

# BCA Assessment Report

Innovation Way, Fairy Meadow



<b>Project:</b>	Innovation Way, Fairy Meadow
<b>Reference No:</b>	113737:10c-BCA-r1
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**Document Control**

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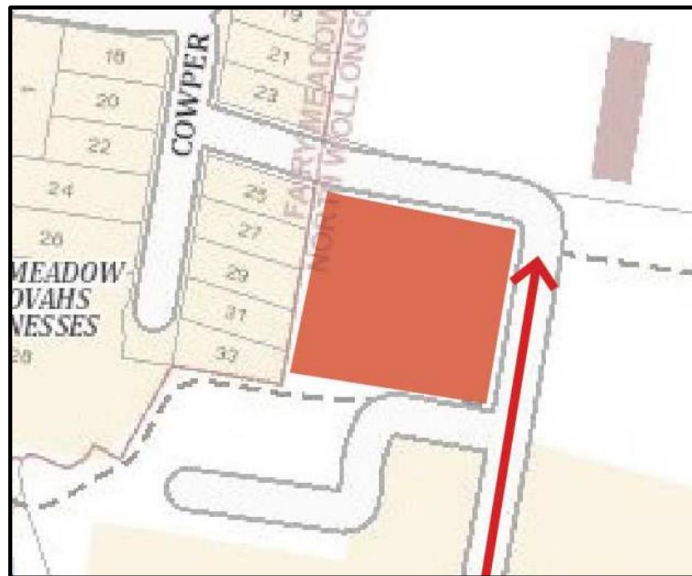
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## 1 BASIS OF ASSESSMENT

### 1.1. Location and Description

The building development, the subject of this report, is located at Innovation Way, Fairy Meadow. The proposed development comprises the construction of a new single storey Ambulance station which will include an enclosed plant room used for ambulance parking, external public parking, amenities, general office / communal areas and two sleeping pods.

The main pedestrian and vehicular access into the building is from the northern boundary which adjoins the new proposed road.



*Photo sourced from DJRD Architectural Plans*

### 1.2. Purpose

The purpose of this report is to assess the current design proposal against the Deemed-to-Satisfy Provisions of BCA 2019, and to clearly outline those areas (if any) where compliance is not achieved, where areas may warrant redesign to achieve strict BCA compliance or where areas may be able to be assessed against the relevant performance criteria of BCA 2019.

### 1.3. Building Code of Australia

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

### 2.2. Classification (Clause A6.0)

The building has been classified as follows.

Table 1. Building Classification

Class	Level	Description
3	Ground	Sleeping pods (Sole occupancy units)
5	Ground	Offices, amenities, meeting and communal ancillary areas
7a	Ground	Plant room used for the parking of the ambulances

*Note: The Sleeping pods have been classified as a Class 3 part, on the basis that the rooms will be a common place of transient living for a number of unrelated occupants i.e. ambulance operational staff.*

### 2.3. Effective Height (Clause A1.0)

The building is single storey and therefore the effective height is not applicable.

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

The building is required to be of Type C Construction.

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

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

Class 5	Maximum Floor Area	3 000m <sup>2</sup>
	Maximum Volume	18 000m <sup>3</sup>
Class 7a	Maximum Floor Area	2 000m <sup>2</sup>
	Maximum Volume	12 000m <sup>3</sup>

*Note: There are no maximum floor area or volume limitations for Class 3 parts as these classifications are required to have fire rated bounding construction under Specification C1.1.*

### 2.6. Fire Compartments

The building is a single fire compartment.

## **2.7. Exits**

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

- (a) The entrance door which is located adjacent to the admin.
- (b) The rear door located adjacent to the Female WC.
- (c) The two egress doors from the Plant room.

## **2.8. Location of fire-source features**

The fire source features for the subject development are:

North: The far side of Innovation Way.

South: The common site boundary.

East: The far side of Innovation Way.

West: The common site boundary.



### 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. 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 matters 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 addressed in a detailed Performance Based Solution 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.	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

## **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 complies or is capable of complying (as outlined in Annexure D) with that Code.

## **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 djrd architects

SHEET LIST		
Sheet Number	Current Revision	Sheet Name
AR-0000	G	COVER PAGE
AR-0100	E	SITE ANALYSIS
AR-0101	G	PROPOSED SITE PLAN
AR-0102	E	SHADOW DIAGRAMS
AR-0103	H	DEMOLITION PLAN
AR-1101	G	GROUND FLOOR GENERAL ARRANGEMENT PLAN
AR-1102	G	ROOF PLAN
AR-1103	E	WALL SET OUT PLAN
AR-1104	D	GROUND FLOOR STRUCTURAL SETOUT PLAN
AR-1201	C	GROUND REFLECTED CEILING PLAN
AR-1301	C	GROUND FLOOR FINISHES PLAN
AR-2001	G	ELEVATIONS
AR-2501	G	SECTIONS

SHEET LIST		
Sheet Number	Current Revision	Sheet Name
AR-5000	C	WALL SECTIONS KEY PLAN
AR-5001	C	WALL SECTIONS
AR-5002	C	WALL SECTIONS
AR-5003	C	WALL SECTIONS
AR-5004	C	WALL SECTIONS
AR-5501	C	SECTION DETAILS
AR-5502	C	SECTION DETAILS
AR-5510	C	PLAN DETAILS
AR-6010	C	PLANT ROOM
AR-6011	C	PLANT ROOM
AR-6012	C	PLANT ROOM
AR-6020	C	OIL SEP, DELIVERY, MSB & COMMS
AR-6030	C	WASTE & SERVICES

SHEET LIST		
Sheet Number	Current Revision	Sheet Name
AR-6040	C	ADMIN, ACCESSIBLE TOILET & CLEANER
AR-6050	C	MEDICAL STORE & CHARGE
AR-6060	C	MALE WC, LOCKERS & FEMALE WC
AR-6070	C	SLEEPING PODS & GYM
AR-6080	C	COMMON ROOM, KITCHEN & DINING, OUTDOOR AREA
AR-6090	C	MEETING ROOM & OFFICES
AR-6200	C	CORRIDOR
AR-6201	C	CIRCULATION
AR-8010	C	DOOR TYPES & DOOR SCHEDULE
AR-8020	C	WINDOW TYPES & WINDOW SCHEDULE
AR-8030	C	WALL TYPES
AR-9001	F	RENDER
AR-9002	G	AXONOMETRIC

## **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
<b>Fire Resistance (Floors – Walls – Doors – Shafts)</b>		
1.	Fire seals protecting openings in fire resisting components of the building	<b>BCA2019 C3.15</b> (Openings for service installations) <b>BCA2019 Spec C3.15</b> AS1530.4:2014 & AS4072.1-2005
2.	Solid core doors > Type 'C' Construction	<b>BCA2019 Spec. C3.4</b> C3.11 (Bounding Construction)
<b>General</b>		
3.	Portable fire extinguishers	<b>BCA2019 E1.6</b> AS 2444–2001
<b>General Egress</b>		
4.	Warning & operational signs	<b>BCA2019 D3.6</b> (Braille Exit Signs) (Note: E4.5 (Exit Signs))
<b>Electrical Services</b>		
5.	Automatic fire detection & alarm: > Clause 3 – AS 3786:2014 Smoke Alarm systems powered from consumer mains in accordance with AS 3786-2014; or > Clause 4 – AS 1670.1:2018 system throughout the building/part connected to a Clause 7 building occupant warning system.	<b>BCA2019 E2.2</b> , NSW Table E2.2a, <b>Spec E2.2a</b> <b>Spec E2.2a</b> - Clause 3 (Smoke alarm system) <b>Spec E2.2a</b> - Clause 4 (Smoke detection system) <b>Spec E2.2a</b> - Clause 7 (BOWS)
6.	Emergency lighting	<b>BCA2019 E4.2, E4.4</b> AS/NZS 2293.1:2018
7.	Exit signs	<b>BCA2019 E4.5</b> (Exit Signs) <b>BCA2019 E4.6</b> (Direction Signs) <b>BCA2019 E4.8</b> (Design and Operation - Exits) AS/NZS 2293.1:2018
<b>Hydraulic Services</b>		
8.	Fire hydrant systems (Street hydrant) - pressure and flow test required	<b>BCA2019 E1.3</b> AS 2419.1:2005

