### C2022042

# BUILDING CODE OF AUSTRALIA 2022 REPORT



# 27 REDMAN ROAD DEE WHY NSW

# **Residential Flat Building**

**11 November 2022** 

**Revision 1** 

TABLE OF CONTENTS	Page No.
1.0 – EXECUTIVE SUMMARY	3
1.1 – DESIGN CONSIDERATIONS	
1.2 – FIRE ENGINEERING	
1.3 – REPORT VERSION	5
2.0 - PROPERTY DESCRIPTION	6
2.1 – BUILDING LOCATION	
2.3 – REPORT PURPOSE	7
2.4 – REPORT METHODOLOGY	
2.5 – EXCLUSIONS, ASSUMPTIONS AND LIMITATIONS	
2.6 – Building Description	9
3.0 - BCA 2022 ASSESSMENT	10
3.1 – STRUCTURAL & FIRE RESISTANCE (SECTION B & C OF BCA 20	)22)10
3.2 – ACCESS & EGRESS (SECTION D, BCA 2022)	
3.3 – Services and Equipment (Section E, BCA 2022)	
3.4 – HEALTH & AMENITY (PART F, BCA 2022)	27
3.5 – ANCILLARY PROVISIONS (PART G, BCA 2022)	
3.6 – SPECIAL USE BUILDINGS. (SECTION I, BCA 2022)	
3.7 – ENERGY EFFICIENCY. (SECTION J, BCA 2022)	
4.0 - PROPOSED FIRE SAFETY SCHEDULE	39
5.0 – CONCLUSION	40
6.0 – REFERENCES DOCUMENTS & PLANS	
UIU — RLI ERLIICES DUCUPILII IS & FLANS	······

© Mosman Certifiers Pty Ltd. All rights reserved.

PO Box 94 Spit Junction NSW 2088. ABN: 24 606 570 825, ACN: 606 570 825

360 Certification (Mosman Certifiers Pty Ltd) has prepared this document for the sole use of the Client and for a specific purpose, each as expressly stated in the document. No other party should rely on this document without the prior written consent of 360 Certification.

360 Certification undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document. This document has been prepared based on the Client's description of its requirements and 360 Certification's experience, having regard to assumptions that 360 Certification can reasonably be expected to make in accordance with sound professional principles. 360 Certification accepts no liability for information provided by the Client and other third parties used to prepare this document or as the basis of the analysis. Subject to the above conditions, this document may be transmitted, reproduced, or disseminated only in its entirety.

#### 1.0 - Executive Summary

This BCA 2022 Report has been prepared to support the development application for the residential flat building containing four apartments with associated carparking at 27 Redman Road Dee Why NSW.

The two parts of the building have been considered as one *united building* to simplify the assessment based on the interconnecting bridge between the front and rear building.

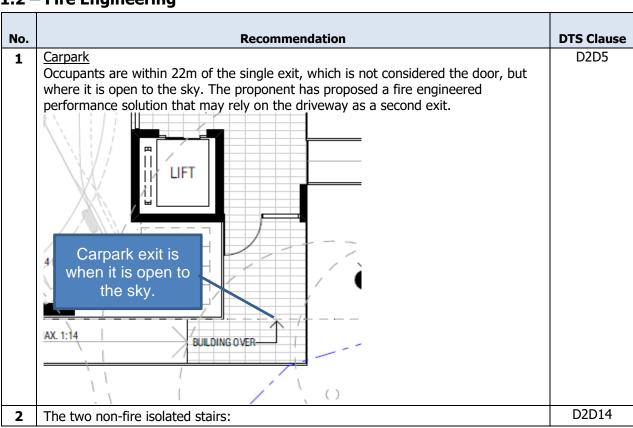
The assessment of the documentation has revealed that the building is primarily capable of complying with the *Deemed-to-Satisfy* [herein 'DTS'] provisions of the *National Construction Code, Volume One, Building Code of Australia 2022,* [herein 'BCA 2022'], and where necessary the Performance Requirements, without modification that would require the development consent to be modified.

#### 1.1 - Design Considerations

No.	Recommendation	DTS Clause				
1	Within Building 'A' spandrel separation is required from the carpark to level 1 and from level 1 to level 2.	C4D3				
	Western openings (metal grill) to ground floor Building "A' marked in red below.					
	CRETE ORIVE WAY  GREEN WALL ON  METAL SCREENS  WALL					
	ON NS 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1					
	Western openings (1 x door and 1 x window) to first floor Building "A' marked in red below.					
	PLANTER  WHITE TRANSLUCENT GLASS TO THE SIDE  ACCESS					
	BDRM 3 BATH					
	Western openings (4 x window) to first floor Building "B' marked in red below.					
2	One hand rail is required to all stairs as per this clause. The two non-fire isolated stairs must have two hand rails to AS 1428.1-2009 and are subject to detailed design at construction certificate stage.	D3D22				
3	Disabled access must be provided from the principal pedestrian entry at the property boundary to the:	D4D4				

	<ul> <li>entry doors of the residential units on all levels;</li> </ul>	
	<ul> <li>residential bins and storage areas on the ground levels.</li> </ul>	
	Currently the circulations space to one bin storage, and the two storage rooms will	
	need to be adjusted to comply with AS 1428.1-2009.	
4	Tactiles will be required to non-fire isolated stairs and the ramps. Tactile ground	D4D9
	surface indicators required by (1) must comply with sections 1 and 2 of AS/NZS	
	1428.4.1.	
5	Fire hydrant coverage is required as the building is greater than 500m <sup>2</sup> . Hydrant	E1D2
	coverage must comply with E1.3 and AS 2419.1-2021.	
	The site is served by Sydney Water asset	
	ID: 2417392, 150 CICL Reticulation.	
	151 2 117 552/ 150 6162 Notice and distribution	
	Street hydrant coverage is not to be achieved to unit 4. As such, onsite hydrant	
	coverage will be required, which will likely need a booster and pump, which is	
	currently not shown.	
	currently not snown.	
	The booster is also more than 10m from the substation that is currently proposed	
	next to the driveway.	
	next to the universaly.	
	The pump room on the ground floor has direct egress outside, which complies with	
	this clause.	
6	The batteries contained within electric cars and/or on-site battery storage are likely	E1D17
0	to be considered a special hazard at construction certificate stage. At present there	LID1/
	is minimal guidance from the ABCB on the suppression of such fires. As such, such	
<u> </u>	equipment may need to be fire separated as a minimum.	F7D1
7	The walls separating Units must have an $R_w + C_{tr}$ (airborne) not less than 50.	F7D1
	Discontinuous construction will be required around the lift shafts in building A & B.	

#### 1.2 - Fire Engineering



- Provide a continuous path of egress from every level served;
- Excluding the rear stair, discharge not more than 15m from a doorway providing egress to a road or open space;
- provide a total egress distance not more than 80m (circa 60m).

The rear non fire isolated stair discharges 21m from open space instead of 15m, which is to be addressed via a fire engineered *performance solution*.

#### 1.3 - Report Version

Revision	Date	Comments	Prepared & approved
DRAFT 1	04 November 2022	DRAFT report.	Greg Evans, Registered Certifier BDC 1870.
Revision 1	11 November 2022	Final report.	Greg Evans, Registered Certifier BDC 1870.



Registered Certifier BDC 1870

**360 Certification** 



### 2.0 - Property Description

#### 2.1 - Building Location

The existing building is located on Lot 73, Deposited Plan 7413, and is known as 27 Redman Road Dee Why NSW.

Image: Location plan of 27 Redman Road Dee Why NSW. © Google 2021.

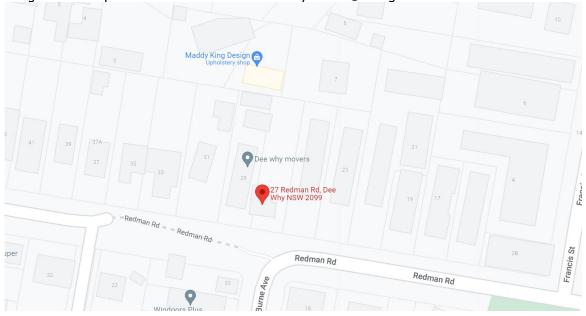


Image: Site plan of 27 Redman Road, Dee Why NSW.



#### 2.2 - Basis of Assessment

This BCA 2022 Report has been prepared based of the following: -

- The *Deemed-to-Satisfy* provisions of BCA 2022, including NSW Variations and relevant Australian Standards;
- Where relevant, the Performance Requirements of BCA 2022;
- The Environmental Planning & Assessment Act 1979;
- Clause 131 and 143 of the Environmental Planning & Assessment Regulations 2000;
- Disability (Access to Premises Buildings) Standards 2010;
- Plans prepared by Mackensie Architects International, Project 16/04, p. 1-27, Rev A;
- The front and rear building are united, as defined by BCA 2022 due to the interconnecting bridge.

#### 2.3 – Report Purpose

This BCA 2022 Report has been prepared to support the development application for the residential flat building containing four apartments with associated carparking at 27 Redman Road Dee Why NSW. The BCA 2022 Report will:

- compare the proposed building against the *Deemed-to-Satisfy* provisions of BCA 2022 including NSW Variations and relevant Australian Standards;
- Identify DTS breaches that can be altered to comply with the DTS provisions of BCA 2022;
- Identify DTS breaches and relevant performance requirements to be considered for Performance Solutions by the fire engineering and other consultants.

#### 2.4 - Report Methodology

This BCA 2022 report initially relies upon the plans of the proposed building, and a review of the structure against *Deemed-to-Satisfy* provisions of BCA 2022 and adopted Australian Standards.

Consideration can be given to the Performance Requirements of BCA 2022 where appropriate. Where relevant the assessment can include the following categories –

- Structural;
- Fire resistance and compartmentation;
- Occupant Access/Egress;
- Fire Safety/Protection Services
- Health & Amenity;
- Energy Efficiency.

Where compliance is not achieved with the relevant Deemed-to-Satisfy provisions, recommendations will be made to comply with the DTS or the relevant performance requirements.

#### 2.5 – Exclusions, Assumptions and Limitations

- This report does not imply, nor refer to structural design or operating capability or design of any electrical, fire, hydraulic or mechanical services;
- Limited reference is made to the Disability (Access to Premises Buildings)
   Standards 2010 and the Disability Discrimination Act 1992 (Cth);
- This report excludes a detailed Section J Assessment;
- Property protection, asset protection, environment protection, business interruption, issues associated with insurance or community impact are specifically excluded in this report;
- No liability is accepted for the accuracy of any documents / drawings provided by others which may form the basis of the analysis in this report;
- This report is specifically limited to the project / building and all contents (including data, methodologies, calculations, and conclusions) in this report shall not be used for any other projects / buildings or any other purposes. No liability is accepted for the use of findings of this report by others;
- Modifications, changes, or future developments to the building and / or any fire safety systems may invalidate the findings of this report. A re-assessment should be sought if these changes happen.

