BUILDING CODE OF AUSTRALIA COMPLIANCE REPORT

Mixed-Use Residential Unit Building Development

53-55 Donnison Street, Gosford

Date	**Prepared for**	**Reference No.**
24 May, 2023	Vlz Construction Pty Ltd	22166B – R1.1

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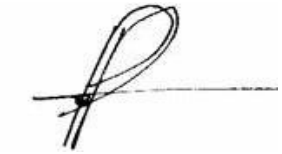 Paul Prestidge **Director** Grad Dip Build Surveying (UWS) Building Surveyor - Unrestricted Accreditation No. BDC1800 Member of the ASSOCIATION OF AUSTRALIAN CERTIFIERS	 Anthony Banham **Director** Grad Dip Build Surv. (UWS) ACAA Member – No. 291

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1 Contents

2 EXECUTIVE SUMMARY 4
2.1 General Summary 4
2.2 Matters Identified / Recommendations 4
2.3 Design Certifications 8
2.4 Compliance Statement 10
3 INTRODUCTION 11
3.1 General 11
3.2 Report Basis 11
3.3 Purpose of the Report 12
3.4 Building Code of Australia 12
3.5 Limitations 12
3.6 Assumptions 13
3.7 Relevant stakeholders 13
4 BUILDING ASSESSMENT DATA 14
4.1 Description of Development 14
4.2 BCA Assessment Information 14
4.3 Fire Sources Features 15
4.4 Maximum Size of Fire Compartments 16
4.5 Terminology 16
5 BCA ASSESSMENT 19
6 CONCLUSION 124
7 APPENDIX 125
7.1 Fire Safety Schedule (Draft) 125
7.2 Glossary of Terms 126
7.3 Table – FRL of Building Elements – Type A Construction 128

2 EXECUTIVE SUMMARY

2.1 General Summary

Ai Consultancy has been engaged by Vlz Construction Pty Ltd to carry out a Building Code of Australia compliance review of the Residential Unit Building Development proposed at 53 - 55 Donnison Street, Gosford.

In accordance with the client's instructions, we have completed this report with the principal objective of establishing the extent to which the proposal achieves compliance with the Building Code of Australia 2019, Amendment 1, Volume 1 (BCA) including any NSW variations. Within the report we provide recommendations as to the works required to achieve the specified outcomes of this legislation.

2.2 Matters Identified / Recommendations

The following table provides a list of Deemed-To-Satisfy compliance departures with the proposed design:

Recommended Deemed-To-Satisfy Compliance Solutions		
Item No.	**BCA Clause**	**Comment**
1	Spec C1.1	All building elements to achieve the fire resistance levels of Type A Construction as outlined in Specification C1.1 (Refer Appendix A). Typical fire resistance levels for different classifications are as follows: Class 2 – FRL 90/90/90 Class 7a and 9 – FRL 120/120/120 Class 7b – FRL 240/240/240
2	C1.9	The following elements and their components are required to be non-combustible: • External walls and common walls, including all components incorporated in them including the façade covering, framing and insulation. • Non-loadbearing internal walls where they are required to be fire-resisting. The façade engineer is to provide details with the application for CC including evidence of suitability under BCA A5.2 via the following; (a) a current CodeMark certificate, (b) a current certificate of Accreditation, (c) a report issued by an Accredited Testing Laboratory or a certificate, or (d) a report from a professional engineer for each non-combustible ancillary element.
3	A5.5, C1.10 and NSW Spec. C1.10	The fire hazard properties for all floor linings and coverings, wall and ceiling linings are to be provided by the manufacture in the form of the following; (a) a current CodeMark certificate, (b) a current certificate of Accreditation, (c) a report issued by an Accredited Testing Laboratory Air-handling ductwork – Rigid and flexible ductwork in a Class 2 to 9 building must comply with the relevant fire hazard properties set out in AS4254.1 and AS4254.2 and provided to the Principal Certifier prior to issue of the Construction Certificate.

		The rigid and flexible air-handling ductwork must comply with the relevant fire hazard properties set out in AS4254.1 and AS4254.2 in the form of the following; (a) a current CodeMark certificate, (b) a current certificate of Accreditation, (c) a report issued by an Accredited Testing Laboratory
4	C1.14	The façade engineer is to provide evidence of suitability under BCA A5.2 via the following; (a) a current CodeMark certificate, (b) a current certificate of Accreditation, (c) a report issued by an Accredited Testing Laboratory or a certificate, or (d) a report from a professional engineer for each non-combustible ancillary element.
5	C2.8	The following FRL's are to be provided to walls separating classifications in the same storey, alternatively each building element in that storey must have the higher FRL prescribed in Specification C1.1: Class 2 – FRL 90/90/90 Class 7a and 9 – FRL 120/120/120 Class 7b – FRL 240/240/240 Where a part of a building has been designed, constructed or adapted for a different purpose and is less than 10% of the floor area of the storey it is situated on, the classification of the other part of the storey may apply to the whole storey. (does not apply where the minor use of a building is Class 2, 3 or 4). The Class 7b store area/waste rooms are greater than 10% of the floor area of each storey, therefore each classification applies.
6	C2.9	The following FRL's are to be provided to floors separating classifications in different storeys. Class 2 – FRL 90/90/90 Class 7a and 9 – FRL 120/120/120 Class 7b – FRL 240/240/240 A section plan identifying the required FRL is to be provided with the structural details to confirm compliance.
7	C3.8	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. The fire isolated passageway door opinion to open space is not shown as being provided with a door. A door schedule is to be provided to confirm compliance.
8	C3.10	Lift manufacturer details and certification is to be provided to confirm design compliance for the openings in fire-isolated lift shafts.
9	D1.2, G3.7	The building is greater than 25m effective height (28.6m) and includes an atrium (atrium 2). On that basis two exits are required on each storey if the building. The following is noted: • Two exits are not provided to basement levels 1 and 2.

		• Two exits are not provided to the class 2 portions of the building (first floor to sixth floor). • Two exits are not provided to the class 9b rooftop terrace.
10	D1.4	The following areas are greater than 20m from a single exit: **Basement Level 2** • Exit distance on basement level 2 exceeds 20m to a single exit. (~22.5m) **Basement Level 1** • Exit distance from the Plant Room on basement level 1 exceeds 20m to a single exit. (~20.5m)
11	D1.7	The path of travel from the point of discharge of the fire-isolated exit necessitates passing within 6 m of another part of the external wall of the same building, measured horizontally at right angles to the path of travel. That part of the wall must have an FRL of not less than 60/60/60, and openings protected internally in accordance with C3.4 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.
12	D2.4	The rising and descending fire isolated stairway/s (from below and above) discharges into the same fire passageway at the ground floor level.
13	D2.10	The ramp serving the communal garden, play area and outdoor gym is required to be designed to comply with AS1428.1-2009, its noted than a grade of 1:10 does not comply. It's noted that compliance with BCA D3 and AS1428.1-2009 is outside the scope of this report.
14	D2.21	Lever downward action door hardware are to be provided to required exits and paths of travel doors and are to be openable without a key from the side seeking egress.
		Doorways serving areas required to be accessible in accordance with D3 BCA are to be provided with lever downward action door hardware that the hand of a person who cannot grip will not slip from the handle during operation of the latch and have clearance between the handle and the back plat or door face at the centre grip section of the handle of not less than 35mm and not more than 45mm.
15	E1.3	Hydraulic details and design certificate is to be provided from a licensed (competent) fire safety practitioner to confirm compliance with AS2419-2005. Also refer to G6.6 regarding the rooftop in this regard.
16	E1.4	Basement 2, Basement 1, the Ground level and the Rooftop Terrace are required to be served by a hose reel system. Hydraulic details and design certificate is to be provided from a licensed (competent) fire safety practitioner to confirm compliance with AS2441-2005.
17	E1.5	The building has a rise in storeys of ten (10) and an effective height of more than 25m (28.6m). The entire building is to be

		provided with a sprinkler system to comply with BCA Spec E1.5 and Spec E1.5a, AS2118.1-2017 and AS2419-2005. Hydraulic details and design certificate is to be provided from a licensed (competent) fire safety practitioner. It's noted that the identified sprinkler booster and pump locations have not been shown on the plans.
18	E1.8	The building has an effective height of 28.6m, a fire control centre is required, however it is not required to be within a separate room as the building is less than 50 m in effective height. This centre is not shown on the architectural plans.
19	E1.10, E2.3	The architectural plans show EV Charging space/s within the basement level carpark. Given the extreme associated fire risks with EV vehicle fires it is recommended that special consideration be given by the licensed (competent) fire safety practitioner designing the fire systems. It is also noted that Fire and Rescue NSW frequently raise the location of EV chargers within the basement carparking level as a matter of concern when considering comments in relation to fire engineered performance solutions.
20	E2.2 & Spec E2.2a	The fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp serving is required to be provided with an automatic air pressurisation system for fire-isolated exits in accordance with AS 1668.1 as the fire-isolated stairway serve storeys above an effective height of 25 m;
		The building is to be provided with a smoke detection system complying with Spec. E2.2a and 1670.1.
		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.
		A fire alarm monitoring system connected to a fire station or fire station dispatch centre in accordance with AS 1670.3 is required.
		A Class 7a building, including a basement, provided with a mechanical ventilation system in accordance with AS 1668.2 must comply with clause 5.5 of AS 1668.1 except that— (a) fans with metal blades suitable for operation at normal temperature may be used; and (b) the electrical power and control cabling need not be fire rated.
21	E3.1, E3.2, E3.6, E3.7, E3.8, E3.9	The lift design is to comply with E3.1, E3.2, E3.6, E3.7, E3.8, E3.9 and AS1735 and manufacturer details are to be provided, the lift is required to be a stretcher and emergency lift.
22	E4.2, E4.5 & E4.6	Emergency lighting, exit sign and direction signs are required in common corridors, required non and fire-isolated stairways, lift and public areas. Electrical details and design certificate are required to confirm compliance.
23	F4.2 & F4.6	Habitable rooms are to be provided with a minimum 10% natural light and 5% natural ventilation. Where natural ventilation is not achievable, a mechanical ventilation or air-conditioning system complying with AS1668.2 and AS/NZS3666.1 is to be provided.

24	F4.11	Mechanical/natural details and design statement is to be provided for the ventilation system to serve the car park.
25	F5.4 & F5.5	A system for sound insulation of the floors/walls is to be provided on plans to demonstrate compliance with F5.4 & F5.5 and also specify the fire rating level (FRL's) in accordance with BCA Spec C1.1 and Table 3.
26	G3.2	Atrium 2 is not able to contain a cylinder having a horizontal diameter of not less than 6 m.

2.3 Design Certifications

The following table provides a consolidated list of BCA compliance matters that are required to be addressed by design certifications and/or specifications to be issued by the relevant architectural, services and engineering consultants:

Relevant Discipline	Compliance Requirements
Project Architect	▪ All service penetrations through fire rated elements will be protected with fire seals tested to achieve the required FRL in accordance with AS4072.1 and AS1530.4-2015 in accordance with BCA Spec C3.15. ▪ The finished surface materials to stairs, ramps and landings will achieve a slip resistance classification that accords with Tables D2.14 when tested to AS4586-2013. ▪ Balustrades will be provided to all elevated balconies, landings, stairs and ramps in accordance with Clause D2.16 of BCA 2019 Amendment 1. ▪ Handrails will be provided to all stairs and ramps in accordance with Clause D2.17 of BCA 2019, Amendment 1. ▪ The door latching mechanisms to the proposed required exit doors and doors within the path of travel to an exit will be in accordance with Clause D2.21 of BCA 2019, Amendment 1. ▪ Fire door signage will be provided to all doors entering/ exiting the fire isolated exits in the building to comply with Clause D2.23 of BCA 2019 Amendment 1. ▪ Water proofing membranes for external above ground use will comply with AS4654 Parts 1 and 2. ▪ Metal roof sheeting will comply with AS1562.1. ▪ Glazed assemblies to comply with AS2047 and AS1288. ▪ Bathrooms and/ or laundries will be provided with floor wastes per Clause F1.11 of BCA 2019, Amendment 1. ▪ Stairways will be constructed of the materials specified within BCA Clause D2.3.
Structural Engineer	▪ The building has been designed to resist all necessary actions and imposed loads determined in accordance with BCA Part B and the relevant Structural Australian Standards as they relate to the relevant materials and forms of construction. ▪ The FRL's of the structural elements for the proposed works have been designed in accordance with Table 3 for a building of Type A Construction of Specification C1.1 of BCA 2019 Amendment 1.

Relevant Discipline	Compliance Requirements
	▪ Joints in fire rated external walls are to have the required FRL with respect to integrity and insulation relative to the building element they are joining.
Hydraulic Consultant	▪ Fire hydrants will be installed in accordance with Clause E1.3 of BCA 2019 Amendment 1 and AS2419.1-2005 and any requirements of the Fire Engineered Performance Solution as required. ▪ Fire hose reels will be installed in the basement car park in accordance with Clause E1.4 of BCA 2019 Amendment 1 and AS2441-2005 as required. ▪ The building is to be provided with a Sprinkler system, hydraulic details and design certificate is to be provided from a competent fire safety practitioner to confirm compliance with Specification E1.5 and E1.5a, AS2118.1-2017 and AS2419-2005. ▪ Storm water drainage will be provided in accordance with and AS3500.3 and AS3500.5 (as appropriate) ▪ Portable Fire Extinguishers will be provided to protect the main switch board and the kitchen to comply with AS2444-2001 and Clause E1.6 of BCA 2019, Amendment 1.
Electrical Consultant	▪ The fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp serving is required to be provided with an automatic air pressurisation system for fire-isolated exits in accordance with AS 1668.1 ▪ A smoke detection and alarm system will be installed throughout the building in accordance with Table E2.2a, and Specification E2.2a of BCA 2019, Amendment 1 and AS1670.1-2015. ▪ 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. ▪ A fire alarm monitoring system connected to a fire station or fire station dispatch centre in accordance with AS 1670.3 is required. ▪ Emergency lighting will be installed throughout the development in accordance with Clause E4.2, E4.4 of BCA 2019, Amendment 1 and AS2293.1 – 2018. ▪ Exit signage will be installed in accordance with Clause E4.5, E4.7, and E4.8 of BCA 2019, Amendment 1 and AS2293.1– 2018.
Mechanical Consultant	▪ Enclosed areas of the building will be provided with compliant mechanical ventilation systems that accord with AS1668.2-2012 per Clause F4.5 of BCA 2019, Amendment 1. ▪ A Class 7a building, including a basement, provided with a mechanical ventilation system in accordance with AS 1668.2 must comply with clause 5.5 of AS 1668.1.
Lift Consultant	▪ Lift installations will comply with Spec E3.1 & Table E3.6b of BCA 2019. ▪ Lift landing doorways will be protected by a –/60/– FRL fire doors that comply with AS1735.11. ▪ Lift indicator panels in the wall of the fire isolated shaft will be backed by construction having an FRL of not less than –/60/60 if it exceeds 35,000mm2 in area.

2.4 Compliance Statement

It is deemed from the assessments carried out within this report that **the proposed development is capable of achieving compliance** with the relevant requirements of the National Construction Code 2019, Amendment 1, Volume 1 – Building Code of Australia Class 2 to 9 buildings ("BCA") subject to the recommendations/ works identified being accommodated into the finalised design documentation.

3 INTRODUCTION

3.1 General

This document represents the statutory compliance assessment and report for the Residential Unit Building and Basement Carpark Development proposed at 53 - 55 Donnison Street, Gosford.

This report has been completed with the principal objective of establishing the extent to which the proposal achieves compliance with the relevant statutory requirements of the Environmental Planning and Assessment Regulation 2000 ("the Reg") and in particular the Building Code of Australia 2019 Amendment 1, Volume 1 (BCA) including any NSW variations. Within the report we provide recommendations as to the works required to achieve the specified outcomes of this legislation.

Detailed commentary with regard to specific compliance departures identified is provided in the assessment tables under Section 5.0 of this report.

3.2 Report Basis

This report has been prepared on the basis of the following:

- Architectural plans prepared by ELK Designs as follows:

Title	Sheet No.	Rev	Date
Cover Page	DA000	P7	14/07/2022
Site Plan	DA030	P7	14/07/2022
Basement 2 Plan	DA100	P11	20/02/2023
Basement 1 Plan	DA110	P11	20/02/2023
Ground Floor Plan	DA120	P10	14/07/2022
First Floor Plan	DA130	P10	14/07/2022
Second Floor Plan	DA140	P10	14/07/2022
Third Floor Plan	DA150	P10	14/07/2022
Fourth Floor Plan	DA160	P10	14/07/2022
Fifth Floor Plan	DA170	P11	14/07/2022
Sixth Floor Plan	DA180	P11	14/07/2022
Roof Plan	DA190	P5	26/07/2022
Northern Elevation	DA300	P6	14/07/2022
Eastern Elevation	DA301	P6	14/07/2022
Southern Elevation	DA302	P6	14/07/2022
Western Elevation	DA303	P6	14/07/2022
External Finishes	DA350	-	06/03/2023

- National Construction Code Series 2019, Amendment 1, Building Code of Australia for Class 2 to 9 Buildings, published by the Australian Building Codes Board (ABCB).
- The Guide to the National Construction Code Series 2019, Amendment 1, Building Code of Australia or Class 2 to 9 Buildings, published by the Australian Building Codes Board (ABCB).

3.3 Purpose of the Report

The purpose of this report is to:

- Identify the relevant Deemed-to-Satisfy Provisions of the Building Code of Australia 2019 Amendment 1, Volume 1 (BCA) in relation Clauses C, D1, D2 and E and provide any non-compliances with the relevant Clauses for the proposed development; and
- Provide a schedule of fire safety measures for the proposed development.

Section A2.1 of the Building Code of Australia 2019 Amendment 1, Volume 1 states that the Performance Requirements can only be satisfied by a:

(a) Performance Solution; or

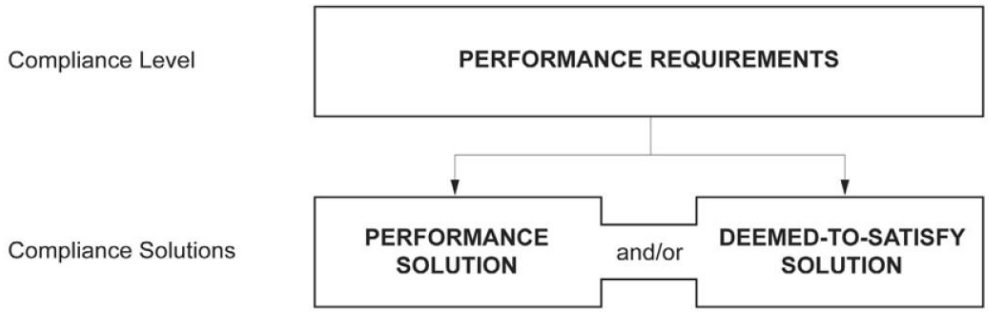
(b) Deemed-to-Satisfy Solution; or

(c) A combination of (a) and (b).

The following is noted:

- the term *Performance Solution* was formerly known as *Alternative Solution*
- The terms *Performance Solution* and *Deemed-to-Satisfy Solution* were formerly used under the term *Building Solution.*

Figure 1: NCC compliance option structure



3.4 Building Code of Australia

This report is based on the Deemed-to-Satisfy Provisions of the Building Code of Australia 2019 Amendment 1, Volume 1, and the NSW variations where applicable.

3.5 Limitations

This report is strictly limited to a statutory compliance Review of the project listed in the Executive Summary. This Report cannot be applied to any other project or building design as the assessments are specific for this project only.

The statutory compliance assessment and report specifically excludes the following:

- Determining compliance with the BCA for matters other than addressed with in this report or addressing any matters outside the scope or limitations of the BCA.
- Compliance against Australian Standards and products, specialist advice for each standard and product must be to the satisfaction of the Design Architect.
- The operations of any of the installed (or to be installed) fire services.
- Protection of Property other than required by the Deemed-to-Satisfy provisions of the BCA, unless specifically referenced in the report (i.e. for Heritage purposes).
- Fires caused by arson, other than as a single source of fire initiation, or terrorist attacks.
- Emergencies other than for fires and fire related evacuations.

- This report has been prepared for the exclusive use of the client referred to on the cover sheet of this report. We do not warrant or accept liability for the reliance upon or use of this report by any other party.
- The report considers matters of a significant nature only and should not be considered exhaustive.
- The report does not consider structural adequacy of the building.
- Any service provider requirements are outside the scope of this report (e.g. Sydney Water, Telstra, etc)

3.6 Assumptions

The assumptions of this report are as follows:

- This report provides a Statutory Compliance assessment to confirm compliance of proposed development with the relevant Performance Requirements of the BCA.
- The assessment and subsequent recommendation(s) provided by this report is based on the design documentation provided for assessment and as listed in Section 3.2. Any future alteration, enlargement or addition will require re-assessment of the revised design documentation.
- The building/s will be subject to ongoing annual maintenance as required by the AFSS.

3.7 Relevant stakeholders

The relevant stakeholders for this project are as listed in the table below.

Role	Organisation
Client	Vlz Construction Pty Ltd
Consent Authority	Central Coast Council
Architect	ELK Designs
Principal Certifier	TBC
BCA Consultant	Paul Prestidge, Ai Consultancy
Access Consultant	TBC

4 BUILDING ASSESSMENT DATA

4.1 Description of Development

The development, subject to this report, is located at 53 - 55 Donnison Street, Gosford.

The development consists of a Residential Unit Building Development.

4.2 BCA Assessment Information

This section incorporates the relevant provisions contained in the BCA. A summary of the compliance status of the architectural design is subsequently provided relevant to each clause.

Alongside each clause heading; compliance shall be indicated by using one (or more) of the following compliance categories –

<table>
<tr><th>Characteristic</th><th colspan="2">Description</th></tr>
<tr><td rowspan="6">Building Classification</td><td>Class 2</td><td>Residential Units</td></tr>
<tr><td>Class 7a</td><td>Carpark</td></tr>
<tr><td>Class 7b</td><td>Storage/Waste *</td></tr>
<tr><td>Class 9b</td><td>Rooftop Terrace</td></tr>
<tr><td colspan="2">* The Class 7b store room and waste storage on the basement 2 level in the carpark is more than 10% of the floor area of the floor, therefore the Class 7b classification applies to these rooms.
**The Class 7b storage rooms on the basement 1 level in the carpark are less than 10% of the floor area of the floor, therefore the Class 7a classification applies.
<table>
<tr><th>Room</th><th>Storey</th><th>Area</th><th>%</th></tr>
<tr><td>Basement 2</td><td>612.4m^2</td><td>84.8m^2</td><td>13.85%</td></tr>
<tr><td>Basement 1</td><td>592.4m^2</td><td>57.7m^2</td><td>9.75%</td></tr>
</table></td></tr>
<tr><td>Rise in Storeys</td><td colspan="2">Ten (10)</td></tr>
<tr><td>Levels Contained</td><td colspan="2">Ten (10)</td></tr>
<tr><td>Type of Construction</td><td colspan="2">Type A</td></tr>
<tr><td>Effective Height</td><td colspan="2"><50m (28.6m)</td></tr>
<tr><td rowspan="4">Floor Area</td><td>Basement 2</td><td>612.4m^2 (84.8 m^2 storage)</td></tr>
<tr><td>Basement 1</td><td>592.4m^2 (57.7m^2 storage)</td></tr>
<tr><td>Ground to Sixth Floor</td><td>N/A (Class 2)</td></tr>
<tr><td>Rooftop</td><td>833.65m^2</td></tr>
<tr><td>Total</td><td>2038.45m^2</td></tr>
</table>

BCA Assessment/Interpretation Notes:

- **Determining a building classification (BCA A6.0)**

  (1) The classification of a building or part of a building is determined by the purpose for which it is designed, constructed or adapted to be used.

