



To: Investments and Loans Pty Ltd
Project: 762 Pittwater Road, Brookvale
Report: BCA Assessment Report
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DOCUMENT CONTROL

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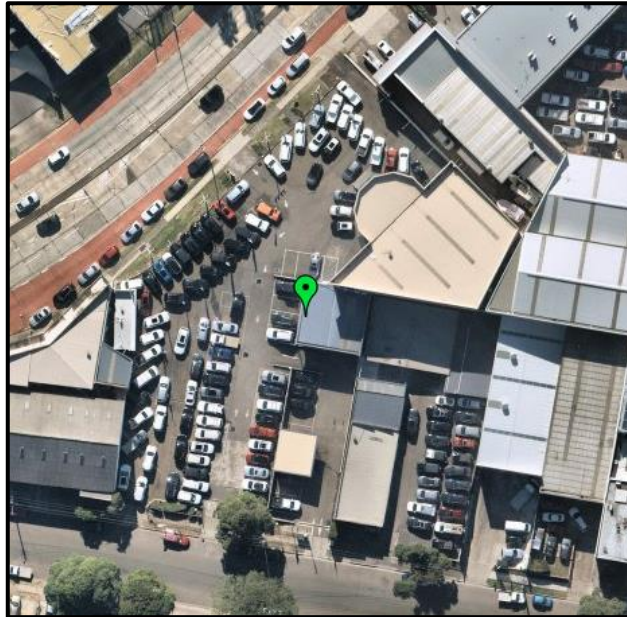
1 BASIS OF ASSESSMENT

1.1 Location and Description

The building development, the subject of this report, is located at 762 Pittwater Road, Brookvale. The building works include alterations and additions to an existing car show room, which will extend the floor spaces of the existing building.

The works are being undertaken on the Ground Floor and it is noted that no new works are being undertaken to the First Floor.

Direct vehicular access is provided to the building from West Street, while the pedestrian entrance is provided on Pittwater Road.



1.2 Purpose

The purpose of this report is to assess the current design proposal against the Deemed-to-Satisfy Provisions of BCA 2019, and to clearly outline those areas (if any) where compliance is not achieved, where areas may warrant redesign to achieve strict BCA compliance or where areas may be able to be assessed against the relevant performance criteria of BCA 2019. Such assessment against relevant performance criteria will need to be addressed by means of a separate Performance Based Fire Safety Engineered Assessment Report to be prepared under separate cover.

1.3 Building Code of Australia

This report is based on the Deemed-to-Satisfy Provisions of the National Construction Code Series Volume 1 – Building Code of Australia, 2019 Edition (BCA) incorporating the State variations where applicable. Please note that the version of the BCA applicable to new building works is the version applicable at the time of the lodgement of the Construction Certificate application to the Accredited Certifying Authority. The BCA is updated generally on a three-yearly cycle, starting from the 1st of May 2019.

1.4 Limitations

This report does not include nor imply any detailed assessment for design, compliance or upgrading for:

- (a) the structural adequacy or design of the building;
- (b) the inherent derived fire-resistance ratings of any proposed structural elements of the building (unless specifically referred to); and

- (c) the design basis and/or operating capabilities of any proposed electrical, mechanical or hydraulic fire protection services.

This report does not include, or imply compliance with:

- (a) the National Construction Code – Plumbing Code of Australia Volume 3
- (b) the Disability Discrimination Act 1992 including the Disability ((Access to Premises – Buildings) Standards 2010 – unless specifically referred to), (Note: The provision of disabled access to the subject development has been assessed against the deemed to satisfy provision of Part D.3 and F2.4 of BCA2019 only);
- (c) Demolition Standards not referred to by the BCA;
- (d) Work Health and Safety Act 2011;
- (e) Requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Local Council, ARTC, Department of Planning and the like; and
- (f) Conditions of Development Consent issued by the Local Consent Authority.

1.5 Design Documentation

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

2 BUILDING DESCRIPTION

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

2.1 Rise in Storeys (Clause C1.2)

The building has a rise in storeys of three (3)

2.2 Classification (Clause A6.0)

The building has been classified as follows.

Table 1. Building Classification

Class	Level	Description
6	Ground Floor	Car Show Room
5	Level 1	Offices
8	Basement	Workshop

2.3 Effective Height (clause A1.0)

The building has an effective less than 12 metres. (RL26.2 - RL18.2 = 8m)

2.4 Type of Construction Required (Table C1.1)

The building is required to be of Type B Construction.

2.5 Floor Area and Volume Limitations (Table C2.2)

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

Class 6 and 8	Maximum Floor Area	3,500m ²
	Maximum Volume	21,000m ³
Class 5	Maximum Floor Area	5,500m ²
	Maximum Volume	33,00m ³

2.6 Fire Compartments

The following fire compartments have been assumed:

1. The Basement is considered to form a single fire compartment;
2. The Car Show Room and Offices form a single fire compartment.

2.7 Exits

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

- (a) The edge of the awning which forms the construction edge in front of both doorways leading to open space.

2.8 Climate Zone (Clause A1.0)

The building is located within Climate Zone 5.

2.9 Location of Fire-source features

The fire source features for the subject development are:

North: The boundary of adjacent allotment;

South: The far boundary of West Street;

East: The boundary of adjacent allotment;

West: The far boundary of Pittwater Road and the adjacent building on allotment

A *fire-source feature* is defined in Part A1.0 – Schedule 3 of the BCA as–

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

A building element is exposed to a fire-source feature if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that–

- (i) has an FRL of not less than 30/–/–; and
- (ii) is neither transparent nor translucent.

3 ESSENTIAL FIRE SAFETY MEASURES

The following fire safety measures are required to be installed in the building as part of the new works, this table may be required to be updated as the design develops and options for compliance are confirmed.

Table 2. Essential Fire Safety Measures

Item	Essential Fire and Other Safety Measures	Standard of Performance
Fire Resistance (Floors – Walls – Doors – Shafts)		
1.	Construction Joints	BCA2019 C1.1, Spec C1.1 BCA2019 C3.16 AS1530.4:2014 & AS4072.1-2005
2.	Fire seals protecting openings in fire resisting components of the building	BCA2019 C3.15 (Openings for service installations) BCA2019 C3.16 (Construction joints) BCA2019 Spec C3.15 AS1530.4:2014 & AS4072.1-2005
General		
3.	Portable fire extinguishers	BCA2019 E1.6 AS2444–2001
4.	Fire blankets	AS2444–2001
General - Egress		
5.	Automatic fail safe devices • Auto open Sliding Exit doors • Break Glass release	BCA2019 D2.21 (Operation of Latches) AS 1670.1:2018 (Fire)
6.	Operation of Door latches • Failsafe • Manuel Push Button Control	D2.21 (Operation of Latch) AS1670.1:2018
7.	Path of travel for stairways, passageway and ramps	EP&A Reg. 2000 Clauses 184-186
8.	Swing of Exit Doors	D2.20 (Swinging Doors)
9.	Warning & operational signs	BCA2019 D3.6 (Braille Exit Signs) (Note: E4.5 (Exit Signs)) BCA2019 E3.3 (Lift Signs),

Item	Essential Fire and Other Safety Measures	Standard of Performance
Electrical Services		
10.	Automatic fire detection & alarm: Clause 4 - AS1670.1-2018 system throughout the building/part connected to a BOWS @ 100dB(A)	BCA2019 E2.2 , NSW Table E2.2a, Table 2.2b, Spec E2.2a Spec E2.2a - Clause 4 (Smoke detection system) Spec E2.2a - Clause 7 (BOWS) AS1670.1:2018 (Fire) – Section 4 and 5 (Detectors)
11.	Emergency lighting	BCA2019 E4.2, E4.4 AS/NZS 2293.1 –2018
12.	Exit signs	BCA2019 E4.5 (Exit Signs) BCA2019 E4.6 (Direction Signs) BCA2019 E4.7 (Residential Concession) BCA2019 E4.8 (Design and Operation - Exits) AS/NZS 2293.1 –2018
Hydraulic Services		
13.	Fire hydrant systems NSW Storz Couplings	BCA2019 E1.3 BCA2019 C2.12 (Separation of Equipment) AS2419.1–2005 FRNSW Technical Sheet D15/45534.V6 issued 11.04.17, 'Compatible Hose Connections'
14.	Hose reel systems	BCA2019 E1.4 AS2441–2005

4 FIRE RESISTANCE LEVELS

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

Type B Construction

Table 3. Type B Construction

Item	Class 5/6	Class 8
Loadbearing External Walls		
• Less than 1.5m to a fire source feature	180/180/180	240/240/240
• 1.5 – less 3m from fire source feature;	180/120/90	240/180/120
• 3 – less 9m from a fire source feature	180/90/60	240/90/60
• 9 – less 18m from a fire source feature	180/60/-	240/60/-
• 18m or more from a fire source feature	-/-/-	-/-/-
Non-Loadbearing External Walls		
• Less than 1.5m to a fire source feature	-/180/180	-/240/240
• 1.5 – less 3m from fire source feature;	-/180/120	-/180/120
• 3m or more from a fire source feature.	-/-/-	-/-/-
Loadbearing External Columns		
• Less than 18m	180/-/-	240/-/-
• 18m or more	-/-/-	-/-/-
Non-Loadbearing External Columns	-/-/-	-/-/-
Common Walls & Fire Walls	180/180/180	240/240/240
Stair and Lift Shafts required to be fire-resisting		
• Loadbearing Stair & Lift shaft	180/120/120	240/120/120
• Non-loadbearing Stair shaft only	-/120/120	-/120/120
Internal walls bounding sole occupancy units		
• Loadbearing	180/-/-	240/-/-
• Non-loadbearing	-/-/-	-/-/-
Internal walls bounding public corridors, public lobbies and the like:		
• Loadbearing	180/-/-	240/-/-
• Non-loadbearing	-/-/-	-/-/-
Other loadbearing internal walls and columns	180/-/-	240/-/-
Roofs	-/-/-	-/-/-

5 MATTERS FOR FURTHER CONSIDERATION

5.1 General

Assessment of the Architectural design documentation against the Deemed-to Satisfy Provisions of the Building Code of Australia, 2019 (BCA) has revealed the following areas where compliance with the BCA may require further consideration and/or may involve assessment as Performance Based (Fire Engineered) Performance Solutions. Any Performance Solutions will be required to clearly indicate methodologies for achieving compliance with the relevant Performance Requirements.

