

BCA Capability Statement

Triple Two Nine Industrial Development
Early Childhood Centre
13 Endeavour Road, Caringbah

Prepared for:

Aliro Group

Revision 0

13 June, 2025

Reference:230188



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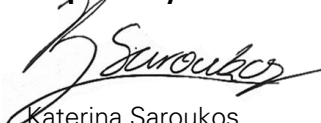
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+ Report Status

+ Date	13.06.2025
+ Revision	0
+ Status	Preliminary Issue
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BDC No.: 05225

+ Revision History

+ Revision	0	+ Date	13.06.2025
+ Status	Preliminary Issue		

1.0 Introduction

1.1 Background

This statement has been prepared to verify that **BM+G** Pty Ltd have undertaken a review of the architectural documentation that will accompany the Development Application (DA) to Southerland Shire Council for the proposed Early Childcare Centre forming part of the development referred to as Triple Two Nine, Caringbah against the Building Code of Australia 2022 (BCA) (Amendment 1).

Note that this statement is to be read in conjunction with the BCA Assessment Report issued by BM+G addressing the wider estate also. The most current version of this report, at the time of writing, is Version 3.1, issued 14 October 2024.

1.2 Capability Statement Objectives

The objectives of this statement are to:

- + Confirm that the DA architectural documentation has been reviewed by an appropriately qualified Building Surveyor and Registered Certifier.
- + Confirm that the proposed new building works can readily achieve compliance with the BCA pursuant to Section 19 of the *Environmental Planning & Assessment (Development Certification & Fire Safety) Regulation 2021*.
- + Accompany the Development Application submission to enable the Consent Authority to be satisfied that subsequent compliance with the fire & life safety and health & amenity requirements of the BCA, will not necessarily give rise to design changes to the building which may necessitate the submission of an application under Section 4.55 of the *Environmental Planning and Assessment Act 1979*.
- + It should be noted that it is not the intent of this statement to identify all BCA provisions that apply to the subject development. The development will be subject further assessment following receipt of more detailed documentation at Construction Certificate stage.

The assessment has been undertaken in accordance with Clause 24 and 25 of the Building and Development Certifiers Regulation 2020. BM+G are the proposed Registered Certifier and the advice provided in this Report is limited to whether submitted documentation complies with the Building Code of Australia or a legislative requirement.

1.3 Referenced Documentation

The following documentation has been reviewed, referenced and/or relied upon in the preparation of this report:

- + Building Code of Australia 2022 (Amendment 1) (BCA)
- + The Guide to the Building Code of Australia 2022 (Amendment 1)
- + Architectural Plans prepared by Watson Young Architects numbered:

+ Drawing	+ Revision	+ Date
21366 005	G	Sep. 2023
21366 505	D	Feb. 2024

+ Drawing	+ Revision	+ Date
21366 006	C	Feb. 2024

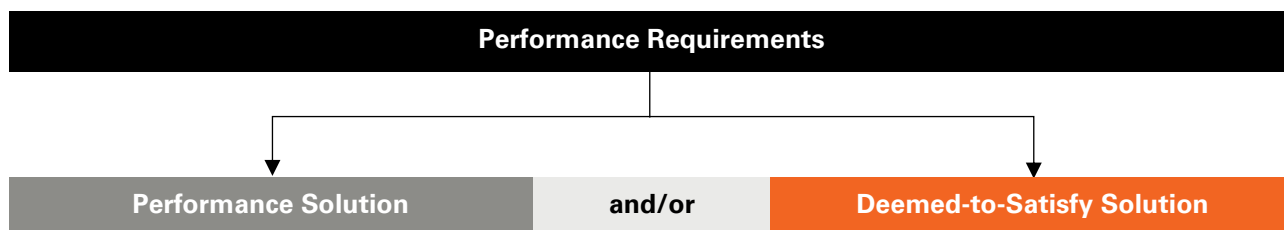
1.4 Relevant Version of the BCA

Pursuant to Section 19 of the *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021* the proposed development is subject to compliance with the relevant requirements of the BCA as in force at the day on which the application for the Construction Certificate is made. The current version of the BCA is BCA 2022 (Amendment 1), which is in force as of 1 May 2025.

Note: The adoption date of BCA 2025 has not been announced. If the application for the Construction Certificate is lodged after the date on which BCA 2025 comes into force, reassessment will be required.

Where the building is a multi-storey building and multiple Construction Certificates will be issued under the same development consent, the relevant version of the BCA may be 'locked in' based on the day in which the application is made for the Construction Certificate which involves the **entrance floor**.

1.5 Compliance with the BCA



Compliance with the BCA is achieved by complying with:

- + the Governing Requirements of the BCA; and
- + the Performance Requirements.

Performance Requirements are satisfied by one of the following, as shown in the Figure below:

- + A Performance Solution.
- + A Deemed-to-Satisfy Solution.
- + A combination of the above two options.

Where a *Performance Requirement* is proposed to be satisfied by a *Performance Solution*, the following steps must be undertaken:

- + Prepare a performance-based design brief in consultation with relevant stakeholders.
- + Carry out analysis, using one or more of the Assessment Methods listed in A2G2(2), as proposed by the performance-based design brief.
- + Evaluation the results against the acceptance criteria in the performance-based design brief.
- + Prepare a final report that includes:
 - All Performance Requirements and/or Deemed-to-Satisfy provisions identified through A2G2(3) or A2G4(3) as applicable; and
 - Identification of all Assessment Methods used; and

- Details of steps (a) to (c); and
- Confirmation that the Performance Requirement has been met; and
- Details of conditions or limitations, if any exist, regarding the Performance Solution.

2.0 Proposed Development

2.1 Description

The proposed development comprises the construction of a proposed Early Childcare Centre, forming part of the development referred to as Triple Two Nine, Caringbah. The subject site is located at 13 Endeavour Road, Caringbah NSW.

2.2 Building Classification

The building has been classified as follows:

+ BCA Classification(s)	Class 5 (Office) Class 6 (Café) 7b (Warehouse) Class 9b (Childcare)
+ Rise in Storeys	Two (2)
+ Storeys Contained	Two (2)
+ Type of Construction	Type B Construction (see further comments under cl.C2D5).
+ Importance Level (Structural)	Level 2 – <i>To be confirmed by structural engineer</i>
+ Sprinkler Protected Throughout	Yes (sprinkler protection required by DtS provisions)
+ Effective Height	4.2m (RL3.9 – RL8.1)
+ Floor Area	10,870m ²
+ Max. Fire Compartment Size	<i>No limitation (large isolated building)</i>
+ Climate Zone	Zone 5 (Sutherland)

3.0 BCA Assessment – Key Issues

We note the following BCA compliance matters with relation to proposed building works are capable of complying with the BCA. Please note that this is not a full list of BCA clauses, they are the key requirements that relate to the proposed work and the below should be read in conjunction with the BCA.

3.1 Section B – Structure

Part B1

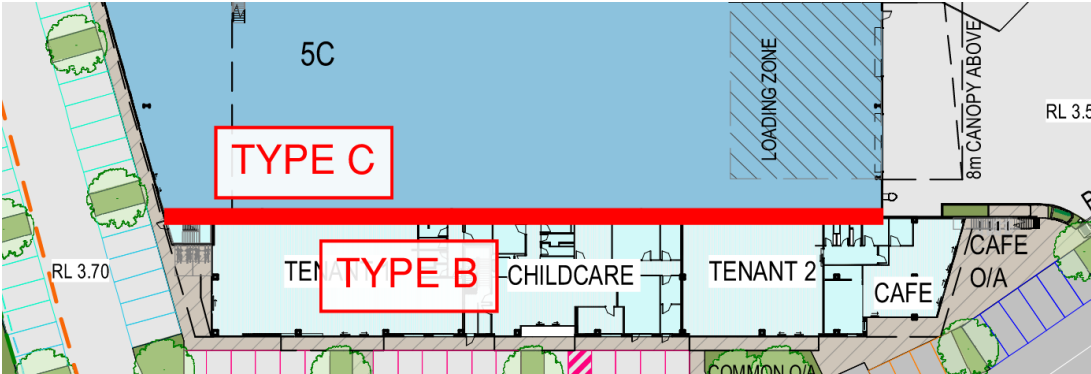
- + New building works are to comply with the structural provisions of the BCA 2022 and the following referenced standards including:
 - + AS 1170.0 – 2002 General Principles
 - + AS 1170.1 – 2002, including certification for balustrades (dead and live loads)
 - + AS 1170.2 – 2021, Wind loads
 - + AS 10170.4 – 2007, Earthquake loads
 - + AS 3700 – 2018, Masonry Structures
 - + AS 3600 – 2018, Concrete Structures
 - + AS 4100 – 1998, Steel Structures and/or
 - + AS 4600 – 2018, Cold formed steel Structures
 - + AS 2159 – 2009, Piling Design & Installation
 - + AS 1720 – 2010, Design of Timber Structure
 - + AS/NZS 1664.1 & 2 – 1997, Aluminium Structures
 - + AS 2047 – 2014, Windows and External Glazed Doors in buildings
 - + AS 1288 – 2006, Glass in buildings
 - + AS 3660.1 – 2014, Termite control (or confirmation no primary building elements are timber).
- + Design certification will also be required from the Architect and Services Consultants to confirm compliance with Section 8 of AS1170.4-2007 with regard to the design of non-structural parts and components and their fastenings for horizontal and vertical earthquake forces and inter-storey drift.
- + In accordance with B1D3(a)(iv) a notional additional load of not less than 0.15kPa to support the addition of solar photovoltaic panels is to be applied to the roof structure.
- + The Importance Level provisions of BCA (Section B) are to be acknowledged by the Structural Engineer and addressed to the degree necessary.

