BCA LOGIC

Building Regulation, BCA,
Fire, Access and Energy Consultants

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Project:	Newport Surf Life Saving Club
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		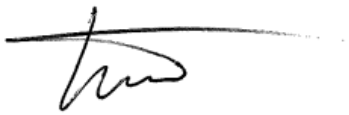	

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EXECUTIVE SUMMARY

This document provides an assessment of the architectural design drawings for the proposed new development at Newport Surf Life Saving Club, against the Deemed-to-Satisfy provisions of the Building Code of Australia (BCA) 2019, Volume 1.

Part 5 'Matters for Further Consideration' of this report outlines the identified BCA compliance issues that require further information or consideration and/or assessment as Performance Solutions.

Any Performance Solution will need to be detailed in a separate report and must clearly indicate methodologies for achieving compliance with the relevant BCA Performance Requirements.

Item	Description	BCA Provision
Building Code of Australia Compliance Matters to be Addressed		
1.	A fire hydrant system is necessary as the building as a floor area greater than 500m2. If existing external hydrants are available, they shall be assessed for pressure, flow, and coverage as per AS2419.1-2005	E1.3

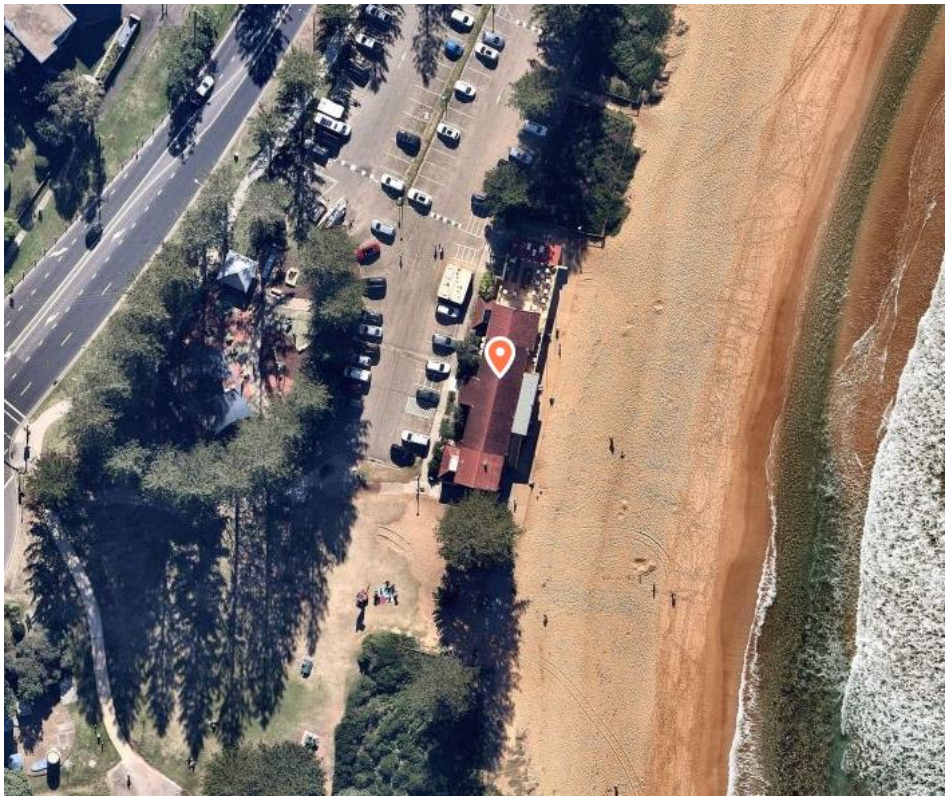
Annexure B to this report provides a detailed assessment of the proposal against ALL relevant Deemed-to-Satisfy Provisions of the BCA.

1 BASIS OF ASSESSMENT

1.1. Location and Description

The building development, the subject of this report, is located at 394 Barrenjoey Rd, Newport. The building is also known as the Newport Surf Life Saving Club and includes two (2) floors, featuring a terrace on the first floor.

Direct vehicular access is provided to the building from Barrenjoey Road. Pedestrian entry is from Barrenjoey Rd and from the beach front.



1.2. Purpose

The purpose of this report is to assess the current design proposal against the Deemed-to-Satisfy Provisions of BCA 2019 Amendment 1, 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, Amendment 1 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) 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 D3 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 Australian Standards unless specifically referred to;

(f) 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

(g) 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.

1.6. Definitions

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.

Envelope

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.

Exit

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—

(i) the Performance Requirements — any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any openings adequately protected; or

(ii) the Deemed-to-Satisfy Provisions — any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that required for a fire wall for that type of construction and where all openings in the separating construction are protected in accordance with the Deemed-to Satisfy Provisions of the relevant Part.

Fire-resistance level (FRL)

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.

Group number

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.

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 Two (2).

2.2. Classification (Clause A6.0)

The building has been classified as follows;

Table 1. Building Classification

Class	Level	Description
Class 7b	Part Ground Level	Storage Gear Compound
Class 9b	Ground Level – First Floor	Surf Lifesaving club facilities including a retail tenancy

Note: The Class 6 is not more than 10% of the floor area of the storey and therefore will not require a separate classification.

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

2.6. Fire Compartments

The entire building is considered to be one fire compartment.

2.7. Exits

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

(a) Doors leading from storage gear compound

(b) Front and rear entrance doors

(c) Level 1 - Top riser of both non-fire isolated stairs

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 far boundary of Bert Payne Park

South: Bert Payne Park

East: Newport Beach

West: Barrenjoey Road

A *fire-source feature* is defined in Section A1.1 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.

In accordance with Clause 2.1 of Specification C1.1, a part of 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–

(a) has an FRL of not less than 30/–/–; and

(b) is neither transparent nor translucent.

3 MATTERS FOR FURTHER CONSIDERATION

3.1. 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.

3.2. 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.

3.3. Façade Construction – Non-Combustible

As the building is required to be of Type B, the external façade is required to be *non-combustible* and comply with Clause C1.9 of BCA2019 which states as follows:

(a) In a building required to be of Type B construction, the following building elements and their components must be *non-combustible*:

  (i) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation.

  (ii) The flooring and floor framing of lift pits.

  (iii) Non-*loadbearing* internal walls where they are required to be fire-resisting.

(b) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of *non-combustible* construction in—

  (i) a building required to be of Type B construction, subject to C2.10, in—

    (A) a Class 2, 3 or 9 building; and

    (B) a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys.

(c) A l*oadbearing* internal wall and a *loadbearing fire wall*, including those that are part of a *loadbearing* shaft, must comply with Specification C1.1.

(d) The requirements of (a) and (b) do not apply to gaskets, caulking, sealants, termite management systems, Glass including laminated glass, thermal breaks associated with glazing systems and damp-proof courses.

(e) The following materials, may be used wherever a *non-combustible* material is required:

  (i) Plasterboard.

  (ii) Perforated gypsum lath with a normal paper finish

(iii) Fibrous-plaster sheet.

(iv) Fibre-reinforced cement sheeting.

(v) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0.

(vi) *Sarking-type materials* that do not exceed 1 mm in thickness and have a *Flammability Index* not greater than 5.

(vii) Bonded laminated materials where—

(A) each lamina, including any core, is *non-combustible*; and

(B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and

(C) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively.

Currently the external façade construction has been nominated on the plans as follows:

- Northern elevation –No external wall construction nominated on plans – further assessment required as design progresses to ensure *non-combustible* wall construction complies with above.
- Southern elevation –No external wall construction nominated on plans – further assessment required as design progresses to ensure *non-combustible* wall construction complies with above.
- Eastern elevation –No external wall construction nominated on plans – further assessment required as design progresses to ensure *non-combustible* wall construction complies with above.
- Western elevation –No external wall construction nominated on plans – further assessment required as design progresses to ensure *non-combustible* wall construction complies with above.

It is also noted that this clause also prohibits the use of in situ formwork containing combustible elements including PVC lined formwork products where the PVC lining remains in place for the life of the building where proposed to be used as an external wall element, common walls, the flooring and floor framing of lift pits, services riser shafts or non-*loadbearing* internal walls required to be fire resisting.

Note that perimeter walls of basement (below ground) floor levels are also deemed to be external walls.

3.4. BCA Compliance Matters to be Addressed

1. A fire hydrant system is necessary as the building is being extended and has a floor area greater than 500m2. If existing external hydrants are available, they shall be assessed for pressure, flow and coverage as per AS2419.1-2005

ANNEXURE A DESIGN DOCUMENTATION

Annexure A – Design Documentation

This report has been based on the following design documentation.

