

## BCA Design Compliance Report (BCA Consultant)

6 Abundance Road, Medowie 2318 | Prepared for: Colliers Our Ref: 24000398 | Issue date: 30 January 2025



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## Authorisation

Revision	Comment / Reason for Issue	Issue Date	Prepared by	Reviewed by
03	Tender Issue – Updated	30-lan-25	AS	- COP
	Architectural Set	JO-Jall-2 J	Jye Sutrin	Matthew Marks

## **Revision History**

Revision	Comment / Reason for Issue	Issue Date	Prepared by
01	Preliminary Concept Design Report	25-Sep-24	Jye Sutrin
02	Tender Issue (Block D not assessed)	13-Nov-24	Jye Sutrin
03	Tender Issue – Updated Architectural Set	30-Jan-25	Jye Sutrin

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## 1 Executive Summary

Modern Building Consultants (MBC Group) as the appointed BCA Consultant for the proposed activity, have reviewed architectural design documents prepared by NBRS (refer appendix A) for compliance with the National Construction Code - Building Code of Australia Volume One 2022 (referred to as BCA).

#### 1.1 Performance Solutions - Fire & Life Safety

The assessment of the design documentation has revealed that the following areas are required to be assessed against the relevant Performance Requirements of the BCA. The submission for a Crown works Certificate will need to include verification from a Certifier – Fire Safety, where determined permissible under A2G1 of the BCA, for the following aspects: -

DTS Clause	Description of Non-Compliance	Performance Requirement
	Exit travel distances	
	<ul> <li>Block A</li> <li>Ground - Up to 30 to an exit in lieu of 20m</li> <li>Level 1 - Up to 30m to a POC in lieu of 20m. Up to 50m to an exit in lieu of 40m</li> <li>Level 2 - Up to 30m to a POC in lieu of 20m. Up to 50m to an exit in lieu of 40m</li> </ul>	
D2D5	<ul> <li>Block B</li> <li>Ground - Up to 30m to an exit in lieu of 20m</li> <li>Level 1 - Up to 25m to a POC in lieu of 20m. Up to 70m to an exit in lieu of 40m</li> <li>Level 2 - Up to 25m to a POC in lieu of 20m. Up to 70m to an exit in lieu of 40m</li> </ul>	D1P4, E2P2
	A fire engineering performance solution is to be sought to address this non-compliance.	
	Architect to detail stairs on Block B plans for accurate assessment	
	Distance between alternative exits	
	Block A • Level 1 & 2 – up to 70m between exits in lieu of 60m	
D2D6	Block B • Level 1 & 2 - Up to 90m between exits in lieu of 60	D1P4, E2P2
	A fire engineering performance solution is to be sought to address this non-compliance.	



#### DTS Clause Description of Non-Compliance

Performance Requirement

	Fire hydrants	
E1D2 &	Fire hydrant tanks are required to be located a minimum 10m away from any buildings in accordance with AS2419.1-2021.	F1D7
AS2419.1	Fire services engineer is to provide comment.	EIPJ
	A fire engineering performance solution is to be sought to address this non-compliance.	
	Fire hose reels	
E1D3	It is proposed to omit fire hose reels from non-classroom and office areas i.e. canteen, plant area etc. TBC by Fire Service Consultant. The hall is required to have FHR.	E1P1
	A fire engineering performance solution is to be sought to address this non-compliance.	
	Internal tenability	
S43C9	It is proposed to not provide Block C with mechanical ventilation (air-conditioning). Therefore, the internal tenability requirements of S43C9 will not be met. Mechanical engineer design to be specified.	NSW G5P2
	A fire engineering performance solution is to be sought to address this non-compliance.	
	Vehicular access	
S43C14	Vehicular access is to be provided in accordance with C3D5(2), as if the building were a large-isolated building. This is not proposed	NSW G5P2
	A fire engineering performance solution is to be sought to address this non-compliance, or a Bushfire Safety Authority is to be sought as a mitigation measure of the planning approval.	

#### 1.2 Performance Solutions Non-fire or Access Related

The assessment of the design documentation has revealed that the following areas are required to be assessed against the relevant Performance Requirements of the BCA. The submission for a Crown Works Certificate will need to include verification from an Accredited Consultant (suitably



qualified in the relevant field), where determined permissible under A2G1 of the BCA, for the following aspects:

DTS Clause	Description of Non-Compliance	Performance Requirement
Part F3	If DtS requirements cannot be satisfied, an F3P1 weatherproofing performance solution is to be provided.	F3P1
Part J	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.	Part J

Any Performance Solution will be subject to consultation and approval by Fire and Rescue NSW as part of the Crown Works Certificate process. FEBQ consultation shall commence as soon as practicable.

#### 1.3 Design Details Required

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

DTS Clause	Description
	Lightweight construction
	Lightweight construction must comply with Specification 6 if it is used in a wall system—
C2D9	If lightweight construction is used for the fire-resisting covering of a steel column or the like, and if—
	It is to be confirmed if Lightweight Construction is proposed
	Non-combustible building elements
C2D10	In a building required to be of Type A construction, the following building elements and their components must be non-combustible:



(a) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation.

(b) The flooring and floor framing of lift pits.

(c) Non-loadbearing internal walls where they are required to be fire-resisting.

A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in a Type A building.

A loadbearing internal wall and a loadbearing fire wall, including those that are part of a loadbearing shafts, must comply with Specification 5.

The following materials may be used wherever a non-combustible material is required:

- (a) Plasterboard.
- (b) Perforated gypsum lath with a normal paper finish
- (c) Fibrous-plaster sheet.

(d) Fibre-reinforced cement sheeting.

(e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0.

(f) Sarking-type materials and associated adhesives including tapes, that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5.

(g) Bonded laminated materials where-

(i) each lamina, including any core, is non-combustible; and

(ii) each adhesive layer does not exceed 1 mm in thickness

and the total thickness of the adhesive layers does not exceed 2 mm; and

(iii) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively, and.

(iv) when located externally, are fixed in accordance with C2D15.

External walls build up details are to be provided, confirming compliance with C2D10

#### **Fire Hazard Properties**

C2D11

The fire hazard properties of walls, ceilings, floor coverings and mechanical ductwork will need to comply with Specification 7 of the NCC. The following requirements apply:

a) Floor Coverings – Critical radiant Flux not less than 2.2kW/m2 and a maximum smoke development rate of 750 percent-minutes

b) Wall and Ceiling Linings – Material Group No. 1 in public corridors/spaces and group 1,2,3 allowed in other areas with a smoke growth



rate index not more than 100, or an average specific extinction area less than 250m2/kg

c) Other Materials – Spread of Flame Index not exceeding 9 and Smoke Developed Index not exceeding 8 (if Spread of Flame if >5)

Rigid and flexible air handling ductwork must comply with AS4254 parts 1 & 2

Floor linings and floor coverings used in lift cars must have a critical radiant flux not less than 2.2kW/m2 with lift wall and ceiling linings having a Group rating of 1 or 2.

Test reports for internal linings are to be provided for assessment prior to issuing a Crown Works Certificate.

#### Ancillary elements

An ancillary element must not be fixed, installed, attached to or supported by the internal space within or external face of an external wall that is required to be non-combustible unless it is one of the following:

- An ancillary element that is non-combustible.
- A gutter, downpipe or other plumbing fixture or fitting.
- A flashing.

• A grate or grille not more than 2 m<sup>2</sup> in area associated with a building service.

- An electrical switch, socket-outlet, cover plate or the like.
- A light fitting.
- A required sign.
- A sign other than one provided under (a) or (g) that
  - i) achieves a group number of 1 or 2; and
  - ii) does not extend beyond one storey; and

C2D14

iii) does not extend beyond one fire compartment; and

iv) is separated vertically from other signs permitted under (h) by at least 2 storeys.

v) An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that—

i) meets the relevant requirements of S7C7 as for an internal element; and

- serves a storey— at ground level; or
  - (A) immediately above a storey at ground level; and
  - (B) does not serve an exit, where it would render the

exit unusable in a fire.

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- A part of a security, intercom or announcement system.
  - Wiring

ii)

- Waterproofing material applied to the floor surface of external balconies, terraces or the like, and a 250 mm upturn above the floor level
  - A gasket, caulking, sealant or adhesive.



DTS Clause	Description	
Test reports demonstrating compliance with AS 1530.1 will be requir		
	external wall elements and attachments will be required as the design develops.	
	To be confirmed if the canopy at the front of Block A is affixed to the external	
	walls of the building or if it is self-supporting.	
	Acceptable methods of protection	
	Where protection is required, doorways, windows and other openings must be	
	protected as follows:	
	Doorways—	
	(i) internal or external wall-wetting sprinklers as appropriate used with	
	doors that are self-closing or automatic closing; or	
	(ii) $-/60/30$ fire doors that are self-closing or automatic closing.	
C4D5	Windows—	
	(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 snutters	
	Method of protecting openings within 6m of external stair to be confirmed.	
	Openings in floors and ceilings for services	
	(1) where a service passes through -	
	(a) a floor that is required to have a FRL with respect to integrity or	
	insulation; or	
	(b) a ceiling required to have a resistance to the incipient spread of fire,	
C4D13	the service must be installed in accordance with	
	(a) in a building of Type A construction - a shaft complying with	
	Specification 5; or	
	(b) in a building of Type C construction - a shaft that will not reduce the	
	fire performance of the building elements it penetrates	
	At $\Omega C$ stage a detailed schedule of eveny penetration is required to be produced	
	Engaging a passive fire stopping company is advised	
	Openings for service installations	
	openings for service installations	
	Any new proposed penetrations must comply with provisions of C4D15 and	
	Spec. 13. The penetration shall comply with the tested system identical with a	
C4D15	prototype that has been tested in accordance with AS1530.4 and AS4072 and	
	achieves the required FRL	
	At OC stage a detailed schedule of every penetration is required to be produced.	
	Engaging a passive fire stopping company is advised.	



#### **Construction joints**

C4D16 Any proposed joint construction is to comply with the provisions of C4D16 and in accordance to AS 1530.4 to achieve the required FR for Type A and C Construction.

At OC stage details of compliance are to be provided. Engaging a passive fire stopping company is advised.

#### **Fire-resisting construction**

Spec 5 Architect to provide a set of fire-rating plans demonstrating compliance with FRL requirements for Type A & C buildings along with confirming proposed compartmentalisation strategy.

### Width of exits and paths of travel to exits



2m egress path to be maintained for each stair. This is to be measured from the end of handrail extensions. Note if protection of openings is not proposed under D2D13 & C4D5, not less than 6m is required from the 2m egress path to the external wall of the building.

