



BCA Design Compliance Report (BCA Consultant)

Broadwater – Northern Rivers Schools



Prepared for: SINSW

Our Ref: 23000411 | Issue date: 20.10.23

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Authorisation

Revision	Comment / Reason for Issue	Issue Date	Prepared by	Reviewed by
05	BCA Report – For DA Submission	20.10.23		
			Curtis Schumann	Joel Lewis

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Revision	Comment / Reason for Issue	Issue Date	Prepared by
01	Draft BCA Report - REF Submission	04.07.23	Curtis Schumann
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03	Draft BCA Report - REF Submission	26.07.23	Curtis Schumann
04	BCA Report - REF Submission	11.08.23	Curtis Schumann
05	BCA Report – For DA Submission	20.10.23	Curtis Schumann

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1 Executive Summary

Modern Building Consultants (MBC Group) as the appointed BCA Consultant for the proposed development, have reviewed architectural design documents prepared by Pedavoli Architects Pty Ltd (refer Appendix A) for compliance with the National Construction Code - Building Code of Australia Volume One 2019 Amendment 1.

1.1 Performance Solutions - Fire & Life Safety

The assessment of the design documentation has revealed that the following areas are required to be assessed against the relevant Performance Requirements of the BCA in accordance with Clause 25 of the Building and Development Certifiers Regulation 2020. The submission for a Construction Certificate will need to include verification from a Certifier – Fire Safety, where determined permissible under A2.1 of the BCA, for the following aspects: -

DTS Clause	Description of Non-Compliance	Performance Requirement
Type of Construction required / Fire resisting construction		
C1.1 / Spec C1.1	<p>It is proposed to rationalise the FRL requirements of the load-bearing elements for the 9b school portion equivalent of Type C Construction. As the load bearing elements are > 3m from a fire source feature, the following FRL's are proposed:</p> <ul style="list-style-type: none"> - External Walls -/-/- - Internal Columns -/-/- 	CP1, CP2
	<p>It is also proposed to omit Clause 4.1 (i) fire separation from the Level 1 floor of the 9b portion. However, fire separation under this clause is still required to the floor separating the 7b storage on Ground from 9b on Level 1</p> <p>To be addressed as part of a performance solution certified by a suitably qualified Accredited Practitioner - Fire Safety</p>	
Fire Resistant Construction		
Spec C1.1	<p>It is proposed to rationalise Table 4 FRL requirements of the external walls separating the storage component on ground from 240/90/60 to 30/30/30.</p> <p>To be addressed as part of a performance solution certified by a suitably qualified Accredited Practitioner - Fire Safety</p>	CP1, CP2

DTS Clause	Description of Non-Compliance	Performance Requirement
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Non-combustible building elements

It is proposed to install the following combustible materials within the external wall system:

C1.9	<ul style="list-style-type: none"> - Timber back blocks for fixing - Polyisocyanurate (PIR) insulation within canteen walls 	CP2
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To be addressed as part of a performance solution certified by a suitably qualified Accredited Practitioner - Fire Safety

Ancillary Elements

C1.14	<p>It is proposed to have combustible signage materials fixed to the external walls which will not achieve the non-combustibility requirements of AS1530.1.</p>	CP2, CP4
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To be addressed as part of a performance solution certified by a suitably qualified Accredited Practitioner - Fire Safety

Fire Hydrants

E1.3	<p>It is proposed to permit the hydrant simultaneous flow requirement of the AS2419.1-2009 Hydrant System suitable to serve a Fire Compartment less than 1000m².</p>	EP1.3
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To be addressed as part of a performance solution certified by a suitably qualified Accredited Practitioner - Fire Safety

DTS Clause	Description of Non-Compliance	Performance Requirement
Fire hose reels		
Fire hose reels are required to be provided to the storage rooms, canteen, admin/staff rooms and library.		
E1.4	It is anticipated due to the function and characteristics of building occupants typically housed within these areas that fire hose reels are to be omitted from this building.	EP1.1
To be addressed as part of a performance solution certified by a suitably qualified Accredited Practitioner - Fire Safety		

Any Performance Solution relating to category 2 items (CP9, EP1.3, EP1.4, EP1.6, EP2.2, EP3.2) will be subject to consultation and by Fire and Rescue NSW as part of the Construction Certificate process.

1.2 Performance Solutions – Accessibility

The assessment of the design documentation has revealed that the following areas are required to be assessed against the relevant Performance Requirements of the BCA in accordance with Clause 25 of the Building and Development Certifiers Regulation 2020.

Refer to the Accessibility Report by MBC Group for further information surrounding the accessibility requirements of the site.

1.3 Performance Solutions Non-fire or Access Related

- The assessment of the design documentation has revealed that the following areas are required to be assessed against the relevant Performance Requirements of the BCA in accordance with Clause 18 of the Building and Development Certifiers Regulation 2020. The submission for a Construction Certificate will need to include verification from a Accredited Consultant (suitably qualified in the relevant field), where determined permissible under A2.1 of the BCA, for the following aspects:

DTS Clause	Description of Non-Compliance	Performance Requirement
Weather Proofing	<p>A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause –</p> <ul style="list-style-type: none"> (a) Unhealthy or dangerous conditions, or loss of amenity for occupants; and (b) Undue dampness or deterioration of building elements <p>There are not Deemed-to-Satisfy Provisions for Performance Requirement FP1.4 (The prevention of the penetration of water through external walls) This must be addressed by way of Performance Solution</p> <p>Façade Engineer to note and provide further details demonstrating compliance with performance requirement FP1.4 prior to the issue of the relevant Construction Certificate.</p> <p>SINSW to note the above-mentioned pathway – there is no DtS pathway under the provisions the BCA 2019 Amd 1.</p>	FP1.4

1.4 Design Details Required

The assessment of the design documentation has revealed that the following areas require further details to demonstrate compliance with the prescriptive provisions of the BCA

DTS Clause	Description
D2.16 / D2.17	<p>Balustrades and handrails</p> <p>A continuous barrier must be provided where there is any drop below the ground greater than 1m. Furthermore, there shall be no climbable elements between 150 – 760mm from the finished floor along the barrier</p> <p>Note that primary schools are required to be fitted with a double handrail in accordance with Clause D2.17(a)(iii) whereby the second rail is installed between 665 – 750mm which is within the climbable zone.</p> <p>Architect to note and where this may apply, ensure that the barrier extends greater than 1m. This needs to be reflected and noted on the architectural plans. EFSG Requirements to be considered in addition to the above.</p>
D2.21	<p>Operation of latch</p>

DTS Clause	Description
	<p>A door in a required exit, forming part of a required exit or in the path of travel of a required exit must be readily openable without a key from the side that faces a person seeking egress, by –</p> <ul style="list-style-type: none"> (i) A single downward action on a single device which is located between 900mm and 1.1 from the floor and if serving an area required to be accessible by Part D3 – <ul style="list-style-type: none"> (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 centre grip section of the handle of not less than 35mm and not more than 45mm <p>Further details of the proposed door as the design develops towards the issue of the . Clarification on the locking and unlocking mechanisms is required as they form the path of travel to an exit. This detail is not required to be provided for the purposes of obtaining the DA.</p>

The documentation will need further detailing such as door hardware, construction specifications, services design and manufacturer's details, as outlined in Appendix D of this report.

