



BCA Design Assessment Report

DA Documentation Phase



Former Shoalhaven Anglican School
17 Croobyar Road, Milton NSW 2538

Fire Safety Engineers | Inclusive Accessibility Consultants | Building Code Consultants

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17 Croobyar Road, Milton NSW 2538
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The following report register documents the development and issue of this and each subsequent report(s) undertaken by DC Partnership.

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Revision History—

OUR REFERENCE	REMARKS	ISSUE DATE
SYD225_017-1 (BCA) TS	FINAL report issued – For masterplan phase	8 th Oct 2025
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EXECUTIVE SUMMARY

This BCA Design Assessment Report has been prepared by DC Partnership at the request of NSW Department of Education and relates to the redevelopment of a former school site to be used as an educational and sports facility for use by schools within the Ulladulla and Milton SCG, located at 17 Croobyar Road, Milton NSW 2538.

Based upon our assessment to date we are of the opinion that the subject development is capable of achieving compliance with the performance provisions of the BCA, either by complying with the prescriptive requirements or via a performance-based approach.

Any other matters that have been identified as requiring 'Capable of Compliance' in **Section 3** shall also be developed and reviewed as the project progresses. The above has explicitly been stated as they are deemed to have greater implications if left unresolved.

In addition to undertaking a detailed assessment of the design against the prescriptive requirements of the BCA a preliminary performance-based assessment has also been undertaken.

The table below lists scenarios where we believe the adoption of a performance design may add value to development in-lieu of complying with the prescriptive (DtS) provisions—

ITEM	PROPOSED PERFORMANCE SOLUTION	BCA DTS CLAUSE	PERFORMANCE REQUIREMENT
FIRE SAFETY			
1.	Justify the omission of fire hose reels to the following areas within Blocks A & I: (a) Service rooms; (b) Sanitary compartments; (c) Kitchens; (d) Storage rooms; and <i>Note – DtS compliance is available for this item</i>	E1D3	E1P1
NON-FIRE SAFETY			
2.	Justify the provision of unisex staff facilities within Block V in lieu of separate sex facilities where more than 10 staff will be present. <i>Note – DtS compliance is available for this item</i>	F4D4	F4P1

The implementation of a performance-based approach in lieu of compliance with the deemed-to-satisfy (DtS) provisions shall be in consultation with all relevant stakeholders and is subject to the approval of the certifying authority.

The adoption of performance solutions for fire safety matters may be subject to consultation with the NSW Fire Brigade as part of the Construction Certificate process under Section 25 - 29 of the Environmental Planning & Assessment (Development Certification and Fire Safety) Regulation 2021.

1.0 INTRODUCTION

1.1 General

This report has been prepared at the request of NSW Department of Education and relates to the proposed redevelopment of the former school site to be used as an educational and sports facility for use by schools within the Ulladulla and Milton SCG located at 17 Croobyar Road, Milton NSW 2538.

1.2 Purpose of report

The purpose of this report is to identify the extent to which the architectural design documentation complies with the prescriptive provisions of the NCC 2022 Amendment 2 Volume One - Building Code of Australia, thereby after referred to as the BCA.

1.3 Documentation Provided for Assessment

This assessment is based upon the Architectural documentation prepared by Edmiston Jones listed within **Appendix 1**.

1.4 Limitations

In interpreting the report, the following limitations shall be noted –

- (a) BCA requirements for existing buildings located on the allotment;
- (b) This report is based upon, and limited to, the information depicted in the documentation provided for assessment, and does not make any assumptions regarding 'design intention' or the like;
- (c) This assessment does not contain comments regarding detailed design issues such as (but not limited to): slip resistance, handrail design, door hardware specification and lift specification.
- (d) The list of fire safety measures in Section 2.8 is not a proposed fire safety schedule within the context of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021; and
- (e) This report is not a regulated design, as defined by the Design Building Practitioners Regulations 2021.

1.5 Report Exclusions

It is conveyed that this report should not be construed to infer that an assessment for compliance with the following has been undertaken –

- (a) Work Health & Safety Act (2011) and Regulations (2017);
- (b) WorkCover Authority requirements;
- (c) Structural and Services Design Documentation;
- (d) The individual requirements of service authorities (i.e. Telecommunication Carriers, Sydney Water, Endeavour Energy);
- (e) Any conditions imposed by the Consent Authority;
- (f) Any conditions imposed by the Principal Certifying Authority;

- (g) Design and Building Practitioners Act (2020) and Regulations (2021);
- (h) Adaptable Housing (AS4299-1995);
- (i) Liveable Housing Guidelines;
- (j) BASIX/NatHers certificate;
- (k) The Disability Discrimination Act (DDA) 1992;
- (l) The accessibility requirements of the BCA, as contained within Part D4 and F4D5 of the BCA; and
- (m) The energy efficiency provisions of the BCA, as contained with Section J of the BCA.

