

BUILDING CODE OF AUSTRALIA 2019 – AMENDMENT ONE COMPLIANCE REPORT

48-50 EUROBIN AVENUE, MANLY

Prepared for:	MostynCopper
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1.0. DOCUMENT HISTORY AND DRAWING SCHEDULE

1.1. Document History

Date	Issue	Status	Prepared by	Reviewed by
12.12.2022	Issue 1.1	Final Version with minor amendments	Tim O'Reilly BDC 3184	Orlando Da Silva BDC 0081
12.12.2022	Issue 1.0	Final Version	Tim O'Reilly BDC 3184	Orlando Da Silva BDC 0081

1.2. Drawing Schedule

Drawing By	Project No.	Drawing No.	Drawing Title	Issue
JDH Architects	1235	DA_004	Proposed Site Plan	A
JDH Architects	1235	DA_111	Proposed Floor Plan	A
JDH Architects	1235	DA_112	Proposed Roof Plan	A
JDH Architects	1235	DA_401	Elevations	A
JDH Architects	1235	DA_403	Sections	A

2.0. EXECUTIVE SUMMARY

The development being the subject of this report relates to the construction of a school (classroom) building. The building is intended to be constructed using a series of pre-manufactured modular demountables.

This report has been prepared for Stella Maris College and will be used to assist in ensuring the proposal is **capable** of complying with the current BCA.

3.0. INTRODUCTION

3.1. Location and Description

The development being the subject of this Report is located at 48-50 Eurobin Avenue, Manly. The property is bounded by Eurobin Avenue to the north-east and adjoining allotments to the south-east, south-west and north-west.

It is noted that it is the Developers intention to consolidate the lots as part of the development process.



The proposed development comprises the construction of a school (classroom) building. The building is intended to be constructed using a series of pre-manufactured modular demountables.

3.2. Report Purpose

This Report has been prepared by Building Certificates Australia Pty Ltd as an indicative Building Code of Australia 2019 – Amendment One (BCA) compliance review of the proposed development. The assessment has been undertaken against the Deemed-To-Satisfy (DTS) provisions of the BCA relating to Parts C, D, E and F only. This review is provided to assist in ensuring the building is capable of complying with the BCA.

3.3. Basis of Report

This Report is based upon:

- A desktop review of the documentation submitted for assessment (refer to drawing schedule section 1.2); and
- The Deemed-to-Satisfy provisions of Parts C, D, E and F of the BCA.

3.4. Referenced Documents

The following documentation was relied upon when preparing this Report:

- The performance and deemed-to-satisfy provisions of the 2019 Building Code of Australia Amendment One, Volume One (BCA) incorporating the NSW Appendices where applicable.
- Guide to the National Construction Code Volume 1.
- Disability (Access to Premises — Buildings) Standards 2010.
- Environmental Planning & Assessment Act 1979.
- Environmental Planning & Assessment Regulation 2000.

3.5. Limitations and Exclusions

The limitations and exclusions of this Report are as follows:

- This Report is based on a review of the referenced documents only.
- The purpose of this Report is to assist in obtaining a DA only. This Report is not to be relied upon in regard to any subsequent Construction Certificate
- No assessment has been undertaken with respect to the Disability Discrimination Act 1992 (DDA). Separate advice from an appropriately qualified access consultant should be obtained by the client to be satisfied that their obligations under the DDA have been addressed.

Please note that whilst the BCA specifies a minimum standard of compliance with AS1428.1 and Part D3 of the BCA for access and facilities for people with disabilities, compliance with such requirements may not necessarily preclude the possibility of a future complaint made under the Disability Discrimination Act 1992

(DDA). The DDA is a complaint-based legislation and is presently not identified by the State Building Codes and Regulations. In this regard the client should be satisfied that their obligations under the DDA have been addressed.

