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EXECUTIVE SUMMARY

This document provides an assessment of the preliminary design drawings for the proposed alterations and additions to Freshwater Surf Life Saving Club, against the Deemed-to-Satisfy provisions of the Building Code of Australia (BCA) 2019, Volume 1 and the Disability (Access to Premises – Buildings) Standards 2010. The proposed works involve the enclosure of an existing balcony area at first floor level for use as an office for approximately three staff.

Part 5 'Matters for Further Consideration' of this report outlines the identified compliance issues that require further information or consideration.

ltem	Description	BCA/ Premises Standards Provision		
Premis	ses Standards Compliance Matters to be Addressed			
1.	An accessible path of travel is required from the principal pedestrian entrance at ground floor level, to the area of the new works. This will require the installation of a passenger lift and upgrade of the main entry door.	Section 2.1 of the Disability (Access to Premises – Buildings) Standards 2010		
Buildi	ng Code of Australia Compliance Matters to be Addressed			
	The FRL's of all elements are to be in accordance with Table 3 of BCA Specification C1.1, as detailed in the Table contained within Part 4.0 of this report. Specifically, the following FRLs will likely be applicable to the proposed works:			
1.	> Loadbearing parts of external walls – FRL 120/60/30	C1.1		
	> Loadbearing internal walls – FRL 120/-/-			
	 Fire-resisting lift shafts (where proposed) – FRL 120/120/120 			
2.	The proposed external walls of the office must incorporate a 900 mm high, fire-rated spandrel achieving an FRL of not less than 60/60/60, in accordance with Clause C2.6.C2.6			
3.	The threshold of the proposed office doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf. Further details are required of the proposed floor levels, noting that there is currently a change in level between the internal floor level and the external balcony level.	D2.15		
	A smoke detection and alarm system and building occupant warning system must be installed in accordance with Clauses 4 & 7 of BCA Specification E2.2a.			
4.	& 7 of BCA Specification E2.2a. The current fire safety schedule for the building lists 'smoke alarms' as a fire safety measure in lieu of 'smoke detection and alarm system'. Clarification is required from a suitably qualified electrician / consultant as to whether the existing system achieves compliance with Clauses 4 & 7 of BCA Specification E2.2a and the relevant parts of AS 1670.1-2018. Where compliance is currently not achieved, the system will need to be upgraded to comply.			

Item	Description	BCA/ Premises Standards Provision
5.	In accordance with BCA Performance Requirement FP1.4, the construction of the new external walls must be such that they will prevent the penetration of water that could cause unhealthy or dangerous conditions or loss of amenity to occupants and undue dampness or deterioration of building elements. As there is no BCA deemed-to-satisfy provision applicable to this requirement, compliance must be achieved by demonstrating the proposed external wall construction will meet the above Performance Requirement.	No DtS Provisions – FP1.4 Performance Provisions Only

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

1 BASIS OF ASSESSMENT

1.1. Location and Description

The building development, the subject of this report, is located at Kooloora Avenue, Freshwater. The existing building consists of heritage portion constructed circa 1908, fronting Freshwater Beach and a larger club extension at the rear constructed in the 1990s. The proposed office extension is contained within the existing balcony footprint on the first floor of the 1990s portion of the building, with no works proposed to the existing heritage portion.

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.

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 2016.

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) Demolition Standards not referred to by the BCA;
- (c) Work Health and Safety Act 2011;
- (d) Requirements of Australian Standards unless specifically referred to;
- (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.

1.5. Federal Disability Discrimination Act (DDA)

Disability is broadly defined and includes disabilities which are physical, intellectual, psychiatric, neurological, cognitive or sensory (a hearing or vision impairment), learning difficulties, physical disfigurement and the presence in the body of disease-causing organisms.

All organisations have a responsibility, under the DDA, to provide equitable, dignified access to goods and services and to premises used by the public. Premises are broadly defined and would include all areas included within the subject development.

The DDA applies nationally and is complaint based. While the BCA2019 is recognised as a design standard to satisfy certain aspects of the DDA, compliance with the BCA2019 and the referenced standards does not guarantee that a complaint will not be lodged.



The graph below indicates the current relationship of the BCA2019 to the DDA.

1.6. The Disability (Access to Premises – Buildings) Standards

The aim of the Premises Standards is to provide the building and design industry with detailed information regarding the required access provisions associated with the design and construction of new buildings and upgrade to existing buildings. They do not apply to existing buildings that are not undergoing upgrade. They will only apply to elements addressed within the Standards. All other elements related to premises will still be subject to the existing provisions of the DDA.

The Premises Standards generally align with the access provisions of BCA2019 and reference a range of Australian Standards relating to access and other associated matters. The Premises Standards aim to provide certainty for the building industry in relation to meeting the requirements for access in new and upgraded buildings.

The relevant provisions of the Premises Standards will apply to a new part of a building, and any "affected part" of a building, if the building is Class 1b, Class 2 (if a new and short term rent accommodation is available) and Classes 3, 5, 6, 7, 8, 9 or 10 buildings. The "affected part" is the accessway from the principal pedestrian entrance to the area of the new works including the entry door at principal pedestrian entrance.

The Premises Standards (including the affected part upgrade) is applicable to a building owner who is the applicant for a building permit, such as a Construction Certificate or Complying Development Certificate or if the work is constructed for or on behalf of the Crown. It is noted that under Clause 4.3 of the Premises Standards, if the lessee of a new part of a building, which has more than one lessee, submits the application for approval of the building work, the upgrading of the affected part will not be applicable.

From the information provided, the development is Crown development, therefore **upgrading of the affected part WILL be required** – See requirements in Part 5.3 below.



1.7. Design Documentation

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

1.8. Definitions

Assembly building

Assembly building means a building where people may assemble for-

- (a) civic, theatrical, social, political or religious purposes including a library, theatre, public hall or place of worship; or
- (b) educational purposes in a school, early childhood centre, preschool, or the like; or
- (c) entertainment, recreational or sporting purposes including-
 - (i) a cinema; or
 - (ii) a sports stadium, sporting or other club; or
- (d) transit purposes including a bus station, railway station, airport or ferry terminal.

Average specific extinction area

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

Critical radiant flux

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

Effective height

Effective height means the vertical distance between the floor of the lowest storey included in a determination of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units).

<u>Envelope</u>

Envelope, for the purposes of Section J in Volume One, means the parts of a building's fabric that separate a conditioned

space or habitable room from-

(a) the exterior of the building; or

(b) a non-conditioned space including-

- (i) the floor of a rooftop plant room, lift-machine room or the like; and
- (ii) the floor above a carpark or warehouse; and
- (iii) the common wall with a carpark, warehouse or the like.

