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28 November 2019

#### **MORSON GROUP**

Level 2, 3 Barrack Street SYDNEY NSW 2000

Dear Elliot

#### RE: BUILDING CODE OF AUSTRALIA REPORT – C2018099 PROPERTY: 21-25 WOODRIFF STREET PENRITH NSW

Please find enclosed our Building Code of Australia Report 2016 (Amendment 1) in relation to the approved eight storey serviced apartment building containing 58 serviced apartments, related facilities, three ground floor commercial tenancies and two basement car park levels.

Should you require further information in relation to the above, please do not hesitate to contact the undersigned.

Regards,

Greg Evans Director Accredited Certifier BPB 1870 **360 Certification** 

C2018099 – 21-25 Woodriff Street Penrith NSW, Revision 2, 28 November 2019.

# BCA 2016 (Amendment 1) REPORT



# **21-25 WOODRIFF STREET PENRITH NSW**

# Report No. C2018099

# **Revision 2**

# 25 November 2019

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#### **1.0 – Executive Summary**

This BCA 2016 Report has been prepared to assess the approved eight storey serviced apartment building containing 58 serviced apartments, related facilities, three ground floor commercial tenancies and two basement car park levels.

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 BCA 2016 Code 2016 (Volume 1, Amendment 1, Class 2-9 Buildings) [herein 'BCA 2016'], 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	The external door to the loading dock on the ground floor, which is an exit, is to	D2.20
	swing in the direction of egress.	
2	The swimming pool on level 7 requires a swimming pool fence around the pool. The external wall of the pool cannot be used as the barrier. The fence area must not include anything other than pool numping equipment. The pool fence must be	NSW G1.1(a)
	designed in accordance with the Swimming Pool Act 1992, The swimming Pools Regulation 2008 and AS 1926.1-2012. The Act and regulations prevail over the standard	
	standard.	

			Performance
No.	Recommendation	DTS Clause	Requirement
1	Excluding the ground floor slab, B1 and B2, the proponent proposes to reduce the FRL's of the Class 5, 6 and 9b parts to 90 minutes, via a fire engineered <i>performance solution</i> .	C1.1, C2.8, C2.9, C2.10, Clause 2 & 3 of Spec. C1.1,	CP1, CP2,
2	The combined floor area of B2, B1 and the ground floor is approximately 5,500m <sup>2</sup> , which is more than the maximum floor area permitted for the Class 5, 6 and 7a parts of Type A construction.	C2.2	CP1, CP2
3	No spandrel protection to common lobby windows on southern and western façade of levels 1-6.	C2.6	CP2
4	Level 1 to Level 6, is Class 3 and has public corridors more than 40 metres in length, which therefore must be separated with smoke doors into intervals no more than 40m.	C2.14	CP2, DP4, EP2.2
5	The following openings require protection as per Clause C3.2. - Ground floor opening to driveway northern façade.	C3.2, C3.4	CP2
6	The exit travel distance in the conference room on level 7, is up to 25m to FS3, assuming furniture is installed to the room, instead of 20m.	D1.4	DP4, EP2.2
7	Occupants are exposed to the southern wall of the southern commercial tenancy, when discharging from fire isolated stair FS2 and FS4, as restricted by D1.7(c).	D1.7(c)	DP4, DP5, EP2.2
8	The hydrant booster is within 10m of the building and is not protected within fire rated construction 2m either side and 3m above, as per Clause 7.3(c)(ii) of AS 2419.1-2005.	E1.3	EP1.3

#### 1.2 – Fire Engineering

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9	The sprinkler alarm valves are not located in a room that has	Clause 6(a) of	EP1.4
	direct egress to a road or open space as per Clause 6 of	Spec. E1.5	
	Specification E1.5. This is proposed to be subject to a fire		
	engineered performance solution.		

#### 1.3 – Report Version

Revision	Date	Design Changes	Prepared & Approved
DRAFT	21 January 2018		Greg Evans, Accredited Certifier BPB 1870, 360 Certification
FINAL	21 November 2019		Greg Evans, Accredited Certifier BPB 1870, 360 Certification
FINAL	2/ November 2019	Design changes as per architectural adjustments and minor corrections.	Greg Evans, Accredited Certifier BPB 1870, 360 Certification

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Greg Evans Director Accredited Certifier BPB 1870 **360 Certification** 

Date: 28 November 2019

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# 2.0 – Property Description

#### 2.1 - Building Location

The subject building is proposed to be located on Lot 106, deposited plan 1236304, and is identified as 21-25 Woodriff Street Penrith.

Union Street adjoins the northern boundary. Woodriff Street adjoins the southern boundary. Carparks adjoins the southern and western boundaries.



Location plan: 21-25 Woodriff Street Penrith NSW.

Site / ground floor plan: 21-25 Woodriff Street Penrith NSW.



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#### 2.2 – Basis of Assessment

This BCA 2016 Report has been prepared based of the following: -

- The *Deemed-to-Satisfy* and the where relevant the *Performance Requirements* of BCA 2016 (Amendment 1) including NSW Variations and relevant Australian Standards;
- Plans prepared by MORSON Group, Project No. 18018, Revision P10, pages 1-17;
- The Environmental Planning & Assessment Act 1979 & Environmental Planning & Assessment Regulations 2000;
- Disability (Access to Premises Buildings) Standards 2010.

#### 2.3 – Report purpose

Please find enclosed our Building Code of Australia Report 2016 in relation to the approved eight storey serviced apartment building containing 58 serviced apartments, related facilities, three ground floor commercial tenancies and two basement car park levels. The BCA 2016 Report will:

- compare the proposed building against the *Deemed-to-Satisfy* provisions of BCA 2016 including NSW Variations and relevant Australian Standards;
- Identify DTS breaches that can be altered to comply with the DTS provisions of BCA 2016;
- 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 2016 report initially relies upon the plans of the proposed building, and a review of the structure against *Deemed-to-Satisfy* provisions of BCA 2016 and adopted Australian Standards.

Consideration can be given to the Performance Requirements of BCA 2016 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.

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#### 2.5 – Exclusions

- This report has not assessed services drawings for breaches of their respective Australian Standard referenced by BCA 2016;
- This report does not imply, nor make reference 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	Mixed use building			
Use/Classifications	Storov	Description	Classification(s)	1
	Bacomont 2	Carpark		-
	Basement 1	Carpark	78 7a	-
	Ground Level	Commercial	5 or NSW 6	-
		Serviced Apartment Lobby	3	
		Driveways / carpark	7a	
	Level 1	Serviced Apartments	3	]
	Level 2	Serviced Apartments	3	-
	Level 3	Serviced Apartments	3	-
	Level 4	Serviced Apartments	3	-
	Level 5	Serviced Apartments	3	
	Level 6	Serviced Apartments	3	4
	Level 7	swimming pool.	3 9h	
	Note 1: At the time of writin	on this report the baseme	nt storage on B1 and B2 is less that	] an 10%
	of the floor area of the st storage is Class 7a as it sat	<i>orey</i> , as confirmed by callisfies the concession with	Iculations by the architect. As su in per Clause A3.3(a)(i).	ch, the
Rise in Storeys	The proposed building	g has a <i>rise in storey</i> :	<i>s</i> of eight (8) as per Clause	C1.2.
Storeys contained	The proposed building	g will contain ten (10	) storeys.	
Fire Compartments	The carpark and commercial spaces on basement levels 1 and 2 and the ground floor is one <i>fire compartment</i> . The remaining floors 1-7 are one <i>fire compartment</i> each.			
Floor Area & Volume	The maximum floor areas and volumes do not apply to Class 3 parts.			
	The combined floor area of B2, B1 and the ground floor is approximately 5,500m <sup>2</sup> , which is more than the maximum floor area permitted for the Class 5, 6 and 7a parts of Type A construction. The maximum volume of the same fire compartment is less than 30,000m <sup>3</sup> as permitted.			
	The floor area and volume of the Class 9b part one level 7 is less than the maximum permitted for Type A construction.			
Effective Height	The building will have (Level 7 – 52.40m – ground	an effective height of floor 29.15m).	of approximately 23.20 m.	
Car parking Spaces	84 (Basement 2 – 42,	Basement 1 – 39 +	Ground Level - 2)	
Type of Construction	The proposed building	g requires Type <b>`A'</b> C	onstruction.	
Primary FRL's	Class 3 – 90 minutes; Class 5 – 120 minutes; Class 6 – 180 minutes; Class 7a – 120 minutes; Class 9b – 120 minutes.			
HBCF Insurance	HBCFI is NOT applicable as the building is serviced apartments and has a rise in storeys of five (as defined by the <i>Home Building Regulation 2014.</i> As such, the building is considered a multi-storey building under clause 54 of the <i>Home Building Regulation 2014.</i>		as a ) <i>14.</i> se 54	
Zoning	B4 – Mixed use			
Bushfire Prone Land	No			
Flood Prone	No			

