ARCHITECTUS

BCA ASSESSMENT REPORT

UNE Tamworth Central

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Jensen Hughes Australia

Providing building regulations, fire engineering, accessibility, and energy consulting services to NSW for over 25 years

Our story begins in 1997 with the founding of BCA Logic to fulfill the demand of a consultancy company whose expertise expanded across the entire life cycle of a building, from consulting on the initial planning through to construction and occupation.

BCA Logic, SGA Fire and BCA Energy joined Jensen Hughes in 2021, a leading global, multi-disciplinary engineering, consulting and technology firm focused on safety, security and resiliency. We continue to be at the forefront of our industry and work thoroughly to preserve our position by ensuring the successful delivery of projects.

Jensen Hughes was launched in 2014 through the historic merger of Hughes Associates and Rolf Jensen & Associates (RJA), two of the most experienced and respected fire protection engineering companies at the time. Since then, we have gained market leadership in nuclear risk consulting and established commanding positions in areas like forensic engineering, security risk consulting and emergency management. Over the past 22 years, our integration of more than 30 privately held engineering and consulting firms has dramatically expanded our global footprint, giving us a powerful market presence ten times larger than our nearest competitor in some of our markets and extending our historical lineage back to 1939.

With more than 90 offices and 1500 employees worldwide supporting clients globally across all markets, we utilise our geographic reach to help better serve the needs of our local, regional, and multinational clients. In every market, our teams are deeply entrenched in local communities, which is important to establishing trust and delivering on our promises.

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Executive summary

This document provides an assessment of the architectural design drawings for the proposed learning centre development at UNE Tamworth Central Campus, against the Deemed-to-Satisfy provisions of the Building Code of Australia (BCA) 2022.

The project comprises the construction of a new four (4) storey education building within the existing campus. The new building will be provided with the following:

- 1 x multicultural centre;
- 4 x teaching spaces of up to 25 persons;
- 2 x teaching spaces of up to 50 persons;
- 1 x clinical simulation lab & associated spaces;
- 4 x bookable student workspaces;
- Student break-out spaces (including desks)
- Staff & care spaces, storage, kitchenettes and amenities.

Figure 1 - Proposed Learning Centre

Part 3 ‘Matters for Further Consideration’ of this report outlines the identified BCA compliance issues that require further information or consideration and/or assessment as Performance Solutions.

Annexure **D** to this report provides a detailed assessment of the proposal against ALL relevant Deemed-to-Satisfy Provisions of the BCA.

The architectural design documentation as referred to in report has been assessed against the applicable provisions of the Building Code of Australia, (BCA) and it is considered that such documentation complies or is capable of complying (as outlined in Annexure D) with that Code subject to providing the necessary performance solutions outlined below and providing additional information where indicated below.

Any Performance Solution will need to be detailed in a separate report and must clearly indicate methodologies for achieving compliance with the relevant BCA Performance Requirements.

Item	Description	BCA Provision
Performance Solutions Required		
1.	The automatic sliding doors provided within the Ground Level Fire Wall are permitted to be provided as non-fire-rated doors in lieu of achieving an FRL of -/120/30.	C4D6 C1P2 & C1P8
2.	Permit the stair between Ground Level and Level 01 to form an extended technical connection of four storeys without requiring all stairs within the building to be fire-isolated or for the applicable of atrium provisions.	D2D4 G3D1 D1D5
3.	The non-fire-isolated stairs provided to Levels 01, 02 and 03 do not provide a continuous egress path to the level of egress by their own flights and landings.	D2D14 D1P4 & E2P2
4.	To demonstrate that the construction of external walls is such that they will prevent the penetration of water that could cause unhealthy or dangerous conditions or loss of amenity to occupants and undue dampness or deterioration of building elements.	F3D2 to F3D5 F3P1
Building Code of Australia Compliance Matters to be Addressed		
1.	The Ground Floor FHR is noted to be located more than 4m from the nearest exit. The location of the FHR is to be amended to be within 4m of the Main Entry on the Ground Floor.	E1D3
Further Information Required		
1.	There is an outdoor auditorium seating area which is within 6m of the proposed building however, it is assumed that this seating will be provided as part of landscaping works and will not form a separate raised building or structure. Confirmation of the type of structure that will be constructed is to be provided.	C4D3
2.	A Fire Hose Reel is noted to be provided on the Ground Level of the building, but FHRs have not been indicated on Levels 01 to 03. Please confirm the locations of FHRs throughout the building.	E1D3
3.	The accessible facility provided on Level 02 is noted to open into the student breakout space which is assumed to be normally occupied and will be required to be provided with mechanical exhaust.	F6D10

NCC Clause Numbering

BCA2022 uses a new structure and clause referencing system to create better consistency across all volumes of the NCC. While the new Section-Part-Type-Clause system makes the NCC look different at first, it's intended to improve user experience and make it more web accessible.

The new structure results in a reorganisation of specifications and parts, some of which are contained in the table below.

The NCC uses a uniform clause numbering system across each of its three volumes. This system is called Section-Part-Type-Clause (SPTC). In each clause number-

- The first letter indicates which NCC section or prat it sits within;
- The first number indicates the number of the Part within a section or the number of a Specification.
- The second letter indicates the clause type. It will be either G, O, F, P, V, D, or C. and these are explained below.
- The second number is the clause number within each Part of Specification.

The clause Types used in the NCC are as follows:

- G = Governing requirements (mandatory)
- O = Objective (guidance)
- F = Functional Statement (guidance)
- P = Performance Requirement (mandatory)V = Verification Method (optional)
- D = Deemed-to-Satisfy Provision (optional)
- C = Clause in a Specification (can be mandatory or optional depending on how the Specification is called up by the NCC).

1.0 Basis of Assessment

1.1 LOCATION AND DESCRIPTION

The building development, the subject of this report, is located at the UNE Tamworth Central Campus, on the Corners of Peel Street & Roderick Street.

The project comprises the construction of a new four (4) storey education building within the existing campus. The new building will be provided with the following:

- 1 x multicultural centre;
- 4 x teaching spaces of up to 25 persons;
- 2 x teaching spaces of up to 50 persons;
- 1 x clinical simulation lab & associated spaces;
- 4 x bookable student workspaces;
- Student break-out spaces (including desks)
- Staff & care spaces, storage, kitchenettes and amenities.

Figure 2 - Proposed Learning Centre

1.2 PURPOSE

The purpose of this report is to assess the current design proposal against the Deemed-to-Satisfy Provisions of BCA, and to clearly outline those areas (if any) where compliance is not achieved, where areas may warrant redesign to achieve strict BCA compliance or where areas may be able to be assessed against the relevant performance criteria of BCA. Such assessment against relevant performance criteria will need to be addressed by means of a separate Performance-based Assessment (Performance Solution) Report to be prepared under separate cover.

1.3 BUILDING CODE OF AUSTRALIA

The National Construction Code (**NCC**) is Australia's primary set of technical design and construction provisions for buildings.

As a performance-based code, it sets the minimum required level for the safety, health, amenity, accessibility and sustainability of certain buildings. The Australian Building Codes Board, on behalf of the Australian Government and each State and Territory government, produces and maintains the National Construction Code.

The NCC has three (3) volumes being:

- Volume One - containing technical design and construction requirements for all Class 2 to 9 buildings
- Volume Two - containing technical design and construction requirements for certain residential (class 1) and non-habitable buildings and structures (Class 10).
- Volume Three - Containing technical requirements for the design and construction for plumbing and drainage systems in new and existing buildings

This report is based on the Deemed-to-Satisfy Provisions of the National Construction Code (**NCC**) Series Volume One – Building Code of Australia, 2022 Edition (**BCA**), incorporating the State variations where applicable. Please note that the version of the BCA applicable to new building works is the version applicable at the time of the lodgement of the Construction Certificate application to the Accredited Certifying Authority. The BCA is currently updated on a three-yearly cycle.

A reference to the BCA in this report is a reference to **BCA2022**, being volume 1 of the NCC.

1.4 LIMITATIONS

1. This report is not a Design Compliance Declaration (DCD) under the Design and Building Practitioners Act 2020, nor is it to be construed as such.
2. This report is limited to a visual assessment of the plans and specifications provided and does not include any assessment or interrogation of the BIM model or the like.
3. This report does not include nor imply any detailed assessment for design, compliance or upgrading for:
    a. the structural adequacy or design of the building;
    b. the inherent derived fire-resistance ratings of any proposed structural elements of the building (unless specifically referred to); and
    c. the design basis and/or operating capabilities of any proposed electrical, mechanical or hydraulic services.
4. This report does not include, or imply compliance with:
    a. the National Construction Code – Plumbing Code of Australia Volume Three;
    b. the Disability Discrimination Act 1992 including the Disability ((Access to Premises – Buildings) Standards 2010 – unless specifically referred to), (Note: The provision of access for people with a disability has not been assessed against the Deemed-to-Satisfy Provisions of Part D4 and Clauses E3D8, F4D5 and F4D12 of the BCA unless otherwise discussed in this report);
    c. Demolition Standards not referred to by the BCA;

d. Work Health and Safety Act 2011;

e. Requirements of Australian Standards unless specifically referred to;

f. Requirements of other Regulatory Authorities including, but not limited to, Telecommunications Supply Authorities, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Local Council, ARTC, Department of Planning and the like; and

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

1.5 DESIGN DOCUMENTATION

This report has been based on the Design plans and Specifications listed in Annexure A of this Report.

2.0 Building Description

For the purposes of the Building Code of Australia (BCA) the development may be described as follows.

2.1 RISE IN STOREYS (CLAUSE C2D3)

The building has a rise in storeys of four (4).

2.2 CLASSIFICATION (CLAUSE A6G1)

The building has been classified as follows.

Table 1: Building Classification

Class	Level	Description
9b	Ground Level to Level 03	Education (University Learning Centre)

2.3 EFFECTIVE HEIGHT (CLAUSE A1G4)

The building has an *effective height* of less than 25 metres and more than 12 metres (12.30m).

2.4 TYPE OF CONSTRUCTION REQUIRED (TABLE C2D2)

The building is required to be of Type A Construction.

2.5 FLOOR AREA AND VOLUME LIMITATIONS (TABLE C3D3)

The building is subject to maximum floor area and volume limits of:-

Class 9b	Maximum Floor Area	8,000m^2
	Maximum Volume	48,000m^3

2.6 FIRE COMPARTMENTS

The following *fire compartments* have been assumed:

1. Ground Level forms a single fire compartment.
2. Levels 01 to 03 form a single fire compartment.

Refer to Figure 3 below for the assumed separation of fire compartments on the Ground Floor.

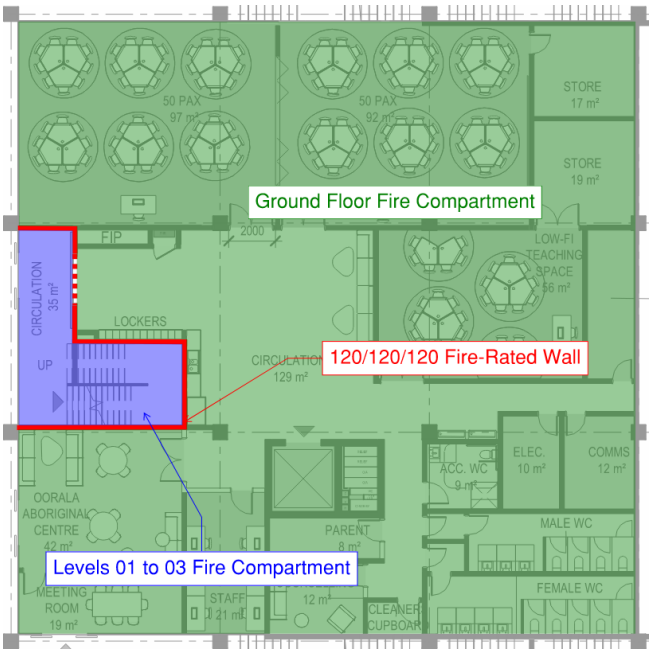


Figure 3 - Separation of Fire Compartments on Ground Level

2.7 EXITS

The following points in the building have been considered as the exits:

Ground Floor

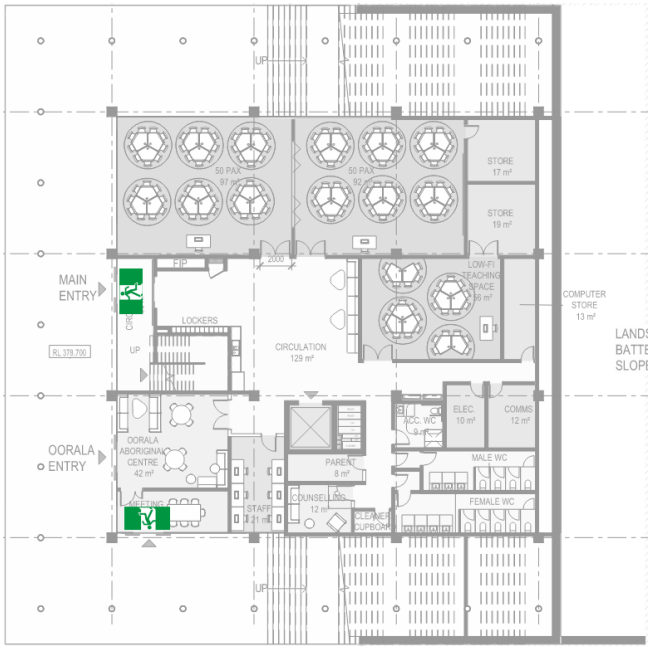


Figure 4 - Exits Ground Floor

Level 01

Figure 5 - Exits Level 01

Level 02

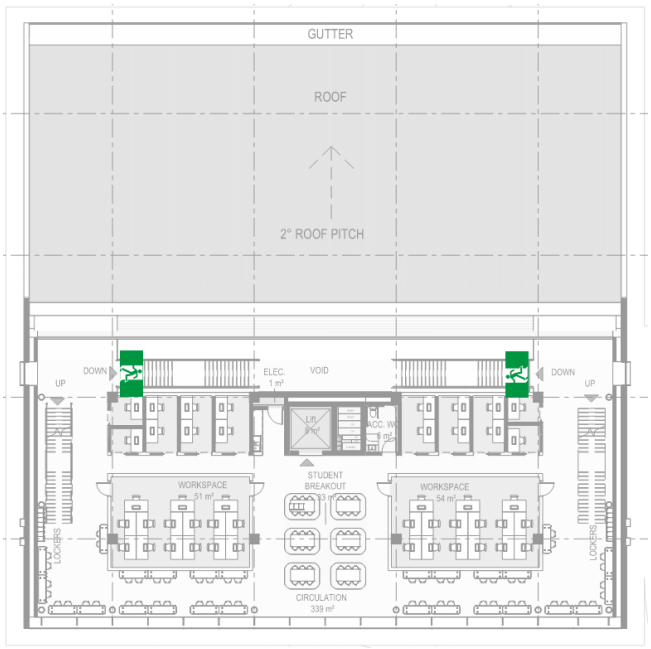


Figure 6 - Exits Level 02

Level 03

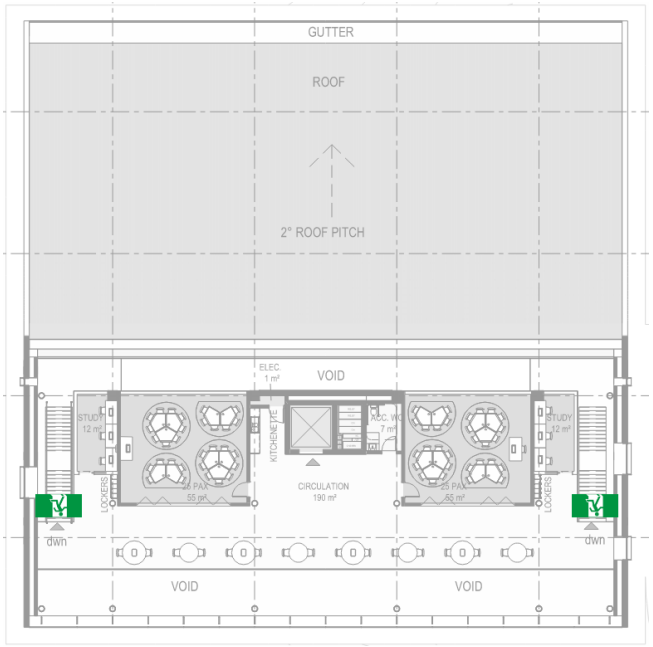


Figure 7 - Exits Level 03

2.8 CLIMATE ZONE (SCHEDULE 1)

The building is located within Climate Zone 4.

2.9 BUILDING IMPORTANCE LEVEL

Certain Australian Standards (particularly structural standards) require the Importance Level of the building to be determined. The importance level relates to the individual actions on a building listed in clause B1D3 of the BCA

Table B1D3a of the BCA provides the following:

Importance Level	Building Types	Jensen Hughes Interpretation and Examples
1	Buildings or structures presenting a low degree of hazard to life and other property in the case of failure.	1 and 2 storey factory buildings
2	Buildings or structures not included in Importance Level 1, 3 and 4.	Residential apartment buildings and associated carparking. Office buildings
3	Buildings or Structures that are designed to contain a large number of people.	Stadia, Entertainment venues, shopping centres. Transport facilities

Importance Level	Building Types	Jensen Hughes Interpretation and Examples
4	Buildings or Structures that are essential to post-disaster recovery or associated with hazardous facilities.	Data centres, evacuation centres

2.10 LOCATION OF FIRE-SOURCE FEATURES

The fire source features for the subject development are:

North: The far boundary of Roderick Street.

South: The far boundary of Scott Road.

East: The far boundary of Peel Street.

West: The far boundary of the adjoining Peel River.

In accordance with Clause S5C2 of Specification 5, a part of a building element is exposed to a *fire-source feature* if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that–

a. has an FRL of not less than 30/–/–; and

b. is neither transparent nor translucent.

Figure 8 - Site Location

3.0 Matters for Further Consideration

3.1 GENERAL

Assessment of the Architectural design documentation against the Deemed-to-Satisfy Provisions of the BCA has revealed the following areas where compliance with the BCA may require further consideration and/or may involve assessment as Performance-based *Performance Solutions*. Any *Performance Solutions* will be required to clearly indicate methodologies for achieving compliance with the relevant *Performance Requirements*.

Annexure D to this report provides a detailed assessment of the proposal against ALL relevant Deemed-to-Satisfy Provisions of the BCA. It is important that Annexure D is read in conjunction with the items below, as some matters may not have had sufficient information provided to allow a detailed assessment to be undertaken.

3.2 DIMENSIONS AND TOLERANCES

The BCA contains the minimum standards for building construction and safety, and therefore generally stipulates minimum dimensions which must be met. Jensen Hughes's assessment of the plans and specifications has been undertaken to ensure the minimum dimensions have been met.

The designer and builder should ensure that the minimum dimensions are met onsite, and consideration needs to be given to construction tolerances for wall set outs, applied finishes and skirtings to corridors and bathrooms for example, tiling bed thicknesses and the like which can adversely impact on critical matters such as access for people with disabilities, stair and corridor widths and balustrade heights.

3.3 PERFORMANCE-BASED DESIGN – PERFORMANCE SOLUTIONS

There are specific areas throughout the development where strict Deemed-to-Satisfy BCA Compliance may not be achieved by the proposed design and site constraints. These matters may need to be addressed in a detailed Performance Solution and/or Fire Engineering Report, to be prepared for this development under separate cover:

Table 2: Performance Solutions

Item	Description of Performance Solution	DTS Provision	Relevant Performance Requirements
1.	To demonstrate that the construction of the external walls is such that they will prevent the penetration of water that could cause unhealthy or dangerous conditions or loss of amenity to occupants and undue dampness or deterioration of building elements.	F3D2 to F3D5	F3P1
2.	The automatic sliding doors provided within the Ground Level Fire Wall are permitted to be provided as non-fire-rated doors in lieu of achieving an FRL of -/120/30.	C4D6	C1P2 & C1P8

Item	Description of Performance Solution	DTS Provision	Relevant Performance Requirements
3.	Permit the stair between Ground Level and Level 01 to form an extended technical connection of four storeys without requiring all stairs within the building to be fire-isolated or for the applicable of atrium provisions.	D2D4 G3D1	D1D5
4.	The non-fire-isolated stairs provided to Levels 01, 02 and 03 do not provide a continuous egress path to the level of egress by their own flights and landings.	D2D14	D1P4 & E2P2

3.4 RELIANCE ON CODEMARK CERTIFICATES

The ABCB have clarified that where a CodeMark Certificate is available that references compliance with a performance requirement of the BCA, that a building specific performance solution is not required where it is proposed to rely on that CodeMark.

This is a result of the Conformity Body that issues the CodeMark Certificate is required to undertake an assessment of the product using a process that is equivalent to the process set out in A2.2(4). Therefore, when relying on a CodeMark Certificate to demonstrate that a Performance Solution complies with relevant Performance Requirements, a construction practitioner need not undertake the process in A2.2(4) again.

3.5 FAÇADE CONSTRUCTION – NON COMBUSTIBLE

As the building is required to be of Type A the external façade is required to be *non-combustible* and comply with Clause C2D10 of the BCA.

Currently the external façade construction has been nominated on the plans as follows:

- Northern elevation –No external wall construction nominated on plans – further assessment required as design progresses to ensure non-combustible wall construction complies with above.
- Southern elevation –No external wall construction nominated on plans – further assessment required as design progresses to ensure non-combustible wall construction complies with above.
- Eastern elevation –No external wall construction nominated on plans – further assessment required as design progresses to ensure non-combustible wall construction complies with above.
- Western elevation –No external wall construction nominated on plans – further assessment required as design progresses to ensure non-combustible wall construction complies with above.

It is also noted that this clause also prohibits the use of in situ formwork containing combustible elements including PVC lined formwork products where the PVC lining remains in place for the life of the building where proposed to be used as an external wall element, common walls, the flooring and floor framing of lift pits, services riser shafts or non-loadbearing internal walls required to be fire resisting.

It should be noted that perimeter walls of basement (below ground) floor levels are also deemed to be external walls and the above provisions apply.

The use of rigid PVC permanent formwork systems can be permitted by undertaking a performance solution which in part can include reliance on a Certificate of conformity (CodeMark Certificate) as evidence of suitability for some or all of the performance requirements.

Annexures

Annexure A - Design Documentation

This report has been based on the following design documentation.

Table 3: Architectural Plans

Architectural Plans Prepared by Architectus Project No. 220518.00			
Drawing Number	**Revision**	**Date**	**Title**
DA0150	-	20/07/2023	Proposed Site Plan
DA1001	-	20/07/2023	GA – Ground Level
DA1002	-	20/07/2023	GA – Level 01
DA1003	-	20/07/2023	GA – Level 02
DA1004	-	20/07/2023	GA – Level 03
DA1005	-	20/07/2023	GA - Roof
DA2001	-	20/07/2023	West & East Elevations
DA2002	-	20/07/2023	North & South Elevations
DA2501	-	20/07/2023	Sections

Annexure B - Essential Services

The following fire safety measures are required to be installed in the building. The following table may be required to be updated as the design develops and options for compliance are confirmed, including any omissions or additions as a result of the fire engineering processes.

This section provides information for the design team, including service designers, and may need to be updated upon receipt of final designs and performance solutions at the construction approval stage.