Table 2. Architectural Plans

Architectural Plans Prepared by Adriano Pupilli and Associates			
Drawing Number	**Revision**	**Date Title**	**Title**
000	A	02/08/2020	Cover
001	A	02/09/2020	Survey
002	A	02/09/2020	Site Analysis
003	A	02/09/2020	Site Plan
004	A	02/09/2020	Demolition Plan
005	A	02/09/2020	Existing Ground Floor Plan
006	A	02/09/2020	Existing First Floor Plan
007	A	02/09/2020	Existing Roof Plan
008	A	02/09/2020	Existing Section Plan
009	A	02/09/2020	Existing Elevations Plan
010	A	02/09/2020	Proposed Ground Floor Plan
011	A	02/09/2020	Proposed First Floor Plan
012	A	02/09/2020	Proposed Roof Plan
013	A	02/09/2020	Proposed Section Plan
014	A	02/09/2020	Proposed Elevation Plan
015	A	02/09/2020	Schedule of Colours and Materials
018	A	02/09/2020	Proposed Landscape Plan

ANNEXURE B ESSENTIAL SERVICES

Annexure B - Essential Services

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 3. Essential Fire Safety Measures

Item	Essential Fire and Other Safety Measures	Standard of Performance
Fire Resistance (Floors – Walls – Doors – Shafts)		
1.	Fire seals protecting openings in fire resisting components of the building	**BCA2019 C3.15** (Openings for service installations) **BCA2019 Spec C3.15** AS1530.4:2014 & AS4072.1-2005
2.	Lightweight construction > FRL30/30/30 Fire Rating of floor/ceiling	**BCA2019 C1.1, Spec. C1.1** AS1530.4:2014
General		
3.	Portable fire extinguishers	**BCA2019 E1.6** AS 2444–2001
4.	Fire blankets	AS 2444–2001
Electrical Services		
5.	Emergency lighting	**BCA2019 E4.2, E4.4** AS/NZS 2293.1:2018
6.	Exit signs	**BCA2019 E4.5** (Exit Signs) **BCA2019 E4.6** (Direction Signs) **BCA2019 E4.8** (Design and Operation - Exits) AS/NZS 2293.1:2018
Hydraulic Services		
7.	Fire hydrant systems > NSW Storz Couplings	**BCA2019 E1.3** AS 2419.1:2005 FRNSW Technical Sheet D15/45534.V9 issued 10.01.19, 'Compatible Hose Connections'
8.	Hose reel systems	**BCA2019 E1.4** AS 2441:2005

ANNEXURE C FIRE RESISTANCE LEVELS

Annexure C - Fire Resistance Levels

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.

Type B Construction

Table 4. Type B Construction

Item	Class 9b
Loadbearing External Walls - Less than 1.5m to a *fire- source feature* - 1.5 – less 3m from *fire- source feature* - 3 – less 9m from *a fire- source feature* - 9 – less 18m from a *fire- source feature* - 18m or more from a *fire- source feature*	120/120/120 120/90/60 120/30/30 120/30/- -/-/-
Non-Loadbearing External Walls - Less than 1.5m to a *fire- source feature* - 1.5 – less 3m from *fire- source feature* - 3m or more from a *fire- source feature*	-/120/120 -/90/60 -/-/-
Loadbearing External Columns - Less than 18m - 18m or more	120/-/- -/-/-
Non-Loadbearing External Columns	-/-/-
Common Walls & Fire Walls	120/120/120
Stair and Lift Shafts required to be fire-resisting - Loadbearing Stair & Lift shaft - Non-loadbearing Stair shaft only	120/120/120 -/120/120
Internal walls bounding sole occupancy units - Loadbearing - Non-loadbearing	120/-/- -/-/-
Internal walls bounding public corridors, public lobbies, and the like: - Loadbearing - Non-loadbearing	120/-/- -/-/-
Other loadbearing internal walls and columns	120/-/-
Roofs	-/-/-

In a Class 9b building, a floor separating storeys, must—

(c) be constructed so that it is at least of the standard achieved by a floor/ceiling system incorporating a ceiling which has a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or

(d) have an *FRL* of at least 30/30/30; or

(e) have a fire-protective covering on the underside of the floor, including beams incorporated in it, if the floor is combustible or of metal; and

ANNEXURE D DETAILED BCA 2019 ASSESSMENT

Annexure D – 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 – Refer Annexure E	'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 E 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	Clause Requirements	Comment	Status
Section B: Structure			
Part B1 – Structural Provisions			
B1.0: Deemed-to-Satisfy Provisions	Informational	Noted	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 E
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 E
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 to certify at CC stage.	CRA – Refer Annexure E
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 at CC stage.	CRA – Refer Annexure E
B1.6 Construction of buildings in flood hazard areas	A Class 2 or 3 building, Class 9a health care building, Class 9c aged-care building or Class 4 part of a building, in a flood hazard area (refer to Council maps) must comply the ABCB Standard for Construction of Buildings in Flood Hazard Areas.	N/A	N/A

Section C: Fire Resistance			
Part C1 – Fire Resistance and Stability			
C1.0: Deemed-to-Satisfy Provisions	Informational	Noted	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.	Based upon rise in storeys of two the building is Type B Construction.	CRA – Refer Annexure E
C1.2: Calculation of rise in storeys	The building has a rise in storeys of two (2).	Noted	Noted
C1.3: Buildings of multiple classification	Informational	Noted	Noted
C1.4: Mixed Types of construction	A building may be of mixed Types of construction where it is separated in accordance with C2.7 and the Type of construction is determined in accordance with C1.1 or C1.3.	This building is a single Type of Construction	N/A
C1.5: Two Storey Class 2, 3 or 9c buildings	N/A.	N/A	N/A
C1.6: Class 4 Parts of building	N/A.	N/A	N/A
C1.7: Open spectator stands and indoor sports stadium	N/A.	N/A	N/A
C1.8: Lightweight construction	Lightweight construction used in a fire-rated application is to comply with Specification C1.8.	Further assessment to be undertaken at Construction Certificate Stage after wall details have been provided.	CRA – Refer Annexure E

Section C: Fire Resistance				
C1.9:	Non-combustible building elements	(a) In a building required to be of Type A or B construction, the following building elements and their components must be *non-combustible*: (i) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation. (ii) The flooring and floor framing of lift pits. (iii) Non-loadbearing internal walls where they are required to be fire-resisting. (a) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of *non-combustible* construction in— (i) a building required to be of Type A construction; and (ii) a building required to be of Type B construction, subject to C2.10, in— (A) a Class 2, 3 or 9 building; and (B) Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys. (b) A loadbearing internal wall and a loadbearing *fire wall*, including those that are part of a loadbearing shaft, must comply with Specification C1.1. (c) The requirements of (a) and (b) do not apply to gaskets, caulking, sealants, termite management systems, Glass including laminated glass, thermal breaks associated with glazing systems and damp-proof courses. (d) The following materials, may be used wherever a *non-combustible* material is required: (i) Plasterboard.	Further assessment to be undertaken at Construction Certificate Stage to demonstrate the construction of the walls and materials used complies with this clause. Note: This clause also prohibits the use of in situ formwork containing combustible elements including PVC lined formwork products where the PVC lining remains in place for the life of the building. Where the use of such products is proposed – in all instances the material must be the subject of a site specific Performance Assessment Report.	CRA – Refer Annexure E

Section C: Fire Resistance			
	(ii) Perforated gypsum lath with a normal paper finish. (iii) Fibrous-plaster sheet. (iv) Fibre-reinforced cement sheeting. (v) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. (vi) *Sarking-type materials* that do not exceed 1 mm in thickness and have a *Flammability Index* not greater than 5. (vii) Bonded laminated materials where— (A) each lamina, including any core, is *non-combustible*; and (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and (C) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively.		
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*.	Further information is required to assess the compliance of this item with regards to the internal linings used throughout the building.	CRA – Refer Annexure E
C1.11: Performance of external walls in fire	N/A.	N/A	N/A

Section C: Fire Resistance			
C1.12: Non-combustible materials	N/A.	N/A	N/A
C1.13: Fire-protected timber: Concession	N/A.	N/A	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 it is one of the following: (a) An ancillary element that is *non-combustible*. (b) A gutter, downpipe or other plumbing fixture or fitting. (c) A flashing. (d) A grate or grille not more than 2 m² in area associated with a building service. (e) An electrical switch, socket-outlet, cover plate or the like. (f) A light fitting. (g) A required sign. (h) A sign other than one provided under (a) or (g) that— (i) achieves a group number of 1 or 2; and (ii) does not extend beyond one storey; and (iii) does not extend beyond one fire compartment; and (iv) is separated vertically from other signs permitted under (h) by at least 2 storeys. (i) An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that—	No information at this stage. To be further assessed with design development	CRA – Refer Annexure E

Section C: Fire Resistance			
	(i) meets the relevant requirements of Table 4 of Specification C1.10 as for an internal element; and (ii) serves a storey— (A) at ground level; or (B) immediately above a storey at ground level; and (iii) does not serve an *exit*, where it would render the *exit* unusable in a fire. (j) A part of a security, intercom, or announcement system. (k) Wiring. (l) A paint, lacquer, or a similar finish. (m) A gasket, caulking, sealant or adhesive directly associated with (a) to (k).		
Part C2 – Compartment and Separation			
C2.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
C2.1: Application of Part	Informational - C2.2, C2.3 and C2.4 do not apply to a carpark provided with a sprinkler system complying with Specification E1.5 (other than an FPAA101D or FPAA101H system), an open-deck carpark or an open spectator stand.	Noted	Noted
C2.2: General floor area and volume limitations	The size of *fire compartments* in the building must not exceed that specified in Table C2.2.	The Class 9b portion of the building is 789.57m2 and is less than the limitation of 8,000m2. The Class 7b portion of the building is 317.39m2 and is less than the limitation of 5,000m2.	Complies