### 2.6 - Building Description

Building Use		<b>ing</b> means a building containing 3 Iling, co-living housing or multi dwe		
	Note: Residential flat buildings are a type of residential accommodation—see the definition of that term in this Dictionary.			
Use/Classifications	Storey	Description	Classification(s)	
	Ground floor	Residential & Carparking	2 & 7a	
	Level 1	Residential	2	
	Level 2 Residential 2			
		torage in the car park basement lev t storey, and therefore the storag 6G1 of BCA 2022 (A1).		
Rise in Storeys	The proposed buildi	ng has a <i>rise in storeys</i> of <b><u>tl</u></b>	ıree as per Clause C1.2.	
Storeys Contained	The proposed buildi	ng contains <b>three</b> storeys.		
Type of Construction	The proposed buildi	ng requires Type 'A' Constru	ction.	
Floor Area & Volume	The maximum floor	areas and volumes do not a	pply to Class 2 parts.	
		The area and volume of the carpark is less than the maximum permitted for Type 'A', 'B' or 'C' construction.		
Effective Height	The building will have an effective height of 8.90m.  Note: RL 37.10 – RL 28.20.			
Primary FRL's	Class 2 – 90 minutes;			
•	Class 7a −120 minutes.			
Fire Compartments	Each storey is assumed to be a <i>fire compartment</i> . Each dwelling is fire separated from the rest of the building they are not separate <i>fire compartments</i> .			
Parking Spaces	4 + 4 bicycles.			
HBCF Insurance	HBCFI is applicable as the building has a rise in storeys of less than 4 (as defined by the <i>Home Building Regulation 2014</i> ). As such, the building is <b>not</b> considered a <i>multi-storey building</i> under clause 54 of the <i>Home Building Regulation 2014</i> ).			
Strata Scheme Builders Bond		v.fairtrading.nsw.gov.au/ puilding-bond-and-inspec		
Zoning	R3 – Medium Densit	ty Residential		
Bushfire Prone Land	No.			
Flood Prone	Yes.			
Acid Sulphate Soils	No.			
Heritage	No			
Conservation Area	No			
Salinity	No			

#### 3.0 - BCA 2022 Assessment

### 3.1 – Structural & Fire Resistance (Section B & C of BCA 2022)

Part B	Structural Provisions	Clause Requirements/Comments	Compliance
B1D1	Deemed-to-satisfy	Part applicable.	Note only.
B1D2	provisions Resistance to actions.	Subject to geotechnical and structural engineering.	Yes
B1D3	Determination of	Subject to geotechnical and structural engineering.	Yes
0103	individual actions.	Subject to geoteeninear and structural engineering.	103
B1D4	Determination of	Subject to geotechnical and structural engineering.	Yes
	structural resistance of		
	materials and forms of		
B1D5	construction. Structural software.	Note only.	Note only.
B1D6	Construction of buildings	Subject to flood levels	Yes
5150	in flood hazard areas.		. 33
Part C2	Fire Resistance and Stability	Clause Requirements/Comments	Compliance
C2D1	DtS Provisions.	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Note only
C2D2	Type of construction	The proposed building requires Type 'A' construction.	Yes
	required.	Fire ratings must comply with Section C, and	
	a	Specification 5.	
	Cladding: Clause 2.4 of Spec. C1.1		
	states:	Primary FRL's	
	The method of attaching or	Class 2 – 90 minutes;	
	installing a finish, lining,	Class 7a –120 minutes.	
	ancillary element, or service		
	installation to a building element must not reduce	External walls, common walls, lift framing and non-	
	the fire-resistance of that	load bearing fire resisting internal walls must be non-	
	element to below that	combustible. Internal load bearing walls must be of	
	required.	concrete, masonry.	
C2D2	Calculation of rise in storeys.	The proposed building has a rise in storeys of three. The building contains three storeys.	Yes
C2D4	Buildings of multiple	The building does not propose mixed types of	N/A
	classifications.	construction.	
C2D5	Mixed type of	The building is not proposed to be subject to mixed	N/A
Cape	construction.	types of construction.	D1/A
C2D6	Two storey Class 2, 3 or 9c buildings.	Not applicable as no Class 2, 3 or 9c.	N/A
C2D7	Class 4 parts of buildings.	No Class 4 parts.	N/A
C2D8	Open spectator stands	Not an open spectator stand or indoor sports stadium.	N/A
	and indoor sports		
	stadiums.		
C2D9	Lightweight fire rated	If proposed to use lightweight fire rated construction in	Yes
	construction.	a wall or to cover a steel column or the like, the	
		system must comply with this clause, Specification 6,	
62046	AL LOUI	and the manufactures specifications.	.,
C2D10	Non-combustible	The following building elements and their components	Yes
	building elements	must be non-combustible:	

	and Separation		
Part C3	Compartmentation	(f) A component of a garage door.  Clause Requirements/Comments	Compliance
		(e) Fibre-reinforced cement sheeting.	
		(c) Perforated gypsum lath with a normal paper finish. (d) Fibrous-plaster sheet.	
		(b) Layered plasterboard product.	
		following: (a) A laminated glass system.	
		panel need not comply with (1) if it is one of the	
		frame. (2) An externally located bonded laminated cladding	
	, p. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	mechanically supported or restrained to the supporting	
	laminated cladding panels	construction, externally located bonded laminated cladding panels must have all layers of cladding	
C2D15	Fixing of bonded	(1) In a building required to be of Type A or B	Yes
		required to be non-combustible unless it is one of the exempted items contained within this clause.	
		parts or external face of an external wall that is	
C2D14	Ancillary elements	An ancillary element must not be fixed, installed, attached to, or supported by the concealed internal	Yes
	Concession	protective timber.	
C2D13	walls in fire. Fire-protected timber:	constructed with tilt up concrete panels.  Not proposed to comply with requirements for fire	N/A
C2D12	Performance of external	Not applicable as the building not proposed to be	N/A
		<ul> <li>Plasterboard wall and ceiling linings comply with this clause.</li> </ul>	
		and a smoke development rate of not more than 750 percent-minutes.	
		As the building will not be sprinklered, the floor linings are to achieve a critical radiant flux <i>not less than</i> 2.2	
		clause.	
C2D11		floor linings, floor coverings, wall linings, ceiling linings and air-handling ductwork, must comply with this	
NSW	Fire hazard properties	The fire hazard properties of	Yes
		Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5 do not have to comply with this clause.	
		A loadbearing internal wall and a loadbearing fire wall, including those that are part of a loadbearing shafts, must comply with Specification 5.	
		must be of non-combustible construction in— a building required to be of Type A construction; and	
		similar shaft that is not for the discharge of hot products of combustion, which is non-loadbearing,	
		A shaft, being a lift, ventilating, pipe, garbage, or	
		(c) Non-loadbearing internal walls where they are required to be fire-resisting.	
		covering, framing and insulation. (b) The flooring and floor framing of lift pits.	
		components incorporated in them including the facade	

C3D1	DtS Provisions.	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Note only
C3D2	Application of Part.	Applicable Yes or No	Applicable
C3D3	General floor area and volume limitations.	The maximum floor areas and volumes do not apply to Class 2 parts or sprinkler protected carparks.	Yes
C3D4	Large isolated buildings.	Not a large isolated building.	N/A
C3D5	Requirements for open space and vehicular access.	Not a large isolated building.	N/A
C3D6	Class 9 buildings. NSW C3D6(3) relating to Class 9c buildings.	Not a class 9 building.	N/A
C3D7	Vertical separation of openings in external walls.	Spandrel separation is required as the building requires Type A construction and is not proposed to be sprinkler protected.  Spandrel separation must be one of the following: (A) is not less than 900 mm in height; and (B) extends not less than 600 mm 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	Yes
		900 mm min.	
		900 mm min.	
		FIGURE 4 - VERTICAL SEPARATION IN TYPE A CONSTRUCTION (SPANDREL)	

		450 mm min.  FIGURE 5 - HORIZONTAL SEPARATION IN TYPE A CONSTRUCTION	
		Within Building 'A' spandrel separation is required from the carpark to level 1 and from level 1 to level 2.	
		Within Building 'B' spandrel separation is required from the lobby / storage area to level 1, and from level 1 to 2.	
C3D8	Separation by fire walls.	No <i>fire walls</i> separating the building in different <i>fire compartments</i> .	N/A
C3D9	Separation of classifications in the same storey.	Not applicable as each storey is one class only. Not the basement	N/A
C3D10	Separation of classifications in the different storey.	The ground floor is Class 7a, while level 1 is Class 2. and the ground floor is class 2. As such, the first floor slab must have the higher FRL of 120 minutes for the Class 7a instead of 90 minutes for the Class 2.	Yes
C3D11	Separation of lift shafts.	The lift shafts must be fire rated and achieve an FRL of: - 120/120/120 to ground floor level; - 90/90/90 on remaining levels.  Doorways to the lift are to have an FRL of/60/	Yes
C3D12	Stairways and lifts in one shaft.	The lifts is contained within its own fire rated shaft as required.	Yes
C3D13	Separation of equipment.	The following equipment must be fire separated from the building: - (i) lift motors and lift control panels within a lift room; 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 system installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200 kWh or more. (vi) on-site fire pumps must comply with the requirements of AS 2419.1.	Yes
C3D14	Electricity supply system.	If the main electrical distribution board serves fire pumps, they must be fire separated with fire rated construction achieving an FRL of 120/120/120 with doorways achieving an FRL of/120/30 AND the	Yes

		emergency switchgear must be separated from non-	
		emergency switchgear as per Clause C2.13(d).	
C3D15	Public corridors in Class 2 and Class 3 buildings.	No public corridor greater than 40m in length.	Yes
Part C4	Protection of Openings	Clause Requirements/Comments	Compliance
C4D1	DtS Provisions.	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Note only
C4D2	Application of part.	This Part applies to the building. This clause also details when this clause does not apply to come openings.	Note only
C4D3	Protection of openings in external walls.	Within Building 'A' spandrel separation is required from the carpark to level 1 and from level 1 to level 2.	Design consideration
		Western openings (metal grill) to ground floor Building "A' marked in red below.	
		GREEN WALLOW METAL SCREENS WALL	
		0N NS 2 1 2 2 3 - 4 - 4 - 5 5 5 5	
		Western openings (1 x door and 1 x window) to first floor Building "A' marked in red below.	
		PLANTER WHITE TRANSLUCENT GLASS TO THE SIDE PLANTEF ACCESS BATH BATH	
		Western openings (4 x window) to first floor Building "B' marked in red below.  VERTICAL LÜUVRES  WC	
C4D4	Separation of external walls and associated openings in different fire	No fire compartments on different levels As such, this clause does not apply.	N/A
C4D5	compartments.  Acceptable methods of	No openings require protection as per C4D3. However,	Design consideration
C4D6	protection.  Doorways in fire walls.	openings may need to be protected as per D2D12  No <i>fire walls</i> and therefore doorways in <i>fire walls</i> .	N/A
C4D7	Sliding fire doors.	No sliding fire doors.	N/A
C4D8	Protection of doorways in horizontal exits.	No horizontal exits.	N/A