Comment: Structural design details and certification will be required at CC application stage

3.2 Section C – Fire Resistance

C2D2/ Spec 5

Type of Construction Required: The building is required to comply with the requirements of Type A Construction as relevant (see Section 2.2, above). The below table provides an overview of the requirements. Refer to Table 4 & 6 of Appendix 1 for the FRL requirements of Type A Construction, respectively

	<p style="text-align: center;">Type B Construction:</p> <ul style="list-style-type: none"> + Load-bearing external walls and columns need not achieve an FRL if >18m from a boundary / separate building. + Non load-bearing external walls (and columns incorporated within) need not achieve an FRL if >3m from a boundary or separate building. + Floors must be protected in accordance with Spec 5, subject to complying with S5C3. + Roof must be of non-combustible construction. + Internal columns on the floor immediately below the roof need not achieve an FRL. <p>Comment: It is noted that Fire Engineered Performance Solutions are proposed to rationalise FRLs in a number of instances in this regard also. Documentation & design statements shall be provided with eth CC application, demonstrating compliance.</p>
C2D3	<p>Calculation of Rise in Storeys: The rise in storeys of a building is the sum of the greatest number of storeys at any part of the external walls of the building and any storeys within the roof space calculated in accordance with the requirements set out in this clause.</p> <p>Comment: As stipulated in section 2.2 of this report, the rise in storeys of Building 5 (Block 1) is Two (2).</p>
C2D5	<p>Mixed Types of Construction: A building may be of mixed types of construction where it is separated by a fire wall complying with cl. C3D8.</p> <p>Comment: It is proposed to fire separate the childcare centre (and adjacent tenancies) from the warehouse part of the building. As a result of this fire separation, Type C construction may be applied to the warehouse, while Type B applies to the childcare centre, as shown below.</p> 
C2D10/ C2D14	<p>Non-Combustible Building Elements: All materials and or components incorporated in an external wall of a Type A Construction Building, or fire-rated wall must be non-combustible. This includes but not limited to:</p> <ul style="list-style-type: none"> + Any external wall claddings. + Any framing or integral formwork systems, i.e. timber framing, sacrificial formwork, etc. + Any external linings or trims, i.e. external UPVC window linings, timber window blades, etc. + Any sarking or insulation contained within the wall assembly. <p>This is not an exhaustive list, and any element incorporated within any external wall assembly must be identified and approved prior to the issue of a CC.</p> <p>Refer to Table 1 in Appendix 1 for the elements required to be non-combustible.</p> <p>Ancillary Elements: An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible, unless it is in accordance with this clause.</p> <p>Comment: Design documentation is to be provided at CC stage demonstrating compliance. Specific attention is drawn to commentary regarding 'green walls', noting that Building 5 (Block 1) requires non-combustible external walls.</p>

C2D11/ Spec. 7

Fire Hazard Properties: A schedule of all wall, floor, and ceiling linings along with associated test reports are to be provided for review to ensure compliance with the fire hazard property requirements of the BCA. Noting:

- + Minimum Group Numbers apply to wall and ceiling linings. AS 5637 test reports must be provided to determine compliance.
- + Minimum Critical Radiant Flux values apply to floor linings. AS ISO 9239.1 test reports must be provided to determine compliance

Refer to Table 2 and 3 in Appendix 1 below for the required fire hazard properties.

Comment: Design documentation is to be provided at CC stage.

C3D3

General Floor Area and Volume Limitations: Buildings are required to achieve fire compartment sizes not in excess of the DtS requirements of this clause.

Comment: As stipulated in section 2.2 of this report Building 5 (Block 1) is a 'large isolated building' and thus has no limitation on fire compartment size.

C3D4

Large Isolated Buildings: A Large Isolated Building that contains Class 5, 6, 7, 8 or 9 parts, is required to be—

- + Protected throughout with a sprinkler system complying with Specification 17; and
- + Provided with a perimeter vehicular access complying with C3D5(2).

Comment: The proposed Building 5 (Block 1), is required to be sprinkler protected and provided with a 6m wide perimeter vehicular accessway in accordance with Clause C3D5(2) throughout (see notes below).

Note 1: Any proposed gates are to achieve no less than 6m unobstructed width or the reduced width will need to be included in the above Performance Solution.

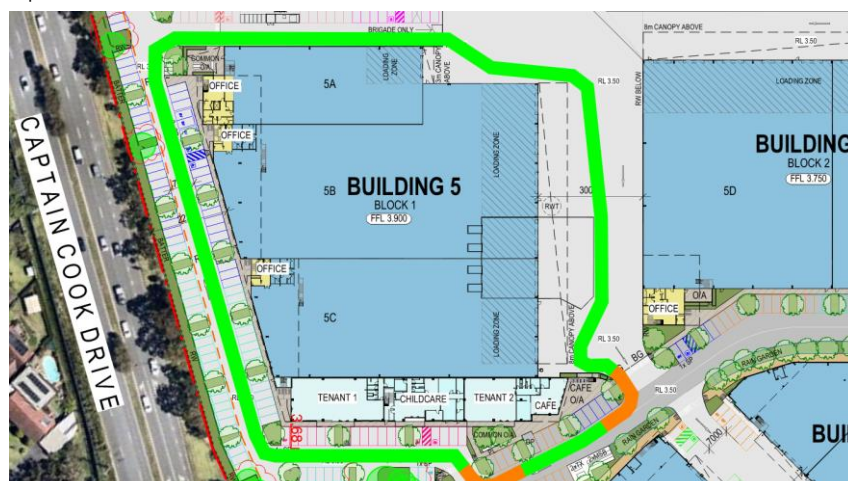
Note 2: The driveways providing vehicular perimeter access must be designed with adequate loading capacities, gradients and swept paths to accommodate a fire truck, having regard to the FRNSW Fire Safety Guideline – Access for Fire Brigade Vehicles and Firefighters.

Note 3: The Trial Design for the Fire Engineered Performance Solution must take into consideration and detail the proposed security access to the site and how this may impact on FRNSW vehicular access.

C3D5

Requirements for Open Spaces and Vehicular Access: Open space and vehicular access required by C3D4 must comply with the requirements of sub-clauses (a) & (b) of this Part whereby they must be 6m wide within 18m of the external walls of the building and of a suitable bearing capacity and unobstructed height to permit the operation and passage of FRNSW vehicles.

Comment: Refer to the below mark-up identifying the paths of perimeter vehicular access, with compliant access paths shown in **green**, paths >18m from the building shown in **orange**, and areas to which there is no perimeter vehicular access shown in **red**. It is understood that a **Fire Engineering Performance Solution** is proposed to address the below pictured deviations from the BCA DtS requirements.