<u>Exit</u>

Exit means -

- (a) Any, or any combination of the following if they provide egress to a road or open space-
 - (i) An internal or external stairway.
 - (ii) A ramp.
 - (iii) A fire-isolated passageway.
 - (iv) A doorway opening to a road or open space.
- (b) A horizontal exit or a fire-isolated passageway leading to a horizontal exit.

Fire compartment

Fire compartment means –

- (a) the total space of a building; or
- (b) when referred to in—
 - the Performance Requirements any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any openings adequately protected; or
 - (ii) the Deemed-to-Satisfy Provisions any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that required for a fire wall for that type of construction and where all openings in the separating construction are protected in accordance with the Deemed-to Satisfy Provisions of the relevant Part.

Fire-resistance level (FRL)

Fire-resistance level (FRL) means the grading periods in minutes determined in accordance with Specification A2.3, for the following criteria—

- (a) structural adequacy; and
- (b) integrity; and
- (c) insulation,

and expressed in that order.

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

Fire-source feature

- (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

Flammability index

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

<u>Group number</u>

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



Loadbearing

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

Non-combustible

Non-combustible means—

- (a) applied to a material not deemed combustible as determined by AS 1530.1:1994 Combustibility Tests for Materials; and
- (b) applied to construction or part of a building constructed wholly of materials that are not deemed combustible

Performance Requirement

Performance Requirement means a requirement which states the level of performance which a Performance Solution or Deemed-to-Satisfy Solution must meet.

Performance Solution

Performance Solution means a method of complying with the Performance Requirements other than by a Deemed-to-Satisfy Solution.

Sarking-type material

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

Smoke growth rate index

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

Sole-occupancy unit

Sole-occupancy unit means a room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier and includes—

- (a) a dwelling; or
- (b) a room or suite of rooms in a Class 3 building which includes sleeping facilities; or
- (c) a room or suite of associated rooms in a Class 5, 6, 7, 8 or 9 building; or
- (d) a room or suite of associated rooms in a Class 9c building, which includes sleeping facilities and any area for the exclusive use of a resident.

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
4	Part first floor	Caretaker's dwelling
5	Part first floor	Office (proposed)
7b	Basement	Storage
9b	Ground floor & part first floor	Assembly building

Note: the canteen use on the ground floor occupies less than 10% of the floor area of the storey, therefore need not be classified separately.

2.3. Effective Height (Clause A1.0)

The building has an effective height of less than 12 metres.

2.4. Type of Construction Required (Table C1.1)

The building is required to be of Type A Construction on the basis that the first floor contains a part assembly use.

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

The building as a whole, complies with the maximum floor area and volume limits:-

Class 5 & 9b	Maximum Floor Area	8,000 m ²
	Maximum Volume	48,000 m ³
Class 7	Maximum Floor Area	5,000 m ²
	Maximum Volume	30,000 m ³

2.6. Exits

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

- (a) The stairway between the meeting room and the caretaker's dwelling, discharging to the external of the building at ground floor; and
- (b) the stairway connecting the first floor with the ground floor foyer.

2.7. Climate Zone (Clause A1.0)

The building is located within Climate Zone 5.



3 ESSENTIAL FIRE SAFETY MEASURES

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

Table 2. Essential Fire Safety Measures

Fire Safety Measure	Status*	Minimum Standard of Performance
Fire Extinguishers	E & N	AS2444-2001
		BCA2019 Clause E1.6 & Table E1.6
Fire Blankets	E	AS2444-2001
Fire Hose Reels	E	AS2441-2005
Emergency Lights	E	BCA E4.2, E4.4 & AS/NZS2293.1
Exit Signs	E & N	BCA E4.5, E4.6, E4.7 E4.8 & AS2293.1
		AS/NZS 2293.1-2018
Fire Doors	E	BCA 96 Spec C3.4 & AS1905.1-1997
Fire Hydrant System	E	BCA 2008 E1.3 & AS 1905.1-1997
Paths of Travel	E	EP&A Regulation Clause 186
Smoke Alarms	E	BCA Spec E2.2a & AS3786-2014
Fire seals protecting openings in fire resisting components of the building	E	(Standard of performance is not specified in current Fire Safety Schedule)
Automatic Smoke Detection and Alarm	Ν	BCA2019 Spec. E2.2a (Clause 4)
System		AS1670.1-2018
Building Occupant Warning System	N	BCA2019 Spec. E2.2a (Clause 7)
		AS1670.1-2018 (clause 3.22)

*Status: new (N), existing (E)

4 FIRE RESISTANCE LEVELS

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

Details of the below Type A FRLs that apply to the proposed works are provided in Part 5 of this report.

Type A Construction

Table 3.Type A Construction

Item	Class 4	Class 5 & 9b	Class 7b
Loadbearing External Walls (including columns and other building elements incorporated therein)			
- 3m or more from a fire source feature	90/60/30	120/60/30	240/180/90
Non-Loadbearing External Walls - 3m or more from a <i>fire-</i> <i>source feature</i>	-/-/-	-/-/-	-/-/-
External Columns	90/-/-	120/-/-	240/-/-
Common Walls & Fire Walls	90/90/90	120/120/120	240/240/240
Stair and Lift Shafts required to be fire-resisting - Loadbearing	90/90/90	120/120/120	240/120/120
- Non-loadbearing	-/90/90	-/120/120	-/120/120
Internal walls bounding sole occupancy units - Loadbearing	90/90/90	120/-/-	240/-/-
- Non-loadbearing	-/60/60	-/-/-	-/-/-
Internal walls bounding public corridors, public lobbies and the like:			
- Loadbearing	90/90/90	120/-/-	240/-/-
- Non-loadbearing	-/60/60	-/-/-	-/-/-
Ventilating, pipe, garbage and like shafts:	00/00/00	400/00/00	0.40/400/400
- Loadbearing	90/90/90	120/90/90	240/120/120
- INON-IOAODEARING	-/90/90	-/90/90	-/120/120
Other loadbearing internal walls, beams trusses and columns	90/-/-	120/-/-	240/-/-
Floors	90/90/90	120/120/120	240/240/240

Note: The roof need not comply with any FRL's in accordance with the concession provided under Clause 3.5 of Specification C1.1 for buildings not exceeding three storeys.



5 MATTERS FOR FURTHER CONSIDERATION

5.1. General

Assessment of the Architectural design of the proposed works against the Deemed-to Satisfy Provisions of the Building Code of Australia, 2019 (BCA) and the Disability (Access to Premises – Buildings) Standards 2010, has revealed the following areas which may require further consideration.

Annexure B to this report provides a detailed assessment of the proposal against ALL relevant Deemedto-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 maters such as access for people with disabilities, stair and corridor widths and balustrade heights.

5.3. Affected Part Requirements (Premises Standards)

The "affected part" is the accessway from the principal pedestrian entrance to the area of the new works including the entry door at principal pedestrian entrance. The relevant provisions of the Premises Standards will apply to a new part of a building, and the "affected part" of the building for the current development.

