MATT SHUTER + ASSOCIATES

Building Code of Australia

Design Compliance Report

Schematic Design Review

Sutherland Public School Hall Upgrade

Report Number & Revision:	**MSA2604_BCA_SUT_2.2**
Prepared For:	**NSW Department of Education**
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Executive Summary

This report assesses the **Schematic Level Design** for the proposed **Sutherland Public School Hall Upgrade** against the requirements of the National Construction Code (NCC) / Building Code of Australia (BCA).

This report has been prepared to support a Review of Environmental Factors for the New Hall, pursuant to Part 5 of the Environmental Planning and Assessment Act (EP&A Act).

The primary purpose of the report is to identify any non-compliances with the deemed-to-satisfy provision of the BCA and provide recommendations to best comply with the requirements of the BCA.

Subject to compliance with the mitigation measures of this report, it is considered that the development can readily comply with the relevant requirements of the BCA. Recommendations have been identified as follows:

- Significant BCA matters, being those with the ability to affect the design have been included in Table 1.0 below.
- A BCA Compliance Schedule suitable for the current level of design is also contained in in Table 6.0 of this report.

Table 1.0 – Mitigation Measures - Significant BCA Compliance Matters

#	DTS Clause	Recommendation	Status
BCA Compliance Issues			
•	BCA H3V4 & BCA C1V4	**Avoidance of Spread of Fire between Class 2-9 buildings** Design input from fire engineer and/or structural engineer is required to confirm compliance with BCA Verification Method H3V4 or C1V4 to address the spread of fire between the new hall and existing school buildings via the existing class 10a covered walkways.	**Certification by Designer or Specialist** *Possible Fire Engineering Advice required*
•	Part D4	**DDA Report** Refer to DDA Report for detailed assessment of accessibility features that are required for the development scope.	**Design Report Required** *DDA Consultant*
•	Various	**Design Detail** Further to the above matters, those items that are indicated as *"Can Readily Comply – (Subject to Detail)"* in Table 3.0 also require further details or minor design changes to allow full assessment by the BCA Consultant.	**Further Detail Required**

1.0 Introduction

This report assesses the **Schematic Level Design** for the proposed **Sutherland Public School Hall Upgrade** against the requirements of the National Construction Code (NCC) / Building Code of Australia (BCA).

This report has been prepared to support a Review of Environmental Factors for the New Hall, pursuant to Part 5 of the Environmental Planning and Assessment Act (EP&A Act).

The subject site is located at 38-54 Eton Street Sutherland NSW 2232 (see Figure 1.0). The Sutherland Public School is approximately 1.35 ha in area and is made up of the following 16 allotments:

- Lot 1, DP6600
- Lot 2, DP6600
- Lot 3, DP6600
- Lot 4, DP6600
- Lot 5, DP6600
- Lot 6, DP6600
- Lot 7, DP6600
- Lot 8, DP6600
- Lot 9, DP6600
- Lot 10, DP6600
- Lot 5, Section 45, DP802
- Lot 6, Section 45, DP802
- Lot 7, Section 45, DP802
- Lot 8, Section 45, DP802
- Lot 9, Section 45, DP802
- Lot 10, Section 45, DP802

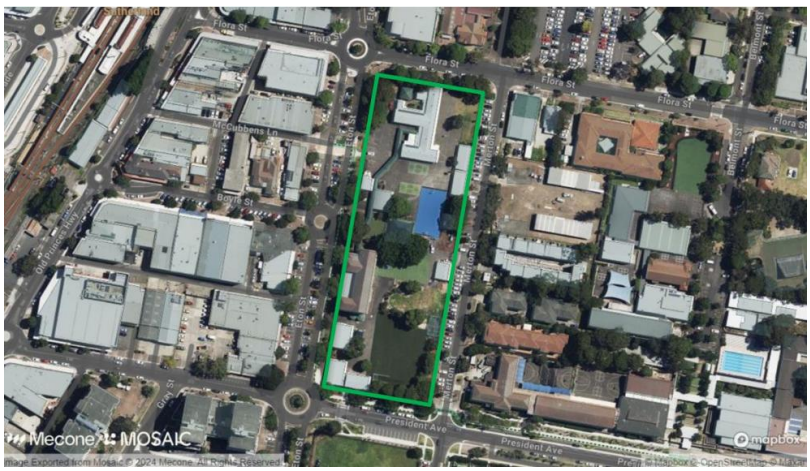


Figure 1.0 – Subject Site

The proposed works involve upgrades to the existing Sutherland Public School. This will include demolition of existing Block J, garden bed, car parking spaces, and associated structures, construction of a new single storey school hall, and associated civil works. The proposal retains the existing student capacity at the Sutherland Public School.

MSA have been advised that the project will be carried out over one continuous construction period for the demolition and construction works.

2.0 Assessed Information

The following information was specifically relied upon for this assessment:

- Desktop assessment of **Schematic design documentation** and supporting design plans and information prepared by BKA Architecture (refer Attachment B – Assessed Plans)
- The Building Code of Australia (National Construction Code) 2022
- The Guide to the Building Code of Australia (National Construction Code) 2022

3.0 Purpose & Basis of the Report

3.1 Report Purpose

The purpose of this report is to assess the following:

- Assess the design documentation against the prescriptive requirements of the relevant BCA, and detail any significant issues (or those which have the ability to affect the current design);
- Provide recommendations to best address any significant departures from the requirements of BCA and to guide the detailed design development.

3.2 General Basis

The general basis of this report is to assess and address compliance with the significant requirements of the Building Code of Australia (BCA) as relevant to the new building works and with regard to the site conditions and current design documentation. The scope of services is limited to assessment against *Sections C - Fire Resistance, Section D - Access & Egress and Section E - Services & Equipment, Section F - Health and Amenity, and high level parameter advice on Section B – Structure and Section J - Energy Efficiency* of the BCA.

3.3 Regulatory Basis

The following outlines the regulatory basis for assessment for Crown developments and existing buildings.

3.3.1 Environmental Planning & Assessment Act, 1979 and Regulation 2021

This report assumes compliance with the Building Code of Australia is required under Environmental Planning & Assessment Act, 1979 and Regulation 2021.

3.3.2 Development within Existing Buildings

Where a development is being undertaken to an existing building, the following methodology is used to determine if 'the building works' comply with the BCA:

- All *new* works must comply with the BCA, and
- The new works must not cause a contravention of the BCA within the existing building. If a contravention is caused, it must be addressed, and
- The new works must not cause a *reduction* in the fire protection afforded to the existing building when compared to existing, and
- The existing building (beyond the scope of the above three dot points) need not upgraded to comply with the BCA – *unless required otherwise by the Consent or Certifying Authority.*

4.0 Limitations & Exclusions of the Report

The Report does not specifically consider anything beyond the considerations contains in Section 2.0 "Assessed Information" and Section 3.0 "Purpose & Basis of Report" and is otherwise also subject to the following specific limitations:

- This report is limited strictly to assessment of the proposed project scope, ie 'the new building works' as detailed in the information referenced in Section 2.0 and does not constitute a full upgrade assessment of any existing building.
- The report is limited to assessment of the development against the deemed-to-satisfy provisions of the applicable Building Code of Australia.
- No assessment has been made of any existing Fire Engineering or BCA Performance based Reports that may apply to the base building or development, unless otherwise specifically noted.

- The information provided to MSA as nominated in Section 2.0 is accepted in good faith as accurate and correct.

- Some requirements of the BCA / Access Regulations are recognised as being interpretive in nature. Where these matters are encountered, interpretations are made in accordance with MSA policy &/or as guided by other standards, guides and industry best practice. Specific relevant interpretations relevant to this assessment are included in Section 5.2 "BCA Assessment Data" of this report.

- MSA does not support the use of combustible cladding or aluminium composite panels as external cladding, lining or ancillary element in any way. Such products are recommended to be avoided and where such products are proposed, MSA automatically excludes their assessment from any reporting and certification and will not accept liability for their use in any way.

- The report does not consider compliance with *The Disability Discrimination Act, 1992*, the *Disability (Access to Premises – Buildings) Standards 2010*, or accessibility related parts of the *BCA* (unless specifically referred to). A separate accessibility (DDA) report is required.

- Detailed assessment of any engineering matters or Australian Standards– e.g: structural, civil, electrical, hydraulic, mechanical, fire, bushfire protection is beyond the scope of this report.

- The Report does not provide for any Alternative /Fire Engineered Solutions.