Table 4: Essential Fire Safety Measures

Item	Essential Fire and Other Safety Measures	Standard of Performance
Fire Resistance (Floors – Walls – Doors – Shafts)		
1.	Access Panels & doors/hoppers (fire rated)	**BCA2022 C4D14** (Openings in Shafts) **BCA2022 Specification 12** AS 1905.1:2015 (Fire Resistant Doorsets)
2.	Construction Joints	**BCA2022 C2D2, Specification 5** **BCA2022 C4D16** AS 1530.4:2014 & AS 4072.1:2005
3.	Fire doors	**BCA2022 C3D13** (Separation of Equipment) **BCA2022 C3D14** (Electricity Supply Systems) **BCA2022 C4D5** (Acceptable methods of Protection) **BCA2022 C4D6** (Doors in Fire Walls) **BCA2022 C4D11** (Opening in Fire Isolated Lift Shafts) AS1735.11- 1986 **BCA2022 C4D14** (Opening in Shafts) Specification 12 AS1905.1: 2015
4.	Fire seals protecting openings in fire resisting components of the building	**BCA2022 C4D15** (Openings for service installations) **BCA2022 C4D16** (Construction joints) **BCA2022 Specification 13** AS1530.4:2014 & AS4072.1-2005
5.	Lightweight construction + Fire Rating of Electrical Switchboards + 120/120/120 Fire Rating of Walls/floors/ceiling located throughout the building. ▪ Non-combustible roof or floor covering	**BCA2022 C2D2, Specification 5** **BCA2022 C2D9, Specification 6** **BCA2022 C3D8** (Fire Walls) **BCA2022 C3D13** (Separation of Equipment)

Item	Essential Fire and Other Safety Measures	Standard of Performance
	▪ Light Weight Wall System by ……. ▪ Light Shaft Wall System by ……. + Enclosure of Shafts (Service Shafts, Lift Shafts and Fire Isolated Stairs)	**BCA2022 D3D7** (Smoke Lobby) AS1530.4:2014
General		
6.	Portable fire extinguishers	**BCA2022 E1D14** AS 2444–2001
7.	Fire blankets	AS 2444–2001
General Egress		
8.	Automatic fail safe devices + Auto open Sliding Exit doors + Break Glass release	**BCA2022 D3D26** (Operation of Latches) AS 1670.1:2018 (Fire)
9.	Evacuation Training	AS 3745:2010
10.	Operation of Door latches + Failsafe + Manual Push Button Control	**D3D26** (Operation of Latch) AS 1670.1:2018
11.	Required Automatic Doors	**D3D24** (Doorways and Doors)
12.	Warning & operational signs	**BCA2022 D3D28** (Signs on Fire Doors) **BCA2022 D4D7** (Braille Exit Signs) (Note: E4D5 (Exit Signs)) **BCA2022 E3D4** (Lift Signs)
Lifts		
13.	Access to Lift Pits + Located at lowest level or if >3m provided through an access door	**BCA2022 D2D22** (Access to Lift Pits) 'DANGER LIFT WELL – ENTRY OF UNAUTHORISED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES'
14.	Stretcher Lifts including + Fire Service Controls + Recall Operation + Drive control switch	**BCA2022 E3D3** **BCA2022 E3D9** (Fire Service Controls) **BCA2022 E3D11** (Fire Service Recall Operation Switch) **BCA2022 E3D12** (Lift Car Fire Service drive control switch) **BCA2022 Specification 24** AS 1735.11:1986 (Fire rated landing doors)

Item	Essential Fire and Other Safety Measures	Standard of Performance
Electrical Services		
15.	Automatic fail safe devices + Auto open Sliding Exit doors + Break Glass release	**BCA2022 D3D26** (Operation of Latches) AS1670.1:2018 (Fire)
16.	Automatic fire detection & alarm: + Clause S20C4 – AS 1670.1:2018 system throughout the building/part connected to a BOWS @ 100dB(A)	**BCA2022 E2D9** **BCA2022 C4D6** (Doors in Fire Walls) **BCA2022 D3D26** (Operation of Latch) **Specification 12,** **Spec 20 - Clause S20C4** (Smoke detection system) **Spec 20 - Clause S20C7** (BOWS) AS 1670.1:2018 (Fire) – Section 4 and 5 (Detectors) AS 1670.4:2018 (EWIS)
17.	Emergency lighting	**BCA2022 E4D2, E4D4** AS/NZS 2293.1:2018
18.	Exit signs	**BCA2022 E4D55** (Exit Signs) **BCA2022 E4D6** (Direction Signs) **BCA2022 E4D8** (Design and Operation - Exits) AS/NZS 2293.1:2018
19.	Emergency warning and intercom system (EWIS) (EWIS or SSISEP) + Class 9b (School RIS >3)	**BCA2022 E4D9** AS 1670.4:2018 (EWIS)
Hydraulic Services		
20.	Automatic fire suppression systems + General Sprinklers + Combined Sprinklers and Hydrant + Fast Response Heads	**BCA2022 E1D4, E1D5,** **BCA2022 Specification 17** AS 2118.1:2017 (Sprinklers) AS 2118.6:2012 (Combined Sprinklers/Hydrant)
21.	Fire hydrant systems + NSW Storz Couplings	**BCA2022 E1D2** **BCA2022 C3D13 (Separation of Equipment)** AS 2419.1:2021 FRNSW Technical Sheet D15/45534.V9 issued 10.01.19, 'Compatible Hose Connections'
22.	Hose reel systems	**BCA2022 E1D3** AS 2441:2005
23.	Wall-wetting sprinkler / drenchers	**BCA2022 C4D5,**

Item	Essential Fire and Other Safety Measures	Standard of Performance
		AS 2118.2: Wall-wetting sprinkler / drenchers
Mechanical Services		
24.	Fire dampers	**BCA2022 E2, Spec 20, Spec 21** **BCA2022 C4D16** AS 1668.1:2015 (Amdt 1) AS 1682.1:2015 & AS 1682.2:2015
25.	1. Auto-shutdown of Air-handling System. + Any system that recycles air from one fire compartment to another, or operates in a manner that may spread smoke and does not operate as a smoke control system as per AS 1668.1:2015;	**BCA2022 E2,** **Spec 20,** AS 1668.1:2015 (Amdt 1)

E2D3 General Requirements

1. An air-handling system which does not form part of a smoke hazard management system in accordance with E2D4 to E2D20 and which recycles air from one fire compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must, subject to (2), be designed and installed—
    a. to operate as a smoke control system in accordance with AS 1668.1; or
    b. such that it—
        i. incorporates smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and
        ii. 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.

Annexure C - Fire Resistance Levels

The following fire resistance levels (FRL's) are required for the various building elements, with a fire source feature being the far boundary of a road adjoining the allotment, a side or rear boundary or an external wall of another building on the allotment except a Class 10 structure.

Type A Construction

Table 5: Type A Construction

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

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

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

Location	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2, 3 or 4 Part	Class 5, 7a or 9	Class 6	Class 7b or 8
Fire-resisting lift and stair shafts	90/90/90	120/120/120	180/120/120	240/120/120
Bounding public corridors, public lobbies and the like	90/90/90	120/-/-	180/-/-	240/-/-
Between or bounding sole-occupancy unit	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 Part	Class 5, 7a or 9	Class 6	Class 7b or 8
Fire-resisting lift and stair shafts	-/90/90	-/120/120	-/120/120	-/120/120
Bounding public corridors, public lobbies and the like	-/60/60	-/-/-	-/-/-	-/-/-
Between or bounding sole-occupancy unit	-/60/60	-/-/-	-/-/-	-/-/-
Ventilating, pipe, garbage, and like shafts not used for	-/90/90	-/90/90	-/120/120	-/120/120

the discharge of hot products of combustion				

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

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

Annexure D - Detailed BCA 2022 Assessment

Outlined below is a detailed assessment of the design under the Deemed-to-Satisfy Provisions of the Building Code of Australia (BCA) including the State variations where applicable.

All Deemed-to-Satisfy clauses that are applicable to the subject building have been referred to below, including a comment adjacent to each clause of the proposal's ability to satisfy each respective clause.

The abbreviations outlined below have been used in the following table.

N/A	Not Applicable. The Deemed-to-Satisfy clause is not applicable to the proposed design.
Complies	The relevant provisions of the Deemed-to-Satisfy clause have been satisfied by the proposed design.
CRA – Refer Annexure F	'COMPLIANCE READILY ACHIEVABLE'. It is considered that there is not enough information included in the documentation to accurately determine strict compliance with the individual clause requirements. However, with further design development, compliance can readily be achievable. This item is to be read in conjunction with the BCA Specification included within Annexure F of this report.
FI	Further Information is necessary to determine the compliance potential of the building design.
PS	Performance Solution with respect to this Deemed-to-Satisfy Provision is necessary to satisfy the relevant Performance Requirements.
DNC	Does Not Comply.
Noted	BCA Clause simply provides a statement not requiring specific design comment or confirmation.
Base Building	A base building element and the proposed works do not unduly reduce the level of fire protection or structural adequacy of the existing.

Note: The previous clause reference from BCA2019 has been included in brackets (eg [2019: B1.0]) to provide assistance to the reader and to outline where clauses have been changed or added. The term [new to BCA2022] has been used where the requirements are new to the BCA.

Deemed to Satisfy Clause Assessment

Table 6: Deemed to Satisfy Clause Assessment

SECTION B: STRUCTURE

Section B: Structure			
Clause	**Clause Requirements**	**Comment**	**Status**
Part B1 – Structural Provisions Section B is a specialist area that outlines the design requirements for the building including loads, actions and relevant Australian Standards. Compliance with Section B generally requires detailed design by a combination of consultants which may include Geotechnical, Structural and Façade**.** Given the specialist nature of Section B, and the need for design by other consultants, it is not within the scope of this BCA Assessment Report.			
B1D1: Deemed-to-Satisfy Provisions [2019: B1.0]	Informational	Noted	Noted
B1D2: Resistance to actions [2019: B1.1]	The resistance of a building or structure must be greater than the most critical action effect resulting from different combinations of actions, where— (a) the most critical action effect on a building or structure is determined in accordance with B1D3 and the general design procedures contained in AS/NZS 1170.0; and (b) the resistance of a building or structure is determined in accordance with B1D4.	Structural Engineer to certify at CC stage.	CRA – Refer Annexure F

Section B: Structure			
Clause	**Clause Requirements**	**Comment**	**Status**
B1D3: Determination of individual actions [2019: B1.2]	The magnitude of individual actions must be determined in accordance with the following: (i) BCA Clause B1D3; and (ii) AS/NZS 1170.0; and (iii) AS/NZS 1170.1; and (iv) AS/NZS 1170.2 as appropriate; and (v) AS/NZS 1170.3 as appropriate; and (vi) AS 1170.4 as appropriate;	Structural Engineer to certify at CC stage.	CRA – Refer Annexure F
B1D4: Determination of structural resistance of materials and forms of construction [2019: B1.4]	The structural resistance of materials and forms of construction must be determined in accordance with Clause B1D4 and the referenced Australian Standards.	Structural Engineer to certify at CC stage.	CRA – Refer Annexure F
B1D5: Structural software [2019: B1.5]	(1) Structural software used in computer aided design of a building or structure, that uses design criteria based on the Deemed-to-Satisfy Provisions of the BCA, including its referenced documents, for the design of steel or timber trussed roof and floor systems and framed building systems, must comply with the ABCB Protocol for Structural Software.	Structural Engineer to certify at CC stage.	CRA – Refer Annexure F
B1D6 Construction of buildings in flood hazard areas [2019: B1.6]	(1) A building in a flood hazard area must comply with the ABCB Standard for Construction of Buildings in Flood Hazard Areas.	Confirm if the site is located in a flood hazard area. Initial investigations appear to indicate that the site is impacted by flooding.	FI

Section B: Structure			
Clause	**Clause Requirements**	**Comment**	**Status**
	(2) The requirements of (1) only apply to a Class 2 or 3 building, Class 9a health-care building, Class 9c building or a Class 4 part of a building.		

SECTION C: FIRE RESISTANCE

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
Part C1 – Fire Resistance			
Part C1 contains the Objectives, Functional Statements, Performance Requirements and Verification methods applicable to that part.			Noted
Part C2 – Fire Resistance and Stability			
C2D1: Deemed-to-Satisfy Provisions [2019: C1.0]	Informational	Noted	Noted
C2D2: Type of construction required [2019: C1.1]	(1) The minimum Type of fire-resisting construction of a building must be determined in accordance with Table C2D2, except as allowed for— (a) certain Class 2, 3 or 9c buildings, in C2D6; and	The building is required to be of Type A construction Refer to Specification 5 at the end of this section for specific requirements.	CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) a Class 4 part of a building located on the top storey, in C2D4(2); and (c) open spectator stands and indoor sports stadiums, in C2D8. (2) Each building element must comply with Specification 5 as applicable.		
C2D3: Calculation of rise in storeys [2019: C1.2]	(1) 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— (a) above the finished ground next to that part; or (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. (2) A storey is not counted if— (a) it is situated at the top of the building and contains only heating, ventilating or lift equipment, water tanks, or similar service units or equipment; or (b) it is situated partly below the finished ground and the underside of the ceiling is not more than 1 m above the average finished level of the ground at the external wall, or if the external wall is more than 12 m long, the average for the 12 m part where the ground is lowest. (4) For the purposes of calculating the rise in storeys of a building—	The building has a rise in storeys of four (4).	Noted

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) a mezzanine is regarded as a storey in that part of the building in which it is situated if its floor area is more than 200 m2 or more than ⅓ of the floor area of the room, whichever is the lesser;		
C2D4: Buildings of multiple classification [2019: C1.3]	(1) In a building of multiple classifications, the Type of construction required for the building is the most fire-resisting Type resulting from the application of Table C2D2 on the basis that the classification applying to the top storey applies to all storeys. (2) In a building containing a Class 4 part on the top storey, for the purpose of (1), the classification applying to the top storey must be— (a) when the Class 4 part occupies the whole of the top storey, the classification applicable to the next highest storey; or (b) when the Class 4 part occupies part of the top storey, the classification applicable to the adjacent part.	Noted	Noted
C2D5: Mixed Types of construction [2019: C1.4]	A building may be of mixed Types of construction where it is separated in accordance with C3D8 and the Type of construction is determined in accordance with C2D2 or C2D4.	Not Applicable	NA
C2D9: Lightweight construction [2019: C1.8]	(1) Lightweight construction must comply with Specification 6 if it is used in a wall system—	This is a design criteria required to be verified by manufacturers details / certification.	CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(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. (2) If lightweight construction is used for the fire-resisting covering of a steel column or the like, and if— (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 (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.		
C2D10: Non-combustible building elements [2019: C1.9]	(1) In a building required to be of Type A or B 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.	The building is required to be provided with non-combustible building elements as it is required to be constructed in accordance with Type A construction. The drawings provided do not nominate external building materials. Further review will be required to be completed as the design develops.	FI

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(2) 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) a building required to be of Type A construction; (3) A loadbearing internal wall and a loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification 5. (4) The requirements of (1) and (2) do not apply to the following: (a) Gaskets. (b) Caulking. (c) Sealants. (d) Termite management systems. (e) Glass, including laminated glass, and associated adhesives, including tapes. (f) Thermal breaks associated with— (i) glazing systems; or (ii) external wall systems, where the thermal breaks— (A) are no larger than necessary to achieve thermal objectives; and		

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(B) do not extend beyond one storey; and (C) do not extend beyond one fire compartment. (g) Damp-proof courses. (h) Compressible fillers and backing materials, including those associated with articulation joints, closing gaps not wider than 50 mm. (i) Isolated— (i) construction packers and shims; or (ii) blocking for fixing fixtures; or (iii) fixings, including fixing accessories; or (iv) acoustic mounts. (j) Waterproofing materials applied to the external face, used below ground level and up to 250 mm above ground level. (k) Joint trims and joint reinforcing tape and mesh of a width not greater than 50 mm. (l) Weather sealing materials, applied to gaps not wider than 50 mm, used within and between concrete elements. (m) Wall ties and other masonry components complying with AS 2699 Part 1 and Part 3 as		

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	appropriate, and associated with masonry wall construction. (n) Reinforcing bars and associated minor elements that are wholly or predominately encased in concrete or grout. (o) A paint, lacquer or a similar finish or coating. (p) Adhesives, including tapes, associated with stiffeners for cladding systems. (q) Fire-protective materials and components required for the protection of penetrations. (5) The following materials, when entirely composed of itself, are non-combustible and may be used wherever a non-combustible material is required: (a) Concrete. (b) Steel, including metallic coated steel. (c) Masonry, including mortar. (d) Aluminium, including aluminium alloy. (e) Autoclaved aerated concrete, including mortar. (f) Iron. (g) Terracotta. (h) Porcelain. (i) Ceramic.		

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(j) Natural stone. (k) Copper. (l) Zinc. (m) Lead. (n) Bronze. (o) Brass. (6) 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 that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5. (g) Bonded laminated materials where—		

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(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.		
C2D11: Fire hazard properties [2019: C1.10]	Fire hazard properties of internal linings, materials and assemblies must comply with C2D11 of the BCA and Specification 7, including floor, wall and ceiling linings, air-handling ductwork, lift cars, insulation, *sarking-type materials* and attachments, or be considered *non-combustible*.	Wall, floor and ceiling linings have not been nominated in the drawings provided. Further review will be required as the design develops.	FI CRA – Refer Annexure F
C2D12: Performance of external walls in fire [2019: C1.11]	Concrete external walls that could collapse as complete panels (e.g. tilt-up and pre-cast concrete), in a building having a rise in storeys of not more than 2, must comply with Specification 8.	This clause is not applicable to the subject building	NA
C2D13: Fire-protected timber: Concession [2019: C1.13]	Fire-protected timber may be used wherever an element is required to be non-combustible, provided— (a) the building is— (i) a separate building; or	This clause is not applicable to the subject building	NA

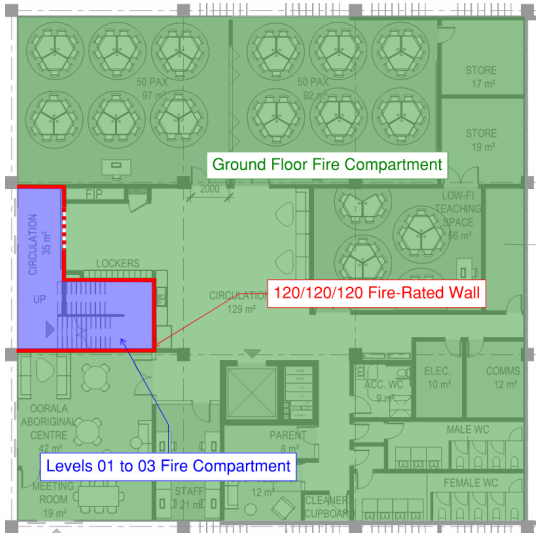
Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(ii) a part of a building— (A) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or (B) which is located above or below a part not containing fire-protected timber and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a fire wall for the lower storey; and (b) the building has an effective height of not more than 25 m; and (c) the building has a sprinkler system (other than a FPAA101D or FPAA101H system) throughout complying with Specification 17; and (d) any insulation installed in the cavity of the timber building element to have an FRL is non-combustible; and (e) cavity barriers are provided in accordance with Specification 9.		
C2D14: Ancillary elements [2019: C1.14]	An ancillary element must not be fixed, installed, attached to or supported by the concealed internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following: (a) An ancillary element that is non-combustible.	The proposed external products have not been identified and will require further review to ensure that non-combustibility and other required criteria will be met.	FI CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) A gutter, downpipe or other plumbing fixture or fitting. (c) A flashing. (d) A grate, grille or similar cover not more than 2 m2 in area associated with a building service. (e) An electrical switch, socket-outlet, cover plate or the like. (f) A light fitting. (g) A required sign. (h) 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. (i) An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that— (i) meets the relevant requirements of Table S7C7 as for an internal element; and (ii) serves a storey—		

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(A) at ground level; or (B) immediately above a storey at ground level; and (iii) does not serve an exit, where it would render the exit unusable in a fire. (j) A part of a security, intercom or announcement system. (k) Wiring. (l) Waterproofing material installed in accordance with AS 4654.2 and applied to an adjacent floor surface, including vertical upturn, or a roof surface. (m) Collars, sleeves and insulation associated with service installations. (n) Screens applied to vents, weepholes and gaps complying with AS 3959. (o) Wiper and brush seals associated with doors, windows or other openings. (p) A gasket, caulking, sealant or adhesive directly associated with (a) to (o).		
C2D15: Fixing of Bonded Laminated Cladding Panels	(1) In a building required to be of Type A or B construction, externally located bonded laminated cladding panels must have all layers of cladding mechanically supported or restrained to the supporting frame.	The proposed external cladding products have not been identified and will require further review to ensure that attachment and other required criteria will be met.	FI CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
[New for 2022]	(2) An externally located bonded laminated cladding panel need not comply with (1) if it is one of the following: (a) A laminated glass system. (b) Layered plasterboard product. (c) Perforated gypsum lath with a normal paper finish. (d) Fibrous-plaster sheet. (e) Fibre-reinforced cement sheeting. (f) A component of a garage door.		
Part C3 – Compartment and Separation			
C3D1: Deemed-to-Satisfy Provisions [2019: C2.0]	Informational	Noted	Noted
C3D2: Application of Part [2019: C2.1]	(1) C3D3, C3D4 and C3D5 do not apply to a carpark provided with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17, an open-deck carpark or an open spectator stand. (2) C3D13(1)(e) does not apply to a Class 8 electricity network substation.	Noted	Noted
C3D3: General floor area and volume limitations	(1) The size of any fire compartment or atrium in a Class 5, 6, 7, 8 or 9 building must not exceed the relevant maximum	The floor area and volume of the two assumed fire compartments within the building do not exceed the maximum permitted compartment sizes.	Complies

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
[2019: C2.2]	floor area nor the relevant maximum volume set out in Table C3D3 and C3D6 except as permitted in C3D4. (2) A part of a building which contains only heating, ventilating, or lift equipment, water tanks, or similar service units is not counted in the floor area or volume of a fire compartment or atrium if it is situated at the top of the building. (3) In a building containing an atrium, the part of the atrium well bounded by the perimeter of the openings in the floors and extending from the level of the first floor above the atrium floor to the roof covering is not counted in the volume of the atrium for the purposes of this clause.		
C3D6: Class 9 Buildings [2019: C2.5]	(2) In a building containing a Class 9b early childhood centre— (a) unless the Class 9b early childhood centre is the only use in the building, it must be separated from the remainder of the building by walls and/or floors with an FRL not less than that required for a fire wall; and (b) each storey within the Class 9b early childhood centre must contain not less than 2 fire compartments.	Not Applicable	NA
C3D7: Vertical separation of openings in external walls [2019: C2.6]	Spandrels are not required to buildings that are provided with an AS 2118.1:2017 or AS 2118.4:2012 sprinkler system installed throughout.	The proposed building is assumed to be provided with a sprinkler protection system; therefore spandrels are not required. Confirmation of the sprinkler system that will be installed is to be provided.	FI CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
C3D8: Separation by fire walls [C2.7 of BCA2019]	(1) Construction — A fire wall must be constructed in accordance with the following: (a) The fire wall has the relevant FRL prescribed by Specification 5 for each of the adjoining parts, and if these are different, the greater FRL, except where S5C19(3)(c)(i), S5C22(3)(c)(i) and S5C25(3)(c)(i) permit a lower FRL on the carpark side. (b) Any openings in a fire wall must not reduce the FRL required by Specification 5 for the fire wall, except where permitted by the Deemed-to-Satisfy Provisions of Part C4. (c) Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not pass through or cross the fire wall unless the required fire-resisting performance of the fire wall is maintained. (2) Separation of buildings — A part of a building separated from the remainder of the building by a fire wall may be treated as a separate building for the purposes of the Deemed-to-Satisfy Provisions of Sections C, D and E if it is constructed in accordance with (1) and the following: (a) The fire wall extends through all storeys and spaces in the nature of storeys that are common to that part and any adjoining part of the building. (b) The fire wall is carried through to the underside of the roof covering.	The wall separating fire compartments on the Ground Level is required to be constructed in accordance with the requirements for a Fire Wall.  The drawings provided do not indicate FRLs achieved by walls. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(c) Where the roof of one of the adjoining parts is lower than the roof of the other part, the fire wall extends to the underside of— (i) the covering of the higher roof, or not less than 6 m above the covering of the lower roof; or (ii) the lower roof if it has an FRL not less than that of the fire wall and no openings closer than 3 m to any wall above the lower roof; or (iii) the lower roof if its covering is non-combustible and the lower part has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17. (3) Separation of fire compartments — A part of a building separated from the remainder of the building by a fire wall may be treated as a separate fire compartment if it is constructed in accordance with (a) and the fire wall extends to the underside of— (a) a floor having an FRL required for a fire wall; or (b) the roof covering.		
C3D9: Separation of classifications in the same storey [2019: C2.8]	(1) If a building has parts of different classifications located alongside one another in the same storey— (a) each building element in that storey must have the higher FRL prescribed in Specification 5 for that element for the classifications concerned; or	Not Applicable	NA

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) the parts must be separated in that storey by a fire wall. (2) A fire wall required by (1)(b) must have the FRL prescribed in accordance with Specification 5 as applicable for that element for the Type of construction and the classifications concerned. (3) For the purposes of (2), the FRL in Specification 5 must be either— (a) the higher FRL prescribed in Table S5C11d or S5C21d; or (b) the FRL prescribed in Table S5C24c. (4) For the purposes of (1), where one part is a carpark complying with S5C19, S5C22 or S5C25, the parts may be separated by a fire wall complying with S5C19(3)(c), S5C22(3)(c) or S5C25(3)(c) as appropriate.		
C3D10: Separation of classifications in different storeys [2019: C2.9]	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.	Not Applicable	NA
C3D11: Separation of lift shafts [2019: C2.10]	(1) Any lift connecting more than 2 storeys, or more than 3 storeys if the building is sprinklered, (other than lifts which	The lift facility is required to be housed within a fire-rated shaft achieving an FRL no less than 120/120/120.	FI CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	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 Specification 5; and (4) Openings for lift landing doors and services must be protected in accordance with the Deemed-to-Satisfy Provisions of Part C4.	FRLs have not been nominated on the drawings provided. Further review will be undertaken as the design develops.	
C3D12: Stairways and lifts in one shaft [2019: C2.11]	A stairway and lift must not be in the same shaft if either the stairway or the lift is required to be in a fire-resisting shaft.	Not Applicable	NA
C3D13: Separation of equipment [2019: C2.12]	(1) Equipment other than that described in (2) and (3) must be separated from the remainder of the building with construction complying with (4), if that equipment comprises— (a) lift motors and lift control panels; or (b) emergency generators used to sustain emergency equipment operating in the emergency mode; or (c) central smoke control plant; or (d) boilers; or (e) 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.	The building does not appear to contain equipment that is required to be separated from the remainder of the building. The lift motor and control is assumed to be located on top of the lift car and within the fire-isolated shaft. Confirmation of whether any battery systems will be installed within the building is to be provided. FRLs have not been nominated on the drawings provided. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(2) Equipment need not be separated in accordance with (1) if the equipment comprises— (a) smoke control exhaust fans located in the air stream which are constructed for high temperature operation in accordance with Specification 21; or (b) stair pressurising equipment installed in compliance with the relevant provisions of AS 1668.1; or (c) a lift installation without a machine-room; or (d) equipment otherwise adequately separated from the remainder of the building. (3) Separation of on-site fire pumps must comply with the requirements of AS 2419.1. (4) Separating construction must have— (a) except as provided by (b)— (i) an FRL 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 (b) when separating a lift shaft and lift motor room, an FRL not less than 120/–/–.		
C3D14: Electricity supply system [2019: C2.13]	(1) An electricity substation located within a building must—	The drawings provided indicate the provision of an Electrical room and a Comms room however it is not clear whether any	FI

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and (b) have any doorway in that construction protected with a self-closing fire door having an FRL of not less than –/120/30. (2) 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 than 120/120/120; and (b) have any doorway in that construction protected with a self-closing fire door having an FRL of not less than –/120/30. (3) Subject to (4), electrical conductors must— (a) have a classification in accordance with AS/NZS 3013 of not less than— (i) if located in a position that could be subject to damage by motor vehicles — WS53W; or (ii) otherwise — WS52W; or (b) be enclosed or otherwise protected by construction having an FRL of not less than 120/120/120. (4) The requirements of (3) only apply to electrical conductors located within a building that supply—	electricity supply systems will be installed within either of these rooms. FRLs have not been nominated on the drawings provided. Further review will be undertaken as the design develops.	CRA – Refer Annexure F

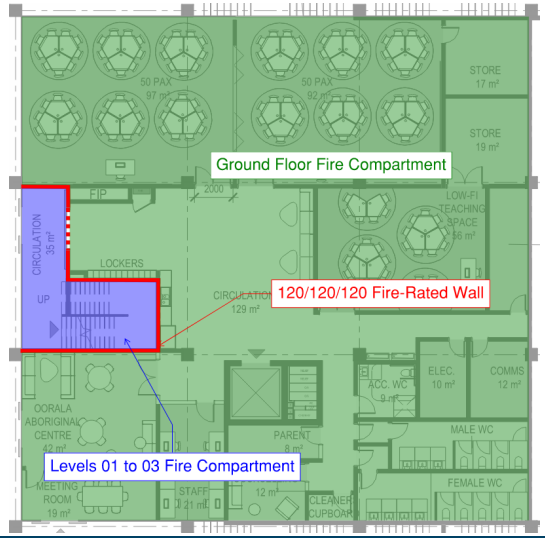
Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) a substation located within the building which supplies a main switchboard covered by (2); or (b) a main switchboard covered by (2). (5) Where emergency equipment is required in a building, all switchboards in the 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 the non-emergency equipment switchgear. (6) For the purposes of (5), emergency equipment includes but is not limited to the following: (a) Fire hydrant booster pumps. (b) Pumps for automatic sprinkler systems, water spray, chemical fluid suppression systems or the like. (c) Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building. (d) Air handling systems designed to exhaust and control the spread of fire and smoke. (e) Emergency lifts. (f) Control and indicating equipment. (g) Emergency warning and intercom systems.		

