BCA Assessment Report

4 Alexander Street, Collaroy

Project:	4 Alexander Street, Collaroy
Reference No:	114581-BCA-r1
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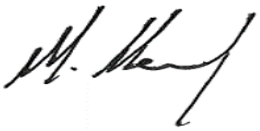
			

Table of Contents

Tables

EXECUTIVE SUMMARY

This document provides an assessment of the architectural design drawings for the proposed Seniors Housing Development at 4 Alexander Street, Collaroy, against the Deemed-to-Satisfy provisions of the Building Code of Australia (BCA) 2019, Volume 1 Amendment 1.

Part 3 '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
Performance Solutions Required		
1.	To allow the proposed garage door opening to be located in the fire wall separating the Class 7a compartment from the Class 2 compartment. Additionally, the windows located at 90 degrees to the fire wall which are within 4 metres will not be protected in accordance with C3.4	Clause C3.3 and C3.5
2.	To allow the lift to open directly into the second-floor unit *Note: Lift landing doors don't achieve an insulation rating of 30 minutes as required by C3.11*	Clause C3.11
3.	To rationalise an FRL 90/90/90 fire protection wall behind the fire hydrant booster that will be less than 2 metres high and 3 metres long.	Clause E1.3
4.	The construction of the external walls is such that they will prevent the penetration of water that could cause unhealthy or dangerous conditions or loss of amenity to occupants and undue dampness or deterioration of building elements.	No DtS provisions
5.	To allow the lift to open directly into the second-floor unit, where the lift landing doors may not achieve an Rw rating not less than 30 *Note: To be prepared/discussed with an Acoustics Consultant*	Clause F5.5
Further Information Required During Design Development at CC Stage		
1.	There are no external or internal wall construction details shown on plans – further assessment is required as the design progresses to ensure all external walls and any internal fire rated walls are *non-combustible* construction in accordance with the above.	Clause C1.9
2.	The external balconies and communal areas will require a waterproofing membrane in accordance with AS 4654.1 & .2. Further information will be required during design development to ensure there is a step down or grated drain installed at the external door thresholds.	Clause F1.4

Annexure D 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 development, the subject of this report, is located at 4 Alexander Street, Collaroy. The building contains a three-storey residential flat building which comprises five (5) units used for seniors living and a ground level carpark which is cut into the rear of the site. The main pedestrian entrance into the building is along the western boundary via a ramped pathway while the main vehicular entrance into the car park is along the eastern boundary via the driveway.

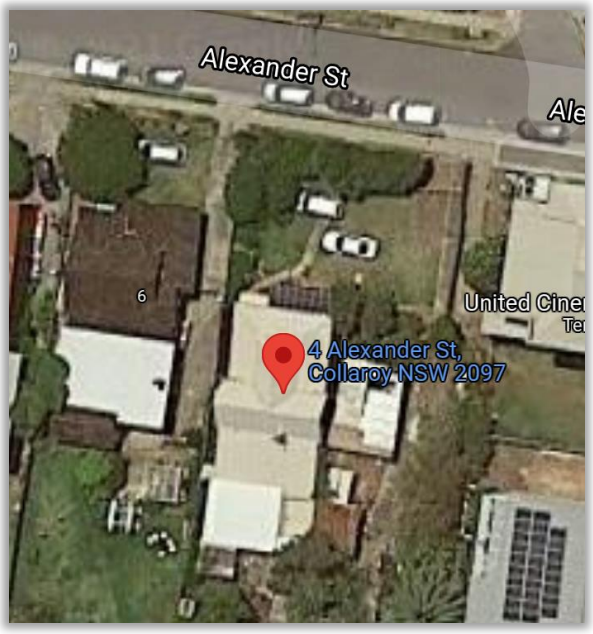


Photo sourced from Google maps

1.2. Purpose

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

1.3. Building Code of Australia

This report is based on the Deemed-to-Satisfy Provisions of the National Construction Code Series Volume 1 – Building Code of Australia, 2019 Edition Amendment One (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);

(c) The deemed to satisfy provisions of Part D3 and F2.4 of BCA2019;

(d) Demolition Standards not referred to by the BCA;

(e) Work Health and Safety Act 2011;

(f) Requirements of Australian Standards unless specifically referred to;

(g) 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

(h) Conditions of Development Consent issued by the Local Consent Authority.

1.5. Design Documentation

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

2 BUILDING DESCRIPTION

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

2.1. Rise in Storeys (Clause C1.2)

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

2.2. Classification (Clause A6.0)

The building has been classified as follows.

Table 1. Building Classification

Class	Level	Description
2	Ground – Level 2	Residential sole occupancy units and common areas
7a	Ground	Carpark

2.3. Effective Height (Clause A1.0)

The building has an *effective height* of 6.4 metres (RL 9.18 – 2.78).

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

The building is required to be of Type A Construction.

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

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

Class 7a	Maximum Floor Area	5 000m^2
	Maximum Volume	30 000m^3
Class 2	The Class 2 portions of the building are not subject to floor area and volume limitations of C2.2 as Table 3 of Specifications C1.1 and Clause C3.11 of the BCA regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 classifications.	

2.6. Fire Compartments

The following *fire compartments* have been assumed:

(a) The ground level Car park.

(b) The Class 2 part of the building.

2.7. Exits

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

(a) The horizontal exit in the fire wall that separates the car park from the residential lobby;

(b) The egress door in the carpark garage door;

(c) The point of open space, past the front entry door on the western elevation; and

(d) The non-fire-isolated stair that serves the residential levels. Due to the top floor unit having no common lobby, the non-fire-isolated stair will be required to be fire separated with bounding construction that achieves an FRL of -/60/60 (non-load bearing) or 90/90/90 (load bearing).

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 side of Alexander Street.

South: The common rear boundary shared with East bank Avenue.

East: The common side boundary shared with 1097 – 1091 Pittwater Road.

West: The common side boundary shared with 6 Alexander Street.

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 Solutions. Any *Performance Solutions* will be required to clearly indicate methodologies for achieving compliance with the relevant *Performance Requirements*.

Annexure D 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 D 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. Performance Based Design – Performance Solutions

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

Table 2. Performance Solutions

Item	Description of Performance Solution	DTS Provision	Relevant Performance Requirements
1.	To allow the proposed garage door opening to be located in the fire wall separating the Class 7a compartment from the Class 2 compartment. Additionally, the windows located at 90 degrees to the fire wall which are within 4 metres will not be protected in accordance with C3.4	Clause C3.3 and C3.5	To be confirmed by the Fire Engineer
2.	To allow the lift to open directly into the second-floor unit *Note: Lift landing doors don't achieve an insulation rating of 30 minutes as required by C3.11*	Clause C3.11	To be confirmed by the Fire Engineer
3.	To rationalise an FRL 90/90/90 fire protection wall behind the fire hydrant booster that will be less than 2 metres high and 3 metres long.	Clause E1.3	To be confirmed by the Fire Engineer

Item	Description of Performance Solution	DTS Provision	Relevant Performance Requirements
4.	The construction of the external walls is such that they will prevent the penetration of water that could cause unhealthy or dangerous conditions or loss of amenity to occupants and undue dampness or deterioration of building elements.	No DtS provisions	FP1.4
5.	To allow the lift to open directly into the second-floor unit, where the lift landing doors may not achieve an Rw rating not less than 30 *Note: To be prepared/discussed with an Acoustics Consultant*	Clause F5.5	To be confirmed by the Acoustics Consultant

3.4. Clause C1.9 – Non-Combustible Construction

As the building is required to be of Type A Construction, 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 A 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 A construction; and*

(c) *A loadbearing 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 – There are no external or internal wall construction details shown on the plans – further assessment is required as the design progresses to ensure all external walls and any internal fire rated walls are *non-combustible* construction in accordance with the above.
- Southern elevation – There are no external or internal wall construction details shown on the plans – further assessment is required as the design progresses to ensure all external walls and any internal fire rated walls are *non-combustible* construction in accordance with the above.
- Eastern elevation – There are no external or internal wall construction details shown on the plans – further assessment is required as the design progresses to ensure all external walls and any internal fire rated walls are *non-combustible* construction in accordance with the above.
- Western elevation – There are no external or internal wall construction details shown on the plans – further assessment is required as the design progresses to ensure all external walls and any internal fire rated walls are *non-combustible* construction in accordance with the above.

Note 1: 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 2: Due to industry wide changes to Professional Indemnity Insurance which include exclusions to external combustible cladding, BCA Logic are not in a position to recommend, advocate for, or undertake performance-based solutions for any combustible wall elements including external claddings or the use of PVC lined formwork products and the like. A reference to the use of any of these products within this report is not to be taken as support for their use in the building. BCA Logic are not responsible for the selection of any materials and our report outlines compliance pathways and whether or not compliance is achieved only.

3.5. Clause F1.4 – External above ground membranes

The external balconies and communal areas will require a waterproofing membrane in accordance with AS 4654.1 & .2. Further information will be required during design development to ensure there is a step down or grated drain installed at the external door thresholds.

Note: where disabled access is required, a grated drain will be required in lieu of a step down.

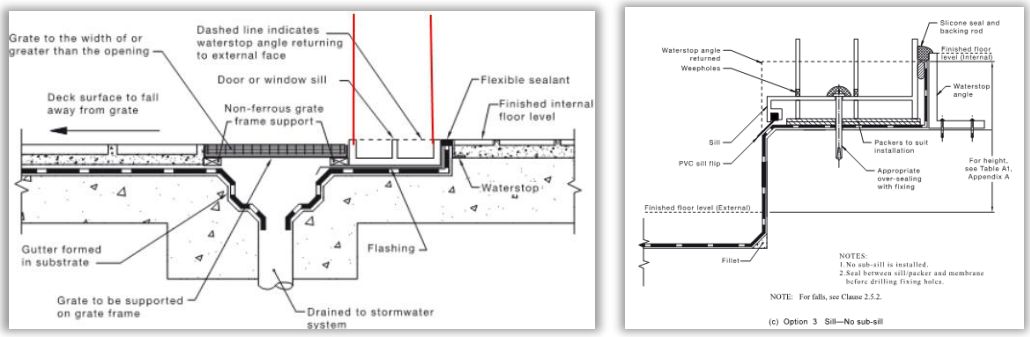


Figure 1 – Grated drain and step-down methods in accordance with AS 4654.2

4 STATEMENT OF COMPLIANCE

The architectural design documentation as referred to in report has been assessed against the applicable provisions of the Building Code of Australia, (BCA) and it is considered that such documentation is capable of complying (as outlined in Annexure D) with that Code, for purposes of a Development Application.