Openings in fire isolated exits.	Both stairs only connect three storeys and therefore are not required to be fire isaolted. However, where the stair adjoins a unit, fire rated bounding construction requirements still apply.	N/A
Service penetrations in fire isolated exits.	No fire isolated stairs.	N/A
Openings in fire isolated lift shafts.	The doorways to the lift <i>shaft</i> 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.	Yes
Bounding construction: Class 2, 3, 4 & 9b buildings (entertainment venues) NSW C4D12(4), all classes. NSW C4D12(5), Class 3 residential care buildings. NSW C4D12(10) for Class 9b buildings used as entertainment venues.	The internal entry doorways to units must be self closing fire doors, that achive an FRL of/60/30 and otherwise comply with AS 1905.1-2015.	Yes
Openings in floors and ceilings for services.	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 fire stopped in accordance with this clause, C3.15 and the FRL concessions provided for sprinkler protected buildings.	Yes
Openings in shafts.	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.	
Openings for service installations	Where an electrical, electronic, plumbing, mechanical ventilation, air-conditioning, or other service penetrates a building element (other than an <i>external wall</i> or roof) that is <i>required</i> to have an FRL with respect to <i>integrity</i> or <i>insulation</i> or a <i>resistance to the incipient spread of fire</i> , that installation must be fire stopped as per this clause.	Yes
Construction joints.	Construction joints to be fire stopped as per this	Yes
Columns protected with lightweight construction to achieve an FRL.	A column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL or resistance to the incipient spread of fire.	Yes
	Service penetrations in fire isolated exits.  Openings in fire isolated lift shafts.  Bounding construction: Class 2, 3, 4 & 9b buildings (entertainment venues) NSW C4D12(4), all classes. NSW C4D12(5), Class 3 residential care buildings. NSW C4D12(10) for Class 9b buildings used as entertainment venues.  Openings in floors and ceilings for services.  Openings in shafts.  Construction joints.  Construction joints.	exits.  Inot required to be fire isaloted. However, where the stair adjoins a unit, fire rated bounding construction requirements still apply.  No fire isolated exits.  Openings in fire isolated lift shafts.  The doorways to the lift shaft must be protected by — (60)— fire doors that— (1) comply with AS 1735.11; and (ii) are set to remain closed except when discharging or receiving passengers, goods, or vehicles.  Bounding construction: Class 2, 3, 4 & 9b buildings (entertainment venues) NSW 4012(4), all classes. NSW 4012(5), class 3 residential care buildings. NSW 4012(10) for Class 9b buildings used as retertainment venues.  Openings in floors and ceilings for services.  Openings in shafts.  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 fire stopped in accordance with this clause, C.3.15 and the FRL concessions provided for sprinkler protected buildings.  Openings in shafts.  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 pane which, together with its frame, is non-combustible or has an FRL of not less than —/60/30; 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.  Openings for service installations  Openings for service construction to integrity or insulation or a resistance to the incipient spread of fire, that installation must be fire stopped as per this clause.  Construction joints.  Columns protected with lightweight construction to achieve an FRL.  A column protected by lightweight construction to achieve an FRL or resistance to the incipient spread of fire, that installad using a method and materials identical with a prototype

3.2 - Access & Egress (Section D, BCA 2022)

Part D2	Provisions for Escape	Clause Requirements/Comments	Compliance
D2D1	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Note only.
D2D2	Application of Part	Part applicable	Note only.
D2D3	Number of exits required NSW D2D3(4), Class 9 buildings	Each storey requires one exit as per this clause.	Yes
D2D4	When fire-isolated stairways and ramps are required.	Both stairs are considered non-fire isolated.	Yes
D2D5	Exit travel distances	Carpark Occupants are within 22m of the single exit, which is not considered the door, but where it is open to the sky. The proponent has proposed a fire engineered performance solution that may rely on the driveway as a second exit.  Carpark exit is when it is open to the sky.  Residential units: The doorways of sole occupancy units are within 6m of their adjoining single exit, as permitted by this clause.	Fire engineering
D2D6	Distance hetween	Occupants not within sole occupancy units are within 20m of an exit, which complies with this clause.	Vac
D2D6	Distance between alternative exits	Carpark: The carpark does not rely on alternate exits. However, if the ramp is utilised for fire engineering purposes, the exits are more than 9m part, and less than 45m apart.  There is no convergence as per D2D6(d) as occupants have exited the building and are in open space.  The remaining parts of the building do not rely on alternate exits.	Yes
D2D7	Height of exits, paths of travel to exits and doorways	In a required exit or path of travel to an exit the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm.	Yes

Midth of exits and paths of travel to exits   NSW DZDR(S), Class 90 billings used as entertainment venues   The path of travel to exits   The aggregate egress width for the building complies with this clause based on normal residential occupancy rates.				
with this clause based on normal residential occupancy rates.  NSW D2D9  Width of doorways in exits or paths of travel to exits and paths of travel to exits generally complies with this clause based on normal residential occupancy rates.  The width of doorways can be 750mm for non-accessible paths.  The dimensions of exits and paths of travel to exits generally complies with this clause and is subject to detailed design at construction certificate stage.  D2D10  Exit width not to diminish in direction of travel to a road or open space, except where the width is increased in accordance with D2D8(1)(b) or D2D9(a)(i).  The unobstructed width of a required exit must not diminish in the direction of travel to a road or open space, except where the width is increased in accordance with D2D8(1)(b) or D2D9(a)(i).  D2D11  Determination and measurement of exits and paths of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of travel to a road or open space in the direction of the direction of the direction of the direction of travel to a road or open space in the direction of the direction	D2D8	of travel to exits NSW D2D8(5), Class 9b		Yes
D2D10 exits or paths of travel to exits  The dimensions of exits and paths of travel to exits generally complies with this clause and is subject to detailed design at construction certificate stage.  The dimensions of exits and paths of travel to exits generally complies with this clause and is subject to detailed design at construction certificate stage.  The unobstructed width of a required exit must not diminish in direction of travel to a road or open space, except where the width is increased in accordance with D2D8(1)(b) or D2D9(a)(i).  For the purposes of D2D7 to D2D10 the following apoply:  (a) The required width of a stainway or ramp in a required exit or path of travel to an exit must—  (i) be measured clear of all obstructions such as handralls, projecting parts of barriers and the like; and extend without interruption, except for ceiling cornices, to a heighth not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing.  (b) To determine the aggregate unobstructed width, the number of persons accommodated must be calculated according to D2D18.  D2D12 Travel via fire-isolated exits.  D2D13 External stairways or ramps in lieu of fire-isolated exits solated exits.  D2D14 Travel by non-fire-isolated exits solated exits solated exits solated exits except where the width of the properties of the			with this clause based on normal residential occupancy	
D2D10   Exit width not to diminish in direction of travel   D2D11		exits or paths of travel	accessible paths and 850mm for accessible paths.  The dimensions of exits and paths of travel to exits	Yes
diminish in direction of travel to a road or open space, except where the width is increased in accordance with D2D8(1)(b) or D2D9(a)(l).  D2D11  Determination and measurement of exits and paths of travel to exits  The required width of a stairway or ramp in a required exit or path of travel to an exit must—  (i) be measured clear of all obstructions such as handrails, projecting parts of barriers and the like; and extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing.  (b) To determine the aggregate unobstructed width, the number of persons accommodated must be calculated according to D2D18.  D2D12  Travel via fire-isolated exits  D2D13  External stairways or ramps in lieu of fire-isolated stairs  D2D14  Travel by non-fire-isolated stairways or ramps.  The two non-fire isolated stairs:  Provide a continuous path of egress from every level served;  Excluding the rear stair, discharge not more than 15m from a doorway providing egress to a road or open space;  Provide a total egress distance not more than 80m (circa 60m).  The rear non fire isolated stair discharges 21m from open space instead of 15m, which is to be addressed via a fire engineered performance solution.  D2D15  Discharge from exits NSW D2D15(6), Class 9b building used as entertainment wene				
Determination and measurement of exits and paths of travel to exits  For the purposes of D2D7 to D2D10 the following apply:  (a) The required width of a stairway or ramp in a required exit or path of travel to an exit must—  (i) be measured clear of all obstructions such as handrails, projecting parts of barriers and the like; and (ii) extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing.  (b) To determine the aggregate unobstructed width, the number of persons accommodated must be calculated according to D2D18.  D2D12 Travel via fire-isolated exits.  No applicable as both stairs are non-fire isolated.  External stairways or ramps in lieu of fire-isolated exits  D2D13 External stairways or ramps in lieu of fire-isolated exits  D2D14 Travel by non-fire-isolated exits  D2D15 Excluding the rear stair, discharge not more than 15m from a doorway providing egress from every level served;  Excluding the rear stair, discharge not more than 15m from a doorway providing egress to a road or open space;  Provide a total egress distance not more than 80m (circa 60m).  The rear non fire isolated stair discharges 21m from open space instead of 15m, which is to be addressed via a fire engineered performance solution.  The discharge of the exits to ramp along the eastern façade complies with this clause.	D2D10	diminish in direction of	diminish in the direction of travel to a road or open space, except where the width is increased in	Yes
D2D12 Travel via fire-isolated exits.  D2D13 External stairways or ramps in lieu of fire-isolated exits  D2D14 Travel by non-fire-isolated stairways or ramps.  The two non-fire isolated stairs:  Provide a continuous path of egress from every level served;  Excluding the rear stair, discharge not more than 15m from a doorway providing egress to a road or open space;  provide a total egress distance not more than 80m (circa 60m).  The rear non fire isolated stair discharges 21m from open space instead of 15m, which is to be addressed via a fire engineered performance solution.  D2D15 Discharge from exits NSW D2D15(6), Class 9b building used as entertainment venue  No external stair in lieu of a fire isolated stair.  N/A  Subject to fire engineering  Subject to fire engineering  The two non-fire isolated stairs:  Provide a continuous path of egress from every level served;  Excluding the rear stair, discharge not more than 80m (circa 60m).  The rear non fire isolated stair discharges 21m from open space instead of 15m, which is to be addressed via a fire engineered performance solution.  The discharge of the exits to ramp along the eastern façade complies with this clause.	D2D11	measurement of exits and paths of travel to	apply:  (a) The required width of a stairway or ramp in a required exit or path of travel to an exit must—  (i) be measured clear of all obstructions such as handrails, projecting parts of barriers and the like; and  (ii) extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing.  (b) To determine the aggregate unobstructed width, the number of persons accommodated	Yes
D2D13 External stairways or ramps in lieu of fire-isolated exits  D2D14 Travel by non-fire-isolated stairways or ramps.  The two non-fire isolated stairs:  Provide a continuous path of egress from every level served;  Excluding the rear stair, discharge not more than 15m from a doorway providing egress to a road or open space;  provide a total egress distance not more than 80m (circa 60m).  The rear non fire isolated stair discharges 21m from open space instead of 15m, which is to be addressed via a fire engineered performance solution.  D2D15 Discharge from exits  N/A  NSW D2D15(6), Class 9b  Discharge from exits  NSW D2D15(6)	D2D12			N/A
isolated stairways or ramps.  • Provide a continuous path of egress from every level served; • Excluding the rear stair, discharge not more than 15m from a doorway providing egress to a road or open space; • provide a total egress distance not more than 80m (circa 60m).  The rear non fire isolated stair discharges 21m from open space instead of 15m, which is to be addressed via a fire engineered performance solution.  D2D15  Discharge from exits NSW D2D15(6), Class 9b building used as entertainment venue  The discharge of the exits to ramp along the eastern façade complies with this clause.  Yes	D2D13	External stairways or ramps in lieu of fire-	No external stair in lieu of a fire isolated stair.	N/A
NSW D2D15(6), Class 9b building used as entertainment venue façade complies with this clause.	D2D14	Travel by non-fire- isolated stairways or	<ul> <li>Provide a continuous path of egress from every level served;</li> <li>Excluding the rear stair, discharge not more than 15m from a doorway providing egress to a road or open space;</li> <li>provide a total egress distance not more than 80m (circa 60m).</li> <li>The rear non fire isolated stair discharges 21m from open space instead of 15m, which is to be addressed</li> </ul>	fire
	D2D15	NSW D2D15(6), Class 9b building used as entertainment		Yes
	D2D16		No horizontal exits are provided / required.	N/A