5.0 Building Characteristics

5.1 Building Details

5.1.1 Sutherland Public School

The site is the existing **Sutherland Public School** located at 38-54 and 66 Eton Street, Sutherland.

The proposed development is the **Hall Upgrade** being the erection of a new school hall with stage, kitchenette/canteen, OSHC Office, Cola, storeroom and student and staff amenities.

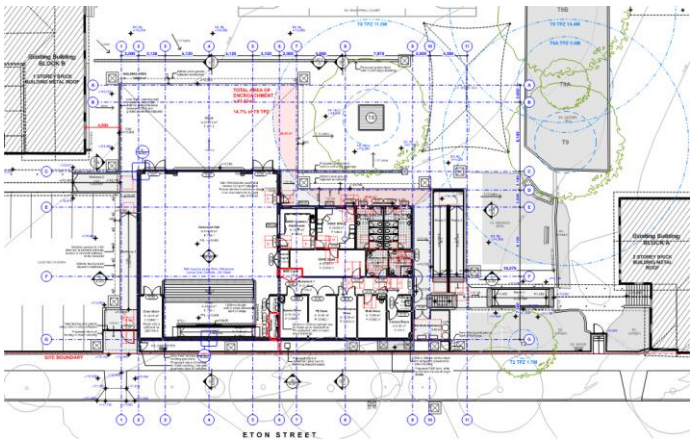


Figure 5.1.1 – Proposed New Hall *(source: Ground Floor Plan by BKA Architecture)*

5.2 BCA Assessment Data

The following table details the key BCA characteristics of the building / development:

Table 5.2 – BCA Assessment Data

BCA Clause 2022 (BCA 2019 in brackets)		**Proposed**
Part A6 (A1.1)	Classification	Class 9b (Assembly Building)
C2D3 (C1.2)	Rise in Stories	1
C2D2 (C1.1)	Construction Type	Type C Construction (Least Fire Resistant)
C3D3 (C2.2)	Floor areas and Fire Compartment Limitations	Type C (Class 5, 9b or 9c) - Max Floor Area 3000m2, Max Volume 18000m3
Schedule 1 (Schedule 3)	Effective Height	Less than 12m

5.3 BCA / Access Interpretation

Effective height

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).

Exit

Exit means:

(a) any, or any combination of the following if they provide egress to a road or open space:

- An internal or external stairway.
- A ramp.
- A fire-isolated passageway.
- A doorway opening to a road or open space.

(b) A horizontal exit or a fire-isolated passageway leading to a horizontal exit

Fire compartment

Fire Compartment means—

(a) the total space of a building; or

(b) when referred to in—

(i) the Performance Requirements — any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any openings adequately protected; or

(ii) the Deemed-to-Satisfy Provisions — any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that required for a fire wall for that type of construction and where all openings in the separating construction are protected in accordance with the Deemed-to Satisfy Provisions of the relevant Part

Fire-resistance level (FRL)

FRL means the grading periods in minutes determined in accordance with Specification A2.3, for the following criteria—

(a) structural adequacy; and

(b) integrity; and

(c) insulation,

and expressed in that order.

Note: A dash means that there is no requirement for that criterion. For example, 90/–/– means there is no requirement for an FRL for integrity and insulation, and –/–/– means there is no requirement for an FRL.

Fire-source feature

Fire source feature means—

(a) the far boundary of a road, river, lake or the like adjoining the allotment; or

(b) a side or rear boundary of the allotment; or

(c) an external wall of another building on the allotment which is not a Class 10 building

Fire wall

Fire wall means a wall with an appropriate resistance to the spread of fire that divides a storey or building into fire compartments

Non-combustible

Non-combustible means -

(a) applied to a material — not deemed combustible as determined by AS 1530.1 — Combustibility Tests for Materials; and

(b) applied to construction or part of a building — constructed wholly of materials that are not deemed combustible.

Occupiable Outdoor Area

Open /unroofed sections may be considered 'occupiable outdoor area' a new definition under Part G6 of BCA 2019 that requires unroofed parts of buildings meet certain BCA criteria in relation to fire resistance, egress and services and equipment as these areas can have an effect on the safety of occupants.

Performance requirement

Performance requirement means a requirement which states the level of performance which a Performance Solution or Deemed-to-Satisfy Solution must meet.

Performance Solution

Performance Solution means a method of complying with the Performance Requirements other than by a Deemed-to-Satisfy Solution.

6.0 BCA Mitigation Measures

The following Table 6.0 provides a summary of assessment of the architectural plans against the significant requirements of the BCA. The following notations are made in the "Status" column of Table 6.0 for ease of reference.

Key of Compliance Status

Status	Description
Complies	The design documentation for the development demonstrates compliance with the BCA deemed-to-satisfy (DTS) provisions as relevant to the new building works &/or the existing level of compliance is maintained.
Can Readily Comply **or** **Further Detail Required**	Though strict & full compliance can't necessarily be ascertained on the current level of documentation detail, compliance can be readily achieved within the constraints of the design. This may be in the form of a plan or specification note, or further detailed information.
NA / Informational	The matter is not applicable to the item of the project scope or the clause is informational only. No specific action required.
Does Not Comply	There is an apparent or foreseeable non-compliance with the BCA deemed-to-satisfy provisions indicated on the design documentation that will require re-design or further consideration.
Critical Detail Required	There is a critical detail required to assess or confirm full BCA compliance that should be identified as soon as possible to reduce project risk.
Fire Engineering	A Fire Engineering Report (fire safety issue) is required to address the DTS non-compliance (or re-design). *The recommendations of any fire engineering report must be incorporated into the design.*
BCA Performance Solution	A BCA Performance Solution Report (for non-fire safety issue) is required to address the DTS non-compliance (or re-design). *The recommendations of any performance solution report must be incorporated into the design.*
Certification by Designer or Specialist	Detailed assessment and confirmation is required from the relevant design engineer, designer or specialist to confirm compliance with the specified requirements of the BCA &/or referenced Australian Standards. This may be technical advice at early design stages or design compliance certification at detailed design stages.

Table 6.0 provides a summary of key BCA considerations only and should be read in conjunction with the full terms, wording and requirements of the Building Code of Australia to ensure compliance. Some BCA Clauses that are not relevant have specifically not been included in the Table.

Table 6.0 –BCA Compliance Schedule

BCA 2019 Cl.	BCA 2022 Cl.	BCA Requirement	Compliance Comment	Status
Section B – Structure				
Section B	Section B	**Structural Compliance** All new works must meet current Structural Requirements of Section B of the BCA. Existing structures should be confirmed as capable of supporting any new loads.	Design compliance certification from the designer of specialist	**Certification by Designer or Specialist**
B1.4	B1D4	**Glazing – BCA Clause B1.4** All glazing must be selected and installed in accordance with AS2047 & AS1288.	Design compliance certification from the designer of specialist	**Certification by Designer or Specialist**
Section C – Fire Resistance				
Part C2 – Fire Resistance & Stability				
C1.1	C2D2	**Type of Construction** All new works must meet current Fire Resistance Level (FRL) requirements of Section C and Specification 5 of the BCA for the required Type of Construction. *Refer to "Fire Resistance of Building Elements below in this table and Attachment B for more Fire Resistance Level information.*	The building is required to be benchmark Type C Construction, requiring fire resistance levels in accordance with BCA Specification 5 and as summarised in Attachment A. Design compliance certification from the designer of specialist	**Certification by Designer or Specialist**
2.1 of Spec C1.1	S5C2	**Exposure to Fire Source Features** A building element is exposed to a fire-source feature if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that– • has an FRL of not less than 30/–/–; and • is neither transparent nor translucent.	The new building is required to be of type C construction. The building is setback an appropriate distance from other buildings on the allotment subject to addressing BCA C1V4 & H3V4 to 'avoid the spread of fire' between the buildings via the covered walkways.	**Further Detail Required**
CV2	H3V4 & C1V4	**Avoidance of Spread of Fire between Class 2-9 buildings** – Class 10a Covered Walkways – BCA H3V4 & BCA C1V4 To avoid a class 10a building increasing the risk of fire spread between Class 2-9 buildings, • the class 10a building must be capable of withstanding a heat flux set out in column 2 of Table H3V4 without ignition; and • the class 10a building must not cause heat flux in excess of those set out in column 2 of H3V4 when the distance between buildings is set out in column 1 of Table H3V4. Table H3V4 Heat flux (same allotment) Column 1 (Location) / Column 2 (Heat flux [kW/m^2]) 0 m – 80 2 m – 40 6 m – 20 12 m – 10	Design input from fire engineer and/or structural engineer is required to confirm compliance with BCA Verification Method H3V4 or C1V4 to address the spread of fire between the new hall and existing school buildings via the covered walkways.	**Certification by Designer or Specialist** *Possible Fire Engineering Advice required*
Spec C1.1	S5C21	**Fire-Resistance of Building Elements** The FRL's of all elements are to be in accordance with: • The FRL's detailed in the Table contained within **Attachment A** of this report. • The FRLs for specific separation of equipment (addressed elsewhere in this report)	Design compliance certification from the designer of specialist	**Certification by Designer or Specialist**
C1.2	C2D3	**Rise in Storeys** The building rise in stories is generally the sum of the greatest number of storeys at any part of the external walls of the building and any storeys within the roof space above the finished ground next to that part.	The building has a rise in storeys of 1	**Informational**
C1.8	C2D9	**Lightweight Construction** Lightweight construction must comply with Specification 6 where it is used for fire rated elements and/or lifts shafts.	Design compliance certification from the designer of specialist	**Certification by Designer or Specialist**