#### Applicable to all stairs.



DTS Clause	Description
	Confirmation to be provided as to how many students are within each block, storey and GLS.
	External stairways in leu of fire-isolated exits
	External stairs in Block A & B are <6m from the external wall of the building. Architect to update plans to detail distance between stair and external walls/openings. Fire rating plans to be provided.
D2D13	Method of protecting openings within 6m of external stairs is to be confirmed in accordance with C4D5, noting that if drenchers are proposed, they are located internally.
	How is discharge proposed from external stairs? Noting that if persons are required to travel within 6m of the building, any opening will require protection in accordance with BCA Clause C4D5.
	Installations in exits and paths of travel
D3D8	<ul> <li>Services or equipment comprising— <ul> <li>electricity meters, distribution boards or ducts; or</li> <li>central telecommunications distribution boards or equipment; or</li> <li>electrical motors or other motors serving equipment in the building,</li> </ul> </li> <li>may be installed in— <ul> <li>in any corridor, hallway, lobby or the like leading to a required exit, if the services or equipment are enclosed by non-combustible construction or a fire protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure.</li> </ul> </li> </ul>
	Locations of the above equipment to be detailed on plans.
D3D14/ D3D15/	Goings and risers / Landings / Handraits
D3D20	Detailed sections of stairs are to be provided of each staircase for assessment.
D3D16	Thresholds The threshold of a doorway in an accessible building must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless the door opens to a road and open space or is provided with a threshold ramp or step ramp in accordance with AS 1428.1. Architect to confirm location of any door threshold provided with a step or ramp. Details of step/ramp to be provided.
D3D17/	Barriers to prevent falls / Height of barriers / Openings in barriers / Barrier
D3D18/	climability
D3D19/	Detailed sections of barriers to be provided for assessment
03020	Swinging doors
D3D25	



Must swing in the direction of egress unless— it serves a building or part with a floor area not more than 200 m2 it is the only required exit from the building or part, and it is fitted with a device for holding it in the open position.

Doors serving as exits are to swing in the direction of egress. Applicable to all blocks.



Architect to amend plan to comply.

DZD24	Operation of latch
05020	
	Architect to provide door schedule and section details of doors for assessment.
	Buildings not more than 25m in effective height: Class 5, 6, 7b, 8 and 9b
	buildings
E2D9	
	Services engineer is to provide details of the automatic smoke detection and
	alarm system complying with Spec 20.
	Lift instillations
Part E3	
	Details of the proposed lifts to be provided confirming compliance with E3D2,
	E3D4, E3D6, E3D7, E3D8 and E3D11.
	Visibility in an emergency, exit signs and warning systems.
Dart E1	
Pail E4	Details of the proposed emergency lighting/exit signage to be provided
	confirming compliance with E4D2, E4D3, E4D4, E4D5, E4D6 and E4D8.
	Facilities in Class 3 to 9 buildings
	· · · · · · · · · · · · · · · · · · ·
F4D4	Sufficient facilities appear to have been provided for 680 students (phase 1)
	Dians to be undefied to show male female facilities
	Plans to be updated to show mate/remate facilities.
	Accessible sanitary facilities
F4D5	Block B Ground - Not less than 1 ambulant facility is to be provided for use by
	males at sanitary facility bank.



DTS Clause	Description	
	Architect to amend plans to comply or an access performance solution is to be	
	sought. See access report.	
	Height of rooms and other spaces	
	<ul> <li>(3) The height of rooms and other spaces in a Class 5, 6, 7 or 8 building must be not less than—</li> <li>(a) except as allowed in (b) and (8) – 2.4 m; and</li> <li>(b) a corridor, passageway, or the like – 2.1 m.</li> <li>(5) The height of rooms and other spaces in a Class 9b building must not be less</li> </ul>	
	<ul> <li>(a) for a school classroom or other assembly building or part that accommodates not more than 100 people 2.4 m; and</li> <li>(b) for a theatre, public hall or other assembly building or part that accommodates more than 100 people 2.7 m; and</li> </ul>	
F5D2	<ul> <li>(c) for a corridor—</li> <li>(i) that serves an assembly building or part that accommodates not more than 100 persons — 2.4 m; or</li> <li>(ii) that serves an assembly building</li> </ul>	
	<ul> <li>(8) The height of rooms and other spaces in any building must not be less than—</li> <li>(a) for a bathroom, shower room, sanitary compartment, other than an accessible adult change facility, airlock, tea preparation room, pantry, storeroom, garage, car parking area, or the like – 2.1 m; and</li> <li>(b) for a commercial kitchen – 2.4 m; and</li> <li>(c) above a stairway, ramp, landing or the like – 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or</li> </ul>	
	the like; and (d) for a required accessible adult change facility — 2.4 m.	
	Sectional details to be provided for each block showing head height clearances. Additional, populations of each Block, Storey and GLS to be provided.	
	Provision of natural light / Method and extent of natural lighting	
F6D2/ F6D3	Natural light is to be provided for Block A & B classrooms	
	Elevations are to be provided detailing the size of classroom windows for assessment against this clause.	
	Restriction on location of sanitary compartments / Airlocks	
	Block A -	
F6D9/ F6D10	Ground - Sanitary facilities open directly into a classroom within a high school. Level 1 - Sanitary facilities open directly into an office occupied by more than 1	
	person. Level 1 - Sanitary facilities open directly into a library.	



DTS Clause	Description	
	These facilities have not been provided with airlocks or privacy screens	
	Architect to amend plan to comply or a BCA performance solution is to be sought	
	Separation between buildings	
S43C3	Architect to provide a site plan detailing distance between buildings.	
	Architect to provide details of FRL compliance.	
	Non-combustible path around building	
S43C6	A non-combustible pathway directly adjacent to the building and not less than 1.5m wide has not been provided around the perimeter of the building.	
	Architect to amend plan to detail path around buildings.	
	Protection – certain Class 9 buildings	
G5D4	Bushfire consultant and architect to provide plans, specifications and documents verifying compliance with Spec 43.	
Note:		
Servio	es consultants are to provide a list of any known performance solutions specific	
to the	ir field.	
<ul> <li>A full</li> </ul>	site plan is to be provided reflecting the current design, this plan is to detail all	
propo	sed canopies and awnings.	
Building Use: Please confirm if the hall (Block C) is intended for use by the public in addition		

to normal school operations.

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

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

Jye Sutrin Building Surveyor MBC Group

## 2 Introduction



This BCA Report has been prepared to support a Review of Environmental Factors (REF) for the proposed New High School for Medowie (the activity). The purpose of the REF is to assess the potential environmental impacts of the activity prescribed by State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP) as "development permitted without consent" on land carried out by or on behalf of a public authority under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

The activity is to be undertaken pursuant to Chapter 3, Part 3.4, Section 3.37 of the T&I SEPP.

The activity will be carried out at 6 Abundance Road, Medowie (the site). The purpose of this report is to The purpose of this report is to assess the current design proposal against the Deemed-to-Satisfy (DtS) provisions of the BCA.

#### 2.1 Purpose

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

#### 2.2 Methodology

The methodology applied in undertaking this assessment has included: -

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

#### 2.3 Limitations

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

- the structural adequacy or design of the building;
- the inherent derived fire-resistance ratings of any proposed structural elements of the building (unless specifically referred to); and
- the design basis and/or operating capabilities (including pressure & flows) of any proposed:
- o **electrical**
- o mechanical
- o hydraulic
- fire protection services.

This report does not include, or imply compliance with:

- $\circ$  the National Construction Code Plumbing Code of Australia Volume 3
- the Disability Discrimination Act 1992 including the Disability ((Access to Premises Buildings) Standards 2010 – unless specifically referred to)
- The deemed to satisfy provisions of Part D4 and F4D5 of BCA 2022
- The deemed to satisfy provisions of Section J of BCA 2022



- Demolition Standards not referred to by the BCA;
- Work Health and Safety Act 2011;
- An out of cycle change to the Building Code of Australia.
- Requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Roads and Transport Authority, Local Council, ARTC, Department of Planning and the like; and
- Conditions of Development Consent issued by the Local Consent Authority, if applicable.

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

#### 2.4 Current Legislation

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

#### Applicable Building Code of Australia (BCA)

Crown building work cannot be commenced unless the Crown building work is certified by or on behalf of the Crown to comply with the Building Code of Australia in force as at –

(a) the date of the invitation for tenders to carry out the Crown building work, or(b) in the absence of tenders, the date on which the Crown building work commences, except as provided by this section.

The proposed development will be subject to compliance with the relevant requirements of the BCA as in force at the time the invitation for tenders to carry out the Crown building work was made.

It is assumed that the invitation for tenders to carry out the Crown building work was made before the 1st May 2025, as such this report is based upon the Deemed-to-Satisfy provisions of BCA 2022.

Should an out of cycle change occur to the Building Code of Australia, then this report is required to be updated to reflect any applicable changes made and now required by the BCA.



## 3 Development (activity) Description & Assessment Information

#### 3.1 Proposed Development (activity)

The proposed activity comprises the construction of a new high school.

#### 3.2 Location and Description

The site has a street address of 6 Abundance Road, Medowie. It is 6.51ha in area, and comprises 1 allotment, legally described as Lot 3 in DP788451.

A large proportion of the site is currently unused and vacant. A small shed structure and caravan are located adjacent to the northern boundary. A cluster of buildings including a single storey dwelling, an outhouse/shed structure and temporary greenhouse are located within the south eastern corner.

The site contains a largely vegetated area to the south west corner. The site is relatively flat with a gradual fall from west to east toward Abundance Road.

The site has a primary frontage to Abundance Road to the east and Ferodale Road to the north. Abundance Road and Ferodale Road are both classified Local Roads. Medowie Road, approximately 1km east of the site, is a classified Regional Road.

The area surrounding the site mostly consists of industrial, rural residential, educational, and agricultural lands. Adjacent to the north western boundary is a Shell petrol station and mechanic garage. Adjacent to the north eastern boundary is a medical health clinic. Across Abundance Road along the eastern boundary are a number of warehouse and light industrial developments. Directly north of the site across Ferodale Road are large lots used for agricultural purposes.



Medowie Public School is located on Ferodale Road, to the north west of the site, opposite the Shell petrol station



The proposed activity involves the construction of school facilities on the site for the purpose of the New High School for Medowie. The site contains a densely vegetated area to the southwest corner which is identified as land with high biodiversity values corresponding to the areas of remnant native vegetation (PCT 3995 – Hunter Coast Paperbark-Swamp Mahogany Forest). The existing dwelling house and other structures on the site will be demolished as part of the works. No other works are proposed within this area.

The proposed new school will accommodate 640 students in 29 permanent teaching spaces including 3 support teaching spaces across 3-storeys of buildings on the site. The proposed activity be delivered across 1 stage, and will consist of the following:

# 29 permanent teaching spaces including 3 support teaching spaces, to accommodate 640 students, and school hall to accommodate 1,000 students. Approximately 10,500 sqm of GFA is proposed.

- Main vehicular ingress and egress to Ferodale Road to the north, with a new pedestrian and vehicle crossing proposed.
- Main pedestrian access to Abundance Road.
- Kiss and ride, and bus drop and pick up areas to Abundance Road (6 x parallel spaces).
- New pedestrian wombat crossing to Abundance Road.
- Approximately 55 x car parking spaces and 3 x accessible car parking spaces.
- Approximately 70 x bicycle parking spaces.
- Block A (Admin) consists of administration and learning spaces.
- Block B (Foodtech/Workshop) consists of food technology rooms and workshops.
- Block C (Hall) consists of school hall to accommodate 1,000 students.
- Central quad, 1 playing field, and 1 sports courtyard.



The proposed school activity will include the following spaces; general learning spaces, General support learning spaces, administrative services, staff areas, gym and canteen, library areas for science, wood and metal, food and textiles, health PE, performing arts, additional learning spaces, student amenities, storage, movement (stairs and covered walkways).