1.6 Relevant Legislative Framework

- (a) New building works –

Sub-section 19(1)(c) of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulations 2021 requires that all works forming part of the Construction Certification ('new works') comply with the current requirements of the BCA.

All new works proposed in the architectural documentation are required to comply but existing features of an existing building need not comply with the BCA unless specified under different parts of the legislation e.g. change of building use or consent authority may require upgrade of buildings.

- (b) Existing buildings (No change of use) –

Section 14(3) of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulations 2021 prevents a certifying authority from issuing a Construction Certificate that involves the alteration, enlargement or extension of an existing building unless on completion of the building work, the fire protection and structural capacity of the building will not be reduced.

2.0 DEVELOPMENT DESCRIPTION

2.1 Site Description

An assessment of the subject development has been undertaken by DC Partnership at the request of School Infrastructure NSW and relates to the existing school premises undergoing alterations and additions at the Former Shoalhaven Anglican School.

A summary of the scope of works is as follows;

- (a) Building I (Hall) upgrade as multi-purpose facility including use for gymnasium and performance stage;
- (b) Building H – Existing kitchen upgrade | VET (catering kitchen);
- (c) Building V – Upgrade/ re-purpose as Site Reception, Admin and staff areas;
- (d) Building A - Refurbishment of 4 GLS rooms and sanitary facilities;
- (e) Upgrade grass playing field/ oval (Athletics track and full-sized rectangular sports field);
- (f) 2 x new basketball courts (unenclosed);
- (g) Demolition of buildings P, Q, R, S, T, U & W and replace with new car park and bus set-down area; new school perimeter and internal fencing (mixture of palisade and chainmesh) note on site plan the buildings being demolished.
- (h) Partial Improvements to existing gravel access road; and
- (i) Landscaping improvements following demolition Works and upgrade / new accessible paths of travel to meet accessibility compliance.



Figure 2.1 (a) – Subject Site (Prepared by Edmiston Jones)



Figure 2.1 (b) – Existing Site Images (Prepared by Edmiston Jones)

2.2 Building Description

The proposed works will comprise of the redevelopment of the former school site to be used as an educational and sports facility for use by schools within the Ulladulla and Milton SCG.

Table 2.2 (a) – Block A Building Description

BLOCK A DESCRIPTION		
Building Classification	Class 9b	School
Storeys Contained	One (1)	
Rise in Storeys	One (1)	
Type of Construction	Type C	
Largest Fire Compartment Size	809 m ²	Within C3D3 Limits
Climate Zone	Zone 6	
Designated Bushfire Prone Area	Yes	Bushfire Consultant to Confirm

Table 2.2 (b) – Block V Building Description

BLOCK V DESCRIPTION		
Building Classification	Class 5	Administration
Storeys Contained	One (1)	
Rise in Storeys	One (1)	
Type of Construction	Type C	
Largest Fire Compartment Size	403 m ²	Within C3D3 Limits
Climate Zone	Zone 6	
Designated Bushfire Prone Area	Yes	Bushfire Consultant to Confirm

Table 2.2 (c) – Block H Building Description

BLOCK H DESCRIPTION		
Building Classification	Class 9b	School
	Class 7b	Storage
Storeys Contained	One (1)	
Rise in Storeys	One (1)	
Type of Construction	Type C	
Largest Fire Compartment Size	213 m ²	Within C3D3 Limits
Climate Zone	Zone 6	
Designated Bushfire Prone Area	Yes	Bushfire Consultant to Confirm

Table 2.2 (d) – Block I Building Description

BLOCK I DESCRIPTION		
Building Classification	Class 9b	School
Storeys Contained	One (1)	
Rise in Storeys	One (1)	
Type of Construction	Type C	
Largest Fire Compartment Size	1,240 m ²	Within C3D3 Limits
Climate Zone	Zone 6	
Designated Bushfire Prone Area	Yes	Bushfire Consultant to Confirm

2.3 BCA Assessment – Interpretation Notes

To provide the reader with additional context, the following information regarding assessment methodology used in this assessment is provided below—

- (a) The proposed hall building has not been assessed as an entertainment venue for the purpose of this assessment;
- (b) Croobyar Road has not been assessed as a fire-source feature given the boundary is more than 6m to the far side of the road;
- (c) Cars, cabinets and loose furniture are not considered to be permanently fixed and not intervening in the path of travel;
- (d) The covered walkway between Blocks H & I has been deemed as a Class 10b structure, therefore voiding the requirement to assess these as a united building;
- (e) The halls potential external use has solely been accounted for in calculating aggregate egress width, however it is not yet confirmed for external use and therefore not a requirement at this stage;
- (f) As per the bushfire consultant's report, specification 43 will not applicable on the basis that the subject buildings are not mapped within the bushfire zone.
- (g) As design progresses to CC further details shall be developed to ensure compliance with the requirements of the BCA is achieved, such as:
 - (i) Wall and floor schedule, showing FRL's, construction, & etc;
 - (ii) External finishes schedule;
 - (iii) Door and window schedules showing operation of latches, door and window dimensions etc.
 - (iv) Signage schedule showing statutory signage;
 - (v) RLs / FFLs of landscaped (external) egress routes;
 - (vi) Fire hydrant and brigade booster assembly locations;
 - (vii) Portable fire extinguisher locations;
 - (viii) Lift details showing size of lift car etc; and
 - (ix) Wet area details.

