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NCC BUILDING CODE OF AUSTRALIA COMPLIANCE ASSESSMENT REPORT

S.456 DA SUBMISSION

PROPOSED CHILD CARE CENTRE

723-727 WARRINGAH ROAD, FORESTVILLE

DATE ► 22 SEPTEMBER 2021

REPORT NO. ► 8245 (BCA) – Rev 02

PREPARED FOR ►MOSTYN COPPER GROUP

PREPARED BY ► AE&D

BCA / Certifiers

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CONTENTS

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1.0 EXECUTIVE SUMMARY AND RECOMMENDATIONS

This report suitable to accompany a S4.56 modification application to Council provides a National Construction Code (NCC) Building Code of Australia ("BCA") 2019 – Amendment 1 assessment of a proposed Childcare Centre, to be located at 723-727 Warringah Road, Forrestville.

The proposed development comprises of a multi- level childcare building, outdoor play areas and external carpark.

The primary purpose of this report is to identify the non-compliance matters contained in the proposed design against the current Deemed-to-Satisfy (DTS) Provisions of the BCA and to provide compliance recommendations to overcome the DTS non-compliances.

1.1 Recommendations

The following is a list of Deemed-to-Satisfy Provisions that should be addressed either by design amendments, additional information **OR** by way of a Performance Solution:

BCA Clause	Deemed-to-Satisfy Provision to be addressed
C1.9 Non - combustible building elements	• **Proposed timber cladding or similar must be demonstrated to be *non-combustible* and achieve minimum FRL's required under Specification C1.1 or subject to fire engineered solution at CC stage.** • **All components of the external wall including sarking and insulation must be non - combustible as determined by AS 1530.1 or current CodeMark certification.**
C2.8 Separation of Classifications in the same storey	• **Ground Floor – separation of classifications between Class 9b, 7b & 7a parts will be required by a fire wall or storey built to the higher FRL applicable to the Class 7b part, i.e. 240/240/240).** • **CC plans to demonstrate BCA DTS compliance or alternatively FRL's could be rationalized under a BCA Performance Solution.**
C2.9 Separation of Classifications in different storeys	• **Ground Floor - The flooring between the storage and carpark classifications (Class 7a & 7b) and childcare above (Class 9b) will need to achieve up to an FRL 240/240/240.** • **CC plans to demonstrate BCA DTS compliance or alternatively FRL's could be rationalized under a BCA Performance Solution.**
C3.2 Protection of openings in external walls	• **Ground Floor - The final discharge door from the fire stair is located within 3m of the western side boundary and will be required to be protected per BCA C3.4.**
D1.2 Number of Exits required	• **A technical non - compliance exists at the Class 9b entry lobby in that a minimum 2 exits is not provided.** • **It is recommended this BCA DTS non - compliance be addressed by a fire engineered BCA Performance Solution in support of the current design.**
D1.6 Dimensions of Exits and	• **Ground Floor - The path of travel width to the pram store area measures less than 1m.** • **To be addressed by design change or BCA DTS non - compliance be**

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BCA Clause	Deemed-to-Satisfy Provision to be addressed
paths of Travel to Exits	**addressed by a fire engineered BCA Performance Solution in support of the current design.**
D1.12 Non-required stairways	• **The non-required non fire isolated stairway connecting Ground Floor to L2 connects 3 storeys which requires the whole of the building to be sprinkler protected.** • **Any variation to BCA DTS non - compliance must be addressed by a fire engineered BCA Performance Solution in support of the current design.**
D1.18 Early childhood centres	• **The building has a RIS of 3 service by 2 required exits on L1 & L2.** • **As L1 & L2 do not provide direct egress to road or open space occupant egress must be assessed under a fire engineered solution at CC stage to demonstrate compliance with the relevant Performance Requirements of the BCA.**
D2.20 Swinging Doors	• **Level 1 - The door swing into the fire-isolated stairways appears to encroach more than 500mm on the required exit width at the landing.** • **Any variation to BCA DTS non - compliance must be addressed by a fire engineered BCA Performance Solution in support of the current design.**
E1.3 Fire Hydrants	• **Fire hydrants to be detailed inside fire isolated stairway at each landing.** • **An FPAS accredited hydrant designer is to design the fire hydrant system and certify the hydrant system complies with AS 2419.1-2005 – including coverage, pressure and flow from street hydrant or booster and pumproom where design requires.** • **Where a booster is required it must be in sight from the main building entry.** • **Where a hydrant pump room is required it must be accessed direct from open space or via a fire isolated stairway.** • **Architectural plans to detail any onsite hydrants, booster and pumproom where required by design.** • **CC plans to demonstrate BCA DTS compliance. Where DTS compliance cannot be achieved a performance based solution by a fire engineer will be required.**
E1.4 Fire Hose Reels	• **An FPAS accredited hose reel designer is to design the hose reel system throughout the building.** • **Architectural plans to detail FHR locations in respect to exit locations.**
E1.5 Sprinklers	• **Sprinkler system to be designed to comply with AS 2118.1-2017 to satisfy requirements of D1.12.** • **Sprinkler alarm valves must be located in a secure room or enclosure which has direct egress to a road or open space.** • **All sprinkler valve rooms and enclosures must be secured with a system suitable for use by the fire brigade.** • **A required sprinkler system must be connected to and activate a building occupant warning system complying with Clause 7 of Specification E2.2a.** • **Where a smoke hazard management system is installed and is actuated by smoke detectors, the sprinkler system must, wherever practicable, be arranged to also activate the smoke hazard management system.**
F1.0	• **Performance Requirements FP1.4, for the prevention of the penetration**

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BCA Clause	Deemed-to-Satisfy Provision to be addressed
Deemed -to-Satisfy Provisions	**of water through external wall, must be complied.** • **There are no Deemed -to Satisfy Provisions for this Performance Solution in respect to external walls.** • **Details demonstrating compliance with this clause by way of a BCA Performance Solution prepared by a Façade Engineer must accompany the construction certificate plans / specification**
F2.3 Facilities for Class 3 to 9 Buildings	• **The kitchen on Level 2 does not detail a kitchen sink, separate handwashing facility and space for cooking facilities.**

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2.0 INTRODUCTION

This report suitable to accompany a S4.56 modification application to Council provides a National Construction Code (NCC) Building Code of Australia ("BCA") 2019 – Amendment 1 assessment of a proposed Childcare Centre, to be located at 723-727 Warringah Road, Forrestville.

This report provides a BCA assessment table in Section 3.0 that summarises the identified non- compliance matters and offers specific recommendations.

2.1 Basis of Report

The key basis of this report is to address compliance with the Building Code of Australia (BCA) 2019 – Amendment 1. The scope of services is limited to Sections C – "Fire Resistance", Section D – "Access & Egress", Section E – "Services & Equipment", Section F "Health and Amenity" and Section J "Energy Efficiency"

This report is based on a desktop assessment of the proposed plans, with specific reference to the following:

- Architectural Plans prepared by Liquid Design Project No.3318 – Drawing Numbers:

Drawing Number	Revision	Dated	Drawing Title
A0000	G	24/06/21	Cover
A0002	F	24/10/18	Site Plan
A2000	P	24/06/21	Proposed Ground Floor Plan
A2001	O	24/06/21	Proposed Level 1
A2002	O	24/06/21	Proposed Level 2
A2005	M	24/06/21	Proposed Roof
A2100	D	04/08/21	Ground Floor – Detailed Plan
A2101	D	04/08/21	Level 1 – Detailed Plan
A2102	D	04/08/21	Level 2 – Detailed Plan
A2105	A	04/08/21	Roof – Detailed Plan
A3000	M	24/06/21	Proposed North/South Elevation
A3001	L	24/06/21	Proposed East/West Elevation
A3500	I	24/06/21	Detailed Elevation North/South
A3501	H	24/06/21	Detailed Elevation West
A3502	H	24/06/21	Detailed Elevation East
A3503	J	24/06/21	Detailed Elevations Courtyard
A4000	J	24/06/21	Proposed Site Sections
A4001	J	24/06/21	Proposed Entry Sections
A9010	I	24/06/21	Visualizations

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- The Building Code of Australia 2019 – Amendment 1 prepared by the Australian Building Codes Board.
- The Guide to the BCA 2019 – Amendment 1, prepared by the Australian Building Codes Board.

2.2 Purpose of the Report

The purpose of this report is to assess the following:

- Assessment under the current Building Code of Australia 2019 – Amendment 1 and list any departures from the BCA 2019.
- Provide recommendations to address identified non-compliances, and/or identify potential performance solutions

2.3 Limitations of the Report

The following is excluded from this assessment:

- Access and facilities for people with disabilities is addressed however compliance with Disability Discrimination Act 1992 (DDA) is outside the scope of this report. It should be noted that BCA compliance does not necessarily meet the requirements of the Disability Discrimination Act (DDA).
- Reporting on hazardous materials, OH&S matters or site contamination
- Assessment of any structural elements or geotechnical matters relating to the building, including any structural or other assessment of the existing fire resistant levels of the building
- Consideration of any fire services operations (including hydraulic, electrical or other systems)
- Assessment of plumbing and drainage installations, including stormwater
- Assessment of mechanical plant operations, electrical systems or security systems
- Heritage significance
- Consideration of energy or water authority requirements
- Consideration of Council's local planning policies
- Environmental or planning issues
- Requirements of statutory authorities
- Pest inspection or assessment building damage caused by pests (general/visual pest invasion or damage will be reported, however invasive or intrusive inspections have not be carried out)
- Sections G, H or I of the BCA are not considered.
- Provision of any construction approvals or certification under Part 4A or Part 5 of the Environmental Planning & Assessment Act 1979.
- Glazing, shading, lighting calculations and the like required by Section J of the BCA not been carried out
- This assessment excludes BCA clauses D3.0-3.12 (Inclusive), F2.4 and E3.6. Refer to separate access consultant report by AED.
- BCA 2019 Amendment 1 does not directly specify slip-resistance classification(s) for all *accessible paths of travel*; however, we highlight the need under AS 1428.1-2009 for all *accessible paths of travel* to have a slip-resistant surface. We recommend you should seek surface finish advice from an independent specialist slip safety consultant.