#### 3.3 BCA Classification (Part A6)

The proposed development shall contain the following classifications: -

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

#### 3.4 Rise in Storeys (Clause C2D3)

The proposed activity has been assessed to have a rise in storeys of three (3).

#### 3.5 Effective Height (Part A1)

The proposed activity has been assessed to have an effective height of 7.5m, this is measured from ground level 0.00 to level two 7.50.

The BCA now defines effective height as: -

"Effective height means the vertical distance between the floor of the lowest storey included in a determination of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units)."

#### 3.6 Type of Construction Required (Clause C2D2 / Table C2D2)

The proposed development is required to be Type A & C Construction. Specification 5 outlines the fire resistance required by certain building elements. This has also been provided in Appendix B.

#### 3.7 Floor Area and Volume Limitations (Clause C3D3 / Table C3D3)

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

Class		Туре А	Туре В	Туре С
E Ob or Oc	Max floor area -	8,000m <sup>2</sup>	<del>5,500m<sup>2</sup></del>	3,000m <sup>2</sup>
5, 90 01 90	Max volume -	48,000m <sup>3</sup>	<del>33,000m<sup>3</sup></del>	18,000m <sup>3</sup>
6, 7, 8 or 9a	Max floor area -	5,000m <sup>2</sup>	<del>3,500m<sup>2</sup></del>	2,000m <sup>2</sup>
	Max volume -	30,000m <sup>3</sup>	<del>21,000m<sup>3</sup></del>	12,000m <sup>3</sup>

#### 3.8 Building Data Summary



Part of Development	Use	Class	Floor Area (approx.) m <sup>2</sup>	Population*
Ground	Office, General	5 9h	2 610m <sup>2</sup>	Students: 640
Blocks A & B	Learning Space	5,70	2,01011	Staff: 49
Level 2 -	Office, General	5, 9b	2,560m <sup>2</sup>	As above
Level 3 -	General Learning		2	
Blocks A & B	Space	9b	2,560m <sup>2</sup>	As above

\*Advised by NBRS based on 30 students per GLS.

Part of Development	Use	Class	Floor Area (approx.) m <sup>2</sup>	Population
Block C	Multipurpose Hall	9b	1,550m <sup>2</sup>	Same as above

Notes:

- The above populations have been based on confirmation provided by Colliers.
- $\circ~$  It is assumed each level of blocks A & B have been split into separate fire compartments. To be confirmed by architect

Summary of Construction and Building				
Use(s)	Office, General Learning Space, Multipurpose Hall			
Classifications(s)	5, 9b			
Number of Storeys contained	Blocks A & B - Three (3) Block C – One (1)			
Rise in Storeys	Blocks A & B - Three (3) Block C – One (1)			
Type of Construction	Blocks A & B – Type A Construction Block C – Type C Construction			
Effective Height	7.5m			
Climate Zone	5			
Importance Level	Structural Engineer is to determine importance level in accordance with BCA and AS1170 Part 0-2002, this must be specified in their design certificate			



## 4 Proposed Fire Safety Schedule

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

#### Fire Safety Schedule

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

Premises:	Medowie High School
Address:	6 Abundance Road, Medowie 2318

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

#### SCHEDULE – Base Building BCA Year 2022 Type of Construction A & C Effective height = 7.5m

	Measure	Status	Existing Performance Standard
	Automatic fire detection and		BCA 2022 Clause E2D2, E2D3, E2D9 & NSWE2D16
1.		N	Spec 20 Clause S20C4, S20C6, S20C7
			AS 1670.1-2018,
2	Emergency lighting	N	BCA 2022 Clause E4D2, E4D3 E4D4,
۷.			AS 2293.1-2018
			BCA 2022 Clause E4D5, NSW E4D6 & E4D8,
3.	Exit and directional signage	N	Spec 25
			AS 2293.1-2018
1	Fire base real systems	N	BCA 2022 Clause E1D3,
4.	The hose reet systems	N	AS 2441-2005
E.	Fire hydrant systems	N	BCA 2022 Clause E1D2,
5.			AS 2419.1-2021,
	Fire seals (protecting		BCA 2022 Clause C4D15. Spec 13.
6	openings and service	N	AS 4072.1-2005.
	penetrations in fire resisting		AS 1530.4-2014. Manufacturer's specifications
	components of the building)		
	Mechanical air handling		BCA 2022 E2 and NSW Part E2, NSWE2D16
7.	systems (Automatic	N	AS/NZS 1668.1-2015, AS 1668.2-2012
	Shutdown)		
8.	Occupant warning system	N	BCA 2022 Clause E2D3, Spec 20 Clause S20C7,
<u> </u>	secupane maning system		AS 1670.1-2018
9	Portable fire extinguishers	Ν	BCA 2022 Clause E1D14,
2.			AS 2444-2001



	Measure	Status	Existing Performance Standard	
10.	10. Smoke and heat vents		BCA 2022 Part E2, Spec 22, S20C8, NSWE2D16 AS 2665-2001	
11.	Smoke exhaust system	N	BCA Clause E2, Spec 21, AS/NZS 1668.1-2015	
12.	Wall wetting sprinkler and drencher systems	Ν	BCA 2022 Clause C4D5, AS 2118.2-2021	
13.	Add in performance solution requirement e.g. Storage of XXXX materials on storey XXXX must be less than XXXX above finished floor level	Ν	Performance Solution Report XXXXX, prepared by XXXX dated XXXX	



## 5 BCA Assessment – Clause by Clause

BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary		
Section C - Fire res	Section C - Fire resistance				
Part C2 - Fire resis	tance and stability				
C2D2	Type of construction required	Compliance Appears Achieved	The building is required to be constructed in accordance with Type X Construction. Block A, B - Type A Construction		
C2D3	Calculation of Rise in storeys	Compliance Appears Achieved	Block C - Type C construction         The rise in storeys is 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— <ul> <li>(a) above the finished ground next to that part; or</li> <li>(b) if part of the external wall is on the boundary of the allotment, above the natural ground level at the relevant part of the boundary.</li> </ul> <li>The building is noted to have a rise in stories of:         <ul> <li>Block C - 1</li> </ul> </li> <li>Table C202: Type of construction required</li> <li>The construction required</li>		
C2D9	Lightweight Construction	Compliance Readily Achievable	Lightweight construction must comply with Specification 6 if it is used in a wall system— (a) that is required to have an FRL; or (b) for a lift shaft, stair shaft or service shaft or an external wall bounding a public corridor including a non-fire isolated passageway or non-fire-isolated ramp, in a spectator stand, sports stadium, cinema or theatre, railway station, bus station or airport terminal If lightweight construction is used for the fire-resisting covering of a steel column or the like, and if—		



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
			<ul><li>(a) the covering is not in continuous contact with the column, then the void must be filled solid, to a height of not less than 1.2 m above the floor to prevent indenting: and</li><li>(b) the column is liable to be damaged from the movement of vehicles, materials or equipment, then the covering must be protected by steel or other suitable material.</li></ul>
			<ul> <li>The following will be required to demonstrate compliance</li> <li>Architectural drawings detailing compliance in accordance C2D9 where applicable.</li> <li>Wall schedule nominating FRL and tested system where lightweight construction is being used to achieve an FRL.</li> <li>Architectural design compliance statement.</li> </ul>
C2D10	Non-combustible building elements	Further Details Required	<ul> <li>In a building required to be of Type A construction, the following building elements and their components must be non-combustible: <ul> <li>(a) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation.</li> <li>(b) The flooring and floor framing of lift pits.</li> <li>(c) Non-loadbearing internal walls where they are required to be fire-resisting.</li> </ul> </li> <li>A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in a Type A building.</li> <li>A loadbearing internal wall and a loadbearing fire wall, including those that are part of a loadbearing shafts, must comply with Specification 5.</li> <li>The following materials may be used wherever a non-combustible material is required: <ul> <li>(a) Plasterboard.</li> <li>(b) Perforated gypsum lath with a normal paper finish</li> <li>(c) Fibrous-plaster sheet.</li> <li>(d) Fibre-reinforced cement sheeting.</li> <li>(e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0.</li> <li>(f) Sarking-type materials and associated adhesives including tapes, that do not exceed 1</li> </ul> </li> </ul>



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
			mm in thickness and have a Flammability Index not greater than 5.
			(g) Bonded laminated materials where—
			(i) each lamina, including any core, is non-combustible; and
			(ii) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the
			adhesive layers does not exceed 2 mm; and
			(iii) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated
			material as a whole do not exceed 0 and 3 respectively, and.
			(iv) when located externally, are fixed in accordance with C2D15.
			The fire hazard properties of walls, ceilings, floor coverings and mechanical ductwork will
			need to comply with Specification 7 of the NCC. The following requirements apply:
			a) Floor Coverings – Critical radiant Flux not less than 2.2kW/m2 and a maximum smoke
			development rate of 750 percent-minutes
			b) Wall and Ceiling Linings – Material Group No. 1 in public corridors/spaces and group
			1,2,3 allowed in other areas with a smoke growth rate index not more than 100, or an
		Further Details Required	average specific extinction area less than 250m2/kg
	Fire Hazard Properties		c) Other Materials – Spread of Flame Index not exceeding 9 and Smoke Developed Index
C2D11			not exceeding 8 (if Spread of Flame if >5)
			Rigid and flexible air handling ductwork must comply with AS4254 parts 1 $\&$ 2
			Floor linings and floor coverings used in lift cars must have a critical radiant flux not less
			than 2.2kW/m2 with lift wall and ceiling linings having a Group rating of 1 or 2.
			Test reports for internal linings are to be provided for assessment prior to issuing a Crown
			Works Certificate
			An ancillary element must not be fixed, installed, attached to or supported by the internal
			space within or external face of an external wall that is required to be non-combustible
C2D14			unless it is one of the following:
	Ancillant claments	Further Details Required	• An ancillary element that is non-combustible.
C2D14	Ancillary elements	Further Details Required	• A gutter, downpipe or other plumbing fixture or fitting.
			• A flashing.
			• A grate or grille not more than 2 m <sup>2</sup> in area associated with a building service.
			• An electrical switch, socket-outlet, cover plate or the like.





BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
			• A light fitting.
			• A required sign.
			• A sign other than one provided under (a) or (g) that—
			i) achieves a group number of 1 or 2; and
			ii) does not extend beyond one storey; and
			iii) does not extend beyond one fire compartment; and
			iv) is separated vertically from other signs permitted under (h) by at least 2 storeys.
			v) An awning, sunshade, canopy, blind or shading hood other than one provided under (a)
			that –
			i) meets the relevant requirements of S7C7 as for an internal element; and
			ii) serves a storey— at ground level; or
			(A) immediately above a storey at ground level; and
			(B) does not serve an exit, where it would render the exit unusable in a fire.
			• A part of a security, intercom or announcement system.
			• Wiring
			• waterproofing material applied to the floor surface of external balconies, terraces of the
			like, and a 250 mm upturn above the floor level
			• A gasket, cauking, sealant of aunesive.
			rest reports demonstrating compliance with AS 1550.1 will be required for the external
			wall elements and attachments will be required as the design develops.
			To be confirmed if canony is affixed to walls or self-supporting
Part C3 - Compart	mentation and Separation		
eomparti			Floor area and volume limitations comply with Type A B C Construction.
			Total floor area for Block A & B is approx. 7,715m2. It is assumed the building will be
C3D3	General Floor area and	Compliance Readily	compartmentalised by floor on each level. Therefore, complying with C3D3 of the BCA.
	volume limitations	Achievable	
			Confirmation provided detailing that floor to floor compartmentation is provided.