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#### 3.0 - BCA 2016 (Amendment 1) Assessment

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

Clause	Description	Clause Requirements/Comments	Compliance Yes/No
Part B	Structural Provisions		
B1.0	Deemed-to-satisfy provisions	Part applicable.	Note only.
B1.1	Resistance to actions.	Subject to geotechnical and structural engineering.	Yes
B1.2	Determination of individual actions.	Subject to geotechnical and structural engineering.	Yes
B1.3	****	Blank clause.	N/A
B1.4	Determination of structural resistance of materials and forms of construction.	Subject to geotechnical and structural engineering.	Yes
B1.5	Structural software.	Note only.	Note only.
B1.6	Construction of buildings in flood hazard areas.	Property not identified as flood prone.	N/A
Clause	Description	Clause Requirements/Comments	Compliance Yes/No
Part C1	Fire Resistance and Stability		
C1.0	DtS Provisions.	Applicable <i>performance requirements</i> for <i>building solutions</i> .	Note only
C1.1	Type of construction required. <b>Cladding:</b> Clause 2.4 of Spec. C1.1 states: The method of attaching or installing a finish, lining, <i>ancillary</i> <i>element</i> or service installation to a building element must not reduce the fire-resistance of that element to below that <i>required</i> .	Type 'A' construction required to comply with Clause 2 and 3 of Specification C1.1. The majority of building elements must be non-combustible, including: external walls, lifts and fire resisting internal walls. Internal load bearing walls must be of concrete, masonry or fire protected timber. The roof does not require an FRL, but due to the Class 9b part, must remain under 25m in effective height and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes. The roof is currently concrete, which complies with this clause. The buildings' required FRL's. Class 3 – 90 minutes; Class 5 – 120 minutes; Class 7a – 120 minutes;	Subject to fire engineering

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		Class 9b – 120 minutes	
	Clause 3.6(b)(ii) of Specification C1.1. <b>3.6 Roof lights</b> If a roof is required to have an FRL or its covering is required to be non-combustible, roof lights or the like installed in that roof must— (b) be not less than 3 m from— (ii) any part of the building	Excluding the ground floor slab, B1 and B2, the proponent proposes to reduce the FRL's of the Class 5, 6 and 9b parts to 90 minutes, via a fire engineered <i>performance solution</i> . The void in the level 1 floor slab must remain 3m from the window and door openings of unit 109, to ensure it	
	(II) any part of the building which projects above the roof unless that part has the FRL required of a fire wall and any openings in that part of the wall for 6 m vertically above the roof light or the like are protected in accordance with C2.4, and	complies with Clause 3.6(b)(ii) of Specification C1.1.	
C1 2	Colculation of vice in stores	The proposed building has a visa in	Ver
CI.2	Calculation of rise in storeys.	storeys including the basements.	Yes
C1.3	Buildings of multiple classifications.	The building contains Class 3, 5, 6, 7a, and 9b parts. For this clause only, the building is identified as an eight storey Class 9b building which requires Type 'A', construction.	Yes
C1.4	Mixed type of construction.	The building is not subject to mixed types of construction.	N/A
C1.5	Two storey Class 2, 3 or 9c buildings.	Not applicable as the Class 3 has a rise in storeys of eight.	N/A
C1.6	Class 4 parts of buildings.	No Class 4 parts.	N/A
C1.7	Open spectator stands and	Not applicable.	N/A
	indoor sports stadiums.		
C1.8	Lightweight fire rated	If proposed, lightweight fire rated	Yes
	construction.	construction is to comply with this	
		clause and manufactures	
		specifications.	
C1.9	Non-combustible building	All parts of the external walls are	Yes
	elements	required to be non-combustible. All	
		bearing internal walls and shafts are	
		to comply with specification C1.1.	
		Attachments to the external walls	
		must comply with C1.14.	
		Detailed assessment must be	
		undertaken at construction certificate	
		stage to ensure compliance especially	
		with any metal cladded walls with	
		fibro sheeting that are proposed to be	
C1 10	Fire benevid avenuation	Installed over the AFS walls.	
C1.10	NSW Variations	floor linings, floor coverings, wall	detailed design

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	NSW C1.10(a)(v) NSW C1.10(b) NSW C1.10(c)(xiii).	<ul> <li>linings, ceiling linings and air-handling ductwork, are capable of complying with this clause.</li> <li>As the Class 3 part of the building will not be sprinklered, the floor linings are to achieve a critical radiant flux <i>not less than</i> 2.0 and a smoke development rate of not less than 750 percent minutes.</li> <li>Wall and ceiling linings are assumed to be plasterboard and will comply with this alorge.</li> </ul>	
C1.11	Performance of external walls in fire.	Not applicable as the building not proposed to be constructed with concrete panels.	N/A
C1.12	****	Deleted clause.	N/A
C1.13	Fire-protected timber: Concession	Not proposed to comply with requirements for fire protective timber.	N/A
C1.14	Ancillary elements	An <i>ancillary element</i> must not be fixed, installed or attached to the internal parts or external face of an <i>external wall</i> that is <i>required</i> to be <i>non-combustible</i> unless it is one of the elements detailed in this clause.	Yes, subject to detailed design
Dart C2	Compartmentation and		
Fait CZ	Separation		
C2.0	<i>Separation</i> DtS Provisions.	Applicable <i>performance requirements</i> for <i>building solutions</i> .	Note only
C2.0	Separation         DtS Provisions.         Application of Part.	Applicable <i>performance requirements</i> for <i>building solutions</i> . Applicable Yes or No	Note only Applicable
C2.0 C2.1 C2.2	Separation         DtS Provisions.         Application of Part.         General floor area and volume limitations.	Applicable <i>performance requirements</i> for <i>building solutions.</i> Applicable Yes or No The maximum floor areas and volumes do not apply to Class 3 parts.	Note only Applicable Subject to fire engineering
C2.0 C2.1 C2.2	Separation         DtS Provisions.         Application of Part.         General floor area and volume limitations.	Applicable performance requirements for building solutions.Applicable Yes or NoThe maximum floor areas and volumes do not apply to Class 3 parts.The combined floor area of B2, B1 and the ground floor is approximately 5,500m², which is more than the maximum floor area permitted for the Class 5, 6 and 7a parts of Type A construction. This is to be subject to a fire engineered performance solution.The maximum volume of the same fire compartment is less than 30,000m³ as permitted.The floor area and volume of the Class 9b part one level 7 is less than the maximum permitted for Type A construction. 4,000m², which is less than the maximum 5,000m² permitted	Note only Applicable Subject to fire engineering