Several acronyms and abbreviations are used throughout this report, refer to **Appendix 2** for clarification.

2.4 Fire Separation / Compartmentation

Fire compartmentation for the proposed building has been assessed as follows –

Table 2.4 – Fire compartments

COMPARTMENT	APPROX. AREA (m ²)	APPROX. VOLUME (m ³)	C3D3 LIMITATION
Block A	809	-	Within
Block V	403	-	Within
Block H	213	-	Within
Block I	1,240	-	Within

2.5 Fire Source Features

The building is exposed to the following fire source features –

Table 2.5 – Fire source features

DESCRIPTION	DISTANCE FROM (m)
Site Boundary	Greater than 6m
Croobyar Road Far Boundary	Greater than 6m
Other Buildings	Greater than 6m

2.6 Occupancy Load Assessment

The proposed population for the building has been calculated as detailed within D2D18 of the BCA.

Table 2.6 – Population Calculation

LOCATION	USE	AREA (m ²)	DENSITY	#	PROPOSED WIDTH	REQUIRED WIDTH
Block A	Classrooms	809	7.7	105	>1.25m	1.25m
Block V	Admin	403	31	13	>1m	1m
Block H	Practical Learning / Kitchen	213	10.1	21	>1m	1m
Block I	Hall	1,240	2.65	468	>4m	4m

Notes –

1. The total school population of 197 has been provided by Edmiston Jones;
2. It is assumed that the hall will be used for assembly and may house the total school population at any point; and
3. The halls potential external use has solely been accounted for in calculating aggregate egress width, however it is not yet confirmed for external use and therefore not a requirement at this stage.

2.7 Sanitary Facilities Assessment

Table 2.7 – Sanitary Compartments

Population No.		Required			Provided			Difference		
		WC	Urinals	Basins	WC	Urinals	Basins	WC	Urinals	Basins
Male Students	92	3	2	3	3	2	3			
Female Students	92	5	-	3	5	-	3			
Male Staff	7	1	-	1	1	-	1			

Population No.	Required			Provided			Difference		
	WC	Urinals	Basins	WC	Urinals	Basins	WC	Urinals	Basins
Female Staff	7	2	-	1	2	-	1		

Notes –

1. The above assessment is based on a site-wide calculation, accounting for the total population rather than the population of each building;
2. An exact 50/50% split between Male and Females have been applied, please advise if this is not suitable for the proposed use;
3. Accessible unisex facilities have been counted once for each sex (F4D3);
4. A urinal may be a closet pan used in place of a urinal i.e. a closet pan may be treated as a urinal but not vice versa (F4D9); and
5. While the accessible toilet has been designated to staff for the purposes of calculations, it is available for use by customers / patrons.

2.8 Fire Safety Measures

The following is a list of fire safety measures required for the building based on the DtS provisions of the BCA only. The list is subject to change as the design progresses and does not include any Performance Solution / Fire Engineering Report measures or any additional measures.

Table 2.8 – Fire safety measures required by DtS provisions

MEASURE	STANDARD OF PERFORMANCE
Automatic Detection and Alarm System (Mechanical Shutdown)	BCA 2022 Amdt 2 Spec. 20 (S20C3, S20C4, S20C5), AS 3786-2014, AS 1670.1-2018
Emergency Lighting	BCA 2022 Amdt 2 Clause E4D2, E4D3, E4D4 & AS 2293.1-2018
Exit And Directional Signage	BCA 2022 Amdt 2 Clause E4D5, E4D6, E4D8, Spec. 25 & AS 2293.1-2018
Fire Hydrant Systems	BCA 2022 Amdt 2 Clause E1D2, AS 2419.1-2021
Portable Fire Extinguishers & Fire Blankets	BCA 2022 Amdt 2 Clause E1D14 & AS 2444-2001
Power Operated Doors (Exits)	BCA 2022 Amdt 2 Clause D3D24, D3D26, D3D28 & Manufacturer's specifications
Smoke Detectors and Heat Detectors	BCA 2022 Amdt 2 Clause E2D3, Spec. 20 (S20C3), AS 1670.1-2018, AS3786-2014
Smoke Exhaust System	BCA 2022 Amdt 2 Clause E2D3, Spec. 20, Spec. 21, & AS/NZS 1668.1-2015
Warning And Operational Signs	BCA 2022 Amdt 2 Clause D3D28 Section 108 & 109 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021