(2) Each part of a building must be classified according to its purpose and comply with all the appropriate requirements for its classification.

Exemption 1: For A6.0(1) where a part of a building has been designed, constructed or adapted for a different purpose and is less than 10% of the floor area of the storey it is situated on, the classification of the other part of the *storey* may apply to the whole *storey*.

Limitation 1: *Exemption 1* does not apply where the minor use of a building is a laboratory or a Class 2, 3 or 4 part of a building.

(3) A room that contains a mechanical, thermal or electrical facility or the like that serves the building must have the same classification as the major part or principal use of the building or *fire compartment* in which it is situated.

(4) Unless another classification is more suitable an *occupiable outdoor area* must have the same classification as the part of the building to which it is associated.

4.3 Fire Sources Features

Summary table for the building setbacks.

Fire Source Feature	Setback	
Front (Northern) Allotment Boundary	Basement Level 2	~0m (Donnison Street)
	Basement Level 1	~0m (Donnison Street)
	Ground Floor to Second Floor	~3.9m (Donnison Street)
	Third Floor to Sixth Floor	6.0m
	Rooftop Terrace	~7.1m
Side (Eastern) Allotment Boundary	Basement Level 2	~3.9m
	Basement Level 1	~3.9m
	Ground Floor to Sixth Floor	~9.0m
	Rooftop Terrace	~10.2m
Side (Western) Allotment Boundary	Basement Level 2	2.88m (Batley Street)
	Basement Level 1	2.88m (Batley Street)
	Ground Floor to Second Floor	~3.0m (Batley Street)
	Third Floor Sixth	4.5m (Batley Street)
	Rooftop Terrace	~5.7m (Batley Street)
Rear (Southern) Allotment Boundary	Basement Level 2	9.2m
	Basement Level 1	9.2m
	Ground Floor to Second	~6.0m
	Third Floor Fifth	9.0m
	Sixth Floor	14.17m
	Rooftop Terrace	~17.7m

4.4 Maximum Size of Fire Compartments

Summary table for the size of fire compartments for Type A construction.

Classification	Type A Construction		Type B Construction		Type C Construction	
5, 9b or 9c	Max floor area	8000m^2	Max floor area	5500m^2	Max floor area	3000m^2
	Max volume	48000m^3	Max volume	33000m^3	Max volume	18000m^3
6, 7, 8 or 9a (except for patient care areas)	Max floor area	5000m^2	Max floor area	3500m^2	Max floor area	2000m^2
	Max volume	30000m^3	Max volume	21000m^3	Max volume	12000m^3

4.5 Terminology

- **An Accredited Practitioner (Fire Safety)** - Is the holder of an accreditation under the *Building and Development Certifiers Act 2018* that authorises the holder to exercise the functions of an accredited practitioner (fire safety).
- **Building Code of Australia** - Document published on behalf of the Australian Building Codes Board. The BCA is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia and is adopted in NSW under the provisions of the Environmental Planning & Assessment Act & Regulation.
- **Effective height** - Effective height means the vertical distance between the floor of the lowest storey included in a determination of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units).
- **Exit** - means –
  (a) Any, or any combination of the following if they provide egress to a road or open space—
    (i) An internal or external stairway.
    (ii) A ramp.
    (iii) A fire-isolated passageway.
    (iv) A doorway opening to a road or open space.
  (b) A horizontal exit or a fire-isolated passageway leading to a horizontal exit.
- **Fire compartment** - means –
  (a) the total space of a building; or
  (b) when referred to in—
    (i) the Performance Requirements — any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any openings adequately protected; or
    (ii) the Deemed-to-Satisfy Provisions — any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that required for a fire wall for that type of construction and where all openings in the separating construction are protected in accordance with the Deemed-to Satisfy Provisions of the relevant Part.
- **Fire Resistance Level (FRL)** - means the grading periods in minutes tested in accordance with AS 1530.4-2005 for the following criteria -
  (a) structural adequacy; and
  (b) integrity; and
  (c) insulation,
  (d) and expressed in that order.

- **Fire Source Feature (FSF)** - the far boundary of a road adjoining the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building.
- **Fire wall** - Fire wall means a wall with an appropriate resistance to the spread of fire that divides a storey or building into fire compartments.
- **Loadbearing** - Intended to resist vertical forces additional to those due to its own weight.
- **Non-combustible -** Non-combustible means—
  (a) applied to a material — not deemed combustible as determined by AS 1530.1:1994 — Combustibility Tests for Materials; and
  (b) applied to construction or part of a building — constructed wholly of materials that are not deemed combustible
- **Occupiable outdoor area** means a space on a roof, balcony or similar part of a building—
  (a) that is open to the sky; and
  (b) to which access is provided, other than access only for maintenance; and
  (c) that is not open space or directly connected with open space.
- **Open space** - means a space on the allotment, or a roof or other part of the building suitably protected from fire, open to the sky and connected directly with a public road.
- **Performance Requirements of the BCA** - A Building Solution will comply with the BCA if it satisfies the Performance Requirements. A Performance requirement states the level of performance that a Building Solution must achieve.

  Compliance with the Performance Requirements can only be achieved by-
  (a) complying with the Deemed-to-Satisfy Provisions; or
  (b) formulating an Alternative Solution which-
    (i) complies with the Performance Requirements; or
    (ii) is shown to be at least equivalent to the Deemed-to-Satisfy Provisions; or

  a combination of (a) and (b).
- **Public corridor** means an enclosed corridor, hallway or the like which—
  (a) serves as a means of egress from 2 or more sole-occupancy units to a required exit from the storey concerned; or
  (b) is required to be provided as a means of egress from any part of a storey to a required exit.
- **Rise in Storeys** means the greatest number of storeys calculated in accordance with C1.2 of the BCA.
- **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 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—
  (a) a dwelling; or
  (b) a room or suite of rooms in a Class 3 building which includes sleeping facilities; or
  (c) a room or suite of associated rooms in a Class 5, 6, 7, 8 or 9 building.
- **Storey** - means a space within a building which is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but not—
  (a) a space that contains only—
    (i) a lift shaft, stairway or meter room; or

(ii) a bathroom, shower room, laundry, water closet, or other sanitary compartment; or
(iii) accommodation intended for not more than 3 vehicles; or
(iv) a combination of the above; or

(b) a mezzanine

5 BCA Assessment

The following presents our assessment of the proposed development against the relevant Deemed-To-Satisfy requirements of the BCA in the context of the legislative considerations that are required of a Consent Authority (as outlined above.

The following categories are used throughout the assessment tables to provide an indication of the compliance status against each of the Deemed-To-Satisfy requirements.

Category	Description
Complies	Indicates that Deemed-to-Satisfy design compliance is achieved.
Capable	Typically issues that can be readily accommodated into the CC/CDC Design documentation by way of minor plan notation or verification of compliance in design certifications and/or specifications issued by the relevant architectural, services and engineering consultants
Does not comply	Indicates that a Deemed-to-Satisfy compliance departure/s is noted. Resolution options are provided.
Not applicable	Not applicable or not directly relevant.
Design Detail	Compliance commentary is provided. Such should not be considered deficiencies but matters for consideration by the design team / assessment authority at relevant / nominated stages of design.
For Info	General informational commentary.
Performance Solution	The opportunity exists to develop a Performance Solution to resolve the identified compliance departure.

Interpretation Note(s) –

i. Readily moveable furniture has been treated as indicative. The person/s responsible for furnishing the building (parts) should ensure their furnishing layout/s do not cause AS 1428.1 circulation deficiencies.

ii. *Slip-resistant floor surface/s* – BCA does not directly specify slip-resistance classification(s) for all accessible paths of travel; however, we highlight the need under AS1428.1-2009 for all accessible paths of travel to have a slip-resistant surface. We recommend you should seek surface finish advice from an independent specialist slip safety consultant.

Section C1 - FIRE RESISTANCE

BCA Clause	Description	Status	Comments
C1.1	Type of Construction	For Note Only	All building elements to achieve the fire resistance levels of Type A Construction as outlined in Specification C1.1 (Refer Appendix A). **Comment:** Details to be provided with the application for CC.
Spec C1.1	Fire Ratings	Capable	All building elements to achieve the fire resistance levels of Type A Construction as outlined in Specification C1.1 (Refer Appendix A). Typical fire resistance levels for different classifications are as follows: Class 2 – FRL 90/90/90 Class 7a and 9 – FRL 120/120/120 Class 7b – FRL 240/240/240

BCA Clause	Description	Status	Comments
	Fire-resistance of building elements	Capable	**Clause 3.1 - Fire-resistance of building elements** 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 3; or (iii) if under Clause 3.5 the roof is not *required* to comply with Table 3, 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 **Comment:** Fire protection is required in accordance with Spec C1.1 cl. 3.1(c)(ii) to a fire rated slab roof (as detailed above) is required. This facilitates combustible waterproofing to be include don the roof slab.
C1.2	Calculation of rise in storeys	For Note Only	Rise in Storeys of ten (10).
C1.3	Buildings of multiple classification	Complies	All parts of the building are required to be of Type A construction.
C1.4	Mixed Types of Construction	Complies	All parts of the building are required to be of Type A construction.
C1.5	Two Storey Class 2, 3 & 9c	Not Applicable	
C1.6	Class 4 Parts of buildings	Not Applicable	
C1.7	Open spectator stands and indoor sports stadiums	Not Applicable	
C1.8, Spec C1.8	Lightweight Construction	Not Applicable	(a) Lightweight construction must comply with Specification C1.8 if it is used in a wall system— (i) that is required to have an FRL; or (ii) for a lift shaft, stair shaft or service shaft or an external wall bounding a public corridor

BCA Clause	Description	Status	Comments
			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. (b) If lightweight construction is used for the fire-resisting covering of a steel column or the like, and if— (i) 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 (ii) 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.
C1.9	Non-combustible building elements	Capable	(a) In a building required to be of Type A or B construction, the following building elements and their components must be non-combustible: (i) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation. (ii) The flooring and floor framing of lift pits. (iii) Non-loadbearing internal walls where they are required to be fire-resisting. (b) 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— (i) a building required to be of Type A construction; and (ii) a building required to be of Type B construction, subject to C2.10, in— (A) a Class 2, 3 or 9 building; and (B) a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys.

BCA Clause	Description	Status	Comments
			(C) A loadbearing internal wall and a loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification C1.1. (d) The requirements of (a) and (b) do not apply to the following: (i) Gaskets. (ii) Caulking. (iii) Sealants. (iv) Termite management systems. (v) Glass, including laminated glass. (vi) Thermal breaks associated with glazing systems. (vii) Damp-proof courses. (e) The following materials may be used wherever a non-combustible material is required: (i) Plasterboard. (ii) Perforated gypsum lath with a normal paper finish. (iii) Fibrous-plaster sheet. (iv) Fibre-reinforced cement sheeting. (v) 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. (vi) Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than5. (vii) Bonded laminated materials where— (A) each lamina, including any core, is non-combustible; and (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and (C) 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.

<table>
<tr><th>BCA Clause</th><th>Description</th><th>Status</th><th>Comments</th></tr>
<tr><td></td><td></td><td></td><td>Comment: The façade engineer is to provide details with the application for CC including evidence of suitability under BCA A5.2 via the following;
(a) a current CodeMark certificate,
(b) a current certificate of Accreditation,
(c) a report issued by an Accredited Testing Laboratory, or
(d) a certificate or report from a professional engineer for each non-combustible building element.</td></tr>
<tr><td></td><td colspan="3">The following table lists building elements required to be non-combustible, concrete, or masonry in a building of Type A construction.

Building elements required to be non-combustible, concrete, masonry or fire-protected timber in a building of Type A construction
<table>
<tr><th>Building element</th><th>Type A construction</th></tr>
<tr><td>External wall</td><td>Non-combustible</td></tr>
<tr><td>Common wall</td><td>Non-combustible</td></tr>
<tr><td>Floor and floor framing of lift pit</td><td>Non-combustible</td></tr>
<tr><td>All loadbearing internal walls (including those of shafts)</td><td>Concrete, masonry or fire-protected timber</td></tr>
<tr><td>Loadbearing fire walls</td><td>Concrete, masonry or fire-protected timber</td></tr>
<tr><td>Non-loadbearing walls required to be fire-resistant</td><td>Non-combustible</td></tr>
<tr><td>Non-loadbearing lift, ventilation, pipe, garbage and like shafts which do not discharge hot products of combustion</td><td>Non-combustible</td></tr>
</table></td></tr>
<tr><td>A5.5, C1.10 and NSW Spec. C1.10</td><td>Fire Hazard Properties</td><td>Capable</td><td>The fire hazard properties of the following internal linings, materials and assemblies within a Class 2 to 9 building must comply with Specification C1.10:
(i) Floor linings and floor coverings.
(ii) Wall linings and ceiling linings.
(iii) Air-handling ductwork.
(iv) Lift cars.
(v) In Class 9b buildings used as—
(A) an entertainment venue, a material used to cover closed back upholstered seats; and
(B) a public hall or the like, a proscenium curtain required by Specification H1.3.
(vi) In Class 9b buildings used as a theatre, public hall or the like—
(A) fixed seating in the audience area or auditorium; and
(B) a proscenium curtain required by Specification H1.3.
(vii) Escalators, moving walkways and non-required non fire-isolated stairways or pedestrian ramps subject to Specification D1.12.</td></tr>
</table>

BCA Clause	Description	Status	Comments
			(viii) Sarking-type materials. (ix) Attachments to floors, ceilings, internal walls, common walls, fire walls and to internal linings of external walls. (x) Other materials including insulation materials other than sarking-type materials. **Comment:** The fire hazard properties for all floor linings and coverings, wall and ceiling linings are to be provided by the manufacture in the form of the following; (a) a current CodeMark certificate, (b) a current certificate of Accreditation, (c) a report issued by an Accredited Testing Laboratory, or (d) a certificate or report from a professional engineer for each non-combustible building element. Air-handling ductwork – Rigid and flexible ductwork in a Class 2 to 9 building must comply with the relevant fire hazard properties set out in AS4254.1 and AS4254.2. Details to be provided with the application for CC.

3. Floor linings and floor coverings

A floor lining or floor covering must have—

(a) a *critical radiant flux* not less than that listed in Table 2; and

(b) in a building not protected by a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5, a maximum *smoke development rate* of 750 percent-minutes; and

(c) a *group number* complying with Clause 6(b), for any portion of the floor covering that is continued more than 150 mm up a wall.

Table 2 Critical radiant flux (CHF in kW/m^2) of floor linings and floor coverings

Class of building	Building not fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5	Building fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5	Fire-isolated *exits* and fire control rooms
Class 2, 3, 5, 6, 7, 8 or 9b, excluding— (i) Class 3 accommodation for the aged; and (ii) Class 9b as specified below	2.2 kW/m^2	1.2 kW/m^2	2.2 kW/m^2

BCA Clause	Description	Status	Comments

4. Wall and ceiling linings

(a) A wall or ceiling lining system must comply with the *group number* specified in Table 3 and for buildings not fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 have—

(i) a *smoke growth rate index* not more than 100; or

(ii) an *average specific extinction area* less than 250 m^2/kg.

(b) 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.

Table 3 Wall and ceiling lining materials (material groups permitted)

Class of building	Fire-isolated *exits* and fire control rooms	Public corridors	Specific areas	Other areas
Class 2 or 3, Unsprinklered Excluding accommodation for the aged, people with disabilities, and children	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3
Class 2 or 3, Sprinklered Excluding accommodation for the aged, people with disabilities, and children	Walls: 1 Ceilings: 1	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3
Class 3 or 9a, Unsprinklered Accommodation for the aged, people with a disability, children and *health-care buildings*	Walls: 1 Ceilings: 1	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2, 3
Class 3 or 9a, Sprinklered Accommodation for the aged, people with a disability, children and *health-care buildings*	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3
Class 5, 6, 7, 8 or 9b *schools*, Unsprinklered	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2,

Class of building	Fire-isolated *exits* and fire control rooms	Public corridors	Specific areas	Other areas
				3
Class 5, 6, 7, 8 or 9b *schools*, Sprinklered	Walls: 1 Ceilings: 1	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1 ,2, 3
Class 9b other than *schools*, Unsprinklered	Walls: 1 Ceilings: 1	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2, 3
Class 9b other than *schools*, Sprinklered	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3
Class 9c, Sprinklered	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3

Notes to Table 3:

1. "Sprinklered" means a building fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5.
2. "Specific areas" means within—
   a. for Class 2 and 3 buildings, a *sole-occupancy unit*; and
   b. for Class 5 buildings, open plan offices with a minimum floor dimension/floor to ceiling height ratio > 5; and
   c. for Class 6 buildings, shops or other building with a minimum floor dimension/floor to ceiling height ratio > 5; and
   d. for Class 9a *health-care buildings*, *patient care areas*; and
   e. for Class 9b theatres and halls, etc, an auditorium; and
   f. for Class 9b *schools*, a classroom; and
   g. for Class 9c buildings, *resident use area*.

BCA Clause	Description	Status	Comments
C1.11	Performance of external walls in fire (Concrete tilt-up panels)	Not Applicable	
C1.13, Spec C1.13	Fire-protected Timber Const.	Not Applicable	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 (ii) a part of a building— (A) (A)which only occupies part of a storey, and is separated from the remaining part by a fire wall; or (B) (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 E1.5; 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 C1.13. **Comments**: The building has an effective height of more than 25 m.
C1.14	Ancillary elements	Capable	An ancillary element must not be fixed, installed or attached to the 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. (b) A gutter, downpipe or other plumbing fixture or fitting. (c) A flashing. (d) A grate or grille not more than 2 m2 in area associated with a building service. (e) An electrical switch, socket-outlet, cover plate or the like.

BCA Clause	Description	Status	Comments
			(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 4 of Specification C1.10 as for an internal element; and (ii) serves a storey— (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 exits unusable in a fire. (j) A part of a security, intercom or announcement system. (k) Wiring. (l) A paint, lacquer or a similar finish. (m) A gasket, caulking, sealant or adhesive directly associated with (a) to (k). **Comments**: The façade engineer is to provide evidence of suitability under BCA A5.2 via the following; (a) a current CodeMark certificate, (b) a current certificate of Accreditation, (c) a report issued by an Accredited Testing Laboratory or a certificate, or (d) a report from a professional engineer for each non-combustible ancillary element.

Part C2 – COMPARTMENTATION AND SEPARATION

BCA Clause	Description	Status	Comments
C2.1	Application of Part	For Note Only	Floor area and volume limitations do not apply to a carpark provided with a sprinkler system (other than a FPAA101D

BCA Clause	Description	Status	Comments
			orFPAA101H system) complying with Specification E1.5.
C2.2	General Floor Area & Volume Limitations	Complies	The max floor area and volume limitations do not apply to Class 2 buildings. The Class 7a and 7b parts comply with the max floor area and volume limitations.
C2.3	Large Isolated Buildings	Not Applicable	
C2.4	Requirements for Open Space and Vehicular Access	Not Applicable	
C2.5	Class 9a & 9c Buildings	Not Applicable	
Spec C2.5	Smoke-proof walls in health-care and residential care buildings	Not Applicable	
C2.6	Vertical separation of openings in external walls (Spandrels)	Not Applicable	To Type **A** construction (a) If in a building of Type A construction, any part of a window or other opening in an external wall is above another opening in the storey next below and its vertical projection falls no further than 450 mm outside the lower opening (measured horizontally), the openings must be separated by— (i) A spandrel which – (A) Is not less than 900mm in height; and (B) Extends not less than 600mm above the upper surface of the intervening floor; and (C) Is of non-combustible material having an FRL of not less than 60/60/60; or (ii) Part of a curtain wall or panel wall that complies with (i); or (iii) Construction that complies with (i) behind a curtain wall or panel wall and has any gaps packed with a non-combustible material that will withstand thermal expansion and structural movement of the walling without the loss of seal against fire and smoke; or

BCA Clause	Description	Status	Comments
			(iv) A slab or other horizontal construction that – (A) Projects outwards from the external face of the wall not less than 1100mm; and (B) Extends along the wall not less than 450mm beyond the openings concerned; and (C) Is non-combustible and has an FRL of not less than 60/60/60. (b) The requirements of (a) do not apply to – (i) An open-deck car park; or (ii) An open spectator stand; or (iii) A building which has a sprinkler system complying with Specification E1.5 installed throughout (other than a FPAA101D or FPAA101H system); or (iv) Openings within the same stairway; or (v) Openings in external walls where the floor separating the storeys does not require an FRL with respect to integrity and insulation. (c) For the purposes of C2.6, window or other opening means that part of the external wall of a building that does not have an FRL off 60/60/60 or greater. **Comments**: The building is to be provided with a sprinkler system in accordance with E1.5 and AS2118.1, on that basis spandrels are not required.
C2.7	Separation by fire walls	Capable	**Construction** — A fire wall must be constructed in accordance with the following: (i) The fire wall has the relevant FRL prescribed by Specification C1.1 for each of the adjoining parts, and if these are different, the greater FRL, except where Tables 3.9, 4.2 and 5.2 of Specification C1.1 permit a lower FRL on the carpark side. (ii) Any openings in a fire wall must not reduce the FRL required by Specification C1.1 for the fire wall, except where permitted by the Deemed-to-Satisfy Provisions of Part C3.