The application for Construction Certificate shall be assessed under the relevant provisions of the Environmental Planning and Assessment Act 1979 (As Amended) and the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021.



Joel Lewis
Director
MBC Group

2 Introduction

Modern Building Certifiers (MBC) have been engaged as the appointed BCA Consultant for the development subject of this report by SINSW. This report is based upon a desktop review of architectural details (as listed in Appendix A), presently schematic design phase, against the applicable provisions of the National Construction Code - Building Code of Australia Volume One 2019 Amendment 1.

2.1 Purpose

The purpose of this report is to assess the current design proposal against the Deemed-to-Satisfy (DtS) provisions of the BCA.

2.2 Methodology

The methodology applied in undertaking this assessment has included: -

- A desktop review of architectural plans, as listed in Appendix A
- Detailed assessment of Sections C, D, E & F (as applicable / relevant) of the BCA
- Discussions with the design development team to gain an understanding of the development proposed.

2.3 Limitations

This report does not include or imply any detailed assessment for design, compliance or upgrading for:

- the structural adequacy or design of the building;
- the inherent derived fire-resistance ratings of any proposed structural elements of the building (unless specifically referred to); and
- the requirements of the Education Facilities Standards Guidelines (EFSG); and
- the design basis and/or operating capabilities of any proposed
 - electrical
 - mechanical
 - hydraulic
 - fire protection services.

This report does not include, or imply compliance with:

- the National Construction Code – Plumbing Code of Australia Volume 3
- the Disability Discrimination Act 1992 including the Disability ((Access to Premises – Buildings) Standards 2010 – unless specifically referred to)
- The deemed to satisfy provisions of Part D3 and F2.4 of BCA 2019 Amendment 1
- The deemed to satisfy provisions of Section J of BCA 2019 Amendment 1
- Demolition Standards not referred to by the BCA;
- Work Healthy and Safety Act 2011;
- An out of cycle change to the Building Code of Australia.
- Requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority,

Work Cover, Roads and Maritime Services (RMS), Roads and Transport Authority, Local Council, ARTC, Department of Planning and the like; and

- Conditions of Development Consent issued by the Local Consent Authority.

This report has been prepared by MBC in the capacity as the appointed Certifier for the proposed development. This report is an assessment of the proposed development against the DtS provisions of the applicable BCA.

2.4 Current Legislation

The applicable legislation governing the design of buildings in NSW is the Environmental Planning and Assessment Act 1979.

Applicable Building Code of Australia (BCA)

Pursuant to S6.28 of the Environmental Planning and Assessment Act 1979, the proposed building is subject to compliance with the relevant requirements of the BCA as in force at the time of the date of invitation for tenders to carry out the building work.

The new BCA 2022 came into effect on the 1st of May 2023. As the date of invitation for tenders to carry out the building work was made prior to this date, the BCA in force is BCA 2019 Amendment 1. As this was applicable at the time of tender.

Legislative Provisions for the Upgrade of Existing Buildings

Any new work shall comply with the BCA, that being BCA 2019 Amendment 1.

The consent authority, when assessing the development application, may require that the existing building be brought into partial or full compliance with the current provisions of the BCA. The triggers for upgrade include:

- Where the building works, together with any other works completed or authorised within the previous 3 years, represents more than half the total volume of the building; or
- Council are not satisfied that the measures contained within the building are adequate for the purposes of life safety or the prevention of spread of fire to adjacent buildings.

3 Development Description & Assessment Information

3.1 Proposed Development

The existing buildings at Broadwater Public School, 9 Byrnes Street, Broadwater (Lot 4 & 5, Deposited Plan (DP) 1043232 and Lot 501 DP 755624) were significantly inundated during the February 2022 floods and most of the structures are no longer habitable due to the damages caused by the flood waters. As a result, the NSW Department of Education is proposing to demolish the existing school buildings and construct a new elevated school building to replace it. The floor level of the new building will be located above the design flood level to increase flood resistance and create useable undercroft spaces.

A development application will be submitted to Richmond Valley Council for these works. Works will comprise the following:

- Site preparation including site establishment works, earthworks and relocation of heritage bell.
- Demolition of existing school buildings.
- Construction of a new elevated school building, with at-grade (undercroft) amenities and storage, including:

o Ground Level:

- Open undercroft space for covered outdoor learning and play
- Male and female amenities and accessible toilet / change room facility. ▪ Cleaners Store.
- Sports Store.
- Equipment and general store.

o Elevated Level:

- New administration comprising interview room, clerical spaces, Principal's office, staff room, sick bay, store and male, female and accessible amenities.
 - School library with computer room, store, main communications room and library office.
 - Three (3) General Learning Spaces (GLS) with learning commons and multi-purpose space.
 - Canteen with open servery space.
 - Store.
 - Male, female and accessible amenities.
 - Mechanical plant.
-
- New hard and soft landscaping including replacement playing field, playground, half games court and vegetable garden and new yarning circle.

It is not proposed to increase staff or student numbers as a result of these works

3.2 Location and Description

The site is located on the 9 Byrnes Street Broadwater 2472 and is legally described as Lot 5/-/DP1043232.