3.0 BCA ASSESSMENT DATA

This report suitable to accompany DA submission provides a Building Code of Australia (BCA) 2019 – Amendment 1 assessment of a proposed Childcare Centre, to be located at 723-727 Warringah Road, Forrestville.

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The proposed development comprises of a multi- level building, outdoor play areas and external carpark.

BCA Building Classifications:	9b – Assembly Building (Early Childhood Centre) 5 – Office 7a - carpark 7b – Bin Storage (Ground Floor)
Building/s rise in storeys:	3 (determined in accordance with C1.2 of the BCA).
Type of Construction:	A (determined in accordance with C2.2 of the BCA)
Effective Height (m):	<12m
Climate Zone	5 (determined in accordance with Figure A1.1 and Table A1.1.

3.1 Location of Fire Source features

On the assumption that Lot 1 DP 25050, lot 2 DP 25050 and Lot 53 DP 25050 will be consolidated into one as part of the development consent process the *fire source features* for the subject development will be:

- The far side of Warringah Road to the north (>3m);
- The allotment boundary adjoining Forrestville Primary (>3m);
- The private allotment boundary to the east (3.2m approx.)
- The private allotment boundary to the west (1.5m approx.)

3.2 Summary of Fire Services Required

Summarised below are also the likely fire services required for the building under BCA DTS provisions:

- Fire hydrants are required to serve all areas and be provided in accordance with BCA E1.3 and AS 2419.1-2005.
- A fire hose reel system complying with BCA E1.4 and AS 2441-2005 must be provided to serve all areas.
- Portable fire extinguishers must be provided in accordance with BCA E1.6 & Table E1.6 and must be selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444-2001.
- Automatic smoke and fire detection to be provided in accordance with Part E2 and BCA Specification E2.2a.
- Automatic shutdown of any air handling system (other than non-ducted individual room units with a capacity not more than 1000L/s and miscellaneous exhaust air systems installed in accordance with Section 5 and 6 of AS/NZS 1668.1) which does not form part of the smoke hazard management system, on the activation smoke detectors installed complying with Clause 5 of Specification E2.2a.
- An emergency lighting system must be installed throughout the building in accordance with BCA E4.2 of the BCA and AS 2293.1-2018.
- Exit signs must be installed throughout the building in accordance with BCA E4.5, E4.7 and AS 2293.1-2018.
- Sprinkler system to provide coverage throughout in accordance with BCA E1.5 & AS 2118.1- 2017 to address connection of non-required stairway connecting 3 storeys as specified in BCA Clause D1.12.

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BCA ASSESSMENT SUMMARY

The following table details the BCA compliance of the assessed design.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
SECTION B **STRUCTURE**					
B1.1 Resistance to actions				X	The resistance of a building or structure must be greater than the most critical action effect resulting from different combinations of actions, where—(a) the most critical action effect on a building or structure is determined in accordance with B1.2 and the general design procedures contained in AS/NZS 1170.0; and(b)the resistance of a building or structure is determined in accordance with B1.4 ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)***
B1.2 Determination of individual actions				X	The Building must be designed to comply with the provisions of BCA Clause B1.2 and in addition the building or structure must resist loads determined in accordance with the following: (a) Permanent actions: (i)the design or known dimensions of the building or structure; and (ii)the unit weight of the construction; and (iii) AS/NZS 1170.1. (b)Imposed actions: (i)the known loads that will be imposed during the occupation or use of the building or structure; and (ii)construction activity actions; and (iii)AS/NZS 1170.1. (c)Wind, snow and ice and earthquake actions: (i)the applicable annual probability of design event for safety, determined by— (A)assigning the building or structure an Importance Level in accordance with Table B1.2a; and (B)determining the corresponding annual probability of exceedance in accordance with Table B1.2b; and (ii)AS/NZS 1170.2; and (iii)AS/NZS 1170.3 and AS 1170.4 as appropriate; and (iv) in cyclonic areas, metal roof cladding, its connections and immediate supporting members must comply with Specification B1.2; and (v)for the purposes of (iv), cyclonic areas are those determined as being located in wind regions C and D in accordance with AS/NZS 1170.2. (d)Actions not covered in (a), (b) and (c) above:

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(i)the nature of the action. and (ii)the nature of the building or structure; and (iii)the Importance Level of the building or structure determined in accordance with Table B1.2a; and (iv) AS/NZS 1170.1. (e)For the purposes of (d) the actions include but are not limited to (i)liquid pressure action; and (ii)ground water action; and (iii)rainwater action (including ponding action); and (iv) earth pressure action; and (v)differential movement; and (vi) time dependent effects (including creep and shrinkage); and (vii) thermal effects; and (viii) ground movement caused by— (A)swelling, shrinkage or freezing of the subsoil; and (B)landslip or subsidence; and (C) siteworks associated with the building or structure; and (ix) construction activity actions. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)***
B1.4 Determination of Structural Materials and forms of Construction				X	Forms of construction are to be designed to the following Australian Standards as applicable: (a) AS 3700 (b) AS 3600 (c) AS 4100 (d) AS 1288-2006 (see note below) (e) AS 2047 (f) AS 1562.1 (g) AS 1720.1 (h) AS 3660.1 – Termite protection (i) AS 4654.1 and 2 – Waterproofing of external above ground areas (j) AS/NZS 4505 – garage doors and large access doors (k) Table B1.4 – re Glazing in lift shafts that do not require an FRL. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)***
B1.6 Construction in Flood Prone Areas			X		Not applicable to Class 9b buildings

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
SECTION C **FIRE RESISTANCE**					
Part C1 **Fire Resistance & Stability**					
C1.1 Type of Construction Required				X	Refer to Spec C1.1 and Attachment B for Schedule of FRLs for Type A Construction. These are to be certified by the architect and structural engineer as having been met, based on the proposed design. Please note that Specification C1.1 also requires design compliance with the following: 1. 2.4 The method of attaching or installing a finish, lining, *ancillary element* or service installation to a building element must not reduce the fire-resistance of that element to be below that *required*. 2. 2.5 A balcony and any incorporated supporting part, which forms part of the building need not comply with table 3 if it does not form part of the only path of travel to a required exit from the building and in Type A it is situated not more than 2 storeys above the lowest storey providing direct egress to road or open space; and any supporting columns are of non- combustible construction. 3. 2.7 Fire isolated shafts are required to be enclosed at the top and bottom of the shaft with fire rated construction as per specification C1.1. 4. The walls to fire rated shafts must achieve the fire rating from both directions i.e. from inside and outside the shaft. 5. Roof: The roof of the building does not need an FRL, provided the roof covering is non-combustible (as per the concession in Clause 3.5 of Specification C1.1 of the BCA) as RIS does not exceed 3. **<u>Compliance Issues</u>** **The following FRL's apply for Type A construction:** ***External walls - loadbearing (1.5m – 3m)*** **Class 7 & 9b FRL 120/90/90** **Class 7b (Garbage Room) – FRL 240/240/240** ***External walls – non loadbearing (1.5m – 3m)*** **Class 7 & 9b FRL - /90/90** **Class 7b (Garbage Room) – FRL - /240/80** ***Internal columns (loadbearing)*** **Class 7 & 9b FRL 120/ - / -.** ***Floors***

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Class 7 & 9b FRL 120/120/120 ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification or FRL's rationalised under a fire engineered solution at CC stage.***
C1.2 Calculation of Rise In Storeys			X		The proposed building will have a rise in storeys (RIS) of 3.
C1.3 Buildings of Multiple Classifications			X		The type of construction required for a building is determined based on the most fire resisting Type resulting from the application of Table C1.1 on the basis that the classification applying to the top storey applies to all storeys.
C1.4 Mixed Types of Construction			X		The building will need to be of Type A Construction
C1.8 Lightweight Construction			X		Where it is proposed to use *lightweight construction* (within the meaning of the BCA) this must comply with Specification C1.8 if it is used in a wall system— (i) that is required to have an FRL; or (ii) for a lift shaft, stair shaft or service shaft or an external wall bounding a public corridor including a non fire-isolated passageway or non fire-isolated ramp. If lightweight construction is used for the fire-resisting covering of a steel column or the like, and if — (i) the covering is not in continuous contact with the column, then the void must be filled solid, to a height of not less than 1.2 m above the floor to prevent indenting; and (ii) the column is liable to be damaged from the movement of vehicles, materials or equipment, then the covering must be protected by steel or other suitable material. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C1.9 Non - combustible building elements				X	(a) In a building *required* to be of Type A construction, the following building elements and their components must be *non-combustible*: (i) ***External walls* and *common walls*, including all components incorporated in them including the facade covering, framing and insulation**. (ii) The flooring and floor framing of lift pits. (iii) Non-*loadbearing internal walls* where they are *required* to be *fire-resisting*. (b) A *shaft*, being a lift, ventilating, pipe, garbage, or

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					similar *shaft* that is not for the discharge of hot products of combustion, that is non-*loadbearing*, must be of *non-combustible* construction in— (i) a building *required* to be of Type A construction; and (c) A *loadbearing internal wall* and a *loadbearing fire wall*, including those that are part of a *loadbearing shaft*, must comply with **Specification C1.1**. (d) The requirements of **(a)** and **(b)** do not apply to gaskets, caulking, sealants and damp-proof courses. (e) The following materials may be used wherever a *non-combustible* material is *required*: (i) Plasterboard. (ii) Perforated gypsum lath with a normal paper finish. (iii) Fibrous-plaster sheet. (iv) Fibre-reinforced cement sheeting. (v) Pre-finished metal sheeting having a *combustible* surface finish not exceeding 1 mm thickness and where the *Spread-of-Flame Index* of the product is not greater than 0. (vi) Bonded laminated materials where— (A) each lamina, including any core, is *non-combustible*; and (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed2mm; and (C) the *Spread-of-Flame Index* and the *Smoke-Developed Index* of the bonded laminated material as a whole do not exceed 0 and 3 respectively. The following materials, though combustible or containing combustible fibres, may be used wherever a non-combustible material is required within the BCA: (a) Plasterboard. (b) Perforated gypsum lath with a normal paper finish. (c) Fibrous-plaster sheet. (d) Fibre-reinforced cement sheeting. (e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. (f) Bonded laminated materials where— (i) each laminate is non-combustible; and (ii) each adhesive layer does not exceed 1 mm in thickness; and (iii) the total thickness of the adhesive layers does not exceed 2 mm; and (iv) the Spread-of-Flame Index and the Smoke-Developed Index of the laminated material as a whole

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					does not exceed 0 and 3 respectively. **Compliance Issue:** • **Proposed cladding materials and external wall elements must be demonstrated to be *non-combustible* and achieve minimum FRL's required under Specification C1.1 or subject to fire engineered solution at CC stage.** • **All components of the external wall including sarking and insulation must be non - combustible as determined by AS 1530.1 or current CodeMark certification.** ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C1.10 Fire Hazard Properties				X	The fire hazard properties of the following linings, materials and assemblies must comply with Specification C1.10 by way of test reports / certificates provided from a *registered testing authority* (within the meaning of the BCA): (i) Floor linings and floor coverings. (ii) Wall linings and ceiling linings. (iii) Air-handling ductwork. (iv) Lift cars. (v) sarking-type materials (vi) Attachments to floors, ceilings, internal walls and the internal linings of external walls. (vii) Other materials including insulation materials other than sarking-type materials. Except that: 1. Paint or fire-retardant coatings must not be used to achieve compliance with the required fire hazard properties; and 2. The requirements of this clause are exempted to the martials and assemblies listed under C1.10(c)(i) to (xiv) ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C1.11 Performance of External Walls in			X		Not applicable.