BCA Clause	Description	Status	Comments
			(iii) 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. **Comment:** Details to be provided with the application for CC.
C2.8	Separation of classifications in the same storey	Capable	The building has a Class 7b storage located alongside the Class 2 "Residential" foyer and the commercial spaces in the same storey; • Each building element in that storey must have the higher FRL prescribed in Specification C1.1 for that element for the classifications concerned; or • The parts must be separated in that storey by a fire wall having – • The higher FRL prescribed in Table **3**, 4 or 5 of Specification C1.1 as applicable for that element for the Type of construction and the classifications concerned. • Where one part is a car park complying with Table 3.9, 4.2 or 5.2 of Specification C1.1, the parts may be separated by a fire wall complying with the appropriate Table. **Comments**: The following FRL's are to be provided to walls separating classifications in the same storey, alternatively each building element in that storey must have the higher FRL prescribed in Specification C1.1: Class 2 – FRL 90/90/90 Class 7a and 9 – FRL 120/120/120 Class 7b – FRL 240/240/240 Where a part of a building has been designed, constructed or adapted for a different purpose and is less than 10% of the floor area of the storey it is situated on, the classification of the other part of the storey may apply to the whole storey. (does not apply where the minor use of a building is Class 2, 3 or 4). The Class 7b waste store and store rooms in the basement 2 carpark is greater than 10% of the floor area of the floor,

BCA Clause	Description	Status	Comments
			therefore the Class 7b classification applies to these rooms. Details to be provided with the application for CC.
C2.9	Separation of classifications in different storeys	Capable	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 C1.1 for the classification of the lower storey. **Comments**: The following FRL's are to be provided to floors separating classifications in different storeys. Class 2 – FRL 90/90/90 Class 7a and 9 – FRL 120/120/120 Class 7b – FRL 240/240/240 A section plan identifying the required FRL is to be provided with the structural details to confirm compliance.
C2.10	Separation of lift shafts	Capable	(a) Any lift connecting more than 2 storeys, or more than 3 storeys if the building is sprinklered, (other than lifts which are wholly within an atrium) must be separated from the remainder of the building by enclosure in a shaft in which— (i) in a building required to be of Type A construction—the walls have the relevant FRL prescribed by Specification C1.1; and (ii) in a building required to be of Type B construction — the walls— (A) if loadbearing, have the relevant FRL prescribed by Table 4 of Specification C1.1; or (B) if non-loadbearing, be of non-combustible construction. (b) Any lift in a patient care area in a Class 9a health-care building or a resident use area in Class 9c aged care building must be separated from the remainder of the building by a shaft having an FRL of not less than— (i) in a building of Type A or B construction — 120/120/120; or

BCA Clause	Description	Status	Comments
			(ii) in a building of Type C construction — 60/60/60. (c) An emergency lift must be contained within a fire-resisting shaft having an FRL of not less than 120/120/120. (d) Openings for lift landing doors and services must be protected in accordance with the Deemed-to-Satisfy Provisions of Part C3. **Comments:** The lifts are enclosed in their own shaft and require an FRL of not less than the following with lift openings to be protected. • Class 2 = FRL 90/90/90 • Class 7a, 9b = FRL 120/120/120 Structural details are required to confirm FRL compliance. Details to be provided with the application for CC.
C2.11	Stairways and lifts in one shaft	Not Applicable	The plans indicate that no stairways and lifts in one shaft.
C2.12	Separation of Equipment	Capable	(a) Equipment other than that described in (b) and (c) must be separated from the remainder of the building with construction complying with (d), if that equipment comprises— (i) lift motors and lift control panels; or (ii) emergency generators used to sustain emergency equipment operating in the emergency mode; or (iii) central smoke control plant; or (iv) boilers; or (v) a battery or batteries installed in the building that have a voltage exceeding 24 volts and a capacity exceeding 10 ampere hours. (b) Equipment need not be separated in accordance with (a) if the equipment comprises— (i) smoke control exhaust fans located in the air stream which are constructed for high temperature operation in accordance with Specification E2.2b; or (ii) stair pressurising equipment installed in compliance with the

BCA Clause	Description	Status	Comments
			relevant provisions of AS/NZS 1668.1; or (iii) a lift installation without a machine-room; or (iv) equipment otherwise adequately separated from the remainder of the building. (c) Separation of on-site fire pumps must comply with the requirements of AS 2419.1. (d) Separating construction must have— (i) except as provided by (ii)— (A) an FRL as required by Specification C1.1, but not less than 120/120/120; and (B) any doorway protected with a self-closing fire door having an FRL of not less than –/120/30; or (ii) when separating a lift shaft and lift motor room, an FRL not less than 120/–/–. **Comment:** Lift motors and lift control panels, emergency generators used to sustain emergency equipment, is to be fire separated with an FRL not less than 120/120/120, with a self-closing fire door having an FRL of not less than –/120/30. Details to be provided with the application for CC.
C2.13	Electricity Supply System	Capable	(a) An electricity substation located within a building must— (i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and (ii) have any doorway in that construction protected with a *self-closing* fire door having an FRL of not less than –/120/30. (b) A main switchboard located within the building which sustains emergency equipment operating in the emergency mode must— (i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and (ii) have any doorway in that construction protected with a *self-closing* fire door having an FRL of not less than –/120/30.

BCA Clause	Description	Status	Comments
			(c) Electrical conductors located within a building that supply— (i) a substation located within the building which supplies a main switchboard covered by (b); or (ii) a main switchboard covered by (b), (d) An electricity substation located within a building must— (i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120;and (ii) have any doorway in that construction protected with a *self-closing* fire door having an FRL of not less than –/120/30. **Comment:** The electricity substation and any emergency equipment is to be fire separated with an FRL not less than 120/120/120, with a self-closing fire door having an FRL of not less than –/120/30. A main switchboard which sustains emergency equipment is to be fire separated in separate switchboards from non-emergency equipment. Details to be provided with the application for CC.
C2.14	Public corridors in Class 2 and 3 buildings	Complies	In a Class 2 or 3 building, a public corridor (*enclosed*), if more than 40 m in length, must be divided at intervals of not more than 40 m with smoke-proof walls complying with Clause 2 of Specification C2.5. **Comments**: The public corridors serving the Class 2 sole-occupancy units are less than 40m in distance.

Part C3 – PROTECTION OF OPENINGS

BCA Clause	Description	Status	Comments
C3.2	Protection of openings in external walls	Not Applicable	Openings in an *external wall* that is *required* to have an FRL must— (a) if the distance between the opening and the *fire-source feature* to which it is exposed is less than— (i) 3 m from a side or rear boundary of the allotment; or (ii) 6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not

BCA Clause	Description	Status	Comments
			located in a *storey* at or near ground level; or (iii) 6 m from another building on the allotment that is not Class 10. **Comment:** There are no openings that require protection.
C3.3	Separation of external walls and associated openings in different fire compartments	Not Applicable	
C3.4	Acceptable methods of protection	Design Detail	(a) Where protection is *required*, doorways, *windows* and other openings must be protected as follows: (i) Doorways— (A) internal or external wall-wetting sprinklers as appropriate used with doors that are *self-closing* or *automatic* closing; or (B) –/60/30 fire doors that are *self-closing* or *automatic* closing. (ii) *Windows*— (A) internal or external wall-wetting sprinklers as appropriate used with *windows* that are *automatic* closing or permanently fixed in the closed position; or (B) –/60/– fire *windows* that are *automatic* closing or permanently fixed in the closed position; or (C) –/60/– *automatic* closing fire shutters. (iii) Other openings— (A) excluding voids — internal or external wall-wetting sprinklers, as appropriate; or (B) construction having an FRL not less than –/60/–. (C) Fire doors, fire *windows* and fire shutters must comply with Specification C3.4. **Comment:** The separation of rising and descending flights within the fire isolated passageways and within public corridors serving the Class 2 sole-occupancy units exceeds 40m, smoke-proof walls including doors complying with Clause 2

BCA Clause	Description	Status	Comments
			of Specification C2.5 are proposed which are to reduce the intervals to not more than 40m. **Comment:** The openings within 6 m of the path of travel from the point of discharge of the fire-isolated exit in accordance with D1.7 are required to be fire protected. Protection of these openings is required in accordance with Clause C3.4. Details to be provided with the application for CC. Alternatively, a performance solution may be considered.
Spec C3.4	Fire doors, smoke doors, fire windows and shutters	Design Detail	**General requirements** 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. **Construction Deemed-to-Satisfy** A smoke door of one or two leaves satisfies Clause 3.1 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) (i) The leaves are normally in the closed position; or (ii) (A) The leaves 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

BCA Clause	Description	Status	Comments
			(B) in the event of power failure to the door, the leaves fail-safe in the closed position. (e) The leaves return to the fully closed position after each manual opening. (f) Any glazing incorporated in the door complies with AS 1288. **Comment:** Separation of rising and descending flights is required within the fire isolated passageway, smoke-proof walls including doors complying with Clause 2 of Specification C2.5. Details to be provided with the application for CC.
C3.5	Doors in Fire Walls	Capable	Self-closing fire doors are to be provided in separating walls that have the same integrity of the FRL required with a concession for the insulation which is to be 30min. (See Clause 2.8 of the report) **Comments**: A door schedule is to be provided to confirm compliance. Details to be provided with the application for CC.
C3.6	Sliding Fire Doors	Not Applicable	
C3.7	Protection of doorways in horizontal exits	Not Applicable	(a) A doorway that is part of a horizontal exit must be protected by either— (i) a single fire door that has an FRL of not less than that required by Specification C1.1 for the fire wall except that the door must have an insulation level of at least 30; or (ii) 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 ½that required by Specification C1.1 for the fire wall except that each door must have an insulation level of at least 30. (b) Each door required by (a) must be self-closing, or automatic-closing in accordance with the following: (i) 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

BCA Clause	Description	Status	Comments
			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. (ii) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification E1.5, 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.
C3.8	Openings in Fire Isolated Exits	Capable	(a) 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 (b) and (c). (b) The automatic-closing operation required by (a) 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. (c) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification E1.5, is installed in the building, activation of the system must also initiate the automatic-closing operation. (d) A window in an external wall of a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp must be protected in accordance with C3.4 if it is within 6 m of, and exposed to, a window or other opening in a wall of the same

BCA Clause	Description	Status	Comments
			building, other than in the same fire-isolated enclosure. **Comments**: 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. A door schedule is to be provided to confirm compliance.
C3.9	Service Penetrations in Fire Isolated Exits	Capable	Fire-isolated exits must not be penetrated by any services other than— (a) electrical wiring permitted by D2.7(e) 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 (ii) does not open into any other part of the building; or (c) water supply pipes for fire services. **Comment:** Details to be provided with the application for CC.
C3.10	Openings in Fire Isolated Lift Shafts	Capable	(a) 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— (i) comply with AS 1735.11; and (ii) are set to remain closed except when discharging or receiving passengers, goods or vehicles. (b) 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 mm^2 in area. **Comments:** Lift manufacturer details and certification is to be provided to confirm design compliance for the openings in fire-isolated lift shafts.

BCA Clause	Description	Status	Comments
C3.11, NSW 3.11(d)	Bounding construction: Class 2 and 3 buildings and Class 4 parts	Capable	(a) A doorway in a Class 2 or 3 building must be protected if it provides access from a sole-occupancy unit to— (i) a public corridor, public lobby, or the like; or (ii) a room not within a sole-occupancy unit; or (iii) the landing of an internal non fire-isolated stairway that serves as a required exit; or (iv) another sole-occupancy unit. (b) A doorway in a Class 2 or 3 building must be protected if it provides access from a room not within a sole-occupancy unit to— (i) a public corridor, public lobby, or the like; or (ii) the landing of an internal non fire-isolated stairway that serves as a required exit. (c) A doorway in a Class 4 part of a building must be protected if it provides access to any other internal part of the building. NSW C3.11(d) (d) Protection for a doorway must be at least— (i) in a building of Type A construction — a self-closing –/60/30 fire door; and (ii) in a building of Type B or C construction — a self-closing, tight fitting, solid core door, not less than 35 mm thick, (e) Other openings in internal walls which are required to have an FRL with respect to integrity and insulation must not reduce the fire-resisting performance of the wall. **Comment:** Class 2 sole-occupancy unit entry doors shall be provided with self-closing, FRL -/60/30 fire doors. A door schedule is to be provided to confirm compliance. Details to be provided with the application for CC.

BCA Clause	Description	Status	Comments
C3.12	Openings in Floors & Ceilings	Capable	(a) Where a service passes through— (i) a floor that is *required* to have an FRL with respect to *integrity* and *insulation*; or (ii) a ceiling *required* to have a *resistance to the incipient spread of fire*, the service must be installed in accordance with (b). (b) A service must be protected— (i) in a building of Type A construction, by a *shaft* complying with Specification C1.1; or (ii) in a building of Type B or C construction, by a *shaft* that will not reduce the fire performance of the building elements it penetrates; or (iii) in accordance with C3.15. (c) 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. **Comment:** All service shafts are to have a FRL as specified in Appendix A of this report. Details to be provided with the application for CC.
C3.13	Openings in Shafts	Capable	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. **Comment:** Access to any service shafts is to be through an access panel, or self-closing fire door, having a FRL of not less than -/60/30.

BCA Clause	Description	Status	Comments
			Details to be provided with the application for CC.
C3.15	Openings for Service installations	Capable	Where an electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrates a building element (other than an external wall or roof) that is required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire, that installation must comply with any one of the following: (a) Tested systems (i) The service, building element and any protection method at the penetration are identical with a prototype assembly of the service, building element and protection method which has been tested in accordance with AS 4072.1 and AS 1530.4 and has achieved the required FRL or resistance to the incipient spread of fire. (ii) It complies with (i) except for the insulation criteria relating to the service if— (A) the service is a pipe system comprised entirely of metal (excluding pipe seals or the like); and (B) any combustible building element is not located within 100 mm of the service for a distance of 2 m from the penetration; and (C) combustible material is not able to be located within 100 mm of the service for a distance of 2 m from the penetration; and (D) it is not located in a required exit. (b) Ventilation and air-conditioning — In the case of ventilating or air-conditioning ducts or equipment, the installation is in accordance with AS/NZS 1668.1. (c) Compliance with Specification C3.15 (i) The service is a pipe system comprised entirely of metal (excluding pipe seals or the like) and is installed in accordance with Specification C3.15 and it—

BCA Clause	Description	Status	Comments
			(A) penetrates a wall, floor or ceiling, but not a ceiling required to have a resistance to the incipient spread of fire; and (B) connects not more than 2 fire compartments in addition to any fire-resisting service shafts; and (C) does not contain a flammable or combustible liquid or gas. (ii) The service is sanitary plumbing installed in accordance with Specification C3.15 and it— (A) is of metal or UPVC pipe; and (B) penetrates the floors of a Class 5, 6, 7, 8 or 9b building; and (C) is in a sanitary compartment separated from other parts of the building by walls with the FRL required by Specification C1.1 for a stair shaft in the building and a self-closing –/60/30 fire door. (iii) The service is a wire or cable, or a cluster of wires or cables installed in accordance with Specification C3.15 and it— (A) penetrates a wall, floor or ceiling, but not a ceiling required to have a resistance to the incipient spread of fire; and (B) connects not more than 2 fire compartments in addition to any fire-resisting service shafts. (iv) The service is an electrical switch, outlet, or the like, and it is installed in accordance with Specification C3.15. **Comment:** Details to be provided with the application for CC.
Spec C3.15	Penetration of walls, floors and ceilings by services	Capable	As above
C3.16	Construction Joints	Capable	Joints are to have the required FRL with respect to integrity and insulation relative to the building element they are joining.

BCA Clause	Description	Status	Comments
C3.17	Columns protected with lightweight construction to achieve an FRL	For Note Only	

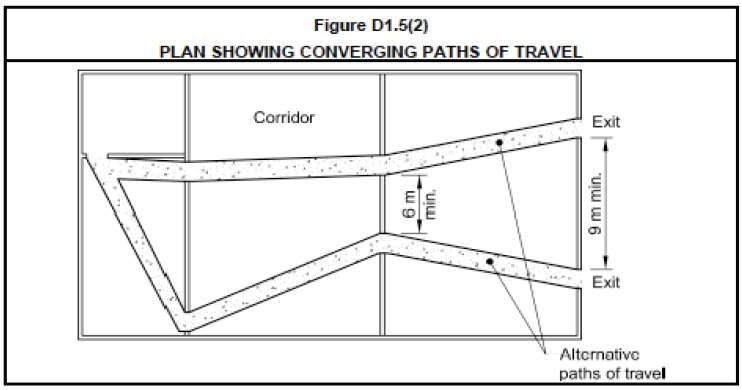
PART D1 – PROVISION FOR ESCAPE

BCA Clause	Description	Status	Comments
D1.1	Application of part	For Note Only	
D1.2	Number of Exits Required	Does not Comply	(a) **All buildings** — Every building must have at least one exit from each storey. (b) **Class 2 to 8 buildings** — 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 25m. (ii) A Class 2 or 3 building subject to C1.5. (c) **Basements** — In addition to any horizontal exit, not less than 2 exits must be provided from any storey if egress from that storey involves a vertical rise within the building of more than 1.5 m, unless— (i) the floor area of the storey is not more than 50 m^2; and (ii) the distance of travel from any point on the floor to a single exit is not more than 20 m. (d) **Class 9 buildings** — In addition to any horizontal exit, not less than 2 exits must be provided from the following: (i) Each storey if the building has a rise in storeys of more than 6 or an effective height of more than 25 m. (ii) Any storey which includes a patient care area in a Class 9a health-care building. (iii) Any storey that contains sleeping areas in a Class 9c building. (iv) Each storey in a Class 9b building used as an early childhood centre. (v) Each storey in a primary or secondary school with a rise in storeys of 2 or more.

BCA Clause	Description	Status	Comments
			(vi) Any storey or mezzanine that accommodates more than 50 persons, calculated under D1.13. **Comment:** The building is greater than 25m effective height (28.6m). On that basis two exits are required on each storey if the building. The following is noted: • Two exits are not provided to basement levels 1 and 2. • Two exits are not provided to the class 2 portions of the building (first floor to sixth floor). • Two exits are not provided to the class 9b rooftop terrace.
D1.3	When fire-isolated stairways and ramps are required	Capable	**Class 2 and 3 buildings** — Every stairway or ramp serving as a required exit must be fire-isolated unless it connects, passes through or passes by not more than— (i) 3 consecutive storeys in a Class 2 building; or (ii) 2 consecutive storeys in a Class 3 building, and one extra storey of any classification may be included if— (iii) it is only for the accommodation of motor vehicles or for other ancillary purposes; or (iv) the building has a sprinkler system (other than a FPAA101D system) complying with Specification E1.5 installed throughout; or (v) 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, if loadbearing; and (C) no opening that could permit the passage of fire or smoke. **Class 5, 6, 7, 8 or 9 buildings** — Every stairway or ramp serving as a required exit must be fire-isolated unless— (i) in a Class 9a health-care building — it connects, or passes through or passes by not more than 2 consecutive storeys in areas other than patient care areas; or

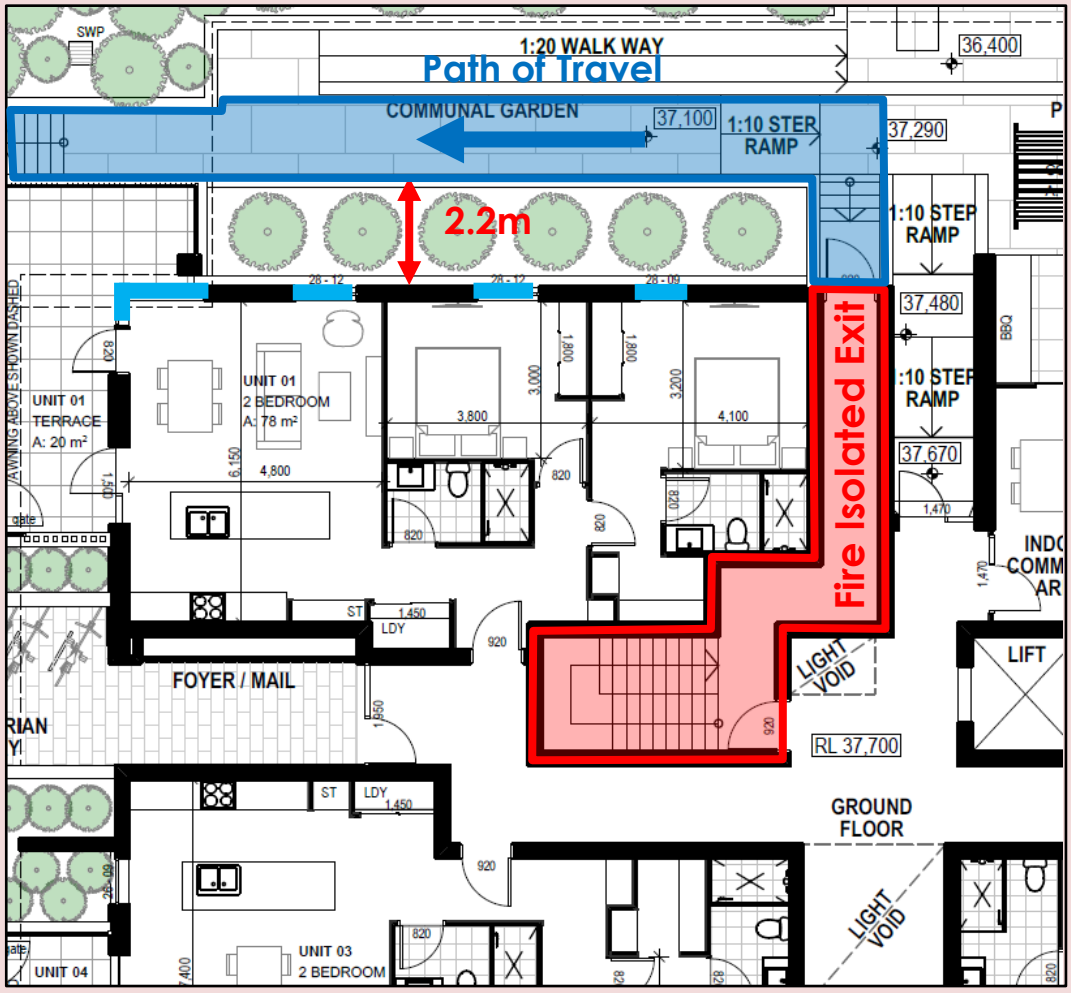
BCA Clause	Description	Status	Comments
			(ii) it is part of an open spectator stand; or (iii) in any other case except in a Class 9c building, it connects, passes through or passes by not more than 2consecutive storeys and one extra storey of any classification may be included if— (A) the building has a sprinkler system (other than a FPAA101D system) complying with Specification E1.5 installed throughout; or (B) the required exit does not provide access to or egress for, and is separated from, the extra storey by construction having— (aa) an FRL of –/60/60, if non-loadbearing; and (bb) an FRL of 90/90/90 for Type A construction or 60/60/60 for Type B or C construction, if loadbearing; and (cc) no opening that could permit the passage of fire or smoke. **Comment:** The exit stairway provided is shown as fire-isolated.
D1.4	Exit travel distances	Does not Comply	**Class 2 and 3 buildings**— (i) The entrance doorway of any *sole-occupancy unit* must be not more than— (A) 6 m from an *exit* or from a point from which travel in different directions to 2 *exits* is available; or (B) 20 m from a single *exit* serving the *storey* at the level of egress to a road or *open space*; and (ii) no point on the floor of a room which is not in a *sole-occupancy unit* must be more than 20 m from an *exit* or from a point at which travel in different directions to 2 *exits* is available. **Class 5, 6, 7, 8 or 9 buildings** — Subject to (d), (e) and (f)— (i) 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

BCA Clause	Description	Status	Comments
			to one of those exits must not exceed 40 m; and (ii) 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. **Comment:** The following areas are greater than 20m from a single exit: **Basement Level 2** • Exit distance on basement level 2 exceeds 20m to a single exit. (~22.5m) **Basement Level 1** • Exit distance from the Plant Room on basement level 1 exceeds 20m to a single exit. (~20.5m)
D1.5	Distance between alternative exits	Not Applicable	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 available from all points on the floor including lift lobby areas; and (b) not less than 9 m apart; and (c) not more than— (i) in a Class 2 or 3 building — 45 m apart; or (ii) in a Class 9a health-care building, if such required exit serves a patient care area — 45 m apart; or (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. **Comments:** Whilst the building is required to be served by two exits, only one exit is provided.

