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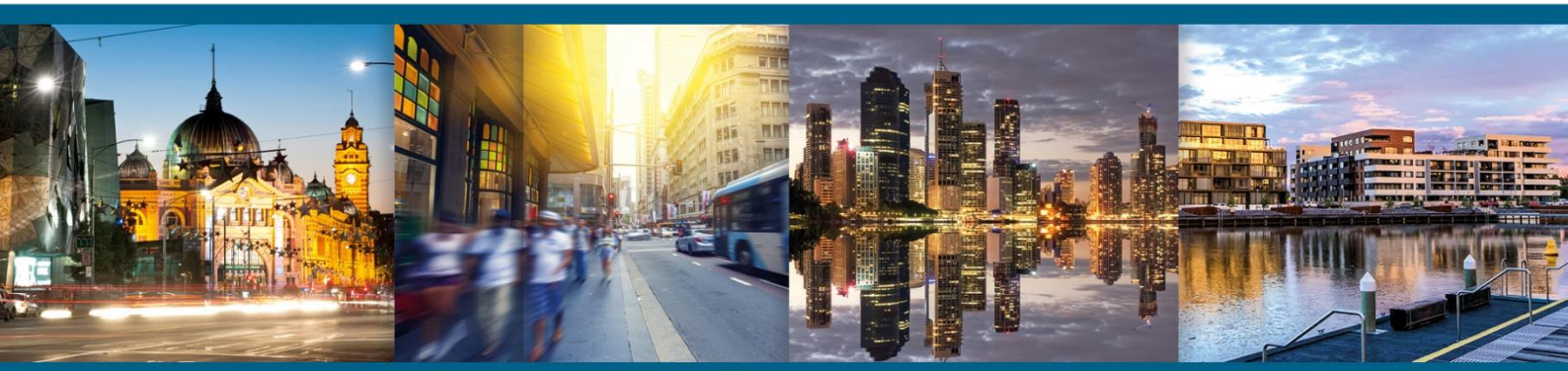
SYDNEY • MELBOURNE • BRISBANE • CANBERRA

Eileen O'Connor Catholic School - 84 Gavenlock Road Mardi 2023-1405- BCA Report R1.3

Preliminary BCA Assessment

2023-1405



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Report Revision History

Revision No:	Date:	Revision Details:	Author:	Verifier:
R1.0	Thursday, 21 November 2024	Final Report	Josh Harvey	Gary Rafferty
R1.1	Tuesday, 15 April 2025	Final Report-Update	Josh Harvey	Gary Rafferty
R1.2	Thursday, 12 June 2025	Final Report-Update	Josh Harvey	Gary Rafferty
R1.3	Wednesday, 2 July 2025	Final Report-Update (EV Charging)	Josh Harvey	Gary Rafferty

Executive Summary

An assessment of the proposed design of the project at Eileen O'Connor Catholic School - 84 Gavenlock Road Mardi has been undertaken against the Deemed-to-Satisfy (DTS) provisions of the relevant sections of the Building Code of Australia and the applicable Building Regulations.
This report details the non-compliances identified that require either amendments to plans or a Performance Solution to satisfy the Performance Requirements of the BCA.

The purpose of this report is to identify issues and omissions in the audited documentation that are required to be addressed to permit the lodgement and approval of a State Significant Development Application for under State Environmental Planning Policy (Planning Systems) 2021

Summary of BCA Parameters:

Building Use:	School
Class of Occupancy	Class 7a (Undercover Car-Park) Class 7b (storage) & 9b (Primary & Secondary School)
Type of Construction Required	Type A
Rise Storeys:	Three (3)
Number of Storeys:	Three (3)
Effective Height:	6.64m **(RL14.3 - Level # RL 7.665)**

1. Issues Requiring Resolution

1.1. Issues requiring amendments to plans, additional details or documentation.

The following issues either need to be resolved or require further details and/or documentation to be provided to ensure compliance before issuing the Construction Certificate.

1.2. Performance solutions required.

It is proposed to satisfy the following non-compliances via Performance Solution:

Item	DTS Clause	Description	Non-Compliance
1.	C4D4	**Separation of external walls and associated openings in different fire compartments**	Stair 1 and the maintenance store on lower ground floor are considered separate fire compartments. Stair 1 contains openings in the external wall which are technically required to be protected in accordance with C4D4. It is recommended that the fire engineer address rationalisation of the protection to these glazed openings via Performance Solution
2.	D2D4	**When fire-isolated stairways and ramps are required**	**Stair 5** connects three storeys and is required to be constructed as a fire isolated stair. The construction of stair 5 is required to be addressed via Fire Engineering Performance Solution, as the stair is not enclosed in a fire rated shaft. There are glazed openings at the public lobbies.
3.	D2D5	**Exit travel distances**	The exit distances exceed the prescriptive requirements of BCA Clause D2D5 and the following assessment has been made; 1. Level 1 -Distance to a point of choice measured 31m from staff WC's
4.	D2D6	**Distance between alternative exits**	The distances between alternate exits exceed the prescriptive requirements of BCA Clause D2D5 and the following assessment has been made; 1. Ground Floor – The distance between Stair 5 & the ramp leading to open space on lower ground floor measures 79m in lieu of 60m
5.	D2D12	**Travel via fire-isolated exits**	Stair 5 does not meet the requirements of BCA Clause D3D12 and therefore is required to be addressed via Fire Engineering Performance Solution. Stair 5 discharges internally within the building and does not lead directly to road or open space.
6.	D2D14	**Travel by non-fire-isolated stairways or ramps**	Stairs 2,3 & 4 and technically not required to be constructed as fire isolated stairs and therefore, designed as non-fire isolated stairs. However, various non-compliances have been identified. • The distance from any point on a floor to a point of egress to a road or open space exceeds 80 m. (Stair 4 measured up to

Item	DTS Clause	Description	Non-Compliance
			90m) • Stairs discharge at a point more than 20m from the door way leading to road. The client has advised that a fire engineer will be engaged to address variations to the DtS requirements
7.	E1D2	**Fire hydrants**	The hydrant booster is located next to the vehicle entry however it is not parallel with Keefer's Glen. The booster assembly will be located greater than 20m from the principal pedestrian entry. A Fire Engineer is to be engaged to address the feasibility of a Performance Solution to vary the requirements of AS2419-2021
8.	E1D17 & E2D21	**Provisions for special hazards**	The installation of PV Panels will be addressed as a special hazard via BCA Clause ED13 & E2D21 provisions for special hazards. Where EV charging stations are located within a building or fixed to an external wall, they will also be considered a special hazards.

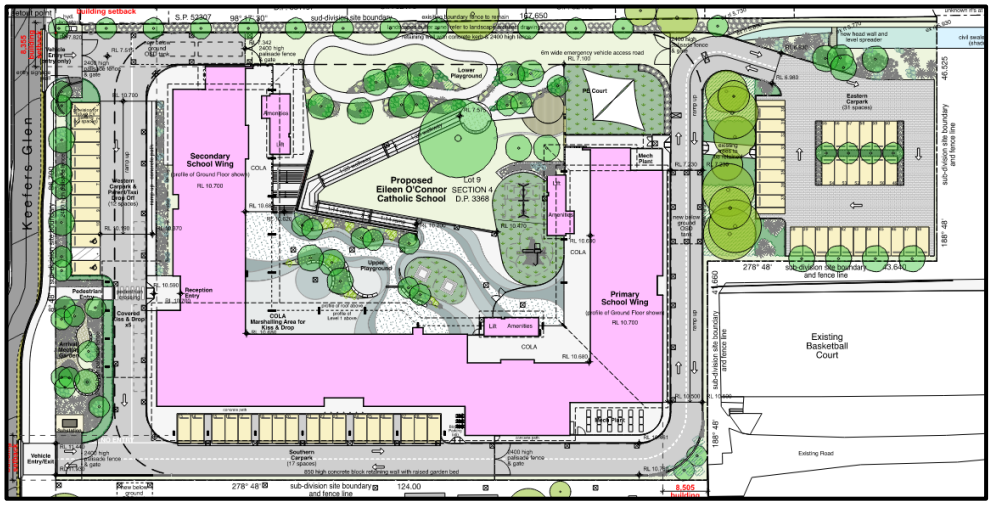
Introduction

This report presents the findings of a preliminary assessment of the proposed alterations and additions to Eileen O'Connor Catholic School against the Deemed-to-Satisfy (DtS) provisions of Building Code of Australia (BCA) 2022.

The development involves:

- Demolition of existing sheds, netball courts, infill of existing dam and removal of selected existing trees
- Construction of a two-three storey building comprising of:
    - 20 General Learning Areas catering for 2 streams of Kindergarten to Year 6 and a single stream Years 7-12.
    - Flexible workspaces for Kitchen, TAS(Technology and Applied Studies)/STEAM (Science, Technology, Engineering, the Arts and Mathematics), Visual Arts.
    - State of the art Library.
    - Multi-purpose rooms to cater for activities including gym, fitness, performing arts space and school community events
    - Sensory indoor and outdoor play spaces, basketball court and landscaping
    - Complimentary learning spaces to support collaboration with allied health professionals for tailored interventions and in-class support.
    - Amenities and storerooms
    - Administration and operational facilities
    - three car parking areas for cars and buses with independent entry & exit points from the site.
    - Parent/carer and transport provider drop off area including a covered drop off zone
- Ancillary works including site services infrastructure
- Universally accessible connections across the campus.