Section C: Fire Resistance			
C2.3: Large isolated buildings	N/A.	N/A	N/A
C2.4: Requirements for open spaces and vehicular access	N/A.	N/A	N/A
C2.5: Class 9a and 9c Buildings	N/A.	N/A	N/A
C2.6: Vertical separation of openings in external walls	N/A.	N/A	N/A
C2.7: Separation by fire walls	**Construction** - A *fire wall* must be constructed in accordance with the following: (a) Any openings in a *fire wall* must not reduce the *FRL* required by Specification C1.1 for the *fire wall*, except where permitted by the Deemed-to-Satisfy Provisions of Part C3. (b) Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or *sarking-type material*, must not pass through or cross the *fire wall* unless the required fire resisting performance of the *fire wall* is maintained. **Separation of buildings** – A part of a building separated from the remainder of the building by a *fire wall* may be treated as a separate building for the purposes of the Deemed-to-Satisfy provisions of Sections C, D and E if it is constructed in accordance with (a) and the following: (i) the *fire wall* extends through all storeys and spaces in the nature of storeys that are common to that part and any adjoining part of the building.	The wall separating the Class 7b & 9b portions of the building located on Ground Floor will need to have an FRL of 240/240/240. No details at this stage have been provided of fire rated walls. To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure F

Section C: Fire Resistance			
	(ii) The *fire wall* is carried through to the underside of the roof covering. (iii) Where the roof of one of the adjoining parts is lower than the roof of the other part, the *fire wall* extends to the underside of— (A) the covering of the higher roof, or not less than 6 m above the covering of the lower roof; or (B) the lower roof if it has an *FRL* not less than that of the *fire wall* and no openings closer than 3 m to any wall above the lower roof; or (C) the lower roof if its covering is *non-combustible* and the lower part has a sprinkler system complying with Specification E1.5. **Separation of *fire compartments*** – A part of a building separated from the remainder of the building by a *fire wall* may be treated as a separate *fire compartment* if it is constructed in accordance with this clause and the *fire wall* extends to the underside of – (c) a floor having an *FRL* required for a *fire wall*; or the roof covering.		
C2.8: Separation of classifications in the same storey	Where a storey has different classifications located alongside one another: each building element in that storey must have the higher *FRL* prescribed in Specification C1.1 for that element for the classifications concerned; or the parts must be separated in that storey by a *fire wall* having the higher *FRL* prescribed in Table 3; or	The building has a Class 7b storage area for equipment and the main entry foyer and amenities which is considered Class 9b on Ground Floor. The option for compliance are:- a. The separating wall to the storage compound will be required to be fire rated with a wall achieving not less than FRL of 240/240/240; or b. The higher fire resistance levels of the Class 7b of 240 minutes would need to extend throughout the building.	CRA – Refer Annexure E

Section C: Fire Resistance			
	where one part is a carpark complying with Table 3.9, 4.2 or 5.2 of Specification C1.1, the parts may be separated by a *fire wall* complying with the appropriate Table.	The building is over 3 metres away from the boundary line and the client will chose either option a or b during a detailed design review Note: the shop area on Ground Floor is less than 10% of the floor area and therefore, does not require a separate classification.	
C2.9: Separation of classifications in different storeys	The floor separating a Class 2, 3 or 4 part from the storey below must: (i) be a floor/ceiling system incorporating a ceiling which has a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or (ii) have an *FRL* of at least 30/30/30; or (iii) have a fire-protective covering on the underside of the floor, including beams incorporated in it, if the floor is combustible or of metal. Note: Determination of Floor *FRL*'s must also consider compliance with C2.7 whereby the floor must have the same *FRL* as the fire wall of the *fire compartment* below and D2.12 whereby roof as open space must have an *FRL* not less than 120/120/120.	N/A – However, as per BCA Spec C1.1 the floor to a Class 9b to have FRL 30/30/30.	N/A
C2.10: Separation of lift shafts	Applies to Lift connecting more than 2 storeys, or more than 3 if building is sprinklered, (other than lifts wholly in atrium). Type B Lift shaft walls, if load-bearing must have the relevant *FRL* prescribed by Table 4 of Specification C1.1 and if non-loadbearing, be of *non-combustible* construction.	The passenger lift connects only 2 storeys therefore, this clause does not apply.	N/A

Section C: Fire Resistance			
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.	Based on the current design of this building, the stairway and the lift are in separate compartments.	Complies
C2.12: Separation of equipment	Any of the following equipment located in the building must be separated from the remainder of the building: lift motors and lift control panels; or emergency generators used to sustain emergency equipment operating in the emergency mode; or central smoke control plant; or boilers; or a battery system installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200 kWh or more. Equipment need not be separated in if the equipment comprises: smoke control exhaust fans located in the air stream which are constructed for high temperature operation in accordance with Specification E2.2b; or stair pressurizing equipment installed in compliance with the relevant provisions of AS 1668.1:2015; or a lift installation without a machine room; or equipment otherwise adequately separated from the remainder of the building. Separation must be by construction having an *FRL* as required by Specification C1.1, but not less than *FRL* 120/120/120 with openings protected by self-closing fire doors having an *FRL* of not less than –/120/30. Separation of on-site fire pumps must comply with the requirements of AS 2419.1:2005.	At this stage there is no equipment required to be fire separated. To be further assessed with design development.	N/A

Section C: Fire Resistance			
C2.13: Electricity supply system	Any electrical substation located within the building must be separated from the remainder of the building by construction having an *FRL* of not less than 120/120/120, and doorways protected with self-closing fire doors having an *FRL* of not less than –/120/30. A main switchboard which sustains emergency equipment operating in the emergency mode must be fire separated from any other part of the building by construction having an *FRL* of not less than 120/120/120 and have the doorway fitted with self-closing fire door having an *FRL* of not less than –/120/30. Any electrical conductors located within the building that supply a substation or main switchboard for emergency equipment must comply with BCA clause C2.13. Emergency equipment switchgear must be separated from non-emergency equipment switchgear by metal partitions designed to minimize the spread of a fault from the non-emergency equipment switchgear. Emergency equipment includes but is not limited to the following: (i) fire hydrant booster pumps; (ii) sprinkler pumps; (iii) hose reel pumps; (iv) air-handling systems designed to exhaust and control the spread of smoke; (v) emergency lifts; (vi) control and indicating equipment; and (vii) sound systems and intercom systems for emergency purposes.	At this stage there is no equipment required to be fire separated. To be further assessed with design development.	N/A
C2.14: Public corridors in Class 2 and 3 Buildings	N/A.	N/A	N/A

Section C: Fire Resistance			
Part C3 – Protection of Openings			
C3.0: Deemed-to-Satisfy Provisions	Informational	Noted	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 veranda, colonnade, terrace, or the like; and (iv) In a carpark– (A) Service penetrations through; and (B) Openings formed by a vehicle ramp in, (aa) A floor other than a floor that separates a part not used as a carpark, providing the connected floors comply as a single fire compartment for the purposes of all other requirements of the Deemed-to-Satisfy Provisions of Sections C, D and E.	Noted	Noted

Section C: Fire Resistance			
	(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.		
C3.2: Protection of openings in external walls	Openings in an external wall that is required to have an *FRL* must be protected in accordance with C3.4 if the distance between the opening and the *fire-source feature* is: > less than 3 m from a side or rear boundary; or > less than 6 m from the far boundary of a road, river, lake, or the like adjoining the allotment, if not located in a storey at or near ground level; or > less than 6 m from another building on the allotment that is not Class 10; and > if required to be protected under (a), not occupy more than 1/3 of the area of the external wall of the storey in which it is located unless they are in a Class 9b building used as an open spectator stand. Where wall-wetting sprinklers are used, they must be located externally.	The building is over 3 metres from the boundary setback. Therefore the openings in the external wall do not need to have an FRL.	Complies
C3.3: Separation of external walls and associated	N/A.	N/A	N/A

Section C: Fire Resistance				
	openings in different fire compartments			
C3.4:	Acceptable methods of protection	Where protection is required, openings must be protected as follows: <u>Doorways:</u> (ii) Internal or external wall-wetting sprinklers as appropriate used with doors that are self-closing; or (iii) –/60/30 fire doors that are self-closing. <u>Windows:</u> (i) Internal or external wall-wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position; or (ii) –60/– fire windows that are automatically closing or permanently fixed in the closed position; or (iii) –/60/– automatic closing fire shutters. <u>Other openings:</u> (i) Excluding voids – internal or external wall-wetting sprinklers; or (ii) Construction having an *FRL* not less than –/60/– Fire doors, fire windows and fire shutters must comply with BCA Specification C3.4.	At this stage, no protection of openings is required	N/A
C3.5:	Doorways in fire walls	N/A	N/A	N/A
C3.6:	Sliding fire doors	N/A	N/A	N/A