3.0 BCA ASSESSMENT SUMMARY

3.1 Interpretation

The following table summarises the compliance status of the architectural design in terms of each applicable prescriptive provision of the BCA and indicates a capability for compliance with the BCA. The following is an explanation of the terminology used in the summary checklist:

- (a) N/A: Not Applicable. This clause is not applicable to the proposed design.
- (b) Complies: The proposed design complies with the relevant provisions of the BCA.
- (c) PS: Performance Solution. The proposed design can comply with the relevant Performance Requirements of the BCA via a Performance Solution.
- (d) Does not comply: The proposed design does not comply with the BCA and requires amendment or investigations into the feasibility of a Performance Solution.
- (e) Capable of Compliance: Detailed design items which are to be developed and verified at CC stage.

Table 3.1 – BCA assessment summary checklist

BCA CLAUSE		COMPLIES	DOES NOT COMPLY	CAPABLE OF COMPLIANCE
Section B – Structure				
Part B1 - Structural provisions				
B1D2	Resistance to actions			✓
B1D3	Determination of individual actions			✓
B1D4	Determination of structural resistance of materials and forms of construction			✓
B1D6	Construction of buildings in flood hazard areas	N/A		
Section C – Fire Resistance				
Part C2 - Fire Resistance and Stability				
C2D2A	Type of construction required	N/A		
C2D2B	Type of construction required	N/A		
C2D2C	Type of construction required			✓
C2D3	Calculation of rise in storeys	✓		
C2D9	Lightweight construction			✓
C2D10	Non-combustible building elements	N/A		
C2D11	Fire hazard properties			✓
C2D12	Performance of external walls in fire			✓
C2D13	Fire-protected timber: Concession			✓
C2D14	Ancillary elements	N/A		
C2D15	Fixing of bonded laminated cladding panels	N/A		
Part C3 - Compartmentation and separation				
C3D3	General floor area and volume limitations	✓		

BCA CLAUSE		COMPLIES	DOES NOT COMPLY	CAPABLE OF COMPLIANCE
C3D4	Large isolated buildings	N/A		
C3D5	Requirements for open spaces and vehicular access	N/A		
C3D6	Class 9 buildings	N/A		
C3D7	Vertical separation of openings in external walls	N/A		
C3D8	Separation by fire walls	N/A		
C3D9	Separation of classifications in the same storey	N/A		
C3D10	Separation of classifications in different storeys	N/A		
C3D11	Separation of lift shafts	N/A		
C3D12	Stairways and lifts in one shaft	N/A		
C3D13	Separation of equipment			✓
C3D14	Electricity supply system			✓
C3D15	Public corridors in Class 2 and 3 buildings	N/A		
Part C4 - Protection of openings				
C4D3	Protection of openings in external walls	✓		
C4D4	Separation of external walls and associated openings in different fire compartments	N/A		
C4D5	Acceptable methods of protection	N/A		
C4D6	Doorways in fire walls	N/A		
C4D7	Sliding fire doors	N/A		
C4D8	Protection of doorways in horizontal exits	N/A		
C4D9	Openings in fire-isolated exits	N/A		
C4D10	Service penetrations in fire-isolated exits	N/A		
C4D11	Openings in fire-isolated lift shafts	N/A		
C4D12	Bounding construction: Class 2 and 3 buildings and Class 4 parts	N/A		
C4D13	Openings in floors and ceilings for services			✓
C4D14	Openings in shafts	N/A		
C4D15	Openings for service installations			✓
C4D16	Construction joints			✓
C4D17	Columns protected with lightweight construction to achieve an FRL			✓
Section D – Access and Egress				
Part D2 - Provisions for escape				
D2D3	Number of exits required	✓		
D2D4	When fire-isolated stairways and ramps are required	N/A		
D2D5	Exit travel distances	✓		