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
Part C4 – Protection of Openings			
C4D1: Deemed-to-Satisfy Provisions [2019: C3.0]	Informational	Noted	Noted
C4D2: Application of Part [2019: C3.1]	(1) The Deemed-to-Satisfy Provisions of this Part do not apply to the following: (a) Control joints, weep holes and the like in external walls of masonry construction and joints between panels in external walls of pre-cast concrete panel construction if, in all cases they are not larger than necessary for the purpose. (b) Non-combustible ventilators for subfloor or cavity ventilation, if each does not exceed 45 000 mm2 in face area and is spaced not less than 2 m from any other ventilator in the same wall. (c) Openings in the vertical plane formed between building elements at the construction edge or perimeter of a balcony or verandah, colonnade, terrace, or the like. (d) In a carpark floor other than a floor that separates a part not used as a carpark, and subject to (e), the following openings in a carpark floor: (i) Service penetrations. (ii) Openings formed by a vehicle ramp.	Noted	Noted

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(e) The requirements of (d) only apply where the connected carpark levels comply as a single fire compartment for the purposes of all other requirements of the Deemed-to-Satisfy Provisions of Sections C, D and E. (2) For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings in building elements required to be fire-resisting include doorways, windows (including any associated fanlight), infill panels and fixed or openable glazed areas that do not have the required FRL. (3)For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings, other than those covered under (1)(c), between building elements such as columns, beams and the like, in the plane formed at the construction edge or perimeter of the building, are deemed to be openings in an external wall.		
C4D3: Protection of openings in external walls [2019: C3.2]	(1) Subject to (2), openings in an external wall that is required to have an FRL must be protected in accordance with C4D5, and if wall-wetting sprinklers are used, they must be located externally. (2) The requirements of (1) only apply if the distance between the opening and the fire-source feature to which it is exposed is less than— (a) 3 m from a side or rear boundary of the allotment; or (b) 6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a storey at or near ground level; or	The building is located more than 6m from the adjoining roadways and river and is not located within 6m of another building on the property. It is noted that there is an outdoor auditorium seating area which is within 6m of the proposed building however, it is assumed that this seating will be provided as part of landscaping works and will not form a separate raised building or structure. Confirmation of the type of structure that will be constructed is to be provided.	FI

Section C: Fire Resistance

Clause	Clause Requirements	Comment	Status
	(c) 6 m from another building on the allotment that is not Class 10. (3) Openings required to be protected under (1), must not occupy more than 1/3 of the area of the external wall of the storey in which they are located unless they are in a Class 9b building used as an open spectator stand.		
C4D4: Separation of external walls and associated openings in different fire compartments [2019: C3.3]	The distance between parts of external walls and any openings within them in different *fire compartments* separated by a *fire wall* must not be less than that set out in Table C4D4, unless— (a) those parts of each wall have an *FRL* not less than 60/60/60; and (b) any openings protected in accordance with C4D5. Table C4D4 DISTANCE BETWEEN EXTERNAL WALLS AND ASSOCIATED OPENINGS IN DIFFERENT FIRE COMPARTMENTS **Angle between walls** / **Min. Distance** 0° (walls opposite) 6 m more than 0° to 45° 5 m more than 45° to 90° 4 m more than 90° to 135° 3 m more than 135° to less than 180° 2 m 180° or more Nil	The fire wall provided on the Ground Level is required to extend to the external face of the external wall to ensure that adequate separation is provided between fire compartments. The drawings provided do not indicate FRLs achieved by walls. Further review will be undertaken as the design develops.	FI

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
			
C4D5: Acceptable methods of protection [2019: C3.4]	(1) Where protection is required, doorways, windows and other openings must be protected as follows: (a) 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. (b) Windows—	Noted	Noted

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(i) internal or external wall-wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position; or (ii) –/60/– fire windows that are automatic closing or permanently fixed in the closed position; or (iii) –/60/– automatic closing fire shutters. (c) Other openings— (i) excluding voids — internal or external wall-wetting sprinklers, as appropriate; or (ii) construction having an FRL not less than –/60/- (2) Fire doors, fire windows and fire shutters must comply with Specification 12.		
C4D6: Doorways in fire walls [2019: C3.5]	(1) The aggregate width of openings for doorways in a fire wall, which are not part of a horizontal exit, must not exceed ½ of the length of the fire wall, and each doorway must be protected by— (a) 2 fire doors or fire shutters, one on each side of the doorway, each of which has an FRL of not less than ½ that required by Specification 5 for the fire wall except that each door or shutter must have an insulation level of at least 30; or (b) a fire door on one side and a fire shutter on the other side of the doorway, each of which complies with (a); or	The automatic sliding doors provided within the Ground Level Fire Wall are assumed to be glazed and will not achieve the required -/120/30 FRL. It is proposed to permit the sliding doors to be provided as non-fire-rated doors under a fire engineered performance solution.	**PS Refer Part 3.3**

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(c) a single fire door or fire shutter which has an FRL of not less than that required by Specification 5 for the fire wall except that each door or shutter must have an insulation level of at least 30. (2) A fire door or fire shutter required by (1)(a), (b) or (c) must be self-closing, or automatic closing in accordance with (3) and (4). (3) The automatic closing operation required by (2) must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located on each side of the fire wall not more than 1.5 m horizontal distance from the opening. (4) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification 17, is installed in the building, activation of the system in either fire compartment separated by the fire wall must also initiate the automatic closing operation.		
C4D7: Sliding fire doors [2019: C3.6]	(1) If a doorway in a fire wall is fitted with a sliding fire door which is open when the building is in use— (a) it must be held open with an electromagnetic device, which when de-activated in accordance with (2) and (3), allows the door to be fully closed in not less than 20 seconds and not more than 30 seconds after release; and	Not Applicable	NA

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) in the event of power failure to the door — the door must fail safe in the closed position in accordance with (a); and (c) an audible warning device must be located near the doorway and a red flashing warning light of adequate intensity on each side of the doorway must be activated in accordance with (2) and (3); and (d) signs must be installed on each side of the doorway located directly over the opening stating, in capital letters not less than 50 mm high in a colour contrasting with the background: **WARNING — SLIDING FIRE DOOR** (2) The electromagnetic device required by (1)(a) must be de-activated and the warning system activated by heat or smoke detectors, as appropriate, installed in accordance with AS 1905.1 and the relevant provisions of AS 1670.1. (3) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification 17, is installed in the building, activation in either fire compartment separated by the fire wall must also de-activate the electromagnetic device and activate the warning system.		
C4D8: Protection of doorways in horizontal exits [2019: C3.7]	(1) A doorway that is part of a horizontal exit must be protected by either— (a) a single fire door that has an FRL of not less than that required by Specification 5 for the fire wall except	Not Applicable – The fire wall is not proposed to be utilised as a horizontal exit.	NA

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	that the door must have an insulation level of at least 30; or (b) in a Class 7 or 8 building — 2 fire doors, one on each side of the doorway, each with an FRL of not less than ½ that required by Specification 5 for the fire wall except that each door must have an insulation level of at least 30. (2) Each door required by (1) must be self-closing, or automatic-closing in accordance with the following: (a) The automatic-closing operation must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located on each side of the fire wall not more than 1.5 m horizontal distance from the opening. (b) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification 17, is installed in the building, activation of the system in either fire compartment separated by the fire wall must also initiate the automatic-closing operation.		
C4D9: Openings in fire-isolated exits [2019: C3.8]	(1) Doorways that open to fire-isolated stairways, fire-isolated passageways or fire-isolated ramps, and are not doorways opening to a road or open space, must be protected by –/60/30 fire doors that are self-closing, or automatic closing in accordance with (2) and (3).	Not Applicable – The building is not provided with fire-isolated exits.	NA

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Clause	**Clause Requirements**	**Comment**	**Status**
	(2) The automatic-closing operation required by (1) must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located not more than 1.5 m horizontal distance from the approach side of the doorway. (3) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification 17, is installed in the building, activation of the system must also initiate the automatic-closing operation. (4) A window in an external wall of a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp must be protected in accordance with C4D5 if it is within 6 m of, and exposed to, a window or other opening in a wall of the same building, other than in the same fire-isolated enclosure.		
C4D10: Service penetrations in fire-isolated exits [2019: C3.9]	Fire-isolated exits must not be penetrated by any services other than— (a) electrical wiring permitted by D3D8(6) to be installed within the exit; or (b) ducting associated with a pressurisation system if it— (i) is constructed of material having an FRL of not less than –/120/60 where it passes through any other part of the building; and	Not Applicable	NA

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(ii) does not open into any other part of the building; or (c) for fire services, water supply and test drain pipes.		
C4D11: Openings in fire-isolated lift shafts [2019: C3.10]	(1) Doorways — If a lift shaft is required to be fire-isolated, an entrance doorway to that shaft must be protected by –/60/– fire doors that— (a) comply with AS 1735.11; and (b) are set to remain closed except when discharging or receiving passengers, goods or vehicles. (2) Lift indicator panels — A lift call panel, indicator panel or other panel in the wall of a fire-isolated lift shaft must be backed by construction having an FRL of not less than –/60/60 if it exceeds 35 000 mm2 in area.	Details of the proposed separation of the lift shaft have not been provided. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F
C4D13: Openings in floors and ceilings for services [2019: C3.12]	(1) Where a service passes through— (a) a floor that is required to have an FRL with respect to integrity and insulation; or (b) a ceiling required to have a resistance to the incipient spread of fire, (c) the service must be installed in accordance with (2). (2) A service must be protected— (a) in a building of Type A construction, by a shaft complying with Specification 5; or	Services penetrations through floors are assumed to be contained within fire-rated shafts or fire-stopped in accordance with C4D15 at each slab penetration. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(c) in accordance with C4D15. (3) Where a service passes through a floor which is required to be protected by a fire-protective covering, the penetration must not reduce the fire performance of the covering.		
C4D14: Openings in shafts [2019: C3.13]	In a building of Type A construction, an opening in a wall providing access to a ventilating, pipe, garbage or other service shaft must be protected by— (a) if it is in a sanitary compartment — a door or panel which, together with its frame, is non-combustible or has an FRL of not less than –/30/30; or (b) a self-closing –/60/30 fire door or hopper; or (c) an access panel having an FRL of not less than –/60/30; or (d) if the shaft is a garbage shaft — a door or hopper of non-combustible construction.	Details of the proposed separation of shafts has not been provided. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F
C4D15: Openings for service installations [2019: C3.15]	Where services pass through an element which is required to achieve an *FRL* (other than an external wall or roof), the service must be fire protected in accordance with BCA Clause C4D15. **Note**: contractors should check with PCA to confirm compliance with their proposed fire stopping method.	Noted	CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
C4D16: Construction joints [2019: C3.16]	(1) Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner— (a) identical with a prototype tested in accordance with AS 4072.1 and AS 1530.4 to achieve the required FRL; or (b) that differs from a prototype in accordance with Section 4 of AS 4072.1 and achieves the required FRL. (2) The determination of the required FRL must be confirmed in a report from an Accredited Testing Laboratory in accordance with Specifications 1 and 2. (3) The requirements of (1) do not apply where joints, spaces and the like between fire-protected timber elements are provided with cavity barriers in accordance with Specification 9..	Noted	CRA – Refer Annexure F
C4D17: Columns protected with lightweight construction to achieve an FRL [2019: C3.17]	A column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL or resistance to the incipient spread of fire.	Noted	CRA – Refer Annexure F
Specification 5 – Fire-Resisting Construction			
S5C1: Scope [2019: Spec C1.1: 1]	This Specification contains requirements for the fire-resisting construction of building elements.	Noted	Noted

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
S5C2: Exposure to fire-source features [2019: Spec C1.1: 2.1]	(1) A part of a building element is exposed to a fire-source feature if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that— (a) has an FRL of not less than 30/–/–; and (b) is neither transparent nor translucent. (2) A part of a building element is not exposed to a fire-source feature if the fire-source feature is— (a) an external wall of another building that stands on the allotment and the part concerned is more than 15 m above the highest part of that external wall; or (b) a side or rear boundary of the allotment and the part concerned is below the level of the finished ground at every relevant part of the boundary concerned. (3) If various distances apply for different parts of a building element— (a) the entire element must have the FRL applicable to that part having the least distance between itself and the relevant fire-source feature; or (b) each part of the element must have the FRL applicable according to its individual distance from the relevant fire-source feature. (4) The requirements of (3) do not override or permit any exemption from S5C3.	Noted	Noted

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
S5C3: Fire protection for a support of another part [2019: Spec C1.1: 2.2]	(1) Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part, subject to (2), must— (a) have an FRL not less than that required by other provisions of this Specification; and (b) if located within the same fire compartment as the part it supports have an FRL in respect of structural adequacy the greater of that required— (i) for the supporting part itself; and (ii) for the part it supports; and (c) be non-combustible— (i) if required by other provisions of this Specification; or (ii) if the part it supports is required to be non-combustible. (2) The following building elements need not comply with (1)(b) and (1)(c)(ii): (a) An element providing lateral support to an external wall complying with S5C24(1)(b) or C2D12. (b) An element providing support within a carpark and complying with S5C19, S5C22 or S5C25. (c) A roof providing lateral support in a building—	Noted – the building is required to be constructed to achieve the same FRL throughout.	CRA – Refer Annexure F

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Clause	**Clause Requirements**	**Comment**	**Status**
	(i) of Type A construction if it complies with S5C15(a), (b) or (d); and (ii) of Type B and C construction. (d) A column providing lateral support to a wall where the column complies with S5C6(1) and (2). (e) An element providing lateral support to a fire wall or fire-resisting wall, provided the wall is supported on both sides and failure of the element on one side does not affect the fire performance of the wall.		
S5C4: Lintels [2019: Spec C1.1: 2.3]	(1) A lintel must have the FRL required for the part of the building in which it is situated. (2) A lintel need not comply with (1) if it does not contribute to the support of a fire door, fire window or fire shutter, and— (a) it spans an opening in— (i) a wall of a building containing only one storey; or (ii) a non-loadbearing wall of a Class 2 or 3 building; or (b) it spans an opening in masonry which is not more than 150 mm thick and— (i) not more than 3 m wide if the masonry is non-loadbearing; or	Noted	CRA – Refer Annexure F

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Clause	**Clause Requirements**	**Comment**	**Status**
	(ii) not more than 1.8 m wide if the masonry is loadbearing and part of a solid wall or one of the leaves of a cavity wall		
S5C5: Attachments not to impair fire-resistance [2019: Spec C1.1: 2.4]	The method of attaching or installing a finish, lining, ancillary element or service installation to a building element must not reduce the fire-resistance of that element to below that required.	Noted	CRA – Refer Annexure F
S5C6: General concessions [2019: Spec C1.1:2.5]	(1) Steel columns — A steel column, other than one in a fire wall or common wall, need not have an FRL in a building that contains— (a) only 1 storey; or (b) 2 storeys in some of its parts and 1 storey only in its remaining parts if the sum of the floor areas of the upper storeys of its 2 storey parts does not exceed the lesser of— (i) 1/8 of the sum of the floor areas of the 1 storey parts; or (ii) in the case of a building to which one of the maximum floor areas specified in Table C3D3 is applicable — 1/10 of that area; or (iii) in the case of a building to which two or more of the maximum floor area specified in Table C3D3 is applicable — 1/10 of the lesser of those areas. (2) Timber columns — A timber column may be used in a single storey building if—	Noted. Any roof structures supporting plant equipment are permitted to be non-combustible in lieu of achieving an FRL.	CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) in a fire wall or common wall the column has an FRL not less than that listed in Table S5C11d, S5C21d or S5C24c as appropriate; and (b) in any other case where the column is required to have an FRL in accordance with Table S5C11a, S5C11c, S5C11g, S5C21a, S5C21c, S5C21g, S5C24a or S5C24b, it has an FRL of not less than 30/–/–. (3) Structures on roofs — A non-combustible structure situated on a roof need not comply with the other provisions of this Specification if it only contains— (a) lift motor equipment; or (b) one or more of the following: (i) Hot water or other water tanks. (ii) Ventilating ductwork, ventilating fans and their motors. (iii) Air-conditioning chillers. (iv) Window cleaning equipment. (v) Other service units that are non-combustible and do not contain flammable or combustible liquids or gases. (4) Curtain walls and panel walls — A requirement for an external wall to have an FRL does not apply to a curtain wall or panel wall which is of non-combustible construction and fully protected by automatic external wall-wetting sprinklers.		

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Clause	**Clause Requirements**	**Comment**	**Status**
	(5) Balconies and verandahs — A balcony, verandah or the like and any incorporated supporting part, which is attached to or forms part of a building, need not comply with Table S5C11c, S5C11g, S5C21c, S5C21g, S5C24b or S5C24e if— (a) it does not form part of the only path of travel to a required exit from the building; and (b) in Type A construction— (i) it is situated not more than 2 storeys above the lowest storey providing direct egress to a road or open space; and (ii) any supporting columns are of non-combustible construction.		
S5C7: Mezzanine floors: Concession [2019: Spec C1.1: 2.6]	(1) This Clause does not apply to a Class 9b building that is a spectator stand or audience viewing area accommodating more than 100 persons as calculated according to D2D18. (2) A mezzanine and its supports need not have an FRL or be non-combustible provided— (a) the total floor area of all the mezzanines in the same room does not exceed 1/3 of the floor area of the room or 200 m2, whichever is the lesser; and (b) the FRL of each wall and column that supports any other part of the building within 6 m of the mezzanine is increased by the amount listed in Table S5C7.	Not Applicable	NA

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
S5C8: Enclosure of shafts [2019: Spec C1.1: 2.7]	(1) Shafts required to have an FRL must be enclosed at the top and bottom by construction having an FRL not less than that required for the walls of a non-loadbearing shaft in the same building. (2) The provisions of (1) need not apply to— (a) the top of a shaft extending beyond the roof covering, other than one enclosing a fire-isolated stairway or ramp; or (b) the bottom of a shaft if it is non-combustible and laid directly on the ground.	Noted – the lift shaft is required to be provided with a fire-rated lid achieving no less than (120)/120/120.	CRA – Refer Annexure F
Type A fire-resisting construction [2019: Spec C1.1: 3.0]	Type A fire-resisting construction is applicable to the development.	Refer to part 3 clauses below for the relevant Type A Construction requirements appliable to the project.	-
S5C11: Fire-resistance of building elements [2019: Spec C1.1 3.1]	(1) In a building required to be of Type A construction— (a) each building element listed in Tables S5C11a, S5C11b, S5C11c, S5C11d, S5C11e, S5C11f and S5C11g, and any beam or column incorporated in it, must have an FRL not less than that listed in those Tables for the particular class of building concerned; and (b) any internal wall required to have an FRL with respect to integrity and insulation must extend to— (i) the underside of the floor next above; or (ii) the underside of a roof complying with Table S5C11g; or	The drawings provided do not indicate the FRLs achieved by building elements, further review will be undertaken as the design develops.	FI CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(iii) if under S5C15 the roof is not required to comply with Table S5C11g, the underside of the non-combustible roof covering and, except for roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not be crossed by timber or other combustible building elements; or (iv) a ceiling that is immediately below the roof and has a resistance to the incipient spread of fire to the roof space between the ceiling and the roof of not less than 60 minutes; and (c) a loadbearing internal wall and a loadbearing fire wall (including those that are part of a loadbearing shaft) must be constructed from— (i) concrete; or (ii) masonry; or (iii) subject to (2), fire-protected timber; or (iv) any combination of (i) to (iii); and (d) the FRLs specified in Table S5C11c for an external column apply also to those parts of an internal column that face and are within 1.5 m of a window and are exposed through that window to a fire-source feature. (2) For the purposes of (1)(c)(iii), fire-protected timber may be used, provided that— (a) the building is— (i) a separate building; or		

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(ii) a part of a building— (A) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or (B) which is located above or below a part not containing fire-protected timber and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a fire wall for the lower storey; and (b) the building has an effective height of not more than 25 m; and (c) the building has a sprinkler system (other than a FPAA101D or FPAA101H system) throughout complying with Specification 17; and (d) any insulation installed in the cavity of the timber building element required to have an FRL is non-combustible; and (e) cavity barriers are provided in accordance with Specification 9. (3) For the purposes of Table S5C11a and Table S5C11b, external wall includes any column and other building element incorporated within it or other external building element.		
S5C12: Type A fire Resisting Construction - Concessions for floors	A floor need not comply with Table S5C11g if— (a) it is laid directly on the ground; or	The Ground Level floor of the building is assumed to be laid directly on the ground and is not required to achieve an FRL.	Noted

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
[2019: Spec C1.1: 3.2]	(b) in a Class 2, 3, 5 or 9 building, the space below is not a storey, does not accommodate motor vehicles, is not a storage or work area, and is not used for any other ancillary purpose; or (e) it is an open-access floor (for the accommodation of electrical and electronic services and the like) above a floor with the required FRL.		
S5C13: Type A fire Resisting Construction - Floor Loading of Class 5 and 9b buildings: Concession [2019: Spec C1.1: 3.3]	If a floor in a Class 5 or 9b building is designed for a live load not exceeding 3 kPa— (a) the floor next above (including floor beams) may have an FRL of 90/90/90; or (b) the roof, if that is next above (including roof beams), may have an FRL of 90/60/30.	Noted	Noted
S5C14: Type A fire Resisting Construction - Roof superimposed on concrete slab: Concession [2019: Spec C1.1 3.4]	A roof superimposed on a concrete slab roof need not comply with S5C11 as to fire-resisting construction if— (a) the superimposed roof and any construction between it and the concrete slab roof are non-combustible throughout; and (b) the concrete slab roof complies with Table S5C11g.	Not Applicable	NA
S5C15: Type A fire Resisting Construction - Roof: Concession [2019: Spec C1.1: 3.5]	A roof need not comply with Table S5C11g if its covering is non-combustible and the building— (a) has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 installed throughout; or	The building is assumed to be provided with a sprinkler system and as such is permitted to omit the required FRL to the roof, provided the covering is non-combustible.	CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) has a rise in storeys of 3 or less; or (c) is of Class 2 or 3; or (d) has an effective height of not more than 25 m and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes.	Please note that the building cannot be provided with a FPAA101 sprinkler system for the application of this concession.	
S5C16: Type A fire Resisting Construction - Roof lights [2019: Spec C1.1: 3.6]	If a roof is required to have an FRL or its covering is required to be non-combustible, roof lights or the like installed in that roof must— (a) have an aggregate area of not more than 20% of the roof surface; and (b) be not less than 3 m from— (i) any boundary of the allotment other than the boundary with a road or public place; and (ii) any part of the building which projects above the roof unless that part has the FRL required of a fire wall and any openings in that part of the wall for 6 m vertically above the roof light or the like are protected in accordance with C4D5; and (iii) any roof light or the like in an adjoining sole-occupancy unit if the walls bounding the unit are required to have an FRL; and (iv) any roof light or the like in an adjoining fire-separated section of the building; and	Not Applicable	NA

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(c) if a ceiling with a resistance to the incipient spread of fire is required, be installed in a way that will maintain the level of protection provided by the ceiling to the roof space.		
S5C17: Type A fire Resisting Construction - Internal columns and walls: Concession [2019: Spec C1.1: 3.7]	For a building with an effective height of not more than 25 m and having a roof without an FRL in accordance with S5C15, in the storey immediately below that roof, internal columns other than those referred to in S5C11(1)(d) and internal walls other than fire walls and shaft walls may have— (b) in a Class 5, 6, 7, 8 or 9 building— (i) with rise in storeys exceeding 3: FRL 60/60/60; or (ii) with rise in storeys not exceeding 3: no FRL.	The internal columns on Level 03 that support the roof structure are permitted to achieve an FRL of 60/-/- in lieu of 120/-/-.	CRA – Refer Annexure F
Specification 6 – Structural Tests For Lightweight Construction			
This Specification describes tests to be applied to and criteria to be satisfied by a wall system of lightweight construction. The manufactures generally provide evidence of compliance to this specification.			Noted
Specification 7 – Fire Hazard Properties			
S7C1: Scope [2019: Spec C1.10: 1]	This Specification sets out requirements in relation to the fire hazard properties of linings, materials and assemblies in Class 2 to 9 buildings as set out in Table S7C2.	Noted	-

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
S7C2: Application [2019: Spec C1.10: 2]	Linings, materials and assemblies must comply with the appropriate requirement described in Table S7C2	Noted	Noted
S7C3: Floor linings and floor coverings [2019: Spec C1.10: 3]	A floor lining or floor covering must have— (a) a critical radiant flux not less than that listed in Table S7C3; and (b) in a building not protected by a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17, a maximum smoke development rate of 750 percent-minutes; and (c) a group number complying with S7C6(b), for any portion of the floor covering that is continued more than 150 mm up a wall.	Internal linings have not been indicated on the drawings provided. Further review will be completed as products are specified.	FI
S7C4: Wall and ceiling linings [2019: Spec C1.10: 4]	(1) A wall or ceiling lining system must comply with the group number specified in Table S7C4 and for buildings not fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 have— (a) a smoke growth rate index not more than 100; or (b) an average specific extinction area less than 250 m2/kg. (2) A group number of a wall or ceiling lining and the smoke growth rate index or average specific extinction area must be determined in accordance with AS 5637.1.	Internal linings have not been indicated on the drawings provided. Further review will be completed as products are specified.	FI