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Fire					
C1.13 Fire protected timber: concession			X		Not applicable
C1.14 Ancillary elements				X	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 one of the following: • An ancillary element that is not combustible. • Plumbing fixtures / fitting (i.e. gutter, downpipe, etc). • Grate / grille with less than 2m2 associated with a building service. • Light fitting. • Required sign. • Flashing. • Awning, sunshade, canopy (except ground level and level above) that is not in an exit. • Intercom devices • Wiring • Paint or the like • Gasket / caulking / sealant ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Part C2 **Compartmentation & Separation**					
C2.2 General Floor Area & Volume Limitations	X				Fire compartment floor area and volume limitations do not exceed the limitations set by Table C2.2 for Type A construction.
C2.3 Large Isolated Buildings			X		Not applicable
C2.4 Requirements for Open Space			X		Informational clause only
C2.5 Class 9a & 9c Buildings			X		Not applicable
C2.6 Vertical Separation of openings in				X	This clause applies where the building is not sprinkler protected - All openings located in the external walls of the building

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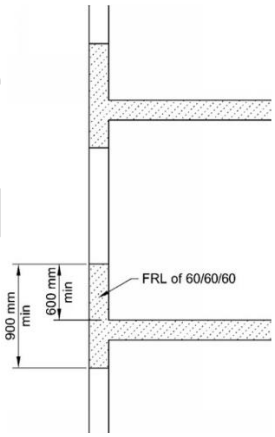
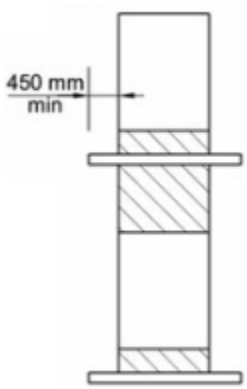
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
external walls					above one another must comply with vertical separation requirements as stipulated under Clause C2.6, that is: • **Vertical spandrel -** They are protected with a 900mm high (FRL 60/60/60) spandrel extending at least 600mm above the separating slab (as per below), or  • **Horizontal projecting slab -** They are provided with a 1.1m horizontal projection (FRL (60/60/60) also extending at least 450mm either side of the opening. Particular attention should be paid to openings being protected via a balcony slab to ensure that the slab extends outwards 1.1m.  ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C2.7 Separation by Fire Walls			X		A fire wall must be constructed as follows: ▪ The fire wall has the relevant FRL prescribed by Specification C1.1 for each of the adjoining parts, and if these are different, the greater FRL; and ▪ Any openings in the fire wall must not reduce the FRL required by SpecificationC1.1 for the fire wall, except where permitted by the Deemed-to-Satisfy

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					Provisions of Part C3; and 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. **This clause will apply where fire walls are used to compartment Ground Floor under C2.8.**
C2.8 Separation of Classifications in the same storey				X	In a building containing different classifications located alongside each other in the same storey: • each building element in that storey must have the higher FRL prescribed in Specification C1.1 for that element for the classifications concerned; or • the parts must be fire wall separated; or • Alternatively, the FRL's may be rationalized by way of a Performance Solution by a fire engineer. **Compliance Issue(s)** • **Ground Floor – separation of classifications between Class 9b, 7b & 7a parts will be required by a fire wall or storey built to the higher FRL applicable to the Class 7b part, i.e. 240/240/240).** ***CC plans to demonstrate BCA DTS compliance or alternatively FRL's could be rationalized under a BCA Performance Solution.***
C2.9 Separation of Classifications in different storeys				X	As different classifications are situated one above the other in adjoining storeys they must be separated by flooring that has an FRL of not less than that prescribed for Type A construction in Specification C1.1 for the classification of the lower storey. **Compliance Issue(s)** • **Ground Floor - The flooring between the storage and carpark classifications (Class 7a & 7b) and childcare above (Class 9b) will need to achieve up to an FRL 240/240/240.** ***CC plans to demonstrate BCA DTS compliance or alternatively FRL's could be rationised under a BCA Performance Solution.***
C2.10 Separation of lifts shafts				X	The lift in this building must be fire separated from the remainder of the building by enclosure in a fire rated shaft which achieves an FRL of not less than that prescribed under Table 3 of Specification C1.1 for the building classification in which the lift shaft passes through (i.e. FRL 120/120/120 loadbearing)

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Openings for lift landing doors and services must be protected in accordance with BCA DTS Part D3. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C2.11 Stairways and lifts in one shaft			X		There are no stairways located in the same shaft as a lift.
C2.12 Separation of Equipment				X	The following equipment must be fire separated from the remaining parts of the building via construction achieving an FRL of not less than 120/120/120 and any access doorway must be fitted with a self-closing fire door having an FRL of not less than -/120/30: • Lift motors and lift control panels (except that when separating a lift shaft from a lift motor room, an FRL of not less than 120/-/- is required); • Emergency generators used to sustain emergency equipment operating in the emergency mode; • Central smoke control plant; • Boilers; • Hydrant pump room • a battery or batteries installed in the building that have a voltage exceeding 24 volts and a capacity exceeding 10 ampere hours; ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.***
C2.13 Electrical Supply				X	Any proposed substation located within the building must be separated as follows or as per Ausgrid requirements – (i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and (ii) have the doorway in that construction protected with a self-closing fire door having an FRL of not less than –/120/30. Any proposed main switchboard located within the building (and which sustains emergency equipment operating in the emergency mode) must – (i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and

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					(ii) have any doorway in that construction protected with a self-closing fire door having an FRL of not less than –/120/30. Electrical conductors located within the building which supply – (i) a substation located within the building which supplies a main switchboard covered above; or (ii) a main switchboard covered above, must— (iii) have a classification in accordance with AS/NZS 3013-2005 of not less than— (A) if located in a position that could be subject to damage by motor vehicles — WS53W; or (B) otherwise — WS52W; or (iv) be enclosed or otherwise protected by construction having an FRL of not less than 120/120/120 All switchboards in the electrical installation, which sustain the electricity supply to the emergency equipment, must be constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of a fault from the non-emergency equipment switchgear. Emergency equipment includes but it is not limited to – (i) Fire hydrant booster pumps (ii) Pumps for automatic sprinkler systems, water spray, chemical fluid suppression systems or the like. (iii) Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building. (iv) Air handling systems designed to exhaust and control the spread of fire and smoke. (v) Emergency lifts. (vi) Control and indicating equipment. (vii) Sound systems and intercom systems for emergency purposes. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C2.14 Public corridors in Class 2 & 3			X		Not applicable

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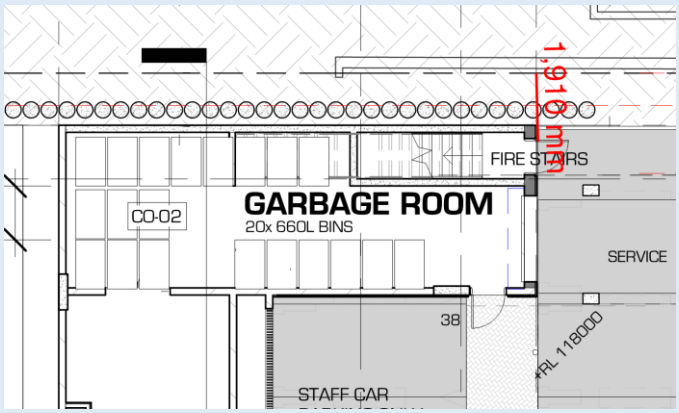
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Buildings					
Part C3 **Protection of Openings**					
C3.2 Protection of openings in external walls		X			Openings in an external wall that is required to have an FRL must be protected in accordance with C3.4: • if the distance between the opening and the fire-source feature is less than 3 m from a side or rear boundary; or • less than 6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a storey at or near ground level; or • less than 6 m from another building on the allotment that is not Class 10; and if required to be protected under (a), not occupy more than 1/3 of the area of the external wall of the storey in which it is located unless they are in a Class 9b building used as an open spectator stand. **Compliance Issue(s)** ***Ground Floor*** • **The final discharge door from the fire stair is located within 3m of the western side boundary and will be required to be protected per BCA C3.4.**  ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C3.3 Separation of external walls and associated openings in different fire compartments			X		Not applicable - there are no associated openings in a different fire compartments within the building.
C3.4 Acceptable Methods of Protection				X	(a) Where protection is required to doorways and windows and other openings they must be protected as follows:

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					(i) Doorways - Internal or external wall wetting sprinklers as appropriate used with doors that are self-closing or automatic closing; or - -/60/30 fire doors that are self-closing or automatic closing (ii) Windows - Internal or external wall wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position or; - -/60- fire windows that are automatic closing or permanently fixed in the closed position or - -/60- automatic closing fire shutters. (iii) Other openings – - Excluding voids – internal or external wall wetting sprinklers as appropriate or - Construction having a FRL not less than -/60/-. b) Fire doors, fire windows and fire shutters must comply with Specification C3.4. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C3.5 Doorways in Fire Walls			X		Not applicable – there are no proposed fire walls.
C3.6 Sliding Fire Doors			X		Not applicable - no sliding fire doors proposed.
C3.7 Protection of Doorways in horizontal exits			X		Not applicable - no horizontal exits proposed.
C3.8 Openings in fire isolated exits				X	Doors to fire stairs must be self or auto closing -/60/30 fire doors. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C3.9 Service Penetrations in fire-isolated exits				X	The fire isolated exits are not to be penetrated by any services **other** than water supply pipes for fire services OR electrical wiring associated with: • a lighting, detection, or pressurization system serving the exit; or • a security, surveillance or management system serving the exit; or • an intercommunication system or an audible or