The site is legally defined as Lot 9 Section 4 DP 3368 and located within the Local Government Area of Central Coast Council.



Site plan courtesy of Staton Dahl Architects

2. Purpose

The purpose of this report is to identify issues and omissions in the audited documentation that are required to be addressed to permit the lodgement and approval of a State Significant Development Application for under State Environmental Planning Policy (Planning Systems) 2021.

3. Scope and Limitations

3.1. Scope

The scope of this assessment is limited to the design documentation referenced in Appendix A of this report.

3.2. Limitations

The following limitations apply to the assessment:

- The report considers matters of a significant nature only and should not be considered exhaustive.
- The plans are assessed to the extent necessary to issue a construction certificate under Part 6 of The Act. This means the design has been assessed to be capable of complying with the BCA without necessarily having all the detailed design completed at this stage.
- Details in regard to access for people with disabilities have been assessed to the extent of the deemed-to-satisfy provisions of the BCA/Premises Standard only. A detailed assessment against AS 1428 series, AS/NZS 2890.6 - 2009 and AS 4299 - 1995 is outside the scope of this report
- Generally, the assessment does not incorporate a detailed assessment of the requirements of the Australian Standards.
- Structural and services documentation have not been reviewed.
- Appraisals are limited to the provisions of the BCA and the Premises Standards. Other legislative requirements have not been considered. It does not address additional or specific requirements stipulated under other areas such as Safety in Design, Construction Safety, Disability Discrimination, Planning and Environment, Occupational Health and Safety, Health, Dangerous Goods, etc, which may impact on the design and use of the building. It is recommended that appropriate advice from suitably qualified consultants should be obtained for further information on these areas.
- The BCA report and associated compliance advice is not intended or permitted to be relied on by any other party with respect to their obligations to ensure compliance including but not limited to the making of a compliance declaration under the NSW Design and Building Professionals Act.
- This does not include an assessment of the Access parts of BCA 2022 (Part D4) & Disability (Access to Premises – Buildings) Standards 2010 (Premises
- This does not include an assessment of the Energy efficient parts of BCA 2022 (Section J).

4. National Construction Code BCA 2022- Volume 1: Building Code of Australia Class 2 to Class 9 Buildings

The National Construction Code (NCC) is a uniform set of technical provisions for the design and construction of buildings, structures and plumbing/drainage systems which is separated into 3 volumes. Volume 1 of the NCC is the Building Code of Australia (BCA) for Class 2 to 9 buildings which is the document to which the assessment in this report has been undertaken against. The BCA is legislated under The Act and specifies the Performance Requirements for the design and construction of Class 2 to 9 buildings that must be satisfied to achieve compliance. The Performance Requirements can only be satisfied by a Performance Solution, Deemed-to-Satisfy (DTS) solution or a combination of both.

5. Performance Solutions

The BCA is written in a performance format which allows performance based buildings. This has allowed for innovation and variation from the prescriptive deemed-to-satisfy requirements of the BCA, whilst maintaining the principle levels of health, safety and amenity of building occupants.

Performance solutions are generally adopted when a nominated deemed-to-satisfy provision appears inappropriate for the design, or when a proposed design varies from the prescriptive requirements of the BCA. Subsequently, a performance solution supported by Fire Engineering analysis can determine whether a proposed design that varies from prescriptive requirements, will satisfactorily meet the performance provisions of the BCA. Ultimately, it is with the discretion of the relevant building surveyor whether to accept a deviation from the prescriptive code requirements.

Utilising the performance provisions may result in more economical and somewhat safer building, however performance solutions may require additional on-going maintenance. It is in this instance that all parties, such as the building owner, insurance companies, proposed tenants, etc., are aware of this decision making process and are kept informed of any additional requirements needed to maintain the level of safety.

6. Statutory Framework

The following table summarises the key statutory issues relating to fire safety and the BCA in relation to the certification of new building works.

Issue	Legislative reference	Comment
Existing building fire safety	EPAR S64	Council may require upgrading in some circumstances
New Work	EPAR (DCFS) S19	All new works must comply

6.1. New Work

Section 19 of the EPAR (DCFS) requires that all new work comply with the current requirements of the BCA.

This means that all works proposed in the plans are required to comply but that existing features of an existing building need not comply with the BCA unless required to under other clauses of the legislation.

7. Assessment Data Summary

The following basic assessment data has been drawn from the provisions of the BCA 2022.

7.1. Assumptions

Assumptions made in the preparation of this report are listed below:

1. Primary and Secondary school are considered a united building.
2. School is considered the use of the building storage and carpark are ancillary to said use.
3. The under-croft carpark is less than 10% of the total floor area therefore, fire separation is not required.

8. Assessment

The following is a summary of an assessment of the proposed design against the relevant Deemed-to-Satisfy provision of the BCA.