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
S7C5: Air-handling ductwork [2019: Spec C1.10: 5]	Rigid and flexible ductwork in a Class 2 to 9 building must comply with the fire hazard properties set out in AS 4254.1 and AS 4254.2.	Internal linings have not been indicated on the drawings provided. Further review will be completed as products are specified.	FI
S7C6: Lift cars [2019: Spec C1.10: 6]	Materials used as— (a) floor linings and floor coverings must have a *critical radiant flux* not less than 2.2; and (b) wall and ceiling linings must be a Group 1 material or a Group 2 material in accordance with AS 5637.1:2015.	Internal linings have not been indicated on the drawings provided. Further review will be completed as products are specified.	FI
S7C7: Other materials [2019: Spec C1.10: 7]	Materials and assemblies not included in S7C3, S7C4, S7C5 or S7C6 must not exceed the indices set out in Table S7C7.	Internal linings have not been indicated on the drawings provided. Further review will be completed as products are specified.	FI
Specification 12 – Fire Doors, Smoke Doors, Fire Window and Shutters			
S12C1 Scope [2019: Spec C3.4: 1]	This Specification sets out requirements for the construction of fire doors, smoke doors, fire windows and fire shutters.	Noted	Noted
S12C2 Fire doors [2019: Spec C3.4: 2]	Fire doorsets must comply with AS 1905.1:2015 and not fail by radiation through any glazed part during the period specified for integrity in the required *FRL*.	Noted	CRA – Refer Annexure F
S12C3 General Requirements for Smoke doors [2019: Spec C3.4: 3.1]	Smoke doors must be constructed so that smoke will not pass from one side of the doorway to the other and, if they are glazed, there is minimal danger of a person being injured by accidentally walking into them.	Noted	CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
S12C4 Construction Deemed-to-Satisfy for smoke doors [2019: Spec C3.4: 3.2]	A smoke door of one or two leaves satisfies S12C3 if it is constructed as follows: (a) The leaves are side-hung to swing— (i) in the direction of egress; or (ii) in both directions. (b) The leaves are solid-core and at least 35 mm thick, or are capable of resisting smoke at 200°C for 30 minutes. (c) The leaves are fitted with smoke seals. (d) The leaves— (i) are normally in the closed position; or (ii) operate such that— (A) they are closed automatically with the automatic closing operation initiated by smoke detectors, installed in accordance with the relevant provisions of AS 1670.1, located on each side of the doorway not more than 1.5 m horizontal distance from the doorway; and (B) in the event of power failure to the door, they will fail-safe in the closed position. (e) The leaves return to the fully closed position after each manual opening.	Noted	

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
	(f) Any glazing incorporated in the door complies with AS 1288. (g) If a glazed panel is capable of being mistaken for an unobstructed exit, the presence of the glass must be identified by an opaque mid-height band, mid-rail, crash-bar or other opaque construction.		
S12C5 Fire shutters [2019: Spec C3.4: 4]	A required fire shutter must— (a) be a shutter that— (i) is identical with a tested prototype that has achieved the required FRL; and (ii) is installed in the same manner and in an opening that is not larger than the tested prototype; and (iii) did not have a rise in average temperature on the side remote from the furnace of more than 140 K during the first 30 minutes of the test; or (b) be a steel shutter complying with AS 1905.2 if a metallic fire shutter is not prohibited by C4D6.	Noted	CRA – Refer Annexure F
S12C6 Fire windows [2019: Spec C3.4: 5]	Fire window must be identical to the prototype which achieved the required *FRL* and be installed in the same manner and in an opening that is not larger than the tested prototype.	Noted	CRA – Refer Annexure F

Section C: Fire Resistance			
Clause	**Clause Requirements**	**Comment**	**Status**
Specification 13 – Penetration of Walls, Floors and Ceilings by Services			
This Specification prescribes materials and methods of installation for services that penetrate walls, floors and ceilings required to have an FRL. A detailed design for penetrations is required and not part of this report.			Noted

SECTION D: ACCESS AND EGRESS

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
Part D1 – Access and Egress			
Part D1 contains the Objectives, Functional Statements, Performance Requirements and Verification methods applicable to that part.			Noted
Part D2 – Provision for Escape			
D2D1: Deemed-to-Satisfy Provisions [2019: D1.0]	Informational	Noted	Noted

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
D2D2: Application of Part [2019: D1.1]	The Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a *sole-occupancy unit* in a Class 2 or 3 building or a Class 4 part of a building.	Noted	Noted
D2D3: Number of exits required [2019: D1.2]	(1) All buildings — Every building must have at least one exit from each storey. (2) Class 2 to 8 buildings — (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 height of more than 25 m. (b) The requirements of (a)(i) do not apply to a part of a storey that— (i) is provided with direct egress to a road or open space; and (ii) satisfies D2D5 by the provision of 1 exit. (4) Class 9 buildings — (a) In addition to any horizontal exit, not less than 2 exits must be provided from the following: (v) Each storey in a primary or secondary school with a rise in storeys of 2 or more. (vi) Any storey or mezzanine that accommodates more than 50 persons, calculated under D2D18.	Two exits are required to be provided to all levels of the building except for Level 02 as the anticipated populations exceed 50 persons. It is noted that no less than 2 exits are provided to each storey of the building.	Complies

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) The requirements of (a) do not apply to a part of a storey that— (i) is a plant room, machinery room, storeroom, lift-machine room or the like; and (ii) is provided with direct egress to a road, open space or a fire-isolated exit complying with D2D12(2); and (iii) satisfies D2D5 by the provision of 1 exit. (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— (a) an exit; or (b) at least 2 exits if 2 or more exits are required.		
D2D4: When fire-isolated stairways and ramps are required [2019: D1.3]	(2) Class 5, 6, 7, 8 or 9 buildings — Every stairway or ramp serving as a required exit must be fire-isolated unless— (c) in any other case, except in a Class 9b early childhood centre or a Class 9c building, it connects, passes through or passes by not more than 2 consecutive storeys and one extra storey of any classification may be included if— (i) the building has a sprinkler system (other than a FPAA101D system) complying with Specification 17 installed throughout; or	The building is assumed to be provided with sprinkler protection and as such, the stairs serving Levels 01 to 03 are not required to be fire-isolated. It is noted that the stair between Ground Level and Level 01 will result in an extended technical connection of four storeys however, it is proposed to permit all stairs within the building to be non-fire-isolated due to the proposed fire wall surrounding the stair on the Ground Level. This arrangement will be required to be addressed under a fire engineered performance solution.	**PS Refer Part 3.3.**

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(ii) the required exit does not provide access to or egress for, and is separated from, the extra storey by construction having— (A) an FRL of –/60/60, if non-loadbearing; and (B) an FRL of 90/90/90 for Type A construction or 60/60/60 for Type B or C construction, if loadbearing; and (C) no opening that could permit the passage of fire or smoke.		
D2D5: Exit travel distances [2019: D1.4]	(3) Class 5, 6, 7, 8 or 9 buildings — Subject to (4), (5) and (6)— (a) no point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m; and (b) in a Class 5 or 6 building, the distance to a single exit serving a storey at the level of access to a road or open space may be increased to 30 m.	Exit Travel distances provided to all parts of the building meet the requirements of D2D5.	Complies
D2D6: Distance between alternative exits [2019: D1.5]	Exits that are required as alternative means of egress must be— (a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily	The separation between alternative exits on each storey of the building meet the requirements of D2D6.	Complies

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	available from all points on the floor including lift lobby areas; and (b) not less than 9 m apart; and (c) not more than— (iii) in all other cases — 60 m apart; and (d) located so that alternative paths of travel do not converge such that they become less than 6 m apart.		
D2D7: Height of Exits, Paths of Travel to Exits and Doorways [2019: D1.6(a)]	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	The ceiling heights throughout exit paths appear to generally achieve a height of 2.0m however detailed RCPs have not been provided to confirm. Further information is required to ensure that adequate ceiling height is maintained throughout the building.	FI CRA – Refer Annexure F
D2D8: Width of Exits and Paths of Travel to Exits [2019: D1.6(b), (c), (d) and (e)]	(1) 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— (a) 1 m; or (b) 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a treatment area or ward area; and (2) If the storey, mezzanine or open spectator stand accommodates more than 100 persons but not more than 200 persons, the aggregate unobstructed width of required exits or paths of travel to an exit, except for doorways, must be not less than—	A Minimum width of 1m appears to be maintained throughout the building. The building has been provided with a minimum of 2m of egress width on each level of the building, allowing for a population of up to 200 persons per storey. This exceeds the anticipated population per storey as provided by Architectus.	Complies

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) 1 m plus 250 mm for each 25 persons (or part) in excess of 100; or (b) 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a treatment area or ward area. (3) If the storey, mezzanine or open spectator stand accommodates more than 200 persons, the aggregate unobstructed width of required exits or paths 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.		
D2D9: Width of Doorways in Exits or Paths of Travel to Exits [2019: D1.6(f)]	In a required exit or path of travel to an exit, the unobstructed width of a doorway must be not less than— (c) the unobstructed width of each exit provided to comply with D2D8(1), (2), (3) or (4), minus 250 mm; or (f) in any other case except where it opens to a sanitary compartment or bathroom — 750 mm wide.	Exit doors appear to provide no less than 750mm clear width.	CRA – Refer Annexure F
D2D10: Exit width not to diminish in direction of travel [2019: D1.6(g)]	The unobstructed width of a required exit must not diminish in the direction of travel to a road or open space, except where the width is increased in accordance with D2D8(1)(b) or D2D9(a)(i).	The exit widths provided throughout the building do not diminish in the direction of travel.	Complies

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
D2D11: Determination and measurement of exits and paths of travel to exits [2019: D1.6(h) and (i)]	For the purposes of D2D7 to D2D10 the following apply: (a) The required width of a stairway or ramp in a required exit or path of travel to an exit must— (i) be measured clear of all obstructions such as handrails, projecting parts of barriers and the like; and (ii) extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing. (b) To determine the aggregate unobstructed width, the number of persons accommodated must be calculated according to D2D18.	Noted	CRA – Refer Annexure F
D2D12: Travel via fire-isolated exits [2019: D1.7]	(1) A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from— (a) a public corridor, public lobby or the like; or (b) a sole-occupancy unit occupying all of a storey; or (c) a sanitary compartment, airlock or the like. (2) Each fire-isolated stairway or fire-isolated ramp must provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway— (a) to a road or open space; or	Not Applicable	NA

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) to a point— (i) in a storey or space, within the confines of the building, that is used only for pedestrian movement, car parking or the like and is open for at least ⅔ of its perimeter; and (ii) from which an unimpeded path of travel, not further than 20 m, is available to a road or open space; or (c) into a covered area that— (i) adjoins a road or open space; and (ii) is open for at least ⅓ of its perimeter; and (iii) has an unobstructed clear height throughout, including the perimeter openings, of not less than 3 m; and (iv) provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6 m. (3) Where a path of travel from the point of discharge of a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building, measured horizontally at right angles to the path of travel, the following applies: (a) That part of the wall must have— (i) an FRL of not less than 60/60/60; and		

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(ii) any openings protected internally in accordance with C4D5; and (b) The protection required by (a) must extend for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser. (4) If more than 2 access doorways, not from a sanitary compartment or the like, open to a required fire-isolated exit in the same storey— (a) a smoke lobby in accordance with D3D7 must be provided; or (b) the exit must be pressurised in accordance with AS 1668.1. (5) A ramp must be provided at any change in level less than 600 mm in a fire-isolated passageway in a Class 9 building.		
D2D13: External stairways or ramps in lieu of fire-isolated exits [2019: D1.8]	(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— (a) non-combustible throughout; and (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. (2) For the purposes of this clause—	Not Applicable	NA

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(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 (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 (c) openings in an external wall and openings under (3) and (4), are determined in accordance with C4D2. (3) The protection referred to in (1)(b), must adequately protect occupants using the exit from exposure to a fire within the building, in accordance with one of the following methods: (a) The part of the external wall of the building to which the exit is exposed must have— (i) an FRL of not less than 60/60/60; and (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 (iii) any opening 3 m or more but less than 6 m from the exit, protected in accordance with C4D5 and if wall wetting sprinklers are used, they are located internally.		

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(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. (4) The wall, roof, floor or other shielding element required by (3)(b) must— (a) have an FRL of not less than 60/60/60; and (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 (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.		
D2D14: Travel by non-fire-isolated stairways or ramps [2019: D1.9]	(1) A non-fire-isolated stairway or non-fire-isolated ramp serving as a required exit must provide a continuous means of travel by its own flights and landings from every storey served to the level at which egress to a road or open space is provided. (3) In a Class 5, 6, 7, 8 or 9 building, the distance from any point on a floor to a point of egress to a road or open space	The non-fire-isolated stairs provided to Levels 01, 02 and 03 do not provide a continuous egress path to the level of egress by their own flights and landings. It is proposed to permit the current arrangement under a fire engineered performance solution. The total egress travel from Level 03 to the main entry on Level 01 does not exceed 80m.	**PS Refer Part 3.3** Complies

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	by way of a required non-fire-isolated stairway or non-fire-isolated ramp must not exceed 80 m. (5) In a Class 5 to 8 or 9b building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than— (a) 20 m from a doorway providing egress to a road or open space or from a fire-isolated passageway leading to a road or open space; or (b) 40 m from one of 2 such doorways or passageways if travel to each of them from the non-fire-isolated stairway or non-fire-isolated ramp is in opposite or approximately opposite directions.	Additionally, all non-fire-isolated stairs that discharge on a level with access to open space discharge within 20m of the exit to open space.	Complies
D2D15: Discharge from exits [2019: D1.10]	(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. (2) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than— (a) the minimum width of the required exit; or (b) 1 m, whichever is the greater. (3) If an exit discharges to open space that is at a different level than the public road to which it is connected, the path of travel to the road must be by—	The external columns provided around the perimeter of the building provide adequate protection of exits to prevent them from becoming blocked.	Complies

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) a ramp or other incline having a gradient not steeper than 1:8 at any part, or not steeper than 1:14 if required by the Deemed-to-Satisfy Provisions of Part D4; or (b) except if the exit is from a Class 9a building, a stairway complying with the Deemed-to-Satisfy Provisions of the NCC. (4) The discharge point of alternative exits must be located as far apart as practical.		
D2D17: Non-required stairways, ramps or escalators [2019: D1.12]	An escalator, moving walkway or non-required non fire-isolated stairway or pedestrian ramp— (c) except where permitted in (b) must not connect more than— (i) 3 storeys if— (A) each of those storeys is provided with a sprinkler system (other than a FPAA101D system) complying with Specification 17 throughout; and (B) at least one of those storeys is situated at a level at which there is a direct egress to a road or open space; or (d) except where permitted in (b) or (c), must not connect, directly or indirectly, more than 2 storeys at any level in a Class 5, 6, 7, 8 or 9 building and those storeys must be consecutive.	Not Applicable - The stairs provided within the building are provided as required non-fire-isolated exits.	NA

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
D2D18: Number of persons accommodated [2019: D1.13]	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 metres 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.	The following populations have been provided by Architectus: • Ground Level - 152 • Level 01 - 64 • Level 02 - 45 • Level 03 - 64	Noted
D2D19: Measurement of distances [2019: D1.14]	The nearest part of an exit means in the case of— (a) a fire-isolated stairway, fire-isolated passageway, or fire-isolated ramp, the nearest part of the doorway providing access to them; and (b) a non-fire-isolated stairway, the nearest part of the nearest riser; and	Noted	Noted

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(c) a non-fire-isolated ramp, the nearest part of the junction of the floor of the ramp and the floor of the storey; and (d) a doorway opening to a road or open space, the nearest part of the doorway; and (e) a horizontal exit, the nearest part of the doorway.		
D2D20: Method of Measurement [2019: D1.15]	Informational	Noted	Noted
D2D21: Plant rooms, lift motor rooms and electricity network substations: concession [2019: D1.16]	(1) A ladder may be used in lieu of a stairway to provide egress from— (a) a plant room with a floor area of not more than 100 m2; or (b) all but one point of egress from a plant room, a lift machine room or a Class 8 electricity network substation with a floor area of not more than 200 m2. (2) A ladder permitted under (1)— (a) may— (i) form part of an exit provided that in the case of a fire-isolated stairway it is contained within the shaft; or (ii) discharge within a storey in which case it must be considered as forming part of the path of travel; and	Not Applicable - The building does not appear to be provided with plant rooms that are accessible via a ladder.	NA

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) for a plant room or a Class 8 electricity network substation, must comply with AS 1657; and (c) for a lift machine room, where access is provided from within a machine room to a secondary floor, a fixed rung type ladder complying with AS 1657 may be used, provided that— (i) the height between the floors is not more than 2800 mm; and (ii) the ladder is inclined at an angle to the horizontal not less than 65 degrees nor more than 75 degrees; and (iii) the distance between the front face of the ladder and any adjacent obstruction is not less than— (A) 960 mm, where the ladder is inclined 65 degrees to the horizontal; or (B) 760 mm, where the ladder is inclined 75 degrees to the horizontal; or (C) a distance that is determined by interpolating the values in (A) and (B), where the ladder is inclined at any angle between 65 degrees and 75 degrees to the horizontal; and (iv) a clear space not less than 600 mm exists between the foot of the ladder and any equipment.		

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
D2D22: Access to lift pits [2019: D1.17]	Access to lift pits must— (a) where the pit depth is not more than 3 m, be through the lowest landing doors; or (b) where the pit depth is more than 3 m, be provided through an access doorway complying with the following: (i) In lieu of D2D7 to D2D11, the doorway must be level with the pit floor and not be less than 600 mm wide by 1980 mm high clear opening, which may be reduced to 1500 mm where it is necessary to comply with (ii). (ii) No part of the lift car or platform must encroach on the pit doorway entrance when the car is on a fully compressed buffer. (iii) Access to the doorway must be by a stairway complying with AS 1657. (iv) In lieu of D3D26, doors fitted to the doorway must be— (A) of the horizontal sliding or outwards opening hinged type; and (B) self-closing and self-locking from the outside; and (C) marked on the landing side with the letters not less than 35 mm high:	The depth of the lift pit has not been indicated on the drawings provided however, it is assumed to be less than 3m and access is assumed to be provided through the Ground Level landing doors.	CRA – Refer Annexure F

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	DANGER LIFTWELL – ENTRY OF UNAUTHORIZED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES		
D2D23: Egress from primary schools [2019: D1.18]	(1) Every part of a Class 9b primary school must be wholly within a storey that provides direct egress to a road or open space. (2) The requirements of (1) do not apply to a building with a rise in storeys of 4 or less, where the primary school is the only use in that building	Not Applicable	NA
Part D3 – Construction of Exits			
D3D1: Deemed-to-Satisfy Provisions [2019: D2.0]	(1) Where a Deemed-to-Satisfy Solution is proposed, Performance RequirementsD1P1 to D1P6, D1P8 and D1P9 are satisfied by complying with— (a) D2D2 to D2D23, D3D2 to D3D30 and D4D2 to D4D13; and (b) in a building containing an atrium, Part G3; and (c) in a building in an alpine area, Part G4; and (d) for a building containing an occupiable outdoor area, Part G6; and (e) for additional requirements for Class 9b buildings, Part I1; and (f) for public transport buildings, Part I2; and	Noted	Noted

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(g) for farm buildings and farm sheds, Part I3. (2) Where a Performance Solution is proposed the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable. (3) Performance RequirementD1P7 must be complied with if lifts are to be used to assist occupants to evacuate a building.		
D3D2: Application of Part [2019: D2.1]	Except for— (a) D3D14, D3D15(a), D3D17, D3D18, D3D19, D3D20, D3D22(5), D3D22(6), D3D26 and D3D29, the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a sole-occupancy unit in a Class 3 building; and (b) D3D14, D3D15(a), D3D17, D3D18, D3D19, D3D20, D3D22(5), D3D22(6), D3D23 and D3D29, the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a sole-occupancy unit in a Class 2 building or Class 4 part of a building	Not Applicable	NA
D3D3: Fire-isolated stairways and ramps [2019: D2.2]	The fire isolated stairways must be constructed of *non-combustible* materials and constructed so that if there is local failure it will not cause structural damage to, or impair the fire-resistance of the shaft.	Not Applicable	NA
D3D4: Non-fire-isolated stairways and ramps [2019: D2.3]	In a building having a rise in storeys of more than 2, required stairs and ramps (including landings and any supporting building elements) which are not required to be	The drawings provided do not confirm the construction materials of the non-fire-isolated stairways provided within the building. Confirmation of the construction materials is to be provided.	FI CRA – Refer Annexure F

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	within a fire-resisting shaft, must be constructed according to D3D3, or only of— (a) reinforced or prestressed concrete; or (b) steel in no part less than 6 mm thick; or (c) timber that— (i) has a finished thickness of not less than 44 mm; and (ii) has an average density of not less than 800 kg/m3 at a moisture content of 12%; and (iii) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue.		
D3D5: Separation of rising and descending stair flights [2019: D2.4]	If a stairway serving as an exit is required to be fire-isolated— (a) there must be no direct connection between— (i) a flight rising from a storey below the lowest level of access to a road or open space; and (ii) a flight descending from a storey above that level; and (b) any construction that separates or is common to the rising and descending flights must be— (i) non-combustible; and	Not Applicable	NA

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(ii) smoke proof in accordance with S11C2.		
D3D6: Open access ramps and balconies [2019: D2.5]	Where an open access ramp or balcony is provided to meet the smoke hazard management requirements of E2D4 to E2D13, it must— (a) have ventilation openings to the outside air which— (i) have a total unobstructed area not less than the floor area of the ramp or balcony; and (ii) are evenly distributed along the open sides of the ramp or balcony; and (b) not be enclosed on its open sides above a height of 1 m except by an open grille or the like having a free air space of not less than 75% of its area.	Not Applicable	NA
D3D7: Smoke lobbies [2019: D2.6]	A smoke lobby required by D2D12 must— (a) have a floor area not less than 6 m2; and (b) be separated from the occupied areas in the storey by walls which are impervious to smoke, and— (i) have an FRL of not less than 60/60/– (which may be fire-protective grade plasterboard, gypsum block with set plaster, face brickwork, glass blocks or glazing); and (ii) extend from slab to slab, or to the underside of a ceiling with a resistance to the incipient spread of fire of 60 minutes which covers the lobby; and	Not Applicable	NA

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(iii) any construction joints between the top of the walls and the floor slab, roof or ceiling must be smoke sealed with intumescent putty or other suitable material; and (c) at any opening from the occupied areas, have smoke doors complying with S12C3 and S12C4 except that the smoke sensing device need only be located on the approach side of the opening; and (d) be pressurised as part of the exit if the exit is required to be pressurised under E2D3.		
D3D8: Installations in exits and paths of travel [2019: D2.7]	(1) Access to service shafts and services other than to fire-fighting or detection equipment as permitted in the Deemed-to-Satisfy Provisions of Section E, must not be provided from a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp. (2) An opening to any chute or duct intended to convey hot products of combustion from a boiler, incinerator, fireplace or the like, must not be located in any part of a required exit or any corridor, hallway, lobby or the like leading to a required exit. (3) Gas or other fuel services must not be installed in a required exit. (4) Except for in a fire-isolated exit specified in (1), services or equipment enclosed in accordance with (5) may be installed in a required exit, or in any corridor, hallway, lobby or the like leading to a required exit, where that service or equipment comprises—	All proposed electrical cupboards are required to be provided with smoke seals and a non-combustible lining. Further review of the door schedule will be undertaken as the design develops.	FI CRA – Refer Annexure F

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) electricity meters, distribution boards or ducts; or (b) central telecommunications distribution boards or equipment; or (c) electrical motors or other motors serving equipment in the building. (5) An enclosure for the purposes of (4) must be suitably sealed against smoke spreading from the enclosure and be— (a) non-combustible construction; or (b) a fire-protective covering. (6) Electrical wiring may be installed in a fire-isolated exit if the wiring is associated with— (a) a lighting, detection, or pressurisation system serving the exit; or (b) a security, surveillance or management system serving the exit; or (c) an intercommunication system or an audible or visual alarm system in accordance with D3D27; or (d) the monitoring of hydrant or sprinkler isolating valves.		
D3D9: Enclosure of space under stairs and ramps	(1) Fire-isolated stairways and ramps — If the space below a required fire-isolated stairway or fire-isolated ramp is	The drawings provided do not indicate the enclosure of the spaces beneath any of the stairways. In the event that an	CRA – Refer Annexure F

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
[2019: D2.8]	within the fire-isolated shaft, it must not be enclosed to form a cupboard or similar enclosed space. (2) Non fire-isolated stairways and ramps — The space below a required non fire-isolated stairway (including an external stairway) or non fire-isolated ramp must not be enclosed to form a cupboard or other enclosed space unless— (a) the enclosing walls and ceilings have an FRL of not less than 60/60/60; and (b) any access doorway to the enclosed space is fitted with a self-closing –/60/30 fire door.	enclosure is formed beneath any of the proposed stairways, it must be fire separated in accordance with D3D9.	
D3D10: Width of stairways and ramps [2019: D2.9]	A required stairway or ramp that exceeds 2 m in width is counted as having a width of only 2 m unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2 m.	Not Applicable	NA
D3D11: Pedestrian ramps [2019: D2.10]	(1) A fire-isolated ramp may be substituted for a fire-isolated stairway if the construction enclosing the ramp and the width and ceiling height comply with the requirements for a fire-isolated stairway. (2) A ramp serving as a required exit must— (a) where the ramp is also serving as an accessible ramp under Part D4, be in accordance with AS 1428.1; or (b) in any other case, have a gradient not steeper than 1:8.	Not Applicable – the drawings provided do not indicate the use of ramps within the development.	NA

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(3) The floor surface of a ramp must have a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586.		
D3D12: Fire-isolated passageways [2019: D2.11]	(1) The enclosing construction of a fire-isolated passageway must have an FRL when tested for a fire outside the passageway in another part of the building of— (a) if the passageway discharges from a fire-isolated stairway or ramp — not less than that required for the stairway or ramp shaft; or (b) in any other case — not less than 60/60/60. (2) Notwithstanding (1)(b), the top construction of a fire-isolated passageway need not have an FRL if the walls of the fire-isolated passageway extend to the underside of— (a) a non-combustible roof covering; or (b) a ceiling having a resistance to the incipient spread of fire of not less than 60 minutes separating the roof space or ceiling space in all areas surrounding the passageway within the fire compartment.	Not Applicable	NA
D3D13: Roof as open space [2019: D2.12]	If an exit discharges to a roof of a building, the roof must— (a) have an FRL of not less than 120/120/120; and (b) not have any roof lights or other openings within 3 m of the path of travel of persons using the exit to reach a road or open space.	Not Applicable	NA

