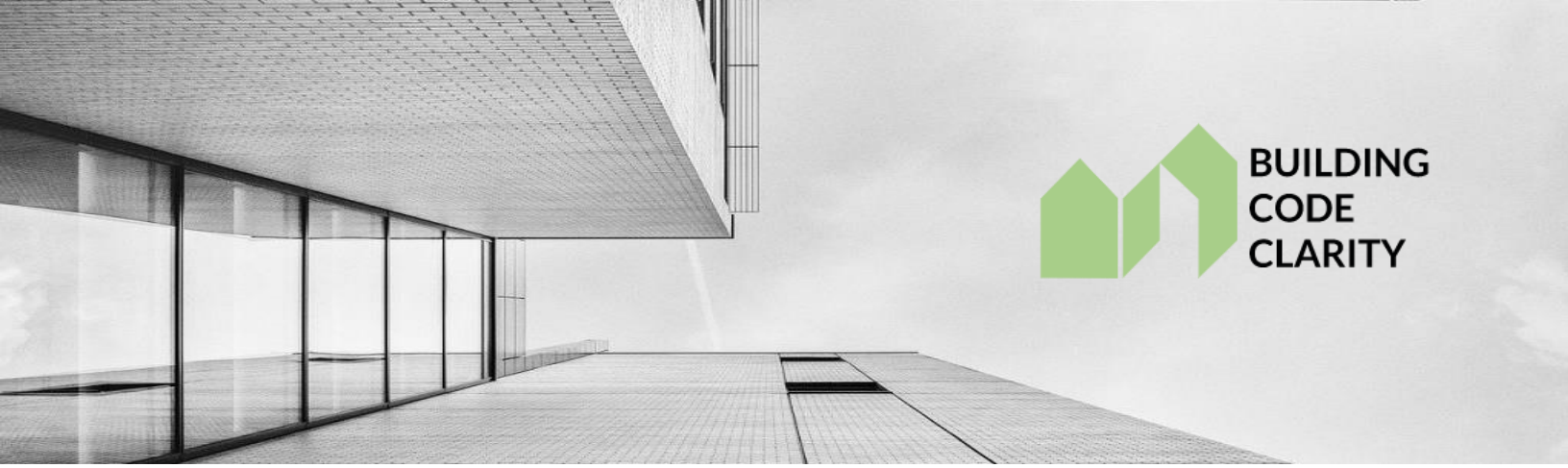

BCA Compliance Assessment Report

36 Bardo Road, Newport

Residential development

Date: 15th December 2022

Report no. J1112-BCA-2

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J1112-BCA-1	06.12.22	Preliminary BCA report for DA
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CONTENTS

Executive Summary

This report provides an assessment of the proposed residential development at 36 Bardo Rd, Newport, NSW, against the relevant deemed-to-satisfy provisions of the Building Code of Australia 2019, Amendment 1 (BCA), excluding accessibility provisions of Part D3 & Clause F2.4, which will be addressed by a separate Access Consultant.

The following table outlines the BCA compliance issues identified in the design that will require further information or consideration and/or assessment as Performance Solutions. These issues are further detailed in Part 4 of this report 'BCA Assessment Summary'.

Item	Description	BCA provision(s)
Building Code of Australia Compliance Matters to be Addressed		
1.	External cladding The external weatherboard cladding must be changed to a non-combustible material, such as metal cladding.	C1.9
2.	BCA Specifications The BCA provisions listed in Part 3 of this report as 'Compliance Readily Achievable' (CRA), will need to be certified by the relevant party or included in the project specifications at the Construction Certificate stage.	Various
Performance Solutions Required		
3.	Weatherproofing of external walls As there are no Deemed-to-Satisfy Provisions for this *Performance Requirement* in respect of external walls, compliance with FP1.4 must be demonstrated via a *performance solution*. Note: if the project will be subject to NCC 2022 a performance solution will not be required for walls constructed of masonry to AS 3700, autoclaved aerated concrete to AS 5146.3 or metal wall cladding to AS 1562.1.	FP1.4

1 Introduction

1.1 Location and Description

The development is located at 36 Bardo Road, Newport, NSW. The works involve the construction of a new residential apartment building comprising two storeys of residential units (six units in total) and a basement carpark.

Pedestrian and vehicular access to the site is direct from Bardo Road.

1.2 Purpose of the Report

The purpose of this report is to provide a detailed assessment of the proposed design, as detailed on the architectural design plans, against the deemed-to-satisfy provisions of the Building Code of Australia (BCA), excluding accessibility related provisions (Part D3, Clause E3.6 and Clause F2.4) which will be addressed by a separate Access consultant.

1.3 Basis of the Report

This report is based on the architectural plans provided, as listed in Annexure C and the current version of the Building Code of Australia Volume 1, being Amendment 1, 2019 (BCA 2019).

1.4 Limitations of the Report

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

a) the structural design of the building;
b) the fire-resistance ratings of any proposed structural elements of the building (unless specifically referred to);
c) the design of any proposed electrical, mechanical, hydraulic or fire protection services;
d) weatherproofing of external walls; or
e) waterproofing details.

This report does not include, nor imply compliance with:

a) the National Construction Code – Plumbing Code of Australia Volume 3;
b) the Disability Discrimination Act 1992;
c) the Adaptable Housing standard;
d) Work Health and Safety Act 2011;
e) requirements of Australian Standards unless specifically referred to;
f) requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Local Council, Department of Planning and the like; or
g) conditions of the Development Consent issued by the Local Consent Authority.

2 BCA Assessment Data

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

(Note: the terms identified by italics are defined terms under the BCA. Some of these definitions can be found in Annexure D of this report.)

2.1 Building Classification

The building has been classified according to its use, in accordance with BCA Clause A6.0.

Class	Level	Description
2	Part basement, ground floor & Level 01	Residential parts including residential common areas
7a	Part basement	*Carpark*

2.2 Building Rise in Storeys

The building has a *rise in storeys* of three, determined in accordance with BCA Clause C1.2.

The building has two storeys of residential units and a basement carpark storey that is, for the most part, below ground.

2.3 Type of Construction

The building is required to be of Type A fire-resisting construction, in accordance with BCA Clause C1.1.

2.4 Effective Height

The building has an *effective height* of less than 12m.

2.5 Exits

The *exits* of the building are as follows:

Basement level

- The doorway from the garbage room to *open space.*
- The doorway (*horizontal exit*) into the northern stairway, discharging to the ground floor lobby.

Ground level

- Either of the two doors of the southern residential lobby, opening to the external pathway / *open space*.
- The door of the northern residential lobby, opening to the external pathway / *open space*.

Level 01

- The two internal, non-fire-isolated exit stairs discharging into the ground floor lobbies.

2.6 Location of Fire-source Features

The *fire-source features* to which the building is exposed and their approximate distances from the building's external walls are as follows:

North:	The rear allotment boundary (5.8 m)
South:	The far boundary of Bardo Road (> 6 m)
East:	The eastern side allotment boundary (2.9 m)
West:	The western side allotment boundary (3.2 m)

2.7 Climate Zone

For the purposes of Section J of the BCA, the building is located within Climate Zone 5.

3 BCA Clause-by-Clause Assessment

The table on the following page provides a clause-by-clause assessment of the design against the applicable *deemed-to-satisfy provisions* of the BCA 2019, Amendment 1.

The following abbreviations have been used to indicate the compliance status:

NA	Not applicable – The deemed-to-satisfy clause is not applicable to the design
Complies	The design complies with the relevant parts of the deemed-to-satisfy clause
CRA	Compliance readily achievable – The design is consistent with the relevant deemed-to-satisfy clause, however strict compliance with the clause will need to be demonstrated by either certification by the appropriate party or by inclusion in the BCA specifications for the project at Construction Certificate stage.
DNC	Does Not Comply
PS	Performance Solution – BCA compliance is proposed or recommended to be achieved via a Performance Solution, in lieu of compliance with the subject deemed-to-satisfy clause.
Noted	The clause has been considered in the assessment, however, does not require any further design input.