- This Report does not address issues in relation to the following:
 - a) The structural adequacy of the building including the Fire Resistance Levels (FRL's) of any existing building elements (unless specifically referred to).
 - b) The design, maintenance or operation of any existing electrical, mechanical, hydraulic or fire protection services.
 - c) Environmental Planning and Assessment Act and Regulations.
 - d) Local Government Act and Regulations.
 - e) Workplace Health and Safety Act and Regulations.
 - f) SafeWork requirements.
 - g) Requirements of other Regulatory Authorities including, but not limited to, Telstra, Sydney Water, Electricity Supply Authority, RMS, Council and the like.
 - h) Disability Discrimination Act.
 - i) Construction Safety Act.
 - j) Any previous conditions of Development Consent issued by the relevant Local Council.
- Building Certificates Australia Pty Ltd cannot guarantee acceptance of this Report by the Local Council, Fire and Rescue NSW or other approval authorities.
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Compliance with the Building Code of Australia

The BCA is a performance-based document whereby compliance can be achieved by satisfying the Deemed-to-Satisfy (DtS) requirements, or by formulating a Performance Solution to address the relevant Performance Requirements (or a combination of both).

As specified above, the Environmental Planning and Assessment Regulation 2000 requires all new building work to comply with the relevant requirements of the BCA (as in force at the time the application for the CC is made). This means that the plans and documentation submitted with the CC application must demonstrate full compliance with the relevant provisions of the BCA.

Disability (Access to Premises — Buildings) Standards 2010

The Disability (Access to Premises — Buildings) Standard 2010 does not apply to this building as it is considered to be entirely new. Rather, disabled access is dealt with under BCA Part D3.

3.6. Terminology

- *Building Code of Australia* - Document published on behalf of the Australian Building Codes Board. The BCA is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia and

is adopted in NSW under the provisions of the Environmental Planning & Assessment Act & Regulation.

- *Fire-Resistance Level (FRL)* - means the grading periods in minutes tested in accordance with AS 1530.4-2005 for the following criteria -
 - (a) structural adequacy;
 - (b) integrity; and
 - (c) insulation,
 and expressed in that order (e.g. 90/90/90).
- *Fire Source Feature (FSF)* - the far boundary of a road adjoining the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building.
- *Open space* - means a space on the allotment, or a roof or other part of the building suitably protected from fire, open to the sky and connected directly with a public road.
- *Performance Requirements of the BCA* - A Building Solution will comply with the BCA if it satisfies the Performance Requirements. A Performance requirement states the level of performance that a Building Solution must achieve.

Compliance with the Performance Requirements can only be achieved by-

- (a) complying with the Deemed-to-Satisfy Provisions; or
 - (b) formulating an Alternative Solution which-
 - (i) complies with the Performance Requirements; or
 - (ii) is shown to be at least equivalent to the Deemed-to-Satisfy Provisions; or
 - (c) a combination of (a) and (b).
- *Sole Occupancy Unit (SOU)* - means a room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier.

4.0 BUILDING DESCRIPTION – PROPOSED DEVELOPMENT

BUILDING CHARACTERISTICS	
BCA Year/Version	BCA 2019 – Amendment One
BCA Referenced Standards	Refer to Appendix 1
Intended Building Uses	School
BCA Classifications	Class 9b
Number of storeys	1
Rise In storeys	1
Storeys not counted in Rise	0
Effective Height of Building	<p>The effective height has been determined at <12m</p> <p>Note: The BCA definition of effective height is as follows: “Effective height means the vertical distance between the floor of the lowest storey included in a determination of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units).”</p>
Type of Construction	Type C Construction
Floor area and Volume limitations	3,000m ² and / or 18,000m ³
Fire Compartments and Sole Occupancy Units	The building is considered to be a single fire compartment.

Exits	<p>The following points in the building have been considered as the exits:</p> <ul style="list-style-type: none"> There are two exits leading from the building
Climate Zone	The building is located within Climate Zone 5
Fire Source Features	<p>North-east: The far side of Eurobin Avenue South-east: The allotment boundary or the neighbouring building, should the lots be consolidated as part of the development South-west: The allotment boundary North-west: The allotment boundary</p> <p><i>Note:</i> A fire-source feature is defined in Section A1.1 of the BCA as –</p> <ol style="list-style-type: none"> the far boundary of a road, river, lake or the like adjoining the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building. <p>A building element is exposed to a fire-source feature if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that</p> <ul style="list-style-type: none"> has an FRL of not less than 30/–/–; and is neither transparent nor translucent.