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
D3D14: Goings and risers [2019: D2.13]	(1) A stairway must have— (a) not more than 18 and not less than 2 risers in each flight; and (b) going (G), riser (R) and quantity (2R + G) in accordance with Table D3D14, except as permitted by (2) and (3); and (c) constant goings and risers throughout each flight, except as permitted by (2) and (3), and the dimensions of goings (G) and risers (R) in accordance with (1)(b) are considered constant if the variation between— (i) adjacent risers, or between adjacent goings, is no greater than 5 mm; and (ii) the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm; and (d) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and (e) treads which have— (i) a surface with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; or (ii) a nosing strip with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; and	Detailed stair drawings have not been provided for review. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F

<table>
<tr><th colspan="4">Section D: Access and Egress</th></tr>
<tr><th>Clause</th><th>Clause Requirements</th><th>Comment</th><th>Status</th></tr>
<tr><td></td><td>(f) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 storeys; and

(g) in a Class 9b building, not more than 36 risers in consecutive flights without a change in direction of at least 30°; and

(h) in the case of a required stairway, no winders in lieu of a landing; and

(3) Where a stairway discharges to a sloping public walkway or public road—

(a) the riser (R) may be reduced to account for the slope of the walkway or road; and

(b) the quantity (2R+G) may vary at that location.</td><td></td><td></td></tr>
<tr><td>D3D15: Landings

[2019: D2.14]</td><td>Landings must be not less than 750 mm long and have either a surface with a slip-resistance classification complying with Table D3D15 or a strip at the edge of the landing with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013.
<table>
<tr><th></th><th colspan="2">Surface Condition</th></tr>
<tr><th>Application</th><th>Dry</th><th>Wet</th></tr>
<tr><td>Ramp steeper than 1:14</td><td>P4 or R11</td><td>P5 or R12</td></tr>
</table></td><td>The drawings provided indicate all landings will meet the required dimensions as per D3D15.</td><td>CRA – Refer Annexure F</td></tr>
</table>

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	<table><tr><td>Ramp steeper than 1:20 but not steeper than 1:14</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Tread or landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr></table>		
D3D16: Thresholds [2019: D2.15]	The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless— (c) in a building required to be accessible by Part D4, the doorway— (i) opens to a road or open space; and (ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or (e) in other cases— (i) the doorway opens to a road or open space, external stair landing or external balcony; and (ii) the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens.	Door thresholds haven not been indicated on the drawings provided. As the building is required to be accessible, all doorways must have level thresholds. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
D3D17: Barriers to prevent falls [2019: D2.16(a) – (c)]	(1) A continuous barrier must be provided along the side of— (a) a roof to which general access is provided; and (b) a stairway or ramp; and (c) a floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and (d) any delineated path of access to a building, (e) if the trafficable surface is 1 m or more above the surface beneath. (2)The requirements of (1) do not apply to— (a) the perimeter of a stage, rigging loft, loading dock or the like; or (b) areas referred to in D3D23; or (c) a retaining wall, unless the retaining wall forms part of, or is directly associated with a delineated path of access to a building from the road, or a delineated path of access between buildings; or (d) a barrier provided to an openable window covered by D3D29. (3) A barrier required by (1) must be constructed in accordance with D3D18, D3D19, D3D20 and, if a wire barrier is used, D3D21.	Balustrade details have not been provided for review. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
D3D18: Height of Barriers [2019: Table D2.16(a)]	(1) 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. (2) For a barrier provided under (1) — (a) barrier heights are measured vertically from the surface beneath, except that for stairways the height must be measured above the nosing line of the stair treads; and (b) a transition zone may be incorporated where the barrier height changes from 865 mm on a stair flight or ramp to 1 m at a landing or floor.	Balustrade details have not been provided for review. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F
D3D19: Openings in barriers [Table D2.16(a) of BCA2019]	(1) Except where allowed by (2), openings in a required barrier must not allow a 125 mm sphere to pass through.	Balustrade details have not been provided for review. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(5) For a barrier provided under (1), 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. (6) Where a required barrier is fixed to the vertical face forming an edge of a landing, balcony, deck, stairway or the like, the opening formed between the barrier and the face must not exceed 40 mm. (7) For the purposes of (6), the opening is measured horizontally from the edge of the trafficable surface to the nearest internal face of the barrier.		
D3D20: Barrier climbability [2019: Table D2.16(a)]	(1) 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.	Balustrade details have not been provided for review. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F
D3D21: Wire barriers [2019: D2.16(d)]	Where a required barrier is constructed of wire, it is deemed to meet the requirements of D3D19(1) if it is constructed in accordance with the following: (a) For horizontal wire systems— (i) when measured with a strain indicator, it must be in accordance with the tension values in Table D3D21a; or (ii) must not exceed the maximum deflections in Table D3D21c.	Balustrade details have not been provided for review. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) For non-continuous vertical wire systems, when measured with a strain indicator, must be in accordance with the tension values in Table D3D21a (see Note 4). (c) For continuous vertical or continuous near vertical sloped wire systems— (i) must have wires of no more than 2.5 mm diameter with a lay of 7×7 or 7×19 construction; and (ii) changes in direction at support rails must pass around a pulley block without causing permanent deformation to the wire; and (iii) must have supporting rails, constructed with a spacing of not more than 900 mm, of a material that does not allow deflection that would decrease the tension of the wire under load; and (iv) when the wire tension is measured with a strain indicator, it must be in accordance with the tension values in Table D3D21b and measured in the furthermost span from the tensioning device.		
D3D22: Handrails [2019: D2.17]	(1) Except for handrails referred to in D3D23, and subject to (2), 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	Handrail details have not been provided for review. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(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). (2) The height required by (1)(c) and (d) is measured above the nosings of stair treads and the floor surface of the ramp, landing or the like. (4) Handrails required to assist people with a disability must be provided in accordance with D4D4.		
D3D23: Fixed platforms, walkways stairways and ladders [2019: D2.18]	A fixed platform, walkway, stairway, ladder and any going and riser, landing, handrail or barrier attached thereto may comply with AS 1657 in lieu of D3D14, D3D15, D3D17, D3D18, D3D19, D3D20, D3D21 and D3D22 if it only serves— (a) machinery rooms, boiler houses, lift-machine rooms, plant-rooms, and the like;	Plant areas do not appear to be provided with ladders or the like.	NA
D3D24: Doorways and doors [2019: D2.19]	(2) A doorway serving as a required exit or forming part of a required exit, or a doorway in a patient care area of a Class 9a health-care building— (a) must not be fitted with a revolving door; and	All exit doors are noted to be provided as sliding doors that open to road/open space and are assumed to be automated. Confirmation that doors are able to be opened under a force of 110N is to be provided.	FI CRA – Refer Annexure F

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(c) must not be fitted with a sliding door unless— (i) it leads directly to a road or open space; and (ii) the door is able to be opened manually under a force of not more than 110 N; and (d) if fitted with a door which is power-operated— (i) it must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and (ii) if it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door. (3) A power-operated door in a path of travel to a required exit, except for a door in a patient care area of a Class 9a health-care building as provided in (2), must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source.		
D3D25: Swinging doors [2019: D2.20]	(1) A swinging door in a required exit or forming part of a required exit— (a) 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	Not Applicable – Swinging doors are not provided as exits or forming part of exits.	NA

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	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 (b) must swing in the direction of egress unless— (i) 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; or (ii) it serves a sanitary compartment or airlock (in which case it may swing in either direction); or (c) must not otherwise impede the path or direction of egress. (2) The measurement of encroachment referred to in (1)(a) in each case is to include door handles or other furniture or attachments to the door.		
D3D26: Operation of latch [2019: D2.21]	(1) 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—	Detailed door schedules have not been provided for review. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(i) be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and (ii) 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. (2) Where the latch operation device referred to in (1)(b) is not located on the door leaf itself— (a) manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and located— (i) not less than 500 mm from an internal corner; and (ii) for a hinged door, between 1 m and 2 m from the door leaf in any position; and (iii) for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position; and (b) braille and tactile signage complying with S15C3 and S15C6 must identify the latch operation device. (3) The requirements of (1) and (2) do not apply to a door that—		

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) serves a vault, strong-room, sanitary compartment, or the like; or (b) serves only, or is within— (iv) a space which is otherwise inaccessible to persons at all times when the door is locked; or (d) is fitted with a fail-safe device which automatically unlocks the door upon the activation of any sprinkler system (other than a FPAA101D system) complying with Specification 17 or smoke, or any other detector system deemed suitable in accordance with AS 1670.1 installed throughout the building, and is readily openable when unlocked; or		
D3D27: Re-entry from fire-isolated exits [2019: D2.22]	(1) Doors of a fire-isolated exit must not be locked from the inside as follows: (a) In a Class 9a health-care building. (b) In a Class 9b early childhood centre. (c) In a Class 9c building. (d) In a fire-isolated exit serving any storey above an effective height of 25 m, throughout the exit. (2) The requirements of (1)(a), (c) and (d) do not apply to a door fitted with a fail-safe device that automatically unlocks the door upon the activation of a fire alarm and—	Not Applicable	NA

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) on at least every fourth storey, the doors are not able to be locked and a sign is fixed on such doors stating that re-entry is available; or (b) an intercommunication system, or an audible or visual alarm system, operated from within the enclosure is provided near the doors and a sign is fixed adjacent to such doors explaining its purpose and method of operation. (3) The requirements of (1)(b) do not apply to a door fitted with a fail-safe device that automatically unlocks the door serving the Class 9b early childhood centre upon the activation of a fire alarm.		
D3D28: Signs on doors [2019: D2.23]	(1) A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to— (a) a required— (i) fire door providing direct access to a fire-isolated exit, except a door providing direct egress from a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building; and (ii) smoke door; and (b) any door which is a— (i) fire door forming part of a horizontal exit; and (ii) smoke door that swings in both directions; and	Signage plans have not been provided for review. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(iii) door leading from a fire isolated exit to a road or open space. (2) A sign required by (1)(a) must be fixed on the side of the door that faces a person seeking egress and, if the door is fitted with a device for holding it in the open position, either a sign must be fixed on the wall adjacent to the doorway, or signs must be fixed to both sides of the door. (3) A sign required by (1)(b) must be fixed on each side of the door. (4) A sign referred to in (1) must be in capital letters not less than 20 mm high in a colour contrasting with the background and state the following: (a) For an automatic door held open by an automatic hold-open device— **FIRE SAFETY DOOR — DO NOT OBSTRUCT** (b) For a self-closing door— **DO NOT OBSTRUCT** **DO NOT KEEP OPEN** **FIRE SAFETY DOOR** (c) For a door discharging from a fire-isolated exit— **FIRE SAFETY DOOR — DO NOT OBSTRUCT**		

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
D3D29: Protection of openable windows [2019: D2.24]	(3) A barrier with a height not less than 865 mm above the floor is required to an openable window— (a) in addition to window protection, when a child resistant release mechanism is required by (2)(b)(iii); and (b) where the floor below the window is 4 m or more above the surface beneath if the window is not covered by (1). (4) A barrier covered by (3) except for (5) must not— (a) permit a 125 mm sphere to pass through it; and (b) have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing.	Window and Balustrade details have not been provided for review. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F
D3D30: Timber stairways: concession [2019: D2.25]	(1) Notwithstanding D3D3(a), timber treads, risers, landings and associated supporting framework within a required fire-isolated stairway or fire-isolated passageway may be constructed from fire-protected timber in accordance with C2D13— (a) if the timber— (i) has a finished thickness of not less than 44 mm; and (ii) has an average density of not less than 800 kg/m3 at a moisture content of 12%; and (b) subject to—	Not Applicable	NA

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
	(i) the building being protected throughout by a sprinkler system (other than a FPAA101D system) complying with Specification 17 which extends to within the fire-isolated enclosure; and (ii) fire protection being provided to the underside of stair flights and landings located immediately above a landing level which— (A) is at or near the level of egress; or (B) provides direct access to a carpark. (2) Fire protection required by (1) must be not less than one layer of 13 mm fire-protective grade plasterboard fixed in accordance with the system requirements for a fire-protective covering.		

Section D: Access and Egress			
Clause	**Clause Requirements**	**Comment**	**Status**
Part D4 – Access for People with A Disability			
See separate Access Report for details. Part D4 does not form part of this report.			

SECTION E: SERVICES AND EQUIPMENT

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
Part E1 – Fire Fighting Equipment			
E1D1: Deemed-to-Satisfy Provisions [2019: E1.0]	Informational	Noted	Noted
E1D2: Fire hydrants [2019: E1.3]	(1) A fire hydrant system must be provided to serve a building— (a) having a total floor area greater than 500 m2; and (b) where a fire brigade station is— (i) no more than 50 km from the building as measured along roads; and (ii) equipped with equipment capable of utilising a fire hydrant. (2) The fire hydrant system must be installed in accordance with AS 2419.1. (4) Where internal fire hydrants are provided, they must serve only the storey on which they are located.	The building is required to be provided with fire hydrant protection however, the drawings provided do not indicate the locations of fire hydrants on the property. Further information is to be provided to confirm that compliance fire hydrant provisions are installed to service both buildings. Fire Services Specification Certification to be provided confirming compliance.	FI CRA – Refer Annexure F
E1D3: Fire hose reels [2019: E1.4]	(1) E1D3 does not apply to— (d) classrooms and associated corridors in a primary or secondary school.	Fire Hose Reels (FHRs) are required to be provided throughout the building.	FI CRA – Refer Annexure F

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(2) A fire hose reel system must be provided— (a) to serve the whole building where one or more internal fire hydrants are installed; or (b) where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500 m2. (3) The fire hose reel system must— (a) have fire hose reels installed in accordance with AS 2441; and (b) provide fire hose reels to serve only the storey at which they are located, except a sole-occupancy unit of not more than 2 storeys in a Class 6, 7, 8 or 9 building may be served by a single fire hose reel located at the level of egress from that sole-occupancy unit provided the fire hose reel can provide coverage to the whole of the sole-occupancy unit. (4) Fire hose reels must be located internally, externally or in combination, to achieve the system coverage specified in AS 2441. (5) In achieving system coverage, one or a combination of the following criteria for individual internally located fire hose reels must be met in determining the layout of any fire hose reel system: (a) Fire hose reels must be located adjacent to an internal fire hydrant (other than one within a fire-isolated exit), except that a fire hose reel need not be	A FHR is noted to be provided on the Ground Level of the building and provides adequate coverage to the storey, but FHRs have not been indicated on Levels 01 to 03. Please confirm the locations of FHRs throughout the building. The Ground Floor FHR is noted to be located more than 4m from the nearest exit. The location of the FHR is to be amended to be within 4m of the Main Entry on the Ground Floor.	

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	located adjacent to every fire hydrant, provided system coverage can be achieved. (b) Fire hose reels must be located within 4 m of an exit, except that a fire hose reel need not be located adjacent to every exit, provided system coverage can be achieved. (c) Where system coverage is not achieved by compliance with (a) and (b), additional fire hose reels may be located in paths of travel to an exit to achieve the required coverage. (6) Fire hose reels must be located so that the fire hose will not need to pass through doorways fitted with fire or smoke doors, except— (b) doorways in walls referred to in C3D13 or C3D14 separating equipment or electrical supply systems; and (c) doorway openings to shafts referred to in C4D14. (7) Where the normal water supply cannot achieve the flow and pressures required by AS 2441, or is unreliable— (a) a pump; or (b) water storage facility; or (c) both a pump and water storage facility, must be installed to provide the minimum flow and pressures required by clause 6.1 of AS 2441.		

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
E1D4: Sprinklers [2019: E1.5]	A sprinkler system must— (a) be installed in a building or part of a building when required by E1D5 to E1D13 as applicable; and (b) comply with Specification 17 and Specification 18 as applicable.	Noted	Noted
E1D5: Where sprinklers are required: all classifications [2019: Table E1.5]	Sprinklers are required throughout the whole building if any part of the building has an effective height of more than 25 m— (a) including an open-deck carpark within a multi-classified building;	Not Applicable – Sprinklers are not required to be provided to the building under BCA Clauses E1D4 to E1D13 however, it is understood that sprinklers will be provided to permit the provision of non-fire-isolated stairs and the connection of three storeys without applying atrium provisions.	NA
E1D6: Where sprinklers are required: Class 2 and 3 buildings other than residential care buildings. [2019: Table E1.5]	(1) In a Class 2 or 3 building, or any multi-classified building containing a Class 2 or 3 part, sprinklers are required throughout the whole building if any part of the building has— (a) a rise in storeys of 4 or more; and (b) an effective height of not more than 25 m. (2) The requirements of (1) do not apply to a residential care building.	Not Applicable	NA
E1D7: Where sprinklers are required: Class 3 building used as a residential care buildings. [2019: Table E1.5]	Sprinklers are required throughout a building containing— (a) a Class 3 building used as a residential care building; and	Not Applicable	NA

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) any fire compartment containing a Class 3 part used for residential care.		
E1D8: Where sprinklers are required: Class 6 building. [2019: Table E1.5]	In a Class 6 building, sprinklers are required in fire compartments where either of the following apply: (a) A floor area of more than 3 500 m^2. (b) A volume of more than 21 000 m^3.	Not Applicable	NA
E1D9: Where sprinklers are required: Class 7a building other than an open deck carpark. [2019: Table E1.5]	In a Class 7a building, other than an open-deck carpark, sprinklers are required in fire compartments where more than 40 vehicles are accommodated.	Not Applicable	NA
E1D10: Where sprinklers are required: Class 9a health care building used as a residential care building, Class 9c buildings. [2019: Table E1.5]	(1) In a Class 9a health-care building used as a residential care building, sprinklers are required throughout the building and in any fire compartment containing a Class 9a part used for residential care. (2) In a Class 9c building, sprinklers are required throughout the building and in any fire compartment containing a Class 9c part.	Not Applicable	NA
E1D11: Where sprinklers are required: Class 9b buildings. [2019: Table E1.5]	(1) In a Class 9b building, other than an early childhood centre, see Part I1. (2) In a Class 9b early childhood centre and in a building containing a Class 9b early childhood centre, sprinklers are required throughout the whole building, including any part of another class.	Not Applicable	NA

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
E1D12: Where sprinklers are required: additional requirements. [2019:Table E1.5]	(1) For sprinkler requirements for atriums, see Part G3. (2) For sprinkler requirements for large isolated buildings, see C3D4.	Not Applicable	NA
E1D13: Where sprinklers are required: occupancies of excessive hazard. [2019: Table E1.5]	(1) In occupancies of excessive hazard, sprinklers are required in fire compartments where either of the following apply: (a) A floor area of more than 2 000 m2. (b) A volume of more than 12 000 m3. (2) For the purposes of (1), occupancies of excessive fire hazard comprise buildings which contain— (a) hazardous processes or storage including the following: (i) Aircraft hangars. (ii) Cane furnishing manufacture, processing and storage. (iii) Fire-lighter and fireworks manufacture and warehousing. (iv) Foam plastic and foam plastic goods manufacture, processing and warehousing e.g. furniture factory. (v) Hydrocarbon based sheet product, manufacture, processing and warehousing e.g. vinyl floor coverings.	Not Applicable	NA

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(vi) Woodwool and other flammable loose fibrous material manufacture. (b) combustible goods with an aggregate volume exceeding 1000 m3 and stored to a height greater than 4 m including the following: (i) Aerosol packs with flammable contents. (ii) Carpets and clothing. (iii) Electrical appliances. (iv) Combustible compressed fibreboards (low and high density) and plywoods. (v) Combustible cartons, irrespective of content. (vi) Esparto and other fibrous combustible material. (vii) Furniture including timber, cane and composite, where foamed rubber or plastics are incorporated. (viii) Paper storage (all forms of new or waste) e.g. bales, sheet, horizontal or vertical rolls, waxed coated or processed. (ix) Textiles raw and finished, e.g. rolled cloth, clothing and manchester. (x) Timber storage including sheets, planks, boards, joists and cut sizes.		

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(xi) Vinyl, plastic, foamed plastic, rubber and other combustible sheets, offcuts and random pieces and rolled material storage, e.g. carpet, tar paper, linoleum, wood veneer and foam mattresses. (xii) All materials having wrappings or preformed containers of foamed plastics.		
E1D14: Portable fire extinguishers [2019: E1.6]	(1) Portable fire extinguishers must be— (a) provided as listed in (3) and (4); and (c) subject to (2), selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444. (3) In Class 2 to 9 buildings (except within sole-occupancy units of a Class 9c building), portable fire extinguishers must be provided as follows: (a) To cover Class AE or E fire risks associated with emergency services switchboards. (5) For the purposes of (3) and (4): (a) Fire risks are defined in accordance with AS 2444. (b) An emergency services switchboard is one which sustains emergency equipment operating in the emergency mode. (c) Additional extinguishers may be required to cover fire risks in relation to special hazards provided for in E1D17.	The locations of portable fire extinguishers have not been shown on the drawings provided. Further review will be undertaken as the design develops. Fire Services Specification Certification to be provided confirming compliance.	FI CRA – Refer Annexure F

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
E1D15: Fire control centres [2019: E1.7]	A fire control centre facility in accordance with Specification 19 must be provided for— (a) a building with an effective height of more than 25 m; and (b) a Class 6, 7, 8 or 9 building with a total floor area of more than 18 000 m^2.	Not Applicable	NA
E1D16: Fire precautions during construction [2019: E1.9]	In a building under construction— (a) not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stairway or exit; and (b) after the building has reached an effective height of 12 m— (i) the required fire hydrants and fire hose reels must be operational in at least every storey that is covered by the roof or the floor structure above, except the 2 uppermost storeys; and (ii) any required booster connections must be installed.	Noted – the building will reach an effective height of 12m once the floor slab of Level 03 is poured.	Noted
E1D17: Provision for special hazards [2019: E1.10]	Suitable additional provision must be made if special problems of fighting fire could arise because of— (a) the nature or quantity of materials stored, displayed or used in a building or on the allotment; or	Not Applicable	NA

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) the location of the building in relation to a water supply for fire-fighting purposes.		

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
Specification 17 – Fire Sprinkler Systems			
S17C1 Scope	This Specification sets out requirements for the design and installation of fire sprinkler systems.	Noted	Noted
S17C2 Application of automatic fire sprinkler standards	An automatic fire sprinkler system shall comply with AS2118 as relevant to the building classification and the design of the hydraulic consultant. Where the building is residential class 2 or 3 then refer to Specification 18 for specific design requirements and concessions.	Fire Services Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
S17C3 Separation of sprinklered and non-sprinklered areas	Where a part of a building is not protected with sprinklers, the sprinklered and non-sprinklered parts must be fire-separated with a wall or floor which must— (a) comply with any specific requirement of the Deemed-to-Satisfy Provisions of the BCA; or (b) where there is no specific requirement, comply with the relevant part of AS 2118, FPAA101D or FPAA101H.	Fire Services Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
S17C4 Protection of openings	Any openings, including those for service penetrations, in construction separating sprinklered and non-sprinklered parts of a building, including the construction separating the areas nominated for omitted protection in AS 2118.1, must be protected in accordance with the Deemed-to-Satisfy Provisions of Part C4.	Fire Services Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
S17C5 Quick response sprinklers	Quick response sprinklers may be installed only if they are suitable for the type of application proposed and it is demonstrated that the sprinkler system is designed to accommodate their use.	Fire Services Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
S17C6 Sprinkler valve enclosures	(1) Sprinkler alarm valves must be located in a secure room or enclosure which has direct egress to a road or open space. (2) All sprinkler valve rooms and enclosures must be secured with a system suitable for use by the fire brigade.	Fire Services Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
S17C7 Water supply	(1) A required sprinkler system must be provided with at least one water supply. (2) A required sprinkler system in a building greater than 25 m in effective height must be provided with a dual water supply except that a secondary water supply storage capacity of 25,000 litres may be used if— (a) the storage tank is located at the topmost storey of the building; and (b) the building occupancy is classified as no more hazardous than Ordinary Hazard 2 (OH2) under AS 2118.1; and	Fire Services Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(c) an operational fire brigade service is available to attend a building fire.		
S17C8 Building occupant warning system	A required sprinkler system, except a FPAA101D sprinkler system, must be connected to and activate a building occupant warning system complying with S20C7.	Fire Services Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
S17C9 Connection to Other Systems	Where a smoke hazard management system is installed and is actuated by smoke detectors, the sprinkler system must, wherever practicable, be arranged to also activate the smoke hazard management system.	Fire Services Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
S17C10 Anti-tamper Devices	(1) Where a sprinkler system is installed— (a) over any stage area in a theatre, public hall or the like, visual and audible status indication of sprinkler valves must be provided at the location normally used by the stage manager; or (b) in a space housing lift electrical and control equipment (including machine rooms, secondary floors and sheave rooms), any valves provided to control sprinklers in these spaces must be located adjacent to the space. (2) Any valves provided to control sprinklers required by (1) must be fitted with anti-tamper monitoring devices connected to a monitoring panel.	Fire Services Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
S17C13 Sprinkler systems in lift installations	(1) Where sprinklers are installed in a space housing lift electrical and control equipment, including machine rooms, secondary floors and sheave rooms, sprinklers in these spaces must—	Fire Services Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) have heads protected from accidental damage by way of a guard that will not impair the performance of the head; and (b) be capable of being isolated and drained, either separately or collectively, without isolating any other sprinklers within the building. (2) Valves provided to control sprinklers referred to in (1) must be installed in accordance with S17C10(2).		