BCA Clause-by-Clause Assessment Table

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
Part B - Structure			
B1.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
B1.1: Resistance to actions	The resistance of the building must be greater than the most critical action effect resulting from different combinations of actions, where the most critical action has been determined in accordance with Part B1 of the BCA.	Structural Engineer to certify at CC stage.	CRA
B1.2: Determination of individual actions	The magnitude of actions must be determined in accordance with BCA Clause B1.2.	Structural Engineer to certify at CC stage.	CRA
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 BCA Clause B1.4, including the following (as appropriate): > Masonry – AS 3700-2018 as varied by BCA Clause B1.4 (a) > Concrete – AS 3600-2018, AS 5146.1 (aerated) & AS 5216 > Steel structures – AS 4100-1998, AS/NZS 4600-2018 & NASH Standard > Composite steel and concrete: AS/NZS 2327-2017 > Cold-formed steel structures – AS/NZS 4600-2018 > Low-rise steel framing – NASH Standard > Timber construction – AS 1684.2-2010, AS 1720.1 & AS 1720.5 > Piling – AS 2159-2009	Structural Engineer to certify at CC stage.	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	> Metal roofing – AS 1562.1-2018		
	Glazed assemblies – AS 2047-2014 & AS 1288-2006	-	CRA
	Termite Risk Management: Where a *primary building element* is subject to attack by subterranean termites: AS 3660.1, and— (i) for the purposes of this provision, a *primary building element* consisting entirely of, or a combination of, any of the following materials is considered not subject to termite attack: (A) Steel, aluminium or other metals. (B) Concrete. (C) Masonry. (D) Fibre-reinforced cement. (E) Timber — naturally termite resistant in accordance with Appendix C of AS 3660.1. (F) Timber — preservative treated in accordance with Appendix D of AS 3660.1; and (ii) a durable notice must be permanently fixed to the building in a prominent location, such as a meter box or the like, indicating— (A) the termite management system used; and (B) the date of installation of the system; and (C) where a chemical is used, its life expectancy as listed on the appropriate authority's pesticides register label; and (D) the installer's or manufacturer's recommendations for the scope and frequency of future inspections for termite activity.	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
B1.5: Structural software	Not applicable	-	NA
B1.6 Construction of buildings in flood hazard areas	Not applicable	-	NA
Part C1 – Fire resistance and stability			
C1.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
C1.1: Type of construction required	The minimum Type of fire resisting construction required for the building is Type A Construction in accordance with BCA Specification C1.1.	Refer to Type A Construction requirements detailed in Specification C1.1 section below.	-
C1.2: Calculation of rise in storeys	(a) The rise in *storey*s is the sum of the greatest number of *storey*s at any part of the external walls of the building and any *storey*s within the roof space— (i) above the finished ground next to that part; or (ii) if part of the external wall is on the boundary of the allotment, above the natural ground level at the relevant part of the boundary. (b) A *storey* is not counted if— (i) it is situated at the top of the building and contains only heating, ventilating or lift equipment, water tanks, or similar service units or equipment; or (ii) it is situated partly below the finished ground and the underside of the ceiling is not more than 1 m above the average finished level of the ground at the external wall, or if the external wall is more than 12 m long, the average for the 12 m part where the ground is lowest.	The building has a rise in storeys of three (3) based on the basement carpark under being partially above the finished ground level on the southern elevation.	Noted

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
C1.3: Buildings of multiple classification	Informational	-	Noted
C1.4: Mixed Types of construction	Not applicable	-	NA
C1.5: Two Storey Class 2, 3 or 9c buildings	Not applicable	-	NA
C1.6: Class 4 Parts of building	Not applicable	-	NA
C1.7: Open spectator stands and indoor sports stadium	Not applicable	-	NA
C1.8: Lightweight construction	Lightweight construction used in a fire-rated application must comply with Specification C1.8.	-	CRA
C1.9: Non-combustible building elements	(a) The following building elements and their components must be *non-combustible*: (i) External walls, including all components incorporated in them including the facade covering, framing and insulation. (ii) The flooring and floor framing of the lift pit. (iii) Non-*loadbearing* internal walls required to be fire-resisting. (b) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is non-*loadbearing*, must be of *non-combustible* construction. (c) A *loadbearing* internal wall, including those that are part of a *loadbearing* shaft, must comply with Specification C1.1.	<u>Clause 3.10 concession for Class 2 parts</u> Notwithstanding C1.9(a) and (b) and Clause 3.1(d) of Specification C1.1, Clause 3.10 of Specification C1.1 permits, timber framing to be used for: (a) external walls; (a) non-*loadbearing* internal walls required to be fire-resisting; (b) non-*loadbearing* shafts; and (c) *loadbearing* internal walls. All other elements within these walls must be *non-combustible* construction in accordance with C1.9. <u>Weatherboard</u>	**DNC**

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(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.	The external weatherboard cladding must be changed to a non-combustible material.	

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	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.		
C1.10: Fire hazard properties	*Fire hazard properties* of internal linings, materials and assemblies must comply with BCA Clause C1.10 and Specification C1.10.	-	CRA
C1.11: Performance of external walls in fire	Not applicable	-	NA
C1.12:	This clause has deliberately been left blank in the BCA.	-	NA
C1.13: Fire-protected timber: Concession	Not applicable	-	NA
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.	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(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).		
Part C2 – Compartmentation and separation			

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
C2.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
C2.1: Application of Part	Not applicable	-	NA
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.	-	Complies
C2.3: Large isolated buildings	Not applicable	-	NA
C2.4: Requirements for open spaces and vehicular access	Not applicable	-	NA
C2.5: Class 9a and 9c Buildings	Not applicable	-	NA
C2.6: Vertical separation of openings in external walls	Where the vertical projection of a window or other 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.	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	For the purposes of this clause, window or other opening means that part of the external wall of a building that does not have an *FRL* of 60/60/60 or greater.		
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 must not pass through or cross the *fire wall* unless the required fire resisting performance of the *fire wall* is maintained.	-	CRA
C2.8: Separation of classifications in the same storey	If a building has parts of different classifications located alongside one another in the same storey— > 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.	The walls separating the Class 2 residential lobbies and stairways from the Class 7a carpark parts at basement level must achieve an FRL of not less than (120)/120/120.	CRA
C2.9: Separation of classifications in different storeys	A floor 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 floor separating the basement level from the ground level must achieve an FRL of not less than 120/120/120.	CRA
C2.10: Separation of lift shafts	The 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.	-	CRA
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.	-	Complies

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
C2.12: Separation of equipment	(a) Equipment other than that described in (b) and (c) must be separated from the remainder of the building with construction complying with (d), if that equipment comprises— (i) lift motors and lift control panels; or (ii) emergency generators used to sustain emergency equipment operating in the emergency mode; or (iii) central smoke control plant; or (iv) boilers; or (v) 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. (b) Equipment need not be separated in accordance with (a) if the equipment comprises— (i) smoke control exhaust fans located in the air stream which are constructed for high temperature operation in accordance with Specification E2.2b; or (ii) stair pressurising equipment installed in compliance with the relevant provisions of AS 1668.1; or (iii) a lift installation without a machine-room; or (iv) equipment otherwise adequately separated from the remainder of the building. (c) Separation of on-site fire pumps must comply with the requirements of AS 2419.1. (d) Separating construction must have— (i) except as provided by (ii)—	No equipment requiring compliance with this clause is currently indicated on the plans.	NA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(A) an FRL as required by Specification C1.1, but not less than 120/120/120; and (B) any doorway protected with a self-closing fire door having an FRL of not less than –/120/30.		
C2.13: Electricity supply system	Not applicable	-	NA
C2.14: Public corridors in Class 2 and 3 Buildings	Not applicable	-	NA
Part C3 – Protection of openings			
C3.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
C3.1: Application of Part	Informational– (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 if 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 mm^2 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. (b) For the purposes of the *Deemed-to-Satisfy Provisions* of this Part, openings in building elements required to be	-	Noted