Within the affected part the following works will be required:

Item No	Area	Required Upgrade	Compliance
		 The main entry door will need to be upgraded to comply with AS 1428.1-2009, including: a clear opening width of not less than 850 mm in accordance with Figure 31 of AS 1428.1-2009. At least one of leaf must comply. 	
1.	Main entry door	Door hardware compliant with clause 13.5 of AS 1428.1- 2009. Compliance with Clause D2.21 will require the latch on the inside of the door to be a panic bar for egress purposes.	CRA
		> Luminance contrast in accordance with clause 13.1 of AS 1428.1-2009.	

Table 1. Affected Parts

Item No	Area	Required Upgrade	Compliance
		A passenger lift will need to be provided to connect the main entry to the new works on the first floor. The passenger lift must comply with BCA Table E3.6b.	
2.	Lift access	Although compliance with the Premises Standards requires an accessible path of travel to the new area of works only, consideration should be given to connecting all three levels of the building via the lift, as this would be required if the building was constructed to the current BCA.	CRA
3.	Braille and tactile signage	Braille and tactile signage complying with Specification D3.6 and incorporating the international symbol of access, must identify the main entry door as an exit door and state "Exit" and "Level" and either: (a) the floor level number; or (b) a floor level descriptor; or (c) a combination of (a) and (b)	CRA

5.4. Type A Construction requirements – BCA Clause C1.1

The FRL's of all elements are to be in accordance with Table 3 of BCA Specification C1.1, as detailed in the Table contained within Part 4.0 of this report. Specifically, the following FRLs will likely be applicable to the proposed office works:

- > Loadbearing parts of external walls FRL 120/60/30
- > Loadbearing internal walls FRL 120/-/-
- > Fire-resisting lift shafts (where proposed) FRL 120/120/120

5.5. Vertical separation of openings in external walls – BCA Clause C2.6

Where the vertical projection of an opening in an external wall falls no further than 450 mm outside an opening in the storey next below, the openings must be provided with vertical separation complying with Clause C2.6, that is:

- > They must be protected with a 900mm high (*FRL* 60/60/60) spandrel extending at least 600mm above the separating slab, or
- > They must be provided with a 1.1m horizontal projection (*FRL* 60/60/60) also extending at least 450mm either side of the openings.

It is recommended that the proposed external walls of the office incorporate a 900 mm high, fire-rated spandrel achieving an FRL of not less than 60/60/60, in accordance with the above.



5.6. Thresholds – BCA Clause D2.15

The threshold of the proposed office doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf. Further details are required of the proposed floor levels, noting that there is currently a change in level between the internal floor level and the external balcony level.

5.7. Smoke hazard management – BCA Clause E2.2

A smoke detection and alarm system and building occupant warning system must be installed in accordance with Clauses 4 & 7 of BCA Specification E2.2a.

The current fire safety schedule for the building lists 'smoke alarms' as a fire safety measure in lieu of 'smoke detection and alarm system'. Clarification is required from a suitably qualified electrician / consultant as to whether the existing system achieves compliance with Clauses 4 & 7 of BCA Specification E2.2a and the relevant parts of AS 1670.1-2018. Where compliance is currently not achieved, the system will need to be upgraded to comply.



ANNEXURE A DESIGN DOCUMENTATION

Annexure A – Design Documentation

This report has been based on the following design documentation.

Table 4. Architectural Plans

Preliminary Sketch Plan			
Drawing Number	Revision	Date Title	Title
-	-	30.01.2020	Revised first floor balcony design



ANNEXURE B DETAILED BCA 2019 ASSESSMENT

Annexure B – Detailed BCA 2019 Assessment

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

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

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

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

Deemed to Satisfy Clause Assessment

Table 5. Deemed to Satisfy Clause Assessment

Clause

Comment

Status

Sectio	Section B: Structure			
Part B	1 – Structural Provision	S		
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	N/A	

Section C: Fire Resistance			
Part C	1 – 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 A 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). It is noted that the tower of the heritage building above first floor level contains service equipment only and is only accessible via a man hole in the ceiling at the first floor level, with stair access having been removed as part of previous renovations.	Note



Sectio	n C: Fire Resistance		
		The proposed works do not alter the existing rise in storeys.	
C1.3:	Buildings of multiple classification	Informational	Noted
C1.4:	Mixed Types of construction	Not applicable	N/A
C1.5:	Two Storey Class 2, 3 or 9c buildings	Not applicable	N/A
C1.6:	Class 4 Parts of building	Informational	Noted
C1.7:	Open spectator stands and indoor sports stadium	Not applicable	N/A
C1.8:	Lightweight construction	Lightweight construction used in a fire-rated application, including for fire rating of steel columns, is to comply with Specification C1.8.	CRA – Refer Annexure C
C1.9:	Non-combustible building elements	 New external walls, including all components incorporated in them including the facade covering, framing and insulation must be <i>noncombustible</i>. Any proposed non-loadbearing shafts, including a lift shaft, must be of <i>non-combustible</i> construction. Any loadbearing internal walls, including those that are part of a loadbearing shaft, must be concrete or masonry. The non-combustibility requirements do not apply to gaskets, caulking, sealants, termite management systems, glass including laminated glass, thermal breaks associated with glazing systems and damp-proof courses. The following materials, may be used wherever a <i>non-combustible</i> material is required: (i) Plasterboard. (ii) Perforated gypsum lath with a normal paper finish. (iii) Fibrous-plaster sheet. (iv) Fibre-reinforced cement sheeting. (v) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. 	CRA – Refer Annexure C

Section C: Fire Resistance		
	(vi) Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5.	
	(vii) Bonded laminated materials where—	
	(A) each lamina, including any core, is <i>non-combustible</i> ; and	
	 (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and 	
	(C) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively.	
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 car, insulation, <i>sarking-type materials</i> and attachments, or be considered <i>non-combustible</i> .	CRA – Refer Annexure C
C1.11: Performance of external walls in fire	Not applicable	N/A
C1.12: Non-combustible materials	Clause now deleted and relocated to C1.9.	Noted
C1.13: Fire-protected timber: Concession	Not applicable	N/A
	 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 <i>non-combustible</i> unless it is one of the following: (a) An ancillary element that is <i>non-combustible</i>. (b) A gutter, downpipe or other plumbing fixture or fitting. (c) A flashing. (d) A grate or grille not more than 2 m² in area associated with a building service 	CRA – Refer
C1.14: Ancillary elements	(e) An electrical switch, socket-outlet, cover plate or the like.	Annexure C
	(f) A light fitting.	
	(g) A required sign.	
	(h) A sign other than one provided under (a) or (g) that—	
	(i) achieves a <i>group number</i> of 1 or 2; and	
	(ii) does not extend beyond one storey; and	