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
Part E2 – Smoke Hazard Management			
E2D1: Deemed-to-Satisfy Provisions [2019:E2.0]	Informational	Noted	Noted
E2D2: Application of Part [2019: E2.1]	Informational	Noted	Noted
E2D3: General requirements [2019: E2.2]	(1) An air-handling system which does not form part of a smoke hazard management system in accordance with E2D4 to E2D20 and which recycles air from one fire compartment to another fire compartment or operates in a	Mechanical & Fire Services Specification Certification to be provided confirming compliance.	FI

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must, subject to (2), be designed and installed— (a) to operate as a smoke control system in accordance with AS 1668.1; or (b) such that it— (i) incorporates smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and (ii) 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. (3) 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 these Sections of the Standard.		
E2D4 Fire-isolated exits [2019: Table E2.2a]	(1) A part of a building listed in (2) must be provided with— (a) an automatic air pressurisation system for fire-isolated exits in accordance with AS 1668.1; or (b) open access ramps or balconies in accordance with D3D6. (2) The requirements of (1) apply to—	Not Applicable	NA

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) a required fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp serving— (i) any storey above an effective height of 25 m; or (ii) more than 2 below ground storeys, not counted in the rise in storeys in accordance with C2D3; or (iii) an atrium to which Part G3 applies; or (b) a required fire-isolated passageway or fire-isolated ramp with a length of travel more than 60 m to a road or open space. (3) An automatic air pressurisation system for a fire-isolated exit must serve the entire exit.		
E2D9 Buildings not more than 25m in effective height: Class 5, 6, 7b, 8 and 9b buildings [2019:E2.2a]	(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 than 3; must meet the requirements of (2). (2) A building referred to in (1) must be provided with— (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.	As the building has a rise in storeys of four (4), smoke detection or sprinkler protection is required to be provided throughout the building. Fire Services Specification Certification to be provided confirming compliance.	FI

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(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.		
E2D20 Class 9b assembly buildings: other assembly buildings (not listed in E2D16 to E2D19) [2019:E2.2b]	(1) The requirements of (2)— (a) apply to a Class 9b assembly building where the building or part of the building is used for a purpose other than— (i) as described in E2D16 to E2D19; or (ii) a school; and (b) do not apply to— (i) sporting complexes (including sports halls, gymnasiums, swimming pools, ice and roller rinks, and the like) other than an indoor sports stadium with total spectator seating for more than 1000; or (ii) churches and other places used solely for religious worship. (2) Each fire compartment, other than one in a building referred to in (1)(b), having a floor area of more than 2000 m2 must be provided with— (a) an automatic smoke exhaust system complying with Specification 21; or (b) if the building is single storey, automatic smoke-and-heat vents complying with Specification 22; or	Not Applicable	NA

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(c) if the floor area of the fire compartment is not more than 5000 m2 and the building has a rise in storeys of not more than 2— (i) an automatic smoke detection and alarm system complying with Specification 20; or (ii) a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17.		
E2D21 Provisions for special hazards [2019: E2.3]	Additional smoke hazard management measures may be necessary due to the— (a) special characteristics of the building; or (b) special function or use of the building; or (c) special type or quantity of materials stored, displayed or used in a building; or (d) special mix of classifications within a building or fire compartment, which are not addressed in E2D4 to E2D20.	Not Applicable	NA

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
Specification 20 – Smoke Detection and Alarm System			
S20C1 Scope	This Specification describes the installation and operation of automatic smoke detection and alarm systems.	Noted	Noted
S20C2. Type of system	A required automatic smoke detection and alarm system must be provided in accordance with the following: (c) Class 5, 6, 7, 8, 9b and 9c buildings — a smoke detection system complying with S20C4	Fire Services Specification Certification to be provided confirming compliance.	FI
S20C3 Smoke alarm system	(1) In all Class 2 to 9 buildings provided with a smoke alarm system, the following applies: (a) A smoke alarm system must— (i) consist of smoke alarms complying with AS 3786; and (ii) be powered from the consumer mains source.	Not Applicable	NA
S20C4 Smoke detection system	(1) In all Class 2 to 9 buildings provided with a smoke detection system, the following applies: (a) A smoke detection system must— (i) subject to (2), (3) and (4), comply with AS 1670.1; and (ii) activate a building occupant warning system in accordance with S20C7.	Fire Services Specification Certification to be provided confirming compliance.	FI

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) In kitchens and other areas where the use of the area is likely to result in smoke detectors causing spurious signals, subject to (c)— (i) any other detector deemed suitable in accordance with AS 1670.1 may be installed provided that smoke detectors are installed elsewhere in the sole-occupancy unit in accordance with the requirements for alarms in S20C3(2)(a) and (2)(b); or (ii) an alarm acknowledgement facility may be installed. (c) Where a kitchen or other area referred to in (b) is in a building protected with a sprinkler system complying with Specification 17 (other than a FPAA101D or FPAA101H system), detectors need not be installed in the kitchen or other areas likely to result in spurious signals.		
S20C6. Smoke detection for smoke control system	(2) Smoke detectors required to activate— (a) automatic shutdown of air-handling systems in accordance with E2D16, E2D17 or E2D19; or (b) a smoke exhaust system in accordance with Specification 21, must comply with the requirements of (3). (3) Smoke detectors referred to in (2) must— (a) be spaced—	Fire Services Specification Certification to be provided confirming compliance.	FI

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(i) not more than 20 m apart and not more than 10 m from any wall, bulkhead or smoke curtain; and (ii) in enclosed malls and walkways in a Class 6 building not more than 15 m apart and not more than 7.5 m from any wall, bulkhead or curtain; and (b) have a sensitivity— (i) in accordance with AS 1670.1 in areas other than a multi-storey walkway and mall in a Class 6 building; and (ii) not exceeding 0.5% smoke obscuration per metre with compensation for external airborne contamination as necessary, in a multi-storey walkway and mall in a Class 6 building. (4) Smoke detectors provided to activate a smoke control system must— (a) either— (i) form part of a building fire or smoke detection system complying with AS 1670.1; or (ii) be a separate dedicated system incorporating control and indicating equipment complying with AS 1670.1; and (b) activate a building occupant warning system complying with S20C7, except that smoke detectors provided solely to initiate automatic shutdown of air-handling systems in accordance with (2)(a) need not activate a building occupant warning system.		

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
S20C7 Building occupant warning system	Subject to E4D9, a building occupant warning system provided as part of a smoke hazard management system must comply with clause 3.22 of AS 1670.1 to sound through all occupied areas.	Fire Services Specification Certification to be provided confirming compliance.	FI
S20C8 System Monitoring	The following installations must be connected to a fire alarm monitoring system connected to a fire station or fire station dispatch centre in accordance with AS 1670.3: (a) A smoke detection system in a Class 3 building provided in accordance with S20C2(b)(i) or S20C2(b)(ii). (b) A smoke detection system in a Class 9a health-care building, if the building accommodates more than 20 patients. (c) A smoke detection system in a Class 9c building. (d) Smoke detection in accordance with S20C6 provided to activate— (i) a smoke exhaust system in accordance with Specification 21; or (ii) smoke-and-heat vents in accordance with Specification 22.	Not Applicable	NA

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
Part E3 – Lift Installations			
E3.0: Deemed-to-Satisfy Provisions [2019: E3.0]	(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements E3P1 to E3P4 are satisfied by complying with— (a) E3D2 to E3D12; and (b) for a building containing an occupiable outdoor area, Part G6; and (c) for public transport buildings, Part I2. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.	Noted	Noted
E3D2: Lift installations [2019: E3.1]	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification 24	Noted	CRA – Refer Annexure F
E3D3: Stretcher facility in lifts [2019: E3.2]	(1) A stretcher facility in accordance with (2) must be provided— (b) where an emergency lift is not required, if passenger lifts are installed to serve any storey above an effective height of 12 m, in at least one of those lifts to serve each floor served by the lifts. (2) A stretcher facility must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600 mm wide x 2000 mm long x 1400 mm high above the floor level.	The lift facility installed within the building is required to cater for stretcher provisions. The internal dimensions of the lift shaft appear to be capable of accommodating stretcher provisions however further review will be required to be completed as the design develops.	FI CRA – Refer Annexure F

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
E3D4: Warning against use of lifts in fire [2019: E3.3]	(1) A warning sign must be displayed where it can be readily seen near every call button for a passenger lift or group of lifts throughout a building. (2) The requirements of (1) do not apply to a small lift such as a dumb-waiter or the like that is for the transport of goods only. (3) Each warning sign required by (1) must comply with the details and dimensions of Figure E3D4 and consist of— (a) incised, inlaid or embossed letters on a metal, wood, plastic or similar plate securely and permanently attached to the wall; or (b) letters incised or inlaid directly into the surface of the material forming the wall.	Vertical Transport Specification Certification to be provided confirming compliance.	FI
E3D6: Landings [2019: E3.5]	Access and egress to and from lift well landings must comply with the Deemed-to-Satisfy Provisions of Parts D2, D3 and D4.	Lift landings appear to generally meet the requirements of BCA Part D.	CRA – Refer Annexure F
E3D7: Passenger lifts and their limitations [2019: E3.6]	(1) In an accessible building, every passenger lift must be one of the following lift types, subject to the limitations (if any) of each lift type: (a) There are no limitations on the use of electric passenger lifts, electrohydraulic passenger lifts or inclined lifts. (2) A passenger lift referred to in (1) must not rely on a constant pressure device for its operation if the lift car is fully enclosed.	Vertical Transport Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
E3D8 Accessible features required for passenger lifts	In an accessible building, every passenger lift must have the following features where applicable: (a) A handrail complying with the provisions for a mandatory handrail in AS 1735.12 for all lifts except— (i) a stairway platform lift; and (ii) a low-rise platform lift. (b) Lift floor dimensions of not less than 1400 mm wide x 1600 mm deep for all lifts which travel more than 12 m. (d) Lift floor dimensions of not less than 810 mm wide x 1200 mm deep for a stairway platform lift. (e) Minimum clear door opening complying with AS 1735.12 for all lifts except a stairway platform lift. (f) Passenger protection system complying with AS 1735.12 for all lifts with power-operated doors. (g) Lift landing doors at the upper landing for all lifts except a stairway platform lift. (h) Lift car and landing control buttons complying with AS 1735.12 for all lifts except— (i) a stairway platform lift; and (ii) a low-rise platform lift. (i) Lighting in accordance with AS 1735.12 for all enclosed lift cars.	Vertical Transport Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(j) For all lifts serving more than 2 levels— (i) automatic audible information within the lift car to identify the level each time the car stops; and (ii) audible and visual indication at each lift landing to indicate the arrival of the lift car; and (iii) audible information and audible indication required by (i) and (ii) is to be provided in a range of between 20 - 80 dB(A) at a maximum frequency of 1500 Hz. (k) Emergency hands-free communication, including a button that alerts a call centre of a problem and a light to signal that the call has been received, for all lifts except a stairway platform lift.		
E3D9: Fire service controls [E3.7 of BCA2019]	Where lifts serve any storey above an effective height of 12 m, the following must be provided: (a) A fire service recall control switch complying with E3D11 for— (i) a group of lifts; or (ii) a single lift not in a group that serves the storey. (b) A lift car fire service drive control switch complying with E3D12 for every lift.	Vertical Transport Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
E3D11: Fire service recall switch [E3.9 of BCA2019]	(1) Each group of lifts must be provided with one fire service recall control switch required by E3D9 that activates the fire service recall operation at (6). (2) The switch required by (1) must— (a) be located at the landing nominated by the appropriate authority; and (b) be labelled “FIRE SERVICE” in indelible white lettering on a red background; and (c) have two positions with an “OFF” and an “ON” position identified; and (d) be operable only by the use of a key that is removable in either the “OFF” position or the “ON” position. (3) Adhesive labels must not be used for compliance with (2)(b) and (c). (4) The key in (2)(d) must be able to turn all fire service recall control switches in the building and must have a different key combination to other keys used for lifts in the building. (5) The fire service recall operation must be activated by— (a) switching the fire service recall control switch in (1) to “ON”; or (b) a signal from a fire management system approved by the appropriate authority.	Vertical Transport Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(6) The activation of the fire service recall operation at (5) must— (a) cancel all registered car and landing calls; and (b) inactivate all door reopening devices that may be affected by smoke; and (c) ensure lift cars travelling toward the nominated floor continue to the nominated floor without stopping; and (d) ensure lift cars travelling away from the nominated floor stop at or before the next available floor without opening the doors (either automatically or by the door open button), reverse direction and travel without stopping to the nominated floor; and (e) for lifts stopped at a floor other than the nominated floor, close the doors and travel without stopping to the nominated floor; and (f) ensure that lifts stay at the nominated floor with doors open; and (g) permit all lifts to return to normal service if the fire service recall control switch at (1) is switched to the “OFF” position during or after the fire service recall operation. (7) The requirements of (6) do not apply to lifts on inspection service or when the lift car fire service control switch required by E3D12 is in the "ON" position.		

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(8) Lifts having manual controls must signal an alert to the lift for the lift to return to the nominated floor containing the recall switch that activated the signal.		
E3D11: Lift car service drive control switch [E3.10 of BCA2019]	(1) The lift car fire service drive control switch required by E3D9 must be activated from within the lift car. (2) The switch must— (a) be located between 600 mm and 1500 mm above the lift car floor; and (b) be labelled “FIRE SERVICE” by indelible white lettering on a red background; and (c) have two positions with an “OFF” and an “ON” position identified; and (d) operate only by the use of a key that is removable in either the “OFF” position or the “ON” position. (3) Adhesive labels must not be used for compliance with (2)(b) or (c). (4) When the lift car fire service drive control switch at (1) is turned to the "ON" position, the lift must— (a) not respond to the fire service recall control switch; and (b) cancel all registered lift car and landing calls; and (c) override all lift car call access control systems; and	Vertical Transport Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(d) inactivate all door reopening devices that may be affected by smoke; and (e) allow the registration of lift car call by lift car call buttons, however the lift doors must not close in response to the registration of lift car calls; and (f) activate door closing by constant pressure being applied on the “door close” button unless the button is released before the doors are fully closed, in which case the doors must reopen and any registered lift car calls must be cancelled; and (g) when the doors are closed, move the lift in response to registered lift car calls while allowing additional lift car calls to also be registered; and (h) travel to the first possible floor in response to registered lift car calls and cancel all registered lift car calls after the lift stops; and (i) ensure doors do not open automatically, rather by constant pressure being applied on the “door open” button unless the button is released before the doors are fully open, in which case the doors must re-close. (5) The requirements of (4) do not apply to a lift operating on inspection service. (6) A multi-deck lift installation must have systems in place that—		

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) are able to communicate to the fire officer that the fire service drive control switch will not operate until all decks have been cleared of passengers; and (b) ensure there is an appropriate method of clearing all deck landings of passengers; and (c) maintain all doors to deck landings not containing the fire service control switch closed and inoperative while the lift is on fire service drive control.		

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
Specification 24 – Lift Installations			
1S24C1 Scope	This Specification contains requirements for electric passenger lift installations and electrohydraulic passenger lift installations.	Noted	Noted
S24C2 Lift cars exposed to solar radiation	(1) A lift car exposed to solar radiation directly, or indirectly by re-radiation, must have— (a) mechanical ventilation at a rate of one air change per minute; or (b) mechanical cooling.	Not Applicable	NA

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(2) A 2 hour alternative power source for ventilation or mechanical cooling at (1) must be provided in the event of normal power loss.		
S24C3 Lift car emergency lighting	A lift car must have an emergency lighting system designed— (a) to come on automatically upon failure of the normal lighting supply; and (b) to provide at least 20 lux of lighting for 2 hours on the alarm initiation button.	Vertical Transport Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
S24C4 Cooling of lift shaft	While a lift in a lift shaft is in service, the cooling of the lift shaft must— (a) ensure that the dry bulb air temperature in the lift shaft does not exceed 40°C; and (b) if the cooling is by a ventilation system, be provided with an air change rate determined using a temperature rise of no more than 5 K..	Vertical Transport Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
S24C5 Lift foyer access	Where there is a security foyer in a building, access may be via locked security doors provided— (a) security doors revert to the unlocked state in the event of— (i) power failure; or (ii) fire alarm; and	Vertical Transport Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F

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Clause	**Clause Requirements**	**Comment**	**Status**
	(b) locked foyer areas are monitored by closed circuit television and intercom system to a 24 hour staffed location.		
S24C6 Emergency access doors in a single enclosed lift shaft	(1) Where a lift is installed in a single enclosed lift shaft having a distance between normal landing entrances greater than 12.2 m, emergency access doors must be provided and constructed as follows: (a) The clear opening size of emergency doors must be not less than 600 mm wide x 980 mm high. (b) Hinged doors must not open towards the interior of the lift shaft. (c) Doors must be self-closing and self-locking. (d) Doors must be marked on the landing side with the letters not less than 35 mm high: DANGER LIFTWELL ACCESS KEEP FURNITURE AND FIXTURES CLEAR (e) Doors from the landing side must only be openable by a tool. (f) Each emergency door must be provided with a positive breaking electrical contact, wired into the control circuit to prevent movement of the lift until the emergency door is both closed and locked. (2) Emergency egress from the lift car must be provided in single enclosed lift shafts where—	Vertical Transport Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) ropes are installed; and (b) the vertical distance between the lift car sill and the landing door head is less than 600 mm; and (c) the counterweight is resting on its fully compressed buffer. (3) Emergency egress required by (2) must be in the form of an interlocked door with clear opening dimensions not less than 600 mm x 600 mm, accessible from the lift car entrance or the lift car roof (where the door is located in the wall of the lift shaft).		

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
Part E4 – Visibility In An Emergency, Exit Signs And Warning Systems			
E4D1: Deemed-to-Satisfy Provisions [2019: E4.0]	Informational	Noted	Noted
E4D2: Emergency lighting requirements [2019: E4.2]	An emergency lighting system must be installed— (a) in every fire-isolated stairway, fire-isolated passageway or fire-isolated ramp; and	Emergency lighting is required to be provided throughout the building.	FI

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) in every storey of a Class 5, 6, 7, 8 or 9 building where the storey has an area more than 300 m^2— (i) in every passageway, corridor, hallway, or the like, that is part of the path of travel to an exit; and (ii) in any room having a floor area more than 100 m2 that does not open to a corridor or space that has emergency lighting or to a road or open space; and (iii) in any room having a floor area more than 300 m2; and (d) in every required non-fire-isolated stairway; and (e) in a sole-occupancy unit in a Class 5, 6 or 9 building if— (i) the floor area of the unit is more than 300 m^2; and (ii) an exit from the unit does not open to a road or open space or to an external stairway, passageway, balcony or ramp, leading directly to a road or open space; and (f) in every room or space to which there is public access in every storey in a Class 6 or 9b building if— (i) the floor area in that storey is more than 300 m^2; or (ii) any point on the floor of that storey is more than 20 m from the nearest doorway leading directly to	Electrical Specification Certification to be provided confirming compliance.	

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	a stairway, ramp, passageway, road or open space; or (iii) egress from that storey involves a vertical rise within the building of more than 1.5 m, or any vertical rise if the storey concerned does not admit sufficient light; or (iv) the storey provides a path of travel from any other storey required by (i), (ii) or (iii) to have emergency lighting; and		
E4D3: Measurement of distance [2019: E4.3]	Informational	Noted	Noted
E4D4: Design and operation of emergency lighting [2019: E4.4]	Every required emergency lighting system must comply with AS/NZS 2293.1.	Electrical Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
E4D5: Exit signs [E4.5 of BCA2019]	An exit sign must be clearly visible to persons approaching the exit, and must be installed on, above or adjacent to each— (d) door serving as, or forming part of, a required exit in a storey required to be provided with emergency lighting in accordance with E4D2.	Exit Signage is required to be provided throughout the building. Electrical Specification Certification to be provided confirming compliance.	FI
E4D6: Direction signs [2019: E4.6]	If an exit is not readily apparent to persons occupying or visiting the building, then exit signs must be installed—	Directional Exit Signage is required to be provided throughout the building. Electrical Specification Certification to be provided confirming compliance.	FI

Section E: Services and Equipment			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) in appropriate positions in corridors, hallways, lobbies, foyers, auditoria, and the like, indicating the direction to a required exit;		
E4D8: Design and operation of exit signs [2019: E4.8]	Every required exit sign must— (a) comply with— (i) AS/NZS 2293.1; or (ii) for a photoluminescent exit sign, Specification 25; and (b) be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.	Electrical Specification Certification to be provided confirming compliance.	FI
E4D9: Emergency warning and intercom systems [2019: E4.9]	An emergency warning and intercom system complying, where applicable, with AS 1670.4 must be installed— (e) in a Class 9b building— (i) used as a school and having a rise in storeys of more than 3;	The building is required to be provided with an EWIS system. Fire Services Specification Certification to be provided confirming compliance.	FI

SECTION F: HEALTH AND AMENITY

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
Part F1 – Surface water management, rising damp and external waterproofing			
F1D1: Deemed-to-Satisfy Provisions [2019: F1.0]	(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F1P1 to F1P4 are satisfied by complying with F1D2 to F1D8. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable	Noted	Noted
F1D2: Application of part	(1) F1D4 and F1D5 do not apply to a roof with a covering complying with F3D2(a) to (d). (2) F1D3 to F1D5 do not apply to a balcony, podium or similar horizontal surface part of a building— (a) where the flooring is of timber decking or other perforated flooring; or (b) which is located directly above ground.	Noted	Noted
F1D3: Stormwater drainage [2019: F1.1]	Stormwater drainage must be designed and constructed in accordance with AS/NZS 3500.3.	Hydraulic Services Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
F1D4 Exposed joints	Exposed joints in the drainage surface on a roof, balcony, podium or similar horizontal surface part of a building must— (a) be protected in accordance with Section 2.9 of AS 4654.2; and	Hydraulic Services Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) not be located beneath or run through a planter box, water feature or similar part of the building.		
F1D5: External above ground membranes [2019: F1.4]	A roof, balcony, podium or similar horizontal surface part of a building must be provided with a waterproofing membrane— (a) consisting of materials complying with AS 4654.1; and (b) designed and installed in accordance with AS 4654.2.	Architectural Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
F1D6: Damp-proofing [2019: F1.9]	(1) Except for a building covered by (3), moisture from the ground must be prevented from reaching— (a) the lowest floor timbers and the walls above the lowest floor joists; and (b) the walls above the damp-proof course; and (c) the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders. (2) Where a damp-proof course is provided, it must consist of— (a) a material that complies with AS/NZS 2904; or (b) impervious sheet material in accordance with AS 3660.1.	Architectural Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
F1D7: Damp-proofing of floors on the ground [2019: F1.10]	(1) If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870. (2) The requirements of (1) do not apply where— (a) weatherproofing is not required; or (b) the floor is the base of a stair, lift or similar shaft which is adequately drained by gravitation or mechanical means.	Architectural Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
F1D8 Subfloor Ventilation [F1.12 of BCA 2019]	(1) Subfloor spaces must— (a) be provided with openings in external walls and internal subfloor walls in accordance with Table F1D8 for the climatic zones given in Figure F1D8; and (b) have clearance between the ground surface and the underside of the lowest horizontal member in the subfloor in accordance with Table F1D8.	Not Applicable	NA
Part F2 – Wet areas and overflow protection			
F2D1 Deemed-to-satisfy Provisions [New for 2022]	(1) Where a Deemed-to-Satisfy Solution is proposed, Performance RequirementsF2P1 and F2P2 are satisfied by complying with F2D2 to F2D4. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.	Noted	Noted

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
F2D2 Wet area construction [2019: F1.7]	(2) In a Class 5, 6, 7, 8 or 9 building, building elements in a bathroom or shower room, a slop hopper or sink compartment, a laundry or sanitary compartment must— (a) be water resistant or waterproof in accordance with Specification 26; and (b) comply with AS 3740, as if they were in a Class 2 or 3 building or a Class 4 part of a building.	Architectural Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
F2D3 Rooms containing urinals [2019: F1.7]	(1) Where a slab or stall type urinal is installed— (a) the floor surface of the room containing the urinal must be an impervious material; and (i) where no step is installed, must— (A) be graded to the urinal channel for a distance of 1.5 m from the urinal channel; and (B) have the remainder of the floor graded to a floor waste; and (ii) where a step is installed— (A) the step must have an impervious surface and be graded to the urinal channel; and (B) the floor behind the step must be graded to a floor waste; and	Not Applicable	NA

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) the junction between the floor surface and the urinal channel must be impervious. (2) Where a wall hung urinal is installed— (a) the wall must be surfaced with impervious material extending from the floor to not less than 50 mm above the top of the urinal and not less than 225 mm on each side of the urinal; and (b) the floor must be surfaced with an impervious material and be graded to a floor waste.		
F2D4 Floor wastes	(1) In a Class 2 or 3 building or Class 4 part of a building, a bathroom or laundry located at any level above a sole-occupancy unit or public space must have a floor waste. (2) Where a floor waste is installed— (a) the minimum continuous fall of a floor plane to the waste must be 1:80; and (b) the maximum continuous fall of a floor plane to the waste must be 1:50.	Not Applicable	NA
Part F3 – Roof and wall cladding			
F3D1 Deemed-to-satisfy provisions	(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirement F3P1 is satisfied by complying with F3D2 to F3D5.	Informative	Noted

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
	(2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable		
F3D2: Roof coverings [2019: F1.5]	A roof must be covered with— (a) roof tiles complying with AS 2049, fixed in accordance with AS 2050; or (b) metal sheet roofing complying with AS 1562.1; or (c) plastic sheet roofing designed and installed in accordance with AS 1562.3; or (d) terracotta, fibre-cement and timber slates and shingles designed and installed in accordance with AS 4597, except in cyclonic areas; or (e) an external waterproofing membrane complying with F1D5.	The roof covering materials have not been specified on the plans provided however it is assumed that metal sheet roofing will be provided. Architectural Specification Certification to be provided confirming compliance.	FI CRA – Refer Annexure F
F3D3: Sarking [2019: F1.6]	Sarking-type material used for weatherproofing of roofs and walls must comply with AS 4200.1 and AS 4200.2.	Architectural Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F
F3D4: Glazed Assemblies [2019: F1.13]	(1) Subject to (2) and (3), the following glazed assemblies in an external wall, must comply with AS 2047 requirements for resistance to water penetration: (a) Windows. (b) Sliding and swinging glazed doors with a frame, including French and bi-fold doors with a frame.	Architectural Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
	(c) Adjustable louvres. (d) Shopfronts. (e) Window walls with one piece framing. (3) The following glazed assemblies need not comply with (1): (a) All glazed assemblies not in an external wall. (c) Fixed louvres. (e) Sliding and swinging glazed doors without a frame. (f) Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 2047. (g) Second-hand windows, re-used windows and recycled windows.		
F3D5: Wall Cladding [New for 2022]	(1) External wall cladding must comply with one or a combination of the following: (a) Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700. (b) Autoclaved aerated concrete: AS 5146.3. (c) Metal wall cladding: AS 1562.1.	The drawings provided do not indicate the proposed external cladding materials. Further review will be undertaken as the design develops. Architectural Specification Certification to be provided confirming compliance.	**PS Refer Part 3.3**