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	fire-resisting include doorways, windows (including any associated fanlight), infill panels and fixed or openable glazed areas that do not have the required FRL. (c) For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings, other than those covered under (a)(iii), between building elements such as columns, beams and the like, in the plane formed at the construction edge or perimeter of the building, are deemed to be openings in an external wall.		
C3.2: Protection of openings in external walls	Openings in an external wall that is required to have an *FRL* must be protected in accordance with C3.4 if the distance between the opening and the *fire-source feature* (side or rear boundary) to which it is exposed is **less than 3 m**. Where wall-wetting sprinklers are used, they must be located externally.	There are no openings in external walls located less than 3 m of and exposed to, a side or rear boundary.	CRA
C3.3: Separation of external walls and associated openings in different fire compartments	Not applicable	-	NA
C3.4: Acceptable methods of protection	Fire doors must comply with BCA Specification C3.4.	-	CRA
C3.5: Doorways in fire walls	Doors in a fire wall must achieve 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 doorways separating the carpark parts from the residential stairways at basement level must achieve an FRL of not less than -/120/30.	CRA
C3.6: Sliding fire doors	Not applicable	-	NA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
C3.7: Protection of doorways in horizontal exits	Not applicable	-	NA
C3.8: Openings in fire-isolated exits	Not applicable	-	NA
C3.9: Service penetrations in fire-isolated exits	Not applicable	-	NA
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 are set to remain closed except when discharging or receiving passengers. > A panel 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 mm^2 in area.	-	CRA
C3.11: Bounding Construction: Class 2, 3 and 4 Buildings	> The doorways between sole occupancy units and the public lobbies must be protected by self–closing -/60/30 fire doors. > C3.11 (g) - 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 exits and is along an open balcony, landing or the like and passes an external wall of another sole-occupancy unit, then that external wall must— o be constructed of concrete or masonry, or be lined internally with a *fire-protective covering*; and o have any doorway fitted with a self-closing, tight-fitting solid core door not less than 35 mm thick; and	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	○ have any windows or other openings— ▪ protected internally in accordance with C3.4; or ▪ located at least 1.5 m above the floor of the balcony, landing or the like.		
C3.12: Openings in floors and ceilings for services	Where services pass through a floor which is required to achieve an *FRL* or a ceiling required to have a *resistance to the incipient spread of fire*, the service must be enclosed within a fire resisting shaft or fire protected in accordance with Clause C3.15.	-	CRA
C3.13: Openings in shafts	Openings in shafts must be protected by: (a) if it is in a sanitary compartment – a door or panel which together with its frame, is non-combustible or has an FRL of not less than –/30/30; or (b) a self-closing –/60/30 fire door or hopper; or (c) an access panel having an FRL of not less than –/60/30; or (d) if the shaft is a garbage shaft – a door or hopper of non-combustible construction.	-	CRA
C3.15: Openings for service installations	Where services pass through an element (other than an external wall or roof), which is required to achieve an *FRL* or a *resistance to the incipient spread of fire*, the service must be fire protected in accordance with BCA Clause C3.15.	-	CRA
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*.	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
C3.17: Columns protected with lightweight construction to achieve an FRL	Not applicable	-	NA
Specification C1.1 – Fire-resisting construction			
1: Scope	Informational	-	Noted
2.1: Exposure to fire-source features	Informational– 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– > has an *FRL* of not less than 30/–/–; and > is neither transparent nor translucent.	-	Noted
2.2: Fire protection for a support of another part	Where a part of a building required to have an *FRL* depends upon direct vertical or lateral support from another part to maintain its *FRL*, that supporting part must have an *FRL* not less than that required by other provisions of this Specification; and if located within the same *fire compartment* as the part it supports have an FRL in respect of structural adequacy the greater of that required for the supporting part itself and for the part it supports.	-	CRA
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— (a) it spans an opening in a non-loadbearing wall of a Class 2 building; or	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(b) it spans an opening in masonry which is not more than 150 mm thick and— (i) not more than 3 m wide if the masonry is non-loadbearing; or (ii) not more than 1.8 m wide if the masonry is loadbearing and part of a solid wall or one of the leaves of a cavity wall.		
2.4: Attachments not to impair fire-resistance	The method of attaching or installing a finish, lining, ancillary element or service installation to a building element must not reduce the fire-resistance of that element to below that required.	-	CRA
2.5: General concessions	<u>Balcony concession</u> A balcony, verandah or the like and any incorporated supporting part, which is attached to or forms part of a building, need not comply with Tables 3, 4 and 5 if— (i) it does not form part of the only path of travel to a required exit from the building; and (ii) Type A construction— (A) it is situated not more than 2 storeys above the lowest storey providing direct egress to a road or open space; and (B) any supporting columns are of non-combustible construction.	This clause will not be applicable as the balconies require an FRL for the purposes of Clause C2.6.	NA
2.6: Mezzanine floors: Concession	Not applicable	-	NA
2.7: Enclosure of shafts	Fire rated shafts must be enclosed at the top and bottom by construction having an FRL not less than that required for	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	the walls of a non-*loadbearing* shaft in the same building, except that this provision need not apply to– > the top of a shaft extending beyond the roof covering, other than one enclosing a fire-isolated stairway; or > the bottom of a shaft if it is *non-combustible* and laid directly on the ground.		
2.8: Carparks in Class 2 and 3 Buildings	Not applicable	-	NA
2.9: Residential Aged Care	Not applicable	-	NA
Type A Fire-Resting Construction	Refer below	-	-
3.1: Fire-resistance of building elements	> 3.1(a) - Building elements must comply with the fire resistance levels (FRLs) set out in Table 3 of Specification C1.1. (Refer to Annexure A of this report). > 3.1(c) - Internal walls required to be fire rated must extend to– (i) to the underside of the floor next above; or (ii) 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 (iii) 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.		CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	> 3.1(d) - *Loadbearing* internal walls must be of concrete or masonry. > Note: Clause 3.10 of Spec. C1.1 provides a concession permitting the use of timber framing within the residential levels, however no timber framing is proposed.		
3.2: Concessions for floors	Floors laid directly on the ground need not comply with Table 3.	-	Noted
3.3: Floor Loading of Class 5 and 9b buildings: Concession	Not applicable	-	NA
3.4: Roof superimposed on concrete slab: Concession	Not applicable	-	NA
3.5: Roof: Concession	The roof of the Class 2 part need not comply with Table 3 due to the concession provided under this clause.	-	Noted
3.6: Roof lights	Not applicable	-	NA
3.7: Internal columns and walls: Concession	In the storey immediately below the roof, internal columns and internal walls (other than *shaft* walls) may have an FRL of 60/60/60 due to the concession provided under this clause.	-	Noted
3.8: Open spectator stands and indoor sports stadiums concession	Not applicable	-	NA
3.9: Carparks	Not applicable	-	NA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
3.10: Class 2 and 3 buildings: Concession	(a) In a Class 2 building with a *rise in storeys* of not more than 3– (i) notwithstanding C1.9(a) and (b) and C2.6, timber framing may be used for– (A) external walls; and (B) common walls; and (C) the floor framing of lift pits; and (D) non-*loadbearing* internal walls which are required to be fire-resisting; and (E) non-*loadbearing shafts*; and (F) spandrels or horizontal construction provided for the purposes of C2.6; and (ii) notwithstanding Clause 3.1(d) of Specification C1.1, for *loadbearing* internal walls — (A) timber framing may be used; and (B) *non-combustible* materials may be used.	-	Noted
Part D1 – Provision for escape			
D1.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
D1.1: Application of Part	The Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of the Class 2 *sole-occupancy units*.	-	Noted
D1.2: Number of exits required	Every storey must have at least one exit and not less than 2 *exits* must be provided from the basement.	-	Complies

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
D1.3: When fire-isolated stairways and ramps are required	Class 2 Every stairway serving as a required exit in a Class 2 building, must be fire-isolated unless it connects, passes through or passes by not more than 3 consecutive *storeys* in a Class 2 building and one extra storey of any classification may be included if– > it is only for the accommodation of motor vehicles or for other ancillary purposes; or > the building has a sprinkler system (other than a FPAA101D system) complying with Specification E1.5 installed throughout; or > the required exit does not provide access to or egress for, and is separated from, the extra *storey* by construction having_ o an FRL of -/60/60, if non-*loadbearing*; and o an FRL of 90/90/90, if *loadbearing*; and o no opening that could permit the passage of fire or smoke. Class 7 Every stairway serving as a required exit must be fire-isolated unless it connects, passes through or passes by not more than 2 consecutive storeys and one extra storey of any classification may be included if— > the building has a sprinkler system (other than a FPAA101D system) complying with Specification E1.5 installed throughout; or	The two internal stairways are located in the Class 2 parts and connect not more than 3 storeys, in accordance with this clause.	Complies

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	> the required exit does not provide access to or egress for, and is separated from, the extra storey by construction having— o an FRL of –/60/60, if non-loadbearing; and o an FRL of 90/90/90 for Type A construction or 60/60/60 for Type B or C construction, if loadbearing; and o no opening that could permit the passage of fire or smoke.		
D1.4: Exit travel distances	Class 2 residential — > 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. Class 7a carpark— 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.	-	Complies
D1.5: Distance between alternative exits	Exits for the basement level must be no less than 9 m apart and no more than 60 m apart.	The basement exits are approximately 45 m apart.	Complies

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
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. > the required width of a stairway or ramp must be measured clear of all obstructions such as handrails. > the unobstructed width of a required exit must not diminish in the direction of travel to a road or open space.	-	CRA
D1.7: Travel via fire-isolated exits	Not applicable	-	NA
D1.8: External stairways or ramps in lieu of fire-isolated exits	Not applicable	-	NA
D1.9: Travel by non-fire-isolated stairways or ramps	(a) 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. (b) 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 that is not fire-isolated and is required to serve	-	Complies

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	that room or sole-occupancy unit must not exceed 60 m. (c) In a Class 5, 6, 7, 8 or 9 building, the distance from any point on a floor to a point of egress to a road or open space by way of a required non-fire-isolated stairway must not exceed 80 m. (d) 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.		
D1.10: Discharge from exits	> An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it. > 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 point of alternative exits must be located as far apart as practical.	-	Complies