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					visual alarm system in accordance with D2.22 (it is noted that re-entry from fire-isolated exits will not be required); or • the monitoring of hydrant or sprinkler isolating valves ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C3.10 Openings in Fire isolated lift shafts				X	• Lifts landing doors are required to be fire doors with an FRL of -/60/- that comply with AS 1735.11-1986, and be set to remain closed except when discharging or receiving, passengers, goods or vehicles. • Lift indicator panels must also be fire rated in accordance with this clause. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C3.11 Bounding Construction			X		Not applicable.
C3.12 Openings in floors and ceilings for services				X	Where services pass through a floor which is required to achieve a FRL or a ceiling required to have a RISF, the service must be enclosed within a fire resisting shaft or fire protected in accordance with Clause C3.15. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C3.13 Openings in Shafts				X	An opening in a wall providing access to a ventilating, pipe, garbage or other service shaft must be fire protected in accordance with this clause. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C3.15 Openings for Service Installations				X	Where services pass through an element which is required to achieve a FRL (other than an external wall or roof), the service must be fire protected in accordance with this clause. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C3.16 Construction Joints				X	Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS 1530.4 to achieve the required FRL. ***Details demonstrating compliance with this clause must be incorporated into the construction***

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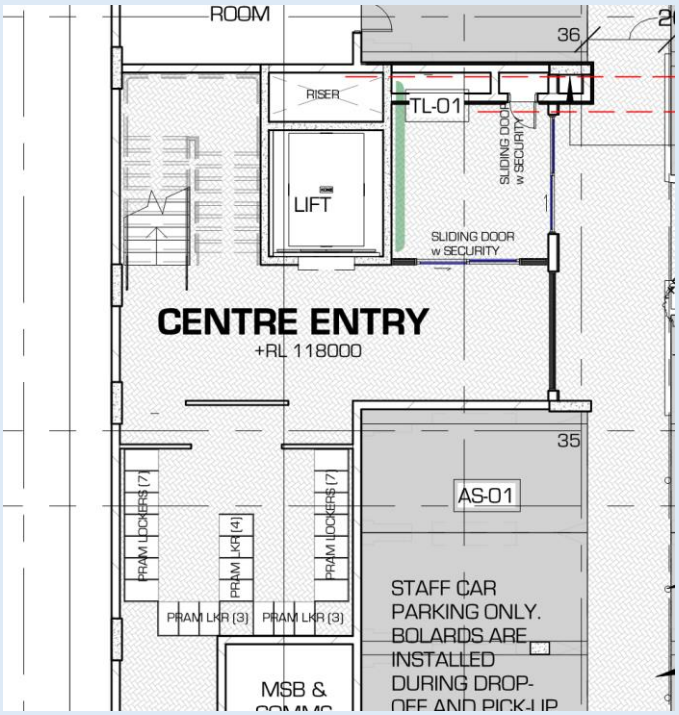
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					certificate plans / specification
SECTION D **ACCESS & EGRESS**					
Part D1 **Provision for Escape**					
D1.2 Number of Exits required		X			(a) **All buildings** — Every building must have at least one exit from each storey and (d) **Class 9 buildings** — 2 exits must be provided from the following: • Each storey in a Class 9b building used as an early childhood centre. (g) **Access to exits** — Without passing through another sole-occupancy unit every occupant of a storey or part of a storey must have access to— • an exit; or • at least 2 exits, if 2 or more exits are required. **Compliance Issue(s)** ***Ground Floor*** • **A technical non - compliance exists at the Class 9b entry lobby in that a minimum 2 exits is not provided.**  ***It is recommended this BCA DTS non - compliance be addressed by a fire engineered BCA Performance***

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Solution in support of the current design.
D1.3 When Fire Isolated exits are required			X		The two stairs serving as required exits from Level 1 & 2 are indicated as being fire-isolated as they connect and pass through more than 2 consecutive storeys.
D1.4 Exit Travel Distances	X				**(c) Class 5, 6, 7, 8 or 9 buildings** — Subject to (d), (e) and (f)— (i) no point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m; and (ii) in a Class 5 or 6 building, the distance to a single exit serving a storey at the level of access to a road or open space may be increased to 30 m. ***Plan assessment indicates BCA DTS compliance is achieved.***
D1.5 Distance Between Alternate Exits	X				Exits that are required as alternative means of egress must be— (a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas; and (b) not less than 9 m apart; and (iii) in all other cases — 60 m apart; and (d) located so that alternative paths of travel do not converge such that they become less than 6 m apart. ***It is noted that D1.2 non - compliance is recommended to be addressed by Performance Solution noting an additional exit door on Ground Level would be less than 9m apart.***
D1.6 Dimensions of Exits and paths of Travel to Exits		X			In a required exit or path of travel to an exit— (a) the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm; and (b) the unobstructed width of each exit or path of travel to an exit, except for doorways, must be not less than 1m as based on the populations of places an staff each storey does not accommodate more than 100 persons **<u>Compliance Issue(s)</u>** ***Ground Floor*** • **The path of travel width to the pram store area measures less than 1m.**

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					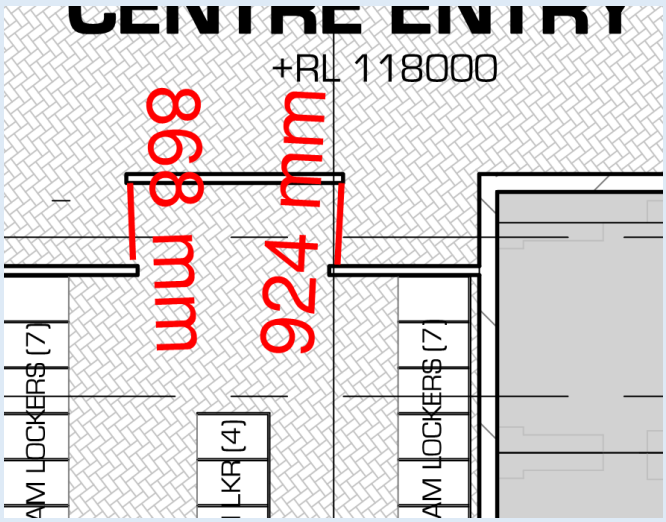 ***To be addressed by design change or BCA DTS non - compliance be addressed by a fire engineered BCA Performance Solution in support of the current design.***
D1.7 Travel via Fire Isolated Exits	X				• D1.7(a) A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from— (i) a public corridor, public lobby or the like; or (ii) a sole-occupancy unit occupying all of a storey; or (iii) a sanitary compartment, airlock or the like. • D1.7(b) Each fire-isolated stairway or fire-isolated ramp must provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway— (i) to a road or open space; or (ii) to a point— (A) 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 (B) from which an unimpeded path of travel, not further than 20 m, is available to a road or open space; or (iii) into a covered area that— (A) (A) adjoins a road or open space; (B) and is open for at least 1/3 of its perimeter; and (C) has an unobstructed clear height throughout, including the perimeter

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					openings, of not less than 3 m; and (D) provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6 m. • D1.7 (c) Where a path of travel from the point of discharge of a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building, measured horizontally at right angles to the path of travel, that part of the wall must have— (i) an FRL of not less than 60/60/60; and (ii) any openings protected internally in accordance with C3.4, for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser. • D1.7 (d) If more than 2 access doorways, not from a sanitary compartment or the like, open to a required fire-isolated exit in the same storey— (i) a smoke lobby in accordance with D2.6 must be provided; or (ii) the exit must be pressurised in accordance with AS/NZS 1668.1. ***Plan assessment indicates BCA DTS compliance is achieved noting the discharge height at the discharge point on the western stair measures not less than 3m in height.***
D1.8 External Stairways or ramps in lieu of Fire Isolated Stairs			X		Not applicable as no external stairways or ramps proposed.
D1.9 Travel by non-fire-isolated stairs			X		Not applicable – no non fire isolated stairways serve as a required exit.
D1.10 Discharge from Exits				X	a) An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it. (b) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than— (i) the minimum width of the required exit; (ii) or 1 m, whichever is the greater. (***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***

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D1.11 Horizontal Exits			X		Not applicable.
D1.12 Non-required stairways, ramps or escalators		X			A non-required stairway must not connect more than – (i) 3 storeys if each of those storeys is provided with a sprinkler system complying with specification E1.5 throughout; or (ii) 2 storeys, Provided that in each case, those storeys must be consecutive, and one of those storeys is situated at a level at which there is direct egress to a road or open space; and Must not connect, directly or indirectly, more than 2 storeys at any level in a Class 9 building and those storey must be consecutive. **Compliance Issue(s)** • **The non-required non fire isolated stairway connecting Ground Floor to L2 connects 3 storeys which requires the whole of the building to be sprinkler protected.** ***Any variation to BCA DTS non - compliance must be addressed by a fire engineered BCA Performance Solution in support of the current design.***
D1.13 Number of Persons Accommodated Note NSW Table D1.13 Area per person according to use			X		The proposed occupancy numbers have been provided as follows – • **Children – 146 (0 to 5 years)** • **Staff – 26 (estimate)**
D1.14 Measurement of Distances			X		The nearest part of an exit means in the case of— (a) a fire-isolated stairway, fire-isolated passageway, or fire-isolated ramp, the nearest part of the doorway providing access to them; and (b) a non-fire-isolated stairway, the nearest part of the nearest riser; and (c) a non-fire-isolated ramp, the nearest part of the junction of the floor of the ramp and the floor of the storey; and (d) a doorway opening to a road or open space, the nearest part of the doorway; and (e) a horizontal exit, the nearest part of the doorway. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
D1.15 Method of Measurement			X		Informational clause only
D1.16 Plant Rooms and lift Motor Rooms: Concession			X		Not applicable to this building.
D1.17 Access to lift pits			X		Access to lift pits must— (a) where the pit depth is not more than 3 m, be through the lowest landing doors; or (b) where the pit depth is more than 3 m, be provided through an access doorway complying with the following: (i) In lieu of D1.6, the doorway must be level with the pit floor and not be less than 600 mm wide by 1980 mm high clear opening, which may be reduced to 1500 mm where it is necessary to comply with (ii). (ii) No part of the lift car or platform must encroach on the pit doorway entrance when the car is on a fully compressed buffer. (iii) Access to the doorway must be by a stairway complying with AS 1657. (iv) In lieu of D2.21, doors fitted to the doorway must be— (A) of the horizontal sliding or outwards opening hinged type; and (B) self-closing and self-locking from the outside; and (C) marked on the landing side with the letters not less than 35 mm high: **"DANGER LIFTWELL – ENTRY OF UNAUTHORIZED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES"** ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)***
D1.18 Early childhood centres		X			(a) Every part of a Class 9b early childhood centre must be wholly within a storey that provides direct egress to a road or open space. (b)The requirements of (a) do not apply in a building with a rise in storeys of not more than 2, where the Class 9b early childhood centre is the only use in that building. **DTS Compliance matters -** • **The building has a RIS of 3 service by 2**