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		The area and volume of the Class 9b part on level 7 is less than the maximums permitted.	
C2.3	Large isolated buildings.	Not a large isolated building.	N/A
C2.4	Requirements for open space		N/A
	and vehicular access.	Not a large isolated building.	
C2.5	Class 9a and 9c buildings. NSW Variations NSW C2.5(b).	Not a Class 9a or 9c building.	N/A
C2.6	New Variations NEW C2.5(D). Vertical separation of openings in external walls. All spandrels must achieve an FRL of 60/60/60or 90/90/90 if load bearing. Vertical spandrels must be: (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 Horizontal spandrels must be: a slab or other horizontal construction that— (A) projects outwards from the external face of the wall not less than 1100 mm; and (B) extends along the wall not less than 450 mm beyond the openings concerned; and (C) is non-combustible and has an FRL of not less than 60/60/60.	Spandrel protection is required if the whole building is not sprinkler protected. Most spandrels are compliant with a horizontal projection or vertical spandrel. However, the following spandrels are subject to a fire engineered <i>performance solution.</i> No spandrel protection to common lobby windows on southern and western façade of levels 1-6.	Subject to fire engineering
		CO FILM	
C2.7	Separation by fire walls.	No fire walls separating <i>fire</i> compartments.	N/A
C2.8	Separation of classifications in the same storey.	Excluding the ground floor and level 7, all floors have one classification only, and therefore this clause does not apply to B2, B1, and level 1-6. The ground floor contains Class 3, 5, 6	Subject to fire engineering

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		and 7a parts, which require structural FRL's between 90// to 180//	
		Level 7 contains Class 3 and 9b parts, which require structural FRL's of 90/ /, 120//, respectively.	
		This clause requires the different classes to be separated by a fire wall or the higher FRL adopted throughout the storey. Alternatively, excluding the ground floor slab, B1 and B2, the proponent proposes to reduce the FRL's of the Class 5, 6 and 9b parts to 90 minutes, via a fire engineered <i>performance solution</i> .	
C2.9	Separation of classifications in the different storeys.	The ground floor has Class 3, 5, 6, and 7a parts.	Subject to fire engineering
		The DTS provisions require the ground floor concrete slab and the ground floor ceiling concrete slab must achieve the higher FRL of 180/180/180.	
		Level 6 ceiling / level 7 concrete floor slab must achieve the higher FRL of 120/120/120 as level 7 has Class 3 and 9b parts.	
		Excluding the ground floor slab, B1 and B2, the proponent proposes to reduce the FRL's of the Class 5, 6 and 9b parts to 90 minutes, via a fire engineered <i>performance solution</i> .	
C2.10	Separation of lift shafts.	The lift shafts must be fire rated.	Subject to fire
		The rating varies between 90, 120 and 180 minutes depending if the lift walls are load bearing / support the floor or ceiling concrete slabs.	engineering
		Doorways to the lift are to have an FRL of/60/	
		Excluding the ground floor slab, B1 and B2, the proponent proposes to reduce the FRL's of the Class 5, 6 and 9b parts to 90 minutes, via a fire engineered <i>performance solution</i> .	
C2.11	Stairways and lifts in one shaft.	The lift and stairs are within separate	Yes
C2.12	Separation of equipment.	The following equipment must be fire separated from the building: -	Yes

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		<i>(i) lift motors and lift control panels;</i>	
		(ii) emergency generators used to	
		sustain emergency generators used to	
		operating in the emergency mode; or	
		(iii) central smoke control plant; or	
		(iv) boilers; or	
		(v) a battery or batteries installed in	
		the building that have a voltage	
		exceeding 24 volts and a capacity	
		exceeding 10 ampere nours.	
		with the requirements of AS 2419 1	
		At present, it is likely that the building	
		will only contain on site fire pumps	
		from the list above.	
		The fire separation of the hydrant	
		pump room on Basement 1, must	
		achieve an FRL of LB: 120/120/120 or	
		NLB:/120/120 with doorways	
C2 12	Electricity supply system	achieving an FRL of/120/30.	Vac
C2.15	Electricity supply system.	Distribution Board is serving an	res
		electrical pump, the MEDB room on	
		the ground floor must also achieve an	
		FRL of LB: 120/120/120 or NLB:	
		/120/120 with doorways achieving an	
		FRL of/120/30.	
		The emergency switchgear must be	
		separated from non-emergency	
62.14		switchgear as per Clause C2.13(d).	
C2.14	Public corridors in Class 2 and Class 3 buildings	Level 1 to Level 6, IS Class 3 and has	SUDJECT TO TIPE
	Class 5 buildings.	in length which therefore must be	engineering
		separated with smoke doors into	
		intervals no more than 40m.	
		This item is proposed to be subject to	
		a fire engineered <i>performance</i>	
		solution.	
Part C3	Protection of Openings		
C3.0	DtS Provisions.	Applicable <i>performance requirements</i>	Note only
C3.1	Application of part.	Applicable Yes or No.	Note only
C3.2	Protection of openings in	The following openings require	Subject to fire
	external walls.	protection as per Clause C3.2.	engineering
		Ground floor oponing to drivoway	
		northern facade	
		normennaçãoe.	

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		The proponent has indicated that this opening is proposed to be subject to a fire engineered <i>performance solution.</i>	
		Ground floor opening to driveway western façade.	
		This opening is proposed to be protected with a fire rated shutter achieving an FRL of/60/ in accordance with C3.4(a)(iii)(B), C3.4(b) and Specification C3.4.	
C3.3	Separation of external walls and associated openings in different fire compartments.	No external walls exposed to different fire compartments in the same building.	N/A
C3.4	Acceptable methods of protection.	Refer to clause C3.2.	Yes
C3.5	Doorways in fire walls.	No fire walls separating fire compartments.	N/A
C3.6	Sliding fire doors.	No sliding fire doors.	N/A
C3.7	Protection of doorways in	No horizontal exits.	N/A
C3.8	horizontal exits. Openings in fire isolated exits.	Doorways to the fire isolated stairs are to have self-closing fire doors achieving an FRL of/60/30.	Yes, subject to detailed design
C3.9	Service penetrations in fire isolated exits.	Fire isolated stairs must not be penetrated with any plumbing or electrical services, except fire services, including exit signs, emergency lighting and hydrants.	Yes, subject to detailed design
C3.10	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, subject to detailed design