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
Part F4 – Sanitary and Other Facilities			
F4D1: Deemed-to-Satisfy Provisions [2019: F2.0]	(1) Where a Deemed-to-Satisfy Solution is proposed, Performance RequirementsF4P1 to F4P6 are satisfied by complying with— (a) F4D2 to F4D12; and (b) for public transport buildings, Part I2; and (c) for farm sheds, Part I3. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.	Noted	Noted
F4D3: Calculation of number of occupants and facilities [2019: F2.2]	(1) The number of persons accommodated must be calculated according to D2D18 if it cannot be more accurately determined by other means. (2) Unless the premises are used predominantly by one sex, sanitary facilities must be provided on the basis of equal numbers of males and females. (3) In calculating the number of sanitary facilities to be provided under F4D2 and F4D4, a unisex facility required for people with a disability (other than a facility provided under F4D12) may be counted once for each sex. (4) For the purposes of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary products.	The following populations have been provided by Architectus: • Ground Level - 152 • Level 01 - 64 • Level 02 - 45 • Level 03 - 64 • Total population = 334 persons	CRA – Refer Annexure F

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
F4D4: Facilities in Class 3 to 9 buildings (including Table F2.3) [2019: F2.3]	(1) Except where permitted by (3), (4), (7), F4D5(a), F4D5(b) and F4D12(1), separate sanitary facilities for males and females must be provided for Class 3, 5, 6, 7, 8 or 9 buildings in accordance with Tables F4D4a, F4D4b, F4D4c, F4D4d, F4D4e, F4D4f, F4D4g, F4D4h, F4D4i, F4D4j, F4D4k and F4D4l, as appropriate. (2) In Tables F4D4a, F4D4b, F4D4c, F4D4d, F4D4e, F4D4f, F4D4g, F4D4h, F4D4i, F4D4j, F4D4k and F4D4l — (a) 'Number' means the number of facilities required; and (b) '>' means greater than; and (c) a hyphen means no data (refer to the row above for the highest value applicable); and (d) 'N/A' means not applicable; and (e) a reference to— (i) 'employees' includes owners and managers using the building; and (ii) 'add 1 per 100 or 150, 250, 500, etc.' includes any part thereof of that number. (3) If not more than 10 people are employed, a unisex facility may be provided instead of separate facilities for each sex. (4) If the majority of employees are of one sex, not more than 2 employees of the other sex may share toilet facilities	In calculating the number of facilities provided for staff and students, the amenities on Level 01 have been assigned as staff facilities, all other facilities have been assigned to students. The facilities provided throughout the building based on the above will cater for: • 450 Students, and • 90 Staff The number of facilities provided exceeds the anticipated populations for the building.	Complies

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
	if the facilities are separated by means of walls, partitions and doors to afford privacy. (6) Adequate means of disposal of sanitary products must be provided in sanitary facilities for use by females. (11) Not less than one washbasin must be provided where closet pans or urinals are provided.		
F4D5: Accessible sanitary facilities (including Table F2.4) [2019: F2.4]	In a building required to be accessible— (a) accessible unisex sanitary compartments must be provided in accessible parts of the building in accordance with F4D6; and (c) at each bank of toilets where there is one or more toilets in addition to an accessible unisex sanitary compartment at that bank of toilets, not less than one sanitary compartment suitable for a person with an ambulant disability for use by males and not less than one sanitary compartment suitable for a person with an ambulant disability for use by females, each in accordance with AS 1428.1, must be provided; and (d) an accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary products; and (e) the circulation spaces, fixtures and fittings of all accessible sanitary facilities provided in accordance with F4D6 and F4D7 must comply with the requirements of AS 1428.1; and	Accessible sanitary facilities have been provided on each storey of the building and located with the bank of amenities as required. Each bank of WCs are noted to be provided with an ambulant cubical as required. Detailed internal layouts have not been provided for review to confirm compliance with AS1428.1-2009.	CRA – Refer Annexure F

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
	(f) an accessible unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only; and (g) where two or more of each type of accessible unisex sanitary facility are provided, the number of left and right handed mirror image facilities must be provided as evenly as possible; and (h) where male sanitary facilities are provided at a separate location to female sanitary facilities, accessible unisex sanitary facilities are only required at one of those locations;		
F4D6: Accessible unisex sanitary compartments [2019: Table F2.4a]	(1) Where required by F4D5(a), the minimum number of accessible unisex sanitary compartments for each class of building is as follows: (d) For Class 5, 6, 7, 8 or 9 buildings, where F4D4 requires closet pans— (i) 1 on every storey containing sanitary compartments; and (ii) where a storey has more than 1 bank of sanitary compartments containing male and female sanitary compartments, at not less than 50% of those banks.	Accessible sanitary facilities have been provided on each storey of the building and located with the bank of amenities as required.	Complies

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
F4D7 Accessible unisex showers [2019: Table F2.4(b)]	(1) Where required by F4D5(b), the minimum number of accessible unisex showers for each class of building is as follows: (d) For Class 5, 6, 7, 8 or 9 buildings, where F4D4 requires 1 or more showers, not less than 1 for every 10 showers or part thereof.	The building is not required to be provided with showers under F4D4.	NA
F4D8: Construction of sanitary compartments [2019: F2.5]	(1) Other than in an early childhood centre, sanitary compartments must have doors and partitions that separate adjacent compartments and extend— (a) from floor level to the ceiling in the case of a unisex facility; or (c) 1.8 m above the floor in all other cases. (2) Unless there is a clear space of at least 1.2 m, measured in accordance with Figure F4D8, between the closet pan within the sanitary compartment and the doorway, the door to a fully enclosed sanitary compartment must— (a) open outwards; or (b) slide; or (c) be readily removable from the outside of the sanitary compartment.	Lift off hinges are required to be provided to cubicles if full height partitions are provided.	CRA – Refer Annexure F
F4D9: Interpretation: urinals and washbasins	(1) A urinal may be— (a) an individual stall or wall-hung urinal; or	Not Applicable	NA

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
[2019: F2.6]	(b) each 600 mm length of a continuous urinal trough; or (c) a closet pan used in place of a urinal. (2) A washbasin may be— (a) an individual basin; or (b) a part of a hand washing trough served by a single water tap.		
F4D10 Microbial (legionella) control [2019: F2.7]	This clause has deliberately been left blank. F4D10 does not apply in NSW as the installation of hot water, warm water and cooling water systems (and their operation and maintenance) is regulated in the Public Health Regulation 2012, under the Public Health Act 2010.	Not Applicable	NA
F4D12: Accessible adult change facilities [F2.9 of BCA2019]	(1) One unisex accessible adult change facility must be provided in an accessible part of a— (a) Class 6 building that is a shopping centre having a design occupancy of not less than 3,500 people, calculated on the basis of the floor area and containing a minimum of 2 sole-occupancy units;	Not Applicable	NA

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
Part F5 – Room Heights			
F5D1 Deemed-to-Satisfy Provisions [2019: F3.0]	(1) Where a Deemed-to-Satisfy Solution is proposed, Performance RequirementF5P1 is satisfied by complying with— (a) F5D2; and (b) for farm sheds, Part I3. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.	Noted	Noted
F5D2: Height of rooms and other spaces [2019: F3.1]	(5) The height of rooms and other spaces in a Class 9b building must be not be less than— (a) for a school classroom or other assembly building or part that accommodates not more than 100 persons — 2.4 m; and (b) for a theatre, public hall or other assembly building or part that accommodates more than 100 persons — 2.7 m; and (c) for a corridor— (i) that serves an assembly building or part that accommodates not more than 100 persons — 2.4 m; or (ii) that serves an assembly building or part that accommodates more than 100 persons — 2.7 m.	The building sections provided indicate that a minimum ceiling height of 2.7m is generally provided throughout the building however RCPs have not been provided for review to confirm compliance is achieved. Further review will be undertaken as the design develops.	FI CRA – Refer Annexure F

Section F: Health and Amenity			
	(6) For the purposes of (5) the number of persons accommodated must be calculated according to D2D18. (8) The height of rooms and other spaces in any building must be not be less than— (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 (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;		
Part F6 – Light and Ventilation			
F6D1: Deemed-to-Satisfy Provisions [2019: F4.0]	(1) Where a Deemed-to-Satisfy Solution is proposed, Performance RequirementsF6P1 to F6P5 are satisfied by complying with— (a) F6D2 to F6D12; and (b) for a building containing an occupiable outdoor area, Part G6; and (c) for farm buildings and farm sheds, Part I3. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.	Noted	Noted

Section F: Health and Amenity			
F6D2: Provision of natural light [2019: F4.1]	Natural light must be provided in: (a) A Class 2 building and a Class 4 part of a building — to all habitable rooms. (b) A Class 3 building — to all bedrooms and dormitories. (c) Class 9a and 9c buildings — to all rooms used for sleeping purposes. (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.	Not Applicable	NA
F6D5: Artificial Lighting [2019: F4.4]	(1) Artificial lighting must be provided— (a) in required stairways, passageways, and ramps; and (b) if natural light of a standard equivalent to that required by F6D3 is not available, and the periods of occupation or use of the room or space will create undue hazard to occupants seeking egress in an emergency, in— (i) a Class 4 part of a building — to sanitary compartments, bathrooms, shower rooms, airlocks and laundries; and (ii) a Class 2 building — to sanitary compartments, bathrooms, shower rooms, airlocks, laundries, common stairways and other spaces used in common by the occupants of the building; and	Electrical specification certificate to be provided confirming compliance.	CRA – Refer Annexure F

Section F: Health and Amenity			
	(iii) Class 3, 5, 6, 7, 8 and 9 buildings — to all rooms that are frequently occupied, all spaces required to be accessible, all corridors, lobbies, internal stairways, other circulation spaces and paths of egress. (2) The artificial lighting system must comply with AS/NZS 1680.0. (3) The system may provide a lesser level of illumination to the following spaces during times when the level of lighting would be inappropriate for the use: (a) A theatre, cinema or the like, when performances are in progress, with the exception of aisle lighting required by Part I1. (b) A museum, gallery or the like, where sensitive displays require low lighting levels. (c) A discotheque, nightclub or the like, where to create an ambience and character for the space, low lighting levels are used.		
F6D6: Ventilation of rooms [2019: F4.5]	A habitable room, office, shop, factory, workroom, sanitary compartment, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have— (a) natural ventilation complying with F6D7; or (b) a mechanical ventilation or air-conditioning system complying with AS 1668.2.	All parts of the buildings are assumed to be provided with a mechanical ventilation system. Mechanical specification certificate to be provided confirming compliance.	CRA – Refer Annexure F

Section F: Health and Amenity			
F6D7: Natural ventilation [2019: F4.6]	(1) Natural ventilation provided in accordance with F6D6(a) must consist of openings, windows, doors or other devices which can be opened— (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 verandah, 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.	Not Applicable - All parts of the buildings are assumed to be provided with a mechanical ventilation system.	NA
F6D8: Ventilation borrowed from adjoining room [2019: F4.7]	Natural ventilation to a room may come through a window, opening, door or other device from an adjoining room (including an enclosed verandah) if both rooms are within the same sole-occupancy unit or the enclosed verandah is common property, and— (b) in a Class 5, 6, 7, 8 (except a Class 8 electricity network substation) or 9 building— (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, opening, door or other device with a ventilating area of not less than 10% of the combined floor areas of both rooms; and	Not Applicable	NA

Section F: Health and Amenity			
	(c) the ventilating areas specified in (a) and (b) may be reduced as appropriate if direct natural ventilation is provided from another source.		
F6D9: Restriction on position of water closets and urinals [2019: F4.8]	A sanitary compartment must not open directly into— (d) a room used for public assembly (which is not an early childhood centre, primary school or open spectator stand); or (e) a workplace normally occupied by more than one person.	The amenities provided to the Ground Level, Level 01 & Level 03 open onto circulation corridors as required. The accessible facility provided on Level 02 is noted to open into the student breakout space which is assumed to be normally occupied and will be required to be provided with mechanical exhaust.	CRA – Refer Annexure F
F6D10: Airlocks [2019: F4.9]	If a sanitary compartment is prohibited under F6D9 from opening directly to another room— (b) in a Class 5, 6, 7, 8 or 9 building (which is not an early childhood centre, primary school 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 (ii) the sanitary compartment must be provided with mechanical exhaust ventilation and the doorway to the room adequately screened from view.	The accessible facility provided on Level 02 is noted to open into the student breakout space which is assumed to be normally occupied and will be required to be provided with mechanical exhaust. It is noted that the position of the WC pan is such that it is screened from view for anyone occupying the student breakout space. Mechanical specification certificate to be provided confirming compliance.	CRA – Refer Annexure F

Section F: Health and Amenity			
Clause	**Clause Requirements**	**Comment**	**Status**
Part F7 – Sound Transmission and Insulation			
Part F7 is only applicable to Class 2, 3 and 9c buildings. as such, it is not applicable to the subject building.			

SECTION G: ANCILLARY PROVISIONS

Section G: Ancillary Provisions			
Clause	**Clause Requirements**	**Comment**	**Status**
Part G1 – Minor Structures and Components			
G1D1: Deemed-to-Satisfy Provisions [2019: G1.0]	(1) Performance RequirementG1P1 must be complied with. (2) Where a Deemed-to-Satisfy Solution is proposed, Performance RequirementsG1P2 to G1P5 are satisfied by complying with G1D2 to G1D4. (3) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.	Noted	Noted
NSW G1D5: Provision for cleaning windows [2019: NSW G1.101]	(1) A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level. (2) A building satisfies (1) where— (a) the windows can be cleaned wholly from within the building; or	Architectural Specification Certification to be provided confirming compliance.	CRA – Refer Annexure F

Section G: Ancillary Provisions			
Clause	**Clause Requirements**	**Comment**	**Status**
	(b) provision is made for the cleaning of the windows by a method complying with the Work Health and Safety Act 2011 and regulations made under that Act.		

Section G: Ancillary Provisions			
Clause	**Clause Requirements**	**Comment**	**Status**
Part G2 – Boilers, Pressure Vessels, Heating Appliances, Fireplaces, Chimneys and Flues			
The building is not proposed to contain any of the above items, therefore Part G2 is not applicable to the subject building.			

Section G: Ancillary Provisions			
Clause	**Clause Requirements**	**Comment**	**Status**
Part G3 – Atrium Construction			
G3D1: Atriums Affected by the Part [2019: G3.1]	This Part does not apply to an atrium which— (a) connects only 2 storeys; or (b) connects only 3 storeys if—	It is noted that the stair between Ground Level and Level 01 will result in an extended technical connection of four storeys, due to the non-fire-isolated stairs connecting Levels 01 to 03.	**PS Refer Part 3.3**

Section G: Ancillary Provisions			
Clause	**Clause Requirements**	**Comment**	**Status**
	(i) each storey is provided with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 throughout; and (ii) one of those storeys is situated at a level at which there is direct egress to a road or open space.	It is noted that both the Ground Level and Level 01 are provided with direct access to road / open space and the building is assumed to be provided with sprinkler protection. It is proposed to permit the connection of Ground Level to Level 3 without the application of Atrium Provisions due to the proposed fire wall surrounding the stair on the Ground Level. This arrangement will be required to be addressed under a fire engineered performance solution.	
G3D2: Dimensions of atrium well [2019: G3.2]	An atrium well must have a width throughout the well that is able to contain a cylinder having a horizontal diameter of not less than 6 m.	Not Applicable	NA
G3D3: Separation of Atrium by Bounding Walls [2019: G3.3]	An atrium must be separated from the remainder of the building at each storey by bounding walls set back not more than 3.5 m from the perimeter of the atrium well except in the case of the walls at not more than 3 consecutive storeys if— (a) one of those storeys is at a level at which direct egress to a road or open space is provided; and (b) the sum of the floor areas of those storeys that are contained within the atrium is not more than the maximum area that is permitted in Table C3D3.	Not Applicable	NA
G3D4: Construction of Bounding Walls	Bounding walls must— (a) have an FRL of not less than 60/60/60, and—	Not Applicable	NA

Section G: Ancillary Provisions			
Clause	**Clause Requirements**	**Comment**	**Status**
[2019: G3.4]	(i) extend from the floor of the storey to the underside of the floor next above or to the underside of the roof; and (ii) have any door openings protected with self-closing or automatic –/60/30 fire doors; or (b) be constructed of fixed toughened safety glass, or wired safety glass in non-combustible frames, with— (i) any door openings fitted with a self-closing smoke door complying with Specification 12; and (ii) the walls and doors protected with wall-wetting systems in accordance with Specification 31; and (iii) a fire barrier with an FRL of not less than –/60/30 installed in any ceiling spaces above the wall.		
G3D5: Construction of Balconies [2019: G3.5]	If a bounding wall separating an atrium from the remainder of the building is set back from the perimeter of the atrium well, a barrier that is imperforate and non-combustible, and not less than 1 m high must be provided.	Not Applicable	NA
G3D6: Separation at Roof [2019: G3.6]	In an atrium— (a) the roof must have the FRL prescribed in Table S5C11g; or (b) the roof structure and membrane must be protected by a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17.	Not Applicable	NA

Section G: Ancillary Provisions			
Clause	**Clause Requirements**	**Comment**	**Status**
G3D7: Means of Egress [2019: G3.7]	All areas within an atrium must have access to at least 2 exits.	Not Applicable	NA
G3D8: Fire and Smoke Control System [2019: G3.8]	Sprinkler systems, smoke control, fire detection and alarm systems, and emergency warning and intercom systems must be installed in compliance with Specification 31.	Not Applicable	NA

Section G: Ancillary Provisions			
Clause	**Clause Requirements**	**Comment**	**Status**
Part G4 – Construction in Alpine Areas			
The subject building is not located in an alpine area therefore Part G4 is not applicable.			

Section G: Ancillary Provisions			
Clause	**Clause Requirements**	**Comment**	**Status**
Part G5 – Construction in Bushfire Prone Areas			
The subject building is not located within a bushfire area therefore the provisions of part G5 are not applicable.			

Section G: Ancillary Provisions			
Clause	**Clause Requirements**	**Comment**	**Status**
Part G6 – Occupiable Outdoor Areas			
G6.1: Application of part [2019: G6.1]	(1) The Deemed-to-Satisfy Provisions of this Part apply to buildings containing an occupiable outdoor area in addition to the other Deemed-to-Satisfy Provisions of NCC Volume One. (2) The Deemed-to-Satisfy Provisions of this Part take precedence where there is a difference to the Deemed-to-Satisfy Provisions of Sections C, D, E, F and G. (3) Except for G6D2, the Deemed-to-Satisfy Provisions of this Part do not apply to— (a) an occupiable outdoor area of a sole-occupancy unit in a Class 2 or 3 building, Class 9c building or Class 4 part of a building; or (b) an occupiable outdoor area with an area less than 10m2.	Not Applicable	NA
G6D2: Fire hazard properties [2019: G6.2]	(1) Subject to (2), a lining, material or assembly in an occupiable outdoor area must comply with C2D11 as for an internal element. (2) The following fire hazard properties of a lining, material or assembly in an occupiable outdoor area are not required to comply with C2D11: (a) Average specific extinction area. (b) Smoke-Developed Index.	Not Applicable	NA

Section G: Ancillary Provisions			
Clause	**Clause Requirements**	**Comment**	**Status**
	(c) Smoke development rate. (d) Smoke growth rate index ($SMOGRA_{RC}$).		
G6D3: Fire Separation [2019: G6.3]	For the purposes of the Deemed-to-Satisfy Provisions of C3D8, C3D9 and C3D10, a reference to a storey includes an occupiable outdoor area, however a *fire wall* cannot be used to separate an occupiable outdoor area into different *fire compartments*.	Not Applicable	NA
G6D4: Provision for escape [2019: G6.4]	For the purposes of the Deemed-to-Satisfy Provisions of Part D2, a reference to a storey or room includes an occupiable outdoor area.	Not Applicable	NA
G6D5: Construction of exits [2019: G6.5]	For the purposes of the Deemed-to-Satisfy Provisions of Part D3, a reference to a storey or room includes an occupiable outdoor area.	Not Applicable	NA
G6D6: Fire fighting equipment [2019: G6.6]	Except for S17C7(2)(a), for the purposes of the Deemed-to-Satisfy Provisions of Part E1, a reference to a storey includes an occupiable outdoor area.	Not Applicable	NA
G6D7: Lift installations [2019: G6.7]	For the purposes of the Deemed-to-Satisfy Provisions of Part E3, a reference to a storey includes an occupiable outdoor area.	Not Applicable	NA
G6D8: Visibility in an emergency, exit signs and warning systems [2019: G6.8]	For the purposes of the Deemed-to-Satisfy Provisions of Part E4, a reference to a storey includes an occupiable outdoor area.	Not Applicable	NA

Section G: Ancillary Provisions			
Clause	**Clause Requirements**	**Comment**	**Status**
G6D9: Light and ventilation [2019: G6.9]	For the purposes of the Deemed-to-Satisfy Provisions of F6D5, F6D9 and F6D10, a reference to a room includes an occupiable outdoor area.	Not Applicable	NA
G6D10: Fire orders [2019: G6.10]	For the purposes of the Deemed-to-Satisfy Provisions of G4D8, a reference to a storey includes an occupiable outdoor area.	Not Applicable	NA

SECTION I: SPECIAL USE BUILDINGS

Section I: Special Use Buildings			
Clause	**Clause Requirements**	**Comment**	**Status**
Part I1 – Class 9b Buildings			
I1D1 Application of part [2019: H1.0]	(1) For a Class 9b building or part of a building that is not an entertainment venue— (a) the Deemed-to-Satisfy Provisions of Part I1 apply to every enclosed Class 9b building or part of a building which— (i) is a school assembly, church or community hall with a stage and any backstage area with a total floor area of more than 300 m2; or	Information only	Noted

Section I: Special Use Buildings			
Clause	**Clause Requirements**	**Comment**	**Status**
	(ii) otherwise, has a stage and any backstage area with a total floor area of more than 200 m2; or (iii) has a stage with an associated rigging loft; and (b) notwithstanding (1)(a)— (i) I1D4 applies to every open or enclosed Class 9b building; and (ii) I1D7 applies to every enclosed Class 9b building. (2) For a Class 9b building that is an entertainment venue, NSW Part I4 applies in replacement of Part I1.		
I1D2: Separation [2019: H1.2]	A theatre, public hall or the like must— (a) have a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17; or (b) have the stage, backstage area and accessible under stage area separated from the audience by a proscenium wall in accordance with I1D3.	Not Applicable	NA
I1D3: Proscenium Wall Construction [2019: H1.3]	A proscenium wall must comply with Specification 32.	Not Applicable	NA
I1D4: Seating Area [2019: H1.4]	In a seating area—	Not Applicable	NA

Section I: Special Use Buildings			
Clause	**Clause Requirements**	**Comment**	**Status**
	(a) the gradient of the floor surface must not be steeper than 1 in 8, or the floor must be stepped so that— (i) a line joining the nosings of consecutive steps does not exceed an angle of 30° to the horizontal; and (ii) the height of each step in the stepped floor is not more than 600 mm; and (iii) the height of any opening in such a step is not more than 125 mm; and (b) if an aisle divides the stepped floor and the difference in level between any 2 consecutive steps— (i) exceeds 230 mm but not 400 mm — an intermediate step must be provided in the aisle; and (ii) exceeds 400 mm — 2 equally spaced intermediate steps must be provided in the aisle; and (iii) the going of intermediate steps must be not less than 270 mm and such as to provide as nearly as practicable equal treads throughout the length of the aisle; and (c) the clearance between rows of fixed seats used for viewing performing arts, sport or recreational activities must be not less than—		

Section I: Special Use Buildings			
Clause	**Clause Requirements**	**Comment**	**Status**
	(i) 300 mm if the distance to an aisle is not more than 3.5 m; or (ii) 500 mm if the distance to an aisle is more than 3.5 m.		
HI1D5: Exits from stages [2019: H1.5]	(1) The path of travel to an exit from a stage or performing area must not pass through the proscenium wall if the stage area is separated from the audience area with a proscenium wall. (2) Required exits from backstage and under-stage areas must be independent of those provided for the audience area.	Not Applicable	NA
I1D6: Access to Platforms and Lofts [2019: H1.6]	A stairway that provides access to a service platform, rigging loft, or the like, must comply with AS 1657.	Not Applicable	NA
I1D7: Aisle Lights [2019: H1.7]	In every enclosed Class 9b building, where in any part of the auditorium, the general lighting is dimmed or extinguished during public occupation and the floor is stepped or is inclined at a slope steeper than 1 in 12, aisle lights must be provided to illuminate the full length of the aisle and tread of each step.	Not Applicable	NA

Section I: Special Use Buildings			
Clause	**Clause Requirements**	**Comment**	**Status**
Part I2 – Public Transport Buildings			
The building is not a public transport building therefore the provisions of part I2 are not applicable.			

Section I: Special Use Buildings			
Clause	**Clause Requirements**	**Comment**	**Status**
NSW Parts I4, I5 and I6 – Entertainment Venues, Temporary Structures and Drive In Theatres			
The building is not a special use building under the NSW variations therefore Parts I4, I5 and I6 are not applicable.			

SECTION J: ENERGY EFFICIENCY

Section J: Energy Efficiency (Class 3, 5, 6, 7b, 8, 9)
Section J is a specialist area that addresses the building fabric, building sealing, mechanical ventilation, lighting and building management systems. Compliance with Section J generally requires detailed design by a combination of consultants which may include Energy consultants, Façade Engineers and Mechanical and electrical engineers**.** Given the specialist nature of Section J, and the need for design by other consultants, it is not within the scope of this BCA Assessment Report.

Annexure E - Definitions

Average specific extinction area

Average specific extinction area means the average specific extinction area for smoke as determined by AS 5637.1:2015.

Critical radiant flux

Critical radiant flux (CRF) means the critical heat flux at extinguishment (CHF in kW/m2) as determined by AS ISO 9239.1:2003.

Designated bushfire prone area

Designated bushfire prone area means land which has been designated under a power of legislation as being subject, or likely to be subject, to bushfires.

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).

Envelope

Envelope, for the purposes of Section J in Volume One, means the parts of a building's fabric that separate a conditioned space or habitable room from—

1. the exterior of the building; or
2. a non-conditioned space including—
    a. the floor of a rooftop plant room, lift-machine room or the like; and
    b. the floor above a carpark or warehouse; and
    c. the common wall with a carpark, warehouse or the like.

