

BUILDING CODE OF AUSTRALIA COMPLIANCE ASSESSMENT REPORT

C2 – IVANHOE VILLAGE & COMMUNITY CENTRE

IVANHOE ESTATE – LOT C2, EPPING ROAD, MACQUARIE PARK

DATE ► 05/08/2021

REPORT NO. ► 11067.2

PREPARED FOR ► Frasers

PREPARED BY ► AE&D



AEDGROUP

Innovation & expertise in building regulations

CONTENTS

1.0	EXECUTIVE SUMMARY AND RECOMMENDATIONS	3
1.1	RECOMMENDATIONS	3
2.0	INTRODUCTION	5
2.1	BASIS OF REPORT	5
2.2	PURPOSE OF THE REPORT.....	5
2.3	LIMITATIONS OF THE REPORT.....	5
3.0	BCA ASSESSMENT DATA	7
3.1	BUILDING CLASSIFICATION BREAKDOWN	7
3.2	SUMMARY OF FIRE SERVICES REQUIRED.....	9
4.0	BCA ASSESSMENT SUMMARY	11
5.0	CONCLUSION	70
6.0	ATTACHMENT A - INSPECTION & MAINTENANCE	71
6.1	FIRE SAFETY MEASURES.....	71
6.2	GOOD HOUSEKEEPING	71
7.0	ATTACHMENT B – REQUIREMENTS TYPE A CONSTRUCTION	72

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1.0 EXECUTIVE SUMMARY AND RECOMMENDATIONS

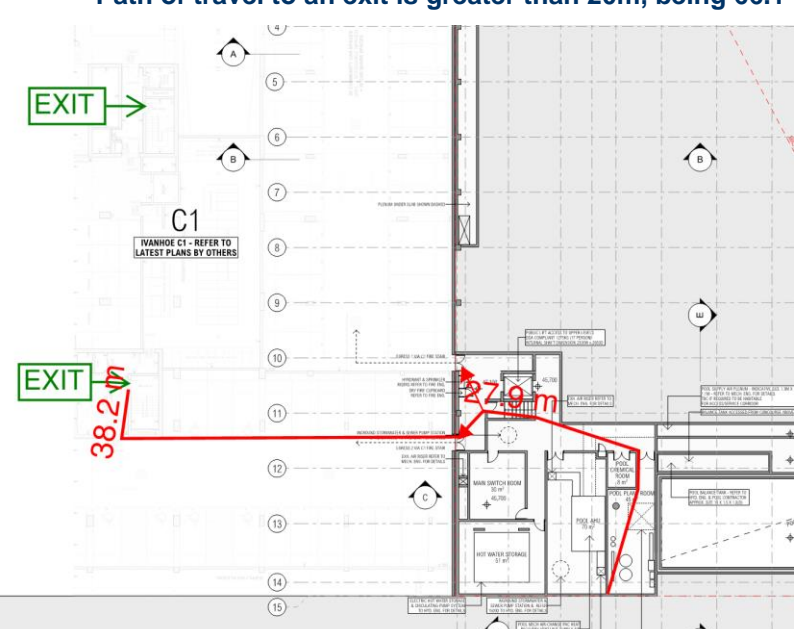
This report provides a Building Code of Australia (BCA) 2019 Amendment 1 assessment of the proposed Village Green, Community Centre, Swimming Pool and Gym, to be located at C2, Epping Road, Macquarie Park

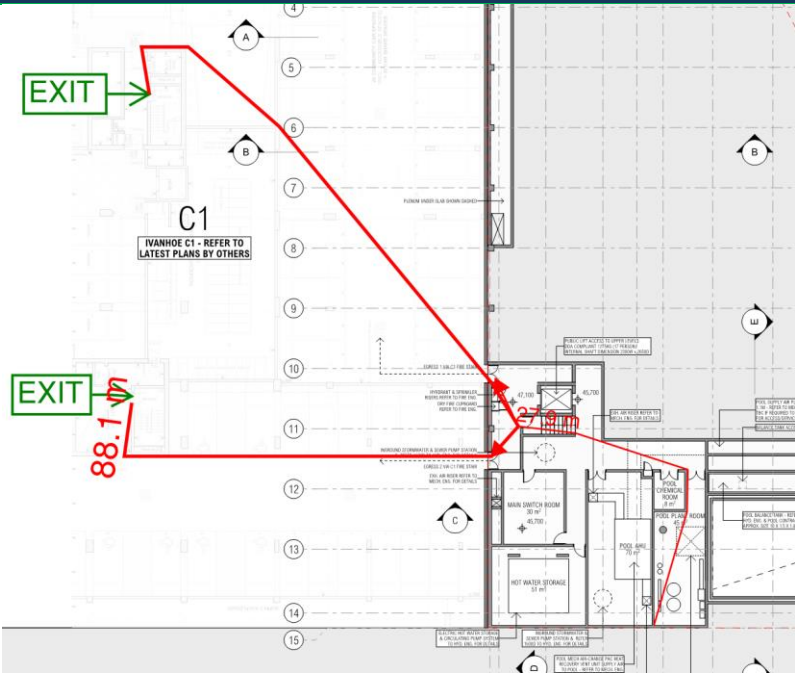
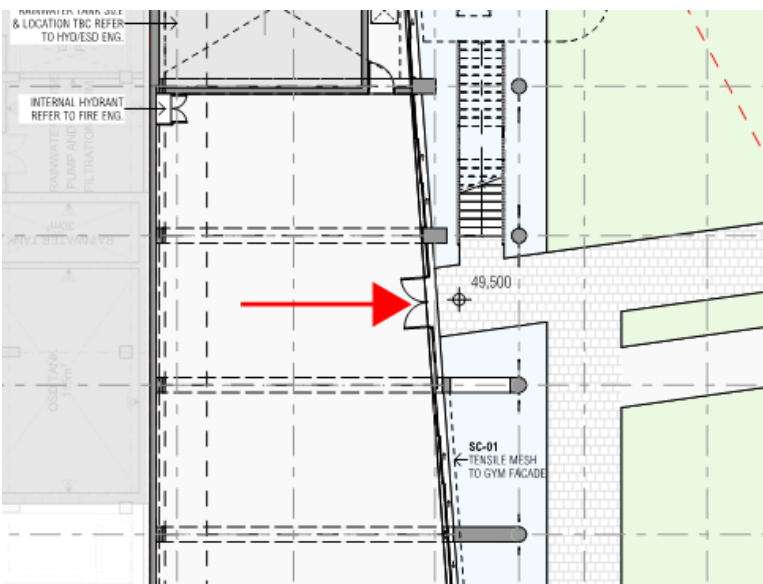
The primary purpose of this report is to identify the non-compliance matters contained in the proposed design against the current Deemed-to-Satisfy (DTS) Provisions of the BCA and to provide compliance recommendations to overcome the DTS non-compliances.

The building is capable of complying with the BCA so long as the non-compliances identified in Part 1.1 of this report are addressed by a Fire Engineered Performance Solution.

1.1 Recommendations

The following is a list of Deemed-to-Satisfy Provisions that should be addressed either by design amendments, additional information **OR** by way of an Alternative Solution:

BCA Clause	Deemed-to-Satisfy Provision to be addressed
<p>D1.4 Exit Travel Distances</p>	<p>Basement level</p> <ul style="list-style-type: none"> - Path of travel to a point of choice is greater than 20m, being 27.9m. - Path of travel to an exit is greater than 20m, being 66.1 
<p>D1.5 Distance Between Alternative Exits</p>	<p>The distance between alternative exits from the plant are is more than 60m, being 88.1m.</p> <p><i>It is recommended this is addressed by a Fire Engineered Performance Solution.</i></p>

BCA Clause	Deemed-to-Satisfy Provision to be addressed
	
D2.20 Swinging Doors	<p>Lower Ground – Gym doorway is required to swing in the direction of egress.</p> 
E1.4 Fire Hose Reels	<p>Architectural plans are required to detail the location of the required fire hose reels.</p>

2.0 INTRODUCTION

This report provides a Building Code of Australia (BCA) 2019 Amendment 1 assessment of the proposed Village Green, Community Centre, Swimming Pool and Gym, to be located at C2, Epping Road, Macquarie Park.

This report provides a BCA assessment table in Section 3.0 that summarises the identified non-compliance matters and offers specific recommendations.

2.1 Basis of Report

The key basis of this report is to address compliance with the Building Code of Australia (BCA) BCA 2019 Amendment 1. The scope of services is limited to Sections C – “Fire Resistance”, Section D – “Access & Egress”, Section E – “Services & Equipment”, Section F “Health and Amenity” and Section J “Energy Efficiency”

This report is based on a desktop assessment of the proposed plans, with specific reference to the following:

- Architectural plans prepared by CHROFI, Drawing Numbers:

Drawing Title	Drawing No.	Revision	Dated
Site Plan	A-A-002	03	10/07/2021
Basement Plan	A-A-101	07	10/07/2021
Lower Ground Plan	A-A-102	07	10/07/2021
Upper Ground Plan	A-A-103	07	10/07/2021
Roof	A-A-104	07	10/07/2021
Elevations	A-A-201	07	10/07/2021
Elevations 2	A-A-202	05	10/07/21
Section A & B	A-A-301	07	10/07/2021
Section C & D	A-A-302	07	10/07/2021
Section E	A-A-303	05	10/07/2021

- The Building Code of Australia 2019 Amendment 1 prepared by the Australian Building Codes Board.
- The Guide to the BCA 2019 Amendment 1, prepared by the Australian Building Codes Board.

2.2 Purpose of the Report

The purpose of this report is to assess the following:

- Assessment under the current Building Code of Australia 2019 Amendment 1 and list any departures from the BCA 2019 Amendment 1
- Provide recommendations to address identified non-compliances, and/or identify potential alternative solutions.

2.3 Limitations of the Report

This report does not assess the following:

- Access and facilities for people with disabilities is addressed however compliance with Disability Discrimination Act 1992 (DDA) is outside the scope of this report. It should be noted that BCA compliance does not necessarily meet the requirements of the Disability Discrimination Act (DDA).
- Reporting on hazardous materials, OH&S matters or site contamination

- Assessment of any structural elements or geotechnical matters relating to the building, including any structural or other assessment of the existing fire resistant levels of the building
- Consideration of any fire services operations (including hydraulic, electrical or other systems)
- Assessment of plumbing and drainage installations, including stormwater
- Assessment of mechanical plant operations, electrical systems or security systems
- Heritage significance
- Consideration of energy or water authority requirements
- Consideration of Council's local planning policies
- Environmental or planning issues
- Requirements of statutory authorities
- Pest inspection or assessment building damage caused by pests (general/visual pest invasion or damage will be reported, however invasive or intrusive inspections have not be carried out)
- Sections G, H, I & J of the BCA are not considered.
- Provision of any construction approvals or certification under Part 4A or Part 5 of the Environmental Planning & Assessment Act 1979.
- Glazing, shading, lighting calculations and the like required by Section J of the BCA not been carried out
- This assessment excludes BCA clauses D3.0-3.12 (Inclusive), E3.6 and F2.4. Refer to separate access consultant's report.
- BCA 2019 Amendment 1 does not directly specify slip-resistance classification(s) for all *accessible paths of travel*; however, we highlight the need under AS 1428.1-2009 for all *accessible paths of travel* to have a slip-resistant surface. We recommend you should seek surface finish advice from an independent specialist slip safety consultant.

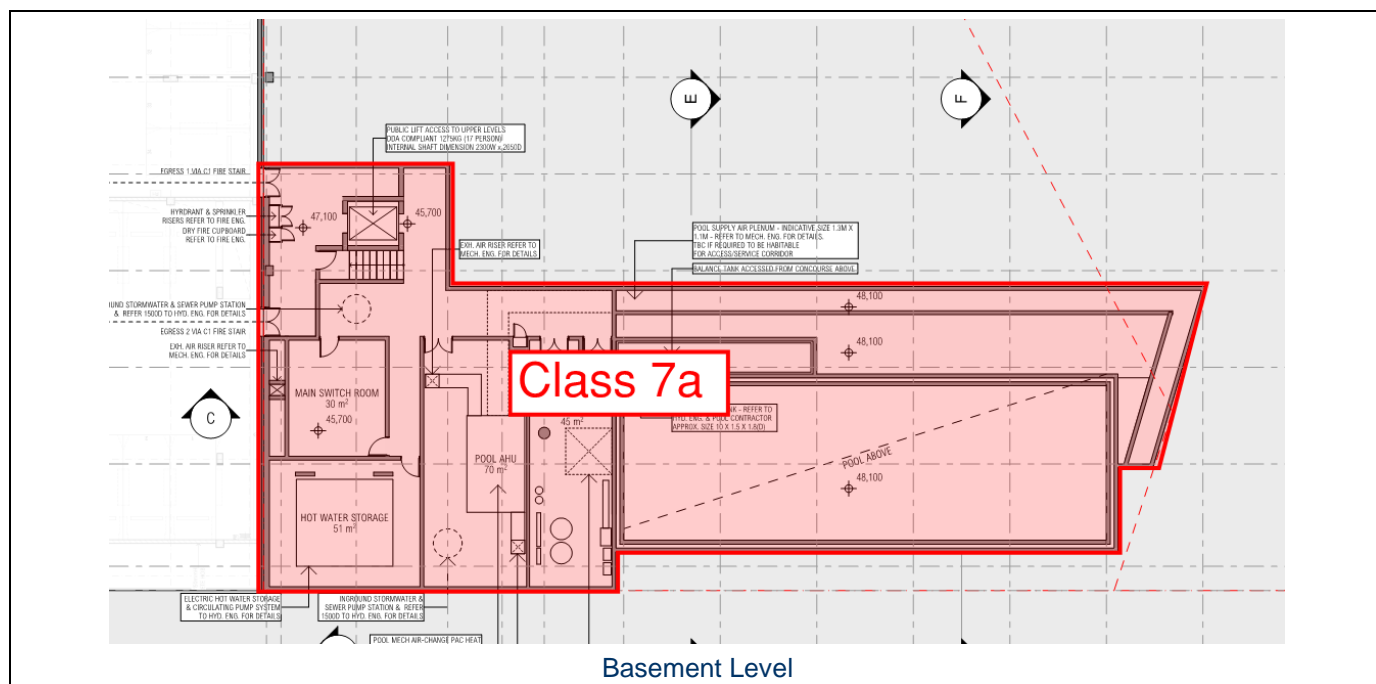
3.0 BCA ASSESSMENT DATA

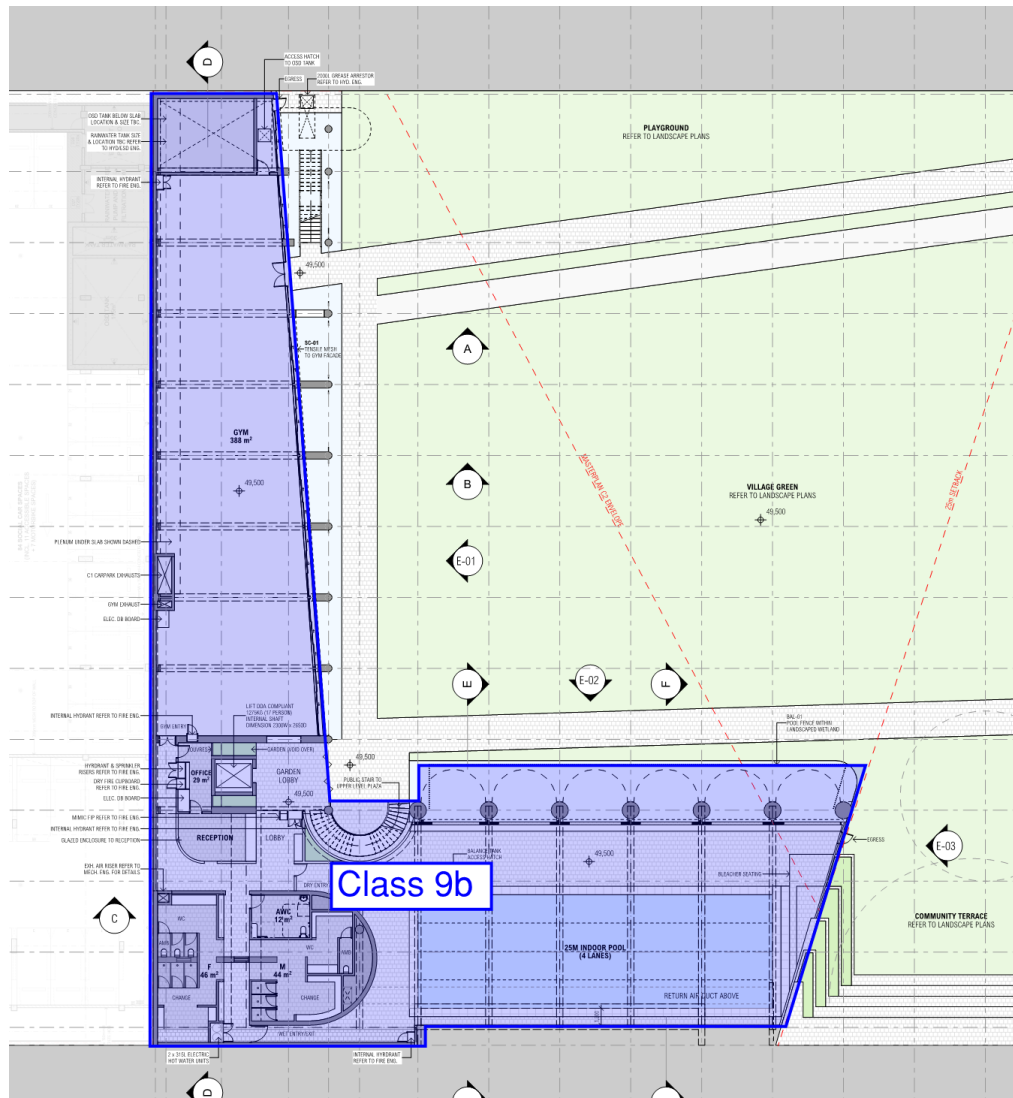
The following data is provided in respect to review of the building under the Building Code of Australia 2019 Amendment 1 in respect to the compliance assessment of the proposed Village Green, Community Centre, Swimming Pool and Gym, to be located at C2, Epping Road, Macquarie Park.

BCA Building Classifications:	<u>Basement Level:</u> Class 7a (carpark plant)
	<u>Lower Ground Level:</u> Class 9b (assembly)
	<u>Upper Ground Level:</u> Class 9b (assembly); and Class 6 (café)
Building rise in storeys:	21* (determined in accordance with C1.2 of the BCA).
Type of Construction:	A * (determined in accordance with C1.1 of the BCA)
General Floor area limitations:	<5,000m ² & <308,000m ³
Effective Height (m):	0 (single storey)
Climate Zone (Thermal Design)	Zone 5 (determined in accordance with ABCB Climate map, Date: Sep 2019 Version: VC00031.3)

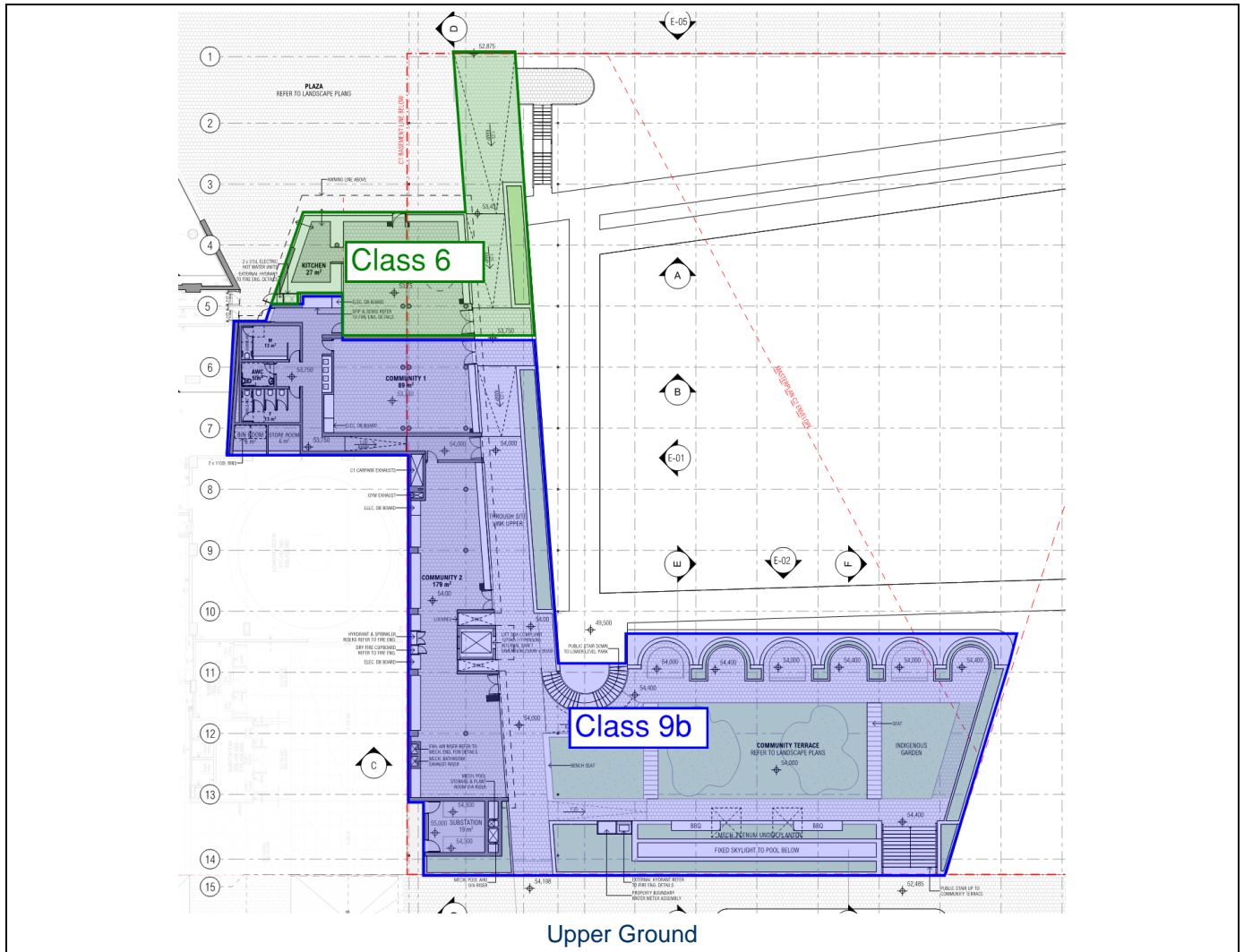
* based on C2 being connected to C1

3.1 Building Classification breakdown





Lower Ground



3.2 Summary of Fire Services Required

Summarised below are the BCA deemed to satisfy fire services required for the building which has an effective height of more than 50m:

- Fire hydrants are required to serve all areas and be provided in accordance with BCA E1.3 and AS 2419.1-2005 as applicable to a building exceeding 50m in effective height.
- A fire hose reel system complying with BCA E1.4 and AS 2441-2005 must be provided to serve all areas other than class 3 SOUs. Note: FHR's no longer required to serve a Class 3 building, however additional fire extinguishers are required in all class 3 parts.
- A sprinkler system throughout all parts of the building complying with E1.5 and AS 2118.1-2017 and the Fire Engineering Report
- Portable fire extinguishers must be provided in accordance with BCA E1.6 & Table E1.6 and must be selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444-2001.
- Automatic smoke and fire detection to be provided throughout the building in accordance with Part E2 and BCA Specification E2.2a. and AS 1670.1-2018
- A zone smoke control system must be provided to the Class 5 and 6 building parts in accordance with Part E2 and BCA Specification E2.2a. and AS 1670.1-2018, unless omitted through fire engineering.
- A emergency warning and intercom system complying with BCA E4.2 and AS 1670.4-2018 must be installed throughout the whole building



- An emergency lighting system must be installed throughout the building in accordance with BCA E4.2 of the BCA and AS 2293.1-2018.
- Exit signs must be installed throughout the building in accordance with BCA E4.5 and AS 2293.1-2018.
- Signage to be provided exits in accordance with D2.23 and Clause 183 of *Environmental Planning & Assessment Regulation 2000*.



4.0 BCA ASSESSMENT SUMMARY

The following table details the BCA compliance of the assessed design.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
SPECIFICATION A1.1 FIRE PROTECTED TIMBER					
Specification A1.1 has been introduced to allow fire-protective timber construction utilising a non-combustible fire protective covering for buildings not exceeding 25m which are sprinkler protected.					
2.1 General requirements			X		Not applicable. No fire protected timber proposed.
2.2 Massive Timber			X		Not applicable. No fire protected timber proposed.
SECTION B STRUCTURE					
Part B1: Structural Provisions				X	<ul style="list-style-type: none"> ❖ Structural engineer to provide structural drawings/details and accompanying structural design certificate to demonstrate that all building elements will comply with Section B of the BCA. ❖ Glazing must comply with AS 1288-2006 and AS 2047-2014. ❖ Termite control must comply with AS 3660.1-2000 where any primary building elements are timber. ❖ If the building is in a flood hazard area it is required to comply with BCA clause B1.6. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)</i></p>
SECTION C FIRE RESISTANCE					
Part C1 - Fire Resistance & Stability					
C1.1 Type of Construction Required				X	<p>Refer to Spec C1.1 and Attachment B for Schedule of FRLs for Type A Construction. These are to be certified by the architect and structural engineer as having been met, based on the proposed design.</p> <p>Please note that specification C1.1 also requires design compliance with the following:</p> <ol style="list-style-type: none"> 1. Fire isolated shafts are required to be enclosed at the top and bottom of the shaft with fire rated construction as per specification C1.1. This fire rating is required in two directions. 2. Internal lightweight walls to be fire rated, as well as non-load bearing lift, ventilating, pipe, garbage or similar shaft wall must be of non-combustible construction. 3. The walls to fire rated shafts must achieve the fire rating from both directions i.e. from inside and outside the shaft. 4. Roof: The roof of the building does not need an FRL, provided the roof covering is non-combustible (as per the concession in Clause 3.5 of Specification C1.1 of the BCA).

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	Informational NA or	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)
C1.2 Calculation of Rise In Storeys			X		Refer to Section 2.0 of this report for further details
C1.3 Buildings of Multiple Classifications			X		Informational. In a building of multiple classifications, the type of construction required for the building is the most fire resisting Type resulting from the application of Table C1.1 on the basis that the classification applying to the top storey applies to all storeys.
C1.4 Mixed Types of Construction			X		Not applicable. Type A Construction only.
C1.5 Two Storey Class 2, 3 or 9c buildings			X		Not applicable. Not a 2 storey Class 2, 3 or 9c building.
C1.6 Class 4 Parts			X		Not applicable. No Class 4 parts.
C1.7 Open Spectator Stands			X		Not applicable. No open spectator stands proposed.
C1.8 Lightweight Construction			X		<p>(a) Where it is proposed to use <i>lightweight construction</i> (within the meaning of the BCA) this must comply with Specification C1.8 if it is used in a wall system—</p> <p>(i) that is required to have an FRL; or</p> <p>(ii) for a lift shaft, stair shaft or service shaft or an external wall bounding a public corridor including a non fire-isolated passageway or non fire-isolated ramp.</p> <p>(b) If lightweight construction is used for the fire-resisting covering of a steel column or the like, and if —</p> <p>(i) the covering is not in continuous contact with the column, then the void must be filled solid, to a height of not less than 1.2 m above the floor to prevent indenting; and</p> <p>(ii) the column is liable to be damaged from the movement of vehicles, materials or equipment, then the covering must be protected by steel or other suitable material.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C1.9 Non - combustible building elements			X		<p>(a) In a building <i>required</i> to be of Type A construction, the following building elements and their components must be <i>non-combustible</i>:</p> <p>(i) External walls and <i>common walls</i>, including all components incorporated in them including the facade covering, framing and insulation.</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none">(ii) The flooring and floor framing of lift pits.(iii) Non-loadbearing <i>internal walls</i> where they are <i>required</i> to be <i>fire-resisting</i>.(b) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in—<ul style="list-style-type: none">(i) a building <i>required</i> to be of Type A construction; and(c) A <i>loadbearing internal wall</i> and a <i>loadbearing fire wall</i>, including those that are part of a <i>loadbearing shaft</i>, must comply with Specification C1.1.(d) The requirements of (a) and (b) do not apply to gaskets, caulking, sealants, termite management systems, glass including laminated glass, thermal breaks associated with glazing systems, damp-proof courses.(e) The following materials may be used wherever a <i>non-combustible</i> material is <i>required</i>:<ul style="list-style-type: none">(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 <i>combustible</i> surface finish not exceeding 1 mm thickness and where the <i>Spread-of-Flame Index</i> of the product is not greater than 0.(vi) Sarking type materials that do not exceed 1mm in thickness and have a Flammability Index not greater than 5.(vii) Bonded laminated materials where—<ul style="list-style-type: none">(A) each lamina, including any core, is <i>non-combustible</i>; and(B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2mm; and(C) the <i>Spread-of-Flame Index</i> and the <i>Smoke-Developed Index</i> of the bonded laminated material as a whole do not exceed 0 and 3 respectively. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C1.10 Fire Hazard Properties				X	<ul style="list-style-type: none">(a) The fire hazard properties of the following internal linings, materials and assemblies must comply with Specification C1.10 by way of test reports / certificates provided from a <i>registered testing authority</i> (within the meaning of the BCA):<ul style="list-style-type: none">(i) Floor linings and floor coverings.





BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none">(ii) Wall linings and ceiling linings.(iii) Air-handling ductwork.(iv) Lift cars.(v) NSW C1.10(a)(v) -In a Class 9b building used as an entertainment venue , a material used to cover closed back upholstered seats; and a public hall or the like a proscenium curtain required by Specification H1.3.(vi) Escalators, moving walkways and non required non fire isolated stairways or pedestrian ramps subject to Specification D1.12.(vii) Sarking type materials.(viii) Attachments to floors, ceilings, internal walls and the internal linings of external walls.(ix) Other materials including insulation materials other than sarking type materials. <p>(b) NSW: Paint or fire -retardant coatings must not be used in order to make a material comply with the required fire hazard property, except in respect to a material referred to in NSW Specifications C1.10, NSW Table 4 and to which Notes 4 and 5 are applicable.</p> <p>(c) The requirement s of (a) do not apply to a material or assembly if it is –</p> <ul style="list-style-type: none">(i) plaster, cement render, concrete, terrazzo, ceramic tile or the like; or(ii) a fire protective covering; or(iii) a timber framed window; or(iv) a solid timber handrail or skirting; or(v) a timber-faced door; or(vi) an electrical switch, socket-outlet, cover plate or the like; or(vii) a material used –<ul style="list-style-type: none">(A) a roof insulating material applied in continuous contact with a substrate; or(B) an adhesive; or(C) a damp-proof course, flashing, caulking, sealing, ground moisture barrier or the like; or(viii) a paint, varnish, lacquer or similar finish, other than nitro-cellulose lacquer; or(ix) a clear or translucent roof light of glass fibre-reinforced polyester if –<ul style="list-style-type: none">(A) the roof in which is is installed forms part of a single storey building required to be Type C construction; and(B) the material is used as part of the roof covering; and



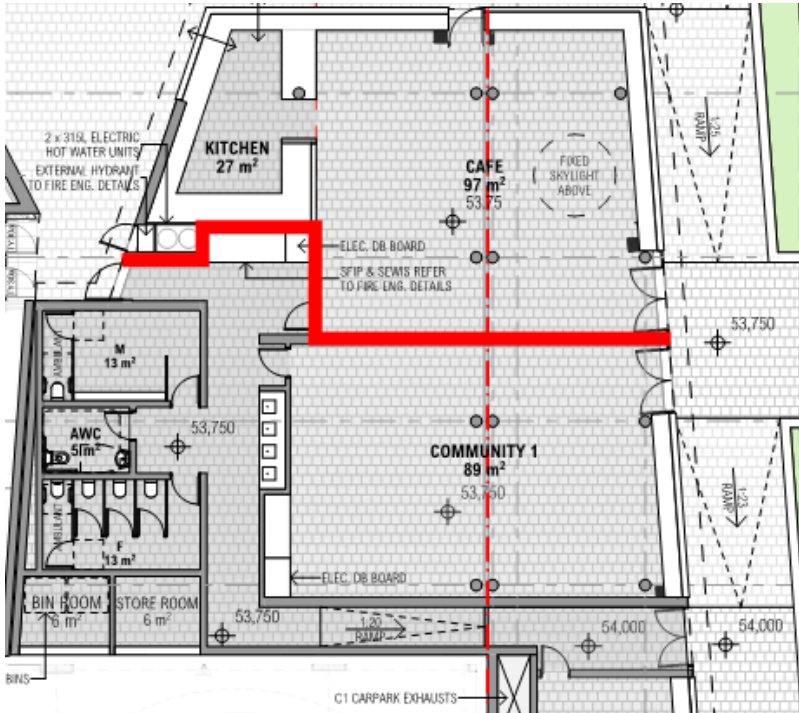
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(C) it is no closer than 1.5m from another roof light of the same type; and</p> <p>(D) each roof light is not more than 14m² in area; and</p> <p>(E) the area of the roof lights per 70m² of roof surface is not more than 14m² in area; or</p> <p>(x) a face plate or neck adaptor of supply and return air outlets of an air handling system; or</p> <p>(xi) a face plate or diffuser plate of light fitting and emergency exit signs and associated electrical wiring and electrical components; or</p> <p>(xii) a joinery unit, cupboard, shelving or the like; or</p> <p>(xiv) Timber treads, risers, landings and associated supporting framework installed in accordance with D2.25 where the Spread-of-Flame Index and the Smoke-Developed Index of the timber does not exceed 9 and respectively; or</p> <p>(xv) Any other material that does not significantly increase the hazards of the fire.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C1.11 Performance of External Walls in Fire			X		Not applicable. Concrete external walls that could collapse as complete panels (e.g. tilt-up and pre-cast concrete) are not proposed.
C1.12 ****			X		Clause deleted.
C1.13 Fire protected timber: concession			X		Not applicable. Fire-protected timber is not proposed.
C1.14 Ancillary elements			X		<p>An <i>ancillary element</i> must not be fixed, installed or attached to the internal parts or external face of an <i>external wall</i> that is <i>required</i> to be <i>non-combustible</i> unless it is one of the following:</p> <p>(a) An ancillary element that is non-combustible.</p> <p>(b) A gutter, downpipe or other plumbing fixture or fitting.</p> <p>(c) A flashing.</p> <p>(d) A grate or grill not more than 2m² in an area associated with a building service.</p> <p>(e) An electrical switch, socket outlet, cover plate or the like.</p> <p>(f) A light fitting.</p> <p>(g) A <i>required</i> sign.</p> <p>(h) A sign other than one provided under (a) or (g) that –</p> <p>(i) Achieves a group number 1 or 2; and</p> <p>(ii) Does not extend beyond one storey; and</p>

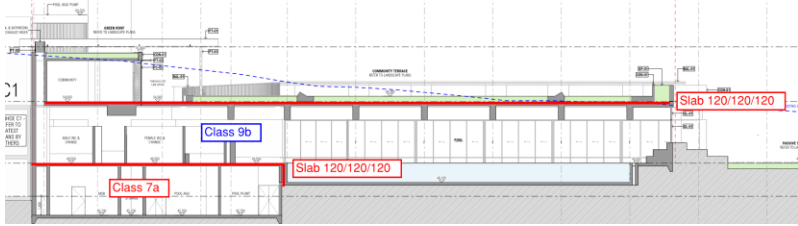
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none"> (iii) Does not extend beyond one fire compartment; and (iv) Is separated vertically from other signs permitted under (h) by at least 2 storeys. (i) An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that – <ul style="list-style-type: none"> (i) Meets the requirements of Table 4 of Specification C1.10 as an internal element; and (ii) Serves a storey – <ul style="list-style-type: none"> (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 similar finish, (m) A gasket, caulking, sealant or adhesive directly associated with (a) to (k). <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
Part C2 - Compartmentation & Separation					
C2.1 Application of Part			X		Informational. Part applies to the subject building.
C2.2 General Floor Area & Volume Limitations	X				The size of any fire compartment or atrium in a Class 6, or 9 building does not exceed the relevant maximum floor area and maximum volume set out in Table C2.2 & C2.5, except as permitted in C2.3.
C2.3 Large Isolated Buildings			X		Not applicable. Not a large isolated building.
C2.4 Requirements for Open Space			X		Not applicable. Not a large isolated building.
C2.5 Class 9a & 9c Buildings			X		Not applicable. Not a Class 9a or 9c building.
C2.6 Vertical Separation of openings in external walls			X		Not applicable. Assumed to be sprinklered as its one building with C1.
C2.7 Separation by Fire Walls				X	<ul style="list-style-type: none"> (a) Construction – a fire wall must be constructed in accordance with the following: <ul style="list-style-type: none"> (i) The fire wall has the relevant FRL prescribed by Specification C1.1 for each of the adjoining parts, and if these are different, the greater FRL; except where



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>Tables 3.9, 4.2 and 5.2 of Specification C1.1 permit a lower FRL on the carpark side.</p> <p>(ii) Any openings in the 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.</p> <p>(iii) Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not pass through or cross the fire wall unless the required fire resisting performance of the fire wall is maintained.</p> <p>(b) Separation of buildings – a part of a building separated from the remainder of the building by a fire wall may be treated as a separate building for the DTS provisions of Sections C, D & E if it is constructed in accordance with (a) and the following:</p> <p>(i) The fire wall extends through all storeys and spaces in the nature of storeys that are common to that part and any adjoining part of the building.</p> <p>(ii) The fire wall is carried through to the underside of the roof covering.</p> <p>(iii) Where the roof of one of the adjoining parts is lower than the roof of the other part, the fire wall extends to the underside of –</p> <p>(A) The covering of the higher roof, or not less than 6m above the covering of the lower roof; or</p> <p>(B) The lower roof if it has an FRL not less than that of a fire wall and no openings closer than 3m to any wall above the lower roof; or</p> <p>(C) The lower roof if its covering is non combustible and the lower part has a sprinkler system (other than a FPAA101D or FPAA101H system complying with Specification E1.5.</p> <p>(c) Separation of fire compartments – a part of a building separated from the remainder of the building by a fire wall may be treated as a separate fire compartment if it is constructed in accordance with (a) and the fire wall extends to the underside of –</p> <p>(i) A floor having an FRL required for a fire wall; or</p> <p>(ii) The roof covering.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C2.8 Separation of Classifications in the same storey				X	<p>In a building containing different classifications located alongside one other in the same storey -</p> <p>(a) each building element in that storey must have the higher FRL prescribed in Specification C1.1 for that element for the classifications concerned; or</p>



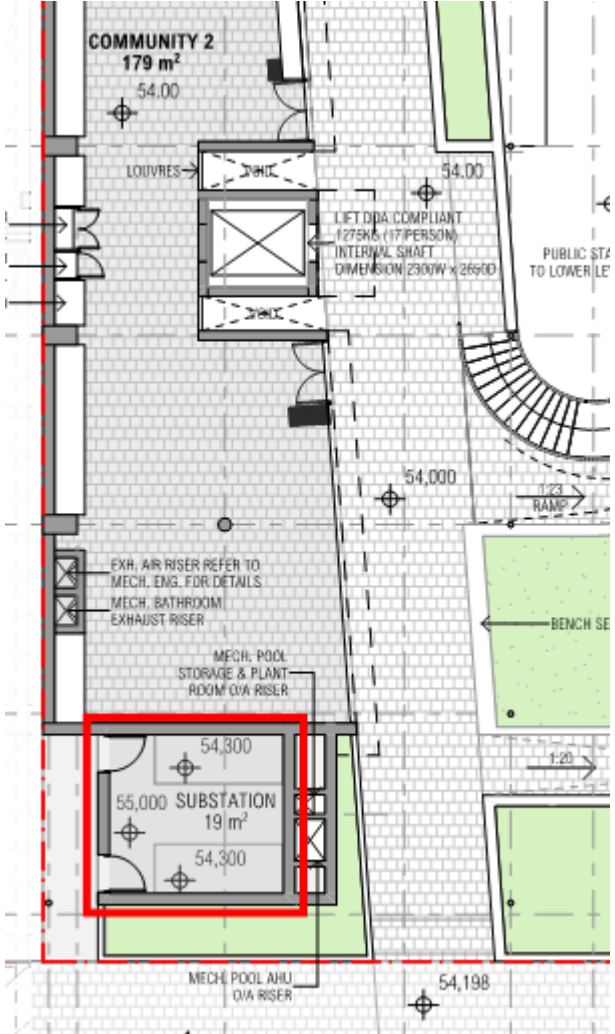
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(b) the parts must be separated in that storey by a fire wall having –</p> <ul style="list-style-type: none"> (i) the higher FRL prescribed in Table 3 or 4; or (ii) the FRL prescribed in Table 5, Specification C1.1, for that element for the Type of construction and classification concerned; or <p>(c) where one part is a carpark complying with Table 3.9, 4.2 or 5.2 of Specification C1.1, the parts may be separated by a fire wall complying with the appropriate table.</p> <p>The wall separating the café from the rest of the building is required to be separated by the higher FRL in Table 3 of Spec C1.1.</p> <p>Alternatively, this may be addressed by a Fire Engineered Performance Solution to rationalise the FRLs of separating elements.</p>  <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C2.9 Separation of Classifications in different storeys				X	<p>If parts of different classification are situated one above the other in adjoining storeys they must be separated as follows –</p> <ul style="list-style-type: none"> (a) Type A construction - the floor between the adjoining parts must have an FRL of not less than that prescribed in Specification C1.1 for the classification of the lower storey. <p>The floor separating the subject levels is required to be 120/120/120 to comply with Table 3 of Spec C1.1.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C2.10 Separation of lifts shafts				X	<p>(a) Any lift connecting more than 2 storeys, or more than 3 storeys where the building is sprinkler protected must be separated from the remainder of the building by enclosure in a shaft in which –</p> <p>(i) For Type A construction – the walls have the FRL prescribed by Specification C1.1; and</p> <p>(d) Openings for lift landing doors and services must be protected in accordance with the DTS provisions of Part C3.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C2.11 Stairways and lifts in one shaft	X				A stairway and lift are not be in the same shaft if either the stairway or the lift is required to be in a fire-resisting shaft.
C2.12 Separation of Equipment				X	<p>(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 –</p> <p>(i) lift motors and lift control panels or</p> <p>(ii) Emergency generators used to sustain emergency equipment operating in the emergency mode; or</p> <p>(iii) Central smoke control plant; or</p> <p>(iv) Boilers; or</p> <p>(v) A battery system installed in that building that has a total voltage of 12 volts or more and a storage capacity of 200kWh or more.</p> <p>(b) Equipment need not be separated in accordance with (a) if the equipment comprises-</p> <p>(i) Smoke control exhaust fans located in the air stream which are constructed for high temperature operation in accordance with Specification E2.2b; or</p> <p>(ii) Stair pressurizing equipment installed in compliance with AS 1668.1; or</p> <p>(iii) A lift installation without a machine room; or</p> <p>(iv) Equipment otherwise adequately separated from the remainder of the building.</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(c) Separation of onsite fire pumps must comply with the requirements of AS2419.1.</p> <p>(d) Separating construction must have –</p> <p>(i) Except as provided by (ii) –</p> <p>(A) An FRL is required by Specification C1.1, but not less than 120/120/120; and</p> <p>(B) Any doorway protected with a -/120/30 self-closing fire door; or</p> <p>(ii) When separating a lift shaft and lift motor room, an FRL not less than 120/-/-.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
C2.13 Electrical Supply				X	<p>(a) An electricity sub-station must be separated from the building in accordance with the Energy Authority Requirements (i.e. Ausgrid).</p> <p>(b) A main switchboard located within the building (and which sustains emergency equipment operating in the emergency mode) must –</p> <p>(i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and</p> <p>(ii) have any doorway in that construction protected with a self-closing fire door having an FRL of not less than – /120/30.</p> <p>(c) Electrical conductors located within the building that supply –</p> <p>(i) a substation located within the building which supplies a main switchboard covered by (b); or</p> <p>(ii) a main switchboard covered by (b), must—</p> <p>(iii) have a classification in accordance with AS/NZS 3013-2005 of not less than—</p> <p>(A) if located in a position that could be subject to damage by motor vehicles — WS53W; or</p> <p>(B) otherwise — WS52W; or</p> <p>(iv) be enclosed or otherwise protected by construction having an FRL of not less than 120/120/120</p> <p>(d) where emergency equipment is required in a building, all switchboards in the electrical installation, which sustain the electricity supply to the emergency equipment, must be constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of a fault from the non-emergency equipment switchgear.</p> <p>(e) For the purposes of (d), emergency equipment includes but it is not limited to –</p>

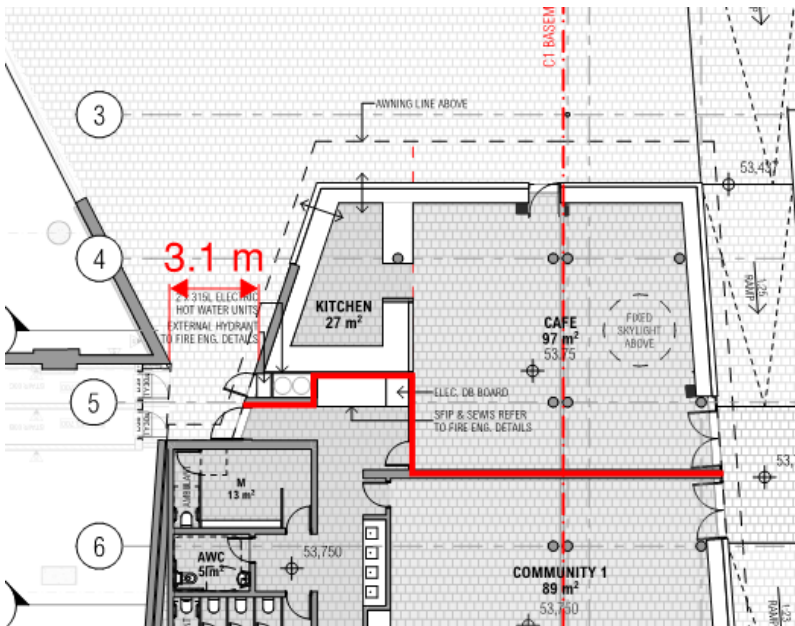


BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(i) Fire hydrant booster pumps</p> <p>(ii) Pumps for automatic sprinkler systems, water spray, chemical fluid suppression systems or the like.</p> <p>(iii) Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building.</p> <p>(iv) Air handling systems designed to exhaust and control the spread of fire and smoke.</p> <p>(v) Emergency lifts.</p> <p>(vi) Control and indicating equipment.</p> <p>(vii) Emergency warning and intercom systems (EWIS).</p> <p>Substation on Upper Ground to be enclosed.</p>  <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C2.14				X	Not applicable. No Class 2 or 3 parts proposed.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Public corridors in Class 2 & 3 Buildings					
Part C3 - Protection of Openings					
C3.1 Application of Part			X		<p>(a) The DTS provisions of this Part do not apply to-</p> <ul style="list-style-type: none"> (i) Control joints, weep holes and the like in external walls of masonry construction and joints between panels in external walls of pre -cast concrete panel construction if, in all cases they are not larger than necessary for the purpose; and (ii) Non-combustible ventilators for subfloor or cavity ventilation, if each does not exceed 45000m in face area and spaced not less than 2m from any other ventilator in the same wall; and (iii) Openings in the vertical plane formed between building elements at the construction edge or perimeter of a balcony or verandah, colonnade, terrace, or the like and (iv) In a carpark – <ul style="list-style-type: none"> (A) Service penetrations through; and (B) Openings formed by a vehicle ramp in, a floor other than a floor that separates a part not uses as a carpark, providing the connected floors comply as a single fire compartment for the purposes of all other requirements of the DTS provisions of Sections C, D & E. <p>(b) For the purposes of DTS provisions of this Part, openings in building elements required to be fire resisting include doorways, windows (including any associated fanlight), infill panels and fixed or openable glazed areas that do not have the required FRL.</p> <p>(c) For the purposes of the DTS 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 of the perimeter of the building, are deemed to openings in the external wall.</p>
C3.2 Protection of openings in external walls	X				<p>(a) Openings in an external wall that is required to have an FRL must be protected in accordance with C3.4:</p> <ul style="list-style-type: none"> (i) if the distance between the opening and the fire-source feature is less than 3 m from a side or rear boundary; or (ii) less than 6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a storey at or near ground level; or (iii) less than 6 m from another building on the allotment that is not Class 10; <p>If wall wetting sprinklers are to be used they are to be located externally.</p> <p>(b) if required to be protected under (a), not occupy more than 1/3 of the area of the external wall of the storey in which it is</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>located unless they are in a Class 9b building used as an open spectator stand.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
<p>C3.3</p> <p>Separation of external walls and associated openings in different fire compartments</p>				X	<p>The distance between parts of external walls and any openings within them in different fire compartments separated by a fire wall must not be less than that set out in Table C3.3, unless—</p> <ul style="list-style-type: none"> (a) those parts of each wall have an FRL not less than 60/60/60; and (b) any openings protected in accordance with C3.4. <p>The western external walls of the café are required to achieve an FRL of 60/60/60 to comply with this provision.</p>  <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
<p>C3.4</p> <p>Acceptable Methods of Protection</p>			X		<p>Informational.</p> <ul style="list-style-type: none"> (a) Where protection is required to doorways and windows and other openings they must be protected as follows: <ul style="list-style-type: none"> (i) Doorways <ul style="list-style-type: none"> ❖ Internal or external wall wetting sprinklers as appropriate used with doors that are self-closing or automatic closing; or ❖ -/60/30 fire doors that are self-closing or automatic closing



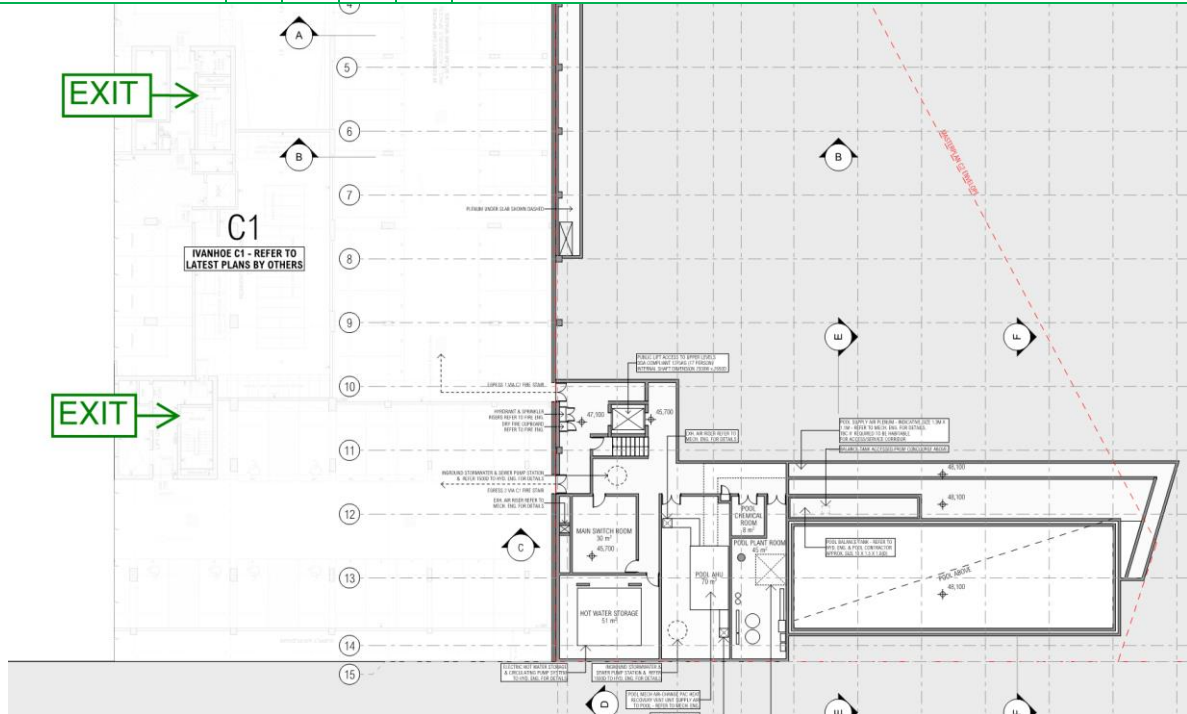
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(ii) Windows</p> <ul style="list-style-type: none"> ❖ Internal or external wall wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position or; ❖ -/60- fire windows that are automatic closing or permanently fixed in the closed position or ❖ -/60- automatic closing fire shutters. <p>(iii) Other openings –</p> <ul style="list-style-type: none"> ❖ Excluding voids – internal or external wall wetting sprinklers as appropriate or ❖ Construction having a FRL not less than -/60/-. <p>(b) Fire doors, fire windows and fire shutters must comply with Specification C3.4.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C3.5 Doorways in Fire Walls				X	<p>(a) The aggregate width of openings for doorways in a fire wall, which are not part of a horizontal exit, must not exceed ½ the length of the fire wall, and each doorway must be protected by –</p> <ul style="list-style-type: none"> (i) 2 fire doors or fire shutters, one on each (ii) side of the doorway, each of which has an FRL not less than ½ that required by Specification C1.1 for the fire wall except that each door or shutter must have an insulation level of at least 30; or (iii) A fire door on one side and a fire shutter on the other side of the doorway, each of which complies with (i); or (iv) A single fire door or fire shutter which has an FRL of not less than that required by Specification C1.1 for the fire wall except that each door or shutter must have an insulation level of at least 30. <p>(b) A fire door or fire shutter required by (a)(i), (ii) or (iii) must be self-closing, or automatic closing in accordance with (c) & (d).</p> <p>(c) The automatic closing operation required by (b) must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with AS1670.1 and located on each side of the fire wall not more than 1.5m horizontal distance from the opening.</p> <p>(d) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D) complying with Specification E1.5, is installed in the building, activation of the system in either fire compartment separated by the fire wall must also initiate the automatic closing operation.</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
C3.6 Sliding Fire Doors			X		Not applicable. No sliding fire doors proposed or required.
C3.7 Protection of Doorways in horizontal exits			X		Not applicable. No horizontal exits proposed or required.
C3.8 Openings in fire isolated exits			X		Not applicable. No fire-isolated exits proposed or required.
C3.9 Service Penetrations in fire-isolated exits			X		Not applicable. No fire-isolated exits proposed or required.
C3.10 Openings in Fire isolated lift shafts				X	<p>(a) Doorways – if a lift shaft is required to be fire isolated, an entrance doorway to that shaft must be protected by -/60/- fire doors that-</p> <p>(i) comply with AS 1735.11, and</p> <p>(ii) are set to remain closed except when discharging or receiving, passengers, goods or vehicles.</p> <p>(b) Lift indicator panels – A lift call panel, indicator panel or other panel in the wall of a fire-isolated lift shaft must be backed by construction having an FRL of not less than -/60/60 if it exceeds 35,000mm² in area.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C3.11 Bounding Construction: Class 2, 3 & 4 Parts.			X		Not applicable. No residential parts proposed.
C3.12 Openings in floors and ceilings for services				X	<p>Where services pass through a floor which is required to achieve a FRL or a ceiling required to have a RISF, the service must be enclosed within a fire resisting shaft or fire protected in accordance with Clause C3.15.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C3.13 Openings in Shafts				X	<p>In a building of Type A construction, an opening in a wall providing access to a ventilating, pipe, garbage or other service shaft must be fire protected in accordance with this clause.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C3.15 Openings for Service Installations				X	Where services pass through an element which is required to achieve a FRL (other than an external wall or roof), the service must be fire stopped by a tested system or Specification C3.15.