The BCA report and associated compliance advice is not intended or permitted to be relied on by any other party with respect to their obligations to ensure compliance including but not limited to the making of a compliance declaration under the NSW Design and Building Professionals Act.

8.1. Section A: General Provisions

Secondary School Wing and Primary school wing are connected by elevated walkways, therefore, Steve Watson and Partners have deemed the buildings as united buildings which function as one building.

8.2. Section B: Structure

The Structural Engineering design of the building will be required to comply with the structural provisions of Part B1 of the BCA.

8.3. Section C: Fire Resistance

The proposed new building is required to be Type A construction as it is a Class 7b & 9b building with a rise in storeys of three. Please refer to Appendix D for all fire rating requirements.

As the building is required to be Type A Construction, external walls and common walls, including all components incorporated in them including the facade covering, framing and insulation are required to be non-combustible as per the requirements of BCA Clause C2D10. At Construction Certificate stage, test reports shall be provided for cladding and any attachments to the external wall.

Proposed floor coverings and any proposed wall and ceiling lining materials must comply with the fire hazard properties nominated in Specification C2D11 & specification 7 of the BCA.

The building has a total floor area (compartment size) of less of 8000m^2 and is within the floor area and volume requirements for Type A Construction in accordance with BCA Clause C3D3.

Stair 1 and the maintenance store on lower ground floor are considered separate fire compartments. Stair 1 contains openings in the external wall which are technically required to be protected in accordance with C4D4.

It is recommended that the fire engineer address rationalisation of the protection to these glazed openings via Performance Solution

In accordance with BCA Clause C3D7 vertical separation of openings in external walls any part of a window or other opening in an external wall is above another opening in the storey next below and

its vertical projection falls no further than 450 mm outside the lower opening (measured horizontally), the openings must be separated by—

a. a spandrel which—
   i. is not less than 900 mm in height; and
   ii. extends not less than 600 mm above the upper surface of the intervening floor; and (iii) is of non-combustible material having an FRL of not less than 60/60/60; or
b. a slab or other horizontal construction that—
   i. projects outwards from the external face of the wall not less than 1100 mm; and
   ii. extends along the wall not less than 450 mm beyond the openings concerned; and
   iii. is non-combustible and has an FRL of not less than 60/60/60.

The current building design incorporates both methods and demonstrate compliance with the requirements of BCA Clause C3D7, however, further assessment will be required at CC stage.

As previously discussed, the three buildings are considered one building for the purposes of this assessment, therefore, they are not considered fire sources to one another.

The Lower Ground Floor will be primarily utilised as storage, therefore, the part of the building has attracted a 7b Classification. The Class 7b parts are required to be fire separated from the reminder of the building to achieve an FRL 240.

At CC stage, detailed FRL and compartment drawings are to be submitted demonstrating compliance with the requirements of BCA Clause C3D10.

In a Class 9b building with a rise in storeys of three, the floors are required to be provided with an FRL achieving 120min.

As a result of the requirement to have a fire rating, FRL or the like, any penetrations through the floor slab must comply with the requirements of C4D13.

It is noted that the proposed building will have no openings located within 3m of the fire source feature (allotment boundary), however as part of the development the allotment boundaries will be aligned. This will result in the existing buildings of St Peter College being located within 3m of the fire source feature. Although technically SSDA have not parameters for building upgrades, SWP recommend;

A. The demountable buildings are relocated 3m or greater from the allotment boundary or;
B. External walls are upgraded to achieve FRL 90/-/- and window openings protected in accordance with BCA Clause C4D5
   i. internal or external wall-wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position; or
   ii. –/60/– fire windows that are automatic closing or permanently fixed in the closed position; or
   iii. –/60/– automatic closing fire shutters.

All new penetrations through fire rated elements are to be protected in accordance with BCA Clause C4D15. A Passive Fire Consultant shall be engaged at CC stage to provide a penetration specification for the various building elements.

8.4. Section D: Access and Egress

A minimum of two exits have been provided throughout all storeys , demonstrating compliance with BCA Clause D2D3.

As per the requirements of D2D4 every stair in a Class 9b building must be fire isolated unless it does not connect or pass through more than 3 consecutive floors in a sprinkler protected building, or 2 storeys in a non-sprinkler protected building or where the exit is fire separated from the additional storey

Stair 1 connects two storeys and is proposed to be separated from the lower ground floor and therefore is not required to be constructed as a fire isolated stair.

Stairs 2, 3 and 4 connect 2 storeys and are not required to be constructed as fire isolated stair.

Stair 5 connects three storeys and is required to be constructed as a fire isolated stair. The construction of stair 5 is required to be addressed via Fire Engineering Performance Solution, as the stair is not enclosed in a fire rated shaft. There are glazed openings at the public lobbies.