Section C: Fire Resistance			
C3.7: Protection of doorways in horizontal exits	N/A	N/A	N/A
C3.8: Openings in fire-isolated exits	N/A	There are no fire-isolated exits in this building.	N/A
C3.9: Service penetrations in fire-isolated exits	N/A	There are no fire-isolated exits in this building.	N/A
C3.10: Openings in fire-isolated lift shafts	Lift landing doors are required to be fire doors with an *FRL* of -/60/- that comply with AS 1735.11:1986 and be set to remain closed except when discharging or receiving, passengers, goods, or vehicles. Panels in the wall of the lift shaft must be backed by construction having an *FRL* of not less than –/60/60 if it exceeds 35 000 mm2 in area.	N/A -lift shaft is not required to be fire rated.	N/A
C3.11: Bounding Construction: Class 2, 3 and 4 Buildings	N/A.	N/A	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.	Service penetrations to be protected in accordance with this clause.	CRA – Refer Annexure E
C3.13: Openings in shafts	N/A	N/A	N/A
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.	Service penetrations to be protected in accordance with this clause.	CRA – Refer Annexure E

Section C: Fire Resistance				
		Note: contractors should check with PCA to confirm compliance with their proposed fire stopping method.		
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 1530.4:2014 to achieve the required *FRL*.	N/A	N/A
C3.17:	Columns protected with lightweight construction to achieve an FRL	N/A.	N/A	N/A
Specification C1.1 – Fire-Resisting Construction				
2.0:	General Requirements	Informational	Noted	Noted
2.1:	Exposure to fire-source features	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– (iii) has an *FRL* of not less than 30/–/–; and (iv) is neither transparent nor translucent.	Noted	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.	Noted	Noted

Section C: Fire Resistance			
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).	No information on Lintels provided at this stage. To be further assessed at Construction Certification Stage.	CRA – Refer Annexure E
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.	Noted	Noted
2.5: General concessions	Steel columns (1 or 2 storey buildings) Timber columns (1 storey buildings) Structures on roofs Curtain walls and panel walls Balconies and verandas Structures on roofs — A *non-combustible* structure situated on a roof need not comply with the other provisions of this Specification if it only contains— (i) lift motor equipment; or (ii) one or more of the following: (A) Hot water or other water tanks. (B) Ventilating ductwork, ventilating fans, and their motors. (C) Air-conditioning chillers. (D) Window cleaning equipment. (E) Other service units that are *non-combustible* and do not contain flammable or combustible liquids or gases.	The Balcony does not need to comply with Table 4 of BCA Clause Spec C1.1 as it does not form part of the only path of travel to a required exit from the building.	Complies

Section C: Fire Resistance				
2.6:	Mezzanine floors: Concession	N/A.	N/A	N/A
2.7:	Enclosure of shafts	Fire-isolated shafts are required to be enclosed at the top and bottom of the shaft with fire rated construction having an *FRL* 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. The above does not apply to shafts extending beyond the roof covering, other than fire isolated stair and lift shafts and the bottom of *non-combustible* shafts laid directly on the ground.	N/A	N/A
2.8:	Carparks in Class 2 and 3 Buildings	N/A.	N/A	N/A
2.9:	Residential Aged Care building: Concession	N/A.	N/A	N/A
4.0:	Type B fire-resisting construction	Noted	This building is of Type B Construction.	Noted
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 shaft 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 shaft must be constructed so that the floor or part will be free to sag or fall	No details on the fire resistance of building elements provided at this stage. The building is located more than 3 metres away from any fire-source feature. Therefore, external loadbearing walls need to have an FRL of 120/30/30 and external non-loadbearing walls do not need to have an FRL.	CRA – Refer Annexure E

Section C: Fire Resistance			
	in a fire without causing structural damage to the shaft; 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 combustible; 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 lift, subject to C2.10, ventilating, pipe, garbage, and similar shafts which are not for the discharge of hot		

Section C: Fire Resistance				
		products of combustion and not loadbearing, must be of *non-combustible* construction in— (i) a Class 2, 3 or 9 building; and (ii) a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys; and in a Class 2 or 3 building, except where within the one *sole-occupancy unit*, or a Class 9a health-care building or a Class 9b building, a floor separating storeys or above a space for the accommodation of motor vehicles or used for storage or any other ancillary purpose, must— (i) be constructed so that it is at least of the standard achieved by a floor/ceiling system incorporating a ceiling which has a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or (ii) have an *FRL* of at least 30/30/30; or (iii) have a fire-protective covering on the underside of the floor, including beams incorporated in it, if the floor is combustible or of metal; and;		
4.2:	Carparks	N/A.	N/A	N/A
Specification C1.10 – Fire Hazard Properties				
1.	Scope	Informational	Noted	-
2.	Application	Informational	Noted	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	No information on floor linings and floor coverings provided at this stage. To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E

Section C: Fire Resistance				
		(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.		
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 5637.1:2015.	No information provided about wall and ceiling lines at this stage. To be further assessed at Construction Certificate Stage	CRA – Refer Annexure E
5.	Air-handling ductwork	Rigid and flexible ductwork must comply with the fire hazard properties set out in AS 4254 Parts 1 and 2.	No mechanical plans provided at this stage. To be assessed at Construction Certificate Stage.	CRA – Refer Annexure E
6.	Lift cars	Materials used as— (a) floor linings and floor coverings must have a *critical radiant flux* not less than 2.2; and (b) wall and ceiling linings must be a Group 1 material or a Group 2 material in accordance with AS 5637.1:2015.	No lift car plans / information provided at this stage. To be assessed at Construction Certificate Stage.	CRA – Refer Annexure E

Section C: Fire Resistance				
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.	Noted	Noted

Section D: Access and Egress				
Part D1 – Provision for Escape				
D1.0:	Deemed-to-Satisfy Provisions	Informational	Noted	Noted
D1.1:	Application of Part	The Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a *sole-occupancy unit* in a Class 2 or 3 building or a Class 4 part of a building.	Noted	Noted
D1.2:	Number of exits required	As a Class 9b the first floor needs two exits	Each level has access to two exits and the distance to a point on the floor to a single exit is not more than 20m. Therefore, this building complies to this clause. .	Complies
D1.3:	When fire-isolated stairways and ramps are required	Every *exit* stairway must be fire-isolated, except for…….	The stairs do not connect more than 2 storeys; therefore, the stairways aren't required to be fire isolated	Noted
D1.4:	Exit travel distances	<u>Class 5, 6, 7, 8 or 9 buildings –</u> (a) no point on a floor must be more than 20m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those *exits* must not exceed 40m; (b) Assembly Buildings – In a Class 9b building other than a *school* or *early childhood centre*, the distance to one of the exits may be 60m if –	Ground floor exit travel to gear store compound is not more than 20m to an exit due to two doors being provided. The exit travel distance to the first floor level rooms is not more than 20m to the top of stair/s where an exit is reached. It is also possible for an alternative egress path to other stair.	Complies

Section D: Access and Egress			
	i. The path of travel from the room concerned to that *exit* is through another area which is a corridor, hallway, lobby, ramp or other circulation space; and ii. The room is smoke-separated from the circulation space by construction having an FRL not less than 60/60/60 with every doorway in that construction protected by a tight fitting, *self-closing*, solid-core door not less than 35mm thick; and iii. The maximum distance of travel does not exceed 40m within the room and 20m from the doorway to the room through the circulation space to the *exit*.		
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— (i) in a Class 2 or 3 building — 45 m apart; or (ii) in a Class 9a health-care building, if such required *exit* serves a patient care area — 45 m apart; or (iii) in all other cases — 60 m apart; and (d) located so that alternative paths of travel do not converge such that they become less than 6 m apart.	Due to compliant exit travel to a single exit, alternative exit travel is not required. However, there are two exits available as per BCA Clause D1.2.	Complies

Section D: Access and Egress				
		Note: the distance between *exits* must be measured through the point at which travel two *exits* is available.		
D1.6:	Dimensions of exits and paths of travel to exits	In a required *exit* or path of travel to an *exit*– the unobstructed height throughout *exits* and paths of travel to *exits* must not be less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm; and the unobstructed width of each *exit* or path of travel to an *exit*, except for doorways must be not less than 1m; the unobstructed width of doorways must be not less than 750 mm, unless providing access for people with disabilities in which case the unobstructed width must be not less than 850 mm. the required width of a stairway or ramp must be measured clear of all obstructions such as handrails. the unobstructed width of a required *exit* must not diminish in the direction of travel to a road or open space.	Based upon the populations of BCA Clause D1.13 there are 320 persons. In accordance with this clause the egress width needs to be not less than 3000mm. This has been provided by the two fire stairs of 1500mm width. Care to be taken that handrails do not encroach on minimum width. To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
D1.7:	Travel via fire-isolated exits	N/A	N/A	N/A
D1.8:	External stairways or ramps in lieu of fire-isolated exits	N/A	N/A	N/A
D1.9:	Travel by non-fire-isolated stairways or ramps	A non-fire-isolated stairway serving as a required *exit* must provide a continuous means of travel by its own flights and landings from every storey served to the level at which egress to a road or open space is provided. In a Class 5, 6, 7, 8 or 9 building, the distance from any point on a floor to a point of egress to a road or open	The overall travel distance via the stair is less than 80m and the distance at discharge is not more than 20m to an exit.	Complies