C3D6	<p>Class 9 Buildings: In a building containing a Class 9b early childhood centre—</p> <ul style="list-style-type: none"> + unless the Class 9b early childhood centre is the only use in the building, it must be separated from the remainder of the building by walls and/or floors with an FRL not less than that required for a fire wall; and + each storey must contain not less than 2 fire compartments. <p>However, the above requirements do not apply to a Class 9b early childhood centre-</p> <ul style="list-style-type: none"> + Wholly within a storey that provides direct egress to a road or open space; or + With a rise in storeys of not more than 2, where the Class 9b early childhood centre is the only use in the building. <p>Comment: Compliance with the above is readily achievable, noting separation from the warehouse & adjacent tenancies is required by fire rated walls & floors achieving the FRLs specified in Spec. 5.</p> <p>Fire rating details regarding the fire compartmentation on Level 1 is to be finalised and submitted with the CC application package.</p>
C3D8	<p>Separation by Fire Walls: Separation of Fire Compartments must be constructed in accordance with the following:</p> <ul style="list-style-type: none"> + FRL in accordance with Tables S5C11a – S5C11g of Spec. 5 and extend to the underside of a floor with the same FRL, or to the underside of a non-combustible roof covering. + Any openings in a fire wall must not reduce the FRL, except where permitted by the Deemed-to-Satisfy Provisions of Part C3 (i.e. fire doors; protection of services). + Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not pass through or cross the fire wall unless the required fire resisting performance of the fire wall is maintained. <p>Comment: Compliance with the above is readily achievable, though it is noted that the fire rating details regarding the fire compartmentation is to be finalised and submitted with the CC application package.</p>
C3D9/ C3D10	<p>Separation of Classifications: Separate classifications will either need to be separated by a fire wall achieving the higher FRL requirement between the two classes, or alternatively the higher FRL must apply to both areas subject to Spec 5.</p> <p><i>Note: Refer to C3D8 comments above with regards to structural elements crossing a fire wall at roof level.</i></p> <p>Comment: It is understood that separation of the Class 9b part of Building 5 (Block 1) (i.e. the early childcare centre) is proposed to be separated from the Class 5, 6, & /7b parts.</p> <p>Fire rated construction separating the Class 5 & 7b parts from the childcare centre require a 120/120/120 FRL, while the construction separating the Class 6 parts from the childcare require a 180/180/180 FRL.</p> <p><i>Note: Both vertical & horizontal separation is to be considered (i.e. walls & floors).</i></p>
C3D11	<p>Separation of Lift Shafts: Lift shafts are required to achieve an FRL in accordance with Spec. 5 where they connect greater than 3 storeys in sprinkler protected buildings.</p> <p>Comment: It is noted that the lift shaft in Building 5 (Block 1) does not exceed the above threshold, however, it is understood that the lift shaft is required to be fire rated for the purpose of fire compartmentation across storeys.</p>
C3D13	<p>Separation of Equipment: Equipment as listed below must be separated from the remainder of the building with construction that achieves an FRL of 120/120/120 (or that required by Spec. 5, whichever is greater) and doorways being self-closing -/120/30 fire doors:</p> <ul style="list-style-type: none"> + Lift motors and lift control panels; or + Emergency generators used to sustain emergency equipment operating in emergency mode; or + Central smoke control plant; or

- + Boilers; or
- + A battery or battery system installed in the building that has a voltage of 12 volts or more and a storage capacity of 200kWh or more.

Confirmation is required as to whether any of the above will be applicable to this development.

Comment: To be noted by the Architect. Provide plans demonstrating compliance as part of the CC application package.

C3D14

Electricity Supply System: An electricity substation, electrical conductors & main switchboards which sustain 'emergency equipment' operating in the emergency mode, located within a building must—

- + Be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and
- + Having any doorway in that construction protected with a self-closing fire door having an FRL of not less than -/120/30
- + Electrical conductors which supply a substation or main switchboard sustaining emergency equipment operating in the emergency mode –
- + Have a classification in accordance with AS/NZS 3013 of not less than—
 - If located in a position that could be subject to damage by motor vehicles — WS53W; or
 - Otherwise — WS52W; or
- + Be enclosed or otherwise protected by construction having an FRL of not less than 120/120/120.

Where emergency equipment is required in a building, all switchboards in the electrical installation, which sustain the electricity supply to the emergency equipment switchgear must be separated from the non-emergency equipment switchgear by metal partitions designed to minimise the spread of fault from the non-emergency equipment switchgear.

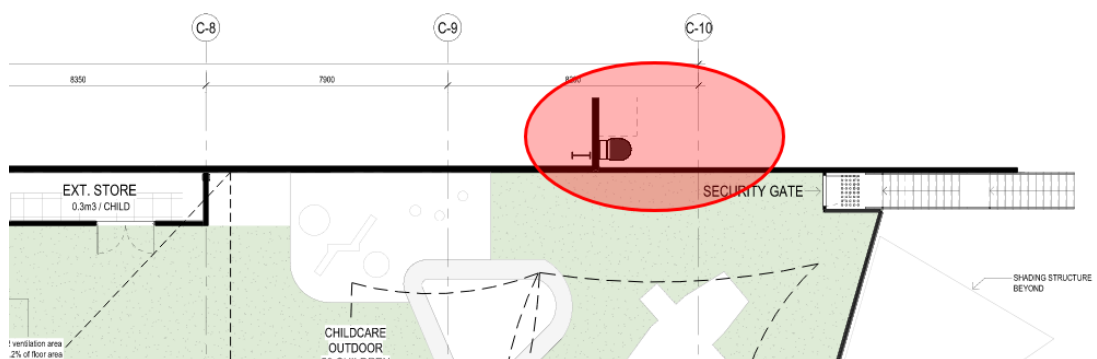
Note: For the purpose of this clause, 'emergency equipment' includes (but is not limited to) fire pumps, air handling systems for smoke control, emergency lifts, control & indicating equipment, EWIS.

Comment: To be noted by the Architect. Provide plans demonstrating compliance as part of the CC application package.

C4D4

Separation of External Walls and Associated Openings in Different Fire Compartments: The distance between parts of external walls and openings within them in different fire compartments separated by a fire wall must not be less than that set out in Table C4D4, unless those parts of each wall have an FRL not less than 60/60/60 and any openings are protected in accordance with C4D5.

Comment: The below exposure occurs in Building 5 (Block 1). The BCA DtS provisions require that these walls require a 60/60/60 FRL for a distance of 4m back, and that all openings/penetrations are appropriately fire protected also.



C4D11

Openings in Fire-isolated Shafts: If lift shafts are required to be fire-isolated an entrance doorway must be protected by -/60/- fire doors and the lift indicator panels must be backed by construction having an FRL of not less than -/60/60 if it exceeds 35,000mm².

	Comment: To be noted. Documentation required at OC stage.
C4D13	<p>Openings in Floors and Ceilings for Services: This clause applies to the floors and ceilings in buildings of Types A, B & C Construction and sets out the methods required to limit the spread of fire through openings in these building elements, required to resist the spread of fire.</p> <p>Comment: To be noted. Documentation required at OC stage.</p>
C4D15	<p>Openings for Services Installations: All opening for services installations in building elements required to be fire-resisting with respect to integrity and insulation must be protected in accordance with the provisions of Spec. 13.</p> <p>Comment: To be noted. Documentation required at OC stage</p>
Spec. 8	<p>Performance of External Walls in Fire: This specification contains measures to minimise in the event of fire the likelihood of external walls collapsing outwards as complete panels and the likelihood of panels separating from supporting members.</p> <p>Comment: Structural Design certification and details demonstrating compliance are required to be provided at CC Application Stage for the proposed warehouses.</p>
Spec. 12	<p>Fire Doors, Smoke Doors, Fire Windows and Shutters: Fire doors and smoke doors must comply with the requirements of this specification.</p> <p>Comment: To be noted by the Architect. Provide plans demonstrating compliance as part of the CC application package.</p>

3.3 Section D – Access and Egress

D2D3	<p>Number of Exits Required: The building requires no less than 2 exits to each storey comprising a Class 9b early childhood centre. All other areas require no less than 1 exit.</p> <p>Comment: The provided plans demonstrate compliance in this regard.</p>
D2D4	<p>When Fire-Isolated Stairways and Ramps are Required: This clause specifies the requirements for when fire isolated stairs or ramps are required in buildings based upon the number of storeys that they interconnect and the classification of the building.</p> <p>Comment: The stair(s) providing egress from the early childhood centre are required to be fire isolated, based on the requirements of this clause. It is understood that the eastern stair is to be constructed as an 'external stair in lieu of a fire isolated stair' complying with the requirements of clause D2D13. The central & western stairs are proposed to be bound by a fire isolated shaft.</p>
D2D5	<p>Exit Travel Distances: Exit travel distances within the building are required to be not more than 20m to a point of choice between alternative exits and 40m to the nearest one from Class 6 & 9 areas.</p> <p>Comment: The travel distances to a point of choice & to an exit achieve compliance, within the early childcare centre.</p>
D2D6	<p>Distance Between Alternative Exits: Exits required as alternative exits must be –</p> <ul style="list-style-type: none"> + Distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least two exits is readily available from all points on the floor including lift lobby areas; and + not less than 9m apart; and + not more than – 60m apart. + Located so that the alternative paths of travel do not converge such that they become less than 6m apart. <p>Comment: The travel distances between alternative exits achieve compliance, within the early childcare centre.</p>