ANNEXURE A DESIGN DOCUMENTATION

Annexure A – Design Documentation

This report has been based on the following design documentation.

Table 3. Architectural Plans

Architectural Plans Prepared by PBD Architects dated 03.09.2021	
DRAWING SCHEDULE	
DA 000	COVER PAGE & AREA SCHEDULE
DA 001	DEMOLITION PLAN
DA 002	SITE PLAN
DA 003	SITE ANALYSIS PLAN
DA 100	GROUND FLOOR PLAN
DA 101	LEVEL 1 PLAN
DA 102	LEVEL 2 PLAN
DA 103	ROOF PLAN
DA 110	UNIT G.01
DA 111	UNIT 1.01
DA 112	UNIT 1.02
DA 113	UNIT 1.03
DA 114	UNIT 2.01
DA 200	ELEVATIONS
DA 201	ELEVATIONS
DA 300	SECTIONS
DA 400	EXTERNAL MATERIALS & FINISHES
DA 401	EXTERNAL MATERIALS & FINISHES
DA 402	PHOTOMONTAGE 01
DA 403	PHOTOMONTAGE 02
DA 500	SOLAR ACCESS DIAGRAM
DA 510	SHADOW DIAGRAM JUNE 21ST
DA 511	SHADOW DIAGRAM MARCH 21ST
DA 513	SHADOW DIAGRAM SEPT 21ST
DA 514	SHADOW DIAGRAM DEC 21ST
DA 520	FSR CALCULATON
DA 530	CEILING HEIGHT LIMIT DIAGRAM
DA 540	LANDSCAPING & DEEP SOIL CALCULATION
DA 600	EXCAVATION DIAGRAM

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 4. Essential Fire Safety Measures

Item	Essential Fire and Other Safety Measures	Standard of Performance
Fire Resistance (Floors – Walls – Doors – Shafts)		
1.	Access Panels & doors/hoppers (fire rated)	**BCA2019 C3.13** (Openings in Shafts) **BCA2019 Spec C3.4** AS 1905.1:2015 (Fire Resistant Doorsets)
2.	Fire doors	**BCA2019 C3.10** (Opening in Fire Isolated Lift Shafts) AS1735.11- 1986 **BCA2019 C3.7** (Protection of doorways in horizontal exits) **BCA2019 C3.11** (Bounding Construction) AS1905.1: 2015
3.	Fire seals protecting openings in fire resisting components of the building	**BCA2019 C3.15** (Openings for service installations) **BCA2019 C3.16** (Construction joints) **BCA2019 Spec C3.15** AS1530.4:2014 & AS4072.1-2005
4.	Lightweight construction > Fire Rating of lightweight bounding walls between units	**BCA2019 C1.1, Spec. C1.1** **BCA2019 C1.8, Spec C1.8** **BCA2019 C3.11** (Bounding Construction) AS1530.4:2014
General		
5.	Portable fire extinguishers	**BCA2019 E1.6** AS 2444–2001
General Egress		
6.	Swing of Exit Doors	**D2.20** (Swinging Doors)
7.	Warning & operational signs	**BCA2019 D2.23 (**Signs on Fire Doors) **BCA2019 D3.6** (Braille Exit Signs) (Note: E4.5 (Exit Signs)) **BCA2019 E3.3** (Lift Signs)

Item	Essential Fire and Other Safety Measures	Standard of Performance
Lifts		
8.	Access to Lift Pits > Located at lowest level	**BCA2019 D1.17** (Access to Lift Pits)
Electrical Services		
9.	Automatic fire detection & alarm: > Clause 5 smoke alarm and detection system: Clause 3 – AS 3786:2014 Smoke Alarm systems powered from consumer mains to all residential SOU's Clause 4 smoke detectors required in the common area as the building. Clause 7 BOWS to sound throughout the building > Incorporating a thermal detection system in the basement carpark.	**BCA2019 E2.2**, NSW Table E2.2a **Spec E2.2a** **Spec E2.2a** - Clause 5 (Combined smoke alarm and smoke detection system) **Spec E2.2a** - Clause 7 (BOWS) AS 3786:2014 (Amdt 1-4) AS 1670.1:2018 (Fire) – Section 4 and 5 (Detectors)
10.	Emergency lighting	**BCA2019 E4.2, E4.4** AS/NZS 2293.1:2018
11.	Exit signs	**BCA2019 E4.5** (Exit Signs) **BCA2019 E4.6** (Direction Signs) **BCA2019 E4.7** (Residential Concession) **BCA2019 E4.8** (Design and Operation - Exits) AS/NZS 2293.1:2018
Hydraulic Services		
12.	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'
13.	Hose reel systems	**BCA2019 E1.4** AS 2441:2005
Mechanical Services		
14.	Fire dampers	**BCA2019 E2.2, Spec E2.2a, Spec E2.2b** **BCA2019 C3.15** AS 1668.1:2015 (Amdt 1) AS 1682.1:2015 & AS 1682.2:2015
15.	1. Mechanical air handling systems	**BCA2019 E2.2, Table E2.2a,**

Item	Essential Fire and Other Safety Measures	Standard of Performance
	2. Mechanical ventilation to carpark.	**Spec E2.2a** AS 1668.1:2015 (Amdt 1) **Note: 5.5.3 Override control** To enable manual control by attending emergency services personnel, fans that are not required to shut down on initiation of fire mode in the car park shall be provided with a control switch at the designated building entry point. **Note:** Signage should be located at the car park entry indicating the location of the control switches.
Performance Solutions		
	Description of Performance Solution	**DTS Provision**
16.	To allow the proposed garage door opening to be located in the fire wall separating the Class 7a compartment from the Class 2 compartment. Additionally, the windows located at 90 degrees to the fire wall which are within 4 metres will not be protected in accordance with C3.4	Clause C3.3 and C3.5
17.	To allow the lift to open directly into the second-floor unit *Note: Lift landing doors don't achieve an insulation rating of 30 minutes as required by C3.11*	Clause C3.11
18.	To rationalise an FRL 90/90/90 fire protection wall behind the fire hydrant booster that will be less than 2 metres high and 3 metres long.	Clause E1.3

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 A Construction

Table 5. Type A Construction

Item	Class 2 parts	Class 7a parts
Loadbearing External Walls (including columns and other building elements incorporated therein) - Less than 1.5m to a *fire- source feature* - 1.5 – less than 3m from a *fire-source feature* - 3m or more from a *fire source feature*	90/90/90 90/60/60 90/60/30	120/120/120 120/90/90 120/60/30
Non-Loadbearing External Walls - Less than 1.5m to a *fire-source feature* - 1.5 – less than 3m from a *fire-source feature* - 3m or more from a *fire-source feature*	-/90/90 -/60/60 -/-/-	-/120/120 -/90/90 -/-/-
External Columns - Loadbearing - Non-loadbearing	90/-/- -/-/-	120/-/- -/-/-
Common Walls & Fire Walls	90/90/90	120/120/120
Stair and Lift Shafts required to be fire-resisting - Loadbearing - Non-loadbearing	90/90/90 -/90/90	120/120/120 -/120/120
Internal walls bounding sole occupancy units - Loadbearing - Non-loadbearing	90/90/90 -/60/60	120/-/- -/-/-
Internal walls bounding public corridors, public lobbies and the like: - Loadbearing - Non-loadbearing	90/90/90 -/60/60	120/-/- -/-/-
Ventilating, pipe, garbage and like shafts: - Loadbearing - Non-loadbearing	90/90/90 -/90/90	120/90/90 -/90/90
Other loadbearing internal walls, beams trusses and columns	90/-/-	120/-/-
Floors	90/90/90	120/120/120
Roofs[1]	90/60/30	120/60/30

[1] The roof need not comply with any FRL's due to the sprinkler protection of the entire building.

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 F	'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 F 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 6. 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 F
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 F
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 F
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 F
B1.6 Construction of buildings in flood hazard areas	A Class building, in a flood hazard area (refer to Council maps) must comply the ABCB Standard for Construction of Buildings in Flood Hazard Areas.	Structural Engineer to certify at CC stage.	CRA – Refer Annexure F

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 minimum Type of fire-resisting construction of a building must be determined in accordance with Table C1.1 of the Clause.	The building is required to be Type A Construction. No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F
C1.2: Calculation of rise in storeys	The rise in storeys is the sum of the greatest number of storeys at any part of the external walls of the building and any storeys with the roof space.	The building has a rise in storeys of three (3).	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.	The building does not have mixed types of construction.	N/A
C1.5: Two Storey Class 2, 3 or 9c buildings	N/A	The building has a rise in storeys more than two.	N/A
C1.6: Class 4 Parts of building	N/A	The building does not contain a Class 4 part.	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.	No details have been provided at this stage, however as the design progresses, compliance will be readily	CRA – Refer Annexure F

Section C: Fire Resistance			
		achievable subject to further details being provided at CC stage.	
C1.9: Non-combustible building elements	(a) In a building required to be of Type A 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 A construction; and (c) A loadbearing 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.	No details of the external walls have been provided, however further details will be required at CC stage to confirm that all external walls, flooring of lift pits and internal non-load bearing walls required to be fire rated are all non-combustible construction. 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.	FI – Refer to part 3