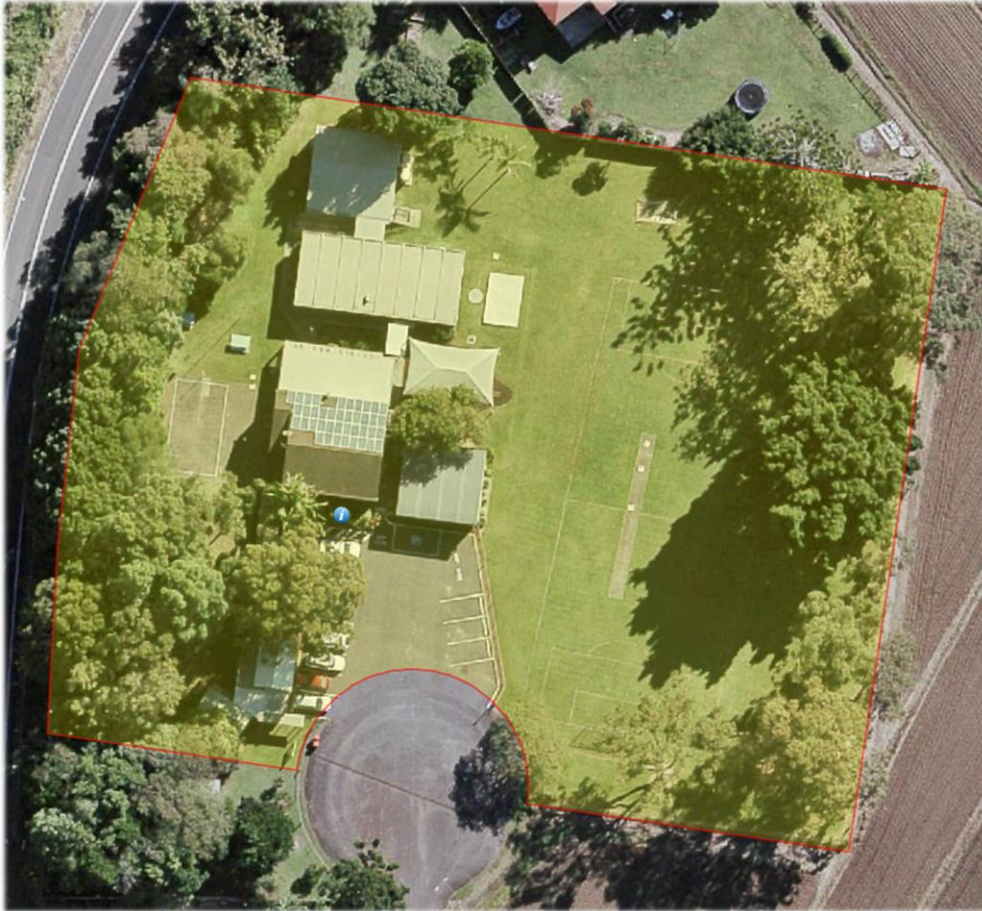


Image 1 – Six Maps: [SIX Maps \(nsw.gov.au\)](https://www.sixmaps.com/)

3.3 BCA Classification (Clause A3.2)

The proposed development shall contain the following classifications: -

- Class 5: being an office building or part
- Class 7b: being a storage building or part
- Class 9b: being a public assembly building or the like

3.4 Rise in Storeys (Clause C1.2)

The proposed development has been assessed to have a rise in storeys of two (2).

3.5 Effective Height (Clause A1.1)

The proposed development has been assessed to have an effective height of 3m, this is measured from floor level at ground to floor level 1.

Please note the definition of effective height of a building was changed 1 May 2016. The BCA now defines effective height as: -

“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).”

3.6 Type of Construction Required (Clause C1.1 / Table C1.1)

The proposed development is required to be Type B Construction. Specification C1.1 outlines the fire resistance required by certain building elements. This has also been provided in Appendix B.

3.7 Floor Area and Volume Limitations (Clause C2.2 / Table C2.2)

The development is limited to the following floor area and volume compartment limitations:

Class		Type A	Type B	Type C
5, 9b or 9c	Max floor area -	8,000m ²	5,500m ²	3,000m ²
	Max volume -	48,000m ³	33,000m ³	18,000m ³
6, 7, 8 or 9a	Max floor area -	5,000m ²	3,500m ²	2,000m ²
	Max volume -	30,000m ³	21,000m ³	12,000m ³

3.8 Building Data Summary

Part of Development	Use	Class	Floor Area (approx.) m ²	Population (using D1.13)
Ground	Storage & Amenities	7b & 9b	TBC	55 Students & 9 Staff (As indicated by SINSW).
Level 1	Classrooms, Staff Room, Library & Amenities	5 & 9b	TBC	

Notes:

- The above populations have been based on the floor areas and calculations in accordance with Table D1.13 of the BCA.
- The floor areas have been adjusted to account for ancillary areas such as sanitary facilities, corridors, shelving and / or racking layouts in storage areas by a factor of 0.8.

Summary of Construction and Building	
Use(s)	Office, Storage, School
Classifications(s)	5, 7b & 9b
Number of Storeys contained	2
Rise in Storeys	2
Type of Construction	B
Effective Height	3.3m

4 Proposed Fire Safety Schedule

The following is a draft Fire Safety Schedule for the proposed building, listing the likely measures and standards of performance required, this schedule shall be subject of further development and review as part of the Performance Solutions assessment:

Fire Safety Schedule

Section 78 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021

Premises: Broadwater - Norther Rivers Schools
 Address: 9 Byrnes Street Broadwater 2472

The following essential fire safety measures shall be implemented in the whole of the building premises and each of the fire safety measures must satisfy the standard of performance listed in the schedule which, for the purposes of Section 78 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021, is deemed to be the current fire safety schedule for the building.

SCHEDULE – Base Building BCA 2019-Amendment 1

Type of Construction B

Effective height = 3.3m

	Measure	Status	Existing Performance Standard
1.	Automatic fire detection and alarm system	N	BCA 2019 Amd. 1 Clause E2.2a, Spec. E2.2a Clause 4, 5, 6, Spec. G3.8, AS 1670.1-2018 (automatic shutdown only)
2.	Emergency lighting	N	BCA 2019 Amd. 1 Clause E4.2, E4.3 E4.4, AS 2293.1-2018
3.	Exit and directional signage	N	BCA 2019 Amd. 1 Clause E4.5, NSW E4.6 & E4.8, Spec E4.8 AS 2293.1-2018
4.	Fire alarm monitoring system	N	BCA 2019 Amd. 1 Spec E2.2a Clause 8, AS 1670.3-2018
5.	Fire doors	N	BCA 2019 Amd. 1 Clause C2.12, C2.13, C3.4, C3.6, C3.8, C3.11, Spec C3.4, AS 1905.1-2015
6.	Fire hydrant systems	N	BCA 2019 Amd. 1 Clause E1.3, AS 2419.1-2005
7.	Mechanical air handling systems	N	BCA 2019 Amd. 1 Clause C2.3, E2.2, Spec. E1.8, Spec E2.2a, Spec G3.8, AS/NZS 1668.1-2015, AS 1668.2-2012
8.	Path of travel for stairways, passageway and ramps	N	Section 107-109 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021

	Measure	Status	Existing Performance Standard
9.	Portable fire extinguishers	N	BCA 2019 Amd. 1 Clause E1.6, AS 2444-2001
10.	Required automatic exit doors	N	BCA 2019 Amd. 1 Clause D2.19, D2.21
11.	Warning and operational signs	N	BCA 2019 Amd. 1 Clause C3.6, D2.23, E3.3, Spec E1.8, Clause 183 of the Environmental Planning and Assessment Regulation 2000
12.	Fire engineered performance solution	N	Performance Solution Report E-lab, prepared by XXXX dated XXXX