#### Building Code of Australia 2022

BCA Clause	Compliance Provisions	Status	MBC Assessment Report	Commentary
			Classification	Type of Construction
				A B C
			5, 9b or 9c aged care max floor area—	8 000 m <sup>2</sup> 5 500 m <sup>2</sup> 3 000 m <sup>2</sup>
			max volume-	48 000 m <sup>3</sup> 33 000 m <sup>3</sup> 18 000 m <sup>3</sup>
			6, 7, 8 or 9a (except max floor area— for patient care	5 000 m <sup>2</sup> 3 500 m <sup>2</sup> 2 000 m <sup>2</sup>
			(1) An open space require	ed by C3D4 must—
			(a) be wholly within the a	allotment except that any road river or public place adjoining the
			allotment, but not the far	rthest 6 m of it may be included; and
			(b) include vehicular acce	ess in accordance with C3D5(2); and
			(c) not be used for the sto	prage or processing of materials: and
			(d) not be built upon, exc	rept for guard houses and service structures (such as electricity
			substations and pump ho	puses) which may encroach upon the width of the space if they do
			not unduly impede fire-fi	ghting at any part of the perimeter of the allotment or unduly add
			to the risk of spread of fir	re to any building on an adjoining allotment
			(2) Vehicular access requi	ired by this Part –
			(a) must be capable of pr	oviding continuous access for emergency vehicles to enable travel
	Dequirements for even	Performance Solution Proposed	in a forward direction fro	m a public road around the entire building; and
	Requirements for open		(b) must have a minimum	n unobstructed width of 6 m with no part of its furthest boundary
C3D3	spaces and venicular		more than 18 m from the	building and in no part of the 6 m width be built upon or used for
	access		any purpose other than v	ehicular or pedestrian movement; and
			(c) must provide reasonal	ble pedestrian access from the vehicular access to the building;
			and (d) must have a load	bearing capacity and unobstructed height to permit the operation
			and passage of fire brigat	de vehicles; and
			(d) must be wholly within	n the allotment except that a public road complying with (a), (b), (c)
			and (d) may serve as the	vehicular access or part thereof
			(e) must be wholly within	n the allotment except that a public road complying with (a), (b),
			(c) and (d) may serve as t	he vehicular access or part thereof.
			Spec 43 requires vehicula achieved	ar access be provided in accordance with C3D5. This has not been



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
C3D7	Vertical Fire Separation of openings in external walls	Compliance Readily Achievable	A building of Type A construction must be provided with spandrel separation between openings on different storeys unless the building is sprinkler protected throughout. Spandrels are required in accordance with BCA Clause C3D7: - 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; - 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. It is noted that any penetrations in the spandrel construction e.g. for drainage, overflow etc. are to be protected.
C3D9	Separation of classifications in the same storey	Compliance Readily Achievable	120minutes required for construction of storey
C3D10	Separation of classifications in different storeys	Compliance Readily Achievable	If parts of different classification are situated one above the other in adjoining storeys they must be separated as follows: (a) Type A construction – The floor between the adjoining parts must have an FRL of not less than that prescribed in Specification 5 for the classification of the lower storey. (b) Type B or C construction – If one of the adjoining parts is of Class 2, 3 or 4, the floor separating the part from the storey below must– (i) be a floor/ceiling system incorporating a ceiling which has a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or (ii) have an FRL of at least 30/30/30; or (iii) have a fire-protective covering on the underside of the floor, including beams incorporated in it, if the floor is combustible or of metal.
C3D11	Separation of Lift Shafts	Compliance Readily Achievable	Any lift connecting more than 2 storeys, or more than 3 storeys if the building is sprinklered, (other than lifts which are wholly within an atrium) must be separated from the remainder of the building by enclosure in a shaft in which— (a) in a building required to be of Type A construction — the walls have the relevant FRL prescribed by Specification5; and



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
			(b) in a building required to be of Type B construction – the walls–
			(i) if loadbearing, have the relevant FRL prescribed by Tables S5C21a to S5C21f of
			Specification 5; or
			(ii) if non-loadbearing, be of non-combustible construction.
			Openings for lift landing doors and services must be protected in accordance with the
			Deemed-to-Satisfy Provisions of Part C4.
			The following equipment is required to be fire separated from the remainder of the
			building with construction achieving an FRL of 120 minutes:
			§ 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
	Separation of equipment	Compliance Readily Achievable	§ boilers: or
C3D13			§ 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.
			Separating construction must have
			(i) an ERL as required by Specification 5, but not less than $120/120/120$ ; and
			(ii) any doorway protected with a self-closing fire door having an FRL of not less than -
			/120/30: or
			(iii) when separating a lift shaft and lift motor room an ERL not less than $120/-/-$
			A main switchboard located within the building which sustains emergency equipment
			operating in the emergency mode must—
			(a) be separated from any other part of the building by construction having an FRL of not
			less than120/120/120; and
			(b) have any doorway in that construction protected with a self-closing fire door having an
C3D14	Electricity supply system	Compliance Readily Achievable	FRL of not less than -/120/30.
			Where emergency equipment is required in a building, all switchboards in the electrical
			installation, which sustain the electricity supply to the emergency equipment must be
			constructed so that emergency equipment switchgear is separated from non-emergency
			equipment switchgear by metal partitions designed to minimise the spread of a fault from





BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
			the non-emergency equipment switchgear.
			<ul> <li>Emergency equipment includes but is not limited to the following:</li> <li>Fire hydrant booster pumps.</li> <li>Pumps for automatic sprinkler systems, water spray, chemical fluid suppression systems or the like.</li> <li>Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building.</li> <li>Air handling systems designed to exhaust and control the spread of fire and smoke.</li> <li>Emergency lifts.</li> <li>Control and indicating equipment.</li> </ul>
			- Emergency warning and intercom systems.
Part C4 - Protectio	n of Openings		
C4D5	Acceptable methods of protection	Further Details Required	<ul> <li>Where protection is required, doorways, windows and other openings must be protected as follows:</li> <li>Doorways-</li> <li>(i) internal or external wall-wetting sprinklers as appropriate used with doors that are self-closing or automatic closing; or</li> <li>(ii) -/60/30 fire doors that are self-closing or automatic closing.</li> <li>Windows-</li> <li>(i) internal or external wall-wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position; or</li> <li>(ii) -/60/- fire windows that are automatic closing or permanently fixed in the closed position; or</li> <li>(iii) -/60/- automatic closing fire shutters</li> </ul>
C4D13	Openings in floors and ceilings for services	Further Details Required	<ul> <li>(1) where a service passes through -</li> <li>(a) a floor that is required to have a FRL with respect to integrity or insulation; or</li> <li>(b) a ceiling required to have a resistance to the incipient spread of fire, the service must be installed in accordance with</li> <li>(a) in a building of Type A construction - a shaft complying with Specification 5; or</li> </ul>



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
			(b) in a building of Type C construction - a shaft that will not reduce the fire performance of
			the building elements it penetrates
C4D14	Openings in shafts	Compliance Readily	Openings in shafts are required to be protected by a self-closing/60/30 fire door or
		Achievable	hooper or an access panel having an FRL of/60/30.
			Any new proposed penetrations must comply with provisions of C4D15 and Spec. 13. The
	Openings for convice		penetration shall comply with the tested system identical with a prototype that has been tested in accordance with AS1E70.4 and AS4072 and achieves the required EPL
C4D15	installations	Further Details Required	Lested in accordance with AS1550.4 and AS4072 and achieves the required FRL
	Instattations		At OC stage a detailed schedule of every penetration is required to be produced. Advise
			encacing specialist fire stopping company
			Any proposed joint construction is to comply with the provisions of C4D16 and in
			accordance to AS 1530.4 to achieve the required FR for Type A and C Construction
C4D16	Construction joints	Further Details Required	At OC stage details of compliance are to be provided. Engaging a passive fire stopping
			company is advised.
Section D - Access	and Egress	·	
Part D2 - Provision	ו for Escape		
			(1) All buildings — Every building must have at least one exit from each storey.
			(2) Class 2 to 8 buildings $\ln addition to any parimental ovit not loss than 2 ovits must be$
			(2) Class 2 to 8 buildings – in addition to any horizontal exit, not less than 2 exits must be provided from the following:
			(a) In addition to any horizontal exit not less than 2 exits must be provided from the
			following.
			(i) Each storey if the building has an effective beight of more than 25 m
D2D3	Number of exits required	Compliance Appears Achieved	(ii) A Class 2 or 3 building subject to C2D6
			(3) Basements – In addition to any horizontal exit. not less than 2 exits must be provided
			from any storey if egress from that storey involves a vertical rise within the building of
			more than 1.5 m, unless –
			(a) the floor area of the storey is not more than 50 m²; and
			(b) the distance of travel from any point on the floor to a single exit is not more than 20 m.





BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
			<ul> <li>(4) Class 9 buildings – In addition to any horizontal exit, not less than 2 exits must be provided from the following:</li> <li>(i) Each storey if the building has a rise in storeys of more than 6 or an effective height of more than 25 m.</li> <li>(ii) Any storey which includes a patient care area in a Class 9a health-care building.</li> <li>(iii) Any storey that contains sleeping areas in a Class 9c building.</li> <li>(iv) Each storey, or each part of a storey, used as in a Class 9b building used as an early childhood centre.</li> <li>(v)Each storey in a primary or secondary school with a rise in storeys of 2 or more.</li> <li>(vi) Any storey or mezzanine that accommodates more than 50 persons, calculated under D2D18.</li> </ul>
			<ul> <li>(i) The requirements of (a) do not apply to a part of a storey that—</li> <li>(i) is a plant room, machinery room, storeroom, lift-machine room or the like; and</li> <li>(ii) is provided with direct egress to a road or open space; and satisfies D2D5 by the provision of 1 exit.</li> <li>(iii) satisfies D2D5 by the provision of 1 exit.</li> </ul>
			(5) Exits from Class 9c buildings and patient care areas in Class 9a health-care buildings – In a Class 9a health-care building and a Class 9c building, at least one exit must be provided from every part of a storey which has been divided into fire compartments in accordance with C3D3 or C3D6
			(6) Exits in open spectator stands — In an open spectator stand containing more than one tier of seating, every tier must have not less than 2 stairways or ramps, each forming part of the path of travel to not less than 2 exits.
			(7) Access to exits — Without passing through another sole-occupancy unit every occupant of a storey or part of a storey must have access to— an exit; or at least 2 exits if 2 or more exits are required.
D2D5	Exit travel distances	Performance Solution Proposed	Travel distance shall be as follows:



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
			<ul> <li>Block A</li> <li>Ground - Up to 30 to an exit in lieu of 20m</li> <li>Level 1 - Up to 30m to a POC in lieu of 20m. Up to 50m to an exit in lieu of 40m</li> <li>Level 2 - Up to 30m to a POC in lieu of 20m. Up to 50m to an exit in lieu of 40m</li> </ul>
			<ul> <li>Block B</li> <li>Ground - Up to 30m to an exit in lieu of 20m</li> <li>Level 1 - Up to 25m to a POC in lieu of 20m. Up to 70m to an exit in lieu of 40m</li> <li>Level 2 - Up to 25m to a POC in lieu of 20m. Up to 70m to an exit in lieu of 40m</li> <li>Block C</li> <li>Ground - Complies</li> </ul>
			Architect to detail stairs on Block B plans for accurate assessment
D2D6	Distance between alternative exits	Performance Solution Proposed	<ul> <li>Exits must not be less than 9m apart; and note more than:</li> <li>Block B</li> <li>Level 1 - Up to 90m between exits in lieu of 60</li> <li>Level 2 - Up to 90m between exits in lieu of 60</li> <li>Fire engineering performance solution to be sought.</li> <li>Architect to detail stairs on Block B plans for accurate assessment</li> </ul>
D2D7	Height of exits, paths of travel to exits and doorways	Compliance Readily Achievable	In a required exit or path of travel to an exit the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm.
D2D8 & NSW D2D8	Width of exits and paths of travel to exits	Does Not Comply	The unobstructed width of each required exit or path of travel to an exit, except for ladders provided in accordance with D2D21, D3D23 or I3D5, and doorways, must be not less than 1m Class 9c ward or treatment area the un obstructed width shall be 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
			(c) in a public corridor in a Class 9c aged care building, notwithstanding (2) and (3)–
			(i) 1.5 m; and
			(ii) 1.8 m for the full width of the doorway, providing access into a sole-occupancy unit or
			communal bathroom.
			(3) If the storey, mezzanine or open spectator stand accommodates more than 200 persons.
			the aggregate unobstructed width of each required exit or path of travel to an exit, except
			for doorways, must be not less than—
			(a) 2 m plus 500 mm for every 60 persons (or part) in excess of 200 persons if egress
			involves a change in floor level by a stairway or ramp with a gradient steeper than 1 in 12;
			or
			(b) in any other case, 2 m plus 500 mm for every 75 persons (or part) in excess of 200.
			2m earess path to be maintained Applicable to all stairs
			Details are to be provided confirming how many occupants are within each Block and each
			storey of the buildings.
			In a required exit or path of travel to an exit, the unobstructed width of a doorway must be
			not less than-
			(a) in patient care areas through which patients would normally be transported in beds-
			(i) if the doorway provides access to, or from, a corridor of width
			(A) less than 2.2m - 1200mm or
			(B) 2.2 or greater - 1070mm and
			(II) where the doorway referred to in (I) is fitted with two leaves and one leaf is secured in
D2D9	width doorways in exits or	Compliance Appears Achieved	the closed position in accordance with D3D26(3)(e), the other leaf must permit an
			(b) In patient care areas in a horizontal exit. 1250mm or
			(c) the uppetructed width of each exit provided to comply with $D2D8(1)$ (2) (3) or (4)
			minus 250mm or
			(d) in a class 9c building, 800mm except-
			(i) in resident use areas the minimum unobstructed width must be 870mm, and
			(ii) for the doorways leading from a public corridor to a sole occupancy unit the minimum
			unobstructed width must be 1070mm; and



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
			(iii) where the doorway is fitted with two leaves and one leaf is secured in the closed position in accordance with $D_3D_26(3)(a)$ the other leaf must permit an unobstructed
			opening not less than 870mm wide in resident use areas and 800mm wide in non-resident
			use area or
			(e) In any other case except where it opens to a sanitary compartment or bathroom - 750mm wide
D2D10	Exit width not to diminish in direction of travel	Compliance Appears Achieved	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).
D2D13	External stairways or ramps in lieu of fire- isolated exits	Further Details Required	<ul> <li>(1) An external stairway or ramp may serve as a required exit in lieu of a fire-isolated exit serving a storey below an effective height of 25 m, if the stairway or ramp is— <ul> <li>(a) non-combustible throughout; and</li> <li>(b) protected in accordance with (3) if it is within 6 m of, and exposed to any part of the external wall of the building it serves.</li> </ul> </li> <li>(2) For the purposes of this clause— <ul> <li>(a) exposure under (1)(b), is measured in accordance with S5C2, as if the exit was a building element and the external wall of the building was a fire-source feature to the exit, except that the FRL required in S5C2(1)(a) must not be less than 60/60/60; and</li> <li>(b) the plane formed at the construction edge or perimeter of an unenclosed building or part such as an open-deck carpark, open spectator stand or the like, is deemed to be an external wall; and</li> <li>(c) openings in an external wall and openings under (3) and (4), are determined in accordance with C4D2.</li> </ul> </li> <li>(3) The protection referred to in (1)(b), must adequately protect occupants using the exit from exposure to a fire within the building to which the exit is exposed must have— <ul> <li>(i) an FRL of not less than 60/60/60; and</li> </ul> </li> <li>(ii) no openings less than 3 m from the exit (except a doorway serving the exit protected by a -/60/30 fire door in accordance with C4D9(1)); and</li> </ul>



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
			C4D5 and if wall wetting sprinklers are used, they are located internally. (b) The exit must be protected by construction of a wall, roof, floor or other shielding element as appropriate in accordance with (4) from— (i) any part of the external wall of the building having an FRL of less than 60/60/60; and (ii) any openings in the external wall
			<ul> <li>(4) The wall, roof, floor or other shielding element required by (3)(b) must—</li> <li>(a) have an FRL of not less than 60/60/60; and</li> <li>(b) have no openings less than 3 m from the external wall of the building (except a doorway serving the exit protected by a -/60/30 fire door in accordance with C4D9(1)); and</li> <li>(c) have any opening 3 m or more but less than 6 m from any part of the external wall of the building protected in accordance with C4D5 and if wall wetting sprinklers are used, they are located on the side exposed to the external wall.</li> </ul>
			Structural engineer to confirm FRLs of external walls within 6m of external stairs in accordance with Spec 5 Type A Construction. Architect to update plans to detail distance between stair and external walls/openings
			How is discharge proposed from external stairs? Noting that if persons are required to travel within 6m of the building, any opening will require protection in accordance with BCA Clause C3D5.
			Block B stair to be detailed on the plans with distance form Block B detailed. Note: The stair can be protected by a shielding wall having an FRL of not less than 60/60/60. Stair to be detailed on Block B plans for accurate assessment
			(1) An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it.
D2D15	Discharge from exits	Compliance Appears Achieved	(2) If the required exit leads to open space, the required width of the path of travel to the road must be maintained (the minimum width of the required exit or 1m whichever is the greater)
			(3) If the exit discharges at a different level to the road a compliant ramp must be provided.



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BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
			Class 9a building requires a compliant stair.
			(4) Discharge points must be as far apart as practical. Additional requirements for open spectator stand.
D2D18	Number of persons accommodated	Further Details Required	For the purposes of the Deemed-to-Satisfy Provisions, the number of persons accommodated in a storey, room or mezzanine must be determined with consideration to the purpose for which it is used and the layout of the floor area by— (a) calculating the sum of the numbers obtained by dividing the floor area of each part of the storey by the number of square meters per person listed in Table D2D18 according to the use of that part, excluding spaces set aside for— (i) lifts, stairways, ramps and escalators, corridors, hallways, lobbies and the like; and (ii) service ducts and the like, sanitary compartments or other ancillary uses; or (b) reference to the seating capacity in an assembly building or room; or (c)any other suitable means of assessing its capacity. <b>Confirmed that in phase 1 (excluding Block D) there will be 680 students and 49 staff.</b> Whereas in Phase 2 there will be 1000 students and 79 staff total. <b>Confirmation to be provided as to how many students are within each block, storey and</b> <b>GLS.</b>
D2D22	Access to lift pits	Compliance Readily Achievable	<ul> <li>Access to lift pits must– <ul> <li>(a) where the pit depth is not more than 3 m, be through the lowest landing doors; or</li> <li>(b) where the pit depth is more than 3 m, be provided through an access doorway</li> <li>complying with the following:</li> <li>(i) In lieu of D2D7 to D2D11, the doorway must be level with the pit floor and not be less</li> <li>than 600 mm wide by 1980 mm high clear opening, which may be reduced to 1500 mm</li> <li>where it is necessary to comply with (ii).</li> <li>(ii) No part of the lift car or platform must encroach on the pit doorway entrance when the</li> <li>car is on a fully compressed buffer.</li> <li>(iii) Access to the doorway must be by a stairway complying with AS 1657.</li> <li>(iv) In lieu of D3D26, doors fitted to the doorway must be–</li> <li>(A) of the horizontal sliding or outwards opening hinged type; and</li> </ul> </li> </ul>



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
			<ul> <li>(B) self-closing and self-locking from the outside; and</li> <li>(C) marked on the landing side with the letters not less than 35 mm high:</li> <li>DANGER LIFTWELL – ENTRY OF UNAUTHORIZED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES</li> </ul>
Part D3 - Construc	tion of Exits		
D3D8	Installations in exits and paths of travel	Further Details Required	Services or equipment comprising— (i) electricity meters, distribution boards or ducts; or (ii) central telecommunications distribution boards or equipment; or (iii) electrical motors or other motors serving equipment in the building, may be installed in— (iv) a required exit, except for fire-isolated exits specified in (a); or (v) in any corridor, hallway, lobby or the like leading to a required exit, if the services or equipment are enclosed by non-combustible construction or a fire protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure.
D3D14	Goings and risers	Further Details Required	Risers and goings must comply with D3D14 and have slip resistance as per table D3D15. Detailed sections of stairs are to be provided of each staircase for assessment.
D3D15	Landings	Further Details Required	<ul> <li>In a stairway–</li> <li>(a) landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing must–</li> <li>(i) be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing; and</li> <li>(ii) have–</li> <li>- a surface with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; or</li> <li>- a strip at the edge of the landing with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; or</li> <li>- a strip at the edge of the landing with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586, where the edge leads to a flight below</li> <li>Landings have been reviewed and appear compliant. Detailed drawings will be required as the design develops.</li> </ul>