BCA CLAUSE		COMPLIES	DOES NOT COMPLY	CAPABLE OF COMPLIANCE
D2D6	Distance between alternative exits	✓		
D2D7	Height of exits, paths of travel to exits and doorways	✓		
D2D8	Width of exits and paths of travel to exits	✓		
D2D9	Width of doorways in exits or paths of travel to exits	✓		
D2D10	Exit width not to diminish in direction of travel	✓		
D2D11	Determination and measurement of exits and paths of travel to exits	✓		
D2D12	Travel via fire-isolated exits	N/A		
D2D13	External stairways or ramps in lieu of fire-isolated exits	N/A		
D2D14	Travel by non-fire-isolated stairways or ramps	N/A		
D2D15	Discharge from exits	✓		
D2D16	Horizontal exits	N/A		
D2D17	Non-required stairways, ramps or escalators	N/A		
D2D21	Plant rooms, lift machine rooms and electricity network substations: Concession	N/A		
D2D22	Access to lift pits			✓
D2D23	Egress from primary schools	N/A		
Part D3 - Construction of exits				
D3D3	Fire-isolated stairways and ramps	N/A		
D3D4	Non-fire-isolated stairways and ramps	N/A		
D3D5	Separation of rising and descending stair flights	N/A		
D3D6	Open access ramps and balconies	N/A		
D3D7	Smoke lobbies	N/A		
D3D8	Installations in exits and paths of travel			✓
D3D9	Enclosure of space under stairs and ramps	N/A		
D3D10	Width of required stairways and ramps	N/A		
D3D11	Pedestrian ramps	N/A		
D3D12	Fire-isolated passageways	N/A		
D3D13	Roof as open space	N/A		
D3D14	Goings and risers	N/A		
D3D15	Landings	N/A		
D3D16	Thresholds			✓
D3D17	Barriers to prevent falls	N/A		
D3D18	Height of barriers	N/A		
D3D19	Openings in barriers	N/A		

BCA CLAUSE		COMPLIES	DOES NOT COMPLY	CAPABLE OF COMPLIANCE
D3D20	Barrier climbability	N/A		
D3D21	Wire barriers	N/A		
D3D22	Handrails	N/A		
D3D23	Fixed platforms, walkways, stairways and ladders	N/A		
D3D24	Doorways and doors			✓
D3D25	Swinging doors	✓		
D3D26	Operation of latch			✓
D3D27	Re-entry from fire-isolated exits	N/A		
D3D28	Signs on doors			✓
D3D29	Protection of openable windows	N/A		
D3D30	Timber stairways: Concession	N/A		
Section E – Services and Equipment				
Part E1 – Fire fighting equipment				
E1D2	Fire hydrants			✓
E1D3	Fire hose reels			PS
E1D4 - E1D12	Sprinklers	N/A		
E1D13	Where sprinklers are required: occupancies of excessive hazard	N/A		
E1D14	Portable fire extinguishers			✓
E1D15	Fire control centres	N/A		
E1D16	Fire precautions during construction	N/A		
E1D17	Provisions for special hazards			✓
Part E2 - Smoke hazard management				
E2D3	General requirements	N/A		
E2D4	Fire-isolated exits	N/A		
E2D5 - E2D20	Smoke hazard management system			✓
E2D21	Provision for special hazards			✓
Part E3 - Lift installations				
E3D2	Lift installations			✓
E3D3	Stretcher facility in lifts	N/A		
E3D4	Warning against use of lifts in fire			✓
E3D5	Emergency lifts	N/A		
E3D6	Landings			✓
E3D7	Passenger lift types and their limitations			✓
E3D9	Fire service controls	N/A		
E3D10	Residential care buildings	N/A		
E3D11	Fire service recall control switch	N/A		
E3D12	Lift car fire service drive control switch	N/A		
Part E4 - Visibility in an emergency, exit signs and warning systems				

BCA CLAUSE		COMPLIES	DOES NOT COMPLY	CAPABLE OF COMPLIANCE
E4D4	Design and operation of emergency lighting			✓
E4D8	Design and operation of exit signs			✓
E4D9	Emergency warning and intercom systems			✓
Section F - Health and amenity				
Part F1 - Surface water management, rising damp and external waterproofing				
F1D3	Stormwater drainage			✓
F1D4	Exposed joints			✓
F1D5	External waterproofing membranes			✓
F1D6	Damp-proofing			✓
F1D7	Damp-proofing of floors on the ground			✓
F1D8	Subfloor ventilation			✓
Part F2 - Wet areas and overflow protection				
F2D2	Wet area construction			✓
F2D3	Rooms containing urinals			✓
F2D4	Floor wastes	N/A		
Part F3 - Roof and wall cladding				
F3D2	Roof coverings			✓
F3D3	Sarking			✓
F3D4	Glazed assemblies			✓
F3D5	Wall cladding			✓
Part F4 - Sanitary and other facilities				
F4D2	Facilities in residential buildings	N/A		
F4D4	Facilities in Class 3 to 9 buildings			PS
F4D8	Construction of sanitary compartments			✓
F4D11	Waste management	N/A		
Part F5 - Room heights				
F5D2	Height of rooms and other spaces	✓		
Part F6 - Light and ventilation				
F6D2	Provision of natural light			✓
F6D3	Methods and extent of natural light			✓
F6D4	Natural light borrowed from adjoining room	N/A		
F6D5	Artificial lighting			✓
F6D6	Ventilation of rooms			✓
F6D7	Natural ventilation			✓
F6D8	Ventilation borrowed from adjoining room			✓
F6D9	Restriction on location of sanitary compartments			✓
F6D10	Airlocks			✓