D2D7/ D2D8/ D2D9/ D2D10/ D2D11	<p>Dimensions of Paths of Travel to an Exit: The minimum clear height through all egress paths is required to be no less than 2m, and a minimum of 1m wide (this width dimension is measured clear of any obstructions such as handrails and joinery). Aggregate exit widths must be achieved which are driven by occupancy numbers of each floor.</p> <p>Comment: The provided plans indicate that compliance is readily achievable. Architect to note.</p> <p>Specific attention is drawn to the external passages adjacent external walls incorporating downpipes, roof access ladders and other permanent attachments to the façade, noting that these attachments mustn't impinge on the required egress width, nor interfere with compliance of the handrails or the like.</p> <p>Additionally, it is noted that provisions relating to widths through accessible paths of travel are applicable in accessible areas. Refer to commentary under Part D4 in this regard.</p>
D2D12	<p>Travel via Fire Isolated Exits: A fire isolated stairway is required to provide independent egress from each storey that it serves and discharge directly –</p> <ul style="list-style-type: none"> + To a road open space; or + To a point – <ul style="list-style-type: none"> - In a storey or space, within the confines of the building, that is used only for pedestrian movement, car parking or the like and is open for at least 2/3 of its perimeter; and - From which an unimpeded path of travel, not further than 20m, is available to a road or open space <p>External walls and openings exposed to the discharge path of a fire-isolated stairway (less than 6m, measured perpendicular to the path of travel) must be protected with a 1-hour fire-rating for external walls, and C4D5 for openings.</p> <p>Comment: The provided plans demonstrate compliance in this regard.</p>
D2D13	<p>External Stairways or Ramps in Lieu of Fire-Isolated Stairways: An external stairway or ramp may serve as a required exit in lieu of a fire-isolated exit serving a storey below an effective height of 25m provided that it is constructed in accordance with the following.</p> <ul style="list-style-type: none"> + The external stair is to achieve a minimum FRL of 60/60/60 – when tested from the inside; + Stair to be non-combustible; + Exit doors to the stair is to be self-closing -/60/30 fire door; + No openings to occur in the external wall of the building within 3m for the exit. <p>If openings are within 3-6m of the exit they are to be protected in accordance with BCA Clause C4D5 (if drenchers are used, they are to be located internally). Opens are restricted from being within 0-3m of the exit.</p> <p>Comment: The eastern stair serving Level 1 is proposed to be constructed as an external stair in lieu of a fire isolated stair. In this regard it is understood that the external walls within 6m of the stair on Ground Floor & Level 1 are proposed to be fire rated in accordance with the requirements of this clause.</p>
D2D15	<p>Discharge From Exits: The path of travel to the road from a required exit leading to open space must have an unobstructed exit width of that of the required exit, or if larger, 1m.</p> <p>If the discharge point of the exit is at a different level from the road, a stairway or ramp (max. gradient of 1:14) must be provided.</p> <p>Comment: Architect to note. Plans to be provided with the CC application demonstrating compliance with the requirements of this clause.</p>
D2D18	<p>Number of Persons Accommodated: Clause D2D18 and Table D2D18 are used to calculate the anticipated number of people in particular types of buildings so that minimum exit widths and the required number of sanitary and other facilities can be calculated. This clause and table are not to be used for non-BCA purposes.</p> <p>Comment: We request that indicative population numbers be provided to inform the calculations as part of the BCA report (particularly regarding aggregate egress width & sanitary facilities). This will be required to be finalised as part of the CC application.</p>

D3D3	<p>Fire Isolated Stairways & Ramps: A stairway or ramp, including landings that are required to be within a fire-resisting shaft must be constructed of non-combustible materials to protect the structural integrity of the shaft.</p> <p>Comment: To be noted by the Architect. Provide plans demonstrating compliance as part of the CC application package.</p>
D3D8	<p>Installations in Exits and Paths of Travel: This clause restricts the installation of certain services in fire-isolated exits, non-fire-isolated exits and certain paths of travel to exits. Sub-clauses (1) to (6) prescribe which services shall not be installed as well as the circumstances in which certain services may be installed in fire-isolated and non-fire-isolated exits.</p> <p>Comment: To be noted by the Architect. Provide plans demonstrating compliance as part of the CC application package.</p>
D3D9	<p>Enclosure of Space Under Stairs and Ramps: The space below a required, non-fire isolated stairway/ramp must not be enclosed to form a cupboard or other enclosed space, unless the cupboard is bound by construction achieving an FRL of at least 60/60/60, with a self-closing -/60/30 door.</p> <p>The space below a fire isolated stairway mustn't be enclosed to form a cupboard or the like.</p> <p>Comment: To be noted by the Architect. Provide plans demonstrating compliance as part of the CC application package.</p>
D3D14 – D3D16 & D3D22	<p>Stairways, Balustrades and Handrails:</p> <p><u>Stairways:</u></p> <ul style="list-style-type: none"> + A stairway must have no more than 18, nor less than 2, risers in each flight. + Landings must be not less than 750mm in length. + In a Class 9b building, not more than 36 risers in consecutive flights without a change in direction of at least 30°. <p><u>Balustrades:</u></p> <ul style="list-style-type: none"> + All balustrades must achieve a minimum height of 1m above finished floor level. + Balustrades (except for fire-isolated stairs) must not permit a 125mm sphere to pass through any opening. + Balustrades in fire-isolated exits must comprise no gap larger than 150mm between nosing line (or landing) and bottom rail. Other openings in the balustrade must not exceed 460mm. If the fire-isolated exit also functions as a circulation stair, the 125mm gap requirement applies in lieu of these reduced provisions. <p><u>Handrails:</u></p> <ul style="list-style-type: none"> + Handrails must be located on both sides of all stairways and ramps except for fire-isolated stairs. Handrails must comply with AS 1428.1 as relevant. <p>Comment: To be noted by the Architect. Provide plans demonstrating compliance as part of the CC application package.</p>
D3D17, D3D18, D3D19, D3D20 & D3D21	<p>Balustrades or Other Barriers: These clauses detail where balustrades are required to be provided and sets out in specific detail the construction requirements. Typically, the following will apply to this class of building:</p> <ul style="list-style-type: none"> + Balustrades are required where the fall to the level below is more than 1m in height. The minimum height of a balustrade is 1m above the floor of the landing, walkway or the like; and 865mm above the floor of a stairway or a ramp. + For a fall of more than 4m to the surface level below, a window sill must be a minimum of 865mm in height above the height of the floor surface. + Where the floor is more than 4m above the surface beneath the balustrade any horizontal or near horizontal members between 150mm and 760mm above the floor must not facilitate climbing.

	<ul style="list-style-type: none"> + Balustrades must be constructed so as to not permit a sphere of 125mm diameter to pass through. The exception to this is within fire isolated exits within the building, or internal stairs within a Class 7b or 8 building, where the rails can be positioned a maximum of 460mm apart, so long as a bottom rail is located so a sphere of 150mm cannot pass through the opening between the nosing of the stair treads and the rail or between the floor of the landing, balcony or the like. + Note: Any wire barriers must be compliant with D3D21 and tables D3D21(a) to D3D21(c). <p>Comment: To be noted by the Architect. Provide plans demonstrating compliance as part of the CC application package.</p>
D3D22	<p>Handrails: This Clause sets out the requirements regarding the location, spacing and extent of handrails required to be installed in buildings.</p> <p>Comment: To be noted by the Architect. Provide plans demonstrating compliance as part of the CC application package. It is specifically noted that the central stair in the childcare centre does not incorporate an offset of the stair treads at the mid landing, which may affect the configuration of the central handrail. Additional detail is to be provided with the CC application, demonstrating compliance.</p>
D3D24	<p>Doorways and Doors: This clause applies to all doorways that form an exit and refers to the types of doors that cannot be used in buildings of prescribed uses, the use of power operated doors and the force required to operate sliding doors.</p> <p>If an exit door is power operated, it must be opened manually under a force of not more than 110N if there is a malfunction or failure to the power source; and it must open automatically if there is a power failure to the door and upon the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.</p> <p>Comment: It is specifically noted that roller shutter doors cannot be used as egress doors. The provided plans demonstrate compliance in this regard, whereby swing doors have been provided</p>
D3D25/ D3D26	<p>Doors and Latching: All egress doorways must swing in the direction of egress and must be readily openable without a key from the side that faces a person seeking egress, by a single handed downward or pushing action on a single device which is located between 900mm and 1100mm from the floor.</p> <p>It is noted that the above does not apply to early childhood centres, so long as the door complies with either of the below:</p> <ul style="list-style-type: none"> + The door is openable by operating a fail-safe control switch, not contained within a protective enclosure, to actuate a device to unlock the door; or + By hand by a person or persons, specifically nominated by the owner, properly instructed as to the duties and responsibilities involved and available at all times when the building is lawfully occupied so that persons in the building or part may immediately escape if there is a fire. <p>Comment: To be noted by the Architect (specific attention is drawn to the requirements pertaining to early childhood centres). Provide plans demonstrating compliance as part of the CC application package.</p>
D3D27	<p>Re-Entry from Fire Isolated Exits: Doors from Class 9b early childhood centres providing access from fire isolated stairs mustn't be able to be locked such that re-entry from the stair back into the building is not available. Except, for an early childhood centre, the doors may be locked, so long as the locks de-activate upon fire trip.</p> <p>Comment: To be noted by the Architect & Fire Services Designer. Details to be provided demonstrating compliance as part of the CC application package.</p>
D3D29	<p>Protection of Openable Windows: In a Class 9b early childhood centre, a window must be provided with protection if the floor below the window is 2m or more above the surface beneath. Where the lowest level of the window opening is less than 1.7m above the floor, a window opening must be protected.</p> <p>Comment: To be noted by the Architect. Details to be provided demonstrating compliance as part of the CC application package.</p>