Item	Essential Fire and Other Safety Measures	Standard of Performance
9.	Hose reel systems (Class 7a Part)	<b>BCA2019 E1.4</b> AS 2441:2005

## **ANNEXURE C FIRE RESISTANCE LEVELS**



## Annexure C - Fire Resistance Levels

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

### Type C Construction

Table 5. Type C Construction

Item	Class 3 part	Class 5 & 7a
External Walls		
- Less than 1.5m to a <i>fire-source feature</i>	90/90/90	90/90/90
- 1.5 – less 3m from <i>fire-source feature</i>	-/-/-	60/60/60
- 3m or more from a <i>fire-source feature</i>	-/-/-	-/-/-
External Column not incorporated in an external wall		
- Less than 1.5m to a fire source feature	90/-/-	90/-/-
- 1.5 – less 3m from fire source feature;	-/-/-	60/-/-
- 3m or more from a fire source feature	-/-/-	-/-/-
Common Walls and Fire Walls	90/90/90	90/90/90
Internal walls bounding sole occupancy units	60/60/60	-/-/-
Internal walls bounding public corridors, hallways and the like	60/60/60	-/-/-
Internal walls bounding a stair if required to be fire rated	60/60/60	60/60/60

## **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.

<b>N/A</b>	Not Applicable. The Deemed-to-Satisfy clause is not applicable to the proposed design.
<b>Complies</b>	The relevant provisions of the Deemed-to-Satisfy clause have been satisfied by the proposed design.
<b>CRA – Refer Annexure F</b>	'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.
<b>FI</b>	Further Information is necessary to determine the compliance potential of the building design.
<b>PS</b>	Performance Solution with respect to this Deemed-to-Satisfy Provision is necessary to satisfy the relevant Performance Requirements.
<b>DNC</b>	Does Not Comply.
<b>Noted</b>	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
<b>Section B: Structure</b>			
<b>Part B1 – Structural Provisions</b>			
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 3 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 (limited to the Class 3 sleeping pods)	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 building is required to be of Type C Construction.	The building is required to be Type C Construction. A review of the wall layout and types has been undertaken and it is noted that FRL 60/60/60 bounding walls are proposed around the sleeping pods and the public corridor outside the unit entry doors. It is noted that all the fire rated bounding walls are proposed to extend to the underside of the non-combustible roof covering.	Complies
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 one (1).	Noted
C1.3:	Buildings of multiple classification	Informational	Noted	Noted
C1.4:	Mixed Types of construction	N/A	N/A	N/A
C1.5:	Two Storey Class 2, 3 or 9c buildings	N/A	N/A	N/A
C1.6:	Class 4 Parts of building	N/A	N/A	N/A
C1.7:	Open spectator stands and indoor sports stadium	N/A	N/A	N/A

Section C: Fire Resistance			
C1.8: Lightweight construction	Lightweight construction used in a fire-rated application is to comply with Specification C1.8.	The fire rated bounding walls are constructed out of blockwork, therefore it is deemed that no lightweight construction will be used for fire rated elements.	N/A
C1.9: Non-combustible building elements	N/A	The building is Type C Construction.	N/A
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, <i>sarking-type materials</i> and attachments, or be considered <i>non-combustible</i> .	Details of the internal linings shall be provided to the certifier at CC stage to ensure all linings comply with the fire hazard properties of this clause.	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
C1.13: Fire-protected timber: Concession	N/A	N/A	N/A
C1.14: Ancillary elements	<p>An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be <i>non-combustible</i> unless it is one of the following:</p> <ul style="list-style-type: none"> <li>(a) An ancillary element that is <i>non-combustible</i>.</li> <li>(b) A gutter, downpipe or other plumbing fixture or fitting.</li> <li>(c) A flashing.</li> <li>(d) A grate or grille not more than 2 m<sup>2</sup> in area associated with a building service.</li> </ul>	The building has no external walls that require an FRL.	N/A

**Section C: Fire Resistance**

- (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
  - (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).

**Section C: Fire Resistance****Part C2 – Compartment and Separation**

C2.0:	Deemed-to-Satisfy Provisions	Informational	Noted	Noted
C2.1:	Application of Part	Informational	Noted	Noted
C2.2:	General floor area and volume limitations	The size of <i>fire compartments</i> in the building must not exceed that specified in Table C2.2.	The building does not exceed the maximum floor area and volume limitations of Type C Construction.	Complies
C2.3:	Large isolated buildings	N/A	N/A	N/A
C2.4:	Requirements for open spaces and vehicular access	N/A	N/A	N/A
C2.5:	Class 9a and 9c Buildings	N/A	N/A	N/A
C2.6:	Vertical separation of openings in external walls	N/A	The building is single storey.	N/A
C2.7:	Separation by fire walls	N/A	The building does not have any Fire Walls proposed.	N/A
C2.8:	Separation of classifications in the same storey	<p>Where a storey has different classifications located alongside one another:</p> <ul style="list-style-type: none"> <li>&gt; each building element in that storey must have the higher <i>FRL</i> prescribed in Specification C1.1 for that element for the classifications concerned; or</li> <li>&gt; the parts must be separated in that storey by a <i>fire wall</i> having the higher <i>FRL</i> prescribed in Table 3; or</li> </ul>	The Class 3 sleeping pods are separated with FRL 60/60/60 bounding walls. The Class 5 and 7a parts have the same FRL's as specified in Type C Construction.	Noted



**Section C: Fire Resistance**

	> where one part is a carpark complying with Table 3.9, 4.2 or 5.2 of Specification C1.1, the parts may be separated by a <i>fire wall</i> complying with the appropriate Table.		
C2.9: Separation of classifications in different storeys	N/A	The building is single storey.	N/A
C2.10: Separation of lift shafts	N/A	N/A	N/A
C2.11: Stairways and lifts in one shaft	N/A	N/A	N/A
C2.12: Separation of equipment	N/A	N/A	N/A
C2.13: Electricity supply system	<ul style="list-style-type: none"> <li>&gt; A main switchboard which sustains emergency equipment operating in the emergency mode must be fire separated from any other part of the building by construction having an <i>FRL</i> of not less than 120/120/120 and have the doorway fitted with self-closing fire door having an <i>FRL</i> of not less than – /120/30.</li> <li>&gt; Any electrical conductors located within the building that supply a substation or main switchboard for emergency equipment must comply with BCA clause C2.13.</li> <li>&gt; 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.</li> <li>&gt; Emergency equipment includes but is not limited to the following:</li> </ul>	The building contains a main switch board, however it is assumed that the emergency equipment will have battery back-up and therefore no fire separation is required.	Noted

**Section C: Fire Resistance**

	<ul style="list-style-type: none"> <li>○ fire hydrant booster pumps;</li> <li>○ sprinkler pumps;</li> <li>○ hose reel pumps;</li> <li>○ air-handling systems designed to exhaust and control the spread of smoke;</li> <li>○ emergency lifts;</li> <li>○ control and indicating equipment; and</li> <li>○ sound systems and intercom systems for emergency purposes.</li> </ul> <p>Note: Consideration should be given to the location of Electrical Substations on adjoining sites in regards to proximity to Fire Hydrant Boosters being within 10.0m</p>		
C2.14: Public corridors in Class 2 and 3 Buildings	Public corridors in Class 3 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 sleeping pods discharge into a corridor which is fire separated with construction achieving an FRL of 60/60/60. The public corridor is no longer than 40 metres, therefore no smoke separation is required.	Complies
<b>Part C3 – Protection of Openings</b>			
C3.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
C3.1: Application of Part	Informational	Noted	Noted
C3.2: Protection of openings in external walls	N/A	The building does not have any external walls and/or openings within 3 meters of the boundary.	N/A
C3.3: Separation of external walls and associated openings in different fire compartments	N/A	N/A	N/A