BCA CLAUSE		COMPLIES	DOES NOT COMPLY	CAPABLE OF COMPLIANCE
F6D11	Carparks	N/A		
F6D12	Kitchen local exhaust ventilation	N/A		
Section G - Ancillary provisions				
Part G2 - Boilers, pressure vessels, heating appliances, fireplaces, chimneys and flues				
G2D2 – G2D4	Boilers, pressure vessels, heating appliances, fireplaces, chimneys and flues			✓
Part G5 - Construction in bushfire prone areas				
NSW G5D3 – G5D4	Construction in bushfire prone areas	N/A		
Section I – Special use buildings				
Part I1 Class 9b buildings				
I1D2- I1D7	Class 9b buildings			✓

4.0 CONCLUSION

Our strategy for ensuring compliance will be refined and documented during the design process in conjunction with the continual development of the architectural documentation, as required.

Based upon our assessment to date we are of the opinion that the subject development is capable of achieving compliance with the performance provisions of the BCA. Compliance would be achieved via a mixture of adopting a performance based approach as well as complying with the relevant deemed-to-satisfy requirements as outlined within the BCA, compliance via the performance based approach could occur without significant changes to the proposed design.

The Performance Solutions for the building will be developed as part of the ongoing design and consultation with the design team.

The details of the proposed Performance Solutions with respect to fire safety are subject to the outcome of the fire engineering brief and analysis which will be carried out in accordance with the International Fire Engineering Guidelines.

Report By



TJ Suters
Technical Admin Assistant
For DC Partnership

Verified By



Jake Robson
Senior Building Code Consultant
For DC Partnership

APPENDIX 1 – DOCUMENTATION PROVIDED FOR ASSESSMENT

This BCA assessment was based upon the architectural documentation prepared by Edmiston Jones namely—

DRAWING	REV	TITLE	DATE
DA00	P2	COVER SHEET	24.11.2025
DA01	P2	SITE PLAN	24.11.2025
DA02	P2	PART SITE PLAN 1	24.11.2025
DA03	P2	PART SITE PLAN 2	24.11.2025
DA04	P2	BLOCK A - FLOOR PLAN & ROOF PLAN	24.11.2025
DA05	P2	BLOCK A - ELEVATIONS & SECTIONS	24.11.2025
DA06	P2	BLOCK V - FLOOR PLAN, ROOF PLAN, ELEVATIONS & SECTIONS	24.11.2025
DA07	P2	BLOCK H - FLOOR PLAN, ROOF PLAN, ELEVATIONS & SECTIONS	24.11.2025
DA08	P2	BLOCK I - FLOOR PLAN & ROOF PLAN	24.11.2025
DA09	P2	BLOCK I - ELEVATIONS	24.11.2025
DA10	P2	BLOCK I - SECTIONS	24.11.2025

APPENDIX 2 – ABBREVIATIONS & DEFINITIONS

The following acronyms and abbreviations are used throughout the report.

ACRONYM / ABBREVIATION	DEFINITION
AS	Australian Standard
CHF	Critical Heat Flux
BCA	Building Code of Australia 2022
DTS	Deemed to Satisfy
FRL	Fire-resistance level
FH	Fire hydrant
FHR	Fire hose reel
NCC	National Construction Code
PFE	Portable fire extinguisher
PBDB	Performance Based Design Brief
RC	Reinforced concrete
SOU	Sole occupancy unit
SPEC.	Specification
U-Value	Thermal transmittance

DEFINITIONS

The following definitions are provided for words used throughout the report.

Accessible

Accessible means having features to enable use by people with a disability.

Combustible

A material — means combustible as determined by AS 1530.1; and construction or part of a building — means constructed wholly or in part of combustible materials.

Deemed-to-Satisfy Provisions

Provisions which are deemed to satisfy the Performance Requirements.

Deemed-to-Satisfy Solution

A method of satisfying the Deemed-to-Satisfy Provisions.

Effective height

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

Exit

Exit means –

Any, or any combination of the following if they provide egress to a road or open space—

- (a) An internal or external stairway.
- (a) A ramp.
- (b) A fire-isolated passageway.
- (c) A doorway opening to a road or open space.
- (d) A horizontal exit or a fire-isolated passageway leading to a horizontal exit.

Fire compartment

Fire compartment means –

- (a) the total space of a building; or
- (b) when referred to in—
 - (i) the Performance Requirements — any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any openings adequately protected; or
 - (ii) the Deemed-to-Satisfy Provisions — any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that required for a fire wall for that type of construction and where all openings in the separating construction are protected in accordance with the Deemed-to-Satisfy Provisions of the relevant Part.