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

Note: It is important that Annexure B is read in conjunction with the items below, as some matters may not have had sufficient information provided to allow a detailed assessment to be undertaken.

5.2 Dimensions and Tolerances

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

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

5.3 Performance Based Design – Performance Solutions

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

Table 4. Performance Solutions

Item	Description of Performance Solution	DTS Provision
1.	Allow for an extended travel distance of 31m from the base of the non-fire-isolated stair to open space in lieu of the required 20m	D1.9

5.4 Non-Combustible Building Elements – Clause C1.9

The building elevations detail that an Aluminium Composite Panel is proposed to be used on the external wall of the building. However as a Type B Building, it is required that the walls are comprised of non-combustible building elements in accordance with this clause.

1. Submit details of the proposed Aluminium Composite Panelling for review to ensure that compliance with be maintained.

5.5 Travel by Non-Fire-Isolated Stairways – Clause D1.9

The new works are noted to increase the travel distance from the existing non-fire-isolated stair to greater than 20m as required by this clause. The current travel distance is now up to 31m to open space. This would need to be subject to a Performance Solution under a Fire Engineering Report.

5.6 Discharge from Exits – Clause C1.10

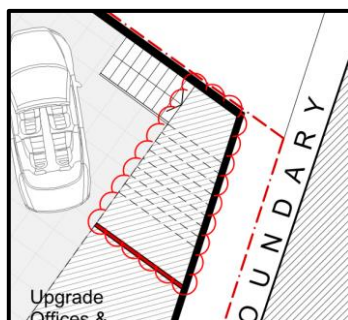
The exits both discharge onto the vehicular access, which will allow for the possibility that cars may block the point of discharge.

1. Bollards must be provided to each of the exit points to ensure a 1000mm clear egress width is maintained.

5.7 Enclosure of Space Under Stairs – Clause D2.8

This clause requires that enclosures underneath non-fire-isolated stairs must be enclosed with fire rated construction. Limited details have been provided on the existing portion of the building, however it is possible that the north-eastern non-fire-isolated stair has an enclosed space underneath.

1. Additional details must be provided on the existing rooms on the Ground Floor to determine if an enclosure is provided underneath this stair.



5.8 Swinging Doors – Clause D2.20

The central swinging door is required to be used on the path of travel and would therefore be required to swing in the direction of egress. Following discussions with the Architect, it is proposed to change this to a sliding door. The following provisions must be provided to such a door:

1. The new sliding door 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
2. Must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm

5.9 Access to Buildings – Clause D3.2

Access to the building is subject to discussions with the Architect as to the proposed method of gaining access from the footpath into the building.

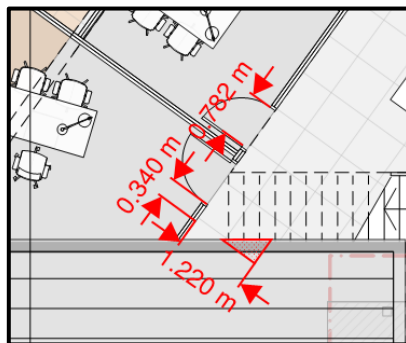
It is considered that a Performance Solution to allow access into the building from the Delivery Room would not be possible to achieve, as this would additionally create an issue of less than 50% of the entrances would be accessible.

5.10 Parts of Buildings to be Accessible – Clause D3.3

The new works are required to provide access throughout in accordance with AS1428.1-2009, this will require access into each of the new offices by maintain suitable door clearance and circulation. The two new centrally located offices are not provided with doors that maintain an 850mm clear width, while the southern office is not provided with compliant latchside circulation.

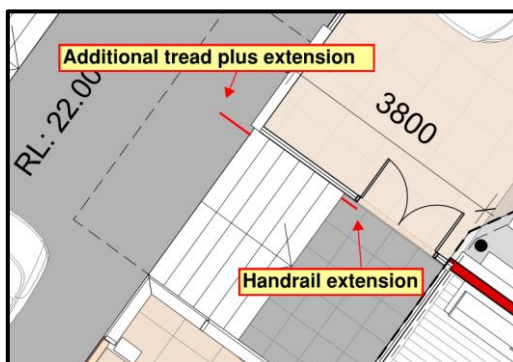
These offices must be updated to have doors that maintain a clear opening width of 850mm and the southern office must have a latchside clearance of 340mm measure out 1220mm. This will require the plans to be updated to ensure compliance with AS1428.1-2009.

1. Modify these two offices to ensure door widths and circulation spaces are provided in accordance with AS1428.1-2009.



Each of the new stairways are required to be provided with two handrails, handrail extensions and tactile indicators in accordance with AS1428.1-2009. This will have an impact on the central entrance stair as the extensions will impact with the door operation and protrude into the vehicle access.

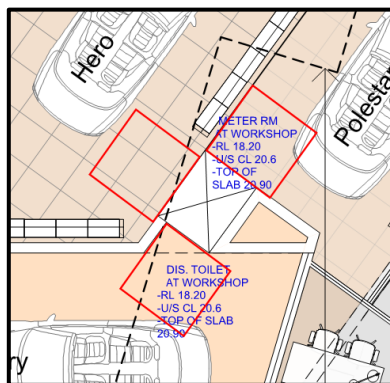
1. It would be recommended to offset the stair within the building to not have the handrail protruding into the vehicle access; and
2. Provide a door entry that is clear of any handrail extensions.



5.11 Lift Landings – Clause E3.5

A low riser Low speed Constant Pressure Lift has been proposed to provide access throughout the different levels of the building. It is required that each of the landings are provided with sufficient turning space to allow for access to and from the lift.

The current landings are not considered to be suitable due to the location of the cars throughout, although this may be altered at any time it is considered that where a 90 degree turn is required at either landing a space up to 1500mmx1500mm is made available in accordance with AS1428.1-2009.

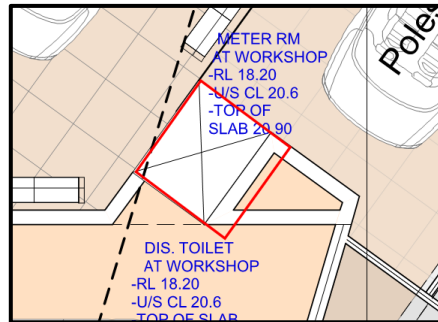


Note: Due to a change if levels greater than 1000mm a platform lift is not acceptable under the BCA.

5.12 Passenger Lifts – Clause E3.6

The proposed lift currently connects three different floor levels all with different angles of entrance, this would therefore require the occupant to turn whilst in the lift to allow for them to egress the lift in the appropriate direction. The current lift dimensions would not allow for turning and therefore not allow for suitable access to each of the levels.

1. It would be required that the lift provide an internal clearance of 1500mm x 1500mm to allow for suitable turning in accordance with AS1428.1-2009.



5.13 Accessible Sanitary Facilities – Clause F2.4

The current plans do not detail any new or existing accessible sanitary facilities as required by this Clause.

1. Additional details must be provided of an existing accessible facility or a new unisex accessible facility must be provided in accordance with AS1428.1-2009.

ANNEXURE A - DESIGN DOCUMENTATION

This report has been based on the following design documentation.

Table 5. Architectural Plans

Architectural Plans Prepared by O’Keefe Architects			
Drawing Number	Revision	Date	Title
DA01	C	01/05/19	Site Plan
DA03	C	01/05/19	Floor Plan
DA04	C	01/05/19	Elevations
DA05	C	01/05/19	Sections

ANNEXURE B - DETAILED BCA 2019 ASSESSMENT

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

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

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

N/A	Not Applicable. The Deemed-to-Satisfy clause is not applicable to the proposed design.
Complies	The relevant provisions of the Deemed-to-Satisfy clause have been satisfied by the proposed design.
CRA	'COMPLIANCE READILY ACHIEVABLE'. It is considered that there was not enough information included in the documentation to accurately determine strict compliance with the individual clause requirements. However, subject to noting the requirements of each clause, compliance can be readily achieved.
FI	Further Information is necessary to determine the compliance potential of the building design.
PS	Performance Solution with respect to this Deemed-to-Satisfy Provision is necessary to satisfy the relevant Performance Requirements.
DNC	Does Not Comply.
Noted	BCA Clause simply provides a statement not requiring specific design comment or confirmation.