D2D17			
	Non-required stairways, ramps, or escalators.	No non-required stairways, ramps or escalators connecting storeys.	N/A
D2D18	Number of persons accommodated.  NSW Table D2D18	The aggregate egress width complies with this clause based on normal residential occupancy levels.	Yes
D2D19	Measurement of distances	This clause details the rules pertaining to the nearest part of an exit.	Note only.
D2D20	Method of measurement	This clause details the rules pertaining to the measurement of exit travel.	Note only.
D2D21	Plant rooms and lift machine rooms: Concession.	No plant concession required.	N/A
D2D22	Access to lift pits	The lift pits will be less than 3m in depth and therefore access to the lift pit will be via the lowest landing doors.	Yes
D2D23	Egress from primary schools School: Includes a primary or secondary school, college, university, or similar educational establishment	Not applicable as not a school as defined by BCA 2022.	N/A
Part D3	Construction of Exits	Clause Requirements/Comments	Compliance
D3D1	DtS Provisions.	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Note only.
NSW D3D2	Application of part	Part applies.	Note only.
D3D3	Fire-isolated stairways and ramps.	No fire isolated stairs are proposed.	N/A
D3D4	Non-fire-isolated stairways and ramps.	The non-fire isolated stairs serving the building must be:  (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.	Yes
D3D5	Separation of rising and descending stair flights.	No rising and descending stair flights.	N/A
D3D6	Open access ramps and balconies.	No open access ramps or balconies used to comply with the requirements of Table E2.2a.	N/A
D3D7	Smoke lobbies.	No smoke lobbies required.	N/A
	Installations in exits and	Electrical distribution boards that are located within a path of travel to an exit must be contained within non-	Yes
D3D8	paths of travel.	combustible construction (metal cabinet) and smoke sealed.	
D3D8	Enclosure of space under stairs and ramps.	combustible construction (metal cabinet) and smoke	Yes

D3D11	Pedestrian ramps.	The eastern ramp at ground floor level is accessible to AS 1428.1-2009 and must have a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586.	Yes
D3D12	Fire-isolated passageways.	No fire isolated passageways proposed based on current plans.	N/A
D3D13	Roof as open space.	The exits do not discharge to a roof to the like. The eastern ramp at ground floor is not considered a roof as although elevated off the ground, the space beneath is sub-floor only.	Yes
D3D14	Goings and risers. NSW D3D14(1), all Classes	The goings and risers of the non-fire isolated stairs appear capable of complying with this clause and are subject to detailed design at construction certificate stage.	Yes
D3D15	Landings.	The landings of the internal fire isolated stairs appear capable of complying with this clause and are subject to detailed design at construction certificate stage.	Yes
NSW D3D16	Thresholds.	The threshold of all the entries must comply with AS 1428.1-2009.  This is likely to require:  1:8 threshold ramp with a maximum height of 35mm; or  1:10 step ramp, with a maximum height of 190mm; or  1:14 ramp if more than 190mm.	Yes
D3D17	Balustrades to prevent falls.	Balustrades must be provided to:	Yes
D3D18	Height of barriers NSW D3D18(1), all classes.	The height of a barrier required by D3D17 must be not less than the following: (a)For stairways or ramps with a gradient of 1:20 or steeper — 865 mm.  (b) For landings to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed 500 mm in length — 865 mm.  (c) In front of fixed seating on a mezzanine or balcony within an auditorium in a Class 9b building, where the horizontal projection extends not less than 1 m outwards from the top of the barrier — 700 mm. For all other locations — 1 m.	Yes
D3D19	Openings in barriers	The non-fire isolated stairs may must not permit a 125mm sphere to pass through the balustrade.	Yes
D3D20	Barrier climbability.	A barrier required by D3D17, located on a floor more than 4 m above the surface beneath, must not incorporate horizontal or near horizontal elements that could facilitate climbing between 150 mm and 760 mm above the floor.	Yes
D3D20	Wire barriers	Wire barriers not proposed.	N/A
D3D22	Handrails.	One hand rail is required to all stairs as per this clause.  The two non-fire isolated stairs must have two hand rails to AS 1428.1-2009 and are subject to detailed design at construction certificate stage.	Design consideration

D3D23	Fixed platforms, walkways' stairways, and ladders.	No fixed platforms, walkways and ladders proposed or required.	N/A
D3D24	Doorways and doors. NSW D3D24(2), all classes.	No revolving, sliding or tilt up doors proposed in an exit or part of an exit.	N/A
D3D25	Swinging doors.	Swinging exit doorways must swing in the direction of egress, unless they: - are the only exit from that part; - serve area less than 200m2; have a hold open device to the back of the door.	Yes
D3D26	Operation of latch. NSW D3D26(5), all classes NSW D3D26(6), class 9b entertainment venues	Door hardware must be 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.	Yes
	Image: Door ha	ordware requirements for hinged and sliding doors.	
	(a) Isometric view  35 to 45 mm	35 to 45 mm	
FIGURE	(b) Plan view  35(A) EXAMPLE OF ACCEPTABLE DOOR HARD HINGED DOORS	SECTIONAL ELEVATION ISOMETRIC VIEW  WARE FOR  FIGURE 35(B) EXAMPLE OF ACCEPTABE DOOR HARDWARE FOR SLIDING DOORS	
D3D27	Re-entry from fire- isolated exits.	Building not >25m in effective height.	N/A
D3D28	Signs on doors.	The doors to fire isolated stairs 1, 2, 3 and 4, must have signage that states:  "FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN"	N/A
D3D29	Protection of openable windows. Class 2, 3, 4 or 9b building.  http://www.legislation.nsw.qov.au/#/view/act/2015/50/part6/div3/sec118	The bedroom windows on the second level, and levels above, that do not open to balconies and have a sill height of less than 1.7 metres, require protection as per this clause.  BCA 2019 (A1) applies to <b>bedroom windows</b> only, 2m above the ground with a sill less than 1.7m in	Yes

		height. They MUST be fixed into that position or have	
		the screen that can withstand 250 Newtons (25kg).	
		the serven that can withstand 250 Newtons (25kg).	
		Section 118 of the Strata Schemes Management Act	
		2015 requires	
		ALL windows accessible from an apartment, 2m	
		above the ground with a sill less than 1.7m in height.	
		They MUST have the child lock, but do not have to be	
		fixed, or have the screen that can withstand 250	
		Newtons (25kg).	
D3D30	Timber stairways: Concession	Not applicable as no timber stairs proposed within a fire isolated stairway.	N/A
NSW	Doors in path of travel in	Not an 'entertainment venue', as defined by the EP &	N/A
D3D31	an entertainment venue.	A Regs.	
Part D4	Access for People with Disabilities	Clause Requirements/Comments	Compliance
D4D1	DtS Provisions.	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Note only.
D4D2	General building access	Disabled access is a requirement of BCA 2019 (A1)	Yes
	requirements.	and Federal legislation.	
		Class 2:	
		From a pedestrian entrance required to be accessible to at least 1	
		floor containing sole-occupancy units and to the entrance doorway	
		of each sole-occupancy unit located on that level. To and within not less than 1 of each type of room or space for use	
		in common by the residents, including a cooking facility, sauna,	
		gymnasium, swimming pool, common laundry, games room,	
		individual shop, eating area, or the like. Where a ramp complying with AS 1428.1 or a passenger lift is	
		installed—	
		(a) to the entrance doorway of each sole-occupancy unit; and	
		(b) to and within rooms or spaces for use in common by the residents,	
		located on the levels served by the lift or ramp.	
D4D3	Access to buildings.	The principal pedestrian entry to the property is via	Yes
		Redman Road, which complies with this clause.	
D4D4	Parts of buildings to be	Disabled access must be provided from the principal	Design
	accessible.	pedestrian entry at the property boundary to the:	consideration
		- entry doors of the residential units on all	
		levels;	
		<ul> <li>residential bins and storage areas on the ground levels.</li> </ul>	
		ground ievels.	
		Currently the circulations space to one bin storage,	
		and the two storage rooms will need to be adjusted to	
		comply with AS 1428.1-2009.	
D4D5	Exemptions.	Disabled access need not be provided to service areas	Yes
		/ metres rooms etc.	
		- Water metre room;	
		- Electricity metre room;	
D4D6	Accessible car parking.	- Fire service / pump rooms.  Accessible car parking space is not required as the	N/A
りせいり	Accessible cal parking.	carpark relates to a Class 2 building. If required, the	IN/A
		space must comply with AS/NZS 2890.6. Vertical	
		clearance of not less than 2500mm must be provided	
		above each dedicated space and adjacent shared area,	
		when measured in accordance with AS 2890.6: 2009.	
D4D7	Signage.	Accessible signage will be required to the doorways	Yes