Fire-resistance level (FRL)

Fire-resistance level (FRL) means the grading periods in minutes determined in accordance with Specification A2.3, for the following criteria—

- (a) structural adequacy; and
- (b) integrity; and
- (c) insulation,

— expressed in that order.

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

Fire-source feature

- (a) the far boundary of a road, river, lake or the like adjoining the allotment; or
- (b) a side or rear boundary of the allotment; or
- (c) an external wall of another building on the allotment which is not a Class 10 building

Fire wall

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

Loadbearing

Intended to resist vertical forces additional to those due to its own weight.

Non-combustible

Non-combustible means—

- (a) applied to a material — not deemed combustible as determined by AS 1530.1:1994 — Combustibility Tests for Materials; and
- (b) applied to construction or part of a building — constructed wholly of materials that are not deemed combustible

Occupiable outdoor area

Occupiable outdoor area means a space on a roof, balcony or similar part of a building—

- (a) that is open to the sky; and
- (b) to which access is provided, other than access only for maintenance; and
- (c) that is not open space or directly connected with open space.

Open space

Open space means a space on the allotment, or a roof or similar part of a building adequately protected from fire, open to the sky and connected directly with a public road.

Performance Requirement

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

Performance Solution

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

Sole-occupancy unit

Sole-occupancy unit means a room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier and includes—

- (a) a dwelling; or
- (b) a room or suite of rooms in a Class 3 building which includes sleeping facilities: or
- (c) a room or suite of associated rooms in a Class 5, 6, 7, 8 or 9 building; or
- (d) a room or suite of associated rooms in a Class 9c building, which includes sleeping facilities and any area for the exclusive use of a resident.

APPENDIX 3 – FRLS

Table A3 TYPE C CONSTRUCTION: FRL OF BUILDING ELEMENTS

Building element	Class of building—FRL: (in minutes)				
	<i>Structural adequacy/Integrity/Insulation</i>				
	2, 3 or 4 part	5, 7a or 9	6	7b or 8	
EXTERNAL WALL (including any column and other building element incorporated therein) or other external building element, where the distance from any <i>fire-source feature</i> to which it is exposed is—					
Less than 1.5 m	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90	
1.5 to less than 3 m	-/-/-	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60	
3 m or more	-/-/-	-/-/-	-/-/-	-/-/-	
EXTERNAL COLUMN not incorporated in an <i>external wall</i> , where the distance from any <i>fire-source feature</i> to which it is exposed is—					
Less than 1.5 m	90/-/-	90/-/-	90/-/-	90/-/-	
1.5 to less than 3 m	-/-/-	60/-/-	60/-/-	60/-/-	
3 m or more	-/-/-	-/-/-	-/-/-	-/-/-	
COMMON WALLS and FIRE WALLS—	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90	90/ 90/ 90	
INTERNAL WALLS-					
Bounding <i>public corridors</i> , public lobbies and the like—	60 / 60/ 60	-/-/-	-/-/-	-/-/-	
Between or bounding <i>sole-occupancy units</i> —	60/ 60/ 60	-/-/-	-/-/-	-/-/-	
Bounding a stair if <i>required</i> to be rated—	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60	60/ 60/ 60	
ROOFS	-/-/-	-/-/-	-/-/-	-/-/-	

APPENDIX 4 – FIRE HAZARD PROPERTIES

The tables below are a summary of Spec. 7 and indicates the required fire hazard properties of internal linings, materials and assemblies.

FLOOR LININGS AND FLOOR COVERINGS

LOCATION / AREA	REQUIREMENT			
Throughout	Critical Radiant Flux (kW/m²)			
	Class	Not sprinkler protected	Sprinkler protected	Fire-isolated exits & fire control rooms
	Class 2, 3, 5, 6, 7, 8 or 9b, excluding Class 3 accommodation for the aged and Class 9b as specified below	2.2	1.2	2.2
	Class 3 accommodation for the aged	4.5	2.2	4.5
	Class 9a patient care areas	4.5	2.2	4.5
	Class 9a areas other than patient care areas	2.2	1.2	4.5
	Class 9b auditorium or audience seating area used mainly for indoor swimming or ice skating	1.2	1.2	2.2
	Class 9b auditorium or audience seating area used mainly for other sports or multi-purpose functions	2.2	1.2	2.2
	Class 9c resident use area	N/A	2.2	4.5
	Class 9c areas other than resident use areas	N/A	1.2	4.5
Non-sprinkler protected areas	Max. Smoke Development Rate of 750 percent minutes (% min)			
Continued more than 150 mm up a wall	Group Number 1 or 2			
Lift cars	Critical Radiant Flux (kW/m²) - 2.2			