DEEMED TO SATISFY CLAUSE ASSESSMENT

Table 6. Deemed to Satisfy Clause Assessment

Clause	Comment	Status
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SECTION B: STRUCTURE		
PART B1 – STRUCTURAL PROVISIONS		
B1.0: Deemed-to-Satisfy Provisions	Informational	Noted
B1.1: Resistance to actions	The resistance of the building must be greater than the most critical action effect resulting from different combinations of actions, where the most critical action has been determined in accordance with this Part – Structural Engineer to certify at CC stage.	CRA – Refer Annexure C
B1.2: Determination of individual actions	The magnitude of actions must be determined in accordance with this Clause – Structural Engineer to certify at CC stage.	CRA – Refer Annexure C
B1.4: Determination of structural resistance of materials and forms of construction	The structural resistance of materials and forms of construction must be determined in accordance with this Clause – Structural Engineer, Architect and Manufacturers to certify at CC stage.	CRA – Refer Annexure C
B1.5 Structural software	Structural software used in computer aided design of a building or structure within the geometrical limits of (b) of this Clause must comply with the ABCB Protocol for Structural Software. Structural Engineer to certify.	CRA – Refer Annexure C
B1.6 Construction of buildings in flood hazard areas	Not applicable due to the building classification.	N/A

SECTION C: FIRE RESISTANCE		
PART C1 – FIRE RESISTANCE AND STABILITY		
C1.0: Deemed-to-Satisfy Provisions	Informational	Noted
C1.1: Type of construction required	The building is required to be of Type B Construction. Refer to Specification C1.1 requirements at the end of this Section.	CRA – Refer Annexure C
C1.2: Calculation of rise in storeys	The building has a rise in storeys of three (3).	Noted
C1.3: Buildings of multiple classification	Informational	Noted
C1.4: Mixed Types of construction	The building will only be of one type of construction	N/A
C1.5: Two Storey Class 2, 3 or 9c buildings	Not applicable due to the building classification.	N/A
C1.6: Class 4 Parts of building	Not applicable due to the building classification.	N/A
C1.7: Open spectator stands and indoor sports stadium	Not applicable due to the use of the building.	N/A
C1.8: Lightweight construction	Lightweight construction used in a fire-rated application is to comply with Specification C1.8.	CRA – Refer Annexure C

SECTION C: FIRE RESISTANCE		
C1.9: Non-combustible building elements	In a building required to be of Type B construction, the building elements and their components detailed in this Clause must be non-combustible. It is proposed that Aluminium Composite Panels are being used on the external wall. Details must be provided to ensure that compliance would be available.	FI
C1.10: Fire hazard properties	Fire hazard properties of internal linings, materials and assemblies must comply with C1.10 of the BCA and Specification C1.10, including floor, wall and ceiling linings, air-handling ductwork, lift cars, insulation, sarking-type materials and attachments, or be considered non-combustible.	CRA – Refer Annexure C
C1.11: Performance of external walls in fire	Concrete external walls are not proposed as part of the proposed works.	N/A
C1.12: Non-combustible materials	Clause now deleted, and relocated to C1.9.	Noted
C1.13: Fire-protected timber: Concession	Fire protected timber has not been proposed	N/A
C1.14: Ancillary elements	An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless noted in accordance with this clause.	CRA – Refer Annexure C
PART C2 – COMPARTMENT AND SEPARATION		
C2.0: Deemed-to-Satisfy Provisions	Informational	Noted
C2.1: Application of Part	Informational	Noted
C2.2: General floor area and volume limitations	The size of the new fire compartment formed is considered to be in accordance with this clause	Complies
C2.3: Large isolated buildings	The building is not considered to be a large isolated building.	N/A
C2.4: Requirements for open spaces and vehicular access	Due to compliance with C2.2 no access is required in accordance with this clause	N/A
C2.5: Class 9a and 9c Buildings	Not applicable due to the building classification.	CRA – Refer Annexure C
C2.6: Vertical separation of openings in external walls	Not applicable due to the type of construction.	N/A
C2.7: Separation by fire walls	No fire walls or fire compartmentation required as part of the new works.	N/A
C2.8: Separation of classifications in the same storey	It is considered that the entire Ground Floor would be a single classification due to the offices being used in association with the Show Room.	Noted
C2.9: Separation of classifications in different storeys	Not applicable due to the type of construction.	N/A
C2.10: Separation of lift shafts	No lifts are existing or provided as part of the new works that will require compliance with this clause.	N/A

SECTION C: FIRE RESISTANCE		
C2.11: Stairways and lifts in one shaft	There are no stairways and lifts within the same shaft	N/A
C2.12: Separation of equipment	No separation is required in accordance with this clause.	N/A
C2.13: Electricity supply system	No main switch board or the like is considered to form part of the new works.	Noted
C2.14: Public corridors in Class 2 and 3 Buildings	Not applicable due to the building classification.	N/A
PART C3 – PROTECTION OF OPENINGS		
C3.0: Deemed-to-Satisfy Provisions	Informational	Noted
C3.1: Application of Part	(a) The Deemed-to-Satisfy Provisions of this Part do not apply to– (i) Control joints, weep holes and the like in external walls of masonry construction and joints between panels in external walls of pre-cast concrete panel construction if, in all cases they are not larger than necessary for the purpose; and (ii) Non-combustible ventilators for subfloor or cavity ventilation, if each does not exceed 45 000 mm² in face area and is spaced not less than 2 m from any other ventilator in the same wall; and (iii) Openings in the vertical plane formed between building elements at the construction edge or perimeter of a balcony or verandah, colonnade, terrace, or the like; and (b) For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings in building elements required to be fire-resisting include doorways, windows (including any associated fanlight), infill panels and fixed or openable glazed areas that do not have the required FRL. (c) For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings, other than those covered under (a)(iii), between building elements such as columns, beams and the like, in the plane formed at the construction edge or perimeter of the building, are deemed to be openings in an external wall.	Noted
C3.2: Protection of openings in external walls	Each of the new openings in the external wall are noted to be further than 3m from the boundary and more than 6m from another building on the allotment. The building which is connected to the South of the new works is considered to form part of the same building.	Noted
C3.3: Separation of external walls and associated openings in different fire compartments	There are no separate fire compartments which will need separation in accordance with this clause	N/A

SECTION C: FIRE RESISTANCE		
C3.4: Acceptable methods of protection	Methods of protection noted	Noted
C3.5: Doorways in fire walls	There are no doorways within fire walls proposed	N/A
C3.6: Sliding fire doors	There are no sliding fire doors proposed	N/A
C3.7: Protection of doorways in horizontal exits	There are no horizontal exits proposed or required as part of the new works.	N/A
C3.8: Openings in fire-isolated exits	There are no fire-isolated exit proposed	N/A
C3.9: Service penetrations in fire-isolated exits	There are no fire-isolated exit proposed	N/A
C3.10: Openings in fire-isolated lift shafts	There are no lift shafts that are required to be fire-isolated	N/A
C3.11: Bounding Construction: Class 2, 3 and 4 Buildings	Not applicable due to the building classification.	N/A
C3.12: Openings in floors and ceilings for services	Where services pass through a floor which is required to achieve an FRL or a ceiling required to have a resistance to the incipient spread of fire, the service must be enclosed within a fire resisting shaft or fire protected in accordance with Clause C3.15.	CRA – Refer Annexure C
C3.13: Openings in shafts	Openings in shafts 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.	CRA – Refer Annexure C
C3.15: Openings for service installations	Where services pass through an element which is required to achieve an FRL (other than an external wall or roof), the service must be fire protected in accordance with BCA Clause C3.15. Note: contractors should check with PCA to confirm compliance with their proposed fire stopping method.	CRA – Refer Annexure C
C3.16: Construction joints	Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS 1530.4 to achieve the required FRL.	CRA – Refer Annexure C

SECTION C: FIRE RESISTANCE		
C3.17: 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.	CRA – Refer Annexure C
SPECIFICATION C.1.1 – FIRE-RESISTING CONSTRUCTION		
2.0: General Requirements	Informational	Noted
2.1: Exposure to fire-source features	A building element is exposed to a <i>fire-source feature</i> if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that– (i) has an FRL of not less than 30/–/–; and (ii) is neither transparent nor translucent. The existing walls located on the boundary are assumed to be provided in accordance with this Specification.	Noted
2.2: Fire protection for a support of another part	Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part must have an FRL not less than that required by other provisions of this Specification; and if located within the same fire compartment as the part it supports have an FRL in respect of structural adequacy the greater of that required for the supporting part itself and for the part it supports.	CRA – Refer Annexure C
2.3: Lintels	A lintel must have the FRL required for the part of the building in which it is situated unless it does not contribute to the support of a fire door, fire window or fire shutter and meets the requirements of Spec C1.1 clause 2.3 (a) & (b).	CRA – Refer Annexure C
2.4: Attachments not to impair fire-resistance	The method of attaching or installing a finish, lining, ancillary element or service installation to a building element must not reduce the fire-resistance of that element to below that required.	CRA – Refer Annexure C
2.5: General concessions	No concessions under this clause will be applicable	N/A
2.6: Mezzanine floors: Concession	There are no mezzanines proposed	N/A
2.7: Enclosure of shafts	No fire isolated shafts are being proposed as part of the new works.	Noted
2.8: Carparks in Class 2 and 3 Buildings	Not applicable due to the building classification.	N/A
2.9: Residential Aged Care building: Concession	Not applicable due to the use of the building.	N/A
4.0: Type B fire-resisting construction	Noted	-

SECTION C: FIRE RESISTANCE		
4.1: Fire-resistance of building elements	The FRL's of all elements are to be in accordance with the FRL's detailed in the Table contained within Part 4.0 of this report. - External walls, common walls and the flooring and floor framing of lift pits must be non-combustible (Note: insulation and sarking used must be non-combustible) - if a stair <i>shaft</i> supports any floor or a structural part of it— (i) the floor or part must have an FRL of 60/–/– or more; or (ii) the junction of the stair <i>shaft</i> must be constructed so that the floor or part will be free to sag or fall in a fire without causing structural damage to the <i>shaft</i>; and - Internal walls required to be fire rated must extend to— (i) to the underside of the floor next above if that floor has an FRL of at least 30/30/30; or (ii) the underside of a roof complying with Table 3; or (iii) the underside of a ceiling having a resistance to the incipient spread of fire to the roof space above itself of not less than 60 minutes; or (iv) the underside of the roof covering if it is non-combustible and, except for roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not be crossed by timber or other combustible building elements; or (v) 450 mm above the roof covering if it is <i>combustible</i>; and - Load bearing internal walls (including those part of a loadbearing shaft) and fire walls must be of concrete or masonry. - Non-loadbearing internal walls required to be fire rated must be of non-combustible construction. Note: This includes non-combustible insulation. When an insulation material is not certified as non-combustible, this material will need to be the subject of a Fire Engineering Assessment at the CC stage. - in a Class 5, 6, 7, 8 or 9 building, in the storey immediately below the roof, internal columns and internal walls other than fire walls and shaft walls, need not comply with Table 4; and	CRA – Refer Annexure C
4.2: Carparks	There is no car parking associated with the new works.	N/A