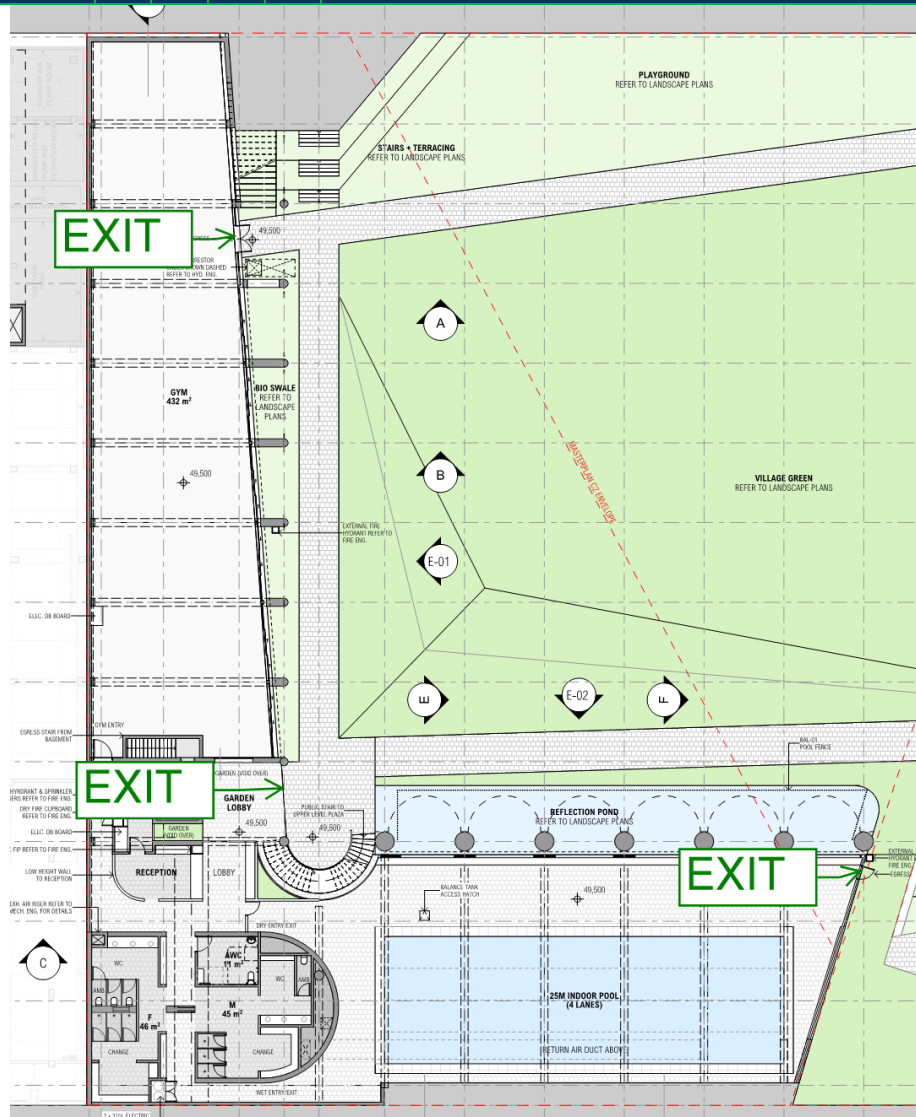
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
C3.16 Construction Joints				X	<p>Construction joints, spaces and 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 to achieve the required FRL.</p> <p>The requirements above do not apply where joints, spaces and the like between fire protected timber elements are provided with cavity barriers in accordance with Specification C1.13.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C3.17 Columns protected in lightweight construction to achieve an FRL			X		<p>Any column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of construction which has achieved the required FRL or resistance to the incipient spread of fire.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
SECTION D					
ACCESS & EGRESS					
Part D1 - Provision for Escape					
D1.1 Application of Part			X		The DTS provisions of this Part do not apply to the internal parts of a sole occupancy unit in a Class 2 or 3 building or Class 4 part of a building.
D1.2 Number of Exits required	X				<p>(a) All buildings — Every building must have at least one exit from each storey.</p> <p>(b) Class 2 to 8 buildings — In addition to any horizontal exit, not less than 2 exits must be provided from the following:</p> <p>(i) Each storey if the building has an effective height of more than 25 m.</p> <p>(ii) A Class 2 or 3 building subject to C1.5.</p> <p>(c) Basements — In addition to any horizontal exit, not less than 2 exits must be provided from any storey if egress from that storey involves a vertical rise within the building of more than 1.5 m, unless—</p> <p>(i) the floor area of the storey is not more than 50 m²; and</p> <p>(ii) the distance of travel from any point on the floor to a single exit is not more than 20 m.</p> <p>(d) Class 9 buildings — In addition to any horizontal exit, not less than 2 exits must be provided from the following:</p> <p>(i) Each storey if the building has a rise in storeys of more than 6 or an effective height of more than 25 m.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(vi) Any storey or mezzanine that accommodates more than 50 persons, calculated under D1.13.</p> <p>(g) Access to exits — Without passing through another sole-occupancy unit every occupant of a storey or part of a storey must have access to—</p> <p>(i) an exit; or</p> <p>(ii) at least 2 exits, if 2 or more exits are required.</p>



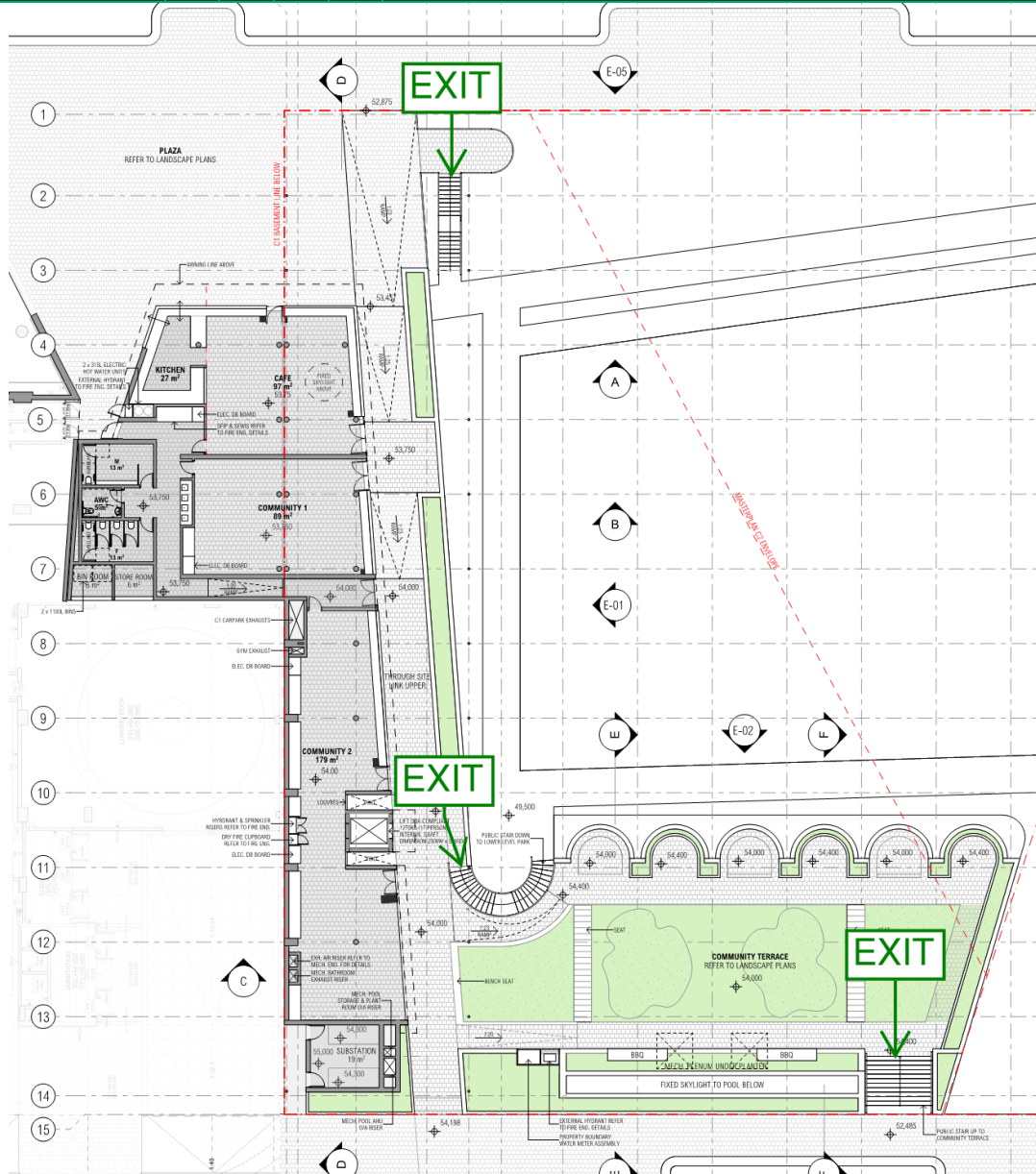
Basement Level

BCA DEEMED-TO-SATISFY PROVISION	Compliance Required NA or Informational DOES NOT COMPLY COMPLIES	COMMENTS
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Lower Ground Floor

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	Informational	NA or	Compliance Required	COMMENTS
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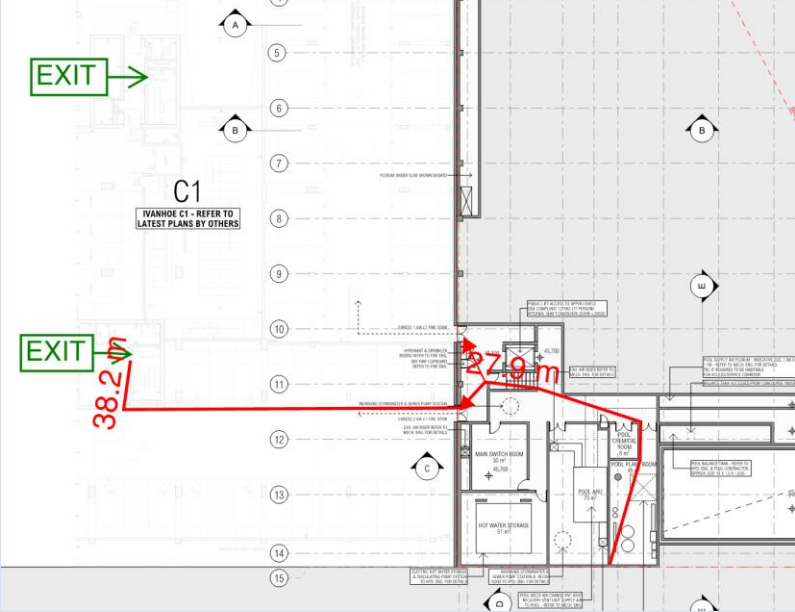
Upper Ground Floor

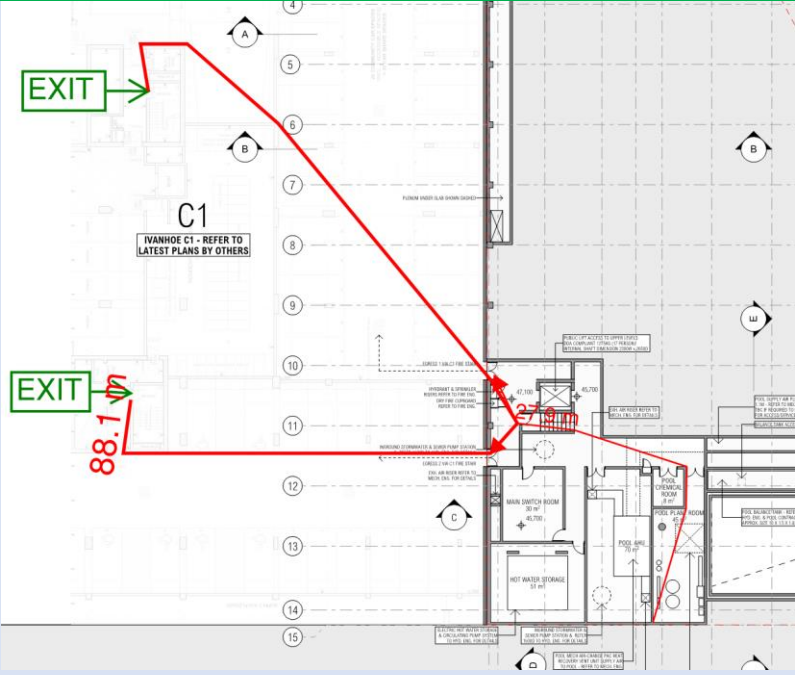
D1.3 When Fire Isolated exits are required				X	<p>(b) Class 5, 6, 7, 8 or 9 buildings — Every stairway or ramp serving as a required exit must be fire-isolated unless—</p> <p>(iii) in any other case it connects, passes through or passes by not more than 2 consecutive storeys and one extra storey of any classification may be included if—</p> <p>(A) the building has a sprinkler system (other than a FPAA101D system) complying with Specification E1.5 installed throughout; or</p> <p>(B) the required exit does not provide access to or egress for, and is separated from, the extra storey by construction having—</p> <p>(aa) an FRL of –/60/60, if non-loadbearing; and</p>
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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(bb) an FRL of 90/90/90 for Type A construction or 60/60/60 for Type B or C construction, if loadbearing; and</p> <p>(cc) no opening that could permit the passage of fire or smoke.</p> <p>All proposed exits are non-fire-isolated as permitted.</p>
D1.4 Exit Travel Distances		X			<p>(c) Class 5, 6, 7, 8 or 9 buildings — Subject to (d), (e) and (f)—</p> <p>(i) 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; and</p> <p>(ii) in a Class 5 or 6 building, the distance to a single exit serving a storey at the level of access to a road or open space may be increased to 30 m.</p> <p>(f) Assembly buildings — In a Class 9b building other than a school or early childhood centre, the distance to one of the exits may be 60 m if—</p> <p>(i) the path of travel from the room concerned to that exit is through another area which is a corridor, hallway, lobby, ramp or other circulation space; and</p> <p>(ii) the room is smoke-separated from the circulation space by construction having an FRL of not less than 60/60/60 with every doorway in that construction protected by a tight fitting, self-closing, solid-core door not less than 35 mm thick; and</p> <p>(iii) the maximum distance of travel does not exceed 40 m within the room and 20 m from the doorway to the room through the circulation space to the exit.</p> <p><u>DTS non-compliance</u></p> <p>Basement level</p> <ul style="list-style-type: none"> - Path of travel to a point of choice is greater than 20m, being 27.9m. - Path of travel to an exit is greater than 20m, being 66.1



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p>Lower Ground – Distance to a point of choice is less than 20m. Storey complies.</p> <p>Upper Ground – Distance to a point of choice is less than 20m. Storey complies.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D1.5 Distance Between Alternative Exits		X			<p>Exits that are required as alternative means of egress must be—</p> <ul style="list-style-type: none"> (a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas; and (b) not less than 9 m apart; and (c) not more than— <ul style="list-style-type: none"> (iii) in all other cases — 60 m apart; and (d) located so that alternative paths of travel do not converge such that they become less than 6 m apart. <p><u>DTS non-compliance</u></p> <p>The distance between alternative exits from the plant are is more than 60m, being 88.1m.</p> <p><i>It is recommended this is addressed by a Fire Engineered Performance Solution.</i></p>

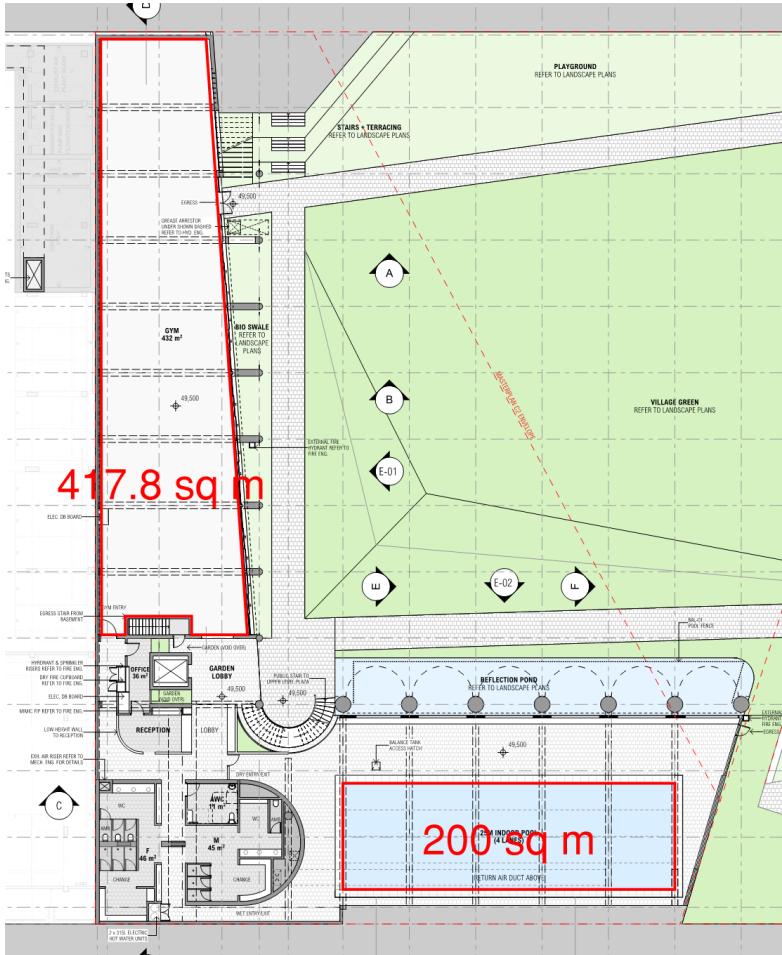
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					
D1.6 Dimensions of Exits and paths of Travel to Exits				X	<p>In a required exit or path of travel to an exit—</p> <ul style="list-style-type: none"> (a) the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm; and (b) the unobstructed width of each exit or path of travel to an exit, except for doorways, must be not less than— <ul style="list-style-type: none"> (i) 1 m; or (ii) 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a (c) if the storey or mezzanine accommodates more than 100 persons but not more than 200 persons, the aggregate unobstructed width, except for doorways, must be not less than— <ul style="list-style-type: none"> (i) 1 m plus 250 mm for each 25 persons (or part) in excess of 100; or (ii) 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a treatment area or ward area; and (d) if the storey or mezzanine accommodates more than 200 persons, the aggregate unobstructed width, except for doorways, must be increased to— <ul style="list-style-type: none"> (i) 2 m plus 500 mm for every 60 persons (or part) in excess of 200 persons if egress involves a change in floor level by a stairway or ramp with a gradient steeper than 1 in 12; or (ii) in any other case, 2 m plus 500 mm for every 75 persons (or part) in excess of 200; and (f) the unobstructed width of a doorway must be not less than—

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none"> (iii) the unobstructed width of each exit provided to comply with (b), (c), (d) or (e), minus 250 mm; or (v) in any other case except where it opens to a sanitary compartment or bathroom — 750 mm wide; and (g) the unobstructed width of a required exit must not diminish in the direction of travel to a road or open space, except where the width is increased in accordance with (b)(ii) or (f)(i); and (h) the required width of a stairway or ramp must— <ul style="list-style-type: none"> (i) be measured clear of all obstructions such as handrails, projecting parts of balustrades or other barriers and the like; and (ii) extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing. (i) to determine the aggregate unobstructed width, the number of persons accommodated must be calculated according to D1.13; and <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D1.7 Travel via Fire Isolated Stairs			X		Not applicable. Proposed stairways are not required to be fire isolated.
D1.8 External Stairways or ramps in lieu of Fire Isolated Stairs			X		Not applicable. Proposed stairways are not required to be fire isolated.
D1.9 Travel by non-fire-isolated stairs	X				<ul style="list-style-type: none"> (a) A non-fire-isolated stairway or non-fire-isolated ramp 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. (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 or non-fire-isolated ramp must not exceed 80 m. (e) In a Class 5 to 8 or 9b building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than— <ul style="list-style-type: none"> (i) 20 m from a doorway providing egress to a road or open space or from a fire isolated passageway leading to a road or open space; or (ii) 40 m from one of 2 such doorways or passageways if travel to each of them from the non-fire-isolated stairway or non-fire-isolated ramp is in opposite or approximately opposite directions.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
D1.10 Discharge from Exits				X	<p>(a) 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.</p> <p>(b) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than—</p> <p>(i) the minimum width of the required exit;</p> <p>(ii) or 1 m,</p> <p>whichever is the greater.</p> <p>(c) If an exit discharges to open space that is at a different level than the public road to which it is connected, the path of travel to the road must be by—</p> <p>(i) a ramp or other incline having a gradient not steeper than 1:8 at any part, or not steeper than 1:14 if required by the Deemed-to-Satisfy Provisions of Part D3; or</p> <p>(d) The discharge point of alternative exits must be located as far apart as practical.</p> <p>(g) The number of persons accommodated must be calculated according to D1.13.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D1.11 Horizontal Exits			X		Not applicable. No horizontal exits proposed or required.
D1.12 Non-required stairways, ramps or escalators			X		Not applicable. No non-required stairways, ramps or escalators proposed.
D1.13 Number of Persons Accommodated Note NSW Table D1.13 Area per person according to use			X		<p>For the purpose of the Deemed-to-Satisfy provisions, the number of persons accommodated in a storey, room or mezzanine must be determined with consideration to the purpose for which it is used and the layout of the floor area by—</p> <p>(a) calculating the sum of the numbers obtained by dividing the floor area of each part of the storey by the number of square metres per person listed in Table D1.13 according to the use of that part, excluding spaces set aside for—</p> <p>(i) lifts, stairways, ramps and escalators, corridors, hallways, lobbies and the like; and</p> <p>(ii) service ducts and the like, sanitary compartments or other ancillary uses; or</p> <p>(b) reference to the seating capacity in an assembly building or room; or</p> <p>(c) any other suitable means of assessing its capacity.</p> <p><i>Refer NSW Table D1.13 to calculate area per person according to use.</i></p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>Lower Ground Floor Population number calculations</p> <p>Gym = 367m² 418/3 (Table D1.13) = 140 people</p> <p>Pool = 200m² 200/1.5 (Table D1.13) = 134 people</p> <p>Combined population = 140 + 134 = 274</p>  <p>Upper Ground Floor Population number calculations</p> <p>Community 1 = 89m²</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>89/1 (Table D1.13 public hall) = 89 people</p> <p>Community 2 = 179m² 179/1 (Table D1.13 public hall) = 179 people</p> <p>Café = 79m² 97/1 (Table D1.13 cafe) = 97 people</p> <p>Combined population = 89+179+97 = 347</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D1.14 Measurement of Distances			X		<p>Informational.</p> <p>The nearest part of an exit means in the case of—</p> <ul style="list-style-type: none"> (a) a fire-isolated stairway, fire-isolated passageway, or fire-isolated ramp, the nearest part of the doorway providing access to them; and (b) a non-fire-isolated stairway, the nearest part of the nearest riser; and (c) a non-fire-isolated ramp, the nearest part of the junction of the floor of the ramp and the floor of the storey; and (d) a doorway opening to a road or open space, the nearest part of the doorway; and (e) a horizontal exit, the nearest part of the doorway. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D1.15 Method of Measurement			X		<p>Informational.</p> <p>The following rules apply:</p> <ul style="list-style-type: none"> (a) In the case of a room that is not a sole occupancy unit in a Class 2 or 3 building or Class 4 part of a building, the distance includes the straight-line measurement from any point of the floor of the room to the nearest part of the doorway leading from it, together with the distance from the part of the doorway to the single required exit or point from which travel in different directions to 2 required exits is available. (b) Subject to (d), the distance from the doorway of a sole occupancy unit in a Class 2 or 3 building is measured in a straight line to the nearest part of the required single exit or point from which travel in different directions to 2 required exits is available.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(c) Subject to (d), the distance between exits is measured in a straight line between the nearest parts of those exits.</p> <p>(d) Only the shortest distance is taken along a corridor, hallway, external balcony or other path of travel that curves or changes direction.</p> <p>(e) If more than one corridor, hallway, or other internal path of travel connects required exits, for the purposes of D1.5(c) the measurement is along the path of travel through the point at which travel in different directions to those exits is available, as determined in accordance with D1.4.</p> <p>(f) If a wall (including a demountable internal wall) that does not bound –</p> <p>(i) A room; or</p> <p>(ii) A corridor, hallway or the like, causes a change in direction in proceeding to a required exit, the distance is measured along the path of travel past the wall.</p> <p>(iii) If permanent fixed seating is provided, the distance is measured along the path of travel between the rows of seats.</p> <p>(iv) In the case of a non-fire isolated stairway or non-fire isolated ramp, the distance is measured along a line connecting the nosings of the treads, along the slope of the ramp, together with the distance connecting those lines across any intermediate landing.</p>
D1.16 Plant Rooms and lift Motor Rooms: Concession			X		<p>(a) A ladder may be used in lieu of a stairway to provide egress from—</p> <p>(i) a plant room with a floor area of not more than 100 m²; or</p> <p>(ii) all but one point of egress from a plant room, a lift machine room or a Class 8 electricity network substation with a floor area of not more than 200 m².</p> <p>(b) A ladder permitted under (a)—</p> <p>(i) may form part of an exit provided that in the case of a fire-isolated stairway it is contained within the shaft; or</p> <p>(ii) may discharge within a storey in which case it must be considered as forming part of the path of travel; and</p> <p>(iii) for a plant room or a Class 8 electricity network substation, must comply with AS 1657; and</p> <p>(iv) for a lift machine room, where access is provided from within a machine room to a secondary floor, a fixed rung type ladder complying with AS 1657 may be used, provided that—</p> <p>(A) the height between the floors is not more than 2800 mm; and</p> <p>(B) the ladder is inclined at an angle to the horizontal not less than 65 degrees nor more than 75 degrees; and</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(C) the distance between the front face of the ladder and any adjacent obstruction is not less than—</p> <p>(aa) 960 mm, where the ladder is inclined 65 degrees to the horizontal; or</p> <p>(bb) 760 mm, where the ladder is inclined 75 degrees to the horizontal; or</p> <p>(cc) a distance that is determined by interpolating the values in (aa) and (bb), where the ladder is inclined at any angle between 65 degrees and 75 degrees to the horizontal; and</p> <p>(D) a clear space not less than 600 mm exists between the foot of the ladder and any equipment.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D1.17 Access to lift pits			X		Not applicable. No lift pits proposed.
Part D2 - Construction of Exits					
D2.1 Application of Part			X		Except for D2.13, D2.14 (a), D2.16, D2.17(d), D2.17(e) and D2.18, the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of the Class 2 sole-occupancy units. Note NSW D2.1 (entertainment venues)
D2.2 Fire-Isolated stairways and ramps			X		Not applicable. No fire-Isolated stairways and ramps proposed or required.
D2.3 Non-fire Isolated stairways and ramps				X	<p>In a building having a rise in storeys of more than 2, required stairs and ramps (including any landings and any supporting building elements) which are not required to be within a fire resisting shaft, must be constructed according to D2.2, or only of -</p> <p>(a) reinforced or prestressed concrete; or</p> <p>(b) steel in no part less than 6 mm thick; or</p> <p>(c) timber that—</p> <p>(i) has a finished thickness of not less than 44 mm; and</p> <p>(ii) has an average density of not less than 800 kg/m³ at a moisture content of 12%; and</p> <p>(iii) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue".</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2.4 Separation of Rising and Descending Stairs	X				<p>If a stairway serving as a required exit is required to be fire isolated —</p> <p>(a) There must be no direct connection between —</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none"> (i) A flight rising from a storey below the lowest level of access to a road or open space; and (ii) A flight descending from a storey above that level ; and
D2.5 Open Access ramps and balconies			X		Not applicable. No open access ramps or balconies provided to meet the smoke hazard management requirements of Table E2.2a are proposed.
D2.6 Smoke Lobbies			X		Not applicable. No smoke lobbies proposed.
D2.7 Installations in Exits and Paths of Travel				X	<ul style="list-style-type: none"> (a) Access to service shafts and services other than to fire-fighting or detection equipment as permitted in the Deemed-to-Satisfy Provisions of Section E, must not be provided from a fire-isolated stairway. (b) An opening to any chute or duct intended to convey hot products of combustion from a boiler, incinerator, fireplace or the like must not be located in any part of a required exit or any corridor, hallway, lobby or the like leading to a required exit. (c) Gas or other fuel services must not be installed in a required exit (d) Services or equipment comprising – <ul style="list-style-type: none"> (i) Electricity meters, distribution boards or cuts; or (ii) Central telecommunications distribution boards or equipment; or (iii) Electrical motors or other motors service equipment in the building, May be installed in – <ul style="list-style-type: none"> (i) A required exit, except for fire-isolated exits specified in (a); or (ii) In any corridor, hallway, lobby or the like leading to a required exit, If the services or equipment are enclosed by non-combustible construction or a fire-protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure (e) Electrical wiring may be installed in a fire-isolated exit if the wiring is associated with; <ul style="list-style-type: none"> (i) A lighting, detection, or pressurization system serving the exit; or (ii) A security, surveillance or management system serving the exit; or (iii) An intercommunication system or an audible or visual alarm system in accordance with D2.22; or (iv) The monitoring of hydrant or sprinkler isolating valves. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification

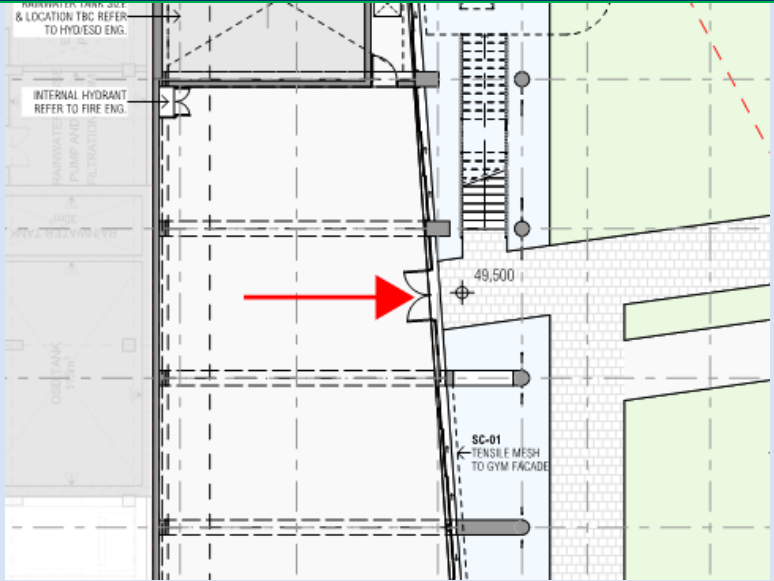
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
D2.8 Enclosure of Space Under Stairs and ramps			X		Not applicable. No enclosures under stairways proposed.
D2.9 Width of Stairs			X		A required stairway or ramp that exceeds 2 m in width is counted as having a width of only 2 m unless it is divided by a handrail, balustrade or other barrier continuous between landings and each division has a width of not more than 2 m. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
D2.10 Pedestrian Ramps			X		(c) The floor surface of a ramp must have a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
D2.11 Fire-Isolated Passageways			X		Not applicable. No fire-isolated passageway is proposed.
D2.12 Roof as Open Space			X		Not applicable. Roof is not used as open space.
D2.13 Goings & Risers				X	(a) A stairway must have— (i) not more than 18 and not less than 2 risers in each flight; and (ii) going (G), riser (R) and quantity (2R + G) in accordance with Table D2.13, except as permitted by (b) and (c); and (iii) constant goings and risers throughout each flight, except as permitted by (b) and (c), and the dimensions of goings (G) and risers (R) in accordance with (a)(ii) 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; and (iv) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and (v) treads which have— (A) a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or (B) a nosing strip with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; and

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none"> (vi) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 storeys; and (vii) in a Class 9b building, not more than 36 risers in consecutive flights without a change in direction of at least 30°; and (viii) in the case of a required stairway, no winders in lieu of a landing. <p>(c) Where a stairway discharges to a sloping public walkway or public road—</p> <ul style="list-style-type: none"> (i) the riser (R) may be reduced to account for the slope of the walkway or road; and (ii) the quantity (2R+G) may vary at that location. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.14 Landings				X	<p>In a stairway</p> <ul style="list-style-type: none"> (a) Landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing must – <ul style="list-style-type: none"> (i) Be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing; and (ii) Have – <ul style="list-style-type: none"> (A) A surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS4586; or (B) A strip at the edge of the landing with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS4586, where the edge leads to a flight below; and <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.15 Thresholds				X	<p>The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless—</p> <ul style="list-style-type: none"> (c) in a building required to be accessible by Part D3, the doorway— <ul style="list-style-type: none"> (i) opens to a road or open space; and (ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or (e) in other cases— <ul style="list-style-type: none"> (i) the doorway opens to a road or open space, external stair landing or external balcony; and

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					<p>(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.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.16 Balustrades and other Barriers Note NSW D2.16				X	<p>(a) A continuous barrier must be provided along the side of—</p> <p>(i) a roof to which general access is provided; and</p> <p>(ii) a stairway or ramp; and</p> <p>(iii) a floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and</p> <p>(iv) any delineated path of access to a building, if the trafficable surface is 1 m or more above the surface beneath.</p> <p>(b) The requirements of (a) do not apply to—</p> <p>(i) the perimeter of a stage, rigging loft, loading dock or the like; or</p> <p>(ii) areas referred to in D2.18; or</p> <p>(iii) a retaining wall unless the retaining wall forms part of, or is directly associated with a delineated path of access to a building from the road, or a delineated path of access between buildings; or</p> <p>(iv) a barrier provided to an openable window covered by D2.24.</p> <p>(c) A barrier required by (a) must be constructed in accordance with NSW Table D2.16a 1.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.17 Handrails		X			<p>(a) Except for handrails referred to in D2.18, handrails must be—</p> <p>(i) located along at least one side of the ramp or flight; and</p> <p>(iii) located along each side if the total width of the stairway or ramp is 2 m or more; and</p> <p>(iv) in any other case, fixed at a height of not less than 865 mm measured above the nosings of stair treads and the floor surface of the ramp, landing, or the like; and</p> <p>(v) continuous between stair flight landings and have no obstruction on or above them that will tend to break a hand-hold; and</p> <p>(vi) in a required exit serving an area required to be accessible, designed and constructed to comply with clause 12 of AS 1428.1, except that clause 12(d) does not apply to a handrail required by (a)(iii)(B).</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(c) Handrails required to assist people with a disability must be provided in accordance with D3.3.</p> <p>(e) The requirements of (d) do not apply to—</p> <p>(i) handrails referred to in D2.18; or</p> <p>(ii) a stairway or ramp providing a change in elevation of less than 1 m; or</p> <p>(iii) a landing; or</p> <p>(iv) a winder where a newel post is installed to provide a handhold.</p> <p>All stairways and ramps must be provided with handrails in accordance with AS 1428.1-2009.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
D2.18 Fixed Platforms, walkways and ladders				X	<p>A fixed platform, walkway, stairway, ladder and any going and riser, landing, handrail or barrier attached thereto may comply with AS1657 in lieu of D2.13, D2.14 D2.16 and D2.17 if it only serves:</p> <p>(a) Machinery rooms, boiler houses, lift machine rooms, plant-rooms and the like; or</p> <p>(b) Non-habitable rooms, such as attics, storerooms and the like that are not used on a frequent or daily basis in the internal parts of a sole occupancy unit in a Class 2 building or Class 4 part of the building.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
D2.19 Doorways & Doors				X	<p>(b) A doorway serving as a required exit or forming part of a required exit—</p> <p>(i) Must not be fitted with a revolving door; and</p> <p>(ii) Must not be fitted with a roller shutter or tilt-up door unless –</p> <p>(A) It serves a Class 6, 7 or 8 building or part with a floor area not more than 200m²; and</p> <p>(B) The doorway is the only required exit from the building or part; and</p> <p>(C) It is held in the open position while the building or part is lawfully occupied; and</p> <p>(iii) Must not be fitted with a sliding door unless –</p> <p>(A) It leads directly to a road or open space; and</p> <p>(B) The door is able to be opened manually under a force of not more than 110 N; and</p> <p>(iv) If fitted with a door which is power-operated –</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(A) It must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and</p> <p>(B) If it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.</p> <p>(c) A power-operated door in a path of travel to a required exit, except for a door in a patient care area of a Class 9a health-care building as provided in (b), must be able to open manually under a force of not more than 110 N if there is a malfunction or failure of the power source.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
D2.20 Swinging Doors		X			<p>A swinging door in a required exit or forming part of a required exit –</p> <p>(a) Must not encroach –</p> <p>(i) At any part of its swing by more than 500mm of the require width (including any landings) of a required –</p> <p>(A) Stairway; or</p> <p>(B) Ramp; or</p> <p>(C) Passageway,</p> <p>If it is likely to impede the path of travel of the people already using the exit; and</p> <p>(ii) When fully open, by more than 100 mm on the required width of the required exit, and</p> <p>The measurement of encroachment in each case is to include door handles or other furniture or attachments to the door; and</p> <p>(b) Must swing in the direction of egress unless</p> <p>(i) It serves a building part with a floor area not more than 200m², it is the only required exit from the building part and it is fitted with a device for holding it in the open position; or</p> <p>(ii) It serves a sanitary compartment or airlock (in which case it may swing in either direction; and</p> <p>(c) Must not otherwise impede the path or direction of egress.</p> <p><u>DTS non-compliance</u></p> <p>Lower Ground – Gym doorway is required to swing in the direction of egress.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</p>
D2.21 Operation of Latch				X	<p>(a) A door in a required exit, forming part of a required exit or in the path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress by –</p> <p>(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 –</p> <p>(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</p> <p>(B) have a clearance between the handle and the back plate or door face at the center grip section of the handle of not less than 35mm and not more than 45mm; or</p> <p>(ii) a single hand pushing action on a single device which is located between 900mm and 1.2m from the door; and</p> <p>(iii) where the latch operation device referred to in (ii) is not located on the door leaf itself –</p> <p>(A) manual controls to power operated doors must be at least 25mm wide, proud of the surrounding surface and located –</p> <p>(aa) not less than 500mm from an internal corner; and</p> <p>(bb) for a hinged door, between 1m and 2m from the door leaf in any position; and</p>

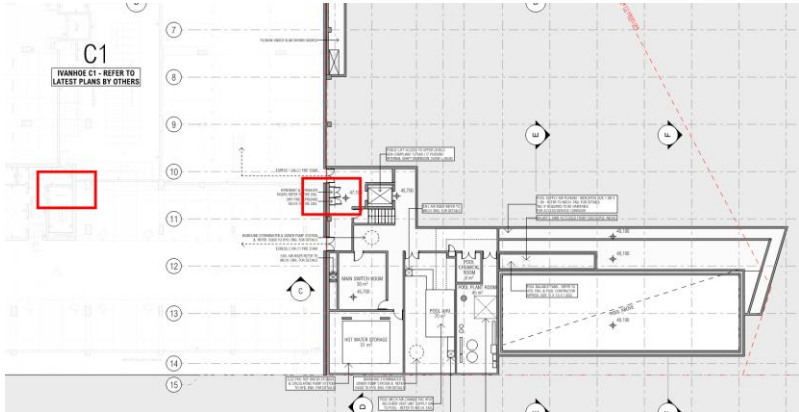
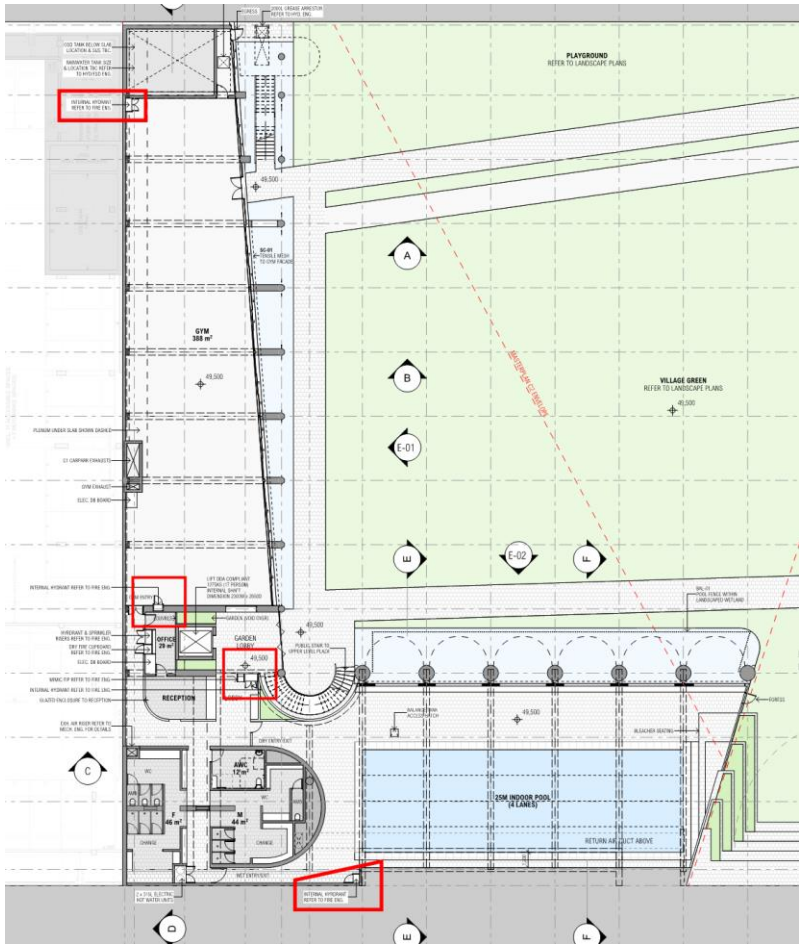
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(cc) for a sliding door, within 2m of the doorway and clear of a surface mounted door in the open position.</p> <p>(B) Braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device.</p> <p>(b) The requirements of (a) do not apply to a door that –</p> <p>(D) A space which is otherwise inaccessible to persons at all times when the door is locked; or</p> <p>(iii) Serves –</p> <p>(C) By operating a fail-safe control switch, not contained within the protective enclosure, to actuate a device to unlock the door; or</p> <p>(D) By hand by a person or persons, specifically nominated by the owner, properly instructed as to the duties and responsibilities involved and available at all times when the building is lawfully occupied so that persons in the building or part may immediately escape if there is a fire; or</p> <p>(iv) Is fitted with a fail-safe device which automatically unlocks the door upon the activation of any sprinkler system (other than a FPAA101D system) complying with Specification E1.5, or smoke , or any other detector system deemed suitable in accordance with AS1670.1 installed throughout the building, and is readily operable when unlocked; or</p> <p>(c) The requirements of (a) do not apply in a Class 9b building (other than a school, an early childhood centre or a building used for religious purposes) to a door in a required exit, forming part of a required exit or in the path of travel to a required exit serving a storey or room accommodating more than 100 persons, determined in accordance with D1.13, in which case it must be readily operable—</p> <p>(i) without a key from the side that faces a person seeking egress; and</p> <p>(ii) by a single hand pushing action on a single device such as a panic bar located between 900 mm and 1.2 m from the floor; and</p> <p>(iii) where a two-leaf door is fitted, the provisions of (i) and (ii) need only apply to one door leaf if the appropriate requirements of D1.6 are satisfied by the opening of that one leaf; and</p> <p>(iv) where the door is a door in a path of travel providing re-entry to the building from a balcony, terrace or the like, it may be fitted with key-operated fastenings only, the tongues of which must be locked in the retracted position whenever the building is occupied by the public, so the door can yield to pressure.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
D2.22 Re-entry from Fire isolated exits			X		Not applicable. No fire-isolated exits proposed
D2.23 Signs on Doors				X	<p>(a) A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to—</p> <p>(i) a required—</p> <p>(A) fire door providing direct access to a fire-isolated exit, except a door providing direct egress from a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building; and</p> <p>(B) smoke door,</p> <p>on the side of the door that faces a person seeking egress and, if the door is fitted with a device for holding it in the open position, on either the wall adjacent to the doorway or both sides of the door; and</p> <p>(ii) a—</p> <p>(A) fire door forming part of a horizontal exit; and</p> <p>(B) smoke door that swings in both directions; and</p> <p>(C) door leading from a fire isolated exit to a road or open space, on each side of the door.</p> <p>(b) A sign referred to in (a) must be in capital letters not less than 20 mm high in a colour contrasting with the background and state—</p> <p>(i) for an automatic door held open by an automatic hold-open device—</p> <p>“FIRE SAFETY DOOR—DO NOT OBSTRUCT”; or</p> <p>(ii) for a self-closing door—</p> <p>“FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN”; or</p> <p>(iii) for a door discharging from a fire-isolated exit—</p> <p>“FIRE SAFETY DOOR—DO NOT OBSTRUCT”.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.24 Protection of openable windows			X		Not applicable. No Class 2, 3 of 9b childcare centre proposed.
D2.25			X		Not applicable. No timber stairway are proposed.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Timber stairways concession					
Part D3 - Access for People with Disabilities – This report does not assess Access provisions.					
SECTION SERVICES & EQUIPMENT					E
Part E1 - Fire Fighting Equipment					
E1.3 Fire Hydrants				X	<p>(a) A hydrant system must be provided to serve a building –</p> <p>(i) Having a total floor area greater than 500m²; and</p> <p>(ii) Where a fire brigade station is –</p> <p>(A) No more than 50 km from the building as measured along roads; and</p> <p>(B) Equipped with equipment capable of utilising a fire hydrant.</p> <p>(b) The fire hydrant system-</p> <p>(i) Must be installed in accordance with AS2419.1, except –</p> <p>(B) Where a sprinkler system is installed throughout a building in accordance with AS 2118.1, AS 2118.4, AS 2118.6, FPAA101H or FPAA101D the fire hydrant booster protection requirements of Clause 7.3(c)(ii) and 7.3(d)(iii) of AS 2419.1 do not apply, and</p> <p>(C) A fire hydrant booster assembly may be located between 3.5m and 10m of the building, and need not comply with Clause 7.3(d)(iii) of AS 2419.1 where the assembly is protected by an adjacent fire rated freestanding wall that –</p> <p>(aa) achieves an FRL of not less than 90/90/90; and</p> <p>(bb) extends not less than 1m each side of the outermost fire hydrant booster risers within the assembly and is not less than 3m wide; and</p> <p>(cc) extends to a height of not less than 2m above finished ground level; and</p> <p>(ii) Where internal fire hydrants are provided, they must serve only the storey on which they are located except that a sole occupancy unit –</p> <p>(A) In a Class 2 or 3 building or Class 4 part may be served by a single fire hydrant located at the level of egress from the sole occupancy unit; or</p> <p>(B) Of not more than 2 storeys in a Class 5, 6, 7, 8 or 9 building may be served by a single fire hydrant located at the level of egress from that sole occupancy unit provided the fire hydrant can provide coverage to the whole of the sole occupancy unit.</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>Architectural plans are detailed with the following locations of hydrant valves:</p> <p>Basement Floor</p>  <p>Lower Ground Floor</p> 