5.0 FIRE SAFETY SCHEDULES

5.1 Proposed Fire Safety Schedule

As a result of the works proposed under this development application, the **DRAFT** fire safety schedule for the site will be as follows.

The final fire safety schedule is to be prepared for issue with the Construction Certificate.

Essential Fire and Other Safety Measures	Standard of Performance	Proposed
Emergency lighting	BCA E4.2, E4.4 AS/NZS 2293.1 –2018	✓
Exit signs	BCA E4.5 (Exit Signs) BCA E4.6 (Direction Signs) BCA E4.8 (Design and Operation - Exits) AS/NZS 2293.1 –2018	✓
Fire hydrant systems - NSW Storz Couplings	BCA E1.3 AS 2419.1 – 2005	✓
Portable fire extinguishers	BCA E1.6 AS 2444 – 2001	✓

5.2 Certification of Essential Fire Safety Measures

Pursuant to Section 169 of the Environmental Planning and Assessment Regulations 2000, it will be necessary for the owner of the building, on completion of work to furnish a Final Fire Safety Certificate with regard to each essential fire safety measure identified in the proposed Fire Safety Schedule listed above.

The Final Fire Safety Certificate must state that each essential fire safety measure specified in the fire safety schedule for the building to which the certificate relates:

- (a) has been assessed by a properly qualified person, and
- (b) was found, when it was assessed, to be capable of performing to at least the standard required by the current fire safety schedule for the building for which the certificate is issued.

Every year, the owner(s) will need to sign and submit an Annual Fire Safety Statement to the Local Council and the NSW Fire Brigade, which confirms that all essential fire safety measures have been tested and maintained and perform to the original design and installation standard. A copy of the Annual Fire Safety Statement must also be displayed in a prominent area of the buildings (i.e. the main entrance foyers).

6.0 CONCLUSION

Based on our assessment as detailed in Appendix B of this Report, we believe the development can comply with the BCA without significant modification.

Furthermore, in this instance, we believe any modification and/or advancement in the level of detail required to satisfy the requirements of the BCA will **not** necessitate the need for any significant design changes that would trigger a requirement to lodge an application under Section 4.55 of the Environmental Planning and Assessment Act 1979.

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APPENDIX A – FIRE RESISTANCE LEVELS

Table 5 Type C construction: FRL of building elements

Building element	Class of building—FRL: (in minutes)			
	<i>Structural adequacy/Integrity/Insulation</i>			
	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 <i>fire-source feature</i> to which it is exposed is—				
Less than 1.5 m	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90
1.5 to less than 3 m	—/—/—	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60
3 m or more	—/—/—	—/—/—	—/—/—	—/—/—
EXTERNAL COLUMN not incorporated in an <i>external wall</i> , where the distance from any <i>fire-source feature</i> to which it is exposed is—				
Less than 1.5 m	90/—/—	90/—/—	90/—/—	90/—/—
1.5 to less than 3 m	—/—/—	60/—/—	60/—/—	60/—/—
3 m or more	—/—/—	—/—/—	—/—/—	—/—/—
COMMON WALLS and FIRE WALLS—	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90
INTERNAL WALLS—				
Bounding <i>public corridors</i> , public lobbies and the like—	60/ 60/ 60	—/—/—	—/—/—	—/—/—
Between or bounding <i>sole-occupancy units</i> —	60/ 60/ 60	—/—/—	—/—/—	—/—/—
Bounding a stair if <i>required</i> to be rated—	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60
ROOFS	—/—/—	—/—/—	—/—/—	—/—/—