5 BCA Assessment – Clause by Clause

BCA Clause	Compliance Provisions	Status	Assessment commentary
Part B - Structural			
B1 – Structural Provisions			
B1.0	Deemed-to-Satisfy Provisions	Note.	Part B1 is applicable
B1.1	Resistance to Action	Compliance readily achievable	Any new structural works are to comply with the applicable requirements of BCA Part B1, including AS/NZS 1170.0-2002, AS/NZS 1170-1-2002, AS/NZS1170.2-2011, AS/NZS1170.3-2003, AS1170.4-2007 and any other applicable Australian Standards Drawings and design documentation will be required prior to issue of the Approval
B1.2	Determination of individual Actions	Compliance readily achievable	Drawings and design documentation that demonstrate that the construction materials and forms of construction will comply with B1.4 of the BCA and the applicable Australian Standards. Any deviations from B1.4 or applicable Australian Standards will need to be addressed as a performance solution.
B1.4	Determination of Structural resistance of materials and form of construction	Note.	The structural resistance of materials and forms of construction shall be determined in accordance with the following: (i) Masonry - AS3700-2018 (ii) Concrete construction - AS3600-2018 (iii) Footings and slabs – AS2870-2011 (iv) Steel construction - AS4100-1998 or AS/NZS 4600-2005 (v) Termite Risk Management - AS3660.1-2014 (vi) Piling - AS2159-2009 (vii) Glazed assemblies - AS2047-2014-amendments 1 & 2 (external), and/or AS1288-2006 (internal)

BCA Clause	Compliance Provisions	Status	Assessment commentary
B1.6	Construction of buildings in flood hazard areas	Noted.	The building is located within a flood zone and will be subject to comply with the BCA and Flood Report.
Part C – Fire Resistance			
C1 - Fire Resistance			
C1.0	Deemed-to-Satisfy Provisions	Noted.	Applicable
C1.1 / Spec C1.1	Type of Construction Required	Performance Solution Required	<p>The building is required to be constructed in accordance with Type B Construction as noted in specification C1.1.</p> <p>It is proposed to rationalise the FRL requirements of the load-bearing elements for the 9b school portion equivalent of Type C Construction. As the load bearing elements are > 3m from a fire source feature, the following FRL's are proposed:</p> <ul style="list-style-type: none"> - External Walls -/-/ - Internal Columns -/-/ <p>It is also proposed to omit Clause 4.1 (i) fire separation from the Level 1 floor of the 9b portion. However, fire separation under this clause is still required to the floor separating the 7b storage on Ground from 9b on Level 1</p> <p>To be addressed as part of a performance solution certified by a suitably qualified Accredited Practitioner - Fire Safety</p>
C1.2	Calculation of Rise in storeys	Note.	The building has a Rise in Stories of 2.

BCA Clause	Compliance Provisions	Status	Assessment commentary
C1.8	Lightweight Construction	Compliance readily achievable	<p>Any lightweight construction must comply to Specification C1.8 provisions within the BCA if required due to equipment being installed as noted in NCC C2.12 and C2.13.</p> <p>Confirmation of materials of construction being installed will be required to confirm.</p>
C1.9	Non-combustible building elements	Performance Solution Required	<p>In a building required to be of Type A or B construction, all external walls including all components incorporated within them including façade covering and insulation are to be non-combustible.</p> <p>It is proposed to install the following combustible materials within the external wall system:</p> <ul style="list-style-type: none"> - Timber back blocks for fixing - Polyisocyanurate (PIR) insulation within canteen walls <p>To be addressed as part of a performance solution certified by a suitably qualified Accredited Practitioner - Fire Safety</p>
C1.10 & NSW Variation	Fire Hazard Properties	Compliance readily achievable.	<p>All floor, wall and ceiling lining materials shall comply with C1.10 and Specification C1.10.</p> <p>Design Compliance Statement to be provided by relevant architect prior to issue of CC.</p>
C1.14	Ancillary Elements	Performance Solution Required	<p>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:</p> <p>It is proposed to have combustible signage materials fixed to the external walls which will not achieve the non-combustibility requirements of AS1530.1.</p>

BCA Clause	Compliance Provisions	Status	Assessment commentary																							
			To be addressed as part of a performance solution certified by a suitably qualified Accredited Practitioner - Fire Safety																							
C2 - Compartmentation and Separation																										
C2.0	Deemed-to-Satisfy Provisions	Noted.	Applicable.																							
C2.1	Application of Part	Noted.	This part is applicable																							
C2.2	General Floor area and volume limitations	Note.	Fire Compartment limitations for Type B Construction are compliant: <table border="1" data-bbox="1016 635 1756 831"> <thead> <tr> <th>Class</th> <th></th> <th>Type A</th> <th>Type B</th> <th>Type C</th> </tr> </thead> <tbody> <tr> <td rowspan="2">5, 9b or 9c</td> <td>Max floor area -</td> <td>8,000m²</td> <td>5,500m²</td> <td>3,000m²</td> </tr> <tr> <td>Max volume -</td> <td>48,000m³</td> <td>33,000m³</td> <td>18,000m³</td> </tr> <tr> <td rowspan="2">6, 7, 8 or 9a</td> <td>Max floor area -</td> <td>5,000m²</td> <td>3,500m²</td> <td>2,000m²</td> </tr> <tr> <td>Max volume -</td> <td>30,000m³</td> <td>21,000m³</td> <td>12,000m³</td> </tr> </tbody> </table>	Class		Type A	Type B	Type C	5, 9b or 9c	Max floor area -	8,000m ²	5,500m ²	3,000m ²	Max volume -	48,000m ³	33,000m ³	18,000m ³	6, 7, 8 or 9a	Max floor area -	5,000m ²	3,500m ²	2,000m ²	Max volume -	30,000m ³	21,000m ³	12,000m ³
Class		Type A	Type B	Type C																						
5, 9b or 9c	Max floor area -	8,000m ²	5,500m ²	3,000m ²																						
	Max volume -	48,000m ³	33,000m ³	18,000m ³																						
6, 7, 8 or 9a	Max floor area -	5,000m ²	3,500m ²	2,000m ²																						
	Max volume -	30,000m ³	21,000m ³	12,000m ³																						
C2.7	Separation in fire walls	Noted.	(a) Construction – A fire wall must be constructed in accordance with the following: <ul style="list-style-type: none"> (i) The fire wall has the relevant FRL prescribed by Specification C1.1 (240/90/60) for each of the adjoining parts, and if these are different, the greater FRL. (c) Separation of fire compartments – A part of a building separated from the remainder of the building by a fire wall may be treated as a separate fire compartment if it is constructed in accordance with (a) and the fire wall extends to the underside of– <ul style="list-style-type: none"> (i)a floor having an FRL required for a fire wall; or (ii) the roof covering 																							