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C3.11	Bounding construction: Class 2, 3, 4 & 9b buildings NSW Variation NSW C3.11(d).	The doorways to the serviced apartments, and other rooms that open to the common corridor (back of house or staff rooms), must be self-closing fire door sets, achieving an FRL of/60/30 as the building requires Type A construction. Cupboards, where a person cannot enter the space are not rooms and therefore do not need fire rated doors.	Yes, subject to detailed design
C3.12	Openings in floors and ceilings for services. Note: Excluding the ground floor slab, B1 and B2, the proponent proposes to reduce the FRL's of the Class 5, 6 and 9b parts to 90 minutes, via a fire engineered <i>performance solution.</i>	Openings in the floor slabs, except the lower ground floor carpark slab, are required to be protected / fire stopped as they require an FRL with respect to integrity and insulation.	Yes, subject to detailed design
C3.13	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 <i>shaft</i> must be protected by— (a) if it is in a <i>sanitary compartment</i> — a door or panel which, together with its frame, is <i>non-combustible</i> or has an FRL of not less than –/30/30; or (b) a <i>self-closing</i> –/60/30 fire door or hopper; or (c) an access panel having an FRL of not less than –/60/30; or (d) if the <i>shaft</i> is a garbage <i>shaft</i> — a door or hopper of <i>non-combustible</i> construction.	Yes, subject to detailed design
C3.14	****	Blank clause.	N/A
C3.15	Openings for service installations Note: Excluding the ground floor slab, B1 and B2, the proponent proposes to reduce the FRL's of the Class 5, 6 and 9b parts to 90 minutes, via a fire engineered <i>performance solution.</i>	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</i> <i>fire</i> , that installation must be fire stopped as per this clause.	Yes, subject to detailed design
C3.16	Construction joints.	Construction joints to be fire stopped as per this clause.	Yes
C3.17	Columns protected with lightweight construction to achieve an FRL.	Columns proposed to be protected with lightweight fire rated construction to comply with this clause and must be shown the construction certificate documentation.	Yes, subject to detailed design

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Clause	Description	Clause Requirements/Comments	Compliance Yes/No
Part D1	Provisions for Escape		
D1.0	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Note only.
D1.1	Application of Part	Part applicable	Note only.
D1.2	Number of exits required NSW Variation NSW D1.2(d)(vii).	Basement 2 and 1, and level 7 have two exits as required. The remaining floors have one exit as required by this clause. Additional exits are provided for exit travel distances	Yes
D1.3	When fire-isolated stairways and ramps are required.	FS1 – serves the basements; FS2 – serves the basements; FS3 – serves levels 1 to 7; FS4 – serves levels 1 to 7. All stairs are fire isolated as required.	Yes
D1.4	Exit travel distances	The exit travel distances within the basements is 20m to a point of choice of the two separate exits (FS1 & FS2), with one of the exits within 40m.	Yes
		[Note: Basement 2, storage area that adjoins the western boundary is less than 20m to a point of choice as required, where the ceiling height is measured at 2.1m or more]. The exit travel distances within the ground floor are 20m to a single exit or point of choice of two separate exits, where one of those exits is within 40m.	Yes
		<ul> <li>Excluding the fire stairs, the ground floor exits are: <ul> <li>Sliding glass doors to the eastern colonnade;</li> <li>Sliding glass doors to the northern forecourt;</li> <li>The discharge door of FS2;</li> <li>The external doorway from the southern tenancy to the eastern façade / Woodriff Street;</li> <li>The external doorway from the eastern tenancy that open to the eastern facades;</li> <li>The external doorway of the north tenancy opening to the eastern colonnade;</li> </ul> </li> </ul>	

#### 3.2 – Access & Egress (Section D, NCC)

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		<ul> <li>The doorway from the loading dock.</li> </ul>	
		The exit travel distances from the Class 3 parts on Level 1-6 complies with this clause, as occupants are 6m to an exit or 6m to a point of choice of two exits, and 20m from an exit or point of choice from the staff / BOH rooms.	Yes
		The exit travel distance in the conference room on level 7, is up to 30m to FS3, assuming furniture is installed to the room, instead of 20m. This is proposed to be subject to a fire engineered performance solution.	Subject to fire engineering
D1.5	Distance between alternative exits	The distance between the alternative exits complies with this clause, which requires 60m within the Class 6, 7a and 9b parts, and 45m within the Class 3 parts.	Yes
D1.6	Dimensions of exits and paths of travel NSW Variations NSW D1.6(f)(vii) NSW D1.6(i)	The dimensions of exits and paths of travel to exits generally complies with this clause. The aggregate egress for each floor is 200 occupants, except the ground floor, which has at least 4 exits that would allow 400 occupants. It is assumed that level 7, will not have more than 200 occupants at any given time, or less as required by the relevant development consent.	Yes, subject to detailed design
D1.7	Travel via fire-isolated exits.	Doorways opening to the fire isolated stairways are all from public corridors or public lobbies as required.	Yes
		All stairs discharge at the ground floor and via their own fire isolated passageways.	Yes
		FS1 and FS3 discharge to the northern façade, where occupants are effectively in open space after 1m, which complies with D1.7(b)&(c).	Yes
		Occupants are exposed to the southern wall of the southern commercial tenancy, when discharging from fire isolated stair FS2 and FS4, as restricted by D1.7(c).	Subject to fire engineering

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		Checkstout to match arch	
		R TO PTC STRUCTURE APPRICIAL STORIWATER TANK TO STORMWATER APPRICAL 2 2 3 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
		This is to be subject to a fire	
D1.8	External stairways or ramps in	No external stair in lieu of a fire	N/A
	lieu of fire-isolated exits	isolated stair required or proposed.	
D1.9	Travel by non-fire-isolated	No non-fire isolated stairs connecting	N/A
	stairways or ramps.	storeys. As such, clause is not	
D1.10	Discharge from exits	The discharge of the exits complies	Yes, subject to
	NSW Variation NSW D1.10(f).	with this clause.	detailed design
		Additional details are required to	
		confirm the transition between public	
		and private lands to ensure disabled	
		access is also provided where the	
		transition forms part of the accessible path of travel.	
D1.11	Horizontal exits.	No horizontal exits are provided /	N/A
		required.	
D1.12	Non-required stairways, ramps	No non-required stairways, ramps or	N/A
D1 13	or escalators.	escalators. Population loads are to be confirmed	Ves subject to
D1.15	accommodated.	for the ground floor.	detailed design
	NSW Variation NSW Table D1.13.		,
		It is assumed, the aggregate egress	
		the ground floor, which has at least 4	
		exits that would allow 400 occupants.	
		It is assumed that level 7, will not	
		given time, or less as required by the	
		relevant development consent.	
D1.14	Measurement of distances	Note only.	Note only.
D1.15	Method of measurement	Note only.	Note only.
D1.16	Plant rooms and lift machine	The plant rooms and lift rooms are	Yes
	rooms: Concession	entitled to comply with the	
	rooms: Concession.	entitled to comply with the concessions for earess using ladders	
	rooms: Concession.	entitled to comply with the concessions for egress using ladders complying with this part.	

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		depth and therefore access to the lift pit will be via the lowest landing doors.	
Part D2	Construction of Exits		
D2.0	DtS Provisions.	Applicable <i>performance requirements</i> for <i>building solutions</i> .	Note only.
D2.1	Application of part NSW Variation NSW D1.2(c).	Part applies.	Note only.
D2.2	Fire-isolated stairways and ramps.	The fire isolated stairs must be constructed with non-combustible materials, so that if there is local failure it will not cause structural damage to, or impair the fire- resistance of, the shaft. Details to be provided by the structural	Yes, subject to detailed design
D2.3	Non-fire-isolated stairways and ramps.	The non-fire isolated stair to the roof level is assumed to be constructed from concrete, which complies with this clause.	Yes, subject to detailed design
D2.4	Separation of rising and descending stair flights.	No rising and descending stair flights. In other words, the stairs serving the basement do not interconnect to the stairs serving upper levels.	N/A
D2.5	Open access ramps and balconies.	No open access ramps or balconies used to comply with the requirements of Table E2.2a.	N/A
D2.6	Smoke lobbies.	No smoke lobbies utilised.	N/A
D2.7	Installations in exits and paths of travel.	Electrical distribution boards that are located within a path of travel to an exit must be contained within non- combustible construction (metal cabinet) and smoke sealed.	Yes, subject to detailed design
D2.8	Enclosure of space under stairs and ramps.	No cupboards permitted or proposed to the fire isolated stairs.	Yes
D2.9	Width of stairways.	Stairways greater than 2m in width only count for 2m of exit width.	Note only.
D2.10	Pedestrian ramps.	No pedestrian ramps serving as exits.	N/A
D2.11	Fire-isolated passageways.	The fire isolated passageway on the ground floors are assumed to be load bearing and therefore must be concrete or masonry. Details to be provided by the structural engineer.	Yes, subject to detailed design
D2.12	Roof as open space.	The roof is not utilised as open space for the purpose of this clause.	N/A
D2.13	Goings and risers. NSW Variation NSW 2.13(a)(ix), (x), xi	The goings and the risers are capable of complying with this clause.	Yes, subject to detailed design
D2.14	Landings.	The proposed landings are capable of complying with this clause and are subject to detailed design at construction certificate stage.	Yes, subject to detailed design