Fire-resistance of building elements

In a building required to be of Type C construction—

- (a) a building element listed in Table 5 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and
- (b) an external wall that is required by Table 5 to have an FRL need only be tested from the outside to satisfy the requirement; and
- (c) a fire wall or an internal wall bounding a sole-occupancy unit or separating adjoining units must comply with Specification C1.8 if it is of lightweight construction and is required to have an FRL; and
- (d) in a Class 2 or 3 building, an internal wall which is required by Table 5 to have an FRL must extend—
 - (i) to the underside of the floor next above if that floor has an FRL of at least 30/30/30 or a fire-protective covering on the underside of the floor; or
 - (ii) to the underside of a ceiling having a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or
 - (iii) to the underside of the roof covering if it is non-combustible, and except for roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not be crossed by timber or other combustible building elements; or
 - (iv) 450 mm above the roof covering if it is combustible; and
- (e) in a Class 2 or 3 building, except where within the one sole-occupancy unit, or a Class 9a health-care building, or a Class 9b building, a floor separating storeys, or above a space for the accommodation of motor vehicles or used for storage or any other ancillary purpose, and any column supporting the floor, must—
 - (i) have an FRL of at least 30/30/30; or
 - (ii) have a fire-protective covering on the underside of the floor including beams incorporated in it and around the column, if the floor or column is combustible or of metal; and
- (f) in a Class 9c building a floor above a space for the accommodation of motor vehicles or used for storage or any other ancillary purpose, and any column supporting the floor, must—
 - (i) have an FRL of at least 30/30/30; or
 - (ii) have a fire-protective covering on the underside of the floor including beams incorporated in it and around the column, if the floor or column is combustible or of metal.

APPENDIX B: BCA REQUIREMENTS - CLAUSE BY CLAUSE ASSESSMENT

An indicative compliance assessment of the referenced documents identified in section 1.2 of this report has been undertaken against the Deemed-to-Satisfy Provisions of the National Building Code of Australia 2019 Amendment One (BCA).

In the table below is a summary of the Deemed-to-Satisfy Provisions of the BCA. All Deemed-to-Satisfy clauses that are applicable to the subject building have been referred to below, including a comment adjacent to each clause of the proposal's ability to satisfy each respective clause.

The abbreviations outlined below have been used in the following tables:

N/A	The Deemed-to-Satisfy clause does not apply to the subject Building.
Complies	The relevant provisions of the Deemed-to-Satisfy clause have been demonstrated by the proposed design and existing building features.
CRA	'Compliance Readily Achievable'. It is considered that the level of detail included in the DA documentation will not determine strict compliance with the individual BCA clause requirement. Further detailed documentation can be submitted as part of the Construction Certificate application, demonstrating compliance with the requirement of the BCA. Where this abbreviation is used, demonstrating BCA compliance is not expected to fundamentally change the DA approved building design.
FI	Further information is necessary to determine the compliance potential of the building design.
PS	Preparation of a Performance Solution with respect to this Deemed-To-Satisfy Provision is possible to satisfy the relevant BCA Performance Requirements.
DNC	Does Not Comply.
DTS	Deemed-To-Satisfy provisions as defined by the National Building Code of Australia 2019 – Amendment 1.

BCA 2019 Amendment One Clause by Clause Assessment

Clause	Description	Status	Comments
SECTION C – FIRE RESISTANCE			
Part C1 – Fire Resistance and Stability			
C1.1	Type of construction required	CRA	The building must be constructed in accordance with the Type C fire-resisting construction requirements outlined in BCA Specification C1.1 and detailed in Appendix A of this Report.
C1.2	Calculation of rise in storeys	Noted	The building has an overall rise in storeys of one.
C1.3	Buildings of multiple Classification	Noted	Type C construction applicable to the whole building.
C1.4	Mixed types of Construction	N/A	
C1.5	Two storey Class 2, 3 or 9c buildings	N/A	
C1.6	Class 4 parts of buildings	N/A	
C1.7	Open spectator stands and indoor sports stadiums	N/A	
C1.8	Lightweight construction	N/A	
C1.9	Non-combustible building elements	CRA	Type C Construction
C1.10	Fire hazard properties	CRA	The fire hazard properties of all floor linings and floor coverings, wall linings, and ceiling linings must comply with BCA Specification C1.10. Fire Test Certificates will be required for all chosen products unless exempt by this Clause.
C1.11	Performance of external walls in fire	Noted	Concrete walls that could collapse as complete panels in a building with a rise in storeys of more than 2, must comply with Specification C1.11.
C1.12	Deliberately left blank	N/A	
C1.13	Fire-protected timber: Concession	N/A	
C1.14	Ancillary elements	N/A	
Part C2 – Compartmentation and Separation			
C2.1	Application of Part	Noted	Clauses C2.2, C2.3 and C2.4 do not apply to a sprinkler protected carpark, open deck carpark or open spectator stand.