D4D2 & D2D3	<p>General Building Access Requirements: The extent of access required depends on the classification of the building. Buildings and parts of building must be accessible as set out in sub-clauses (1)-(10) unless exempted by Clause D4D5.</p> <p>Access is required to and within all areas normally used by the occupants, for Class 5, 6, 7b & 9b buildings and any levels in a Class 7a building containing accessible carparking spaces.</p> <p>Comment: Access is required to & within all areas normally used by occupants. Refer to commentary in the Access Report for further commentary.</p>
D4D4	<p>Parts of the Building to be Accessible: This clause specifies the requirements for accessways within buildings which must be accessible. In accordance with Clause D4D4, ramps & stairways must comply with Clause 10 & 11 of AS 1428.1-2009 (respectively), whilst fire isolated stairs must comply with Clauses 11.1(f) & (g) of AS 1428.1-2009 only. In addition, any storey with a floor area more than 200m² must be served by a passenger lift that is designed to comply with Part E4, and all accessways must include passing & turning spaces per AS 1428.1-2009.</p> <p>Clause D4D4(g) and (h) requires that the pile height or pile thickness shall not exceed 11mm and the carpet backing thickness shall not exceed 4mm. Moreover, the carpet pile height or pile thickness dimension shall not exceed 11mm, the carpet backing thickness dimension shall not exceed 4mm and their combined dimension shall not exceed 15mm.</p> <p>Note: The exemption to not provide a ramp or lift under clause D4D4(f) can only be applied if the floor area of the entire storey in the whole building is less than 200m² and is not interpreted to be applied to each tenancy.</p> <p>Comment: It is understood that the childcare centre is readily capable of achieving compliance with the above. Refer to commentary in the Access Report for further commentary.</p>
D4D5	<p>Exemptions: This clause provides details on buildings or parts of buildings not required to be accessible under the BCA where providing access would be inappropriate because of the nature of the area/use or the tasks undertaken.</p> <p>Comment: Access Consultant to advise on any areas to which this exemption is proposed to be applied, such areas within the childcare centre may include store rooms & cleaners rooms.</p>
D4D6	<p>Accessible Parking: This clause provides details of the number of accessible carparking spaces required in a carpark depending on the classification of the building.</p> <p>Comment: The provided plans indicate that compliance is achieved with respect to the ratio of accessible car parking spaces required. Refer to additional commentary in the Access Report.</p>
D4D7	<p>Signage: Braille and tactile signage must be provided to required accessible sanitary facilities, spaces with hearing augmentation, ambulant sanitary facilities, pedestrian entrances that are not accessible, and to each door required by Clause E4D5 to be provided with an exit sign. The latter is to state "EXIT" and state the level e.g. "LEVEL 1".</p> <p>Comment: Refer to commentary in the Access Report. Signage plan to be reviewed & approved by the Access Consultant prior to installation.</p>
D4D8	<p>Hearing Augmentation: A hearing augmentation system must be provided where an inbuilt amplification system (excluding emergency warning systems) is present in the following areas:</p> <ul style="list-style-type: none"> + In a room in a Class 9b + In an auditorium, conference room, meeting room, or judicatory room, + In a ticket office, teller's booth, reception area of the like where the public is screened by the service provider. <p>Comment: Refer to commentary in the Access Report, though specific attention is drawn to the requirement for provision of a hearing induction loop to all in-built amplification systems in each meeting room, as well as each room in the childcare centre.</p>
D4D9	<p>Tactile Indicators: This clause provides for the installation of tactile indicators in buildings required to be accessible and must be provided to warn people who are blind or have a vision impairment that they are approaching a stairway, escalator, passenger conveyor, ramp, overhead obstruction or an accessway meeting a vehicular way, except for areas exempted by D4D5.</p>

	Comment: Architect to note. Plans submitted with the CC application are to demonstrate compliance.
D4D13	<p>Glazing on an Accessway: This part requires the provision of a contrasting strip, chair rail, handrail or transom across all frameless or fully glazed doorways and surrounding glazing capable of being mistaken for an opening.</p> <p>Comment: Refer to commentary in the Access Report.</p>

3.4 Section E – Services and Equipment

E1D2	<p>Fire Hydrants:</p> <ul style="list-style-type: none"> + E1D2(1) – A fire hydrant system must be provided to serve a building having a total floor area greater than 500m² and where a fire brigade is available to attend a building fire. + E1D2(2) – Requires that the fire hydrant system must be installed in accordance with the provisions of AS2419.1-2021 and details where internal hydrants must be located. + E1D2(4) – states that internal fire hydrants must serve the level in which they are installed. <p><i>Note: Where a building exceeds 108,000m³ a Performance Solution is required for the entirety of the design of the Hydrant System per Appendix of AS 2419.1-2021.</i></p> <p>Comment: Fire hydrant coverage is required to be provided to the childcare centre, throughout all parts of all storeys.</p> <p>Detailed plans are to be provided demonstrating compliance as part of the CC application package. The hydrant system is to be installed as part of the construction of the overall development of the estate. Refer to commentary with respect to this system in the BCA Assessment Report issued by BM+G relating to the overall development.</p>
E1D3	<p>Fire Hose Reels: A fire hose reel system must be provided to serve a building where one or more internal fire hydrants are installed or in a building with a floor area greater than 500m². Where required to be provided, fire hose reels are to comply with AS 2441 – 2005.</p> <p>Comment: Fire hose reel coverage is required to be provided to the childcare centre, throughout all parts of all storeys.</p> <p>Detailed plans are to be provided demonstrating compliance as part of the CC application package. The hose reel system is to be installed as part of the construction of the overall development of the estate. Refer to commentary with respect to this system in the BCA Assessment Report issued by BM+G relating to the overall development.</p>
NSW E1D4, E1D12, E1D13	<p>Sprinklers: A sprinkler system must be installed in a building or part of a building when required by Clauses E1D5 to E1D13 and comply with Specification 17 or 18.</p> <p>Specification 17 sets out requirements for the design and installation of sprinkler systems in Class 2-9 Buildings, and details the required design standards, including AS 2118.1-2017 and AS 2118.6-2012.</p> <p>Comment: It is understood that sprinklers are proposed to be provided to the childcare centre.</p> <p>Detailed plans are to be provided demonstrating compliance as part of the CC application package. Further commentary with respect to the details of the sprinkler system are contained within the BCA Assessment Report issued by BM+G relating to the overall development.</p>
E1D14	<p>Portable Fire Extinguishers: To be provided and designed in accordance with Sections 1, 2 and 3 of AS 2444-2001.</p> <p>Comment: PFEs to be provided, as required. Certification will be required, verifying compliance at OC stage.</p>