SECTION C: FIRE RESISTANCE		
4.3: Class 2 and 3 buildings: Concession	Not applicable due to the building classification.	N/A
SPECIFICATION C1.10 – FIRE HAZARD PROPERTIES		
1. Scope	Informational	-
2. Application	Informational	Noted
3. Floor linings and floor coverings	A floor lining or floor covering must have– a) a critical radiant flux not less than that listed in Table 2; and b) in a building not protected by a sprinkler system complying with Specification E1.5, a maximum smoke development rate of 750 percent-minutes; and c) a group number complying with Clause 6(b), for any portion of the floor covering that is continued more than 150 mm up a wall.	CRA – Refer Annexure C
4. Wall and ceiling linings	a) A wall or ceiling lining system must comply with the group number specified in Table 3 and for buildings not fitted with a sprinkler system complying with Specification E1.5 have– (i) a smoke growth rate index not more than 100; or (ii) an average specific extinction area less than 250 m²/kg. b) A group number of a wall or ceiling lining and the smoke growth rate index or average specific extinction area must be determined in accordance with AS 5637.1.	CRA – Refer Annexure C
5. Air-handling ductwork	Rigid and flexible ductwork must comply with the <i>fire hazard properties</i> set out in AS 4254 Parts 1 and 2.	CRA – Refer Annexure C
6. Lift cars	No lift is being proposed as part of the new works	N/A
7. Other materials	Materials and assemblies not included in Clauses 3, 4, 5 or 6 must not exceed the indices set out in Table 4.	CRA – Refer Annexure C

SECTION D: ACCESS AND EGRESS		
PART D1 – PROVISION FOR ESCAPE		
D1.0: Deemed-to-Satisfy Provisions	Informational	Noted
D1.1: Application of Part	All parts of the building are applicable	Noted
D1.2: Number of exits required	The building is only required to be provided with a single exit. All part of the building are provided with sufficient exits.	Complies

SECTION D: ACCESS AND EGRESS		
D1.3: When fire-isolated stairways and ramps are required	None of the stairways are required to be fire-isolated in accordance with this clause.	N/A
D1.4: Exit travel distances	The exit travel distances throughout the Ground Floor are considered to be compliant due to the point of choice being made available. No works are being undertaken to the First Floor and there assumed that compliance will be maintained. No plans have been provided to review compliance.	Complies
D1.5: Distance between alternative exits	The distance between alternative exits is considered to be compliant in accordance with this clause.	Complies
D1.6: Dimensions of exits and paths of travel to exits	1000mm wide travel distance must be maintained throughout the building. It is considered that no part of the new works will be provided with a clearance less than this. When locating the cars, it will be required to ensure that suitable clearance is maintained in accordance with this clause	CRA – Refer Annexure C
D1.7: Travel via fire-isolated exits	There are no fire-isolated exits proposed or required	N/A
D1.8: External stairways or ramps in lieu of fire-isolated exits	There are no external stairs used in accordance with this clause	N/A
D1.9: Travel by non-fire-isolated stairways or ramps	The discharge from the existing non-fire-isolated stair will be increased due to the new works and cause a non-compliance. The rear stair will require travel of up to 26m in lieu of the required 20m. This would need to be addressed by a Performance Solution.	DNC Refer to Part 5 of this Report
D1.10: Discharge from exits	It is noted that the vehicle access will have the potential to block the egress paths from the building and therefore should be provided with bollards to ensure that 1m clearance is maintained through the footpath.	DNC Refer to Part 5 of this Report
D1.11: Horizontal exits	There are no horizontal exits proposed or required	N/A
D1.12: Non-required stairways, ramps or escalators	There are no non-required stairs or the like.	N/A
D1.13: Number of persons accommodated	Informational– Based on floor area and Table D1.13, the population numbers are as follows: Car showroom does not have an equivalent use in Table D1.13. It is not appropriate to use 'Showroom' in Table D1.13. D1.13(c) allows any other suitable means to assess capacity. PCA to use employee numbers and relevant customer data from tenant to determine total population. It will clearly be less than 100 persons.	Noted

SECTION D: ACCESS AND EGRESS		
D1.14: Measurement of distances	Informational	Noted
D1.15: Method of Measurement	Informational	Noted
D1.16: Plant rooms, lift motor rooms and electricity network substations: concession	There are no plant rooms or the like that are provided as part of the new works	N/A
D1.17: Access to lift pits	There is no lift provided as part of the new building or within the existing building.	N/A
PART D2 – CONSTRUCTION OF EXITS		
D2.0: Deemed-to-Satisfy Provisions	Informational	Noted
D2.1: Application of Part	Informational	Noted
D2.2: Fire-isolated stairways and ramps	There are no fire-isolated stairs being provided	N/A
D2.3: Non-fire-isolated stairways and ramps	There are no new non-fire-isolated stairway provided in accordance with this clause. The only stairs provided are for a change in level.	Noted
D2.4: Separation of rising and descending stair flights	There are no rising and descending stairs	N/A
D2.5: Open access ramps and balconies	There are no ramps or balconies used in accordance with this clause	N/A
D2.6: Smoke lobbies	There are no smoke lobbies required	N/A
D2.7: Installations in exits and paths of travel	- Access to service shafts and services other than to fire-fighting or detection equipment must not be provided from a fire-isolated stairway or fire-isolated passageway. - Gas or other fuel services must not be installed in a required exit. - Any electricity meters, distribution boards or ducts, or telecommunications distribution boards or equipment installed in corridors/hallways/lobbies or the like must be enclosed with non-combustible construction or a fire protective covering with doorways suitably sealed against smoke spread.	CRA – Refer Annexure C
D2.8: Enclosure of space under stairs and ramps	As part of the new works, there are no enclosures that are proposed underneath any of the new stairways. The existing stairways are not considered to be provided with enclosures underneath. However confirmation is required on one stair due to possible space being provided underneath.	FI
D2.9: Width of stairways and ramps	No stair is required to be wider than 2m	Noted

SECTION D: ACCESS AND EGRESS		
D2.10: Pedestrian ramps	- A ramp serving as a required exit must— (i) where the ramp is also serving as an accessible ramp under Part D3, be in accordance with AS 1428.1; or (ii) in any other case, have a gradient not steeper than 1:8. - The floor surface of a ramp must have a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586.	CRA – Refer Annexure C
D2.11: Fire-isolated passageways	There are no fire-isolated passageways	N/A
D2.12: Roof as open space	There is no portion of the roof that is considered to be open space	N/A
D2.13: Goings and risers	Stairways must comply with the following: - stairways must have not more than 18 and not less than 2 risers in each flight; - goings must be between 250 mm and 355 mm; - risers must be between 115 mm high and 190 mm high; - the slope relationship (2 x riser dimension + going dimension) must be within the range of 550-700; - the goings and risers must be constant (uniform) throughout each flight and the dimensions of goings (G) and risers (R) are considered constant if the variation between— (A) adjacent risers, or between adjacent goings, is no greater than 5 mm; and (B) the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm. - Risers must not contain any openings that would permit a 125 mm sphere to pass through. - each tread must have a non-slip finish or an adequate non-skid strip near the edge of the nosings; - treads must be of solid construction (not mesh or perforated) if the stairway is more than 10 m high or connects more than 3 storeys. - Treads must have a surface or nosing strip with a slip-resistant classification not less than that listed in Table D2.14 when tested in accordance with AS 4586-2013 <i>Slip resistance classification of new pedestrian surface materials</i>.	CRA – Refer Annexure C

SECTION D: ACCESS AND EGRESS

D2.14: Landings	Landings must be not less than 750 mm long and have either a surface with a slip-resistance classification complying with Table D2.14 or a strip at the edge of the landing with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586. <table border="1" data-bbox="603 495 1134 1037"> <thead> <tr> <th data-bbox="603 495 868 629" rowspan="2">Application</th><th colspan="2" data-bbox="871 495 1023 629">Surface Condition</th></tr> <tr> <th data-bbox="871 633 1023 723">Dry</th><th data-bbox="1026 633 1134 723">Wet</th></tr> </thead> <tbody> <tr> <td data-bbox="603 728 868 846">Ramp steeper than 1:14</td><td data-bbox="871 728 1023 846">P4 or R11</td><td data-bbox="1026 728 1134 846">P5 or R12</td></tr> <tr> <td data-bbox="603 851 868 947">Ramp steeper than 1:20 but not steeper than 1:14</td><td data-bbox="871 851 1023 947">P3 or R10</td><td data-bbox="1026 851 1134 947">P4 or R11</td></tr> <tr> <td data-bbox="603 952 868 1037">Tread or landing surface</td><td data-bbox="871 952 1023 1037">P3 or R10</td><td data-bbox="1026 952 1134 1037">P4 or R11</td></tr> <tr> <td data-bbox="603 1041 868 1115">Nosing or landing edge strip</td><td data-bbox="871 1041 1023 1115">P3</td><td data-bbox="1026 1041 1134 1115">P4</td></tr> </tbody> </table>	Application	Surface Condition		Dry	Wet	Ramp steeper than 1:14	P4 or R11	P5 or R12	Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11	Tread or landing surface	P3 or R10	P4 or R11	Nosing or landing edge strip	P3	P4	CRA – Refer Annexure C
Application	Surface Condition																		
	Dry	Wet																	
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Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11																	
Tread or landing surface	P3 or R10	P4 or R11																	
Nosing or landing edge strip	P3	P4																	
D2.15: Thresholds	The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless– a) in a building required to be accessible, the doorway– (i) opens to a road or open space; and (ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or b) in other cases– (i) the doorway opens to a road or open space, external stair landing or external balcony; and (ii) the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens.	CRA – Refer Annexure C																	
D2.16: Barriers to prevent falls	Balustrades must be provided to stairs and balconies, driveway ramps etc where there is a fall of more than 1m. Balustrades must comply with the following: <u>Balustrade minimum heights</u> • 865 mm above stair nosings; • 865 mm above landings to a stair where the barrier is provided along the inside edge of the landing and does not exceed 500 mm in length; and	CRA – Refer Annexure C																	