The exit distances exceed the prescriptive requirements of BCA Clause D2D5 and the following assessment has been made

- Level 1 -Distance to a point of choice measured 31m from staff WC's

The distances between alternate exits exceed the prescriptive requirements of BCA Clause D2D5 and the following assessment has been made;

- Ground Floor – The distance between Stair 5 & the ramp leading to open space on lower ground floor measures 79m in lieu of 60m

The client has advised a fire engineer will be engaged to address variations to the Dts requirements of the NCC at CC stage,

In accordance with Clause D2D7, D2D8 and D2D9 of the BCA, the available exits provided are capable of accommodating the population from each GLA based on number of persons calculated under Clause D2D18 of the BCA. The building will accommodate 200 students and approximately 71 staff.

Confirmation from the design team in relation to population number states that there will be no more than 30 persons per GLA and the egress withs for the Ground Floor First Floor Second floor are capable of serving this number.

Stair 5 discharges internally within the building and does not lead directly to road or open space. Stair 5 does not meet the requirements of BCA Clause D3D12 and therefore is required to be addressed via Fire Engineering Performance Solution.

Stairs 2,3 & 4 and technically not required to be constructed as fire isolated stairs and therefore, designed as non-fire isolated stairs.
However, various non-compliances have been identified.

- The distance from any point on a floor to a point of egress to a road or open space exceeds 80 m. (Stair 4 measured up to 90m)
- Stairs discharge at a point more than 20m from the door way leading to road.

The client has advised that a fire engineer will be engaged to address variations to the DtS requirements

The requirements of BCA Clause D2D23 are not application applicable as the primary school is the only use within the building and has a rise in storeys of 4 or less.

For D2D23(1), a primary school includes classrooms, offices, staffrooms, halls, canteens and the like within the primary school.

For D2D23(2), a primary school includes classrooms, offices, staffrooms, halls, canteens, carparks, end of trip facilities and the like provided solely for the primary school, or ***school*** *which incorporates the primary school.*

School*: Includes a primary or secondary school, college, university or similar educational establishment.*

Any new electrical meters, distribution boards (telecommunications or electrical) in the path of travel must be contained within a non-combustible enclosure with the doorways fitted with smoke seals in accordance with Clause D3D8 of the BCA.

In accordance with BCA Clause D3D9 the storerooms under non-fire isolated must be constructed as follows;

a. the enclosing walls and ceilings have an FRL of not less than 60/60/60; and
b. any access doorway to the enclosed space is fitted with a self-closing –/60/30 fire door.

The construction of the new stairways including goings, risers and slip resistance classification is to comply with Clause D3D14 of the BCA. Landings at the top and bottom of the stairway is to comply with Clause D3D15 of the BCA.

Balustrades are detailed in locations as required by BCA Clause D3D17 however, further design development is required at Construction Certificate stage to demonstrate compliance with the requirements of BCA Clause D3D18 Height of barriers and D3D19 Openings in barriers.

Handrails are to be provided to the new stairs in accordance with Clause D3D22, D4D4 and Clause 11 and 12 of AS1428.1 – 2009.

Within the primary school handrails must be provided as follows;

i. have one handrail fixed at a height of not less than 865 mm; and
ii. in addition to (i), have a handrail—

(A) fixed at a height between 665 mm and 750 mm in a primary school

Sufficient details have not been provided at this stage, however, compliance is readily achievable subject to detailed design development at CC stage.

All doors serving as the required exit are required to swing in the direction of travel in accordance with BCA Clause D3D25.

8.5. Section E: Services and Equipment

The building is required to be served by a fire hydrant system complying with Clause E1D2 of the BCA and AS 2419.1 – 2021.

The hydrant booster is located next to the vehicle entry however it is not parallel with Keefer's Glen.

The booster assembly will be located greater than 20m from the principal pedestrian entry.

A Fire Engineer is to be engaged to address the feasibility of a Performance Solution to vary the requirements of AS2419-2021

Fire Hose reels are not required to be provided to serve the Classrooms of a Class 9b building.
The building will require portable fire extinguishers complying with Clause E1D14 of the BCA and AS 2444 – 2001.

Clause E1D17 & E2D21 Where solar panels are proposed to be installed, the installation will be addressed as an Excessive Hazard via BCA Clause ED13 & E2D21 provisions for special hazards. The installation of PV Panels will be addressed as a special hazard via BCA Clause ED13 & E2D21 provisions for special hazards.

Where EV charging stations are located within a building or fixed to an external wall, they will also be considered a special hazards.

The proposed lift will be required to be one of types identified in Clause E3D7 and E3D8, subject to the limitations on use specified in the Table. The lift also is required to incorporate the accessible features in accordance with Table E3.6b of the BCA.