D3D16       Thresholds       Further Details Required       The threshold of a doorway in an accessible building must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless the door opens to a road and open space or is provided with a threshold ramp or step ramp. Details of step/ramp to be provided.         D3D17       Barriers to prevent falls       Further Details Required       A Ratrier to prevent falls is required where the surface below is greater than 1m.         Barriers to prevent falls       Further Details Required       A Barrier to prevent falls is required to be in accordance with D3D18, 03D19, D3D20.         D5D17       Barriers to prevent falls       Further Details Required       Balustrade design is required to be in accordance with D3D18, 03D19, D3D20.         D5D17       Barriers to prevent falls       Further Details Required       The height of barriers to be provided for assessment.         D5D17       Barriers to prevent falls       Further Details Required       The height of barrier required to be in accordance with D3D18, 03D19, D3D20.         D5D17       Barriers to prevent falls       Further Details Required       The height of barriers to be provided for assessment.         D5D18       Height of Barriers       Further Details Required       The height of fixed seating on a mezzanine or balcony within an auditorium in a Class 9b building, where the horizontal projection extends not less than 1 m outwards from the top of the barrier - 700 mm. (d) For all other locations - 1 m.         D5D19	BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
D3D17         Barriers to prevent falls         Further Details Required         A Barrier to pervent falls is required to be in accordance with D3D18, D3D19, D3D20.           D3D17         Barriers to prevent falls         Further Details Required         A Barrier to prevent falls is required to be in accordance with D3D18, D3D19, D3D20.           D3D18         Height of Barriers         Further Details Required         The height of a barrier required to be in accordance with D3D17 must be not less than the following:           D3D18         Height of Barriers         Further Details Required         The height of a barrier required by D3D17 must be not less than the following:           D3D18         Height of Barriers         Further Details Required         (a) For stairways or ramps with a gradient of 1:20 or steeper – 865 mm.           D3D18         Height of Barriers         Further Details Required         (b) For landings to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed 500 mm in length – 865 mm           D3D18         Further Details Required         (c) In front of fixed seating on a mezzanine or balcony within an auditorium in a Class 9b building, where the horizontal projection extends not less than 1 m outwards from the top of the barrier – 700 mm.           D3D19         Openings in barriers         Further Details Required         The maximum 125 mm barrier opening for a stairway, such as a non-fire-isolated stairway, is measured above the nosing line of the stair treads.	D3D16	Thresholds	Further Details Required	The threshold of a doorway in an accessible building must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless the door opens to a road and open space or is provided with a threshold ramp or step ramp in accordance with AS 1428.1.
D3D17       Barriers to prevent falls       Further Details Required       A Barrier to prevent falls is required where the surface below is greater than 1m.         Balustrade design is required to be in accordance with D3D18, D3D19, D3D20.       Detailed drawings of the balustrades will be required as the design develops.         D2D18       Height of Barriers       Further Details Required       The height of a barrier required by D3D17 must be not less than the following:         (a) For stairways or ramps with a gradient of 1:20 or steeper – 865 mm.       (b) For landings to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed 500 mm in length – 865 mm         (b) For landings to a stair or ramp where the barrier or balcony within an auditorium in a Class 9b building, where the horizontal projection extends not less than 1 m outwards from the top of the barrier – 700 mm.         (d) For all other locations – 1 m.       Detailed sections of barriers to be provided for assessment.         D3D19       Openings in barriers       Further Details Required       The maximum 125 mm barrier opening for a stairway, such as a non-fire-isolated stairway, is measured above the nosing line of the stair treads.         Where a barrier is fixed to the face of a landing, balcony, deck or the like, the opening				Architect to confirm location of any door threshold provided with a step or ramp. Details of step/ramp to be provided.
D3D17       Barriers to prevent falls       Further Details Required       Balustrade design is required to be in accordance with D3D18, D3D19, D3D20.         D3D17       Detailed drawings of the balustrades will be required as the design develops.       Detailed drawings of the balustrades will be required as the design develops.         D3D18       Height of Barriers       Further Details Required       The height of a barrier required by D3D17 must be not less than the following: <ul> <li>(a) For stairways or ramps with a gradient of 1:20 or steeper – 865 mm.</li> <li>(b) For landings to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed 500 mm in length – 865 mm.</li> <li>(c) In front of fixed seating on a mezzanine or balcony within an auditorium in a Class 9b building, where the horizontal projection extends not less than 1 m outwards from the top of the barrier – 700 mm.</li> <li>(d) For all other locations – 1 m.</li> </ul> D3D19     Openings in barriers     Further Details Required         Vertice Details Required       The maximum 125 mm barrier opening for a stairway, such as a non-fire-isolated stairway, is measured above the nosing line of the stair treads.				A Barrier to prevent falls is required where the surface below is greater than 1m.
DSD1       Defines to prefere total       Pointer Details required         Detailed drawings of the balustrades will be required as the design develops.       Detailed sections of barriers to be provided for assessment.         D3D18       Height of Barriers       Further Details Required       The height of a barrier required by D3D17 must be not less than the following: <ul> <li>(a) For stairways or ramps with a gradient of 1:20 or steeper – 865 mm.</li> <li>(b) For landings to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed 500 mm in length – 865 mm</li> <li>(c) In front of fixed seating on a mezzanine or balcony within an auditorium in a Class 9b building, where the horizontal projection extends not less than 1 m outwards from the top of the barrier – 700 mm.</li> <li>(d) For all other locations – 1 m.</li> </ul> D3D19     Openings in barriers     Further Details Required           View Protection of the barrier of the top in the top of the barrier and the top of the barrier and the provided for assessment.           D3D19         Openings in barriers         Further Details Required         Openings in a required barrier must not allow a 125 mm sphere to pass through.           The maximum 125 mm barrier opening for a stairway, such as a non-fire-isolated stairway, is measured above the nosing line of the stair treads.         Where a barrier is fixed to the face of a landing, balcony, deck or the like, the opening	03017	Barriers to prevent falls	Further Details Required	Balustrade design is required to be in accordance with D3D18, D3D19, D3D20.
Detailed sections of barriers to be provided for assessment.         D3D18       Height of Barriers       Further Details Required       The height of a barrier required by D3D17 must be not less than the following: <ul> <li>(a) For stairways or ramps with a gradient of 1:20 or steeper – 865 mm.</li> <li>(b) For landings to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed 500 mm in length – 865 mm</li> <li>(c) In front of fixed seating on a mezzanine or balcony within an auditorium in a Class 9b building, where the horizontal projection extends not less than 1 m outwards from the top of the barrier – 700 mm.</li> <li>(d) For all other locations – 1 m.</li> </ul> D3D19       Openings in barriers       Further Details Required       Openings in a required barrier must not allow a 125 mm sphere to pass through.         The maximum 125 mm barrier opening for a stairway, such as a non-fire-isolated stairway, is measured above the nosing line of the stair treads.       Where a barrier is fixed to the face of a landing, balcony, deck or the like, the opening				Detailed drawings of the balustrades will be required as the design develops.
D3D18       Height of Barriers       Further Details Required       The height of a barrier required by D3D17 must be not less than the following:         (a) For stairways or ramps with a gradient of 1:20 or steeper – 865 mm.       (b) For landings to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed 500 mm in length – 865 mm         (c) In front of fixed seating on a mezzanine or balcony within an auditorium in a Class 9b building, where the horizontal projection extends not less than 1 m outwards from the top of the barrier – 700 mm.         (d) For all other locations – 1 m.         D400         D3D19       Openings in barriers         Further Details Required       Further Details Required         Where a barrier is fixed to the face of a landing, balcony, deck or the like, the opening				Detailed sections of barriers to be provided for assessment.
D3D18Height of BarriersFurther Details Required(a) For stairways or ramps with a gradient of 1:20 or steeper - 865 mm. (b) For landings to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed 500 mm in length - 865 mm (c) In front of fixed seating on a mezzanine or balcony within an auditorium in a Class 9b building, where the horizontal projection extends not less than 1 m outwards from the top of the barrier - 700 mm. (d) For all other locations - 1 m.D3D19Openings in barriersFurther Details RequiredOpenings in a required barrier opening for a stairway, such as a non-fire-isolated stairway, is measured above the nosing line of the stair treads. Where a barrier is fixed to the face of a landing, balcony, deck or the like, the opening			Further Details Required	The height of a barrier required by D3D17 must be not less than the following:
D3D18Height of BarriersFurther Details Required(c) In front of fixed seating on a mezzanine or balcony within an auditorium in a Class 9b building, where the horizontal projection extends not less than 1 m outwards from the top of the barrier - 700 mm. (d) For all other locations - 1 m.Detailed sections of barriers to be provided for assessment.Detailed sections of barriers to be provided for assessment.D3D19Openings in barriersFurther Details RequiredOpenings in a required barrier opening for a stairway, such as a non-fire-isolated stairway, is measured above the nosing line of the stair treads.Where a barrier is fixed to the face of a landing, balcony, deck or the like, the opening		Height of Barriers		<ul> <li>(a) For stairways or ramps with a gradient of 1:20 or steeper - 865 mm.</li> <li>(b) For landings to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed 500 mm in length - 865 mm</li> </ul>
D3D19       Openings in barriers       Further Details Required       Further Details Required       Openings in a required barrier opening for a stairway, such as a non-fire-isolated stairway, is measured above the nosing line of the stair treads.         Where a barrier is fixed to the face of a landing, balcony, deck or the like, the opening	D3D18			(c) In front of fixed seating on a mezzanine or balcony within an auditorium in a Class 9b
(d) For all other locations – 1 m.Detailed sections of barriers to be provided for assessment.Detailed sections of barriers to be provided for assessment.Openings in a required barrier must not allow a 125 mm sphere to pass through.D3D19Openings in barriersFurther Details RequiredThe maximum 125 mm barrier opening for a stairway, such as a non-fire-isolated stairway, is measured above the nosing line of the stair treads.Where a barrier is fixed to the face of a landing, balcony, deck or the like, the opening				of the barrier – 700 mm.
Detailed sections of barriers to be provided for assessment.D3D19Openings in barriersFurther Details RequiredOpenings in a required barrier opening for a stairway, such as a non-fire-isolated stairway, is measured above the nosing line of the stair treads.Where a barrier is fixed to the face of a landing, balcony, deck or the like, the opening				(d) For all other locations — 1 m.
D3D19Openings in barriersFurther Details RequiredOpenings in a required barrier must not allow a 125 mm sphere to pass through. The maximum 125 mm barrier opening for a stairway, such as a non-fire-isolated stairway, is measured above the nosing line of the stair treads.Where a barrier is fixed to the face of a landing, balcony, deck or the like, the opening				Detailed sections of barriers to be provided for assessment.
D3D19Openings in barriersFurther Details RequiredThe maximum 125 mm barrier opening for a stairway, such as a non-fire-isolated stairway, is measured above the nosing line of the stair treads.Where a barrier is fixed to the face of a landing, balcony, deck or the like, the opening	D3D19			Openings in a required barrier must not allow a 125 mm sphere to pass through.
Where a barrier is fixed to the face of a landing, balcony, deck or the like, the opening		Openings in barriers	Further Details Required	The maximum 125 mm barrier opening for a stairway, such as a non-fire-isolated stairway, is measured above the nosing line of the stair treads.
between the barrier and the face must not permit a 40 mm sphere to pass through				Where a barrier is fixed to the face of a landing, balcony, deck or the like, the opening between the barrier and the face must not permit a 40 mm sphere to pass through



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			Detailed sections of barriers to be provided for assessment.			
D3D20	Barrier climbability	Further Details Required	<ul> <li>A barrier required by D3D17, located on a floor more than 4 m above the surface beneath, must not incorporate horizontal or near horizontal elements that could facilitate climbing between 150 mm and 760 mm above the floor.</li> <li>A climbable element is considered a horizontal element or a protrusion of 20mm or more.</li> <li>Detailed sections of barriers to be provided for assessment.</li> </ul>			
D3D22	Handrails	Further Details Required	Handrails must— (a) be located along at least one side of the ramp or flight; and (b) be located along each side if the total width of the stairway or ramp is 2 m or more; and (c) in a Class 9b building used as a primary school or early childhood centre— (i) have one handrail fixed at a height of not less than 865 mm; and (ii) have a second handrail fixed at a height between 665 mm and 750 mm; and (d) in any other case, be fixed at a height of not less than 865 mm; and (e) be continuous between stair flight landings and have no obstruction on or above them that will tend to break a hand-hold; and (f) in a required exit serving an area required to be accessible, be designed and constructed to comply with clause 12 of AS 1428.1, except that clause 12(d) does not apply to a handrail required by (1)(c)(ii).			
D3D25	Swinging doors	Does Not Comply	A swinging door in a required exit or forming part of a required exit must not encroach— (i) at any part of its swing by more than 500 mm on the required width (including any landings) of a required stairway, ramp or passageway if it is likely to impede the path of travel of the people already using the exit; and (ii) when fully open, by more than 100 mm on the required width of the required exit; and Must swing in the direction of egress unless— it serves a building or part with a floor area not more than 200 m2 it is the only required exit from the building or part and it is fitted with a device for holding it in the open position.			