<table>
<tr><th>BCA 2019 Cl.</th><th>BCA 2022 Cl.</th><th>BCA Requirement</th><th>Compliance Comment</th><th>Status</th></tr>
<tr><td>C1.10</td><td>C2D11</td><td>Fire Hazard Properties

Fire hazard properties for all new floor, wall and ceiling linings and assemblies must comply with BCA Specification 7 (or otherwise considered non-combustible).

Floor Linings – must have an appropriate Critical Radiant Flux and smoke development rate % tested per ISO 9239.1-2003 and meeting the indices in Specification 7 for the location.

Walls & Ceilings – must have an appropriate Group Number tested per AS 5637.1-2015 and meeting the indices in BCA Specification 7.</td><td>Product data sheets and test reports for all floor, wall and ceiling linings are required to demonstrate compliance</td><td>Can Readily Comply - Detail</td></tr>
<tr><td colspan="5">Part C3 – Compartmentation & Separation</td></tr>
<tr><td>C2.2</td><td>C3D3</td><td>Fire Compartment Floor Area & Volume Limitations

The BCA requires that the floor area of fire compartments is limited to certain areas and volumes dependant on the Type of Construction.

Table C3D3: Maximum size of fire compartments or atria
<table><tr><th>Classification</th><th>Type A construction</th><th>Type B construction</th><th>Type C construction</th></tr><tr><td>5, 9b or 9c</td><td>Max floor area—8 000 m^2</td><td>Max floor area—5 500 m^2</td><td>Max floor area—3 000 m^2</td></tr><tr><td></td><td>Max volume—48 000 m^3</td><td>Max volume—33 000 m^3</td><td>max volume—18 000 m^3</td></tr><tr><td>6, 7, 8 or 9a (except for patient care areas)</td><td>Max floor area—5 000 m^2</td><td>Max floor area—3 500 m^2</td><td>Max floor area—2 000 m^2</td></tr><tr><td></td><td>Max volume—30 000 m^3</td><td>Max volume—21 000 m^3</td><td>Max volume—12 000 m^3</td></tr></table></td><td>The building is within the limits for Type C construction</td><td>Complies</td></tr>
<tr><td>C2.12</td><td>C3D13</td><td>Separation of Equipment

Any of the following equipment located in the building must be separated from the remainder of the building:
• lift motors and lift control panels; or
• emergency generators used to sustain emergency equipment operating in the emergency mode; or
• central smoke control plant; or
• boilers; or
• a battery system installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200 kWh or more.

Equipment need <u>not</u> be separated in if the equipment comprises:
• smoke control exhaust fans located in the air stream which are constructed for high temperature operation in accordance with Specification 21; or
• stair pressurizing equipment installed in compliance with the relevant provisions of AS 1668.1:2015; or
• a lift installation without a machine room; or
• equipment otherwise adequately separated from the remainder of the building.

Separation must be by construction having an FRL as required by Specification 5, but not less than FRL 120/120/120 with openings protected by self-closing fire doors having an FRL of not less than –/120/30.

Separation of on-site fire pumps must comply with the requirements of AS 2419.1:2021.</td><td>The design engineers shall confirm the nature of equipment proposed within the building and certify compliance with BCA Clause C3D13.</td><td>Certification by Designer or Specialist</td></tr>
<tr><td>C2.13</td><td>C3D14</td><td>Electricity Supply System

• Any electrical substation located within the building must be separated from the remainder of the building by construction having an FRL of not less than 120/120/120, and doorways protected with self-closing fire doors having an FRL of not less than –/120/30.
• A main switchboard which sustains emergency equipment operating in the emergency mode must be fire separated from any other part of the building by construction having an FRL of not less than 120/120/120 and have the doorway fitted with self-closing fire door having an FRL of not less than –/120/30.
• Any electrical conductors located within the building that supply a substation or main switchboard for emergency equipment must comply with BCA clause C3D14.
• Emergency equipment switchgear must be separated from non-emergency equipment switchgear by metal partitions designed to minimize the spread of a fault from the non-emergency equipment switchgear.
  • Emergency equipment includes but is not limited to the following:
  • fire hydrant booster pumps;</td><td>The design engineers shall confirm the nature of equipment proposed within the building and certify compliance with BCA Clause C3D14.</td><td>Certification by Designer or Specialist</td></tr>
</table>

BCA 2019 Cl.	BCA 2022 Cl.	BCA Requirement	Compliance Comment	Status
		• sprinkler pumps; • hose reel pumps; • air-handling systems designed to exhaust and control the spread of smoke; • emergency lifts; • control and indicating equipment; and • sound systems and intercom systems for emergency purposes.		
Part C4 – Protection of Openings				
C3.2	C4D3	**Protection of Openings in External Walls** Openings in an external wall that is required to have an FRL must be protected against the spread of fire (drenchers, fire rated glazing, fire shutters) if they are not less than: • 3m from a side or rear boundary of the allotment, or • 6m from the far boundary of a road, river lake or the like adjoining the allotment (except for ground level openings), or • 6m from another building on the same allotment • If required to be protected, must not occupy more than 1/3 of the area of the external wall of the storey in which it is located	On the basis the building is of Type C construction and located no closer than 3m from another building on the allotment, the external walls do not require a FRL.	**Complies**
C3.15	C4D15	**Openings for Service Installations & Construction Joints** • Where services penetrate a building element required to have an FRL, the services must generally be protected against the spread of fire (mechanical with dampers, hydraulic with collars and electrical with fire rated mastic). • All cable penetrations through floors or fire walls must be fire stopped in accordance with BCA C4D15 and AS1530.4 with fire rated mastic to seal gaps.	Product data sheets and test reports detailing the method of protecting any service penetrations through fire rated elements are required to demonstrate compliance	**Can Readily Comply - Detail**
Section D – Access & Egress				
Part D2 – Provision for Escape				

D1.2	D2D3	**Number of Exits Required**
		• At least one exit must be provided from each storey of every building
		• At least 2 alternative exits must be provided from:
		  ○ Every storey of a building which has an effective height of more than 25m
		  ○ Basement storeys where egress from the building involves a vertical rise of 1.5m or more (some small basements provided with an exemption)
		  ○ Class 8 buildings with a rise in storeys of more than 6
		  ○ A storey which contains a 'patient care area'
		  ○ A storey which contains sleeping areas in a Class 9c building
		  ○ Every storey in a childcare centre
		  ○ Each storey of a primary/secondary school with a rise in storeys of 2 or more
		  ○ Any storey or mezzanine which accommodates more than 50 ppl
		  ○ Any storey used as a Class 9b early childhood centre, or any Class 9b early childhood centre which forms part of a storey
		• Additional requirements apply to Class 9a and 9c buildings and to open spectator stands.
		• Egress is not permitted to be provided through another sole occupancy unit.
		• A part of a storey which is provided with direct egress to a road or open space is permitted to have only 1 exit for buildings with an effective height of more than 25m.
		•
			Every storey of a class 9b building which accommodates more than 50 persons must have access to at least 2 exits.
			The design demonstrates compliance as required
				Complies