		used as exits.	
D4D8	Hearing augmentation.	A hearing augmentation system must be provided where an inbuilt amplification system, other than one used only for emergency warning, is installed.	N/A
D4D9	Tactile indicators.	Tactiles will be required to non-fire isolated stairs and the ramps. Tactile ground surface indicators required by (1) must comply with sections 1 and 2 of AS/NZS 1428.4.1.	Design consideration
D4D10	Wheelchair seating in Class 9b assembly buildings.	No fixed seating proposed as part of the development.	N/A
D4D11	Swimming Pools.	No swimming pool proposed.	N/A
D4D12	Ramps.	The accessible ramps must comply with AS 1428.1-2009. On an accessway—  (a) a series of connected ramps must not have a combined vertical rise of more than 3.6 m; and (b) a landing for a step ramp must not overlap a landing for another step ramp or ramp.	Yes
D4D13	Glazing on an accessway.	On an accessway, where there is no chair rail, handrail, or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1-2009.	Yes

# 3.3 – Services and Equipment (Section E, BCA 2022)

Part E1	Fire Fighting Equipment	Clause Requirements/Comments	Compliance
E1D1	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions</i>	Note only
E1D2	Fire hydrants.	Fire hydrant coverage is required as the building is greater than 500m <sup>2</sup> . Hydrant coverage must comply with E1.3 and AS 2419.1-2021.	Design consideration
		The site is served by Sydney Water asset ID: 2417392, 150 CICL Reticulation.	
		Street hydrant coverage is not to be achieved to unit 4. As such, onsite hydrant coverage will be required, which will likely need a booster and pump, which is currently not shown.	
		The booster is also more than 10m from the substation that is currently proposed next to the driveway.	
		The pump room on the ground floor has direct egress outside, which complies with this clause.	
E1D3	Fire hose reels.	Assuming internal hydrants are proposed, one fire hose reels is required for the Class 7a parts in accordance with AS 2441-2005. Coverage to be obtained from a 36m hose, with 4m spray. Hose reels to be within 4m of an exit, but not every exit.	Yes
E1D4	Sprinklers	As the building has a rise in storeys of only 3, the building does not require sprinklers.	N/A

E1D5	Where sprinklers are required: all classifications	Not applicable as building not more than 25m in effective height.	N/A
E1D6	Where sprinklers are required: Class 2 and 3 buildings other than residential care buildings	No applicable as the building has a rise in storeys of only three.	N/A
E1D7	Where sprinklers are required: Class 3 buildings used as residential care buildings	Not applicable as not class 3 residential care building.	N/A
E1D8	Where sprinklers are required: Class 6 building	Not applicable as not class 6 greater than 3,500m <sup>2</sup> or volume greater than 21,000m <sup>3</sup> .	N/A
E1D9	Where sprinklers are required: Class 7a building, other than an open-deck carpark	No applicable as the car park has less than 40 vehicles.	N/A
E1D10	Where sprinklers are required: Class 9a health-care building used as a residential care building, Class 9c buildings	Not applicable as not a class 9a or 9c building.	N/A
E1D11	Where sprinklers are required: Class 9b buildings	Sprinklers are not required by this clause as not Class 9b.	N/A
E1D12	Where sprinklers are required: additional requirements	Sprinklers are not required for clause as no atrium and not a large isolated building.	N/A
E1D13	Where sprinklers are required: occupancies of excessive hazard	Not applicable as the building is not an occupancy of excessive hazard.	N/A
E1D14	Portable fire extinguisher.	Portable fire extinguishers must be installed throughout the building in accordance with Clause E1.6(a), Table E1.6, and AS 2444-2001.  Portable fire extinguishers must be installed to cover Class AE or E fire risks associated with emergency services switchboards.	Yes
E1D15	Fire control centres.	Not required or proposed as the size of the Class 7a or 9b part combined is less than 18,000m <sup>2</sup> .	N/A
E1D16	Fire precautions during construction.	Not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stairway or exit.  After the building has reached an effective height of 12.00m, fire hydrants and hose reels must be operational by every storey that is covered by a roof or floor structure above, except the two most upper storeys and the booster must be installed.	Yes
E1D17	Provision for special hazards.	The batteries contained within electric cars and/or on- site battery storage are likely to be considered a special hazard at construction certificate stage. At present there is minimal guidance from the ABCB on	Design consideration

		the suppression of such fires. As such, such equipment	
Part E2	Smoke Hazard Management	may need to be fire separated as a minimum.  Clause Requirements/Comments	Compliance
E2D1	DtS Provisions	Applicable <i>performance requirements</i> for <i>building</i> solutions	Note only
E2D2	Application of requirements	Part applies, except it will not apply to the carpark if the carpark is considered to be open deck. At this stage, the carpark has not been considered open deck.	Applicable
E2D3	General requirements	Clause E2D3(1): An air handling system that connects fire compartments must comply with AS 1668.1 or have automatic fire and smoke dampers. Class 2 units are considered fire compartments for the purpose of this clause only.  Clause E2D3(3): Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one fire compartment (other than a carpark ventilation system) and not forming part of a smoke hazard management system must comply with these Sections of the Standard.	Yes
		Clause E2D3(4):  Not applicable as no smoke control or stair pressurisation in the building required or proposed.	
E2D4	Fire isolated exits	No fire isolated exits proposed or required.	N/A
E2D5	Buildings more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building	Not applicable as not more than 25m in effective height.	N/A
E2D6	Buildings more than 25 m in effective height: Class 5, 6, 7b, 8 or 9b buildings	Not applicable as not more than 25m in effective height.	N/A
E2D7	Buildings more than 25 m in effective height: Class 9a buildings	Not applicable as not more than 25m in effective height.	N/A
E2D8	Buildings not more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building	The Class 2 part must be provided with an automatic smoke detection and alarm system complying with Specification 20.	Yes
E2D9	Buildings not more than 25 m in effective height: Class 5, 6, 7b, 8 and 9b buildings	Not applicable as not Class 5, 6, 7b, 8 and 9b buildings	N/A
NSW E2D10	Buildings not more than 25 m in effective height: large isolated buildings subject to C3D4	Not applicable as not a large isolated building.	N/A
E2D11	Buildings not more than 25 m in effective height:	Not applicable as not class 9a or 9c building.	N/A

	Class 9a and 9c		
E2D12	buildings Class 7a buildings	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. In this instance, it is likely that the carpark will be naturally ventilated.	Yes
E2D13	Basements (other than Class 7a buildings)	Not applicable as no basement of another class.	N/A
E2D14	Class 6 buildings – in fire compartments more than 2000 m <sup>2</sup> : Class 6 building (not containing an enclosed common walkway or mall serving more than one Class 6 sole-occupancy unit)	Not applicable as not a Class 6 building.	N/A
E2D15	Class 6 buildings – in fire compartments more than 2000 m <sup>2</sup> : Class 6 building (containing an enclosed common walkway or mall)	Not applicable as not a Class 6 part.	N/A
NSW E2D16	Class 9b – assembly buildings: all	Not applicable as no Class 9b part.	N/A
NSW E2D17	Class 9b – assembly buildings: night clubs, discotheques, and the like	Not applicable as not an assembly building used as a night club, discotheques or the like.	N/A
NSW E2D18	Class 9b – assembly buildings: exhibition halls, museums, and art galleries	Not applicable as not an assembly building used as an exhibition hall, museums, and art galleries.	N/A
NSW E2D19	Class 9b – assembly buildings: other assembly buildings (not listed in NSW E2D16 to E2D18)	Not applicable as no Class 9b part.	N/A
NSW E2D20	Class 9b assembly buildings: other assembly buildings (not listed in E2D16 to E2D19)	Not applicable in NSW.	N/A
E2D21	Provision for special hazards	Additional smoke hazard management measures may be necessary due to the—special characteristics of the building; or (a) special function or use of the building; or (b) special type or quantity of materials stored, displayed, or used in a building; or (c) special mix of classifications within a building or fire compartment, (d) which are not addressed in E2D4 to E2D20.  The building is not considered to be subject to special hazards, which are not already addressed via the previous provisions.	N/A

Part E3	Lift Installations	Clause Requirements/Comments	Compliance
E3D1	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Note only
E3D2	Lift installations.	The electric passenger lift must comply with Specification 24.	Yes
E3D3	Stretcher facility in lifts.	A stretcher facility is required as the lifts serve an effective height of more than 12.00m.	Yes
		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.	
E3D4	Warnings against the use of lifts in fire.	Signage will be provided to comply with this clause.	Yes
E3D5	Emergency lifts.	An emergency lift is not required or proposed.	N/A
E3D6	Landings.	Landings to the lift will comply with this clause.	Yes
E3D7	Passenger lifts types and their limitations	The lifts proposed will comply with E3D7(1)(a), being a of electric passenger lifts, electrohydraulic passenger lifts or inclined lifts.	Yes
E3D8	Accessible features required for passenger lifts	The passenger lift must comply with this clause. The required disabled access provisions.  a) Hand rail to AS 1735.12; b) Lift floor of 1400 (w) x 1600 (d); c) Lifts doors that have passenger protection to AS 1735.12; d) Lift landing doors at the upper landing; e) Lift car control buttons to AS 1735.12; f) Lighting to AS 1735.12; g) Automatic audible information, visual indicators to identify the level and when the lift stops. h) Emergency button to call centre.	Yes
E3D9	Fire service controls.	Fire service controls are required as lift serves a building with an effective height of more than 12m.	Yes
E3D10	Residential care buildings.	The building is not a Class 9c building.	N/A
E3D11	Fire service recall control switch.	Each group of lifts must be provided with one fire service recall control switch required by E3D9 that activates the fire service recall operation at (6).	Yes
E3D12	Lift car fire service drive control switch.	The lift car fire service drive control switch required by E3D9 must be activated from within the lift car.	Yes
Part E4	Emergency Lighting, Exit Signs and Warning Systems	Clause Requirements/Comments	Compliance
E4D1	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Note only.
E4D2	Emergency lighting requirements.	Emergency lighting is required throughout the whole building, including the roof levels.	Yes
E4D3	Measurement of distance.	Noted.	Note only.
E4D4	Design and operation of emergency lighting.	Emergency lighting must be installed in accordance with AS 2293.1-2018.	Yes
E4D5	Exit signs.	Exit signs to be installed on all levels above or adjacent to the exit.	Yes
NSW E4D6	Direction signs.	If the exit is not readily apparent, additional directional exit signs must be installed to guide occupants to the exit.	Yes