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>Upper Ground Floor</p> <p>Hydraulic Services Design Certification and associated plans must be incorporated into the construction certificate specification</p>
<p>E1.4 Fire Hose Reels</p>		X			<p>(b) A fire hose reel system must be provided –</p> <ul style="list-style-type: none"> (i) to serve the whole building where one or more internal fire hydrants area installed; or (ii) where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500m². <p>(c) The fire hose reel system must –</p> <ul style="list-style-type: none"> (i) Have hose reels installed in accordance with AS 2441; and (ii) Provide hose reels to serve only the storey in which they are located except a sole occupancy unit of not more than 2 storeys in a Class 6, 7, 8 and 9 building may be served by a single fire hose reel located at the level of egress from that sole occupancy unit provided the fire hose reel can provide coverage to the whole of the sole occupancy unit.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(d) Fire hose reels must be located internally, externally or in combination, to achieve the system coverage as specified in AS2441.</p> <p>(e) In achieving system coverage, one or a combination of the following criteria for individual internally located fire hose reels must be met in determining the layout of any fire hose reel system:</p> <ul style="list-style-type: none"> (i) Fire hose reels must be located adjacent to an internal hydrant (other than one in a fire isolated exit). Except that a fire hose reel need not be located adjacent to every fire hydrant, provided system coverage can be achieved. (ii) Fire hose reels must be located within 4m of an exit, except that a fire hose reel need not be located adjacent to every exit, provided system coverage can be achieved. (iii) Where system coverage is not achieved by compliance with (i) and (ii), additional fire hose reels may be located in paths of travel to an exit to achieve the required coverage. <p>(f) Fire hose reels must be located so that the fire hose will not pass through doorways fitted with fire or smoke doors,</p> <p>(g) Where the normal water supply cannot achieve the flow and pressures required by AS 2441, or is unreliable –</p> <ul style="list-style-type: none"> (i) A pump; or (ii) Water storage facility; or (iii) Both a pump and water storage facility, <p>Must be installed to provide the minimum flow and pressures required by clause 6.1 of AS 2441.</p> <p><u>DTS non-compliance</u></p> <p>Architectural plans are required to detail the location of the required fire hose reels.</p> <p><i>Hydraulic Services Design Certification and associated plans must be incorporated into the construction certificate specification</i></p>
E1.5 Sprinklers				X	<p>A sprinkler system must –</p> <ul style="list-style-type: none"> (a) Be installed in a building or part of a building when required by Table E1.5; and (b) Comply with Specification E1.5 and Specification E1.5a as applicable as summarised below – <ul style="list-style-type: none"> ❖ All Classes - Throughout the whole building if any part of the building has an effective height of more than 25m <p><i>Hydraulic Services Design Certification must be incorporated into the construction certificate specification</i></p>
E1.6				X	<ul style="list-style-type: none"> (a) Portable fire extinguishers must be – (i) Provided as listed in Table E1.6;

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Portable Fire Extinguishers					(iii) Subject (b), selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
E1.8 Fire Control Centre			X		Not applicable. A Fire Control Centre will be provided in the adjoining C1 building.
E1.9 Fire Precautions during construction				X	In a building under construction – (a) not less than one portable fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required / temporary exit; and (b) After the building has reach an effective height of 12m – (i) the required fire hydrants and fire hose reels must be operational on all floor / roof covered storeys, except for the 2 uppermost storeys; and (ii) Any required booster connections must be installed. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
E1.10 Provision for Special Hazards			X		Not applicable. Not a special hazard.
Part E2 Smoke Hazard Management					
E2.2 General Requirements (inclusive of Table E2.2a / Table E2.2b & NSW amendments)				X	<u>General smoke hazard management requirements</u> (a) A building must comply with (b), (c), (d) and— (i) Table E2.2a as applicable to Class 2 to 9 buildings such that each separate part complies with the relevant provisions for the classification; and (ii) Table E2.2b as applicable to Class 6 and 9b buildings such that each separate part complies with the relevant provisions for the classification. (b) An air-handling system which does not form part of a smoke hazard management system in accordance with Table E2.2a or Table E2.2b and which recycles air from one fire compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must— (i) be designed and installed to operate as a smoke control system in accordance with AS 1668.1; or (ii) (A) incorporate smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(B) be arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with clause 7.5 of AS 1670.1; and</p> <p>for the purposes of this provision, each sole-occupancy unit in a Class 2 or 3 building is treated as a separate fire compartment.</p> <p>(c) Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one fire compartment (other than a carpark ventilation system) and not forming part of a smoke hazard management system must comply with that Section of the Standard.</p> <p>(d) A smoke detection system must be installed in accordance with Clause 6 of Specification E2.2a to operate AS 1668.1 systems that are provided for zone pressurisation and automatic air pressurisation for fire-isolated exits.</p> <p><i>Note: Smoke alarms in sole occupancy units are required to be interconnected.</i></p> <ul style="list-style-type: none"> • A zone pressurisation system between vertically separated fire compartments in accordance with AS 1668.1 is required. • The Upper Floor Level Class 9b assembly area is required to be provided with auto shutdown of air handling system in accordance with NSW E2.2b. <div style="border: 1px solid black; padding: 5px;"> <p>NSW Table E2.2a General provisions</p> <p>(a) Automatic shutdown:</p> <p>A building or part of a building used as an assembly building must be provided with automatic shutdown of any air handling system (other than non-ducted individual room units with a capacity not more than 1000 L/s and miscellaneous exhaust air systems installed in accordance with Sections 5 and 6 of AS 1668.1) which does not form part of the smoke hazard management system, on the activation of—</p> <p>(i) smoke detectors installed complying with Clause 6 of Specification E2.2a; and</p> <p>(ii) any other installed fire detection and alarm system, including a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5.</p> </div> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
E2.3 Provision for Special Hazards			X		Not applicable. Not a special hazard.
Part E3 - Lift Installations					
E3.1 Lift installations				X	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
E3.2 Stretcher Facility in Lifts			X		Not applicable. Emergency lift is not required. Effective height of area served is less than 12m.
E3.3 Warning Against the use of lifts in Fire				X	<p>A warning sign must—</p> <ul style="list-style-type: none"> (a) be displayed where it can be readily seen— <ul style="list-style-type: none"> (i) near every call button for a passenger lift or group of lifts throughout a building; except (ii) a small lift such as a dumb-waiter or the like that is for the transport of goods only; and (b) comply with the details and dimensions of Figure E3.3 and consist of— <ul style="list-style-type: none"> (i) incised, inlaid or embossed letters on a metal, wood, plastic or similar plate securely and permanently attached to the wall; or (ii) letters incised or inlaid directly into the surface of the material forming the wall. <p>“DO NOT USE LIFTS IF THERE IS A FIRE”</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
E3.4 Emergency Lifts			X		Not applicable. Effective height is less than 25m.
E3.5 Landings				X	<p>Access and egress to and from lift-well landings must comply with the Deemed-to-Satisfy Provisions of Section D.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
E3.6 Facilities for People with Disabilities				X	<p>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.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
E3.7 Fire Service Controls			X		Not applicable. Lifts serve any storey above an effective height of 12m.
E3.8 Residential Care Buildings			X		Not applicable. Not a residential care building.
E3.9 Fire service recall operation switch				X	Information relevant to specific fire service recall control switch requirements.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
E3.10 Lift car fire service drive control switch				X	Information relevant to specific lift car fire service drive control switch requirements. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
Part E4 - Visibility in an Emergency, Exit signs and Warning Systems					
E4.2 Emergency Lighting Requirements				X	An emergency lighting system must be installed— (a) in every fire-isolated stairway, fire-isolated passageway or fire-isolated ramp; and (b) in every storey of a Class 5, 6, 7, 8 or 9 building where the storey has a floor area more than 300 m ² — (i) in every passageway, corridor, hallway, or the like, that is part of the path of travel to an exit; and (ii) in any room having a floor area more than 100 m ² that does not open to a corridor or space that has emergency lighting or to a road or open space; and (iii) in any room having a floor area more than 300 m ² ; and (c) in every passageway, corridor, hallway, or the like, having a length of more than 6 m from the entrance doorway of any sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building to the nearest doorway opening directly to— (i) a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp; or (ii) an external stairway serving instead of a fire-isolated stairway under D1.8; or (iii) an external balcony leading to a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp; or (iv) a road or open space; and (d) in every required non-fire-isolated stairway; and (e) in a sole-occupancy unit in a Class 5, 6 or 9 building if— (i) the floor area of the unit is more than 300 m ² ; and (ii) an exit from the unit does not open to a road or open space or to an external stairway, passageway, balcony or ramp, leading directly to a road or open space; and (f) in every room or space to which there is public access in every storey in a Class 6 or 9b building if— (i) the floor area in that storey is more than 300 m ² ; or (ii) any point on the floor of that storey is more than 20 m from the nearest doorway leading directly to a stairway, ramp, passageway, road or open space; or



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(iii) egress from that storey involves a vertical rise within the building of more than 1.5 m, or any vertical rise if the storey concerned does not admit sufficient light; or</p> <p>(iv) the storey provides a path of travel from any other storey required by (i), (ii) or (iii) to have emergency lighting.</p> <p>Electrical Design Certification must be incorporated into the construction certificate specification</p>
E4.3 Measurement of Distance			X		<p>Informational.</p> <p>Distances, other than vertical rise, must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.</p>
E4.4 Design and Operation of Emergency Lighting			X		<p>The emergency lighting system must comply with AS/NZS 2293.1-2018</p>
E4.5 Exit Signs				X	<p>An exit sign must be clearly visible to persons approaching the exit, and must be installed on, above or adjacent to each—</p> <p>(a) door providing direct egress from a storey to—</p> <p>(i) an enclosed stairway, passageway or ramp serving as a required exit; and</p> <p>(ii) an external stairway, passageway or ramp serving as a required exit; and</p> <p>(iii) an external access balcony leading to a required exit; and</p> <p>(b) door from an enclosed stairway, passageway or ramp at every level of discharge to a road or open space; and</p> <p>(c) horizontal exit; and</p> <p>(d) door serving as, or forming part of, a required exit in a storey required to be provided with emergency lighting in accordance with E4.2.</p> <p>Electrical design plans and certification must be incorporated into the construction certificate specification</p>
E4.6 Direction Signs (inclusive of NSW E4.6)				X	<p>If an exit is not readily apparent to persons occupying or visiting the building, then exit signs must be installed—</p> <p>(a) in appropriate positions in corridors, hallways, lobbies, foyers, auditoria, and the like, indicating the direction to a required exit; and</p> <p>(b) in a Class 9b building used as an entertainment venue — in any external egress path to a road where the exit does not open directly onto a road</p> <p>Electrical Design Certification must be incorporated into the construction certificate specification and directional exit sign locations must be illustrated on the architectural floor plans</p>
E4.7			X		<p>Not applicable. Not a Class 2, 3 or 4 building.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Class 2 & 3 Buildings & Class 4 Parts: Exemption					
E4.8 Design & Operation of Exit Signs				X	Exit signs must comply with: (a) AS/NZS 2293.1-2018; or (b) For a photoluminescent exit sign, Specification E4.8. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
E4.9 Emergency Warning & Intercom Systems				X	An emergency warning and intercom system complying where applicable with AS 1670.4 must be installed— (a) in a building with an effective height of more than 25 m; and (e) in a Class 9b building— (i) used as a school and having a rise in storeys of more than 3; or (ii) used as a theatre, public hall, or the like, having a floor area more than 1000 m ² or a rise in storeys of more than 2. <i>Electrical Design Certification must be incorporated into the construction certificate specification</i>

SECTION F HEALTH & AMENITY

Part F1 - Damp & Weatherproofing

F1.0 Deemed -to-Satisfy Provisions			X		Performance Requirements FP1.4, for the prevention of the penetration of water through external wall, must be complied. There are no Deemed -to Satisfy Provisions for this Performance Solution in respect to external walls. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
F1.1 Stormwater Drainage				X	Stormwater drainage must comply with AS/NZS 3500.3-2018. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
F1.4 External above ground membranes				X	Any external above ground membranes must be waterproofed as per AS 4654 Parts 1 and 2-2012. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
F1.5 Roof coverings				X	A roof must be covered with— (d) metal sheet roofing complying with AS 1562.1; or <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
F1.6 Sarking				X	Sarking-type materials used for weatherproofing must comply with AS/NZS 4200.1 and AS 4200.2. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
F1.7 Waterproofing of wet area				X	(b) In a Class 5, 6, 7, 8 or 9 building, building elements in the bathroom or shower room, a slop hopper or sink compartment, a laundry or sanitary compartment must— (i) be water resistant or waterproof in accordance with Table F1.7; and (ii) comply with AS 3740, as if they were in a Class 2 or 3 building or a Class 4 part of a building. (c) Where a slab or stall type urinal is installed— (i) the floor surface of the room containing the urinal must— (A) be an impervious material; and (B) where no step is installed— (aa) be graded to the urinal channel for a distance of 1.5 m from the urinal channel; and (bb) the remainder of the floor be graded to a floor waste; and (C) where a step is installed— (aa) the step must have an impervious surface and be graded to the urinal channel; and (bb) the floor behind the step must be graded to a floor waste; and (ii) the junction between the floor surface and the urinal channel must be impervious. (d) Where a wall hung urinal is installed— (i) the wall must be surfaced with impervious material extending from the floor to not less than 50 mm above the top of the urinal and not less than 225 mm on each side of the urinal. (ii) the floor must be surfaced with impervious material and graded to a floor waste. (e) In a room with timber or steel-framed walls and containing a urinal— (i) the wall must be surfaced with an impervious material extending from the floor to not less than 100 mm above the floor surface; and (ii) the junction of the floor surface and the wall surface must be impervious.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F1.9 Damp-proofing				X	Where a damp-proof course is required, it must consist of a material that complies with AS/NZS 2904-1995; or impervious sheet material in accordance with AS 3660.1-2000 Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F1.10 Damp-proofing of floors on the ground				X	If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870-2011 (N/A to areas that do not require weatherproofing – refer specific clause exemptions). Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F1.11 Provision of Floor Wastes			X		Not applicable. Not a Class 2, 3 building.
F1.12 Sub Floor Ventilation			X		Not applicable. No sub floor space provided.
F1.13 Glazed Assemblies				X	Glazed assemblies within external walls in accordance with AS 2047-2014. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
Part F2 - Sanitary & Other Facilities					
F2.1 Facilities in residential buildings			X		Not applicable. Not a residential building.
F2.2 Calculation of number of occupants and fixtures			X		<ul style="list-style-type: none"> ❖ The number of persons accommodated must be calculated according to D1.13 if it cannot be more accurately determined by other means. ❖ Unless the premises are used predominantly by one sex, sanitary facilities must be provided on the basis of equal numbers of males and females. ❖ In calculating the number of sanitary facilities to be provided under F2.1 and F2.3, a unisex facility required for people with a disability may be counted once for each sex. ❖ For the purposes of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary towels.
F2.3 Facilities for Class 3 to 9 Buildings				X	(a) Except where permitted by (b), (c), (f), F2.4(a) and F2.4(b), separate sanitary facilities for males and females must be provided for Class 3, 5, 6, 7, 8 or 9 buildings in accordance with Table F2.3.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS																
					<p>(b) If not more than 10 people are employed, a unisex facility may be provided instead of separate facilities for each sex.</p> <p>(c) If the majority of employees are of one sex, not more than 2 employees of the other sex may share toilet facilities if the facilities are separated by means of walls, partitions and doors to afford privacy.</p> <p>(d) Employees and the public may share the same facilities in a Class 6 and 9b building (other than a school or early childhood centre) provided the number of facilities provided is not less than the total number of facilities required for employees plus those required for the public.</p> <p>(e) Adequate means of disposal of sanitary towels must be provided in sanitary facilities for use by females.</p> <p>(f) Separate sanitary facilities for males and females need not be provided for patients in a ward area of a class 9a building.</p> <p>• Lower Floor Level</p> <p><u>Population number calculations</u></p> <p>Gym = 367m² 418/3 (Table D1.13) = 140 people</p> <p>Pool = 200m² 200/1.5 (Table D1.13) = 134 people</p> <p>Combined population = 140 + 134 = 274</p> <p>Numbers of sanitary facilities calculated in accordance with Table F2.3 function room.</p> <p>Please note AED does not consider gym and pool to be a “sporting venue” as there will be no spectators. The provision of sanitary facilities for <i>participants</i> are considered too onerous and would only be appropriate for a venue where there are spectators.</p> <p><u>Required</u></p> <table><tr><th></th><th>Closet pan</th><th>Urinal</th><th>Washbasin</th></tr><tr><td>Males - 137</td><td>2* 1</td><td>3</td><td>2* 1</td></tr><tr><td>Females - 137</td><td>4* 3</td><td>-</td><td>2* 1</td></tr><tr><td>Unisex accessible</td><td colspan="3">1</td></tr></table> <p>* Applying concession F2.2(c) where a unisex accessible facility is counted once for each sex.</p>		Closet pan	Urinal	Washbasin	Males - 137	2* 1	3	2* 1	Females - 137	4* 3	-	2* 1	Unisex accessible	1		
	Closet pan	Urinal	Washbasin																		
Males - 137	2* 1	3	2* 1																		
Females - 137	4* 3	-	2* 1																		
Unisex accessible	1																				



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS																																
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	Closet pan	Urinal	Washbasin																		
Males	1	4	Unknown.																		
Females	4	-	Unknown																		
Unisex accessible	1																				
F2.4 Facilities for People with Disabilities			X		Not assessed in this report.																
F2.5 Construction of Sanitary Compartments				X	<p>Sanitary compartments must have:</p> <p>(a) Doors and partitions that separate adjacent compartments; and</p> <p>(b) the door to a fully enclosed sanitary compartment must open outwards, or slide, or be removable from outside of the compartment, unless there is a clear space of at least 1.2m between the closet pan within the compartment and the doorway.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>																
F2.6 Interpretation: Urinals and washbasins			X		<p>Information relevant to urinal and washbasin design.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>																
F2.7 Microbial Control Note NSW F2.7 (Clause Deleted)			X		Not applicable. Clause Deleted in NSW.																
F2.8 Waste Management					Information relevant to requirements for Class 9a & 9c.																
F2.9 Accessible adult change facilities			X		Not applicable. Not a shopping centre or a sporting venue.																
Part F3 Room Sizes																					
F3.1 Height of Rooms and other spaces				X	<p>The ceiling height must be not less than—</p> <p>(b) in a Class 5, 6, 7 or 8 building—</p> <p>(i) except as allowed in (ii) and (f) — 2.4 m; and</p> <p>(ii) a corridor, passageway, or the like — 2.1 m; and</p>																



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(d) in a Class 9b building—</p> <p>(i) a school classroom or other assembly building or part that accommodates not more than 100 persons — 2.4 m; and</p> <p>(ii) a theatre, public hall or other assembly building or part that accommodates more than 100 persons — 2.7 m; and</p> <p>(iii) a corridor—</p> <p>(A) that serves an assembly building or part that accommodates not more than 100 persons — 2.4 m; or</p> <p>(B) that serves an assembly building or part that accommodates more than 100 persons — 2.7 m; and</p> <p>(iv) the number of persons accommodated must be calculated according to D1.13; and</p> <p>(f) In any building—</p> <p>(i) a bathroom, shower room, sanitary compartment, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like — 2.1 m; and</p> <p>(ii) a commercial kitchen & required accessible change room facility — 2.4 m; and</p> <p>(iii) above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like.</p>
Part F4 - Light & Ventilation					
F4.1 Provision of natural light			X		Not applicable. Not a residential building or childcare centre.
F4.2 Methods and extent of natural lighting			X		Not applicable. Not a residential building or childcare centre.
F4.3 Natural light borrowed from adjoining room			X		Not applicable. Not a residential building or childcare centre.
F4.4 Artificial lighting				X	<p>Artificial lighting in accordance with AS/NZS 1680.0-2009 to specific building areas.</p> <p><i>Electrical Design Certification must be incorporated into the construction certificate specification</i></p>
F4.5 Ventilation of Rooms				X	<p>All rooms to be provided with Clause F4.6 compliant natural ventilation OR a mechanical ventilation or air-conditioning system complying with AS 1668.2-2012.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>





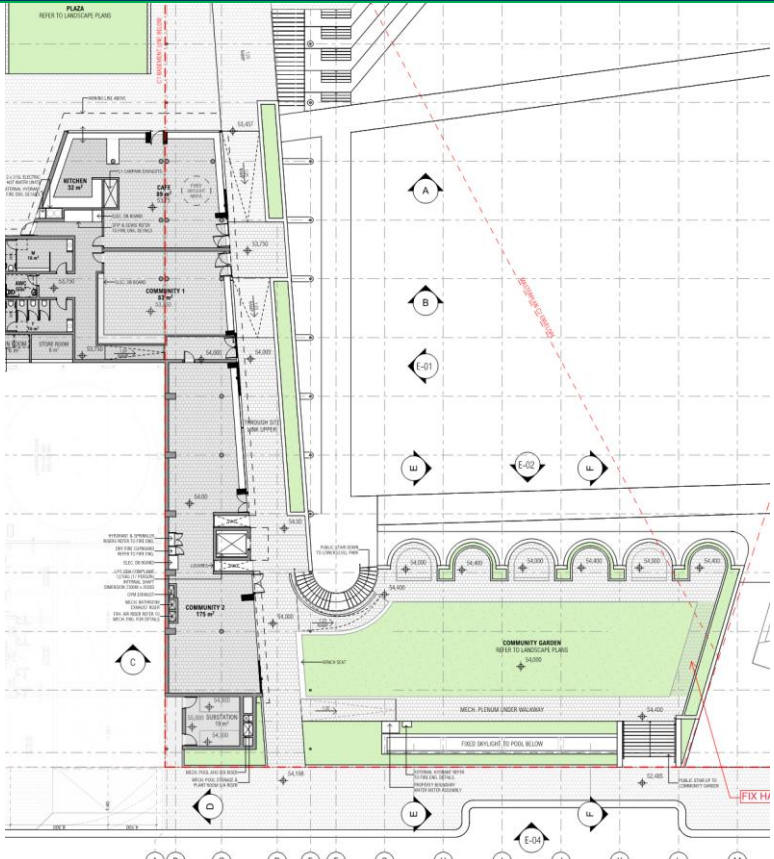
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
F4.6 Natural Ventilation			X		<p>(a) Natural ventilation provided in accordance with F4.5(a) must consist of permanent openings, windows, doors or other devices which can be opened—</p> <p>(i) with ventilating area not less than 5% of the floor area of the room required to be ventilated; and</p> <p>(ii) open to—</p> <p>(A) a suitably sized court, or space open to the sky; or</p> <p>(B) an open verandah, carport, or the like; or</p> <p>(C) an adjoining room in accordance with F4.7.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F4.7 Ventilation borrowed from adjoining room			X		Not applicable. Ventilation is not borrowed.
F4.8 Restriction of position of water closets and urinals	X				Rooms containing closet pans or urinals must not open directly into kitchen / pantry areas, public dining areas, Class 3 dormitory areas, public assembly areas (excluding early childhood centres, primary schools and open spectator stands) and a workplace normally occupied by more than one person.
F4.9 Airlocks			X		Not applicable. An airlock is not required.
F4.11 Carparks			X		Not applicable. No carpark proposed.
F4.12 Kitchen local exhaust			X		<p>Kitchen exhaust hood complying with AS/NZS 1668.1-2015 and AS 1668.2-2012 for commercial kitchens.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
Part F5 - Sound Transmission					
F5.1 Application of Part			X		Not applicable. No Class 2, 3 or 9c parts.
F5.2 Determination of airborne sound insulation ratings			X		Not applicable. No Class 2, 3 or 9c parts.
F5.3 Determination of impact sound insulation ratings			X		Not applicable. No Class 2, 3 or 9c parts.
F5.4 Sound Insulation of floors between units			X		Not applicable. No Class 2, 3 or 9c parts.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
F5.5 Sound insulation of walls between units			X		Not applicable. No Class 2, 3 or 9c parts.
F5.6 Sound insulation rating of services			X		Not applicable. No Class 2, 3 or 9c parts.
F5.7 Sound isolation of pumps			X		Not applicable. No Class 2, 3 or 9c parts.
Part F6 – Condensation Management					
F6.1 Application of Part			X		Not applicable. No Class 2 or 4.
F6.2 Pliable building membrane			X		Not applicable. No Class 2 or 4.
F6.3 Flow rate and discharge of exhaust systems			X		Not applicable. No Class 2 or 4.
F6.4 Ventilation of roof spaces			X		Not applicable. No Class 2 or 4.
SECTION ANCILLIARY PROVISIONS					G
Part G1 - Minor Structures and Components					
G1.1 Swimming Pools				X	<p>(a) G1.1(b) applies to the technical construction requirements for barriers to restrict access to swimming pools, subject to out-of-ground pool walls and the walls of above ground pools, including inflatable pools, not being considered to be effective barriers.</p> <p>(b) A swimming pool with a depth of water more than 300 mm and which is associated with a Class 2 or 3 building or Class 4 part of a building, must have suitable barriers to restrict access by young children to the immediate pool surrounds in accordance with:</p> <p>(i) AS 1926 Parts 1 and 2; or</p> <p>(ii) if the swimming pool is a spa pool:</p> <p>(A) The requirements of (b)(i); or</p> <p>(B) Clause 9 of the Swimming Pools Regulation 2018</p> <p>(c) A water recirculation system in a swimming pool with a depth of water more than 300mm must comply with AS 1926.3-2010.</p> <p>A swimming pool with a depth of water more than 300 mm and which is associated with a Class must have suitable barriers</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>to restrict access by young children to the immediate pool surrounds in accordance with AS 1926.1 and AS 1926.2.</p> <p>Consideration of Section 14 of the Swimming Pools Act is also required.</p> <div style="border: 1px solid black; padding: 5px;"> <p><u>14 General requirements for indoor swimming pools</u></p> <p>The owner of any premises in which an indoor swimming pool is situated must ensure that the means of access to the swimming pool are at all times restricted in accordance with the standards prescribed by the regulations.</p> </div> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
NSW G1.101 Provision for cleaning windows			X		Not applicable. No windows are located more than 3 storeys above ground level.
G1.2 Refrigeration chambers, strong-rooms and vaults			X		Not applicable. A refrigerated or cooling chamber of sufficient size for a person to enter is not proposed.
G1.3 Outdoor play areas			X		Not applicable.
Part G2 - Boilers, Pressure Vessels, Heating Appliances, Fireplaces, Chimneys and Flues					
G2.2 Installation of appliances			X		Not applicable.
G2.3 Open fire places			X		Not applicable.
G2.4 Incinerator rooms			X		Not applicable.
Part G3 - Atrium Construction					
G3.1 Application of Part			X		Not applicable. No atrium proposed.
G3.2 Dimensions of atrium well			X		Not applicable. No atrium proposed.
G3.3 Separation of atrium by bounding walls			X		Not applicable. No atrium proposed.
G3.4 Construction of bounding walls			X		Not applicable. No atrium proposed.
G3.5 Construction at balconies			X		Not applicable. No atrium proposed.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
G3.6 Separation at roof			X		Not applicable. No atrium proposed.
G3.7 Means of egress			X		Not applicable. No atrium proposed.
G3.8 Fire and smoke control systems			X		Not applicable. No atrium proposed.
Part G4 - Construction in Alpine Areas					
G4.1 Application of Part			X		Not applicable. Not an alpine area.
G4.3 External doorways			X		Not applicable. Not an alpine area.
G4.4 Emergency lighting			X		Not applicable. Not an alpine area.
G4.5 External ramps			X		Not applicable. Not an alpine area.
G4.6 Discharge of exits			X		Not applicable. Not an alpine area.
G4.7 External trafficable structures			X		Not applicable. Not an alpine area.
G4.8 Fire-fighting services and equipment			X		Not applicable. Not an alpine area.
G4.9 Fire orders			X		Not applicable. Not an alpine area.
Part G5 - Construction in Bushfire Prone Areas					
G5.1 Application of Part			X		Not applicable. Not a bushfire area.
G5.2 Protection			X		Not applicable. Not a bushfire area.
Part G6 - Occupiable Outdoor Areas					
G6.1 Application of Part				X	<p>The DTS provisions of this part apply to buildings containing an outdoor area in addition to the other DTS provisions of the BCA. It does not apply to such areas within a sole occupancy unit.</p> <p><i>Note – occupiable outdoor area is defined as a space on a roof, balcony, or similar part of a building that is open to the sky; and to which access is provided, other than access only for maintenance; and that is not open space or directly connected to open space.</i></p> <p>The area on Upper Ground Area is considered an occupiable outdoor area subject to this part.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					
G6.2 Fire hazard properties				X	<p>(a) A lining, material or assembly in an occupiable area must comply with C1.10 as for an internal element.</p> <p>(b) The following fire hazard properties of a lining, material or assembly in an occupiable area are not required to comply with C1.10:</p> <ul style="list-style-type: none"> (i) Average specific extinction area. (ii) Smoke-development Index. (iii) Smoke development rate. <p>(c) Smoke growth rate index.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
G6.3 Fire separation			X		<p>Informational.</p> <p>For the purposes of DTS provisions of C2.7, C2.8 and C2.9, a reference to a storey includes an occupiable outdoor area, however a fire wall cannot be used to separate an occupiable area into different fire compartments.</p>
G6.4 Provision for escape				X	<p>For the purposes of the DTS provisions of Part D1, a reference to a storey or room includes an occupiable outdoor area.</p>
G6.5 Construction of exits				X	<p>For the purposes of the DTS provisions of Part D2, a reference to a storey includes an occupiable outdoor area.</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
G6.6 Firefighting equipment				X	For the purposes of the DTS provisions of Part E1, a reference to a storey includes an occupiable outdoor area.



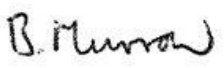
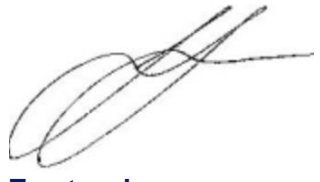
5.0 CONCLUSION

This report provides a Building Code of Australia 2019 Amendment 1 (BCA) assessment of the proposed the proposed Village Green, Community Centre, Swimming Pool and Gym, to be located at C2, Epping Road, Macquarie Park

The primary purpose of this report was to identify the non-compliance matters contained in the proposed design philosophy against the current Deemed-to-Satisfy (DTS) Provisions of the BCA and to provide compliance recommendations to overcome the DTS non-compliances.

This report provided a BCA assessment table in Section 3.0 that summarises the identified non-compliance matters and offers specific recommendations that are also outlined in the Executive Summary.

Further, if compliance with the deemed-to-satisfy provisions is not achievable or desirable, Alternative Solutions could be further developed and verified by an appropriately qualified BCA Consultant or Fire Safety Engineer.

<p>Prepared by:</p>  <u>Ben Murrow</u> Senior Associate For AED Accredited Certifier / Principal Certifying Authority (Building) – Grade 3 BDC2060	<p>Reviewed by:</p>  <u>Trenton Jones</u> Director For AED Accredited Certifier / Principal Certifying Authority (Building) – Grade 1 BDC0203
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6.0 ATTACHMENT A - INSPECTION & MAINTENANCE

6.1 Fire Safety Measures

The fire safety measures within the building must be maintained to ensure correct operation at all times the building is occupied. All firefighting equipment should be tagged when tested/inspected and log books kept up-to-date for all smoke detection, warning systems and sprinkler systems (where installed).

An annual fire safety certificate must be submitted to the local consent authority and the NSW Fire Brigade each year indicating satisfactory performance of the fire safety measures contained within the building. The annual fire safety statement should be displayed in a prominent place within the building (i.e. the main entry foyer)

The correct operation and maintenance of the buildings fire safety measures is critical in affording an adequate level of fire safety.

6.2 Good Housekeeping

The ongoing management of the building should ensure good housekeeping procedures. The following matters should be considered by building management:

- ❖ Ensure exits and paths of travel to exits remain unobstructed (in particular stairways)
- ❖ Avoid storage of materials in unoccupied areas
- ❖ Limit storage of flammable/combustible materials to designated and approved areas
- ❖ Prevent chocking open fire/smoke doors
- ❖ Prevent storage of materials that could hinder access to firefighting equipment

7.0 ATTACHMENT B – REQUIREMENTS TYPE A CONSTRUCTION

3.1 Fire-resistance of Building Elements

In a building required to be of Type A construction—

- (a) each building element listed in Table 3 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and
- (b) * * * *
- (c) any internal wall required to have an FRL with respect to integrity and insulation must extend to—
 - (i) the underside of the floor next above; or
 - (ii) the underside of a roof complying with Table 3; or
 - (iii) if under Clause 3.5 the roof is not required to comply with Table 3, the underside of the non-combustible roof covering and, except for roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not be crossed by timber or other combustible building elements; or
 - (iv) a ceiling that is immediately below the roof and has a resistance to the incipient spread of fire to the roof space between the ceiling and the roof of not less than 60 minutes; and
- (d) a loadbearing internal wall and a loadbearing fire wall (including those that are part of a loadbearing shaft) must be constructed from—
 - (i) concrete; or
 - (ii) masonry; or
 - (iii) fire-protected timber, provided that—
 - (A) the building is—
 - (aa) a separate building; or
 - (ee) a part of a building—
 - (AA) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or
 - (BB) which is located above or below a part not containing fire-protected timber and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a fire wall for the lower storey; and
 - (B) the building has an effective height of not more than 25 m; and
 - (C) the building has a sprinkler system (other than a FPAA101D or FPAA101H system) throughout complying with Specification E1.5; and
 - (D) any insulation installed in the cavity of the timber building element required to have an FRL is non-combustible; and
 - (E) cavity barriers are provided in accordance with Specification C1.13; or
 - (iv) any combination of (i) to (iii); and
 - (e) * * * * *
 - (f) the FRLs specified in Table 3 for an external column apply also to those parts of an internal column that face and are within 1.5 m of a window and are exposed through that window to a fire-source feature.

Table 3 Type A Construction: FRL of Building Elements

Building Element	Class of building – FRL: (in minutes)			
	<i>Structural adequacy/Integrity/Insulation</i>			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it is exposed is—				
For loadbearing parts—				
Less than 1.5m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3m	90/60/60	120/90/90	180/180/120	240/240/180
3m or more	90/60/30	120/60/30	180/120/90	240/180/90

Building Element	Class of building – FRL: (in minutes) <i>Structural adequacy/Integrity/Insulation</i>			
For non-loadbearing parts—				
Less than 1.5m	-/90/90	-/120/120	-/180/180	-/240/240
1.5 to less than 3m	-/60/60	-/90/90	-/180/120	-/240/180
3m or more	-/-/-	-/-/-	-/-/-	-/-/-
EXTERNAL COLUMN not incorporated in an external wall—				
For loadbearing columns -	90/-/-	120/-/-	180/-/-	240/-/-
For non-loadbearing columns -	-/-/-	-/-/-	-/-/-	-/-/-
COMMON WALLS AND FIRE WALLS	90/90/90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS				
Fire-resisting lift and stair shafts				
Loadbearing	90/90/90	120/120/120	180/120/120	240/120/120
Non-loadbearing	-/90/90	-/120/120	-/120/120	-/120/120
Bounding public corridors, public lobbies and the like -				
Loadbearing	90/90/90	120/-/-	180/-/-	240/-/-
Non-loadbearing	-/60/60	-/-/-	-/-/-	-/-/-
Between or bounding sole-occupancy units				
Loadbearing	90/90/90	120/-/-	180/-/-	240/-/-
Non-loadbearing	-/60/60	-/-/-	-/-/-	-/-/-
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion -				
Loadbearing	90/90/90	120/90/90	180/120/120	240/120/120
Non-loadbearing	-/90/90	-/90/90	-/120/120	-/120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES				
And Columns -	90/-/-	120/-/-	180/-/-	240/-/-
Floors	90/90/90	120/120/120	180/180/180	240/240/240
Roofs	90/60/30	120/60/30	180/60/30	240/90/60

3.2 Concessions for floors

A floor need not comply with Table 3 if—

- it is laid directly on the ground; or
- in a Class 2, 3, 5 or 9 building, the space below is not a storey, does not accommodate motor vehicles, is not a storage or work area, and is not used for any other ancillary purpose; or
- it is a timber stage floor in a Class 9b building laid over a floor having the required FRL and the space below the stage is not used as a dressing room, store room, or the like; or
- it is within a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building; or
- it is an open-access floor (for the accommodation of electrical and electronic services and the like) above a floor with the required FRL.

3.3 Floor loading of Class 5 and 9b buildings: Concession

If a floor in a Class 5 or 9b building is designed for a live load not exceeding 3 kPa—

- the floor next above (including floor beams) may have an FRL of 90/90/90; or
- the roof, if that is next above (including roof beams) may have an FRL of 90/60/30.

3.4 Roof superimposed on concrete slab: Concession

A roof superimposed on a concrete slab roof need not comply with Clause 3.1 as to fire-resisting construction if—

- (a) the superimposed roof and any construction between it and the concrete slab roof are non-combustible throughout; and
- (b) the concrete slab roof complies with Table 3.

3.5 Roof: Concession

A roof need not comply with Table 3 if its covering is non-combustible and the building—

- (a) has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 installed throughout; or
- (b) has a rise in storeys of 3 or less; or
- (c) is of Class 2 or 3; or
- (d) has an effective height of not more than 25 m and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes.

3.6 Roof lights

If a roof is required to have an FRL or its covering is required to be non-combustible, roof lights or the like installed in that roof must—

- (a) have an aggregate area of not more than 20% of the roof surface; and
- (b) be not less than 3 m from—
 - (i) any boundary of the allotment other than the boundary with a road or public place; and
 - (ii) any part of the building which projects above the roof unless that part has the FRL required of a fire wall and any openings in that part of the wall for 6 m vertically above the roof light or the like are protected in accordance with C3.4; and
 - (iii) any roof light or the like in an adjoining sole-occupancy unit if the walls bounding the unit are required to have an FRL; and
 - (iv) any roof light or the like in an adjoining fire-separated section of the building; and
- (c) if a ceiling with a resistance to the incipient spread of fire is required, be installed in a way that will maintain the level of protection provided by the ceiling to the roof space.

3.7 Internal columns and walls: Concession

For a building with an effective height of not more than 25 m and having a roof without an FRL in accordance with Clause 3.5, in the storey immediately below that roof, internal columns other than those referred to in Clause 3.1(f) and internal walls other than fire walls and shaft walls may have—

- (a) in a Class 2 or 3 building: FRL 60/60/60; or
- (b) in a Class 5, 6, 7, 8 or 9 building—
 - (i) with rise in storeys exceeding 3: FRL 60/60/60; or
 - (ii) with rise in storeys not exceeding 3: no FRL.

3.8 Open spectator stands and indoor sports stadiums: Concession

In an open spectator stand or indoor sports stadium, the following building elements need not have the FRL specified in Table 3:

- (a) The roof if it is non-combustible.
- (b) Columns and loadbearing walls supporting only the roof if they are non-combustible.
- (c) Any non-loadbearing part of an external wall less than 3 m—
 - (i) from any fire-source feature to which it is exposed if it has an FRL of not less than –/60/60 and is non-combustible; or
 - (ii) from an external wall of another open spectator stand if it is non-combustible.

3.9 Carparks

- (a) Notwithstanding Clause 3.1, a carpark may comply with Table 3.9 if it is an open-deck carpark or is protected with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 and is—

- (i) a separate building; or
 - (ii) a part of a building—

- (A) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or
 - (B) which is located above or below another classification, and the floor separating the classifications complies with C2.9; or
 - (C) which is located above another Class 7 part of the building not used for carparking, and the floor separating the parts complies with Table 3 for a Class 7 part other than a carpark; or
 - (D) which is located below another Class 7 part of the building not used for carparking, and the floor separating the parts complies with Table 3.9.
- (b) For the purposes of this Clause, a carpark—
- (i) includes—
 - (A) an administration area associated with the functioning of the carpark; and
 - (B) where the carpark is sprinklered, is associated with a Class 2 or 3 building and provides carparking for separate sole-occupancy units, each carparking area with an area not greater than 10% of its floor area for purposes ancillary to the sole-occupancy units; but
 - (ii) excludes—
 - (A) except for (b)(i), any area of another classification, or other part of a Class 7 building not used for carparking; and
 - (B) a building or part of a building specifically intended for the parking of trucks, buses, vans and the like.

Table 3.9 - Requirements for carparks

Building Element			FRL (not less than) <i>Structural adequacy/Integrity/Insulation</i> ESA/M (not greater than)
Wall			
(a)	External Wall		
	(i)	Less than 3m from a fire-source feature to which it is exposed:	
			Loadbearing
		Non-loadbearing	-/60/60
	(ii)	3m or more from a fire-source feature to which it is exposed	-/-/-
(b)	Internal Wall		
	(i)	Loadbearing, other than one supporting only the roof (not used for carparking)	60/-/-
	(ii)	Supporting only the roof (not used for carparking).	-/-/-
	(iii)	Non-loadbearing	-/-/-
(c)	Fire wall		
	(i)	From the direction used as a carpark	60/60/60
	(ii)	From the direction not used as a carpark	As required by Table 7.1
Column			
(a)	Supporting only the roof (not used for carparking) and 3m or more from a fire-source to which it is exposed		-/-/-
(b)	Steel column other than one covered by (a) and one that does not support a part of a building that is not used as a carpark		60/-/- or 25m ² /tonne
(c)	Any other column not covered by (a) or (b)		60/-/-
Beam			

Building Element		FRL (not less than) <i>Structural adequacy/Integrity/Insulation</i> ESA/M (not greater than)
(a)	Steel floor beam in continuous contact with a concrete floor slab	60/-/- or 30m ² /tonne
(b)	Any other beam	60/-/-
Fire resisting lift and stair shaft (within the carpark only)		60/60/60
Floor slab and vehicle ramp		60/60/60
Roof (not used for carparking)		-/-/-

Notes to Table 3.9:

1. ESA/M means the ratio of exposed surface area to mass per unit length.

2. Refer to Specification E1.5 for special requirements for a sprinkler system in a carpark complying with Table 3.9 and located within a multi-classified building.

3.10 Class 2 and 3 buildings: Concession

- (a) A Class 2 or 3 building having a rise in storeys of not more than 3 need not comply with Clause 3.1(d) of Specification C1.1 and the requirements of C1.9(a), (b) and C2.6 for non-combustible material, if it is constructed using—
 - (i) timber framing throughout; or
 - (ii) non-combustible material throughout; or
 - (iii) a combination of (i) and (ii), provided—
 - (iv) * * * * *
 - (v) any insulation installed in the cavity of a wall required to have an FRL is non-combustible; and
 - (vi) the building is fitted with an automatic smoke alarm system complying with Specification E2.2a.
- (b) A Class 2 or 3 building having a rise in storeys of not more than 4 may have the top three storeys constructed in accordance with (a) provided—
 - (i) the lowest storey is used solely for the purpose of parking motor vehicles or for some other ancillary purpose; and
 - (ii) the lowest storey is constructed of concrete or masonry including the floor between it and the Class 2 or 3 part of the building above; and
 - (iii) the lowest storey and the storey above are separated by construction having an FRL of not less than 90/90/90 with no openings or penetrations that would reduce the fire-resisting performance of that construction except that a doorway in that construction may be protected by a -/60/30 self-closing fire door.
- (c) In a Class 2 or 3 building complying with (a) or (b) and fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5, any FRL criterion prescribed in Table 3—
 - (i) for any floor and any loadbearing wall, may be reduced to 60, except any FRL criterion of 90 for an external wall must be maintained when tested from the outside; and
 - (ii) for any non-loadbearing internal wall, need not apply if—
 - (A) it is lined on each side with 13 mm standard grade plasterboard or similar non-combustible material; and
 - (B) it extends—
 - (aa) to the underside of the floor next above; or
 - (bb) to the underside of a ceiling with a resistance to the incipient spread of fire of 60 minutes; or
 - (cc) to the underside of a non-combustible roof covering; and
 - (C) any insulation installed in the cavity of the wall is non-combustible; and
 - (D) any construction joint, space or the like between the top of the wall and the floor, ceiling or roof is smoke sealed with intumescent putty or other suitable material; and
 - (E) any doorway in the wall is protected by a self-closing, tight fitting, solid core door not less than 35 mm thick.



BUILDING CODE OF AUSTRALIA COMPLIANCE ASSESSMENT REPORT

24 STOREY RESIDENTIAL BUILDING AND 17 STOREY RESIDENTIAL BUILDING WITH 3 STOREY
BASEMENT CARPARK

IVANHOE ESTATE - LOT C4, EPPING ROAD, MACQUARIE PARK

DATE ► 05/08/2021

REPORT NO. ► 11067.3

PREPARED FOR ► Frasers

PREPARED BY ► AE&D



AEDGROUP

Innovation & expertise in building regulations

CONTENTS

1.0	EXECUTIVE SUMMARY AND RECOMMENDATIONS	3
1.1	RECOMMENDATIONS	3
2.0	INTRODUCTION	27
2.1	BASIS OF REPORT	27
2.2	PURPOSE OF THE REPORT.....	28
2.3	LIMITATIONS OF THE REPORT.....	28
3.0	BCA ASSESSMENT DATA	30
3.1	LOCATION OF FIRE SOURCE FEATURES	30
3.2	SUMMARY OF FIRE SERVICES REQUIRED.....	31
4.0	BCA ASSESSMENT SUMMARY	33
5.0	CONCLUSION	120
6.0	ATTACHMENT A - INSPECTION & MAINTENANCE	121
6.1	FIRE SAFETY MEASURES.....	121
6.2	GOOD HOUSEKEEPING	121
7.0	ATTACHMENT B – REQUIREMENTS TYPE A CONSTRUCTION	122

REVISION STATUS				
REPORT NO/REV	DATE	STATUS	WRITTEN	CHECKED
11067.3, Rev 1.0	20/04/2021	DRAFT FOR COMMENT	BM	TJ
11067.3, Rev 2.0	30/04/2021	UPDATED DRAFT FOR COMMENT	BM	TJ
11067.3, Rev 3.0	18/06/2021	UPDATED DRAFT FOR COMMENT	BM	TJ
11067.3, Rev 4.0	30/06/2021	FINAL	BM	TJ
11067.3, Rev 5.0	06/07/2021	FINAL – MINOR UPDATE	BM	TJ
11067.3, Rev 6.0	05/08/2021	FINAL – MINOR UPDATE	BM	TJ

COMMERCIAL IN CONFIDENCE

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1.0 EXECUTIVE SUMMARY AND RECOMMENDATIONS

This report provides a Building Code of Australia (BCA) 2019 Amendment 1 assessment of the proposed 24 storey residential tower and 17 storey residential tower with 3 storey basement carpark building, to be located at Stage 2, Lot C4, Ivanhoe Estate at Epping Road, Macquarie Park

The primary purpose of this report is to identify the non-compliance matters contained in the proposed design against the current Deemed-to-Satisfy (DTS) Provisions of the BCA and to provide compliance recommendations to overcome the DTS non-compliances.

1.1 Recommendations

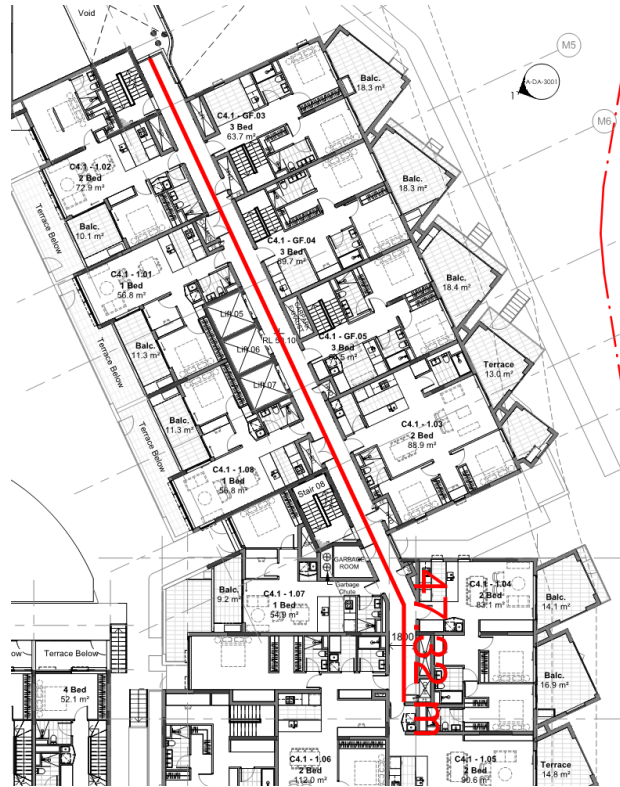
The following is a list of Deemed-to-Satisfy Provisions that should be addressed either by design amendments, additional information **OR** by way of an Alternative Solution:

BCA Clause	Deemed-to-Satisfy Provision to be addressed
C2.14 Public corridors in Class 2 & 3 Buildings	<ul style="list-style-type: none"> Ground floor - Corridor length is greater than 40m, being 48.08m.