In accordance with NSW E2D16 (A building or part of a building used as an assembly building must be provided with automatic shutdown of any air-handling system (other than non-ducted individual room units with a capacity not more than 1000 L/s and miscellaneous exhaust air systems installed in accordance with Sections 5 and 6 of AS 1668.1) which does not form part of the smoke hazard management system, on the activation of smoke detectors installed complying with S20C6.

Electrical Engineer to provide detailed dry fire service drawings and design certification at CC stage to demonstrate compliance with the requirements of E2D16.

Lift installation to comply with Part E3 of NCC 2022. As the lift does not travel more than 12m, a stretcher lift is not required to be provided.

The building will require emergency lighting in accordance with Clauses E4.2 & E4.4 of the BCA and AS 2293.1 – 2018.

The building will require exit signage in accordance with Clauses E4.5, E4.6 & E4.8 of the BCA and AS 2293.1 – 2018.

8.6. Section F: Health and Amenity

Stormwater drainage must be designed and constructed in accordance with AS/NZS 3500.3.

Internal wet areas and external balconies shall be waterproofed in accordance with AS 3740 and AS 4654.2 respectively.

External wall cladding must comply with the requirements of F3D5 Wall cladding, further details are to be provided at CC stage to demonstrate compliance.

Sanitary facilities are required to be provided on an equal basis and shall be allocated for male and female occupants. Furthermore, separate facilities are required to be provided for students and staff. Compliance has been demonstrated with this regards. Further assessment will be required at CC in relation to the student change facilities which may require a Performance Solution.

Based on an assessment of the current sanitary facilities the following population numbers can be supported;

Male	Female		Male Closet Pan	Male Urinals	Male Washbasins	Female Closet Pan	Female Washbasins
200	200	Primary School (Students)	4	3	5	4	5
200	200	Class 9b - Secondary Schools (Students)	4	3	5	4	5
80	80	Class 9b - Schools (Employees)	2	2	2	4	2

It has been determined that each GLA will not accommodate more than 100 persons therefore, a 2.4m floor to ceiling height is acceptable.

As it is feasible that each storey is capable of accommodating more than 100 persons a minimum floor to ceiling height is required to be 2700mm within common corridors. Based on an assessment of the architectural drawings, compliance has been demonstrated, with a floor to ceiling height of circa 3m being achieved.

In a Class 9b building natural light is required to be provided to all general-purpose classrooms in primary or secondary schools.

Required natural light must be provided by windows or doors that have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the floor area of the room.

It would appear that sufficient natural light been provided into various GLA's within the ground floor. All GLA's are capable of complying with the natural light requirements of BCA Clause F6D2 & F6D3. Further details to be provided at CC stage. The architect to provide detailed natural light & ventilation calculations for all general-purpose classrooms and ensure that the area of the rooms incorporate any proposed store areas.

Artificial lighting is required to all rooms that are frequently occupied, all accessible spaces, all corridors and circulation spaces and path of egress in accordance with AS/NZS 1680.0 – 2009.

Ventilation will be required to all rooms occupied by a person for any purpose by means of natural ventilation complying with Clause F6D7 of the BCA or mechanical ventilation/air-conditioning complying with AS 1668.2 –2012.

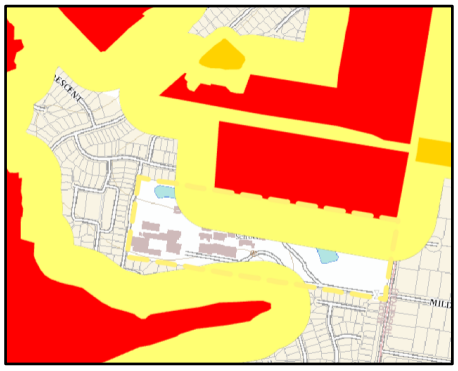
Various sanitary compartments open directly onto the common circulation space these are not considered rooms for the purpose of F6D9 and therefore a screen is not required to be provided. The areas have been screened as per the requirements of F6D10.

8.7. Part G5: Construction in bushfire prone areas (NSW)

The proposed new building has been identified as being located on bushfire-prone land. The NCC 2022 includes specific and stringent requirements for Class 9b school buildings situated on bushfire-prone land.

The building is identified as being located on BAL—12.5, the building would need to comply with DtS requirements of NSW Part G5 Construction in bushfire prone areas & Specification 43.

The bushfire consultant shall review the architectural drawings and provide design certificate at CC stage.



`Figure 2 - Hazard identification map

Section J: Energy Efficiency

In NSW for a Class 3 building or Class 5 to 9 building, from 1 May 2023 to 30 September 2023 NSW Section J of NCC 2019 Volume One Amendment 1 may apply instead of Section J of NCC 2022 Volume One and from 1 October 2023 Section J of NCC 2022 Volume One applies. The buildings are to be designed to achieve compliance with the relevant provisions of Part J1 to J9 respectively.