SECTION D: ACCESS AND EGRESS		
	1 m in all other locations. <u>Balustrade openings – other than fire-isolated stairs</u> - A 125 mm sphere must not be able to pass through any opening and for stairways, the 125 mm is measured above the nosing line of the stair treads.	
D2.17: Handrails	Handrails to stairways must: - be located along at least one side of the ramp or flight (a flight being 2 or more risers); and - located along each side if the total width of the stairway or ramp is 2m or more; and - be fixed at a height of not less than 865 mm above the nosings of the stair treads and the floor surface of the ramp, landing, or the like; and - be continuous between stair flight landings and have no obstruction that will break a hand-hold. - be constructed to comply with clause 12 of AS 1428.1 (including handrails to the fire stairs). - Handrails in common areas (other than fire stairs) must also accord with D3.3.	CRA – Refer Annexure C
D2.18: Fixed platforms, walkways stairways and ladders	The new works do not include any areas that will require access in accordance with this clause	N/A
D2.19: Doorways and doors	Exit doors that are power operated 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 leading to road or open space, open automatically if there is a power failure or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door. A power operated door in a path of travel to a required exit must be able to be opened manually under a force of not more than 110 N if there is a malfunction of the power source.	CRA – Refer Annexure C
D2.20: Swinging doors	The doorway discharging to the stairway is noted to swing against the direction of egress. This would not be complaint and the doors must be re-swung.	DNC Refer to Part 5 of this Report
D2.21: Operation of latch	All doors in a required exit or forming part of a required exit AND doors in a path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress, by– (i) a single hand downward action or pushing action on a single device which is located between 900mm and 1.1 m from the floor and if serving an area required to be accessible by Part D3 –	CRA – Refer Annexure C

SECTION D: ACCESS AND EGRESS		
	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 35mm and not more than 45mm; or (ii) a single hand pushing action on a single device which is located between 900mm and 1.2m from the floor. (iii) where the latch operation device referred to in (ii) is not located on the door leaf itself— (A) manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and located— (aa) not less than 500 mm from an internal corner; and (bb) for a hinged door, between 1 m and 2 m from the door leaf in any position; and (cc) for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position. (B) braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device. The above requirements do not apply to a door that – (i) serves only or is within a sole-occupancy unit in a Class 2 building; or (ii) serves a sole-occupancy unit in a Class 5, 6, 7 or 8 building with a floor area not more than 200m²; or (iii) are fitted with a fail-safe device which automatically unlocks the door upon the activation of an AS 1670.1 detection system installed throughout the building and is readily openable when unlocked.	
D2.22: Re-entry from fire-isolated exits	Re-entry is not required to be provided in accordance with this clause	N/A
D2.23: Signs on doors	Signage is not required to be provided to any doors forming part of the new works	N/A
D2.24: Protection of openable windows	There are no new openable windows that will be located at a height to require protection in accordance with this clause	Noted
D2.25: Timber stairways: concession	There are no timber stairways proposed in accordance with this clause.	N/A
PART D3 - ACCESS FOR PEOPLE WITH A DISABILITY		

SECTION D: ACCESS AND EGRESS			
D3.0:	Deemed-to-Satisfy Provisions	Informational	Noted
D3.1:	General building access requirements	Access complying with AS 1428.1-2009 must be provided from the principal pedestrian entrance to and within all areas normally used by the occupants.	CRA – Refer Annexure C
D3.2:	Access to buildings	Access to the building is subject to discussions with the Architect as to the proposed method of gaining access from the footpath into the building. It is considered that a Performance Solution to allow access into the building from the Delivery Room would not be possible to achieve, as this would additionally create an issue of less than 50% of the entrances would be accessible.	Fi
D3.3:	Parts of buildings to be accessible	Access throughout the new works have been provided by the provision of a platform lift. Details must be provided on the lift and associated landings to ensure that compliant turning space and access is provided. There are two new offices as part of the new works which are not provided with the required 850mm clear doorways and lacking door circulation in accordance with AS1428.1-2009. These layouts must be upgraded to ensure compliant access is provided throughout. The spacing of cars is required to maintain at least 1000mm clearance for access to all areas throughout the floor. The stairways are required to be provided handrails in accordance with AS1428.1-2009. It is noted that the central stairway will have extensions that will impact on the access throughout the door and will protrude into the vehicular access area. It would be recommended that the door is modify to allow for compliant access and that the stair is offset to not have an impact on the vehicular access. Note: The Access to Premises Standards to not provide the concessions provided in sub-cluses (g) and (h) in this clause, hence compliance with the Access to Premises Standards will require the floor covering in the accessible areas to strictly comply with Clause 7.4.1(a) of AS1428.1-2009.	DNC Refer to Part 5 of this Report
D3.4:	Exemptions	There are no areas of the new works that will require an exemption in accordance with this clause	N/A
D3.5:	Accessible car parking	No parking space have been provided as part of the new works. There is a carpark provided to the rear of the building however it does not form part of the new works.	Noted
D3.6:	Signage	Braille and tactile signage complying with Specification D3.6 and incorporating the	CRA – Refer Annexure C

SECTION D: ACCESS AND EGRESS		
	international symbol of access, or deafness as appropriate, must identify each: – sanitary facility; and – any space with a hearing augmentation system; and – identify each door required by E4.5 to be provided with an exit sign and state “Exit” and “Level” and either: (aa) the floor level number; or (bb) a floor level descriptor; or (cc) a combination of (aa) and (bb) • Signage to accessible sanitary facilities must identify if the facility is suitable for left or right handed use; and • Signage to identify an ambulant accessible facility in accordance with AS 1428.1 must be located on the door of the facility. • 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; • Where a bank of facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access in accordance with AS 1428.1 must be placed at the location of the sanitary facilities that are not accessible, to direct a person to the location of the nearest accessible unisex facility. • in a building subject to F2.9, directional signage complying with Specification D3.6 must be provided at the location of each— (i) bank of sanitary facilities; and (ii) accessible unisex sanitary facility, other than one that incorporates an accessible adult change facility, to direct a person to the location of the nearest accessible adult change facility within that building.	
D3.7: Hearing augmentation	Hearing augmentation is not required to be provided as part of the new works	N/A
D3.8: Tactile indicators	TGSI's to be provided in compliance with this Clause, AS1428.1, AS1428.4.1 and AS4586/HB198 at bottom and top of stairs / ramps. Ensure installed full tread width, colour contrasting with adjacent surface, slip resistance and 300mm from the ramp edge of stair riser.	CRA – Refer Annexure C

SECTION D: ACCESS AND EGRESS		
D3.9: Wheelchair seating spaces in Class 9b assembly buildings	Not applicable due to the building classification.	N/A
D3.10: Swimming pools	No swimming pool has been provided	N/A
D3.11: Ramps	There are no ramps which required a vertical rise of more than 3.6m.	Noted
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.	CRA – Refer Annexure C
SPECIFICATION D3.6 – BRAILLE AND TACTILE SIGNS		
1. Scope	Noted	-
2. Location of Braille and Tactile Sign	The location of braille and tactile signs shall be in accordance with AS1428.1 and Specification D3.6.	CRA – Refer Annexure C
3. Braille and Tactile Sign Specification	All accessible signage to comply with this clause and AS1428.1. Tactile characters to be raised in sentence case with matt finish.	CRA – Refer Annexure C
4. Luminance contrast	All accessible signage to comply with this clause and AS1428.1. The sign background to have at least 30% luminance contrast with the 5mm width border, tactile characters and braille. Luminance contrast to be measured on the location once installed.	CRA – Refer Annexure C
5. Lighting	Braille and tactile signs to be appropriately illuminated, in compliance with this Clause and AS1428.1. The access pathway must have a minimum luminance contrast of 30%, in accordance with AS1428.1.	CRA – Refer Annexure C
6. Braille	Braille must be in accordance with the criteria set out by the Australian Braille Authority.	CRA – Refer Annexure C

SECTION E: SERVICES AND EQUIPMENT		
PART E1 – FIRE FIGHTING EQUIPMENT		
E1.0: Deemed-to-Satisfy Provisions	Informational	Noted
E1.3: Fire hydrants	As the building has a floor area greater than 500 m ² , a fire hydrant system complying with AS 2419.1-2005 must be provided to serve the building. Confirmation may be sought as to whether the street hydrant system will maintain adequate coverage, pressure and flow. Otherwise a hydrant system will need to be installed. This will likely require a booster to be installed at the front of the site along with possible attack hydrants.	CRA – Refer Annexure C
E1.4: Fire hose reels	A fire hose reel system complying with BCA clause E1.4 and AS 2441-2005 must be provided to the building.	CRA – Refer Annexure C

SECTION E: SERVICES AND EQUIPMENT		
	All points on a floor shall be within reach of a 4 m hose stream issuing from a nozzle at the end of the hose laid on floor. The hose length shall not exceed 36 m.	
E1.5: Sprinklers	The building is not required to be sprinkler protected.	N/A
E1.6: Portable fire extinguishers	Portable fire extinguishers must be provided in accordance with clause E1.6 & Table E1.6 of the BCA and must be selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444-2001.	CRA – Refer Annexure C
E1.8: Fire control centres	A fire control centre is not required to be provided in accordance with this clause	N/A
E1.9: Fire precautions during construction	Informational– During construction, not less than one portable 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 / temporary exit.	Noted
E1.10: Provision for special hazards	The building is not considered to be a special hazard	N/A
PART E2 – SMOKE HAZARD MANAGEMENT		
E2.0: Deemed-to-Satisfy Provisions	Informational	Noted
E2.1: Application of Part	Informational	Noted
E2.2: General requirements (including Tables E2.2a and E2.2b)	<u>Class 6 parts</u> Due to the rise in storeys it is required that the building is provided with a smoke detection and alarm system in accordance with Specification E2.2a.	CRA – Refer Annexure C
E2.3: Provisions for special hazards	The building is not considered to be a special hazard	N/A
SPECIFICATION E2.2a – SMOKE DETECTION AND ALARM SYSTEM		
1. Scope	Noted	-
2. Type of system	Due to the building classification, it would be required that a Clause 4 system is provided throughout.	CRA – Refer Annexure C
3. Smoke alarm system	Not applicable due to the rise in storeys.	N/A
4. Smoke detection system	A smoke detection system must be installed throughout the building in accordance with this Clause and AS16670.1. Detectors must be extended throughout the new part of the building, however should the building not be provided with a detection system, this will be an upgrade requirement.	CRA – Refer Annexure C
5. Combined smoke alarm and smoke detection system	Not applicable due to the building classification.	N/A
6. Smoke detection for smoke control system	Not applicable due to the lack of smoke control systems	N/A
7. Building occupant warning system	The smoke detection system must be connected to a BOWS in accordance with this clause	CRA – Refer Annexure C
8. System Monitoring	Not applicable due to the building classification.	N/A
PART E3 – LIFT INSTALLATIONS		