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
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.*	One *horizontal exit* will be used as an exit from the basement level (i.e. the doorway to the northern stairway) and the other exit from the basement will be via the garbage room.	Complies
D1.12: Non-required stairways, ramps or escalators	Not applicable	-	NA
D1.13: Number of persons accommodated	Informational	-	Noted
D1.14: Measurement of distances	Informational	-	Noted
D1.15: Method of Measurement	Informational	-	Noted
D1.16: Plant rooms, lift motor rooms and electricity network substations: concession	Not applicable	-	NA
D1.17: Access to lift pits	Access to the lift pits must be via the lowest landing doors.	-	CRA
D1.18: Egress from early childhood centres	Not applicable	-	NA
Part D2 – Construction of exits			
D2.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
D2.1: Application of Part	Informational –	-	Noted

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	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.*		
D2.2: Fire-isolated stairways and ramps	Not applicable	-	NA
D2.3: Non-fire-isolated stairways and ramps	Required stairs and ramps (including landings and any supporting building elements) must be of *non-combustible* construction, or only of- (a) reinforced or prestressed concrete; or (b) steel in no part less than 6 mm thick; or (c) timber that— (i) has a finished thickness of not less than 44 mm; and (ii) has an average density of not less than 800 kg/m3 at a moisture content of 12%; and (iii) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue".	-	CRA
D2.4: Separation of rising and descending stair flights	Not applicable	-	NA
D2.5: Open access ramps and balconies	Not applicable	-	NA
D2.6: Smoke lobbies	Not applicable	-	NA
D2.7: Installations in exits and paths of travel	> Gas or other fuel services must not be installed in a required *exit*.	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	> Any electricity distribution boards, ducts or equipment installed in corridors leading to an exit must be enclosed with *non-combustible* construction or a *fire-protective covering* with doorways suitably sealed against smoke spread.		
D2.8: Enclosure of space under stairs and ramps	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.	-	CRA
D2.9: Width of stairways and ramps	Informational	-	Noted
D2.10: Pedestrian ramps	The floor surface of ramps must have a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013.	The external 1:14 ramps must have a slip rating of P4 or R11. The external 1:8 ramp must have a slip rating of P5 or R12.	CRA
D2.11: Fire-isolated passageways	Not applicable	-	NA
D2.12: Roof as open space	Not applicable	-	NA
D2.13: Goings and risers	Stairways must comply with the following: > 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;	-	CRA

<table>
<tr><th>BCA Clause</th><th>Relevant Deemed-To-Satisfy Requirements</th><th>Comment</th><th>Status</th></tr>
<tr><td></td><td>
> 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 between the treads.
> 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>
Stairway landings must have a gradient no steeper than 1:50 and 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>
</table>
</td><td>-</td><td>CRA</td></tr>
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<tr><td></td><td>
<table>
<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></td><td></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–
(a) in a building required to be accessible, the doorway–
(i) opens 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.</td><td>-</td><td>CRA</td></tr>
<tr><td>D2.16: Barriers to prevent falls</td><td>A continuous barrier must be provided along the side of the stairways and balconies where the trafficable surface is 1 m or more above the surface beneath. The barrier must comply with the following:
<u>Barrier minimum heights</u>
> 865 mm above stair nosings; and
> 1 m in all other locations.
Note: a transition zone may be incorporated where the barrier height changes from 865 mm on a stair flight to 1m at landings.</td><td>-</td><td>CRA</td></tr>
</table>

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	Balustrade openings 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. Climbability > For floors more than 4m above the surface beneath, any horizontal or near horizontal elements between 150 mm and 760 mm above the floor must not facilitate climbing.		
D2.17: Handrails	Handrails to stairways and ramps must: > be located on at least one side of the ramp or flight; 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. > In required exit stairs, be constructed to comply with clause 12 of AS 1428.1:2009.	Handrails to be detailed on the construction stage plans.	CRA
D2.18: Fixed platforms, walkways stairways and ladders	Not applicable	-	NA
D2.19: Doorways and doors	Not applicable	-	NA
D2.20: Swinging doors	A swinging door in a required *exit* or forming part of a required exit– (a) must not encroach–	-	Complies

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(i) at any part of its swing by more than 500 mm on the required 1m width of the *exit* if it is likely to impede the path of travel of people already using 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; and (b) must swing in the direction of egress unless– (i) it serves a building or part with a floor area not more than 200 m^2, 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 (ii) it serves a sanitary compartment or airlock (in which case it may swing in either direction). (c) must not otherwise impede the path or direction of egress.		
D2.21: Operation of latch	All doors in a required *exit* or forming part of a required *exit* AND doors in a path of travel to a required *exit* must be readily openable without a key from the side that faces a person seeking egress, by– (i) a single hand downward action or pushing action on a single device which is located between 900mm and 1.1 m from the floor and if serving an area required to be accessible by Part D3 – (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	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(B) have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35mm and not more than 45mm; or (ii) a single hand pushing action on a single device which is located between 900mm and 1.2m from the floor. (iii) where the latch operation device referred to in (ii) is not located on the door leaf itself— (A) manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and located— (aa) not less than 500 mm from an internal corner; and (bb) for a hinged door, between 1 m and 2 m from the door leaf in any position; and (cc) for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position. (B) braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device. The above requirements do not apply to a door that – (i) serves only or is within a *sole-occupancy unit* in a Class 2 building; or (ii) is 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.		

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
D2.22: Re-entry from fire-isolated exits	Not applicable	-	NA
D2.23: Signs on doors	> The *horizontal exit* door at basement level must be provided with signage on both sides, stating: **"FIRE SAFETY DOOR** **DO NOT OBSTRUCT** **DO NOT KEEP OPEN"** > The above signage must be in capital letters not less than 20mm in height, contrasting with the background. Note: Fire signage in accordance with clause 183 of the Environmental Planning and Assessment Regulation 2000 is also required.	-	CRA
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–	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(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. (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	Not applicable	-	NA
Part D3 Access for people with a disability - Refer to Access report by separate consultant			
Part E1 Fire-fighting equipment			
E1.0: Deemed-to-Satisfy Provisions	Informational	-	Noted