Section C: Fire Resistance			
C3.4:	Acceptable methods of protection	N/A	N/A
C3.5:	Doorways in fire walls	N/A	N/A
C3.6:	Sliding fire doors	N/A	N/A
C3.7:	Protection of doorways in horizontal exits	N/A	N/A
C3.8:	Openings in fire-isolated exits	N/A	N/A
C3.9:	Service penetrations in fire-isolated exits	N/A	N/A
C3.10:	Openings in fire-isolated lift shafts	N/A	N/A
C3.11:	Bounding Construction: Class 2, 3 and 4 Buildings	<p>&gt; 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 tight fitting, solid core door not less than 35 mm thick.</p>	<p>The doorway into the common corridor and sole occupancy units are fitted with self-closing solid core doors that are a minimum 35mm thick.</p> <p>Complies.</p>
C3.12:	Openings in floors and ceilings for services	N/A	N/A
C3.13:	Openings in shafts	N/A	N/A
C3.15:	Openings for service installations	<p>Where services pass through an element which is required to achieve an <i>FRL</i> (other than an external wall or roof), the service must be fire protected in accordance with BCA Clause C3.15.</p>	<p>Where services pass through fire rated elements, they must be protected in accordance with Specification C3.15.</p> <p>CRA – Refer Annexure F</p>

Section C: Fire Resistance			
	<b>Note:</b> contractors should check with PCA to confirm compliance with their proposed fire stopping method.		
C3.16: Construction joints	Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS 1530.4:2014 to achieve the required <i>FRL</i> .	Construction joints between fire rated elements shall be sealed in accordance with this clause.	CRA – Refer Annexure F
C3.17: Columns protected with lightweight construction to achieve an <i>FRL</i>	N/A	N/A	N/A
Specification C1.1 – Fire-Resisting Construction			
2.0: General Requirements	Informational	Noted	Noted
2.1: Exposure to fire-source features	<p>A building element is exposed to a <i>fire-source feature</i> if any of the horizontal straight lines between that part and the <i>fire-source feature</i>, or vertical projection of the feature, is not obstructed by another part of the building that–</p> <ul style="list-style-type: none"> <li>(i) has an <i>FRL</i> of not less than 30/–/–; and</li> <li>(ii) is neither transparent nor translucent.</li> </ul>	Noted	Noted
2.2: Fire protection for a support of another part	Where a part of a building required to have an <i>FRL</i> depends upon direct vertical or lateral support from another part to maintain its <i>FRL</i> , that supporting part must have an <i>FRL</i> not less than that required by other provisions of this Specification; and if located within the same <i>fire compartment</i> as the part it supports have an <i>FRL</i> in respect of structural adequacy the greater of that required for the supporting part itself and for the part it supports.	It has been advised that the Structural Engineer has designed the fire rated bounding walls to be self-supporting, therefore no fire protection of a supporting part to these elements is required.	Noted

Section C: Fire Resistance				
2.3:	Lintels	N/A	N/A	N/A
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, however compliance is readily achievable, subject to further details and/or specification being provided at CC stage.	CRA – Refer Annexure F
2.5:	General concessions	<p>Structures on roofs — A <i>non-combustible</i> structure situated on a roof need not comply with the other provisions of this Specification if it only contains—</p> <ul style="list-style-type: none"> <li>(i) lift motor equipment; or</li> <li>(ii) one or more of the following: <ul style="list-style-type: none"> <li>(A) Hot water or other water tanks.</li> <li>(B) Ventilating ductwork, ventilating fans and their motors.</li> <li>(C) Air-conditioning chillers.</li> <li>(D) Window cleaning equipment.</li> <li>(E) Other service units that are <i>non-combustible</i> and do not contain flammable or combustible liquids or gases.</li> </ul> </li> </ul>	Concessions applicable for the ventilation and solar panels located on the roof.	CRA – Refer Annexure F
2.6:	Mezzanine floors: Concession	N/A	N/A	N/A
2.7:	Enclosure of shafts	N/A	N/A	N/A
2.8:	Carparks in Class 2 and 3 Buildings	N/A	N/A	N/A
2.9:	Residential Aged Care building: Concession	N/A	N/A	N/A

**Section C: Fire Resistance**

5.0:	Type C fire-resisting construction	Type C fire-resisting construction is applicable to the development.	Refer to part 3 clauses below for the relevant Type C Construction requirements applicable to the project.	Noted
5.1:	Fire-resistance of building elements	<p>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.</p> <ul style="list-style-type: none"> <li>&gt; An external wall that is required to have an FRL need only be tested from the outside to satisfy the FRL requirement.</li> <li>&gt; Internal walls in a Class 2 or 3 building required to be fire rated must extend to— <ul style="list-style-type: none"> <li>(i) to the underside of the floor next above if that floor has an <i>FRL</i> of at least 30/30/30 or a fire-protective covering on the underside of the floor; or</li> <li>(ii) the underside of a ceiling having a resistance to the incipient spread of fire to the roof space above itself of not less than 60 minutes; or</li> <li>(iii) the underside of the roof covering if it is <i>non-combustible</i> and, except for roof battens with dimensions of 75 mm x 50 mm or less or <i>sarking-type material</i>, must not be crossed by timber or other combustible building elements; or</li> <li>(iv) 450 mm above the roof covering if it is combustible.</li> </ul> </li> </ul>	<p>The building is required to be Type C Construction.</p> <p>A review of the wall layout and types has been undertaken and it is noted that FRL 60/60/60 bounding walls are proposed around the sleeping pods and the public corridor outside the unit entry doors. It is noted that all the fire rated bounding walls are proposed to extend to the underside of the non-combustible roof covering.</p>	Complies
5.2:	Carparks	N/A	N/A	N/A

**Section D: Access and Egress****Part D1 – Provision for Escape**

Section D: Access and Egress			
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 <i>sole-occupancy unit</i> in a Class 3 building.	Noted	Noted
D1.2: Number of exits required	Class 5,7a and 3 parts (Under 25m effective height) > Each storey and part must have access to at least one exit.	The Class 3, 5 and 7a parts have access to at least one exit.	Complies
D1.3: When fire-isolated stairways and ramps are required	N/A	N/A	N/A
D1.4: Exit travel distances	<p><u>Class 3 part —</u></p> <ul style="list-style-type: none"> <li>&gt; The entrance doorway of each <i>sole-occupancy unit</i> must be not more than – <ul style="list-style-type: none"> <li>○ 6 m from an <i>exit</i> or from a point from which travel in different directions to 2 <i>exits</i> is available; or</li> <li>○ 20 m from a single <i>exit</i> serving the storey at the level of egress to a road or open space.</li> </ul> </li> </ul> <p><u>Class 5 and 7a parts—</u></p> <p>No point on a floor must be more than 20 m from an <i>exit</i>, or a point from which travel in different directions to 2 <i>exits</i> is available, in which case the maximum distance to one of those <i>exits</i> must not exceed 40 m.</p> <ul style="list-style-type: none"> <li>&gt; no point on a floor must be more than 20 m from an <i>exit</i>, or a point from which travel in different directions to 2 <i>exits</i> is available, in which case the maximum distance to one of those <i>exits</i> must not exceed 40 m; and</li> </ul>	<p>With reference to the designated exits outlined in section 2.7 of this report, all points throughout the Class 5 and 7a parts are located within 20 metres of 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 does not exceed 40 metres. With regards to the travel distances from the Class 3 sleeping pods, the entry doors are no further than 6m from the final exit door that discharges to the rear of the building.</p>	Complies