BCA 2019 Cl.	BCA 2022 Cl.	BCA Requirement	Compliance Comment	Status

D1.4	D2D5	**Exit Travel Distances**
		• Class 2 & 3 buildings
		  ○ The distance between the entrance door of a Sole Occupancy Unit (SOU) and an exit or Point of Choice (POC) to 2 alternative exits must not exceed 6m (20m on ground floor)
		  ○ From all parts not in a SOU – 20m to exit or POC
		• Class 4 buildings – entrance door of SOU to exit or POC must not exceed 6m
		• Class 5, 6, 7, 8 or 9 buildings – 20m to exit or POC
		• Additional requirements apply to Class 9 buildings, and open Spectator stands
			The design demonstrates compliance as required	**Complies**

D1.5	D2D6	**Distance Between Alternative Exits** • BCA requires that where exits are provided as 'alternative' should be distributed as uniformly as possible around the storey. • Alternative exits must: • Be not less than 9m apart • Be not more than 45m apart in a Class 2 or 3 building (or patient care area in a Class 9a building) • Be not more than 60m apart in any other case • Be located so that alternative paths of travel do not converge to be less than 6m apart.	The design demonstrates compliance as required	**Complies**
D1.6(a)	D2D7	**Height of exits, paths of travel to exits and doorways** Required exits or path of travel to exits must have an unobstructed height throughout of not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980mm.	The plans detail an appropriate level of compliance for this stage of design. Details sections throughout the entire building confirming the height of egress paths to be supplied during future design stages	**Can Readily Comply - Detail**
D1.6(b), (c), (d) and (e)	D2D8	**Width of Exits & Paths of Travel to Exits** • Generally a minimum 1m egress path of travel must be provided. • Wider exits required for Class 9a or 9c buildings for patients on beds • Appropriate aggregate exit width must be provided or maintained in the building to allow for safe egress of the building populations.	The plans detail an appropriate level of compliance for this stage of design.	**Can Readily Comply - Detail**
D1.6(f)	D2D9	**Width of doorways in exits or paths of travel to exits** General min width of doorway in an exit or path of travel: • Unobstructed egress width (as per D2D8) minus 250mm • Generally 750mm (unless to sanitary compartments) • Additional widths required in Class 9a or 9c buildings.	The plans detail an appropriate level of compliance for this stage of design. Door schedule to be further developed to confirm compliance during future design stages	**Can Readily Comply - Detail**
D1.6(g)	D2D10	**Exit width not to diminish in direction of travel** The unobstructed width of a required exit must not diminish in the direction of travel to a road or open space, except where the width is increased in accordance with D2D8(1)(b) or D2D9(a)(i).	The design demonstrates compliance as required noting there are multiple egress gates from the school to road	**Complies**
D1.10	D2D15	**Discharge of Exits** • Exits from the building must be provided with an unobstructed path of travel to the street. Where exits discharge at a level that is different to the street level, compliant stairs and ramps must be provided to the street. • The width of the external path must be not less than 1m wide (or if the width of the required exits is more than 1m, the width of the external path must be not less than that of the required exit) • Where necessary, exits must be provided with suitable barriers or bollards to prevent vehicles blocking them. • Additional requirements apply to Class 9b buildings containing auditoriums	The design demonstrates compliance as required via a new egress gate to the road.	**Complies**

<table>
<tr><th>BCA 2019 Cl.</th><th>BCA 2022 Cl.</th><th>BCA Requirement</th><th>Compliance Comment</th><th>Status</th></tr>
<tr><td>D1.13</td><td>D2D18</td><td>Number of Persons Accommodated

The number of persons accommodated on each storey can be determined by using the estimates based on floor area in Table D2D18 or other appropriate means of determination can also be used where populations can be more reasonably estimated.</td><td>Detailed occupant numbers (anticipated student and teach numbers) to be supplied.</td><td>Further Detail Required</td></tr>
<tr><td colspan="5">Part D3 - Construction of Exits</td></tr>
<tr><td>D2.7</td><td>D3D8</td><td>Installations in the Path of Travel

• Electrical distribution and telecommunications, boards etc. where located in a path of travel to an exit, must be enclosed in non-combustible construction, with openings suitably smoke sealed.</td><td>Detailed method of enclosing services cupboards to be supplied during future design stages.</td><td>Can Readily Comply - Detail</td></tr>
<tr><td>D2.13</td><td>D3D14</td><td>Goings & Risers

To satisfy BCA D3D14, a stairway must have—

• Not more than 18 and not less than 2 risers in each flight
• Going/riser/quantity dimensions in accordance with BCA Table D3D14
• Constant riser/going dimensions (variation 5mm between treads and 10mm overall permitted)
• Required exits must not contain winders in lieu of a quarter landing (up to 3 winders in a quarter landing are permitted in non-required stairs and in residential SOUs')
• Solid treads required where stair exceed 10m in height or 3 storeys
• No openings that would allow a 125mm sphere to pass through
• Slip resistant treads or nosings (per Table D3D15 below)
• Where consecutive flights contain more than 36 risers in a Class 9b building, the stair must contain a minimum 30 degree change in direction.
• Bottom riser may vary when meeting a public road only

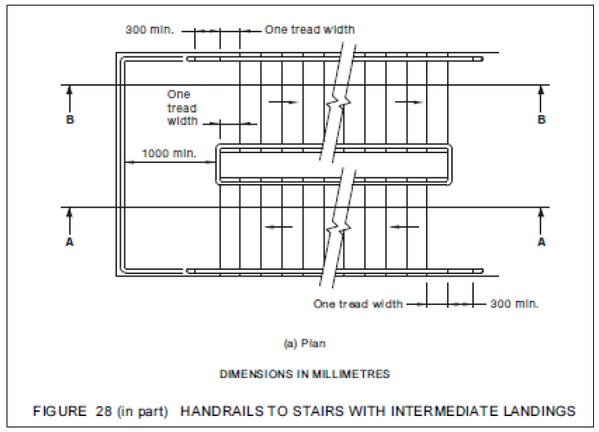
Table D3D14: Riser and going dimensions
<table><tr><th rowspan="2">Stairway location</th><th colspan="2">Riser (R)</th><th colspan="2">Going (G)Note 3</th><th colspan="2">Quantity (2R + G)</th></tr><tr><th>Max</th><th>Min</th><th>Max</th><th>Min</th><th>Max</th><th>Min</th></tr><tr><td>Public</td><td>190</td><td>115</td><td>355</td><td>250</td><td>700</td><td>550</td></tr><tr><td>Private Note 1</td><td>190</td><td>115</td><td>355</td><td>240</td><td>700</td><td>550</td></tr></table>
Refer to DDA Report for specific accessibility requirements to some stairs</td><td>The plans detail an appropriate level of compliance for this stage of design.</td><td>Can Readily Comply - Detail</td></tr>
<tr><td>D2.14</td><td>D3D15</td><td>Landings

Landings must:

• Be at least 750mm long must be provided to divide stairs into flights no greater than 18 risers (900mm preferred top and bottom to allow tactiles on a single grade)
• Be no steeper than 1:50
• be slip resistant as per BCA Table D3D15

Table D3D15: Slip-resistance classification
<table><tr><th>Application</th><th>Dry surface conditions</th><th>Wet surface conditions</th></tr><tr><td>Ramp steeper than 1:14</td><td>P4 or R11</td><td>P5 or R12</td></tr><tr><td>Ramp steeper than 1:20 but not steeper than 1:14</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Tread or landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr></table></td><td>The design demonstrates an appropriate level of compliance subject to confirmation of gradient/crossfalls and slip resistance during future design stages</td><td>Can Readily Comply - Detail</td></tr>
<tr><td>D2.15</td><td>D3D16</td><td>Thresholds

A doorway must generally not contain a step or ramp within the door threshold unless it is leading externally, and the step is no greater than 190mm (except on accessible paths where no step is allowable).</td><td>The plans detail an appropriate level of compliance for this stage of design.</td><td>Can Readily Comply - Detail</td></tr>
</table>