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D2.15	Thresholds. NSW Variation NSW D2.15(d)(e).	The proposed thresholds are capable of complying with this clause and are subject to detailed design at construction certificate stage.	Yes, subject to detailed design
D2.16	Balustrades or other barriers. NSW Variation D2.16(g)(iv) & (v).	The proposed balustrades capable of complying with this clause and are subject to detailed design at construction certificate stage.	Yes, subject to detailed design
D2.17	Handrails.	Hand rails will be required to all stairs and they are capable of complying with this clause. Note hand rail requirements for non-	Yes, subject to detailed design
<b>DD</b> 10		fire isolated stairs under Clause D3.3, which requires two hand rails.	21/2
D2.18	Fixed platforms, walkways' stairways and ladders.	ladders proposed or required.	N/A
D2.19	Doorways and doors. NSW Variation NSW D2.19(b)(v).	The sliding glass doors to the eastern colonnade and northern forecourt must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and if it leads directly to a road or <i>open space</i> it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the <i>fire compartment</i> served by the door.	Yes, subject to detailed design
D2.20	Swinging doors.	Excluding the external door to the loading dock on the ground floor, (which is to be adjusted) exit doors throughout the building swing on the direction of egress as required.	Design consideration
D2.21	Operation of latch. NSW Variation NSWD2.21(c)& (d). Note: If the conference room on level 7 serves more than 100 persons, panic bars will be required to the Class 9b parts.	Excluding the internal doors of the serviced apartments, 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, subject to detailed design
D2.22	Re-entry from fire-isolated exits.	Building not >25m in effective height.	N/A Yes subject to
02.23		isolated stairs and the smoke doors in	detailed design

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		the hallways must have the following	
		signage.	
		"FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN";	
		The doorways leading from the fire isolated stairs that open to outside	
		must have signage that states:	
		"FIRE SAFETY DOOR DO NOT OBSTRUCT";	
D2.24	Protection of openable windows. Class 2, 3, 4 or 9b building.	The bedroom windows on the first floor or above that have a sill height of less than 1.7 metres and do not open to a balcony, require protection as per this clause. BCA 2016 applies to <b>bedroom</b>	Yes, subject to detailed design
		windows only, 2m above the ground with a sill less than 1.7m in height. They MUST be fixed into that position or have the screen that can withstand 250 Newtons (25kg).	
D2.25	Timber stairways: Concession	No applicable as no timber stairs proposed within the fire isolated stairway.	N/A
NSW D2.101	Doors in path of travel in an entertainment venue.	Not an ' <i>entertainment venue'</i> , as defined by the EP & A Regs. 2000.	N/A
Part D3	Access for People with Disabilities		
D3.0	DtS Provisions.	Applicable <i>performance requirements</i> for <i>building solutions</i> .	Note only.
D3.1	General building access requirements.	Disabled access is a requirement of BCA 2016 and Federal legislation.	Yes, subject to detailed design
		In this instance, disabled access must be provided from the principal	
		- accessible car parking places on basement levels;	
		<ul> <li>throughout the ground floor common areas and</li> </ul>	
		<ul> <li>entry door of all of the serviced apartments;</li> </ul>	
		<ul> <li>within 3 accessible serviced apartments;</li> </ul>	
		<ul> <li>common external terraces on level 1 and level 7 / roof;</li> <li>within the back of house /</li> </ul>	
		staff rooms on levels 1-6;	

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		- the conference room, gym,	
		common bathroom facilities.	
		The building appears capable of	
		complying with this clause subject to	
		detailed design.	
D3.2	Access to buildings.	An accessway is provided from the	Yes, subject to
		boundary of the property, to the	detailed design
		principal pedestrian entrances.	
D3.3	Parts of buildings to be	The building appears capable of	Yes, subject to
	accessible.	complying with this clause subject to	detailed design
D2.4		detailed design.	X
D3.4	Exemptions.	Disabled access need not be provided	Yes
		to service areas / metres rooms etc.	
		- Gas metre room;	
		- Water metre room;	
		- Electricity metre room	
D2 E	Accessible car parking	Five accessible car parking space are	Voc
05.5	Accessible cal parking.	required and provided. The space must	165
	3 accessible rooms divided by a	comply with AS/NZS 2890.6	
	total of 58 rooms = $5.17\%$		
		Vertical clearance of not less than	
	83 carparking spots x 5.17% =	2500mm must be provided above each	
	4.2911 car parking spots	dedicated space and adjacent shared	
	rounded up to five accessible	area, when measured in accordance	
	car parking spots.	with AS 2890.1: 1993 Clause 5.3. (AS	
		2890.6: 2009 Clause 2.4) (Figure 4).	
D3.6	Signage.	Braille and tactile signage complying	Yes, subject to
		with Specification D3.6 must: -	detailed design
		(ii) identify each door required by E4.5	
		to be provided with an exit sign and	
		state—	
		(A)	
		"Exit"; and	
		"Level"; and either	
		(aa) the noor level number; or	
		(DD) a moor level descriptor, or	
		In addition to the above, where a	
		pedestrian entrance is not accessible.	
		directional signage incorporating the	
		international symbol of access, in	
		accordance with AS 1428.1 must be	
		provided to direct a person to the	
		location of the nearest accessible	
		pedestrian entrance.	
D3.7	Hearing augmentation.	Hearing augmentation not required.	N/A
D3.8	Tactile indicators.	If non-fire isolated stairs proposed,	Yes, subject to
		and form part of the accessible path,	detailed design
		they must have tactiles in accordance	
		with sections 1 and 2 of AS/NZS	
		1428.4.1.	