- Part J1 - Energy efficiency performance requirements
- Part J2 - Energy efficiency
- Part J3 - Elemental provisions for a sole-occupancy unit of a Class 2 building or a Class 4 part of a building
- Part J4 - Building Fabric
- Part J5 - Building Sealing
- Part J6 - Air-Conditioning and ventilation

- Part J7 - Artificial lighting and power
- Part J8 - Heated water supply and swimming pool and spa pool plant
- Part J9 - Energy monitoring and on-site distributed energy resources (J9D4 also includes the requirements for building to be EV ready)

Section J compliance has not been reviewed by SWP, and a full compliance review should be undertaken by a suitably qualified acoustic consultant to ensure compliance with BCA Part J & Section J has been complied with prior to the issue of any construction certificate.

9. Conclusion

The plans assessed were developed to a standard suitable for submission as a Development Application and do not contain all the details necessary to allow a CC to be issued. As such, this assessment was limited to the major items of the BCA with the view of identifying any items that may result in a modified Development Consent being required, or additional key items that need to be included in the design.

The architectural design documentation as referred to in report have been assessed against the applicable provisions of the Building Code of Australia, (BCA) and it is considered that such documentation is capable of complying with that Code subject to the areas contained within this report being addressed during design development.

10. Appendix A – Referenced Documentation

The following documentation was used in the preparation of this report:

Drawing No.	Title	Issue	Date	Drawn By
A0001	Cover Sheet	A		Stanton Dahl Architects
A0101	Campus Plan	A	07/04/25	Stanton Dahl Architects
A0106a	Proposed Site Plan	A	07/04/25	Stanton Dahl Architects
A0106b	Setbacks & Building Dimensions Plan	A	07/04/25	Stanton Dahl Architects
A0107	Extent of Works	A	07/04/25	Stanton Dahl Architects
A0201	Floor Plan Lower Ground	A	07/04/25	Stanton Dahl Architects
A0202	Floor Plan Ground	A	07/04/25	Stanton Dahl Architects
A0203	Floor Plan Level 1	A	07/04/25	Stanton Dahl Architects
A0204	Roof Plan	A	07/04/25	Stanton Dahl Architects
A0211	Typical GLA Floor Plan	A	07/04/25	Stanton Dahl Architects
A0251	Access Plan Lower Ground	A	07/04/25	Stanton Dahl Architects
A0252	Access Plan Ground	A	07/04/25	Stanton Dahl Architects
A0253	Access Plan Level 1	A	07/04/25	Stanton Dahl Architects
A0301	Elevations 1	A	07/04/25	Stanton Dahl Architects
A0302	Elevations 2	A	07/04/25	Stanton Dahl Architects
A0311	Sections 1	A	07/04/25	Stanton Dahl Architects
A0312	Sections 2	A	07/04/25	Stanton Dahl Architects
A0701	Materials & Finishes 1	A	07/04/25	Stanton Dahl Architects
A0702	Materials & Finishes 2	A	07/04/25	Stanton Dahl Architects

11. Appendix C – Schedule of proposed statutory Fire Safety Measures

Measure	Standard of Performance
Automatic Fire Detection and Alarm System (Smoke Detection System to Automatically Shut down Air-Handling System)	BCA 2022 S20C6 and AS 1670.1 - 2018
Emergency Lighting	BCA 2022 Clause E4D2, E4D4 and AS/NZS 2293.1 - 2018
Exit Signs	BCA 2022 Clause E4D5, NSW E4D6, E4D7, E4D8 and AS/NZS 2293.1 - 2018
Fire Engineering Performance Solution	Fire Engineering Performance Solution prepared by xxxx, Ref xxxx Date xxxx
Hose Reel System	BCA 2022 Clause E1D3 and AS 2441 - 2005
Fire Hydrants Systems	BCA 2022 Clause E1D2 and AS2419.1-2021
Fire Seals Protecting Opening in Fire Resisting Components of The Building	BCA 2022 Clause C4D15, Specification 13, AS 1530.4 - 2014, AS 4072.1 - 2005 and installed in accordance with the tested prototype.
Lightweight Construction	BCA 2022 Specification 6, Clause A2G3 and AS 1530.4 - 2014
Mechanical Air Handling System (Automatic Shut Down of Air-Handling System)	BCA 2022 Clause NSW E2D16 and AS 1668.1 - 2015
Portable Fire Extinguishers	BCA 2022 Clause E1D14 and AS 2444 - 2001
Warning And Operational Signs	BCA 2022 Clauses D2D22, NSW D3D24, D3D28 and D4D7.