BCA 2019 Cl.	BCA 2022 Cl.	BCA Requirement	Compliance Comment	Status
D2.16 (a), (b) and (c)	D3D17	**Barriers to Prevent Falls** A continuous barrier must be provided along the side of— (a) a roof to which general access is provided; and (b) a stairway or ramp; and (c) a floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and (d) any delineated path of access to a building, if the trafficable surface is 1 m or more above the surface beneath.	The plans detail an appropriate level of compliance for this stage of design.	**Can Readily Comply - Detail**
D2.17	D3D22	**Handrails** • A handrail is required to at least one side of every stairway or ramp (and to both sides where the stair has a width of 2m or more) • Handrails must be at a height of not less than 865mm above the stair nosing line (additional handrail at 665-750mm to be provided in primary schools) • The handrail must be continuous between stair flight landings and have no obstructions that will tend to break a hand-hold (except for newel posts, ball type sanctions or the like). • Handrails required to assist people with disabilities must comply with BCA D3.3. • In a required exit, the handrail must comply with Clause 12 of AS1428.1. This typically requires the handrail to have a continuous height to the stair nosing line & around landings, and also incorporate extensions/terminations at the top and bottom as per AS1428.1.  FIGURE 28 (in part) HANDRAILS TO STAIRS WITH INTERMEDIATE LANDINGS • Additional requirements apply to Class 9a and 9c buildings	The plans detail an appropriate level of compliance for this stage of design.	**Can Readily Comply - Detail**
D2.19	D3D24	**Doorways & Doors** • Doors in required exits must not be fitted with roller shutters/tilt up doors (except in Class 6-8 SOUs with a floor area of not more than 200m^2, and where only one exit is required, and the door is held open when in use. • Doors in required exits must not be sliding unless the door leads directly to road/open space (and can be manually opened with force less than 110 N) • Where power operated doors are provided they must open automatically on power failure or fire alarm trip and able to be opened manually with force no less than 110N) • Additional requirements apply to Class 9a and 9c buildings.	The plans detail an appropriate level of compliance for this stage of design. Detailed door schedule to be supplied during future design stages	**Can Readily Comply - Detail**

<table>
<tr><th>BCA 2019 Cl.</th><th>BCA 2022 Cl.</th><th>BCA Requirement</th><th>Compliance Comment</th><th>Status</th></tr>
<tr><td>D2.20</td><td>D3D25</td><td>Swinging Doors
Doors gates serving as a required exit for public areas should typically swing in the direction of egress and must generally not impede egress paths.
Swinging doors must not encroach:
at any part of its swing by more than 500 mm on the required 1m width of the exit and
when fully open, by no more than 100 mm on the required 1m exit width
Doors can swing against the direction of egress if serving building areas less than 200m^2, are the only exit and a hold-open device is provided to the door.</td><td>The design demonstrates compliance as required</td><td>Complies</td></tr>
<tr><td>D2.21</td><td>D3D26</td><td>Operation of Latch
Exit doors and doors in a path of travel to an exit must generally be readily operable without a key from the side that faces a person seeking egress by a single handed downward action or pushing action on a single device which is located between 900mm and 1100mm above the floor.
Some concessions are provided to certain buildings – including doors in a residential SOU, childcare centers, banks, jails, metal health facilities. Doors which open automatically on the activation of a fire trip are also provided with a concession under this clause.
Additional requirements apply to assembly buildings accommodating more than 100 people (which generally requires that panic bars be provided)</td><td>Detailed door schedule to be supplied during future design stages including the use of panic bars to egress doors from the hall</td><td>Can Readily Comply - Detail</td></tr>
<tr><td colspan="5">Part D4 – Access for People with Disabilities</td></tr>
<tr><td>Part D3</td><td>Part D4</td><td>Access for People with Disabilities
Access / DDA is not specifically considered by this BCA Report. Refer to separate DDA Report for assessment.</td><td>Refer to separate accessibility report</td><td>Informational</td></tr>
<tr><td colspan="5">Section E – Services & Equipment</td></tr>
<tr><td>Section E</td><td>Section E</td><td>Services & Equipment
BCA Section E
Any new or affected Fire Services must comply with the BCA Section E and relevant Australian Standards.</td><td>Fire Services & Equipment
The following Fire Services & Equipment are required under the deemed-to-satisfy provisions of the BCA based on its classification and characteristics:
Relevant design engineers to confirm the following fire services will comply with the BCA & relevant Australian Standards.<table><tr><th>Fire Service</th><th>Required</th><th>Comments</th></tr><tr><td>Fire Hydrants</td><td>YES</td><td>Any upgrade or modification will require a Design and Design Certificate.</td></tr><tr><td>Fire Hose Reels</td><td>YES</td><td>Fire Hose Reels are required in Class 9b School Halls</td></tr><tr><td>Portable Fire Extinguishers</td><td>YES</td><td>To cover Class A fire risks in classrooms and associated corridors in primary schools.</td></tr><tr><td>Automatic Smoke Detection & Alarm</td><td>TBA</td><td>Smoke Detection may be required for automatic shutdown of any air-handling system in accordance with NSW E2D16 – TBC.</td></tr><tr><td>Emergency Lighting</td><td>YES</td><td>Any new or modification to existing will require a Design and Design Certificate</td></tr><tr><td>Exit Signage</td><td>YES</td><td>Any new or modification to existing will require a Design and Design Certificate</td></tr></table>See below for details on each of the above where relevant</td><td>Certification by Designer or Specialist</td></tr>
</table>

BCA 2019 Cl.	BCA 2022 Cl.	BCA Requirement	Compliance Comment	Status
Part E1 – Fire Fighting Equipment				
E1.3	E1D2	**Fire Hydrants** Fire hydrant coverage meeting AS2419.1 must be confirmed / provided: • to new buildings or new parts that are over 500m^2 in total floor area • to any additional floor area in an existing building that is already provided with hydrant coverage • Hydrant Boosters & Hydrants (where required) must be 10m from the building or adequately protected from fire • Hydrant Pumprooms (where required) must be accessible from open space or via fire isolated passage • Coverage and pressure & flows must meet AS2419.1-2021	**Fire Hydrant Systems** A Fire Hydrant system is required to serve the new building. Details and design certification must be provided by the hydraulic/fire services engineer.	**Certification by Designer or Specialist**
E1.4	E1D3	**Fire Hose Reels** Where the building is provided with an internal fire hydrant system or incorporates a fire compartment with a floor area of more than 500m^2, it must be provided with a fire hose reel system in accordance with BCA E1.4 and AS2441. Fire Hose Reels must be located: • Within 4m of an exit • Along paths of travel to provide requisite coverage • Located so they are not pulled through fire or smoke doors *Note that fire hose reels are not required in a:* • *Class 2/3/4 building* • *Class 8 electrical substation* • *Class 9c building* • *Class 9b primary or secondary school Classrooms/corridors.*	**Fire Hose Reel Systems** A Fire Hose Reel system is required to serve the new building. Details and design certification must be provided by the hydraulic/fire services engineer.	**Certification by Designer or Specialist**
E1.6	E1D14	**Portable Fire Extinguishers** Portable fire extinguishers are required to serve Class A-Class E fire under BCA E1.6 & AS2444. *Note: They are not required for Class A fire where fire hose reels are otherwise provided.*	Design compliance certification from the designer of specialist	**Certification by Designer or Specialist**
BCA Part E2 – Smoke Hazard Management				

E2.2a & E2.2b	NSW E2D3	**Smoke Hazard Management**
		• Smoke Hazard Management must be provided per **E2D4** to **E2D20** depending on the class, rise in stories and nature of the building design, which can require one or more of the following:
		  ○ Zone Pressurisation
		  ○ Smoke Exhaust
		  ○ Smoke Vents
		  ○ Automatic Smoke Detection & Alarm
		  ○ Smoke Detectors to satisfy Automatic Shutdown of Mechanical (Class 9b only)
		  ○ Sprinklers (to satisfy smoke hazard management)
		  ○ Stair Pressurisation
		• Refer to BCA Clauses E2D4 to E2D15 and NSW E2D16 to NSW D2D20 for full details
		• Smoke detection per AS1670.1 can also be required to allow exit / egress doors to unlock in the event of emergency under BCA D3D26.
			Smoke Hazard Management – BCA Clause NSW E2D16
			Smoke Detection is generally not required to school buildings with a rise in storey of 2, however may be required for automatic shutdown of any air-handling system in accordance with NSW E2D16.
			Details of the mechanical ventilation system to be provided to confirm if shutdown is applicable.
				Certification by Designer or Specialist

Table E2.2a	E2D9	**Buildings not more than 25 m in effective height: Class 5, 6, 7b, 8 and 9b buildings** A building not more than 25 m in effective height that— • is a Class 5 or 9b school building or part of a building having a rise in storeys of more than 3; or	**Smoke Hazard Management – BCA Clause NSW E2D16** Smoke Detection is generally not required to school buildings with a rise in storey of 2, however may be required for automatic shutdown of any air-handling system in accordance with NSW E2D16. Details of the mechanical ventilation system to be provided to confirm if shutdown is applicable.	**Certification by Designer or Specialist**