Exit

Exit means –

1. Any, or any combination of the following if they provide egress to a road or open space—
    a. An internal or external stairway.
    b. A ramp.
    c. A fire-isolated passageway.
    d. A doorway opening to a road or open space.
    e. A horizontal exit or a fire-isolated passageway leading to a horizontal exit.

Fire compartment

Fire compartment means –

1. the total space of a building; or
2. when referred to in—
    a. 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
    b. 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—

1. structural adequacy; and
2. integrity; and
3. insulation,

and expressed in that order.

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

Fire-source feature

1. the far boundary of a road, river, lake or the like adjoining the allotment; or
2. a side or rear boundary of the allotment; or
3. 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.

Flammability index

Flammability Index means the index number as determined by AS 1530.2:1993.

Group number

Group number means the number of one of 4 groups of materials used in the regulation of fire hazard properties and applied to materials used as a finish, surface, lining, or attachment to a wall or ceiling.

Horizontal exit

Horizontal exit means a required doorway between 2 parts of a building separated from each other by a fire wall.

Loadbearing

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

Non-combustible

Non-combustible means—

1. applied to a material — not deemed combustible as determined by AS 1530.1:1994 — Combustibility Tests for Materials; and
2. 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–

1. that is open to the sky; and
2. to which access is provided, other than access only for maintenance; and
3. 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.

Sarking-type material

Sarking-type material means a material such as a reflective insulation or other flexible membrane of a type normally used for a purpose such as waterproofing, vapour management or thermal reflectance.

Smoke developed index

Smoke developed index means the index number for smoke as determined by AS/NZS 1530.3.

Smoke development rate

Smoke development rate means the development rate for smoke as determined by testing flooring materials in accordance with AS ISO 9239.1.

Smoke growth rate index

Smoke growth rate index (SMOGRA RC) means the index number for smoke used in the regulation of fire hazard properties and applied to materials used as a finish, surface, lining or attachment to a wall or ceiling.

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—

1. a dwelling; or
2. a room or suite of rooms in a Class 3 building which includes sleeping facilities; or
3. a room or suite of associated rooms in a Class 5, 6, 7, 8 or 9 building; or
4. 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.

Annexure F - BCA Compliance Specification

The following BCA matters (including any applicable NSW variations) are to be addressed by specific BCA Design Certificate to be issued by the relevant architectural, services and engineering consultants at the Construction Certificate Stage and to satisfy their obligations under the Design and Building Practitioners Act 2020 within their individual design compliance declarations.

This schedule should be forwarded to all consultants to obtain verification that these items have and will be included in the design documentation / specifications:

Architectural Design Certification

1. Lightweight construction used to achieve required fire resistance levels will comply with Specification C2D9 of the BCA.
2. Building elements must be non-combustible in accordance with C2D10 of the BCA.
3. Materials, floor and wall linings/coverings, surface finishes and air-handling ductwork used in the works will comply with the fire hazard properties of Clause C2D11 and Specification 7 of the BCA.
4. Any concrete external walls that could collapse as complete panels (e.g. tilt-up and pre-cast concrete), in a building having a rise in storeys of not more than 2, will comply with Specification C2D12.
5. Any fire-protected timber proposed will comply with Clause C2D13 of the BCA.
6. Any ancillary elements fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible will comply with Clause C2D14 of the BCA.
7. The large isolated building will be in accordance with Clause C3D4 of BCA.
8. Vehicular access to a large isolated building will be in accordance with Clause C3D5 of the BCA.
9. Class 9 buildings will be separated in accordance with Clause C3D6 of the BCA.
10. Vertical separation will be provided to the new openings in the external walls in accordance with Clause C3D7 of the BCA. It is noted that no spandrel separation is required in the stairway or to a void.
11. The fire walls proposed to separate buildings and/or fire compartments will comply with Clause C3D8 of the BCA.
12. The parts of different classifications located alongside one another in the same storey will be separated in accordance with Clause C3D9 and Specification 5 of the BCA.
13. Floors separating storeys of different classifications will comply with BCA Clause C3D10 of the BCA.
14. Equipment will be separated in accordance with Clause C3D13 of the BCA.
15. The electricity substation, any main switch room sustaining emergency equipment required to operate in emergency mode, will be separated from the remaining building with construction having an FRL 120/120/120 and provided with self-closing -/120/130 fire doors in accordance with Clause C3D14 of the BCA.
16. The public corridors will be divided into intervals of not more than 40m in length with smoke proof walls in accordance with Clause C3D15, and S11C2 of the BCA.
17. Openings in the external walls that are required to have an FRL will be in located in accordance with Clause C4D3 and C4D4 of the BCA or protected in accordance with Clause C4D5 of the BCA.
18. The external walls and openings of separate fire compartments will be protected in accordance with Clause C4D4.

19. Doorways in any fire walls separating fire compartments will be protected in accordance with Clause C4D6 of the BCA.
20. Sliding fire doors in a fire wall which is open when the building is use will be installed in accordance with Clause C4D7 of the BCA.
21. Doorways in horizontal exits will be protected in accordance with Clause C4D8 of the BCA.
22. Doors in a fire-isolated exit will be self-closing or automatic closing fire doors with an FRL of not less than -/60/30 in accordance with Clause C4D9 of the BCA.
23. Fire-isolated stairways will not be penetrated by services other than those permitted by Clause C4D10 of the BCA.
24. Services penetrating elements required to possess an FRL including the floor slabs, walls, shafts, etc. will be protected in accordance with Clause C4D13, C4D14. and C4D15 and Specification 13 of the BCA.
25. Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation will be protected in accordance with BCA Clause C4D16.
26. The lift doors will be -/60/- fire doors complying with AS 1735.11:1986 in accordance Clause C4D11 of the BCA.
27. Doorways and other openings in internal walls required to have an FRL will be protected in accordance with Clause C4D12 of the BCA.
28. Columns protected by light weight construction will achieve an FRL not less than the FRL for the element it is penetrating, in accordance with Clause C4D17 of the BCA.
29. A lintel will have the FRL required for the part of the building in which it is situated, unless it does not contribute to the support of a fire door, fire window or fire shutter, and it spans an opening in masonry which is not more than 150 mm thick and is not more than 3m wide if the masonry is non- loadbearing; or not more than 1.8m wide if the masonry is loadbearing and part of a solid wall or one of the leaves of a cavity wall, or it spans an opening in a non-loadbearing wall of the Class 2 or 3 building, in accordance with S5C4 of the BCA.
30. All attachments to the external façade of the building will be fixed in a way that does not affect the fire resistance of that element in accordance with S5C6 of the BCA.
31. The top and bottom of the riser shafts will achieve an FRL not less than the FRL required for the walls of the shaft in accordance with S5C8 of the BCA.
32. Smoke-proof walls and doorways required in the health care or aged care building will be in accordance with Specification 11 of the BCA.
33. Fire doors will comply with AS 1905.1:2015 and Specification 12 of the BCA.
34. Smoke doors will be constructed so smoke will not pass from one side of the doorway to the other in accordance with Specification 12 of the BCA.
35. Fire shutters and fire windows will be in accordance with Specification 12 of the BCA.
36. The number of exits provided to the building will be in accordance with Clause D2D3 of the BCA.
37. The required exits will be fire-isolated in accordance with Clause D2D4 of the BCA.
38. Travel distances to exits will be in accordance with Clause D2D5 of the BCA.

39. The alternative exits will be distributed uniformly around the storey and will not be less than 9m apart, and not more that 45m apart in the residential portion or patient care areas in the health-care building or 60m, in accordance with Clause D2D6 of the BCA.
40. The dimensions of exits and paths of travel to exits, including the height, width, and width of doorways will be provided in accordance with D2D7 to D2D10 of the BCA.
41. The fire-isolated exits will be in accordance with Clause D2D12 of the BCA.
42. The external stairway or ramp serving as a required exit will be in accordance with Clause D2D13 of the BCA.
43. Smoke separation will be provided between the exit stairs at the level of discharge in accordance with Clause D2D14 of the BCA.
44. Discharge from exits will be in accordance with Clause D2D15 of the BCA.
45. Horizontal exits will be in accordance with Clause D2D16 of the BCA.
46. The non-required stairways, ramps and escalators will be in accordance with Clause D2D17 of the BCA.
47. The ladder from the plant, lift machine rooms, and electricity network substation in lieu of a stairway will be in accordance with Clause D2D21 of the BCA.
48. Access to the lift pit will be in accordance with Clause D2D22 of the BCA.
49. The stairway or ramp within the fire-isolated shaft is to be non-combustible, and if there is a local failure will not cause structural damage or impair the fire resistance of the shaft, in accordance with Clause D3D3 of the BCA.
50. The non-fire isolated stairs will be constructed in accordance with Clause D3D5 of the BCA.
51. The construction separating rising and descending stairs in the fire-isolated exit stairway will be non-combustible and smoke proof, in accordance with Clause D3D5 of the BCA.
52. The ramp or balcony provided for smoke hazard management requirements will be in accordance with Clause D3D6 of the BCA.
53. The smoke lobby to the fire-isolated exit will be constructed in accordance with Clause D3D7 of the BCA.
54. The construction of EDB’s and telecommunications distribution boards will be in accordance with Clause D3D8 of the BCA with the enclosure bounded by non-combustible construction or fire protective covering and smoke seals provided around the perimeter of the non-combustible doors and any openings sealed with non-combustible mastic to prevent smoke spreading from the enclosure.
55. The enclosing walls and ceiling under the non-fire-isolated stairway will achieve an FRL of 60/60/60 and have a self-closing -/60/30 fire door, in accordance with Clause D3D9 of the BCA.
56. New pedestrian ramps will comply with AS 1428.1:2009, Clause D3D11 and Part D4 of the BCA. The floor surface of a ramp must have a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013.
57. The fire-isolated passageway will be in accordance with Clause D3D12 of the BCA.
58. The roof of the building where the exit discharges will have an FRL of 120/120/120, and will not have roof lights or openings within 3m of the path of travel in accordance with Clause D3D13 of the BCA.
59. Stair geometry will be in accordance with Clause D3D14 of the BCA. Stair treads are to have a surface with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013.

60. Landings and door thresholds throughout the development will be provided in accordance with Clause D3D15 and D3D16 of the BCA. Landings will have either a surface with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013 or a strip at the edge of the landing with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013.
61. The handrails and balustrades to all stairs and throughout the building will be in accordance with D3D17 to D3D22 of the BCA.
62. The fixed platform, walkway, stairway and ladder and any associated going and riser, landing handrail, balustrade, located within the machinery room, boiler house, lift-machine room, plant-room, or non-habitable attic/storeroom within the sole occupancy unit will comply with AS 1657:2018 or Part D3 of the BCA.
63. The doorways and doors will be in accordance with Clause D3D24 and D3D25 of the BCA.
64. Door latching mechanisms will be in accordance with Clause D3D26 of the BCA
65. Re-entry doors from the fire-isolated exits will be in accordance with Clause D3D27 of the BCA.
66. Signage will be provided on fire and smoke doors in accordance with Clause D3D28 of the BCA.
67. The openable portion of a window in a 9b early childhood centre or a bedroom of a Class 2, 3, 4 building will be protected with a restricting device or secure screen that does not allow a 125mm sphere to pass through the opening or screen and resist an outward horizontal action of 250N in accordance with Clause D3D29 of the BCA. In addition to window protection, and for other openable windows 4 meters or more above the ground below, a barrier with a height not less than 865mm above the floor will be installed to the openable window.
68. The new works will be accessible in accordance with Clause D4D1 to D4D4 of the BCA, and with AS 1428.1:2009, with particular note to door circulation spaces, accessway widths, turning spaces and floor coverings, in accordance with Part D4 of the BCA.
69. Accessible carparking will be in accordance with Clause D4D6 of the BCA.
70. Braille and tactile signage will in accordance with Clause D4D7, and Specification 15 of the BCA.
71. Hearing augmentation system will be provided in accordance with Clause D4D8 of the BCA.
72. Tactile ground surface indicators will be provided in accordance with Clause D4D9 of the BCA and AS/NZS 1428.4.1:2009.
73. Fixed wheelchair seating will be in accordance with Clause D4D10, and Table D4D10 of the BCA.
74. The entry/exit to the swimming pool will be in accordance with Clause D4D11, and Specification 16 of the BCA.
75. The ramps associated with the accessway will not have a combined vertical rise of more than 3.6m and a landing for a step ramp will not overlap a landing for another step ramp of ramp in accordance with Clause D4D12 of the BCA.
76. On an accessway, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, will be clearly marked in accordance with AS 1428.1:2009 and Clause D4D13 of the BCA.
77. The fire control centre will be in accordance with Specification 19 of the BCA.
78. Fire precautions whilst the building is under construction will be in accordance with Clause E1D16 of the BCA.

79. Additional provisions will be made in accordance with Clause E1D17 of the BCA, due to the special hazards associated with the building works or the location of the building works.
80. Non-illuminated exit signage will be installed in accordance with Clause E4D7, and of the BCA.
81. External above ground waterproofing membranes will comply with Clause F1D5 of the BCA and AS 4654 Parts 1 & 2:2012.
82. The new roof covering will be in accordance with Clause F3D1 of the BCA.
83. Any sarking proposed will be installed in accordance with Clause F3D2 of the BCA.
84. Waterproofing of all wet areas to the building will be carried out in accordance with Clause F2D2 of the BCA and AS 3740:2010.
85. Damp proofing of the proposed structure will be carried out in accordance with Clause F1D6 and F1D7 of the BCA.
86. Floor wastes will be installed to bathrooms and laundries above sole-occupancy units or public space in accordance with Clause F2D4 of the BCA.
87. Sub-floor ventilation will be provided in accordance with Clause F1D8 of the BCA.
88. All new glazing will be in accordance with Clause F3D4 of the BCA and AS 1288:2021 / AS 2047:2014 (incorporating amendments 1 and 2).
89. Sanitary facilities will be provided in the building in accordance with Clause F4D1, and F4D2 to F4D8 of the BCA.
90. Accessible sanitary facilities will be provided in the building in accordance with ClauseF4D5 and F4D6 of the BCA and AS1428.1:2009.
91. The construction of the sanitary facilities will be in accordance with Clause F4D8 of the BCA.
92. A slop-hopper will be provided in accordance with Clause F4D11 of the BCA.
93. An adult change facility is to be provided in accordance with clause F4D12 and Specification 27.
94. Ceiling heights will be in accordance with Clause F5D2 of the BCA.
95. Natural light will be provided in accordance with Clause F4.1, F4.2, and F4.3 of the BCA.
96. Natural ventilation will be provided in accordance with Clause F6D6, F6D7, and F6D8 of the BCA.
97. Water closets and urinals will be located in accordance with Clause F6D9 of the BCA.
98. The sanitary compartments will either be provided with mechanical exhaust ventilation or an airlock in accordance with Clause F6D10 of the BCA.
99. Pliable building membranes installed in external walls will comply with Clause F6.2 of the BCA and where a pliable building membrane is not installed in an external wall, the primary water control layer will be separated from water sensitive materials by a drained cavity.
100. Every storey of the carpark will be provided with an adequate system of permanent natural or mechanical ventilation in accordance with Clause F6D11 of the BCA.
101. A safe manner for cleaning of windows located 3 or more storeys above ground level will be provided in accordance with the Work Health & Safety Act 2011 and regulations made under that Act in accordance with NSW G1D5 of the BCA.
102. The swimming pool associated with the new building will comply with Clause G1D2 of the BCA and AS 1926 parts 1 and 2. (Note: Excludes NSW. See NSW G11D2 Variation below)

103. The refrigerated or cooling chamber, strongroom or vault will be in accordance with Clause G1D3.
104. Outdoor play spaces associated with the early childhood centre will be in accordance with Clause G1D4 of the BCA.
105. The stoves, heaters or similar appliances installed in the building will be in accordance with AS/NZS 2918:2018 and Clause G2D2 of the BCA.
106. Boilers and pressure vessels shall be installed in accordance with Specification 30 of the BCA.
107. Open fireplaces or fuel-burning appliances with an open fuel-burning compartment will be in accordance with Clause G2D3 of the BCA.
108. The incinerator room including hoppers will be in accordance with Clause G2D4 of the BCA.
109. The atrium will be in accordance with Part G3, and Specification 31 of the BCA.
110. The building is within an Alpine area and therefore will be in accordance with Part G4 of the BCA.
111. The building is within a bushfire prone area and therefore will be in accordance with Part G5 of the BCA. (Note: See NSW G5D3 Variation below)
112. The occupiable outdoor area is to comply with the requirements of Part G6 of the BCA.
113. The building is a theatre, stage, and public hall therefore will be in accordance with Part I1 of the BCA of the BCA.
114. The building is a public transport building therefore will be in accordance with Part I2 of the BCA.
115. The construction of the residential portions of the development will be undertaken in accordance with the relevant BASIX commitments that form part of the Development Consent approval.
116. Essential fire or other safety measures will be maintained and certified on an ongoing basis, in accordance with the provisions of the Environmental Planning and Assessment Regulation, 2000.
117. Building Fabric and Thermal Construction will be in accordance with Part J1 of the BCA.
118. Glazing will be in accordance with Part J1 of the BCA.
119. Building sealing will be in accordance with Part J3 of the BCA.
120. Facilities for Energy Monitoring will be provided in accordance with Clause J8.3 of the BCA.

Electrical Services Design Certification:

121. A smoke detection and alarm system will be installed throughout the building in accordance with Part E2 of the BCA.
122. Emergency lighting will be installed throughout the development in accordance with Clause E4D2 and E4D4 of the BCA and AS/NZS 2293.1:2018.
123. Exit signage will be installed in accordance with Clause E4D5, E4D7 and E4D8 of the BCA and AS/NZS 2293.1:2018.
124. An emergency warning and intercom system (EWIS) will be provided to the building in accordance with Clause E4D9 of the BCA.
125. Artificial lighting will be installed throughout the development in accordance Clause F6D5 of the BCA and AS/NZS 1680.0:2009.
126. Lighting power and controls will be installed in accordance with Part J6 of the BCA.

127. Electrical conductors located within the building that supply a main switchboard that sustains emergency equipment will comply with Clause C3D14 of the BCA.

Hydraulic Services Design Certification:

128. Storm water drainage will be provided in accordance with Clause F1D3 of the BCA and AS/NZS 3500.3:2018

129. Fire hydrant system will be installed in accordance with Clause E1D2 of the BCA and AS 2419.1:2021 as required.

130. Fire hose reels will be installed in accordance with Clause E1D3 of the BCA and AS 2441:2005.

131. A sprinkler system will be installed in accordance with Clauses E1D4 to E1D13 of the BCA as applicable, and, Specification 17 and appropriate part(s) of AS 2118.

132. A sprinkler system will be installed in accordance with Clause E1D6 of the BCA, Specification 18 and appropriate part(s) of AS2118, FPAA101D and FPAA101H.

133. Portable fire extinguishers will be installed in accordance with Clause E1D14 of the BCA and AS 2444:2001.

134. The heated water supply systems will be designed and installed to NCC Volume Three – Plumbing Code and Clause J7.2 of the BCA.

Mechanical Services Design Certification:

135. An air-handling system which does not form part of a smoke hazard management system will be installed in accordance with Clause E2D3 of the BCA, and AS 1668.1:2015.

136. Stair pressurisation will be installed in the building in accordance with Clause E2D4 of the BCA and AS 1668.1:2015.

137. Zone pressurisation will be installed in the building in accordance with Clause E2D6 of the BCA and AS1668.1:2015.

138. A smoke exhaust system will be installed in the building in accordance with Clause E2D10, and Specification 21 of the BCA.

139. Smoke and heat vents will be installed in the building in accordance with Clause E2D10, and Specification 21 of the BCA.

140. Where not naturally ventilated the building will be mechanically ventilated in accordance with Clause F6D6 of the BCA and AS 1668.2:2012.

141. Every storey of the car park will be ventilated in accordance with Clause F6D11 of the BCA and where not naturally ventilated it will be mechanically ventilated in accordance with AS 1668.2:2012 as applicable.

142. The commercial kitchen will be provided with a kitchen exhaust system in accordance with Clause F6D12 of the BCA, and AS 1668.1:2015 and AS 1668.2:2012.

143. Exhaust systems installed in a kitchen, bathroom, sanitary compartment or laundry of a Class 2 or 4 *sole-occupancy unit* will have a minimum flow rate and discharge location in accordance with Clause F8D4 of the BCA.

144. Where exhaust discharges directly or via shaft into a roof space of a Class 2 or 4 *sole-occupancy unit*, ventilation of the roof space will comply with Clause F8D5 of the BCA.

145. The air-conditioning and ventilations systems will be designed and installed in accordance with Part J5 of the BCA

146. Rigid and flexible ductwork will comply with the fire hazard properties set out in AS 4254 Parts 1 and 2.

Structural Engineers Design Certification:

147. The material and forms of construction for the proposed works will be in accordance with Clause B1D2, B1D3 and B1D4 of the BCA as follows:

    a. Dead and Live Loads – AS/NZS 1170.1:2002 (incorporating amendments 1 and 2)

    b. Wind Loads – AS/NZS 1170.2:2021

    c. Earthquake actions – AS 1170.4:2007

    d. Masonry – AS 3700:2018

    e. Concrete Construction – AS 3600:2018

    f. Steel Construction AS 4100:1998

    g. Aluminium Construction – AS/NZS 1664.1 or 2:1997

    h. Timber Construction – AS 1720.1:2010

    i. ABCB Standard for Construction of Buildings in Flood Hazard Areas.

148. The FRL's of building elements for the proposed works have been designed in accordance with Tables S5C11a to S5C11g of the BCA for a building of Type A Construction, Tables S5C21a to S5C21f of the BCA for a building of Type B Construction and Tables S5C24a to S5C24e of the BCA for a building of Type C Construction.

149. The lift shaft will have an FRL in accordance with S5C8 of the BCA.

150. Lightweight construction used to achieve required fire resistance levels will comply with Specification 6 of the BCA.

151. The construction joints to the structure will be in accordance with Clause C4D16 of the BCA to reinstate the FRL of the element concerned.

152. The concrete panel external walls will be in accordance with Specification C2D12 of the BCA.

153. Upon completion of the works, a structural engineer will be able to certify that local failure will be in accordance with Clause D3D3 of the BCA for the fire isolated stairs.

Lift Services Design Certification:

154. The lifts throughout the development will be provided with stretcher facilities in accordance with Clause E3D3 of the BCA and will be capable of accommodating a stretcher with a patient lying horizontally by providing a clear space not less than 600mm wide x 2000mm long x 1400mm high above the floor level.

155. Warning signage in accordance with Clause E3D4 of the BCA will be provided to advise not to use the lifts in a fire.

156. An emergency lift will be provided in the building in accordance with Clause E3D5 of the BCA.

157. A fire service recall control switch is to be installed on a landing at a location nominated by the appropriate authority in accordance with Clause E3D11.

158. A lift car fire service drive control switch is to be installed within the lift car in accordance with Clause E3D9.

159. Access and egress to the lift landings will comply with the Deemed-to-Satisfy Provisions of D4 of the BCA and will be suitable to accommodate disabled persons.

160. The type of lifts will be suitable to accommodate persons with a disability in accordance with Clause E3D8 and will have accessible features in accordance with that clause.

161. The lifts will comply with AS 1735.12:1999 in accordance with Clause E3D8 of the BCA.

162. All electric passenger lifts and electrohydraulic passenger lifts shall comply with Specification 24 of the BCA.

Acoustic Services Design Certification:

163. The sound transmission and insulation of the residential portions of the development will comply with Part F75 of the BCA.

NSW Specification Design Certificate:

164. Materials, floor and wall linings/coverings, surface finished and air-handling ductwork used in the works will comply with the fire hazard properties in accordance with Clause C2D11, NSW Clause C2D11, Specification 7 and NSW Specification 7 of the BCA.

165. The building will be separated in accordance with Clause C3D6, and NSW Clause C3D6 of the BCA.

166. Doorways and other openings in internal walls required to have an FRL will be protected in accordance with Clause C4D12, and NSW Clause C4D12 (4) and (5) of the BCA.

167. The number of exits provided to the building will be in accordance with Clause D2D3 and NSW Clause D2D3(4) of the BCA.

168. The discharge points of exits will be in accordance with Clause D2D15, and NSW Clause D2D15(6) of the BCA.

169. The width of doorways in exits and paths of travel to exits will be provided in accordance with Clause D2D96, and NSW Clause D2D9(a) to (g) of the BCA.

170. Stair geometry to the new stairways will be in accordance with Clause D3D14, and NSW Clause D3D14(1) of the BCA. Stair treads are to have a surface with a slip-resistance classification complying with Table D3D154 when tested in accordance with AS 4586:2013 or a nosing strip with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013.

171. Landings and door thresholds throughout the development will be provided in accordance with Clause D3D15 and D3D162.15, and NSW Clause D3D16(a) to (e) of the BCA. Landings to have either a surface with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013 or a strip at the edge of the landing with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013 where the edge leads to a flight below.

172. The height of barriers is to be in accordance with D3D18 and NSW D3D18(1) of the BCA.

173. The doorways and doors will be in accordance with Clause D3D24, NSW Clause D23D24(2) of the BCA.

174. The door latching mechanisms to the proposed required exit doors will be in accordance with Clause D3D26 and NSW Clause D3D26(5) and (6) of the BCA.

175. The swimming pool associated with the new building will comply with Clause G1D2 and NSW G1D2 of the BCA, Swimming Pools Act 1992, Swimming Pools Regulation 2018 and AS 1926.1:2012. AS 1926.2:2007 and AS 1926.3:2010.

176. The building is within a bushfire prone area therefore will be in accordance with Part G5, and NSW Part G5D3 of the BCA.
177. The building is a class 9b building and therefore will be in accordance with NSW Part I1.
178. The building is an Entertainment Venue and will be in accordance with NSW Part I4 of the BCA.
179. The temporary structure will be in accordance with NSW Part I5.
180. The development consists of a drive-in theatre therefore it is to comply with NSW Part I6.
181. Insulation will be in accordance with AS/NZS 4859.1:2018 and will be installed as required by NSW Part J1 of the BCA.
182. The building is a class 9b building and is required to have a smoke hazard management system in accordance with NSW E2D16 to E2D19 as appropriate.