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
E1.3: Fire hydrants	As the building has a floor area greater than 500 m^2, a fire hydrant system complying with AS 2419.1-2005, as varied by Clause E1.3, must be provided to serve the building. Where a booster assembly is remote from a building, BCA Clause E1.3 permits a fire hydrant booster assembly to be located between 3.5 m and 10 m of the building, (in lieu of 10 m clear) where the assembly is protected by an adjacent fire-rated freestanding wall that– > achieves an FRL of not less than 90/90/90; and > extends not less than 1 m each side of the outermost fire hydrant booster risers within the assembly and is not less than 3 m wide; and > extends to a height of not less than 2 m above finished ground level.	Further details of the fire hydrant system, including external fire hydrant location, booster assembly location and shielding, will be required at CC stage.	CRA
E1.4: Fire hose reels	> A fire hose reel system complying with AS 2441-2005 must be provided to the basement level. > A fire hose reel must be located within 4 m of each of the two basement exit doors. > Fire hose reels must be located so that the fire hose will not need to pass through doorways fitted with fire or smoke doors, except— (i) doorways in walls referred to in C2.12 or C2.13 separating equipment or electrical supply systems; and (ii) doorway openings to shafts referred to in C3.13. > Where the normal water supply cannot achieve the flow and pressures required by AS 2441, or is unreliable—	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(i) a pump; or (ii) water storage facility; or (iii) both a pump and water storage facility, must be installed to provide the minimum flow and pressures required by clause 6.1 of AS 2441.		
E1.5: Sprinklers	Not applicable	-	NA
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.	-	CRA
E1.8: Fire control centres	Not applicable	-	NA
E1.9: Fire precautions during construction	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*.	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
E1.10: Provision for special hazards	Not applicable	-	NA
Part E2 Smoke hazard management			
E2.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
E2.1: Application of Part	Informational	-	Noted
E2.2: General requirements	Class 2 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 carpark 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.	-	CRA
E2.3: Provisions for special hazards	Not applicable	-	NA
Part E3 Lift installations			
E3.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
E3.1: Lift installations	The passenger lifts must comply with BCA Specification E3.1	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
E3.2: Stretcher facility in lifts	Not applicable	-	NA
E3.3: Warning against use of lifts in fire	A warning sign stating: "DO NOT USE LIFTS IF THERE IS A FIRE" Or "Do not use lifts If there is a fire" (10 mm letting for capitals and 8mm lettering for lower case type) shall be displayed near every lift call button. The warning sign must consist of – > incised, inlaid or embossed letters on a metal, wood, plastic or similar plate securely and permanently attached to the wall; or > letters incised or inlaid directly into the surface of the material forming the wall.	-	CRA
E3.4: Emergency lifts	Not applicable	-	NA
E3.5: Landings	Access and egress to and from lift-well landings must comply with the Deemed-to-Satisfy Provisions of Section D.	Compliance is readily achievable with Parts D1 & D2. Refer to Access consultant in relation to Part D3.	-
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.	-	CRA
E3.7: Fire service controls	Not applicable	-	NA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
E3.8: Residential care buildings	Not applicable	-	NA
E3.9: Fire service recall switch	Not applicable	-	NA
E3.10: Lift car service drive control switch	Not applicable	-	NA
Part E4 Visibility in an emergency, exit signs and warning systems			
E4.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
E4.2: Emergency lighting requirements	An emergency lighting system must be installed throughout the building in accordance with the requirements of Clause E4.2	-	CRA
E4.3: Measurement of distance	Informational	-	Noted
E4.4: Design and operation of emergency lighting	The emergency lighting system must comply with AS/NZS 2293.1-2018.	-	CRA
E4.5: Exit signs	Exit signage must be installed throughout the building in accordance with the requirements of Clause E4.5.	-	CRA
E4.6: Direction signs	Exit signs must be installed in appropriate positions to indicate the direction to the exits.	-	CRA
E4.7: Class 2 and 3 buildings and Class 4 Parts: Exemptions	E4.5 does not apply to— (a) a Class 2 building in which every door referred to is clearly and legibly labelled on the side remote from the exit —	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(i) with the word "EXIT" in capital letters 25 mm high in a colour contrasting with that of the background; or (ii) by some other suitable method; and (b) an entrance door of a sole-occupancy unit in a Class 2 building.		
E4.8: Design and operation of exit signs	Exit signs must comply with AS/NZS 2293.1-2018, or for a photoluminescent exit sign, BCA Specification E4.8 and be clearly visible at all times the building is legally occupied.	-	CRA
E4.9: Emergency warning and intercom systems	Not applicable	-	NA
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.	**PS**
F1.1: Stormwater drainage	Stormwater drainage works must comply with AS/NZS 3500.3-2018.	-	CRA
F1.4: External above ground membranes	Waterproofing membranes for external above ground use must comply with AS 4654.1-2012 'Materials' and AS 4654.2-2012 'Design and Installation'.	In accordance with clause 2.8.3 of AS 4654.2-2012, ensure sufficient upturn is provided in membranes at doors and windows to external waterproofed areas, or alternatively provide strip drainage for the full extent of the openings.	CRA
F1.5: Roof coverings	Metal sheet roofing must comply with AS 1562.1-2018.	-	CRA
F1.6: Sarking	*Sarking-type materials* used for weatherproofing must comply with AS/NZS 4200 Part 1 and 2-2017.	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
F1.7: Water proofing of wet areas in buildings	Building elements in wet areas must be *water resistant* or *waterproof* in accordance with Table F1.7 of the BCA and comply with AS 3740-2010.	-	CRA
F1.9: Damp-proofing	Moisture is to be prevented from reaching the walls above a damp-proof course. Where a damp-proof course is provided, it must consist of— > a material that complies with AS/NZS 2904; or > impervious sheet material in accordance with AS 3660.1	-	CRA
F1.10: Damp-proofing of floors on the ground	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	-	CRA
F1.11: Provision of floor wastes	A bathroom or laundry located at any level above a sole-occupancy unit or public space must have— > a floor waste; and > the floor graded to the floor waste to permit drainage of water.	-	CRA
F1.12: Sub-floor ventilation	Not applicable	-	NA
F1.13: Glazed Assemblies	Glazed assemblies in external walls must comply with AS 2047-2014 requirements for resistance to water penetration.	-	CRA
Part F2 Sanitary and other facilities			
F2.0: Deemed-to-Satisfy Provisions	Informational	-	Noted

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
F2.1: Facilities in residential buildings	Each sole-occupancy unit must have the following facilities: (i) Within each sole-occupancy unit, provide— (A) a kitchen sink and facilities for the preparation and cooking of food; and (B) a bath or shower; and (C) a closet pan; and (D) a washbasin. (ii) For laundry facilities, provide either— (A) in each sole-occupancy unit— (aa) clothes washing facilities, comprising at least one washtub and a space for a washing machine; and (bb) clothes drying facilities comprising clothes line or a hoist with not less than 7.5 m of line, or space for one heat operated drying cabinet or appliance in the same room as the clothes washing facilities; or (B) a separate laundry for each 4 sole-occupancy units, or part thereof, that must comprise— (aa) clothes washing facilities, comprising at least one washtub and a space for a washing machine; and (bb) clothes drying facilities comprising clothes line or a hoist with not less than 7.5 m of line per sole-occupancy unit, or space for one heat operated drying cabinet or appliance.	-	Complies

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(iii) For the purposes of (a)(i) and (a)(ii), a kitchen sink or washbasin must not be counted as a laundry washtub.		
F2.2: Calculation of number of occupants and facilities	Informational	-	Noted
F2.3: Facilities in Class 3 to 9 buildings	Not applicable	-	NA
F2.4: Accessible sanitary facilities (including Table F2.4)	Not applicable	-	NA
F2.5: Construction of sanitary compartments	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.	-	Complies
F2.6: Interpretation: urinals and washbasins	Not applicable	-	NA
F2.8: Waste Management	Not applicable	-	NA
F2.9: Accessible adult change facilities	Not applicable	-	NA
Part F3 Room heights			

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
F3.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
F3.1: Height of rooms and other spaces	The height of rooms and other spaces must be not less than— > *Habitable rooms* (excluding kitchens) - 2.4 m > Kitchens – 2.1 m > Corridors, passageways, or the like — 2.1 m > A bathroom, sanitary compartment store room or the like — 2.1 m > Carparking area (other than adaptable spaces) – 2.1 m > 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.	-	CRA
Part F4 Light and ventilation			
F4.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
F4.1: Provision of natural light	Natural light must be provided to all habitable rooms.	-	Complies
F4.2: Methods and extent of natural lighting	(a) Natural light must be provided by: (i) Windows, excluding rooflights, that–: (A) have an aggregate light transmitting area of not less than 10% the *floor area* of the room; and	-	Complies

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(B) 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) Roof lights, 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 – (i) 1m; and (ii) 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	Not applicable	-	NA
F4.4: Artificial Lighting	Artificial lighting to all areas is to comply with AS/NZS 1680.0-2009.	-	CRA
F4.5: Ventilation of rooms	All rooms to be provided with Clause F4.6 compliant natural ventilation **OR** a mechanical ventilation system complying with AS 1668.2:2012.	-	CRA
F4.6: Natural ventilation	Natural ventilation provided in accordance with F4.5 must consist of permanent openings, windows, doors or other devices which can be opened—	-	Complies

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(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.		
F4.7: Ventilation borrowed from adjoining room	Not applicable	-	NA
F4.8: Restriction on position of water closets and urinals	Sanitary compartments must not open directly into a kitchen or pantry.	-	Complies
F4.9: Airlocks	If sanitary compartment is prohibited from opening directly to another room– > access must be by an airlock, hallway or other room; or > the sanitary compartments must be provided with mechanical exhaust ventilation. If sanitary compartment is prohibited from opening directly to another room– > access must be by an airlock, hallway or other room with a floor area not less than 1.1m^2 and fitted with self-closing doors at all access doorways; or > the sanitary compartments must be provided with mechanical exhaust ventilation and the doorway to the room adequately screened from view.	Sanitary compartments must be provided with mechanical ventilation in accordance with this clause.	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
F4.11: Carparks	The carpark must have a system of mechanical ventilation complying with AS 1668.2-2012.	-	CRA
F4.12: Kitchen local exhaust ventilation	Not applicable	-	NA
Part F5 Sound transmission and insulation			
F5.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
F5.1: Application of Part	Informational	-	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 BCA Specification F5.2.	-	CRA
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 ($L_{n,w}$) determined in accordance with AS/ISO 717.2 using results from laboratory measurements; or (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	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(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 $L_{n,w}$ (impact) not more than 62, if separating- > sole-occupancy units; or > a *sole-occupancy unit* from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification.	-	CRA
F5.5: Sound insulation rating of walls	(a) A wall in a Class 2 building must: (i) have an Rw + Ctr (airborne) not less than 50 if it separates *sole-occupancy units*; and (ii) have an Rw (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 unit from a habitable room (other than a kitchen) in an adjoining unit; or	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(B) a *sole-occupancy unit* from a plant room or lift shaft. (b) A door may be incorporated in a wall in a Class 2 building that separates a sole-occupancy unit from a stairway, public corridor, public lobby or the like, provided the door assembly has an Rw not less than 30. (c) (not applicable) (d) (not applicable) (e) 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. (f) 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 (i) a ceiling that provides the sound insulation required for the wall.		
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 Rw + Ctr (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.	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(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 or other pump.	-	CRA
Part F6 Condensation Management			
F6.0: Deemed-to-satisfy provisions	Informational	-	Noted
F6.1: Application of Part	The Deemed-to-Satisfy Provisions of this Part only apply to the Class 2 units.	-	Noted
F6.2 Pliable building membrane	> Where a *pliable building membrane* is installed in an external wall, it must— ○ comply with AS/NZS 4200.1; and ○ be installed in accordance with AS 4200.2; and ○ be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building. > Except for single skin masonry and single skin concrete, where a *pliable building membrane* is not installed in an external wall, the primary *water control layer* must be separated from *water sensitive materials* by a drained cavity.	-	CRA
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	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(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		
F6.4: Ventilation of roof spaces	Not applicable	-	NA
Part G1 Minor structures and components			
G1.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
G1.1: Swimming pools	Not applicable	-	NA
G1.2: Refrigerated chambers, strong-rooms and vaults	Not applicable	-	NA
G1.3: Outdoor play spaces	Not applicable	-	NA
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.	-	Complies