## Section D: Access and Egress

	<ul style="list-style-type: none"> <li>&gt; in a Class 5 building, the distance to a single <i>exit</i> serving a storey at the level of access to a road or open space may be increased to 30 m.</li> </ul>		
D1.5: Distance between alternative exits	<p><i>Exits</i> that are required as alternative means of egress must be—</p> <ul style="list-style-type: none"> <li>(a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 <i>exits</i> is readily available from all points on the floor including lift lobby areas; and</li> <li>(b) not less than 9 m apart; and</li> <li>(c) not more than— <ul style="list-style-type: none"> <li>(i) in a Class 3 building — 45 m apart; or</li> <li>(ii) in all other cases — 60 m apart; and</li> </ul> </li> <li>(d) located so that alternative paths of travel do not converge such that they become less than 6 m apart.</li> </ul> <p>Note: the distance between <i>exits</i> must be measured through the point at which travel two <i>exits</i> is available.</p>	Where alternate exits are relied upon throughout the Class 5 and 7a parts, the distance between the alternate exits do not exceed 60 metres, nor are they located within 9 metres of each other.	Complies
D1.6: Dimensions of exits and paths of travel to exits	<p>In a required <i>exit</i> or path of travel to an <i>exit</i>—</p> <ul style="list-style-type: none"> <li>&gt; the unobstructed height throughout <i>exits</i> and paths of travel to <i>exits</i> must not be less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm; and</li> <li>&gt; the unobstructed width of each <i>exit</i> or path of travel to an <i>exit</i>, except for doorways must be not less than 1m;</li> <li>&gt; the unobstructed width of doorways must be not less than 750 mm, unless providing access for</li> </ul>	The unobstructed height throughout all exits and paths of travel to exits will achieve a height no less than 2 metres, except for a doorway where a height of 1980mm is permitted. Furthermore, all egress widths will achieve a clear distance of 1 metre, except doorways are permitted to have a reduced width of 750 mm (when the doorway is deemed non-accessible).	Complies



**Section D: Access and Egress**

	<p>people with disabilities in which case the unobstructed width must be not less than 850 mm.</p> <ul style="list-style-type: none"> <li>&gt; the required width of a stairway or ramp must be measured clear of all obstructions such as handrails.</li> <li>&gt; the unobstructed width of a required <i>exit</i> must not diminish in the direction of travel to a road or open space.</li> </ul>		
D1.7: Travel via fire-isolated exits	N/A	N/A	N/A
D1.8: External stairways or ramps in lieu of fire-isolated exits	N/A	N/A	N/A
D1.9: Travel by non-fire-isolated stairways or ramps	N/A	N/A	N/A
D1.10: Discharge from exits	<p><i>Exits</i> must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the <i>exit</i>.</p> <p>If a required <i>exit</i> leads to open space, the path of travel to the road must have an unobstructed width of not less than 1m.</p> <p>If an <i>exit</i> 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.</p> <p>The discharge points of alternative <i>exits</i> must be as far apart as practical</p>	<p>All required exits are shown to discharge onto a minimum 1 metre wide pathway that provides egress to the road or open space. The 1:20 walkways and stairs located in the front setback can readily achieve compliance with Part D.</p> <p>The exits that serve as alternate exits are considered to be located far enough apart as practical.</p>	CRA – Refer Annexure F

Section D: Access and Egress			
D1.11: Horizontal exits	N/A	N/A	N/A
D1.12: Non-required stairways, ramps or escalators	N/A	N/A	N/A
D1.13: Number of persons accommodated	<p>Informational—</p> <p>The number of persons accommodated in a storey, room or mezzanine must be determined within consideration to the purpose for which it is used and the layout of the floor area by—</p> <p>(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—</p> <p>(i) lifts, stairways, ramps and escalators, corridors, hallways, lobbies and the like; and</p> <p>(ii) service ducts and the like, sanitary compartments or other ancillary uses; or</p> <p>(b) reference to the seating capacity in an assembly building or room; or</p> <p>(c) any other suitable means of assessing its capacity.</p> <p>Based on floor area and Table D1.13, the population numbers are as follows:</p>	<p>The Class 5 and 7a parts have a proposed accessible sanitary compartment, as well as separate male and female bathrooms, each of which have a single ambulant WC and two wash basins. These sanitary facilities will accommodate a total of 20 females and 20 males, therefore this population number has been used as the limiting factor.</p>	Noted
D1.14: Measurement of distances	Informational	Noted	Noted
D1.15: Method of Measurement	Informational	Noted	Noted
D1.16: Plant rooms, lift motor rooms and electricity	N/A	N/A	N/A

**Section D: Access and Egress**

network substations: concession			
D1.17: Access to lift pits	N/A	N/A	N/A
D1.18: Egress from early childhood centres	N/A	N/A	N/A
<b>Part D2 – Construction of Exits</b>			
D2.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
D2.1: Application of Part	Informational– Except for D2.13, D2.14(a), D2.16, D2.17(d), D2.17(e), D2.21 and D2.24, the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a <i>sole- occupancy unit</i> in a Class 3 building.	Noted	Noted
D2.2: Fire-isolated stairways and ramps	N/A	N/A	N/A
D2.3: Non-fire-isolated stairways and ramps	N/A	N/A	N/A
D2.4: Separation of rising and descending stair flights	N/A	N/A	N/A
D2.5: Open access ramps and balconies	N/A	N/A	N/A
D2.6: Smoke lobbies	N/A	N/A	N/A

## Section D: Access and Egress

D2.7: Installations in exits and paths of travel	<ul style="list-style-type: none"> <li>&gt; 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.</li> <li>&gt; Gas or other fuel services must not be installed in a required <i>exit</i>.</li> <li>&gt; 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 <i>non-combustible</i> construction or a fire protective covering with doorways suitably sealed against smoke spread.</li> <li>&gt; Electrical wiring may be installed in a fire-isolated <i>exit</i> if the wiring is associated with: <ul style="list-style-type: none"> <li>○ a lighting, detection, or pressurization system serving the <i>exit</i>; or</li> <li>○ a security, surveillance or management system serving the <i>exit</i>; or</li> <li>○ an intercommunication system or an audible or visual alarm system in accordance with D2.22; or</li> <li>○ the monitoring of hydrant or sprinkler isolating valves.</li> </ul> </li> </ul>	Where there are electricity meters, distribution boards, central telecommunications distribution boards or equipment located in a required exit or along a path of travel to a required exit or corridor, then the services and/or equipment must be enclosed by non-combustible construction or a fire-protective covering with the doorways and other openings suitably smoke sealed in accordance with Clause D2.7.	CRA – Refer Annexure F
D2.8: Enclosure of space under stairs and ramps	N/A	N/A	N/A
D2.9: Width of stairways and ramps	Informational	N/A	Noted
D2.10: Pedestrian ramps	N/A	N/A	N/A

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	<p>Stairways must comply with the following:</p> <ul style="list-style-type: none"> <li>&gt; Stairways must have not more than 18 and not less than 2 risers in each flight;</li> <li>&gt; Goings must be between 240 mm and 355 mm within the residential units;</li> <li>&gt; Goings must be between 250 mm and 355 mm;</li> <li>&gt; Risers must be between 115 mm high and 190 mm high;</li> <li>&gt; The slope relationship (2 x riser dimension + going dimension) must be within the range of 550-700;</li> <li>&gt; 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– <ul style="list-style-type: none"> <li>(A) adjacent risers, or between adjacent goings, is no greater than 5 mm; and</li> <li>(B) the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm.</li> </ul> </li> <li>&gt; Risers must not contain any openings that would permit a 125 mm sphere to pass through.</li> <li>&gt; Each tread must have a non-slip finish or an adequate non-skid strip near the edge of the nosings;</li> <li>&gt; <b>In the case of a required stairway, no winders in lieu of a landing</b></li> </ul>	<p>The building has a set of stairs located in the front setback which are used as part of the egress to the road. The stairs have consistent goings and risers which are within the limitations of this clause. The treads will readily be able to achieve the required slip resistance ratings of this clause.</p>	CRA – Refer Annexure F