E4D7	Class 2 & 3 buildings and Class 4 parts: Exemption.	E4D5 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.	Yes
E4D8	Design and operation of exit signs.	Every required exit sign must comply with— AS 2293.1; or for a photoluminescent exit sign, Specification 25; and be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.	Yes
E4D9	Sound systems and intercom systems for emergencies	Not a class 3, 9a, or 9b <i>school</i> building or over 25m in Effective Height building.	N/A

### 3.4 - Health & Amenity (Part F, BCA 2022)

Part F1	Surface water management, rising damp and external waterproofing	Clause Requirements/Comments	Compliance
F1D1	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Note only
F1D2	Application of Part	(1) F1D4 and F1D5 do not apply to a roof with a covering complying with F3D2(a) to (d). (2) F1D3 to F1D5 do not apply to a balcony, podium, or similar horizontal surface part of a building— (a) where the flooring is of timber decking or other perforated flooring; or (b) which is located directly above ground.	Note only
F1D3	Stormwater drainage.	The stormwater must comply with AS/NZS 3500.3-2021.	Yes
F1D4	Exposed joints	Exposed joints in the drainage surface on a roof, balcony, podium, or similar horizontal surface part of a building must—  (a) be protected in accordance with Section 2.9 of AS 4654.2; and  (b) not be located beneath or run through a planter box, water feature or similar part of the building.	Yes
F1D5	External waterproofing membranes.	A roof, balcony, podium, or similar horizontal surface part of a building must be provided with a waterproofing membrane—  (a) consisting of materials complying with AS 4654.1; and  (b) designed and installed in accordance with AS 4654.2.	Yes
F1D6	Damp-proofing	Where required, damp-proofing must be installed as per this clause. Where a damp-proof course is provided, it must consist of—	Yes

C2022042 - BCA 2022 Report - 27 Redman Road Dee Why NSW Page 27 of 41

		(a) a material that complies with AS/NZS 2904; or	
		(b) impervious sheet material in accordance with AS	
		3660.1.	
F1D7	Damp-proofing of floors on the ground.	(1)If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent	Yes
		walls by the insertion of a vapour barrier in accordance with AS 2870.	
		(2)The requirements of (1) do not apply where— (a) weatherproofing is not required; or	
		(b) the floor is the base of a stair, lift or similar shaft	
		which is adequately drained by gravitation or	
E4D0	C 1 G 131 13	mechanical means.	
F1D8	Sub-floor ventilation.	(1)Subfloor spaces must— be provided with openings in external walls and	Yes
		internal subfloor walls in accordance with Table F1D8	
		for the	
		(a) climatic zones given in Figure F1D8; and	
		have clearance between the ground surface and the underside of the lowest horizontal member in the	
		subfloor	
		(b) in accordance with Table F1D8.	
Part F2	Wet areas and	Clause Requirements/Comments	Compliance
F2D1	overflow protection	Analizable made management for building	Nista sulu
F2D1	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Note only
F2D2	Wet area construction	(1) In a Class 2 and 3 building and a Class 4 part of a building, building elements in wet areas must—	Yes
		(a) be water resistant or waterproof in accordance	
		with Specification 26; and	
		(b) comply with AS 3740.	
F2D3	Rooms containing urinals	Rooms containing urinals must be designed as per this clause, including walls and floors surrounding the urinals.	Yes
F2D4	Floor wastes	A bathroom or laundry located at any level above a	Yes
		sole-occupancy unit or public space must have a floor waste.	
		(2)Where a floor waste is installed—	
		(a) the minimum continuous fall of a floor plane to the	
		waste must be 1:80; and	
		(b) the maximum continuous fall of a floor plane to the waste must be 1:50.	
Part F3	Roof and walls cladding	Clause Requirements/Comments	Compliance
F3D1	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Note only
F3D2	Roof coverings	A roof must be covered with—	Yes
		(a) roof tiles complying with AS 2049, fixed in accordance with AS 2050; or	
		(b) metal sheet roofing complying with AS 1562.1; or	
		(c) plastic sheet roofing designed and installed in	
		accordance with AS 1562.3; or	
		(d) terracotta, fibre-cement and timber slates and shingles designed and installed in accordance with AS	
		4597,	
		(e) except in cyclonic areas; or	

		an external waterproofing membrane complying with F1D5.	
F3D3	Sarking	Sarking-type material used for weatherproofing of roofs and walls must comply with AS 4200.1 and AS 4200.2.	Yes
F3D4	Glazed assemblies	Glazed assemblies must comply with AS 1288-2021, and/or AS 2047, unless exempt by this clause.	Yes
F3D5	Wall cladding	<ul> <li>(1) External wall cladding must comply with one or a combination of the following:</li> <li>(a) Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700.</li> <li>(b) Autoclaved aerated concrete: AS 5146.3.</li> <li>(c) Metal wall cladding: AS 1562.1.</li> </ul>	Yes
		<ul> <li>(2) The following buildings need not comply with (1):</li> <li>(a) A Class 7 or 8 building where in the particular case there is no necessity for compliance.</li> <li>(b) A garage, tool shed, sanitary compartment, or the like, forming part of a building used for other purposes, except where the construction of the garage, tool shed, sanitary compartment or the like contributed to the weatherproofing of another part of the building that is required to be weatherproofed.</li> <li>(c) An open spectator stand or open deck carpark.</li> <li>Systems different to the above will likely require a performance solution from a façade engineer or</li> </ul>	
		detailed evidence of suitability.	
Part F4	Sanitary and other facilities	detailed evidence of suitability.  Clause Requirements/Comments	Compliance
Part F4 F4D1	Sanitary and other facilities  DtS Provisions	(1)Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F4P1 to F4P6 are satisfied by complying with— (a) F4D2 to F4D12; and (b) for public transport buildings, Part I2; and (c) for farm sheds, Part I3. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.	Compliance  Note only
	facilities	(1)Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F4P1 to F4P6 are satisfied by complying with— (a) F4D2 to F4D12; and (b) for public transport buildings, Part I2; and (c) for farm sheds, Part I3. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.  Each residential SOU will be provided with a kitchen, bathroom, toilet, and shower.  Laundry facilities are proposed via a washing machine. Clothes drying will be via dryer or 7.5m of clothes lines	-
F4D1	Facilities DtS Provisions  Facilities in residential buildings.  Calculation of number of	(1)Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F4P1 to F4P6 are satisfied by complying with—  (a) F4D2 to F4D12; and (b) for public transport buildings, Part I2; and (c) for farm sheds, Part I3.  (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.  Each residential SOU will be provided with a kitchen, bathroom, toilet, and shower.  Laundry facilities are proposed via a washing machine. Clothes drying will be via dryer or 7.5m of clothes lines on balconies or rear yards.  The population is based on normal residential	Note only
F4D1	Facilities  DtS Provisions  Facilities in residential buildings.  Calculation of number of occupants and facilities.  Facilities in Class 3-9 buildings.	(1)Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F4P1 to F4P6 are satisfied by complying with— (a) F4D2 to F4D12; and (b) for public transport buildings, Part I2; and (c) for farm sheds, Part I3. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.  Each residential SOU will be provided with a kitchen, bathroom, toilet, and shower.  Laundry facilities are proposed via a washing machine. Clothes drying will be via dryer or 7.5m of clothes lines on balconies or rear yards.	Note only  Yes
F4D1  F4D2	Facilities  DtS Provisions  Facilities in residential buildings.  Calculation of number of occupants and facilities.  Facilities in Class 3-9	(1)Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F4P1 to F4P6 are satisfied by complying with— (a) F4D2 to F4D12; and (b) for public transport buildings, Part I2; and (c) for farm sheds, Part I3. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.  Each residential SOU will be provided with a kitchen, bathroom, toilet, and shower.  Laundry facilities are proposed via a washing machine. Clothes drying will be via dryer or 7.5m of clothes lines on balconies or rear yards.  The population is based on normal residential occupancy levels.  No facilities required for the Class 7a part as no	Note only  Yes

F4D7	Accessible unisex showers	As no common area shower proposed to the pool, no accessible bathrooms required.	N/A
F4D8	Construction of sanitary compartments.	(1) Other than in an early childhood centre, sanitary compartments must have doors and partitions that separate adjacent compartments and extend— (a) from floor level to the ceiling in the case of a unisex facility; or (b) to a height of not less than 1.5 m above the floor if primary school children are the principal users; or (c) 1.8 m above the floor in all other cases.  (2) The door to a fully enclosed sanitary compartment must— (a)open outwards; or (b) slide; or (c) be readily removable from the outside of the sanitary compartment, unless there is a clear space of at least 1.2 m, measured in accordance with Figure	Yes
		F4D8, between the closet pan within the sanitary	
F4D9	Interpretation: Urinals and washbasins.	compartment and the doorway.  (1) A urinal may be—  (a) an individual stall or wall-hung urinal; or  (b) each 600 mm length of a continuous urinal trough;  (c) a closet pan used in place of a urinal.	Yes
		<ul><li>(2) A washbasin may be—</li><li>(a) an individual basin;</li><li>(b) or a part of a hand washing trough served by a single water tap.</li></ul>	
NSW F4D10	Microbial.	Not applicable in NSW.	N/A
F4D11	Waste management.	Not Class 9a or 9c building.	N/A
F4D12	Accessible adult change facilities	Not a large Class 6 building or a 9b, or large public building.	N/A
Part F5	Room heights	Clause Requirements/Comments	Compliance
F5D1	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Applies
F5D2	Height of rooms and other spaces.	The height of rooms is required to be 2.4 meters in height in habitable rooms and 2.1m in non-habitable rooms. It is noted that that normal internal heights are generally 2.4 metres or more.	Yes
Part F6	Light and ventilation	Clause Requirements/Comments	Compliance
F6D1	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Applicable
F6D2	Provision of natural light.	Natural lighting must be provided to all habitable rooms.	N/A
F6D3	Methods and extent of natural lighting.	Natural lighting via glazed windows or door must be provided to habitable rooms. The total area of glazed windows or doors must be 10% of the floor area of the room.	Yes
	$\mathbf{W}$ = the net area of the light transmitting area of the window (m <sup>2</sup> ); and	Compliance can also be achieved via verification method FV4.3.	
	<b>A</b> = the total area of the internal wall, floor, and ceiling surfaces (m <sup>2</sup> ); and	Currently calculations indicate DTS compliant light.	