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
Part G2 Boilers, pressure vessels, heating appliances, fireplaces, chimneys and flues – not applicable			
Part G3 Atrium construction – not applicable			
Part G4 Construction in alpine areas – not applicable			
Part G5 Construction in bushfire prone areas – not applicable			
Part G6 Occupiable outdoor areas – not applicable			
Section H Special use buildings – Section H is not applicable			
NSW Part J(A)1 Building fabric			
NSW J(A)1.0: Deemed-to-satisfy Provisions	Informational	-	Noted
NSW J(A)1.1: Application of Part	> The deemed-to-satisfy provisions of this Part only apply to thermal insulation in a Class 2 building where a development consent specifies that the insulation is to be provided as part of the development. > The Deemed-to-Satisfy Provisions of this Part for thermal breaks apply to all Class 2 buildings.	-	Noted
NSW J(A)1.2: Compliance with BCA provisions	The sole-occupancy units of a Class 2 building must comply with the national BCA provisions of J0.2(b) to (d) - except that the reference to "Where required" in J1.2 is deemed to refer to "Where a development consent or a complying development certificate specifies that insulation is to be provided as part of the development."	Refer to these clauses below.	Noted
NSW Part J(A)2 Building sealing			
NSW J(A)2.0: Deemed-to-satisfy provisions	Informational	-	Noted

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
NSW (A)2.1: Application of Part	The deemed-to-satisfy provisions of this Part apply to elements forming the *envelope* of a Class 2 building.	-	Noted
NSW J(A)2.2: Compliance with BCA provisions	Class 2 buildings must comply with the following national BCA provisions: > J3.2 Chimneys and flues > J3.3 Roof lights > J3.4 (a) to (d) Windows and doors > J3.5 Exhaust fans > J3.6 Construction of ceilings, walls and floors. > J3.7 Evaporative cloolers	Refer to these clauses below.	Noted
NSW Part J(A)3 Air-conditioning and ventilation systems			
NSW J(A)3.0: Deemed-to-satisfy provisions	Informational	-	Noted
NSW J(A)3.1: Application of Part	The deemed-to-satisfy provisions of this Part apply to a Class 2 building.	-	Noted
NSW J(A)3.2: Compliance with BCA provisions	Class 2 buildings must comply with the following national BCA provisions, as applicable– (a) for air-conditioning system control: J5.2; and (b) for mechanical ventilation system control: J5.3; and (c) for fan systems: J5.4; and (d) for ductwork insulation: J5.5; and (e) for ductwork sealing: J5.6; and (f) for pump systems: J5.7; and (g) for pipework insulation: J5.8; and	Refer to these clauses below.	Noted

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(h) for refrigerant chillers: J5.10; and (i) for unitary air-conditioning equipment: J5.11; and (j) for heat rejection equipment: J5.12.		
NSW Part J(A)4 Heated water supply			
NSW J(A)4.0: Deemed-to-satisfy provisions	Informational	-	Noted
NSW J(A)4.1: Application of Part	Informational	-	Noted
NSW J(A)4.2: Compliance with BCA provisions	Class 2 buildings must comply with the national BCA provisions of J7.2 Heated water supply.	Refer to clause below.	Noted
NSW Part J(A)5 Facilities for energy monitoring			
NSW J(A)5.0: Deemed-to-satisfy provisions	Informational	-	Noted
NSW J(A)5.1: Application of Part	The deemed-to-satisfy provisions of this Part apply to a Class 2 building except within a *sole-occupancy unit*.	-	Noted
NSW J(A)5.3: Compliance with BCA provisions	Class 2 buildings must comply with the national BCA provisions of J8.3.	Refer to clause below.	Noted
NSW Subsection J(B) Energy efficiency – Class 3 and Class 5 to 9 buildings			
NSW J(B)1: Compliance with BCA provisions	The Class 7a part must comply with all of the provisions of the national Section J that are applicable, as varied by NSW J3.1 Application of Part.	Refer to clauses below.	Noted
Part J0 Energy Efficiency			
J0.2: Heating & cooling loads of Sole	J0.2 (b) to (d) require compliance with the following national provisions:	Refer to clauses below.	Noted

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
Occupancy Units to Class 2 & 4 parts	> J1.2 for general thermal construction; and > J0.4 and J0.5 for thermal breaks; and > J1.6(b) and J1.6(c) for floor edge insulation		
J0.4: Roof thermal breaks	A roof that has metal sheet roofing fixed to metal purlins, metal rafters or metal battens and has a ceiling fixed directly to those metal purlins, metal rafters or metal battens, must have a thermal break, consisting of a material with an *R-Value* of not less than R0.2, installed at all points of contact between the metal sheet roofing and its supporting metal purlins, metal rafters or metal battens.	-	CRA
J0.5: Wall thermal breaks	Where a wall lining is fixed directly to the metal wall frame and lightweight external cladding is used, a thermal break consisting of a material with an *R-Value* of not less than R0.2 must be installed at all points of contact between the external cladding and the metal frame.	-	CRA
Part J1 Building Fabric			
J1.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
J1.1: Application of Part	The provisions of Part J1 apply to building elements forming part of the *envelope* of the building.	-	Noted
J1.2: Thermal construction general	(a) Where required, insulation must comply with AS/NZS 4859.1 and be installed so that it— (i) abuts or overlaps adjoining insulation other than at supporting members such as studs, noggings, joists, furring channels and the like where the insulation must be against the member; and	This Clause applies to the Class 2 parts only.	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(ii) forms a continuous barrier with ceilings, walls, bulkheads, floors or the like that inherently contribute to the thermal barrier; and (iii) does not affect the safe or effective operation of a service or fitting. (b) Where required, *reflective insulation* must be installed with— (i) the necessary airspace to achieve the required R-Value between a reflective side of the reflective insulation and a building lining or cladding; and (ii) the *reflective insulation* closely fitted against any penetration, door or window opening; and (iii) the *reflective insulation* adequately supported by framing members; and (iv) each adjoining sheet of roll membrane being— (A) overlapped not less than 50 mm; or (B) taped together. (c) Where required, bulk insulation must be installed so that— (i) it maintains its position and thickness, other than where it is compressed between cladding and supporting members, water pipes, electrical cabling or the like; and (ii) in a ceiling, where there is no bulk insulation or reflective insulation in the wall beneath, it overlaps the wall by not less than 50 mm.		