Section C: Fire Resistance			
	(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*.	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F
C1.11: Performance of external walls in fire	N/A	N/A	N/A
C1.12: Non-combustible materials	Clause now deleted and relocated to C1.9.	Noted	Noted

Section C: Fire Resistance			
C1.13: Fire-protected timber: Concession	N/A	The building is not considered to have any fire-protected timber elements.	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— (i) meets the relevant requirements of Table 4 of Specification C1.10 as for an internal element; and	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F

Section C: Fire Resistance			
	(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.	The building will not be sprinkler protected.	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 building does not exceed the maximum compartmentation parameters of this clause.	Complies
C2.3: Large isolated buildings	N/A	The building is not a large isolated building.	N/A
C2.4: Requirements for open spaces and vehicular access	N/A	The building is not a large isolated building.	N/A

Section C: Fire Resistance				
C2.5:	Class 9a and 9c Buildings	N/A	The building does not contain a Class 9a or 9c part.	N/A
C2.6:	Vertical separation of openings in external walls	Where the vertical projection of an opening in an external wall falls no further than 450 mm outside an opening in the storey next below, the openings must be provided with vertical separation complying with Clause C2.6, that is: > They must be protected with a 900mm high (*FRL* 60/60/60) spandrel extending at least 600mm above the separating slab, or > They must be provided with a 1.1m horizontal projection (*FRL* 60/60/60) also extending at least 450mm either side of the openings. The above does not apply to openings within the same stairway. For the purposes of this clause, opening means that part of the external wall of a building that does not have an *FRL* of 60/60/60 or greater.	The elevations drawings show the provisioning of spandrels that will readily achieve compliance with this clause, subject to the spandrels achieving an FRL of -/60/60 (non-load bearing) or 60/60/60 (load bearing). Further assessment required at CC stage.	CRA – Refer Annexure F
C2.7:	Separation by fire walls	**Construction** - A *fire wall* must be constructed in accordance with the following: > 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. > 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 *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	A fire wall will be required to separate the Class 7a car park from the residential lobby area. The fire wall will require an FRL of 120/120/120 and will require to be constructed to the underside of the fire floor slab which will also have to achieve an FRL of 120/120/120. Further details of the fire wall will be required at CC stage.	CRA – Refer Annexure F

Section C: Fire Resistance			
	is constructed in accordance with this clause and the *fire wall* extends to the underside of – > 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 > 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 Class 7a car park will be separated from the Class 2 lobby with an FRL 120/120/120 fire wall. All other storeys are of a single Class 2 classification.	CRA – Refer Annexure F
C2.9: Separation of classifications in different storeys	Floors separating storeys of different classifications must have an *FRL* of not less than that prescribed in Specification C1.1 for the classification of the lower storey.	The first-floor level slab will require an FRL of 120/120/120 as there is a fire wall on the ground floor, however the second-floor slab can achieve an FRL of 90/90/90. Further assessment required at CC stage.	CRA – Refer Annexure F
C2.10: Separation of lift shafts	Type A Passenger lifts must be separated from the remainder of the building by enclosure in a fire rated shaft achieving an *FRL* prescribed by Table 3 of Specification C1.1. Emergency lifts must be in fire-rated shafts not less than *FRL* 120/120/120.	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F
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.	The fire-isolated stairs are not located within the same shaft as the lifts.	CRA – Refer Annexure F

Section C: Fire Resistance			
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.	Due to the size of the building, it is not considered that any equipment referenced under this clause would be evident in the building and require separation.	N/A
C2.13: Electricity supply system	> A main switchboard which sustains emergency equipment operating in the emergency mode must be fire separated from any other part of the building	No details have been provided at this stage, however as the design progresses, compliance will be readily	CRA – Refer Annexure F

Section C: Fire Resistance			
	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. > 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: o fire hydrant booster pumps; o sprinkler pumps; o hose reel pumps; o air-handling systems designed to exhaust and control the spread of smoke; o emergency lifts; o control and indicating equipment; and o sound systems and intercom systems for emergency purposes.	achievable subject to further details being provided at CC stage.	
C2.14: Public corridors in Class 2 and 3 Buildings	Public corridors in Class 2 parts that exceed 40 m in length must be divided at intervals of not more than 40m with smoke-proof walls complying with Clause 2 of Specification C2.5.	The corridors throughout the Class 2 parts are less than 40 metres in length.	Complies
Part C3 – Protection of Openings			
C3.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted

Section C: Fire Resistance			
C3.1: Application of Part	(a) The Deemed-to-Satisfy Provisions of this Part do not apply to– (i) Control joints, weep holes and the like in external walls of masonry construction and joints between panels in external walls of pre-cast concrete panel construction if, in all cases they are not larger than necessary for the purpose; and (ii) Non-combustible ventilators for subfloor or cavity ventilation, if each does not exceed 45 000 mm2 in face area and is spaced not less than 2 m from any other ventilator in the same wall; and (iii) Openings in the vertical plane formed between building elements at the construction edge or perimeter of a balcony or verandah, colonnade, terrace, or the like; and (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. (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.	Noted	Noted

Section C: Fire Resistance				
		(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.	Based off scaled measurements and notations on the plans, all openings in the building will be located no closer than 3 metres from a fire source feature and therefore no openings are required to be protected under this Clause.	Noted
C3.3:	Separation of external walls and associated openings in different fire compartments	The distance between parts of external walls and any openings within them in different *fire compartments* separated by a *fire wall* must not be less than that set out in Table C3.3, unless— (a) those parts of each wall have an *FRL* not less than 60/60/60; and (b) any openings protected in accordance with C3.4.	The fire wall that separates the carpark from the residential parts on the ground floor will be located at 90 degrees to the adjoining fire compartment. Due to the area being sterile and low fire risk, it is recommended that a Fire Engineered Performance Solution is obtained to rationalise no protection at the garage door and windows in Unit G.01.	PS

Section C: Fire Resistance			
	Table C3.3 DISTANCE BETWEEN EXTERNAL WALLS AND ASSOCIATED OPENINGS IN DIFFERENT FIRE COMPARTMENTS **Angle between walls** / **Min. Distance** 0° (walls opposite) 6 m more than 0° to 45° 5 m more than 45° to 90° 4 m more than 90° to 135° 3 m more than 135° to less than 180° 2 m 180° or more Nil		
C3.4: Acceptable methods of protection	Where protection is required, openings must be protected as follows: <u>Doorways:</u> (i) Internal or external wall-wetting sprinklers as appropriate used with doors that are self-closing; or (ii) –/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	There are no openings under C3.2 that require protection. The garage and window openings in adjoining fire compartments will be addressed by virtue of a performance solution under C3.3 (see comments above).	N/A

Section C: Fire Resistance				
		(ii) Construction having an *FRL* not less than –/60/– Fire doors, fire windows and fire shutters must comply with BCA Specification C3.4.		
C3.5:	Doorways in fire walls	Doorways in the fire walls must be protected by a self-closing fire door that achieves an *FRL* of not less than that required by Specification C1.1 for the *fire wall* except that each door must have an insulation level of at least 30.	The swing doors that are located in the fire wall will require an FRL of -/120/30. However, it is noted that the garage door into the car park will be located in the fire wall, however this will be addressed through the solution under Clause D3.3.	CRA – Refer Annexure F PS
C3.6:	Sliding fire doors	N/A	N/A	N/A
C3.7:	Protection of doorways in horizontal exits	A doorway that is part of a horizontal exit must be protected by a single fire door that has an FRL of not less than that required by Specification C1.1 for the fire wall except that the door must have an insulation level of at least 30, or by one of the other options in Clause C3.7.	The doorway from the carpark into the lobby area is treated as a horizontal exit, therefore the doorway will require a self-closing -/120/30 fire door. Details to be provided at CC stage.	CRA – Refer Annexure F
C3.8:	Openings in fire-isolated exits	Doorways that open to fire-isolated stairways, fire-isolated passageways or fire-isolated ramps, and are not doorways opening to a road or open space, must be protected by –/60/30 fire doors that are self-closing, or automatic-closing in accordance with (ii) and (iii) of Clause C3.8.	It is noted that the proposed internal stairway is a non-fire-isolated stair that will have fire rated bounding construction located around the stairway. The stairway is not a D1.7 fire-isolated exit, therefore this clause is not applicable.	N/A
C3.9:	Service penetrations in fire-isolated exits	N/A	See comments under C3.8.	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.	The lift shafts will require -/60/- lift landing doors. No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F

Section C: Fire Resistance			
	> 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.		
C3.11: Bounding Construction: Class 2, 3 and 4 Buildings	> The doorways between sole occupancy units and the public lobbies and any common / service rooms and the public lobbies (class 2 parts) must be protected by self–closing -/60/30 fire doors. > In a Class 2 building where a path of travel to an *exit* does not provide a person seeking egress with a choice of travel in different directions to alternative *exit*s and is along an open balcony, landing or the like and passes an external wall of– (i) another sole-occupancy unit; or (ii) a room not within a sole-occupancy unit, then that external wall must– (i) be constructed of concrete or masonry, or be lined internally with a fire-protective covering; and (ii) have any doorway fitted with a self-closing, tight-fitting solid core door not less than 35 mm thick; and (iii) have any windows or other openings– (A) protected internally in accordance with C3.4; or (B) located at least 1.5 m above the floor of the balcony, landing or the like.	All doorways from the units that open onto the corridor or fire egress stair must be protected with self-closing -/60/30 fire doors. A performance solution will be required to allow the -/60/- lift doors to open directly into the second-floor unit. Note: The window openings in the ground floor unit that are located adjacent to the western egress pathway must be located at a height of 1500mm above the ramp and the external wall shall also be constructed of a material as specified in C3.11 (g). Further details to be provided at CC stage.	CRA – Refer Annexure F PS
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.	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F