Section D: Access and Egress			
	space by way of a required non-fire-isolated stairway or non-fire-isolated ramp must not exceed 80m. In a Class 5 to 8 or 9b building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than – (i) 20 m from a doorway providing egress to a road or open space or from a fire-isolated passageway leading to a road or open space; or (ii) 40 m from one of 2 such doorways or passageways if travel to each of them from the non-fire-isolated stairway or non-fire-isolated ramp is in opposite or approximately opposite directions.		
D1.10: Discharge from exits	*Exits* must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the *exit*. If a required *exit* leads to open space, the path of travel to the road must have an unobstructed width of not less than 1m. min width of required *exit* if greater. If an *exit* discharges to open space that is at a different level that the public road to which it is connected, the path of travel to the road must be by a ramp or other incline not steeper than 1:8, or a BCA compliant stairway. The discharge points of alternative *exits* must be as far apart as practical	The exit from all stairs are not likely to be obstructed Egress from the discharge point. The path of travel to a road is existing and no change as a result of this development. Note: should there be Crown Land restrictions on right of carriageway this will need to be addressed at Construction Certificate stage.	Complies
D1.11: Horizontal exits	N/A	N/A	N/A
D1.12: Non-required stairways, ramps or escalators	N/A	N/A	N/A

Section D: Access and Egress			
D1.13: Number of persons accommodated	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– (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— (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.	The total floor area of Level 1 is 429m2. Based upon BCA Table D1.13 and 1m2/person this could be up to 429 persons. However, as not all rooms and spaces will be occupied at full capacity at all times and a 1m2/person rate is not realistic to all rooms and uses of those rooms it is reasonable that a reduced population could be considered in this instance. Therefore, as the training areas will only be used when booked and the hall will only be fully utilised when events are organised and all other areas will not be at full capacity, it can be justified that the total population of first floor level is more in the order of 320 persons.	Noted
D1.14: Measurement of distances	Informational – The nearest part of an *exit* means in the case of— (a) a fire-isolated stairway, fire-isolated passageway, or fire-isolated ramp, the nearest part of the doorway providing access to them; and (b) a non-fire-isolated stairway, the nearest part of the nearest riser; and (c) a non-fire-isolated ramp, the nearest part of the junction of the floor of the ramp and the floor of the storey; and (d) a doorway opening to a road or open space, the nearest part of the doorway; and (e) a *horizontal exit*, the nearest part of the doorway.	Noted	Noted

Section D: Access and Egress			
D1.15: Method of Measurement	Informational	Noted	Noted
D1.16: Plant rooms, lift motor rooms and electricity network substations: concession	N/A	N/A	N/A
D1.17: Access to lift pits	Access to the lift pit is assumed to be through the bottom landing doors as the pit is assumed to be less than 3m deep.	There is no access to lift pits documentation provided. To be assessed at Construction Certificate Stage.	CRA – Refer Annexure E
Part D2 – Construction of Exits			
D2.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
D2.1: Application of Part	Informational– Except for D2.13, D2.14(a), D2.16, D2.17(d), D2.17(e), D2.21 and D2.24, the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a *sole-occupancy unit* in a Class 3 building. Except for D2.13, D2.14(a), D2.16, D2.17(d), D2.17 (e), D2.18 & D2.24, the deemed-to-satisfy Provisions of this Part do not apply to internal parts of the Class 2 *sole-occupancy units.*	Noted	Noted
D2.2: Fire-isolated stairways and ramps	The fire isolated stairways must be constructed of *non-combustible* materials and constructed so that if there is local failure it will not cause structural damage to or impair the fire-resistance of the shaft.	N/A	N/A
D2.3: Non-fire-isolated stairways and ramps	Buildings more than 2 storeys Required stairs and ramps (including landings and any supporting building	This building is only 2 storeys and this clause does not apply.	N/A

Section D: Access and Egress			
	elements) must be constructed according to D2.2, or only of- (a) reinforced or prestressed concrete; or (b) steel in no part less than 6 mm thick; or (c) timber that— (i) has a finished thickness of not less than 44 mm; and (ii) has an average density of not less than 800 kg/m3 at a moisture content of 12%; and (iii) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue".		
D2.4: Separation of rising and descending stair flights	N/A	N/A	N/A
D2.5: Open access ramps and balconies	N/A	N/A	N/A
D2.6: Smoke lobbies	N/A	N/A	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	To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E

Section D: Access and Egress			
	protective covering with doorways suitably sealed against smoke spread. Electrical wiring may be installed in a fire-isolated *exit* if the wiring is associated with: (i) a lighting, detection, or pressurization system serving the *exit*; or (ii) a security, surveillance or management system serving the *exit*; or (iii) an intercommunication system or an audible or visual alarm system in accordance with D2.22; or (iv) the monitoring of hydrant or sprinkler isolating valves.		
D2.8: Enclosure of space under stairs and ramps	The space under the fire-isolated stairways within the shaft must not be enclosed to form a cupboard or similar enclosed space. The space below a required non fire-isolated stairway (including an external stairway) or non-fire-isolated ramp must not be enclosed to form a cupboard or other enclosed space unless the enclosing walls and ceilings have an FRL of not less than 60/60/60 and the doorway is fitted with a self-closing –/60/30 fire door.	The space below the non-fire isolated stairs must not be enclosed to form a cupboard or the like unless the space in constructed in accordance with this clause. To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
D2.9: Width of stairways and ramps	Informational– A required stairway or ramp that exceeds 2 m in width is counted as having a width of only 2 m unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2 m.	Noted	Noted
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 1428.1:2009; or	This project does not have any pedestrian ramps	N/A

Section D: Access and Egress			
	(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 4586:2013.		
D2.11: Fire-isolated passageways	N/A	N/A	N/A
D2.12: Roof as open space	N/A	N/A	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 240 mm and 355 mm within the residential units; Goings must be between 250 mm and 355 mm; Goings must be between 250 mm and 355 mm in other areas; 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.	To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E

<table>
<tr><th colspan="4">Section D: Access and Egress</th></tr>
<tr><td></td><td>Risers must not contain any openings that would permit a 125 mm sphere to pass through.

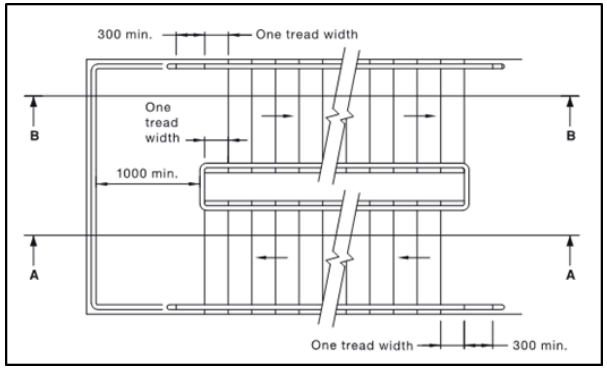
Each tread must have a non-slip finish or an adequate non-skid strip near the edge of the nosings;

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 Slip resistance classification of new pedestrian surface materials.</td><td></td><td></td></tr>
<tr><td>D2.14: Landings</td><td>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 4586:2013.
<table>
<tr><th rowspan="2">Application</th><th colspan="2">Surface Condition</th></tr>
<tr><th>Dry</th><th>Wet</th></tr>
<tr><td>Ramp steeper than 1:14</td><td>P4 or R11</td><td>P5 or R12</td></tr>
<tr><td>Ramp steeper than 1:20 but not steeper than 1:14</td><td>P3 or R10</td><td>P4 or R11</td></tr>
<tr><td>Tread or landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr>
<tr><td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr>
</table></td><td>To be further assessed at Construction Certificate Stage.</td><td>CRA – Refer Annexure E</td></tr>
</table>

Section D: Access and Egress			
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 1428.1:2009; 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.	Where a step at a door threshold exists, the threshold will be constructed in accordance with this clause.	CRA – Refer Annexure E
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 1 m in all other locations. <u>Balustrade openings – fire-isolated stairs</u> maximum openings of 300 mm; or where rails are used– (v) a 150 mm sphere must not be able to pass through the opening between the nosing line of the stair treads and the rail or between the rail	Based upon elevations/sections a perimeter balustrade is shown to the first floor balconies. No details of balustrade provided at this stage. Preliminary review of the plans indicate that balustrades will be 1m. To be further assessed at Construction Certification Stage.	CRA – Refer Annexure E

Section D: Access and Egress			
	and the floor of the landing, balcony or the like; and (vi) the opening between rails must not be more than 460 mm <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. <u>Climbability – other than fire-isolated stairs</u> For floors more than 4m above the surface beneath, the balustrade must not incorporate any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that could facilitate climbing.		
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 1428.1:2009 (including handrails to the fire stairs). Handrails in common areas (other than fire stairs) must also accord with D3.3. <u>Clause 12 of AS 1428.1:2009</u> A required *exit* (fire isolated or non-fire isolated) serving an area required to be accessible must be fitted with	No details provided of handrails at this stage. To be further assessed at Construction Certificate Stage. Note: Under D3.3, all non-fire isolated stairways must have double handrails in accordance with AS1428.1-2009.	CRA – Refer Annexure E