WALL AND CEILING LININGS

LOCATION / AREA	REQUIREMENT				
Throughout	Group Number				
	Class	Fire-isolated exits & fire control rooms	Public corridors	Specific areas	Other areas
	Class 2 or 3, unsprinklered, excluding accommodation for the aged, people with disabilities and children	Walls: 1	Walls: 1, 2	Walls: 1, 2, 3	Walls: 1, 2, 3
		Ceilings: 1	Ceilings: 1, 2	Ceilings: 1, 2, 3	Ceilings: 1, 2, 3
	Class 2 or 3, sprinklered, excluding accommodation for the aged, people with disabilities and children	Walls: 1	Walls: 1, 2, 3	Walls: 1, 2, 3	Walls: 1, 2, 3
		Ceilings: 1	Ceilings: 1, 2, 3	Ceilings: 1, 2, 3	Ceilings: 1, 2, 3
	Class 3 or 9a, unsprinklered, accommodation for the aged, people with a disability, children and health-care buildings	Walls: 1	Walls: 1	Walls: 1, 2	Walls: 1, 2, 3
		Ceilings: 1	Ceilings: 1	Ceilings: 1, 2	Ceilings: 1, 2, 3
	Class 3 or 9a, sprinklered, accommodation for the aged, people with a disability, children and health-care buildings	Walls: 1	Walls: 1, 2	Walls: 1, 2, 3	Walls: 1, 2, 3
		Ceilings: 1	Ceilings: 1, 2	Ceilings: 1, 2, 3	Ceilings: 1, 2, 3
	Class 5, 6, 7, 8 or 9b schools, unsprinklered	Walls: 1	Walls: 1, 2	Walls: 1, 2, 3	Walls: 1, 2, 3

LOCATION / AREA	REQUIREMENT				
		Ceilings: 1	Ceilings: 1, 2	Ceilings: 1, 2	Ceilings : 1, 2, 3
	Class 5, 6, 7, 8 or 9b schools, sprinklered	Walls: 1	Walls: 1, 2, 3	Walls: 1, 2, 3	Walls: 1, 2, 3
		Ceilings: 1	Ceilings: 1, 2, 3	Ceilings: 1, 2, 3	Ceilings : 1, 2, 3
	Class 9b other than schools, unsprinklered	Walls: 1	Walls: 1	Walls: 1, 2	Walls: 1, 2, 3
		Ceilings: 1	Ceilings: 1	Ceilings: 1, 2	Ceilings : 1, 2, 3
	Class 9b other than schools, sprinklered	Walls: 1	Walls: 1, 2	Walls: 1, 2, 3	Walls: 1, 2, 3
		Ceilings: 1	Ceilings: 1, 2	Ceilings: 1, 2, 3	Ceilings : 1, 2, 3
	Class 9c, sprinklered	Walls: 1	Walls: 1, 2	Walls: 1, 2, 3	Walls: 1, 2, 3
Ceilings: 1		Ceilings: 1, 2	Ceilings: 1, 2, 3	Ceilings : 1, 2, 3	
Non-sprinkler protected areas	Smoke Growth Rate Index not more than 100; or Average Specific Extinction Area less than 250 m²/kg.				
Lift cars	Group Number 1 or 2				

OTHER MATERIALS

LOCATION / AREA	REQUIREMENT
Rigid and flexible ductwork	Fire hazard properties set out in AS 4254.1 and AS 4254.2.
Fire-isolated exits & fire control rooms	Spread-of Flame Index 0 Smoke-Developed Index 2
Non-fire-isolated stairs & escalators and auditorium fixed seating	Spread-of Flame Index 0 Smoke-Developed Index 5
Sarking-type material	Flammability Index 0 (fire control rooms) Flammability Index 5 (other areas)
Other materials	Spread-of Flame Index 9 Smoke-Developed Index 8 (if the Spread-of Flame Index is more than 5)

TEST STANDARDS

FIRE HAZARD PROPERTY	TEST STANDARD
Critical Radiant Flux	AS ISO 9239.1
Smoke Development Date	AS ISO 9239.1
Smoke Growth Rate Index	AS 5637.1
Average Specific Extinction Area	AS 5637.1
Group Number	AS 5637.1
Flammability Index	AS 1530.2
Spread-of Flame Index	AS 1530.3
Smoke-Developed Index	AS 1530.3

NOTES

"Sprinklered" means a building fitted with a sprinkler system (that is not a FPAA101D or FPAA101H system) complying with Specification 17.

"Specific areas" means -

- (a) for Class 2 and 3 buildings, a sole-occupancy unit; and
- (b) for Class 5 buildings, open plan offices with a minimum floor dimension/floor to ceiling height ratio > 5; and
- (c) for Class 6 buildings, shops or other building with a minimum floor dimension/floor to ceiling height ratio > 5; and
- (d) for Class 9a health-care buildings, patient care areas; and
- (e) for Class 9b theatres and halls, etc, an auditorium; and
- (f) for Class 9b schools, a classroom; and
- (g) for Class 9c buildings, resident use area.

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