Clause	Description	Status	Comments
C2.2	General floor area and volume limitations	Complies	The building does not exceed the floor area and volume limitations set by this clause.
C2.3	Large isolated buildings	N/A	
C2.4	Requirements for open spaces and vehicular access	N/A	
C2.5	Class 9a and 9c Buildings	N/A	
C2.6	Vertical separation of openings in external walls	N/A	Type C Construction
C2.7	Separation by fire walls	N/A	
C2.8	Separation of classifications in the same storey	N/A	
C2.9	Separation of classifications in different storeys	N/A	
C2.10	Separation of lift shafts	N/A	
C2.11	Stairways and lifts in one shaft	N/A	
C2.12	Separation of equipment	N/A	There is no equipment contained within the building.
C2.13	Electricity supply system	N/A	
C2.14	Public corridors in Class 2 and 3 buildings	N/A	
Part C3 – Protection of Openings			
C3.1	Application of Part	Noted	
C3.2	Protection of openings in external walls	N/A	There are no openings within 3m of a fire-source feature
C3.3	Separation of external walls and associated openings in different fire compartments	N/A	
C3.4	Acceptable methods of Protection	N/A	
C3.5	Doorways in fire walls	N/A	

Clause	Description	Status	Comments
C3.6	Sliding fire doors	N/A	
C3.7	Protection of doorways in horizontal exits	N/A	
C3.8	Openings in fire-isolated exits	N/A	
C3.9	Service penetrations in fire isolated exits	N/A	
C3.10	Openings in fire-isolated lift shafts	N/A	
C3.11	Bounding construction: Class 2 buildings	N/A	
C3.12	Openings in floors for services	N/A	
C3.13	Openings in shafts	N/A	
C3.14	Deliberately left blank	N/A	
C3.15	Openings for service installation	N/A	
C3.16	Construction joints	N/A	
C3.17	Columns protected with lightweight construction	N/A	
SECTION D – ACCESS AND EGRESS			
Part D1 – Provision for Escape			
Clause	Description	Status	Comments
D1.1	Application of Part	Noted	The Deemed to Satisfy provisions of this part do not apply to the internal parts of a sole occupancy unit in a Class 2, 3 or 4 building.
D1.2	Number of exits required	Complies	A choice of at least 2 alternative exits required from the basement level and one exit required from every other level.
D1.3	When fire-isolated exits are required	N/A	
D1.4	Exit travel distances	CRA	No point within the building is to exceed 20m from an exit or 20m from a point of choice in which travel is available in two separate directions, in which case total travel distance (from point of origin) is not to exceed 40m.
D1.5	Distance between alternative exits	PS	The distance between alternate exits is not to be less than 9m or be more than 60 apart when measured along the path of travel.

D1.6	Dimensions of exits and paths of travel to exits	CRA	All paths of travel including which lead to an exit or serving as an exit must have an unobstructed width of no less 1,000mm, measured clear of any obstructions.
D1.7	Travel via fire-isolated exits	N/A	
D1.8	External stairways in lieu of fire-isolated exits	N/A	No external stairs
D1.9	Travel by non-fire-isolated stairways or ramps	CRA	Total travel distance to the end of the ramp is not to exceed 80m
D1.10	Discharge from exits	CRA	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.
D1.11	Horizontal exits	N/A	
D1.12	Non-required stairs, ramps or escalators	N/A	
D1.13	Number of persons Accommodated	N/A	
D1.14	Measurement of distance	Noted	<i>For assessment consideration only</i>
D1.15	Method of measurement	Noted	<i>For assessment consideration only</i>
D1.16	Plant rooms and lift machine rooms: Concession	N/A	
D1.17	Access to lift pits	N/A	
D1.18	Egress from early childhood centres		
Part D2 – Construction of Exits			
D2.1	Application of Part	Noted	Except for— D2.13, D2.14(a), D2.16, D2.17(d), D2.17(e), D2.18 and D2.24 , the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a sole-occupancy unit in a Class 2 building or Class 4 part of a building.
D2.2	Fire-isolated stairs or ramps	N/A	
D2.3	Non-fire-isolated stairways and ramps	N/A	
D2.4	Separation of rising and descending stair flights	N/A	
D2.5	Open access ramps and balconies	N/A	