Section C: Fire Resistance			
	Where a service passes through a floor which is required to be protected by a *fire-protective* covering, the penetration must not reduce the fire performance of the covering.		
C3.13: Openings in shafts	Openings in shafts must be protected by: (a) if it is in a sanitary compartment – a door or panel which together with its frame, is *non-combustible* or has an *FRL* of not less than –/30/30; or (b) a self-closing –/60/30 fire door or hopper; or (c) an access panel having an *FRL* of not less than –/60/30; or (d) if the shaft is a garbage shaft – a door or hopper of *non-combustible* construction.	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F
C3.15: Openings for service installations	Where services pass through an element which is required to achieve an *FRL* (other than an external wall or roof), the service must be fire protected in accordance with BCA Clause C3.15. **Note:** contractors should check with PCA to confirm compliance with their proposed fire stopping method.	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F
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*.	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F
C3.17: Columns protected with lightweight construction to achieve an FRL	A column protected by lightweight construction to achieve an *FRL* which passes through a building element that is required to have an *FRL* or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F

Section C: Fire Resistance				
		assembly of the construction which has achieved the required *FRL* or resistance to the incipient spread of fire.		
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– (i) has an *FRL* of not less than 30/–/–; and (ii) 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.	Due to the fire wall in the carpark, the slab level above the carpark compartment must achieve an FRL of 120/120/120. If this slab continues through to the class 2 parts, then the supporting parts to the slab must achieve a structural FRL of 120 minutes.	CRA – Refer Annexure F
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 details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F
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.	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F

Section C: Fire Resistance				
2.5:	General concessions	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.	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F
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.	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F
2.8:	Carparks in Class 2 and 3 Buildings	N/A	The car park storey is not solely used for the parking of vehicle as there is a class 2 unit located on the ground floor storey, therefore this clause is not applicable.	N/A

Section C: Fire Resistance				
2.9:	Residential Aged Care building: Concession	N/A	N/A	N/A
3.0:	Type A fire-resisting construction	Type A fire-resisting construction is applicable to the development.	Refer to part 3 clauses below for the relevant Type A Construction requirements appliable to the project.	Noted
3.1:	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*) > Internal walls required to be fire rated must extend to– (i) to the underside of the floor next above; or (ii) the underside of a roof complying with Table 3; or (iii) if under Clause 3.5 the roof is not required to comply with Table 3, the underside of the *non-combustible* roof covering 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 (iv) a ceiling that is immediately below the roof and has a resistance to the incipient spread of fire to the roof space above itself of not less than 60 minutes. > 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, as well as non-load bearing lift, ventilating,	<u>Class 7a basement</u> Compliance is readily achievable, subject to the CC plans showing the required FRL's in accordance with table 3 of Specification C1.1. <u>Class 2 parts</u> Compliance is readily achievable, subject to the CC plans showing the required FRL's in accordance with table 3 of Specification C1.1. Note: If Dincel or a similar material is to be used as an element where the BCA requires such element to be *non-combustible*, this material will need to be the subject of a Fire Engineering Assessment at the CC stage which BCA Logic cannot carry out.	CRA – Refer Annexure F

Section C: Fire Resistance				
		pipe, garbage or similar shaft wall 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. > The *FRL*s specified in Table 3 for an external column apply also to those parts of an internal column that face and are within 1.5m of a window and are exposed through that window to a *fire-source feature*.		
3.2:	Concessions for floors	A floor need not comply with Table 3 if— (a) it is laid directly on the ground.	Applicable to the ground floor slab.	Noted
3.3:	Floor Loading of Class 5 and 9b buildings: Concession	N/A	N/A	N/A
3.4:	Roof superimposed on concrete slab: Concession	N/A	N/A	N/A
3.5:	Roof: Concession	A roof need not comply with Table 3 if its covering is *non-combustible* and the building— (a) has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 installed throughout; or (b) has a rise in storeys of 3 or less; or (c) is of Class 2 or 3; or (d) has an *effective height* of not more than 25 m and the ceiling immediately below the roof has a	The roof does not require an FRL as the building does not have a rise in storeys more than 3.	Noted

Section C: Fire Resistance			
	resistance to the incipient spread of fire to the roof space of not less than 60 minutes.		
3.6: Roof lights	If a roof is required to have an *FRL* or its covering is required to be *non-combustible*, roof lights or the like installed in that roof must— (a) have an aggregate area of not more than 20% of the roof surface; and (b) be not less than 3 m from— (i) any boundary of the allotment other than the boundary with a road or public place; and (ii) any part of the building which projects above the roof unless that part has the *FRL* required of a *fire wall* and any openings in that part of the wall for 6 m vertically above the rooflight or the like are protected in accordance with C3.4; and (iii) any rooflight or the like in an adjoining *sole-occupancy unit* if the walls bounding the unit are required to have an *FRL*; and (iv) any rooflight or the like in an adjoining fire-separated section of the building; and (c) if a ceiling with a resistance to the incipient spread of fire is required, be installed in a way that will maintain the level of protection provided by the ceiling to the roof space.	The building has two sky lights located in the first-floor level roof. The sky lights are greater than 3m from the side boundary as well as the openings in the second-floor level unit, however the external walls of the second floor unit that are located within 3 metres of the sky light will require an FRL of 90/90/90. Details to be provided at CC stage.	CRA – Refer Annexure F
3.7: Internal columns and walls: Concession	For a building with an *effective height* of not more than 25 m and having a roof without an FRL in accordance with Clause 3.5, in the storey immediately below that roof, internal columns other than those referred to in Clause 3.1(f) and internal walls other than *fire walls* and shaft walls may have— (a) in a Class 2 or 3 building: FRL 60/60/60.	Applicable to the second-floor level	Noted

Section C: Fire Resistance				
3.8:	Open spectator stands and indoor sports stadiums concession	N/A	N/A	N/A
3.9:	Carparks	N/A	N/A	N/A
3.10:	Class 2 and 3 buildings Concession	N/A	The building is considered to be constructed out of concrete.	N/A

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 part of a building.	Noted	Noted
D1.2:	Number of exits required	Buildings under an effective height of 25 m: > Each storey must have at least 1 exit provided. General > Without passing through another *sole-occupancy unit*, every occupant of a storey or part of a storey must have access to an *exit* or at least 2 *exits*, if 2 or more are required.	**Class 7a Car park:** The car park has access to two exits, those being the horizontal exit into lobby and the egress door in the garage door opening. **Class 2 parts:** The ground floor has access to an exit, being the point of open space past the front entry door, while the upper levels also have access to an exit, being the non-fire-isolated stair that is constructed with fire rated bounding construction.	Complies Complies

Section D: Access and Egress			
D1.3: When fire-isolated stairways and ramps are required	Every stairway in a Class 2 building must be fire-isolated, unless it connects not more than 3 consecutive storeys	The non-fire-isolate stair only connects 3 storeys, therefore it is permitted to be treated as a non-fire-isolated stairway, however the stairway will have bounding construction to avoid fire spread into the top floor unit.	Noted
D1.4: Exit travel distances	<u>Class 2 residential —</u> > The entrance doorway of each *sole-occupancy unit* must be not more than – o 6 m from an *exit* or from a point from which travel in different directions to 2 *exits* is available; or o 20 m from a single *exit* serving the storey at the level of egress to a road or open space; and > No point on the floor of a room which is not in a *sole-occupancy unit* must be more than 20 m from an *exit* or from a point at which travel in different directions to 2 *exits* is available. <u>Class 7a carpark—</u> No point on a floor must be more than 20 m 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 40 m. > no point on a floor must be more than 20 m 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 40 m.	**Class 2 parts:** The unit entry doors of the Class 2 units on the upper levels are located no further than 6 metres from the top riser of the non-fire-isolated stairway. The ground floor unit entry door is located no further than 20 metres from open space. **Class 7a parts:** All points throughout the Class 7a car park are located within 20 metres of an exit, or a point of choice in which travel in different directions is available, in which case the travel distance to one exit does not exceed a distance of 40 metres.	Complies Complies
D1.5: Distance between alternative exits	*Exits* that are required as alternative means of egress must be–	**Class 7a part:** The distance between the alternate exits (horizontal exit and egress door) on the ground floor is no less than 9	Complies

Section D: Access and Egress				
		(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 building — 45 m apart; or (ii) 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. Note: the distance between *exits* must be measured through the point at which travel two *exits* is available.	metres but no more than 60 metres apart (when measured through the path of travel). The paths of travel do no converge and become within 6 metres of each other.	
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.	Each storey is considered to have less than 100 persons. As the building is served by a non-fire-isolated stair, then the aggregate egress width of 1m will be achieved. The egress stairs must maintain a minimum width of 1m, measured clear of the handrails and hydrants. Dimensioned details to be shown at CC stage.	CRA – Refer Annexure F

Section D: Access and Egress				
		> the unobstructed width of a required *exit* must not diminish in the direction of travel to a road or open space.		
D1.7:	Travel via fire-isolated exits	N/A	Although the stairway provides direct access into the top floor unit, the stairway is not a D1.7 fire-isolated stair, however it is a non-fire-isolated stair with fire rated bounding construction.	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 2 building, the distance between the doorway of a room or *sole-occupancy unit* and the point of egress to a road or open space by way of a stairway or ramp that is not fire-isolated and is required to serve that room or *sole-occupancy unit* must not exceed 60m. > In a Class 2 building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than – (i) 15 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) 30 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.	Travel distances via the non-fire-isolated stairways in the Class 2 part comply as the travel distances are less than 60m and the discharge point is within 15m of the front entry door. The stairways in the ground floor lobbies also comply as the total travel distances are less than 60m and the discharge point is within 15m of the front entry door that egresses to open space on the ground floor level.	Complies