SECTION E: SERVICES AND EQUIPMENT			
E3.0:	Deemed-to-Satisfy Provisions	Informational	Noted
E3.1:	Lift installations	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1	CRA – Refer Annexure C
E3.2:	Stretcher facility in lifts	There are no lifts that are required to be provided with stretcher facilities	N/A
E3.3:	Warning against use of lifts in fire	Warning signs indicating “DO NOT USE LIFTS IF THERE IS A FIRE” shall be displayed near every call button for a passenger lift or group of lifts throughout a building as per E3.3.	CRA – Refer Annexure C
E3.4:	Emergency lifts	No emergency lifts are required to be provided	N/A
E3.5:	Landings	Access and egress to and from lift-well landings must comply with the Deemed-to-Satisfy Provisions of Section D. Details of the landings must be provided to ensure compliance is achieved with the required turning spaces.	FI
E3.6:	Passenger lifts	A low rise low speed constant pressure lift is required to be installed within the building due to the change in level greater than 1m. The lift is noted to serve three different levels and have 3 angles of access on each of the levels, this would therefore require that a turning space is made available within the lift to ensure that the occupants can enter and exit at the correct angle. The current lift is considered to be too small and would not allow for access.	DNC Refer to Part 5 of this Report
E3.7:	Fire service controls	There are no lifts serving over 12m and therefore this clause is not applicable	N/A
E3.8:	Aged care buildings	Not applicable due to the building classification.	N/A
E3.9:	Fire service recall switch	There are no lifts serving over 12m and therefore this clause is not applicable	N/A
E3.10:	Lift car service drive control switch	There are no lifts serving over 12m and therefore this clause is not applicable	N/A
PART E4 – VISIBILITY IN AN EMERGENCY, EXIT SIGNS AND WARNING SYSTEMS			
E4.0:	Deemed-to-Satisfy Provisions	Informational	Noted
E4.2:	Emergency lighting requirements	An emergency lighting system must be installed throughout the building in accordance with Clause E4.2 of the BCA and AS 2293.1-2018.	CRA – Refer Annexure C
E4.3:	Measurement of distance	Informational	Noted
E4.4:	Design and operation of emergency lighting	The emergency lighting system must comply with AS 2293.1-2018.	CRA – Refer Annexure C
E4.5:	Exit signs	Exits signs are to be provided above or adjacent to a door providing egress as well as directional signage throughout the entire development where necessary.	CRA – Refer Annexure C
E4.6:	Direction signs	Where an exit is not readily apparent, directional signage is to be installed indicating the direction of egress.	CRA – Refer Annexure C

SECTION E: SERVICES AND EQUIPMENT			
E4.7:	Class 2 and 3 buildings and Class 4 Parts: Exemptions	Informational	Noted
E4.8:	Design and operation of exit signs	Exit signs must comply with AS 2293.1-2018 and be clearly visible at all times when the building is occupied.	CRA – Refer Annexure C
E4.9:	Emergency warning and intercom systems	A EWIS system would not be required as part of the new works.	N/A

SECTION F: HEALTH AND AMENITY			
PART F1 – DAMP AND WEATHERPROOFING			
F1.0:	Deemed-to-Satisfy Provisions	Performance Requirement FP1.4, for the prevention of the penetration of water through external walls, must be complied with. There are no Deemed-to-Satisfy Provisions for this Performance Requirement in respect of external walls.	Noted
F1.1:	Stormwater drainage	Stormwater drainage to comply with AS3500.3-2003.	CRA – Refer Annexure C
F1.4:	External above ground membranes	Waterproofing membranes for external above ground use to comply with AS4654 Parts 1 and 2-2012.	CRA – Refer Annexure C
F1.5:	Roof coverings	Roof coverings are to comply with BCA Clause F1.5.	CRA – Refer Annexure C
F1.6:	Sarking	Sarking-type materials used for weatherproofing must comply with AS/NZS 4200 Part 1 and 2-1994.	CRA – Refer Annexure C
F1.7:	Water proofing of wet areas in buildings	Wet areas must be constructed in accordance with AS 3740-2010 and F1.7 of the BCA.	CRA – Refer Annexure C
F1.9:	Damp-proofing	Moisture is to be prevented from reaching the walls above a damp-proof course, and the underside of the suspended floors.	CRA – Refer Annexure C
F1.10:	Damp-proofing of floors on the ground	If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870-2011 (N/A to areas that do not require weatherproofing – refer specific clause exemptions).	CRA – Refer Annexure C
F1.11:	Provision of floor wastes	Not applicable due to the building classification.	N/A
F1.12:	Sub-floor ventilation	The building is proposed to be slab on ground and not provided with any sub floor	N/A
F1.13:	Glazed Assemblies	Glazed assemblies are to comply with AS2047 and AS1288.	CRA – Refer Annexure C
PART F2 – SANITARY AND OTHER FACILITIES			
F2.0:	Deemed-to-Satisfy Provisions	Informational	Noted
F2.1:	Facilities in residential buildings (including Table F2.1)	Not applicable due to the building classification.	N/A
F2.2:	Calculation of number of occupants and facilities	No changes are being made to the sanitary facilities, the existing facilities will remain.	Noted

SECTION F: HEALTH AND AMENITY		
F2.3: Facilities in Class 3 to 9 buildings (including Table F2.3)	Class 6 building is not required to provide sanitary facilities for patrons The details of the existing sanitary facilities have been provided. It is noted that the floor area of the building will be increased as part of the new works, however the client may confirm that no additional staff will be provided due to the new works.	CRA – Refer Annexure C
F2.4: Accessible sanitary facilities (including Table F2.4)	No accessible sanitary facility has been detailed as part of the new works nor as existing. Additional details must be provided to confirm the provision of an accessible toilet, otherwise the plans must be updated to provide an accessible sanitary facility in accordance with AS1428.1-2009.	FI
F2.5: Construction of sanitary compartments	All sanitary facilities are existing and not being modified	Noted
F2.6: Interpretation: urinals and washbasins	Informational	Noted
F2.8: Waste Management	Not applicable due to the building classification.	N/A
F2.9: Accessible adult change facilities	Not applicable due to the building classification.	N/A
PART F3 – ROOM SIZES		
F3.0: Deemed-to-Satisfy Provisions	Informational	Noted
F3.1: Height of rooms and other spaces	Based on the section provided, it is noted that all new and existing areas of the building will maintain the required minimum of 2400mm in clearance.	CRA – Refer Annexure C
PART F4 – LIGHT AND VENTILATION		
F4.0: Deemed-to-Satisfy Provisions	Informational	Noted
F4.1: Provision of natural light	Not applicable due to the building classification.	N/A
F4.2: Methods and extent of natural lighting	Not applicable due to the building classification.	N/A
F4.3: Natural light borrowed from adjoining room	Not applicable due to the building classification.	N/A
F4.4: Artificial Lighting	Lighting to the all areas is to comply with AS 1680.0.	CRA – Refer Annexure C
F4.5: Ventilation of rooms	All rooms to be provided with Clause F4.6 compliant natural ventilation OR a mechanical ventilation or air-conditioning system complying with AS 1668.2-2012.	CRA – Refer Annexure C
F4.6: Natural ventilation	Due to a lack of openings provided throughout the floor plan, it is assumed that mechanical ventilation will be provided.	N/A
F4.7: Ventilation borrowed from adjoining room	Due to a lack of openings provided throughout the floor plan, it is assumed that mechanical ventilation will be provided.	N/A
F4.8: Restriction on position of water closets and urinals	All sanitary facilities are existing and not being modified	Noted
F4.9: Airlocks	All sanitary facilities are existing and not being modified	Noted

SECTION F: HEALTH AND AMENITY		
F4.11: Carparks	No specific car parking has been provided as part of the new works.	N/A
F4.12: Kitchen local exhaust ventilation	No commercial kitchen has been provided and therefore this clause is not applicable	N/A
PART F5 – SOUND TRANSMISSION AND INSULATION		
F5.0: Deemed-to-Satisfy Provisions	Informational	Noted
F5.1: Application of Part	Not applicable due to the building classification.	N/A

SECTION I: MAINTENANCE		
PART I1 – EQUIPMENT AND SAFETY INSTALLATIONS		
This Part has been deleted in BCA2019.		