BCA Clause	Description	Status	Comments
			 **D1.6 Dimensions of exits and paths of travel to exits**
D1.6	Dimensions of exits and paths of travel to exits	Capable	In a required exit or path of travel to an exit— (a) 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; and (b) the unobstructed width of each exit or path of travel to an exit, except for doorways, must be not less than— (i) 1 m; or (ii) 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 (iii) in a public corridor in a Class 9c aged care building, notwithstanding (c) and (d)— (A) 1.5 m; and (B) 1.8 m for the full width of the doorway, providing access into a sole-occupancy unit or communal bathroom; and (c) if the storey, mezzanine or open spectator stand accommodates more than 100 persons but not more than 200 persons, the aggregate unobstructed width, except for doorways, must be not less than— (i) 1 m plus 250 mm for each 25 persons (or part) in excess of 100; or (ii) 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

BCA Clause	Description	Status	Comments
			(d) if the storey, mezzanine or open spectator stand accommodates more than 200 persons, the aggregate unobstructed width, except for doorways, must be increased to— (i) 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 (ii) in any other case, 2 m plus 500 mm for every 75 persons (or part) in excess of 200; and (e) in an open spectator stand which accommodates more than 2000 persons, the aggregate unobstructed width, except for doorways, must be increased to 17 m plus a width (in metres) equal to the number in excess of 2000 divided by 600; and **Comment:** Details to be provided with the application for CC, in particular a stair detail showing a clear 1m width exclusive of handrails is required.
D1.7	Travel via Fire-Isolated Exits	Does not Comply	(a) 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— (i) a public corridor, public lobby or the like; or (ii) a sole-occupancy unit occupying all of a storey; or (iii) a sanitary compartment, airlock or the like. (b) 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— (i) to a road or open space; or (ii) to a point— (A) 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 2/3 of its perimeter; and

BCA Clause	Description	Status	Comments
			(B) from which an unimpeded path of travel, not further than 20 m, is available to a road or open space; or (iii) into a covered area that— (A) adjoins a road or open space; and (B) is open for at least 1/3 of its perimeter; and (C) has an unobstructed clear height throughout, including the perimeter openings, of not less than 3 m; and (D) provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6 m. (c) 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, that part of the wall must have— (i) an FRL of not less than 60/60/60; and (ii) any openings protected internally in accordance with C3.4, 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. (d) 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— (i) a smoke lobby in accordance with D2.6 must be provided; or (ii) the exit must be pressurised in accordance with AS/NZS 1668.1. (e) A ramp must be provided at any change in level less than 600 mm in a fire-isolated passageway in a Class 9 building. **Comments:** The path of travel from the point of discharge of the fire-isolated exit necessitates passing within 6 m of another part of the external wall of the same building, measured horizontally at right angles to the path of travel. That part of the wall must have an FRL of not

BCA Clause	Description	Status	Comments
			less than 60/60/60, and openings protected internally in accordance with C3.4 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.
			
D1.8	External Stairways or ramps in lieu of fire-isolated exits	Not Applicable	
D1.9	Travel by non-fire-isolated stairways or ramps	Not Applicable	(a) 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. (b) In a Class 2, 3 or 4 building, the distance between the doorway of a room or sole-occupancy unit and

BCA Clause	Description	Status	Comments
			the point of egress to a road or open space by way of a stairway or ramp that is not fire-isolated and is required to serve that room or sole-occupancy unit must not exceed— (i) 30 m in a building of Type C construction; or (ii) 60 m in all other cases. (c) 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 by way of a required non-fire-isolated stairway or non-fire-isolated ramp must not exceed 80 m. (d) In a Class 2, 3 or 9a building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than— (i) 15 m from a doorway providing egress to a road or open space or from a fire-isolated passageway leading toa road or open space; or (ii) 30 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. (e) 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— (i) 20 m from a doorway providing egress to a road or open space or from a fire-isolated passageway leading toa road or open space; or (ii) 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.
D1.10	Discharge from Exits	Capable	(a) 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.

BCA Clause	Description	Status	Comments
			(b) 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— (i) the minimum width of the required exit; or (ii) 1 m, whichever is the greater. (c) 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— (i) 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 D3; or (ii) except if the exit is from a Class 9a building, a stairway complying with the Deemed-to-Satisfy Provisions of the BCA. (d) The discharge point of alternative exits must be located as far apart as practical. (e) In a Class 9b building which is an open spectator stand that accommodates more than 500 persons, a required stairway or required ramp must not discharge to the ground in front of the stand. (f) In a Class 9b building used as an entertainment venue, at least half of the required number of exits from each storey or mezzanine, and at least half of the aggregate width of such exits must discharge otherwise than through the main entrance, or the area immediately adjacent to the main entrance of the building. (g) The number of persons accommodated must be calculated according to D1.13. **Comment:** Details to be provided with the application for CC.
D1.11	Horizontal Exits	Not Applicable	
D1.12	Non-required stairs, ramps or escalators	Not Applicable	There a no non-required stairways proposed.
D1.13	Number of persons accommodated	For Note Only	

BCA Clause	Description	Status	Comments
D1.14	Measurement of distances	For Note Only	
D1.15	Method of measurement	For Note Only	
D1.16	Plant rooms, lift machine rooms and electricity network substations: concession	Not Applicable	(a) A ladder may be used in lieu of a stairway to provide egress from— (i) a plant room with a *floor area* of not more than 100 m2; or (ii) 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. (b) A ladder permitted under (a)— (i) may form part of an *exit* provided that in the case of a *fire-isolated stairway* it is contained within the *shaft*; or (ii) may discharge within a *storey* in which case it must be considered as forming part of the path of travel; and (iii) for a plant room or a Class 8 *electricity network substation*, must comply with AS 1657; and (iv) 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— (A) the height between the floors is not more than 2800 mm; and (B) the ladder is inclined at an angle to the horizontal not less than 65 degrees nor more than 75 degrees; and (C) the distance between the front face of the ladder and any adjacent obstruction is not less than— (aa) 960 mm, where the ladder is inclined 65 degrees to the horizontal; or (bb) 760 mm, where the ladder is inclined 75 degrees to the horizontal; or

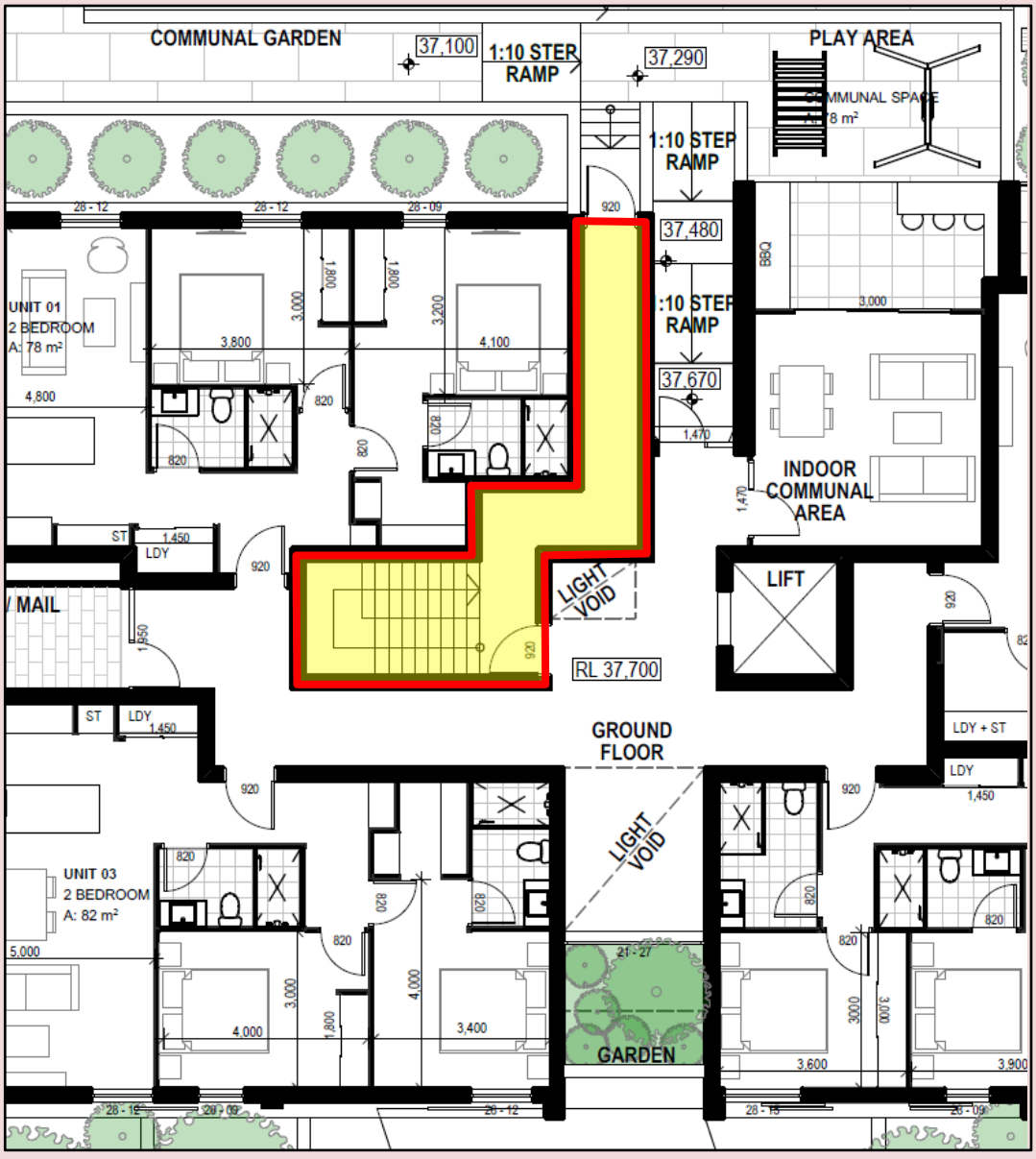
BCA Clause	Description	Status	Comments
			(cc) a distance that is determined by interpolating the values in (aa) and (bb), where the ladder is inclined at any angle between 65 degrees and 75 degrees to the horizontal; and (D) a clear space not less than 600 mm exists between the foot of the ladder and any equipment. **Comment**: No rooms requiring ladder access are proposed.
D1.17	Access to Lift Pits	Capable	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 D1.6, 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 D2.21, 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: (D) "DANGER LIFTWELL – ENTRY OF UNAUTHORIZED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES"

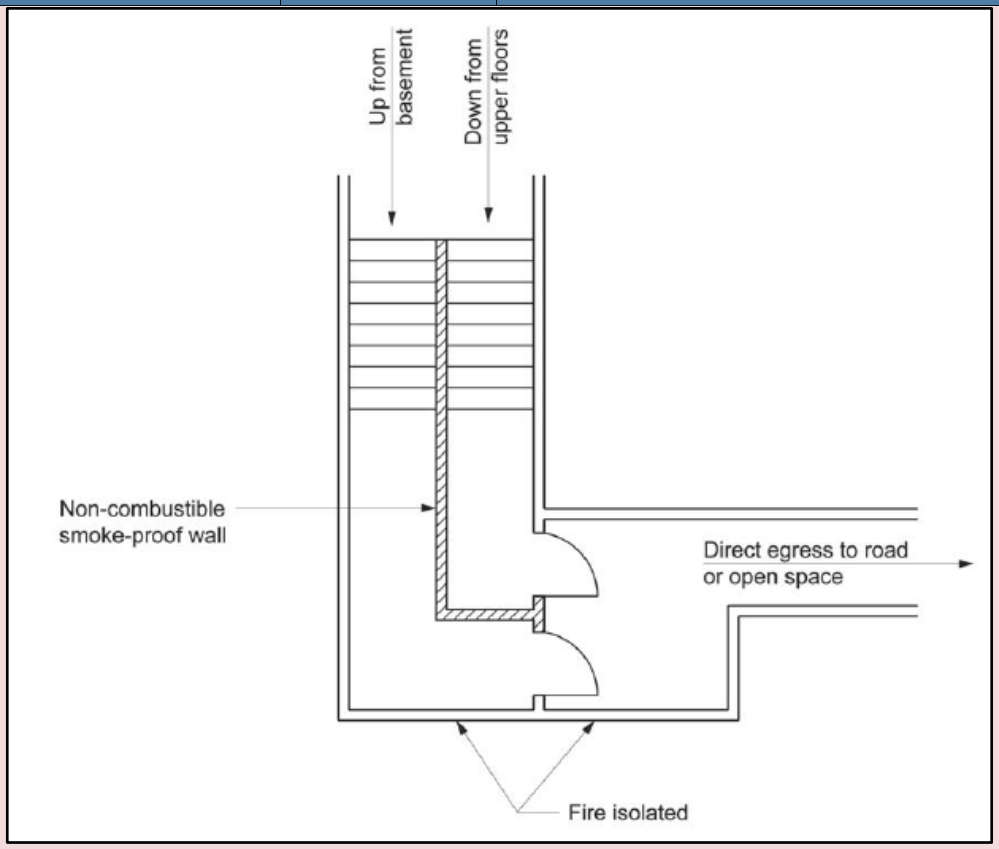
BCA Clause	Description	Status	Comments
			Comments: The plans do not provide this detail. Details to be provided with the application for CC.
D1.18	Egress from early childhood centres	Not Applicable	

PART D2 – CONSTRUCTION OF EXITS

BCA Clause	Description	Status	Comments
D2.1	Application of part	For Note Only	
D2.2	Fire Isolated Stairs & Ramps	Capable	A stairway or ramp (including any landings) that is required to be within a fire-resisting shaft must be constructed— (a) of non-combustible materials; and (b) so that if there is local failure it will not cause structural damage to, or impair the fire-resistance of, the shaft. **Comments:** Details to be provided with the application for CC.
D2.3	Non-Fire Isolated Stairs & Ramps	Not Applicable	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 within a fire-resisting shaft, must be constructed according to D2.2, 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. **Comment:** The building does not include a non-fire isolated stairway.
D2.4	Rising and descending stairs	Does not Comply	If a stairway serving as an exit is required to be fire-isolated— (a) there must be no direct connection between—

BCA Clause	Description	Status	Comments
			(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 smoke proof in accordance with Clause 2 of Specification C2.5. **Comments:** The rising and descending fire isolated stairway/s (from below and above) discharges into the same fire passageway at the ground floor level.



BCA Clause	Description	Status	Comments
	 **Plan -** One method of compliance with D2.4		
D2.5	Open access ramps and balconies	Not Applicable	Where an open access ramp or balcony is provided to meet the smoke hazard management requirements of Table E2.2a, 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. (iii)
D2.6	Smoke lobbies	Not Applicable	A smoke lobby required by D1.7 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-

BCA Clause	Description	Status	Comments
			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 60minutes which covers the lobby; and (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 Clause 3 of Specification C3.4 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 E2.2. **Comments:** A smoke lobby is not proposed however is required.
D2.7	Installations in paths of travel	Capable	(a) 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. (b) 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. (c) Gas or other fuel services must not be installed in a required exit. (d) Services or equipment comprising— (i) electricity meters, distribution boards or ducts; or (ii) central telecommunications distribution boards or equipment; or (iii) electrical motors or other motors serving equipment in the building,

BCA Clause	Description	Status	Comments
			may be installed in— (iv) a required exit, except for fire-isolated exits specified in (a); or (v) in any corridor, hallway, lobby or the like leading to a required exit, if the services or equipment are enclosed by non-combustible construction or a fire-protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure. (e) Electrical wiring may be installed in a fire-isolated exit if the wiring is associated with— (i) a lighting, detection, or pressurisation system serving the exit; or (ii) a security, surveillance or management system serving the exit; or (iii) an intercommunication system or an audible or visual alarm system in accordance with D2.22; or (iv) the monitoring of hydrant or sprinkler isolating valves. **Comments:** Electrical and Telecoms equipment have been shown within corridors and hallways and the like that facilitate egress. These services are to be enclosed by non-combustible construction or a fire-protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure. Details to be provided with the application for CC.
D2.8	Enclosure of space under stairs and ramps	Not Applicable	(a) **Fire-isolated stairways and ramps** — If the space below a required fire-isolated stairway or fire-isolated ramp is within the fire-isolated shaft, it must not be enclosed to form a cupboard or similar enclosed space. (b) **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—

BCA Clause	Description	Status	Comments
			(i) the enclosing walls and ceilings have an FRL of not less than 60/60/60; and (ii) any access doorway to the enclosed space is fitted with a self-closing –/60/30 fire door. **Comment:** No enclosure under the staircases is proposed.
D2.9	Widths of required stairs and ramps	Not Applicable	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.
D2.10	Pedestrian Ramps	Does not Comply	(a) 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. (b) A ramp serving as a required exit must— (i) where the ramp is also serving as an accessible ramp under Part D3, be in accordance with AS 1428.1; or (ii) in any other case, have a gradient not steeper than 1:8. (c) The floor surface of a ramp must have a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586. **Comment:** The ramp serving the communal garden, play area and outdoor gym is required to be designed to comply with AS1428.1-2009, its noted than a grade of 1:10 does not comply. It's noted that compliance with BCA D3 and AS1428.1-2009 is outside the scope of this report. Details to be provided with the application for CC.

<table>
<tr><th>BCA Clause</th><th>Description</th><th>Status</th><th>Comments</th></tr>
<tr><td></td><td></td><td></td><td>
Table 2 – Slip resistance Classification
<table>
<tr><th rowspan="2">Application</th><th colspan="2">Surface Conditions</th></tr>
<tr><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>
<tr><td>Ramp steeper than 1:20 but not steeper than 1:14</td><td>P3 or R10</td><td>P4 or R11</td></tr>
<tr><td>Tread or landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr>
<tr><td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr>
</table>
</td></tr>
<tr><td>D2.11</td><td>Fire-isolated Passageways</td><td>Capable</td><td>(a) 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—
(i) if the passageway discharges from a fire-isolated stairway or ramp — not less than that required for the stairway or ramp shaft; or
(ii) in any other case — not less than 60/60/60.
(b) Notwithstanding (a)(ii), 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—
(i) a non-combustible roof covering; or
(ii) 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.
Comment: Details to be provided with the application for CC.</td></tr>
<tr><td>D2.12</td><td>Roof as Open Space</td><td>Capable</td><td>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.
Comment: The basement roof slab must achieve a minimum FRL for 120/120/120.</td></tr>
</table>

BCA Clause	Description	Status	Comments
			Details to be provided with the application for CC.
D2.13	Goings & Risers	Capable	(a) A stairway must have— (i) not more than 18 and not less than 2 risers in each *flight*; and (ii) going (G), riser (R) and quantity (2R + G) in accordance with Table D2.13, except as permitted by (b) and (c);and (iii) constant goings and risers throughout each *flight*, except as permitted by (b) and (c), and the dimensions of goings (G) and risers (R) in accordance with (a)(ii) are considered constant if the variation between— (A) adjacent risers, or between adjacent goings, is no greater than 5 mm; and (B) the largest and smallest riser within a *flight*, or the largest and smallest going within a *flight*, does not exceed 10 mm; and (iv) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and (v) treads which have— (A) a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or (B) a nosing strip with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; and (vi) 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 (vii) in a Class 9b building, not more than 36 risers in consecutive *flights* without a change in direction of at least30°; and (viii) in the case of a *required* stairway, no winders in lieu of a landing.

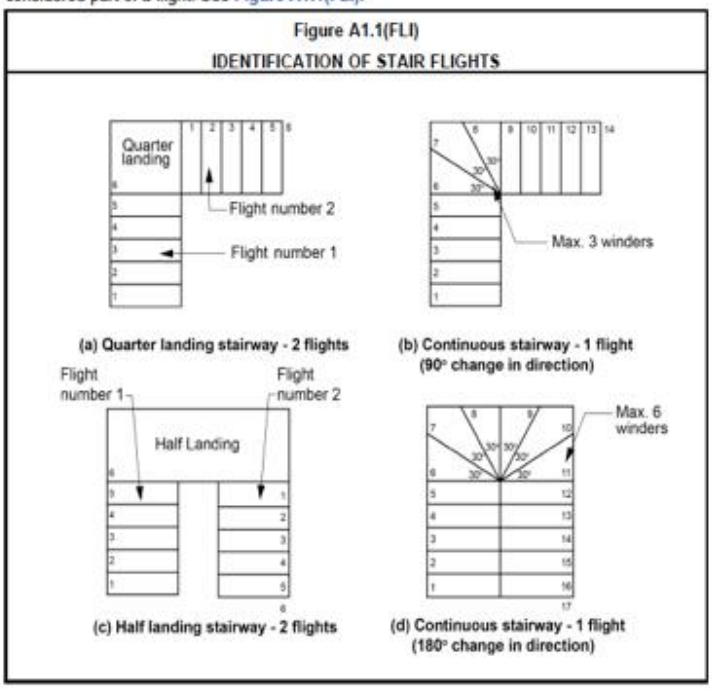
BCA Clause	Description	Status	Comments
			Comment: A stair detail and section are to be provided with the application for CC to demonstrate compliance.

Table 1 – Risers and Goings

	Riser (R)	Going (G)	Status (2R+G)
Maximum	190mm	355mm	700mm
Minimum	115mm	250mm	550mm

Flight

A flight is the part of a stairway that has a continuous slope created by the nosing line of the stair treads. Quarter landings are not considered part of a flight. However, winders are considered part of a flight. See Figure A1.1(FLI).



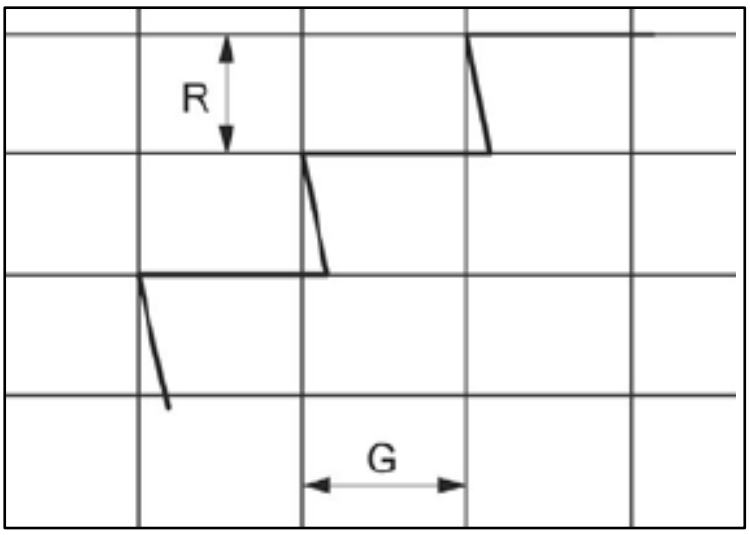


Diagram 1 – Measurement of Goings

<table>
<tr><th>BCA Clause</th><th>Description</th><th>Status</th><th>Comments</th></tr>
<tr><td>D2.14</td><td>Landings</td><td>Capable</td><td>In a stairway—
(a) landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing must—
(i) be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing; and
(ii) have—
(A) a surface with a slip resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or
(B) a strip at the edge of the landing with a slip resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586, where the edge leads to a flight below.

Comments: A stair detail and section are to be provided with the application for CC to demonstrate compliance.</td></tr>
<tr><td></td><td></td><td></td><td>Table 2 – Slip resistance Classification
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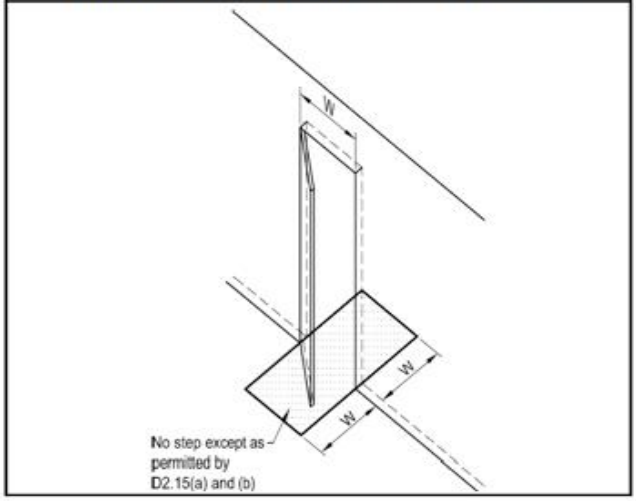
<tr><td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr>
</table></td></tr>
<tr><td>D2.15</td><td>Thresholds</td><td>Capable</td><td>The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorways that the width of the door leaf unless–
(a) in patient care areas in a Class 9a health-care building, the door sill is not more than 25mm above the finished floor level to which the doorway opens; or
(b) in a Class 9c building, a ramp is provided with a maximum gradient</td></tr>
</table>

BCA Clause	Description	Status	Comments
			of 1:8 for a maximum height of 25mm over the threshold; or (c) in a building required to be accessible by Part D3, 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 (d) in a Class 9b building used as an entertainment venue, the door sill of a doorway opening to a road, open space, external stair landing or external balcony is not more than 50mm above the finished floor level to which the doorway opens; or (e) in other cases – (i) the doorway opens to a road or open space, internal stair landing or external balcony; and (ii) the door sill is not more than 190mm above the finished surface of the ground, balcony, or the like, to which to doorway opens. **Comment:** Details to be provided with the application for CC, in particular the set downs at external doors at ground level, balconies/outdoor areas and rooftop plant area.
			Figure D2.15(1) ILLUSTRATION OF WHERE A STEP IS NOT ALLOWED IN A DOORWAY  **Concessions**—D2.15(a), (b) and (c) Concessions are granted in specified circumstances. These include: • D2.15(a)—in the patient care areas of a hospital; and • D2.15(b)—in Class 9c buildings; and • D2.15(c)—in a building required to be accessible by Part D3. • D2.15(d)—in other buildings, to allow for weatherproofing under an external door.