D2.6	Smoke lobbies	N/A	
D2.7	Installations in exits and paths of travel	CRA	<p>Electrical distribution boards and other services or equipment must be located wholly within, and enclosed by, non-combustible construction, or have a fire-protective covering, with the doorway suitably sealed against smoke spreading from the enclosure.</p> <p>This notation should be included on the final construction design.</p>
D2.8	Enclosure of space under stairs and ramps	N/A	
D2.9	Width of stairways	N/A	
D2.10	Pedestrian ramps	CRA	<p>If the ramp gradient exceeds 1:20, it must comply with the requirements of D3 and AS 1428.1-2009.</p> <p>The floor surface slip resistance is not to exceed the classification listed in Table D2.14 when tested in accordance with AS 4586.</p>
D2.11	Fire-isolated passageways	N/A	
D2.12	Roof as open space	N/A	
D2.13	Goings and risers	N/A	
D2.14	Landings	CRA	<p>Landings must have a maximum gradient of 1:50 and where they involve a change in direction, be not less than 750mm when measured 500mm from the inside edge of the landing.</p> <p>Landings must also be slip resistant in accordance with AS 4586.</p>
D2.15	Thresholds	CRA	Thresholds within all common areas are to comply with the requirements of AS 1428.1-2009.
D2.16	Barriers to prevent falls	N/A	
D2.17	Handrails	CRA	A single handrail is required along each of the <i>non-accessible</i> ramps at a minimum height of 865mm. Ensure a width of 1m is maintained throughout this path of travel.
D2.18	Fixed platforms walkways, stairways and ladders	N/A	
D2.19	Doorways and doors	N/A	
D2.20	Swinging doors	CRA	A swinging door in a required exit or forming part of a required exit must swing in the direction of egress.

D2.21	Operation of latch	CRA	<p>A door in a required exit, forming part of a required exit or in the path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress, by—</p> <p>(i) a single hand downward action on a single device which is located between 900 mm and 1.1 m from the floor and if serving an area required to be accessible by Part D3—</p> <p>(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</p> <p>(B) have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35 mm and not more than 45 mm; or</p> <p>(ii) a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor</p>
D2.22	Re-entry from fire-isolated Exits	N/A	
D2.23	Signs on doors	N/A	
D2.24	Protection of openable windows	N/A	
D2.25	Timber stairways: Concession	N/A	
SECTION D3.3 – ACCESS FOR PEOPLE WITH DISABILITIES			
<i>Access is subject to a separate assessment and report undertaken by an Access Consultant.</i>			
SECTION E – SERVICES AND EQUIPMENT			
Part E1 – Fire Fighting Equipment			
Clause	Description	Status	Comments
E1.1	-	-	No Provisions
E1.2	-	-	No Provisions
E1.3	Fire Hydrants	CRA	<p>The total floor area of the subject development is greater than 500m². Therefore, a system of fire hydrants compliant with AS 2419.1-2005 is required to serve the buildings.</p> <p>Of particular note, this Australian Standard requires that a hydrant system within 10m of a building be protected with a shield wall that extends 2m either side and 3m above take offs.</p> <p>Note: this system is required to be designed by an Accredited Fire Safety Designer.</p>
E1.4	Hose Reels	N/A	Hose reels are not required in a school building.
E1.5	Sprinklers	N/A	