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					required exits on L1 & L2. • **As L1 & L2 do not provide direct egress to road or open space occupant egress must be assessed under a fire engineered solution at CC stage to demonstrate compliance with the relevant Performance Requirements of the BCA.**
Part D2 **Construction of Exits**					
D2.2 Fire-Isolated stairways and ramps				X	The fire isolated stairways must be constructed of non-combustible materials and constructed so that if there is local failure it will not cause structural damage to, or impair the fire-resistance of the shaft. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)***
D2.3 Non-fire Isolated stairways and ramps				X	The non-fire isolated stairways must be constructed according to D2.2, or only of- (a) reinforced or prestressed concrete; or (b) steel in no part less than 6 mm thick; or (c) timber that— (i) has a finished thickness of not less than 44 mm; and (ii) has an average density of not less than 800 kg/m3 at a moisture content of 12%; and (iii) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue". ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.4 Separation of Rising and Descending Stairs			X		Not applicable
D2.5 Open Access ramps and balconies			X		Not applicable.
D2.6 Smoke Lobbies			X		Not applicable.
D2.7 Installations in Exits and Paths of Travel				X	In this building – • Access to service shafts and services other than to fire-fighting or detection equipment as permitted in

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					the Deemed-to-Satisfy Provisions of Section E, must not be provided from a fire-isolated stairway. • Gas or other fuel services must not be installed in a required exit • Services or equipment comprising of electricity meters, distribution boards, telecommunications distribution boards or equipment, electrical motors or other motors located within the path of travel to an exit must be enclosed with non-combustible construction or a fire protective covering with doorways suitably sealed against smoke spread from the enclosure. • Electrical wiring may be installed in a fire isolated exit, but only where associated with a lighting, detection, pressurisation, security, surveillance, intercommunication, or hydraulic fire services monitoring valves. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.8 Enclosure of Space Under Stairs and ramps				X	Any space under a non-fire-isolated stair must be enclosed in 60-minute fire rated construction. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.10 Pedestrian Ramps				X	All pedestrian ramps are to have a non-slip finish complying with AS 4586-2013 Slip resistance classification of new pedestrian surface materials. Clause contains additional information relevant to fire isolation and access requirements applicable to pedestrian ramps. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.11 Fire-Isolated Passageways				X	The enclosing construction of a fire isolated passageway must have an FRL when tested for fire outside the passageway in another part of the building, ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.13 Goings & Risers				X	Stairways to achieve compliance with this clause relevant to going and riser dimensions. Stairways to achieve constant risers & goings except:- Treads must have a surface with a slip-resistant classification not less than that listed in Table D2.14 when tested in accordance with *AS 4586-2013 Slip*

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					resistance classification of new pedestrian surface materials. BCA 2019 does not directly specify slip-resistance classification(s) for all *accessible paths of travel*; however, we highlight the need under AS 1428.1-2009 for all *accessible paths of travel* to have a slip-resistant surface. We recommend you should seek surface finish advice from an independent specialist slip safety consultant. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.14 Landings				X	Landings must not be less than 750mm long and have a slip-resistant classification not less than that listed in Table D2.14 when tested in accordance with *AS 4586-2013 Slip resistance classification of new pedestrian surface materials.* BCA 2019 does not directly specify slip-resistance classification(s) for all *accessible paths of travel*; however, we highlight the need under AS 1428.1-2009 for all *accessible paths of travel* to have a slip-resistant surface. We recommend you should seek surface finish advice from an independent specialist slip safety consultant. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.15 Thresholds				X	Generally the threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaves unless the doorway is in a building required to be accessible by Part D3, and in which case the doorway opens to a road or open space and is provided with a threshold ramp or step ramp in accordance with AS 1428.1. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.16 Balustrades and other Barriers Note NSW D2.16				X	Balustrades must be provided to stairs and balconies, driveway ramps etc where there is a fall of more than 1m. Balustrades in fire-isolated stairways shall comply with D2.16 (g) and (h)(i) and all other balustrades shall comply with D2.16(g) and (h)(ii). ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.17				X	All stairways and ramps must be provided with a

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Handrails					handrail as per this clause. A required exit serving an area required to be accessible must be designed and constructed to comply with Clause 12 of AS 1428.1, except that Clause 12(d) does not apply to a handrail required by (a)(iii)(B). All ramps with a gradient steeper than 1:20 or more must be provided with a handrail as per this clause, including any driveway ramps that form paths of travel to the street. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.18 Fixed Platforms, walkways and ladders					Not applicable - no plant areas shown that are required to be accessed via stairs or ladders.
D2.19 Doorways & Doors				X	A doorway serving as a require exit or forming part of a required exit– • Must not be fitted with a revolving door; and • **Must not be fitted with a sliding door unless –** **(A) It leads directly to a road or open space; and** **(B) The door is able to be opened manually under a force of not more than 110 N; and** (iv) If fitted with a door which is power-operated – (A) It must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and (B) If it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door. • A power-operated door in a path of travel to a required exit, except for a door in a patient care area of a Class 9a health-care building as provided in (b), must be able to open manually under a force of not more than 110 N if there is a malfunction or failure of the power source. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.***
D2.20		X			A swing door in a required exit must swing in the

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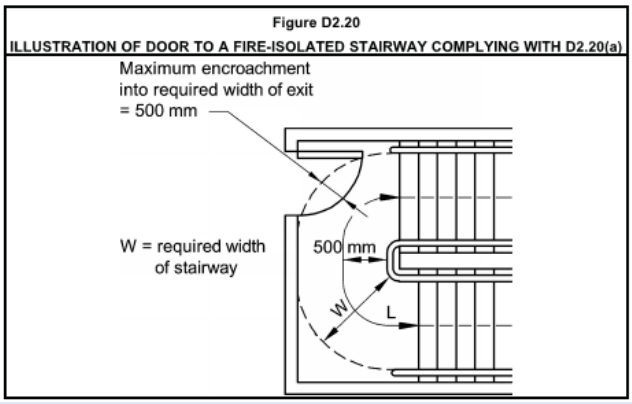
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Swinging Doors					direction of egress. **Compliance Issue(s)** **Level 1** • **The door swing into the fire-isolated stairways appears to encroach more than 500mm on the required exit width at the landing.**  ***CC plans to demonstrate BCA compliance.***
D2.21 Operation of Latch		X			All doors in a required exit or forming part of a required exit AND doors in a path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress, by single hand downward action or pushing action on a single device which is located between 900mm and 1.1 m from the floor and if serving an area required to be accessible by Part D3 – A. be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and B. have a clearance between the handle and the back plate or door face at the center grip section of the handle of not less than 35mm and not more than 45mm; or C. a single hand pushing action on a single device which is located between 900mm and 1.2m from the door. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.22 Re-entry from Fire isolated exits			X		Not applicable to this building design.
D2.23 Signs on Doors				X	(a) A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to—

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(i) a required— (A) fire door providing direct access to a fire-isolated exit, except a door providing direct egress from a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building; and (B) smoke door, on the side of the door that faces a person seeking egress and, if the door is fitted with a device for holding it in the open position, on either the wall adjacent to the doorway or both sides of the door; and (ii) a— (A) fire door forming part of a horizontal exit; and (B) smoke door that swings in both directions; and (C) door leading from a fire isolated exit to a road or open space, on each side of the door. (b) A sign referred to in (a) must be in capital letters not less than 20 mm high in a colour contrasting with the background and state— (i) for an automatic door held open by an automatic hold-open device— “FIRE SAFETY DOOR—DO NOT OBSTRUCT”; or (ii) for a self-closing door— “FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN”; or (iii) for a door discharging from a fire-isolated exit— “FIRE SAFETY DOOR—DO NOT OBSTRUCT”. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.24 Protection of openable windows				X	• A window opening must be provided with protection, if the floor below the window is 2 m or more above the surface beneath in— - a bedroom in a Class 2 or 3 building or Class 4 part of a building; or - **a Class 9b early childhood centre.** • **Where the lowest level of the window opening is less than 1.7 m above the floor, a window opening covered by (a) must comply with the following:** - **The openable portion of the window must be protected with—** **(A) a device capable of restricting the window opening; or**

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					(B) a screen with secure fittings. - A device or screen required by (i) must— (A) not permit a 125 mm sphere to pass through the window opening or screen; and (B) resist an outward horizontal action of 250 N against the— (aa) window restrained by a device; or (bb) screen protecting the opening; and (C) have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden. • A barrier with a height not less than 865 mm above the floor is required to an openable window— - in addition to window protection, when a child resistant release mechanism is required by (b)(ii)(C); and - where the floor below the window is 4 m or more above the surface beneath if the window is not covered by (a). • A barrier covered by (c) except for (e) must not— - permit a 125 mm sphere to pass through it; and - have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2.25 Timber stairways concession			X		Not applicable to this building.
SECTION E SERVICES & EQUIPMENT					
Part E1 Fire Fighting Equipment					
E1.3 Fire Hydrants		X			A hydrant system complying with AS 2419.1-2005 must be provided to the whole of the building. **Compliance Issue(s):** • **Fire hydrants to be detailed inside fire isolated stairway at each landing.** • **An FPAS accredited hydrant designer is to design the fire hydrant system and certify**