**Section D: Access and Egress**

	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.																
D2.14: Landings	<p>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.</p> <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 1:20 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>	Application	Surface Condition		Dry	Wet	Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11	Tread or landing surface	P3 or R10	P4 or R11	Nosing or landing edge strip	P3	P4	<p>The external stairs have greater than 750mm long landings. No details have been provided about the nosings and slip resistance, however compliance is readily achievable, subject to a specification and/or further details being provided to the certifier at CC stage.</p>	<p>CRA – Refer Annexure F</p>
Application	Surface Condition																
	Dry	Wet															
Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11															
Tread or landing surface	P3 or R10	P4 or R11															
Nosing or landing edge strip	P3	P4															
D2.15: Thresholds	<p>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–</p> <p>(a) in a building required to be accessible, the doorway–</p> <ul style="list-style-type: none"><li>(i) opens to a road or open space; and</li><li>(ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1:2009; or</li></ul> <p>(b) in other cases–</p>	<p>The threshold of all doorways must not incorporate a step or ramp at any point closer to the doorway other than the width of the door leaf unless the door opens to open space and the threshold is provided with a threshold ramp or step ramp in accordance with AS 1428.1-2009.</p>	<p>CRA – Refer Annexure F</p>														

Section D: Access and Egress			
	<ul style="list-style-type: none"> <li>(i) the doorway opens to a road or open space, external stair landing or external balcony; and</li> <li>(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.</li> </ul>		
D2.16: Barriers to prevent falls	N/A	N/A	N/A
D2.17: Handrails	<p>Handrails to stairways must:</p> <ul style="list-style-type: none"> <li>&gt; be located along at least one side of the ramp or flight (a flight being 2 or more risers); and</li> <li>&gt; located along each side if the total width of the stairway or ramp is 2m or more; and</li> <li>&gt; 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</li> <li>&gt; be continuous between stair flight landings and have no obstruction that will break a hand-hold.</li> <li>&gt; be constructed to comply with clause 12 of AS 1428.1:2009 (including handrails to the fire stairs).</li> <li>&gt; Handrails in common areas (other than fire stairs) must also accord with D3.3.</li> </ul> <p><u>Clause 12 of AS 1428.1:2009</u></p> <p>A required <i>exit</i> (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.</p>	<p>The building has a set of external stairs located along the pathway leading to Innovation Way. The stairs have double handrails proposed which are shown at a consistent height of 900mm. No specific handrail details have been provided, however compliance is readily achievable subject to the handrails having a circular width of 30-50mm.</p>	CRA – Refer Annexure F
D2.18: Fixed platforms, walkways stairways and ladders	N/A	N/A	N/A

Section D: Access and Egress			
D2.19: Doorways and doors	N/A	The building has no sliding door proposed in any of the required exits.	N/A
D2.20: Swinging doors	<p>Swinging doors in a required <i>exit</i> must not encroach—</p> <ul style="list-style-type: none"> <li>(i) at any part of its swing by more than 500 mm on the required 1m width of the <i>exit</i> and</li> <li>(ii) when fully open, by more than 100 mm on the required 1m <i>exit</i> width; and</li> </ul> <p>the measurement of encroachment in each case is to include door handles or other furniture or attachments to the door.</p> <p>A swinging door in a required <i>exit</i> must swing in the direction of egress unless—</p> <ul style="list-style-type: none"> <li>&gt; it serves a building or part with a floor area not more than 200 m<sup>2</sup>, it is the only required <i>exit</i> from the building or part and it is fitted with a device for holding it in the open position; or</li> <li>&gt; it serves a sanitary compartment or airlock (in which case it may swing in either direction).</li> </ul>	All doorways that serve as required exits swing in the direction of egress and would comply with the provisions of this clause.	Complies
D2.21: Operation of latch	<p>All doors in a required <i>exit</i> or forming part of a required <i>exit</i> AND doors in a path of travel to a required <i>exit</i> must be readily openable without a key from the side that faces a person seeking egress, by—</p> <ul style="list-style-type: none"> <li>(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 – <ul style="list-style-type: none"> <li>(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</li> <li>(B) have a clearance between the handle and the back plate or door face at the centre</li> </ul> </li> </ul>	<p>All doorways that serve as a required exit or are located along a path of travel to a required exit, must be readily opened without a key from the side that faces a person seeking egress and be -</p> <ul style="list-style-type: none"> <li>(i) a single hand downward action lever on a single device which is located between 900 mm and 1.1 metres from the floor and have a clearance between the handle and the back plate or door face of not less than 35 mm and not more than 45mm; or</li> <li>(ii) a single hand pushing action on a single device which is located between 900 mm and 1.2 metres from the floor surface.</li> </ul>	CRA – Refer Annexure F



**Section D: Access and Egress**

	<p>grip section of the handle of not less than 35mm and not more than 45mm; or</p> <p>(iv) a single hand pushing action on a single device which is located between 900mm and 1.2m from the floor.</p> <p>(v) where the latch operation device referred to in (ii) is not located on the door leaf itself—</p> <p>(A) manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and located—</p> <p>(aa) not less than 500 mm from an internal corner; and</p> <p>(bb) for a hinged door, between 1 m and 2 m from the door leaf in any position; and</p> <p>(cc) for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position.</p> <p>(B) braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device.</p>		
D2.22: Re-entry from fire-isolated exits	N/A	N/A	N/A
D2.23: Signs on doors	N/A	N/A	N/A
D2.24: Protection of openable windows	N/A	The building is single storey	N/A
D2.25: Timber stairways: concession	N/A	N/A	N/A

**Section D: Access and Egress****Part D3 – Access for People with A Disability – Refer to Separate Access Report****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.	<p>The building has a combined floor area greater than 500m<sup>2</sup>, therefore a fire hydrant system will be required to serve the building in accordance with AS 2419.1-2005. It has been advised that the street hydrant will be used for hydrant coverage, therefore a Hydraulic consultant must provide details to the certifier at CC stage confirming that compliant pressure and flows and system coverage will be achieved in accordance with AS 2419.1-2009.</p> <p>Note: Systems coverage is achieved by all parts being located within 90 metres of the hydrant (20 m of hose from the hydrant to the truck (ensuring the truck remains at least 10 m away from the building), 60 m of hose from the truck with a 10 m spray issued from the end of the nozzle).</p>	CRA – Refer Annexure F
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 a Fire compartment size greater than 500m <sup>2</sup> , therefore fire hose reel coverage is required in the Plant room. There is a fire hose reel provided within 4 metres of an exit in the Plant room which will provide system coverage throughout the Class 7a part.	Complies
E1.5: Sprinklers	N/A	N/A	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	The building will be required to be protected with portable fire extinguishers in accordance with Clause E1.6 and AS 2444-2001. These shall be documented on the dry	CRA – Refer Annexure F

**Section E: Services and Equipment**

	<p>and must be selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444:2001.</p> <p>For the Class 3 parts, portable fire extinguishers must be—</p> <ul style="list-style-type: none"> <li>(i) an ABE type fire extinguisher; and</li> <li>(ii) a minimum size of 2.5 kg; and</li> <li>(iii) distributed outside a <i>sole-occupancy unit</i>— <ul style="list-style-type: none"> <li>(A) to serve only the storey at which they are located; and</li> <li>(B) so that the travel distance from the entrance doorway of any <i>sole-occupancy unit</i> to the nearest fire extinguisher is not more than 10 m.</li> </ul> </li> </ul>	fire services drawings and form part of a Design Statement from the Services Designer.	
E1.8: Fire control centres	N/A	N/A	N/A
E1.9: Fire precautions during construction	<p>Informational—</p> <ul style="list-style-type: none"> <li>&gt; 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</li> <li>&gt; After the building has reach an <i>effective height</i> 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.</li> </ul>	To be complied with during construction.	Noted
E1.10: Provision for special hazards	N/A	N/A	N/A
<b>Part E2 – Smoke Hazard Management</b>			