E1.6	Portable fire extinguishers	CRA	Portable fire extinguishers are required to be provided in accordance with Table E1.6 of the BCA and AS 2444-2001. Fire extinguisher type and locations are required to be detailed on the final construction design.
Table E1.6 Requirements for extinguishers			
Occupancy class		Risk class (as defined in AS 2444)	
General provisions —Class 2 to 9 buildings (except within <i>sole-occupancy units</i> of a Class 9c building).		(a) To cover Class AE or E fire risks associated with emergency services switchboards. ^{Note 1} (b) To cover Class F fire risks involving cooking oils and fats in kitchens. (c) To cover Class B fire risks in locations where flammable liquids in excess of 50 litres are stored or used (not including that held in fuel tanks of vehicles). (d) To cover Class A fire risks in normally occupied <i>fire compartments</i> less than 500 m ² not provided with fire hose reels (excluding <i>open-deck carparks</i>). (e) To cover Class A fire risks in classrooms and associated corridors in primary and secondary schools not provided with fire hose reels. (f) To cover Class A fire risks associated with a Class 2, 3 or 5 building or Class 4 part of a building.	
Specific provisions (in addition to general provisions)— (a) Class 9a <i>health-care building</i> , including a Class 9a building used as a <i>residential care building</i> . (b) Class 3 parts of detention and correctional occupancies. (c) Class 3 accommodation for children, aged persons and people with disabilities, including a Class 3 building used as a <i>residential care building</i> . (d) Class 9c building.		To cover Class A and E fire risks. ^{Note 2}	
Notes to Table E1.6: 1. For the purposes of this Table, an emergency services switchboard is one which sustains emergency equipment operating in the emergency mode. 2. A Class E fire extinguisher need only be located at each nurses' station, supervisors' station or the like. 3. Additional extinguishers may be required to cover fire risks in relation to special hazards provided for in E1.10. 4. The fire risks in a Class 2 or 3 building or Class 4 part of a building must include risks within any <i>sole-occupancy units</i> , however portable fire extinguishers are not required to be located within a <i>sole-occupancy unit</i> unless the <i>sole-occupancy unit</i> has a <i>floor area</i> greater than 500 m ² .			
E1.7	-	-	No Provisions
E1.8	Fire control centres	N/A	
E1.9	Fire precautions during construction	CRA	In a building under construction not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times.
E1.10	Provisions for special Hazards	N/A	
Part E2 – Smoke Hazard Management			
E2.1	Application of Part	Noted	
E2.2	General requirements	N/A	

E2.3	Provisions for special Hazards	N/A	
Part E3 – Lift Installations			
E3.1	-	-	No provisions.
E3.2	Stretcher facility in lifts	N/A	
E3.3	Warning against use of lifts in fire	N/A	
E3.4	Emergency lifts	N/A	
E3.5	Landings	N/A	
E3.6	Facilities for people with disabilities	N/A	
E3.7	Fire Services Control	N/A	
E3.8	Aged care buildings	N/A	
E3.9	Fire service recall control switch	N/A	
E3.10	Lift car fire service drive control switch	N/A	
Part E4 – Emergency Lighting, Exit Signs and Warning Systems			
E4.1	-	-	No provisions
E4.2	Emergency lighting requirements	CRA	Emergency lighting is to be provided in accordance with this clause. Details are required to be shown on the final construction design and submitted for review.
E4.3	Measurement of distance	Noted	
E4.4	Design and operation of emergency lighting	Noted	Every required emergency lighting system must comply with AS 2293.1-2018.
E4.5	Exit signs	CRA	Exit signage is to be provided in accordance with this clause. Details are required to be shown on the final construction design and submitted for review.
E4.6	Direction signs	CRA	Where an exit location is not clear to a person unfamiliar with the building, exit signs with directional arrows must be installed in appropriate positions indicating the direction to a required exit in accordance with this clause. Details are required to be shown on the final construction design and submitted for review.