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			doors serving as exits are to swing in the direction of egress. Applicable to all blocks.			
			Architect to amend plan to comply			
D3D26	Operation of latch	Further Details Required	A door in a required exit, forming part of a required exit or in the path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress, by— (a) a single hand downward action on a single device which is located between 900 mm and 1.1 m from the floor and if serving an area required to be accessible by Part D4— - be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and - have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35 mm and not more than 45 mm; or (b) a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor.			
			Architect to provide door schedule and section details of doors for assessment.			
Section E - Service	s and Equipment					
Part E1 - Fire Fight	ting Equipment					
E1D2	Fire hydrants	Performance Solution	Fire hydrant tanks are to be located minimum 10m away from a building as per AS2419.1-2021			
			A fire engineering performance solution is to be sought for this non-compliance			
E1D3	Fire hose reels	Performance Solution Proposed	It is proposed to omit fire hose reels from non-classroom and office areas i.e. gym, canteen, multipurpose hall etc.			
			A fire engineering performance solution is to be sought to address this non-compliance.			
			Portable Fire Extinguishers shall be provided as follows:			
E1D14		Compliance Readily	For Class 2, 3, 5 or Class 4 parts -			
	Portable fire extinguishers	Achievable	To serve the building where one or more internal fire hydrants are provided, or to serve any fire compartment with a floor area greater than 500m2 (this includes a SOU)			
			Portable fire extinguishers must comply with the provisions of this clause, AS2444 and			



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary			
			meet the following requirements -			
			(a) they shall be a ABE type extinguisher			
			(b) they shall be a minimum 2.5kg extinguisher			
			(c) distributed outside a SOU to serve only the storey at which they are located and so that			
			the travel distance from the entrance doorway of any SOU to the nearest extinguisher is not more than 10m			
			For Class 2 - 9 buildings			
			To serve a class 5 building where one or more internal fire hydrants are provided, or to serve any fire compartment with a floor area greater than 500m2.			
			Portable fire extinguishers must be provided in accordance with Clause E1D14 and AS2444 and the associated fire risks prescribed under these standards			
			Compliance achievable - further details of all PFE locations to be provided for review in			
			accordance with this clause, any relevant Fire Engineering Report and EFSG guidelines			
			Note			
	Fire precautions during construction					
		Compliance Readily Achievable	Suitable fire extinguishers shall be located adjacent to exits on each storey while the			
E1D16			building is under construction.			
			Once the building reaches an effective above 12m fire hydrant. FHRs and the hydrant			
			booster connection shall be commissioned and operational.			
Part E2 - Smoke H	azard Management					
			An air-handling system which does not form part of a smoke hazard management system in			
			accordance with this Part and which recycles air from one fire compartment to another fire			
	Air bandling system other		compartment or operates in a manner that may unduly contribute to the spread of smoke			
	than as part of a smoke		from one fire compartment to another fire compartment must, subject to (2), be designed			
E2D3	hazard management system	Further Details Required	and installed –			
			(a) to operate as a smoke control system in accordance with AS 1668.1; or			
			(b) such that it—			
			- incorporates smoke dampers where the air-handling ducts penetrate any elements			
			separating the fire compartments served; and			



BCA Clause	<b>Compliance Provisions</b>	Status	MBC Assessment Report Commentary			
			- is arranged such that the air-handling system is shut down and the smoke dampers are			
			activated to close automatically by smoke detectors complying with clause 7.5 of AS 1670.1			
			Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more			
			than one fire compartment (other than a carpark ventilation system) and not forming part			
			of a smoke hazard management system must comply with that Section of the Standard			
			(1) A building not more than 25 m in effective height that—			
			(a) is a Class 5 or 9b school building or part of a building having a rise in storeys of more			
			(h) is Class 6. 7h. 8 or 9h building (other than a school) or part of a building having a rise in			
			storevs of more than 2: or			
			(c) has a rise in storeys of more than 2, and contains—			
	Buildings not more than 25m in effective height: Class 5, 6, 7b, 8 and 9b	Further Details Required	(i) a Class 5 or 9b school part; and			
			(ii) a Class 6, 7b, 8 or 9b (other than a school) part,			
			must meet the requirements of (2).			
			(2) A building referred to in (1) must be provided with—			
			(a) in each required fire-isolated stairway, including any associated fire-isolated			
E2D9			passageway or fire-isolated ramp, an automatic air pressurisation system for fire-isolated exits in accordance with AS 1668.1; or			
	buildings		(b) 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			
			(c) an automatic smoke detection and alarm system complying with Specification 20; or			
			(d) a sprinkler system (other than a FPAA101D or FPAA101H system) complying with			
			Specification 17.			
			(3) 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.			
			Services engineer is to provide details of the automatic smoke detection and alarm system			
			complying with Spec 20.			
			A building used as an assembly building which has a stage under 150m2 is to be provided			
NSW E2D16	Class 9b - all assembly	Further Details Required	with either an automatic smoke exhaust system or roof mounted automatic smoke and heat			
	buildings		vents complying with NSWI4D59.			



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary			
			Design team to note and confirm how compliance will be achieved. Mech engineer to confirm if this is proposed to be omitted under a performance solution.			
			The stage is noted as 'optional' on the plans. Design team to confirm if it is being provided.			
Part E3 - Lift Insta	llations					
E3D2	Lift installations	Further Details Required	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification 24. Please provide details of the lifts proposed to be installed including design certification from a suitably qualified engineer.			
E3D4	Warning against use of lifts in fire	Further Details Required	Warning signs must be displayed; "DO NOT USE LIFTS IF THERE IS A FIRE". No less than 10mm high that are incised, inlaid or embossed on a metal, wood, plastic or similar plate securely & permanently attached to the wall or provided directly into the surface material of the wall. These shall be near every call button for a passenger lift or group throughout the building. Details demonstrating compliance shall be provided			
E3D6	Landings	Further Details Required	Access and egress to and from lift landings shall comply with Section D2, D3, and D4 of the BCA. Details demonstrating compliance shall be provided			
E3D7	Passenger lifts	Further Details Required	In an accessible building, every passenger lift shall comply with the limitations of Clause E3D7 of the BCA, be provided accessible features as required by Clause E3D7 of the BCA and not rely upon a constant pressure device for its operation if the lift car is fully enclosed. Details demonstrating compliance shall be provided			
E3D8	Accessible features required for passenger lifts	Further Details Required	In an accessible building, every passenger lift shall comply with the limitations of Clause E3D7 of the BCA, be provided accessible features as required by Clause E3D7 of the BCA and not rely upon a constant pressure device for its operation if the lift car is fully enclosed. Details demonstrating compliance shall be provided			
E3D11	Fire service recall control switch	Further Details Required	Each group of lifts must be provided with one fire service recall control switch that activates the fire service recall operation in accordance with Clause E3D11 of the BCA. Details demonstrating compliance shall be provided			
Part E4 - Emergen	cy Lighting, Exit Signs and Wa	rning Systems				
E4D2	Emergency lighting requirements	Further Details Required	Emergency Lighting to be provided to the building in accordance with E4 and AS 2293.1-2018. Design Certification to be provided prior to CC.			



BCA Clause	<b>Compliance Provisions</b>	Status	MBC Assessment Report Commentary				
E4D4	Design and operation of emergency lighting	Further Details Required	Design and operation of emergency lighting to be provided to the building in accordance with E4 and AS 2293.1-2018. Design Certification to be provided prior to CC.				
E4D5	Exit signs	Further Details Required	Exit Signage to be provided to the building in accordance with E4 and AS 2293.1-2018. Design Certification to be provided prior to CC.				
E4D6	Direction signs	Further Details Required	Direction Signs to be provided to the building in accordance with E4 and AS 2293.1-2018. Design Certification to be provided prior to CC.				
Section F - Health	and Safety						
Part F4 - Sanitary a	and Other Facilities						
F4D4	Facilities in Class 3 to 9 buildings	Further Details Required	Note: sufficient facilities appear to have been provided for 680 students (phase 1). Plans to be updated to show male/female facilities				
F4D5	Accessible sanitary facilities	Does Not Comply	Accessible sanitary facilities compliant with AS 1428.1-2009 shall be provided in accordance with Clause F4D5, F4D6, F4D7 for the classification and use concerned. Details demonstrating compliance shall be provided Block B Ground - Not less than 1 ambulant facility is to be provided for use by males at				
Part F5 Room Heights							
F5D2	Height of rooms and other spaces	Further Details Required	<ul> <li>(3) The height of rooms and other spaces in a Class 5, 6, 7 or 8 building must be not less than— <ul> <li>(a) except as allowed in (b) and (8) — 2.4 m; and</li> <li>(b) a corridor, passageway, or the like — 2.1 m.</li> </ul> </li> <li>(5) The height of rooms and other spaces in a Class 9b building must be not be less than— <ul> <li>(a) for a school classroom or other assembly building or part that accommodates not more than 100 persons — 2.4 m; and</li> <li>(b) for a theatre, public hall or other assembly building or part that accommodates more than 100 persons — 2.7 m; and</li> <li>(c) for a corridor— </li> <li>(i) that serves an assembly building or part that accommodates not more than 100 persons — 2.4 m; or</li> <li>(ii) that serves an assembly building</li> </ul> </li> </ul>				



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary			
			<ul> <li>(8) The height of rooms and other spaces in any building must be not be less than –</li> <li>(a) for a bathroom, shower room, sanitary compartment, other than an accessible adult change facility, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like – 2.1 m; and</li> <li>(b) for a commercial kitchen – 2.4 m; and</li> <li>(c) above a stairway, ramp, landing or the like – 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like; and</li> <li>(d) for a required accessible adult change facility – 2.4 m.</li> </ul>			
			populations of each Block, Storey and GLS to be provided.			
Part F6 - Light and	d Ventilation					
F6D2	Provision of natural light	Compliance Readily Achievable	<ul> <li>Natural light must be provided in:</li> <li>(d) A Class 9b building – to all general-purpose classrooms in primary or secondary schools and all playrooms or the like for the use of children in an early childhood centre.</li> </ul>			
F6D3	Methods and extent of natural lighting	Further Details Required	Required natural light must be provided by— (a) windows, excluding roof lights, that— (i) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the floor area of the room; and (ii) are open to the sky or face a court or other space open to the sky or an open veranda, carport or the like. or (b) roof lights, that— (i) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the floor area of the room; and (ii) are open to the sky; or (c) a proportional combination of windows and roof lights required by (a) and (b). Elevations are to be provided detailing compliance with this clause.			
E6D4	Natural light borrowed	Compliance Readily	Borrowed light from an adjoining room is permitted in Class 2, 3 and 4 buildings subject to			
	from adjoining room	Achievable	the window or roof light being sufficient in size to accommodate the floor area of both			