Section D: Access and Egress			
	> In a Class 2 building, if 2 or more *exits* are required and are provided by means of internal non-fire-isolated stairways or non-fire-isolated ramps, each *exit* must— (i) provide separate egress to a road or open space; and (ii) be suitably smoke-separated from each other at the level of discharge.		
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. 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 exits on the ground floor discharge to areas that involve occupants travelling over a 1:20 walkway and a 1:14 ramp in order to egress to the street. The walkways and ramps shall comply with the provisions of AS 1428.1-2009 and shall be further assessed at CC stage. The alternate exits on the ground floor area considered to be far enough apart as practicable.	CRA – Refer Annexure F
D1.11: Horizontal exits	*Horizontal exits* must not comprise more than half of the required *exits* from any part of a storey divided by a *fire wall*.	The horizontal exit in the car park does not comprise more than half the exits as there is also an egress door in the garage door that serves a required exit. Suitable space is provided on the carpark side of the horizontal exits to enable occupants to pass through the doorway.	Complies.
D1.12: Non-required stairways, ramps or escalators	N/A	N/A	N/A
D1.13: Number of persons accommodated	Informational– The number of persons accommodated in a storey, room or mezzanine must be determined within consideration	Informational (Class 2 building)	Noted

Section D: Access and Egress			
	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. Based on floor area and Table D1.13, the population numbers are as follows:		
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.	Informational	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.	No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F
D1.18: Egress from early childhood centres	N/A	N/A	N/A
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), D2.18 & 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	N/A	N/A	N/A
D2.3: Non-fire-isolated stairways and ramps	Required stairs and ramps (including landings and any supporting building 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	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F

Section D: Access and Egress				
		(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	The building does not contain a basement level.	N/A
D2.5:	Open access ramps and balconies	N/A	There are no open access ramps and balconies in the development.	N/A
D2.6:	Smoke lobbies	N/A	The building does not have any required smoke lobbies.	N/A
D2.7:	Installations in exits and paths of travel	> Access to service shafts and services other than to fire-fighting or detection equipment must not be provided from a fire-isolated stairway or fire-isolated passageway. > Gas or other fuel services must not be installed in a required *exit*. > Any electricity meters, distribution boards or ducts, or telecommunications distribution boards or equipment installed in corridors/hallways/lobbies or the like must be enclosed with *non-combustible* construction or a fire protective covering with doorways suitably sealed against smoke spread. > Electrical wiring may be installed in a fire-isolated *exit* if the wiring is associated with:	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F

Section D: Access and Egress			
	○ a lighting, detection, or pressurization system serving the *exit*; or ○ a security, surveillance or management system serving the *exit*; or ○ an intercommunication system or an audible or visual alarm system in accordance with D2.22; or ○ 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 non-fire-isolated stairways are shown to have any storage or cupboard space located below the stairway.	Complies
D2.9: Width of stairways and ramps	N/A	N/A	N/A
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 (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.	The pedestrian ramp located along the western boundary shall comply with AS 1428.1-2009. Compliance is readily achievable, subject to further details being provided at CC stage.	CRA – Refer Annexure F

Section D: Access and Egress			
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; > Risers must be between 115 mm high and 190 mm high; > The slope relationship (2 x riser dimension + going dimension) must be within the range of 550-700; > The goings and risers must be constant (uniform) throughout each flight and the dimensions of goings (G) and risers (R) are considered constant if the variation between– (A) adjacent risers, or between adjacent goings, is no greater than 5 mm; and (B) the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm. > Risers must not contain any openings that would permit a 125 mm sphere to pass through. > Each tread must have a non-slip finish or an adequate non-skid strip near the edge of the nosings;	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further stairway details being provided at CC stage.	CRA – Refer Annexure F

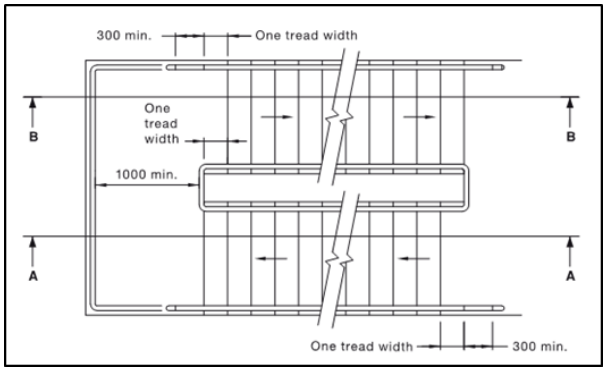
<table>
<tr><th colspan="4">Section D: Access and Egress</th></tr>
<tr><td></td><td>

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.
In the case of a required stairway, no winders in lieu of a landing
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>No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.</td><td>CRA – Refer Annexure F</td></tr>
<tr><td>D2.15: Thresholds</td><td>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–</td><td>Where doorways have a step at the threshold and lead to open space, then a threshold or step ramp shall be installed in accordance with AS 1428.1-2009. Further</td><td>CRA – Refer Annexure F</td></tr>
</table>

Section D: Access and Egress			
	(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.	details required at CC stage to determine the level transitions at the doorway thresholds.	
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 – 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.	No details have been provided at this stage to show the proposed barriers, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F

Section D: Access and Egress			
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 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.	The non-fire-isolated stair has offset risers proposed to ensure the handrails can achieve compliance in the stairway. No details have been provided at this stage to show the proposed handrails, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F

Section D: Access and Egress			
	 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 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.	The building does not have any sliding doors in locations which serve as required exits. Furthermore, if any of the swing does which serve as required exits become power operated, then compliance with the provisions of this clause shall be adhered to.	CRA – Refer Annexure F
D2.20: Swinging doors	Swinging doors in a required *exit* must not encroach–	All the doorways that serve as required exits from the building swing in the direction of travel.	CRA – Refer Annexure F

Section D: Access and Egress			
	(i) at any part of its swing by more than 500 mm on the required 1m width of the *exit* and (ii) when fully open, by more than 100 mm on the required 1m *exit* width; and the measurement of encroachment in each case is to include door handles or other furniture or attachments to the door. A swinging door in a required *exit* must swing in the direction of egress unless– > it serves a building or part with a floor area not more than 200 m2, it is the only required *exit* from the building or part and it is fitted with a device for holding it in the open position; or > it serves a sanitary compartment or airlock (in which case it may swing in either direction).	Dimensioned details of the egress stairs shall be provided at CC stage to confirm that the door swing does not encroach more than 500mm into the exit width (measured clear of the handrails).	
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	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F

Section D: Access and Egress			
	(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— (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) are fitted with a fail-safe device which automatically unlocks the door upon the activation of an AS 1670.1 detection system installed throughout the building and is readily openable when unlocked.		
D2.22: Re-entry from fire-isolated exits	N/A	N/A	N/A

Section D: Access and Egress			
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.	No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F
D2.24: Protection of openable windows	(a) Bedroom windows must be provided with protection if the floor below the window is 2m or more above the surface beneath. (b) 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 (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.	No window details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details / window schedule being provided at CC stage.	CRA – Refer Annexure F

Section D: Access and Egress			
	(c) 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). (d) 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.		
D2.25: Timber stairways: concession	N/A	N/A	N/A
Part D3 – Access for People with A Disability – Assessed by a Third-party Access Consultant			

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.	The building has an onsite fire hydrant booster assembly located adjacent to the main vehicular entrance and in sight of the main pedestrian entrance. Considering that the internal stairway is not treated as a fire-isolated stair, however the stair will have bounding construction, the internal hydrants are deemed to be located in a satisfactory position as they are within 4m of the top riser	CRA – Refer Annexure F

Section E: Services and Equipment			
		at each level. The internal hydrant locations will provide system coverage throughout the building. The building is not sprinkler protected and the hydrant booster assembly is located within 10 metres of the building. It is recommended that discussions are held with a Fire Engineer at CC stage to seek a Performance Solution for a modified wall height to protect the booster, as the DtS method requires a 2-metre-high wall which must be no less than 3 metres long.	PS
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).	The building has internal hydrant installed; therefore, a fire hose reel will be required within 4 metres of one of the exits to provide system coverage throughout the Class 7a part. Further details required at CC stage.	CRA – Refer Annexure F
E1.5: Sprinklers	N/A	The building does not require a sprinkler system.	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. For the Class 2 parts, portable fire extinguishers must be– (i) an ABE type fire extinguisher; and (ii) a minimum size of 2.5 kg; and (iii) distributed outside a *sole-occupancy unit*— (A) to serve only the storey at which they are located; and (B) so that the travel distance from the entrance doorway of any *sole-occupancy unit* to the nearest fire extinguisher is not more than 10 m.	Portable fire extinguishers will be required throughout the building. No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F

Section E: Services and Equipment			
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.	To be complied with during construction.	Noted
E1.10: Provision for special hazards	N/A	N/A	N/A
Part E2 – Smoke Hazard Management			
E2.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
E2.1: Application of Part	Informational	Noted	Noted
E2.2: General requirements (including Tables E2.2a and E2.2b)	**General smoke hazard management requirements** An air-handling system which does not form part of a smoke hazard management system in accordance with Table E2.2a or Table E2.2b and which recycles air from one *fire compartment* to another *fire compartment* or operates in a manner that may unduly contribute to the spread of smoke from one *fire compartment* to another *fire compartment* (such as lobby air supply) must—	**Air handling systems** Further mechanical ventilation details must be provided at CC stage. **Class 2 parts** The Class 2 parts will require a Clause 5 smoke detection and alarm system throughout the units and common areas in accordance with Specification E2.2a. Further details required at CC stage. **Class 7a basement carpark**	CRA – Refer Annexure F CRA – Refer Annexure F

Section E: Services and Equipment			
	(i) be designed and installed to operate as a smoke control system in accordance with AS 1668.1:2015; or (ii) (A) incorporate smoke dampers where the air-handling ducts penetrate any elements separating the *fire compartments* served; and (B) be arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with clause 7.5 of AS 1668.1:2015; and for the purposes of this provision, each *sole-occupancy unit* in a Class 2 or 3 building is treated as a separate *fire compartment*. Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1:2015 serving more than one *fire compartment* (other than a carpark ventilation system) and not forming part of a smoke hazard management system must comply with that Section of the Standard. **Class 2 parts** Class 2 parts must be provided with an automatic smoke detection and alarm system complying with BCA Specification E2.2a. Note: Smoke alarms in sole occupancy units are now required to be interconnected. **Class 7a buildings** A Class 7a building including a basement provided with a mechanical ventilation system in accordance with AS 1668.2:2012 must comply with clause 5.5 of AS 1668.1:2015 except that fans with metal blades for operation at normal temperatures may be used, and the	Further mechanical ventilation details must be provided at CC stage to ensure the system complies with AS 1668.1 & AS 1668.2 – 2005.	CRA – Refer Annexure F