	<b>T</b> = the diffuse light transmittance of the <i>window</i> ,		
	and		
	<b>9</b> = visible sky angle in degrees, measured in a vertical		
	plane normal to and from the		
	centre of the <i>window</i> , and		
	<b>R</b> = the area-weighted		
ECD 4	average reflectance of area A.		D1/A
F6D4	Natural light borrowed	Borrowed light not required.	N/A
	from adjoining room.		.,
F6D5	Artificial lighting.	Artificial lighting will comply with this clause, the BASIX certificate and Part J7 and AS 1680.0-2009.	Yes
NSW	Ventilation of rooms.	Excluding unit bathrooms & laundries and common	Yes
F6D6		area hallways, the building is provided with natural	
		ventilation. Parts that are mechanical ventilated must	
		comply with the BASIX certificate, Part J6 and AS	
		1668.2-2012.	
F6D7	Natural ventilation.	The Class 2 parts of the building that are naturally	Yes
		ventilated, comply with the natural ventilation	
		requirements of this this clause.	
F6D8	Ventilation borrowed	Borrowed ventilation not relied upon.	N/A
	from adjoining room.		
F6D9	Restriction of position of	The sanitary facilities open to a hallway / vestibule as	Yes
	water closets and	required.	
	urinals.		
F6D10	Airlocks.	The sanitary facilities open to a hallway / vestibule as	Yes
		required.	
F6D11	Carparks	The carpark must be either mechanically ventilated as	Yes
		per AS 1668.2-2012 or comply with the natural	
		ventilation provision of AS 1668.4-2012.	
F6D12	Kitchen and local	No commercial kitchen.	N/A
	exhaust ventilation.		
Part F7	Sound Transmission	Clause Requirements/Comments	Compliance
	and Insulation		
F7D1	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Noted.
F7D2		SOIULIOIIS.	
	Application of Part.		Yes
	Application of Part.	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.	Yes
F7D3	Determination of	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  A form of construction required to have an airborne	Yes Note only
F7D3	Determination of airborne sound	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  A form of construction required to have an airborne sound insulation rating must—	
F7D3	Determination of	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  A form of construction required to have an airborne sound insulation rating must—  (a) have the required value for weighted sound	
F7D3	Determination of airborne sound	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  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	
F7D3	Determination of airborne sound	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  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	
F7D3	Determination of airborne sound	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  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	
F7D3	Determination of airborne sound	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  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 ISO 717.1 using results from	
F7D3	Determination of airborne sound	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  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 ISO 717.1 using results from laboratory measurements; or	
F7D3	Determination of airborne sound insulation ratings.	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  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 ISO 717.1 using results from	Note only
F7D3	Determination of airborne sound insulation ratings.  Determination of impact	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  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 ISO 717.1 using results from laboratory measurements; or (b) comply with Specification 28.  A floor in a building required to have an impact sound	
	Determination of airborne sound insulation ratings.	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  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 ISO 717.1 using results from laboratory measurements; or  (b) comply with Specification 28.  A floor in a building required to have an impact sound insulation rating must—	Note only
	Determination of airborne sound insulation ratings.  Determination of impact	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  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 ISO 717.1 using results from laboratory measurements; or (b) comply with Specification 28.  A floor in a building required to have an impact sound	Note only
	Determination of airborne sound insulation ratings.  Determination of impact	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  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 ISO 717.1 using results from laboratory measurements; or (b) comply with Specification 28.  A floor in a building required to have an impact sound insulation rating must— (a) have the required value for weighted normalised impact sound pressure level (Ln,w) determined in	Note only
	Determination of airborne sound insulation ratings.  Determination of impact	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  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 ISO 717.1 using results from laboratory measurements; or (b) comply with Specification 28.  A floor in a building required to have an impact sound insulation rating must— (a) have the required value for weighted normalised impact sound pressure level (Ln,w) determined in accordance	Note only
	Determination of airborne sound insulation ratings.  Determination of impact	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  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 ISO 717.1 using results from laboratory measurements; or (b) comply with Specification 28.  A floor in a building required to have an impact sound insulation rating must— (a) have the required value for weighted normalised impact sound pressure level (Ln,w) determined in	Note only
	Determination of airborne sound insulation ratings.  Determination of impact	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  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 ISO 717.1 using results from laboratory measurements; or  (b) comply with Specification 28.  A floor in a building required to have an impact sound insulation rating must—  (a) have the required value for weighted normalised impact sound pressure level (Ln,w) determined in accordance with AS ISO 717.2 using results from laboratory measurements; or	Note only
	Determination of airborne sound insulation ratings.  Determination of impact	The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.  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 ISO 717.1 using results from laboratory measurements; or  (b) comply with Specification 28.  A floor in a building required to have an impact sound insulation rating must—  (a) have the required value for weighted normalised impact sound pressure level (Ln,w) determined in accordance with AS ISO 717.2 using results from laboratory	Note only

	A wall in a building required to have an impact sound insulation rating must— for a Class 2 or 3 building be of discontinuous construction.	
	or discontinuous construction.	
	For the purposes of this Part, discontinuous construction means a wall having a minimum 20 mm cavity between 2 separate leaves, and—  (a) for masonry, where wall ties are required to	
	connect leaves, the ties are of the resilient type; and (b) for other than masonry, there is no mechanical linkage between leaves except at the periphery.	
Sound insulation of floors.	A floor in a Class 2 or 3 building must have an R <sub>w</sub> + C <sub>tr</sub> (airborne) not less than 50 and an L <sub>n,w</sub> (impact) not more than 62 if it separates—  (a) sole-occupancy units; or  (b) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or	Yes
Sound insulation of walls.	The walls separating Units must have an Rw + Ctr (airborne) not less than 50.	Design consideration
	Discontinuous construction will be required around the lift shafts in building A & B.	
Sound insulation of internal services.	Pipework, including stormwater pipes, must have an Rw + Ctr (airborne) not less than—  (i) 40 if the adjacent room is a <i>habitable room</i> (other than a kitchen); or (ii) 25 if the adjacent room is a kitchen or pop-habitable room	Yes
Sound insulation of pumps.	A flexible coupling must be used at the point of connection between the service pipes in a building and	Yes
Condensation Management	Clause Requirements/Comments	Compliance
DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Note only
Application of Part	The Deemed-to-Satisfy Provisions of this Part only apply to a sole-occupancy unit of a Class 2 building and a Class 4 part of a building.	Yes
External wall	(1) Where a pliable building membrane is installed in	Yes
	Sound insulation of walls.  Sound insulation of internal services.  Sound insulation of pumps.  Condensation Management DtS Provisions	floors.  (airborne) not less than 50 and an L <sub>n,w</sub> (impact) not more than 62 if it separates—  (a) sole-occupancy units; or (b) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification.  Sound insulation of walls.  The walls separating Units must have an R <sub>w</sub> + C <sub>tr</sub> (airborne) not less than 50.  Discontinuous construction will be required around the lift shafts in building A & B.  Sound insulation of internal services.  Pipework, including stormwater pipes, must have an Rw + Ctr (airborne) not less than—  (i) 40 if the adjacent room is a habitable room (other than a kitchen); or (ii) 25 if the adjacent room is a kitchen or non-habitable room.  Sound insulation of pumps.  A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump.  Condensation  Management  Dts Provisions  Applicable performance requirements for building solutions.  Application of Part  The Deemed-to-Satisfy Provisions of this Part only apply to a sole-occupancy unit of a Class 2 building

		installed in an external wall, the primary water control layer must be separated from water sensitive materials by a drained cavity.	
F8D4	Exhaust systems	a) An exhaust system installed in a kitchen, bathroom, sanitary compartment, or laundry must have a minimum flow rate of— (i) 25 L/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.  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.	Yes
F8D5	Ventilation of roof spaces	<ul> <li>(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.</li> <li>(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°, or 1/150 of the respective ceiling area if the roof pitch is less than or equal to 22°.</li> <li>(c) 30% of the total unobstructed area required by (b) must be located not more than 900 mm below the ridge or highest point of the roof space, measured vertically, with the remaining required area provided by eave vents.</li> </ul>	Yes

# 3.5 – Ancillary Provisions (Part G, BCA 2022)

Part G1	Minor Structures and components	Clause Requirements/Comments	Compliance
G1D1	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions</i> .	Note only
NSW G1D2	Swimming pools	<ul> <li>(1) NSW G1D2(2) applies to the technical construction requirements for barriers to restrict access to swimming pools, subject to—</li> <li>(a) out-of-ground pool walls and the walls of above ground pools, including inflatable pools, not being considered to be effective barriers; and</li> <li>(b) the reference in clause 2.3.1 of AS 1926.1 to a barrier within a property including a boundary barrier.</li> <li>(2) A swimming pool with a depth of water more than 300 mm and which is associated with a Class 2 or 3 building or Class 4 part of a building, must have suitable barriers to restrict access by young children to the immediate pool surrounds in accordance with—</li> </ul>	N/A

		(a) AS 1926 Parts 1 and 2; or	
		(b) if the swimming pool is a spa pool— (i)the	
		requirements of (a); or	
		(ii) clause 9 of the Swimming Pools Regulation 2018.	
		(3)A water recirculation system in a swimming pool	
		with a depth of water more than 300 mm must comply	
		with AS 1926.3.	
G1D3	Refrigerated chambers,	No coolrooms proposed.	N/A
GIDS	strong rooms, and vaults.	No cooliooms proposed.	IV/A
G1D4	Outdoor play spaces	Not a Class 9b building.	N/A
NSW	Provision of cleaning	(a) A building must provide for a safe manner of	Yes
G1D5	windows	cleaning any windows located 3 or more storeys above ground level.	. 65
		(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.	
Part G2	Boilers, pressure	Clause Requirements/Comments	Compliance
	vessels, heating		
	appliances,		
	fireplaces, chimneys,		
G2D1	and flues.  DtS Provisions	Applicable <i>performance requirements</i> for <i>building</i>	Note only
		solutions.	•
G2D2	Installation of appliances	The installation of a stove, heater or similar appliance	Yes
		in a building must comply with:	
		(a) Domestic solid-fuel burning appliances —	
		Installation: AS/NZS 2918.	
		(b) For boilers and pressure vessels: Specification 30.	
G2D3	Open fireplaces	No open fire place proposed.	N/A
G2D4	Incinerator rooms	No incinerator rooms proposed.	N/A
Part G3	Atrium construction	Clause Requirements/Comments	Compliance
G3D1	DtS Provisions	Applicable <i>performance requirements</i> for <i>building</i>	N/A
		solutions.	
		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 does not include a stairwell, rampwell or the space within a shaft; &	
		(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	
G3D2	Dimension of atrium well	No atrium within the building.	N/A
0302	Difficusion of adjuli well	To deficin within the building.	IV/
	Atrium well means a space in		
	an atrium bounded by the		
	perimeter of the openings in the floors or by the perimeter		
	of the floors and the external		
	walls.		
G3D3	Separation of atrium by bounding walls.	No atrium within the building.	N/A