BCA 2019 Cl.	BCA 2022 Cl.	BCA Requirement	Compliance Comment	Status
		• is Class 6, 7b, 8 or 9b building (other than a school) or part of a building having a rise in storeys of more than 2; or • has a rise in storeys of more than 2, and contains— ○ a Class 5 or 9b school part; and ○ a Class 6, 7b, 8 or 9b (other than a school) part, must meet the requirements of (2) A building referred to in (1) must be provided with— • in each required fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp, an automatic air pressurisation system for fire-isolated exits in accordance with AS 1668.1; or • a zone pressurisation system between vertically separated fire compartments in accordance with AS 1668.1, if the building has more than one fire compartment; or • an automatic smoke detection and alarm system complying with Specification 20; or a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17. • For the purposes of (2), vertically separated fire compartments are fire compartments above and below each other, and not fire compartments within the same storey.		
Table E2.2b	NSW E2D16	**Class 9b – assembly buildings: nightclubs, discotheques and the like** The following provisions apply to all **Class 9b *assembly buildings***: • A building or part of a building used as an *assembly building* must be provided with *automatic* shutdown of any air-handling which does not form part of the smoke hazard management system, on the activation of— ○ smoke detectors installed complying with S20C6; and ○ any other installed fire detection and alarm system, including a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17. • A basement not counted in the *rise in storeys* in accordance with C2D3, less than 2000 m^2 used as an *assembly building* or part of an *assembly building* containing an *auditorium* or other public area, must be equipped with— ○ an *automatic* smoke detection system in accordance with Specification 20; or ○ an *automatic* zone pressurisation system in accordance with AS 1668.1 if the basement has more than one *fire compartment*; or if the basement forms part of a multi *fire compartmented* building served by the zone pressurisation system; or ○ a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17. ***Stages* and *backstages*:** • For the purposes of this clause, where a *stage* is separated from the *auditorium* by a proscenium wall incorporating a proscenium opening, a *backstage* room or area that is not separated from the *stage* by construction having an FRL of not less than 60/60/60, is taken to form part of the *stage*. • A building or part of a building used as an *assembly building* which has a *stage* with a floor area of more than 50 m^2 and not more than 150 m^2 must, over the *stage*, be provided with— ○ an *automatic* smoke exhaust system complying with Specification 21 (including Figure S21C2); or ○ roof mounted *automatic smoke-and-heat vents* complying with NSW I4D59, in a single *storey* building or the top *storey* of a multi *storey* building. • A building or part of a building used as an *assembly building* which has a stage with a floor area of more than 150 m^2 must, over the stage, be provided with an *automatic* smoke exhaust system complying with Specification 21 (including Figure S21C2). • A building or part of a building used as an *assembly building* which has a stage equipped with means of *flying scenery* must, over the *stage*, be provided with an *automatic* smoke exhaust system complying with Specification 21 (including Figure S21C2).	**Smoke Hazard Management – BCA Clause NSW E2D16** Smoke Detection is generally not required to school buildings with a rise in storey of 2, however may be required for automatic shutdown of any air-handling system in accordance with NSW E2D16. Details of the mechanical ventilation system to be provided to confirm if shutdown is applicable.	**Certification by Designer or Specialist**
E2.3	E2D21	**Provision for Special Hazards** Suitable additional provision must be made for smoke hazard management where it is considered that the building incorporates a *special hazard*, including: • special characteristics of the building; or • special function or use of the building; or • special type or quantity of materials stored, displayed or used in a building; or • special mix of classifications within a building or fire compartment, which are not addressed in BCA Clauses E2D4 to E2D15 and NSW E2D16 to NSW D2D20.	Design compliance certification from the designer of specialist	**Certification by Designer or Specialist**

BCA 2019 Cl.	BCA 2022 Cl.	BCA Requirement	Compliance Comment	Status
Part E3 – Lift Installations				
E3.1	E3D2	**Lift Installations** Electrical passenger lifts and electrohydraulic passenger lifts must comply with BCA Spec E3.1	The matter is not applicable &/or not affected by scope.	**Not Applicable**
Part E4 – Visibility in an Emergency, Exit Signs & Warning Systems				
E4.2, E4.4	E4D2, E4D4	**Emergency Lighting** Emergency lighting must generally be provided throughout stories greater than 300m^2, and above all required exit stairs and ramps per AS2293.1.	Design compliance certification from the designer of specialist	**Certification by Designer or Specialist**
E4.5, E4.6 & E4.8	E4D5, E4D6, E4D8	**Exit & Directional Signs** Illuminated exit signs is required above all exit doors, stairs and final exit points and where the exit isn't readily apparent, directional exit signage is required per AS2293.1.	Design compliance certification from the designer of specialist	**Certification by Designer or Specialist**
E4.9	E4D9	**Sound System & Intercom Systems for Emergency Purposes** A sound system and intercom system for emergency purposes complying where applicable with AS 1670.4 must be installed to station buildings with an Effective Height >25m.	The matter is not applicable &/or not affected by scope.	**Not Applicable**
Section F – Health & Amenity				
Part F1 – Surface water management, rising damp and external waterproofing				
F1.1	F1D3	**Stormwater Drainage** Stormwater drainage must comply with AS3500.3	Design compliance certification from the designer of specialist	**Certification by Designer or Specialist**
New to 2022	F1D4	**Exposed joints** Exposed joints in the drainage surface on a roof, balcony, podium or similar horizontal surface part of a building must be protected in accordance with Section 2.9 of AS 4654.2, and not be located beneath or run through a planter box, water feature or similar part of the building.	The matter is not applicable &/or not affected by scope.	**Not Applicable**
F1.4	F1D5	**External Above Ground Membranes** Waterproof membranes for external above ground use (balconies, terraces etc) must comply with AS4654 Parts 1&2.	The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**
F1.9	F1D6	**Damp-proofing** To comply with AS/NZS 2904-Damproof courses and flashings.	The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**
F1.10	F1D7	**Damp-proofing of Floors on Ground** To comply with AS2870 – 2011 Residential slabs and footings.	The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**
F1.12	F1D8	**Sub-Floor Ventilation** Subfloor ventilation openings must be provided to the underside of suspended floors in accordance with this requirement.	Design compliance certification from the designer of specialist	**Certification by Designer or Specialist**
Part F2 – Wet areas and overflow protection				
F1.7(a) and (b)	F2D2	**Wet area construction** Wet areas must comply with AS3740.	The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**
F1.7(c), (d) and (e)	F2D3	**Rooms containing urinals** Specific details on the installation of either a slab, stall or hung urinal are discussed within this clause.	The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**

BCA 2019 Cl.	BCA 2022 Cl.	BCA Requirement	Compliance Comment	Status
F1.11	F2D4	**Floor wastes** • In a Class 2 or 3 building or Class 4 part of a building, a bathroom or laundry located at any level above a sole-occupancy unit or public space must have a floor waste • In any building, where a floor waste is installed, the floor must have a minimum continuous fall of 1:80 and a maximum continuous fall of 1:50 to any waste. *Note 1: While AS1428.1-2009 permits the floor area of the remainder of a sanitary facility with an accessible shower to have a gradient between 1:80 and 1:100, this is contradicted by BCA Clause F2D4 which limits the plane of the finished floor to a maximum 1:80.* *On this basis, in order to comply with both statutory requirements of the BCA and Premises Standards, the plane of the finished floor within an accessible sanitary facility and outside of the shower recess must be exactly 1:80.*	The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**
Part F3 – Roof and wall cladding				
F1.5	F3D2	**Roof Coverings** Roof covering must comply with the following: • AS2049 - 2002 *Roof Tiles;* and/or • AS/NZS 2908 - 2000 parts 1 and 2 *Cellulose cement products*; and/or • AS/NZS 1562.2 - 1999 *Design and installation of sheet roof and wall cladding –corrugated fibre-reinforced cement* and/or • AS1562.1 - 1992 *Design and installation of sheet roof and wall cladding –metal* and/or • AS/NZS 4256 - 2012 parts 1, 2, 3 and 5 – *Plastic roof and wall cladding material* • AS1562.3 – 1996 *Design and installation of sheet roof and wall cladding –plastics* and/or • ASTM D3018-90 – 1994 , Class A ashphalt shingles surfaced with mineral granules	The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**
F1.6	F3D3	**Sarking** Must comply with AS/NZS4200-1994 Parts 1 & 2.	The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**
F1.13	F3D4	**Glazed Assemblies** *See BCA B1.4*	The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**
New for 2022	F3D5	**Wall cladding** External wall cladding must comply with one or a combination of the following: • Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700. • Autoclaved aerated concrete: AS 5146.3. • Metal wall cladding: AS 1562.1.	The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**
Part F4 – Sanitary & Other Facilities				
F2.1	F4D2	**Facilities in residential buildings** Facilities must be provided to residential buildings as follows: • Class 2, 4 & 9c buildings – kitchen, bath/shower, WC, washbasin & laundry facilities + WC & washbasin for employees where >10 SOU's are provided • Class 3 buildings – bath/shower	The matter is not applicable &/or not affected by scope.	**Not Applicable**
F2.2	F4D3	**Calculation of number of occupants and fixtures** • Number of occupants to be calculated as per BCA D2D18. • Sanitary facilities to be generally provided assuming a 50:50 male/female split • A unisex accessible sanitary facility can be counted once for each sex	The design can readily comply subject to ongoing design detail Where the population of the hall in intended to exceed 200 students and 10 staff, detail of all other facilities on site shall be supplied for assessment.	**Can Readily Comply - Detail**