<table>
<tr><th>BCA Clause</th><th>Description</th><th>Status</th><th>Comments</th></tr>
<tr><td>D2.16</td><td>Barriers to Prevent Falls</td><td>Capable</td><td>(a) A continuous barrier must be provided along the side of—
(i) a roof to which general access is provided; and
(ii) a stairway or ramp; and
(iii) a floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and
(iv) any delineated path of access to a building,
(v) if the trafficable surface is 1 m or more above the surface beneath.
(b) The requirements of (a) do not apply to—
(i) the perimeter of a stage, rigging loft, loading dock or the like; or
(ii) areas referred to in D2.18; or
(iii) 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
(iv) a barrier provided to an openable window covered by D2.24.
(c) A barrier required by (a) must be constructed in accordance with Table D2.16a.
Comment: A balustrade detail and section are to be provided with the application for CC to demonstrate compliance.

Table D2.16a Barrier construction
<table><tr><th>Location</th><th>Minimum Height</th></tr><tr><td>Stairways or ramps with a gradient of 1:20 or steeper.</td><td rowspan="2">865mm</td></tr><tr><td>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.</td></tr><tr><td>In all other locations.</td><td>1000mm</td></tr></table></td></tr>
</table>

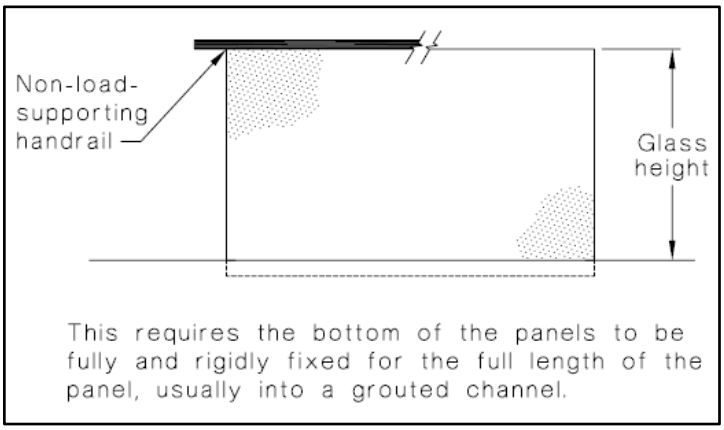
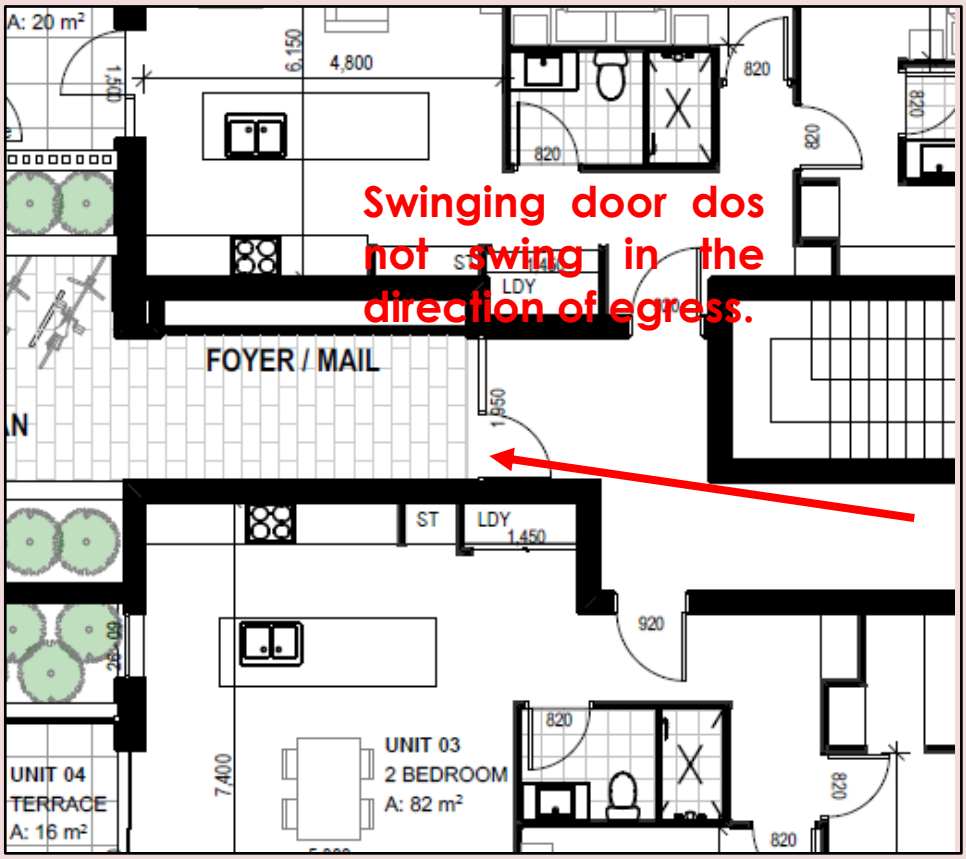
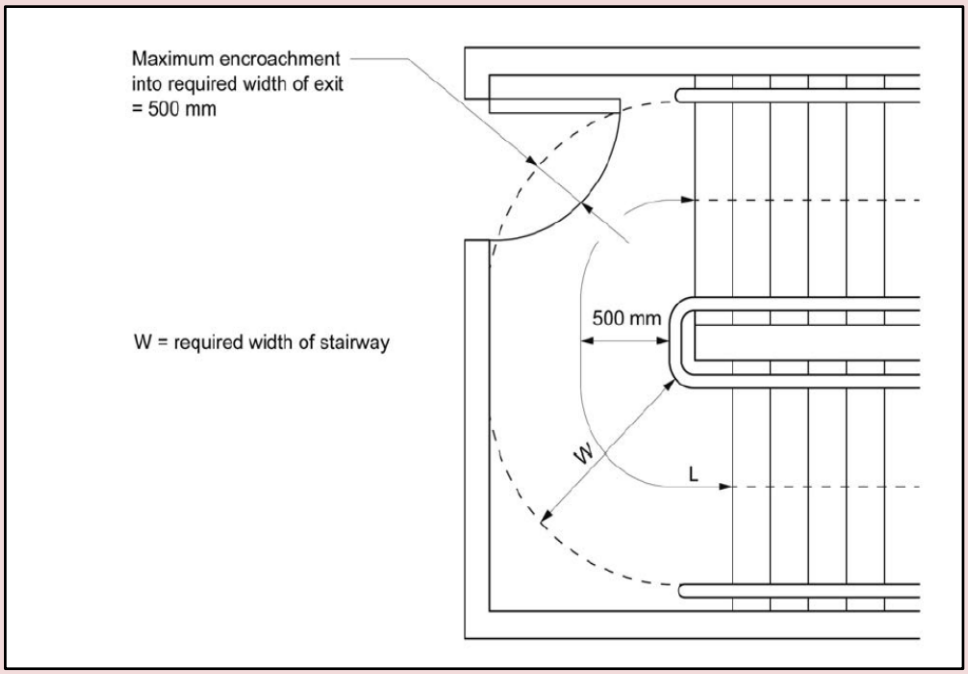
<table>
<tr><th>BCA Clause</th><th>Description</th><th>Status</th><th>Comments</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><th>Location</th><th>Minimum Opening</th></tr>
<tr><td>Fire-isolated stairways, fire-isolated ramps and other areas used primarily for emergency purposes, excluding—
(i) external stairways; and
(ii) external ramps.</td><td>A 300 mm sphere must not be able to pass through any opening; or where rails are used—
(i) a 150 mm sphere must not be able to pass through the opening between the nosing line of the stair treads and the rail or between the rail and the floor of the landing, balcony or the like; and
(ii) the opening between rails must not be more than 460 mm.</td></tr>
<tr><td>Class 7 (other than carparks) and Class 8 buildings.</td><td></td></tr>
<tr><td>In all other locations.</td><td>A 125 mm sphere must not be able to pass through any opening.</td></tr>
</table>


Figure: Structural Balustrades - Cantilevered Glass
</td></tr>
<tr><td>D2.17</td><td>Handrails</td><td>Design Detail</td><td>(a) Except for handrails referred to in D2.18, handrails must be—
(i) located along at least one side of the ramp or flight; and
(ii) located along each side if the total width of the stairway or ramp is 2 m or more; and
(iii) in a Class 9b building used as a primary school—
(A) have one handrail fixed at a height of not less than 865 mm; and
(B) have a second handrail fixed at a height between 665 mm and 750 mm,</td></tr>
</table>

BCA Clause	Description	Status	Comments
			measured above the nosings of stair treads and the floor surface of the ramp, landing or the like; and (iv) in any other case, fixed at a height of not less than 865 mm measured above the nosings of stair treads and the floor surface of the ramp, landing, or the like; and (v) continuous between stair *flight* landings and have no obstruction on or above them that will tend to break a hand-hold; and (vi) in a *required exit* serving an area *required* to be *accessible*, 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 (a)(iii)(B). (d) Handrails to a stairway or ramp within a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building must— (i) be located along at least one side of the flight or ramp; and (ii) be located along the full length of the flight or ramp, except in the case where a handrail is associated with a barrier, the handrail may terminate where the barrier terminates; and (iii) have the top surface of the handrail not less than 865 mm vertically above the nosings of the stair treads or the floor surface of the ramp; and (iv) have no obstruction on or above them that will tend to break a handhold, except for newel posts, ball type stanchions, or the like. **Comment:** A handrail detail and section are to be provided with the application for CC to demonstrate compliance.
D2.18	Fixed Platforms, Walkways, Stairways and Ladders	Not Applicable	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 D2.13, D2.14, D2.16 and D2.17 if it only serves:

BCA Clause	Description	Status	Comments
			(a) machinery rooms, boiler houses, lift-machine rooms, plant-rooms, and the like; or (b) non-*habitable rooms*, such as attics, storerooms and the like that are not used on a frequent or daily basis in the internal parts of a *sole-occupancy unit* in a Class 2 building or Class 4 part of a building. **Comments**: No such areas are proposed.
D2.19	Doorways and Doors	Capable	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*— (i) must not be fitted with a revolving door; and (ii) must not be fitted with a roller shutter or tilt-up door unless— (A) it serves a Class 6, 7 or 8 building or part with a *floor area* not more than 200 m2; and (B) the doorway is the only *required exit* from the building or part; and (C) it is held in the open position while the building or part is lawfully occupied; and (iii) must not be fitted with a sliding door unless— (A) it leads directly to a road or *open space*; and (B) the door is able to be opened manually under a force of not more than 110 N; and (iv) if fitted with a door which is power-operated— (A) 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 (B) 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. **Comment:** Details to be provided with the application for CC.

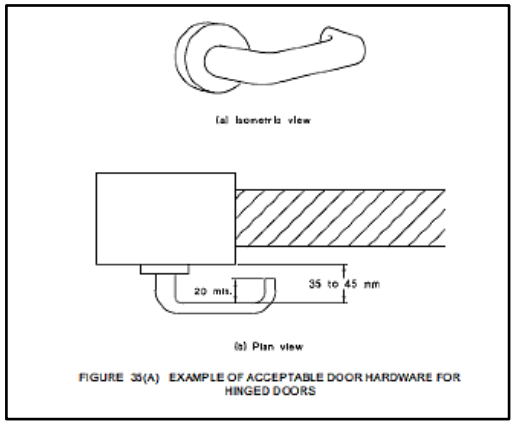
BCA Clause	Description	Status	Comments
D2.20	Swinging Doors	Does not Comply	A swinging door in a required exit or forming part of a required exit— (a) must not encroach— (i) at any part of its swing by more than 500 mm on the required width (including any landings) of a required— (A) stairway; or (B) ramp; or (C) passageway, if it is likely to impede the path of travel of the people already using the exit; and (ii) when fully open, by more than 100 mm on the required width of the required exit, and the measurement of encroachment in each case is to include door handles or other furniture or attachments to the door; 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 m^2, 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); and (c) must not otherwise impede the path or direction of egress. **Comments**: The swinging door from the residential lobby to the pedestrian entry on the ground floor level does not swing in the direction of egress.

BCA Clause	Description	Status	Comments
			
			
D2.21	Operation of Latch	Capable	(a) 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

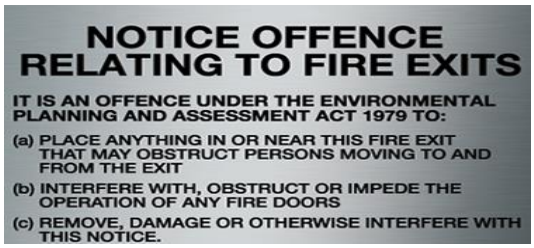
BCA Clause	Description	Status	Comments
			the side that faces a person seeking egress, by— (i) a single hand downward action on a single device which is located between 900 mm and 1.1 m from the floor and if serving an area *required* to be *accessible* by Part D3— (A) be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and (B) 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 (ii) a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor; and (iii) where the latch operation device referred to in (ii) 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— (aa) not less than 500 mm from an internal corner; and (bb) for a hinged door, between 1 m and 2 m from the door leaf in any position; and (cc) for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position. (B) braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device. Example below;

BCA Clause	Description	Status	Comments
			 (b) The requirements of (a) do not apply to a door that— (i) serves a vault, strong-room, *sanitary compartment*, or the like; or (ii) serves only, or is within— (A) a *sole-occupancy unit* in a Class 2 building or a Class 4 part of a building; or (B) a *sole-occupancy unit* in a Class 3 building (other than an entry door to a *sole-occupancy unit* of a boarding house, guest house, hostel, lodging house or backpacker accommodation); or (C) a *sole-occupancy unit* with a *floor area* not more than 200 m2 in a Class 5, 6, 7 or 8 building; or (D) a space which is otherwise inaccessible to persons at all times when the door is locked; or (iii) serves— (A) Australian Government Security Zones 4 or 5; or (B) the secure parts of a bank, *detention centre*, mental health facility, *early childhood centre* or the like; and it can be immediately unlocked— (C) by operating a fail-safe control switch, not contained within a protective enclosure, to actuate a device to unlock the door; or (D) by hand by a person or persons, specifically nominated by the owner, properly instructed as to the duties and responsibilities involved and available at all times when the building is

BCA Clause	Description	Status	Comments
			lawfully occupied so that persons in the building or part may immediately escape if there is a fire; or (iv) 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 E1.5 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; (c) The requirements of (a) do not apply in a Class 9b building (other than a *school*, an *early childhood centre* or a building used for religious purposes) to a door in a *required exit*, forming part of a *required exit* or in the path of travel to a *required exit* serving a *storey* or room accommodating more than 100 persons, determined in accordance with D1.13, in which case it must be readily openable— (i) without a key from the side that faces a person seeking egress; and by a single hand pushing action on a single device such as a panic bar located between 900 mm and 1.2 m from the floor; and (ii) where a two-leaf door is fitted, the provisions of (i) and (ii) need only apply to one door leaf if the appropriate requirements of D1.6 are satisfied by the opening of that one leaf; and (iii) where the door is a door in a path of travel providing re-entry to the building from a balcony, terrace or the like, it may be fitted with key-operated fastenings only, the tongues of which must be locked in the retracted position whenever the building is occupied by the public, so the door can yield to pressure.

BCA Clause	Description	Status	Comments
			(d) The requirements of (a) and (c) do not apply to a door serving a Class 9b building used as an *entertainment venue* where the following provisions apply to a door or gate used by the public— (i) on a door, the single device operating the latch or bolts must be a panic bar if those doors are to be secured; or (ii) an *exit* door or gate used by the public as the main entrance may be fitted with key-operated fastenings only, the tongues of which must be locked in the retracted position whenever the building is occupied by the public so the door or gate can yield to pressure from within; or (iii) a door from a balcony, terrace or the like, being a door in a path of travel providing re-entry to the building, may comply with the locking provision of (ii) above. **Comment:** The CC plans to confirm compliance in the form of door schedule. Doorways serving areas required to be accessible in accordance with D3 BCA are to be provided with lever downward action door hardware that the hand of a person who cannot grip will not slip from the handle during operation of the latch and have clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35mm and not more than 45mm.
			 FIGURE 35(A) EXAMPLE OF ACCEPTABLE DOOR HARDWARE FOR HINGED DOORS

BCA Clause	Description	Status	Comments
D2.22	Re-entry from Fire-Isolated Exits	Capable	(a) Doors of a fire-isolated *exit* must not be locked from the inside as follows: (i) In a Class 9a *health-care building*. (ii) In a Class 9c building. (iii) In a fire-isolated *exit* serving any storey above an *effective height* of 25 m, throughout the *exit*. (b) The requirements of (a) 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— (i) 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 (ii) 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. **Comments:** Details to be provided with the application for CC.
D2.23	Signs on Doors	Capable	(a) 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— (i) (A) required 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 (B) required smoke door, 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, on either the wall adjacent to the doorway or both sides of the door; and (ii)

BCA Clause	Description	Status	Comments
			(A) Fire door forming part of a horizontal exit; and (B) Smoke door that swings in both directions; and (C) Door leading from a fire isolated exit to a road or open space, on each side of the door. (b) A sign referred to in (a) must be in capital letters not less than 20 mm high in a colour contrasting with the background and state— (i) for an automatic door held open by an automatic hold-open device— "**FIRE SAFETY DOOR—DO NOT OBSTRUCT**" or (ii) for a self-closing door— "**FIRE SAFETY DOOR** **DO NOT OBSTRUCT** **DO NOT KEEP OPEN**"; or (iii) for a door discharging **from** a fire-isolated exit— "**FIRE SAFETY DOOR—DO NOT OBSTRUCT**." **See example below;**  **Note**: In accordance with Clause 108 and 109 of the EP&A Regulation, (Development Certification and Fire Safety) 2021, a fire safety notice be displayed in the following areas of the building; A fire safety notice is to be displayed at all times in a conspicuous position adjacent to a doorway providing access to, but not within, that fire stairway, passageway or ramp. The notice is to display **the following words**; 

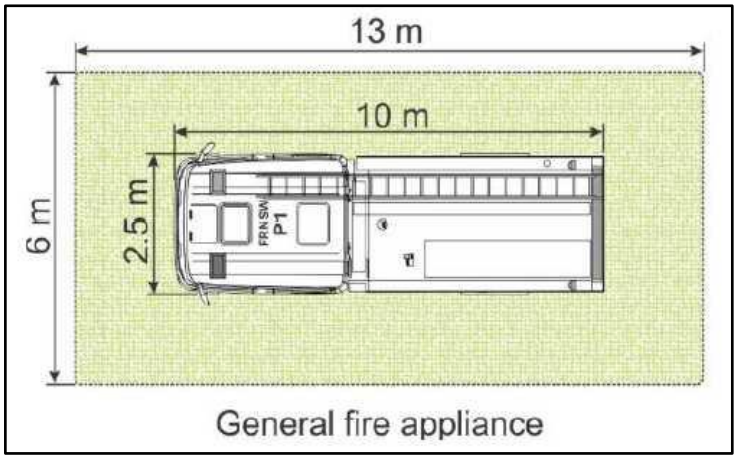
BCA Clause	Description	Status	Comments
D2.24	Protection of Openable Windows	Capable	(a) A window opening must be provided with protection, if the floor below the window is 2m or more above the surface beneath in – (i) a bedroom in a Class 2 or 3 building or Class 4 part of a building; or (ii) a Class 9b early childhood centre. (b) Where the lowest level of the window opening is less than 1.7m above the floor, a window opening covered by (a) must comply with the following: (i) The openable portion of the window must be protected with – (A) a device capable of restricting the window opening; or (B) a screen with secure fittings. (ii) A device or screen required by (i) must – (A) not permit a 125mm sphere to pass through the window opening or screen; and (B) resist an outward horizontal action of 250N against the – (aa) window restrained by a device; or (bb) screen protecting the opening; and (C) have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden. (c) A barrier with a height not less than 865mm above the floor is require to an openable window – (i) in addition to window protection, when a child resistant release mechanism is required by (b)(ii)(C); and (ii) where the floor below the window is a 4m or more above the surface beneath if the window is not covered by (a). (d) A barrier covered by (c) except for (e) must not – (i) permit a 125mm sphere to pass through it; and (ii) have any horizontal or near horizontal elements between 150mm and 760mm above the floor that facilitate climbing.

BCA Clause	Description	Status	Comments
			(e) A barrier required by (c) to an openable window in – (i) fire-isolated stairways, fire-isolated ramps and other areas used primarily for emergency purposes, excluding external stairways and external ramps; and (ii) Class 7 (other than carparks) and Class 8 buildings and parts of buildings containing those classes; (iii) must not permit a 300mm sphere to pass through it. **Comment:** Windows openings in bedrooms are to be provided with protection. Details are to be provided with the application for CC.
D2.25	Timber Stairway: Concession	Not Applicable	

PART E1 – FIRE FIGHTING EQUIPMENT

BCA Clause	Description	Status	Comments
E1.3	Fire Hydrants	Design Detail	A fire hydrant system must be provided to serve a building— (i) having a total *floor area* greater than 500m^2; and (ii) where a *fire brigade station* is— (A) no more than 50 km from the building as measured along roads; and (B) equipped with equipment capable of utilising a fire hydrant. **Comments**: Hydraulic details and design certificate is to be provided from a licensed (competent) fire safety practitioner to confirm compliance with AS2419-2005. Also refer to G6.6 regarding the rooftop in this regard.
	AS2419.1-2005	Design Detail	The following is noted about booster assemblies as from cl. 7.3 of AS2419.1-2005: Fire brigade booster assemblies shall be located so that they meet the following requirements: (a) They are readily accessible to firefighters.