BCA Clause	Compliance Provisions	Status	Assessment commentary
C2.12	Separation of equipment	Compliance readily achievable	The following equipment must be separated from the remainder of the building – <ul style="list-style-type: none"> • emergency generators used to sustain emergency equipment operating in the emergency mode; or • a battery or batteries installed in the building that have a voltage exceeding 24 volts and a capacity exceeding 10 ampere hours. • Separating construction must have – <ul style="list-style-type: none"> an FRL as required by Specification C1.1, but not less than 120/120/120; any doorway protected with a self-closing fire door having an FRL of not less than –/120/30.
C2.13	Electricity supply system	Compliance readily achievable	Electrical substations, main switchboards that operate emergency equipment and electrical conductors serving the above must be separated from the remainder of the building by construction achieving and FRL of 120/120/120.
C3 – Protection of Openings			
C3.2	Protection of openings in external walls	Compliance readily achievable	Openings in an external wall that is required to have an FRL must – <ul style="list-style-type: none"> (a) if the distance between the opening and the fire-source feature to which it is exposed is less than – <ul style="list-style-type: none"> (i) 3 m from a side or rear boundary of the allotment; or (ii) 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

BCA Clause	Compliance Provisions	Status	Assessment commentary
			<p>near ground level; or</p> <p>(ii) 6 m from another building on the allotment that is not Class 10</p> <p>There are no proposed openings within external walls required to have an FRL that would require protection under this clause.</p>
C3.4	Acceptable methods of protection	Note	<p>(a) Where protection is required, doorways, windows and other openings must be protected as follows:</p> <p>(i) Doorways–</p> <p>(A) internal or external wall-wetting sprinklers as appropriate used with doors that are self-closing or automatic closing; or</p> <p>(B) –/60/30 fire doors that are self-closing or automatic closing.</p> <p>(ii) Windows–</p> <p>(A) internal or external wall-wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position; or</p> <p>(B) –/60/– fire windows that are automatic closing or permanently fixed in the closed position; or</p> <p>(C) –/60/– automatic closing fire shutters.</p> <p>(iii) Other openings–</p>

BCA Clause	Compliance Provisions	Status	Assessment commentary
			(A) excluding voids – internal or external wall-wetting sprinklers, as appropriate; or (B) construction having an FRL not less than -/60/-. (c) Fire doors, fire windows and fire shutters must comply with Specification C3.4. There are no proposed openings within external walls required to have an FRL that would require protection under this clause.
C3.5	Doorways in fire walls	Note	A fire door must have an FRL of not less than that required by Specification C1.1 for the fire wall except that each door or shutter must have an insulation level of at least 30.
C3.15	Openings for service installations	Compliance Readily Achievable.	Any new proposed penetrations must comply with provisions of C3.15 and Spec. C3.15. At OC stage a detailed schedule of every penetration is required to be produced. Advise engaging specialist fire stopping company.
Specifications			
Spec C1.1	Fire-Resisting Construction	Performance Solution Required	Type B Construction / Refer to specification. It is proposed to rationalise the FRL requirements of the load-bearing elements of the 9b school portion of the building from Type B to Type C. As the load bearing elements are > 3m from a fire source feature, the following FRL's are proposed: <ul style="list-style-type: none"> • External Walls -/-/- • External Columns -/-/-

BCA Clause	Compliance Provisions	Status	Assessment commentary
			<p>It is also proposed to omit the 30/30/30 FRL requirement from the Level 1 floor. However, the 30/30/30 FRL is still required to the portion of floor separating the 7b storage on Ground Floor from Level 1.</p> <p>It is proposed to reduce the FRL requirements of the external walls separating the storage component on ground floor from 240/60/- to 30/30/30.</p> <p>To be addressed as part of a performance solution certified by a suitably qualified Accredited Practitioner - Fire Safety</p>
Spec C1.8	Structural Tests for Lightweight Construction	Note	Refer to specification
Spec C1.10 & NSW Variation	Fire Hazard Properties	Note	Refer to specification
Spec C3.15	Penetration of Walls, Floors and Ceilings by Services	Note	Refer to specification
Part D - Access and Egress			
D1 - Provision for Escape			
D1.0	Deemed-to-Satisfy Provisions	Note	Noted
D1.1	Application of Part	Note	This part is applicable
D1.2 & NSW Variation	Number of exits required	Complies	<p>A class 9b building that accommodates more than 50 people is required to be serviced by two (2) exits.</p> <p>Compliance has been achieved.</p>

BCA Clause	Compliance Provisions	Status	Assessment commentary
D1.4	Exit travel distances	Complies	Travel distance shall be as follows: Class 9b Buildings: - 20m to a point of choice - 40m total distance to an exit. Travel distances have been checked on the Schematic plans provided for review. Compliance has been achieved.
D1.5	Distance between alternative exits	Complies	Exits must not be less than 9m apart; and note more than: Class 9b - 60m apart; and Located so that alternative paths of travel do not converge such that they become less than 6 m apart. The distance between exits been checked on the Schematic plans provided for review. Compliance has been achieved.
D1.6 & <i>NSW Variation</i>	Dimensions of exits and paths of travel to exits	Complies	Dimensions of exits and paths of travel appear compliant with provisions in D1.6 of the BCA. 1m in width of an exit or path of travel to an exit is required. The unobstructed height of throughout must also not be less than 2m (1980mm at doorways). Aggregate exit width caters for the proposed number of occupants on each level as determined by D1.13 of the BCA.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D1.10	Discharge from exits	Complies	Exits must not be obstructed by potential vehicle blockage by placement of bollards. Due to the location of the building with respect to driveways, carparking and roads, it would not be deemed necessary for bollards to be installed at proposed exits. However, this should be considered by SINSW as a precautionary measure.
D1.13	Number of persons accommodated	Note	Population has been confirmed by SINSW and demonstrated in the MP Reports from Pedavoli Architects.
D2 – Construction of Exits			
D2.0	Deemed-to-Satisfy Provisions	Note	Noted
D2.1 & NSW Variation	Application of Part	Note	This part is applicable
D2.7	Installations in exits and paths of travel	Compliance readily achievable.	Services or equipment comprising— (i) electricity meters, distribution boards or ducts; or (ii) central telecommunications distribution boards or equipment; or (iii) electrical motors or other motors serving equipment in the building, may be installed in— (iv) a required exit, except for fire-isolated exits specified in (a); or (v) in any corridor, hallway, lobby or the like leading to a required exit, if the services or equipment are enclosed by non-combustible construction or a fire protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure. Current plans show the distribution board located externally to the building. Further review will be undertaken as the design develops.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D2.15 & NSW Variation	Thresholds	Note	No steps are to be located closer to the doors threshold then the width of the door unless to the door leads to open space; a step ramp compliant with AS1428.1-2009 can be incorporated.
D2.16 & NSW Variation	Barriers to prevent falls	Note	Compliant balustrades not less than 1m high with no climbable features between 150mm and 760mm are to be provided wherever it is possible to fall 1m or more.
D2.17	Handrails	Compliance Readily Achievable.	<p>Handrails are to be provided to either side of ramps and stairs in accordance with AS1428.1-2009.</p> <p>The above will apply to ramps that Appear to be provided to comply with access provisions between buildings, from the DDA carpark and principal pedestrian entrance.</p> <p>Further review will be undertaken as the design develops.</p>
D2.20.	Swinging doors	Complies	<p>A swinging door in a required exit or forming part of a required exit must swing in the direction of egress unless it serves a building or part with a floor area not more than 200 m², it is the only required exit from the building or part and it is fitted with a device for holding it in the open position.</p> <p>The required exits on Level 1 are nominated as the first riser of the stairs leading to Ground. All other doors on Level 1 are internal and not forming part of required exit doors. Doors on Ground level are serving parts < 200m².</p>
D2.21 & NSW Variation	Operation of latch	Compliance Readily Achievable.	<p>Doors shall be readily openable without a key from the side that a person may seek egress by a single-handed downward action on a single device located between 900mm and 1100mm. Alternatively door must be readily openable on activation of a fail-safe device.</p> <p>Further review of the door hardware will be required as the design develops.</p>