Section E: Services and Equipment				
		electrical power and control cabling need not be fire rated.		
E2.3:	Provisions for special hazards	N/A	N/A	N/A
Specification E2.2a – Smoke Detection and Alarm System				
1.	Scope	Informational	Noted	Noted
2.	Type of system	A required automatic smoke detection and alarm system must be provided in accordance with the following: (a) Class 2 buildings and Class 4 parts of a building— (i) a smoke alarm system complying with Clause 3; or (ii) a smoke detection system complying with Clause 4; or (iii) a combination of a smoke alarm system and a smoke detection system complying with Clause 5	The Class 2 parts will require a Clause 5 smoke detection and alarm system installed throughout. Details to be provided at CC stage.	CRA – Refer Annexure F
3.	Smoke alarm system	N/A	N/A	N/A
4.	Smoke detection system	N/A	N/A	N/A
5.	Combined smoke alarm and smoke detection system	(a) A Class 2 building provided with a combination of a smoke alarm system and smoke detection system in accordance with Clause 2 must— (i) be provided with a smoke alarm system complying with Clause 3 within sole-occupancy units; and	The Class 2 units will require Clause 3 smoke alarms to be installed throughout each unit and Clause 4 detectors to be located throughout the common areas outside the units. Details to be provided at CC stage.	CRA – Refer Annexure F

Section E: Services and Equipment				
		(ii) subject to (b), be provided with a smoke detection system complying with Clause 4 in areas not within sole-occupancy units.		
6.	Smoke detection for smoke control system	N/A	N/A	N/A
7.	Building occupant warning system	Subject to E4.9, a building occupant warning system provided as part of a smoke hazard management system must comply with clause 3.22 of AS 1670.1 to sound through all occupied areas except— (a) in a Class 2 building provided with a smoke detection system in accordance with Clause 4(b), the sound pressure level from a building occupant warning system need not be measured within a sole-occupancy unit if a level of not less than 100 dB(A) is provided at the door providing access to the sole-occupancy unit.	The building will require a building occupant warning system. No details have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details being provided at CC stage.	CRA – Refer Annexure F
8.	System Monitoring	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 have been provided at this stage, however as the design progresses, compliance will be readily achievable subject to further details / specification being provided at CC stage.	CRA – Refer Annexure F
E3.2:	Stretcher facility in lifts	N/A	The passenger lift does not require stretcher facilities.	N/A

Section E: Services and Equipment			
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.	No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F
E3.4: Emergency lifts	N/A	N/A	N/A
E3.5: Landings	Access and egress to and from lift-well landings must comply with the Deemed-to-Satisfy Provisions of Section D.	The landings are considered to be sufficient to accommodate wheelchair turning spaces.	CRA – Refer Annexure F
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.	Based off scaled measurements, the lift will achieve a floor plate with minimum dimensions of 1100mm x 1400mm. Further details of the accessible features shall be provided at CC stage.	CRA – Refer Annexure F
E3.7: Fire service controls	N/A	The building does not have an effective height more than 12 metres.	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

Section E: Services and Equipment			
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.	Emergency lighting will be required throughout the building. No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F
E4.3: Measurement of distance	Informational	Noted	Noted
E4.4: Design and operation of emergency lighting	The emergency lighting system must comply with AS/NZS 2293.1:2018.	Emergency lighting will be required throughout the building. No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F
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 required throughout the building. No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F
E4.6: Direction signs	Where an *exit* is not readily apparent, directional signage is to be installed indicating the direction of egress.	Directional signs will be required throughout the building. No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F
E4.7: Class 2 and 3 buildings and Class 4 Parts: Exemptions	Informational	Noted	Noted
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.	No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F
E4.9: Emergency warning and intercom systems	N/A	N/A	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.	Site specific performance solution required at CC stage as there are no DTS provisions.	PS
F1.1:	Stormwater drainage	Stormwater drainage to comply with AS/NZS 3500.3:2018.	No details stormwater details have been provided; however, compliance is readily achievable subject to further design development and/or details being provided at CC stage.	CRA – Refer Annexure F
F1.4:	External above ground membranes	Waterproofing membranes for external above ground use to comply with AS 4654 Parts 1 and 2:2012.	The external balconies and common areas will require a waterproofing membrane in accordance with AS 4654.1 & .2. Further information will be required during design development to ensure there is a step down or grated drain installed at the door threshold.	FI – Refer to part 3
F1.5:	Roof coverings	Roof coverings are to comply with BCA Clause F1.5.	No roof covering details have been provided; however, compliance is readily achievable subject to further design development and/or details being provided at CC stage.	CRA – Refer Annexure F
F1.6:	Sarking	*Sarking-type materials* used for weatherproofing must comply with AS/NZS 4200 Part 1 and 2:2017.	No sarking details have been provided; however, compliance is readily achievable subject to further design development and/or details being provided at CC stage.	CRA – Refer Annexure F
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 water proofing details have been provided; however, compliance is readily achievable subject to further design development and/or details being provided at CC stage.	CRA – Refer Annexure F

Section F: Health and Amenity			
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 damp-proofing details have been provided; however, compliance is readily achievable subject to further design development and/or details being provided at CC stage.	CRA – Refer Annexure F
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 damp-proofing details have been provided; however, compliance is readily achievable subject to further design development and/or details being provided at CC stage.	CRA – Refer Annexure F
F1.11: Provision of floor wastes	In Class 2 or 3 buildings or Class 4 part of a building, a bathroom or laundry is to have a floor waste where the floor is graded to the floor waste to permit the drainage of water.	No floor wastes have been shown on the plans; however, compliance is readily achievable subject to further design development and/or details being provided at CC stage.	CRA – Refer Annexure F
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 glazing details have been provided; however, compliance is readily achievable subject to further design development and/or details being provided at CC stage.	CRA – Refer Annexure F
Part F2 – Sanitary and Other Facilities			
F2.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
F2.1: Facilities in residential buildings (including Table F2.1)	Each SOU must be provided with sanitary facilities; a kitchen sink; facility for the preparation and cooking of food; a bath or shower; a closet pan; wash basin; laundry wash tub and space for a washing machine and dryer.	Each of the residential units will be required to have its own kitchen, laundry and sanitary facilities.	Complies

Section F: Health and Amenity			
F2.2: Calculation of number of occupants and facilities	Informational	Noted	Noted
F2.3: Facilities in Class 3 to 9 buildings (including Table F2.3)	N/A	The building is Class 2.	N/A
F2.4: Accessible sanitary facilities (including Table F2.4)	N/A	N/A	N/A
F2.5: Construction of sanitary compartments	(a) The door to a fully enclosed sanitary compartment must— (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.	The WC's are located greater than 1.2m away from the door swing, therefore lift off hinges won't be required.	Complies
F2.6: Interpretation: urinals and washbasins	Informational	Noted	Noted
F2.8: Waste Management	N/A	N/A	N/A
F2.9: Accessible adult change facilities	N/A	N/A	N/A
Part F3 – Room Heights			
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— (b) in a Class 2 part of a building— (i) a kitchen, laundry, or the like — 2.1 m; and (ii) a corridor, passageway or the like — 2.1 m; and (iii) a habitable room excluding a kitchen — 2.4 m; and (iv) in a room or space with a sloping ceiling or projections below the ceiling line (c) in any building— (i) a bathroom, shower room, sanitary compartment, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like — 2.1 m; and (ii) 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.	The section drawings show a minimum 2.7m high ceiling height throughout entire building. These proposed heights will allow sufficient space for services to be installed, whilst maintaining the minimum ceiling heights as required by this clause.	CRA – Refer Annexure F
Part F4 – Light and Ventilation			
F4.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
F4.1: Provision of natural light	Class 2 Natural light must be provided to all habitable rooms.	Noted	CRA – Refer Annexure F
F4.2: Methods and extent of natural lighting	(a) Natural light must be provided by: (i) Windows:	A high-level assessment has been carried out using the elevation drawings and it appears that the building would be capable of achieving the relevant natural light provisions to all habitable rooms, however, to carry out a detailed natural light assessment, a window/door schedule will be required at CC stage. The windows and	CRA – Refer Annexure F

Section F: Health and Amenity			
	(A) with an aggregate light transmitting area of not less than 10% the floor area of the room; and (B) that are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or (ii) Rooflights, that: (A) have an aggregate light transmitting area of not less than 3% the floor area of the room; or (iii) a proportional combination of windows and roof lights required by (i) and (ii). (b) A required window that faces a boundary of an adjoining allotment or a wall of the same building or another building on the allotment must be not less than a horizontal distance from that boundary or wall that is the greater of – (c) 1m; and (d) 50% of the square root of the exterior height of the wall in which the window is located, measured from its sill.	doors must be designed to ensure an aggregate light transmitting area no less than 10% of the floor area is provided to all habitable rooms. Natural light can be borrowed from adjoining rooms in accordance with Clause F4.3.	
F4.3: Natural light borrowed from adjoining room	(a) Natural light to a room in a Class 2 building, may come through one or more glazed panels or openings from an adjoining room (including an enclosed verandah) if— (i) both rooms are within the same sole-occupancy unit or the enclosed verandah is on common property; and (ii) the glazed panels or openings have an aggregate light transmitting area of not less than 10% of the floor area of the room to which it provides light; and	Natural light may be borrowed from an adjoining room in accordance with his clause.	CRA – Refer Annexure F