E2D3	<p>General Requirements: Class 2 to 9 buildings must comply with the provisions of this Clause to remove smoke during a fire, to control the operation of air handling systems and to prevent the spread of smoke between compartments.</p> <p>Buildings must comply with the provisions of E2D4, as applicable to Class 2 to 9 buildings. It deals with the design and construction of air handling systems that are part of a smoke hazard management system and air handling system that are not part of a smoke hazard management system.</p> <p>The details relating to the installation and operation of the systems are set out in Specifications 20, 21, & 22.</p>
E2D9	<p>Smoke Hazard Management: Buildings Not More than 25m in Effective Height: Class 5, 6, 7b, 8 and 9b buildings: This clause sets out requirements for smoke hazard management in Class 5-9 buildings <25m in effective height.</p> <p>Comment: The rise in storeys does not exceed 2, thus there are no additional smoke hazard management systems required by this clause.</p>
NSW E2D10	<p>Smoke Hazard Management: Buildings <25m Effective Height: Large Isolated Buildings: This clause sets out the requirements for smoke hazard management systems for large isolated buildings with an effective height of less than 25m.</p> <p>Comment: Building 5 (Block 1) exceeds 108,000m³, and the ceiling height is proposed to exceed 12m. Based on these parameters a smoke exhaust system is required.</p> <p>BM+G are advised that a smoke exhaust system is proposed to be provided to the entirety of the building, though the system is proposed to have a reduced air exchange rate, rationalised via a Fire Engineered Performance Solution.</p> <p>Note that a smoke detection & alarm system is required to be provided, to trigger the smoke exhaust system.</p>
NSW E2D19	<p>Smoke Hazard Management: Class 9b Buildings: Other Assembly Buildings: This clause sets out additional provisions for Class 9b buildings in fire compartments exceeding 2,000m², as well as additional provisions for early childhood centres of any compartment size.</p> <p>Comment: This clause requires provision of an AS1670.1 smoke detection & alarm system throughout the entirety of Building 5 (Block 1), as it comprises an early childhood centre.</p>
E3D4	<p>Warning Against use of Lifts in Fire: Warning signs required be provided must be displayed where they can be readily seen and must comply with the details and dimensions of Figure E3D4.</p> <p>Comment: To be noted by the lift designer/installer.</p>
E3D6	<p>Landings: Access and egress to and from lift well landings must comply with the Deemed-to-Satisfy Provisions of Parts D2 & D3.</p> <p>Comment: To be noted by the lift designer/installer.</p>
E3D7	<p>Passenger Lift Types and their Limitations: In an accessible building, every passenger lift must be one of the types identified in sub-clause (1) and not rely on a constant pressure device for its operation if the lift car is fully enclosed.</p> <p>Comment: To be noted by the lift designer/installer</p>
E4D2 – E4D8	<p>Emergency Lighting and Exits Signs: Emergency lighting and exit signage to be provided in accordance with E4D2 - E4D5 complying with AS 2293.1 – 2018.</p> <p>Comment: Emergency lighting & exit signs are required to be provided throughout the building.</p>
E4D4	<p>Design & Operation of Emergency Lighting: Every required emergency lighting system must comply with AS 2293.1-2018.</p> <p>Comment: Electrical Engineer/sub-contractor to note.</p>
E4D5	<p>Exit Signs: An exit sign must be clearly visible to persons approaching the exit and must be installed on, above or adjacent to each door providing egress from a building. Sub-clauses (a) to (d) set out the situations where exit signs are required to be installed.</p> <p>Comment: Electrical Engineer/sub-contractor to note.</p>

E4D6	<p>Direction Signs: If an exit is not readily apparent to persons occupying or visiting the building then exit signs must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a required exit.</p> <p>Comment: Electrical Engineer/sub-contractor to note.</p>
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3.5 Section F – Health and Amenity

F1D3	<p>Stormwater Drainage: A roof balcony, podium or similar must have a system of stormwater drainage and the structural substrate must be graded with a minimum fall of 1:80 to a drainage outlet.</p> <p>Comment: Civil Engineer to note. Design certification & plans are to be provided with the CC application. Waterproofing sub-contractor(s) to note also. Certification will be required at OC stage.</p>
F1D4	<p>Exposed Joints: Exposed joints in the drainage surface on a roof, balcony, podium or similar horizontal surface part of a building must—</p> <ul style="list-style-type: none"> + Be protected in accordance with Section 2.9 of AS 4654.2; and + Not be located beneath or run through a planter box, water feature or similar part of the building <p>Comment: Waterproofing sub-contractor(s) to note. Certification will be required at OC stage.</p>
F1D5	<p>External Waterproofing Membranes: External waterproofing membranes are required to comply with AS 4654.1 & 2.</p> <p>Comment: Waterproofing sub-contractor(s) to note. Certification will be required at OC stage.</p>
F1D6	<p>Damp-Proofing:</p> <ul style="list-style-type: none"> + This sub-clause requires that moisture from the ground must be prevented from reaching certain parts of buildings as listed. + This sub-clause requires that all damp-proofing materials and termite shields used as damp-proofing must comply with AS/NZS 2904 and AS 3660.1. + This sub-clause lists the buildings and parts of a building that do not need to comply with (a). <p>Comment: Waterproofing sub-contractor(s) to note. Certification will be required at OC stage.</p>
F1D7	<p>Damp Proofing of Floors on the Ground: If the floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870.</p> <p>Damp-proofing need not be provided if weatherproofing is not required or the floor is the base of a stair, lift or similar shaft which is adequately drained by gravitation or mechanical means.</p> <p>Comment: Waterproofing sub-contractor(s) to note. Certification will be required at OC stage.</p>
F2D3 & F2D4	<p>Wet Area Construction: These clauses set out the construction requirements for wet areas in Class 2-9 Building, in relation to floor and wall materials, surface grading, floor wastes and drainage.</p> <p>Comment: Waterproofing sub-contractor(s) to note. Certification will be required at OC stage</p>
F2D4	<p>Floor Wastes: Where a floor waste is provided, the fall of the floor plane to the floor waste is required to be between 1:80–1:50.</p> <p>Comment: Hydraulic Engineer to note. Design details & certification will be required with the CC application.</p>
F3D2	<p>Roof Coverings: This clause details the materials and appropriate standards, with which roofs must be covered with. The roofing requirements are set out in sub-clauses (a) to (g) which identifies the types of materials that may be used and the adopted Australian Standards that apply to their quality and installation.</p>

	<p>Comment: Structural Engineer & roofing sub-contractor to note. Certification will be required at CC & OC stage.</p>
F3D3	<p>Sarking: Sarking-type materials used for weatherproofing of roofs must comply with AS/NZS 4200 parts 1 and 2</p> <p>Comment: Façade installer to note. Certification will be required at OC stage.</p>
F3D4	<p>Glazed Assemblies: Glazed assemblies in an external wall must comply with AS2047 requirements for resistance to water penetration for windows, sliding doors with a frame, adjustable louvres, shop fronts and windows with one-piece framing</p> <p>Comment: Glazing sub-contractors to note. Certification will be required at OC stage.</p>
F3D5	<p>Wall Cladding: The following wall cladding materials are deemed to satisfy Performance Requirement F3P1:</p> <ul style="list-style-type: none"> + Masonry, including masonry veneer, unreinforced and reinforced masonry, complying with AS 3700, + Autoclaved aerated concrete, complying with AS 5146.3, + Metal wall cladding, complying with AS 1562.1. <p>Comment: A Performance Solution Report will be required to address the above, noting that the proposed design does not comprise of wholly DtS materials.</p>
F4D3	<p>Calculation of Number of Occupants and Facilities: This clause sets out the requirements for the calculation of the number of occupants and the number of sanitary facilities required to be installed in Class 2 to 9 buildings. The parameters for the calculation are set out in sub-clauses (a) to (d).</p> <p>Comment: BM+G request that occupant numbers be provided that will be reflective of the maximum occupancy envisaged in the childcare centre. Alternatively, BM+G can provide generic population calculations, based off the m² rates provided in the BCA.</p>
F4D4	<p>Facilities in Class 3 to 9 Buildings: This clause provides the requirements for sanitary facilities to be installed in Class 3-9 buildings in accordance with Tables F4D4a – F4D4l. The requirements and variations are set out in sub-clauses (1)-(11).</p> <p>Additionally, a Class 9b early childhood centre must be provided with—</p> <ul style="list-style-type: none"> + a kitchen or food preparation area with a kitchen sink, separate hand washing facilities, space for a refrigerator and space for cooking facilities, with— <ul style="list-style-type: none"> - the facilities protected by a door or gate with child proof latches to prevent unsupervised access to the facilities by children younger than 5 years old; and - the ability to facilitate supervision of children from the facilities if the early childhood centre accommodates children younger than 2 years old; and + one bath, shower or shower-bath; and + if the centre accommodates children younger than 3 years old— <ul style="list-style-type: none"> - a laundry facility comprising a washtub and space in the same room for a washing machine; and - a bench type baby bath, which is within 1m of the nappy change bench; and - a nappy changing bench which— <ul style="list-style-type: none"> ▪ Is within 1 m of separate adult hand washing facilities and bench type baby bath; and ▪ Must be not less than 0.9m² in area and at a height of not less than 850mm, but not more than 900mm above the finished floor level; and ▪ Must have a space not less than 800mm high, 500mm wide and 800mm deep for the storage of steps; and ▪ Is positioned to permit a staff member changing a nappy to have visibility of the play area at all times. <p>Comment: Further detailed plans & certification demonstrating compliance with the requirements for early childhood centres will be required as per of the CC application package, however the provided plans demonstrate compliance is readily achievable. Specifically, the following is noted:</p>