BCA Clause	Compliance Provisions	Status	Assessment commentary
D3 – Access for People with a Disability			
D3.0	Deemed-to-Satisfy Provisions	Noted.	Applicable
D3.1	General building access requirements	Note	Access is required to all areas of a class 9b building.
D3.2	Access to buildings	Refer to Access Report.	(a) An accessway must be provided to a building required to be accessible – <ul style="list-style-type: none"> (i) from the main points of a pedestrian entry at the allotment boundary & (ii) from another accessible building connected by a pedestrian link; and (iii) from any required accessible carparking space on the allotment. <ul style="list-style-type: none"> - Confirmation of the accessway between buildings is required. If this is a rampway, further review of the landings will be required for compliance with AS 1428.1-2009. - Further detail of accessway to main building entry from principal pedestrian entrance and the carpark is required.
D3.3	Parts of buildings to be accessible	Refer to Access Report.	Access is to be provided to and within all areas normally used by occupants in accordance with AS 1428.1-2009.
D3.4	Exemptions	Refer to Access Report.	The following areas are not required to be accessible: <ul style="list-style-type: none"> (a) An area where access would be inappropriate because of the particular purpose for which the area is used. (b) An area that would pose a health or safety risk for people with a disability. (c) Any path of travel providing access only to an area exempted by (a) or (b).
D3.5	Accessible carparking	Refer to Access Report.	Accessible carparking is to be provided for class 9b school buildings. This requires:

BCA Clause	Compliance Provisions	Status	Assessment commentary
			1 space for every 100 carparking spaces or part thereof or as stipulated by development consent (DA).
D3.6	Signage	Refer to Access Report.	To be provided throughout in accordance with details in D3.6. i.e. tactile and braille indicating the following: <ul style="list-style-type: none"> - Sanitary Facilities. - Hearing augmentation.
D3.7	Hearing augmentation	Refer to Access Report.	A hearing augmentation system must be provided where an inbuilt amplification system, other than one used only for emergency warning, is installed— <ul style="list-style-type: none"> (i) in a room in a Class 9b building; or (ii) in an auditorium, conference room, meeting room or room for judicatory purposes; or (iii) at any ticket office, teller’s booth, reception area or the like, where the public is screened from the service provider.
D3.8	Tactile indicators	Refer to Access Report.	To be provided in accordance with AS 1428 throughout: <ul style="list-style-type: none"> (i) a stairway, other than a fire-isolated stairway (iv) a ramps, step ramp, kerb ramp TGSIs are also required in the absence of suitable barrier to protect from overhead obstructions or an accessway meeting a vehicular way adjacent to an pedestrian entrance to a building.

BCA Clause	Compliance Provisions	Status	Assessment commentary
D3.11	Ramps	Refer to Access Report.	On an accessway– - A series of connected ramps must not have a combined vertical rise of more than 3.6 m.
D3.12	Glazing on an access way	Compliance readily achievable.	Glazing to be provided visual indicators in accordance with AS1428.1-2009 when able to be confused for a doorway.
Specifications			
Spec D3.6	Braille and Tactile Signs	Note.	This Specification sets out the requirements for the design and installation of braille and tactile signage as required by D2.21, D3.6 and Specification F2.9. A compliance statement shall be provided by the architect prior to the issuance of the Approval.
Part E – Services and Equipment			
E1 – Fire Fighting Equipment			
E1.0	Deemed-to-Satisfy Provisions	Applicable.	Noted

BCA Clause	Compliance Provisions	Status	Assessment commentary
E1.3	Fire hydrants	Performance Solution Required	<p>A system of Fire Hydrants is required to be provided in accordance with BCA Clause E1.3 and AS2419.1-2005.</p> <p>Pressure and flow information will be required to confirm the required pressures and flow to the system, depending on the type of hydrant to be utilised.</p> <ul style="list-style-type: none"> ▪ Feed hydrants (within 20m of hard stand for pumping appliance), 200 kPa NSW - 150 ▪ Attack hydrant (within 50m of hard stand) 350 kPa NSW - 250 ▪ Hydrants on a pump station, 700 kPa <p>The flow requirements depend on the size of the fire compartment and type of building, system designer to confirm on drawings and design documentation.</p> <p>The building may be required to be provided with a booster assembly as part of the fire hydrant requirements.</p> <p>The booster is required to be located attached to the building at the main entry. If remote from the building, the booster is to be located at the main vehicle entry or with sight of the main entry of the building within 20m of a hardstand area.</p> <p>It is proposed to reduce the required pressure and flow requirements of the AS2419.1-2009 Hydrant System suitable to serve a Fire Compartment less than 1000m².</p> <p>To be addressed as part of a performance solution certified by a suitably qualified Accredited Practitioner - Fire Safety</p>