Section D: Access and Egress			
	handrails in accordance with Clause 12 of AS 1428.1:2009. The handrail shall follow the angle of the nosings and be consistent height through the stair flight and any landings with no vertical sections at the landing. Compliance can be achieved via offset risers at the bottom of the flight in accordance with Figure 28 in AS 1428.1:2009 or with larger landings to accommodate required handrail extensions.  Figure 28 in AS 1428.1:2009		
D2.18: Fixed platforms, walkways stairways and ladders	N/A	N/A	N/A
D2.19: Doorways and doors	Sliding doors serving as *exit* doors must be openable manually under a force of not more than 110N. *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	No details of exit door operation provided at this stage. To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E

Section D: Access and Egress			
	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.		
D2.20: Swinging doors	Swinging doors to open outwards	The doors generally open outwards as required. Inward swing doors are permitted to rooms less than 200m2.	Complies
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– (iii) 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 – (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 (iv) a single hand pushing action on a single device which is located between 900mm and 1.2m from the floor. (v) 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—	No details of operation of latches provided at this stage. However, panic bars would be needed to serve first floor level as there are more than 100 persons. To be further assessed at Cosntruction Certificate Stage.	CRA – Refer Annexure E

Section D: Access and Egress			
	(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. Class 9b (other than school, early childhood centre or religious) for storey or room accommodating >100 persons: 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– (i) without a key from the side that faces a person seeking egress; and		

Section D: Access and Egress			
	(ii) by a single hand pushing action on a single device such as a panic bar located between 900mm and 1.2 m from the floor; and (iii) where a two-leaf door is fitted, the provisions of (i) and (ii) need only apply to one door leaf if the appropriate requirements of D1.6 are satisfied by the opening of that one leaf; and (iv) where the door is a door in a path of travel providing re-entry to the building from a balcony terrace or the like, it may be fitted with key-operated fastenings only, the tongues of which must be locked in the retracted position whenever the building is occupied by the public, so the door can yield to pressure.		
D2.22: Re-entry from fire-isolated exits	N/A	N/A	N/A
D2.23: Signs on doors	Signage in accordance with this clause is to be located on all fire and smoke doors stating “Fire Safety Door, Do Not Obstruct, Do Not Keep Open” and the discharge door from the fire isolated stairways are to state “Fire Safety Door – Do Not Obstruct” in capital letters not less than 20mm in height. Note: Fire signage in accordance with clause 183 of the Environmental Planning and Assessment Regulation 2000 is also required.	N/A	N/A
D2.24: Protection of openable windows	(c) Where the lowest level of the window opening is less than 1.7m above the floor, a window opening covered by (a) must comply with the following: (i) The openable portion of the window must be protected with– (A) a device to restrict the window opening; or	No details of openable windows provided at this stage. To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E

Section D: Access and Egress			
	(B) a screen with secure fittings. (ii) A device or screen required by (i) must– (A) not permit a 125 mm sphere to pass through the window opening or screen; and (B) resist an outward horizontal action of 250 N against the– (aa) window restrained by a device; or (bb) screen protecting the opening; and (C) have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden. (d) A barrier with a height not less than 865 mm above the floor is required to an openable window– (i) in addition to window protection, when a child resistant release mechanism is required by (b)(ii)(C); and (ii) where the floor below the window is 4m or more above the surface beneath if the window is not covered by (a). (e) A barrier covered by (c) except for (e) must not– (i) permit a 125 mm sphere to pass through it; and (ii) have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing. (f) A barrier required by (c) to an openable window in— (i) fire-isolated stairways, fire-isolated ramps and other areas used primarily for emergency purposes, excluding external stairways and external ramps; and		

Section D: Access and Egress			
	(ii) Class 7 (other than carparks) and Class 8 buildings and parts of buildings containing those classes; (A) must not permit a 300mm sphere to pass through it. **Note:** when considering the preferred option to comply with this clause consideration will need to be given to natural ventilation required under Clause F4.6.		
D2.25: Timber stairways: concession	N/A	N/A	N/A
Part D3 – Access for People with A Disability			
D3.0: Deemed-to-Satisfy Provisions	Informational	Addressed within separate report	Noted

Section E: Services and Equipment			
Part E1 – Fire Fighting Equipment			
E1.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
E1.3: Fire hydrants	As the building has a floor area greater than 500 m2, a fire hydrant system complying with AS 2419.1:2005 must be provided to serve the building. Hydrant booster assembly location. The booster location must comply with the following: (i) be within 8m of a hardstand for fire brigade appliance; (ii) be within sight of the main entry;	No details of fire hydrants provided at this stage. As an extension is proposed to the existing building and resulting in the floor area being greater than 500m2 a fire hydrant will need to be provided. Street hydrants can be relied upon when they are within 70 metres coverage to the furthermost parts of the first floor level. To be further assessed at Construction Certificate stage.	FI Refer to Part 3.4 of Report

Section E: Services and Equipment			
	Assuming it is attached to the building, be separated from the building by construction achieving FRL 90/90/90 for 2m either side of and 3m above the upper hose connections Hydrant pump room location (if a pumpset is required). An internal pump room must have a door opening to a road or open space or egress to open space via a fire-isolated *exit*; Internal hydrants in each fire-isolated *exit* at each storey providing coverage to all parts of the building. For internal fire hydrant coverage, all points on the floor must be covered by a 10m hose stream, issuing from 30 m hose length, extending not less than 1m into the room.		
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 (excluding Classes 2, 3, 4, 5, 8 and 9c). 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. Fire hose reels must be located so that the fire hose will not need to pass through doorways fitted with fire or smoke doors, except— (iii) doorways in walls referred to in C2.5(a)(v) in a Class 9a building and C2.5(b)(iv) in a Class 9c building, separating ancillary use areas of high potential fire hazard; and (iv) doorways in walls referred to in C2.12 or C2.13 separating equipment or electrical supply systems; and (v) doorway openings to shafts referred to in C3.13.	The building is more than 500m2 (1140.84m2) and therefore fire hose reels are required.	N/A

Section E: Services and Equipment			
E1.5: Sprinklers	The building must be provided with a sprinkler system complying with Table E1.5 and Specification E1.5 installed throughout.	The building does not require sprinklers.	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.	No details of portable fire extinguishers provided at this stage. To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
E1.8: Fire control centres	N/A	N/A	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*; and After the building has reach an *effective height* of 12m, the required fire hydrants and fire hose reels must be operational on all floor / roof covered storeys, except for the 2 uppermost storeys; and all required booster connections must be installed.	Noted	Noted
E1.10: Provision for special hazards	Suitable additional provisions must be made if special problems of firefighting could arise because of the nature or quantity of stored materials or the location of the building in relation to a water supply.	Noted	Noted
Part E2 – Smoke Hazard Management			
E2.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
E2.1: Application of Part	Informational	Noted	Noted

Section E: Services and Equipment			
E2.2: General requirements (including Tables E2.2a and E2.2b)	**General smoke hazard management requirements** **Class 9b Building** As the building has a rise in storey of 2, the building is not required to have an automatic smoke detection and alarm system complying with Specification C2.2a.	The building has a rise in storey of not more than 2, therefore does not require a smoke detection and alarm system. It is also assumed that the building will not have mechanical system with more than 1000L/s and therefore shutdown via smoke detectors will not be needed. To be further assessed at Construction Certificate stage.	N/A
E2.3: Provisions for special hazards	N/A	N/A	N/A
Part E3 – Lift Installations			
E3.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
E3.1: Lift installations	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1	No lift details provided at this stage. To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
E3.2: Stretcher facility in lifts	N/A	N/A	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.	To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
E3.4: Emergency lifts	N/A	N/A	N/A

Section E: Services and Equipment			
E3.5: Landings	Access and egress to and from lift-well landings must comply with the Deemed-to-Satisfy Provisions of Section D.	The lift has suitable landings at each level.	Complies
E3.6: Passenger lifts	In an accessible building, every 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 for its operation if the lift car is fully enclosed.	The proposed lift shaft has dimensions of 1700mm x 1600mm. The building will require a lift with minimum floor dimensions of 1100mm x 1400mm. The lift will also require accessible features in accordance with E3.6b. Lift hardware to be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
E3.7: Fire service controls	N/A	N/A	N/A
E3.8: Aged care buildings	N/A	N/A	N/A
E3.9: Fire service recall switch	N/A	N/A	N/A
E3.10: Lift car service drive control switch	N/A	N/A	N/A
Part E4 – Visibility in an Emergency, Exit Signs and Warning Systems			
E4.0: Deemed-to-Satisfy Provisions	Informational	Noted	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/NZS 2293.1:2018.	As the building is more than 300m2 emergency lighting is required. Furthermore ,as rooms are more than 100m2 it will be necessary to provide emergency lighting. To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
E4.3: Measurement of distance	Informational	Noted	Noted