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D3.9	Wheelchair seating in Class 9b assembly buildings.	No fixed seating proposed as part of the development.	N/A
D3.10	Swimming Pools.	The swimming is ancillary to the Class 3 parts and is less than 10% of the floor area of the storey. As such, it is considered a Class 3 part. As the swimming pool has a perimeter less than 40m, approximately 30m, disabled access to and into the swimming pool is not required.	N/A
D3.11	Ramps.	No accessible ramps proposed, as either or required	N/A
D3.12	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.	Yes, subject to detailed design

## 3.3 – Services and Equipment (Section E, NCC)

<i>Clause</i> &	Description	Requirements/Comments	Compliance Yes/No
Part E1	Fire Fighting Equipment		
E1.0	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions</i>	Note only
E1.1	****	Blank clause.	N/A
E1.2	****	Blank clause.	N/A
E1.3	Fire hydrants.	<ul> <li>Fire hydrant coverage is required in accordance with AS 2419.1-2005.</li> <li>Internal hydrants to the fire isolated stairs must provide coverage.</li> <li>The hydrant booster is within 10m of the building and is not protected within fire rated construction 2m either side and 3m above, as per Clause 7.3(c)(ii)</li> </ul>	Subject to fire engineering
F1.4	Fire hose reels.	The proponent has indicated that this is subject to a fire engineered <i>performance solution</i> .	Yes, subject to
		Class 3 parts. The Class 6, 7a, and 9b parts must have fire hose reels, which must be located within 4m of the fire isolated stairs. Coverage is from a 36m hose and 4m spray. Current locations of hose reels satisfies this clause.	detailed design

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E1.5	Sprinklers NSW Variation NSW Table E1.5	Sprinklers are not required for the Class 3, 5, 6 and 9b part as the building is: - subject to BCA 2016 (Amendment 1); and, - less 25m in effective height.	Subject to detailed design and fire engineering
		The Class 7a carpark on B2, B1 and the ground floor is sprinkler protected as required. To prevent the need for a fire wall on the ground floor to separate sprinklered and non- sprinklered areas, the whole ground floor is proposed to be sprinkler protected.	
		The sprinkler alarm valves are not located in a room that has direct egress to a road or open space as per Clause 6 of Specification E1.5. This is proposed to be subject to a fire engineered performance solution.	
E1.6	Portable fire extinguisher.	Portable fire extinguishers will be installed in accordance with this clause and additional PFE's are required to serve the Class 3 part not provided with hose reel coverage.	Yes, subject to detailed design
E1.7	****	Blank clause.	N/A
E1.8	Fire control centres.	Not required or proposed as the building is not over 25m in effective height and is not over 18,000m <sup>2</sup> .	N/A
E1.9	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.	Yes
		Fire hydrants must be operational once the building reaches 12m in effective height.	
E1.10	Provision for special hazards.	Not required or proposed.	N/A
Part E2	Smoke Hazard Management		
E2.0	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions</i>	Note only
E2.1	Application of Part.	Part applies.	Applicable
E2.2	General requirements.	The building will require an automatic smoke detection and alarm system (BOWS) complying with Clause E2.2(a)(i)&(ii), Clause 4 & 6 of Specification E2.2(a), AS 1670.1-2015. The Class 9b part on level 7 will	Yes, subject to detailed design
		require automatic shutdown of the	

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		mechanical ventilation system serving that part as per Clause E2.2a(ii), NSW Table E2.2b. Additional detection is not required by this clause as the Class 9b part is part of a fire compartment less than 2000m <sup>2</sup> .	
		<ul> <li>The carpark ventilation system</li> <li>requires compliance with Clause E2.2a,</li> <li>Clause 5.5 of AS 1668.1-2015 &amp; AS</li> <li>1668.2-2012. This requires: <ul> <li>smoke detectors to the</li> <li>mechanical supply air parts;</li> <li>auto shutdown of the supply</li> <li>air on detection of smoke by</li> <li>the supply air smoke</li> <li>detectors;</li> </ul> </li> <li>auto full ventilation rate where</li> <li>smoke detection installed</li> <li>activated by thermals in</li> <li>accordance with AS 1670.1-2015;</li> <li>Override control switch at the</li> <li>designated building entry point</li> </ul>	
E2.3	Provision of special hazards. NSW variations NSW Table E2.2a NSW Table E2.2b	The building is not considered to be subject to the provision of special hazards.	N/A
Part E3	Lift Installations		
E3.0	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions</i> .	Note only
E3.1	Lift installations.	The electric passenger lift must comply with Specification E3.1.	Yes, subject to detailed design
E3.2	Stretcher facility in lifts.	A stretcher facility is required as the effective height of the building is more than 12 metres.	Yes, subject to detailed design
E3.3	Warnings against the use of lifts in fire.	Signage will be provided to comply with this clause.	Yes, subject to detailed design
E3.4	Emergency lifts.	An emergency lift is not required or proposed.	N/A
E3.5	Landings.	Landings to the lift comply with this clause.	Yes, subject to detailed design
E3.6	Passenger lifts.	The passenger lift will 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;	Yes, subject to detailed design

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E3.7	Fire service controls.	<ul> <li>g) Automatic audible information, visual indicators to identify the level and when the lift stops.</li> <li>h) Emergency button to call centre</li> <li>Fire service controls must be provided to serve the lifts as they serve storeys</li> </ul>	Yes, subject to detailed design
		greater than 12m in effective height.	
E3.8	Aged care buildings.	The building is not a Class 9c building.	Yes
E3.9	Fire service recall operation switch.	Fire service controls must be provided as per this clause, as the lifts serve storeys greater than 12m in effective height.	Yes, subject to detailed design
E3.10	Lift car service drive control switch.	Fire service controls must be provided as per this clause, as the lifts serve storeys greater than 12m in effective height.	Yes, subject to detailed design
Part E4	Emergency Lighting, Exit Signs and Warning Systems		
E4.0	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions</i> .	Note only.
E4.1	****	Blank clause.	N/A
E4.2	Emergency lighting requirements.	Emergency lighting is required to be installed to all internal and external areas that are part of the path of travel to the road or open space in accordance with this clause.	Yes, subject to detailed design
E4.3	Measurement of distance.	Noted.	Note only.
E4.4	Design and operation of	Emergency lighting must be installed	Yes, subject to
	emergency lighting.	in accordance with AS 2293.1-2005.	detailed design
E4.5	Exit signs.	Exit signs to be installed on all levels	Yes, subject to
E4 6	Direction signs	above or adjacent to the exit.	detailed design
24.0	NSW Variation NSW E4.6	additional directional exit signs must be installed to guide occupants to the exit.	detailed design
E4.7	Class 2 & 3 buildings and Class 4 parts: Exemption.	No applicable as not a Class 2 building.	N/A
E4.8	Design and operation of exit signs.	Every required exit sign must comply with— AS 2293.1; or for a photoluminescent exit sign, Specification E4.8; and be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.	Yes, subject to detailed design
E4.9	Sound systems and intercom systems for emergencies	Not a class 3, 9a, or 9b building or over 25m in Effective Height building or used as a school, for the aged or people with a disability.	

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Clause	Description	Clause Requirements/Comments	Compliance
	<b>,</b>	· · · · · · · · · · · · · · · · · · ·	Yes/No
Part F1	Damp and Waterproofing		
F1.0	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions</i> .	Note only
F1.1	Stormwater drainage.	The stormwater will comply with AS/NZS 3500.3-2015.	Yes, subject to detailed design
F1.2	****	Blank clause	N/A
F1.3	****	Blank clause	N/A
F1.4	External above ground membranes.	Where external membranes are proposed, they must comply with AS 4654.1 & 2.	Yes
F1.5	Roof coverings.	The new roof coverings must comply with this clause.	Yes
F1.6	Sarking	New sarking will comply with this clause and AS/NZS 4200.1 & 2.	Yes
F1.7	Waterproofing of wet areas in buildings.	Waterproofing of all wet areas will be in accordance with this clause and AS 3740-2010.	Yes
F1.8	****	Blank clause.	N/A
F1.9	Damp-proofing	New damp-proofing will comply with this clause.	Yes
F1.10	Damp-proofing of floors on the ground.	New damp-proofing on the ground will comply with this clause.	Yes
F1.11	Provision of floor wastes.	New floor wastes will be provided to the Class 3 parts within the bathrooms and laundries.	Yes
F1.12	Sub-floor ventilation.	No sub-floor ventilation.	N/A
F1.13	Glazed assemblies.	New glazed members will comply with this clause and AS 1428.1-2009.	Yes
Part F2	Sanitary and Other Facilities		
F2.0	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions.</i>	Note only
F2.1	Facilities in residential buildings.	No Class 2 parts.	N/A
F2.2	Calculation of number of occupants and facilities.	Note only.	Noted
F2.3	Facilities in Class 3-9 buildings.	Each serviced apartment will be provided with a kitchen, bathroom, toilet, shower.	Yes
		The facilities for the Class 5 and 6 parts on the ground floor can not be determined until the first use is determined. However, based on current designs, sufficient sanitary	