BCA Clause	Compliance Provisions	Status	Assessment commentary
E1.4	Fire hose reels	Performance Solution Required	<p>A fire hose reel (FHR) system shall be provided in accordance with Clause E1.4, and AS2441-2005 is required to be provided to all areas except for classrooms.</p> <p>Drawings and design documentation will be required prior to issue of the Approval.</p> <p>Alternatively, the removal of FHR may be addressed by the project fire engineer.</p> <p>Fire hose reels are required to be provided to the storage rooms, canteen, admin/staff rooms and library.</p> <p>It is anticipated due to the function and characteristics of building occupants typically housed within these areas that fire hose reels are to be omitted from this building.</p> <p>To be addressed as part of a performance solution certified by a suitably qualified Accredited Practitioner - Fire Safety</p>
E1.6	Portable fire extinguishers	Note.	<p>Portable fire extinguishers shall be provided in accordance with Clause E1.6, and AS 2444-2001.</p> <p>Details of the type of portable fire extinguishers proposed and their location shall be provided. This detail shall be certified by a suitably qualified person.</p>
E2 – Smoke Hazard Management			
E2.0	Deemed-to-Satisfy Provisions	Applicable.	Noted
E2.2 & NSW Variation	General requirements	Compliance Readily Achievable.	Smoke detection to facilitate automatic shutdown of air handling systems in accordance with E2.2b is required unless the air conditioning system is non-ducted serving individual rooms with a capacity of less than 1000 L/s.
E4 – Emergency Lighting, Exit Signs and Warning Systems			
E4.0	Deemed-to-Satisfy Provisions	Applicable.	Noted

BCA Clause	Compliance Provisions	Status	Assessment commentary
E4.2	Emergency lighting requirements	Compliance Readily Achievable.	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to issue of Approval.
E4.4	Design and operation of emergency lighting	Compliance Readily Achievable.	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to issue of Approval.
E4.5	Exit signs	Compliance Readily Achievable.	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to issue of Approval.
E4.8	Design and operation of exit signs	Compliance Readily Achievable.	Emergency Lighting & Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2005. Design Certification to be provided prior to Approval.
Part F – Health and Safety			
F1 – Damp and Weatherproofing			
F1.0	Deemed-to-Satisfy Provisions	Note.	There are not Deemed-to-Satisfy Provisions for Performance Requirement FP1.4 (The prevention of the penetration of water through external walls) This must be addressed by way of Performance Solution
FP1.4	Weatherproofing	Performance Solution Required	<p>A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause –</p> <ul style="list-style-type: none"> (d) Unhealthy or dangerous conditions, or loss of amenity for occupants; and (e) Undue dampness or deterioration of building elements <p>There are not Deemed-to-Satisfy Provisions for Performance Requirement FP1.4 (The prevention of the penetration of water through external walls) This must be addressed by way of Performance Solution</p> <p>Façade Engineer to note and provide further details demonstrating compliance with performance requirement FP1.4 prior to the issue of the relevant building approval.</p> <p>SINSW to note the above-mentioned pathway – there is no DtS pathway under the provisions the BCA 2019 Amd 1.</p>

BCA Clause	Compliance Provisions	Status	Assessment commentary
F1.1	Stormwater drainage	Compliance Readily Achievable.	Stormwater drainage shall comply with AS 3500.3-2018. Details of the proposed Stormwater Management System shall be provided. This detail shall be certified by a suitably qualified and Chartered Engineer
F1.4	External above ground membranes	Compliance Readily Achievable.	Waterproofing membranes for external above ground use must comply with AS 4654.1-2012 and AS 4654.2-2012. Details demonstrating compliance shall be provided as the design develops.
F1.5	Roof coverings	Compliance readily achievable.	The roof must be covered with one of the following materials, concrete roof tiles, terracotta roof tiles, cellulose cement corrugated sheeting, metal sheet roofing, plastic sheet roofing or shingles made of terracotta, fibre cement, timber or slate.
F1.6	Sarking	Compliance Readily Achievable.	Sarking-type material used for weatherproofing of roof and walls must comply with AS4200.1-2017 and AS4200.2-2017.
F1.7	Waterproofing of wet areas in buildings	Compliance Readily Achievable.	Waterproofing of wet areas shall comply with the requirements of Table F1.7 and AS 3740-2010. Details demonstrating compliance shall be provided as the design develops.
F1.9	Damp-proofing	Compliance Readily Achievable.	Moisture from the ground must be prevented from reaching the structure of the building. Where a damp-proof course is provided it must comply with AS 2904-1995 or impervious sheet material in accordance with AS3660.1-2014. Details demonstrating compliance shall be provided as the design develops.
F1.10	Damp-proofing of floors on the ground	Compliance Readily Achievable.	Floors laid on ground shall be provided a vapour barrier in accordance with AS 2870-2011. Details demonstrating compliance shall be provided

BCA Clause	Compliance Provisions	Status	Assessment commentary
F1.13	Glazed assemblies	Compliance Readily Achievable.	<p>Glazed assemblies in an external wall shall comply with AS 2047-2014.</p> <p>The following glazed assemblies need not comply revolving doors, fixed louvres, skylights / roof lights, sliding and swinging doors without a frame, heritage windows or second-hand windows, windows constructed onsite which are not design tested.</p> <p>Details demonstrating compliance shall be provided</p>
F2 – Sanitary and Other Facilities			
F2.0	Deemed-to-Satisfy Provisions	Noted	Applicable
F2.2	Calculation of number of occupants and facilities	Note.	Where it cannot be more accurately determined, the number of occupants shall be determined by the application of Clause D1.10 of the BCA.
F2.3	Facilities in Class 3 to 9 buildings	Complies	<p>(a) Except where permitted by (b), (c), (f), F2.4(a), F2.4(b) and F2.9(b), separate sanitary facilities for males and females must be provided for Class 3, 5, 6, 7, 8 or 9 buildings in accordance with Table F2.3.</p> <p>Employees and the public may share the same facilities in a Class 6 and 9b building (other than a school or early childhood centre) provided the number of facilities provided is not less than the total number of facilities required for employees plus those required for the public.</p> <p>MBC Group have reviewed and confirm the proposed facilities cater for the occupancy identified by SINSW.</p>

BCA Clause	Compliance Provisions	Status	Assessment commentary
F2.5	Construction of sanitary compartments	Compliance Readily Achievable.	<p>(a) Other than in an early childhood centre, sanitary compartments must have doors and partitions that separate adjacent compartments and extend—</p> <p>(i) from floor level to the ceiling in the case of a unisex facility; or (ii) to a height of not less than 1.5 m above the floor if primary school children are the principal users; or (iii) 1.8 m above the floor in all other cases.</p> <p>(b) The door to a fully enclosed sanitary compartment must—</p> <p>(i) open outwards; or (ii) slide; or (iii) be readily removable from the outside of the sanitary compartment, unless there is a clear space of at least 1.2 m, measured in accordance with Figure F2.5, between the closet pan within the sanitary compartment and the doorway.</p> <p>(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 opaque for a height of at least 900 mm but not more than 1200 mm above the floor level.</p> <p>Review to be completed by Access Consultant. Please refer to Access report.</p>
F3 – Room Heights			
F3.0	Deemed-to-Satisfy Provisions	Noted.	Applicable.
F3.1	Height of rooms and other spaces	Complies	Floor to ceiling heights compliant with Clause F3.1 of the BCA shall be achieved throughout the development.
F4 – Light and Ventilation			
F4.0	Deemed-to-Satisfy Provisions	Noted	Applicable
F4.1	Provision of natural light	Compliance Readily Achievable.	Natural light is required to be all general-purpose classrooms within a class 9b secondary school.