Section E: Services and Equipment			
E4.4: Design and operation of emergency lighting	The emergency lighting system must comply with AS/NZS 2293.1:2018.	To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
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.	Exit signs will be needed throughout the building.	CRA – Refer Annexure E
E4.6: Direction signs	Where an *exit* is not readily apparent, directional signage is to be installed indicating the direction of egress.	Directional exit signs will be required	CRA – Refer Annexure E
E4.7: Class 2 and 3 buildings and Class 4 Parts: Exemptions	N/A	N/A	N/A
E4.8: Design and operation of exit signs	*Exit* signs must comply with AS/NZS 2293.1:2018 and be clearly visible at all times when the building is occupied.	To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
E4.9: Emergency warning and intercom systems	N/A	The building has a rise in storey of less than 2 and a floor area of less than 1000m2.	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. The assessment contained within this report does not include an assessment against Performance Provision FP1.4.	This clause does not apply to the ground floor Class 7b storage or amenities. First floor level requires a performance solution to address weatherproofing.	PS Required

Section F: Health and Amenity			
F1.1: Stormwater drainage	Stormwater drainage to comply with AS/NZS 3500.3:2018.	No details provided, to be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
F1.4: External above ground membranes	Waterproofing membranes for external above ground use to comply with AS 4654 Parts 1 and 2:2012.	No details provided, to be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
F1.5: Roof coverings	Roof coverings are to comply with BCA Clause F1.5.	No details provided, to be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
F1.6: Sarking	*Sarking-type materials* used for weatherproofing must comply with AS/NZS 4200 Part 1 and 2:2017.	No details provided, to be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
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.	No details provided, to be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
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.	No details provided, to be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
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).	No details provided, to be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
F1.11: Provision of floor wastes	N/A	N/A	N/A
F1.12: Sub-floor ventilation	N/A	N/A	N/A
F1.13: Glazed Assemblies	Glazed assemblies are to comply with AS 2047:2014 and AS 1288:2006.	No details provided, to be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
Part F2 – Sanitary and Other Facilities			

Section F: Health and Amenity				
F2.0:	Deemed-to-Satisfy Provisions	Informational	Noted	Noted
F2.1:	Facilities in residential buildings (including Table F2.1)	N/A	N/A	N/A
F2.2:	Calculation of number of occupants and facilities	Informational – (a) The number of persons accommodated must be calculated according to D1.13 if it cannot be more accurately determined by other means (b) Unless the premises are used predominantly by one sex, sanitary facilities must be provided on the basis of equal numbers of males and females (c) In calculating the number of sanitary facilities to be provided under F2.1 and F2.3, a unisex facility required for people with a disability may be counted once for each sex (d) For the purpose of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary towels	Unisex sanitary compartments can be counted once for each sex.	CRA – Refer Annexure E
F2.3:	Facilities in Class 3 to 9 buildings (including Table F2.3)	(a) Except where permitted by (b), (c), (f), F2.4(a) and F2.4(b), separate sanitary facilities for males and females must be provided for Class 3, 5, 6, 7, 8 or 9 buildings in accordance with Table F2.3. (b) If not more than 10 people are employed, a unisex facility may be provided instead of separate facilities for each sex. (c) If the majority of employees are one sex, not more than 2 employees of the other sex may share toilet facilities if the facilities are separated by means of walls, partitions, and doors to afford privacy.	The Newport Surf Life Saving Club is provided with the following: <u>Ground Floor</u> • External Male & Female Public Amenities • External Disabled ACC WC & Shower • Internal Male & Female Amenities with Showers & Change Room <u>Level 1</u> • Male, Female & ACC Bathrooms	Complies

Section F: Health and Amenity			
	(d) Employees and the public may share the same facilities in a Class 6 and 9b building (other than a school or early childhood centre) provided the number of facilities provided is not less than the total number of facilities required for employees plus those required for the public. (e) Adequate means of disposal of sanitary towels must be provided in sanitary facilities for use by females. (f) Separate sanitary facilities for males and females need not be provided for patients in a ward area of a Class 9a building. (j) Not less than one washbasin must be provided where closet pans or urinals are provided.	• Kitchen & Bar Areas. Further details shall be provided at Construction Certificate Stage demonstrating that the kitchen area has a food preparation area with a sink, separate hand washing facilities, a refrigerator and space for cooking. Based upon an assessment of the proposed sanitary facilities the following combined populations will be served based upon a public hall use <u>Combined Male Club Facilities</u> WC = 4 (700) Urinal = 5 (250) Handwash = 3 (400) <u>Combined Female Club Facilities</u> WC = 7 = (350) Handwash = 3 = (350 Based upon equal numbers of males/females the above facilities will serve up to 500 persons which is in excess of the estimated populations (320 persons) under BCA Clause D1.13 for a public hall type use. Note1: the Accessible bathroom at first floor level has not been included in the above and would count once towards each sex. The facilities certainly at ground floor level will be used at times as a sports venue and will serve the following:- <u>GF- Male Club Facilities</u> WC = 2 (40) Urinal = 3 (30)	

Section F: Health and Amenity			
		Handwash = 2 (20) Shower = 5 (5) <u>Female Club Facilities</u> WC = 4 = (40) Handwash = 2 = (20 Showers = 5 (50) Based upon equal numbers of males/females the above facilities will serve up to 40 persons which will be supplemented by the public facilities. Due to the variable nature of surf club use it is not possible to state whether this is a compliant number. This would need to be supported by input from the Surf Club and Northern Beaches Council to confirm that this is an adequate number of sporting facility type use.	
F2.4: Accessible sanitary facilities (including Table F2.4)	Employee sanitary facility required by Clause F2.1 is to be an accessible unisex compartment compliant with AS 1428.1:2009.	Addressed within separate report	Noted
F2.5: Construction of sanitary compartments	(a) Other than in an early childhood centre, sanitary compartments must have doors and partitions that separate adjacent compartments and extend— (i) from floor level to the ceiling in the case of a unisex facility; or (ii) to a height of not less than 1.5 m above the floor if primary school children are the principal users; or (iii) 1.8 m above the floor in all other cases. (b) The door to a fully enclosed sanitary compartment must—	No details provided outlining construction of sanitary compartments. To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E

Section F: Health and Amenity			
	(i) open outwards; or (ii) slide; or (iii) be readily removable from the outside of the sanitary compartment, unless there is a clear space of at least 1.2 m, measured in accordance with Figure F2.5, between the closet pan within the sanitary compartment and the doorway.		
F2.6: Interpretation: urinals and washbasins	Informational– (a) A urinal may be— (i) an individual stall or wall-hung urinal; or (ii) each 600 mm length of a continuous urinal trough; or (iii) a closet pan used in place of a urinal. (b) A washbasin may be— (i) an individual basin; or (ii) a part of a hand washing trough served by a single water tap.	Noted	Noted
F2.8: Waste Management	N/A	N/A	N/A
F2.9: Accessible adult change facilities	N/A	N/A – the size of building does not trigger this.	N/A
Part F3 – Room Sizes			
F3.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted

Section F: Health and Amenity			
F3.1: Height of rooms and other spaces	(a) The height of rooms and other spaces must be not less than— (d) in a Class 9b building— (i) a school classroom or other assembly building or part that accommodates not more than 100 persons — 2.4 m; and (ii) a theatre, public hall or other assembly building or part that accommodates more than 100 persons — 2.7 m; and (iii) a corridor— (A) that serves an assembly building or part that accommodates not more than 100 persons — 2.4 m; or (B) that serves an assembly building or part that accommodates more than 100 persons — 2.7 m; and (iv) the number of persons accommodated must be calculated according to D1.13; and (f) in any building— (i) a bathroom, shower room, sanitary compartment, airlock, tea preparation room, pantry, storeroom, garage, car parking area, or the like — 2.1 m; and (ii) a commercial kitchen — 2.4 m; and (iii) above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like. (iv) A required accessible adult change facility – 2.4m	Based off of elevation plans the following heights have been calculated: <u>Ground Floor</u> RL 9.00m – RL 5.66m = 3.34m 3.34m – 0.2m (Slab Thickness) = 3.14m <u>Level 1</u> RL 12.05m – RL 9.00m = 3.05m Based on the above calculations the height of Ground Floor & Level 1 will comply with the required height of required rooms and other spaces as they are in excess of 2.7m. No information have been provided regarding floor and ceiling linings. This will be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E

Section F: Health and Amenity			
Part F4 – Light and Ventilation			
F4.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
F4.1: Provision of natural light	N/A	N/A	N/A
F4.2: Methods and extent of natural lighting	N/A	N/A	N/A
F4.3: Natural light borrowed from adjoining room	N/A	N/A	N/A
F4.4: Artificial Lighting	Lighting to all areas is to comply with AS/NZS 1680.0:2009.	No details regarding Artificial Lighting have been provided at this stage. To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E
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.	The building must either be provided with natural or mechanical ventilation. Further details to be provided at Construction Certificate Stage.	CRA – Refer Annexure E
F4.6: Natural ventilation	(a) 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 veranda, carport, or the like; or	This building has large floor to ceiling openings provided to both Ground Floor and Level 1 which will more than adequately provide the required opening size of no less than 5% of the floor area in order to achieve compliant Natural Ventilation. Detailed window schedules will be required at Construction Certificate Stage showing the opening size of each window.	CRA – Refer Annexure E

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.	N/A	N/A
F4.8: Restriction on position of water closets and urinals	Sanitary compartments must not open directly into a – > kitchen or pantry > public dining room or restaurant > dormitory in a Class 3 building > room used for public assembly (which is not an early childhood centre, primary school or open spectator stand) > workplace normally occupied by more than one person.	The proposed accessible sanitary compartments do not open directly into any of these rooms or spaces.	Complies
F4.9: Airlocks	N/A	N/A	N/A
F4.11: Carparks	N/A	N/A	N/A
F4.12: Kitchen local exhaust ventilation	Any commercial kitchen must be provided with a kitchen exhaust hood complying with AS 1668.1:2015 and AS 1668.2:2012 where: any cooking apparatus has: (iii) a total maximum electrical power input exceeding 8 kW; or (iv) a total gas power input exceeding 29 MJ/h; or the total maximum power input to more than one apparatus exceeds: (v) 0.5 kW electrical power; or	No kitchen local exhaust ventilation details have been provided at this stage. To be further assessed at Construction Certificate Stage.	CRA – Refer Annexure E

Section F: Health and Amenity			
	(vi) 1.8 MJ gas, Per m2 of floor area of the room or enclosure.		