Sectio	Section C: Fire Resistance			
		(iii) does not extend beyond one <i>fire compartment</i> ; and		
		(iv) is separated vertically from other signs permitted under (h) by at least 2 storeys.		
		 An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that— 		
		 (i) meets the relevant requirements of Table 4 of Specification C1.10 as for an internal element; and 		
		(ii) serves a storey—		
		(A) at ground level; or		
		 (B) immediately above a storey at ground level; and 		
		(iii) does not serve an <i>exit</i>, where it would render the <i>exit</i> unusable in a fire.		
		(j) A part of a security, intercom or announcement system.		
		(k) Wiring.		
		(I) A paint, lacquer or a similar finish.		
		 (m) A gasket, caulking, sealant or adhesive directly associated with (a) to (k). 		
Part C	2 – Compartment and S	Separation		
C2.0:	Deemed-to-Satisfy Provisions	Informational	Noted	
C2.1:	Application of Part	Informational	Noted	
C2.2:	General floor area and volume limitations	Not applicable - The proposed works do not alter the existing fire compartment size.	N/A	
C2.3:	Large isolated buildings	Not applicable	N/A	
C2.4:	Requirements for open spaces and vehicular access	Not applicable	N/A	

C2.5:	Class 9a and 9c Buildings	Not applicable	N/A
C2.6:	Vertical separation of openings in external walls	Where the vertical projection of an opening in an external wall falls no further than 450 mm outside an opening in the storey next below, the openings must be provided with vertical separation complying with Clause C2.6, that is:	FI Refer to Part 5 of Report

Section	n C: Fire Resistance		
		They must be protected with a 900mm high (FRL 60/60/60) spandrel extending at least 600mm above the separating slab, or	
		> They must be provided with a 1.1m horizontal projection (<i>FRL</i> 60/60/60) also extending at least 450mm either side of the openings.	
		It is recommended that the proposed external walls incorporate a 900 mm high, fire-rated spandrel achieving an FRL of not less than 60/60/60, in accordance with the above.	
C2.7:	Separation by fire walls	Not applicable	N/A
		Where a storey has different classifications located alongside one another:	
C2 0.	Separation of	> each building element in that storey must have the higher <i>FRL</i> prescribed in Specification C1.1 for that element for the classifications concerned; or	
62.0.	classifications in the same storey	> the parts must be separated in that storey by a fire wall having the higher FRL prescribed in Table 3.	Complies
		The proposed Class 5 office attracts the same FRLs as the adjoining Class 9b part and therefore fire wall separation is not required between the two.	
	Separation of	Floors separating storeys of different classifications must have an <i>FRL</i> of not less than that prescribed in Specification C1.1 for the classification of the lower storey.	
	classifications in different storeys	No alterations are proposed to the existing concrete floor structure separating the proposed office from the storey below. The Class 5 office use attracts the same FRL for the floor as is currently required for the existing Class 9b use.	N/A
C2.10:	Separation of lift shafts	Any proposed passenger lift connecting more than 2 storeys, must be separated from the remainder of the building by enclosure in a fire rated shaft achieving an <i>FRL</i> prescribed by Table 3 of Specification C1.1.	CRA – Refer Annexure C
C2.11:	Stairways and lifts in one shaft	A stairway and lift must not be in the same shaft if either the stairway or the lift is required to be in a fire- resisting shaft.	CRA – Refer Annexure C
C2.12:	Separation of equipment	Not applicable	N/A
C2.13:	Electricity supply system	Not applicable	N/A



Section	Section C: Fire Resistance			
C2.14:	Public corridors in Class 2 and 3 Buildings	Not applicable	N/A	
Part C3	B – Protection of Openin	ngs		
C3.0:	Deemed-to-Satisfy Provisions	Informational	Noted	
C3.1:	Application of Part	Informational	Noted	
C3.2:	Protection of openings in external walls	Not applicable – the proposed openings in the external walls are located a sufficient distance from <i>fire source features</i> so as not to require protection under this clause.	N/A	
C3.3:	Separation of external walls and associated openings in different fire compartments	Not applicable	N/A	
C3.4:	Acceptable methods of protection	Not applicable	N/A	
C3.5:	Doorways in fire walls	Not applicable	N/A	
C3.6:	Sliding fire doors	Not applicable	N/A	
C3.7:	Protection of doorways in horizontal exits	Not applicable	N/A	
C3.8:	Openings in fire- isolated exits	Not applicable	N/A	
C3.9:	Service penetrations in fire-isolated exits	Not applicable	N/A	
C3.10:	Openings in fire- isolated lift shafts	 The following will apply to any proposed passenger lift connecting more than two storeys: Lift landing doors are required to be fire doors with an <i>FRL</i> of -/60/- that comply with AS 1735.11:1986 and be set to remain closed except when discharging or receiving, passengers. Panels in the wall of the lift shaft must be backed by construction having an <i>FRL</i> of not less than – /60/60 if it exceeds 35 000 mm² in area. 	CRA – Refer Annexure C	
03.11	Construction: Class 2, 3 and 4 Buildings		N/A	

Section	n C: Fire Resistance		
C3.12:	Openings in floors and ceilings for services	Any new service penetrations through the floor slab must be enclosed within a fire resisting shaft or fire protected in accordance with BCA Clause C3.15.	CRA – Refer Annexure C
C3.13:	Openings in shafts	Not applicable – no new service shafts are proposed.	N/A
C3.15:	Openings for service installations	Any new service penetrations through the floor slab must be enclosed within a fire resisting shaft or fire protected in accordance with BCA Clause C3.15.	CRA – Refer Annexure C
C3.16:	Construction joints	Not applicable	N/A
C3.17:	Columns protected with lightweight construction to achieve an FRL	Not applicable – there are no columns passing through fire rated elements or elements required to achieve a resistance to the incipient spread of fire.	N/A
Specifi	cation C1.1 – Fire-Resi	sting Construction	
2.0:	General Requirements	Informational	Noted
2.1:	Exposure to fire- source features	Informational	Noted
2.2:	Fire protection for a support of another part	Not applicable	N/A
2.3:	Lintels	Not applicable	N/A
2.4:	Attachments not to impair fire-resistance	Not applicable	N/A
2.5:	General concessions	Not applicable	N/A
2.6:	Mezzanine floors: Concession	Not applicable	N/A
2.7:	Enclosure of shafts	Any proposed fire-isolated lift shaft must be enclosed at the top of the shaft with fire rated construction having an <i>FRL</i> required for the walls of a non-load- bearing shaft in the same building, as per specification C1.1. This fire rating is required in two directions.	CRA – Refer Annexure C
2.8:	Carparks in Class 2 and 3 Buildings	Not applicable	N/A
2.9:	Residential Aged Care building: Concession	Not applicable	N/A
3.0:	Type A fire-resisting construction	Refer to Type A Construction requirements in the clauses below.	-