Section F: Health and Amenity			
	(iii) the adjoining room has— (A) windows , excluding roof lights, that— (aa) have an aggregate light transmitting area of not less than 10% of the combined floor areas of both rooms; and (bb) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or (B) roof lights , that— (aa) have an aggregate light transmitting area of not less than 3% of the combined floor areas of both rooms; and (bb) are open to the sky; or (C) a proportional combination of windows and roof lights required by (A) and (B). (b) The areas specified in (a)(ii) and (a)(iii) may be reduced as appropriate if direct natural light is provided from another source.		
F4.4: Artificial Lighting	Lighting to all areas is to comply with AS/NZS 1680.0:2009.	Artificial lighting will be required throughout the building. No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F
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.	No details have been provided to determine if natural or mechanical ventilation will be relied upon throughout the building. However, compliance will be readily achievable, subject to further details being provided at CC stage i.e., mechanical drawings or a details window/door schedule.	CRA – Refer Annexure F

Section F: Health and Amenity			
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 verandah, carport, or the like; or (C) an adjoining room in accordance with F4.7.	Where natural ventilation is being relied upon, then compliance with this clause must be achieved. Further assessment required at CC stage.	CRA – Refer Annexure F
F4.7: Ventilation borrowed from adjoining room	Ventilation may be 'borrowed' from adjoining rooms in some instances in accordance with this clause.	Ventilation may be borrowed from adjoining rooms in accordance with this clause.	CRA – Refer Annexure F
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 building does not have any sanitary compartments that open directly into a kitchen or pantry.	Noted
F4.9: Airlocks	N/A	N/A	N/A
F4.11: Carparks	Every storey of a carpark (except an open deck carpark) must have:	The carpark will require mechanical or natural ventilation. No details have been provided; however,	CRA – Refer Annexure F

Section F: Health and Amenity				
		> a system of mechanical ventilation complying with AS 1668.2:2012; or > a system of natural ventilation complying with Section 4 of AS 1668.4:2012.	compliance is readily achievable subject to further design development at CC stage.	
F4.12:	Kitchen local exhaust ventilation	N/A	N/A	N/A
Part F5 – Sound Transmission and Insulation				
F5.0:	Deemed-to-Satisfy Provisions	Informational	Noted	Noted
F5.1:	Application of Part	Informational– The Deemed-to-Satisfy Provisions of this Part apply to Class 2 buildings.	Applicable to the Class 2 parts	Noted
F5.2:	Determination of airborne sound insulation ratings	A form of construction required to have an airborne sound insulation rating must— (a) have the required value for weighted sound reduction index (R_w) or weighted sound reduction index with spectrum adaptation term (R_w + Ctr) determined in accordance with AS/NZS ISO 717.1 using results from laboratory measurements; or (b) comply with Specification F5.2.	No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F
F5.3:	Determination of impact sound insulation ratings	(a) A floor in a building required to have an impact sound insulation rating must— (i) have the required value for weighted normalised impact sound pressure level with spectrum adaptation term ($L_{n,w}$ + CI) determined in accordance with AS/ISO 717.2 using results from laboratory measurements; or	No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F

Section F: Health and Amenity			
	(ii) comply with Specification F5.2. (b) A wall in a building required to have an impact sound insulation rating must be of discontinuous construction; and (c) For the purposes of this Part, discontinuous construction means a wall having a minimum 20 mm cavity between 2 separate leaves, and (i) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and (ii) for other than masonry, there is no mechanical linkage between leaves except at the periphery.		
F5.4: Sound insulation rating of floors	A floor in a Class 2 building must achieve an $R_w + C_{tr}$ (airborne) not less than 50, and an $L_{n,w}+C_l$ (impact) not more than 62, if separating: > SOU's; or > An SOU from a plant room, lift shaft, public corridor, public lobby or parts of a different classification.	No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F
F5.5: Sound insulation rating of walls	(a) A wall in a Class 2 building must: (i) have an $R_w + C_{tr}$ (airborne) not less than 50 if it separates *sole-occupancy units*; and (ii) have an R_w (airborne) not less than 50 if it separates a sole occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification; and (iii) be of discontinuous construction in accordance with F5.3(b) if it separates: (A) a bathroom, sanitary compartment, laundry or kitchen in one *sole-occupancy*	No details have been provided; however, compliance is readily achievable subject to further design development at CC stage. Because the Lift opens directly into the second-floor unit, a Performance Solution from an Acoustic Consultant will be required as the lift doors will not achieve an Rw rating not less than 30.	CRA – Refer Annexure F PS

Section F: Health and Amenity			
	unit from a habitable room (other than a kitchen) in an adjoining unit; or (B) a *sole-occupancy unit* from a plant room or lift shaft. (b) Where a wall required to have sound insulation has a floor above, the wall must continue to: (i) the underside of the floor above; or (ii) a ceiling that provides the sound insulation required for the wall. (c) Where a wall required to have sound insulation has a roof above, the wall must continue to: (i) the underside of the roof above; or (ii) a ceiling that provides the sound insulation required for the wall. (d) Doorways in walls separating the Class 2 *sole-occupancy units* from a stairway, public corridor, public lobby or the like must be provided with a door assembly that has an R_w not less than 30.		
F5.6: Sound insulation rating of services	(a) If a duct, soil, waste or water supply pipe, including a duct or pipe that is located in a wall or floor cavity, serves or passes through more than one *sole-occupancy unit*, the duct or pipe must be separated from the rooms of any sole occupancy unit by construction with an $R_w + C_{tr}$ (airborne) not less than— (i) 40 if the adjacent room is a habitable room (other than a kitchen); or (ii) 25 if the adjacent room is a kitchen or non-habitable room.	No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F

Section F: Health and Amenity				
		(b) If a storm water pipe passes through a *sole-occupancy unit* it must be separated in accordance with (a)(i) and (ii).		
F5.7:	Sound isolation of pumps	A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating pump.	No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F
Part F6 – Condensation Management				
F6.0:	Deemed-to-satisfy provisions	Informational	Noted	Noted
F6.1:	Application of Part	Informational	Noted	Noted
F6.2	Pliable building membrane	Where a pliable building membrane is installed in an external wall it shall comply with AS/NZS 4200.1:2017 and installed in accordance with AS 4200.2:2017.	No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F
F6.3:	Flow rate and discharge of exhaust systems	(a) An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of— (i) 25 L/s for a bathroom or sanitary compartment; and (ii) 40 L/s for a kitchen or laundry. (b) Exhaust from a kitchen must be discharged directly or via a shaft or duct to outdoor air. (c) Exhaust from a bathroom, sanitary compartment, or laundry must be discharged— (i) directly or via a shaft or duct to outdoor air; or (ii) to a roof space that is ventilated in accordance with F6.4	No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F

Section F: Health and Amenity			
F6.4: Ventilation of roof spaces	N/A	The building has a concrete roof.	N/A

Section G: Ancillary Provisions			
Part G1 – Minor Structures and Components			
NSW G1.101: Provision for cleaning windows	A safe manner for cleaning of windows located 3 or more storeys above ground level must be provided, and compliance is achieved where: > the windows can be cleaned wholly from within the building; or via a method complying with the Work Health and Safety Act 2011 and regulations made under that Act.	No details have been provided; however, compliance is readily achievable subject to further design development at CC stage.	CRA – Refer Annexure F
Part G2 – Boilers, Pressure Vessels, Heating Appliances, Fireplaces, Chimneys and Flues – N/A			
Part G3 – Atrium Construction – N/A			
Part G4 – Construction in Alpine Areas – N/A			
Part G5 – Construction in Bushfire Prone Areas – N/A			
Part G6 – Occupiable Outdoor Areas			
G6.1: Application of part	(a) The Deemed-to-Satisfy Provisions of this Part apply to buildings containing an occupiable outdoor area in addition to the other Deemed-to-Satisfy Provisions of the BCA. (b) The Deemed-to-Satisfy Provisions of this Part take precedence where there is a difference to the Deemed-to-Satisfy Provisions of Sections C, D, E, F and G.	Applicable to the unit balconies	Noted

Section G: Ancillary Provisions				
		(c) Except for G6.2, the Deemed-to-Satisfy Provisions of this Part do not apply to – (i) an occupiable outdoor area of a *sole-occupancy unit* in a Class 2 or 3 building, Class 9c building or Class 4 part of a building; or (ii) an occupiable outdoor area with an area less than $10m^2$.		
G6.2:	Fire hazard properties	(a) Subject to (b), a lining material or assembly in an occupiable outdoor area must comply with C1.10 as for an internal element. (b) The following fire hazard properties of a lining, material or assembly in an occupiable outdoor area are not required to comply with C1.10: (i) *Average specific extinction area.* (ii) Smoke-Developed Index. (iii) Smoke development rate. (iv) *Smoke growth rate index* ($SMOGRA_{RC}$).	Applicable to the unit balconies. Further assessment required at CC stage to confirm compliance.	CRA – Refer Annexure F
G6.3:	Fire Separation	N/A	N/A	N/A
G6.4:	Provision for escape	N/A	N/A	N/A
G6.5:	Construction of exits	N/A	N/A	N/A
G6.6:	Fire fighting equipment	N/A	N/A	N/A
G6.7:	Lift installations	N/A	N/A	N/A
G6.8:	Visibility in an emergency, exit signs and warning systems	N/A	N/A	N/A

Section G: Ancillary Provisions			
G6.9: Light and ventilation	N/A	N/A	N/A
G6.10: Fire orders	N/A	N/A	N/A

Section H: Special Use Buildings – N/A

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

Section J: Energy Efficiency – To be assessed by a third-party Section J Consultant

ANNEXURE E DEFINITIONS

Annexure E - Definitions

Effective height

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

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.

(v) 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

Fire wall

Fire wall means a wall with an appropriate resistance to the spread of fire that divides a storey or building into fire compartments.

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.

Horizontal exit

Horizontal exit means a required doorway between 2 parts of a building separated from each other by a fire wall.