Section E: Services and Equipment			
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)	<p><b>General smoke hazard management requirements</b></p> <p>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 <i>fire compartment</i> to another <i>fire compartment</i> or operates in a manner that may unduly contribute to the spread of smoke from one <i>fire compartment</i> to another <i>fire compartment</i> (such as lobby air supply) must—</p> <ul style="list-style-type: none"> <li>(i) be designed and installed to operate as a smoke control system in accordance with AS 1668.1:2015; or</li> <li>(ii) <ul style="list-style-type: none"> <li>(A) incorporate smoke dampers where the air-handling ducts penetrate any elements separating the <i>fire compartments</i> served; and</li> <li>(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</li> </ul> </li> </ul> <p>for the purposes of this provision, each <i>sole-occupancy unit</i> in a Class 2 or 3 building is treated as a separate <i>fire compartment</i>.</p> <p>Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1:2015 serving more than one <i>fire compartment</i> (other than a carpark ventilation system)</p>	<p>The building contains a Class 3 part, therefore the building requires a smoke detection system in accordance with Clause E2.2a. To satisfy the provisions of Clause E2.2a and Specification E2.2a, the building will require either of the following detection systems:</p> <ul style="list-style-type: none"> <li>(i) A Clause 3 smoke alarm system throughout which is hardwired and powered from consumers main source and is in accordance with AS 3786 – 2014 and Clause 3 of Specification E2.2a; or</li> <li>(ii) A Clause 4 smoke detection system throughout which has a Fire Indicator Panel (FIP) installed which alerts a building occupant warning system in accordance with Clause 7 of Specification E2.2a. The smoke detection system must be installed in accordance with Clause 4 of Specification E2.2a and AS 1670.1-2015. Note: Where a Clause 4 smoke detection is installed, then the fire rating of the main switch board will be required if the switch board sustains power to the FIP.</li> </ul> <p>It is assumed that the Class 7a Plant Room will be provided with natural ventilation, therefore no additional smoke hazard management provisions with regards to mechanical ventilation in the Class 7a part will be required, except for smoke alarm under the Clause 3 or 4 system.</p> <p>The Fire Services designer shall provide a Design Statement to ensure compliance with this clause.</p>	CRA – Refer Annexure F

**Section E: Services and Equipment**

	<p>and not forming part of a smoke hazard management system must comply with that Section of the Standard.</p> <p>A smoke detection system must be installed in accordance with Clause 6 of Specification E2.2a to operate AS1668.1:2015 systems that are provided for zone pressurisation and automatic air pressurisation for fire-isolated exits.</p> <p><b>Class 3 parts</b></p> <p>Class 3 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.</p> <p><b>Class 7a buildings</b></p> <p>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 electrical power and control cabling need not be fire rated.</p>		
E2.3: Provisions for special hazards	N/A	N/A	N/A
<b>Part E3 – Lift Installations – N/A</b>			
<b>Part E4 – Visibility In An Emergency, Exit Signs And Warning Systems</b>			
E4.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
E4.2: Emergency lighting requirements	An emergency lighting system must be installed throughout the building in accordance with Clause E4.2 of the BCA and AS/NZS 2293.1:2018.	The building has an emergency lighting system proposed throughout the building which can readily achieve compliance. The Fire Services designer shall	CRA – Refer Annexure F

Section E: Services and Equipment			
		provide a Design Statement to ensure full compliance with this clause.	
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.	The building has an emergency lighting system proposed throughout the building which can readily achieve compliance. The Fire Services designer shall provide a Design Statement to ensure full compliance with this clause.	CRA – Refer Annexure F
E4.5: Exit signs	<i>Exits</i> signs are to be provided above or adjacent to a door providing egress as well as directional signage throughout the entire development where necessary.	The building has exit signs proposed throughout the building which can readily achieve compliance. The Fire Services designer shall provide a Design Statement to ensure full compliance with this clause.	CRA – Refer Annexure F
E4.6: Direction signs	Where an <i>exit</i> is not readily apparent, directional signage is to be installed indicating the direction of egress.	The building has directional signs proposed throughout the building which can readily achieve compliance. The Fire Services designer shall provide a Design Statement to ensure full compliance with this clause.	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	<i>Exit</i> signs must comply with AS/NZS 2293.1:2018 and be clearly visible at all times when the building is occupied.	The building has exit and directional signs proposed throughout the building which can readily achieve compliance. The Fire Services designer shall provide a Design Statement to ensure full compliance with this clause.	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	<i>Performance Requirement</i> FP1.4, for the prevention of the penetration of water through external walls, must be complied with. There are no Deemed-to-Satisfy Provisions for this <i>Performance Requirement</i> in respect of external walls. The assessment contained within this report does not include an assessment against Performance Provision FP1.4.	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 have been provided for the stormwater drainage systems; however compliance is readily achievable, subject to further details, specification and/or design statement being provided to the certifier 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.	No details have been provided for the external above ground membranes systems; however compliance is readily achievable, subject to further details, specification and/or design statement being provided to the certifier at CC stage.  Note: Grated drains may be required at the external door thresholds.	CRA – Refer Annexure F
F1.5: Roof coverings	Roof coverings are to comply with BCA Clause F1.5.	No details have been provided for the roof coverings; however compliance is readily achievable, subject to further details, specification and/or design statement being provided to the certifier at CC stage.	CRA – Refer Annexure F
F1.6: Sarking	<i>Sarking-type materials</i> used for weatherproofing must comply with AS/NZS 4200 Part 1 and 2:2017.	No details have been provided for the sarking; however compliance is readily achievable, subject to further details, specification and/or design statement being provided to the certifier 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 details have been provided for the water proofing of wet areas; however compliance is readily achievable,	CRA – Refer Annexure F

Section F: Health and Amenity			
		subject to further details, specification and/or design statement being provided to the certifier at CC stage.	
F1.9: Damp-proofing	Moisture is to be prevented from reaching the walls above a damp-proof course, and the underside of the suspended floors.	No details have been provided for the damp-proofing; however compliance is readily achievable, subject to further details, specification and/or design statement being provided to the certifier 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 details have been provided for the damp-proofing; however compliance is readily achievable, subject to further details, specification and/or design statement being provided to the certifier at CC stage.	CRA – Refer Annexure F
F1.11: Provision of floor wastes	N/A	N/A	N/A
F1.12: Sub-floor ventilation	N/A	N/A	N/A
F1.13: Glazed Assemblies	Glazed assemblies are to comply with AS 2047:2014 and AS 1288:2006.	No details have been provided for the glazing; however compliance is readily achievable, subject to further details, specification and/or design statement being provided to the certifier 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.	The Class 3 sleeping pod will have access to the communal male and female bathrooms which provide at least a WC, shower and wash basin.	Complies