Sectio	n C: Fire Resistance		
		The FRL's of all elements are to be in accordance with Table 3 of BCA Specification C1.1, as detailed in the Table contained within Part 4.0 of this report. The following FRLs will likely be applicable to the	
3.1:	Fire-resistance of	proposed works:	CRA – Refer
	building elements	 Loadbearing parts of external walls – FRL 120/60/30 	Annexure C
		> Loadbearing internal walls – FRL 120/-/-	
		 Fire-resisting lift shafts (where proposed) – FRL 120/120/120 	
3.2:	Concessions for floors	Not applicable	N/A
3.3:	Floor Loading of Class 5 and 9b buildings: Concession	Not applicable	N/A
3.4:	Roof superimposed on concrete slab: Concession	Not applicable	N/A
3.5:	Roof: Concession	A roof need not comply with Table 3 if its covering is <i>non-combustible</i> and the building has a rise in storeys of 3 or less.	Note
3.6:	Roof lights	Not applicable	N/A
3.7:	Internal columns and walls: Concession	Any proposed internal columns immediately below the roof may have an FRL of 60/60/60.	CRA – Refer Annexure C
3.8:	Open spectator stands and indoor sports stadiums concession	Not applicable	N/A
3.9:	Carparks	Not applicable	N/A
3.10:	Class 2 and 3 buildings Concession	Not applicable	N/A
Specif	ication C1.10 – Fire Haz	zard Properties	
1.	Scope	Informational	-
2.	Application	Informational	Noted
3.	Floor linings and floor coverings	 New floor linings or floor coverings must have– (a) a <i>critical radiant flux</i> not less than that listed in Table 2 of Specification C1.10; and (b) a <i>maximum smoke development rate</i> of 750 percent-minutes. 	CRA – Refer Annexure C

Sectio	n C: Fire Resistance		
		 (a) New wall or ceiling linings must comply with the group number specified in Table 3 of Specification C1.10 and have- 	
		(i) a smoke growth rate index not more than 100; or	
4.	Wall and ceiling linings	(ii) an average specific extinction area less than 250 m²/kg.	CRA – Refer Annexure C
		(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 5637.1:2015.	
5.	Air-handling ductwork	Rigid and flexible ductwork must comply with the fire hazard properties set out in AS 4254 Parts 1 and 2.	CRA – Refer Annexure C
		Materials used as—	
e	Lift core	 (a) floor linings and floor coverings must have a critical radiant flux not less than 2.2; and 	CRA – Refer
0.	Litt Cars	(b) wall and ceiling linings must be a Group 1 material or a Group 2 material in accordance with AS 5637.1:2015.	Annexure C
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 of Specification C1.10.	CRA – Refer Annexure C

Section D: Access and Egress			
Part D	1 – Provision for Escap	e	
D1.0:	Deemed-to-Satisfy Provisions	Informational	Noted
D1.1:	Application of Part	Informational	Noted
D1.2:	Number of exits required	Not less than 2 exits are required if the storey accommodates more than 50 persons, calculated under D1.13. It is understood that the occupants of the office will have access to both exit stairs serving the floor.	Complies
D1.3:	When fire-isolated stairways and ramps are required	Not applicable – egress from the first-floor office will rely on the existing exit stair which connects only 2 storeys and is therefore not required to be fire-isolated.	N/A
D1.4:	Exit travel distances	No point on a floor must be more than 20 m from an <i>exit</i> , or a point from which travel in different directions to 2 <i>exits</i> is available, in which case the maximum distance to one of those <i>exits</i> must not exceed 40 m.	Complies

Section	Section D: Access and Egress			
D1.5:	Distance between alternative exits	 Exits that are required as alternative means of egress must be– (a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas; and (b) not less than 9 m apart; and (c) not more than 60 m apart; and (d) located so that alternative paths of travel do not converge such that they become less than 6 m apart 	Complies	
D1.6:	Dimensions of exits and paths of travel to exits	 The unobstructed height of the new doorway must be not less than 1980 mm; and the unobstructed width of each path of travel to an <i>exit</i>, except for doorways must be not less than 1m. 	CRA – Refer Annexure C	
D1.7:	Travel via fire-isolated exits	Not applicable	N/A	
D1.8:	External stairways or ramps in lieu of fire- isolated exits	Not applicable	N/A	
D1.9:	Travel by non-fire- isolated stairways or ramps	 The non-fire-isolated stairway serving as a required <i>exit</i> must provide a continuous means of travel by its own flights and landings from every storey served to the level at which egress to a road or open space is provided. The distance from any point on a floor to a point of egress to a road or open space by way of the required non-fire-isolated stairway must not exceed 80m. The required non-fire-isolated stairway must discharge at a point not more than 20 m from a doorway providing egress to a road or open space. 	Complies	
D1.10:	Discharge from exits	 <i>Exits</i> must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the <i>exit</i>. If a required <i>exit</i> leads to open space, the path of travel to the road must have an unobstructed width of not less than 1m. 	Complies	
D1.11:	Horizontal exits	Not applicable	N/A	

Section D: Access and Egress			
D1.12:	Non-required stairways, ramps or escalators	Not applicable	N/A
		Informational-	
		The number of persons accommodated in a storey, room or mezzanine must be determined within consideration to the purpose for which it is used and the layout of the floor area by-	
D1.13:	Number of persons	 (a) calculating the sum of the numbers obtained by dividing the floor area of each part of the storey by the number of square metres per person listed in BCA Table D1.13 according to the use of that part, excluding spaces set aside for— 	Noted
	accommodated	(i) lifts, stairways, ramps and escalators, corridors, hallways, lobbies and the like; and	
		(ii) service ducts and the like, sanitary compartments or other ancillary uses; or	
		 (b) reference to the seating capacity in an assembly building or room; or 	
		(c) any other suitable means of assessing its capacity.	
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	Not applicable	N/A
D1.17:	Access to lift pits	Where a lift is proposed and the lift pit is less than 3m deep, access to the lift pit must be through the bottom landing doors.	CRA – Refer Annexure C
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	Not applicable	N/A
D2.3:	Non-fire-isolated stairways and ramps	Not applicable – the stairways serving as the exits from the new works are existing.	N/A

Section	Section D: Access and Egress			
D2.4:	Separation of rising and descending stair flights	Not applicable	N/A	
D2.5:	Open access ramps and balconies	Not applicable	N/A	
D2.6:	Smoke lobbies	Not applicable	N/A	
D2.7:	Installations in exits and paths of travel	Any proposed electrical boards proposed must be enclosed with <i>non-combustible</i> 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	Not applicable	N/A	
D2.9:	Width of stairways and ramps	Not applicable	N/A	
D2.10:	Pedestrian ramps	Not applicable	N/A	
D2.11:	Fire-isolated passageways	Not applicable	N/A	
D2.12:	Roof as open space	Not applicable	N/A	
D2.13:	Goings and risers	Not applicable	N/A	
D2.14:	Landings	Not applicable	N/A	
D2.15:	Thresholds	The threshold of the proposed office doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf. Further details are required of the proposed floor levels.	FI Refer to Part 5 of Report	
D2.16:	Barriers to prevent falls	Not applicable	N/A	
D2.17:	Handrails	Not applicable	N/A	
D2.18:	Fixed platforms, walkways stairways and ladders	Not applicable	N/A	
D2.19:	Doorways and doors	Not applicable	N/A	
D2.20:	Swinging doors	Not applicable	N/A	
D2.21:	Operation of latch	The new doorway to the office must be readily openable without a key from the side that faces a person seeking egress, by-	CRA – Refer Annexure C	