BCA Clause	Description	Status	Comments
			(b) They are operable by fire brigade pumping appliances located within 8 m. (c) If within, or affixed to, the external wall of the building, the booster shall be— (i) within sight of the main entrance to the building; and (ii) separated from the building by a construction with a fire resistance rating of not less than FRL 90/90/90 for a distance of not less than 2 m each side of and 3 m above the upper hose connections in the booster assembly. (d) If remote from the building, the booster shall be— (i) at the boundary of the site or within sight of the main entrance of the building; (ii) adjacent to the principal vehicular access to the site; and (iii) located not less than 10 m from the external wall of any building served (e) The booster enclosure shall only contain firefighting pipework and equipment. (f) In a position not less than 10 m from any high voltage main electrical distribution equipment such as transformers and distribution boards, and from liquefied petroleum gas and other combustible storage. (g) In a position so that the booster assembly is not obstructed or obscured by obstacles, stored goods, vehicles, vegetation, etc. **Comments**: The following is noted in relation to the booster assembly: • The booster location is not shown. • Boosters should be oriented so as to face the road, rather than facing the entry driveway, 90 degrees to the road frontage. • The handstand location is not identified within 8m. Reference should be made to the Fire Safety Guideline, Access for Fire Brigade Vehicles and Firefighters, published by Fire and Rescue NSW, reference No. FRN14/3255, document ID

BCA Clause	Description	Status	Comments
			D15/6224, Version 5, dated 4 October, 2019 for details, diagram attached below for reference of size and orientation of a hardstand. (https://www.fire.nsw.gov.au/ gallery/files/pdf/guidelines/ vehicle _access.pdf) The following is noted about hardstand areas: o To be a flat, level all weather surface, clear of obstructions. o To provide easy manoeuvring space for the fire appliance. o Any section of carriageway can be designated only when the passing traffic flow will no be blocked by the fire positioned appliance.
			 **Minimum working space for hardstand area**
E1.4	Fire hose reels	Design Detail	(a) E1.4 does not apply to— (i) a Class 2, 3 or 5 building or Class 4 part of a building; or (ii) a Class 8 electricity network substation; or (iii) a Class 9c building; or (iv) classrooms and associated corridors in a primary or secondary school. (b) A fire hose reel system must be provided— (i) to serve the whole building where one or more internal fire hydrants are installed; or (ii) where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500m2. (c) The fire hose reel system must—

BCA Clause	Description	Status	Comments
			(i) have fire hose reels installed in accordance with AS 2441; and (ii) 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. **Comments**: Fire hose reels are to be provided to serve a fire compartment greater than 500m^2 and to serve the building where internal fire hydrants are to be provided with exception to the Class 2 parts of the building. Basement 3, Basement 2, Basement 1, the Ground level and the Rooftop Terrace are required to be served by a hose reel system. Hydraulic details and design certificate is to be provided from a licensed (competent) fire safety practitioner to confirm compliance with AS2441-2005.
E1.5, Spec E1.5	Sprinklers	Design Detail	Class 2 or 3 building (excluding a building used as a *residential care building*) and any other class of building (excluding a building used as a *residential care building*) containing a Class 2 or 3 part - A sprinkler system is to be provided throughout the whole building, including any part of another class. **Comments**: The building has a rise in storeys of ten (10) and an effective height of more than 25m (28.6m). The entire building is required to be provided with a sprinkler system to comply with BCA Spec E1.5 and Spec E1.5a. Hydraulic details and design certificate is to be provided from a licensed (competent) fire safety practitioner to confirm compliance with Spec E1.5 and Spec E1.5a.

BCA Clause	Description	Status	Comments
			It's noted that the identified sprinkler booster and pump locations have not been shown on the plans. Details to be provided with the application for CC.
E1.6	Portable fire extinguishers	Design Detail	A Portable Fire Extinguishers complying with AS2444-2001 are required to be provided. Also refer to G6.6 regarding the rooftop in this regard.
E1.8	Fire control centres	Design Detail	A fire control centre facility in accordance with Specification E1.8 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 m2. **Comments**: Details complying with Specification E1.8 are to be provided with the application for CC.
Spec E1.8	Fire control centres	Design Detail	**2. Purpose and content** A fire control centre must— (a) provide an area from which fire-fighting operations or other emergency procedures can be directed or controlled; and (b) contain controls, panels, telephones, furniture, equipment and the like associated with the *required* fire services in the building; and (c) not be used for any purpose other than the control of— (i) fire-fighting activities; and (ii) other measures concerning the occupant safety or security. **3. Location of fire control centre** A fire control centre must be so located in a building that egress from any part of its floor, to a road or *open space*, does not involve changes in level which in aggregate exceed 300 mm. **4. Equipment not permitted within a fire control centre** An internal combustion engine, pumps, sprinkler control valves, pipes and pipe fittings must not be located in a fire control centre, but may be located in rooms accessed through the fire control centre. **5. Ambient sound level for a fire control centre**

BCA Clause	Description	Status	Comments
			(a) The ambient sound level within the fire control centre measured when all fire safety equipment is operating in the manner in which it operates in an emergency must not exceed 65 dB(A). (b) The measurement must be taken for a sufficient time to characterize the effects of all sound sources. Where there is not a great variation in noise level, a measurement time of 60 seconds may be used. **6. Construction of a fire control room** A fire control centre in a building more than 50 m in *effective height* must be in a separate room where— (a) the enclosing construction is of concrete, masonry or the like, sufficiently impact resistant to withstand the impact of any likely falling debris, and with an FRL of not less than 120/120/120; and (b) any material used as a finish, surface, lining or the like within the room complies with the requirements of Specification C1.10; and (c) services, pipes, ducts and the like that are not directly *required* for the proper functioning of the fire control room do not pass through it; and (d) openings in the walls, floors or ceiling which separate the room from the interior of the building are confined to door ways, ventilation and other openings for services necessary for the proper functioning of the facility. **7. Protection of openings in a fire control room** Openings permitted by Clause 6 must be protected as follows: (a) Openings for *windows*, doorways, ventilation, service pipes, conduits and the like, in an *external wall* of the building that faces a road or *open space*, must be protected in accordance with the *Deemed-to-Satisfy Provisions* of Part C3. (b) Openings in the floors, ceilings and *internal walls* enclosing a fire control room must, except for doorways, be protected in accordance with the *Deemed-to-Satisfy Provisions* of Part C3.

BCA Clause	Description	Status	Comments
			(c) A door opening in the *internal walls* enclosing a fire-control room, must be fitted with a *self-closing* –/120/30smoke sealed fire door. (d) Openings associated with natural or mechanical ventilation must— (i) not be made in any ceiling or floor immediately above or below the fire control room; and (ii) be protected by a –/120/– fire damper if the opening is for a duct through a wall *required* to have an FRL, other than an *external wall*. **8. Doors to a fire control room** (a) *Required* doors to a fire control room must open into the room, be lockable and located so that persons using escape routes from the building will not obstruct or hinder access to the room. (b) The fire control room must be accessible via two paths of travel— (i) one from the front entrance of the building; and (ii) one direct from a public place or *fire-isolated passageway* which leads to a public place and has a door with an FRL of not less than –/120/30. **9. Size and contents of a fire control room** (a) A fire control room must contain— (i) a Fire Indicator Panel and necessary control switches and visual status indication for all *required* fire pumps, smoke control fans and other *required* fire safety equipment installed in the building; and (ii) a telephone directly connected to an external telephone exchange; and (iii) a blackboard or whiteboard not less than 1200 mm wide x 1000 mm high; and (iv) a pin-up board not less than 1200 mm wide x 1000 mm high; and (v) a raked plan layout table of a size suitable for laying out the plans provided under (vi); and (vi) colour-coded, durable, tactical fire plans.

BCA Clause	Description	Status	Comments
			(b) In addition, a fire control room may contain— (i) master emergency control panels, lift annunciator panels, remote switching controls for gas or electrical supplies and emergency generator backup; and (ii) building security, surveillance and management systems if they are completely segregated from all other systems. (c) A fire control room must— (i) have a *floor area* of not less than 10 m2 and the length of any internal side must be not less than 2.5 m; and (ii) if only the minimum prescribed equipment is installed — have a net *floor area* of not less than 8 m2 with a clear space of not less than 1.5 m2 in front of the Fire Indicator Panel; and (iii) if additional equipment is installed — have an additional area of not less than 2 m2 net *floor area* for each additional facility and a clear space of not less than 1.5 m2 in front of each additional control or indicator panel, and the area *required* for any path of travel through the room to other areas must be provided in addition to the requirements (ii) and (iii). **10. Ventilation and power supply for a fire control room** A fire control room must be ventilated by— (a) natural ventilation from a *window* or doorway in an *external wall* of the building which opens directly into the fire control room from a road or *open space*; or (b) a pressurisation system that only serves the fire control room, and— (i) is installed in accordance with AS 1668.1 as though the room is a *fire-isolated stairway*; and (ii) is activated *automatically* by operation of the fire alarm, or sprinkler system complying with SpecificationE1.5, installed in the

BCA Clause	Description	Status	Comments
			building and manually by an over-riding control in the room; and (iii) provides a flow of fresh air through the room of not less than 30 air changes per hour when the system is operating and any door to the room is open; and (iv) has fans, motors and ductwork that form part of the system but not contained within the fire control room protected by enclosing construction with an FRL of not less than 120/120/120; and (v) has any electrical supply to the fire control room or equipment necessary for its operation connected to the supply side of the main disconnection switch for the building, and no openable devices other than necessary doorways, pressure controlled relief louvres and *windows* that are openable by a key, must be constructed in the fire control room. **11. Sign for a fire control room** The external face of the door to the fire control room must have a sign with the words— **FIRE CONTROL ROOM** in letters of not less than 50 mm high and of a colour which contrasts with that of the background. **12. Lighting for a fire control room** Emergency lighting in accordance with the *Deemed-to-Satisfy Provisions* of Part E4 must be provided in a fire control room, except that an illumination level of not less than 400 lux must be maintained at the surface of the plan table. **Comments**: The building has an effective height of 28.6m, a fire control centre is required, however it is not required to be within a separate room as the building is less than 50 m in effective height. This centre is not shown on the architectural plans. Details to be provided with the application for CC.

BCA Clause	Description	Status	Comments
E1.9	Fire precautions during construction	For Note Only	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 one ach *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. **Comment:** Whilst the building is under construction there is to be not less than one fire extinguisher provided at all times to each storey. Details to be provided with the application for CC.
E1.10	Provision for special hazards	Design Detail	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 (b) the location of the building in relation to a water supply for fire-fighting purposes. **Comment:** The architectural plans show EV Charging space/s within the basement level carpark. Given the extreme associated fire risks with EV vehicle fires it is recommended that special consideration be given by the licensed (competent) fire safety practitioner designing the fire systems. It is also noted that Fire and Rescue NSW frequently raise the location of EV chargers within the basement carparking level as a matter of concern when considering comments in relation to fire engineered performance solutions.

PART E2 – SMOKE HAZARD MANAGEMENT

BCA Clause	Description	Status	Comments
E2.2	General Requirements	Design Detail	**Automatic air pressurisation system** The fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp serving is required to be provided with an automatic air pressurisation system for fire-isolated exits in accordance with AS 1668.1 as the fire-isolated stairway serve storeys above an effective height of 25 m; **Note:** An automatic air pressurisation system for fire-isolated exits applies to the entire exit. **Smoke Detection** The building is to be provided with a smoke alarm system complying with Spec. E2.2a Clause 3 or a smoke detection system complying with Spec. E2.2a Clause 4 or a combination of a smoke alarm system within the sole-occupancy units and a smoke detection system in areas not within sole-occupancy units. **Building Occupant Warning System** 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. **System Monitoring** A fire alarm monitoring system connected to a fire station or fire station dispatch centre in accordance with AS 1670.3 is required. **Mechanical Ventilation** A Class 7a building, including a basement, provided with a mechanical ventilation system in accordance with AS 1668.2 must comply with clause 5.5 of AS 1668.1 except that— (a) fans with metal blades suitable for operation at normal temperature may be used; and (b) the electrical power and control cabling need not be fire rated. **Comment:** Mechanical and Electrical details and design certificate is to be provided from a licensed (competent) fire safety practitioner to confirm compliance with BCA Spec E2.2a and the applicable Australian Standard.

BCA Clause	Description	Status	Comments
			Details to be provided with the application for CC.
E2.3	Special Hazards	For Note Only	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 Tables E2.2a and E2.2b. **Comment:** The architectural plans show EV Charging space/s within the basement level carpark. Given the extreme associated fire risks with EV vehicle fires it is recommended that special consideration be given by the licensed (competent) fire safety practitioner designing the fire systems. It is also noted that Fire and Rescue NSW frequently raise the location of EV chargers within the basement carparking level as a matter of concern when considering comments in relation to fire engineered performance solutions.

PART E3 – LIFT INSTALLATIONS

BCA Clause	Description	Status	Comments
E3.1	Lift Installations	For Note Only	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1. **Comments**: Manufacturer's specifications and design certification is to be provided with the application for CC.
Spec E3.1	Lift Installations	Capable	As Above.
E3.2	Stretcher Facility	Capable	(a) A stretcher facility in accordance with (b) must be provided— (i) in at least one emergency lift required by E3.4; or (ii) 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. (b) 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. **Comments**: The effective height of the building is 28.6m approx. The lifts are to be designed to accommodate stretcher facilities. Manufacturer's specifications and design certification is to be provided with the application for CC.
E3.3	Warning Signage	Capable	Warning signage to be provided as follows– "Do not use lifts if there is a fire".
			
E3.4	Emergency Lift	Capable	(a) At least one emergency lift complying with (d) must be installed in— (i) a building which has an *effective height* of more than 25 m; and (ii) a Class 9a building in which *patient care areas* are located at a level that does not have direct egress to a road or *open space*. (b) An emergency lift may be combined with a passenger lift and must serve those *storeys* served by the passenger lift so that all *storeys* of the building served by passenger lifts are served by at least one emergency lift. (c) Where two or more passenger lifts are installed and serve the same *storeys*, excluding a lift that is within an *atrium* and not contained wholly within a *shaft*—

			(i) at least two emergency lifts must be provided to serve those *storeys*; and (ii) if located within different *shafts*, at least one emergency lift must be provided in each *shaft*. (d) An emergency lift must— (i) be contained within a *fire-resisting shaft* in accordance with C2.10; and (ii) in a Class 9a building serving a *patient care area*— (A) have minimum dimensions, measured clear of all obstructions, including handrails, etc complying with Table E3.4; and (B) be connected to a standby power supply system where installed; and (iii) if the building has an *effective height* of more than 75 m, have a rating of at least— (A) 600 kg if not provided with a stretcher facility; or (B) 900 kg if provided with a stretcher facility. **Comments**: The effective height of the building is 28.6m. The lifts are to be designed to accommodate an emergency lifts. Manufacturer's specifications and design certification is to be provided with the application for CC.
E3.5	Landings	Capable	Access and egress to and from lift well landings must comply with the Deemed-to-Satisfy Provisions of Section D. **Comments**: A lift detail / manufacturers specification is to be provided with the application for CC to demonstrate compliance.
E3.6	Passenger Lifts	Capable	The lift design is to comply with E3.6 and AS1735. **Comments**: A lift detail / manufacturer's specifications and design certification is to be provided with the application for CC.
E3.7	Fire Service Controls	Capable	Where lifts serve any storey above an effective height of 12m, the following must be provided: (a) A fire service recall control switch complying with E3.9 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 E3.10 for every lift. **Comments**: A lift detail / manufacturer's specifications and design certification is to be provided with the application for CC.
E3.8	Aged Care Buildings	Not Applicable	
E3.9	Fire Recall Control Switch	Capable	(a) Each group of lifts must be provided with one fire service recall control switch required by E3.7 that activates the fire service recall operation at (e). The switch must— (i) be located at the landing nominated by the appropriate authority; and (ii) be labelled "FIRE SERVICE" in indelible white lettering on a red background; and (iii) have two positions with an "OFF" and an "ON" position identified; and (iv) be operable only by the use of a key that is removable in either the "OFF" position or the "ON" position. (b) Adhesive labels must not be used for compliance with (a)(ii) and (a)(iii). (c) The key in (a)(iv) 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. (d) The fire service recall operation must be activated by— (i) switching the fire service recall control switch in (a) to "ON"; or (ii) a signal from a fire management system approved by the appropriate authority. (e) The activation of the fire service recall operation at (d) must— (i) cancel all registered car and landing calls; and (ii) inactivate all door reopening devices that may be affected by smoke; and (iii) ensure lift cars travelling toward the nominated floor continue to

			the nominated floor without stopping; and (iv) 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 (v) for lifts stopped at a floor other than the nominated floor, close the doors and travel without stopping to the nominated floor; and (vi) ensure that lifts stay at the nominated floor with doors open; and (vii) permit all lifts to return to normal service if the fire service recall control switch at (a) is switched to the "OFF" position during or after the fire service recall operation. (f) The requirements of (e) do not apply to lifts on inspection service or when the lift car fire service control switch required by E3.10 is in the "ON" position. (g) Lifts having manual controls must signal an alert to the lift for the lift to return to the nominated floor containing there call switch that activated the signal. **Comments**: See E3.7 in the report. A lift detail / manufacturer's specifications and design certification is to be provided with the application for CC.
E3.10	Lift Car Drive Control Switch	Capable	(a) The lift car fire service drive control switch required by E3.7 must be activated from within the lift car. The switch must— (i) be located between 600 mm and 1500 mm above the lift car floor; and (ii) be labelled "FIRE SERVICE" by indelible white lettering on a red background; and (iii) have two positions with an "OFF" and an "ON" position identified; and (iv) operate only by the use of a key that is removable in either

			the "OFF" position or the "ON" position. (b) Adhesive labels must not be used for compliance with (a)(ii) or (a)(iii). (c) When the lift car fire service drive control switch at (a) is turned to the "ON" position, the lift must— (i) not respond to the fire service recall control switch; and (ii) cancel all registered lift car and landing calls; and (iii) override all lift car call access control systems; and (iv) inactivate all door reopening devices that may be affected by smoke; and (v) 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 (vi) 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 (vii) 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 (viii) 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 (ix) 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; and (x) the requirements of (c)(i) to (c)(ix) do not apply to a lift operating on inspection service. **Comments**: See E3.7 in the report.

			A lift detail / manufacturer's specifications and design certification is to be provided with the application for CC.

PART E4 – VISIBILITY IN AN EMERGENCY, EXIT SIGNS AND WARNING SYSTEMS

BCA Clause	Description	Status	Comments
E4.2	Emergency lighting requirements	Design Detail	An emergency lighting system must be installed— (a) in every fire-isolated stairway, fire-isolated passageway or fire-isolated ramp; and (b) in every storey of a Class 5, 6, 7, 8 or 9 building where the storey has a floor area more than 300m^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 100m^2 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 300m^2; **Comment:** Emergency lighting is to be provided throughout the building in accordance with AS2293.1–2018. Electrical engineer's details and design certification are to be provided with application for CC. Also refer to G6.8 regarding the rooftop in this regard.
E4.3	Measurement of distance	For Note Only	
E4.4	Design and operation of emergency lighting	Design Detail	Emergency lighting is to be provided throughout the building in accordance with AS2293.1-2018. **Comment:** Electrical engineers details and design certification are to be provided with application for CC.
E4.5	Exit signs	Design Detail	An exit sign must be clearly visible to persons approaching the exit, and must be installed on, above or adjacent to each— (a) door providing direct egress from a storey to— (i) an enclosed stairway, passageway or ramp serving as a required exit; and

BCA Clause	Description	Status	Comments
			(ii) an external stairway, passageway or ramp serving as a required exit; and (iii) an external access balcony leading to a required exit; and (b) door from an enclosed stairway, passageway or ramp at every level of discharge to a road or open space; and (c) horizontal exit; and (d) door serving as, or forming part of, a required exit in a storey required to be provided with emergency lighting in accordance with E4.2. **Comment:** The building is to be provided with exit lighting to assist occupants in identifying the exits to comply with AS2293.1-2018. Electrical engineer's details and design certification are to be provided prior to issue of the Construction Certificate. Note: Braille and tactile signage complying with Spec. D3.6 must— (i) incorporate the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 and identify each— (A) sanitary facility, except a sanitary facility within a sole-occupancy unit in a Class 1b or Class 3 building; and (B) space with a hearing augmentation system; and (ii) identify each door required by E4.5 to be provided with an exit sign and state— (A) "Exit"; and (B) "Level" ; and either (aa) the floor level number; or (bb) a floor level descriptor; or (cc) a combination of (aa) and (bb) Example below;  **Comment:** Exit signage is to be provided throughout the building in accordance with AS2293.1-2018. Electrical engineers

BCA Clause	Description	Status	Comments
			review / design to be provided with application for CC. Also refer to G6.8 regarding the rooftop in this regard.
NSW E4.6	Direction signs	Design Detail	If an exit is not readily apparent to persons occupying or visiting the building, then exit signs must be installed— (a) in appropriate positions in corridors, hallways, lobbies, foyers, auditoria, and the like, indicating the direction to a required exit; and (b) in a Class 9b building used as an entertainment venue — in any external egress path to a road where the exit does not open directly onto a road. **Comment:** Directional exit signage is to be provided throughout the building in accordance with AS2293.1– 2018. Electrical engineer's details and design certification are to be provided with application for CC. Also refer to G6.8 regarding the rooftop in this regard.
E4.7	Class 2 and 3 buildings and Class 4 parts: Exemptions	For Note Only	E4.5 does not apply to— (a) a Class 2 building in which every door referred to is clearly and legibly labelled on the side remote from the exit or balcony— (i) with the word "EXIT" in capital letters 25 mm high in a colour contrasting with that of the background; or (ii) by some other suitable method; and (b) an entrance door of a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building.
E4.8	Design and operation of exit signs	Design Detail	Every *required exit* sign must comply with— (a) AS/NZS 2293.1; or (b) for a photoluminescent *exit* sign, Specification E4.8; and be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.

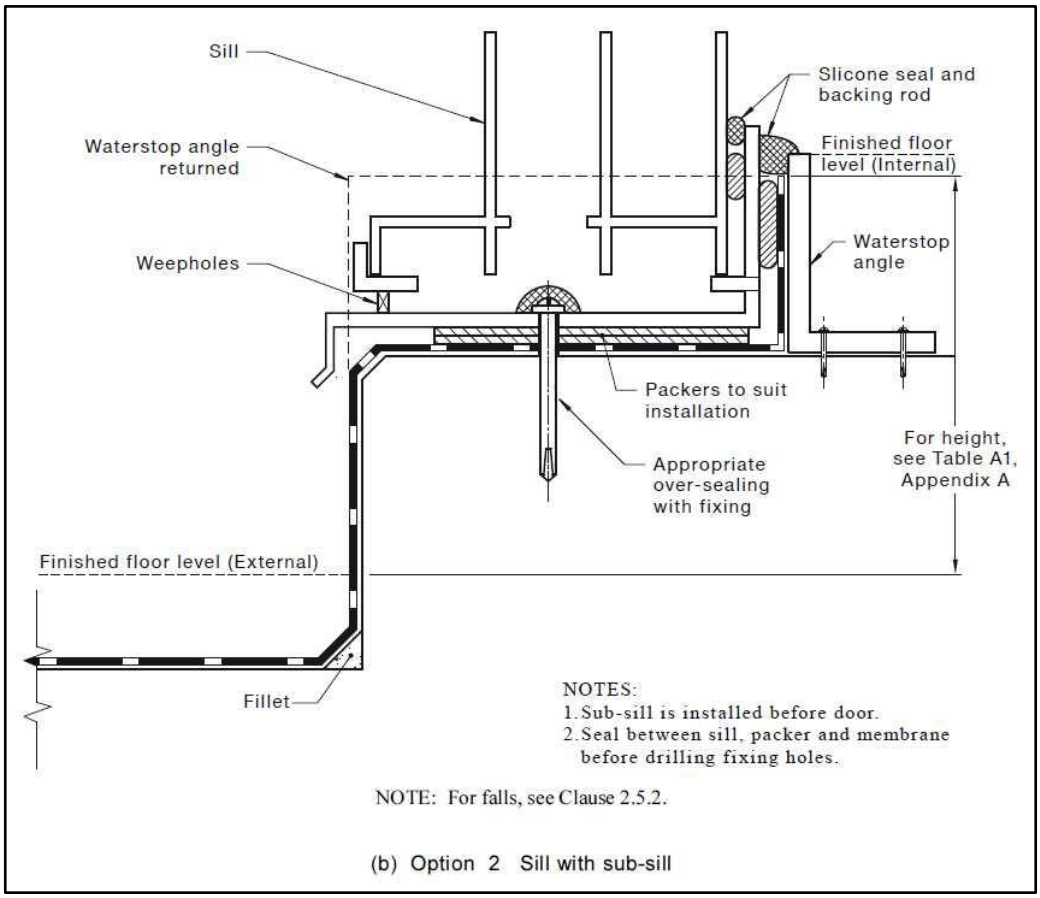
BCA Clause	Description	Status	Comments
			Comment: Electrical engineer's details and design certification are to be provided with application for CC.
Spec E4.8	Photoluminescent Exit Signs	For Note Only	Every *required exit* sign must comply with— (a) AS/NZS 2293.1; or (b) for a photoluminescent *exit* sign, Specification E4.8; and be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.
E4.9	Emergency warning and intercom systems	Design Detail	An emergency warning and intercom system complying where applicable with AS 1670.4 must be installed— (a) in a building with an effective height of more than 25 m; and (b) in a Class 3 building having a rise in storeys of more than 2 and used as— (i) the residential part of a primary or secondary school; or (ii) accommodation for the aged, children or people with a disability; and (c) in a Class 3 building used as a residential care building, except that the system— (i) must be arranged to provide a warning for occupants; and (ii) in areas used by the residents, may have its alarm adjusted in volume and content to minimise trauma consistent with the type and condition of residents; and (d) in a Class 9a building having a floor area of more than 1000 m2 or a rise in storeys of more than 2, and the system— (i) must be arranged to provide a warning for occupants; and (ii) in a ward area, may have its alarm adjusted in volume and content to minimise trauma consistent with the type and condition of patients; and (e) in a Class 9b building— (i) used as a school and having a rise in storeys of more than 3; or (ii) used as a theatre, public hall, or the like, having a floor area more than 1000 m2 or a rise in storeys of more than 2.