12. Appendix C2D2 - Fire Rating Requirements

12.1. Type A Construction

Table 1 S5C11a: Type A construction: FRL of loadbearing parts of external walls

Distance from a *fire-source feature*	FRL (in minutes): *Structural adequacy/ Integrity / Insulation*			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/60/60	120/90/90	180/180/120	240/240/180
3 m or more	90/60/30	120/60/30	180/120/90	240/180/90

Table 2 S5C11b: Type A construction: FRL of non-loadbearing parts of external walls

Distance from a *fire-source feature*	FRL (in minutes): *Structural adequacy / Integrity / Insulation*			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	–/90/90	–/120/120	–/180/180	–/240/240
1.5 to less than 3 m	–/60/60	–/90/90	–/180/120	–/240/180
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–

Table 3 S5C11c: Type A construction: FRL of external columns not incorporated in an external wall

Column type	FRL (in minutes): *Structural adequacy / Integrity / Insulation*			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Loadbearing	90/–/–	120/–/–	180/–/–	240/–/–
Non-loadbearing	–/–/–	–/–/–	–/–/–	–/–/–

Table 4 S5C11d: Type A construction: FRL of common walls and fire walls

Wall type	FRL (in minutes): *Structural adequacy / Integrity / Insulation*			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Loadbearing or non-loadbearing	90/90/90	120/120/120	180/180/180	240/240/240

Table 5 S5C11e: Type A construction: FRL of loadbearing internal walls

Location	FRL (in minutes): *Structural adequacy / Integrity / Insulation*			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Fire-resisting lift and stair shafts	90/90/90	120/120/120	180/120/120	240/120/120
Bounding public corridors, public lobbies and the like	90/90/90	120/–/–	180/–/–	240/–/–
Between or bounding sole-occupancy units	90/90/90	120/–/–	180/–/–	240/–/–
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion	90/90/90	120/90/90	180/120/120	240/120/120

Table 6 S5C11f: Type A construction: FRL of non-loadbearing internal walls

Location	FRL (in minutes): *Structural adequacy / Integrity / Insulation*			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Fire-resisting lift and stair shafts	–/90/90	–/120/120	–120/120	–/120/120
Bounding public corridors, public lobbies and the like	–/60/60	–/–/–	–/–/–	–/–/–
Between or bounding sole-occupancy units	–/60/60	–/–/–	–/–/–	–/–/–
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion	–/90/90	–/90/90	–/120/120	–/120/120

Table 7 S5C11g: Type A construction: FRL of other building elements not covered by Tables S5C11a to S5C11f

Building element	FRL (in minutes): *Structural adequacy / Integrity / Insulation*			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Other loadbearing internal walls, internal beams, trusses and columns	90/–/–	120/–/–	180/–/–	240/–/–
Floors	90/90/90	120/120/120	180/180/180	240/240/240
Roofs	90/60/30	120/60/30	180/60/30	240/90/60

13. Appendix C2D11 - Early Fire Hazard Properties for Materials

Floor materials, floor coverings and wall and ceiling lining materials are required to comply with BCA prescribed fire hazard properties and AS5637.1-2015

Floor Linings and Floor Coverings	
General Non Sprinklered Areas	Minimum 2.2 (or 4.5 for Class 3 areas and 9a patient care areas) kw/m^2 critical radiant heat flux and, a maximum smoke development rate of 750 percent minutes.
General Sprinklered Areas	Minimum 1.2(or 2.2 for Class 3, 9a patient care, and 9c residential use areas) kw/m^2 critical radiant heat flux
Fire Isolated Exits and Fire Control Rooms	Minimum 2.2/(or 4.5 for Class 3, 9a and 9c areas) kw/m^2 critical radiant heat flux
Lift Cars	Minimum 2.2 kw/m^2 critical radiant heat flux

Wall Linings and Ceiling Linings	
Generally	Variously Group 1,2, or 3 materials (more restrictive Group number for non-sprinklered areas, public corridors, health care corridors and other prescribed locations) when tested to AS/ISO 9705 or clause 3 of BCA Spec A2.4 and AS/NZ 3837
Fire Isolated Exits	Group 1 material when tested as above
Lift Cars	Group 1 or 2 materials when tested as above

In addition, in non-sprinklered areas, wall and ceiling linings must have a smoke growth rate index not more than 100 or an average specific extinction area less than 250m^2/g.

Other than above, construction materials generally need to achieve as1530.3 early fire hazard indices requirements as follows:	
Generally	Spread of flame Index not > 9 Smoke developed index not > 8
Sarking	Flammability Index not > 5
Fire Isolated Exits and Fire Control Rooms	Spread of Flame Index 0 Smoke Developed Index not > 2 Sarking Flammability 0
Non Fire Isolated Stairs & Escalators and Auditorium Fixed Seating	Spread of Flame Index 0 Smoke Developed Index not > 5
Lifts	To AS 1735.2
Air Ducts	To AS4254