BCA Clause	Compliance Provisions	Status	Assessment commentary
			From the plans provided it appears this would cover the following areas: <ul style="list-style-type: none"> - Allied health. - Plumbing/ Elec/logistics. - Business centre rooms. A light schedule is to be provided to demonstrate compliance in these spaces.
F4.4	Artificial lighting	Compliance Readily Achievable.	Artificial lighting shall be provided to required stairways, passageways and ramps. Artificial lighting shall comply AS 1680.0
F4.5 & F4.6 <i>NSW Variation</i>	Ventilation of rooms	Compliance Readily Achievable.	Natural ventilation via openable windows at the rate of 5% of room floor area or mechanical ventilation to AS1668.2-2012 is required throughout. Drawings and design documentation will be required prior to issue of the Approval.
Part J – Energy Efficiency			
J0.0	Deemed-to-Satisfy Provisions	Compliance Readily Achievable.	An energy efficiency report confirming compliance with the requirements of section J is required prior to issue of the Approval.

6 Appendix A – Architectural Plans Reviewed

The following documentation, prepared by Pedavoli Architects was used in the assessment and preparation of this report: -

Drawing No.	Title	Date	Drawn By	Revision
BRO - ARC - PP - DWG - 001	COVER SHEET	14/07/2023	Pedavoli Architects	A
BRO - ARC - PP - DWG - 003	SITE ANALYSIS PLAN	14/07/2023	Pedavoli Architects	A
BRO - ARC - PP - DWG - 010	PROPOSED SITE PLAN	14/07/2023	Pedavoli Architects	A
BRO - ARC - PP - DWG - 015	DEMOLITION PLAN	14/07/2023	Pedavoli Architects	A
BRO - ARC - PP - DWG - 100	UNDERCROFT FLOOR PLAN	14/07/2023	Pedavoli Architects	A
BRO - ARC - PP - DWG - 110	RAISED LEVEL FLOOR PLAN	14/07/2023	Pedavoli Architects	A
BRO - ARC - PP - DWG - 120	ROOF PLAN	14/07/2023	Pedavoli Architects	A
BRO - ARC - PP - DWG - 200	ELEVATIONS	14/07/2023	Pedavoli Architects	A
BRO - ARC - PP - DWG - 201	ELEVATIONS	14/07/2023	Pedavoli Architects	A
BRO - ARC - PP - DWG - 300	SECTIONS	14/07/2023	Pedavoli Architects	A
BRO - ARC - PP - DWG - 400	SHADOW DIAGRAMS	14/07/2023	Pedavoli Architects	A
BRO - ARC - PP - DWG - 500	RENDERS	14/07/2023	Pedavoli Architects	A

7 Appendix B

7.1 Table 4 of Specification C1.1

Below is an abridged version of Table 4 of Specification C1.1. These are the Deemed to Satisfy requirements and do not take into consideration any reduction in FRL's sought via a performance-based solution or any concessions afforded by Part 4 of Specification C1.1.

7.2 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 parts –				
less than 18 m	90/-/-	120/-/-	180/-/-	240/-/-
18 m or more	-/-/-	-/-/-	-/-/-	-/-/-
For non-loadbearing parts –				
	-/-/-	-/-/-	-/-/-	-/-/-
COMMON WALLS and FIRE WALLS –				
All	90/ 90 / 90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS –				
Fire-resisting lift and stair shafts –				
Loadbearing	90/ 90/ 90	120/120/120	180/120/120	240/120/120
Non-loadbearing	-/ 90/ 90	-/120/120	-/120/120	-/120/120
Bounding public corridors, public lobbies and the like –				
Loadbearing	60/ 60/ 60	120/-/-	180/-/-	240/-/-

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
Non-loadbearing	-/ 60/ 60	-/-/-	-/-/-	-/-/-
Between or bounding sole-occupancy units–				
Loadbearing	60/ 60/ 60	120/-/-	180/-/-	240/-/-
Non-loadbearing	-/ 60/ 60	-/-/-	-/-/-	-/-/-
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion–				
Loadbearing	60/ 60/ 60	120/-/-	180/-/-	240/-/-
Non-loadbearing	-/ 60/ 60	-/-/-	-/-/-	-/-/-
OTHER LOADBEARING INTERNAL WALLS and COLUMNS–				
All	60/-/-	120/-/-	180/-/-	240/-/-
ROOFS				
Any	-/-/-	-/-/-	-/-/-	-/-/-

8 Appendix C – Occupancy Calculations

The floor area estimations have been provided by Pedavoli Architects Pty Ltd, including the excluded circulation spaces.

Ground & Level 1				
Subject Area	Occupancy Use	D1.13 Density	Floor Area (approx.)	Population Determined
Classrooms and associated corridors.	School – General Classroom	2m ² / person	TBC	As indicated by SINSW
Staff Rooms	School – Staff Room	10m ² / person	TBC	
Library	Library	2m ² / person	TBC	
Canteen	Kitchen	10m ² / person	TBC	
Storage areas	Storage space	30m ² / person	TBC	
TOTAL			TBC	

9 Appendix D – Aggregate Egress Width Calculations

The following has been determined from the submitted details from Pedavoli Architects and SINSW.

Aggregate Egress Widths					
Part of Development	Population	Egress Width Required	Means of Egress	Egress Width Provided	Status
Ground	< 100	1.0m	Perimeter Exit Doors	2.0m	Compliant
Level 1	< 100	1.0m	Required Non-fire-isolated Stairs	2.0m	Compliant

10 Appendix E – Sanitary Facilities Calculations

The following has been determined from the submitted details from SINSW.
55 Students & 9 Staff (As indicated by SINSW).

Sanitary Facility Calculations												
Description of building or part	Occupant Number	Population No.		Required			Provided			Difference		
				WC	U	B	WC	U	B	WC	U	B
Ground & L1 - Students	55	Male	28	1	1	2	5	0	6	3	0	4
		Female	28	2		2	5		6	3		4
Ground & L1 - Teachers	9	Male	5	1	0	1	3	0	3	2	0	2
		Female	5	1		1	3		3	2		2

Key:

*signifies a unisex accessible sanitary facility was added to this facility

` signifies a pan was counted as a urinal or vice versa

Red numbers signify a deficiency in facilities.



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