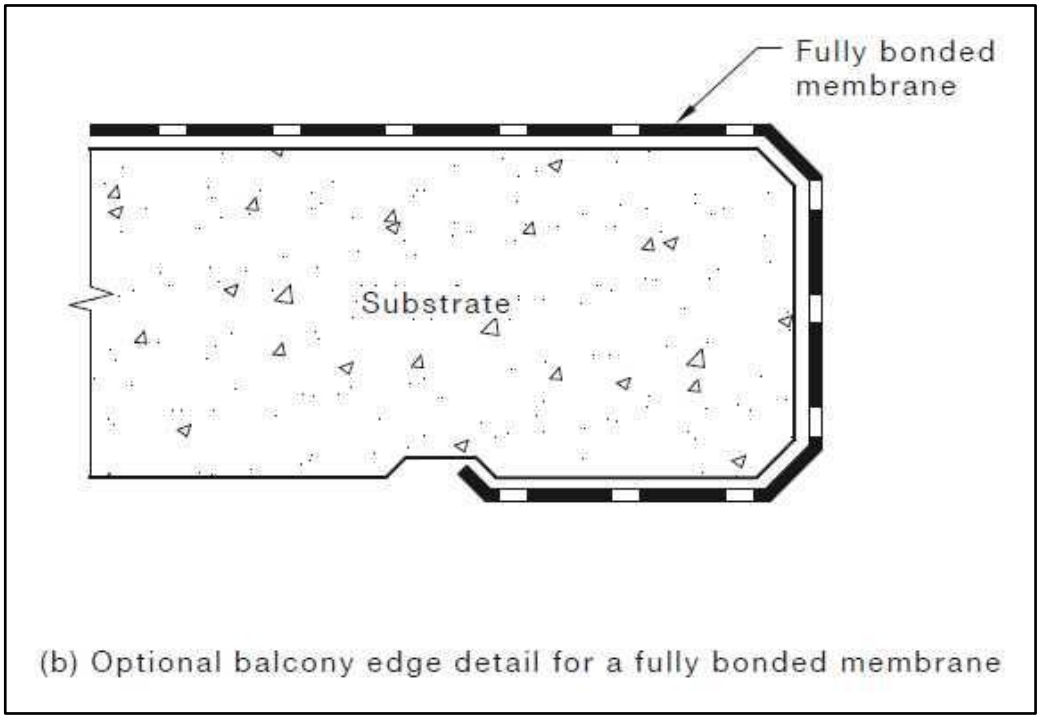
BCA Clause	Description	Status	Comments
			Comment: An emergency warning and intercom system complying where applicable with AS 1670.4 must be installed as the building has an *effective height* of more than 25m. (28.6m) Electrical details and design certificate are to be provided by a licensed (competent) fire safety practitioner and are to be provided prior to issue of the CC.

PART F1 – DAMP AND WEATHERPROOFING

BCA Clause	Description	Status	Comments
F1.0	Damp and Weatherproofing – Deemed-to-Satisfy Provisions	Performance Solution	**F1.0 Deemed-to-Satisfy Provisions** Performance Requirement FP1.4, for the prevention of the penetration of water through external walls, must be complied with. There are no Deemed-to-Satisfy Provisions for this Performance Requirement in respect of external walls. **FP1.4 Weatherproofing** A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause— (a) unhealthy or dangerous conditions, or loss of amenity for occupants; and (b) undue dampness or deterioration of building elements. **Limitation:** FP1.4 does not apply to— (a) a Class 7 or 8 building where in the particular case there is no necessity for compliance; or (b) a garage, tool shed, sanitary compartment, or the like, forming part of a building used for other purposes; or (c) an open spectator stand or open-deck carpark. **Comment:** Details to be provided with the application for CC.
F1.1	Stormwater drainage	Capable	Storm water drainage to comply with AS3500.3 **Comment:** Details to be provided with the application for CC.
F1.4	External above ground membranes	Capable	Water proofing membranes for external above ground use to comply with AS4654 Parts 1 and 2.

BCA Clause	Description	Status	Comments
			Comment: Details to be provided with the application for CC. Some examples from AS4654.2 are provided below, however there are numerous options.



BCA Clause	Description	Status	Comments
	 (b) Optional balcony edge detail for a fully bonded membrane		
F1.5	Roof coverings	Not Applicable	Metal roof sheeting is to comply with AS1562.1.
F1.6	Sarking	Capable	Sarking is to comply with AS4200.
F1.7	Waterproofing of wet areas in buildings	Capable	Water proofing of wet areas is to comply with AS3740-2010. **Comment:** Details to be provided with the application for CC.
F1.9	Damp-proofing	Capable	Damp-proof course is to be provided compliant with AS2904.
F1.10	Damp-proofing of Floors on the Ground	Capable	Vapour barrier is to be provided in accordance with AS2870. **Comment:** Details to be provided with the application for CC.
F1.11	Provision of Floor Wastes	Capable	Bathrooms to be provided with floor wastes. **Comment:** Details to be provided with the application for CC.
F1.12	Subfloor ventilation	Not Applicable	
F1.13	Glazed Assemblies	Capable	Glazed assemblies to comply with AS2047 and AS1288.

PART F2 – SANITARY AND OTHER FACILITIES

BCA Clause	Description	Status	Comments
F2.1	Facilities in residential buildings	Complies	For facilities in Class 2 buildings, the following applies: (a) Within each sole-occupancy unit, provide— (A) a kitchen sink and facilities for the preparation and cooking of food; and (B) a bath or shower; and (C) a closet pan; and (D) a washbasin. (b) For laundry facilities, provide either— (A) in each sole-occupancy unit— (aa) clothes washing facilities, comprising at least one washtub and a space for a washing machine; and (bb) clothes drying facilities comprising clothes line or a hoist with not less than 7.5 m of line, or space for one heat operated drying cabinet or appliance in the same room as the clothes washing facilities; or (B) a separate laundry for each 4 sole-occupancy units, or part thereof, that must comprise— (aa) clothes washing facilities, comprising at least one washtub and a space for a washing machine; and (bb) clothes drying facilities comprising clothes line or a hoist with not less than 7.5 m of line per sole-occupancy unit, or space for one heat operated drying cabinet or appliance. (c) For the purposes of (a)(i) and (a)(ii), a kitchen sink or washbasin must not be counted as a laundry washtub. **Comments**: The CC issue plans are to nominate the location for these facilities
F2.2	Calculation of number of occupants and facilities	For Note Only	(a) The number of persons accommodated must be calculated according to D1.13 if it cannot be more accurately determined by other means. (b) Unless the premises are used predominantly by one sex, sanitary facilities must be provided on the basis

BCA Clause	Description	Status	Comments
			of equal numbers of males and females. (c) In calculating the number of sanitary facilities to be provided under F2.1 and F2.3, a unisex facility *required* for people with a disability (other than a facility provided under F2.9) may be counted once for each sex. (d) For the purposes of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary products.
F2.3	Facilities in Class 3 to 9 buildings	Not Applicable	(a) Except where permitted by (b), (c), (f), F2.4(a), F2.4(b) and F2.9(b), separate sanitary facilities for males and females must be provided for Class 3, 5, 6, 7, 8 or 9 buildings in accordance with Table F2.3. (b) If not more than 10 people are employed, a unisex facility may be provided instead of separate facilities for each sex. (c) If the majority of employees are employed, a unisex facility may be provided instead of separate facilities for each sex. (d) Employees and the public may share the same facilities in a Class 6 and 9b building (other than a *school* or *early childhood centre*) provided the number of facilities provided is not less than the total number of facilities *required* for employees plus those *required* for the public. (e) Adequate means of disposal of sanitary products must be provided in sanitary facilities used by females.
F2.4	Accessible sanitary facilities	Not Applicable	Does not form part of the scope of this assessment.
F2.5	Construction of sanitary compartments	Capable	(a) Other than in an *early childhood centre*, *sanitary compartments* must have doors and partitions that separate adjacent compartments and extend— (i) from floor level to the ceiling in the case of a unisex facility; or (ii) to a height of not less than 1.5 m above the floor if primary *school* children are the principal users; or (iii) 1.8 m above the floor in all other cases.

BCA Clause	Description	Status	Comments
			(b) The door to a fully enclosed *sanitary compartment* must— (i) open outwards; or (ii) slide; or (iii) be readily removable from the outside of the *sanitary compartment*, unless there is a clear space of at least 1.2 m, measured in accordance with Figure F2.5, between the closet pan within the *sanitary compartment* and the doorway.
F2.6	Interpretation: urinals and washbasins	For Note Only	(a) A urinal may be— (i) an individual stall or wall-hung urinal; or (ii) each 600 mm length of a continuous urinal trough; or (iii) a closet pan used in place of a urinal. (b) A washbasin may be— (i) an individual basin; or (ii) a part of a hand washing trough served by a single water tap.
F2.7	Microbial (legionella) control	Not Applicable	Deleted in NSW
F2.8	Waste management	Not Applicable	Applies to Class 9a and 9c buildings only
F2.9, Spec F2.9	Accessible adult change facilities	For Note Only	Applies in the following buildings only: (i) Class 6 building that is a shopping centre having a design occupancy of not less than 3,500 people, calculated on the basis of the *floor area* and containing a minimum of 2 *sole-occupancy units*; and (ii) Class 9b sports venue or the like that— (A) has a design occupancy of not less than 35,000 spectators; or (B) contains a *swimming pool* that has a perimeter of not less than 70 m and that is *required* by Table D3.1 to be *accessible*; and (iii) museum, art gallery or the like having a design occupancy of not less than 1,500 patrons; and (iv) theatre or the like having a design occupancy of not less than 1,500 patrons; and (v) passenger use area of an airport terminal building within an airport that accepts domestic and/or international flights that are public

BCA Clause	Description	Status	Comments
			transport services as defined in the Disability Standards for Accessible Public Transport 2002.

PART F3 – ROOM SIZES

BCA Clause	Description	Status	Comments
F3.1	Height of rooms	Capable	The height of rooms and other spaces must be not less than— (a) in a Class 2 or 3 building or Class 4 part of a building— (i) a kitchen, laundry, or the like — 2.1 m; and (ii) a corridor, passageway or the like — 2.1 m; and (iii) a habitable room excluding a kitchen — 2.4 m; and (iv) in a room or space with a sloping ceiling or projections below the ceiling line within— (A) a habitable room— (aa) in an attic — a height of not less than 2.2 m for not less than two-thirds of the floor area of the room or space; and (bb) in other rooms — a height of not less than 2.4 m for not less than two-thirds of the floor area of the room or space; and (B) a non-habitable room — a height of not less than 2.1 m for not less than two-thirds of the floor area of the room or space; and when calculating the floor area of a room or space, any part that has a ceiling height of less than 1.5 m is not included; and (b) in a Class 5, 6, 7 or 8 building— (i) except as allowed in (ii) and (f) — 2.4 m; and (ii) a corridor, passageway, or the like — 2.1 m; and (d) in a Class 9b building— (i) a school classroom or other assembly building or part that accommodates not more than 100 persons — 2.4 m; and

BCA Clause	Description	Status	Comments
			(ii) a theatre, public hall or other assembly building or part that accommodates more than 100 persons — 2.7 m; and (iii) a corridor— (A) that serves an assembly building or part that accommodates not more than 100 persons — 2.4 m; or (B) that serves an assembly building or part that accommodates more than 100 persons — 2.7 m; and (iv) the number of persons accommodated must be calculated according to D1.13; and (f) in any building— (i) 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 (ii) a commercial kitchen — 2.4 m; and (iii) above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like; and (iv) a required accessible adult change facility — 2.4 m. **Comment:** Details to be provided with the application for CC.

PART F4 – LIGHT AND VENTILLATION

BCA Clause	Description	Status	Comments
F4.1	Provision of natural light	Capable	Natural light must be provided in: (a) **Class 2 buildings and Class 4 parts of buildings** — to all habitable rooms. (b) **Class 3 buildings** — to all bedrooms and dormitories. (c) **Class 9a and 9c buildings** — to all rooms used for sleeping purposes. (d) **Class 9b buildings** — 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.

BCA Clause	Description	Status	Comments
F4.2	Methods and extent of natural light	Capable	(a) Required natural light must be provided by – (i) windows, excluding roof lights, that – (A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the floor area of the room; and (B) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or (ii) roof lights, that – (A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the floor area of the room; and (B) are open to the sky; or (iii) a proportional combination of windows and roof lights required by (i) and (ii). (b) Except in a Class 9c building, in a Class 2, 3 or 9 building or Class 4 part of a building a required window that faces a boundary of an adjoining allotment or a wall of the same building or another building on the allotment must not be less than a horizontal distance from that boundary or wall that is the greater of – (i) Generally – 1m; and (ii) In a patient care area or other room used for sleeping purposes in a Class 9a building – 3m; and (iii) 50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill. (c) In a Class 9c building, a required window must be transparent and located – (i) in an external wall with the window sill not more than 1 m above the floor level; and

BCA Clause	Description	Status	Comments
			(ii) where the window faces an adjoining allotment, another building or another wall of the same building, it must not be less than a horizontal distance of 3 m from the adjoining allotment, other building or wall. **Comment:** A design table detailing room floor areas, glazed window and door sizes/areas, achieved aggregate area for transmitting light and percentage of floor area is to be provided with the application for CC.
F4.3	Natural light borrowed from an adjoining room	Not Applicable	
F4.4	Artificial Lighting	Capable	(a) Artificial lighting must be provided – (i) in required stairways, passageways, and ramps; and (ii) if natural light of a standard equivalent to that required by F4.2 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 – (A) Class 4 parts of a building — to sanitary compartments, bathrooms, shower rooms, airlocks and laundries; and (B) Class 2 buildings — to sanitary compartments, bathrooms, shower rooms, airlocks, laundries, common stairways and other spaces used in common by the occupants of the building; and (C) 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. (b) The artificial lighting system must comply with AS/NZS 1680.0. **Comment:** Artificial lighting is to be provided to comply with AS1680.0-2009. Details are to be provided with the application for CC.

BCA Clause	Description	Status	Comments
F4.5	Ventilation of Rooms	Capable	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 F4.6; or (b) a mechanical ventilation or air-conditioning system complying with AS 1668.2 and AS/NZS 3666.1. **Comment:** All enclosed areas of the building are required to be provided with either; complying natural ventilation or a system of mechanical ventilation complying with AS1668.2-2012. **Note:** Refer to F6.3 in the report for further requirements.
F4.6	Natural ventilation	Capable	(a) Natural ventilation provided in accordance with F4.5(a) must consist of openings, *windows*, doors or other devices which can be opened— (i) with a ventilating area not less than 5% of the *floor area* of the room *required* to be ventilated; and (ii) open to— (A) a suitably sized court, or space open to the sky; or (B) an open verandah, carport, or the like; or (C) an adjoining room in accordance with F4.7. **Comment:** All enclosed areas of the building are required to be provided with either; complying natural ventilation or a system of mechanical ventilation complying with AS1668.2-2012. Where natural ventilation is proposed, a design table detailing room floor areas, openable window and door sizes/areas, achieved aggregate ventilation area and percentage of floor area is to be provided with the application for CC.
F4.7	Ventilation borrowed from an adjoining room	Not Applicable	
F4.8	Restriction on Position of Water Closest and Urinals	Capable	*Sanitary compartments* must not open directly into— (a) a kitchen or pantry; or (b) a public dining room or restaurant; or (c) a dormitory in a Class 3 building; or

BCA Clause	Description	Status	Comments
			(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. **Comment:** Details are to be provided with the application for CC.
F4.9	Airlocks	Capable	If a sanitary compartment is prohibited under F4.8 from opening directly to another room— (a) in a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building— (i) access must be by an airlock, hallway or other room; or (ii) the sanitary compartment must be provided with mechanical exhaust ventilation; and (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. **Comment:** All sanitary compartments are required to be provided with mechanical exhaust ventilation complying with AS1668.2-2012. Details to be provided with the application for CC.
F4.11	Carparks	Capable	Every storey of a carpark, except an open-deck carpark, must have – (a) a system of mechanical ventilation complying with AS 1668.2; or (b) a system of natural ventilation complying with Section 4 of AS 1668.4. **Comments:** Mechanical engineer's details and design certificate is to be provided with the application for CC to demonstrate that the system of ventilation complies with F4.11.

BCA Clause	Description	Status	Comments
F4.12	Kitchen local exhaust ventilation	Capable	A commercial kitchen must be provided with a kitchen exhaust hood complying with AS 1668.1 and AS 1668.2 where— (a) any cooking apparatus has— (i) a total maximum electrical power input exceeding 8 kW; or (ii) a total gas power input exceeding 29 MJ/h; or (b) the total maximum power input to more than one apparatus exceeds— (i) 0.5 kW electrical power; or (ii) 1.8 MJ/hour gas, per m2 of *floor area* of the room or enclosure. **Comments:** A commercial kitchen is not proposed.

PART F5 – SOUND TRANSMISSION AND INSULATION

BCA Clause	Description	Status	Comments
F5.1	Application of Part	For Note Only	
F5.2	Determination of airborne sound insulation ratings	Capable	A form of construction required to have an airborne sound insulation rating must— (a) have the required value for weighted sound reduction index (Rw) or weighted sound reduction index with spectrum adaptation term (Rw + Ctr) determined in accordance with AS/NZS 1276.1or ISO717.1using results from laboratory measurements; or (b) comply with Specification F5.2. **Comments:** A system for sound insulation is to be provided on plans to demonstrate compliance with F5.2 & F5.3. Details are to be provided with the application for CC.
F5.3	Determination of impact sound insulation ratings	Capable	(a) A floor in a building required to have an impact sound insulation rating must – (i) have the required value for weighted normalized impact sound pressure level (Ln,w) determined in accordance with ASISO717.2 using results from laboratory measurements; or (ii) comply with Specification F5.2. (b) A wall in a building required to have an impact sound insulation rating must – (i) for a Class 2 or 3 building be of discontinuous construction; and

			(ii) for a Class 9c building, must – (D) for other than masonry, be two or more separate leaves without rigid mechanical connection except at the periphery; or (E) be identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with Specification F5.5 than a wall listed in Table 2 of Specification F5.2. (c) For the purpose so of this Part, discontinuous construction means a wall having a minimum 20mm cavity between 2 separate leaves, and (i) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and (ii) for other than masonry, there is no mechanical linkage between leaves except at the periphery. **Comments:** A system for sound insulation is to be provided on plans to demonstrate compliance with F5.2 & F5.3. Details are to be provided with the application for CC.
F5.4	Sound insulation rating of floors	Capable	(a) A floor in a Class 2 or 3 building must have an Rw + Ctr (airborne) not less than 50 and an Ln,w (impact) not more than 62 if it separates – (i) sole-occupancy units; or (ii) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification. (b) A floor in a Class 9c building separating sole-occupancy units must have an Rw not less than 45. **Comments:** A system for sound insulation of the floors is to be provided on plans to demonstrate compliance with F5.2, F5.3 & F5.4. Details are to be provided with the application for CC.
F5.5	Sound insulation rating of walls	Capable	(a) A wall in a Class 2 or 3 building must – (i) have an Rw + Ctr (airborne) not less than 50, if it separates sole-occupancy units; and (ii) have an Rw (airborne) not less than 50, if it separates a sole-occupancy unit from a plant room, lift shaft, stairway, public

			corridor, public lobby or the like, or parts of a different classification; and (iii) comply with F5.3(b) if it separates – (A) a bathroom, sanitary compartment, laundry or kitchen in one sole-occupancy unit from a habitable room (other than a kitchen) in an adjoining unit; or (B) a sole-occupancy unit from a plant room or lift shaft. (b) A door may be incorporated in a wall in a Class 2 or 3 building that separates a sole-occupancy unit from a stairway, public corridor, public lobby or the like, provided the door assembly has an Rw not less than 30. (c) A wall in a Class 9c building must have an Rw not less than 45 if it separates – (i) sole-occupancy units; or (ii) a sole-occupancy unit from a kitchen, bathroom, sanitary compartment (not being an associated ensuite), laundry, plant room or utilities room. (d) In addition to (c), a wall separating a sole-occupancy unit in a Class 9c building from a kitchen or laundry must comply with F5.3(b). (e) Where a wall required to have sound insulation has a floor above, the wall must continue to – (i) the underside of the floor above; or (ii) a ceiling that provides the sound insulation required for the wall. (f) Where a wall required to have sound insulation has a roof above, the wall must continue to – (i) the underside of the roof above; or (ii) a ceiling that provides the sound insulation required for the wall. **Comments:** A system for sound insulation of the walls is to be provided on plans to demonstrate compliance with F5.5. Details are to be provided with the application for CC.

PART F6 – CONDENSATION MANAGEMENT

Part F6 aims to limit the amount of condensation that can accumulate within a building by requiring that water vapour be extracted to a point external to the building. It only applies to residential building classifications which are considered to be more susceptible to the accumulation of moisture due to the building's intended function and use.

BCA Clause	Description	Status	Comments
F6.1	Application of Part	For Note Only	Only applies to sole-occupancy units of a Class 2 building and a Class 4 part of building.
F6.2	Pliable building membrane	For Note Only	(a) Where a pliable building membrane is installed in an external wall, it must— (i) comply with AS/NZS 4200.1; and (ii) be installed in accordance with AS 4200.2; and (iii) be a vapour permeable membrane for climate zones 6, 7 and 8; and (iv) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building. (b) Except for single skin masonry and single skin concrete, where a pliable building membrane is not installed in an external wall, the primary water control layer must be separated from water sensitive materials by a drained cavity. **Comments**: A detailed specification is to be provided with the application for CC to demonstrate compliance.
	Definitions • **Pliable building membrane** – means a water barrier as classified by AS/NZS 4200.1. Pliable building membranes (also known as sarking or underlay), when used either independently or as a facing to other materials, such as insulation materials, and as control functions for water, thermal vapour or air control. • **Water control layer** – means a pliable building membrane or the exterior cladding when no pliable building membrane is present. • **Water sensitive materials** – means materials that have an inherent capacity to absorb water vapour and include timber, plasterboard, plywood, oriented strand board and the like.		
F6.3	Flow rate and discharge of exhaust systems	For Note Only	(a) An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of – (i) 25L/s for a bathroom or sanitary compartment; and (ii) 40 L/s for a kitchen or laundry. (b) Exhaust from a kitchen must be discharged directly or via a shaft or duct to outdoor air.