E4.7	Class 2, 3 and 4 buildings: Exemptions	N/A	
E4.8	Design and operation of exit signs	Noted	Exit signs are to operate in accordance with AS 2293.1-2018 and be clearly visible at all times while the building is occupied.
E4.9	Sound systems and intercom systems for emergency purposes	N/A	
SECTION F – HEALTH AND AMENITY			
Part F1 – Damp and Weatherproofing			
Clause	Description	Status	Comments
F1.1	Stormwater drainage	CRA	Stormwater drainage design shall be in accordance with AS/NZS 3500.3-2018. Stormwater drainage details are required as part of the final construction design.
F1.2	-	-	No provisions
F1.3	-	-	No provisions
F1.4	External above ground membranes	CRA	Waterproofing membranes must comply with AS 4654 Parts 1 and 2
F1.5	Roof coverings	CRA	Roof coverings are to comply with the relevant Australian Standards as per this clause as per the selected martial.
F1.6	Sarking	CRA	Sarking type materials used for weatherproofing of roofs and walls must comply with AS/NZS 4200 Parts 1 and 2.
F1.7	Waterproofing of wet areas	N/A	
F1.8	-	-	No provisions
F1.9	Damp-proofing	CRA	Any damp-proofing must comply with AS 2904 and AS 3660.1.
F1.10	Damp-proofing of floors on the ground	N/A	
F1.11	Provisions of floor wastes	N/A	
F1.12	Sub-floor ventilation	N/A	

F1.13	Glazed assemblies	CRA	Windows, sliding doors with a frame, adjustable louvres, shopfronts and window walls with one piece framing in an external wall must comply with AS 2047-2014 requirements for resistance to water penetration.
Part F2 – Sanitary and Other Facilities			
F2.1	Facilities in residential buildings	N/A	
F2.1	Facilities in residential buildings	N/A	No new facilities proposed.
F2.2	Calculation of number of occupants and fixtures	N/A	
F2.3	Facilities in Class 3 to 9 buildings	N/A	
F2.4	Accessible sanitary Facilities	N/A	
F2.5	Construction of sanitary compartments	N/A	
F2.6	Interpretation: Urinals and washbasins	N/A	
F2.7	Warm water installations	N/A	Not Applicable in NSW
F2.8	Waste Management	N/A	
Part F3 – Room Sizes			
F3.1	Height of rooms and other spaces	CRA	Room heights are to be a minimum 2.4m
Part F4 – Light and Ventilation			
F4.1	Provisions of natural light	Noted	Natural light must be provided to all classrooms
F4.2	Methods and extent of natural light	CRA	Windows providing natural light must have an aggregate light transmitting area of not less than 10% of the floor area of the room it serves.
F4.3	Natural light borrowed from adjoining room	Noted	If required natural light can be borrowed via an adjoining room in accordance with this clause.
F4.4	Artificial lighting	CRA	Artificial lighting complying with AS1680.0-2009 is to be provided to all areas outside the classrooms.

F4.5	Ventilation of rooms	CRA	Ventilation must be provided throughout the building by natural or mechanical means. If ventilation is provided by a mechanical system, it must comply with AS 1668.2-2012.
F4.6	Natural ventilation	CRA	If natural ventilation is proposed, the aggregate size of any window opening must not be less than 5% of the floor area of the room served.
F4.7	Ventilation borrowed from adjoining room	Noted	<i>For assessment purposes only.</i>
F4.8	Restriction on location of sanitary compartments	N/A	
F4.9	Airlocks	N/A	
F4.10	-	-	No provisions
F4.11	Carparks	N/A	
F4.12	Kitchen local exhaust	N/A	
Part F5 – Sound Transmission and Insulation			
F5.1	Application of part	Noted	Applicable to Class 2, 3 and 9c buildings
F5.2	Determination of airborne sound insulation ratings	N/A	
F5.3	Determination of impact sound installation ratings	N/A	
F5.4	Sound insulation rating for floors	N/A	
F5.5	Sound insulation rating of walls	N/A	
F5.6	Sound insulation rating of services	N/A	
F5.7	Isolation of pumps	N/A	
Part F6 – Condensation Management			
F6.1	Application of part	Noted	This part applies to a Class 2 building or a Class 4 part.
F6.2	Pliable building membrane	N/A	

F6.3	Flow rate and discharge of exhaust systems	N/A	
F6.4	Ventilation of roof spaces	N/A	