Section G: Ancillary Provisions – N/A

Section H: Special Use Buildings – N/A

Section I: Maintenance – N/A
Part I1 – Equipment and Safety Installations
This Part has been deleted in BCA2019.

Section J: Energy Efficiency (Class 3, 5, 6, 7b, 8, 9) – To be carried out by energy consultant

ANNEXURE E BCA COMPLIANCE SPECIFICATION

Annexure E – 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 4 of Specification C1.1 of BCA2019 for a building of Type B Construction
2. Building elements must be non-combustible in accordance with C1.9 of BCA2019.
3. 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.
4. 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.
5. The parts of different classifications located alongside one another in the same storey will be separated in accordance with Clause C2.8 and Specification C1.1 of BCA2019.
6. Floors separating storeys of different classifications will comply with BCA Clause C2.9 of BCA2019.
7. Openings in the external walls that are required to have an FRL will be in located in accordance with Clause C3.2 of BCA2019 or protected in accordance with Clause C3.4 of BCA2019.
8. Doorways in any fire walls separating fire compartments will be protected in accordance with Clause C3.5 of BCA2019.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. The dimensions of exits and paths of travel to exits will be provided in accordance with Clause D1.6 of BCA2019.
15. Discharge from exits will be in accordance with Clause D1.10 of BCA2019.
16. Access to the lift pit will be in accordance with Clause D1.17 of BCA2019.
17. The construction of EDB's and telecommunications distribution 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.

18. 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 AS 4586:2013.
19. 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 AS 4586:2013 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 4586:2013 where the edge ledge to a flight below.
20. The handrails and balustrades to all stairs and throughout the building will be in accordance with Clause D2.16, and D2.17 of BCA2019.
21. The doorways and doors will be in accordance with Clause D2.19 and D2.20 of BCA2019.
22. Door latching mechanisms will be in accordance with Clause D2.21 of BCA2019
23. Fire precautions whilst the building is under construction fire precautions will be in accordance with Clause E1.9 of BCA2019.
24. External above ground waterproofing membranes will comply with Clause F1.4 of BCA2019 and AS 4654 Parts 1 & 2:2012.
25. Any sarking proposed will be installed in accordance with Clause F1.6 of BCA2019.
26. Waterproofing of all wet areas to the building will be carried out in accordance with Clause F1.7 of BCA2019 and AS 3740:2010.
27. Damp proofing of the proposed structure will be carried out in accordance with Clause F1.9 and F1.10 of BCA2019.
28. Floor wastes will be installed to bathrooms and laundries above sole occupancy units or public space in accordance with Clause F1.11 of BCA2019.
29. Sub-floor ventilation will be provided in accordance with Clause F1.12 of BCA2019.
30. 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.
31. The construction of the sanitary facilities will be in accordance with Clause F2.5 of BCA2019.
32. Ceiling heights to the new areas will be in accordance with Clause F3.1 of BCA2019.
33. Natural ventilation will be provided in accordance with Clause F4.5, F4.6 and F4.7 of BCA2019.
34. Water closets and urinals will be located in accordance with Clause F4.8 of BCA2019.
35. The sanitary compartments will be either be provided with mechanical exhaust ventilation or an airlock in accordance with Clause F4.9 of BCA2019.
36. 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.
37. Building Fabric and Thermal Construction will be in accordance with Part J1 of BCA2019.
38. Glazing will be in accordance with Part J1 of BCA2019.
39. Building sealing will be in accordance with Part J3 of BCA2019.
40. Facilities for Energy Monitoring will be provided in accordance with Clause J8.3 of BCA2019.

Electrical Services Design Certification:

41. Emergency lighting will be installed throughout the development in accordance with Clause E4.2, E4.4 of BCA2019 and AS/NZS 2293.1:2018.
42. Exit signage will be installed in accordance with Clause E4.5, E4.7, and E4.8 of BCA2019 and AS/NZS 2293.1:2018.
43. Artificial lighting will be installed throughout the development in accordance Clause F4.4 of BCA2019 and AS/NZS 1680.0:2009.
44. Lighting power and controls will be installed in accordance with Part J6 of BCA2019.

Hydraulic Services Design Certification:

45. Storm water drainage will be provided in accordance with Clause F1.1 of BCA2019 and AS/NZS 3500.3:2018
46. Fire hydrant system will be installed in accordance with Clause E1.3 of BCA2019 and AS 2419.1:2005 as required.
47. Fire hose reels will be installed in accordance with Clause E1.4 of BCA2019 and AS 2441:2005.
48. Portable fire extinguishers will be installed in accordance with Clause E1.6 of BCA2019 and AS 2444:2001.
49. 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:

50. Where not naturally ventilated the building will be mechanically ventilated in accordance with Clause F4.5 of BCA2019 and AS 1668.2:2012.
51. The commercial kitchen will be provided with a kitchen exhaust hood in accordance with Clause F4.12 of BCA2019, and AS 1668.1:2015 and AS 1668.2:2012.
52. The air-conditioning and ventilations systems will be designed and installed in accordance with Part J5 of BCA2019

Structural Engineers Design Certification:

53. 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:
54. Dead and Live Loads – AS/NZS 1170.1:2002
55. Wind Loads – AS/NZS 1170.2:2011
56. Earthquake actions – AS 1170.4:2007
57. Masonry – AS 3700:2018
58. Concrete Construction – AS 3600:2018
59. Steel Construction AS 4100:1998
60. Aluminium Construction – AS/NZS 1664.1 or 2:1997
61. Timber Construction – AS 1720.1:2010
62. ABCB Standard for Construction of Buildings in Flood Hazard Areas.
63. The FRL's of the structural elements for the proposed works have been designed in accordance with Specification C1.1 of BCA2019, including Table 4, for a building of Type B Construction,

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 AS 1735.12:1999 in accordance with Clause E3.6 of BCA2019.

68. All electric passenger lifts and electrohydraulic passenger lifts shall comply with Specification E3.1 of BCA2019.

NSW Specification Design Certificate:

69. Materials, floor and wall linings/coverings, surface finished and air-handling ductwork used in the works will comply with the fire hazard properties in accordance with Clause C1.10, NSW Clause C1.10, Specification C1.10 and NSW Specification C1.10 of BCA2019.

70. The discharge points of exits will be in accordance with Clause D1.10, and NSW Clause D1.10(f) of BCA2019.

71. The dimensions of exits and paths of travel to exits will be provided in accordance with Clause D1.6, and NSW Clause D1.6(f)(vi)&(j) of BCA2019.

72. Stair geometry to the new stairways will be in accordance with Clause D2.13, and NSW Clause D2.13(a)(ix)(x)(xi) of BCA2019. Stair treads are to have a surface with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013 or a nosing strip with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013.

73. Landings and door thresholds throughout the development will be provided in accordance with Clause D2.14 and D2.15, and NSW Clause D2.15(d)&(e) of BCA2019. Landings to have either a surface with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013 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 4586:2013 where the edge leads to a flight below.

74. The handrails and balustrades to all stairs and throughout the building will be in accordance with Clause D2.16, NSW Clause D2.16 & NSW Table D2.16a 1 and D2.17 of BCA2019.

75. The doorways and doors will be in accordance with Clause D2.19, NSW Clause D2.19(b)(v) and D2.20 of BCA2019.

76. The door latching mechanisms to the proposed required exit doors will be in accordance with Clause D2.21 and NSW Clause D2.21(c)&(d) of BCA2019.

77. Insulation will be in accordance with AS/NZS 4859.1:2018 and will be installed as required by NSW Part J1 of BCA2019.

78. Exit signage will be installed in accordance with Clause E4.5, NSW Clause E4.6, E4.7, and E4.8 of BCA2019 and AS/NZS 2293.1:2018.

79. The building will be mechanically ventilated in accordance with Clause F4.5, NSW F4.5(b) of BCA2019 and AS 1668.2:2012.