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					the hydrant system complies with AS 2419.1-2005 – including coverage, pressure and flow from street hydrant or booster and pumproom where design requires. • **Where a booster is required it must be in sight from the main building entry.** • **Where a hydrant pump room is required it must be accessed direct from open space or via a fire isolated stairway.** • **Architectural plans to detail any onsite hydrants, booster and pumproom where required by design.** ***CC plans to demonstrate BCA DTS compliance. Where DTS compliance cannot be achieved a performance based solution by a fire engineer will be required.***
E1.4 Fire Hose Reels		X			A fire hose reel system must be provided – • to serve the whole building where one or more internal fire hydrants area installed; or • where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500m². • The fire hose reel system must – • Have hose reels installed in accordance with AS 2441; and • Provide hose reels to serve only the storey in which they are located except a sole occupancy unit of not more than 2 storeys in a Class 6, 7, 8 and 9 building may be served by a single fire hose reel located at the level of egress from that sole occupancy unit provided the fire hose reel can provide coverage to the whole of the sole occupancy unit. • Fire hose reels must be located internally, externally or in combination, to achieve the system coverage as specified in AS2441. • In achieving system coverage, one or a combination of the following criteria for individual internally located fire hose reels must be met in determining the layout of any fire hose reel system: • Fire hose reels must be located adjacent to an internal hydrant (other than one in a fire isolated exit). Except that a fire hose reel need not be located adjacent to every fire hydrant, provided system coverage can be achieved. • Fire hose reels must be located within 4m of an exit, except that a fire hose reel need not be located adjacent to every exit, provided system coverage can be achieved.

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					• Where system coverage is not achieved by compliance with (i) and (ii), additional fire hose reels may be located in paths of travel to an exit to achieve the required coverage. • Fire hose reels must be located so that the fire hose will not pass through doorways fitted with fire or smoke doors, except • Doorways in walls referred to in C2.5(a)(v) in a Class 9a building and C2.5(b)(iv) in a Class 9c building, separating ancillary use areas of high potential fire hazard; and • Doorways in walls referred to in C2.12 or C2.13 separating equipment or electrical supply systems; and • Doorways opening into shafts referred to in C3.13. • Where the normal water supply cannot achieve the flow and pressures required by AS 2441, or is unreliable – (i) A pump; or (ii) Water storage facility; or (iii) Both a pump and water storage facility, • Must be installed to provide the minimum floor and pressures required by clause 6.1 of AS 2441. **Design Detail Required for Further Compliance Review:** • **An FPAS accredited hose reel designer is to design the hose reel system throughout the building.** • **Architectural plans to detail FHR locations in respect to exit locations.** ***Hydraulic Services Design Certification and associated plans must be incorporated into the construction certificate specification***
E1.5 Sprinklers				X	A sprinkler system is required to be installed in this building complying with Specification E1.5 where required to comply with the requirements of BCA D1.3. **Design Detail Required for Further Compliance Review:** • **Sprinkler system to be designed to comply with AS 2118.1-2017 to satisfy requirements of D1.12.** • **Sprinkler alarm valves must be located in a secure room or enclosure which has direct egress to a road or open space.** • **All sprinkler valve rooms and enclosures must be secured with a system suitable for**

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					use by the fire brigade. • **A required sprinkler system must be connected to and activate a building occupant warning system complying with Clause 7 of Specification E2.2a.** • **Where a smoke hazard management system is installed and is actuated by smoke detectors, the sprinkler system must, wherever practicable, be arranged to also activate the smoke hazard management system.**
E1.6 Portable Fire Extinguishers				X	Portable fire extinguishers must be provided in accordance with Table E1.6 of the BCA and must be selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444-2001. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
E1.8 Fire Control Centre			X		Not applicable
E1.9 Fire Precautions during construction				X	• During construction, not less than one portable fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required / temporary exit; and • After the building has reach an effective height of 12m, the required fire hydrants and fire hose reels must be operational on all floor / roof covered storeys, except for the 2 uppermost storeys; and • All required booster connections must be installed. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Part E2 Smoke Hazard Management					
E2.2 General Requirements (inclusive of Table E2.2a / Table E2.2b & NSW amendments)				X	In a Class 9b building (other than a school) or part of a building having a rise in storeys of more than 2; or the building must be provided with— • in each required fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp, an automatic air pressurization system for fire-isolated exits in accordance with AS 1668.1; or • a zone pressurization system between vertically separated fire compartments in accordance with AS 1668.1, if the building has more than one fire

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					compartment; or • an automatic smoke detection and alarm system complying with Specification E2.2a; or • sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5. <u>Automatic shutdown (NSW Provision)</u> The childcare centre and gym must be provided with automatic shutdown of any air-handling system (other than non-ducted individual room units with a capacity not more than 1000 l/s and miscellaneous exhaust air systems installed in accordance with Sections 5 and 11 of AS/NZS 1668.1-2015) which does not form part of the smoke hazard management system, on the activation of— (i) smoke detectors installed complying with Clause 5 of Specification E2.2a; and (ii) any other installed fire detection and alarm system, including a sprinkler system complying with Specification E1.5. ***Appropriate Design Certification must be incorporated into the construction certificate specification***
E2.3 Provision for Special Hazards				X	Not applicable.
Part E3 Lift Installations					
E3.1 Lift installations				X	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1 ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
E3.2 Stretcher Facility in Lifts			X		Not applicable as the lift does not serve a storey above an effective height of 12m.
E3.3 Warning Against the use of lifts in Fire				X	Warning signs indicating "**DO NOT USE LIFTS IF THERE IS A FIRE**" shall be displayed near every call button for a passenger lift or group of lifts throughout a building as per E3.3. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
E3.5				X	Access and egress to and from lift-well landings must comply with the Deemed-to-Satisfy Provisions of Section

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Landings					D. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
E3.6 Facilities for People with Disabilities			X		Refer to separate access report.
E3.7 Fire Service Controls			X		Not applicable as the lift does not serve a storey above an effective height of 12m.
E3.8 Aged Care Buildings			X		Not applicable.
E3.9 Fire service recall operation switch			X		Not applicable to this building.
E3.10 Lift car fire service drive control switch			X		Not applicable to this building.
Part E4 Emergency Lighting, Exit Signs and Warning Systems					
E4.2 Emergency Lighting Requirements				X	An emergency lighting system must be installed— • in every fire-isolated stairway, fire-isolated passageway or fire-isolated ramp; and • in every storey of a Class 7 & 9 building where the storey has a floor area more than 300 m^2— - in every passageway, corridor, hallway, or the like, that is part of the path of travel to an exit; and - in any room having a floor area more than 100 m^2 that does not open to a corridor or space that has emergency lighting or to a road or open space; and - in any room having a floor area more than 300 m^2; and - in every passageway, corridor, hallway, or thein every required non-fire-isolated stairway; and • in a sole-occupancy unit in a Class 9 building if— - the floor area of the unit is more than 300 m^2; and - an exit from the unit does not open to a road or open space or to an external stairway, passageway, balcony or ramp, leading directly to a road or open space; and • in every room or space to which there is public

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					access in every storey in a Class 9b building if— - the floor area in that storey is more than 300 m^2; or - any point on the floor of that storey is more than 20 m from the nearest doorway leading directly to a stairway, ramp, passageway, road or open space; or - egress from that storey involves a vertical rise within the building of more than 1.5 m, or any vertical rise if the storey concerned does not admit sufficient light; or - the storey provides a path of travel from any other storey required to have emergency lighting. ***Electrical Design Certification must be incorporated into the construction certificate specification***
E4.3 Measurement of Distance			X		Distances, other than vertical rise, must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.
E4.4 Design and Operation of Emergency Lighting				X	The emergency lighting system must comply with AS 2293.1-2018. ***Electrical Design Certification must be incorporated into the construction certificate specification***
E4.5 Exit Signs				X	Exit signs must be provided to doors serving as or forming part of a required throughout the buildings in accordance with AS 2293.1-2018. ***Electrical Design Certification must be incorporated into the construction certificate specification and exit sign locations must be illustrated on the architectural floor plans***
E4.6 Direction Signs (inclusive of NSW E4.6)				X	If an exit is not readily apparent to persons occupying or visiting the building then directional exit signs must be installed in appropriate positions. ***Electrical Design Certification must be incorporated into the construction certificate specification and directional exit sign locations must be illustrated on the architectural floor plans***
E4.7 Class 2 & 3 Buildings & Class 4 Parts: Exemption			X		Not applicable.
E4.8 Design & Operation of Exit Signs				X	Exit signs must comply with: • AS 2293.1-2018; or For a photoluminescent exit sign, Specification E4.8.