	<ul style="list-style-type: none"> + The prep areas provide the ability to supervise children in the adjacent rooms. + A bench type baby bath, >1 m from the nappy change bench, was provided adjacent both external play areas, with visibility over these areas. + The plans identify that a max. of 68 children will be accommodated. Noting that 1x pan & 1x basin is required for every 15 children. The provided plans indicate that a total of 75 children can be accommodated, thus demonstrating compliance. Each pan & basin serving children must be 'junior' style pans, washbasins with a rim height <600mm AFFL. + The total number of staff is to be confirmed, though it is noted the provided plans indicate the childcare centre can accommodate up to 90 staff. <p>It is also understood that the kitchen on Ground Floor services staff only, thus there is no need for the ability to supervise children from this space.</p>
F4D5	<p>Accessible Sanitary Facilities: Accessible unisex sanitary compartments must be provided, in accordance with F4D6 and unisex showers must be provided in accordance with Table F4D7, in buildings or parts that are required to be accessible. The details for the provision of accessible facilities and the standard, AS 1428.1, are set out in sub-clauses (a) to (i).</p> <p>Comments: The provided plans demonstrate compliance is readily achievable. The Access Consultant is to provide a further review of the detailed plans prior to the issue of the relevant CC. Specific comment should be sought from the Access Consultant with respect to the falls achieved in the accessible shower, noting the competing requirements of AS 1428.1 & AS 3740.</p>
F4D8	<p>Construction of Sanitary Compartments: Other than in an early childhood centre, sanitary compartments must have doors and partitions that separate adjacent compartments and extend:</p> <ul style="list-style-type: none"> + from floor level to the ceiling in the case of a unisex facility; or + a height of not less than 1.5m above the floor if primary school children are the principal users; or + 1.8m above the floor in all other cases. <p>The door to a fully enclosed sanitary compartment must open outwards; or slide: or be readily removable from the outside of the sanitary compartment, unless there is a clear space of at least 1.2m, measured in accordance with Figure F4D8 between the closet pan within the sanitary compartment and the doorway.</p> <p>Comment: Architect to note (specifically with respect to the provisions relating to the early childhood centre). Design documentation demonstrating compliance is to be provided with the CC package.</p>
F5D2	<p>Height of Rooms and Other Spaces: The ceiling heights in Class 2 to 9 buildings must not be less than required in sub-clauses (1) to (8) of this clause.</p> <p>The minimum ceiling heights for a Class 5, 6 & 7 building are as follows:</p> <ul style="list-style-type: none"> + Corridor or Passage, Bathroom, Storeroom, etc. – 2.1m + Remainder – 2.4m. <p>The minimum ceiling heights for a Class 9b building are as follows:</p> <ul style="list-style-type: none"> + A part (including a corridor serving the part) that accommodates not more than 100 persons – 2.4m; A part (including a corridor serving the part) that accommodates more than 100 persons – 2.7m. <p>Comment: Architect to note. Design documentation demonstrating compliance is to be provided with the CC package.</p>
F6D2	<p>Natural Light: Class 9b buildings — to all general purpose classrooms in primary or secondary schools and all playrooms or the like for the use of children in an early childhood centre.</p> <p>Comment: Noting that natural light is required to all 'playrooms' in the early childhood centre, additional comments are provided under cl. F6D3 below.</p>

F6D3	<p>Methods and Extent of Natural Light: Windows or the like are to have an aggregate light transmitting area of not less than 10% of the floor area of the room.</p> <p>In a Class 9b building of a building, a required window that faces a boundary of an adjoining allotment or a wall of the same building or another building on the allotment must not be less than a horizontal distance from that boundary or wall that is the greater of—</p> <ul style="list-style-type: none"> + Generally — 1 m; and + 50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill. <p>In a Class 9b early childhood centre, the sills of 50% of windows in children's rooms must be located not more than 500mm above the floor level.</p> <p>Comment: Architect to note. Design documentation & certification to be provided as part of the CC application package, though it is noted that the provided plans indicate that compliance is readily achievable as a large part of the façade is noted as being 'aluminium framed glazing'.</p>
F6D5	<p>Artificial Lighting: Artificial lighting is required where it is necessary to minimise the hazard to occupants during an emergency evacuation. Sub-clauses (1) - (3) sets out the places where artificial lighting is always required in all classes of buildings and the standard to which it must be installed.</p> <p>Comment: Electrical Engineer to note. Design certification to be submitted at CC Application.</p>
F6D6	<p>Ventilation of Rooms: A habitable room, office, shop, factory, workroom, sanitary compartment, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have natural ventilation complying with F6D7 or a mechanical or air-conditioning system complying with AS1668.2 and AS/NZS 3666.1.</p> <p>Comment: Design certification to be submitted at CC Application.</p>

3.6 Section G – Ancillary Provisions

G1D4	<p>Outdoor Play Spaces: Any outdoor play space in a Class 9b early childhood centre must be enclosed on all sides with a barrier which—</p> <ul style="list-style-type: none"> + Where the edge of the trafficable surface of the outdoor play space is at the same level or less than 2 m above the surface beneath — complies with AS 1926.1; and + Where the edge of the trafficable surface of the outdoor play space is 2 m or more above the surface beneath— <ul style="list-style-type: none"> - Is not less than 1.8 m high, as measured from above the trafficable surface; and - Is non-climbable and does not contain horizontal or other elements that could facilitate climbing; and - does not have any openings or apertures through which a 100 mm or greater sphere could pass; and - Is not within 1.8 m, as measured directly from the top of the barrier, of any elements within the outdoor play space that facilitate climbing; and - Is not within 900 mm of elements in a wall that facilitate climbing; and + Has strength and rigidity complying with AS 1926.1. <p>For the purposes of compliance with AS 1926.1, this is applied as if there is a swimming pool located outside the outdoor play space, so that the barrier restricts children from exiting the premises without the knowledge of staff in the centre.</p> <p>The above requirements of do not apply to a wall, including doors and windows, which form part of the Class 9b early childhood centre, except where the wall is within a non-climbable zone.</p>
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Comment: Architect to note the above, having regard to the fact the fall from the outdoor play areas exceeds 2m. Design details to be provided demonstrating compliance with the Construction Certificate application.

3.7 Section J – Energy Efficiency

Part J4	<p>Building Fabric: The provision of insulation of the building envelope will be required in the proposed Building, in accordance with Clauses J4D3 to J4D7, and the Tables therein, including Thermal Construction General, Roof and Ceiling Construction, Roof lights, Walls, and Floors. Design details and/or certification of design will be required to be provided in this regard.</p> <p>Comment: This section applies to the building envelope of any air-conditioned spaces proposed within the building. Design details and/or certification of building envelope design will be required to be submitted with the application for a Construction Certificate.</p>
Part J5	<p>Building Sealing: The provision of a compliant building sealing is required to all chimneys & flues, roof lights, windows & doors, Exhaust Fans, Ceilings Walls, & floors in accordance with Clauses J5D3 to J5D7.</p> <p>Comment: This section applies to any air-conditioned spaces proposed within the building. Design details and/or certification of building envelope design will be required to be submitted with the application for a Construction Certificate.</p>
Part J6	<p>Airconditioning & Ventilation Systems: Details and/or design certification which confirm that any proposed air-conditioning system within the proposed buildings achieves compliance with the relevant requirements of Part J6 will be required to be provided from the Mechanical Engineer.</p> <p>Comment: Details or certification demonstrating compliance will need to be submitted with the application for a Construction Certificate.</p>
Part J7	<p>Artificial Light & Power: Details and/or design certification which confirm that all artificial lighting, power control, and boiling/chilled water units within the proposed building achieves compliance with the relevant requirements of Part J7 will be required to be provided from the Electrical Engineer.</p> <p>Comment: Section J Consultant certification required at CC Application Stage.</p>
Part J8	<p>Hot Water Supply and Swimming Pool/Spa Pool Plant: Details and/or design certification which confirm that any proposed hot water supply system within the proposed building achieves compliance with the relevant requirements of Part J8 (Section 8 of AS 3500.4) will be required to be provided from the Hydraulic Engineer.</p> <p>Comment: Details and certification demonstrating compliance will need to be submitted with the application for a Construction Certificate.</p>
Part J9	<p>Facilities for Energy Monitoring: Provision for monitoring of energy consumption must be provided to a building where the floor area exceeds 500m², and must be capable of recording the consumption of gas and electricity. In addition, where the floor area of the building exceeds 2,500m² the energy monitoring facilities must be capable of individually recording air-conditioning, lighting, appliance power, central hot water supply, lifts/escalators, and other ancillary plant and being connected to a single interface monitoring system.</p> <p>Comment: Details or certification demonstrating compliance with J9D3 for energy monitoring, J9D4 for provision for EV charging stations, and J9D5 for solar, will need to be submitted with the application for a Construction Certificate.</p> <p>Specifically, it is noted that provision for EV charging is required to the following ratios:</p> <ul style="list-style-type: none"> + 10% of car parking spaces associated with a Class 5 or 6 building, + 20% of car parking spaces associated with a Class 7b, 8 or 9 building.

4.0 Summary of Performance Solutions

The following comprises a summary of the proposed deviations from the BCA DtS provisions, which we understand are readily capable of being addressed via Performance Solutions, to be approved prior to the issue of the relevant Construction Certificate(s).