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

Occupiable outdoor area

Occupiable outdoor area means a space on a roof, balcony or similar part of a building–

(a) that is open to the sky; and

(b) to which access is provided, other than access only for maintenance; and

(c) that is not open space or directly connected with open space.

Open space

Open space means a space on the allotment, or a roof or similar part of a building adequately protected from fire, open to the sky and connected directly with a public road.

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 developed index

Smoke developed index means the index number for smoke as determined by AS/NZS 1530.3.

Smoke development rate

Smoke development rate means the development rate for smoke as determined by testing flooring materials in accordance with AS ISO 9239.1.

Smoke growth rate index

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

Sole-occupancy unit

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

(a) a dwelling; or

(b) a room or suite of rooms in a Class 3 building which includes sleeping facilities; or

(c) a room or suite of associated rooms in a Class 5, 6, 7, 8 or 9 building; or

(d) a room or suite of associated rooms in a Class 9c building, which includes sleeping facilities and any area for the exclusive use of a resident.

ANNEXURE F BCA COMPLIANCE SPECIFICATION

Annexure F – BCA Compliance Specification

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

Architectural Design Certification

1. The FRL's of building elements for the proposed works have been designed in accordance with Table 3 of Specification C1.1 of BCA2019 for a building of Type A Construction.
2. Lightweight construction used to achieve required fire resistance levels will comply with Specification C1.8 of BCA2019.
3. Building elements must be non-combustible in accordance with C1.9 of BCA2019.
4. Materials, floor and wall linings/coverings, surface finishes and air-handling ductwork used in the works will comply with the fire hazard properties of Clause C1.10 and Specification C1.10 of BCA2019.
5. Any ancillary elements fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible will comply with Clause C1.14 of BCA2019.
6. Vertical separation will be provided to the new openings in the external walls in accordance with Clause C2.6 of BCA2019. It is noted that no spandrel separation is required in the stairway or to a void.
7. The external walls and openings of separate fire compartments will be protected in accordance with Clause C3.3 or addressed with a performance solution.
8. Floors separating storeys of different classifications will comply with BCA Clause C2.9 of BCA2019.
9. The electricity substation, any main switch room sustaining emergency equipment required to operate in emergency mode, will be separated from the remaining building with construction having an FRL 120/120/120 and provided with self-closing -/120/130 fire doors in accordance with Clause C2.13 of BCA2019.
10. Doorways in any fire walls separating fire compartments will be protected in accordance with Clause C3.5 of BCA2019 or addressed with a performance solution.
11. Doorways in horizontal exits will be protected in accordance with Clause C3.7 of BCA2019.
12. 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.
13. 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.
14. The lift doors will be --/60/- fire doors complying with AS 1735.11:1986 in accordance Clause C3.10 of BCA2019.
15. Doorways and other opening in internal walls required to have an FRL will be protected in accordance with Clause C3.11 of BCA2019 or addressed with a performance solution.
16. 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.
17. 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, in accordance with Specification C1.1 Clause 2.3 BCA2019.

18. 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.
19. The top and bottom of the riser shafts will achieve an FRL not less than the FRL required for the walls of the shaft in accordance with Clause 2.7 of Specification C1.1 of BCA2019.
20. Fire doors will comply with AS 1905.1:2015 and Specification C3.4 of BCA2019.
21. The dimensions of exits and paths of travel to exits will be provided in accordance with Clause D1.6 of BCA2019.
22. Discharge from exits will be in accordance with Clause D1.10 of BCA2019.
23. Horizontal exits will be in accordance with Clause D1.11 of BCA2019.
24. Access to the lift pit will be in accordance with Clause D1.17 of BCA2019.
25. The non-fire isolated stairs will be constructed in accordance with Clause D2.3 of BCA2019.
26. 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.
27. New pedestrian ramps will comply with AS 1428.1:2009, Clause D2.10 and Part D3 of BCA2019. The floor surface of a ramp must have a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013.
28. 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.
29. 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.
30. The handrails and balustrades to all stairs and throughout the building will be in accordance with Clause D2.16, and D2.17 of BCA2019.
31. The doorways and doors will be in accordance with Clause D2.19 and D2.20 of BCA2019.
32. Door latching mechanisms will be in accordance with Clause D2.21 of BCA2019
33. Signage will be provided on fire and smoke doors in accordance with Clause D2.23 of BCA2019.
34. The openable portion of a window in a bedroom of a Class 2 building will be protected with a restricting device or secure screen that does not allow a 125mm sphere to pass through the opening or screen and resist an outward horizontal action of 250N in accordance with Clause D2.24 of BCA2019. In addition to window protection, and for other openable windows 4 meters or more above the ground below, a barrier with a height not less than 865mm above the floor will be installed to the openable window.
35. Fire precautions whilst the building is under construction fire precautions will be in accordance with Clause E1.9 of BCA2019.
36. Non-illuminated exit signage will be installed in accordance with Clause E4.7, and of BCA2019.

37. External above ground waterproofing membranes will comply with Clause F1.4 of BCA2019 and AS 4654 Parts 1 & 2:2012.
38. The new roof covering will be in accordance with Clause F1.5 of BCA2019.
39. Any sarking proposed will be installed in accordance with Clause F1.6 of BCA2019.
40. Waterproofing of all wet areas to the building will be carried out in accordance with Clause F1.7 of BCA2019 and AS 3740:2010.
41. Damp proofing of the proposed structure will be carried out in accordance with Clause F1.9 and F1.10 of BCA2019.
42. Floor wastes will be installed to bathrooms and laundries above sole occupancy units or public space in accordance with Clause F1.11 of BCA2019.
43. 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.
44. Ceiling heights to the new areas will be in accordance with Clause F3.1 of BCA2019.
45. Natural light will be provided in accordance with Clause F4.1, F4.2, and F4.3 of BCA2019.
46. Natural ventilation will be provided in accordance with Clause F4.5, F4.6 and F4.7 of BCA2019.
47. Pliable building membranes installed in external walls will comply with Clause F6.2 of BCA2019 and where a pliable building membrane is not installed in an external wall, the primary water control layer will be separated from water sensitive materials by a drained cavity.
48. Every storey of the carpark will be provided with an adequate system of permanent natural or mechanical ventilation in accordance with Clause F4.11 of BCA2019.
49. A safe manner for cleaning of windows located 3 or more storeys above ground level will be provided in accordance with the Work Health & Safety Act 2011 and regulations made under that Act in accordance with NSW G1.101 of BCA2019.

Electrical Services Design Certification:

50. A smoke detection and alarm system will be installed throughout the building in accordance with Table E2.2a, and Specification E2.2a of BCA2019.
51. Emergency lighting will be installed throughout the development in accordance with Clause E4.2, E4.4 of BCA2019 and AS/NZS 2293.1:2018.
52. Exit signage will be installed in accordance with Clause E4.5, E4.7, and E4.8 of BCA2019 and AS/NZS 2293.1:2018.
53. Artificial lighting will be installed throughout the development in accordance Clause F4.4 of BCA2019 and AS/NZS 1680.0:2009.

Hydraulic Services Design Certification:

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

Mechanical Services Design Certification:

58. An air-handling system which does not form part of a smoke hazard management system will be installed in accordance with Clause E2.2 of BCA2019, and AS 1668.1:2015.
59. Where not naturally ventilated the building will be mechanically ventilated in accordance with Clause F4.5 of BCA2019 and AS 1668.2:2012.
60. Every storey of the car park will be ventilated in accordance with Clause F4.11 of BCA2019 and where not naturally ventilated it will be mechanically ventilated in accordance with AS 1668.2:2012 as applicable.
61. Exhaust systems installed in a kitchen, bathroom, sanitary compartment or laundry of a Class 2 *sole-occupancy unit* will have a minimum flow rate and discharge location in accordance with Clause F6.3 of BCA2019.
62. Rigid and flexible ductwork will comply with the fire hazard properties set out in AS 4254 Parts 1 and 2.

Structural Engineers Design Certification:

63. The material and forms of construction for the proposed works will be in accordance with Clause B1.2, B1.4 and B1.6 of BCA2019 as follows:
    a. Dead and Live Loads – AS/NZS 1170.1:2002
    b. Wind Loads – AS/NZS 1170.2:2011
64. Earthquake actions – AS 1170.4:2007
65. Masonry – AS 3700:2018
66. Concrete Construction – AS 3600:2018
67. Steel Construction AS 4100:1998
68. Aluminium Construction – AS/NZS 1664.1 or 2:1997
69. ABCB Standard for Construction of Buildings in Flood Hazard Areas.
70. The lift shaft will have an FRL in accordance with Clause C2.10 and Specification C1.1 of BCA2019.
71. Lightweight construction used to achieve required fire resistance levels will comply with Specification C1.8 of BCA2019.
72. The construction joints to the structure will be in accordance with Clause C3.16 of BCA2019 to reinstate the FRL of the element concerned.

Lift Services Design Certification:

73. 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.
74. 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.
75. 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.
76. The lifts will comply with AS 1735.12:1999 in accordance with Clause E3.6 of BCA2019.
77. All electric passenger lifts and electrohydraulic passenger lifts shall comply with Specification E3.1 of BCA2019.

Acoustic Services Design Certification:

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

NSW Specification Design Certificate:

79. 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.
80. The discharge points of exits will be in accordance with Clause D1.10, and NSW Clause D1.10(f) of BCA2019.
81. 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.
82. 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.
83. 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.
84. 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.
85. The doorways and doors will be in accordance with Clause D2.19, NSW Clause D2.19(b)(v) and D2.20 of BCA2019.
86. 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.
87. Insulation will be in accordance with AS/NZS 4859.1:2018 and will be installed as required by NSW Part J1 of BCA2019.
88. A smoke detection and alarm systems will be installed throughout the building in accordance with Table E2.2a, NSW Table E2.2a and NSW Specification E2.2a of BCA2019.
89. 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.
90. The building will be mechanically ventilated in accordance with Clause F4.5, NSW F4.5(b) of BCA2019 and AS 1668.2:2012.