#### 3.4 – Health & Amenity (Part F, NCC)

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		facilities will be provided for most	
		uses.	
		The facilities for level 7 common areas	
		and conference space complies with	
		this clause for the assumed population	
		loads.	
F2.4	Accessible sanitary facilities.	Wheelchair and ambulant accessible	Yes
		bathrooms are located at each bank of	
		common tollets on the ground floor as	
F2 5	Construction of sanitary	The door to a fully enclosed sanitary	Yes
. 2.0	compartments.	<i>compartment</i> must—	100
		(i) open outwards; or	
		(ii) slide; or	
		(iii) be readily removable from the	
		outside of the <i>sanitary compartment</i> ,	
		unless there is a clear space of at least	
		1.2 m, measured in accordance with	
		within the sanitary compartment and	
		the doorway.	
F2.6	Interpretation: Urinals and washbasins.	Noted only.	Yes
F2.7	Microbial. NSW Variation NSW F2.7	Not applicable in NSW.	N/A
F2.8	Waste management.	Not Class 9a	N/A
Part F3	Room Heights		
F3.0	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions</i> .	Applies
F3.1	Height of rooms and other	The height of rooms are required to be	Yes, subject to
	spaces.	2.4 meters in height in habitable	detailed design
		rooms and 2.1m in non-nabitable	
		internal heights are 2.4 metres or	
		more.	
		If the Class 9b accommodates more	
		than 100 occupants, the ceiling height	
		must be 2.7m. It is important that the	
		structural elements do not impact this	
		height.	
Clause	Description	Clause Requirements/Comments	Compliance Yes/No
Part F4	Light and Ventilation		
F4.0	DtS Provisions	Applicable <i>performance requirements</i>	Applicable
E4 1	Drovicion of natural light	Tor <i>building solutions.</i>	Vaa
Г <del>Ч</del> .1		hedrooms within Class 3 parts	res
F4.2	Methods and extent of natural	Compliant natural lighting is provided	Yes
	lighting.	to all bedrooms within Class 3 parts.	. 55

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F4.3	Natural light borrowed from	Borrowed light not required as direct	N/A
<b>F4 4</b>		Transa habitable response artificial	Vaa
F4.4	Artificial lighting.	In non-nabitable rooms, artificial	res
		lighting will comply with this clause,	
		the BASIX certificate and Part J6 and	
		AS 1680.0-2009.	
F4.5	Ventilation of rooms.	Basement 2 and 1 must be	Yes
	NSW Variation F4.5(b).	mechanically ventilated to AS 1668.1-	
		2012 and AS 1668 1-2015	
		2012 414 / 5 1000.1 2015.	
		The Class 2 and 6 parts could be	
		potentially be naturally ventilated.	
		However, it is more likely that they will	
		be mechanically ventilated to AS	
		1668.1-2012 and AS 1668.1-2015, and	
		Part J5 for occupant comfort.	
F4.6	Natural ventilation.	The Class 3 and 6 parts could be	Yes, subject to
		potentially be naturally ventilated.	detailed design
		However, it is more likely that they will	5
		he mechanically ventilated to AS	
		1668 1-2012 and AS 1668 1-2015 and	
		Dort 15 for occupant comfort	
F4 7	Mantilation becaused from	Part J5 for occupant connort.	Vaa subissta
F4./	ventilation borrowed from	Borrowed ventilation may be relied	res, subject to
	adjoining room.	upon for small study / non-nabitable	detailed design
		rooms. However, it is likely that the	
		non-habitable components will be	
		mechanically ventilated.	
F4.8	Restriction of position of water	Toilet doors open to hallways or the	Yes, subject to
	closets and urinals.	like or must be mechanical ventilated	detailed design
		to comply with Clause F4.9(a)(ii).	
F4.9	Airlocks.	Toilet doors open to hallways or the	Yes, subject to
		like or must be mechanical ventilated	detailed design
		to comply with Clause F4.9(a)(ii).	-
F4.10	****	Blank clause.	N/A
F4.11	Carparks	The basement carpark on basement 1	Yes, subject to
		and 2 must be mechanically ventilated	detailed design
		as per AS 1668 2-2012 and AS	actanea accigii
		1668 1-2015	
		1000.1 2015.	
		The ground fleer could notentially	
		comply with AS 1669 4 2012	
F4 12		Comply with AS 1000.4-2012.	N1 / A
F4.12	Kitchen and local exhaust	No commercial kitchens proposed at	N/A
	ventilation.	this stage.	
Part F5	Sound Transmission and Insulation		
F5 0	DtS Provisions	Applicable performance requirements	Noted
. 5.0		for building solutions	Hotea.
F5 1	Application of Part	Applies to Class 3 parts	Annlies
F5 2	Determination of airborne cound	Airborno cound inculation requirement	Notod
FJ.Z	insulation ratings		NOLEO
EE 2	Determination of impact course	Airborno cound inculation ratings	Noted
r5.3	inculation write as	An unit of the sound insulation ratings must	notea
		i de defermined in accordance with	
	insulation radings.		
		Clause F5.2(a) or comply with	

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F5.4	Sound insulation of floors.	The residential floors must have an $R_w$ + Ctr (airborne) not less than 50 and an Ln,w (impact) not more than 62.	Yes
F5.5	Sound insulation of walls.	The walls separating service apartments must have an R <sub>w</sub> + C <sub>tr</sub> (airborne) not less than 50. Discontinuous construction is required	Yes
		around the lift shafts, garage rooms, and other rooms which are habitable and back on to non-habitable areas.	
F5.6	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	Yes
		(ii) 25 if the adjacent room is a kitchen or non- <i>habitable room.</i>	
F5.7	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.	Yes

### 3.5 – Ancillary Provisions (Part G, NCC)

Part G1	Damp and Waterproofing	Clause Requirements/Comments	Compliance
G1.0	DtS Provisions	Applicable <i>performance requirements</i>	Note only
		for <i>building solutions.</i>	
G1.1	Swimming Pools NSW G1.1(a)and (b)	The swimming pool on level 7 requires a swimming pool fence around the pool. The external wall of the pool cannot be used as the barrier. The fence area must not include anything other than pool pumping equipment. The pool fence must be designed in accordance with the Swimming Pool Act 1992, The swimming Pools Regulation 2008 and AS 1926.1-2012. The Act and regulations prevail over the standard.	Design consideration
G1.2	Refrigerated chambers, strong rooms and vaults.	<ul> <li>(a) A refrigerated or cooling chamber, strongroom or vault which is of sufficient size for a person to enter must have—</li> <li>(i) a door which is capable of being opened by hand from inside without a key; and</li> <li>(ii) internal lighting controlled only by a switch which is located adjacent to</li> </ul>	Yes