Section	D: Access and Egress	\$	
		 (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- 	
		 (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.	
		Any new doorway installed at the main entry to the building at ground level (as required for compliance of the 'affected part') must be fitted with a panic bar located between 900 mm and 1.2m from the floor.	
D2.22:	Re-entry from fire- isolated exits	Not applicable	N/A
D2.23:	Signs on doors	Not applicable	N/A
D2.24:	Protection of openable windows	Not applicable	N/A
D2.25:	Timber stairways: concession	Not applicable	N/A
Part D3	B – Access for People v	vith A Disability	
D3.0:	Deemed-to-Satisfy Provisions	Informational	Noted
		Access complying with AS 1428.1:2009 must be provided to and within all areas of the proposed works.	
D3.1:	General building access requirements	The proposed works must comply with AS 1428.1-2009, including the requirements for flooring, door circulation space, luminance contrast of doorways and door hardware.	CRA – Refer Annexure C
D3.2:	Access to buildings	Not applicable	N/A
D3.3:	Parts of buildings to be accessible	Accessways must have turning spaces (1540 mm x 2070 mm) within 2m of the end of the accessway. Ensure turning space is provided at the end of accessways between any fixed workstation desks etc.	CRA – Refer Annexure C
D3.4:	Exemptions	Not applicable	N/A
D3.5:	Accessible car parking	Not applicable	N/A

Section D: Access and Egress			
D3.6:	Signage	 Braille and tactile signage complying with Specification D3.6 and incorporating the international symbol of access, must identify the exit door 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) 	CRA – Refer Annexure C
D3.7:	Hearing augmentation	Not applicable	N/A
D3.8:	Tactile indicators	Where works are proposed to the flooring in the vicinity of the existing stairway, tactile ground surface indicators must be provided to indicate the stairway in accordance with sections 1 and 2 of AS/NZS 1428.4.1:2009.	CRA – Refer Annexure C
D3.9:	Wheelchair seating spaces in Class 9b assembly buildings	Not applicable	N/A
D3.10:	Swimming pools	Not applicable	N/A
D3.11:	Ramps	Not applicable	N/A
D3.12:	Glazing on an Accessway	Any frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1:2009.	CRA – Refer Annexure C

Section E: Services and Equipment			
Part E	1 – Fire Fighting Equipr	nent	
E1.0:	Deemed-to-Satisfy Provisions	Informational	Noted
E1.3:	Fire hydrants	The proposed office must be provided with coverage from the existing fire hydrant system, in accordance with AS 2419.1:2005	CRA – Refer Annexure C
E1.4:	Fire hose reels	The proposed office is provided with coverage from the existing fire hose reel at first floor level.	Complies
E1.5:	Sprinklers	Not applicable	N/A
E1.6:	Portable fire extinguishers	A portable fire extinguisher must be provided to cover Class A fire risks, in accordance with clause E1.6 & Table E1.6 of the BCA and must be selected and located in accordance with Sections 1, 2, 3 and 4 of AS 2444:2001.	CRA – Refer Annexure C

Section	Section E: Services and Equipment			
E1.8:	Fire control centres	Not applicable	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 <i>exit</i> .	Note	
E1.10:	Provision for special hazards	Not applicable	N/A	
Part E2	2 – Smoke Hazard Mana	agement		
E2.0:	Deemed-to-Satisfy Provisions	Informational	Noted	
E2.1:	Application of Part	Informational	Noted	
F2 2.		A smoke detection and alarm system and building occupant warning system must be installed in accordance with Clauses 4 & 7 of BCA Specification E2.2a.	FI	
E2.2:	(including Tables E2.2a and E2.2b)	'smoke alarms' as a fire safety measure in lieu of 'smoke detection and alarm system'. Clarification is required from the electrical consultant as to whether the existing system achieves compliance with Clauses 4 & 7 of BCA Specification E2.2a and the relevant parts of AS 1670.1-2018.	Refer to Part 5 of Report	
E2.3:	Provisions for special hazards	Not applicable	N/A	
Part E3	3 – Lift Installations			
E3.0:	Deemed-to-Satisfy Provisions	Informational	Noted	
E3.1:	Lift installations	Any proposed electric passenger lift installation or electrohydraulic passenger lift installation must comply with Specification E3.1	CRA – Refer Annexure C	
E3.2:	Stretcher facility in lifts	Not applicable	N/A	
E3.3:	Warning against use of lifts in fire	Warning signs indicating "DO NOT USE LIFT IF THERE IS A FIRE" shall be displayed near the call button for any proposed passenger lift, as per E3.3.	CRA – Refer Annexure C	
E3.4:	Emergency lifts	Not applicable	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.	CRA – Refer Annexure C	



Section	n E: Services and Equip	oment	
E3.6:	Passenger lifts	Any proposed passenger lift must be one of the types specified in Table E3.6a, have accessible features in accordance with Table E3.6b, and not rely on a constant pressure device.	CRA – Refer Annexure C
E3.7:	Fire service controls	Not applicable	N/A
E3.8:	Aged care buildings	Not applicable	N/A
E3.9:	Fire service recall switch	Not applicable	N/A
E3.10:	Lift car service drive control switch	Not applicable	N/A
Part E4	I – Visibility in an Emer	gency, Exit Signs and Warning Systems	
E4.0:	Deemed-to-Satisfy Provisions	Informational	Noted
E4.2:	Emergency lighting requirements	Not applicable	N/A
E4.3:	Measurement of distance	Informational	Noted
E4.4:	Design and operation of emergency lighting	Not applicable	N/A
E4.5:	Exit signs	Not applicable	N/A
E4.6:	Direction signs	An exit sign must be provided above the sliding door to the meeting room, on the side of the office, to indicate that egress via the northern stairway is available.	CRA – Refer Annexure C
E4.7:	Class 2 and 3 buildings and Class 4 Parts: Exemptions	Informational	Noted
E4.8:	Design and operation of exit signs	The required exit sign must comply with AS/NZS 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	Not applicable	N/A

Section F: Health and Amenity			
Part F1 – Damp and Weatherproofing			
F1.0:	Deemed-to-Satisfy Provisions	<i>Performance Requirement</i> FP1.4, for the prevention of the penetration of water through external walls, must be complied with. There are no Deemed-to-Satisfy	PS required