			(c) Exhaust from a bathroom, sanitary compartment or laundry must be discharged- (i) directly or via a shaft or duct to outdoor air or (ii) to a roof space that is ventilated in accordance with F6.4. **Comments**: Details including a design statement is to be provided with the application for CC to demonstrate compliance with F6.3.
F6.4	Ventilation of roof space	For Note Only	(a) Where an exhaust system covered by F6.3 discharges directly or via a shaft or duct into a roof space, the roof space must be ventilated to outdoor air through evenly distributed openings. (b) Openings required by (a) must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitch is greater than 22 degrees, or 1/150 of the respective ceiling area if the roof pitch is less than or equal to 22 degrees. **Comments**: Details including a design statement is to be provided to demonstrate compliance with F6.4.

PART NSW G1.101 PROVISION FOR CLEANING WINDOWS

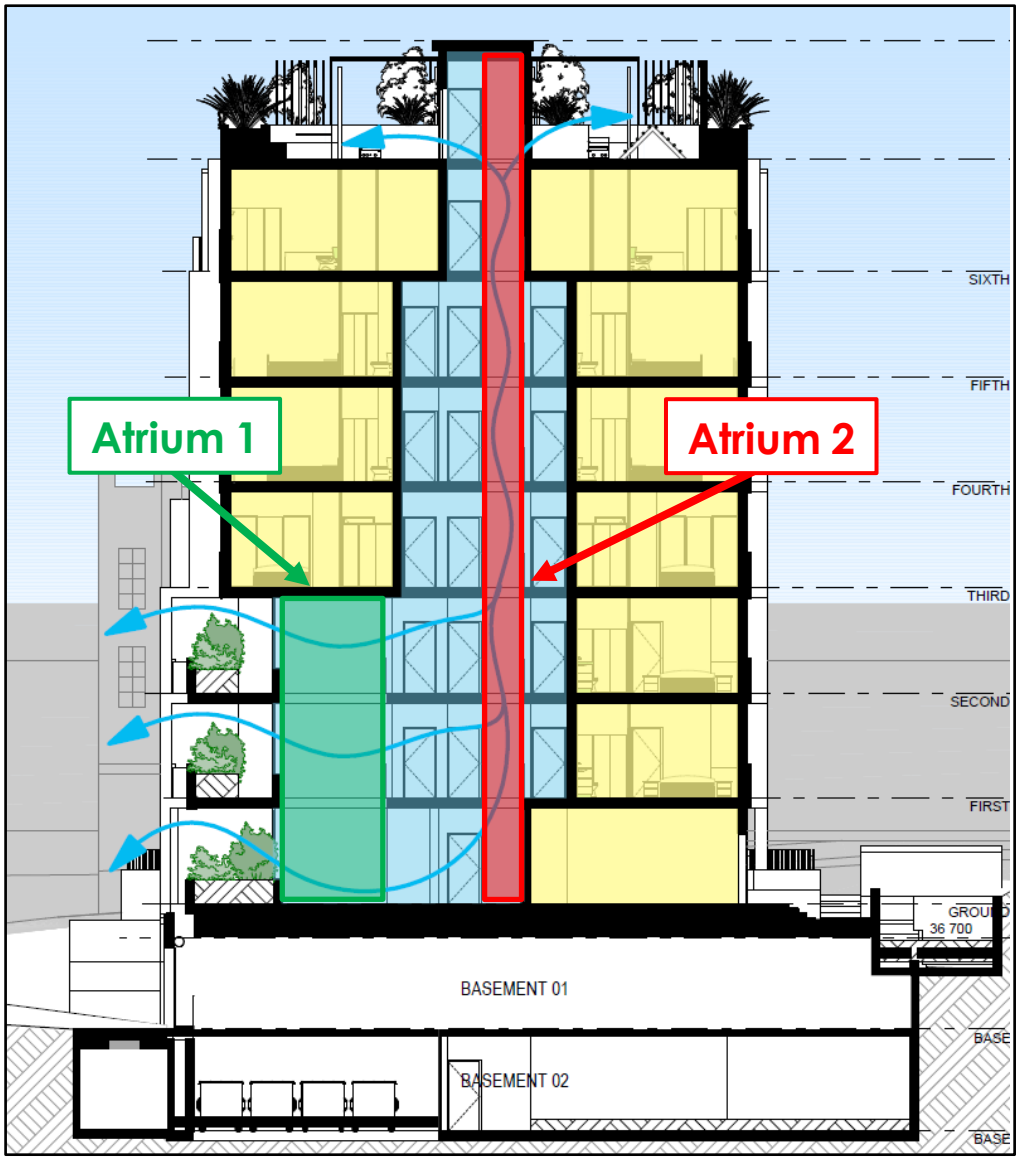
BCA Clause	Description	Status	Comments
NSW G1.101	Application of Part	Capable	(a) A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level. (b) A building satisfies (a) where— (i) the windows can be cleaned wholly from within the building; or (ii) 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. **Comments**: A detailed specification is to be provided to demonstrate compliance to be provided with application for CC.

PART G3 – ATRIUM CONSTRUCTION

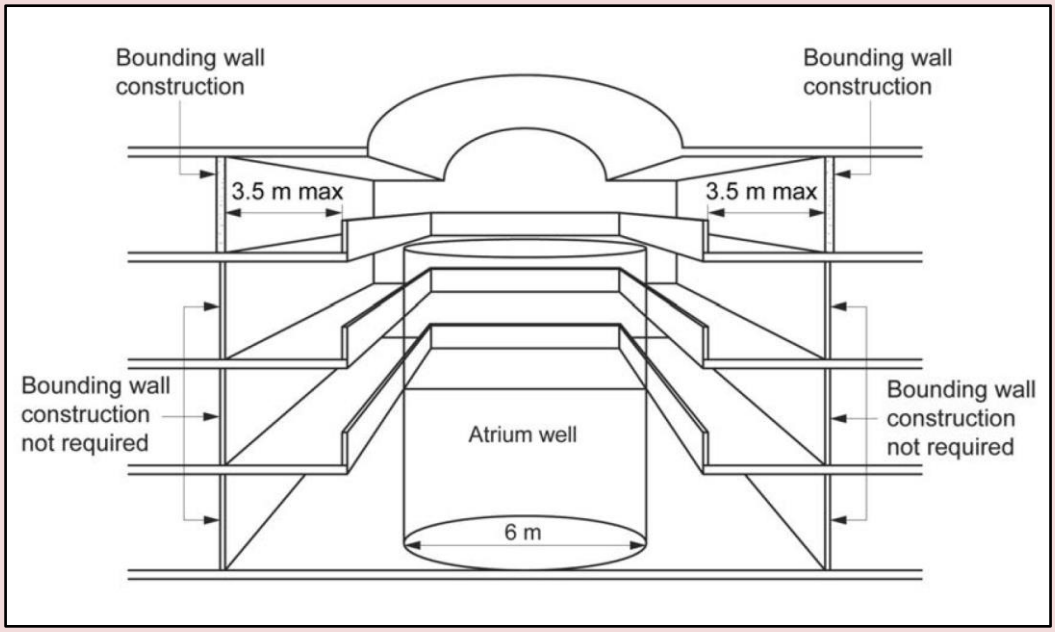
Atrium means a space within a building that connects 2 or more storeys and—
(a) is enclosed at the top by a floor or roof (including a glazed roof structure); and
(b) includes any adjacent part of the building not separated by an appropriate barrier to fire; but
(c) does not include a stairwell, ramp well or the space within a shaft; and

(d) for the purposes of (a) a space is considered enclosed if the area of the enclosing floor or roof is greater than 50% of the area of the space, measured in plan, of any of the storeys connected by the space.

BCA Clause	Description	Status	Comments
G3.1	Application of Part	Capable	This Part does not apply to an atrium which— (a) connects only 2 storeys; or (b) connects only 3 storeys if— (i) each storey is provided with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 throughout; and (ii) one of those storeys is situated at a level at which there is direct egress to a road or open space. **Comment:** The building contains two (2) atriums, as follows: • **Atrium 1** – atrium 1 connects not more than 3 storeys and the building is provided with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 throughout, on that basis Part G3 does not apply. • **Atrium 2** – atrium 2 connects more than 3 storeys (8), on that basis Part G3 applies.



G3.2	Dimensions of atrium well	Does not Comply	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. **Comment:** Atrium 2 is not able to contain a cylinder having a horizontal diameter of not less than 6 m.

			
G3.3	Separation of atrium by bounding walls	Capable	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 no 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 C2.2. **Comment:** Atrium 2 is capable of complying, structural engineer's details are required to confirm FRL compliance. Details to be provided with the application for CC.
G3.4	Construction of bounding walls	Capable	Bounding walls must— (a) have an FRL of not less than 60/60/60, and— (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 C3.4; and (ii) the walls and doors protected with wall-wetting systems in accordance with Specification G3.8; and (iii) a fire barrier with an FRL of not less than –/60/30 installed in any ceiling spaces above the wall. **Comment:** Atrium 2 is capable of complying, structural engineer's details are required to confirm FRL compliance. Details to be provided with the application for CC.
G3.5	Construction at balconies	Capable	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. **Comment:** Atrium 2 is capable of complying. Details to be provided with the application for CC.
G3.6	Separation at roof	Capable	In an atrium— (a) the roof must have the FRL prescribed in Table 3 of Specification C1.1; or (b) the roof structure and membrane must be protected by a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5. **Comment:** Atrium 2 is capable of complying. Details to be provided with the application for CC.
G3.7	Means of egress	Does not Comply	All areas within an atrium must have access to at least 2 exits. **Comment:** The area of Atrium 2 does not have access to at least 2 exits.
G3.8	Fire and smoke control systems	Capable	Sprinkler systems, smoke control, fire detection and alarm systems, and emergency warning and intercom systems must be installed in compliance with Specification G3.8. **Comment:** Atrium 2 is capable of complying. Details to be provided with the application for CC.

PART G6 – OCCUPIABLE OUTDOOR AREAS

Occupiable outdoor area means a space on a roof, balcony or similar part of a building—
(a) that is open to the sky; and
(b) to which access is provided, other than access only for maintenance; and
(c) that is not open space or directly connected with open space.

BCA Clause	Description	Status	Comments
G6.1	Application of Part	For Note Only	(a) 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 the BCA. (b) 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. (c) Except for G6.2, the Deemed-to-Satisfy Provisions of this Part do not apply to— (i) an occupiable outdoor area of a sole-occupancy unit in a Class 2 or 3 building, Class 9c building or Class 4part of a building; or (ii) an occupiable outdoor area with an area less than 10m2.
G6.2	Fire hazard properties	Capable	(a) Subject to (b), a lining, material or assembly in an occupiable outdoor area must comply with C1.10 as for an internal element. (b) The following fire hazard properties of a lining, material or assembly in an occupiable outdoor area are not required to comply with C1.10: (i) Average specific extinction area. (ii) Smoke-Developed Index. (iii) Smoke development rate. (iv) Smoke growth rate index (SMOGRARC). **Comments**: Details to be provided with application for CC.
G6.3	Fire separation	Capable	For the purposes of the Deemed-to-Satisfy Provisions of C2.7, C2.8 and C2.9, 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. **Comments**: Details to be provided with application for CC.

G6.4	Provision for escape	Complies	For the purposes of the Deemed-to-Satisfy Provisions of Part D1, a reference to a storey or room includes an occupiable outdoor area. **Comments**: Details to be provided with application for CC.
G6.5	Construction of exits	Capable	For the purposes of the Deemed-to-Satisfy Provisions of Part D2, a reference to a storey or room includes an occupiable outdoor area. **Comments**: Details to be provided with application for CC.
G6.6	Fire fighting equipment	Capable	Except for Clause 7(b)(i) of Specification E1.5, for the purposes of the Deemed-to-Satisfy Provisions of Part E1, a reference to a storey includes an occupiable outdoor area. **Comments**: Details to be provided with application for CC.
G6.7	Lift installations	Not Applicable	For the purposes of the Deemed-to-Satisfy Provisions of Part E3, a reference to a storey includes an occupiable outdoor area.
G6.8	Visibility in an emergency, exit signs and warning systems	Not Applicable	For the purposes of the Deemed-to-Satisfy Provisions of Part E4, a reference to a storey includes an occupiable outdoor area. **Comments**: Details to be provided with application for CC.
G6.9	Light and ventilation	Not Applicable	For the purposes of the Deemed-to-Satisfy Provisions of F4.4, F4.8 and F4.9, a reference to a room includes an occupiable outdoor area.
G6.10	Fire orders	Not Applicable	For the purposes of the Deemed-to-Satisfy Provisions of G4.9, a reference to a storey includes an occupiable outdoor area.

6 Conclusion

This report identifies the compliance status of the architectural design with the relevant 'deemed-to-satisfy' (DTS) requirements of the Building Code of Australia 2019, Amendment 1, Volume 1.

The outcome of the report highlights that the current design is capable of compliance with the Deemed-to-Satisfy provisions of the BCA and BCA Performance Requirements subject to the recommendations identified within this report being incorporated into the finalised construction certificate design documentation.

BCA Performance Solutions shall be provided where suggested in Sections 5.0 of this report.

7 Appendix

7.1 Fire Safety Schedule (Draft)

Fire Safety Measures	Proposed Standard of Performance
Access Panels, doors and hoppers to fire resisting shaft	BCA C3.10 & AS1735.11-1986, C3.13 & AS1905.1-2015, AS1905.2-2005
Automatic fire detection and alarm system	BCA E2.2, Spec E2.2a and AS1670.1-2018 (fire detection), AS1670.3-2018 (alarm monitoring)
Automatic fire suppression system (Sprinklers)	BCA E1.5, Spec E1.5, Spec E1.5a & AS2118.1-2017
Building occupant warning system	BCA Spec E2.2a and AS1670.1-2018
Emergency lifts	BCA E3.4 and AS1735.2-2001
Emergency lighting	BCA E4.2, E4.4 and AS/NZS2293.1-2018
Emergency warning and intercom systems	BCA E4.9 and BCA E4.9 & AS1670.4-2018
Exit signs	BCA E4.5, E4.6, E4.8 and AS/NZS2293.1-2018
Fire control centres and rooms	BCA E1.8 & Spec E1.8 Clause 2 to 5
Fire dampers	BCA C3.12, C3.15 & AS/NZS1668.1-2015, AS1668.2-2012, and AS1668.4-2012
Fire doors	BCA Spec C3.4 & AS1905.1-2015 & AS1905.2-2005
Fire hydrant systems	BCA E1.3 & AS2419.1-2005
Fire seals protecting openings in fire resisting components of the building	BCA C3.12, C3.15 & Spec C3.15 & AS1530.4-2014
Fire-stair pressurisation system	BCA E2.3 & AS/NZS 1668.1-2015
Fire windows	BCA C3.4 & Specification C3.4
Hose reel system	BCA E1.4 & AS2441-2005
Mechanical air handling system	BCA E2.2, Spec E2.2b & AS/NZS1668.1-2015
Paths of Travel, stairways, passageways or ramps	BCA Section D, Clause 108 and 109 of the EP&A Regulation, (Development Certification and Fire Safety) 2021
Portable fire extinguishers	BCA E1.6 & AS2444-2001
Warning and operational signs	Clause 108 and 109 of the EP&A Regulation, (Development Certification and Fire Safety) 2021, D2.23 (signs on exit doors), E3.3 (lifts)
Performance Solution/s	Future Performance Solution (if applicable)

7.2 Glossary of Terms

The Act means the Environmental Planning and Assessment Act 1979 (NSW). All amendments and references to the Act also mean amendments and references to the Regulations.
Accessible means having features to enable use by people with a disability.
Access Code means the Access Code contained in the Premises Standards. The code outlines design requirements for a building to be accessible
Accessway means a continuous accessible path of travel (as defined in AS1428.1) to, into or within a building.
AFSS or **Annual Fire Safety Statement** has the same meaning as it has in "The Reg".
Affected Part has the same meaning as that in the Premises Standards, being the Principal Public Entrance to a building and access way to new work.
Alternative Solution has the same meaning as **Performance Solution**.
AS1428.1 means AS1428 'Design for access and mobility' Part 1: 2009; General requirements for access – New building work', unless specified.
AS means Australia Standard
Automatic means designed to operate when activated by a heat, smoke or fire sensing device.
Building means the building or part of the building which is the subject of the Building Works.
BCA if not otherwise specified, means National Construction Code 2019, Amendment 1, Volume 1 Building Code of Australia Class 2 to 9 Buildings.
Certificates mean statutory certificates and non-statutory certificates.
Certifying Authority or **CA** has the same meaning as it has in **The Act**.
Change of building use or change of use has the same meaning as it has in **The Act**.
Circulation Space means a clear unobstructed area to enable persons using mobility aids to manoeuvre.
Combustible means—
(a) applied to a material — combustible as determined by AS 1530.1; and
(b) applied to construction or part of a building — constructed wholly or in part of combustible materials.
Compliant means to the standards specified by the Access Code, BCA or AS1428.1 *Note: for clarity, works may be specified in this report that may omit reference to 'compliant' or a specific standards. Where this is the case, those works are to be 'compliant' to the extent required by this definition.
Complying Development Certificate or **CDC** has the same meaning as it has in "The Act".
Consent Authority has the same meaning as it has in "The Act".
Construction Certificate or **CC** has the same meaning as it has in "The Act".
Deemed to Satisfy Provision or **DTS** has the same meaning as the same term in Volumes 1 & 2 of the National standards deemed to achieve compliance with the BCA or Access Code, as applicable.
DDA means the "Disability Discrimination Act 1992"
Development Consent has the same meaning as it has in **The Act**.
Effective height means the vertical distance between the floor of the lowest storey included in the calculation 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).
Fabric means the basic building structural elements and components of a building including the roof, ceilings, walls and floors.
Fire brigade or **FRNSW** means Fire and Rescue New South Wales being the statutory authority constituted under an Act of Parliament having as one of its functions, the protection of life and property from fire and other emergencies.
Fire compartment has the same mean as the BCA.
Fire Engineering Brief, **FEB** or **Brief** has the same meaning as the term in the IFEG. It is a summary document of proposed assessment methods and goals for a Performance Solution relating to a fire safety matter.
Fire Engineering Report or **FER** has the same meaning as the term in the IFEG. It is a detailed report of assessment methods, calculations and outcomes of a Performance Solution relating to a fire safety matter.
Fire hazard properties has the same meaning as the BCA. Generally the properties of a material or assembly that indicate how they behave under specific fire test conditions.
Fire-isolated passageway means a corridor, hallway or the like, of fire-resisting construction, which provides egress to or from a fire-isolated stairway or fire-isolated ramp or to a road or open space.
Fire-isolated stairway means a stairway within a fire-resisting shaft and includes the floor and roof or top enclosing structure.
Fire-resistance level (FRL) means the grading periods in minutes determined in accordance with BCA Specification A2.3. *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 Safety Certificate means an Interim or Final Fire Safety Certificate within the meaning of The Reg.
Floor Area has the same meaning as the National Construction Code 2016 Volume 1 Building Code of Australia Class 2 to 9 Buildings.
IFEG means the International Fire Engineering Guidelines, 2005.
Insulation, in relation to an FRL, means the ability to maintain a temperature on the surface not exposed to the furnace below the limits specified in AS 1530.4.
Integrity, in relation to an FRL, means the ability to resist the passage of flames and hot gases specified in AS 1530.4.
Loadbearing means intended to resist vertical forces additional to those due to its own weight.
Non-combustible means—
(a) applied to a material — not deemed combustible as determined by AS 1530.1 — Combustibility Tests for Materials; and
(b) applied to construction or part of a building — constructed wholly of materials that are not deemed combustible.

Occupation Certificate or **OC** has the same meaning as it has in **The Act**.
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 or **PR** has the same meaning as the term in Volumes 1 & 2 of the National Construction Code.
Premises Standards means the "Disability (Access to Premises – Buildings) Standards 2010"
Performance Solution has the same meaning as the term in Volumes 1 & 2 of the National Construction Code as in force at the time of application for a CDC or CC including all applicable amendments.
Principal Certifier or **PC** is a building practitioner as defined by **The Act**
Public corridor means an enclosed corridor, hallway or the like which—
(a) serves as a means of egress from 2 or more sole-occupancy units to a required exit from the storey concerned; or
(b) is required to be provided as a means of egress from any part of a storey to a required exit.
Building Regulations or **Bldg Reg** means the Building Regulation 2006(NSW) (as amended) and all applicable amendments.
The Reg means the Environmental Planning and Assessment Regulation 2000 (NSW). All amendments and references to the Regulation.
Resistance to the incipient spread of fire , in relation to a ceiling membrane, means the ability of the membrane to insulate the space between the ceiling and roof, or ceiling and floor above, so as to limit the temperature rise of materials in this space to a level which will not permit the rapid and general spread of fire throughout the space
Rise in storeys means the greatest number of storeys calculated in accordance with BCA Clause
Self-closing, applied to a door, means equipped with a device which returns the door to the fully closed position immediately after each opening. C1.2.
Slip Resistant means a property of a surface having a frictional force-opposing movement of an object across a surface.
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
Storey means a space within a building which is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but not—
(a) a space that contains only—
    (i) a lift shaft, stairway or meter room; or
    (ii) a bathroom, shower room, laundry, water closet, or other sanitary compartment; or
    (iii) accommodation intended for not more than 3 vehicles; or
    (iv) a combination of the above; or
(b) a mezzanine.
Structural adequacy, in relation to an FRL, means the ability to maintain stability and adequate loadbearing capacity as determined by AS 1530.4.

7.3 Table – FRL of Building Elements – Type A Construction

The following table identifies the Fire ratings that are applicable to the general building structure. It should be noted that these fire ratings do not relate to specific elements requiring fire separation (e.g. main switchboard, separation of fire compartments and the like);

Building Element	Class of Building – FRL (in minutes)			
	Class 2, 3 or 4	5, 7a or 9	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated therein) or other external building element, where the distance from any fire-source feature to which it is exposed is				
For loadbearing parts –				
Less than 1.5m	90/90/90	120/120/120	180/180/180	240/240/240
1.5m to less than 3m	90/60/60	120/90/90	180/180/120	240/240/180
3m or more	90/60/30	120/60/30	180/120/90	240/180/90
For non-loadbearing parts –				
Less than 1.5m	–/90/90	–/120/120	–/180/180	–/240/240
1.5m to less than 3m	–/60/60	–/90/90	–/180/120	–/240/180
3m or more	–/–/–	–/–/–	–/–/–	–/–/–
External columns not incorporated in an external wall –				
Loadbearing	90/–/–	120/–/–	180/–/–	240/–/–
Fire/ common walls	90/90/90	120/120/120	180/180/180	240/240/240
Internal walls –				
Fire resisting lift and stair shafts				
Loadbearing	90/90/90	120/120/120	180/180/180	240/240/240
Nonloadbearing	–/90/90	–/120/120	–/180/180	–/240/240
Bounding public corridors, public lobbies and the like—				
Loadbearing	90/90/90	120/–/–	180/–/–	240/–/–
Nonloadbearing	–/60/60	–/–/–	–/–/–	–/–/–
Between or bounding sole-occupancy units—				
Loadbearing	90/90/90	120/–/–	180/–/–	240/–/–
Nonloadbearing	–/60/60	–/–/–	–/–/–	–/–/–
Vent, pipe, garbage, and like shafts not used for the discharge of hot products of combustion—				
Loadbearing	90/90/90	120/90/90	180/120/120	240/120/120
Nonloadbearing	–/90/90	–/90/90	–/120/120	–/120/120
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