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E4.9 Emergency Warning & Intercommunication Systems			X		Not applicable.
SECTION F **HEALTH & AMENITY**					
Part F1 Damp & Weatherproofing					
F1.0 Deemed -to-Satisfy Provisions				X	Performance Requirements FP1.4, for the prevention of the penetration of water through external wall, must be complied. There are no Deemed -to Satisfy Provisions for this Performance Solution in respect to external walls. ***Details demonstrating compliance with this clause by way of a BCA Performance Solution prepared by a Façade Engineer must accompany the construction certificate plans / specification***
F1.1 Stormwater Drainage				X	Stormwater drainage must comply with AS/NZS 3500.3-2015. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F1.4 External above ground membranes				X	Any external above ground membranes must be waterproofed as per AS 4654 Parts 1 and 2-2012. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F1.5 Roof coverings				X	Information clause relevant to the Australian Standards applicable to different types of roof coverings. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F1.6 Sarking				X	Sarking-type materials used for weatherproofing must comply with AS/NZS 4200 Part 1 and 2-1994. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F1.7 Waterproofing of wet area				X	Wet areas must be waterproofed in accordance with AS 3740-2010 and F1.7 of the BCA. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***

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F1.9 Damp-proofing				X	Where a damp-proof course is required, it must consist of a material that complies with AS/NZS 2904-1995; or impervious sheet material in accordance with AS 3660.1-2014 ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F1.10 Damp-proofing of floors on the ground				X	If a 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 2870-2011 (N/A to areas that do not require weatherproofing – refer specific clause exemptions). ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F1.11 Provision of Floor Wastes			X		Not applicable
F1.12 Sub Floor Ventilation				X	Clause relevant to the ventilation of sub-floor spaces located between a suspended floor of a building and the ground. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F1.13 Glazed Assemblies				X	Refer to Part B1.
Part F2 Sanitary & Other Facilities					
F2.2 Calculation of number of occupants and fixtures			X		(a) The number of persons accommodated must be calculated according to D1.13 if it cannot be more accurately determined by other means. (b) Unless the premises are used predominantly by one sex, sanitary facilties must be provided on the basis of equal numbers of males and females. (c) In calculating the number of sanitary facilities to be provided under F2.1 and F2.3, a unisex facility required for people with a disability may be counted once for each sex. (d) For the purposes of this Part, a unisex facility comprises one closet pan, one washbasin and means of disposal of sanitary towels. **AED Comment** **Refer to Part D1.13 for estimated population of the**

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					building to determine sanitary facility numbers of F2.3.
F2.3 Facilities for Class 3 to 9 Buildings				X	a) Except where permitted by (b), (c), (f), F2.4 (a) and F2.4 (b), separate sanitary facilities for males and females must be provided for Class 5, 7 and 9 buildings in accordance with Table F2.3. (b) If not more than 10 people are employed, a unisex facility may be provided instead of separate facilities for each sex. (c) If the majority of employees are of one sex, not more than 2 employees of the other sex may share toilet facilities if the facilities are separated by means of walls, partitions and doors to afford privacy. (d) Employees and the public may share the same facilities in a Class 9b building provided the number of facilities provided is not less than the total number of facilities required for employees plus those required for the public. (e) Adequate means of disposal of sanitary towels must be provided in sanitary facilities for use by females. (h) A Class 9b early childhood centre must be provided with- (i) a kitchen or food preparation area with a kitchen sink, separate hand washing facilities, space for a refrigerator and space for cooking facilities with: - 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 (ii) one bath, shower or shower-bath and (iii) if the centre accommodates children younger than 3 years old – - a laundry facility comprising a washtub and space in the same room as the washing machine, and - a bench type baby bath, which is within 1m of a nappy change bench, and - a nappy changing bench which – - is within 1m of a separate adult hand washing facilities and bench type baby bath and - must be not less than 0.9m² on 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,

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					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. The following sanitary facilities have been assessed and complies as required based on population: ***<u>Compliance Issue(s):</u>*** • **The kitchen on *Level 2* does not detail a kitchen sink, separate handwashing facility and space for cooking facilities.** ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.*** ***Where BCA DTS is not achievable it must be dealt with under a Performance Solution at CC stage.***

Building classification	Class 9b - early childhood centres						
			Required sanitary facilities				
Gender	Design Occupancy	User Group	Closet Pans	Urinals	Washbasins	Showers	Baths
Male	13	employees	1	1	1	NA	NA
Female	13	employees	1	NA	1	NA	NA
No gender applies	73	children	5	NA	5	Refer to notes	Refer to notes
NA: do not enter value here	73	children	NA	NA	NA	NA	NA
		NA	NA	NA	NA	NA	NA
		NA	NA	NA	NA	NA	NA

NOTE: In calculating the number of facilities to be provided, under **F2.1** and **F2.3** an accessible unisex facility required for people with a disability may be counted once for each sex. An accessible unisex facility comprises one closet pan, one washbasin and adequate means of disposal of sanitary products. This concession means that for each wash basin and closet pan counted above, you may deduct one for each accessible unisex facility provided. This concession does **NOT** apply to urinals. Refer to **F2.2** for further details.

F2.5 Construction of Sanitary Compartments				X	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 between the closet pan within the sanitary compartment and the doorway, measured in accordance with Figure F2.5. <u>Children sanitary compartments</u> As per F2.5(c), "in an early childhood centre, facilities for use by children must have each sanitary compartment screened by a partition which, except for the doorway, is

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					opaque for a height of at least 900mm but not more than 1200mm above the floor level". ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F2.6 Interpretation: Urinals and washbasins			X		Informational clause relevant to urinal and washbasin design. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F2.8 Waste Management			X		Not applicable.
Part F3 Room Sizes					
F3.1 Height of Rooms and other spaces				X	The ceiling height must be not less than— (a) in a Class 7 building— (i) except as allowed in (ii) and (c) — 2.4 m; and (ii) a corridor, passageway, or the like — 2.1 m; and (b) in a Class 9b building— (i) a school classroom or other assembly building or part that accommodates not more than 100 persons — 2.4 m; and (iii) a corridor— (A) that serves an assembly building or part that accommodates not more than 100 persons — 2.4 m; or (B) that serves an assembly building or part that accommodates more than 100 persons — 2.7 m; and (c) in any building— a bathroom, shower room, sanitary compartment, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like — 2.1 m; and a commercial kitchen — 2.4 m; and above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Part F4 Light & Ventilation					

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
F4.1 Provision of natural light				X	Natural lighting must be provided to: • all habitable rooms in Class 2 buildings, and Class 4 parts of a building; • to all bedrooms and dormitories in a Class 3 building; • to all rooms used for sleeping purposes in Class 9a and 9c buildings. • **Class 9b buildings – to all general-purpose classrooms in primary and secondary schools and all playrooms or the like for the use of children in an early childhood centre.**
F4.2 Methods and extent of natural lighting				X	Required natural lighting must be provided by— (i) windows, excluding roof lights, that— (A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the floor area of the room; and (B) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or (ii) roof lights, that— (A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the floor area of the room; and (B) are open to the sky; or (iii) a proportional combination of windows and roof lights required by (i) and (ii). (b) In a Class 9 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— (i) generally — 1 m; and (d) In a Class 9b early childhood centre, the sills of 50% of windows in children's rooms must be located not more than 500 mm above the floor level. **Plan assessment indicates BCA DTS compliance is achievable.** ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F4.4 Artificial lighting				X	Provision of artificial lighting in accordance with AS/NZS 1680.0-2009 to specific building areas. ***Electrical Design Certification must be incorporated***

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					into the construction certificate specification
F4.5 Ventilation of Rooms				X	All rooms to be provided with Clause F4.6 compliant natural ventilation **OR** a mechanical ventilation or air-conditioning system complying with AS 1668.2-2012. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F4.6 Natural Ventilation				X	(a) Natural ventilation provided in accordance with F4.5(a) must consist of permanent openings, windows, doors or other devices which can be opened— (i) with ventilating area not less than 5% of the floor area of the room required to be ventilated; and (ii) open to— (A) a suitably sized court, or space open to the sky; or (B) an open verandah, carport, or the like; or (C) an adjoining room in accordance with F4.7. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F4.7 Ventilation borrowed from adjoining room				X	Natural ventilation to a room may come through a window, opening, ventilating door or other device from an adjoining room (including an enclosed verandah) if both rooms are within the same sole-occupancy unit or the enclosed verandah is common property, and— (b) in a Class 9 building— (i) the window, opening, door or other device has a ventilating area of not less than 10% of the floor area of the room to be ventilated, measured not more than 3.6 m above the floor; and (ii) the adjoining room has a window, opening, door or other device with a ventilating area of not less than 10% of the combined floor areas of both rooms; and (c) the ventilating areas specified in (a) and (b) may be reduced as appropriate if direct natural ventilation is provided from another source. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F4.8 Restriction of position of water closets and urinals	X				Rooms containing closet pans or urinals must not open directly into kitchen / pantry areas and a workplace occupied by more than one person. It is noted that within an early childhood centre sanitary compartments may open directly into a room used for public assembly.

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					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F4.9 Airlocks				X	Informational clause relevant to the provision of airlocks and the like to separate rooms prohibited under Clause F4.8 from opening directly into another room. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F1.11 Carparks			X		Not applicable.
F4.12 Kitchen local exhaust				X	Informational clause relevant to the provision of a kitchen exhaust hood complying with AS/NZS 1668.1-2015 and AS 1668.2-2012 for commercial kitchens. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Part F5 Sound Transmission					
SECTION G ANCILLIARY PROVISIONS					
Part G1 Minor Structures and Components					
G1.3 Outdoor play areas				X	Any outdoor play space in a class 9b early childhood centre must be enclosed on all sides with a barrier which complies with AS 1926.1-2012. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
NSW G1.101 Provision for cleaning windows				X	A safe manner for cleaning of windows located 3 or more storeys above ground level must be provided, and compliance is achieved where: • The windows can be cleaned wholly from within the building; or • Via a method complying with the Work Health and Safety Act 2011 and regulations made under that Act. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Part G6.1					

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Occupiable Outdoor Areas					
G6.2 Fire hazard properties				X	(a) Subject to (b), a lining, material or assembly in an occupiable outdoor area must comply with C1.10 as for an internal element. (b) The following fire hazard properties of a lining, material or assembly in an occupiable outdoor area are not required to comply with C1.10: (i) Average specific extinction area. (ii) Smoke-Developed Index. (iii) Smoke development rate. (iv) Smoke growth rate index (SMOGRARC). ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
G6.3 Fire Separation			X		For the purposes of the Deemed-to-Satisfy Provisions of C2.7, C2.8 and C2.9, a reference to a storey includes an occupiable outdoor area, however a fire wall cannot be used to separate an occupiable outdoor area into different fire compartments.
G6.4 Provision for Escape	X				For the purposes of the Deemed-to-Satisfy Provisions of Part D1, a reference to a storey or room includes an occupiable outdoor area. It is that there is a point of choice along the eastern side boundary via the “right of passage”.
G6.5 Construction of Exits			X		For the purposes of the Deemed-to-Satisfy Provisions of Part D2, a reference to a storey or room includes an occupiable outdoor area.
G6.6 Fire Fighting Equipment			X		Except for Clause 7(b)(i) of Specification E1.5, for the purposes of the Deemed-to-Satisfy Provisions of Part E1, a reference to a storey includes an occupiable outdoor area.
SECTION J **ENERGY EFFICIENCY**					
NSW SUBSECTION J(B) ENERGY EFFICIENCY - CLASS 3 AND CLASS 5-9 BUILDINGS					
NSW J(B) 1 Compliance with BCA Provisions				X	Class 9 buildings must comply with all of the provisions of the National Section J, except as varied by NSW J3.1 (as referenced below).
NSW J3.1 Application of Part			X		Add the following sub-clause to the National Section J provisions of Clause J3.1: • *J3.1(d) – “parts of buildings that cannot be fully*