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(d) Roof, ceiling, wall and floor materials, and associated surfaces are deemed to have the thermal properties listed in Specification J1.2. (e) The required Total R-Value and Total System U-Value, including allowance for thermal bridging, must be— (i) calculated in accordance with AS/NZS 4859.2 for a roof or floor; or (ii) determined in accordance with Specification J1.5a for wall-glazing construction; or (iii) determined in accordance with Specification J1.6 or Section 3.5 of CIBSE Guide A for soil or sub-floor spaces.		
J1.3: Roof and ceiling construction	Not applicable	This clause does not apply to Class 2 buildings in NSW	NA
J1.4: Roof lights	Not applicable	This clause does not apply to Class 2 buildings in NSW	NA
J1.5: Walls	Not applicable	This clause does not apply to Class 2 buildings in NSW	NA
J1.6: Floors	J1.6(b) & J1.6(c) for floor edge insulation apply to the Class 2 *sole-occupancy units:* (b) A floor must be insulated around the vertical edge of its perimeter with insulation having an R-Value greater than or equal to 1.0 when the floor has an in-slab or in-screed heating or cooling system, except where used solely in a bathroom, amenity area or the like. (c) Insulation required by (b) for a concrete slab-on-ground must— (i) be water resistant; and	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	(ii) be continuous from the adjacent finished ground level— (A) to a depth not less than 300 mm; or (B) for the full depth of the vertical edge of the concrete slab-on-ground		
Part J2 Glazing Part J2 has deliberately been left blank from the BCA2019			
Part J3 – Building sealing			
J3.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
J3.1: Application of Part	The requirements of this Part apply to elements forming the *envelope* of the building other than: > a permanent building opening necessary for the safe operation of a gas appliance; and > parts of building that cannot be fully enclosed.	-	Noted
J3.2: Chimneys and flues	Not applicable	-	NA
J3.3: Roof lights	Not applicable	-	NA
J3.4: Windows and doors	(a) A door, openable window or the like must be sealed. (b) The above does not apply to a window complying with AS 2047 or a fire or smoke door. (c) A seal to restrict air infiltration— (i) for the bottom edge of a door, must be a draft protection device; and (ii) for the other edges of a door or the edges of an openable window or other such opening, may be a	-	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
	foam or rubber compression strip, fibrous seal or the like. (d) An entrance to a building, if leading to a *conditioned space* must have a self-closing door.		
J3.5: Exhaust fans	Any exhaust fan serving a *conditioned space* or *habitable room* must be fitted with a sealing device, such as a self-closing damper of the like.		CRA
J3.6: Construction of ceilings, walls and floors	Ceilings, walls, floors and any openings, such as a window frame, doors frame or the like, are to be constructed to minimise air leakage by being enclosed by internal lining systems that are close fitting at junctions.		CRA
J3.7: Evaporative Coolers	Not applicable	-	NA
Part J4 – Part J4 has deliberately been left blank in BCA 2019.			
Part J5 – Air-conditioning and ventilation systems			
J5.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
J5.1: Application of Part	Informational	-	Noted
J5.2: Air-conditioning system control	Air-conditioning system control must comply with clause J5.2 of BCA 2019.	Design certification to be provided by air-conditioning systems supplier/installer.	CRA
J5.3: Mechanical ventilation system control	A mechanical ventilation system control must comply with clause J5.3 of BCA 2019.	Design certification to be provided by air-conditioning systems supplier/installer.	CRA
J5.4: Fan systems	Fan systems must comply with Clause J5.4 of BCA 2019.	Design certification to be provided by air-conditioning systems supplier/installer.	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
J5.5: Ductwork Insulation	Ductwork insulation must comply with Clause J5.5 of BCA 2019.	Design certification to be provided by air-conditioning systems supplier/installer.	CRA
J5.6: Ductwork Sealing	Ductwork must be sealed in accordance with Clause J5.4 of BCA 2019, where applicable.	Design certification to be provided by air-conditioning systems supplier/installer.	CRA
J5.7: Pump Systems	Pump systems must comply with Clause J5.7 of BCA 2019, where applicable.	Design certification to be provided by air-conditioning systems supplier/installer.	CRA
J5.8: Pipework Insulation	Pipework insulation must comply with Clause J5.7 of BCA 2019, where applicable.	Design certification to be provided by air-conditioning systems supplier/installer.	CRA
J5.9: Space Heating	Not applicable	Compliance is not required with the national BCA provisions of J5.9 as those matters are regulated under BASIX.	NA
J5.10: Refrigerant Chillers	Refrigerant chillers used as part of an air-conditioning system must comply with Clause J5.10 of BCA 2019.	Design certification to be provided by air-conditioning systems supplier/installer.	CRA
J5.11: Unitary Air-Conditioning Equipment	Unitary air-conditioning equipment must comply with Clause J5.11 of BCA 2019.	Design certification to be provided by air-conditioning systems supplier/installer.	CRA
J5.12: Heat Rejection Equipment	Heat rejection equipment must comply with Clause J5.12 of BCA 2019.	Design certification to be provided by air-conditioning systems supplier/installer.	CRA
Part J6 Artificial lighting and power			
J6.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
J6.1: Application of Part	Not applicable	-	NA
J6.2: Artificial lighting	Artificial lighting for the Class 7a part must comply with BCA Clause J6.2 (b).	Design certification to be provided by the electrical designer.	CRA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
J6.3: Interior artificial lighting and power control	Lighting switches and control devices for the Class 7a part must comply with BCA Clause J6.3.	Design certification to be provided by the electrical designer.	CRA
J6.4: Interior decorative and display lighting	Not applicable	-	NA
J6.5: Exterior artificial lighting	Exterior lighting attached to or directed at the façade of the building (Class 7a part only) must be controlled by daylight sensors or time switches in accordance with the specific requirements of this clause.	Design certification to be provided by the electrical designer.	CRA
J6.6: Boiling water and chilled water storage units	Not applicable	-	NA
J6.7: Lifts	Not applicable	-	NA
J6.8: Escalators and moving walkways	Not applicable	-	NA
Part J7 Heated water supply and swimming pool and spa pool plant			
J7.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
J7.2: Heated water supply system	A heated water supply system for food preparation and sanitary purposes must be designed and installed in accordance with Part B2 of NCC Volume Three — Plumbing Code of Australia.	-	CRA
J7.3: Swimming pool heating and pumping	Not applicable	-	NA

BCA Clause	Relevant Deemed-To-Satisfy Requirements	Comment	Status
J7.4: Spa pool heating and pumping	Not applicable	-	NA
Part J8 Facilities for energy monitoring			
J8.0: Deemed-to-Satisfy Provisions	Informational	-	Noted
J8.1: Application of Part	The *deemed-to-satisfy provisions* of this Part do not apply within the Class 2 *sole-occupancy units*.	-	Noted
J8.3: Facilities for energy monitoring	The building must have an energy meter configured to record the time-of-use consumption of gas and electricity.	-	CRA

4 BCA Assessment Summary

As identified by the clause-by-clause assessment in Part 4 of this report, the following BCA compliance matters will require further design input and/or require amendment to the architectural design. The relevant BCA clause(s) to which each matter is related is shown in brackets.

4.1 Non-combustible building elements (Clause C1.9)

Clause C1.9 requires external wall cladding to be non-combustible and weatherboard cladding is currently nominated as a finish on the plans. It is recommended that the design be amended to provide non-combustible cladding.

4.2 Weatherproofing of external walls (BCA FP1.4)

In accordance with Performance Requirement FP1.4, the construction of the external walls (including openings around windows and doors) must prevent the penetration of water that could cause unhealthy or dangerous conditions or loss of amenity to occupants and undue dampness or deterioration of building elements.

As there are no Deemed-to-Satisfy Provisions for this *Performance Requirement* in respect of external walls, compliance with FP1.4 must be demonstrated via a *performance solution.* The assessment contained within this report does not include an assessment against Performance Provision FP1.4.

4.3 BCA Specifications

In addition to the matters identified above, the BCA provisions listed in Part 3 of this report as 'Compliance Readily Achievable' (CRA), will need to be certified by the relevant party or included in the project specifications.

Annexure A – 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 Fire-resistance Levels

Item	Class 2	Class 7a
Loadbearing parts of External Walls (including columns and other building elements incorporated therein)		
> Less than 1.5m to a fire- source feature	90/90/90	120/120/120
> 1.5 – less than 3m from a fire-source feature	90/60/60	120/90/90
> 3m or more from a fire source feature	90/60/30	120/60/30
Non-Loadbearing parts of External Walls		
> Less than 1.5m to a fire-source feature	-/90/90	-/120/120
> 1.5 – less than 3m from a fire-source feature	-/60/60	-/90/90
> 3m or more from a fire-source feature	-/-/-	-/-/-
External Column not incorporated in an external wall		
> Loadbearing	90/-/-	120/-/-
> Non-loadbearing	-/-/-	-/-/-
Fire walls	90/90/90	120/120/120
Lift shafts required to be fire-resisting		
> Loadbearing	90/90/90	120/120/120
> Non-loadbearing	-/90/90	-/120/120
Internal walls bounding public corridors, public lobbies and the like:		
> Loadbearing	90/90/90	120/-/-
> Non-loadbearing	-/60/60	-/-/-
Internal walls between or bounding sole-occupancy units		
> Loadbearing	90/90/90	120/-/-
> Non-loadbearing	-/60/60	-/-/-
Ventilating, pipe, garbage and like shafts		
> Loadbearing	90/90/90	120/90/90
> Non-loadbearing	-/90/90	-/90/90
Other loadbearing internal walls, beams trusses and columns	90/-/-	120/-/-
Floors	90/90/90	120/120/120

Item	Class 2	Class 7a
Roofs[1]	90/60/30	120/60/30

Notes regarding fire-resistance:

1. The roof of the Class 2 parts need not achieve an FRL, as per Clause 3.5 of Spec. C1.1.
2. A floor laid directly on the ground need not achieve an FRL, as per Clause 3.2 of Spec. C1.1.
3. The floors separating different classifications must have the FRL prescribed for the classification of the lower storey, as per Clause C2.9.
4. Fire wall separation to be provided between Class 2 lobbies and the Class 7a carpark at basement level, as per Clause C2.8.
5. In the storey immediately below the roof, internal columns and internal walls (other than shaft walls) may have an FRL of 60/60/60 due to the concession provided under clause 3.7 of Spec. C1.1.