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		the entrance doorway inside the chamber, strongroom or vault; and (iii) an indicator lamp positioned outside the chamber, strongroom or vault which is illuminated when the interior lights <i>required</i> by (a)(ii) are switched on; and (iv) an alarm that is— (A) located outside but controllable only from within the chamber, strongroom or vault; and (B) able to achieve a sound pressure level outside the chamber, strongroom or vaultof90dB(A)when measured3 mfromthe sounding device. (b) Adoor <i>required</i> by (a)(i) in a refrigerated or cooling chamber must have a doorway with a clear width of not less than 600 mm and a clear height not less than 1.5 m. Details to be provided at detailed fit- out <i>construction certificate</i> stage doe the detailed fit-out.	
G1.3	Outdoor play spaces	Not a Class 9b building used as an early childhood centre.	N/A
NSW G1.101	Provision of cleaning windows	<ul> <li>(a) A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level.</li> <li>(b) A building satisfies (a) where—</li> <li>(i) the windows can be cleaned wholly from within the building; or</li> <li>(ii) provision is made for the cleaning of the windows by a method complying with the <i>Work Health and Safety Act 2011</i> and regulations made under that Act.</li> </ul>	Yes
Part G2	Boilers, pressure vessels, heating appliances, fireplaces, chimneys and flues.	Clause Requirements/Comments	Compliance
G2.0	DtS Provisions	Applicable <i>performance requirements</i> for <i>building solutions</i>	Note only
G2.1	****	Deleted clause.	N/A
G2.2	Installation of appliances	<ul> <li>G2.2 Installation of appliances</li> <li>The installation of a stove, heater or similar appliance in a building must comply with:</li> <li>(a) * * * * *</li> <li>(b) Domestic solid-fuel burning appliances — Installation: AS/NZS 2918.</li> <li>(c) For boilers and pressure vessels: Specification G2.2.</li> </ul>	Yes

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G2.3	Open fireplaces	No open fire place proposed.	N/A
G2.4	Incinerator rooms	No incinerator rooms proposed.	N/A
Part G3	Atrium construction	Clause Requirements/Comments	Compliance
G3.1	DtS Provisions	Applicable <i>performance requirements</i>	Note only
		for <i>building solutions</i> .	
G3.2	Dimension of atrium well	No atrium proposed.	N/A
G3.3	Separation of atrium by	No atrium proposed.	N/A
	bounding walls.		
G3.4	Construction of bounding walls	No atrium proposed.	N/A
G3.5	Construction of balconies	No atrium proposed.	N/A
G3.6	Separation of roof	No atrium proposed.	N/A
G3.7	Means of egress	No atrium proposed.	N/A
G3.8	Fire and smoke control systems	No atrium proposed.	N/A
Part G4	Construction in Alpine Areas	Clause Requirements/Comments	Compliance
G4.0	DtS Provisions	Not an alpine area	N/A
Part G5	Construction in Bush Fire	Clause Requirements/Comments	Compliance
	Prone Area.		
G5.0	DtS Provisions	Not a Bush Fire Prone Area	N/A

# 3.6 – Energy Efficiency. (Part J, NCC)

The following NCC Section J National provisions will be applicable to the Class 3, 5, 6 and 9b parts. For detailed assessment, refer to Section J report by Partners Energy, Report No. 6030, dated 27 July 2016.

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## 4.0 – FIRE SAFETY AND OTHER MEASURES

# 4.0 – Fire Safety and Other Measures

Measure	Standard of Performance	
Access panels to fire-resisting shafts.	BCA Clause C3.13	
Automatic fail-safe devices	BCA Clause D2.19, D2.21, Spec C3.4, AS 1670.1- 2015.	
<ul> <li>Sliding glass doors to eastern and northern entries at ground floor.</li> </ul>		
Automatic fire detection and alarms systems (BOWS)	BCA Clause E2.2a, Clause 4 & 6 of Spec. E2.2a,	
	AS 1670.1-2015 and NSW Table E2.2a.	
Automatic fire suppression system	BCA Clause E1.5, Specification E1.5, AS 2118.1-1999, and Fire	
<ul> <li>Basement carparks and ground floor.</li> </ul>	Engineering Report.	
Automatic shutdown air handling systems	BCA Clause E2.3 NSW Table E2.2b	
Emergency lighting	BCA Clause E4.2 & E4.4, AS 2293.1-2005	
Exit signs	BCA Clause E4.5, NSW E4.6, E4.8, AS 2293.1-2005	
Fire dampers	BCA Clause E2.2, AS/NZS 1668.1-2015,	
	AS 1682.2-1990.	
Fire doors	BCA Spec C3.8, C3.10, E3.C3.11, AS 1905.1-2005.	
<ul> <li>Entry doors to service apartments;</li> </ul>		
<ul> <li>Entry doors to back of house rooms, staff rooms,</li> </ul>		
bathrooms on levels 1-7;		
- Internal doorways to the fire isolated stairs and		
- Lift landing doors		
Fire Engineering	Fire Engineering Report	
- Excluding the ground floor slab reduced FRI's of		
Class 5, 6, and 9b parts to 90 minutes;		
- Fire compartment of B2, B1 and ground floor more		
than 5,000m <sup>2</sup> (approximately 5,500m <sup>2</sup> );		
<ul> <li>No spandrel protection to common lobby windows</li> </ul>		
on southern and western façade of levels 1-6;		
- Deletion of smoke doors to common lobbles on		
- Non protection of openings to western boundary:		
<ul> <li>Increased exit travel distance to conference room</li> </ul>		
on level 7;		
- Protection of occupant discharge from fire stair		
FS2 and FS4;		
<ul> <li>Non protection of hydrant booster.</li> </ul>		
Fire hose reels	BCA Clause E1.4, AS 2441-2005.	
Fire hydrant systems	BCA Clause E1.3, AS 2419.1-2005, and Fire Engineering	
	Report.	
Fire seals	BCA Clause C3.15, and manufacturers specifications.	
<ul> <li>protecting openings in fire resisting components of</li> </ul>		
the building.		
Fire shutter	BCA Clause C3.2, C3.4, Specification C3.4, AS 1905.2-2005	
- Carpark opening to aujoining land.	Fire Engineering Depart	
FIFE & SITIOKE SEdIS	Fire Engineering Report.	
on levels 1-6		
Lightweight fire rated construction	BCA Clause C1.8. C3.17. and manufactures specifications	
Mechanical air handling systems	BCA Clause F2 2a Clause 5.5 of $\Delta$ S 1668 1-2015 & $\Delta$ S 1668 2-	
- Carpark.	2012 AS 1670 1-2015	
Portable fire extinguishers	BCA Clause F1 6 AS 2444-2001	
Warning and operational signage	BCA Clause D2 23 D3 6 F1 3 F1 4 F1 6 F3 3 and $FD&A$	
- Fire door signs:	Pare 2000	
- Disabled egress signade.	ncys 2000.	
<ul> <li>Fire isolated stairway notices;</li> </ul>		
- Lift notices;		
<ul> <li>Hydrant, hose reel, PFE signs.</li> </ul>		

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#### 5.0 – CONCLUSION

#### 5.0 – Conclusion

This BCA 2016 Report has been prepared to assess the approved eight storey serviced apartment building containing 58 serviced apartments, related facilities, three ground floor commercial tenancies and two basement car park levels.

The assessment of the documentation has revealed that the building is primarily capable of complying with BCA 2016, and where necessary the Performance Requirements, without modification that would require the development consent to be modified.

Prepared by:

2.

Greg Evans Director Accredited Certifier BPB 1870 **360 Certification** 

Date: 28 November 2018

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#### 6.0 – REFERENCES

#### 6.0 – References & Plans

See attached plans.

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