SECTION J: ENERGY EFFICIENCY		
PART J0 – ENERGY EFFICIENCY		
J0.1: Application of Section J	Informational	Noted
J0.2: Heating & cooling loads of Sole Occupancy Units to Class 2 & 4 parts	Not applicable, clause relevant to class 2 & 4 only	NA
J0.3: Ceiling fans	Not applicable	NA
J0.4: Roof thermal breaks	Not applicable, clause relevant to J0.2 only	NA
J0.5: Wall thermal breaks	Not applicable, clause relevant to J0.2 only	NA
PART J1 – BUILDING FABRIC		
J1.0: Deemed-to-Satisfy Provisions	Informational	Noted
J1.1: Application of Part	The provisions of Part J1 apply to building elements forming part of the <i>envelope</i> of the building.	CRA – Refer Annexure C
J1.2: Thermal construction general	Where required insulation is to comply with AS4859.1 and be installed in accordance with this clause. The required Total R-Value and Total System U-Value, must be determined in accordance with J1.2 (e) clause.	CRA – Refer Annexure C
J1.3: Roof and ceiling construction	(a) A roof or ceiling must achieve a Total R-Value greater than or equal to— (i) in climate zones 1, 2, 3, 4 and 5, R3.7 for a downward direction of heat flow; and (ii) in climate zone 6, R3.2 for a downward direction of heat flow; and (iii) in climate zone 7, R3.7 for an upward direction of heat flow; and (iv) in climate zone 8, R4.8 for an upward direction of heat flow. (b) In climate zones 1, 2, 3, 4, 5, 6 and 7, the solar absorptance of the upper surface of a roof must be not more than 0.45.	CRA – Refer Annexure C
J1.4: Roof lights	No roof lights are proposed as part of the new works	N/A

SECTION J: ENERGY EFFICIENCY		
J1.5: Walls	(a) The Total System U-Value of wall-glazing construction must not be greater than— (i) for a Class 2 common area, a Class 5, 6, 7, 8 or 9b building or a Class 9a building other than a ward area, U2.0; and (ii) for a Class 3 or 9c building or a Class 9a ward area— (A) in climate zones 1, 3, 4, 6 or 7, U1.1; or (B) in climate zones 2 or 5, U2.0; or (C) in climate zone 8, U0.9. (b) The Total System U-Value of display glazing must not be greater than U5.8. (c) The Total System U-Value of wall-glazing construction must be calculated in accordance with Specification J1.5a. (d) Wall components of a wall-glazing construction must achieve a minimum Total R-Value of— (i) where the wall is less than 80% of the area of the wall-glazing construction, R1.0; or (ii) where the wall is 80% or more of the area of the wall-glazing construction, the value specified in Table J1.5a. (e) The solar admittance of externally facing wall-glazing construction must not be greater than— (i) for a Class 2 common area, a Class 5, 6, 7, 8 or 9b building or a Class 9a building other than a ward area, the values specified in Table J1.5b; and (ii) for a Class 3 or 9c building or a Class 9a ward area, the values specified in Table J1.5c. (f) The solar admittance of a wall-glazing construction must be calculated in accordance with Specification J1.5a. (g) The Total system SHGC of display glazing must not be greater than 0.81 divided by the applicable shading factor specified in Clause 7 of Specification J1.5a. a)	CRA – Refer Annexure C
J1.6: Floors	(a) A floor must achieve the Total R-Value specified in Table J1.6. (b) A floor must be insulated around the vertical edge of its perimeter with insulation having an R-Value greater than or equal to 1.0 when the floor— (i) is a concrete slab-on-ground in climate zone 8; or (ii) has an in-slab or in-screed heating or cooling system, except where used solely in a bathroom, amenity area or the like. (c) Insulation required by (b) for a concrete slab-on-ground must— (i) be water resistant; and (ii) be continuous from the adjacent finished ground level— (A) to a depth not less than 300 mm; or (B) for the full depth of the vertical edge of the concrete slab-on-ground.	CRA – Refer Annexure C

SECTION J: ENERGY EFFICIENCY			
PART J2 – GLAZING			
J2.0:	Deemed-to-Satisfy Provisions	Part J2 has deliberately been left blank from the BCA2019	Noted
J2.1:	Application of Part	N/A	Noted
J2.4:	Glazing	N/A	Noted
J2.5:	Shading	N/A	Noted
PART J3 – BUILDING SEALING			
J3.0:	Deemed-to-Satisfy Provisions	Informational	Noted
J3.1:	Application of Part	The requirements of this Part apply to elements forming the <i>envelope</i> of the building other than: - a building in a climate zones 1, 2, 3 and 5 where the only means of air-conditioning is by using an evaporative cooler; or - a permanent building opening necessary for the safe operation of a gas appliance; - a building or part where mechanical ventilation required by part f4 provides sufficient pressurization to prevent infiltration;	Noted
J3.2:	Chimneys and flues	The chimney or flue of an open solid-fuel burning appliance must be provided with a damper or flap that can be closed to seal the chimney or flue.	CRA – Refer Annexure C
J3.3:	Roof lights	No roof lights are proposed as part of the new works	N/A
J3.4:	Windows and doors	(a) A door, openable window or the like must be sealed— (i) when forming part of the envelope; or (ii) in climate zones 4, 5, 6, 7 or 8. (b) The above does not apply to: (i) a window complying with AS 2047; or (ii) a fire door or smoke door; or (iii) roller shutter door, roller shutter grille or other security device or device installed only for out-of-hours security. (c) A seal to restrict air infiltration— (i) for the bottom edge of a door, must be a draft protection device; and (ii) for the other edges of a door or the edges of an openable window or other such opening, may be a foam or rubber compression strip, fibrous seal or the like. (d) An entrance to a building, if leading to a conditioned space must have an airlock, self-closing door, revolving door or the like, other than— (i) where the conditioned space has a floor area of not more than 50m²; or (ii) where a café, restaurant, open front shop or the like has— A. a 3m deep un-conditioned zone between the main entrance, including an open front, and the conditioned space; and	CRA – Refer Annexure C

SECTION J: ENERGY EFFICIENCY		
	B. at all other entrances to the café, restaurant, open from shop of the like, self-closing doors	
J3.5: Exhaust fans	The exhaust fans serving conditioned spaces or habitable room in climate 4 - 8, must be fitted with a sealing device, such as a self-closing damper of the like.	CRA – Refer Annexure C
J3.6: Construction of ceilings, walls and floors	The roof, walls, floors and any other openings, such as window or doors, are to be constructed to minimise air leakage by being enclosed by internal lining systems that are close fitting at ceiling, wall and floor junctions; or are sealed by expanding architraves, skirting, cornices; or expanding foam, rubber compressible strip, caulking or the like.	CRA – Refer Annexure C
J3.7: Evaporative Coolers	The evaporative cooler must be fitted with a self-closing damper or like when serving heated space OR in climate zones 4 - 8.	CRA – Refer Annexure C
PART J4		
J4.0:	This part has deliberately been left blank in the BCA2019	N/A
PART J5 – AIR CONDITIONING AND VENTILATION SYSTEMS		
J5.0: Deemed-to-Satisfy Provisions	Informational	Noted
J5.2: Air-conditioning systems	Compliance required, design certification to be provided by Mechanical Engineer.	CRA – Refer Annexure C
J5.3: Mechanical ventilation system control	Compliance required, design certification to be provided by Mechanical Engineer.	CRA – Refer Annexure C
J5.4: Fan systems	Compliance required, design certification to be provided by Mechanical Engineer.	CRA – Refer Annexure C
J5.5: Ductwork Insulation	Compliance required, design certification to be provided by Mechanical Engineer.	CRA – Refer Annexure C
J5.6: Ductwork Sealing	Compliance required, design certification to be provided by Mechanical Engineer.	CRA – Refer Annexure C
J5.7: Pump Systems	Compliance required, design certification to be provided by Mechanical Engineer.	CRA – Refer Annexure C
J5.8: Pipework Insulation	Compliance required, design certification to be provided by Mechanical Engineer.	CRA – Refer Annexure C
J5.9: Space Heating	Compliance required, design certification to be provided by Mechanical Engineer.	CRA – Refer Annexure C
J5.10: Refrigerant Chillers	Compliance required, design certification to be provided by Mechanical Engineer.	CRA – Refer Annexure C
J5.11: Unitary Air-Conditioning Equipment	Compliance required, design certification to be provided by Mechanical Engineer.	CRA – Refer Annexure C
J5.12: Heat Rejection Equipment	Compliance required, design certification to be provided by Mechanical Engineer.	CRA – Refer Annexure C
PART J6 – ARTIFICIAL LIGHTING AND POWER		
J6.0: Deemed-to-Satisfy Provisions	Informational	Noted
J6.1: Application of Part	Applies to all buildings except a Class 8 electricity network substation.	Noted
J6.2: Artificial lighting	Artificial lighting must comply with J6.2(a), J6.2(b) and J6.2(c), relevant to maximum permitted illumination power loads.	CRA – Refer Annexure C

SECTION J: ENERGY EFFICIENCY		
	Design certification to be provided by the electrical designer.	
J6.3: Interior artificial lighting and power control	Lighting switches and control devices must comply with BCA Clause J6.3. Design certification to be provided by the electrical designer.	CRA – Refer Annexure C
J6.4: Interior decorative and display lighting	Lighting falling under this clause is to be separately switched from other lighting, be under a manual switch and controlled with a time switch. Design certification to be provided by the electrical designer.	CRA – Refer Annexure C
J6.5: Exterior artificial lighting	Exterior lighting attached to or directed at the façade of the building must be controlled by daylight sensors or time switches in accordance with the specific requirements of this clause. Design certification to be provided by the electrical designer.	CRA – Refer Annexure C
J6.6: Boiling water and chilled water storage units	The power supply to a fixed boiling water or chilled water storage unit must be controlled by a time switch in accordance with BCA Specification J6. Design certification to be provided by the electrical designer.	CRA – Refer Annexure C
J6.7: Lifts	The lift proposed will not be provided with a lift car	N/A
J6.8: Escalators and moving walkways	No escalator or moving walkway has been provided	N/A
PART J7 – HEATED WATER SUPPLY		
J7.0: Deemed-to-Satisfy Provisions	Informational	Noted
J7.2: Heated water supply system	The hot water supply systems must be designed and installed in accordance with Part B2 of NCC Volume Three — Plumbing Code of Australia.	CRA – Refer Annexure C
J7.3: Swimming pool heating and pumping	No swimming pool has been proposed	N/A
J7.4: Spa pool heating and pumping	No spa pool has been proposed	N/A
PART J8 – FACILITIES FOR ENERGY MONITORING		
J8.0: Deemed-to-Satisfy Provisions	Informational	Noted
J8.1: Application of Part	Informational	Noted
J8.3: Facilities for energy monitoring	A building with a floor area of more than 500m² must have an energy meter configured to record the time-of-use consumption of gas and electricity.	CRA – Refer Annexure C