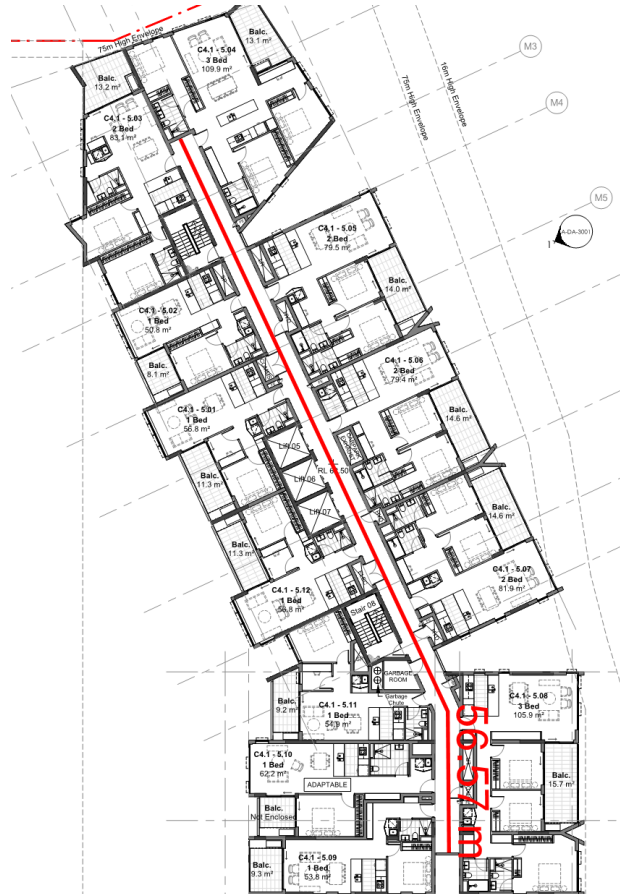
BCA Clause

Deemed-to-Satisfy Provision to be addressed

Level 1 & 2 - Corridor length is greater than 40m, being 47.32m



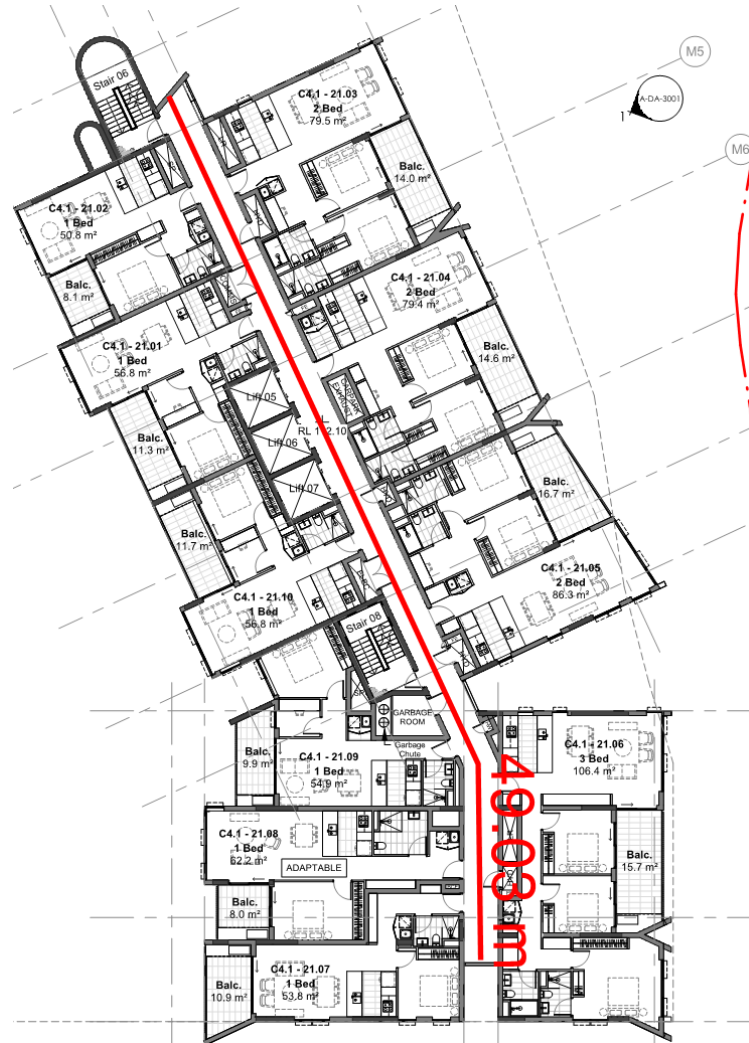
Level 3-17 Corridor length is greater than 40m, being 56.6m



BCA Clause

Deemed-to-Satisfy Provision to be addressed

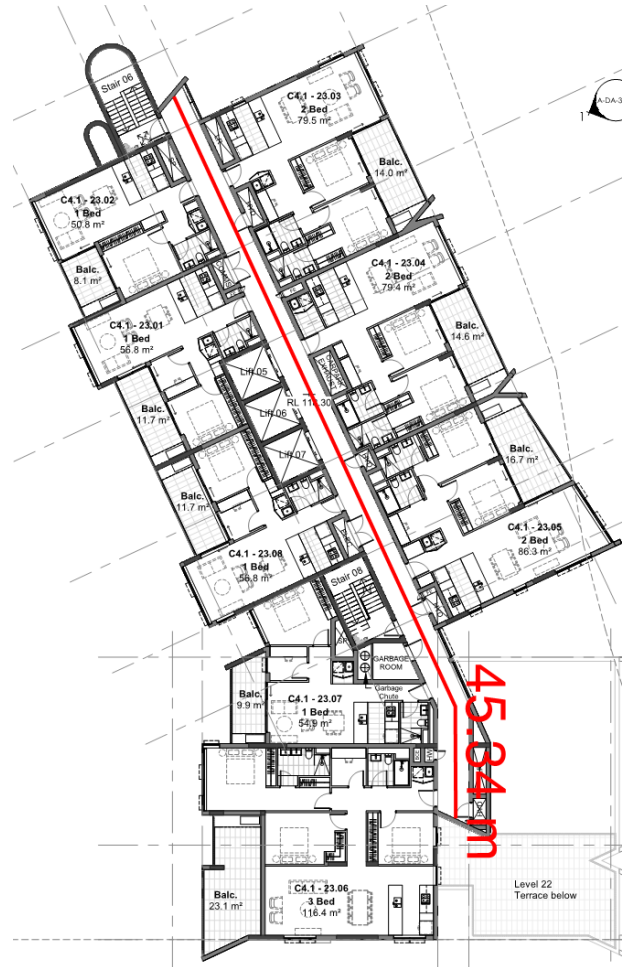
Level 18-21 - Corridor length is greater than 40m, being 49.1m



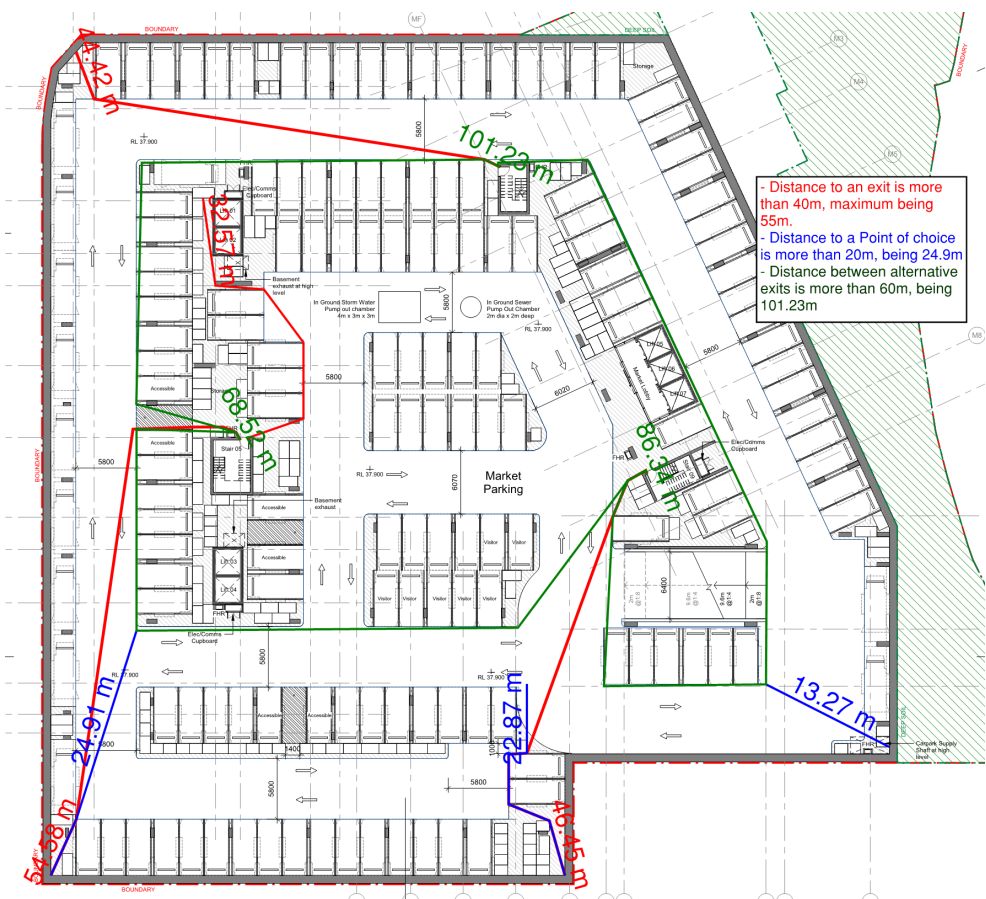
BCA Clause

Deemed-to-Satisfy Provision to be addressed

Level 22 -23 - Corridor length is greater than 40m, being 45.4m.



Page 7 of 127

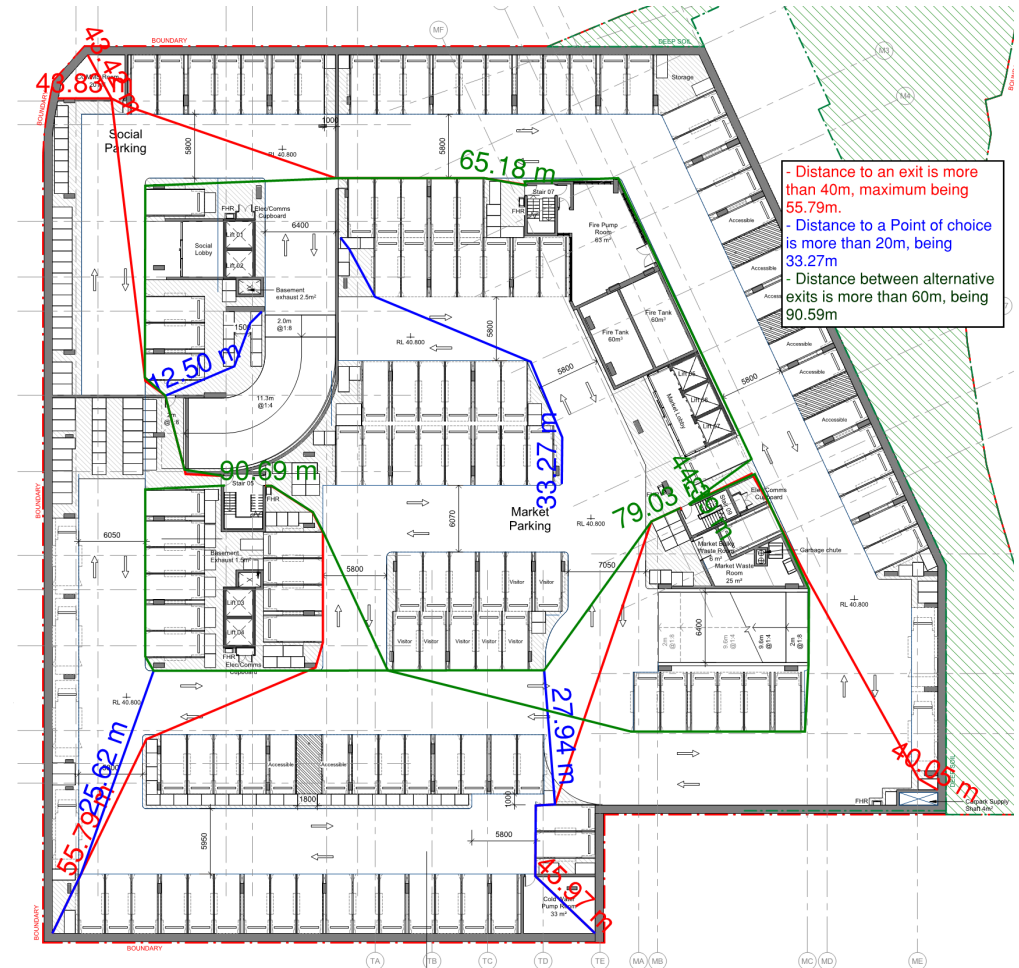
BCA Clause	Deemed-to-Satisfy Provision to be addressed
<p>D1.4</p> <p>Exit Travel Distances</p>	<p>Basement 3 – Distance to a point of choice or an exit exceed 20m and 40m respectively.</p> <p><i>It is recommended that this is addressed by a Fire Engineered Performance Solution.</i></p> 

BCA Clause

Deemed-to-Satisfy Provision to be addressed

Basement 2 – Distance to a point of choice or an exit exceed 20m and 40m respectively.

It is recommended that this is addressed by a Fire Engineered Performance Solution.



Deemed-to-Satisfy Provision to be addressed

46.18 m

72.62 m

43.16 m

91.63 m

87.63 m

27.59 m

28.09 m

60.70 m

Social Visitor Parking Zone

Social Parking

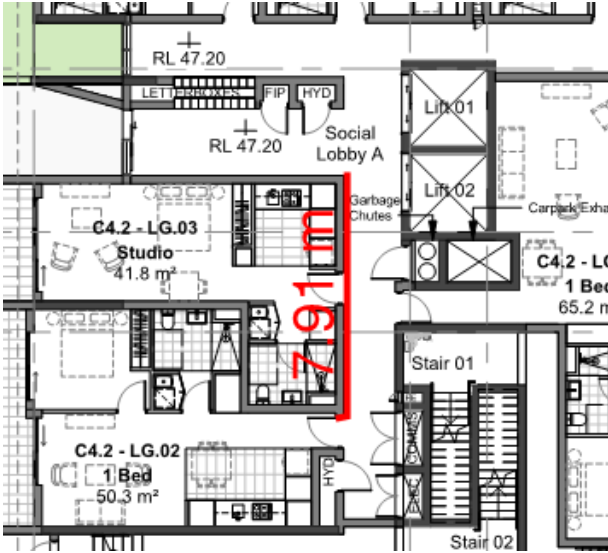
Social Lobby

HRV TURN TABLE

Distance to an exit is more than 40m, maximum being 60.70m.

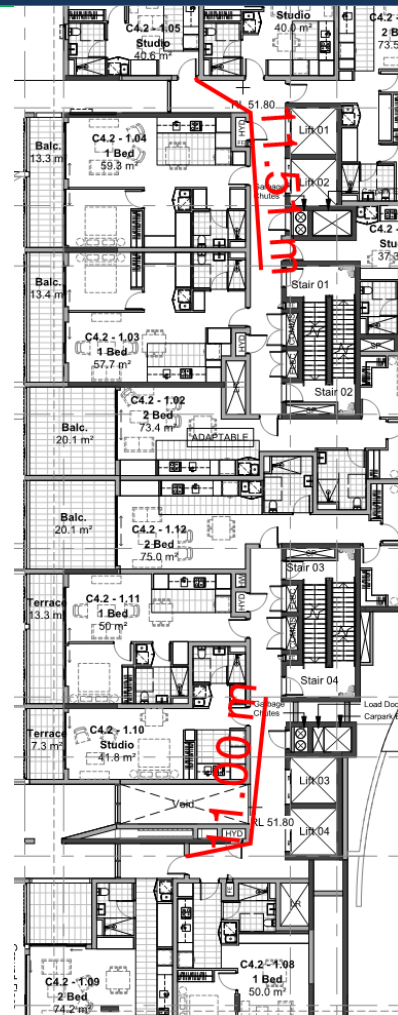
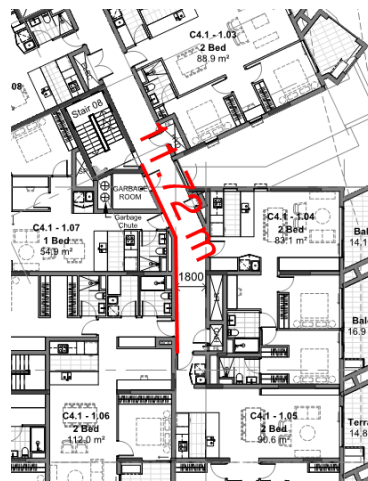
Distance to a Point of choice is more than 20m, being 27.49m

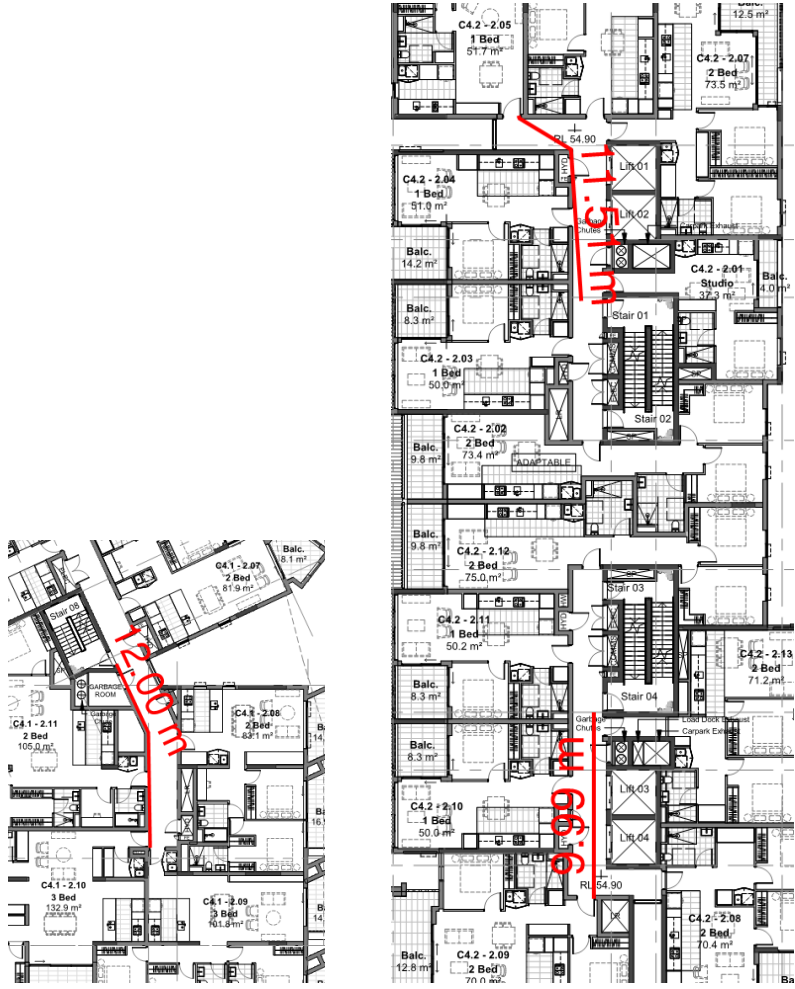
Distance between alternative exits is more than 60m, being 91.23m

BCA Clause	Deemed-to-Satisfy Provision to be addressed
	<p>Ground Floor – Unit LG.02 - The distance to a point of choice is greater than 6m, being 8.0m.</p>  <p>Level 1</p> <ul style="list-style-type: none"> - Unit 1.05 The distance to a point of choice is greater than 6m, being 11.8m (shown in red below). - Unit 1.05 - The distance to a point of choice is greater than 6m, being 11.6m (shown in red below). - Unit 1.09 - The distance to a point of choice is greater than 6m, being 11.0m (shown in red below).

BCA Clause

Deemed-to-Satisfy Provision to be addressed



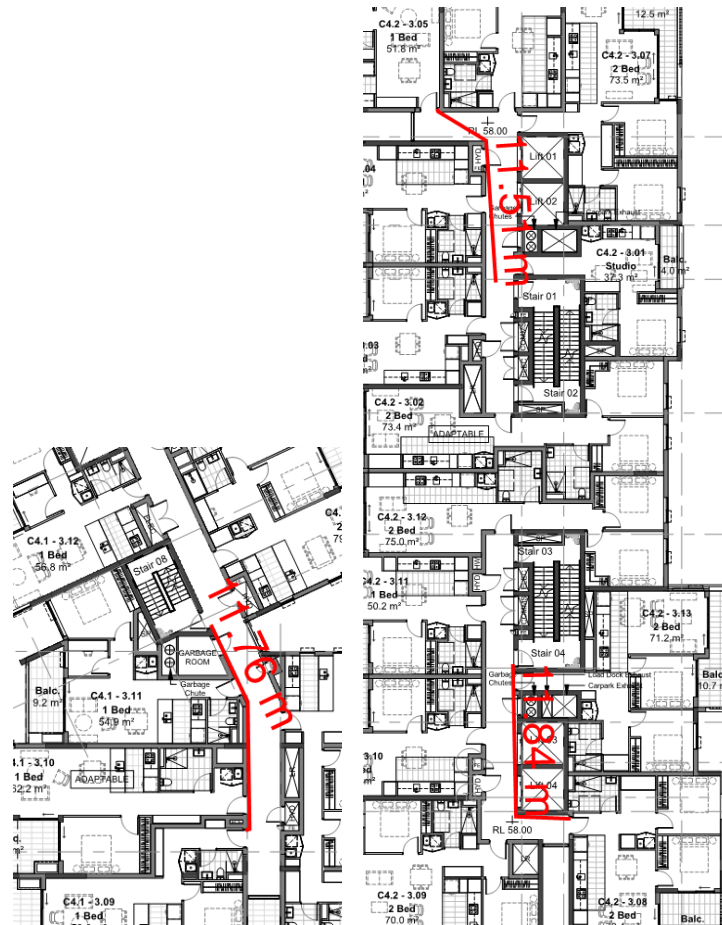
BCA Clause	Deemed-to-Satisfy Provision to be addressed
	<p>Level 2</p> <ul style="list-style-type: none"> – Unit 2.09 - The distance to a point of choice is greater than 6m, being 12.0m (shown in red below). – Unit 2.05 - The distance to a point of choice is greater than 6m, being 11.6m (shown in red below). – Unit 2.09 - The distance to a point of choice is greater than 6m, being 10.0m (shown in red below). <div>  <p>The floor plan shows various units including C4.2-2.05 (1 Bed, 91.7 m²), C4.2-2.07 (2 Bed, 73.5 m²), C4.2-2.06 (1 Bed, 91.0 m²), C4.2-2.01 (Studio, 37.2 m²), C4.2-2.03 (1 Bed, 50.0 m²), C4.2-2.02 (2 Bed, 73.4 m²), C4.2-2.10 (2 Bed, 75.0 m²), C4.2-2.11 (1 Bed, 50.2 m²), C4.2-2.13 (2 Bed, 71.2 m²), C4.2-2.10 (1 Bed, 50.0 m²), C4.2-2.09 (2 Bed, 70.0 m²), C4.1-2.09 (2 Bed, 81.9 m²), C4.1-2.11 (2 Bed, 105.0 m²), C4.1-2.10 (3 Bed, 132.9 m²), and C4.1-2.09 (3 Bed, 101.8 m²). Distances are marked in red: 12.0m from Unit 2.09 to a point of choice, 11.6m from Unit 2.05 to a point of choice, and 10.0m from Unit 2.09 to a point of choice.</p> </div>

BCA Clause

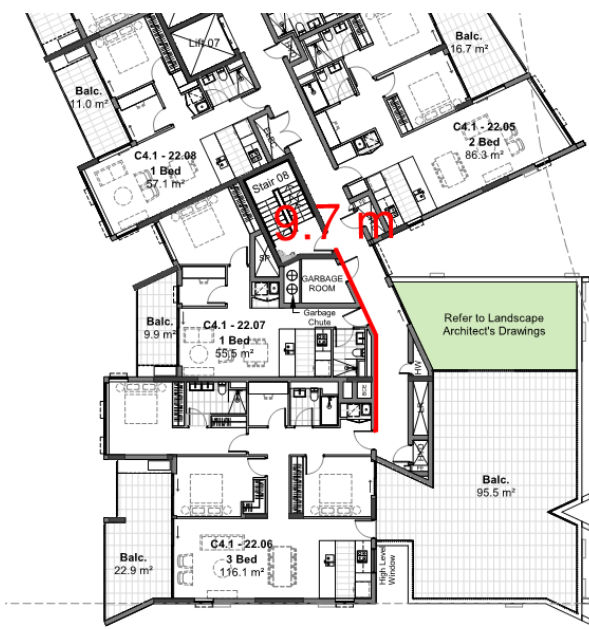
Deemed-to-Satisfy Provision to be addressed

Level 3 -16

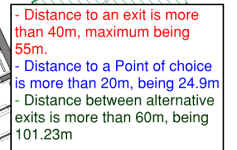
- Unit 3.09 - The distance to a point of choice is greater than 6m, being 11.8m (shown in red below).
- Unit 3.05 - The distance to a point of choice is greater than 6m, being 11.6m (shown in red below).
- Unit 3.09 - The distance to a point of choice is greater than 6m, being 11.9m (shown in red below).



BCA Clause	Deemed-to-Satisfy Provision to be addressed
	<p>Level 17-21</p> <ul style="list-style-type: none"> - Unit 17.04– The distance to a point of choice is greater than 6m, being 7.7m (shown in red below). - Unit 17.09 - The distance to a point of choice is greater than 6m, being 11.7m (shown in red below) 

BCA Clause	Deemed-to-Satisfy Provision to be addressed
	<p>Level 22-23</p> <ul style="list-style-type: none"> - Unit 22.06– The distance to a point of choice is greater than 6m, being 9.7m (shown in red below).  <p><i>This will be addressed by a Fire Engineered Performance Solution.</i></p>
<p>D1.5 Distance Between Alternative Exits</p>	<p>Basement 3 – Distance between alternative exits are marked up as below. <i>It is recommended that this is addressed by a Fire Engineered Performance Solution.</i></p>

Deemed-to-Satisfy Provision to be addressed

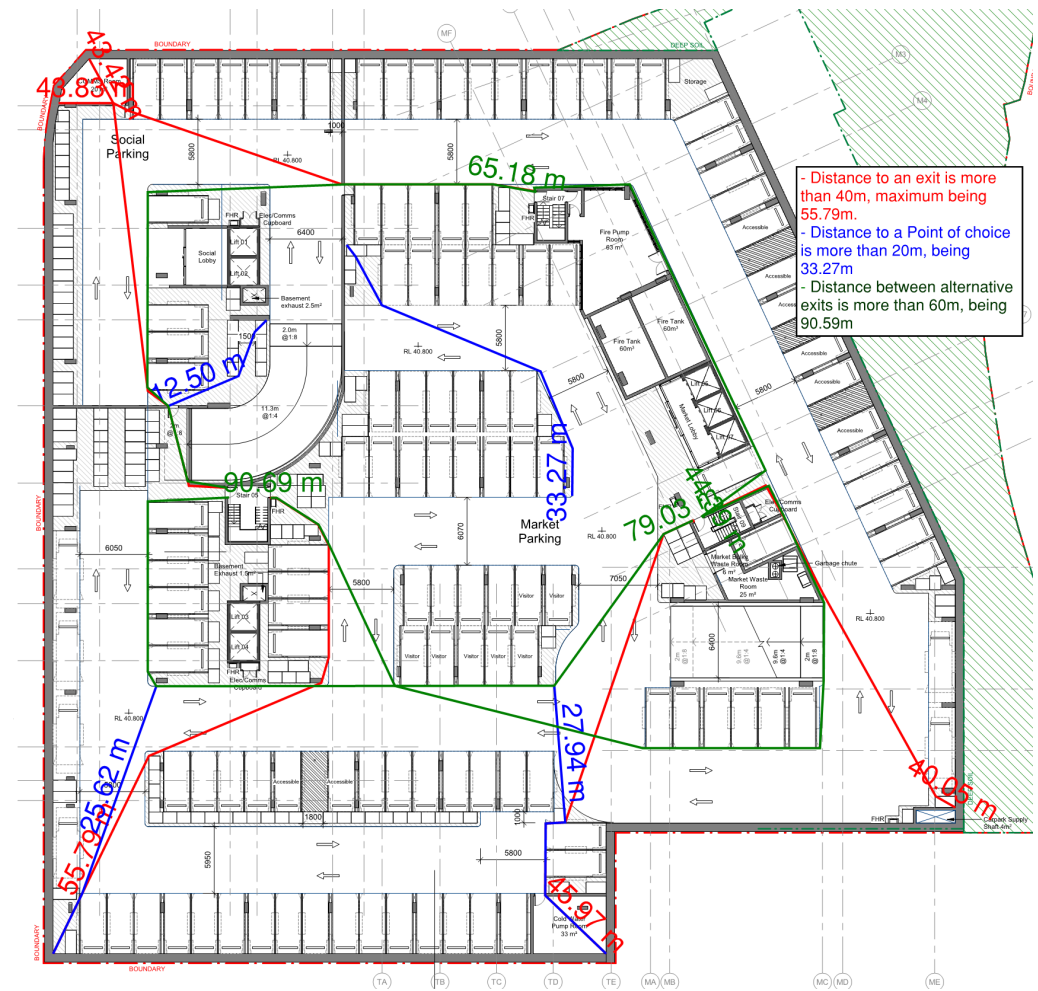


BCA Clause


Deemed-to-Satisfy Provision to be addressed

Basement 2 – Distance between alternative exits are marked up as below.

It is recommended that this is addressed by a Fire Engineered Performance Solution.

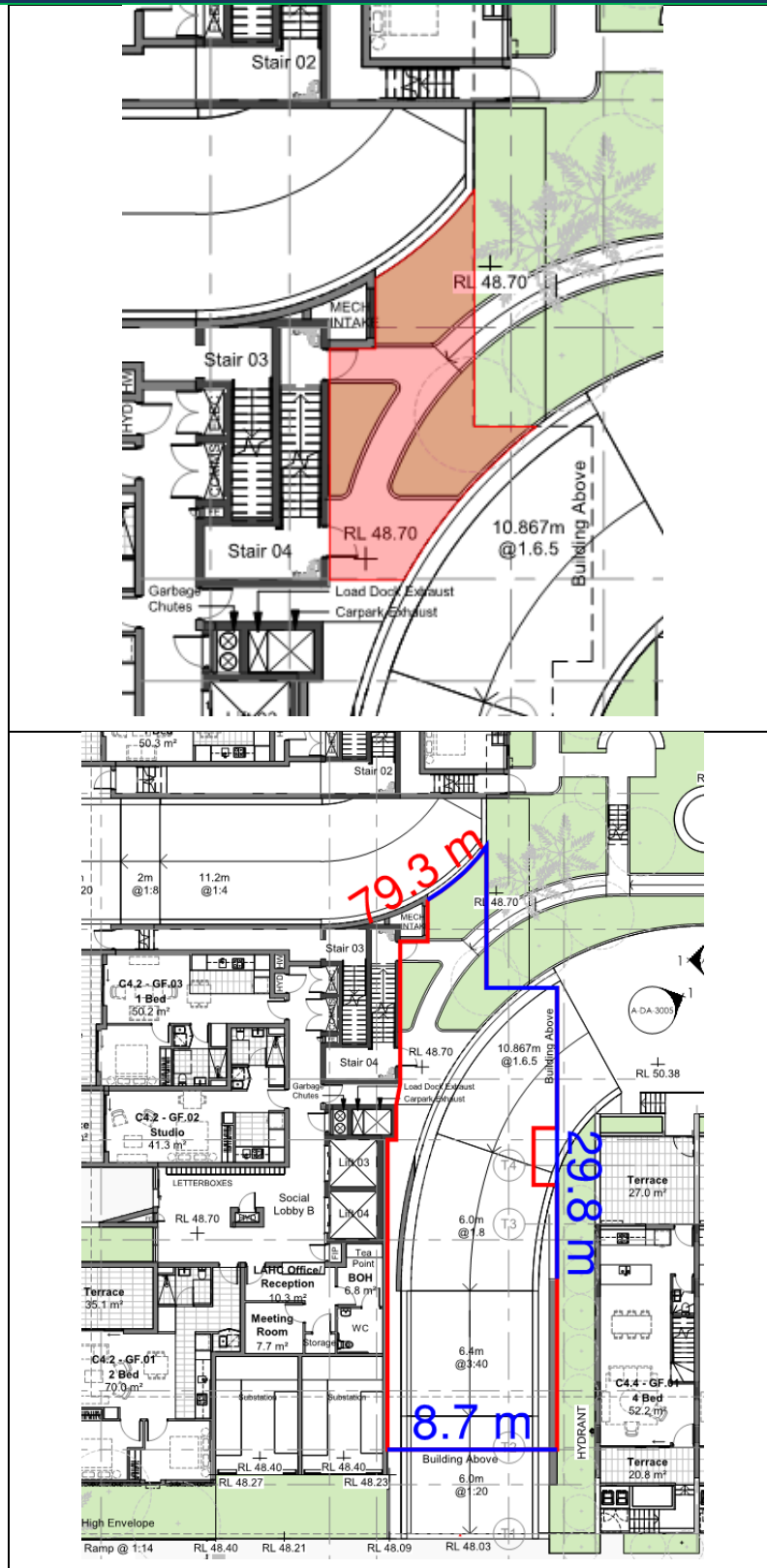


Page 19 of 127

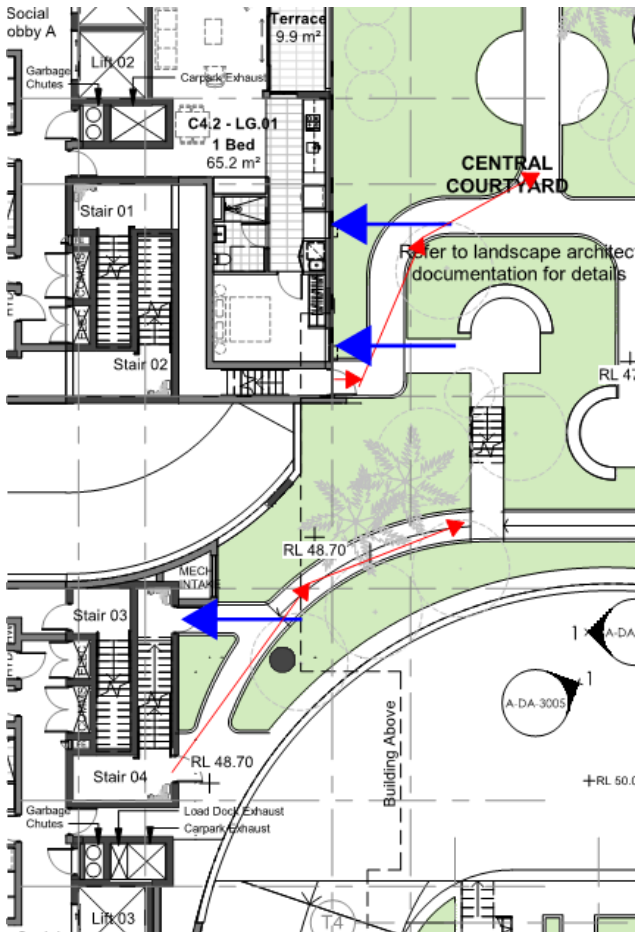
BCA Clause	Deemed-to-Satisfy Provision to be addressed
	<p>Level 1 – 16 – Distance between alternative exits are less than 9m apart as follows:</p> <ul style="list-style-type: none"> - Between Stair 01 & Stair 02 – 5.18m - Between Stair 03 & Stair 04 – 5.15m. 
<p>D1.7 Travel via Fire Isolated Stairs</p>	<p>Southern fire-isolated stairway</p> <p>Perimeter = 79.3m</p> <p>Open = 29.8 + 8.7 = 38.5m</p> <p>Open for 1/3 = yes, complies</p> <p>Unobstructed clear height of 3m = No; 2.9m provided.</p> <p><i>It is recommended that this is addressed by a Fire Engineered Performance Solution.</i></p>

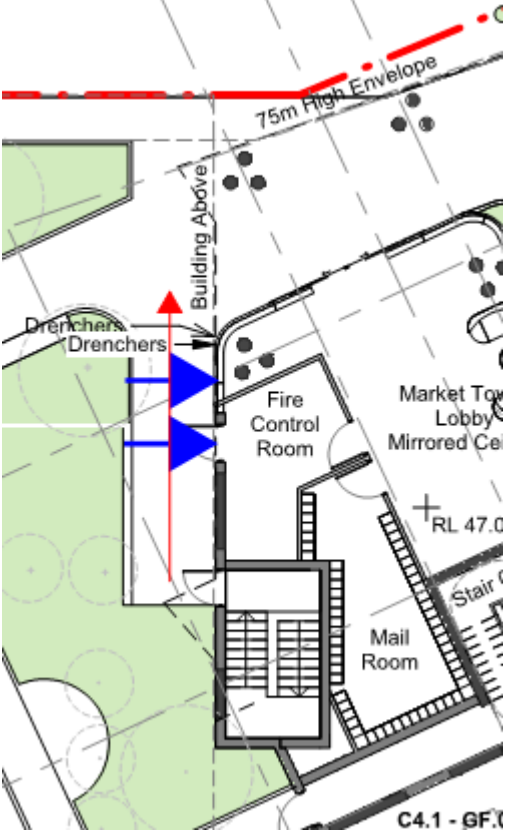
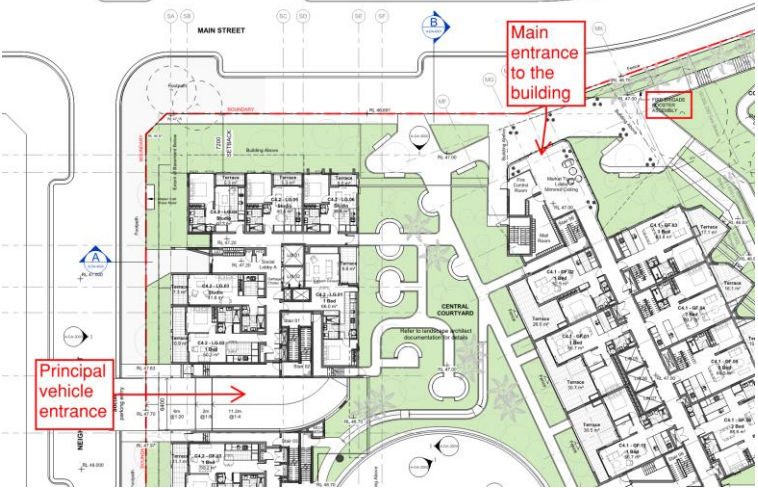
BCA Clause

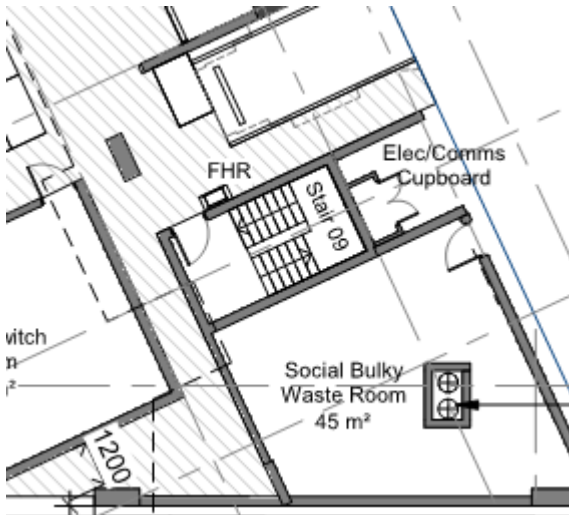
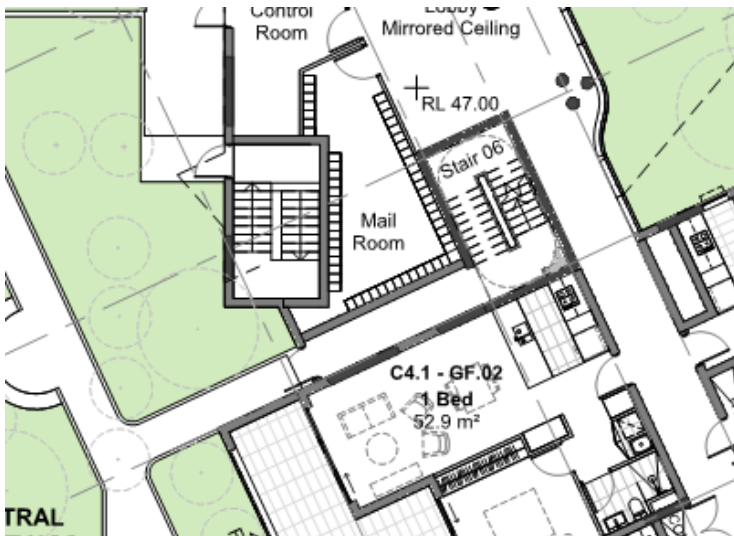
Deemed-to-Satisfy Provision to be addressed

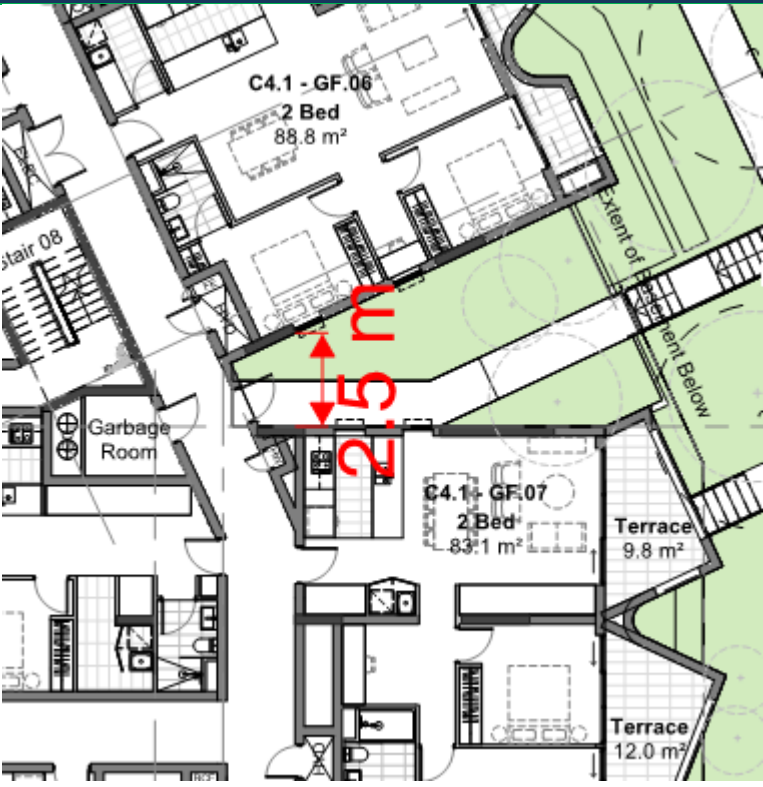


- (c) Where a path of travel from the point of discharge of a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building, measured horizontally at right angles to the path of travel, that part of the wall must have—

BCA Clause	Deemed-to-Satisfy Provision to be addressed
	<p>(i) an FRL of not less than 60/60/60; and</p> <p>(ii) any openings protected internally in accordance with C3.4,</p> <p>for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser.</p> <p>DTS non-compliance</p> <p>Ground floor - Discharge from the following fire-isolated stairways necessitates passing within 6 m of an external wall. Openings (highlighted in blue) are required to be protected internally in accordance with C3.4:</p> <ul style="list-style-type: none"> - Lobby A - Lobby B  <p>Ground floor - Discharge from the northern fire-isolated stairway (from carpark) necessitates passing within 6 m of an external wall. Openings (highlighted in blue) are required to be protected internally in accordance with C3.4.</p> <ul style="list-style-type: none"> - Internal drenchers to windows; and - Internal drenchers to self-closing doorway is DTS compliant.

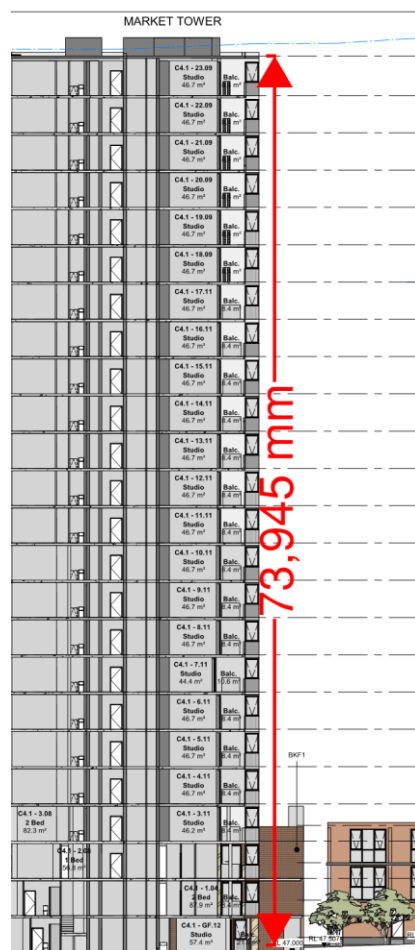
BCA Clause	Deemed-to-Satisfy Provision to be addressed
	
<p>E1.3 Fire Hydrants</p>	<p>The hydrant booster is not adjacent to the principal vehicular access to the site which does not comply with Clause 7.3 of AS 2419.1-2005</p> <p><u>7.3 Location.</u></p> <p>(d) If remote from the building, the booster shall be—</p> <ul style="list-style-type: none"> (i) at the boundary of the site and be within sight of the main entrance of the building; (ii) adjacent to the principal vehicular access to the site; and (iii) located not less than 10 m from the external wall of any building served 

BCA Clause	Deemed-to-Satisfy Provision to be addressed								
E2.2 General Requirements	<ul style="list-style-type: none">No smoke pressurisation shaft is provided to serve all fire-isolated stairways <div><p style="text-align: center;">Basement Level</p></div>								
F4.2 Methods and extent of natural lighting	<p>The bedroom on the northeastern unit faces a wall of the same building and is less than horizontal distance from the wall which does not comply with (b).</p> <table><tr><th>Level</th><th>Calc (50% of square root of sill height)</th><th>Metres to wall</th><th>Complies</th></tr><tr><td>Ground</td><td>$0.5 \times \sqrt{74\text{m}}$ $= 6.08$</td><td>2.5</td><td>No.</td></tr></table>	Level	Calc (50% of square root of sill height)	Metres to wall	Complies	Ground	$0.5 \times \sqrt{74\text{m}}$ $= 6.08$	2.5	No.
Level	Calc (50% of square root of sill height)	Metres to wall	Complies						
Ground	$0.5 \times \sqrt{74\text{m}}$ $= 6.08$	2.5	No.						

BCA Clause	Deemed-to-Satisfy Provision to be addressed
	 <p>Architectural floor plan showing units C4.1-GF.06 and C4.1-GF.07. Unit C4.1-GF.06 is a 2 Bed unit (88.8 m²) and Unit C4.1-GF.07 is a 2 Bed unit (83.1 m²). The plan includes a Garbage Room, Stair 08, and Terraces (9.8 m² and 12.0 m²). Red arrows indicate a 5m horizontal distance and a 2m vertical distance between the units.</p>

BCA Clause

Deemed-to-Satisfy Provision to be addressed



2.0 INTRODUCTION

This report provides a Building Code of Australia (BCA) 2019 Amendment 1 assessment of the proposed 24 storey residential tower and 17 storey residential tower with 3 storey basement carpark building, to be located at Stage 2, Lot C4, Ivanhoe Estate at Epping Road, Macquarie Park

This report provides a BCA assessment table in Section 3.0 that summarises the identified non-compliance matters and offers specific recommendations.

2.1 Basis of Report

The key basis of this report is to address compliance with the Building Code of Australia (BCA) 2019 Amendment 1. The scope of services is limited to Sections C – “Fire Resistance”, Section D – “Access & Egress”, Section E – “Services & Equipment”, Section F “Health and Amenity”.

This report is based on a desktop assessment of the proposed plans, with specific reference to the following:

- Architectural plans prepared by Cox, project No. 220148.00, Drawing Numbers:

Drawing Title	Drawing No.	Revision	Dated
Site Plan	A-DA-1100	1	03.08.21
Basement 3 Plan	A-DA-2050	1	03.08.21
Basement 2 Plan	A-DA-2051	1	03.08.21
Basement 1 Plan	A-DA-2052	1	03.08.21
Ground Floor Plan	A-DA-2100	1	03.08.21
Level 1 Plan	A-DA-2101	1	03.08.21
Level 2 Plan	A-DA-2102	1	03.08.21
Level 3 Plan	A-DA-2103	1	03.08.21
Level 4 Plan	A-DA-2104	1	03.08.21
Level 5 Plan	A-DA-2105	1	03.08.21
Level 6 Plan	A-DA-2106	1	03.08.21
Level 7 Plan	A-DA-2107	1	03.08.21
Level 8 Plan	A-DA-2108	1	03.08.21
Level 9 Plan	A-DA-2109	1	03.08.21
Level 10 Plan	A-DA-2110	1	03.08.21
Level 11 Plan	A-DA-2111	1	03.08.21
Level 12 Plan	A-DA-2112	1	03.08.21
Level 13 Plan	A-DA-2113	1	03.08.21
Level 14 Plan	A-DA-2114	1	03.08.21
Level 15 Plan	A-DA-2115	1	03.08.21
Level 16 Plan	A-DA-2116	1	03.08.21
Level 17 Plan	A-DA-2117	1	03.08.21
Level 18 Plan / Sky Garden	A-DA-2118	1	03.08.21
Level 19 Plan	A-DA-2119	1	03.08.21

Drawing Title	Drawing No.	Revision	Dated
Level 20 Plan	A-DA-2120	1	03.08.21
Level 21 Plan	A-DA-2121	1	03.08.21
Level 22 Plan	A-DA-2122	1	03.08.21
Roof Plan	A-DA-2124	1	03.08.21
North Elevation	A-DA-3000	1	03.08.21
East Elevation	A-DA-3001	1	03.08.21
South Elevation	A-DA-3002	1	03.08.21
West Elevation	A-DA-3003	1	03.08.21
Sections	A-DA-4000	1	03.08.21
Sections	A-DA-4001	1	03.08.21
Sections	A-DA-4002	1	03.08.21

- The Building Code of Australia 2019 Amendment 1 prepared by the Australian Building Codes Board.
- The Guide to the BCA 2019 Amendment 1, prepared by the Australian Building Codes Board.

2.2 Purpose of the Report

The purpose of this report is to assess the following:

- Assessment under the current Building Code of Australia 2019 Amendment 1 and list any departures from the BCA 2019 Amendment 1.
- Provide recommendations to address identified non-compliances, and/or identify potential alternative solutions.

2.3 Limitations of the Report

This report does not assess the following:

- Access and facilities for people with disabilities is addressed however compliance with Disability Discrimination Act 1992 (DDA) is outside the scope of this report. It should be noted that BCA compliance does not necessarily meet the requirements of the Disability Discrimination Act (DDA).
- Reporting on hazardous materials, OH&S matters or site contamination
- Assessment of any structural elements or geotechnical matters relating to the building, including any structural or other assessment of the existing fire resistant levels of the building
- Consideration of any fire services operations (including hydraulic, electrical or other systems)
- Assessment of plumbing and drainage installations, including stormwater
- Assessment of mechanical plant operations, electrical systems or security systems
- Heritage significance
- Consideration of energy or water authority requirements
- Consideration of Council's local planning policies
- Environmental or planning issues
- Requirements of statutory authorities

- Pest inspection or assessment building damage caused by pests (general/visual pest invasion or damage will be reported, however invasive or intrusive inspections have not be carried out)
- Sections G, H or I of the BCA are not considered.
- Provision of any construction approvals or certification under Part 4A or Part 5 of the Environmental Planning & Assessment Act 1979.
- Glazing, shading, lighting calculations and the like required by Section J of the BCA not been carried out
- This assessment excludes BCA clauses D3.0-3.12 (Inclusive), E3.6 and F2.4. Refer to separate access consultant's report.
- BCA 2019 Amendment 1 does not directly specify slip-resistance classification(s) for all *accessible paths of travel*; however, we highlight the need under AS 1428.1-2009 for all *accessible paths of travel* to have a slip-resistant surface. We recommend you should seek surface finish advice from an independent specialist slip safety consultant.

3.0 BCA ASSESSMENT DATA

The following data is provided in respect to review of the building under the Building Code of Australia 2019 Amendment 1 in respect to the compliance assessment of the proposed 24 storey residential tower and 17 storey residential tower with 3 storey basement carpark building, to be located at Stage 2, Lot C4, Ivanhoe Estate at Epping Road, Macquarie Park

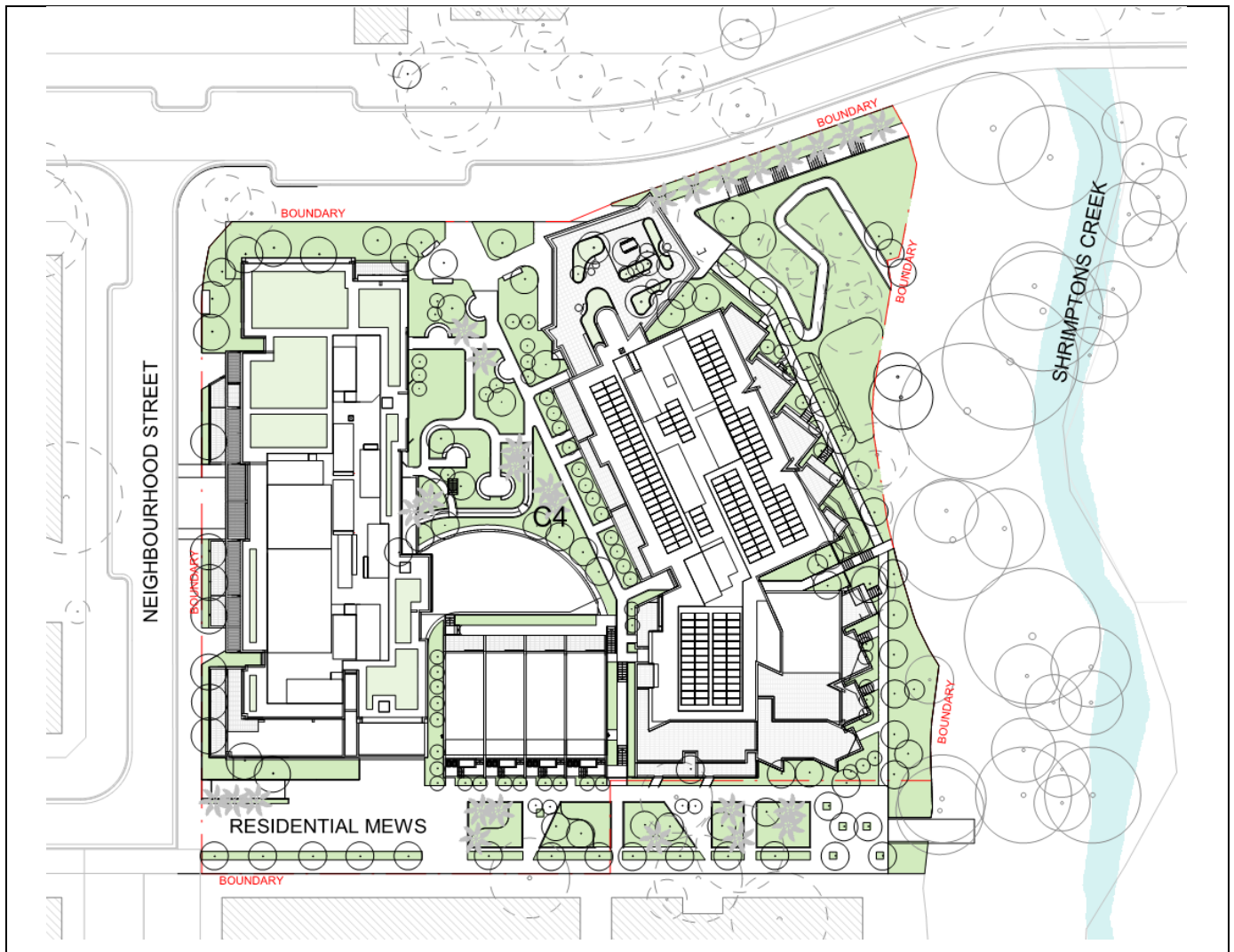
BCA Building Classifications:	Basement 3 - 1 = Class 7a (carpark)* Ground – Level 23 = Class 2 (residential) * Class 7b storage parts are less than 10% of the floor area and therefore take on the majority of the floor classification (BCA Clause A6.0)
Building rise in storeys:	24 (determined in accordance with C1.2 of the BCA).
Type of Construction:	A (determined in accordance with C1.1 of the BCA)
General Floor area limitations:	N/A
Effective Height (m):	71.300 (118.300 – 47.00)
Climate Zone (Thermal Design)	Zone 5 (determined in accordance with ABCB Climate map, Date: Sep 2019 Version: VC00031.3)

3.1 Location of Fire Source features

The potential *fire source features* to be considered for this building are the external wall of another building on the allotment which is not a Class 10 building, the side or rear of the allotment boundary or the far side of the road.