Sectio	Section F: Health and Amenity			
		Provisions for this <i>Performance Requirement</i> in respect of external walls. The assessment contained within this report does not include an assessment against Performance Provision FP1.4.		
F1.1:	Stormwater drainage	New stormwater drainage works must comply with AS/NZS 3500.3:2018.	CRA – Refer Annexure C	
F1.4:	External above ground membranes	Not applicable	N/A	
F1.5:	Roof coverings	The new roof covering must comply with BCA Clause F1.5. Metal sheet roofing to comply with AS 1562.1.	CRA – Refer Annexure C	
F1.6:	Sarking	Sarking-type materials used for weatherproofing must comply with AS/NZS 4200 Part 1 and 2:2017.	CRA – Refer Annexure C	
F1.7:	Water proofing of wet areas in buildings	Not applicable	N/A	
F1.9:	Damp-proofing	Not applicable	N/A	
F1.10:	Damp-proofing of floors on the ground	Not applicable	N/A	
F1.11:	Provision of floor wastes	Not applicable	N/A	
F1.12:	Sub-floor ventilation	Not applicable	N/A	
F1.13:	Glazed Assemblies	New glazed assemblies must comply with AS 2047:2014 and AS 1288:2006.	CRA – Refer Annexure C	
Part F2	2 – Sanitary and Other F	Facilities		
F2.0:	Deemed-to-Satisfy Provisions	Informational	Noted	
F2.1:	Facilities in residential buildings (including Table F2.1)	Not applicable	N/A	
F2.2:	Calculation of number of occupants and facilities	Informational	Noted	
F2.3:	Facilities in Class 3 to 9 buildings (including Table F2.3)	Not applicable – no new sanitary facilities are proposed as part of the works. The occupants of the office will have access to the existing sanitary facilities located on the ground floor.	N/A	
F2.4:	Accessible sanitary facilities (including Table F2.4)	Not applicable	N/A	



Sectio	Section F: Health and Amenity			
F2.5:	Construction of sanitary compartments	Not applicable	N/A	
F2.6:	Interpretation: urinals and washbasins	Not applicable	N/A	
F2.8:	Waste Management	Not applicable	N/A	
F2.9:	Accessible adult change facilities	Not applicable	N/A	
Part F3	3 – Room Sizes			
F3.0:	Deemed-to-Satisfy Provisions	Informational	Noted	
F3.1:	Height of rooms and other spaces	The ceiling height within the new office must be not less than 2.4m.	CRA – Refer Annexure C	
Part F4	4 – Light and Ventilation	n		
F4.0:	Deemed-to-Satisfy Provisions	Informational	Noted	
F4.1:	Provision of natural light	Not applicable	N/A	
F4.2:	Methods and extent of natural lighting	Not applicable	N/A	
F4.3:	Natural light borrowed from adjoining room	Not applicable	N/A	
F4.4:	Artificial Lighting	New lighting is to comply with AS/NZS 1680.0:2009.	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 airconditioning system complying with AS 1668.2:2012.	CRA – Refer Annexure C	
F4.6:	Natural ventilation	 Natural ventilation provided in accordance with F4.5(a) must consist of permanent openings, windows, doors or other devices which can be opened— (i) with an aggregate opening or openable size not less than 5% of the floor area of the room required to be ventilated; and (ii) open to— (A) a suitably sized court, or space open to the sky; or (B) an open verandah, carport, or the like; 	CRA – Refer Annexure C	

Section F: Health and Amenity			
		(C) an adjoining room in accordance with F4.7.	
F4.7:	Ventilation borrowed from adjoining room	Ventilation may be 'borrowed' from adjoining rooms in some instances in accordance with this clause.	CRA – Refer Annexure C
F4.8:	Restriction on position of water closets and urinals	Not applicable	N/A
F4.9:	Airlocks	Not applicable	N/A
F4.11:	Carparks	Not applicable	N/A
F4.12:	Kitchen local exhaust ventilation	Not applicable	N/A
Part F5 – Sound Transmission and Insulation			
Part F5 is not applicable			
Part F6 – Condensation Management			
Part F6 is not applicable			

Section G: Ancillary Provisions

Section G is not applicable

Section H: Special Use Buildings

Section H is not applicable

Section I: Maintenance

Part I1 – Equipment and Safety Installations

This Part has been deleted in BCA2019.

Section J: Energy Efficiency			
Part J0 – Energy Efficiency			
Part J0 is not applicable			
Part J1 – Building Fabric			
J1.0:	Deemed-to-Satisfy Provisions	Informational	Noted



Sectio	n J: Energy Efficiency			
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 AS/NZS 4859.1:2018 and be installed in accordance with this clause. The required Total R-Value and Total System U- Value, must be determined in accordance with Clause J1.2 (e).	CRA – Refer Annexure C	
J1.3:	Roof and ceiling construction	 A roof or ceiling must achieve a Total R-Value greater than or equal to R3.7 for a downward direction of heat flow; and 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	Not applicable	N/A	
J1.5:	Walls	 (a) The Total System U-Value of wall-glazing construction must not be greater than U2.0. (b) The Total System U-Value of wall-glazing construction must be calculated in accordance with Specification J1.5a. (c) 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. (d) The solar admittance of externally facing wall-glazing construction must not be greater than the values specified in Table J1.5b. (e) The solar admittance of a wall-glazing construction must be calculated in accordance with Specification J1.5a. 	CRA – Refer Annexure C	
J1.6:	Floors	Not applicable	N/A	
Part J2	Part J2 – Glazing			
J2.0:	Deemed-to-Satisfy Provisions	Part J2 has deliberately been left blank from the BCA2019	Noted	
Part J3 – Building Sealing				
J3.0:	Deemed-to-Satisfy Provisions	Informational	Noted	
J3.1:	Application of Part	Informational	Noted	

Section J: Energy Efficiency			
J3.2:	Chimneys and flues	Not applicable	N/A
J3.3:	Roof lights	Not applicable	N/A
J3.4:	Windows and doors	Not applicable	N/A
J3.5:	Exhaust fans	Not applicable	N/A
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	Not applicable	N/A
Part J4	ŀ		
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
J5.1:	Application of Part	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



Section J: Energy Efficiency			
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	6 – Artificial Lighting an	d Power	
J6.0:	Deemed-to-Satisfy Provisions	Informational	Noted
J6.1:	Application of Part	Informational	Noted
J6.2:	Artificial lighting	Artificial lighting must comply with BCA Clause J6.2. Design certification to be provided by the electrical designer.	CRA – Refer Annexure C
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	Not applicable	N/A
J6.5:	Exterior artificial lighting	Not applicable	N/A
J6.6:	Boiling water and chilled water storage units	Not applicable	N/A
J6.7:	Lifts	Any proposed lift must be configured to ensure artificial lighting and ventilation in the car are turned off when it is unused for 15 minutes; it also must achieve energy control requirements that comply to Clause J6.7 (b) and (c).	CRA – Refer Annexure C
J6.8:	Escalators and moving walkways	Not applicable	N/A
Part J7 – Heated Water Supply			
J7.0:	Deemed-to-Satisfy Provisions	Informational	Noted
J7.2:	Heated water supply system	Not applicable	N/A
Part J8 – Facilities for Energy Monitoring			