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary		
			rooms. If proposed to borrow light form adjoining rooms, please provide details		
			demonstrating compliance shall be provided		
E6D5	Artificial lighting	Compliance Readily	Artificial lighting shall be provided to required stairways, passageways and ramps. Artificial		
1005		Achievable	lighting shall comply		
			A habitable room, office, shop, factory, workroom, sanitary compartment, bathroom, shower		
			room, laundry and any other		
F6D6	Ventilation of rooms	Compliance Readily	room occupied by a person for any purpose must have –		
		Achievable	(a) natural ventilation complying with F6D7; or		
			(b) a mechanical ventilation or air-conditioning system complying with AS 1668.2 and		
			AS/NZS 3666.1.		
			(1) Natural ventilation provided in accordance with F6D6(a) must consist of openings,		
			windows, doors or other devices		
			which can be opened—		
F6D7	Natural ventilation	Compliance Readily Achievable	(a) with a ventilating area not less than 5% of the floor area of the room required to be		
			ventilated; and		
			(b) open to—		
			(i) a suitably sized court, or space open to the sky; or		
			(ii) an open veranda, carport, or the like; or		
			(iii) an adjoining room in accordance with F6D8.		
			(2) The requirements of (1)(a) do not apply to a Class 8 electricity network substation.		
			Natural ventilation to a room may come through a window, opening, door or other device		
			from an adjoining room (including		
			an enclosed veranda) if both rooms are within the same sole-occupancy unit or the		
			enclosed veranda is common		
			property, and –		
	Ventilation borrowed from	Compliance Readily	(a) in a Class 2 building, a sole-occupancy unit of a Class 3 building or Class 4 part of a		
F6D8	adioining room	Achievable	building-		
			(i) the room to be ventilated is not a sanitary compartment; and		
			(ii) the window, opening, door or other device has a ventilating area of not less than 5% of		
			the floor area of the room to be ventilated; and		
			(III) the adjoining room has a window, opening, door or other device with a ventilating area		
			of not less than 5% of the combined floor areas of both rooms; and		
			(b) in a Class 5, 6, 7, 8 (except a Class 8 electricity network substation) or 9 building—		



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary			
			(i) the window, opening, door or other device has a ventilating area of not less than 10% of the floor area of the room to be ventilated, measured not more than 3.6 m above the floor;			
			and (ii) the adjoining room has a window, enabling door or other device with a ventilating area			
			of not less than 10%			
			of the combined floor areas of both rooms; and			
			(c) the ventilating areas specified in (a) and (b) may be reduced as appropriate if direct			
			natural ventilation is provided from another source.			
			Sanitary compartments must not open directly into-			
			(a) a kitchen or pantry; or			
			(b) a public dining room or restaurant; or			
			(c) a dormitory in a Class 3 building; or			
	Restriction on location of sanitary compartments		(d) a room used for public assembly (which is not an early childhood centre, primary school			
			or open specialor stand); or			
			(e) a workplace normally occupied by more than one person.			
F6D9		Does Not Comply	Block A -			
			Ground - Sanitary facilities open directly into a classroom within a high school.			
			Level 1 - Sanitary facilities open directly into an office occupied by more than 1 person.			
			Level 1 - Sanitary facilities open directly into a library.			
			These facilities have not been provided with airlocks or privacy screens			
			Architect to amend plan to comply or a BCA performance solution is to be sought			
			If a sanitary compartment is prohibited under F6D9 from opening directly to another			
			room-			
			(a) in a sole-occupancy unit in a class 2 or 3 building or class 4 part of a building—			
F(D40	Airlaaka	Dees Not Comply	(i) access must be by an arrock, natiway or other room, or			
FODIO	AIFLOCKS	Does Not Compty	(h) the samtary compartment must be provided with methanical exhaust ventilation, and			
			or open spectator stand)-			
			(i) access must be by an airlock hallway or other room with a floor area of not less than 1.1			
			m2 and fitted with self-closing doors at all access doorways; or			



BCA Clause	Compliance Provisions	Status	MBC Assessment Report Commentary
			(ii) the sanitary compartment must be provided with mechanical exhaust ventilation and the doorway to the room adequately screened from view.
Section G - Ancilla	ry Provisions	• •	
Part G5 - Construc	tion in Bushfire Prone Areas		
G5D4	Protection - certain class 9 buildings	Performance Solution Proposed	<ul> <li>(1) In a designated bushfire prone area, the following must comply with Specification 43:</li> <li>(a) A Class 9a health-care building.</li> <li>(b) A Class 9b-</li> <li>(i) early childhood centre; or</li> <li>(ii) primary or secondary school.</li> <li>(c) A Class 9c residential care building.</li> <li>(2) In a designated bushfire prone area, a Class 10a building or deck immediately adjacent or connected to a building of <ul> <li>a type listed in (1) must comply with S43C2 and S43C13.</li> </ul> </li> </ul>
Specifications	Ī		
Specification 43	Bushfire protection for certain Class 9 buildings	Performance Solution Proposed	<ul> <li>refer to specifications for details</li> <li>BCA S43C3 - Buildings to be located not less than 12m away from any other building, unless they are provided with a fire rating.</li> <li>BCA S43C6 - A non-combustible pathway directly adjacent to the building and not less than 1.5m wide must be provided around the perimeter of the building.</li> <li>BCA S43C14 - Vehicular access is to be provided in accordance with C3D5(2), as if the building were a large, isolated building.</li> <li>BCA Spec S43C9 - It is proposed to not provide Block C with mechanical ventilation (airconditioning). Therefore, the internal tenability requirements of S43C9 will not be met.</li> </ul>



Building Code of Australia 2022



## 6 Appendix A – Architectural Plans Reviewed

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

Drawing No.	Title	Date	Drawn By	Revision
MHS-NBRS- B00A-L0-DR-A- 11000	BLOCK A -HS500 -L0 PLAN	29/10/2024	NBRS	6
MHS-NBRS- B00A-L1-DR-A- 11001	BLOCK A -HS500 -L1 PLAN	29/10/2024	NBRS	6
MHS-NBRS- B00A-L2-DR-A- 11002	BLOCK A -HS500 -L2 PLAN	29/10/2024	NBRS	6
MHS-NBRS- B00A-LR-DR- A-11003	BLOCK A -HS500 -ROOF PLAN	29/10/2024	NBRS	6
MHS-NBRS- B00B-L0-DR-A- 21000	BLOCK B - HS500 - LO PLAN	29/10/2024	NBRS	6
MHS-NBRS- B00B-L1-DR-A- 21001	BLOCK B - HS500 - L1 PLAN	29/10/2024	NBRS	6
MHS-NBRS- B00B-L2-DR-A- 21002	BLOCK B - HS500 - L2 PLAN	29/10/2024	NBRS	6
MHS-NBRS- B00B-LR-DR- A-21003	BLOCK B - HS500 - ROOF PLAN	29/10/2024	NBRS	6
MHS-NBRS- B00C-L0-DR-A- 31000	BLOCK C - FLOOR PLAN	24/10/2024	NBRS	3
MHS-NBRS- B00C-LR-DR-A- 31001	BLOCK C - ROOF PLAN	24/10/2024	NBRS	3
MHS-NBRS- B00C-ZZ-DR-A- 33000	BLOCK C - HALL ELEVATIONS	24/10/2024	NBRS	3
MHS-NBRS- B00C-ZZ-DR-A- 34000	BLOCK C - HALL SECTIONS	24/10/2024	NBRS	3



## 7 Appendix B - Specification 5 Fire-Resisting Construction

#### 7.1 Type A Fire-Resisting Construction

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

Distance from a fire course feature	FRL (in minutes): Structural adequacy/ Integrity / Insulation				
	Class 2, 3 or 4 parts	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 S5C11b: Type A construction: FRL of non-loadbearing parts of external walls

Distance from a <i>fire-source feature</i>	FRL (in minutes): Structural adequacy/ Integrity / Insulation					
	Class 2, 3 or 4 parts	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 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 parts	Class 5, 7a or 9	Class 6	Class 7b or 8		
Loadbearing	90/-/-	120/-/-	180/-/-	240/-/-		
Non-loadbearing	-/-/-	-/-/-	-/-/-	-/-/-		



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

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

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

Distance from a fire-course feature	FRL (in minutes): Structural adequacy/ Integrity / Insulation					
Distance from a jile-source jeuture	Class 2, 3 or 4 parts Class 5, 7a or 9 0		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 S5C11f: Type A construction: FRL of non-loadbearing internal walls

Location	FRL (in minutes): Structural adequacy/ Integrity / Insulation					
	Class 2, 3 or 4 parts	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 <i>public corridors</i> , 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		



Building element	FRL (in minutes): Structural adequacy/ Integrity / Insulation						
	Class 2, 3 or 4 parts	Class 5, 7a or 9	Class 6	Class 7b or 8			
Other <i>loadbearing</i> 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			

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

#### 7.2 Type C Fire-Resisting Construction

#### Table S5C24a: Type C construction: FRL of parts of external walls

Distance from a fire course feature	FRL (in minutes): Structural adequacy/ Integrity / Insulation					
Distance from a jire-source jeature	Class 2, 3 or 4 parts	Class 5, 7a or 9	Class 6	Class 7b or 8		
Less than 1.5m	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 five-source feature	FRL (in minutes): Structural adequacy/ Integrity / Insulation					
	Class 2, 3 or 4 parts	Class 5, 7a or 9	Class 6	Class 7b or 8		
Less than 1.5m	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 two	FRL (in minutes): Structural adequacy/ Integrity / Insulation					
wall type	Class 2, 3 or 4 parts 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 parts	Class 5, 7a or 9	Class 6	Class 7b or 8		
Bounding <i>public corridors</i> , public lobbies and the						
like	60/60/60	-/-/-	-/-/-	-/-/-		
Between or bounding sole-occupancy units	60/60/60	-/-/-	-/-/-	-/-/-		
Bounding a stair if <i>required</i> to be rated	60/60/60	60/60/60	60/60/60	60/60/60		

#### Table S5C24e: Type C construction: FRL of roof

Location	FRL (in minutes): Structural adequacy/ Integrity / Insulation					
	Class 2, 3 or 4 parts Class 5, 7a or 9		Class 6	Class 7b or 8		
Roofs	-/-/-	-/-/-	-/-/-	-/-/-		



## 8 Appendix D – Aggregate Egress Width Calculations

Note: To undertake an accurate aggregate width calculation, please provide a breakdown of student and staff populations per level of each Block.



## 9 Appendix E – Sanitary Facilities Calculations

#### 9.1 Holistic Building Count

Description	Occupant	Population No.		Ree	quired	t	Pr	ovide	ed	Dif	ferer	ice
of building or part	Number			WC	U	В	WC	U	В	WC	U	В
Blocks A B	680	Male	340	6	5	7	28*'	-	27*	22*'	-	20*
C & D	(Student Population)	Female	340	10		7	31*		28*	21*		14*

Description	Occupant Number	Population No.		Required			Provided			Difference		
of building or part				WC	U	В	WC	U	В	WC	U	В
Blocks A, B, C & D	49	Male	25	2	2	1	6*'	-	6*	4*'	-	5*
	(Staff Population)	Female	25	3		1	6*		6*	3*		5*

Key:

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

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

Red numbers signify a deficiency in facilities

Note: although it appears sufficient sanitary facilities have been provided, the plans are to be amended to stipulate if facilities are for male or female use as well as staff or student use.