In this instance the following setbacks are determined in respect to the fire source features applicable to the building

- North west – >6m to far side of Main Street
- North east - >6 to far side of Shrimptons Creek
- South east – >6m to boundary
- South west – >6m to far side of Neighbourhood Street



3.2 Summary of Fire Services Required

Summarised below are the BCA deemed to satisfy fire services required for the building which has an effective height of more than 50m:

- Fire hydrants are required to serve all areas and be provided in accordance with BCA E1.3 and AS 2419.1-2005 as applicable to a building exceeding 50m in effective height.
- A fire hose reel system complying with BCA E1.4 and AS 2441-2005 must be provided to serve all areas other than class 3 SOUs. Note: FHR's no longer required to serve a Class 3 building, however additional fire extinguishers are required in all class 3 parts.
- A sprinkler system throughout all parts of the building complying with E1.5 and AS 2118.1-2017 and the Fire Engineering Report
- Portable fire extinguishers must be provided in accordance with BCA E1.6 & Table E1.6 and must be selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444-2001.
- A fire control room (FCR) must be provided in accordance with BCA E1.8 and Clauses 2 to 12 of BCA Specification E1.8. The FCR must be fire rated from the remainder of the building by construction achieving FRL of 120/120/120 and have two access points.
- Automatic smoke and fire detection to be provided throughout the building in accordance with Part E2 and BCA Specification E2.2a. and AS 1670.1-2018
- Automatic air pressurisation to fire isolated stairs serving residential & basement levels and the fire control room in accordance with BCA E2.2, E1.8 and AS/NZS 1668.1-2015.

- A sound system and intercom system for emergency purposes (SSISEP) complying with BCA E4.2 and AS 1670.4-2018 must be installed throughout the whole building
- An emergency lighting system must be installed throughout the building in accordance with BCA E4.2 of the BCA and AS 2293.1-2018.
- Exit signs must be installed throughout the building in accordance with BCA E4.5 and AS 2293.1-2018.
- Mechanical ventilation to the basement carpark in accordance with BCA Table E2.2a and AS 1668.1-2015 and AS 1668.2-2012, incorporating metal fans.
- Signage to be provided exits in accordance with D2.23 and Clause 183 of *Environmental Planning & Assessment Regulation 2000*.
- Emergency lifts must be provided in accordance with BCA E3.4 and C2.10.
- Stretcher facility and fire service controls in the lift must be provided in accordance with BCA E3.2 and E3.7.

4.0 BCA ASSESSMENT SUMMARY

The following table details the BCA compliance of the assessed design.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
SPECIFICATION A1.1 FIRE PROTECTED TIMBER					
Specification A1.1 has been introduced to allow fire-protective timber construction utilising a non-combustible fire protective covering for buildings not exceeding 25m which are sprinkler protected.					
2.1 General requirements			X		Not applicable. Fire protected timber is not proposed.
2.2 Massive Timber			X		Not applicable. Massive timber is not proposed.
SECTION B STRUCTURE					
Part B1: Structural Provisions				X	<ul style="list-style-type: none"> ❖ Structural engineer to provide structural drawings/details and accompanying structural design certificate to demonstrate that all building elements will comply with Section B of the BCA. ❖ Glazing must comply with AS1288-2006 and AS2047-2014. ❖ Termite control must comply with AS3660.1-2000 where any primary building elements are timber. ❖ If the building is in a flood hazard area it is required to comply with BCA clause B1.6. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)</i></p>
SECTION C FIRE RESISTANCE					
Part C1 - Fire Resistance & Stability					
C1.1 Type of Construction Required				X	<p>Refer to Spec C1.1 and Attachment B for Schedule of FRLs for Type A Construction. These are to be certified by the architect and structural engineer as having been met, based on the proposed design.</p> <p>Please note that specification C1.1 also requires design compliance with the following:</p> <ol style="list-style-type: none"> 1. Fire isolated shafts are required to be enclosed at the top and bottom of the shaft with fire rated construction as per specification C1.1. This fire rating is required in two directions. 2. The walls to fire rated shafts must achieve the fire rating from both directions i.e. from inside and outside the shaft. 3. Roof: The roof of the building does not need an FRL, provided the roof covering is non-combustible (as per the concession in Clause 3.5 of Specification C1.1 of the BCA). <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)</i></p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	Informational	NA or Compliance Required	COMMENTS
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Table 3 Type A construction: FRL of building elements

Building element	Class of building — FRL: (in minutes)			
	<i>Structural adequacy/Integrity/Insulation</i>			
	2	7a		
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any <i>fire-source feature</i> to which it is exposed is—				
For <i>loadbearing</i> parts—				
less than 1.5 m	90/ 90/ 90	120/120/120		
1.5 to less than 3 m	90/ 60/ 60	120/ 90/ 90		
3 m or more	90/ 60/ 30	120/ 60/ 30		
For non- <i>loadbearing</i> parts—				
less than 1.5 m	—/ 90/ 90	—/120/120		
1.5 to less than 3 m	—/ 60/ 60	—/ 90/ 90		
3 m or more	—/—/—	—/—/—		
EXTERNAL COLUMN not incorporated in an <i>external wall</i> —				
For <i>loadbearing</i> columns—	90/—/—	120/—/—		
For non- <i>loadbearing</i> columns—	—/—/—	—/—/—		
COMMON WALLS and FIRE WALLS—	90/ 90/ 90	120/120/120		
INTERNAL WALLS—				
<i>Fire-resisting</i> lift and stair <i>shafts</i> —				
<i>Loadbearing</i>	90/ 90/ 90	120/120/120		
Non- <i>loadbearing</i>	—/ 90/ 90	—/120/120		
Bounding <i>public corridors</i> , public lobbies and the like—				
<i>Loadbearing</i>	90/ 90/ 90	120/—/—		
Non- <i>loadbearing</i>	—/ 60/ 60	—/—/—		
Between or bounding <i>sole-occupancy units</i> —				
<i>Loadbearing</i>	90/ 90/ 90	120/—/—		
Non- <i>loadbearing</i>	—/ 60/ 60	—/—/—		
Ventilating, pipe, garbage, and like <i>shafts</i> not used for the discharge of hot products of combustion—				
<i>Loadbearing</i>	90/ 90/ 90	120/ 90/ 90		
Non- <i>loadbearing</i>	—/ 90/ 90	—/ 90/ 90		
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES and COLUMNS—				
	90/—/—	120/—/—		
FLOORS	90/ 90/ 90	120/120/120		

Building element	Class of building — FRL: (in minutes)			
	<i>Structural adequacy/Integrity/Insulation</i>			
	2	7a		
ROOFS	90/ 60/ 30	120/ 60/ 30		

C1.2 Calculation of Rise In Storeys			X		Refer to Section 2.0 of this report for further details
C1.3 Buildings of Multiple Classifications			X		Informational. In a building of multiple classifications, the type of construction required for the building is the most fire resisting Type resulting from the application of Table C1.1 on the basis that the classification applying to the top storey applies to all storeys.
C1.4 Mixed Types of Construction			X		Not applicable. Type A construction only.
C1.5 Two Storey Class 2, 3 or 9c buildings			X		Not applicable. Greater than 2 storeys.
C1.6 Class 4 Parts			X		Not applicable. No Class 4 Parts.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
C1.7 Open Spectator Stands			X		Not applicable. No open spectator stands proposed.
C1.8 Lightweight Construction			X		<p>(a) Where it is proposed to use <i>lightweight construction</i> (within the meaning of the BCA) this must comply with Specification C1.8 if it is used in a wall system—</p> <p>(i) that is required to have an FRL; or</p> <p>(ii) for a lift shaft, stair shaft or service shaft or an external wall bounding a public corridor including a non fire-isolated passageway or non fire-isolated ramp.</p> <p>(b) If lightweight construction is used for the fire-resisting covering of a steel column or the like, and if —</p> <p>(i) the covering is not in continuous contact with the column, then the void must be filled solid, to a height of not less than 1.2 m above the floor to prevent indenting; and</p> <p>(ii) the column is liable to be damaged from the movement of vehicles, materials or equipment, then the covering must be protected by steel or other suitable material.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><i>Lightweight construction means construction which incorporates or comprises—</i></p> <p>(a) <i>sheet or board material, plaster, render, sprayed application, or other material similarly susceptible to damage by impact, pressure or abrasion; or</i></p> <p>(b) <i>concrete and concrete products containing pumice, perlite, vermiculite, or other soft material similarly susceptible to damage by impact, pressure or abrasion; or</i></p> <p>(c) <i>masonry having a width of less than 70 mm.</i></p> </div> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C1.9 Non - combustible building elements			X		<p>(a) In a building <i>required</i> to be of Type A construction, the following building elements and their components must be <i>non-combustible</i>:</p> <p>(i) External walls and <i>common walls</i>, including all components incorporated in them including the facade covering, framing and insulation.</p> <p>(ii) The flooring and floor framing of lift pits.</p> <p>(iii) <i>Non-loadbearing internal walls</i> where they are <i>required</i> to be <i>fire-resisting</i>.</p> <p>(b) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in—</p> <p>(i) a building <i>required</i> to be of Type A construction; and</p> <p>(c) A <i>loadbearing internal wall</i> and a <i>loadbearing fire wall</i>, including those that are part of a <i>loadbearing shaft</i>, must comply with Specification C1.1.</p> <p>(d) The requirements of (a) and (b) do not apply to gaskets, caulking, sealants, termite management systems, glass</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>including laminated glass, thermal breaks associated with glazing systems, damp-proof courses.</p> <p>(e) The following materials may be used wherever a <i>non-combustible</i> material is <i>required</i>:</p> <ul style="list-style-type: none"> (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 <i>combustible</i> surface finish not exceeding 1 mm thickness and where the <i>Spread-of-Flame Index</i> of the product is not greater than 0. (vi) Sarking type materials that do not exceed 1mm in thickness and have a Flammability Index not greater than 5. (vii) Bonded laminated materials where— <ul style="list-style-type: none"> (A) each lamina, including any core, is <i>non-combustible</i>; and (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2mm; and (C) the <i>Spread-of-Flame Index</i> and the <i>Smoke-Developed Index</i> of the bonded laminated material as a whole do not exceed 0 and 3 respectively. <p>In AED's experience, timber plywood is used to strengthen walls within internal walls required to achieve an FRL.</p> <p>This will require to be addressed by a Fire Engineer Performance Solution.</p>  <p>Figure 1: Example of timber used in a wall required to be fire rated.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>



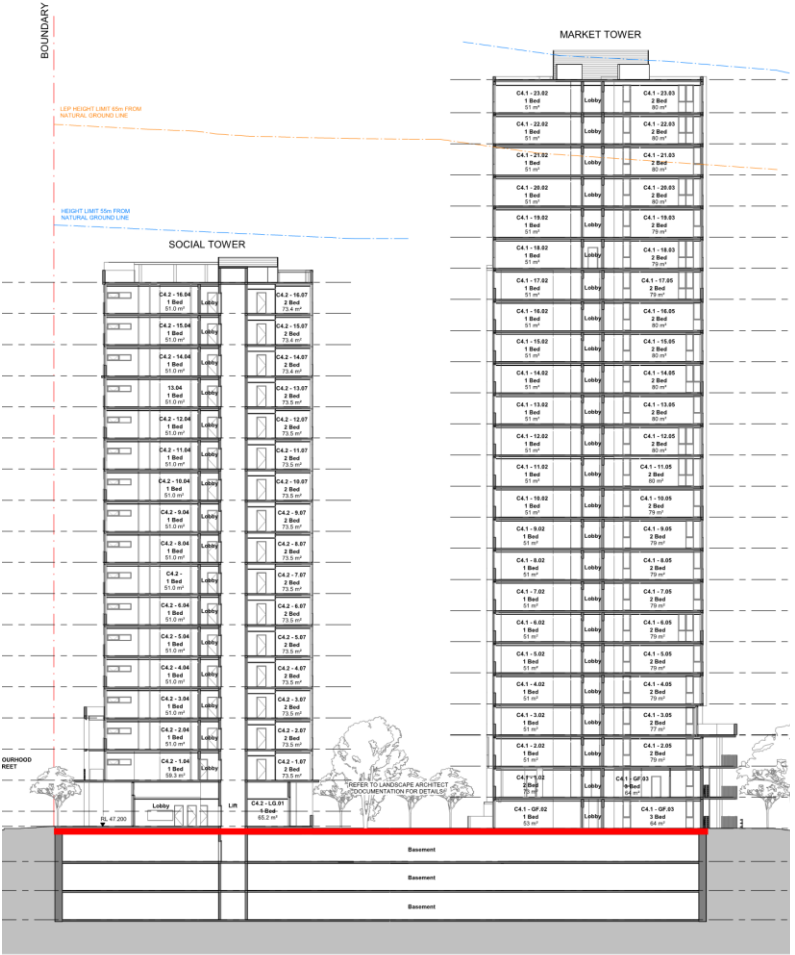
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
C1.10 Fire Hazard Properties				X	<p>(a) The fire hazard properties of the following internal linings, materials and assemblies must comply with Specification C1.10 by way of test reports / certificates provided from a <i>registered testing authority</i> (within the meaning of the BCA):</p> <ul style="list-style-type: none"> (i) Floor linings and floor coverings. (ii) Wall linings and ceiling linings. (iii) Air-handling ductwork. (iv) Lift cars. (vi) Escalators, moving walkways and non required non fire isolated stairways or pedestrian ramps subject to Specification D1.12. (vii) Sarking type materials. (viii) Attachments to floors, ceilings, internal walls and the internal linings of external walls. (ix) Other materials including insulation materials other than sarking type materials. <p>(c) The requirement s of (a) do not apply to a material or assembly if it is –</p> <ul style="list-style-type: none"> (i) plaster, cement render, concrete, terrazzo, ceramic tile or the like; or (ii) a fire protective covering; or (iii) a timber framed window; or (iv) a solid timber handrail or skirting; or (v) a timber-faced door; or (vi) an electrical switch, socket-outlet, cover plate or the like; or (vii) a material used – <ul style="list-style-type: none"> (A) a roof insulating material applied in continuous contact with a substrate; or (B) an adhesive; or (C) a damp-proof course, flashing, caulking, sealing, ground moisture barrier or the like; or (viii) a paint, varnish, lacquer or similar finish, other than nitro-cellulose lacquer; or (ix) a clear or translucent roof light of glass fibre-reinforced polyester if – <ul style="list-style-type: none"> (A) the roof in which is is installed forms part of a single storey building required to be Type C construction; and (B) the material is used as part of the roof covering; and (C) it is no closer than 1.5m from another roof light of the same type; and (D) each roof light is not more than 14m² in area; and



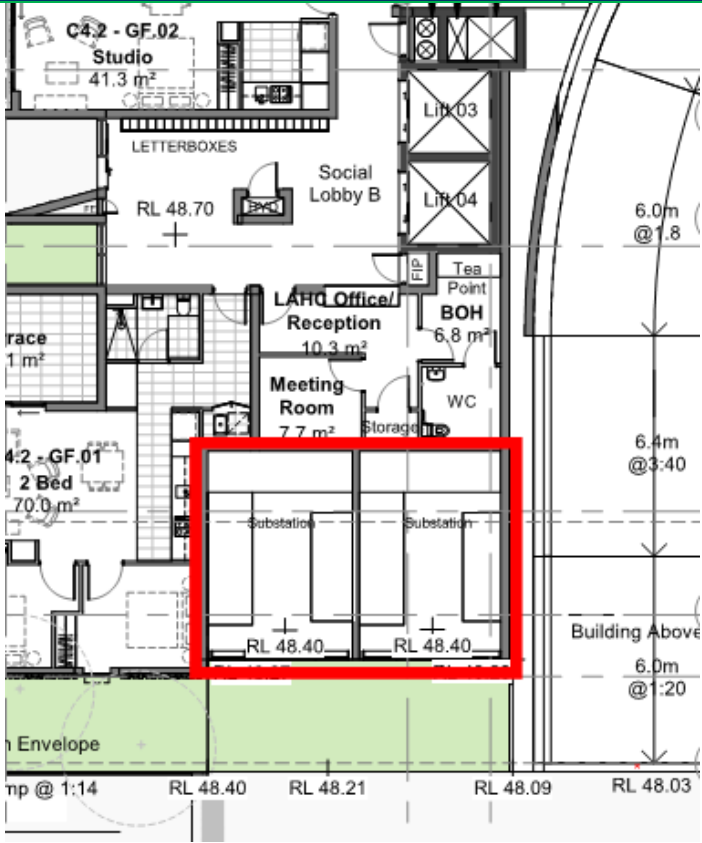
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(E) the area of the roof lights per 70m² of roof surface is not more than 14m² in area; or</p> <p>(x) a face plate or neck adaptor of supply and return air outlets of an air handling system; or</p> <p>(xi) a face plate or diffuser plate of light fitting and emergency exit signs and associated electrical wiring and electrical components; or</p> <p>(xii) a joinery unit, cupboard, shelving or the like; or</p> <p>(xiv) Timber treads, risers, landings and associated supporting framework installed in accordance with D2.25 where the Spread-of-Flame Index and the Smoke-Developed Index of the timber does not exceed 9 and respectively; or</p> <p>(xv) Any other material that does not significantly increase the hazards of the fire.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C1.11 Performance of External Walls in Fire			X		Not applicable. Rise in storeys is greater than 2,
C1.12 ****			X		Clause deleted.
C1.13 Fire protected timber: concession			X		Not applicable. Fire-protected timber is not proposed to be used.
C1.14 Ancillary elements			X		<p>An <i>ancillary element</i> must not be fixed, installed or attached to the internal parts or external face of an <i>external wall</i> that is <i>required</i> to be <i>non-combustible</i> unless it is one of the following:</p> <p>(a) An ancillary element that is non-combustible.</p> <p>(b) A gutter, downpipe or other plumbing fixture or fitting.</p> <p>(c) A flashing.</p> <p>(d) A grate or grill not more than 2m² in an area associated with a building service.</p> <p>(e) An electrical switch, socket outlet, cover plate or the like.</p> <p>(f) A light fitting.</p> <p>(g) A <i>required</i> sign.</p> <p>(h) A sign other than one provided under (a) or (g) that –</p> <p>(i) Achieves a group number 1 or 2; and</p> <p>(ii) Does not extend beyond one storey; and</p> <p>(iii) Does not extend beyond one fire compartment; and</p> <p>(iv) Is separated vertically from other signs permitted under (h) by at least 2 storeys.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	Informational NA or	Compliance Required	COMMENTS
					<ul style="list-style-type: none"> (i) An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that – <ul style="list-style-type: none"> (i) Meets the requirements of Table 4 of Specification C1.10 as an internal element; and (ii) Serves a storey – <ul style="list-style-type: none"> (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 similar finish, (m) A gasket, caulking, sealant or adhesive directly associated with (a) to (k). <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
Part C2 - Compartmentation & Separation					
C2.1 Application of Part			X		Informational. C2.2, C2.3 and C2.4 do not apply to a carpark provided with a sprinkler system (other than a FPAA101D or FPAA101H system complying with Specification E1.5, an open-deck carpark or an open spectator stand.
C2.2 General Floor Area & Volume Limitations			X		Not applicable. Class 7a part is proposed to be sprinkler protected.
C2.3 Large Isolated Buildings			X		Not applicable. Not a large isolated building.
C2.4 Requirements for Open Space			X		Not applicable. Not a large isolated building.
C2.5 Class 9a & 9c Buildings			X		Not applicable. Not a Class 9a or 9c building.
C2.6 Vertical Separation of openings in external walls	X				Building will be sprinkler protected in accordance with Spec E1.5.
C2.7 Separation by Fire Walls		X			<ul style="list-style-type: none"> (a) Construction – a fire wall must be constructed in accordance with the following: <ul style="list-style-type: none"> (i) The fire wall has the relevant FRL prescribed by Specification C1.1 for each of the adjoining parts, and if these are different, the greater FRL; except where Tables 3.9, 4.2 and 5.2 of Specification C1.1 permit a lower FRL on the carpark side.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(ii) Any openings in the 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.</p> <p>(iii) Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not pass through or cross the fire wall unless the required fire resisting performance of the fire wall is maintained.</p> <p>(b) Separation of buildings – a part of a building separated from the remainder of the building by a fire wall may be treated as a separate building for the DTS provisions of Sections C, D & E if it is constructed in accordance with (a) and the following:</p> <p>(i) The fire wall extends through all storeys and spaces in the nature of storeys that are common to that part and any adjoining part of the building.</p> <p>(ii) The fire wall is carried through to the underside of the roof covering.</p> <p>(iii) Where the roof of one of the adjoining parts is lower than the roof of the other part, the fire wall extends to the underside of –</p> <p>(A) The covering of the higher roof, or not less than 6m above the covering of the lower roof; or</p> <p>(B) The lower roof if it has an FRL not less than that of a fire wall and no openings closer than 3m to any wall above the lower roof; or</p> <p>(C) The lower roof if its covering is non combustible and the lower part has a sprinkler system (other than a FPAA101D or FPAA101H system complying with Specification E1.5.</p> <p>(c) Separation of fire compartments – a part of a building separated from the remainder of the building by a fire wall may be treated as a separate fire compartment if it is constructed in accordance with (a) and the fire wall extends to the underside of –</p> <p>(i) A floor having an FRL required for a fire wall; or</p> <p>(ii) The roof covering.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C2.8 Separation of Classifications in the same storey			X		Not applicable. Each storey only contains one classification.
C2.9 Separation of Classifications in different storeys				X	If parts of different classification are situated one above the other in adjoining storeys they must be separated as follows –


BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(a) Type A construction - the floor between the adjoining parts must have an FRL of not less than that prescribed in Specification C1.1 for the classification of the lower storey.</p> <p>Slab separating the basement 1 and Ground Floor is required to have an FRL of 120/120/120.</p>  <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C2.10 Separation of lifts shafts				X	<p>(a) Any lift connecting more than 2 storeys, or more than 3 storeys where the building is sprinkler protected must be separated from the remainder of the building by enclosure in a shaft in which –</p> <p>(i) For Type A construction – the walls have the FRL prescribed by Specification C1.1; and</p> <p>(c) An emergency lift must be contained within a fire resisting shaft having an FRL not less than 120/120/120.</p> <p>(d) Openings for lift landing doors and services must be protected in accordance with the DTS provisions of Part C3.</p>

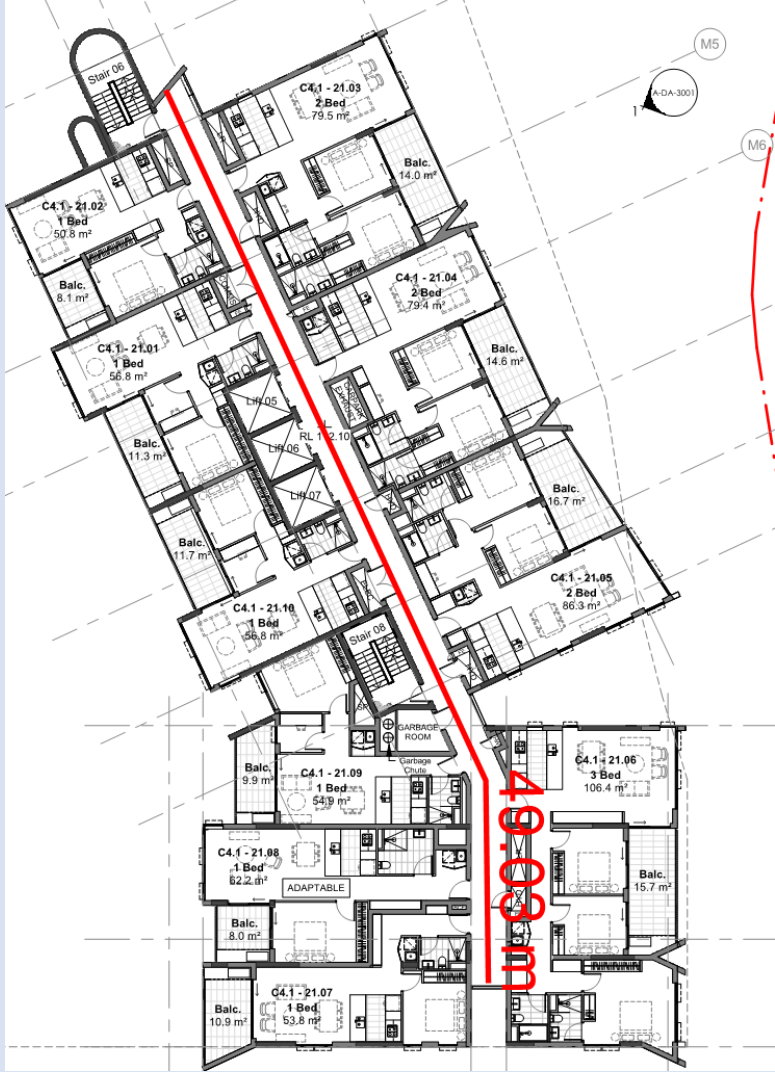
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
C2.11 Stairways and lifts in one shaft	X				A stairway and lift are not be in the same shaft if either the stairway or the lift is required to be in a fire-resisting shaft.
C2.12 Separation of Equipment				X	<p>(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 –</p> <ul style="list-style-type: none"> (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 that building that has a total voltage of 12 volts or more and a storage capacity of 200kWh or more. <p>(b) Equipment need not be separated in accordance with (a) if the equipment comprises-</p> <ul style="list-style-type: none"> (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 pressurizing equipment installed in compliance with AS 1668.1; or (iii) A lift installation without a machine room; or (iv) Equipment otherwise adequately separated from the remainder of the building. <p>(c) Separation of onsite fire pumps must comply with the requirements of AS2419.1.</p> <p>(d) Separating construction must have –</p> <ul style="list-style-type: none"> (i) Except as provided by (ii) – <ul style="list-style-type: none"> (A) An FRL is required by Specification C1.1, but not less than 120/120/120; and (B) Any doorway protected with a -/120/30 self-closing fire door; or (ii) When separating a lift shaft and lift motor room, an FRL not less than 120/-/-. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
C2.13 Electrical Supply				X	<p>(a) An electricity sub-station must be separated from the building in accordance with the Energy Authority Requirements (i.e. Ausgrid).</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p>(b) A main switchboard located within the building (and which sustains emergency equipment operating in the emergency mode) must –</p> <ul style="list-style-type: none"> (i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and (ii) have any doorway in that construction protected with a self-closing fire door having an FRL of not less than – /120/30. <p>(c) Electrical conductors located within the building that supply –</p> <ul style="list-style-type: none"> (i) a substation located within the building which supplies a main switchboard covered by (b); or (ii) a main switchboard covered by (b), must— (iii) have a classification in accordance with AS/NZS 3013-2005 of not less than— <ul style="list-style-type: none"> (A) if located in a position that could be subject to damage by motor vehicles — WS53W; or (B) otherwise — WS52W; or (iv) be enclosed or otherwise protected by construction having an FRL of not less than 120/120/120 <p>(d) where emergency equipment is required in a building, all switchboards in the electrical installation, which sustain the electricity supply to the emergency equipment, must be</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of a fault from the non-emergency equipment switchgear.</p> <p>(e) For the purposes of (d), emergency equipment includes but it is not limited to –</p> <ul style="list-style-type: none"> (i) Fire hydrant booster pumps (ii) Pumps for automatic sprinkler systems, water spray, chemical fluid suppression systems or the like. (iii) Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building. (iv) Air handling systems designed to exhaust and control the spread of fire and smoke. (v) Emergency lifts. (vi) Control and indicating equipment. (vii) Emergency warning and intercom systems (EWIS). <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C2.14 Public corridors in Class 2 & 3 Buildings		X			<p>In a Class 2 or 3 building, a public corridor, if more than 40 m in length, must be divided at intervals of not more than 40 m with smoke-proof walls complying with Clause 2 of Specification C2.5.</p> <p><u>DTS non-compliance</u></p> <ul style="list-style-type: none"> • Ground floor - Corridor length is greater than 40m, being 48.08m.

Level 3-17 Corridor length is greater than 40m, being 56.6m

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p>Level 18-21 - Corridor length is greater than 40m, being 49.1m</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p>Level 22 -23 - Corridor length is greater than 40m, being 45.4m.</p>

Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification

Application of Part

X

- (a) The DTS provisions of this Part do not apply to-
 - (i) Control joints, weep holes and the like in external walls of masonry construction and joints between panels in external walls of pre -cast concrete panel construction if, in all cases they are not larger than necessary for the purpose; and
 - (ii) Non-combustible ventilators for subfloor or cavity ventilation, if each does not exceed 45,000m in face area and spaced not less than 2m from any other ventilator in the same wall; and
 - (iii) Openings in the vertical plane formed between building elements at the construction edge or perimeter of a balcony or verandah, colonnade, terrace, or the like and
 - (iv) In a carpark –
 - (A) Service penetrations through; and



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(B) Openings formed by a vehicle ramp in, a floor other than a floor that separates a part not uses as a carpark, providing the connected floors comply as a single fire compartment for the purposes of all other requirements of the DTS provisions of Sections C, D & E.</p> <p>(b) For the purposes of DTS provisions of this Part, openings in building elements required to be fire resisting include doorways, windows (including any associated fanlight), infill panels and fixed or openable glazed areas that do not have the required FRL.</p> <p>(c) For the purposes of the DTS 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 of the perimeter of the building, are deemed to openings in the external wall.</p>
C3.2 Protection of openings in external walls			X		Not applicable. No opening is located within 3m of a fire source feature.
C3.3 Separation of external walls and associated openings in different fire compartments				X	<p>The distance between parts of external walls and any openings within them in different fire compartments separated by a fire wall must not be less than that set out in Table C3.3, unless—</p> <p>(a) those parts of each wall have an FRL not less than 60/60/60; and</p> <p>(b) any openings protected in accordance with C3.4.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C3.4 Acceptable Methods of Protection			X		<p>(a) Where protection is required to doorways and windows and other openings they must be protected as follows:</p> <p>(i) Doorways</p> <ul style="list-style-type: none"> ❖ Internal or external wall wetting sprinklers as appropriate used with doors that are self-closing or automatic closing; or ❖ -/60/30 fire doors that are self-closing or automatic closing <p>(ii) Windows</p> <ul style="list-style-type: none"> ❖ Internal or external wall wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position or; ❖ -/60- fire windows that are automatic closing or permanently fixed in the closed position or ❖ -/60- automatic closing fire shutters. <p>(iii) Other openings –</p> <ul style="list-style-type: none"> ❖ Excluding voids – internal or external wall wetting sprinklers as appropriate or

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>❖ Construction having a FRL not less than -/60/-.</p> <p>(b) Fire doors, fire windows and fire shutters must comply with Specification C3.4.</p>
C3.5 Doorways in Fire Walls			X		<p>(a) The aggregate width of openings for doorways in a fire wall, which are not part of a horizontal exit, must not exceed ½ the length of the fire wall, and each doorway must be protected by –</p> <p>(i) 2 fire doors or fire shutters, one on each</p> <p>(ii) side of the doorway, each of which has an FRL not less than ½ that required by Specification C1.1 for the fire wall except that each door or shutter must have an insulation level of at least 30; or</p> <p>(iii) A fire door on one side and a fire shutter on the other side of the doorway, each of which complies with (i); or</p> <p>(iv) A single fire door or fire shutter which has an FRL of not less than that required by Specification C1.1 for the fire wall except that each door or shutter must have an insulation level of at least 30.</p> <p>(b) A fire door or fire shutter required by (a)(i), (ii) or (iii) must be self-closing, or automatic closing in accordance with (c) & (d).</p> <p>(c) The automatic closing operation required by (b) must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with AS1670.1 and located on each side of the fire wall not more than 1.5m horizontal distance from the opening.</p> <p>(d) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D) complying with Specification E1.5, is installed in the building, activation of the system in either fire compartment separated by the fire wall must also initiate the automatic closing operation.</p>
C3.6 Sliding Fire Doors			X		Not applicable. No sliding fire doors proposed or required.
C3.7 Protection of Doorways in horizontal exits			X		Not applicable. No horizontal exits proposed or required.
C3.8 Openings in fire isolated exits				X	<p>(a) Doorways that open into fire-isolated stairways, fire-isolated passageways or fire isolated ramps, and are not doorways opening to a road or open space, must be protected by - /60/30 fire doors that are self-closing, or automatic closing in accordance with (b) and (c).</p> <p>(i) The automatic-closing operation must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with AS1670.1 and located on each side of</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>the fire wall not more than 1.5m horizontal distance from the approach side of the doorway.</p> <p>(ii) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D) complying with Specification E1.5, is installed in the building, activation of the system in either fire compartment separated by the fire wall must also initiate the automatic closing operation.</p> <p>(b) A window in an external wall of a fire isolated stairway, fire isolated passageway or fire isolated ramp must be protected in accordance with C3.4 if it is within 6m of, and exposed to, a window or other opening in a wall of the same building, other than in the same fire-isolated enclosure.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C3.9 Service Penetrations in fire-isolated exits				X	<p>Fire-isolated exits must not be penetrated by any services other than –</p> <p>(a) electrical wiring permitted by D2.7(e) to be installed in the exit; or</p> <p>(b) ducting associated with a pressurisation system if it –</p> <p>(i) is constructed of material having an FRL of not less than -/120/60 where it passes through any other part of the building; and</p> <p>(ii) Does not open into any other part of the building; or</p> <p>(c) Water supply pipes for fire services.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C3.10 Openings in Fire isolated lift shafts				X	<p>(a) Doorways – if a lift shaft is required to be fire isolated, an entrance doorway to that shaft must be protected by -/60/- fire doors that-</p> <p>(i) comply with AS 1735.11, and</p> <p>(ii) are set to remain closed except when discharging or receiving, passengers, goods or vehicles.</p> <p>(b) Lift indicator panels – A lift call panel, indicator panel or other panel in the wall of a fire-isolated lift shaft must be backed by construction having an FRL of not less than -/60/60 if it exceeds 35,000mm² in area.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C3.11 Bounding Construction: Class 2, 3 & 4 Parts.				X	<p>(a) A doorway in a Class 2 building must be protected if it provides access from a sole-occupancy unit to—</p> <p>(i) a public corridor, public lobby, or the like; or</p> <p>(ii) a room not within a sole-occupancy unit; or</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none"> (iii) the landing of an internal non fire-isolated stairway that serves as a required exit; or (iv) another sole-occupancy unit. <p>(b) A doorway in a Class 2 or 3 building must be protected if it provides access from a room not within a sole-occupancy unit to—</p> <ul style="list-style-type: none"> (i) a public corridor, public lobby, or the like; or (ii) the landing of an internal non fire-isolated stairway that serves as a required exit. <p>(d) Protection for a doorway required under (a), (b) or (c) must be at least—</p> <ul style="list-style-type: none"> (i) in a building of Type A construction — a self-closing — /60/30 fire door; and <p>(e) Other openings in internal walls which are required to have an FRL with respect to integrity and insulation must not reduce the fire-resisting performance of the wall.</p> <p>(f) A door required by (d) may be automatic-closing in accordance with the following:</p> <ul style="list-style-type: none"> (i) The automatic-closing operation must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located not more than 1.5 m horizontal distance from the approach side of the doorway. (ii) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification E1.5, is installed in the building, activation of the system must also initiate the automatic-closing operation. <p>(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—</p> <ul style="list-style-type: none"> (i) another sole-occupancy unit; or (ii) a room not within a sole-occupancy unit, then that external wall must— (iii) be constructed of concrete or masonry, or be lined internally with a fire-protective covering; and (iv) have any doorway fitted with a self-closing, tight-fitting solid core door not less than 35 mm thick; and (v) have any windows or other openings— <ul style="list-style-type: none"> (A) protected internally in accordance with C3.4; or (B) located at least 1.5 m above the floor of the balcony, landing or the like.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
C3.12 Openings in floors and ceilings for services				X	Where services pass through a floor which is required to achieve a FRL or a ceiling required to have a RISF, the service must be enclosed within a fire resisting shaft or fire protected in accordance with Clause C3.15. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
C3.13 Openings in Shafts				X	In a building of Type A construction, an opening in a wall providing access to a ventilating, pipe, garbage or other service shaft must be fire protected in accordance with this clause. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
C3.15 Openings for Service Installations				X	Where services pass through an element which is required to achieve a FRL (other than an external wall or roof), the service must be fire stopped by a tested system or Specification C3.15. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
C3.16 Construction Joints				X	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 to achieve the required FRL. The requirements above do not apply where joints, spaces and the like between fire protected timber elements are provided with cavity barriers in accordance with Specification C1.13. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
C3.17 Columns protected in lightweight construction to achieve an FRL			X		Any column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of construction which has achieved the required FRL or resistance to the incipient spread of fire. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification

SECTION D

ACCESS & EGRESS

Part D1 - Provision for Escape

D1.1 Application of Part			X		The DTS provisions of this Part do not apply to the internal parts of a sole occupancy unit in a Class 2 or 3 building or Class 4 part of a building.
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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
D1.2 Number of Exits required		X			<p>(a) All buildings — Every building must have at least one exit from each storey.</p> <p>(b) Class 2 to 8 buildings — In addition to any horizontal exit, not less than 2 exits must be provided from the following:</p> <ul style="list-style-type: none"> (i) Each storey if the building has an effective height of more than 25 m. (ii) A Class 2 or 3 building subject to C1.5. <p>(c) Basements — In addition to any horizontal exit, not less than 2 exits must be provided from any storey if egress from that storey involves a vertical rise within the building of more than 1.5 m, unless—</p> <ul style="list-style-type: none"> (i) the floor area of the storey is not more than 50 m²; and (ii) the distance of travel from any point on the floor to a single exit is not more than 20 m. <p>(g) Access to exits — Without passing through another sole-occupancy unit every occupant of a storey or part of a storey must have access to—</p> <ul style="list-style-type: none"> (i) an exit; or (ii) at least 2 exits, if 2 or more exits are required. <p><u>DTS non-compliance</u></p> <p>2 exits are not provided to each of the rooftops.</p> <p>Specifically, a fire-isolated stairway is serving as a DTS compliant exit and an access hatch is serving as a secondary exit.</p> <p>Discussions with the Fire Engineer have determined access hatches will be provided as exits on the rooftop.</p>

Page 55 of 127



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(iii) in any other case it connects, passes through or passes by not more than 2 consecutive storeys and one extra storey of any classification may be included if—</p> <p>(A) the building has a sprinkler system (other than a FPAA101D system) complying with Specification E1.5 installed throughout; or</p> <p>(B) the required exit does not provide access to or egress for, and is separated from, the extra storey by construction having—</p> <p>(aa) an FRL of –/60/60, if non-loadbearing; and</p> <p>(bb) an FRL of 90/90/90 for Type A construction or 60/60/60 for Type B or C construction, if loadbearing; and</p> <p>(cc) no opening that could permit the passage of fire or smoke.</p> <p>All stairways appear to be fire-isolated as required.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D1.4 Exit Travel Distances		X			<p>(a) Class 2 buildings—</p> <p>(i) The entrance doorway of any sole-occupancy unit must be not more than—</p> <p>(A) 6 m from an exit or from a point from which travel in different directions to 2 exits is available; or</p> <p>(B) 20 m from a single exit serving the storey at the level of egress to a road or open space; and</p> <p>(ii) 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.</p> <p>(c) Class 7 buildings — Subject to (d), (e) and (f)—</p> <p>(i) 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; and</p> <p>(ii) in a Class 5 or 6 building, the distance to a single exit serving a storey at the level of access to a road or open space may be increased to 30 m.</p> <p><u>DTS non-compliances</u></p> <p>Basement 3 – Distance to a point of choice or an exit exceed 20m and 40m respectively.</p> <p>Basement 2 – Distance to a point of choice or an exit exceed 20m and 40m respectively.</p>



**Basement 3 – Distance to a point of choice or an exit exceed 20m and 40m respectively.
It is recommended that this is addressed by a Fire Engineered Performance Solution.**



Page 58 of 127

BCA DEEMED-TO-SATISFY
PROVISION

COMPLIES

DOES NOT
COMPLY

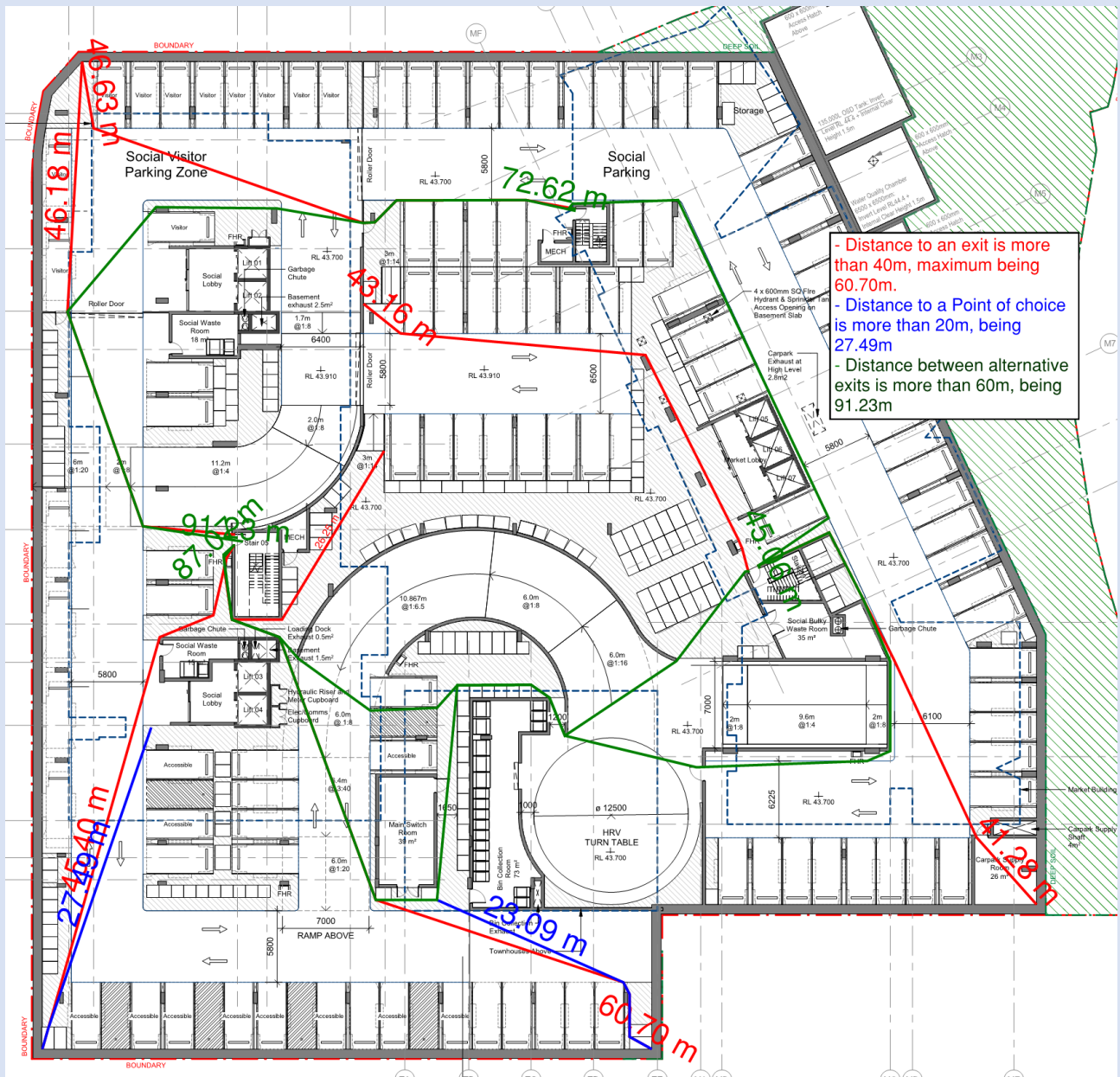
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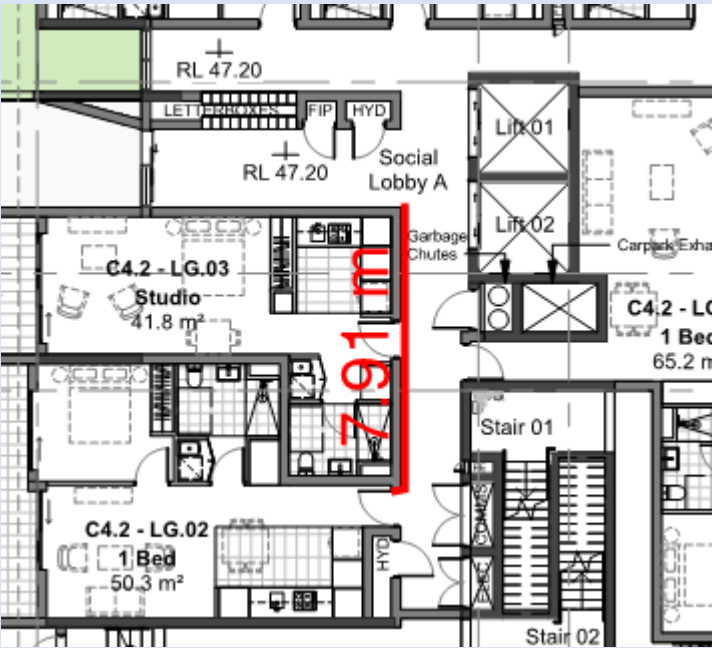
NA or

Compliance
Required

COMMENTS

Basement 1 – Distance to a point of choice or an exit exceed 20m and 40m respectively.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	Informational NA or	Compliance Required	COMMENTS
Ground Floor – Unit LG.02 - The distance to a point of choice is greater than 6m, being 8.0m.					
 <p>The floor plan shows Unit LG.02 (C4.2 - LG.02) with a 1 Bed (50.3 m²) and a Studio (41.8 m²). A red line is drawn from the unit entrance to a point of choice, labeled 7.91m. Other areas shown include Social Lobby A, Lift 01, Lift 02, Stair 01, Stair 02, and various service areas like Garbage Chutes and FIP HYD.</p>					

Page 61 of 127

Page 62 of 127

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
<p>Level 3 -16</p> <ul style="list-style-type: none"> – Unit 3.09 - The distance to a point of choice is greater than 6m, being 11.8m (shown in red below). – Unit 3.05 - The distance to a point of choice is greater than 6m, being 11.6m (shown in red below). – Unit 3.09 - The distance to a point of choice is greater than 6m, being 11.9m (shown in red below). 					