Annexure B – Proposed Fire Safety Schedule

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.

Item	Fire Safety Measure	Standard of Performance
1.	Emergency lighting	BCA2019 Amdt 1 Clauses E4.2, E4.4 & AS/NZS 2293.1-2018
2.	Exit signs	BCA2019 Amdt 1 Clauses E4.5, E4.6, E4.8 & AS/NZS 2293.1-2018
3.	Fire doors	BCA2019 Amdt 1 Clause C3.11 & AS 1905.1-2015 BCA2019 Amdt 1 C3.10 (Opening in Fire Isolated Lift Shafts) & AS 1735.11-1986
4.	Fire hydrant system	BCA2019 Amdt 1 Clause E1.3 & AS 2419.1-2005
5.	Fire hose reel system (to basement level carpark)	BCA2019 Amdt 1 Clause E1.4 & AS 2441-2005
6.	Fire seals protecting openings in fire-resisting components of the building	BCA2019 Amdt 1 Clause C3.15 (Openings for service installations) BCA2019 Amdt 1 C3.16 (Construction joints) BCA2019 Amdt 1 Spec. C3.15 AS1530.4:2014 & AS4072.1-2005
7.	Portable fire extinguishers	BCA2019 Amdt 1 Clause E1.6 & AS 2444-2001
8.	Smoke alarm system	Clause 3 of BCA2019 Amdt 1 Spec. E2.2a & AS 3786-2014
9.	Carpark ventilation override control	AS 1668.1:2015 (Amdt 1) Clause 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 must be located at the car park entry indicating the location of the control switches.
10.	Warning and operational signs	BCA2019 Amdt 1 D2.23 (Signs on Fire Doors) BCA2019 Amdt 1 D3.6 (Braille Exit Signs)

Item	Fire Safety Measure	Standard of Performance
		BCA2019 Amdt 1 E3.3 (Lift Signs) Clause 5.5.3 of AS 1668.1:2015 (Amdt 1) (Signage at carpark entry for ventilation control switches)

Annexure C – Design Documentation

This report has been prepared based on the following design documentation.

Architectural plans prepared by Popov Bass			
Drawing no.	**Revision**	**Date**	**Title**
DA100	E	14/12/22	TITLE PAGE
DA103	B	14/12/22	SITE PLAN
DA104	E	14/12/22	BASEMENT PLAN
DA105	E	14/12/22	GROUND FLOOR PLAN
DA106	E	14/12/22	LEVEL 01 PLAN
DA107	E	14/12/22	ROOF PLAN
DA108	E	14/12/22	POST ADAPTION PLANS
DA109	E	14/12/22	WEST & EAST ELEVATIONS
DA110	E	14/12/22	NORTH & SOUTH ELEVATIONS
DA111	E	14/12/22	SECTIONS AA & BB
DA112	E	14/12/22	SECTIONS CC & DD
DA120	E	14/12/22	EXTERIOR PALETTE & 3D PERSPECTIVES

Annexure D – Definitions

Terms in italics used throughout this report have the BCA definitions, as listed below.

Air-conditioning means a service that actively cools or heats the air within a space, but does not include a service that directly:

(a) cools or heats cold or hot rooms; or

(b) maintains specialised conditions for equipment or processes, where this is the main purpose of the service.

Ancillary element means an element that is secondary to and not an integral part of another element to which it is attached.

Automatic means designed to operate when activated by a heat, smoke or fire sensing device.

Climate zone means an area defined in Figure 2 and in Table 2 for specific locations, having energy efficiency provisions based on a range of similar climatic characteristics.

Combustible means—

(a) applied to a material — combustible as determined by AS 1530.1; and

(b) applied to construction or part of a building — constructed wholly or in part of combustible materials.

Conditioned space means a space within a building, including a ceiling or under-floor supply air plenum or return air plenum, where the environment is likely, by the intended use of the space, to have its temperature controlled by *air-conditioning.*

Deemed-to-Satisfy Provisions means provisions which are deemed to satisfy the Performance Requirements.

Deemed-to-Satisfy Solution means a method of satisfying the Deemed-to-Satisfy Provisions.

Effective height means the vertical distance between the floor of the lowest storey included in the calculation 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, 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—

(c) the floor of a rooftop plant room, lift-machine room or the like; and

(d) the floor above a carpark or warehouse; and

(e) the common wall with a carpark, warehouse or the like

Exit means –

(a) Any, or any combination of the following if they provide egress to a road or open space—

  (i) An internal or external stairway.

  (ii) A ramp.

(iii) A fire-isolated passageway.

(iv) A doorway opening to a road or open space.

(b) A horizontal exit or a fire-isolated passageway leading to a horizontal exit.

External wall means an outer wall of a building which is not a *common wall*.

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 hazard properties means the following properties of a material or assembly that indicate how they behave under specific fire test conditions:

(a) *Average specific extinction area, critical radiant flux and Flammability Index*, determined as defined in Schedule 3 of the BCA.

(b) *Smoke-Developed Index, smoke development rate and Spread-of-Flame Index*, determined in accordance with Schedule 6 of the BCA.

(c) *Group number* and *smoke growth rate index* (SMOGRARC), determined in accordance with Specification C1.10 of BCA Volume One.

Fire-resistance level (FRL) means the grading periods in minutes determined in accordance with Schedule 5 of the BCA, 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-resisting, applied to a building element, means having an FRL appropriate for that element.

Fire-source feature means–

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

Flight means that part of a stair that has a continuous series of risers, including risers of winders, not interrupted by a landing or floor.

Flood hazard area means the site (whether or not mapped) encompassing land lower than the flood hazard level which has been determined by the appropriate authority.

Going means the horizontal dimension from the front to the back of a tread less any overhang from the next tread or landing above (see Figure 3.9.1.4).

Habitable room means a room used for normal domestic activities, and—

(a) includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom; but

(b) excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes-drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.

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

Insulation in relation to an FRL, means the ability to maintain a temperature on the surface not exposed to the furnace below the limits specified in AS 1530.4.

Integrity in relation to an FRL, means the ability to resist the passage of flames and hot gases specified in AS 1530.4.

Loadbearing means intended to resist vertical forces additional to those due to its own weight.

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 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.

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

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

Pliable building membrane means a water barrier as classified by AS/NZS 4200.1.

Primary building element, for the purposes of Volume One, means a member of a building designed specifically to take part of the loads specified in B1.2 and includes roof, ceiling, floor, stairway or ramp and wall framing members including bracing members designed for the specific purpose of acting as a brace to those members.

Resistance to the incipient spread of fire, in relation to a ceiling membrane, means the ability of the membrane to insulate the space between the ceiling and roof, or ceiling and floor above, so as to limit the temperature rise of materials in this space to a level which will not permit the rapid and general spread of fire throughout the space.

Required means required to satisfy a Performance Requirement or a Deemed-to-Satisfy Provision of the NCC as appropriate.

R-Value (m^2.K/W) means the thermal resistance of a component calculated by dividing its thickness by its thermal conductivity.

Rise in storeys means the greatest number of storeys calculated in accordance with C1.2 of Volume One.

Riser means the height between consecutive treads and between each landing and continuous tread.

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.

Structural adequacy in relation to an FRL, means the ability to maintain stability and adequate loadbearing capacity as determined by AS 1530.4.

Storey means a space within a building which is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but not—

(a) a space that contains only—

(b) a lift shaft, stairway or meter room; or

(c) a bathroom, shower room, laundry, water closet, or other sanitary compartment; or

(d) accommodation intended for not more than 3 vehicles; or

(e) a combination of the above; or

(f) a mezzanine.

Structural adequacy in relation to an FRL, means the ability to maintain stability and adequate loadbearing capacity as determined by AS 1530.4.

Total R-Value (m^2.K/W), for the purposes of Volume One, means the sum of the R-Values of the individual component layers in a composite element including any building material, insulating material, airspace, thermal bridging and associated surface resistances.

Total System U-Value (W/m^2.K), for the purposes of Volume One, means the thermal transmittance of the composite element allowing for the effect of any airspaces, thermal bridging and associated surface resistances.

Water resistant means the property of a system or material that restricts moisture movement and will not degrade under conditions of moisture.

Waterproof means the property of a material that does not allow moisture to penetrate through it.

Water control layer means a *pliable building membrane* or the exterior cladding when no *pliable building membrane* is present.

Water sensitive materials means materials that have an inherent capacity to absorb water vapour and include timber, plasterboard, plywood, oriented strand board and the like.