G3D4	Construction of bounding walls	No atrium within the building.	N/A
G3D5	Construction of balconies	No atrium within the building.	N/A
G3D6	Separation of roof	No atrium within the building.	N/A
G3D7	Means of egress	No atrium within the building.	N/A
G3D8	Fire and smoke control	No atrium within the building.	N/A
	systems		
Spec. 31	Fire and smoke control	No atrium within the building.	N/A
	systems in buildings	,	,
	containing atriums		
Part G4	Construction in Alpine	Clause Requirements/Comments	Compliance
	Areas	•	•
G4D1	DtS Provisions	Not an alpine area.	N/A
G4D2	Application of part	Not an alpine area.	N/A
G4D3	External doors	Not an alpine area.	N/A
G4D4	Emergency lighting	Not an alpine area.	N/A
G4D5	External trafficable	Not an alpine area.	N/A
	structures	·	,
G4D6	Clear space around	Not an alpine area.	N/A
	buildings		
G4D7	Fire-fighting services and equipment	Not an alpine area.	N/A
G4D8	Fire orders	Not an alpine area.	N/A
Part G5	Construction in Bush	Clause Requirements/Comments	Compliance
	Fire Prone Area.	,	•
G5D1	DtS Provisions	Not a bush fire prone area.	N/A
NSW G5D2	Application of part	Not a bush fire prone area.	N/A
NSW G5D3	Protection – residential buildings	Not a bush fire prone area.	N/A
NSW	Protection – certain	Not a bush fire prone area.	N/A
G5D4	Class 9 buildings used as		,
	a special fire protection		
	purpose		
Part G6	Occupiable outdoor	Clause Requirements/Comments	Compliance
	areas		_
G6D1	Application of part	No <i>occupiable outdoor area</i> , as defined by BCA 2022.	N/A
	Occupiable outdoor area: 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.		
G6D2	Fire hazard properties	A lining, material or assembly in an occupiable outdoor	N/A
	The management of the second	area must comply with C1.10 as for an internal	
		element.	
		However, 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.	

		by compliant natural ventilation.	
G6D9	Light and ventilation	Lighting must be continued into the external outdoor common area. The external café/bistro area is served	N/A
	emergency, exit signs and warning systems	continued into the outdoor common area.	//
G6D8	Visibility in an	area.  The exit signs and emergency lighting must be	N/A
G6D7	Lift installations	The fire services to building must also serve the outdoor common area.  Not applicable as no lift serving the external café/bistro	N/A
G6D6	Firefighting equipment	Except for Clause S17C7(2)(a), for the purposes of the Deemed-to-Satisfy Provisions of Part E1, a reference to a storey includes an occupiable outdoor area.	N/A
		The outdoor common area complies with human movement requirements of Section D2. However, additional requirements are needed for compliance with Part D3 and AS 1428.1-2009.	
G6D5	Construction of exits.	For the purposes of the Deemed-to-Satisfy Provisions of Part D2, a reference to a storey or room includes an occupiable outdoor area.	N/A
		- Egress from the external outdoor common area complies with part D1 of BCA 2022.	
G6D4	Provision for escape	For the purposes of the Deemed-to-Satisfy Provisions of Part D1, a reference to a storey or room includes an occupiable outdoor area.	N/A
		The outdoor common area is considered a Class 6 part of the building. This clause does not cause additional requirements in this instance.	
G6D3	Fire separation	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.	N/A
		As such, the following is required:  Floor linings: a critical radiant flux not less than 1.2 and a group number 1, 2 or 3 for any portion of the floor covering that is continued more than 150 mm up a wall.  Wall and ceiling linings: a group number 1, 2 or 3.	
		(iv) Smoke growth rate index (SMOGRA <sub>RC</sub> ).	

### 3.6 - Special use buildings. (Section I, BCA 2022)

Part I1	Special use buildings	Clause Requirements/Comments	Compliance
NSW	Application of part	(i) I1D4 applies to every open or enclosed Class 9b	N/A
I1D1		building; and	
		(ii) I1D7 applies to every enclosed Class 9b building.	
I1D2	Separation	Not a Class 9b building.	N/A

C2022042 - BCA 2022 Report - 27 Redman Road Dee Why NSW Page **36** of **41** 

I1D3	Proscenium wall construction	Not a Class 9b building.	N/A
I1D4	Seating area	Not a Class 9b building.	N/A
I1D5	Exists from stages	Not a Class 9b building.	N/A
I1D6	Access to platforms and lofts	Not a Class 9b building.	N/A
I1D7	Aisle lights	Not a Class 9b building.	N/A
Part I1	Entertainment venues other than temporary structures and drive-in theatres	Clause Requirements/Comments	Compliance
NSW I4D1	Application of part	This Part applies to every entertainment venue as described in the <i>Environmental Planning and Assessment Regulation 2021.</i>	N/A
I4D2- I4D62	I4D2-I4D62	Only applicable to <i>entertainment venues</i> .	N/A

# 3.7 – Energy Efficiency. (Section J, BCA 2022)

Part I1	Special use buildings	Clause Requirements/Comments	Compliance
NSW J1D1	Deemed-to-satisfy provisions	Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements NSW J1P1 to NSW J1P7 are satisfied by complying with— (a) NSW J2D2; and (a) NSW J3D2 to J3D10; and (b) NSW J4D2 to J4D7; and (c) NSW J5D2 to J5D8; and (d) NSW J6D2 to J6D13; and (e) NSW J7D2 to J7D9; and (f) J8D2 to NSW J8D4; and (g) J9D2 to J9D5.	Note only
NSW J2D2	Application of Section J	For a Class 3 and 5 to 9 building, Performance Requirement NSW J1P1 is satisfied by complying with—  (a) Part J4, for the building fabric; and (b) Part J5, for building sealing; and (c) Part J6, for air-conditioning and ventilation; and (d) Part J7, for artificial lighting and power; and (e) Part J8, for heated water supply and swimming pool and spa pool plant; and (f) J9D3, for facilities for energy monitoring.  For a Class 2 to 9 building, Performance Requirement NSW J1P4 is satisfied by complying with J9D4 and J9D5.	Note only
NSW Part J3D2	Elemental provisions for a sole-occupancy unit of a Class 2 building or a Class 4 part of a building	The Deemed-to-Satisfy Provisions of this Part apply to building elements forming the external building fabric of a sole-occupancy unit of a Class 2 building.	Yes
NSW Part J4	Building fabric	The proposed external walls are subject to detailed Section J report at construction certificate stage. Expert advice should be obtained from a Section J specialist.	Yes
NSW	Building sealing	Sealing of the doors and windows must comply with	Yes

C2022042 - BCA 2022 Report - 27 Redman Road Dee Why NSW Page **37** of **41** 

Part J5		this part.	
NSW	Air conditioning and	The air-conditioning and ventilation system to the	Yes
Part J6	ventilation	building must be designed to comply with this part.	
NSW	Artificial lighting and	The maximum lighting power levels and control	Yes
Part J7	power	systems are applicable and must be designed to	
		comply with this part.	
NSW	Heated water supply and	Hot water supply systems must be installed in	Yes
Part J8	swimming pool and spa	accordance with this part.	
NSW	Energy monitoring and	The building requires facilities for the recording of	Yes
Part 9	on-site distributed	consumption of electricity and gas as the building is	
	energy	more than 500m <sup>2</sup> .	

# **4.0** – Proposed Fire Safety Schedule

Measure	Standard of Performance		
Access panels, doors, and hoppers to fire- resisting shafts	BCA Clause C4D14, AS 1905.1-2015.		
Automatic fire detection and alarm system	BCA Clause E2D8, Specification 20, S20C3, AS 3786-2014.		
Emergency lighting	BCA Clause E4D2 & E4D4, AS 2293.1-2018.		
Exit and directional signage	BCA Clause E4D5, NSW E4D6 & E4D8, AS 2293.1-2018.		
Fire dampers	BCA Clause C4D15(2)(b), AS 1668.1-2015, AS 1682.1-2015.		
Fire doors  - Main electrical board room;  - Fire pump room;  - Unit entry doors;  - Lift doors.	BCA Clause C3D14, C4D5, C4D9, D2D12, AS 1905.1-2015.		
<ul> <li>Fire engineering</li> <li>Protection of windows and openings to external walls;</li> <li>Discharge of non-fire isolated stairs to the ground floor more than 15m (circa 21m).</li> </ul>	Fire engineering report.		
Fire hose reels (carpark only)	BCA Clause E1D6, AS 2441-2005.		
Fire hydrants	BCA Clause E1D2, AS 2419.1-2021.		
Portable fire extinguishers	BCA Clause E1D14, AS 2444-2001.		
Wall wetting sprinklers (drenchers)	BCA Clause D2D12(3), C4D5, AS 2118.2-2010.		
Warning and operational signs - Disabled egress signage; - Fire hydrant signage; - Fire hose reel signage; - Smoke detection signage	BCA Clause D4D7, Specification 15, AS 1428.1 – 2009; BCA Clause E1D2, AS 2419.1-2021; BCA Clause E1D3, AS 2441-2005; BCA Clause E1D14, AS 3786-2014, AS 1670.1-2021;		
<ul> <li>Portable fire extinguisher signage.</li> </ul>	BCA Clause E1D14, AS 2444-2001.		

#### 5.0 - Conclusion

This BCA 2022 Report has been prepared to support the development application for the residential flat building containing four apartments with associated carparking at 27 Redman Road Dee Why NSW.

The assessment of the documentation has revealed that the building is primarily capable of complying with the DTS provisions of BCA 2022, and where necessary the Performance Requirements, without modification that would require the development consent to be modified.

Prepared by:

Greg Evans Director

Registered Certifier BDC 1870

360 Certification



6.0 - References Documents & Plans

See attached plans.