BCA DEEMED-TO-SATISFY
PROVISION

COMPLIES

DOES NOT
COMPLY

Informational

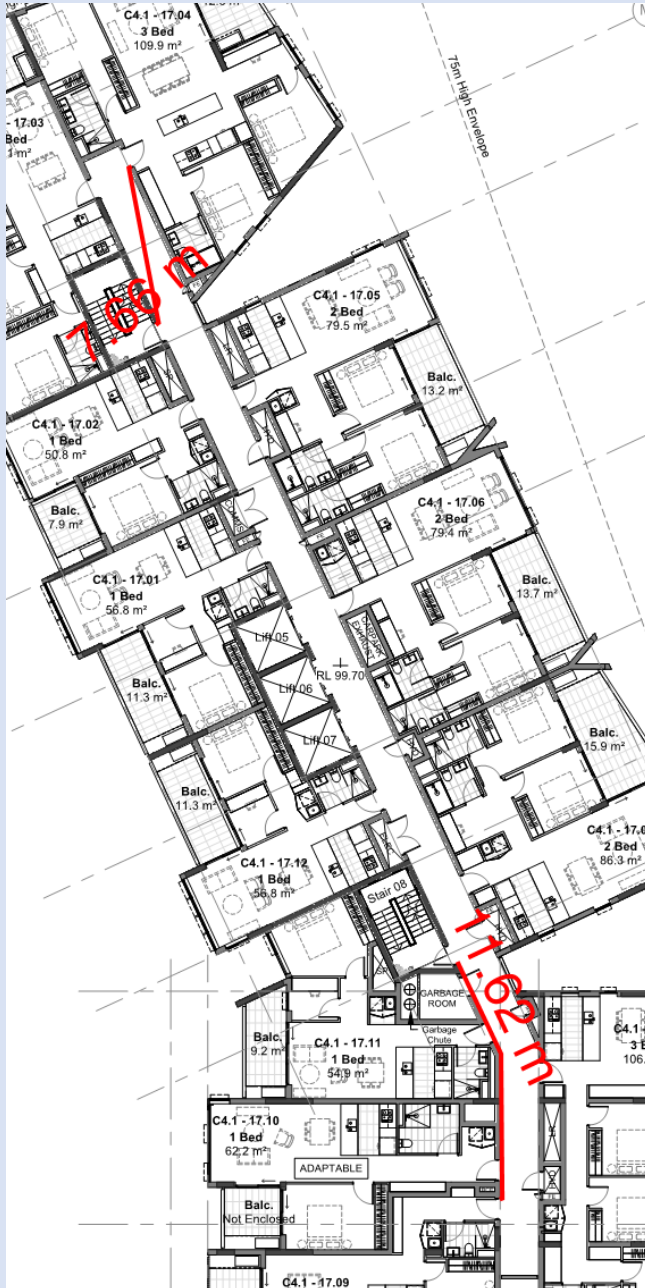
NA or

Compliance
Required

COMMENTS

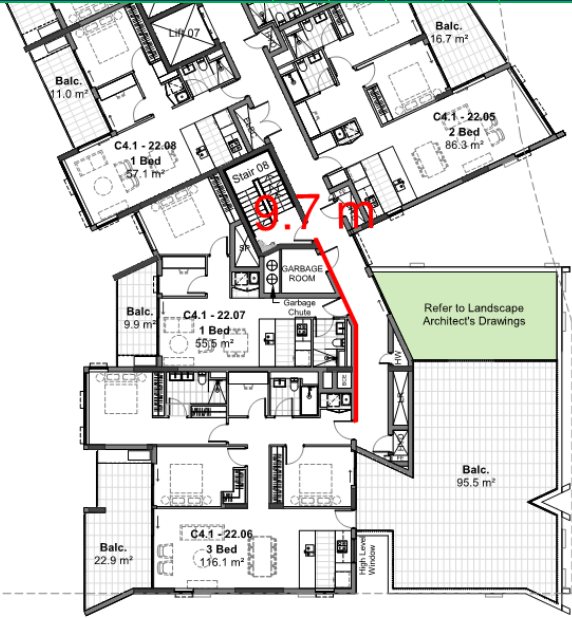
Level 17-21

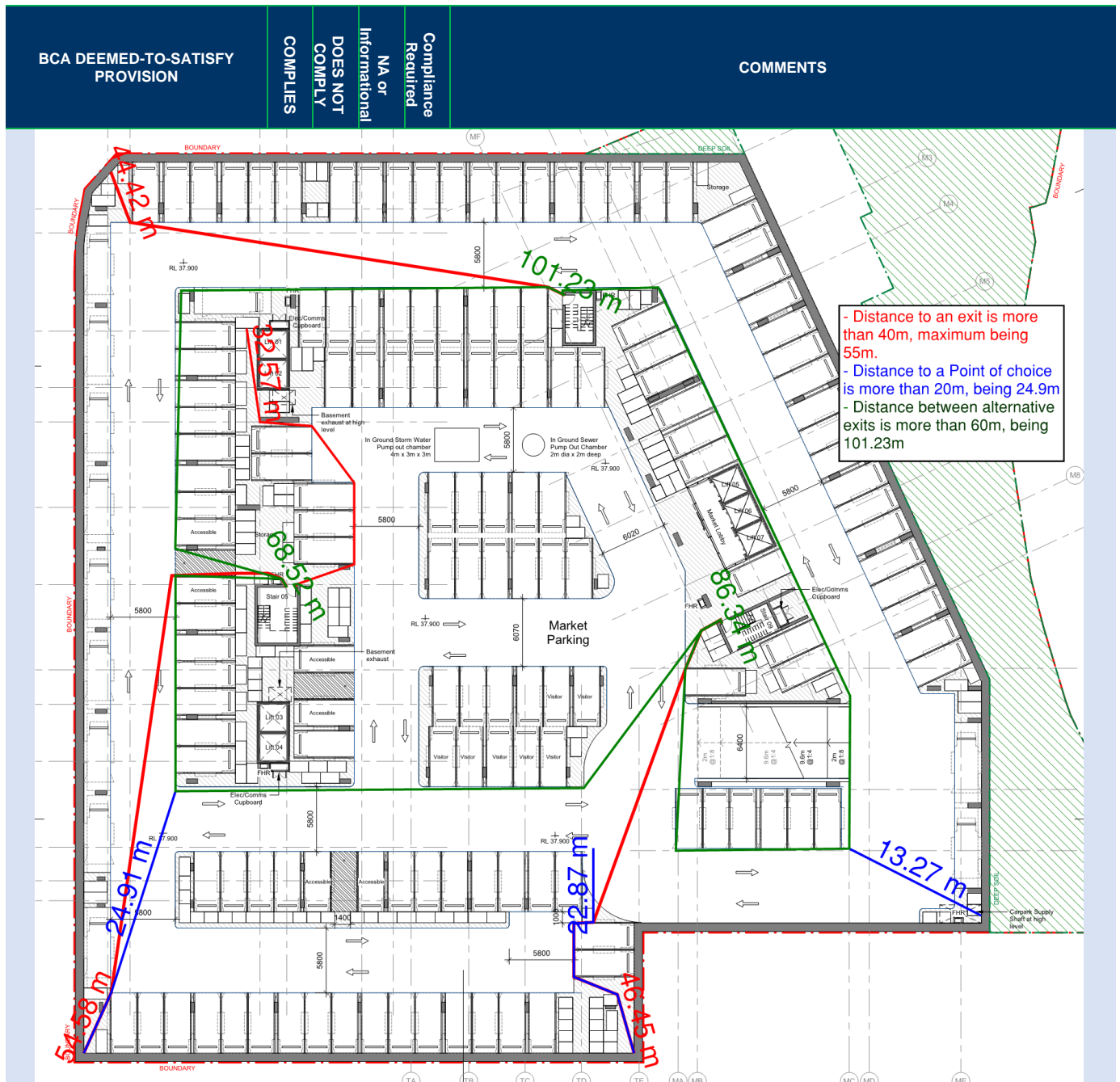
- Unit 17.04– The distance to a point of choice is greater than 6m, being 7.7m (shown in red below).
- Unit 17.09 - The distance to a point of choice is greater than 6m, being 11.7m (shown in red below)



Level 22-23

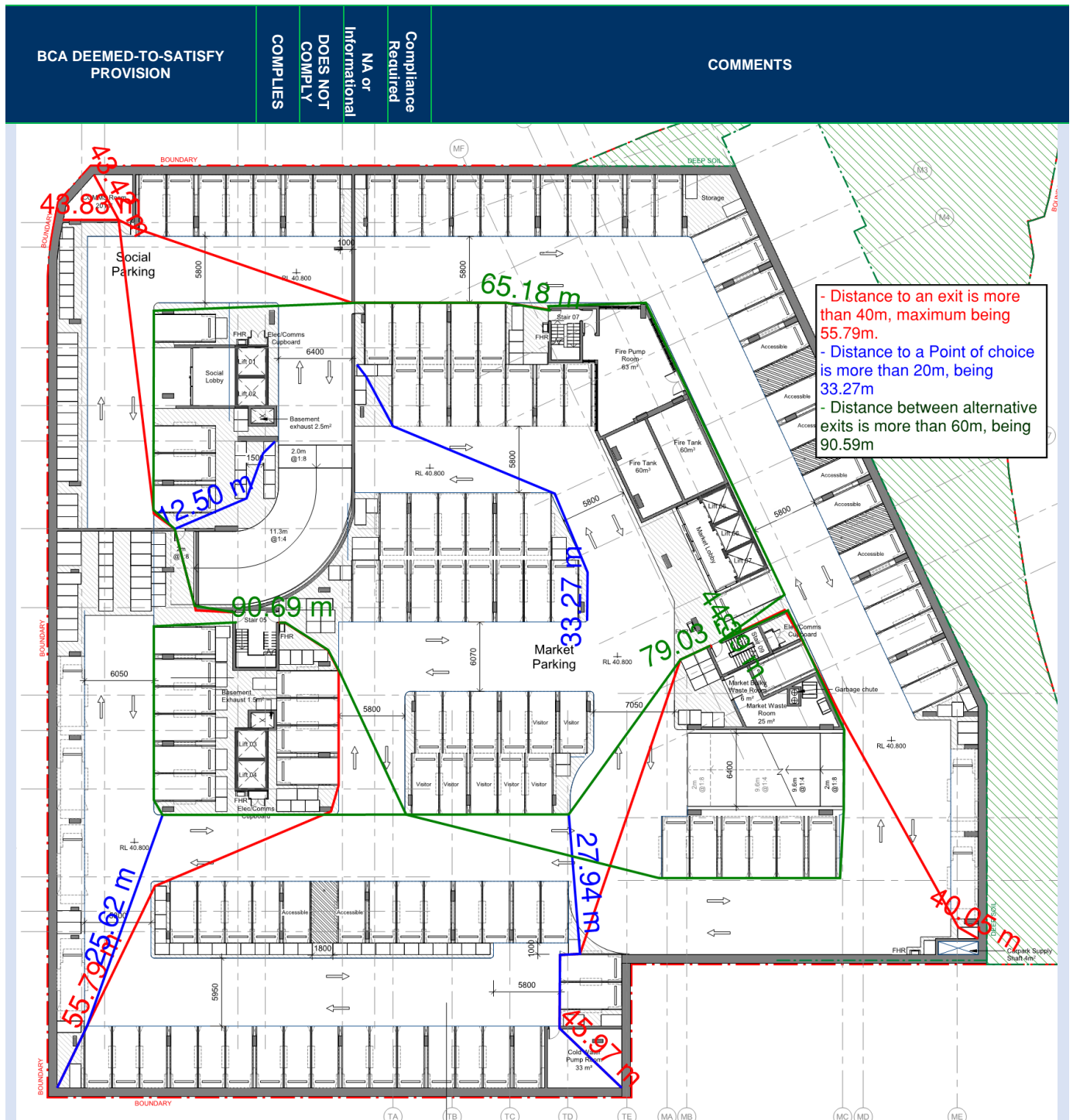
- Unit 22.06– The distance to a point of choice is greater than 6m, being 9.7m (shown in red below).

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p><i>This will be addressed by a Fire Engineered Performance Solution.</i></p>
D1.5 Distance Between Alternative Exits		X			<p>Exits that are required as alternative means of egress must be—</p> <ul style="list-style-type: none"> (a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas; and (b) not less than 9 m apart; and (c) not more than— <ul style="list-style-type: none"> (i) in a Class 2 building — 45 m apart; or (iii) in all other cases — 60 m apart; and (d) located so that alternative paths of travel do not converge such that they become less than 6 m apart.
<p>Basement 3 – Distance between alternative exits are marked up as below. <i>It is recommended that this is addressed by a Fire Engineered Performance Solution.</i></p>					



Basement 2 – Distance between alternative exits are marked up as below.

It is recommended that this is addressed by a Fire Engineered Performance Solution.



Basement 1 – Distance between alternative exits are marked up as below.

It is recommended that this is addressed by a Fire Engineered Performance Solution.


- Distance to an exit is more than 40m, maximum being 60.70m.

- Distance to a Point of choice is more than 20m, being 27.49m

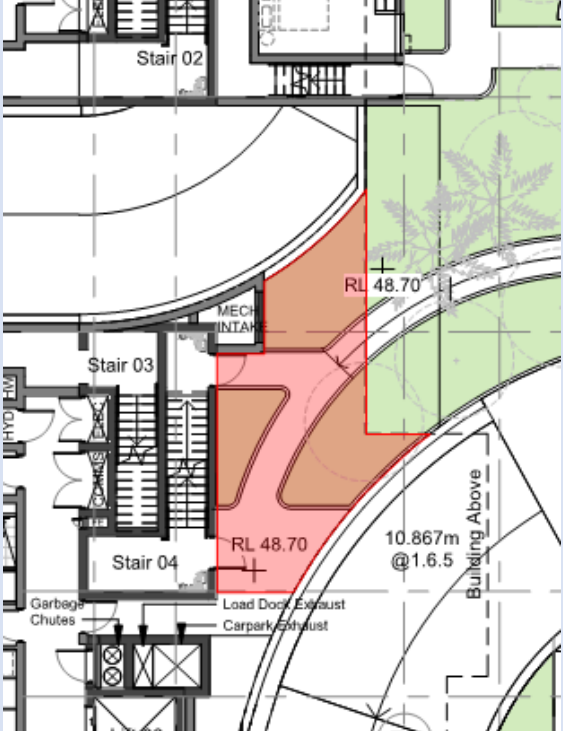
- Distance between alternative exits is more than 60m, being 91.23m

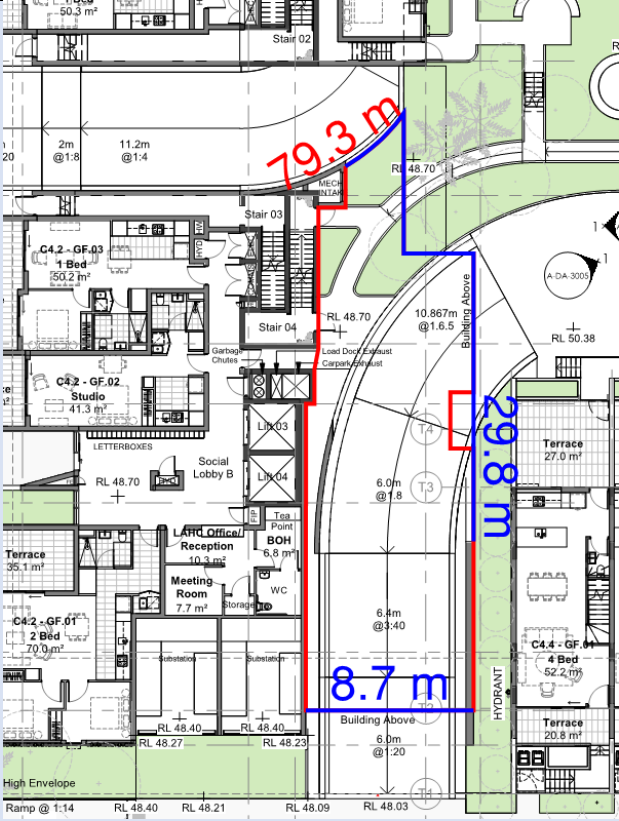
- **Between Stair 01 & Stair 02 – 5.18m**

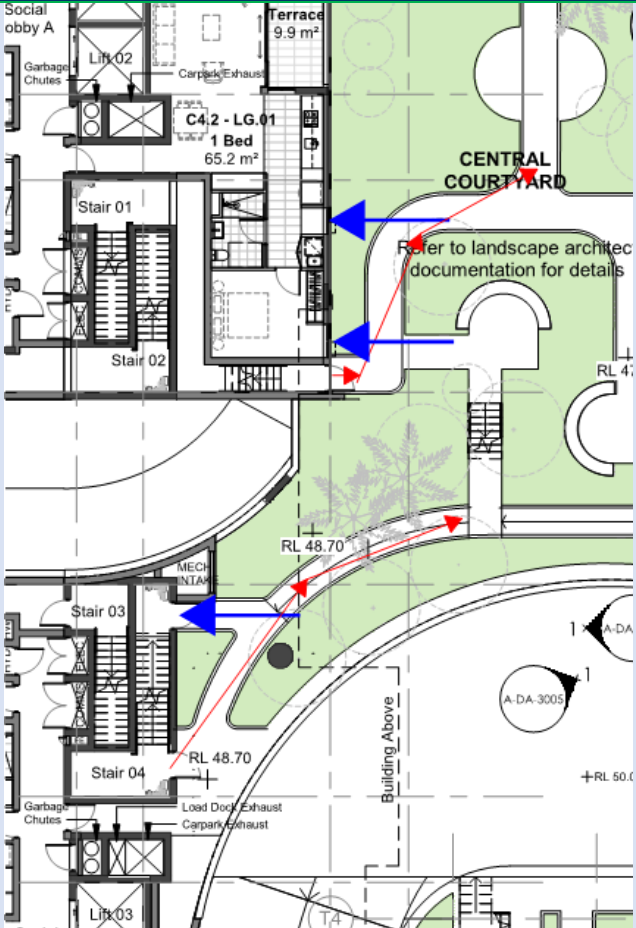



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
<p>- Between Stair 03 & Stair 04 – 5.15m.</p> 					
D1.6 Dimensions of Exits and paths of Travel to Exits				X	<p>In a required exit or path of travel to an exit—</p> <ul style="list-style-type: none"> (a) the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm; and (b) the unobstructed width of each exit or path of travel to an exit, except for doorways, must be not less than— <ul style="list-style-type: none"> (i) 1 m; or (f) the unobstructed width of a doorway must be not less than— <ul style="list-style-type: none"> (iii) the unobstructed width of each exit provided to comply with (b), (c), (d) or (e), minus 250 mm; or (v) in any other case except where it opens to a sanitary compartment or bathroom — 750 mm wide; and

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(g) the unobstructed width of a required exit must not diminish in the direction of travel to a road or open space, except where the width is increased in accordance with (b)(ii) or (f)(i); and</p> <p>(h) the required width of a stairway or ramp must—</p> <p>(i) be measured clear of all obstructions such as handrails, projecting parts of balustrades or other barriers and the like; and</p> <p>(ii) extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing.</p> <p>(i) to determine the aggregate unobstructed width, the number of persons accommodated must be calculated according to D1.13; and</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D1.7 Travel via Fire Isolated Stairs		X			<p>(a) A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from—</p> <p>(i) a public corridor, public lobby or the like; or</p> <p>(ii) a sole-occupancy unit occupying all of a storey; or</p> <p>(iii) a sanitary compartment, airlock or the like.</p> <p>(b) Each fire-isolated stairway or fire-isolated ramp must provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway—</p> <p>(i) to a road or open space; or</p> <p>(ii) to a point—</p> <p>(A) in a storey or space, within the confines of the building, that is used only for pedestrian movement, car parking or the like and is open for at least 2/3 of its perimeter; and</p> <p>(B) from which an unimpeded path of travel, not further than 20 m, is available to a road or open space; or</p> <p>(iii) into a covered area that—</p> <p>(A) adjoins a road or open space;</p> <p>(B) and is open for at least 1/3 of its perimeter; and</p> <p>(C) has an unobstructed clear height throughout, including the perimeter openings, of not less than 3 m; and</p> <p>(D) provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6 m.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>DTS non-compliance</p> <p>Southern fire-isolated stairway</p> <p>Perimeter = 79.3m</p> <p>Open = 29.8 + 8.7 = 38.5m</p> <p>Open for 1/3 = yes, complies</p> <p>Unobstructed clear height of 3m = No; 2.9m provided.</p> <p><i>It is recommended that this is addressed by a Fire Engineered Performance Solution.</i></p> 

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p>(c) Where a path of travel from the point of discharge of a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building, measured horizontally at right angles to the path of travel, that part of the wall must have—</p> <ul style="list-style-type: none"> (i) an FRL of not less than 60/60/60; and (ii) any openings protected internally in accordance with C3.4, <p>for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser.</p> <p>DTS non-compliance</p> <p>Ground floor - Discharge from the following fire-isolated stairways necessitates passing within 6 m of an external wall. Openings (highlighted in blue) are required to be protected internally in accordance with C3.4:</p> <ul style="list-style-type: none"> - Lobby A - Lobby B

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p>Ground floor - Discharge from the northern fire-isolated stairway (from carpark) necessitates passing within 6 m of an external wall. Openings (highlighted in blue) are required to be protected internally in accordance with C3.4.</p> <ul style="list-style-type: none"> - Internal drenchers to windows; and - Internal drenchers to self-closing doorway is DTS compliant.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p>(d) If more than 2 access doorways, not from a sanitary compartment or the like, open to a required fire-isolated exit in the same storey—</p> <ul style="list-style-type: none"> (i) a smoke lobby in accordance with D2.6 must be provided; or (ii) the exit must be pressurised in accordance with AS/NZS 1668.1. <p>(e) A ramp must be provided at any change in level less than 600 mm in a fire-isolated passageway in a Class 9 building.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D1.8 External Stairways or ramps in lieu of Fire Isolated Stairs			X		Not applicable. No external stairways or ramps proposed in lieu of fire isolated stairs
D1.9 Travel by non-fire-isolated stairs	X				<p>(a) A non-fire-isolated stairway or non-fire-isolated ramp 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.</p> <p>(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 or ramp that is not fire-</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>isolated and is required to serve that room or sole-occupancy unit must not exceed—</p> <p>(ii) 60 m in all other cases.</p> <p>(c) In a Class 7 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 or non-fire-isolated ramp must not exceed 80 m.</p> <p>(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—</p> <p>(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</p> <p>(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.</p> <p>(e) In a Class 5 to 8 building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than—</p> <p>(i) 20 m from a doorway providing egress to a road or open space or from a fire isolated passageway leading to a road or open space; or</p> <p>(ii) 40 m from one of 2 such doorways or passageways if travel to each of them from the non-fire-isolated stairway or non-fire-isolated ramp is in opposite or approximately opposite directions.</p> <p>(f) In a Class 2 building, if 2 or more exits are required and are provided by means of internal non-fire-isolated stairways or non-fire-isolated ramps, each exit must—</p> <p>(i) provide separate egress to a road or open space;</p> <p>(ii) and be suitably smoke-separated from each other at the level of discharge.</p> <p>No non-fire-isolated stairways proposed.</p>
D1.10 Discharge from Exits				X	<p>(a) 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.</p> <p>(b) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than—</p> <p>(i) the minimum width of the required exit;</p> <p>(ii) or 1 m,</p> <p>whichever is the greater.</p> <p>(c) If an exit discharges to open space that is at a different level than the public road to which it is connected, the path of travel to the road must be by—</p>





BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none"> (i) a ramp or other incline having a gradient not steeper than 1:8 at any part, or not steeper than 1:14 if required by the Deemed-to-Satisfy Provisions of Part D3; or (ii) a stairway complying with the Deemed-to-Satisfy Provisions of the BCA. (d) The discharge point of alternative exits must be located as far apart as practical. (e) In a Class 9b building which is an open spectator stand that accommodates more than 500 persons, a required stairway or required ramp must not discharge to the ground in front of the stand. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D1.11 Horizontal Exits			X		Not applicable. No horizontal exits proposed or required.
D1.12 Non-required stairways, ramps or escalators			X		Not applicable. An escalator, moving walkway or non-required non-fire-isolated stairway or pedestrian ramp is not proposed.
D1.13 Number of Persons Accommodated Note NSW Table D1.13 Area per person according to use			X		<p>Informational.</p> <p>For the purpose of the Deemed-to-Satisfy provisions, the number of persons accommodated in a storey, room or mezzanine must be determined with consideration to the purpose for which it is used and the layout of the floor area by—</p> <ul style="list-style-type: none"> (a) calculating the sum of the numbers obtained by dividing the floor area of each part of the storey by the number of square metres per person listed in Table D1.13 according to the use of that part, excluding spaces set aside for— <ul style="list-style-type: none"> (i) lifts, stairways, ramps and escalators, corridors, hallways, lobbies and the like; and (ii) service ducts and the like, sanitary compartments or other ancillary uses; or (b) reference to the seating capacity in an assembly building or room; or (c) any other suitable means of assessing its capacity. <p><i>Refer NSW Table D1.13 to calculate area per person according to use.</i></p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D1.14 Measurement of Distances			X		<p>Informational</p> <p>The nearest part of an exit means in the case of—</p> <ul style="list-style-type: none"> (a) a fire-isolated stairway, fire-isolated passageway, or fire-isolated ramp, the nearest part of the doorway providing access to them; and





BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(b) a non-fire-isolated stairway, the nearest part of the nearest riser; and</p> <p>(c) a non-fire-isolated ramp, the nearest part of the junction of the floor of the ramp and the floor of the storey; and</p> <p>(d) a doorway opening to a road or open space, the nearest part of the doorway; and</p> <p>(e) a horizontal exit, the nearest part of the doorway.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D1.15 Method of Measurement			X		<p>Informational</p> <p>The following rules apply:</p> <p>(a) In the case of a room that is not a sole occupancy unit in a Class 2 or 3 building or Class 4 part of a building, the distance includes the straight-line measurement from any point of the floor of the room to the nearest part of the doorway leading from it, together with the distance from the part of the doorway to the single required exit or point from which travel in different directions to 2 required exits is available.</p> <p>(b) Subject to (d), the distance from the doorway of a sole occupancy unit in a Class 2 or 3 building is measured in a straight line to the nearest part of the required single exit or point from which travel in different directions to 2 required exits is available.</p> <p>(c) Subject to (d), the distance between exits is measured in a straight line between the nearest parts of those exits.</p> <p>(d) Only the shortest distance is taken along a corridor, hallway, external balcony or other path of travel that curves or changes direction.</p> <p>(e) If more than one corridor, hallway, or other internal path of travel connects required exits, for the purposes of D1.5(c) the measurement is along the path of travel through the point at which travel in different directions to those exits is available, as determined in accordance with D1.4.</p> <p>(f) If a wall (including a demountable internal wall) that does not bound –</p> <p>(i) A room; or</p> <p>(ii) A corridor, hallway or the like, causes a change in direction in proceeding to a required exit, the distance is measured along the path of travel past the wall.</p> <p>(iii) If permanent fixed seating is provided, the distance is measured along the path of travel between the rows of seats.</p> <p>(iv) In the case of a non-fire isolated stairway or non-fire isolated ramp, the distance is measured along a line connecting the nosings of the treads, along the slope of the ramp, together with the distance connecting those lines across any intermediate landing.</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
D1.16 Plant Rooms and lift Motor Rooms: Concession			X		<p>(a) A ladder may be used in lieu of a stairway to provide egress from—</p> <p>(i) a plant room with a floor area of not more than 100 m²; or</p> <p>(ii) all but one point of egress from a plant room, a lift machine room or a Class 8 electricity network substation with a floor area of not more than 200 m².</p> <p>(b) A ladder permitted under (a)—</p> <p>(i) may form part of an exit provided that in the case of a fire-isolated stairway it is contained within the shaft; or</p> <p>(ii) may discharge within a storey in which case it must be considered as forming part of the path of travel; and</p> <p>(iii) for a plant room or a Class 8 electricity network substation, must comply with AS 1657; and</p> <p>(iv) for a lift machine room, where access is provided from within a machine room to a secondary floor, a fixed rung type ladder complying with AS 1657 may be used, provided that—</p> <p>(A) the height between the floors is not more than 2800 mm; and</p> <p>(B) the ladder is inclined at an angle to the horizontal not less than 65 degrees nor more than 75 degrees; and</p> <p>(C) the distance between the front face of the ladder and any adjacent obstruction is not less than—</p> <p>(aa) 960 mm, where the ladder is inclined 65 degrees to the horizontal; or</p> <p>(bb) 760 mm, where the ladder is inclined 75 degrees to the horizontal; or</p> <p>(cc) a distance that is determined by interpolating the values in (aa) and (bb), where the ladder is inclined at any angle between 65 degrees and 75 degrees to the horizontal; and</p> <p>(D) a clear space not less than 600 mm exists between the foot of the ladder and any equipment.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D1.17 Access to lift pits			X		<p>Access to lift pits must—</p> <p>(a) where the pit depth is not more than 3 m, be through the lowest landing doors; or</p> <p>(b) where the pit depth is more than 3 m, be provided through an access doorway complying with the following:</p> <p>(i) In lieu of D1.6, the doorway must be level with the pit floor and not be less than 600 mm wide by 1980 mm high</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>clear opening, which may be reduced to 1500 mm where it is necessary to comply with (ii).</p> <p>(ii) No part of the lift car or platform must encroach on the pit doorway entrance when the car is on a fully compressed buffer.</p> <p>(iii) Access to the doorway must be by a stairway complying with AS 1657.</p> <p>(iv) In lieu of D2.21, doors fitted to the doorway must be—</p> <p>(A) of the horizontal sliding or outwards opening hinged type; and</p> <p>(B) self-closing and self-locking from the outside; and</p> <p>(C) marked on the landing side with the letters not less than 35 mm high:</p> <p>“DANGER LIFTWELL – ENTRY OF UNAUTHORIZED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES”</p>
Part D2 - Construction of Exits					
D2.1 Application of Part			X		<p>Informational</p> <p>Except for D2.13, D2.14 (a), D2.16, D2.17(d), D2.17(e) and D2.18, the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of the Class 2 sole-occupancy units.</p> <p>Note NSW D2.1 (entertainment venues)</p>
D2.2 Fire-Isolated stairways and ramps				X	<p>A stairway or ramp (including any landings) that is required to be in a fire resisting shaft must be constructed –</p> <p>(a) Of non-combustible materials; and</p> <p>(b) So that if there is local failure it will not cause structural damage to or impair the fire resistance of the shaft.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)</i></p>
D2.3 Non-fire Isolated stairways and ramps				X	<p>In a building having a rise in storeys of more than 2, required stairs and ramps (including any landings and any supporting building elements) which are not required to be within a fire resisting shaft, must be constructed according to D2.2, or only of -</p> <p>(a) reinforced or prestressed concrete; or</p> <p>(b) steel in no part less than 6 mm thick; or</p> <p>(c) timber that—</p> <p>(i) has a finished thickness of not less than 44 mm; and</p> <p>(ii) has an average density of not less than 800 kg/m³ at a moisture content of 12%; and</p> <p>(iii) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue”.</p>



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					<i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
D2.4 Separation of Rising and Descending Stairs				X	<p>If a stairway serving as a required exit is required to be fire isolated –</p> <ul style="list-style-type: none"> (a) There must be no direct connection between – <ul style="list-style-type: none"> (i) A flight rising from a storey below the lowest level of access to a road or open space; and (ii) A flight descending from a storey above that level ; and (b) Any construction that separates or is common to the rising and descending flights must be- <ul style="list-style-type: none"> (i) Non-combustible; and (ii) Smoke proof in accordance with Clause 2 of Specification C2.5. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.5 Open Access ramps and balconies			X		Not applicable. Open access ramps or balconies provided to meet the smoke hazard management requirements of Table E2.2a are not proposed or required.
D2.6 Smoke Lobbies			X		Not applicable. No smoke lobbies required by D1.7 are proposed or required.
D2.7 Installations in Exits and Paths of Travel				X	<ul style="list-style-type: none"> (a) Access to service shafts and services other than to fire-fighting or detection equipment as permitted in the Deemed-to-Satisfy Provisions of Section E, must not be provided from a fire-isolated stairway. (b) An opening to any chute or duct intended to convey hot products of combustion from a boiler, incinerator, fireplace or the like must not be located in any part of a required exit or any corridor, hallway, lobby or the like leading to a required exit. (c) Gas or other fuel services must not be installed in a required exit (d) Services or equipment comprising – <ul style="list-style-type: none"> (i) Electricity meters, distribution boards or cuts; or (ii) Central telecommunications distribution boards or equipment; or (iii) Electrical motors or other motors service equipment in the building, <p>May be installed in –</p> <ul style="list-style-type: none"> (i) A required exit, except for fire-isolated exits specified in (a); or (ii) In any corridor, hallway, lobby or the like leading to a required exit,

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					<p>If the services or equipment are enclosed by non-combustible construction or a fire-protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure</p> <p>(e) Electrical wiring may be installed in a fire-isolated exit if the wiring is associated with;</p> <p>(i) A lighting, detection, or pressurization system serving the exit; or</p> <p>(ii) A security, surveillance or management system serving the exit; or</p> <p>(iii) An intercommunication system or an audible or visual alarm system in accordance with D2.22; or</p> <p>(iv) The monitoring of hydrant or sprinkler isolating valves.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.8 Enclosure of Space Under Stairs and ramps				X	<p>(a) Fire-isolated stairways and ramps — If the space below a required fire-isolated stairway or fire-isolated ramp is within the fire-isolated shaft, it must not be enclosed to form a cupboard or similar enclosed space.</p> <p>(b) Non fire-isolated stairways 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—</p> <p>(i) the enclosing walls and ceilings have an FRL of not less than 60/60/60; and</p> <p>(ii) any access doorway to the enclosed space is fitted with a self-closing –/60/30 fire door.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.9 Width of Stairs			X		<p>A required stairway or ramp that exceeds 2 m in width is counted as having a width of only 2 m unless it is divided by a handrail, balustrade or other barrier continuous between landings and each division has a width of not more than 2 m.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.10 Pedestrian Ramps				X	<p>(a) A fire isolated ramp may be substituted for a fire isolated stairway if the construction enclosing the ramp and the width and ceiling height comply with the requirements for a fire isolated stairway.</p> <p>(b) A ramp serving as a required exit must –</p> <p>(i) Where the ramp is also serving as an accessible ramp under Part D3, be in accordance with AS1428.1; or</p> <p>(ii) In any other case, have a gradient not steeper than 1:8.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(c) The floor surface of a ramp must have a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS4586.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.11 Fire-Isolated Passageways			X		<p>(a) The enclosing construction of a fire isolated passageway must have an FRL when tested for a fire outside the passageway in another part of the building of –</p> <p>(i) If the passageway discharges from a fire isolated stairway or ramp – not less than that required for the stairway or ramp shaft; or</p> <p>In any other case – not less than 60/60/60.</p> <p>(b) Notwithstanding (a)(ii), the top of construction of a fire isolated passageway need not have an FRL if the walls of the fire rated passageway extend to the underside of –</p> <p>(i) A non-combustible roof covering; or</p> <p>(ii) A ceiling having a resistance to the incipient spread of fire of not less than 60 minutes separating the roof space or ceiling space in all areas surrounding the passageway within the fire compartment.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.12 Roof as Open Space				X	<p>If an exit discharges to the roof of a building the roof must –</p> <p>(a) Have an FRL not less than 120/120/120; and</p> <p>(b) Not have any roof lights or other openings with 3m of the path of travel of persons using the exit to reach a road of open space.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.13 Goings & Risers				X	<p>(a) A stairway must have—</p> <p>(i) not more than 18 and not less than 2 risers in each flight; and</p> <p>(ii) going (G), riser (R) and quantity (2R + G) in accordance with Table D2.13, except as permitted by (b) and (c); and</p> <p>(iii) constant goings and risers throughout each flight, except as permitted by (b) and (c), and the dimensions of goings (G) and risers (R) in accordance with (a)(ii) are considered constant if the variation between—</p> <p>(A) adjacent risers, or between adjacent goings, is no greater than 5 mm; and</p> <p>(B) the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm; and</p>

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					<ul style="list-style-type: none"> (iv) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and (v) treads which have— <ul style="list-style-type: none"> (A) a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or (B) a nosing strip with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; and (vi) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 storeys; and (viii) in the case of a required stairway, no winders in lieu of a landing. <p>(b) In the case of a non-required stairway—</p> <ul style="list-style-type: none"> (i) the stairway must have— <ul style="list-style-type: none"> (A) not more than 3 winders in lieu of a quarter landing; and (B) not more than 6 winders in lieu of a half landing; and (ii) the going of all straight treads must be constant throughout the same flight and the dimensions of goings (G) is considered constant if the variation between— <ul style="list-style-type: none"> (A) adjacent goings, is no greater than 5 mm; and (B) the largest and smallest going within a flight, does not exceed 10 mm; and (iii) the going of all winders in lieu of a quarter or half landing may vary from the going of the straight treads within the same flight provided that the going of all such winders is constant. <p>(c) Where a stairway discharges to a sloping public walkway or public road—</p> <ul style="list-style-type: none"> (i) the riser (R) may be reduced to account for the slope of the walkway or road; and (ii) the quantity (2R+G) may vary at that location. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.14 Landings				X	<p>In a stairway</p> <ul style="list-style-type: none"> (a) Landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing must –



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none"> (i) Be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing; and (ii) Have – <ul style="list-style-type: none"> (A) A surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or (B) A strip at the edge of the landing with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS4586, where the edge leads to a flight below; and <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.15 Thresholds				X	<p>The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless—</p> <ul style="list-style-type: none"> (c) in a building required to be accessible by Part D3, the doorway— <ul style="list-style-type: none"> (i) opens to a road or open space; and (ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or (e) in other cases— <ul style="list-style-type: none"> (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. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.16 Balustrades and other Barriers Note NSW D2.16				X	<ul style="list-style-type: none"> (a) A continuous barrier must be provided along the side of— <ul style="list-style-type: none"> (i) a roof to which general access is provided; and (ii) a stairway or ramp; and (iii) a floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and (iv) any delineated path of access to a building, if the trafficable surface is 1 m or more above the surface beneath. (b) The requirements of (a) do not apply to— <ul style="list-style-type: none"> (i) the perimeter of a stage, rigging loft, loading dock or the like; or (ii) areas referred to in D2.18; or (iii) a retaining wall unless the retaining wall forms part of, or is directly associated with a delineated path of access to



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>a building from the road, or a delineated path of access between buildings; or</p> <p>(iv) a barrier provided to an openable window covered by D2.24.</p> <p>(c) A barrier required by (a) must be constructed in accordance with NSW Table D2.16a 1.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.17 Handrails				X	<p>(a) Except for handrails referred to in D2.18, handrails must be—</p> <p>(i) located along at least one side of the ramp or flight; and</p> <p>(iii) located along each side if the total width of the stairway or ramp is 2 m or more; and</p> <p>(iv) in any other case, fixed at a height of not less than 865 mm measured above the nosings of stair treads and the floor surface of the ramp, landing, or the like; and</p> <p>(v) continuous between stair flight landings and have no obstruction on or above them that will tend to break a hand-hold; and</p> <p>(vi) in a required exit serving an area required to be accessible, designed and constructed to comply with clause 12 of AS 1428.1, except that clause 12(d) does not apply to a handrail required by (a)(iii)(B).</p> <p>(c) Handrails required to assist people with a disability must be provided in accordance with D3.3.</p> <p>(d) Handrails to a stairway or ramp within a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building must—</p> <p>(i) be located along at least one side of the flight or ramp; and</p> <p>(ii) be located along the full length of the flight or ramp, except in the case where a handrail is associated with a barrier, the handrail may terminate where the barrier terminates; and</p> <p>(iii) have the top surface of the handrail not less than 865 mm vertically above the nosings of the stair treads or the floor surface of the ramp; and</p> <p>(iv) have no obstruction on or above them that will tend to break a handhold, except for newel posts, ball type stanchions, or the like.</p> <p>(e) The requirements of (d) do not apply to—</p> <p>(i) handrails referred to in D2.18; or</p> <p>(ii) a stairway or ramp providing a change in elevation of less than 1 m; or</p> <p>(iii) a landing; or</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(iv) a winder where a newel post is installed to provide a handhold.</p> <p>Please note the handrail is required to one side of the stairways serving within the residential SOUs.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
D2.18 Fixed Platforms, walkways and ladders				X	<p>A fixed platform, walkway, stairway, ladder and any going and riser, landing, handrail or barrier attached thereto may comply with AS1657 in lieu of D2.13, D2.14 D2.16 and D2.17 if it only serves:</p> <p>(a) Machinery rooms, boiler houses, lift machine rooms, plant-rooms and the like; or</p> <p>(b) Non-habitable rooms, such as attics, storerooms and the like that are not used on a frequent or daily basis in the internal parts of a sole occupancy unit in a Class 2 building or Class 4 part of the building.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
D2.19 Doorways & Doors				X	<p>(b) A doorway serving as a required exit or forming part of a required exit–</p> <p>(i) Must not be fitted with a revolving door; and</p> <p>(ii) Must not be fitted with a roller shutter or tilt-up door unless –</p> <p>(A) It serves a Class 7 building or part with a floor area not more than 200m²; and</p> <p>(B) The doorway is the only required exit from the building or part; and</p> <p>(C) It is held in the open position while the building or part is lawfully occupied; and</p> <p>(iii) Must not be fitted with a sliding door unless –</p> <p>(A) It leads directly to a road or open space; and</p> <p>(B) The door is able to be opened manually under a force of not more than 110 N; and</p> <p>(iv) If fitted with a door which is power-operated –</p> <p>(A) It must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and</p> <p>(B) If it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.</p> <p>(c) A power-operated door in a path of travel to a required exit, must be able to open manually under a force of not more than 110 N if there is a malfunction or failure of the power source.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i>
D2.20 Swinging Doors				X	<p>A swinging door in a required exit or forming part of a required exit –</p> <p>(a) Must not encroach –</p> <p>(i) At any part of its swing by more than 500mm of the required width (including any landings) of a required –</p> <p>(A) Stairway; or</p> <p>(B) Ramp; or</p> <p>(C) Passageway,</p> <p>If it is likely to impede the path of travel of the people already using the exit; and</p> <p>(ii) When fully open, by more than 100 mm on the required width of the required exit, and</p> <p>The measurement of encroachment in each case is to include door handles or other furniture or attachments to the door; and</p> <p>(b) Must swing in the direction of egress unless</p> <p>(i) It serves a building part with a floor area not more than 200m², it is the only required exit from the building part and it is fitted with a device for holding it in the open position; or</p> <p>(ii) It serves a sanitary compartment or airlock (in which case it may swing in either direction; and</p> <p>(c) Must not otherwise impede the path or direction of egress.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
D2.21 Operation of Latch				X	<p>(a) A door in a required exit, forming part of a required exit or in the path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress by –</p> <p>(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 –</p> <p>(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</p> <p>(B) have a clearance between the handle and the back plate or door face at the center grip section of the handle of not less than 35mm and not more than 45mm; or</p> <p>(ii) a single hand pushing action on a single device which is located between 900mm and 1.2m from the door; and</p>



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					<p>(iii) where the latch operation device referred to in (ii) is not located on the door leaf itself –</p> <p>(A) manual controls to power operated doors must be at least 25mm wide, proud of the surrounding surface and located –</p> <p>(aa) not less than 500mm from an internal corner; and</p> <p>(bb) for a hinged door, between 1m and 2m from the door leaf in any position; and</p> <p>(cc) for a sliding door, within 2m of the doorway and clear of a surface mounted door in the open position.</p> <p>(B) Braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device.</p> <p>(b) The requirements of (a) do not apply to a door that –</p> <p>(i) Serves a sanitary compartment, or the like; or</p> <p>(ii) Serves only, or is within –</p> <p>(A) A sole occupancy unit in a Class 2 building or part; or</p> <p>(D) A space which is otherwise inaccessible to persons at all times when the door is locked; or</p> <p>(iii) Serves –</p> <p>(C) By operating a fail-safe control switch, not contained within the protective enclosure, to actuate a device to unlock the door; or</p> <p>(D) By hand by a person or persons, specifically nominated by the owner, properly instructed as to the duties and responsibilities involved and available at all times when the building is lawfully occupied so that persons in the building or part may immediately escape if there is a fire; or</p> <p>(iv) Is fitted with a fail-safe device which automatically unlocks the door upon the activation of any sprinkler system (other than a FPAA101D system) complying with Specification E1.5, or smoke , or any other detector system deemed suitable in accordance with AS1670.1 installed throughout the building, and is readily operable when unlocked; or</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.22 Re-entry from Fire isolated exits			X		<p>(a) Doors of a fire isolated exit must not be locked from the inside as follows:</p> <p>(iii) In a fire-isolated exit serving any storey above an effective height of 25m, throughout the exit.</p>





BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(b) The requirements of (a) do not apply to a door fitted with a fail-safe device that automatically unlocks the door upon activation of a fire alarm and –</p> <p>(i) On at least every fourth storey, the doors are not able to be locked and a sign is fixed on such doors stating that reentry is available; or</p> <p>(ii) An intercommunication system, or an audible or visual alarm system, operated from the enclosure is provided near the doors and a sign is fixed adjacent to such doors explaining its purpose and method of operation.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.23 Signs on Doors				X	<p>(a) A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to—</p> <p>(i) a required—</p> <p>(A) fire door providing direct access to a fire-isolated exit, except a door providing direct egress from a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building; and</p> <p>(B) smoke door,</p> <p>on the side of the door that faces a person seeking egress and, if the door is fitted with a device for holding it in the open position, on either the wall adjacent to the doorway or both sides of the door; and</p> <p>(ii) a—</p> <p>(A) fire door forming part of a horizontal exit; and</p> <p>(B) smoke door that swings in both directions; and</p> <p>(C) door leading from a fire isolated exit to a road or open space, on each side of the door.</p> <p>(b) A sign referred to in (a) must be in capital letters not less than 20 mm high in a colour contrasting with the background and state—</p> <p>(i) for an automatic door held open by an automatic hold-open device—</p> <p>“FIRE SAFETY DOOR—DO NOT OBSTRUCT”; or</p> <p>(ii) for a self-closing door—</p> <p>“FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN”; or</p> <p>(iii) for a door discharging from a fire-isolated exit—</p> <p>“FIRE SAFETY DOOR—DO NOT OBSTRUCT”.</p>





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					<i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
D2.24 Protection of openable windows				X	<p>(a) A window opening must be provided with protection, if the floor below the window is 2 m or more above the surface beneath in—</p> <p>(i) a bedroom in a Class 2 building; or</p> <p>(b) Where the lowest level of the window opening is less than 1.7 m above the floor, a window opening covered by (a) must comply with the following:</p> <p>(i) The openable portion of the window must be protected with—</p> <p>(A) a device capable of restricting the window opening; or</p> <p>(B) a screen with secure fittings.</p> <p>(ii) A device or screen required by (i) must—</p> <p>(A) not permit a 125 mm sphere to pass through the window opening or screen; and</p> <p>(B) resist an outward horizontal action of 250 N against the—</p> <p>(aa) window restrained by a device; or</p> <p>(bb) screen protecting the opening; and</p> <p>(C) have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden.</p> <p>(c) A barrier with a height not less than 865 mm above the floor is required to an openable window—</p> <p>(i) in addition to window protection, when a child resistant release mechanism is required by (b)(ii)(C); and</p> <p>(ii) where the floor below the window is 4 m or more above the surface beneath if the window is not covered by (a).</p> <p>(d) A barrier covered by (c) except for (e) must not—</p> <p>(i) permit a 125 mm sphere to pass through it; and</p> <p>(ii) have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing.</p> <p>(e) A barrier required by (c) to an openable window in—</p> <p>(i) fire-isolated stairways, fire-isolated ramps and other areas used primarily for emergency purposes, excluding external stairways and external ramps; and</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>



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D2.25 Timber stairways concession					<p>(a) Notwithstanding D2.2(a), timber treads, risers, landings and associated supporting framework which –</p> <p>(i) has a finished thickness of not less than 44mm: and</p> <p>(ii) has an average density of not less than 800kg/m³ at a moisture content of 12%, may be used within a required fire isolated stairway or fire isolated passageway constructed from fire-protected timber in accordance with C1.13 subject to –</p> <p>(iii) the building being protected throughout by a sprinkler system complying with specification E1.5 which extends to within the fire isolated enclosure; and</p> <p>(iv) fire protection being provided to the underside of stair flights and landings located immediately above a landing level which-</p> <p>(A) is at or near the level of egress: or</p> <p>(B) provides direct access to a carpark.</p> <p>(b) Fire protection required by (a) must be not less than one layer of 13mm fire protective grade plasterboard fixed in accordance with the system requirements for a fire protective covering.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>

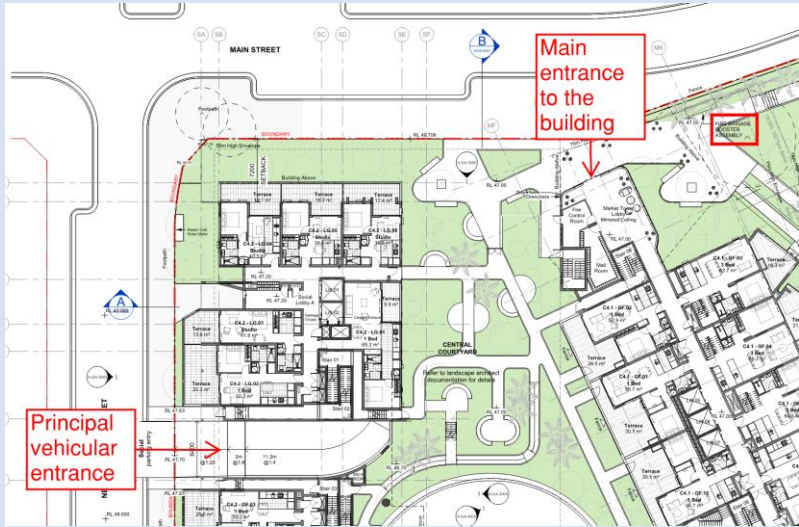
Part D3 - Access for People with Disabilities – Not assessed in this report.