BCA 2019 Cl.	BCA 2022 Cl.	BCA Requirement	Compliance Comment	Status
F2.3	F4D4	**Facilities for Class 3 to 9 Buildings** Facilities to be provided in accordance with BCA F4D4 and Table F4D4a to F4D4l, noting: • Separate facilities typically required for males and female (Except accessible toilets which may be unisex) • Separate facilities required for staff and student in schools • Specific kitchen, laundry and bathing facilities required to be provided in Class 9a buildings • Specific facilities are required to be provided in child care centres – including junior toilet pans & basins, kitchen facilities, laundry facilities and nappy changing benches	The design can readily comply subject to ongoing design detail Where the population of the hall in intended to exceed 200 students and 10 staff, detail of all other facilities on site shall be supplied for assessment.	**Can Readily Comply - Detail**
F2.4	F4D5	**Accessible sanitary facilities** In a building required to be accessible— • accessible unisex sanitary compartments must be provided in accessible parts of the building in accordance with F4D6; and • accessible unisex showers must be provided in accordance with F4D7; and • at each bank of toilets where there is one or more toilets in addition to an accessible unisex sanitary compartment at that bank of toilets, not less than one sanitary compartment suitable for a person with an ambulant disability for use by males and one sanitary compartment suitable for a person with an ambulant disability for use by females, must be provided; and • an accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary products; and • the circulation spaces, fixtures and fittings of all accessible sanitary facilities provided in accordance with F4D6 and F4D7 must comply with the requirements of AS 1428.1; and • an accessible unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only; and • where two or more of each type of accessible unisex sanitary facility are provided, the number of left and right handed mirror image facilities must be provided as evenly as possible; and • where male sanitary facilities are provided at a separate location to female sanitary facilities, accessible unisex sanitary facilities are only required at one of those locations; and • an accessible unisex sanitary compartment or an accessible unisex shower need not be provided on a storey or level that is not required by D4D4(f) to be provided with a passenger lift or ramp complying with AS 1428.1.	The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**

Table F2.4a	F4D6	**Accessible unisex sanitary compartments**
		Where required by F4D5(a), the minimum number of accessible unisex sanitary compartments for each class of building is as follows:
		• For a Class 1b building—
		  ○ not less than 1; and
		  ○ where private accessible unisex sanitary compartments are provided for every accessible bedroom, common accessible unisex sanitary compartments need not be provided.
		• For a Class 2 building, where sanitary compartments are provided in common areas, not less than 1.
		• For Class 3 and Class 9c buildings—
		  ○ in every accessible sole-occupancy unit provided with sanitary compartments within the accessible sole-(i) occupancy unit, not less than 1; and
		  ○ at each bank of sanitary compartments containing male and female sanitary compartments provided in common areas, not less than 1.
		• For Class 5, 6, 7, 8 or 9 buildings, where F4D4 requires closet pans—
		  ○ 1 on every storey containing sanitary compartments; and
		  ○ where a storey has more than 1 bank of sanitary compartments containing male and female sanitary compartments, at not less than 50% of those banks.
		• For a Class 10a building, at each bank of sanitary compartments containing male and female sanitary compartments, not less than 1.
			The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**

BCA 2019 Cl.	BCA 2022 Cl.	BCA Requirement	Compliance Comment	Status

Table F2.4b	F4D7	**Accessible unisex showers**
		Where required by F4D5(b), the minimum number of accessible unisex showers for each class of building is as follows:
		• For a Class 1b building—
		  ○ not less than 1; and
		  ○ where private accessible unisex showers are provided for every accessible bedroom, common accessible unisex showers need not be provided.
		• For a Class 2 building, where showers are provided in common areas, not less than 1.
		• For Class 3 and 9c buildings—
		  ○ in every accessible sole-occupancy unit provided with showers within the accessible sole-occupancy unit,
		  ○ not less than 1; and
		  ○ 1 for every 10 showers or part thereof provided in common areas
		• For Class 5, 6, 7, 8 or 9 buildings, where F4D4 requires 1 or more showers, not less than 1 for every 10 showers or part thereof.
		• For a Class 10a building, where showers are provided, 1 for every 10 showers or part thereof.
			The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**

F2.5	F4D8	**Construction of Sanitary Compartments** Sanitary compartments must have doors and partitions that separate adjacent compartments and extend— • from floor level to the ceiling in the case of a unisex facility; or • to a height of not less than 1.5 m above the floor if primary school children are the principal users; or • 1.8 m above the floor in all other cases • Does not apply to early childhood centres The entry door to a fully enclosed sanitary compartment must— • open outwards; or • slide; or • be readily removable from the outside of the sanitary compartment, unless there is a clear space of at least 1.2 m, measured in accordance with Figure F4D8, between the closet pan within the sanitary compartment and the doorway.	The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**
F2.6	F4D9	**Interpretation: Urinals and washbasins** • Urinals may be individual stalls or a length of 600mm in a trough • A closet pan may be used in lieu of a urinal • Washbasins may be single basins or part of a trough provided with a tap	The clause is informational only in nature	**Informational**

F2.9	F4D9	**Accessible adult change facilities**
		One unisex accessible adult change facility must be provided in an accessible part of a—
		• Class 6 building that is a shopping centre having a design occupancy of not less than 3,500 people, calculated on the basis of the floor area and containing a minimum of 2 sole-occupancy units; and
		• Class 9b sports venue or the like that—
		  ○ has a design occupancy of not less than 35,000 spectators; or
		  ○ contains a swimming pool that has a perimeter of not less than 70 m and that is required by D4D2 to be accessible; and
		• museum, art gallery or the like having a design occupancy of not less than 1,500 patrons; and
		• theatre or the like having a design occupancy of not less than 1,500 patrons; and
		• passenger use area of an airport terminal building within an airport that accepts domestic and/or international flights that are public transport services as defined in the Disability Standards for Accessible Public Transport 2002.
			The matter is not applicable &/or not affected by scope.	**Not Applicable**