A. Matters requiring fire safety engineered performance solutions:

+ BCA (DtS) Clause		+ Description
1.	Nil.	<i>Nil proposed with respect to the childcare centre.</i>

B. Other matters requiring performance solutions:

+ BCA (DtS) Clause		+ Description
1.	F3P1	A Performance Solution report is to be provided by the Architect/Façade Engineer to demonstrate how the external walls are designed to prevent the penetration of water into the building.

5.0 Preliminary List of Fire Safety Measures

The following table is a list of the required fire safety measures within the building. These measures may be subject to further change pending the outcomes of the final compliance review.

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Proposed
Alarm Signalling Equipment	AS 1670.3 – 2018	✓
Automatic Fail Safe Devices	BCA 2022 Clause D3D26	✓
Automatic Fire Detection & Alarm System	BCA 2022 Spec. 20 & 23 AS 1670.1 – 2018	✓
Automatic Fire Suppression Systems	BCA 2022 Spec. 17 AS 2118.1 – 2017	✓
Building Occupant Warning System activated by the Sprinkler System	BCA 2022 Spec. 17 Clause 8 and / or Clause 3.22 of AS 1670.1 – 2018	✓
Emergency Lighting	BCA 2022 Clauses E4D2 & E4D4 AS 2293.1 – 2018	✓
Exit Signs	BCA 2022 Clauses E4D5, NSW E4D6 & E4D8 AS 2293.1 – 2018	✓
Fire Blankets	BCA 2022 Clause E1D14 AS 3504 – 1995 & AS 2444 – 2001	✓
Fire Dampers	BCA 2022 Clause C4D15 AS 1668.1 – 2015 & AS 1682.1 & 2 – 2015 Manufacturer's Specification	✓
Fire Doors	BCA 2022 Clauses C3D13, C3D14, C4D3, C4D5 & C4D6 AS 1905.1 – 2015 Manufacturer's Specification	✓
Fire Hose Reels	BCA 2022 Clause E1D3 AS 2441 – 2005	✓
Fire Hydrant Systems	BCA 2022 Clause E1D2 AS 2419.1 – 2021	✓
Fire Seals	BCA 2022 Clause C4D15 AS 1530.4 – 2014 & AS 4072.1 – 2014 Manufacturer's Specification	✓
Lightweight Construction	BCA 2022 Clause C2D9 AS 1530.4 – 2014 Manufacturer's Specification	✓
Mechanical Air Handling Systems (Automatic Shutdown)	BCA 2022 Clause E2D3 AS/NZS 1668.1 – 2015 & AS 1668.2 – 2012	✓
Perimeter Vehicular Access	BCA 2022 Clause C3D5	✓
Portable Fire Extinguishers	BCA 2022 Clause E1D14 AS 2444 – 2001	✓

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Proposed
Smoke Hazard Management Systems + Smoke Exhaust System	BCA 2022 Part E2 AS/NZS 1668.1 –2015	✓
Wall-Wetting Sprinklers	BCA 2022 Clause C4D5 AS 2118.2 – 2010	✓
Warning & Operational Signs	BCA 2022 Clauses D3D26, D3D28, D4D7 & E3D4 AS 1905.1 – 2015 EP&A (DCFS) Regulation 2021 Section 108	✓
Fire Engineered Performance Solutions relating to: TBC	BCA 2022 Performance Requirements ... Fire Safety Engineering Report prepared by Report No. ... Revision ... dated ...	✓

Please note that the above schedule will need to be revised prior to issue of the Construction Certificate to reference any proposed Fire Engineering Report and incorporate any additional measures required by the proposed Performance Solutions.

6.0 Conclusion

This report contains an assessment of the referenced architectural documentation for the proposed Early Childcare Centre forming part of the development referred to as Triple Two Nine, Caringbah located at located at 13 Endeavour Road, Caringbah NSW against the Deemed-to-Satisfy provisions and Performance Requirements of the Building Code of Australia 2022 (Amendment 1).

In view of the above assessment, we can confirm that subject to the above measures being appropriately addressed by the project design team, compliance with the provisions of the BCA is readily achievable.

In addition, it is considered that such matters can adequately be addressed in the preparation of the Construction Certificate documentation without giving rise to any inconsistencies with the Development Approval.



+ Appendix 1 – References Tables

Table 1: Non-Combustibility Requirements

+ Building Element	+ Type A or B Construction
External wall	Non-combustible
Common wall	Non-combustible
Floor and floor framing of lift pit	Non-combustible
All loadbearing internal walls (including those of shafts)	Concrete, masonry or fire-protected timber
Loadbearing fire walls	Concrete, masonry or fire-protected timber
Non-loadbearing internal walls required to be fire-resistant	Non-combustible
Non-loadbearing lift, ventilating, pipe, garbage and the like shafts which do not discharge hot products of combustion.	Non-combustible (subject to conditions outlined in C2D10)

Table 2: Fire Hazard Properties Requirements – Floor Linings

+ Table S7C3 of Specification 7 Critical Radiant Flux or Floor Linings and Floor Coverings			
+ Class of Building	Building Not Fitted with a Sprinkler System	Building Fitted with a Sprinkler System (other than a FPAA101D or FPAA10H System)	Fire-isolated Exits and Fire Control Rooms
Class 9b	2.2 kW/m ²	1.2 kW/m ²	2.2 kW/m ²

Table 3: Fire Hazard Properties Requirements – Wall and Ceiling Linings

+ Table S7C4 of Specification 7 – Wall and Ceiling Lining Materials (Materials Groups Permitted)				
Class of Building	Fire-isolated Exits and Fire Control Rooms	Public Corridors	Specific Areas	Other Areas
Class 9b (Sprinklered)	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3

'Specific Areas' means:

1. for Class 9b buildings, theatres and halls, etc, an auditorium

Table 4: Fire-Resisting Construction – Type B Construction

+ Building Element	+ Class of Building - FRL: (in minutes) Structural adequacy/integrity/insulation			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
EXTERNAL WALL – (Including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it is exposed is:				
For loadbearing parts:				
Less than 1.5m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3m	90/60/30	120/90/60	180/120/90	240/180/120
3 to less than 9m	90/30/30	120/30/30	180/90/60	240/90/60
9 to less than 18m	90/30/-	120/30/-	180/60/-	240/60/-
18m or more	-/-/-	-/-/-	-/-/-	-/-/-
For non-loadbearing parts:				
less than 1.5m	-/90/90	-/120/120	-/180/180	-/240/240
1.5 to less than 3m	-/60/30	-/90/60	-/180/90	-/180/120
3m or more	-/-/-	-/-/-	-/-/-	-/-/-
EXTERNAL COLUMN - Not incorporated in an external wall				
For loadbearing columns:				
Less than 18m	90/-/-	120/-/-	180/-/-	240/-/-
18m or more	-/-/-	-/-/-	-/-/-	-/-/-
Non-loadbearing columns:				
	-/-/-	-/-/-	-/-/-	-/-/-
COMMON WALLS and FIRE WALLS	90/90/90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS				
Fire-resisting lift and stair shafts				
Loadbearing	90/90/90	120/120/120	180/120/120	240/120/120
Non-loadbearing	-/90/90	-/120/120	-/120/120	-/120/120
Bounding public corridors, public lobbies and the like:				
Loadbearing	60/60/60	120/-/-	180/-/-	240/-/-
Non-loadbearing	-/60/60	-/-/-	-/-/-	-/-/-
Between or bounding sole-occupancy units:				
Loadbearing	60/60/60	120/-/-	180/-/-	240/-/-
Non-loadbearing	-/60/60	-/-/-	-/-/-	-/-/-
OTHER LOADBEARING INTERNAL WALLS AND COLUMNS	60/-/-	120/-/-	180/-/-	240/-/-
ROOFS	-/-/-	-/-/-	-/-/-	-/-/-

Notes:

1. Any wall required to have an FRL with respect to integrity and insulation must extend to the underside of the floor next above if that floor has an FRL of at least 30/30/30; or the underside of a ceiling with a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or the underside of a non-combustible roof covering; or 400mm above the roof covering if it is combustible.
2. Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part must achieve the same FRL. Where that part is also required to be non-combustible, the supporting part must also be non-combustible.
3. The method of attaching or installing a finish, lining, ancillary element, or service installation to a building must not reduce the fire-resistance of that element to below that required.
4. A loadbearing internal wall and a loadbearing fire wall must be constructed from concrete, masonry, or a combination of the two.
5. In the storey immediately below the roof, internal columns and internal walls other than fire walls and shaft walls need not comply with S5C21.
6. Any lightweight construction in a fire wall or an internal wall required to have an FRL is to comply with Specification 6.
7. Non-loadbearing parts of an external wall that are more than 18m from a fire source feature need not be fire rated.