SECTION SERVICES & EQUIPMENT

E

Part E1 - Fire Fighting Equipment


E1.3 Fire Hydrants		X			<p>(a) A hydrant system must be provided to serve a building –</p> <p>(i) Having a total floor area greater than 500m²; and</p> <p>(ii) Where a fire brigade station is –</p> <p>(A) No more than 50 km from the building as measured along roads; and</p> <p>(B) Equipped with equipment capable of utilising a fire hydrant.</p> <p>(b) The fire hydrant system-</p> <p>(i) Must be installed in accordance with AS2419.1, except –</p> <p>(B) Where a sprinkler system is installed throughout a building in accordance with AS 2118.1, AS 2118.4, AS 2118.6, FPAA101H or FPAA101D the fire hydrant booster protection requirements of Clause 7.3(c)(ii) and 7.3(d)(iii) of AS 2419.1 do not apply, and</p> <p>(C) A fire hydrant booster assembly may be located between 3.5m and 10m of the building, and need not comply with Clause 7.3(d)(iii) of AS 2419.1</p>
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BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>where the assembly is protected by an adjacent fire rated freestanding wall that –</p> <p>(aa) achieves an FRL of not less than 90/90/90; and</p> <p>(bb) extends not less than 1m each side of the outermost fire hydrant booster risers within the assembly and is not less than 3m wide; and</p> <p>(cc) extends to a height of not less than 2m above finished ground level; and</p> <p>(ii) Where internal fire hydrants are provided, they must serve only the storey on which they are located except that a sole occupancy unit –</p> <p>(A) In a Class 2 or 3 building or Class 4 part may be served by a single fire hydrant located at the level of egress from the sole occupancy unit; or</p> <p>(B) Of not more than 2 storeys in a Class 5, 6, 7, 8 or 9 building may be served by a single fire hydrant located at the level of egress from that sole occupancy unit provided the fire hydrant can provide coverage to the whole of the sole occupancy unit.</p> <p>DTS non-compliance</p> <p>The hydrant booster is not adjacent to the principal vehicular access to the site which does not comply with Clause 7.3 of AS 2419.1-2005.</p> <div> <p><u>7.3 Location.</u></p> <p>(d) If remote from the building, the booster shall be—</p> <p>(i) at the boundary of the site and be within sight of the main entrance of the building;</p> <p>(ii) adjacent to the principal vehicular access to the site; and</p> <p>(iii) located not less than 10 m from the external wall of any building served</p> </div> <div>  </div>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<i>Hydraulic Services Design Certification and associated plans must be incorporated into the construction certificate specification</i>
E1.4 Fire Hose Reels				X	<p>(a) E1.4 does not apply to –</p> <ul style="list-style-type: none"> (i) A Class 2, 3 or 5 building or Class 4 part of a building; or (ii) A Class 8 electricity network substation; or (iii) A Class 9c building; or (iv) Classrooms and associated corridors in a primary or a secondary school. <p>(b) A fire hose reel system must be provided –</p> <ul style="list-style-type: none"> (i) to serve the whole building where one or more internal fire hydrants area installed; or (ii) where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500m². <p>(c) The fire hose reel system must –</p> <ul style="list-style-type: none"> (i) Have hose reels installed in accordance with AS 2441; and (ii) Provide hose reels to serve only the storey in which they are located except a sole occupancy unit of not more than 2 storeys in a Class 6, 7, 8 and 9 building may be served by a single fire hose reel located at the level of egress from that sole occupancy unit provided the fire hose reel can provide coverage to the whole of the sole occupancy unit. <p>(d) Fire hose reels must be located internally, externally or in combination, to achieve the system coverage as specified in AS2441.</p> <p>(e) In achieving system coverage, one or a combination of the following criteria for individual internally located fire hose reels must be met in determining the layout of any fire hose reel system:</p> <ul style="list-style-type: none"> (i) Fire hose reels must be located adjacent to an internal hydrant (other than one in a fire isolated exit). Except that a fire hose reel need not be located adjacent to every fire hydrant, provided system coverage can be achieved. (ii) Fire hose reels must be located within 4m of an exit, except that a fire hose reel need not be located adjacent to every exit, provided system coverage can be achieved. (iii) Where system coverage is not achieved by compliance with (i) and (ii), additional fire hose reels may be located in paths of travel to an exit to achieve the required coverage. <p>(f) Fire hose reels must be located so that the fire hose will not pass through doorways fitted with fire or smoke doors, except</p>



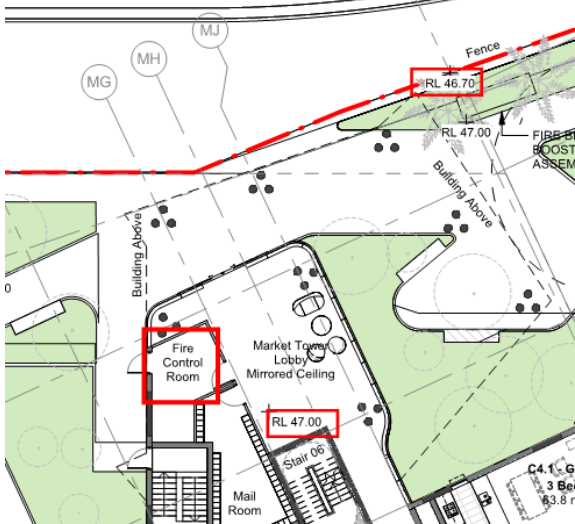
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(i) Doorways in walls referred to in C2.5(a)(v) in a Class 9a building and C2.5(b)(iv) in a Class 9c building, separating ancillary use areas of high potential fire hazard; and</p> <p>(ii) Doorways in walls referred to in C2.12 or C2.13 separating equipment or electrical supply systems; and</p> <p>(iii) Doorways opening into shafts referred to in C3.13.</p> <p>(g) Where the normal water supply cannot achieve the flow and pressures required by AS 2441, or is unreliable –</p> <p>(i) A pump; or</p> <p>(ii) Water storage facility; or</p> <p>(iii) Both a pump and water storage facility,</p> <p>Must be installed to provide the minimum flow and pressures required by clause 6.1 of AS 2441.</p> 

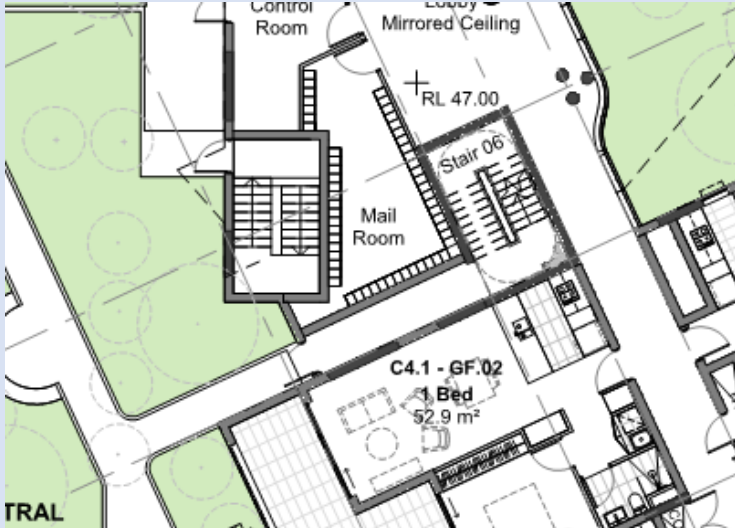
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p>Hydraulic Services Design Certification and associated plans must be incorporated into the construction certificate specification</p>
E1.5 Sprinklers				X	A sprinkler system must - (a) Be installed in a building or part of a building when required by Table E1.5; and

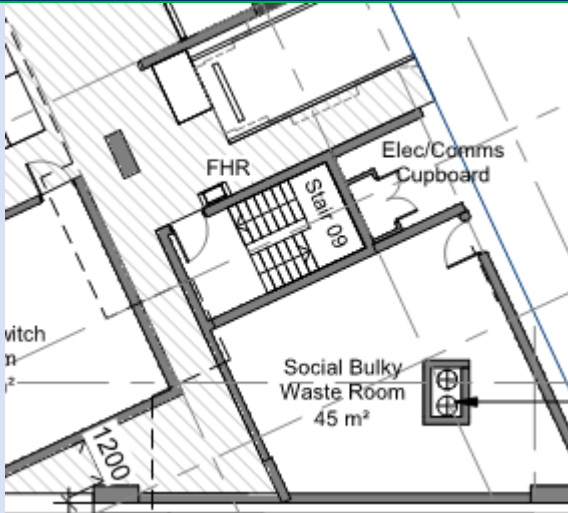


BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(b) Comply with Specification E1.5</p> <p>Sprinkler valve enclosure is required to be detailed on the architectural plans for CC approval in accordance with Clause 6 of BCA Spec E1.5.</p> <p><i>Hydraulic Services Design Certification must be incorporated into the construction certificate specification</i></p>
E1.6 Portable Fire Extinguishers				X	<p>(a) Portable fire extinguishers must be –</p> <p>(i) Provided as listed in Table E1.6;</p> <p>(ii) For a Class 2, building, provided –</p> <p>(A) To serve the whole Class 2, 3, or 5 building or Class 4 part of a building where one or more internal fire hydrants are installed; or</p> <p>(B) Where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500m², and for the purpose of this clause, a sole occupancy unit in a Class 2 or 3 building or Class 4 part of a building is considered to be a fire compartment; and</p> <p>(iii) Subject (b), selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444.</p> <p>(b) Portable fire extinguishers provided in a Class 2 building or Class 4 part of a building must be –</p> <p>(i) An ABE type fire extinguisher; and</p> <p>(ii) A minimum size of 2.5kg; and</p> <p>(iii) Distributed outside a sole occupancy unit –</p> <p>(A) To serve only the storey on which they are located; and</p> <p>(B) So that the travel distance from the entrance doorway of any sole occupancy unit to the nearest fire extinguisher is not more than 10m.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
E1.8 Fire Control Centre				X	<p>A Fire Control Centre facility complying with Specification E1.8 must be provided for:</p> <p>(a) A building with an effective height of more than 25m;</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
E1.9 Fire Precautions during construction				X	<p>In a building under construction –</p> <ul style="list-style-type: none"> (a) not less than one portable fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required / temporary exit; and (b) After the building has reach an effective height of 12m – <ul style="list-style-type: none"> (i) the required fire hydrants and fire hose reels must be operational on all floor / roof covered storeys, except for the 2 uppermost storeys; and (ii) Any required booster connections must be installed. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
E1.10 Provision for Special Hazards			X		Not applicable. No a special hazard.
Part E2 Smoke Hazard Management					
E2.2 General Requirements (inclusive of Table E2.2a / Table E2.2b & NSW amendments)		X			<p>General smoke hazard management requirements</p> <ul style="list-style-type: none"> (a) A building must comply with (b), (c), (d) and— <ul style="list-style-type: none"> (i) Table E2.2a as applicable to Class 2 to 9 buildings such that each separate part complies with the relevant provisions for the classification; and (ii) Table E2.2b as applicable to Class 6 and 9b buildings such that each separate part complies with the relevant provisions for the classification. (b) An air-handling system which does not form part of a smoke hazard management system in accordance with Table E2.2a or Table E2.2b and which recycles air from one fire

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must—</p> <p>(i) be designed and installed to operate as a smoke control system in accordance with AS 1668.1; or</p> <p>(ii)</p> <p>(A) incorporate smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and</p> <p>(B) be arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with clause 7.5 of AS 1670.1; and</p> <p>for the purposes of this provision, each sole-occupancy unit in a Class 2 or 3 building is treated as a separate fire compartment.</p> <p>(c) Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one fire compartment (other than a carpark ventilation system) and not forming part of a smoke hazard management system must comply with that Section of the Standard.</p> <p>(d) A smoke detection system must be installed in accordance with Clause 6 of Specification E2.2a to operate AS 1668.1 systems that are provided for zone pressurisation and automatic air pressurisation for fire-isolated exits.</p> <p><i>Note: Smoke alarms in sole occupancy units are required to be interconnected.</i></p> <p>DTS non-compliance</p> <ul style="list-style-type: none"> No smoke pressurisation shaft is provided to serve all fire-isolated stairways 

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p style="text-align: center;">Basement Level</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
E2.3 Provision for Special Hazards			X		Not applicable. Not a special hazard.
Part E3 - Lift Installations					
E3.1 Lift installations				X	<p>An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
E3.2 Stretcher Facility in Lifts				X	<p>(a) A stretcher facility in accordance with (b) must be provided—</p> <ul style="list-style-type: none"> (i) in at least one emergency lift required by E3.4; or (ii) where an emergency lift is not required, if passenger lifts are installed to serve any storey above an effective height of 12 m, in at least one of those lifts to serve each floor served by the lifts. <p>(b) A stretcher facility must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600 mm wide x 2000 mm long x 1400 mm high above the floor level.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
E3.3 Warning Against the use of lifts in Fire				X	<p>A warning sign must—</p> <ul style="list-style-type: none"> (a) be displayed where it can be readily seen— <ul style="list-style-type: none"> (i) near every call button for a passenger lift or group of lifts throughout a building; except



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none">(ii) a small lift such as a dumb-waiter or the like that is for the transport of goods only; and(b) comply with the details and dimensions of Figure E3.3 and consist of—<ul style="list-style-type: none">(i) incised, inlaid or embossed letters on a metal, wood, plastic or similar plate securely and permanently attached to the wall; or(ii) letters incised or inlaid directly into the surface of the material forming the wall. <p>“DO NOT USE LIFTS IF THERE IS A FIRE”</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
E3.4 Emergency Lifts				X	<ul style="list-style-type: none">(a) At least one emergency lift complying with (d) must be installed in—<ul style="list-style-type: none">(i) a building which has an effective height of more than 25 m; and(ii) a Class 9a building in which patient care areas are located at a level that does not have direct egress to a road or open space.(b) An emergency lift may be combined with a passenger lift and must serve those storeys served by the passenger lift so that all storeys of the building served by passenger lifts are served by at least one emergency lift.(c) Where two or more passenger lifts are installed and serve the same storeys, excluding a lift that is within an atrium and not contained wholly within a shaft—<ul style="list-style-type: none">(i) at least two emergency lifts must be provided to serve those storeys; and(ii) if located within different shafts, at least one emergency lift must be provided in each shaft.(d) An emergency lift must—<ul style="list-style-type: none">(i) be contained within a fire-resisting shaft in accordance with C2.10; and(ii) in a Class 9a building serving a patient care area—<ul style="list-style-type: none">(A) have minimum dimensions, measured clear of all obstructions, including handrails, etc complying with Table E3.4; and(B) be connected to a standby power supply system where installed; and(iii) if the building has an effective height of more than 75 m, have a rating of at least—<ul style="list-style-type: none">(A) 600 kg if not provided with a stretcher facility; or(B) 900 kg if provided with a stretcher facility.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
E3.5 Landings				X	Access and egress to and from lift-well landings must comply with the Deemed-to-Satisfy Provisions of Section D. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
E3.6 Facilities for People with Disabilities				X	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. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
E3.7 Fire Service Controls				X	Where lifts serve any storey above an effective height of 12 m, the following must be provided: (a) A fire service recall control switch complying with E3.9 for— (i) a group of lifts; or (ii) a single lift not in a group that serves the storey. (b) A lift car fire service drive control switch complying with E3.10 for every lift. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
E3.8 Residential Care Buildings			X		Not applicable. Not a residential care building.
E3.9 Fire service recall operation switch				X	Information relevant to specific fire service recall control switch requirements. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
E3.10 Lift car fire service drive control switch				X	Information relevant to specific lift car fire service drive control switch requirements. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
Part E4 - Visibility in an Emergency, Exit signs and Warning Systems					
E4.2 Emergency Lighting Requirements				X	An emergency lighting system must be installed— (a) in every fire-isolated stairway, fire-isolated passageway or fire-isolated ramp; and (b) in every storey of a Class 5, 6, 7, 8 or 9 building where the storey has a floor area more than 300 m ² —

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none"> (i) in every passageway, corridor, hallway, or the like, that is part of the path of travel to an exit; and (ii) in any room having a floor area more than 100 m² that does not open to a corridor or space that has emergency lighting or to a road or open space; and (iii) in any room having a floor area more than 300 m²; and (c) in every passageway, corridor, hallway, or the like, having a length of more than 6 m from the entrance doorway of any sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building to the nearest doorway opening directly to— <ul style="list-style-type: none"> (i) a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp; or (ii) an external stairway serving instead of a fire-isolated stairway under D1.8; or (iii) an external balcony leading to a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp; or (iv) a road or open space; and (d) in every required non-fire-isolated stairway; and (i) in every required fire control centre. <p><i>Electrical Design Certification must be incorporated into the construction certificate specification</i></p>
E4.3 Measurement of Distance			X		<p>Informational.</p> <p>Distances, other than vertical rise, must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.</p>
E4.4 Design and Operation of Emergency Lighting			X		The emergency lighting system must comply with AS/NZS 2293.1-2018
E4.5 Exit Signs				X	<p>An exit sign must be clearly visible to persons approaching the exit, and must be installed on, above or adjacent to each—</p> <ul style="list-style-type: none"> (a) door providing direct egress from a storey to— <ul style="list-style-type: none"> (i) an enclosed stairway, passageway or ramp serving as a required exit; and (ii) an external stairway, passageway or ramp serving as a required exit; and (iii) an external access balcony leading to a required exit; and (b) door from an enclosed stairway, passageway or ramp at every level of discharge to a road or open space; and (c) horizontal exit; and (d) door serving as, or forming part of, a required exit in a storey required to be provided with emergency lighting in accordance with E4.2.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Electrical design plans and certification must be incorporated into the construction certificate specification
E4.6 Direction Signs (inclusive of NSW E4.6)				X	<p>If an exit is not readily apparent to persons occupying or visiting the building, then exit signs must be installed—</p> <p>(a) in appropriate positions in corridors, hallways, lobbies, foyers, auditoria, and the like, indicating the direction to a required exit; and</p> <p>(b) in a Class 9b building used as an entertainment venue — in any external egress path to a road where the exit does not open directly onto a road</p> <p>Electrical Design Certification must be incorporated into the construction certificate specification and directional exit sign locations must be illustrated on the architectural floor plans</p>
E4.7 Class 2 & 3 Buildings & Class 4 Parts: Exemption			X		<p>Informational clause - Exit doors in Class 2 parts need not comply with E4.5 provided every exit door is clearly and legibly labelled on the side remote from the exit with the word "EXIT" in capital letters 25mm high in a colour contrasting with that of the background or some other suitable method.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
E4.8 Design & Operation of Exit Signs				X	<p>Exit signs must comply with:</p> <p>(a) AS/NZS 2293.1-2018; or</p> <p>(b) For a photoluminescent exit sign, Specification E4.8.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
E4.9 Emergency Warning & Intercom Systems			X		<p>An emergency warning and intercom system complying where applicable with AS 1670.4 must be installed—</p> <p>(a) in a building with an effective height of more than 25 m; and</p> <p>Electrical Design Certification must be incorporated into the construction certificate specification</p>
SECTION F					
HEALTH & AMENITY					
Part F1 - Damp & Weatherproofing					
F1.0 Deemed -to-Satisfy Provisions			X		<p>Performance Requirements FP1.4, for the prevention of the penetration of water through external wall, must be complied.</p> <p>There are no Deemed -to Satisfy Provisions for this Performance Solution in respect to external walls.</p> <p>A Performance Solution Report is required to be prepared to satisfy FP1.4 at CC stage.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F1.1				X	Stormwater drainage must comply with AS/NZS 3500.3-2018.

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Stormwater Drainage					<i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
F1.4 External above ground membranes				X	Any external above ground membranes must be waterproofed as per AS 4654 Parts 1 and 2-2012. It is recommended that the assessment of setdown as required by AS 4654 is determined at this stage for co-ordination with the structural engineer. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
F1.5 Roof coverings				X	Not applicable. Roof is expected to be waterproofed in accordance with F1.4.
F1.6 Sarking				X	Sarking-type materials used for weatherproofing must comply with AS/NZS 4200.1 and AS 4200.2. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
F1.7 Waterproofing of wet area				X	(a) In a Class 2 building, building elements in wet areas must— (i) be water resistant or waterproof in accordance with Table F1.7; and (ii) comply with AS 3740. (b) In a Class 7 building, building elements in the bathroom or shower room, a slop hopper or sink compartment, a laundry or sanitary compartment must— (i) be water resistant or waterproof in accordance with Table F1.7; and (ii) comply with AS 3740, as if they were in a Class 2 or 3 building or a Class 4 part of a building. (c) Where a slab or stall type urinal is installed— (i) the floor surface of the room containing the urinal must— (A) be an impervious material; and (B) where no step is installed— (aa) be graded to the urinal channel for a distance of 1.5 m from the urinal channel; and (bb) the remainder of the floor be graded to a floor waste; and (C) where a step is installed— (aa) the step must have an impervious surface and be graded to the urinal channel; and (bb) the floor behind the step must be graded to a floor waste; and

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(ii) the junction between the floor surface and the urinal channel must be impervious.</p> <p>(d) Where a wall hung urinal is installed—</p> <p>(i) the wall must be surfaced with impervious material extending from the floor to not less than 50 mm above the top of the urinal and not less than 225 mm on each side of the urinal.</p> <p>(ii) the floor must be surfaced with impervious material and graded to a floor waste.</p> <p>(e) In a room with timber or steel-framed walls and containing a urinal—</p> <p>(i) the wall must be surfaced with an impervious material extending from the floor to not less than 100 mm above the floor surface; and</p> <p>(ii) the junction of the floor surface and the wall surface must be impervious.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F1.9 Damp-proofing				X	<p>Where a damp-proof course is required, it must consist of a material that complies with AS/NZS 2904-1995; or impervious sheet material in accordance with AS 3660.1-2000</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F1.10 Damp-proofing of floors on the ground				X	<p>If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870-2011 (N/A to areas that do not require weatherproofing – refer specific clause exemptions).</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F1.11 Provision of Floor Wastes				X	<p>Bathrooms and laundries in Class 2, 3 or 4 buildings must be provided with a floor waste, and the floor of such areas must be graded to such floor waste.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F1.12 Sub Floor Ventilation			X		<p>Information relevant to the ventilation of sub-floor spaces located between a suspended floor of a building and the ground.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F1.13 Glazed Assemblies				X	<p>Information relevant to the provision of glazed assemblies within external walls in accordance with AS 2047-2014.</p>

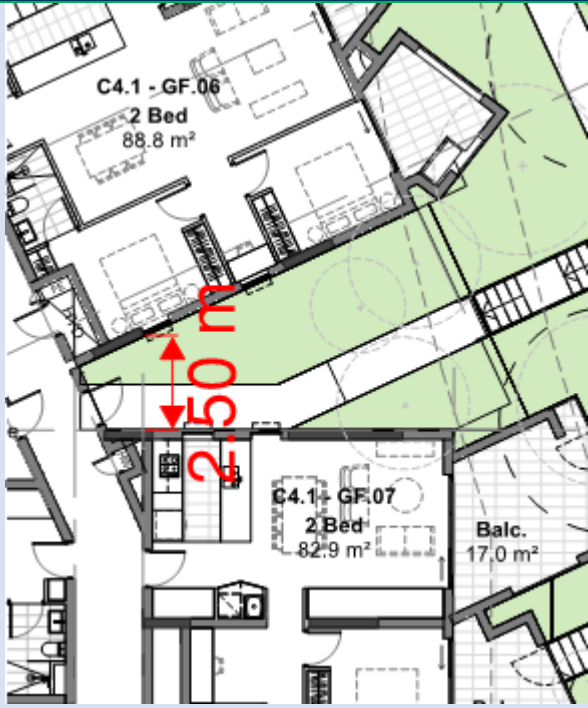
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
Part F2 - Sanitary & Other Facilities					
F2.1 Facilities in residential buildings				X	Sanitary facilities required in Class 2. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F2.2 Calculation of number of occupants and fixtures			X		<ul style="list-style-type: none"> ❖ The number of persons accommodated must be calculated according to D1.13 if it cannot be more accurately determined by other means. ❖ Unless the premises are used predominantly by one sex, sanitary facilities must be provided on the basis of equal numbers of males and females. ❖ In calculating the number of sanitary facilities to be provided under F2.1 and F2.3, a unisex facility required for people with a disability may be counted once for each sex. ❖ For the purposes of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary towels.
F2.3 Facilities for Class 3 to 9 Buildings			X		Not applicable. No Class 3-9 parts require facilities.
F2.4 Facilities for People with Disabilities				X	Not assessed in this report
F2.5 Construction of Sanitary Compartments				X	<p>Other than in an early childhood centre, sanitary compartments must have:</p> <ul style="list-style-type: none"> (a) Doors and partitions that separate adjacent compartments; and (b) the door to a fully enclosed sanitary compartment must open outwards, or slide, or be removable from outside of the compartment, unless there is a clear space of at least 1.2m between the closet pan within the compartment and the doorway. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F2.6 Interpretation: Urinals and washbasins			X		Not applicable. No urinal is proposed or required.
F2.7 Microbial Control Note NSW F2.7 (Clause Deleted)			X		Not applicable. Clause Deleted in NSW.
F2.8			X		Not applicable. Not a Class 9a & 9c building.

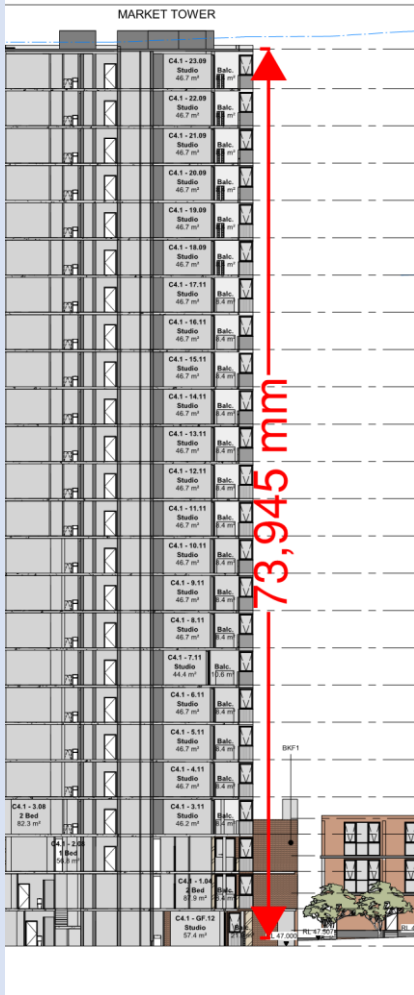


BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Waste Management					
F2.9 Accessible adult change facilities			X		Not applicable.
Part F3 Room Sizes					
F3.1 Height of Rooms and other spaces				X	<p>The ceiling height must be not less than—</p> <p>(a) in a Class 2 or 3 building or Class 4 part of a building—</p> <p>(i) a kitchen, laundry, or the like — 2.1 m;</p> <p>(ii) and a corridor, passageway or the like — 2.1 m; and</p> <p>(iii) a habitable room excluding a kitchen — 2.4 m; and</p> <p>(iv) in a room or space with a sloping ceiling or projections below the ceiling line within -</p> <p>(A) a habitable room—</p> <p>(aa) in an attic — a height of not less than 2.2 m for not less than two thirds of the floor area of the room or space; and</p> <p>(bb) in other rooms — a height of not less than 2.4 m for not less than two thirds of the floor area of the room or space; and</p> <p>(B) a non-habitable room — a height of not less than 2.1 m for not less than two thirds of the floor area of the room or space; and</p> <p>when calculating the floor area of a room or space, any part that has a ceiling height of less than 1.5 m is not included; and</p> <p>(b) in a Class 7 building—</p> <p>(i) except as allowed in (ii) and (f) — 2.4 m; and</p> <p>(ii) a corridor, passageway, or the like — 2.1 m; and</p> <p>(f) In any building—</p> <p>(i) a bathroom, shower room, sanitary compartment, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like — 2.1 m; and</p> <p>(ii) a commercial kitchen & required accessible change room facility — 2.4 m; and</p> <p>(iii) above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like.</p>
Part F4 - Light & Ventilation					
F4.1 Provision of natural light				X	<p>Natural lighting must be provided to:</p> <p>❖ all habitable rooms in Class 2 buildings.</p>



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					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification								
F4.2 Methods and extent of natural lighting		X			<p>(a) Required natural lighting must be provided by—</p> <p>(i) windows, excluding roof lights, that—</p> <p>(A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the floor area of the room; and</p> <p>(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</p> <p>(ii) roof lights, that—</p> <p>(A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the floor area of the room; and</p> <p>(B) are open to the sky; or</p> <p>(iii) a proportional combination of windows and roof lights required by (i) and (ii).</p> <p>(b) In a Class 2 building 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 not be less than a horizontal distance from that boundary or wall that is the greater of—</p> <p>(i) generally — 1 m; and</p> <p>(iii) 50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill.</p> <p><u>DTS non-compliance</u></p> <p>The bedroom on the northeastern unit faces a wall of the same building and is less than horizontal distance from the wall which does not comply with (b).</p> <table><tr><th>Level</th><th>Calc (50% of square root of sill height)</th><th>Metres to wall</th><th>Complies</th></tr><tr><td>Ground</td><td>0.5 x $\sqrt{74\text{m}}$ = 6.08</td><td>2.5</td><td>No.</td></tr></table>	Level	Calc (50% of square root of sill height)	Metres to wall	Complies	Ground	0.5 x $\sqrt{74\text{m}}$ = 6.08	2.5	No.
Level	Calc (50% of square root of sill height)	Metres to wall	Complies										
Ground	0.5 x $\sqrt{74\text{m}}$ = 6.08	2.5	No.										

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p><i>This can be addressed by a Performance Solution at CC stage.</i></p>
<p>F4.3</p> <p>Natural light borrowed from adjoining room</p>				<p>X</p>	<p>(a) Natural lighting to a room in a Class 2 building, Class 4 part of a building or in a sole occupancy unit of a Class 3 building, may come through a glazed panel or opening from an adjoining room (including an enclosed verandah) if—</p> <p>(i) both rooms are within the same sole-occupancy unit or the enclosed verandah is on common property; and</p> <p>(ii) the glazed panels or openings have an aggregate light transmitting area of not less than 10% of the floor area of the room to which it provides light; and the adjoining room has—</p> <p>(A) windows, excluding roof lights, that—</p> <p>(aa) have an aggregate light transmitting area of not less than 10% of the combined floor areas of both rooms; and</p> <p>(bb) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or</p> <p>(B) roof lights, that—</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(aa) have an aggregate light transmitting area of not less than 3% of the combined floor areas of both rooms; and</p> <p>(bb) are open to the sky; or</p> <p>(C) a proportional combination of windows and roof lights required by (A) and (B).</p> <p>(B) The areas specified in (a)(ii) and (a)(iii) may be reduced as appropriate if direct natural light is provided from another source.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F4.4 Artificial lighting				X	<p>Information relevant to the provision of artificial lighting in accordance with AS/NZS 1680.0-2009 to specific building areas.</p> <p>Electrical Design Certification must be incorporated into the construction certificate specification</p>
F4.5 Ventilation of Rooms				X	<p>All rooms to be provided with Clause F4.6 compliant natural ventilation OR a mechanical ventilation or air-conditioning system complying with AS 1668.2-2012.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F4.6 Natural Ventilation			X		<p>(a) Natural ventilation provided in accordance with F4.5(a) must consist of permanent openings, windows, doors or other devices which can be opened—</p> <p>(i) with ventilating area not less than 5% of the floor area of the room required to be ventilated; and</p> <p>(ii) open to—</p> <p>(A) a suitably sized court, or space open to the sky; or</p> <p>(B) an open verandah, carport, or the like; or</p> <p>(C) an adjoining room in accordance with F4.7.</p> <p>(b) The requirements of (a)(i) do not apply to a Class 8 electricity network substation.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F4.7 Ventilation borrowed from adjoining room			X		<p>Natural ventilation to a room may come through a window, opening, ventilating door or other device from an adjoining room (including an enclosed verandah) if both rooms are within the same sole-occupancy unit or the enclosed verandah is common property, and—</p> <p>(a) in a Class 2 building, a sole-occupancy unit of a Class 3 building or Class 4 part of a building—</p> <p>(i) the room to be ventilated is not a sanitary compartment; and</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(ii) the window, opening, door or other device has a ventilating area of not less than 5% of the floor area of the room to be ventilated; and</p> <p>(iii) the adjoining room has a window, opening, door or other device with a ventilating area of not less than 5% of the combined floor areas of both rooms; and</p> <p>(b) in a Class 5, 6, 7, 8 (except a Class 8 electricity network substation) or 9 building—</p> <p>(i) the window, opening, door or other device has a ventilating area of not less than 10% of the floor area of the room to be ventilated, measured not more than 3.6 m above the floor; and</p> <p>(ii) the adjoining room has a window, opening, door or other device with a ventilating area of not less than 10% of the combined floor areas of both rooms; and</p> <p>(c) the ventilating areas specified in (a) and (b) may be reduced as appropriate if direct natural ventilation is provided from another source.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F4.8 Restriction of position of water closets and urinals			X		<p>Rooms containing closet pans or urinals must not open directly into kitchen / pantry areas, public dining areas, Class 3 dormitory areas, public assembly areas (excluding early childhood centres, primary schools and open spectator stands) and a workplace normally occupied by more than one person.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F4.9 Airlocks				X	<p>Information relevant to the provision of airlocks and the like to separate rooms prohibited under Clause F4.8 from opening directly into another room.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F4.11 Carparks				X	<p>Every storey of a carpark (except an open deck carpark) must have:</p> <p>(a) a system of mechanical ventilation complying with AS1668.2-2012; or</p> <p>(b) a system of natural ventilation complying with Section 4 of AS 1668.4-2012.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F4.12 Kitchen local exhaust			X		<p>The provision of a kitchen exhaust hood complying with AS/NZS 1668.1-2015 and AS 1668.2-2012 for commercial kitchens.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
Part F5 - Sound Transmission					
F5.1 Application of Part				X	The provisions of this Part apply to Class 2 buildings only.
F5.2 Determination of airborne sound insulation ratings			X		<p>A form of construction required to have an airborne sound insulation rating must—</p> <p>(a) have the required value for weighted sound reduction index (R_w) or weighted sound reduction index with spectrum adaptation term (R_w + C_{tr}) determined in accordance with AS/NZS 1276.1 or ISO 717.1 using results from laboratory measurements; or</p> <p>(b) comply with Specification F5.2.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F5.3 Determination of impact sound insulation ratings				X	<p>(a) A floor in a building required to have an impact sound insulation rating must—</p> <p>(i) have the required value for weighted normalised impact sound pressure level (L_{n,w}) determined in accordance with AS/ISO 717.2 using results from laboratory measurements; or</p> <p>(ii) comply with Specification F5.2.</p> <p>(b) A wall in a building required to have an impact sound insulation rating must—</p> <p>(i) for a Class 2 building be of discontinuous construction; and</p> <p>(ii) for a Class 9c aged care building, must—</p> <p>(A) for other than masonry, be two or more separate leaves without rigid mechanical connection except at the periphery; or</p> <p>(B) be identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with Specification F5.5 than a wall listed in Table 2 of Specification F5.2.</p> <p>(c) For the purposes of this Part, discontinuous construction means a wall having a minimum 20 mm cavity between 2 separate leaves, and</p> <p>(i) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and</p> <p>(ii) for other than masonry, there is no mechanical linkage between leaves except at the periphery.</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F5.4 Sound Insulation of floors between units				X	<p>(a) 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:</p> <ul style="list-style-type: none"> (i) SOU's; or (ii) An SOU from a plant room, lift shaft, stairway, public corridor, public lobby or parts of a different classification. (iii) A floor in a Class 9c aged care building separating SOU's must achieve an R_w not less than 45. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F5.5 Sound insulation of walls between units				X	<p>(a) A wall in a Class 2 or 3 building must—</p> <ul style="list-style-type: none"> (i) have an $R_w + C_{tr}$ (airborne) not less than 50, if it separates sole-occupancy units; and (ii) have an R_w (airborne) not less than 50, if it separates a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification; and (iii) comply with F5.3(b) if it separates— <ul style="list-style-type: none"> (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 (B) a sole-occupancy unit from a plant room or lift shaft. <p>(b) A door may be incorporated in a wall in a Class 2 or 3 building that separates a sole occupancy unit from a stairway, public corridor, public lobby or the like, provided the door assembly has an R_w not less than 30.</p> <p>(c) A wall in a Class 9c aged care building must have an R_w not less than 45 if it separates—</p> <ul style="list-style-type: none"> (i) sole-occupancy units; or (ii) a sole-occupancy unit from a kitchen, bathroom, sanitary compartment (not being an associated ensuite), laundry, plant room or utilities room. <p>(d) In addition to (c), a wall separating a sole-occupancy unit in a Class 9c aged care building from a kitchen or laundry must comply with F5.3(b).</p> <p>(e) Where a wall required to have sound insulation has a floor above, the wall must continue to—</p> <ul style="list-style-type: none"> (i) the underside of the floor above; or (ii) a ceiling that provides the sound insulation required for the wall.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(f) Where a wall required to have sound insulation has a roof above, the wall must continue to—</p> <p>(i) the underside of the roof above; or</p> <p>(ii) a ceiling that provides the sound insulation required for the wall.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F5.6 Sound insulation rating of services				X	<p>Ducts and pipes must achieve an $R_w + C_{tr}$ (airborne) of no less than 40 if the adjacent room is habitable or 25 if non-habitable.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F5.7 Sound isolation of pumps				X	<p>A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating pump.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
Part F6 – Condensation Management					
F6.1 Application of Part				X	<p>Informational.</p> <p>The Deemed-to-Satisfy Provisions of this Part only apply to a sole-occupancy unit of a Class 2 building.</p>
F6.2 Pliable building membrane				X	<p>(a) Where a pliable building membrane is installed in an external wall, it must—</p> <p>(i) comply with AS/NZS 4200.1; and</p> <p>(ii) be installed in accordance with AS 4200.2; and</p> <p>(iii) be a vapour permeable membrane for climate zones 6, 7 and 8; and</p> <p>(iv) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building.</p> <p>(b) 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.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F6.3 Flow rate and discharge of exhaust systems					<p>(a) An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of—</p> <p>(i) 25 L/s for a bathroom or sanitary compartment; and</p> <p>(ii) 40 L/s for a kitchen or laundry.</p> <p>(b) Exhaust from a kitchen must be discharged directly or via a shaft or duct to outdoor air.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(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. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
F6.4 Ventilation of roof spaces					(a) Where an exhaust system covered by F6.3 discharges directly or via a shaft or duct into a roof space, the roof space must be ventilated to outdoor air through evenly distributed openings. (b) Openings required by (a) must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitch is greater than 22°, or 1/150 of the respective ceiling area if the roof pitch is less than or equal to 22°. (c) 30% of the total unobstructed area required by (b) must be located not more than 900 mm below the ridge or highest point of the roof space, measured vertically, with the remaining required area provided by eave vents. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
SECTION ANCILLIARY PROVISIONS					G
Part G1 - Minor Structures and Components					
G1.1 Swimming Pools			X		Not applicable. No swimming pool proposed.
NSW G1.101 Provision for cleaning windows				X	A safe manner for cleaning of windows located 3 or more storeys above ground level must be provided, and compliance is achieved where: (a) The windows can be cleaned wholly from within the building; or (b) Via a method complying with the Work Health and Safety Act 2011 and regulations made under that Act. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
G1.2 Refrigeration chambers, strong-rooms and vaults			X		No applicable. No refrigerated or cooling chamber proposed.
G1.3 Outdoor play areas			X		Not applicable. No outdoor play areas proposed.
Part G2 - Boilers, Pressure Vessels, Heating Appliances, Fireplaces, Chimneys and Flues					

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
G2.2 Installation of appliances			X		Not applicable.
G2.3 Open fire places			X		Not applicable. No open fire place proposed.
G2.4 Incinerator rooms			X		Not applicable. No incinerator rooms proposed.
Part G3 - Atrium Construction					
G3.1 Application of Part	X				<p>This part does not apply to an atrium which:</p> <ul style="list-style-type: none"> (a) Connects only 2 storeys; or (b) Connects only 3 storeys, <ul style="list-style-type: none"> (i) if each storey is sprinkler protected (other than a FPAA101D or FPAA101H system) complying with specification E1.5 throughout; and (ii) one of those storeys is situated at a level at which there is direct egress to a road or open space. <p>Atrium at principal entrance is not an <i>atrium</i> subject to BCA Part G3.</p>
G3.2 Dimensions of atrium well			X		Not applicable. No atrium proposed.
G3.3 Separation of atrium by bounding walls			X		Not applicable. No atrium proposed.
G3.4 Construction of bounding walls			X		Not applicable. No atrium proposed.
G3.5 Construction at balconies			X		Not applicable. No atrium proposed.
G3.6 Separation at roof			X		Not applicable. No atrium proposed.
G3.7 Means of egress			X		Not applicable. No atrium proposed.
G3.8 Fire and smoke control systems			X		Not applicable. No atrium proposed.
Part G4 - Construction in Alpine Areas					
G4.1 Application of Part			X		Not applicable. No in alpine area.
G4.3 External doorways			X		Not applicable. No in alpine area.
G4.4 Emergency lighting			X		Not applicable. No in alpine area.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
G4.5 External ramps			X		Not applicable. No in alpine area.
G4.6 Discharge of exits			X		Not applicable. No in alpine area.
G4.7 External trafficable structures			X		Not applicable. No in alpine area.
G4.8 Fire-fighting services and equipment			X		Not applicable. No in alpine area.
G4.9 Fire orders			X		Not applicable. No in alpine area.
Part G5 - Construction in Bushfire Prone Areas					
G5.1 Application of Part			X		Not applicable. No in bushfire prone area.
G5.2 Protection			X		Not applicable. No in bushfire prone area.
Part G6 - Occupiable Outdoor Areas					
G6.1 Application of Part			X		<p>Informational.</p> <p>The DTS provisions of this part apply to buildings containing an outdoor area in addition to the other DTS provisions of the BCA. It does not apply to such areas within a sole occupancy unit.</p> <div> <p>Occupiable outdoor area is defined as a space on a roof, balcony, or similar part of a building</p> <ul style="list-style-type: none"> - that is open to the sky; and - to which access is provided, other than access only for maintenance; and - that is not open space or directly connected to open space. </div> <p>The skygarden on Level 18 is <i>occupiable outdoor area</i> subject to this part.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
G6.2 Fire hazard properties				X	<p>(a) A lining, material or assembly in an occupiable area must comply with C1.10 as for an internal element.</p> <p>(b) The following fire hazard properties of a lining, material or assembly in an occupiable area are not required to comply with C1.10:</p> <ul style="list-style-type: none"> (i) Average specific extinction area. (ii) Smoke-development Index. (iii) Smoke development rate. <p>(c) Smoke growth rate index.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
G6.3 Fire separation			X		For the purposes of DTS provisions of C2.7, C2.8 and C2.9, a reference to a storey includes an occupiable outdoor area, however a fire wall cannot be used to separate an occupiable area into different fire compartments.
G6.4 Provision for escape			X		For the purposes of the DTS provisions of Part D1, a reference to a storey or room includes an occupiable outdoor area.
G6.5 Construction of exits			X		For the purposes of the DTS provisions of Part D2, a reference to a storey includes an occupiable outdoor area.
G6.6 Firefighting equipment			X		For the purposes of the DTS provisions of Part E1, a reference to a storey includes an occupiable outdoor area.

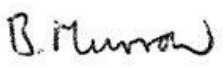
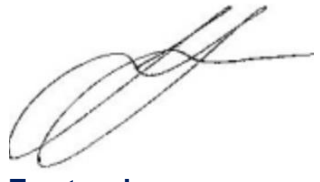
5.0 CONCLUSION

This report provides a Building Code of Australia BCA 2019 Amendment 1 (BCA) assessment of the proposed the proposed 23 storey residential building with 3 storey basement carpark.

The primary purpose of this report was to identify the non-compliance matters contained in the proposed design philosophy against the current Deemed-to-Satisfy (DTS) Provisions of the BCA and to provide compliance recommendations to overcome the DTS non-compliances.

This report provided a BCA assessment table in Section 3.0 that summarises the identified non-compliance matters and offers specific recommendations that are also outlined in the Executive Summary.

Further, if compliance with the deemed-to-satisfy provisions is not achievable or desirable, Alternative Solutions could be further developed and verified by an appropriately qualified BCA Consultant or Fire Safety Engineer.

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6.0 ATTACHMENT A - INSPECTION & MAINTENANCE

6.1 Fire Safety Measures

The fire safety measures within the building must be maintained to ensure correct operation at all times the building is occupied. All firefighting equipment should be tagged when tested/inspected and log books kept up-to-date for all smoke detection, warning systems and sprinkler systems (where installed).

An annual fire safety certificate must be submitted to the local consent authority and the NSW Fire Brigade each year indicating satisfactory performance of the fire safety measures contained within the building. The annual fire safety statement should be displayed in a prominent place within the building (i.e. the main entry foyer)

The correct operation and maintenance of the buildings fire safety measures is critical in affording an adequate level of fire safety.

6.2 Good Housekeeping

The ongoing management of the building should ensure good housekeeping procedures. The following matters should be considered by building management:

- ❖ Ensure exits and paths of travel to exits remain unobstructed (in particular stairways)
- ❖ Avoid storage of materials in unoccupied areas
- ❖ Limit storage of flammable/combustible materials to designated and approved areas
- ❖ Prevent chocking open fire/smoke doors
- ❖ Prevent storage of materials that could hinder access to firefighting equipment

7.0 ATTACHMENT B – REQUIREMENTS TYPE A CONSTRUCTION

3.1 Fire-resistance of Building Elements

In a building required to be of Type A construction—

- (a) each building element listed in Table 3 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and
- (b) * * * *
- (c) any internal wall required to have an FRL with respect to integrity and insulation must extend to—
 - (i) the underside of the floor next above; or
 - (ii) the underside of a roof complying with Table 3; or
 - (iii) if under Clause 3.5 the roof is not required to comply with Table 3, the underside of the non-combustible roof covering and, except for roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not be crossed by timber or other combustible building elements; or
 - (iv) a ceiling that is immediately below the roof and has a resistance to the incipient spread of fire to the roof space between the ceiling and the roof of not less than 60 minutes; and
- (d) a loadbearing internal wall and a loadbearing fire wall (including those that are part of a loadbearing shaft) must be constructed from—
 - (i) concrete; or
 - (ii) masonry; or
 - (iii) fire-protected timber, provided that—
 - (A) the building is—
 - (aa) a separate building; or
 - (ee) a part of a building—
 - (AA) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or
 - (BB) which is located above or below a part not containing fire-protected timber and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a fire wall for the lower storey; and
 - (B) the building has an effective height of not more than 25 m; and
 - (C) the building has a sprinkler system (other than a FPAA101D or FPAA101H system) throughout complying with Specification E1.5; and
 - (D) any insulation installed in the cavity of the timber building element required to have an FRL is non-combustible; and
 - (E) cavity barriers are provided in accordance with Specification C1.13; or
 - (iv) any combination of (i) to (iii); and
 - (e) * * * * *
 - (f) the FRLs specified in Table 3 for an external column apply also to those parts of an internal column that face and are within 1.5 m of a window and are exposed through that window to a fire-source feature.

Table 3 Type A Construction: FRL of Building Elements

Building Element	Class of building – FRL: (in minutes)			
	<i>Structural adequacy/Integrity/Insulation</i>			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it is exposed is—				
For loadbearing parts—				
Less than 1.5m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3m	90/60/60	120/90/90	180/180/120	240/240/180
3m or more	90/60/30	120/60/30	180/120/90	240/180/90

Building Element	Class of building – FRL: (in minutes) <i>Structural adequacy/Integrity/Insulation</i>			
For non-loadbearing parts—				
Less than 1.5m	-/90/90	-/120/120	-/180/180	-/240/240
1.5 to less than 3m	-/60/60	-/90/90	-/180/120	-/240/180
3m or more	-/-/-	-/-/-	-/-/-	-/-/-
EXTERNAL COLUMN not incorporated in an external wall—				
For loadbearing columns -	90/-/-	120/-/-	180/-/-	240/-/-
For non-loadbearing columns -	-/-/-	-/-/-	-/-/-	-/-/-
COMMON WALLS AND FIRE WALLS	90/90/90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS				
Fire-resisting lift and stair shafts				
Loadbearing	90/90/90	120/120/120	180/120/120	240/120/120
Non-loadbearing	-/90/90	-/120/120	-/120/120	-/120/120
Bounding public corridors, public lobbies and the like -				
Loadbearing	90/90/90	120/-/-	180/-/-	240/-/-
Non-loadbearing	-/60/60	-/-/-	-/-/-	-/-/-
Between or bounding sole-occupancy units				
Loadbearing	90/90/90	120/-/-	180/-/-	240/-/-
Non-loadbearing	-/60/60	-/-/-	-/-/-	-/-/-
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion -				
Loadbearing	90/90/90	120/90/90	180/120/120	240/120/120
Non-loadbearing	-/90/90	-/90/90	-/120/120	-/120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES				
And Columns -	90/-/-	120/-/-	180/-/-	240/-/-
Floors	90/90/90	120/120/120	180/180/180	240/240/240
Roofs	90/60/30	120/60/30	180/60/30	240/90/60

3.2 Concessions for floors

A floor need not comply with Table 3 if—

- it is laid directly on the ground; or
- in a Class 2, 3, 5 or 9 building, the space below is not a storey, does not accommodate motor vehicles, is not a storage or work area, and is not used for any other ancillary purpose; or
- it is a timber stage floor in a Class 9b building laid over a floor having the required FRL and the space below the stage is not used as a dressing room, store room, or the like; or
- it is within a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building; or
- it is an open-access floor (for the accommodation of electrical and electronic services and the like) above a floor with the required FRL.

3.3 Floor loading of Class 5 and 9b buildings: Concession

If a floor in a Class 5 or 9b building is designed for a live load not exceeding 3 kPa—

- the floor next above (including floor beams) may have an FRL of 90/90/90; or
- the roof, if that is next above (including roof beams) may have an FRL of 90/60/30.

3.4 Roof superimposed on concrete slab: Concession

A roof superimposed on a concrete slab roof need not comply with Clause 3.1 as to fire-resisting construction if—

- (a) the superimposed roof and any construction between it and the concrete slab roof are non-combustible throughout; and
- (b) the concrete slab roof complies with Table 3.

3.5 Roof: Concession

A roof need not comply with Table 3 if its covering is non-combustible and the building—

- (a) has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 installed throughout; or
- (b) has a rise in storeys of 3 or less; or
- (c) is of Class 2 or 3; or
- (d) has an effective height of not more than 25 m and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes.

3.6 Roof lights

If a roof is required to have an FRL or its covering is required to be non-combustible, roof lights or the like installed in that roof must—

- (a) have an aggregate area of not more than 20% of the roof surface; and
- (b) be not less than 3 m from—
 - (i) any boundary of the allotment other than the boundary with a road or public place; and
 - (ii) any part of the building which projects above the roof unless that part has the FRL required of a fire wall and any openings in that part of the wall for 6 m vertically above the roof light or the like are protected in accordance with C3.4; and
 - (iii) any roof light or the like in an adjoining sole-occupancy unit if the walls bounding the unit are required to have an FRL; and
 - (iv) any roof light or the like in an adjoining fire-separated section of the building; and
- (c) if a ceiling with a resistance to the incipient spread of fire is required, be installed in a way that will maintain the level of protection provided by the ceiling to the roof space.

3.7 Internal columns and walls: Concession

For a building with an effective height of not more than 25 m and having a roof without an FRL in accordance with Clause 3.5, in the storey immediately below that roof, internal columns other than those referred to in Clause 3.1(f) and internal walls other than fire walls and shaft walls may have—

- (a) in a Class 2 or 3 building: FRL 60/60/60; or
- (b) in a Class 5, 6, 7, 8 or 9 building—
 - (i) with rise in storeys exceeding 3: FRL 60/60/60; or
 - (ii) with rise in storeys not exceeding 3: no FRL.

3.8 Open spectator stands and indoor sports stadiums: Concession

In an open spectator stand or indoor sports stadium, the following building elements need not have the FRL specified in Table 3:

- (a) The roof if it is non-combustible.
- (b) Columns and loadbearing walls supporting only the roof if they are non-combustible.
- (c) Any non-loadbearing part of an external wall less than 3 m—
 - (i) from any fire-source feature to which it is exposed if it has an FRL of not less than –/60/60 and is non-combustible; or
 - (ii) from an external wall of another open spectator stand if it is non-combustible.

3.9 Carparks

- (a) Notwithstanding Clause 3.1, a carpark may comply with Table 3.9 if it is an open-deck carpark or is protected with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 and is—

- (i) a separate building; or
 - (ii) a part of a building—

- (A) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or
 - (B) which is located above or below another classification, and the floor separating the classifications complies with C2.9; or
 - (C) which is located above another Class 7 part of the building not used for carparking, and the floor separating the parts complies with Table 3 for a Class 7 part other than a carpark; or
 - (D) which is located below another Class 7 part of the building not used for carparking, and the floor separating the parts complies with Table 3.9.
- (b) For the purposes of this Clause, a carpark—
- (i) includes—
 - (A) an administration area associated with the functioning of the carpark; and
 - (B) where the carpark is sprinklered, is associated with a Class 2 or 3 building and provides carparking for separate sole-occupancy units, each carparking area with an area not greater than 10% of its floor area for purposes ancillary to the sole-occupancy units; but
 - (ii) excludes—
 - (A) except for (b)(i), any area of another classification, or other part of a Class 7 building not used for carparking; and
 - (B) a building or part of a building specifically intended for the parking of trucks, buses, vans and the like.

Table 3.9 - Requirements for carparks

Building Element			FRL (not less than) <i>Structural adequacy/Integrity/Insulation</i> ESA/M (not greater than)
Wall			
(a)	External Wall		
	(i)	Less than 3m from a fire-source feature to which it is exposed:	
			Loadbearing
		Non-loadbearing	-/60/60
(ii)	3m or more from a fire-source feature to which it is exposed		-/-/-
(b)	Internal Wall		
	(i)	Loadbearing, other than one supporting only the roof (not used for carparking)	60/-/-
	(ii)	Supporting only the roof (not used for carparking).	-/-/-
	(iii)	Non-loadbearing	-/-/-
(c)	Fire wall		
	(i)	From the direction used as a carpark	60/60/60
	(ii)	From the direction not used as a carpark	As required by Table 7.1
Column			
(a)	Supporting only the roof (not used for carparking) and 3m or more from a fire-source to which it is exposed		-/-/-
(b)	Steel column other than one covered by (a) and one that does not support a part of a building that is not used as a carpark		60/-/- or 25m ² /tonne
(c)	Any other column not covered by (a) or (b)		60/-/-
Beam			

Building Element		FRL (not less than) <i>Structural adequacy/Integrity/Insulation</i> ESA/M (not greater than)
(a)	Steel floor beam in continuous contact with a concrete floor slab	60/-/- or 30m ² /tonne
(b)	Any other beam	60/-/-
Fire resisting lift and stair shaft (within the carpark only)		60/60/60
Floor slab and vehicle ramp		60/60/60
Roof (not used for carparking)		-/-/-

Notes to Table 3.9:

1. ESA/M means the ratio of exposed surface area to mass per unit length.

2. Refer to Specification E1.5 for special requirements for a sprinkler system in a carpark complying with Table 3.9 and located within a multi-classified building.