BCA 2019 Cl.	BCA 2022 Cl.	BCA Requirement	Compliance Comment	Status
BCA Part F5 - Room Heights				
F3.1	F5D2	**Height of Rooms & Other Spaces** BCA requires that all public habitable areas must be typically: - 2700mm for public areas and corridors serving a Class 9b assembly building with >100 occupants - 2400mm generally for habitable rooms and corridors serving a Class 9b assembly building with <100 occupants - 2100mm for non-habitable rooms, including bathrooms, storerooms, service rooms - 2000mm above stairs, ramps & landings	The design details an appropriate level of compliance for this stage of design. Detailed sections throughout the building confirming all ceiling height to be supplied during future design stages	**Can Readily Comply - Detail**
BCA Part F6 - Light & Ventilation				
F4.1	F6D2	**Provision of natural light** Natural light is required to be provided to habitable/sleeping rooms in Class 2, 3, 4 and 9 buildings.	The matter is not applicable &/or not affected by scope. on the basis the hall is not a general purpose classroom.	**Not Applicable**
F4.2	F6D3	**Methods and extent of natural lighting** Natural light must be provided from: • Windows (with an aggregate light transmitting area of not less than 10% of the floor area of the area which they serve);or • Skylights with an aggregate light transmitting area of not less than 3% of the floor area of the area which they serve; or • A combination of both Windows must typically be setback from the boundary/wall of the building or other building on the allotment: • Generally at least 1m (or 3m for sleeping rooms in a Class 9a building) • 50% of the square room of the height of the wall in which the window ins located. I.e. the higher the wall the greater the setback required. *Note in Class 9b childcare centres, at least 50% of the windows must have sill height not greater than 500mm from the floor level.*	The clause is informational only in nature	**Informational**
F4.3	F6D4	**Natural light borrowed from adjoining room** This clause allows natural light in Class 2-4 buildings to be borrowed from an adjoining room. The room providing the borrowed light must be provided with windows which have a light transmitting area of at least 10% (or skylights with an area or 3%) of the combined floor area of both rooms.	The matter is not applicable &/or not affected by scope.	**Not Applicable**
F4.4	F6D5	**Artificial Light** Artificial lighting is required to all newly created or affected areas in accordance with BCA F4.4 and AS1680.0.	Design compliance certification from the designer of specialist	**Certification by Designer or Specialist**
F4.5	F6D6	**Ventilation of Rooms** A habitable room, office, shop, factory, workroom, sanitary compartment, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have natural light amounting to 5% of the floor area of the room served or mechanical ventilation complying with AS/NZS 1668.2.	The design can readily comply subject to ongoing design detail	**Further Detail Required**
F4.6	F6D7	**Natural Ventilation** Natural ventilation must constitute 5% of the floor area of the area serving and open to a suitable outdoor, covered open area or adjacent shared room with suitable natural ventilation openings.	The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**
F4.7	F6D8	**Ventilation borrowed from adjoining room** Natural ventilation can be borrowed from an adjoining room providing adjacent room is provided ventilating area that is 5% (or 10% in Class 5-9 buildings) of the both the subject room and the adjoining room combined.	The design can readily comply subject to ongoing design detail	**Can Readily Comply - Detail**

BCA 2019 Cl.	BCA 2022 Cl.	BCA Requirement	Compliance Comment	Status
F4.8	F6D9	**Restriction of position of water closets and urinals** Generally sanitary compartments must not open directly into: • A kitchen, pantry, public dining area or restaurant • Dormitory in a Class 3 building • Room / area used for public assembly • Workplace normally occupied by more than 1 person *Note comments in F4.9 below.* \	The design demonstrates appropriate compliance.	**Complies**
F4.9	F6D10	**Airlocks** Airlocks can be used between a sanitary compartment and area described in BCA F6D9 above. In a Class 5-9 building: • airlocks must have a floor area of at least 1.1m^2 and be fitted with self-closing doors. • Alternatively, the sanitary compartment must be provided with mechanical exhaust and the doorway suitably screened from view.	The matter is not applicable &/or not affected by scope.	**Not Applicable**
F4.12	F6D12	**Kitchen Local Exhaust** Commercial kitchens must have exhaust hoods complying with this clause and AS1668.1 & AS1668.2.	Design compliance certification from the designer of specialist	**Certification by Designer or Specialist**
Part F7 - Sound Transmission & Insulation				
Part F5	F7D2	**Sound Transmission and Insulation** This part applies to Class 2, 3 & 9c buildings and provides the requirements for sound insulation must be provided between sole occupancy units (and between units and other parts of the building).	The matter is not applicable &/or not affected by scope.	**Not Applicable**
SECTION G - ANCILLARY PROVISIONS				
Part G5 – Construction in Bushfire Prone Areas				
New for 2022	G5D4	**Protection — Certain Class 9 buildings** - In a **designated bushfire prone area**, the following must comply with Specification 43 except as amended by *Planning for Bushfire Protection*: • A Class 9b— primary or secondary school that is a *special fire protection purpose* located in an area subject to Bushfire Attack level (BAL) not exceeding BAL – 12.5, determined in accordance with *Planning for Bushfire Protection*. • Class 10a building or deck immediately adjacent or connected to a building of a type listed above must comply with AS3959 except as amended by Planning for Bushfire Protection as well as S43C13. • The requirements of the above except as modified by the development consent with a bushfire safety authority issued under section 100B of the Rural Fires Act 1997 for the purpose of integrated development	Where the project is within a designated bushfire prone area, design compliance certification from the designer of specialist. Details to be confirmed during future design stages.	**Certification by Designer or Specialist**
Section J – Energy Efficiency				
Section J	Section J	**Energy Efficiency** *BCA Section J* New works must comply with the Energy Efficiency requirements of Section J, including: 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	A detailed Section J energy efficiency report must be prepared for the project and submitted with any approval documents at AFC stage. *Note: for Crown Building Works certified under s6.28 of the EP&A Act, clause 59A or the EP&A (Development Certificates and Fire Safety Regulations) requires that the Section J Energy Efficiency Report is given to the Planning Secretary through the NSW Planning Portal under. This obligation lies with the design team and not the Crown Certifier.*	**Certification by Designer or Specialist**

7.0 Conclusion

This report assesses the **Schematic Level Design** for the proposed **Sutherland Public School Hall Upgrade** against the requirements of the National Construction Code (NCC) / Building Code of Australia (BCA).

This report has been prepared to support a Review of Environmental Factors for the New Hall, pursuant to Part 5 of the Environmental Planning and Assessment Act (EP&A Act).

The primary purpose of the report is to identify any non-compliances with the deemed-to-satisfy provision of the BCA and provide recommendations to best comply with the requirements of the BCA.

Subject to compliance with the mitigation measures of this report, the development can readily comply with the relevant requirements of the BCA. Recommendations have been identified as follows:

- Significant BCA matters, being those with the ability to affect the design have been included in Table 1.0 in the Executive Summary.
- A BCA Compliance Schedule suitable for the current level of design is also contained in in Table 6.0 of this report.

Attachment A – Summary of Fire Resistance Levels (Type A)

The following is a summary of the required fire resistance levels of buildings elements for **Type C Construction** (refer to BCA Specification S5 for full requirements & concessions):

Table S5C24a: Type C construction: FRL of 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	90/90/90	90/90/90	90/90/90
1.5 to less than 3 m	–/–/–	60/60/60	60/60/60	60/60/60
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–

Table S5C24b: Type C construction: FRL of external columns not incorporated into an external wall

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/–/–	90/–/–
1.5 to less than 3 m	–/–/–	60/–/–	60/–/–	60/–/–
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–

Table S5C24c: Type C 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	90/90/90	90/90/90	90/90/90

Table S5C24d: Type C construction: FRL of 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
Bounding *public corridors*, public lobbies and the like	60/60/60	–/–/–	–/–/–	–/–/–
Between or bounding *sole-occupancy units*	60/60/60	–/–/–	–/–/–	–/–/–
Bounding a stair if *required* to be rated	60/60/60	60/60/60	60/60/60	60/60/60

Table S5C24e: Type C construction: FRL of roof

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
Roofs	–/–/–	–/–/–	–/–/–	–/–/–

The above should be read in conjunction with the remainder and further concessions contained within Specification S5.

Attachment B – Assessed Plans

The following plans have been assessed for the purposes of this report:

ARCHITECTURAL DRAWINGS

Drawing No.	Drawing Name	Scale
A-000	Cover Sheet	
A-005	Site Plan	1:300
A-006	Demolition Plan	1:100
A-007	Building Set Out Plan	1:100
A-010	Wall Type Schedule	
A-100	Concrete Set Out Plan	1:100
A-110	Ground Floor Plan	1:100
A-115	Partition Plan	1:100
A-120	Reflected Ceiling Plan	1:100
A-130	Roof Plan	1:100
A-200	Elevations - Sheet 01	1:100
A-201	Elevations - Sheet 02	1:100
A-300	Sections - Sheet 01	1:100
A-301	Sections - Sheet 02	1:100
A-400	Internal Elevations	1:50
A-450	Wall Section Details - Sheet 01	1:20
A-451	Wall Section Details - Sheet 02	1:20
A-460	Plan Details	1:5
A-470	Section Details	1:5
A-500	Wet Area Details	1:50
A-510	Joinery Details - Kitchenette	1:20
A-550	External Works - Covered Walkway Sections	1:20
A-560	Stair and Ramp Details	1:50, 1:10
A-570	Typical Handrail Details	1:10
A-600	Door Schedule 01	
A-601	Door Schedule 02	1:50
A-602	Glazing Schedule	
A-700	Furniture Plan	1:100
A-710	Signage Plan	1:100
A-711	Typical Signage Diagrams	1:2, 1:5, 1:20
A-750	External Finishes	
A-900	COLA Relocation - Principle Priced Option	1:300
A-901	COLA Skylights - Principle Priced Option	1:100