ANNEXURE C - BCA COMPLIANCE SPECIFICATION

The following BCA matters are to be addressed by specific BCA Design Certificate to be issued by the relevant architectural, services and engineering consultants at the Construction Certificate Stage. This schedule should be forwarded to all consultants to obtain verification that these items have and will be included in the design documentation / specifications:

Architectural Design Certification:

1. The FRL's of the structural elements for the proposed works have been designed in accordance with Table 4 of Specification C1.1 of BCA2019 for a building of Type B Construction.
2. Lightweight construction used to achieve required fire resistance levels will comply with Specification C1.8 of BCA2019.
3. Building elements must be non-combustible in accordance with C1.9.
4. Materials, floor and wall linings/coverings, surface finished and air-handling ductwork used in the works will comply with the fire hazard properties of Clause C1.10 and Specification C1.10 of BCA2019.
5. Floors separating storeys of different classifications will comply with BCA Clause C2.9 of BCA2019.
6. Services penetrating elements required to possess an FRL including the floor slabs, walls, shafts, etc. will be protected in accordance with Clause C3.12, C3.13 and C3.15 and Specification C3.15 of BCA2019.
7. Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation will be protected in accordance with BCA Clause C3.16.
8. Doorways and other opening in internal walls required to have an FRL will be protected in accordance with Clause C3.11 of BCA2019.
9. Columns protected by light weight construction will achieve an FRL not less than the FRL for the element it is penetrating, in accordance with Clause C3.17 of BCA2019.
10. A lintel will have the FRL required for the part of the building in which it is situated, unless it does not contribute to the support of a fire door, fire window or fire shutter, and it spans an opening in masonry which is not more than 150 mm thick and is not more than 3m wide if the masonry is non- loadbearing; or not more than 1.8m wide if the masonry is loadbearing and part of a solid wall or one of the leaves of a cavity wall, or it spans an opening in a non-loadbearing wall of the Class 2 or 3 building, in accordance with Specification C1.1 Clause 2.3 BCA2019.
11. All attachments to the external façade of the building will be fixed in a way that does not affect the fire resistance of that element in accordance with Clause 2.4 of Specification C1.1 of BCA2019.
12. The top and bottom of the riser shafts will achieve an FRL not less than the FRL required for the walls of the shaft in accordance with Clause 2.7 of Specification C1.1 of BCA2019.
13. The number of exits provided to the building will be in accordance with Clause D1.2 of BCA2019.
14. Travel distances to exits will be in accordance with Clause D1.4 of BCA2019.
15. The dimensions of exits and paths of travel to exits will be provided in accordance with Clause D1.6 of BCA2019.
16. Discharge from exits will be in accordance with Clause D1.10 of BCA2019.
17. The non-fire isolated stairs will be constructed in accordance with Clause D2.3 of BCA2019.

18. The enclosing walls and ceiling under the non-fire-isolated stairway will achieve an FRL of 60/60/60, and have a self-closing -/60/30 fire door, in accordance with Clause D2.8 of BCA2019.
19. New pedestrian ramps will comply with AS1428.1-2009, Clause D2.10 and Part D3 of BCA2019. The floor surface of a ramp must have a slip-resistance classification complying with Table D2.14 when tested in accordance with AS4586.
20. The roof of the building where the exit discharges will have an FRL of 120/120/120, and will not have roof lights or openings within 3m of the path of travel in accordance with Clause D2.12 of BCA2019.
21. Stair geometry to the new stairways will be in accordance with Clause D2.13 of BCA2019. Stair treads are to have a surface with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS4586.
22. Landings and door thresholds throughout the development will be provided in accordance with Clause D2.14 and D2.15 of BCA2019. Landings to have either a surface with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS4586 or a strip at the edge of the landing with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS4586 where the edge ledge to a flight below.
23. The handrails and balustrades to all stairs and throughout the building will be in accordance with Clause D2.16, and D2.17 of BCA2019.
24. The doorways and doors will be in accordance with Clause D2.19 and D2.20 of BCA2019.
25. The door latching mechanisms to the proposed required exit doors will be in accordance with Clause D2.21 of BCA2019.
26. The new works will be accessible in accordance with Clause D3.1 and table D3.1, D3.2, D3.3 of BCA2019, and with AS1428.1-2009, with particular note to door circulation spaces, accessway widths, turning spaces and floor coverings, in accordance with Part D3 of BCA2019.
27. Braille and tactile signage will in accordance with Clause D3.6, and Specification D3.6 of BCA2019.
28. Tactile ground surface indicators will be provided in accordance with Clause D3.8 of BCA2019 and AS1428.4.1-2009.
29. On an accessway, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, will be clearly marked in accordance with AS1428.1-2009 and Clause D3.12 of BCA2019.
30. Fire precautions whilst the building is under construction fire precautions will be in accordance with Clause E1.9 of BCA2019.
31. Additional provisions will be made in accordance with Clause E1.10 of BCA2019, due to the special hazards associated with the building works or the location of the building works.
32. External above ground waterproofing membranes will comply with Clause F1.4 of BCA2019 and AS 4654 Parts 1 & 2.
33. The new roof covering will be in accordance with Clause F1.5 of BCA2019.
34. Any sarking proposed will be installed in accordance with Clause F1.6 of BCA2019.
35. Waterproofing of all wet areas to the building will be carried out in accordance with Clause F1.7 of BCA2019 and AS3740.
36. Damp proofing of the proposed structure will be carried out in accordance with Clause F1.9 and F1.10 of BCA2019.
37. All new glazing to be installed throughout the development will be in accordance with Clause F1.13 of BCA2019 and AS1288 / AS2047.

38. Sanitary facilities will be provided in the building in accordance with Clause F2.1, Table F2.1, Clause F2.3 and Table F2.3 of BCA2019.
39. Accessible sanitary facilities will be provided in the building in accordance with Clause F2.4, Table F2.4 (a) of BCA2019 and AS1428.1-2009.
40. Ceiling heights to the new areas will be in accordance with Clause F3.1 of BCA2019.
41. Natural ventilation will be provided in accordance with Clause F4.5, F4.6 and F4.7 of BCA2019.
42. Essential fire or other safety measures must be maintained and certified on an ongoing basis, in accordance with the provisions of the Environmental Planning and Assessment Regulation, 2000.
43. Building Fabric and Thermal Construction will be in accordance with Part J1 of BCA2019.
44. Glazing will be in accordance with Part J1 of BCA2019.
45. Building sealing will be in accordance with Part J3 of BCA2019.
46. Facilities for Energy Monitoring will be provided in accordance with Clause J8.3 of BCA2019.

Electrical Services Design Certification:

47. A smoke detection and alarm system will be installed throughout the building in accordance with Table E2.2a, and Specification E2.2a of BCA2019.
48. Emergency lighting will be installed throughout the development in accordance with Clause E4.2, E4.4 of BCA2019 and AS2293.1.
49. Exit signage will be installed in accordance with Clause E4.5, E4.7, and E4.8 of BCA2019 and AS2293.1.
50. Artificial lighting will be installed throughout the development in accordance Clause F4.4 of BCA2019 and AS/NZS 1680.0.
51. Lighting power and controls will be installed in accordance with Part J6 of BCA2019.

Hydraulic Services Design Certification:

52. Storm water drainage will be provided in accordance with Clause F1.1 of BCA2019 and ASNZS3500.3
53. Fire hydrant system will be installed in accordance with Clause E1.3 of BCA2019 and AS2419.1 as required.
54. Fire hose reels will be installed in accordance with Clause E1.4 of BCA2019 and AS2441.
55. Portable fire extinguishers will be installed in accordance with Clause E1.6 of BCA2019 and AS2444.
56. The heated water supply systems will be designed and installed to NCC Volume 3 – Plumbing code and Clause J7.2 of BCA2019.

Mechanical Services Design Certification:

57. Where not naturally ventilated the building will be mechanically ventilated in accordance with Clause F4.5 of BCA2019 and AS1668.2.
58. The air-conditioning and ventilations systems will be designed and installed in accordance with Part J5 of BCA2019.

Structural Engineers Design Certification:

59. The material and forms of construction for the proposed works will be in accordance with Clause B1.2, B1.4 and B1.6 of BCA2019 as follows:
 - Dead and Live Loads – AS1170.1
 - Wind Loads – AS1170.2

- Earthquake actions – AS1170.4
 - Masonry – AS3700
 - Concrete Construction – AS3600
 - Steel Construction AS4100
 - Aluminium Construction – AS/NZS1664.1 or 2
 - Timber Construction – AS 1720.1
 - ABCB Standard for Construction of Buildings in Flood Hazard Areas.
60. The FRL's of the structural elements for the proposed works have been designed in accordance with Table 4 of Specification C1.1 of BCA2019 for a building of Type B Construction.
61. Lightweight construction used to achieve required fire resistance levels will comply with Specification C1.8 of BCA2019.
62. The construction joints to the structure will be in accordance with Clause C3.16 of BCA2019 to reinstate the FRL of the element concerned.
63. Upon completion of the works, a structural engineer will be able to certify that local failure will be in accordance with Clause D2.2 of BCA2019 for the fire isolated stairs.

Lift Services Design Certification:

64. Warning signage in accordance with Clause E3.3 of BCA2019 will be provided to the lifts to advise not to use the lifts in a fire.
65. Access and egress to the lift well landings will comply with the Deemed-to-Satisfy Provisions of D3 of the BCA2019, and will be suitable to accommodate disabled persons.
66. The type of lifts will also be suitable to accommodate persons with a disability in accordance with Clause E3.6, Table E3.6a, and will have accessible features in accordance with Table E3.6b of BCA2019.
67. The lifts will comply with AS1735.12 in accordance with Clause E3.6 of BCA2019.

Acoustic Services Design Certification:

68. The sound transmission and insulation of the residential portions of the development will comply with Part F5 of BCA2019.