Section F: Health and Amenity			
F2.2: Calculation of number of occupants and facilities	<p>Informational –</p> <p>(a) The number of persons accommodated must be calculated according to D1.13 if it cannot be more accurately determined by other means</p> <p>(b) Unless the premises are used predominantly by one sex, sanitary facilities must be provided on the basis of equal numbers of males and females</p> <p>(c) In calculating the number of sanitary facilities to be provided under F2.1 and F2.3, a unisex facility required for people with a disability may be counted once for each sex</p> <p>(d) For the purpose of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary towels</p>	Noted	CRA – Refer Annexure F
F2.3: Facilities in Class 3 to 9 buildings (including Table F2.3)	<p>(a) Except where permitted by (b), (c), (f), F2.4(a) and F2.4(b), separate sanitary facilities for males and females must be provided for Class 3, 5, 6, 7, 8 or 9 buildings in accordance with Table F2.3.</p> <p>(b) If not more than 10 people are employed, a unisex facility may be provided instead of separate facilities for each sex.</p> <p>(c) If the majority of employees are one sex, not more than 2 employees of the other sex may share toilet facilities if the facilities are separated by means of walls, partitions and doors to afford privacy.</p> <p>(d) Adequate means of disposal of sanitary towels must be provided in sanitary facilities for use by females.</p>	The Class 5 and 7a parts have a proposed accessible sanitary compartment, as well as separate male and female bathrooms, each of which have a single ambulant WC and two wash basins. These sanitary facilities will accommodate a total of 20 females and 20 males.	CRA – Refer Annexure F
F2.4: Accessible sanitary facilities (including Table F2.4)	N/A	Assessed under the Access Report.	N/A

**Section F: Health and Amenity**

F2.5: Construction of sanitary compartments	<p>(a) Other than in an early childhood centre, sanitary compartments must have doors and partitions that separate adjacent compartments and extend—</p> <ul style="list-style-type: none"> <li>(i) from floor level to the ceiling in the case of a unisex facility; or</li> <li>(ii) to a height of not less than 1.5 m above the floor if primary school children are the principal users; or</li> <li>(iii) 1.8 m above the floor in all other cases.</li> </ul> <p>(b) The door to a fully enclosed sanitary compartment must—</p> <ul style="list-style-type: none"> <li>(i) open outwards; or</li> <li>(ii) slide; or</li> <li>(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.</li> </ul>	<p>The door and partitions in the bathrooms have a height of 2100mm which will comply with this clause. The walls and doors to the accessible bathroom are floor to ceiling.</p> <p>The doors to the ambulant toilets open outwards and therefore no lift off hinges are required.</p>	Complies
F2.6: Interpretation: urinals and washbasins	<p>Informational—</p> <p>(a) A urinal may be—</p> <ul style="list-style-type: none"> <li>(i) an individual stall or wall-hung urinal; or</li> <li>(ii) each 600 mm length of a continuous urinal trough; or (iii) a closet pan used in place of a urinal.</li> </ul> <p>(b) A washbasin may be—</p> <ul style="list-style-type: none"> <li>(i) an individual basin; or</li> <li>(ii) a part of a hand washing trough served by a single water tap.</li> </ul>	Noted	Noted

Section F: Health and Amenity			
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
F3.1: Height of rooms and other spaces	<p>(a) The height of rooms and other spaces must be not less than—</p> <p>(b) in a Class 3 part of a building—</p> <p>(i) a kitchen, laundry, or the like — 2.1 m; and</p> <p>(ii) a corridor, passageway or the like — 2.1 m; and</p> <p>(iii) a habitable room excluding a kitchen — 2.4 m; and</p> <p>(c) in a Class 5, 7 building—</p> <p>(i) except as allowed in (ii) and (f) — 2.4 m; and</p> <p>(ii) a corridor, passageway, or the like — 2.1 m; and</p> <p>(d) in any building—</p> <p>(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</p> <p>(ii) a commercial kitchen — 2.4 m; and</p> <p>(iii) above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like.</p>	<p>The sections drawings show ceiling heights of 2.7 metres throughout which will achieve compliance with the provisions of this clause.</p>	Complies

Section F: Health and Amenity			
	(iv) A required accessible adult change facility – 2.4m		
Part F4 – Light and Ventilation			
F4.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
F4.1: Provision of natural light	Class 3 Natural light must be provided to all bedrooms and dormitories.	Natural light to be provided to the Class 3 sleeping pods.	Noted
F4.2: Methods and extent of natural lighting	<p>(a) Natural light must be provided by:</p> <p>(i) Windows:</p> <p>(A) with an aggregate light transmitting area of not less than 10% the floor area of the room; and</p> <p>(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</p> <p>(ii) Rooflights, that:</p> <p>(A) have an aggregate light transmitting area of not less than 3% the floor area of the room; or</p> <p>(iii) a proportional combination of windows and roof lights required by (i) and (ii).</p> <p>(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 –</p> <p>(c) 1m; and</p>	Natural light is required to the Class 3 sleeping pods. The windows located in the western elevation have an aggregate area greater than 10% of the floor area of the bedroom, therefore sufficient natural light is provided in accordance with Clause F4.2.	Complies

Section F: Health and Amenity			
	(d) 50% of the square root of the exterior height of the wall in which the window is located, measured from its sill.		
F4.3: Natural light borrowed from adjoining room	N/A	N/A	N/A
F4.4: Artificial Lighting	Lighting to all areas is to comply with AS/NZS 1680.0:2009.	Artificial Lighting must be provided to all areas / rooms and be installed in accordance with AS/NZS 1680.0:2009.	CRA – Refer Annexure F
F4.5: Ventilation of rooms	All rooms to be provided with Clause F4.6 compliant natural ventilation <b>OR</b> a mechanical ventilation or air-conditioning system complying with AS 1668.2:2012.	It has been advised that the building will have a mechanical ventilation or air-conditioning system complying with AS 1668.2:2012 proposed.  The Plant room is cable of achieving sufficient natural ventilation through the use of the roof ventilators and garage door.	CRA – Refer Annexure F
F4.6: Natural ventilation	<p>(a) Natural ventilation provided in accordance with F4.5(a) must consist of permanent openings, windows, doors or other devices which can be opened—</p> <p>(i) with an aggregate opening or openable size not less than 5% of the floor area of the room required to be ventilated; and</p> <p>(ii) open to—</p> <p>(A) a suitably sized court, or space open to the sky; or</p> <p>(B) an open verandah, carport, or the like; or</p> <p>(C) an adjoining room in accordance with F4.7.</p>	The Plant room is capable of achieving sufficient natural ventilation through the roof ventilators and garage door opening.	CRA – Refer Annexure F
F4.7: Ventilation borrowed from adjoining room	N/A	N/A	N/A

**Section F: Health and Amenity**

F4.8: Restriction on position of water closets and urinals	<p>Sanitary compartments must not open directly into a –</p> <ul style="list-style-type: none"> <li>&gt; kitchen or pantry</li> <li>&gt; public dining room or restaurant</li> <li>&gt; dormitory in a Class 3 building</li> <li>&gt; room used for public assembly (which is not an early childhood centre, primary school or open spectator stand)</li> <li>&gt; workplace normally occupied by more than one person.</li> </ul>	None of the Sanitary compartments open directly into any of these areas.	Complies
F4.9: Airlocks	N/A	N/A	N/A
F4.11: Carparks	<p>Every storey of a carpark (except an open deck carpark) must have:</p> <ul style="list-style-type: none"> <li>&gt; a system of mechanical ventilation complying with AS 1668.2:2012; or</li> <li>&gt; a system of natural ventilation complying with Section 4 of AS 1668.4:2012.</li> </ul>	The Plant room will be provided with natural ventilation through the use of roof ventilators and the operable perforated garage door that can readily achieve compliance with AS 1668.4:2012.	CRA – Refer Annexure F
F4.12: Kitchen local exhaust ventilation	N/A	The building does not contain a commercial kitchen.	N/A
<b>Part F5 – Sound Transmission and Insulation</b>			
F5.0: Deemed-to-Satisfy Provisions	Informational	Noted	Noted
F5.1: Application of Part	<p>Informational–</p> <p>The Deemed-to-Satisfy Provisions of this Part apply to Class 3 buildings.</p>	Applicable to the Sleeping pods.	Noted