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					enclosed"
SECTION J - NATIONAL ENERGY EFFICIENCY PROVISIONS					
Part J1: Building Fabric					
J1.1 Application of Part				X	The DTS Provisions of this Part apply to building elements forming the envelope of the Class 9b buildings.
J1.2 Thermal construction –general				X	Where required, insulation must be provided as per AS/NZS 4859.1-2002 and installed as per this clause. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate specification***
J1.3 Roof and ceiling construction				X	A roof or ceiling that is part of the envelope must achieve the Total R-Value specified in Table J1.3a for the direction of heat flow, and must satisfy all requirements of this clause. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate specification***
J1.4 Roof lights				X	Roof lights including any shaft or diffuser forming part of the envelope, must comply with the thermal performance requirements of Table J1.4. Refer additional requirements relevant to satisfying Part F4. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate specification***
J1.5 Walls				X	Each part of a wall that is part of the envelope must satisfy one of the thermal performance options in Table J1.5, noting the specific exceptions of this clause relevant to doors, vents, penetrations, shutters, glazing, and an earth retaining wall or earth berm, in other than climate zone 8. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate specification***
J1.6 Floors				X	A floor that is part of the building's envelope must achieve the Total R-Value specified in Table J1.6, and must satisfy all requirements of this clause.
Part J2: Glazing – Deleted					
Part J3: Building Sealing					
J3.1				X	The requirements of this Part apply to elements forming

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Application of Part					the envelope of these buildings, other than: • A building in a climate zones 1, 2, 3 and 5 where the only means of air-conditioning is by using an evaporative cooler; • A permanent building opening necessary for the safe operation of a gas appliance; • A building or part where mechanical ventilation required by Part F4 provides sufficient pressurization to prevent infiltration; • Parts of buildings that cannot be fully enclosed.
J3.3 Roof lights				X	Roof lights must be sealed, or capable of being sealed as per the requirements of this clause. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
J3.4 Window and doors				X	Seals to restrict air infiltration to windows and doors must be provided as required (note exceptions listed in J3.4 (b), and requirements for sealing of main entrance in J3.4 (d). ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
J3.5 Exhaust fans				X	Miscellaneous exhaust fans must be fitted with self-closing dampers, where serving a conditioned space or a habitable room in climate zones 4, 5, 6, 7 or 8. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
J3.6 Construction of roofs, walls and floors				X	Roofs, ceilings, walls, floors and any openings such as a window frame, door frame, light frame or the like must be sealed in accordance with the requirements of this clause to minimise air leakage. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
J3.7 Evaporative coolers				X	An evaporative cooler must be fitted with a self-closing damper of the like when serving a heated space, or a habitable room or a public area of a building in climate zones 4, 5, 6, 7 or 8. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Part J4: Blank					
Part J5: Air-conditioning and ventilation systems					

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J5.1 Application of Part			X		The Deemed-to-Satisfy Provisions of this Part apply to this building/s.
J5.2 Air-conditioning systems				X	An air-conditioning unit or system must comply with J5.2(a) to J5.2(g). ***Mechanical Design certification must be submitted in support of the construction certificate application***
J5.3 Mechanical ventilation systems				X	Mechanical ventilation systems must comply with J5.3(a) to J5.3(c). ***Mechanical Design certification must be submitted in support of the construction certificate application***
J5.4 Miscellaneous exhaust systems				X	A miscellaneous exhaust system with an air flow rate of more than 1000 L/s that is associated with equipment having a variable demand such as a stove in a commercial kitchen or a chemical bath in a factory, must have the means for the operator to reduce the energy used (such as by a variable speed fan), and to stop the motor when it is not needed. Refer concessions contained in this clause. ***Mechanical Design certification must be submitted in support of the construction certificate application***
J5.5 Ductwork insulation				X	Ductwork and fittings in an air-conditioning system must be provided with insulation complying with AS/NZS 4859.1and an insulation R-Value as specified in this clause.
J5.6 Ductwork sealing				X	Ductwork in an air-conditioning system with a capacity of 3000 L/s or greater, not located within the only or last room served by the system, must be sealed against air loss in accordance with the duct sealing requirements of AS 4254.1 and AS 4254.2 for the static pressure in the system.
J5.7 Pump systems				X	Pumps and pipework are form part of an air-conditioning system must comply with the requirements of this clause.
J5.8 Pipework insulation				X	Piping, vessels, heat exchangers and tanks containing heating or cooling fluid that are part of an air-conditioning system must be provided with insulation per the requirements of this clause.
J5.9 Space heating				X	A heater used for air-conditioning or as part of an air-conditioning system must be of a type specified in this clause.
J5.10 Refrigerant chillers				X	An air-conditioning system refrigerant chiller must comply with MEPS and the full load operation energy efficiency ratio and integrated part load energy efficiency ration in Table J5.10a or Table J5.10b when determined

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					in accordance with AHRI 551/591.
J5.11 Unitary air-conditioning equipment				X	Unitary air-conditioning equipment including packaged air-conditioners, split system, and variable refrigerant flow systems must comply with MEPS and for a capacity greater than or equal to 65 kWr per the requirements of this clause.
J5.12 Heat rejection equipment				X	The motor rated power of a fan in a cooling tower, closed circuit cooler or evaporative condenser must not exceed the allowances in Table J5.12. The fan in an air cooled condenser must comply with the requirements of this clause.
Part J6: Artificial lighting and power					
J6.1 Application of Part					J6.2. J6.3 and J6.5(a)(ii) apply to this building/s.
J6.2 Artificial lighting				X	Artificial lighting must comply with J6.2(a), J6.2(b) and J6.2(c), relevant to maximum permitted illumination power loads. ***Electrical Design certification must be submitted in support of the construction certificate application***
J6.3 Interior artificial lighting and power control				X	Internal artificial lighting systems must be switched and zoned in accordance with the specific requirements of this clause. ***Electrical Design certification must be submitted in support of the construction certificate application***
J6.4 Interior decorative and display lighting				X	Interior decorative and display lighting, such as for a foyer mural or art display, must be controlled separately from other artificial lighting, and be switched in accordance with the specific requirements of this clause. ***Electrical Design certification must be submitted in support of the construction certificate application***
J6.5 Artificial lighting around the perimeter of a building				X	Artificial lighting around the perimeter of a building must be controlled by sensors or time switches in accordance with the specific requirements of this clause. Refer exclusions relevant to emergency lighting and lighting around detention centres. ***Electrical Design certification must be submitted in support of the construction certificate application***
J6.6 Boiling water and chilled water storage units				X	Power supply to boiling or chilled water storage units must be time switch controlled in accordance with Specification J6. ***Electrical Design certification must be submitted in support of the construction certificate application***

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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
J6.7 Lifts				X	Lifts must – (a) Be configured to ensure artificial lighting and ventilation in the car are turned off when it is unused for 15 minutes and (b) Achieve the idle and standby energy performance level in Table 6.7a; and (c) Achieve – (i) The energy efficiency class in Table 6.7b; or (ii) If a dedicated goods lift, energy efficiency class D in accordance with ISO 25745-2.
J6.8 Escalators and moving walkways			X		Not applicable to this building.
Part J7: Hot water supply and swimming pool and spa pool plant					
J7.2 Hot water supply				X	A heated water supply system for food preparation and sanitary purposes must be designed and installed in accordance with Part B2 of NCC Volume Three — Plumbing Code of Australia. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Part J8: Access for maintenance and facilities for monitoring					
J8.1 Application of Part			X		The Deemed-to-Satisfy Provisions of this Part apply to this building.
J8.3 Facilities for energy monitoring				X	The building must have facilities to record the consumption of gas and electricity as per clause J8.3(a). ***Details demonstrating compliance with this clause must be incorporated into the construction certificate specification***

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4.0 CONCLUSION

This report suitable to accompany a S4.56 modification application to Council provides a National Construction Code (NCC) Building Code of Australia ("BCA") 2019 – Amendment 1 assessment of a proposed Childcare Centre, to be located at 723-727 Warringah Road, Forrestville.

The primary purpose of this report was to identify the non-compliance matters contained in the proposed design philosophy against the current Deemed-to-Satisfy (DTS) Provisions of the BCA and to provide compliance recommendations to overcome the DTS non-compliances.

This report provided a BCA assessment table in Section 3.0 that summarises the identified non compliance matters and offers specific recommendations that are also outlined in the Executive Summary.

Further, if compliance with the deemed-to-satisfy provisions is not achievable or desirable, Performance Solutions could be further developed and verified by an appropriately qualified BCA Consultant or Fire Safety Engineer.

Prepared by:	**Reviewed by:**
 **Daniel Keato** Senior Associate For AED Accredited Certifier / Principal Certifying Authority (Building) BDC2424	 **Kelly Smith** Associate For AED Accredited Certifier / Principal Certifying Authority (Building) BDC2593

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Table 4 Type B construction: FRL of building elements

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 1.5 m	90/ 90/ 90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/ 60/ 30	120/ 90/ 60	180/120/ 90	240/180/120
3 to less than 9 m	90/ 30/ 30	120/ 30/ 30	180/ 90/ 60	240/ 90/ 60
9 to less than 18 m	90/ 30/–	120/ 30/–	180/ 60/–	240/ 60/–
18 m or more	–/–/–	–/–/–	–/–/–	–/–/–
For non-*loadbearing* parts—				
less than 1.5 m	–/ 90/ 90	–/120/120	–/180/180	–/240/240
1.5 to less than 3 m	–/ 60/ 30	–/ 90/ 60	–/120/ 90	–/180/120
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–
EXTERNAL COLUMN not incorporated in an *external wall*, where the distance from any *fire-source feature* to which it is exposed is—				
For *loadbearing* columns—				
less than 18 m	90/–/–	120/–/–	180/–/–	240/–/–
18 m or more	–/–/–	–/–/–	–/–/–	–/–/–
For non-*loadbearing* columns—				
For 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
Fire-resisting stair *shafts*—				
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	–/–/–	–/–/–	–/–/–	–/–/–

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