Section J: Energy Efficiency			
J8.0:	Deemed-to-Satisfy Provisions	Informational	Noted
J8.1:	Application of Part	Informational	Noted
J8.3:	Facilities for energy monitoring	Not applicable	N/A

ANNEXURE C BCA COMPLIANCE SPECIFICATION

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 building elements for the proposed works have been designed in accordance with Table 3 of Specification C1.1 of BCA2019 for a building of Type A Construction.
- 2. Lightweight construction used to achieve required fire resistance levels will comply with Specification C1.8 of BCA2019.
- 3. Building elements will be non-combustible in accordance with C1.9 of BCA2019.
- 4. Materials, floor and wall linings/coverings, surface finishes and air-handling ductwork used in the works will comply with the fire hazard properties of Clause C1.10 and Specification C1.10 of BCA2019.
- 5. Any ancillary elements fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible will comply with Clause C1.14 of BCA2019.
- 6. Vertical separation will be provided to the new openings in the external walls in accordance with Clause C2.6 of BCA2019.
- Services penetrating elements required to possess an FRL including the floor slabs, walls, shafts, etc. will be protected in accordance with Clause C3.12 and C3.15 and Specification C3.15 of BCA2019.
- 8. The lift doors will be --/60/- fire doors complying with AS 1735.11:1986 in accordance Clause C3.10 of BCA2019.
- 9. Enclosure of any proposed shafts will comply with Clause 2.7 of Specification C1.1 of BCA2019.
- 10. The dimensions of exits and paths of travel to exits will be provided in accordance with Clause D1.6 of BCA2019.
- 11. Access to the lift pit will be in accordance with Clause D1.17 of BCA2019.
- 12. The construction of any proposed electrical boards will be in accordance with Clause D2.7 of BCA2019 with the enclosure bounded by non-combustible construction or fire protective covering and smoke seals provided around the perimeter of the non-combustible doors and any openings sealed with non-combustible mastic to prevent smoke spreading from the enclosure.
- 13. The door threshold of the office door will comply with clause D2.15 of BCA2019.
- 14. Door latching mechanisms will be in accordance with Clause D2.21 of BCA2019
- 15. The new works will be accessible in accordance with Clause D3.1 and table D3.1, D3.2, D3.3 of BCA2019, and with AS 1428.1:2009, with particular note to door circulation spaces, luminance contrast to doorways, turning spaces and floor coverings, in accordance with Part D3 of BCA2019.
- 16. Braille and tactile signage will in accordance with Clause D3.6, and Specification D3.6 of BCA2019.
- 17. Tactile ground surface indicators will be provided in accordance with Clause D3.8 of BCA2019 and AS/NZS 1428.4.1:2009 where works to flooring are proposed in the vicinity of the existing stairway.
- 18. All frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, will be clearly marked in accordance with AS 1428.1:2009 and Clause D3.12 of BCA2019.



- 19. Fire precautions whilst the building is under construction fire precautions will be in accordance with Clause E1.9 of BCA2019.
- 20. The new roof covering will be in accordance with Clause F1.5 of BCA2019.
- 21. Any sarking proposed will be installed in accordance with Clause F1.6 of BCA2019.
- 22. All new glazing to be installed throughout the development will be in accordance with Clause F1.13 of BCA2019 and AS 1288:2006 / AS 2047:2014.
- 23. Ceiling heights to the new areas will be in accordance with Clause F3.1 of BCA2019.
- 24. Building Fabric and Thermal Construction will be in accordance with Part J1 of BCA2019.
- 25. New glazing will be in accordance with Part J1 of BCA2019.
- 26. Building sealing will be in accordance with Part J3 of BCA2019.

Electrical Services Design Certification:

- 27. A smoke detection and alarm system will be installed throughout the building in accordance with Table E2.2a, and clauses 4 & 7 of Specification E2.2a of BCA2019.
- 28. Emergency lighting will be installed throughout the development in accordance with Clause E4.2, E4.4 of BCA2019 and AS/NZS 2293.1:2018.
- 29. Exit signage will be installed in accordance with Clause E4.6 and E4.8 of BCA2019 and AS/NZS 2293.1:2018.
- 30. New artificial lighting will comply with Clause F4.4 of BCA2019 and AS/NZS 1680.0:2009.
- 31. Lighting power and controls will be installed in accordance with Part J6 of BCA2019.

Hydraulic Services Design Certification:

- 32. New storm water drainage works will be completed in accordance with Clause F1.1 of BCA2019 and AS/NZS 3500.3:2018
- 33. Fire hydrant system coverage will be provided in accordance with Clause E1.3 of BCA2019 and AS 2419.1:2005.
- 34. A portable fire extinguisher will be installed in accordance with Clause E1.6 of BCA2019 and AS 2444:2001.

Mechanical Services Design Certification:

- 35. Where not naturally ventilated the new works will be mechanically ventilated in accordance with Clause F4.5 of BCA2019 and AS 1668.2:2012.
- 36. Any proposed air-conditioning and ventilations systems will be designed and installed in accordance with Part J5 of BCA2019

Structural Engineers Design Certification:

- 37. 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:
 - a. Dead and Live Loads AS/NZS 1170.1:2002
 - b. Wind Loads AS/NZS 1170.2:2011
 - c. Earthquake actions AS 1170.4:2007
 - d. Masonry AS 3700:2018
 - e. Concrete Construction AS 3600:2018



- f. Steel Construction AS 4100:1998
- g. Aluminium Construction AS/NZS 1664.1 or 2:1997
- 38. The FRL's of the structural elements for the proposed works have been designed in accordance with Specification C1.1 of BCA2019, including Table 3 for a building of Type A Construction.
- 39. The lift shaft will have an FRL in accordance with Clause C2.10 and Specification C1.1 of BCA2019.
- 40. Lightweight construction used to achieve required fire resistance levels will comply with Specification C1.8 of BCA2019.

Lift Services Design Certification:

- 41. Warning signage in accordance with Clause E3.3 of BCA2019 will be provided to the lift to advise not to use the lifts in a fire.
- 42. 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.
- 43. 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.
- 44. The lifts will comply with AS 1735.12:1999 in accordance with Clause E3.6 of BCA2019.
- 45. All electric passenger lifts and electrohydraulic passenger lifts shall comply with Specification E3.1 of BCA2019.