Section F: Health and Amenity				
F5.2: Determination of airborne sound insulation ratings	<p>A form of construction required to have an airborne sound insulation rating must—</p> <p>(a) have the required value for weighted sound reduction index (<math>R_w</math>) or weighted sound reduction index with spectrum adaptation term (<math>R_w + C_{tr}</math>) determined in accordance with AS/NZS ISO 717.1 using results from laboratory measurements; or</p> <p>(b) comply with Specification F5.2.</p>	Noted		Noted
F5.3: Determination of impact sound insulation ratings	<p>(a) A floor in a building required to have an impact sound insulation rating must—</p> <p>(i) have the required value for weighted normalised impact sound pressure level with spectrum adaptation term (<math>L_{n,w} + C_I</math>) determined in accordance with AS/ISO 717.2 using results from laboratory measurements; or</p> <p>(ii) comply with Specification F5.2.</p> <p>(b) A wall in a building required to have an impact sound insulation rating must be of discontinuous construction; and</p> <p>(c) For the purposes of this Part, discontinuous construction means a wall having a minimum 20 mm cavity between 2 separate leaves, and</p> <p>(i) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and</p> <p>(ii) for other than masonry, there is no mechanical linkage between leaves except at the periphery.</p>	Noted		Noted
F5.4: Sound insulation rating of floors	N/A	The building is single storey		N/A

## Section F: Health and Amenity

F5.5: Sound insulation rating of walls	<p>(a) A wall in a Class 2 building must:</p> <ul style="list-style-type: none"> <li>(i) have an <math>R_w + C_{tr}</math> (airborne) not less than 50 if it separates <i>sole-occupancy units</i>; and</li> <li>(ii) have an <math>R_w</math> (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</li> <li>(iii) be of discontinuous construction in accordance with F5.3(b) if it separates: <ul style="list-style-type: none"> <li>(A) a bathroom, sanitary compartment, laundry or kitchen in one <i>sole-occupancy unit</i> from a habitable room (other than a kitchen) in an adjoining unit; or</li> <li>(B) a <i>sole-occupancy unit</i> from a plant room or lift shaft.</li> </ul> </li> </ul> <p>(b) Where a wall required to have sound insulation has a floor above, the wall must continue to:</p> <ul style="list-style-type: none"> <li>(i) the underside of the floor above; or</li> <li>(ii) a ceiling that provides the sound insulation required for the wall.</li> </ul> <p>(c) Where a wall required to have sound insulation has a roof above, the wall must continue to:</p> <ul style="list-style-type: none"> <li>(i) the underside of the roof above; or</li> <li>(ii) a ceiling that provides the sound insulation required for the wall.</li> </ul> <p>(d) Doorways in walls separating the Class 3 <i>sole-occupancy units</i> from a stairway, public corridor, public lobby or the like must be provided with a door assembly that has an <math>R_w</math> not less than 30.</p>	<p>The bounding walls between the two sleeping pods achieve an <math>RW + C_{tr}</math> (airborne) not less than 50 and the walls which separate the sleeping pods from the gym and corridor achieve an <math>R_w</math> (airborne) not less than 50.</p> <p>The doorways providing access into the units achieve an <math>R_w</math> not less than 30.</p>	Complies
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**Section F: Health and Amenity**

F5.6:	Sound insulation rating of services	N/A	The building is single storey.	N/A
F5.7:	Sound isolation of pumps	N/A	N/A	N/A

**Part F6 – Condensation Management – N/A (The building does not contain any Class 2 or 4 parts)**

**Section G: Ancillary Provisions**

**Part G1 – Minor Structures and Components – N/A**

**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 – To be confirmed by Bushfire Consultant if deemed required**

**Part G6 – Occupiable Outdoor Areas – 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 – Third party Section J Consultant to provide Report or Design Statement**

The separating wall between the plantroom and the conditioned spaces must comply with the building fabric provisions of J1 of the BCA2019. Where openings are constructed within the envelope of the conditioned part of the building, suitable seals shall be installed around the operable windows and external doors in accordance with the provisions of J3 of the BCA2019.

## **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).

### Envelope

Envelope, for the purposes of Section J in Volume One, means the parts of a building's fabric that separate a conditioned space or habitable room from—

- (a) the exterior of the building; or
- (b) a non-conditioned space including—
  - (i) the floor of a rooftop plant room, lift-machine room or the like; and
  - (ii) the floor above a carpark or warehouse; and
  - (iii) the common wall with a carpark, warehouse or the like.

### Exit

Exit means –

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

Group number

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

Loadbearing

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

Non-combustible

Non-combustible means—

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

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.

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. 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.
2. Services penetrating elements required to possess an FRL including the walls, etc. will be protected in accordance with Clause C3.15 and Specification C3.15 of BCA2019.
3. Discharge from exits will be in accordance with Clause D1.10 of BCA2019.
4. 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.
5. 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.
6. The handrails to all stairs and throughout the building will be in accordance with D2.17 of BCA2019.
7. Door latching mechanisms will be in accordance with Clause D2.21 of BCA2019
8. Fire precautions whilst the building is under construction fire precautions will be in accordance with Clause E1.9 of BCA2019.
9. External above ground waterproofing membranes will comply with Clause F1.4 of BCA2019 and AS 4654 Parts 1 & 2:2012.
10. The new roof covering will be in accordance with Clause F1.5 of BCA2019.
11. Any sarking proposed will be installed in accordance with Clause F1.6 of BCA2019.
12. Waterproofing of all wet areas to the building will be carried out in accordance with Clause F1.7 of BCA2019 and AS 3740:2010.
13. Damp proofing of the proposed structure will be carried out in accordance with Clause F1.9 and F1.10 of BCA2019.
14. Sub-floor ventilation will be provided in accordance with Clause F1.12 of BCA2019.
15. 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.
16. 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.
17. Building Fabric and Thermal Construction will be in accordance with Part J1 of BCA2019.
18. Glazing will be in accordance with Part J1 of BCA2019.
19. Building sealing will be in accordance with Part J3 of BCA2019.
20. Facilities for Energy Monitoring will be provided in accordance with Clause J8.3 of BCA2019.



**Electrical Services Design Certification:**

21. A smoke detection and alarm system will be installed throughout the building in accordance with Table E2.2a, and Specification E2.2a of BCA2019.
22. Emergency lighting will be installed throughout the development in accordance with Clause E4.2, E4.4 of BCA2019 and AS/NZS 2293.1:2018.
23. Exit signage will be installed in accordance with Clause E4.5, E4.7, and E4.8 of BCA2019 and AS/NZS 2293.1:2018.
24. Artificial lighting will be installed throughout the development in accordance Clause F4.4 of BCA2019 and AS/NZS 1680.0:2009.
25. Lighting power and controls will be installed in accordance with Part J6 of BCA2019.

**Hydraulic Services Design Certification:**

26. Storm water drainage will be provided in accordance with Clause F1.1 of BCA2019 and AS/NZS 3500.3:2018
27. Fire hydrant system will be installed in accordance with Clause E1.3 of BCA2019 and AS 2419.1:2005 as required.
28. Fire hose reels will be installed in accordance with Clause E1.4 of BCA2019 and AS 2441:2005.
29. Portable fire extinguishers will be installed in accordance with Clause E1.6 of BCA2019 and AS 2444:2001.
30. The heated water supply systems will be designed and installed to NCC Volume 3 – Plumbing code and Clause J7.2 of BCA2019.

**Mechanical Services Design Certification:**

31. 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.
32. Where not naturally ventilated the building will be mechanically ventilated in accordance with Clause F4.5 of BCA2019 and AS 1668.2:2012.
33. Rigid and flexible ductwork will comply with the fire hazard properties set out in AS 4254 Parts 1 and 2.

**Structural Engineers Design Certification:**

34. The building materials for the Class 3 will comply with the ABCB Standard for Construction of Buildings in Flood Hazard Areas.

**NSW Specification Design Certificate:**

35. 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.
36. 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.
37. 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.