3.10 Class 2 and 3 buildings: Concession

- (a) A Class 2 or 3 building having a rise in storeys of not more than 3 need not comply with Clause 3.1(d) of Specification C1.1 and the requirements of C1.9(a), (b) and C2.6 for non-combustible material, if it is constructed using—
 - (i) timber framing throughout; or
 - (ii) non-combustible material throughout; or
 - (iii) a combination of (i) and (ii), provided—
 - (iv) * * * * *
 - (v) any insulation installed in the cavity of a wall required to have an FRL is non-combustible; and
 - (vi) the building is fitted with an automatic smoke alarm system complying with Specification E2.2a.
- (b) A Class 2 or 3 building having a rise in storeys of not more than 4 may have the top three storeys constructed in accordance with (a) provided—
 - (i) the lowest storey is used solely for the purpose of parking motor vehicles or for some other ancillary purpose; and
 - (ii) the lowest storey is constructed of concrete or masonry including the floor between it and the Class 2 or 3 part of the building above; and
 - (iii) the lowest storey and the storey above are separated by construction having an FRL of not less than 90/90/90 with no openings or penetrations that would reduce the fire-resisting performance of that construction except that a doorway in that construction may be protected by a -/60/30 self-closing fire door.
- (c) In a Class 2 or 3 building complying with (a) or (b) and fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5, any FRL criterion prescribed in Table 3—
 - (i) for any floor and any loadbearing wall, may be reduced to 60, except any FRL criterion of 90 for an external wall must be maintained when tested from the outside; and
 - (ii) for any non-loadbearing internal wall, need not apply if—
 - (A) it is lined on each side with 13 mm standard grade plasterboard or similar non-combustible material; and
 - (B) it extends—
 - (aa) to the underside of the floor next above; or
 - (bb) to the underside of a ceiling with a resistance to the incipient spread of fire of 60 minutes; or
 - (cc) to the underside of a non-combustible roof covering; and
 - (C) any insulation installed in the cavity of the wall is non-combustible; and
 - (D) any construction joint, space or the like between the top of the wall and the floor, ceiling or roof is smoke sealed with intumescent putty or other suitable material; and
 - (E) any doorway in the wall is protected by a self-closing, tight fitting, solid core door not less than 35 mm thick.



BUILDING CODE OF AUSTRALIA COMPLIANCE ASSESSMENT REPORT

MIXED-USE DEVELOPMENT

MIDTOWN ESTATE – LOT C3, EPPING ROAD, MACQUARIE PARK

DATE ► 04/08/2021

REPORT NO. ► 11067

PREPARED FOR ► FRASERS PROPERTY

PREPARED BY ► AE&D



AEDGROUP

Innovation & expertise in building regulations

CONTENTS

1.0	EXECUTIVE SUMMARY AND RECOMMENDATIONS	3
1.1	RECOMMENDATIONS	3
2.0	INTRODUCTION	15
2.1	BASIS OF REPORT	15
2.2	PURPOSE OF THE REPORT.....	15
2.3	LIMITATIONS OF THE REPORT.....	15
3.0	BCA ASSESSMENT DATA	17
3.1	LOCATION OF FIRE SOURCE FEATURES	17
3.2	SUMMARY OF FIRE SERVICES REQUIRED.....	17
4.0	BCA ASSESSMENT SUMMARY	19
5.0	CONCLUSION	95
6.0	ATTACHMENT A - INSPECTION & MAINTENANCE	96
6.1	FIRE SAFETY MEASURES.....	96
6.2	GOOD HOUSEKEEPING	96
7.0	ATTACHMENT B – REQUIREMENTS TYPE A CONSTRUCTION	97

REVISION STATUS				
REPORT NO/REV	DATE	STATUS	WRITTEN	CHECKED
11067 – REV 1.0	20/05/2021	DRAFT FOR COMMENT	KS	TJ
11067 – REV 2.0	22/06/2021	FINAL REPORT FOR DA	KS	TJ
11067 – REV 3.0	04/08/201	UPDATED REPORT	KS	TJ

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1.0 EXECUTIVE SUMMARY AND RECOMMENDATIONS

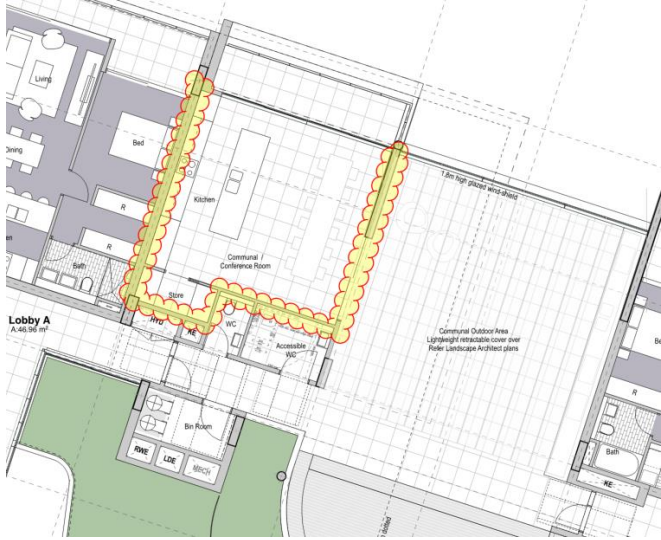
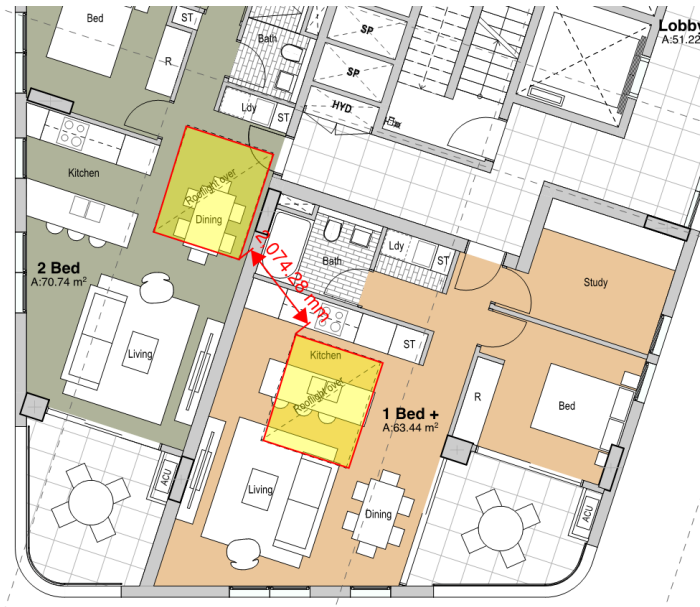
This report provides a Building Code of Australia (BCA) 2019 – Amdt 1 assessment of the Mixed-use development to be located at MIDTOWN ESTATE – LOT C3, EPPING ROAD, MACQUARIE PARK.

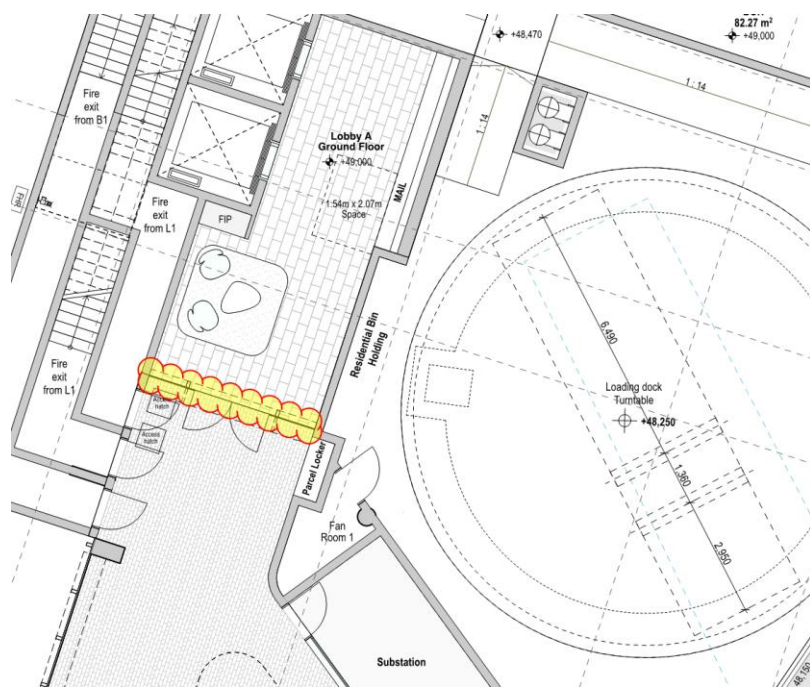
The primary purpose of this report is to identify the non-compliance matters contained in the proposed design against the current Deemed-to-Satisfy (DTS) Provisions of the BCA and to provide compliance recommendations to overcome the DTS non-compliances.


1.1 Recommendations

The following is a list of Deemed-to-Satisfy Provisions that should be addressed either by design amendments, additional information **OR** by way of an Alternative Solution:

BCA Clause	Deemed-to-Satisfy Provision to be addressed
C1.1 Type of Construction Required	<p>Please note that specification C1.1 also requires design compliance with the following:</p> <ol style="list-style-type: none"> Where a combustible material is used as a finish or lining to a wall or roof, or sunscreen, or awning, to a building element required to have an FRL the material must be exempted or comply with the fire hazard properties prescribed under C1.10 and must not otherwise constitute an undue risk of fire spread via the façade of the building or compromise egress from the building. This includes any aluminum panels which where containing plastic strengthening elements would not be non-combustible. Fire isolated shafts are required to be enclosed at the top and bottom of the shaft with fire rated construction as per specification C1.1. This fire rating is required in two directions. This includes all shafts/ chutes serving the residential portions of the building provided for waste and services (refer to areas highlighted in green below).  <ol style="list-style-type: none"> External walls, common walls and the flooring and floor framing of lift pits must be non- combustible construction. Internal lightweight walls to be fire rated, as well as non-load bearing lift, ventilating, pipe, garbage or similar shaft wall must be of non-combustible construction. The walls to fire rated shafts must achieve the fire rating from both directions i.e. from inside and outside the shaft. Roof: The roof of the building does not need an FRL, provided the roof covering is non-combustible (as per the concession in Clause 3.5 of Specification C1.1 of the BCA). Bounding construction to residential units must comply with the fire rating requirements of table 3.

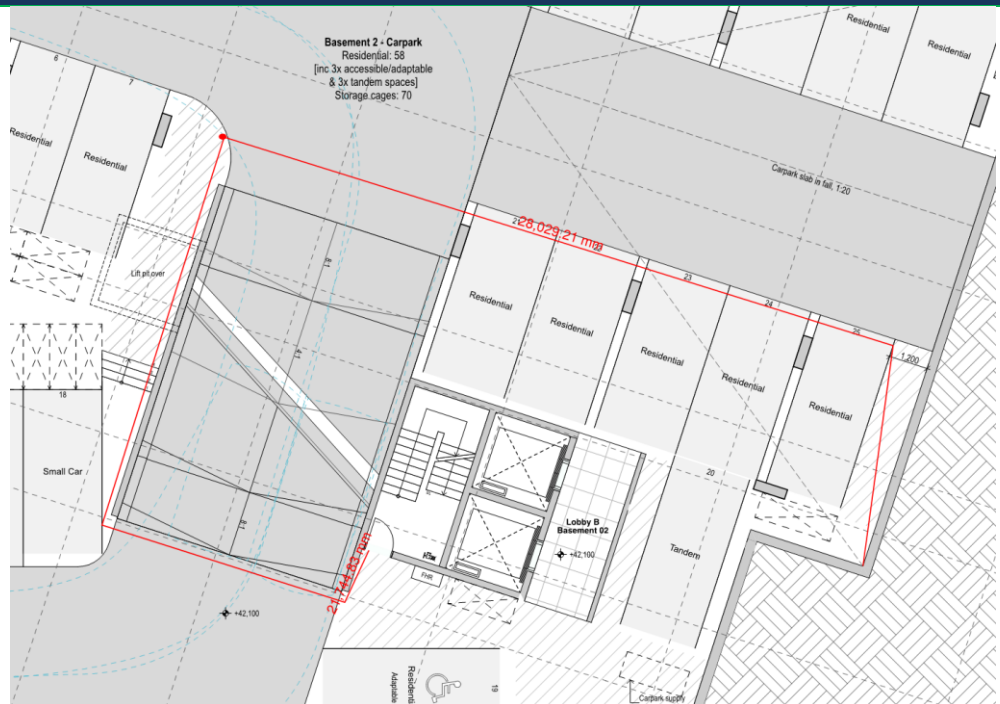
BCA Clause	Deemed-to-Satisfy Provision to be addressed
	<p>8. Floors: see clause C2.9.</p> <p>9. The structural engineer has confirmed the slab will be setdown within the bathrooms areas which reduce the FRL of the thickness of the slab and therefore the FRL of the slab and this will be addressed by way of a Performance Solution at CC stage.</p> <p>10. The walls to the communal area/ conference room on level 15 (highlighted in yellow below) require an FRL 120/120/120.</p>  <p>11. A Performance Solution by the fire engineer will be required where timber is used within the internal walls required to be fire rated such as timber noggings within bounding walls.</p> <p>12. Rooflights: The rooflights highlighted in yellow below are located in adjoining units and are less than 3m apart.</p> 
<p>C1.9</p> <p>Non - combustible building elements</p>	<p>In a building <i>required</i> to be of Type A the following building elements and their components must be <i>non-combustible</i>:</p> <p>(i) External walls and <i>common walls</i>, including all components incorporated in them including the facade covering, framing and insulation (AS 1530.1 test report or CodeMark Certificate to confirm non-combustibility of building elements).</p>

BCA Clause	Deemed-to-Satisfy Provision to be addressed										
C2.8 Separation of Classifications in the same storey	<p>The design requirements in this clause apply to the following:</p> <ul style="list-style-type: none"> Ground –Class 6 (retail) & 7b (storage). Level 15 – Class 2 (residential) & 9b (communal/ conference room). <p>The fire engineer has confirmed the FRL of the ground floor retail parts requiring an FRL 180/180/180 will be rationalized by way of a Performance Solution to 120/120/120.</p>										
C2.9 Separation of Classifications in different storeys	<p>The level (FRL) of fire protection required to the storey above is determined by BCA Table 3 of Specification C1.1 corresponding with the building classification of the lower storey. An excerpt from Table 3 has been produced below:</p> <table border="1"> <thead> <tr> <th>BCA Class</th><th>FRL (Table 3 of Spec C1.1)</th></tr> </thead> <tbody> <tr> <td>Class 2</td><td>90/90/90</td></tr> <tr> <td>Class 6</td><td>180/180/180</td></tr> <tr> <td>Class 7a</td><td>120/120/120</td></tr> <tr> <td>Class 7b</td><td>240/240/240</td></tr> </tbody> </table> <p>The fire engineer has confirmed the FRL of the ground floor retail parts requiring an FRL 180/180/180 will be rationalized by way of a Performance Solution to 120/120/120.</p>	BCA Class	FRL (Table 3 of Spec C1.1)	Class 2	90/90/90	Class 6	180/180/180	Class 7a	120/120/120	Class 7b	240/240/240
BCA Class	FRL (Table 3 of Spec C1.1)										
Class 2	90/90/90										
Class 6	180/180/180										
Class 7a	120/120/120										
Class 7b	240/240/240										
C3.3 Separation of external walls and associated openings in different fire compartments	<p>The openings in the external wall to the retail part of the building and within 6m of the loading dock on ground floor (examples highlighted in yellow below) are to be protected in accordance with C3.4 or alternatively addressed by way of a Performance solution by a fire engineer at CC stage.</p> <p>The fire engineer has confirmed the openings within the separate fire compartments on ground floor will be addressed by way of a Performance Solution at CC stage.</p> 										

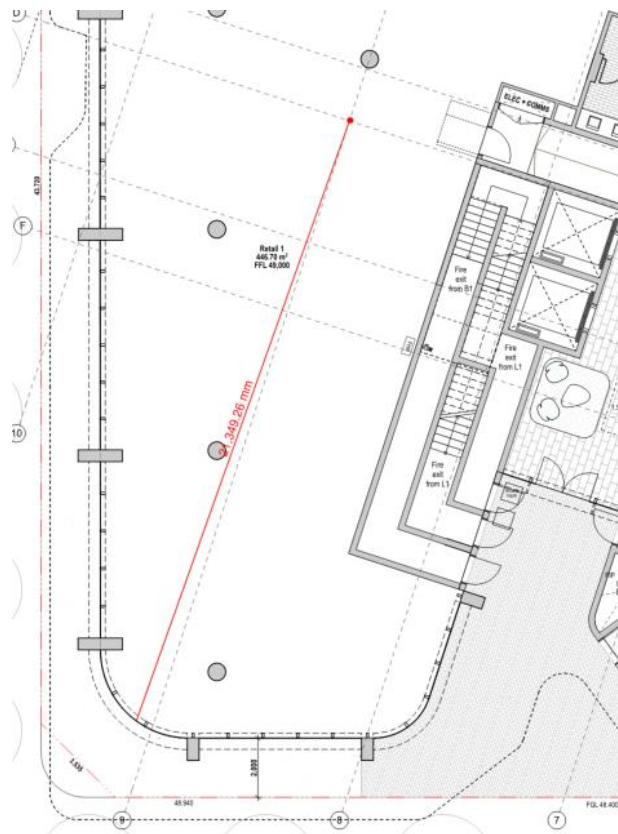
BCA Clause	Deemed-to-Satisfy Provision to be addressed
C3.15 Openings for Service Installations	The fire engineer has confirmed the FRL of the penetrations through the loading dock requiring an FRL 240 minutes will be reduced by way of a Performance Solution at CC stage where a tested system providing an FRL of 240 minutes is not available.
D1.2 Number of Exits required	<p>A single exit is provided to the following areas in lieu of 2 exits:</p> <ul style="list-style-type: none"> Lobby A & B on ground floor; The roof area and level 16 (roof to building B) as this level is provided with a steel pergola. <p>The fire engineer has confirmed the single exit to Lobby A & B will be addressed by way of a Performance Solution at CC stage.</p>
D1.4 Exit Travel Distances	<p>The following areas exceed the maximum distance to an exit:</p> <ul style="list-style-type: none"> Basement level 3 – Architectural plans to detail the gradient of the ramp throughout. Where the ramp provides a gradient no steeper than 1:8 throughout, travel distance to a point of choice will be 28.5m in lieu of 20m. However, where the ramp is greater than 1:8, the travel distance is extended to 54.1m to a point of choice in lieu of 20m from the furthest point of the northern part of the carpark.  <ul style="list-style-type: none"> Basement level 2 -Up to 28m to a point of choice in lieu of 20m and up to 50m to an exit in lieu of 40m.

BCA Clause

Deemed-to-Satisfy Provision to be addressed



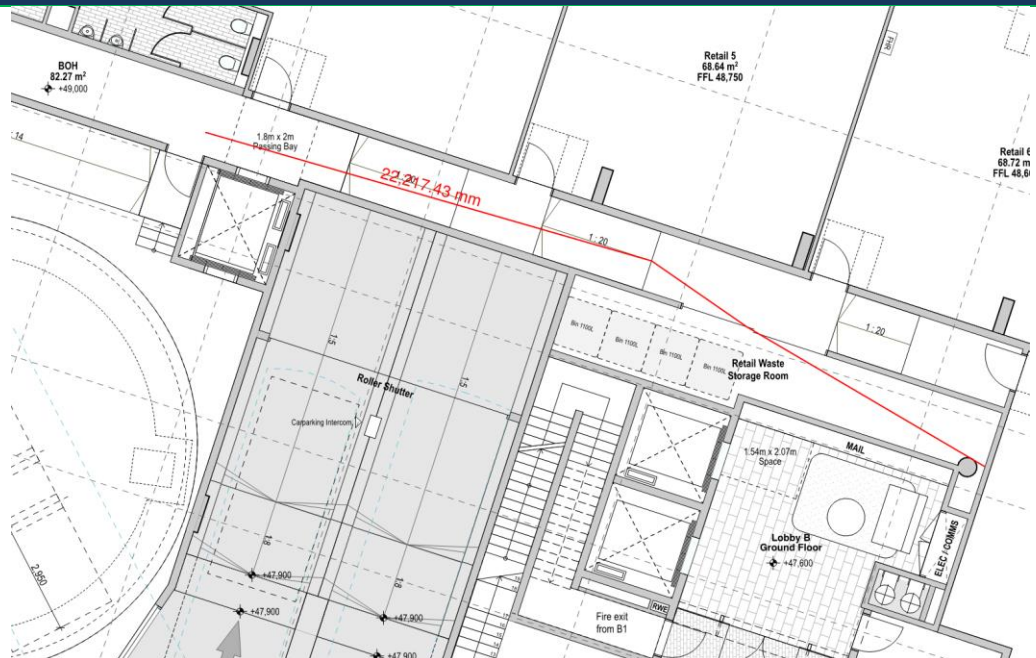
- Ground floor (Retail unit 1) – Up to 21.5m to a point of choice in lieu of 20m.



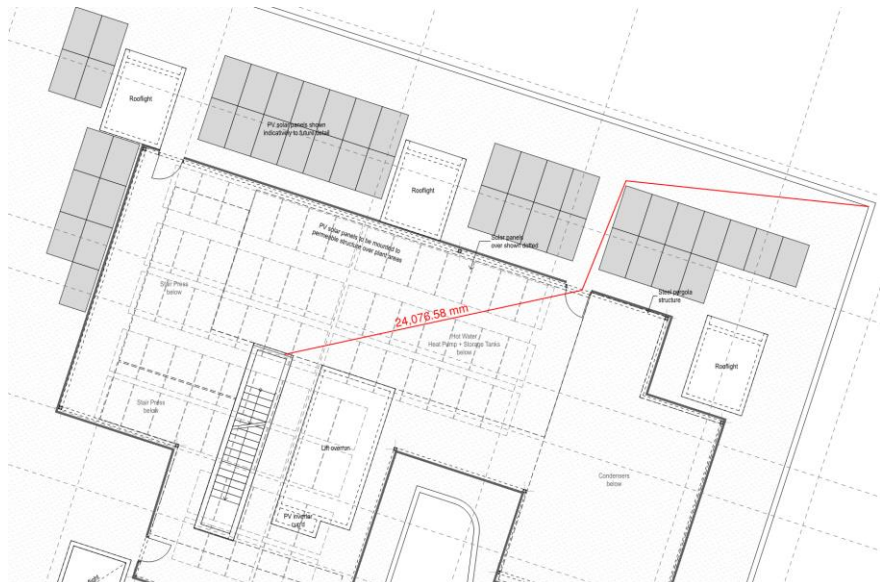
- Ground floor – Up to 22.5m to a point of choice in lieu of 20m from the bin holding area.

BCA Clause

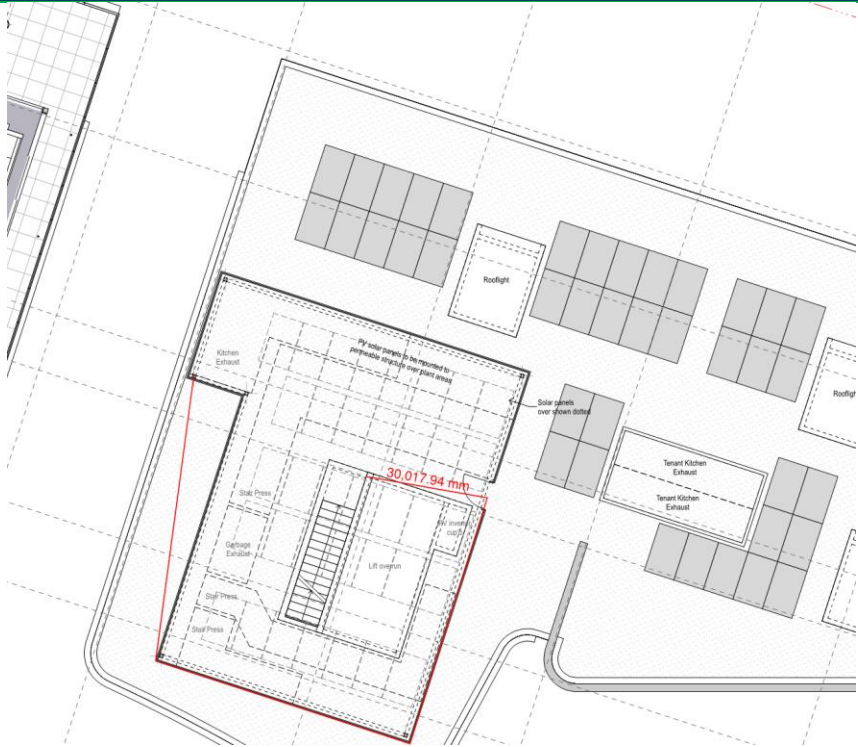
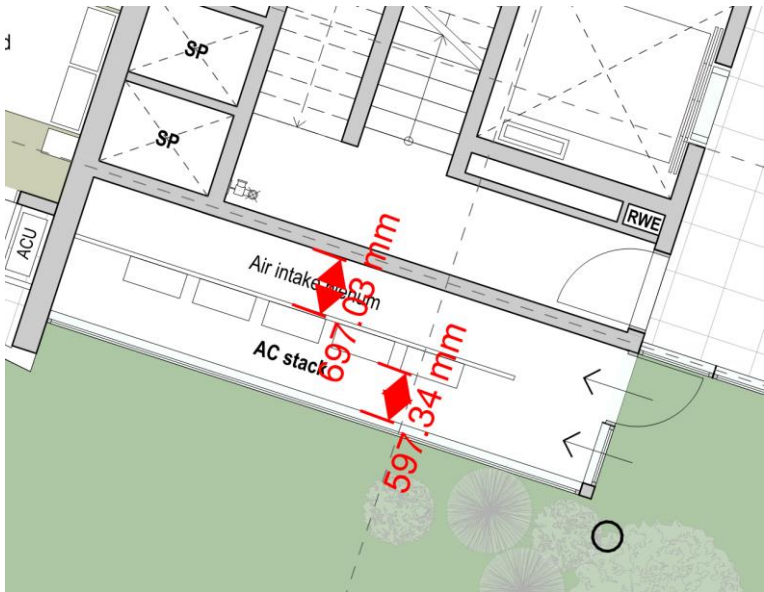
Deemed-to-Satisfy Provision to be addressed

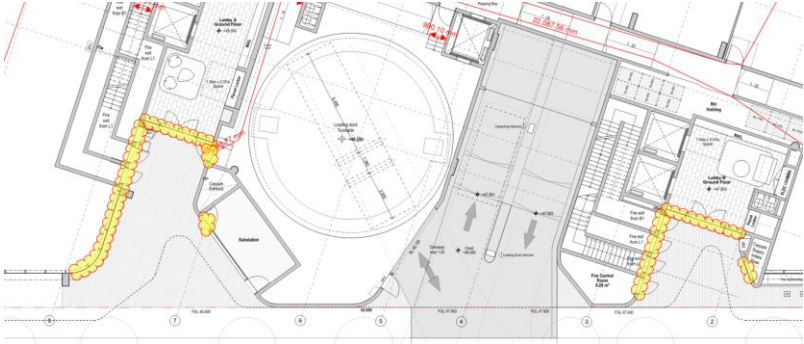
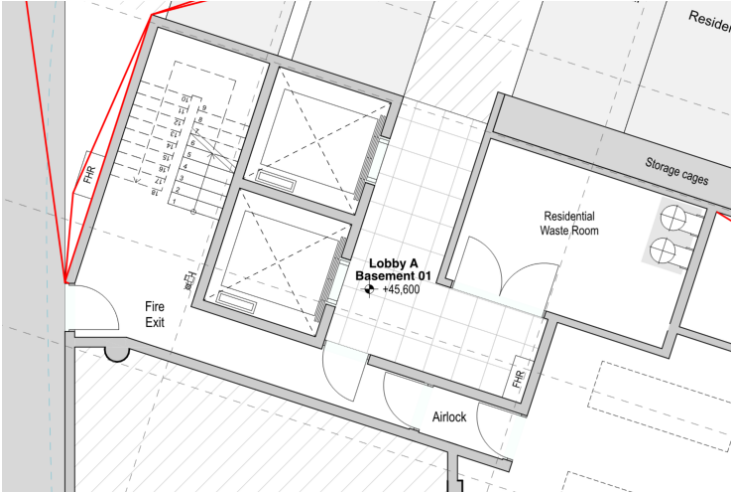



- Building A (First floor to level 14) – Up to 7.5m to a point of choice from the furthest unit in lieu of 6m;
- Building B (Level 1 to level 2) – Up to 8m to a point of choice in lieu of 6m.
- Roof level (Building A) – Up to 24m to a single exit in lieu of 20m.



- Level 16 (Building B) – Up to 30m to a single exit in lieu of 20m. It should be noted, the travel distance was measured along a pathway providing a minimum 1m width.


BCA Clause	Deemed-to-Satisfy Provision to be addressed
	
<p>D1.5 Distance Between Alternative Exits</p>	<p>Ground floor – The distance between the alternate exits to the substation provide a distance of 3.6m in lieu of 9m.</p>
<p>D1.6 Dimensions of Exits and paths of Travel to Exits</p>	<p>The width of the path of travel from within the AC room serving the residential levels are less than 1m.</p> 
<p>D1.7 Travel via Fire Isolated Stairs</p>	<ul style="list-style-type: none"> ▪ The fire-isolated passageways at ground level discharge into areas not open for 1/3rd of its perimeter contrary to D1.7(b)(iii)(B). ▪ The openings along the path of travel (and within 6m measured horizontally at right angles and 3m above the path of travel) from the point where the fire-isolated stairways discharge on ground floor are to be protected internally in

BCA Clause	Deemed-to-Satisfy Provision to be addressed
	<p>accordance with C3.4 (openings highlighted in yellow below). The walls along the path of travel require an FRL no less than 60/60/60.</p>  <ul style="list-style-type: none"> It should be noted, the airlock opening into the fire-isolated passageway on basement level 1 has been considered to fall within the category of “or the like” with regards to D1.7(d). 
<p>D1.12 Non-required stairways, ramps or escalators</p>	<p>The non-required non-fire-isolated stairways serving the forest rooms on levels 6-8 and 11-13 serve no more than 3 consecutive storeys however, one of those storeys are not situated at a level which there is direct egress to a road or open space.</p> <p>The fire engineer has confirmed this will be addressed by way of a Performance solution at CC stage.</p>

BCA Clause	Deemed-to-Satisfy Provision to be addressed
	
D2.12 Roof as Open Space	<p>The fire engineer has confirmed the drainage openings within 3m of the path of travel to the fire stairs on the podium roof will be addressed by way of a Performance Solution at CC stage.</p>
E1.3 Fire Hydrants	<ul style="list-style-type: none"> ▪ An FPAS accredited hydrant designer is to design the fire hydrant system and certify the hydrant system complies with AS 2419.1-2005 – including coverage, pressure and flow. ▪ The building is required to be protected throughout by a sprinkler system complying with Specification E1.5 of the BCA and therefore fire hydrant booster protection in accordance with Clause 7.3 (c)(ii) and 7.3(d)(iii) does not apply. ▪ As there are multiple entrances to the building, a performance solution is required for the location of the hydrant booster assembly identifying the main entrance with the purpose of fire-fighting operations. The fire engineer has confirmed this will be addressed by way of a Performance Solution at CC stage. ▪ Where any external hydrants are located within 10m of the building, the hydrants are to be protected in accordance with AS 2419-2005 or addressed by way of a Performance Solution at CC stage. ▪ A fire brigade relay pump in accordance with AS 2419 to enable relay boosting of each 50m pressure stage. ▪ Fire hydrants to be connected to a ring main as the building has an effective height in excess of 25m.
E1.4 Fire Hose Reels	<p>Fire hose reels have not been detailed within the residential waste rooms on basement level 1.</p>
E1.5 Sprinklers	<ul style="list-style-type: none"> ▪ The sprinkler valve is located in a secure room which does not have direct egress to a road or open space due to egress via 2 flights of stairs in lieu of a single flight described under the BCA Guide. The fire engineer has confirmed this will be addressed by way of a Performance Solution at CC stage. ▪ Covered balconies that exceed 6m² floor area or have a depth in excess of 2m measured perpendicularly from the external wall shall be sprinkler protected as per Clause 5.9.10 of AS 2118.1-2017. ▪ Sprinkler coverage is required to be provided to all cupboards and rooms. ▪ The sprinkler system is to be designed by an FPA accredited sprinkler designer to comply with E1.5, Specification E1.5 and AS 2118.1-2017.

BCA Clause	Deemed-to-Satisfy Provision to be addressed
<p>E1.8 Fire Control Centre</p>	<p>The fire control room is to be accessible via two paths of travel, one from the front entrance and the other direct from a public place of fire-isolated exit and the doorway have an FRL no less than -/120/30. The fire control room is to have an area no less than 10m². The fire control room on the ground floor is provided with a single exit in lieu of 2 exits.</p> <p>The fire control room is to be ventilation by way of natural ventilation from a window or doorway in an external wall from open space or a pressurisation system installed in accordance with AS 1668.1.</p> <p>The FIP is to be located in an area where its floor does not involve changes in level in aggregate greater than 300mm.</p>
<p>E2.2 General Requirements (inclusive of Table E2.2a / Table E2.2b & NSW amendments)</p>	<p><u>Fire-isolated exits</u></p> <p>The fire-isolated stairways serving the residential levels are required to be provided with automatic air pressurisation system in accordance with AS 1668.1-2015.</p> <p><u>Class 2 (Residential)</u></p> <p>The class 2 parts must be provided with an automatic smoke detection and alarm system complying with Spec E2.2a.</p> <p>Clause 2 of Specification E2.2a provides options for the installation of an automatic smoke detection and alarm system. The Class 2 parts must be provided with one of the following options:</p> <ol style="list-style-type: none"> 1. A smoke alarm system complying with Clause 3 of Specification E2.2a. <p>A smoke alarm system would need to comply with AS 3786- 2014, be powered from the consumer mains source and where there is more than one alarm installed within the SOU, they must all be interconnected within that SOU.</p> <p>OR</p> <ol style="list-style-type: none"> 2. A smoke detection system (and building occupant warning system) complying with Clause 4 of Specification E2.2a. <p>A smoke detection system throughout the building must be installed to AS 1670.1-2015 and be connected to activate a building occupant warning system as per clause 6 of Spec E2.2a noting that BOWS is also required throughout the carpark areas.</p> <p>OR</p> <ol style="list-style-type: none"> 3. a combination of a smoke alarm system complying with Clause 3 within sole-occupancy units and a smoke detection system (and building occupant warning system) complying with Clause 4 in areas not within the sole-occupancy units. <p><u>Class 7a carpark</u></p> <p>The Class 7a carpark must be provided with a mechanical ventilation system in accordance with AS 1668.2-2012 and must comply with Clause 5.5 of AS/NZS 1668.1-2015 and fans with metal blades suitable for operation at normal temperature may be used; and the electrical power and control cabling need not be fire rated.</p> <p><u>Class 5, 6 and 7b</u></p> <p>The fire engineer has confirmed zone smoke control will be omitted by way of a Performance Solution at CC stage.</p> <p>The class 5, 6 and 7b portions are to be provided with sprinkler coverage.</p> <p><u>Auto-shutdown – class 9b (communal/ conference room)</u></p>

BCA Clause	Deemed-to-Satisfy Provision to be addressed																																																	
	The class 9b communal/ conference room must be provided with auto-shutdown of the air-handling system as per BCA specification E2.2a and E2.2b and AS 1668.1.																																																	
E4.9 Emergency Warning & Intercom Systems	An emergency warning and intercom system complying where applicable with AS 1670.4 must be installed— (a) in a building with an effective height of more than 25 m.																																																	
F1.0 Deemed -to-Satisfy Provisions	Performance Requirements FP1.4, for the prevention of the penetration of water through external wall must be addressed by way of a Performance Solution. There are no Deemed -to Satisfy Provisions for this Performance Solution in respect to external walls.																																																	
F2.1 Facilities in residential buildings	Within each SOU the following are to be provided: <table><tr><th>Facilities required</th><th>Facilities provided</th></tr><tr><td>Kitchen sink and facilities for the preparation and cooking of food</td><td>Complies.</td></tr><tr><td>A bath or shower</td><td>Complies.</td></tr><tr><td>A closet pan and washbasin</td><td>Complies.</td></tr><tr><td>Clothes washing facilities, comprising at least one washtub and space for a washing machine</td><td>Complies.</td></tr><tr><td>Clothes drying facilities comprising a clothes line or hoist with not less than 7.5m of line or a space for one heat-operated drying cabinet or appliance in the same room as the clothes washing facilities</td><td>To be detailed at CC stage.</td></tr></table>	Facilities required	Facilities provided	Kitchen sink and facilities for the preparation and cooking of food	Complies.	A bath or shower	Complies.	A closet pan and washbasin	Complies.	Clothes washing facilities, comprising at least one washtub and space for a washing machine	Complies.	Clothes drying facilities comprising a clothes line or hoist with not less than 7.5m of line or a space for one heat-operated drying cabinet or appliance in the same room as the clothes washing facilities	To be detailed at CC stage.																																					
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Clothes washing facilities, comprising at least one washtub and space for a washing machine	Complies.																																																	
Clothes drying facilities comprising a clothes line or hoist with not less than 7.5m of line or a space for one heat-operated drying cabinet or appliance in the same room as the clothes washing facilities	To be detailed at CC stage.																																																	
F2.3 Facilities for Class 3 to 9 Buildings	Based on the number of sanitary facilities detailed on the ground floor and the assumption the retail tenancies are café's, restaurants or bars, the following occupant numbers are supported: <ul style="list-style-type: none">Up to 40 employees (50/50 split - 20 males and 20 females); andUp to 200 patrons (50/50 split – 100 males and 100 females). <table><tr><th colspan="2">Building classification</th><th colspan="5">Class 6 - restaurants, cafes, bars</th></tr><tr><th colspan="3"></th><th colspan="4">Required sanitary facilities</th></tr><tr><th>Gender</th><th>Design Occupancy</th><th>User Group</th><th>Closet Pans</th><th>Urinals</th><th>Washbasins</th><th>Shower</th></tr><tr><td>Male</td><td>20</td><td>employees</td><td>1</td><td>1</td><td>1</td><td>NA</td></tr><tr><td>Female</td><td>20</td><td>employees</td><td>2</td><td>NA</td><td>1</td><td>NA</td></tr><tr><td>Male</td><td>100</td><td>patrons</td><td>1</td><td>2</td><td>2</td><td>NA</td></tr><tr><td>Female</td><td>100</td><td>patrons</td><td>3</td><td>NA</td><td>2</td><td>NA</td></tr></table>	Building classification		Class 6 - restaurants, cafes, bars								Required sanitary facilities				Gender	Design Occupancy	User Group	Closet Pans	Urinals	Washbasins	Shower	Male	20	employees	1	1	1	NA	Female	20	employees	2	NA	1	NA	Male	100	patrons	1	2	2	NA	Female	100	patrons	3	NA	2	NA
Building classification		Class 6 - restaurants, cafes, bars																																																
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Female	20	employees	2	NA	1	NA																																												
Male	100	patrons	1	2	2	NA																																												
Female	100	patrons	3	NA	2	NA																																												
F4.2 Methods and extent of natural lighting	The windows that face the northern boundary are required to be setback not less than 3.58m from the boundary to achieve compliance with F4.2(b)(iii) – calculated at 50% of the square root of the exterior height of the wall in which the windows are located. The plans detail a setback of >7m which complies with F4.2(b)(iii).																																																	

BCA Clause	Deemed-to-Satisfy Provision to be addressed
<p>F4.3</p> <p>Natural light borrowed from adjoining room</p>	<p>The study areas are required to be provided with natural light as per the requirements of this clause.</p> 
<p>F4.5</p> <p>Ventilation of Rooms</p>	<p>All rooms include storage and garbage/ bin room and the public corridors are to be provided with Clause F4.6 compliant natural ventilation OR a mechanical ventilation or air-conditioning system complying with AS 1668.2-2012.</p>
<p>G3.1</p> <p>Application of Part</p>	<p>Drawing A-110-005 & A-110-010, Rev P3 details a 3-storey void within the forest room. It is noted the requirements of this clause do not apply to an atrium which connects only 3 storeys within an AS 2118.1-2017 sprinkler protected building however, levels 5 and 10 are not located at a level where direct egress is provided to a road or open space and therefore is to be addressed by way of a Performance solution by the fire engineer.</p>

2.0 INTRODUCTION

This report provides a Building Code of Australia (BCA) 2019 – Amdt 1 assessment of the Mixed-use development, to be located at MIDTOWN ESTATE – LOT C3, EPPING ROAD, MACQUARIE PARK.

This report provides a BCA assessment table in Section 3.0 that summarises the identified non-compliance matters and offers specific recommendations.

2.1 Basis of Report

The key basis of this report is to address compliance with the Building Code of Australia (BCA) 2019 – Amdt 1. The scope of services is limited to Sections C – “Fire Resistance”, Section D – “Access & Egress”, Section E – “Services & Equipment” and Section F “Health and Amenity”.

This report is based on a desktop assessment of the proposed plans, with specific reference to the following:

- Architectural plans prepared by Fox Johnston, Drawings Revision P2 dated 2/05/2021.

Subset ID and Name	Drawing No.	Drawing Title	Subset ID and Name	Drawing No.	Drawing Title
General			Adaptable Apartments		
	A-001-001	Title Sheet		A-115-001	Adaptable Apartments
Site Plans			GA Elevation		
	A-100-003	Site Plan		A-210-001	North Elevation
GA Plans				A-210-001	West Elevation
	A-110-000	Ground Level		A-210-002	South Elevation
	A-110-001	Level 01		A-210-003	East Elevation
	A-110-002	Level 02	GA Sections		
	A-110-003	Level 03		A-310-001	Section DD
	A-110-004	Level 04		A-310-002	Section EE
	A-110-005	Level 05			
	A-110-006	Level 06			
	A-110-007	Level 07			
	A-110-008	Level 08			
	A-110-009	Level 09			
	A-110-010	Level 10			
	A-110-011	Level 11			
	A-110-012	Level 12			
	A-110-013	Level 13			
	A-110-014	Level 14			
200710 stack overlays					
	A-110-014	Level 14			
	A-110-015	Level 15			
	A-110-016	Level 16			
	A-110-017	Roof Plan			
	A-110-B01	Basement 1			
	A-110-B02	Basement 2			
	A-110-B03	Basement 3			

- The Building Code of Australia 2019 – Amdt 1 prepared by the Australian Building Codes Board.
- The Guide to the BCA 2019 – Amdt 1, prepared by the Australian Building Codes Board.

2.2 Purpose of the Report

The purpose of this report is to assess the following:

- Assessment under the current Building Code of Australia 2019 – Amdt 1 and list any departures from the BCA 2019 – Amdt 1.
- Provide recommendations to address identified non-compliances, and/or identify potential alternative solutions.

2.3 Limitations of the Report

This report does not assess the following:

- Access and facilities for people with disabilities is addressed however compliance with Disability Discrimination Act 1992 (DDA) is outside the scope of this report. It should be noted that BCA compliance does not necessarily meet the requirements of the Disability Discrimination Act (DDA).
- Reporting on hazardous materials, OH&S matters or site contamination
- Assessment of any structural elements or geotechnical matters relating to the building, including any structural or other assessment of the existing fire resistant levels of the building

- Consideration of any fire services operations (including hydraulic, electrical or other systems)
- Assessment of plumbing and drainage installations, including stormwater
- Assessment of mechanical plant operations, electrical systems or security systems
- Heritage significance
- Consideration of energy or water authority requirements
- Consideration of Council's local planning policies
- Environmental or planning issues
- Requirements of statutory authorities
- Pest inspection or assessment building damage caused by pests (general/visual pest invasion or damage will be reported, however invasive or intrusive inspections have not be carried out)
- Sections J, G, H or I of the BCA are not considered.
- Provision of any construction approvals or certification under Part 4A or Part 5 of the Environmental Planning & Assessment Act 1979.
- Glazing, shading, lighting calculations and the like required by Section J of the BCA not been carried out
- This assessment excludes BCA clauses D3.0-3.12 (Inclusive), E3.6 and F2.4. Refer to separate access consultant's report.
- BCA 2019 – Amdt 1 does not directly specify slip-resistance classification(s) for all *accessible paths of travel*; however, we highlight the need under AS 1428.1-2009 for all *accessible paths of travel* to have a slip-resistant surface. We recommend you should seek surface finish advice from an independent specialist slip safety consultant.

3.0 BCA ASSESSMENT DATA

The following data is provided in respect to review of the building under the Building Code of Australia 2019 – Amdt 1 in respect to the compliance assessment of the mixed-use development to be located at MIDTOWN ESTATE – LOT C3, EPPING ROAD, MACQUARIE PARK.

BCA Building Classifications:	Class 2 (residential) Class 6 (Retail) Class 7a (Carpark) Class 7b (Storage) Class 9b (Communal/ conference room)
Building rise in storeys:	19 (determined in accordance with C1.2 of the BCA).
Type of Construction:	Type A(determined in accordance with C1.1 of the BCA)
General Floor area limitations:	6 & 7 – 5,000m ² / 30,000m ³
Effective Height (m):	58.9m (45.600 – 104.500)
Climate Zone (Thermal Design)	5

3.1 Location of Fire Source features

The potential *fire source features* to be considered for this building are the external wall of another building on the allotment which is not a Class 10 building, the side or rear of the allotment boundary or the far side of the road.

In this instance the following setbacks are determined in respect to the fire source features applicable to the building

- North →3m from the western boundary
- South – Road boundary
- East – Road boundary
- West – Road boundary

3.2 Summary of Fire Services Required

Summarised below are the BCA deemed to satisfy fire services required for the building:

- Fire hydrants are required to serve all areas and be provided in accordance with BCA E1.3 and AS 2419.1-2005
- A fire hose reel system complying with BCA E1.4 and AS 2441-2005 must be provided to serve all areas other than class 2 SOUs.
- A sprinkler system throughout all parts of the building complying with E1.5 and AS 2118.1-2017.
- Portable fire extinguishers must be provided in accordance with BCA E1.6 & Table E1.6 and must be selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444-2001.
- A fire control room (FCR) must be provided in accordance with BCA E1.8 and Clauses 2 to 12 of BCA Specification E1.8. The FCR must be fire rated from the remainder of the building by construction achieving FRL of 120/120/120 and have two access points.
- Automatic smoke and fire detection to be provided throughout the building in accordance with Part E2 and BCA Specification E2.2a. and AS 1670.1-2018
- Automatic air pressurisation to fire isolated stairs serving residential levels and the fire control room in accordance with BCA E2.2, E1.8 and AS/NZS 1668.1-2015.

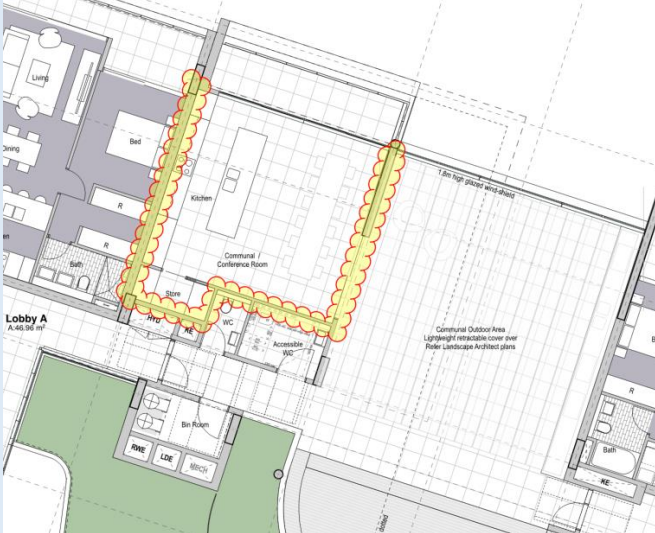
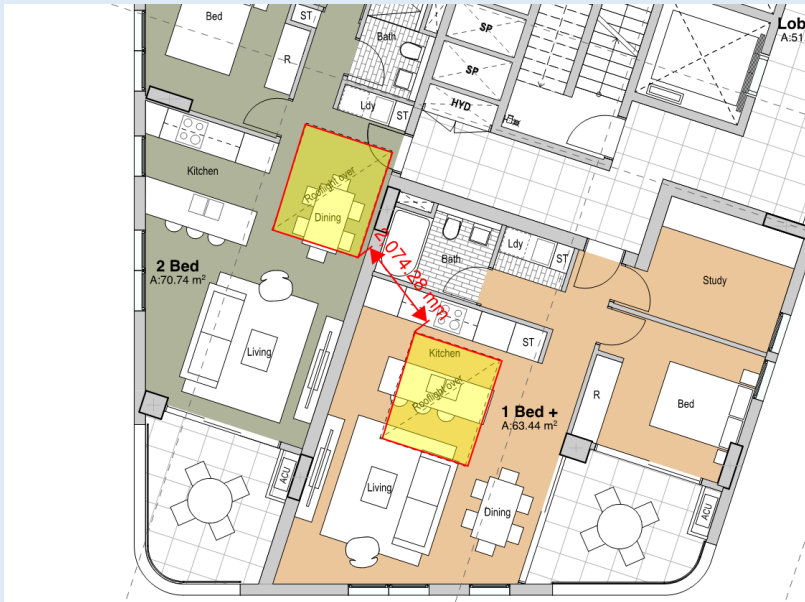
- A sound system and intercom system for emergency purposes (SSISEP) complying with BCA E4.2 and AS 1670.4-2018 must be installed throughout the whole building
- An emergency lighting system must be installed throughout the building in accordance with BCA E4.2 of the BCA and AS 2293.1-2018.
- Exit signs must be installed throughout the building in accordance with BCA E4.5 and AS 2293.1-2018.
- Mechanical ventilation to the basement carpark in accordance with BCA Table E2.2a and AS 1668.1-2015 and AS 1668.2-2012, incorporating metal fans.
- Signage to be provided exits in accordance with D2.23 and Clause 183 of *Environmental Planning & Assessment Regulation 2000*.
- Emergency lifts must be provided in accordance with BCA E3.4 and C2.10.

4.0 BCA ASSESSMENT SUMMARY

The following table details the BCA compliance of the assessed design.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
SPECIFICATION A1.1 FIRE PROTECTED TIMBER					
Specification A1.1 has been introduced to allow fire-protective timber construction utilising a non-combustible fire protective covering for buildings not exceeding 25m which are sprinkler protected.					
2.1 General requirements			X		Not applicable.
2.2 Massive Timber			X		Not applicable.
SECTION B STRUCTURE					
Part B1: Structural Provisions				X	<ul style="list-style-type: none"> ❖ Structural engineer to provide structural drawings/details and accompanying structural design certificate to demonstrate that all building elements will comply with Section B of the BCA. ❖ Glazing must comply with AS1288-2006 and AS2047-2014. ❖ Termite control must comply with AS3660.1-2000 where any primary building elements are timber. ❖ If the building is in a flood hazard area it is required to comply with BCA clause B1.6. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)</i></p>
SECTION C FIRE RESISTANCE					
Part C1 - Fire Resistance & Stability					
C1.1 Type of Construction Required				X	<p>Refer to Spec C1.1 and Attachment B for Schedule of FRLs for Type A Construction. These are to be certified by the architect and structural engineer as having been met, based on the proposed design.</p> <p>Please note that specification C1.1 also requires design compliance with the following:</p> <ol style="list-style-type: none"> Where a combustible material is used as a finish or lining to a wall or roof, or sunscreen, or awning, to a building element required to have an FRL the material must be exempted or comply with the fire hazard properties prescribed under C1.10 and must not otherwise constitute an undue risk of fire spread via the façade of the building or compromise egress from the building. This includes any aluminum panels which where containing plastic strengthening elements would not be non-combustible. Fire isolated shafts are required to be enclosed at the top and bottom of the shaft with fire rated construction as per specification C1.1. This fire rating is required in two directions. This includes all shafts/ chutes serving the

Page 20 of 101

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p>11. A Performance Solution by the fire engineer will be required where timber is used within the internal walls required to be fire rated such as timber noggings within bounding walls.</p> <p>12. Rooflights: The rooflights highlighted in yellow below are located in adjoining units and are less than 3m apart.</p>  <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)</i></p>
C1.2 Calculation of Rise In Storeys			X		Refer to Section 2.0 of this report for further details
C1.3 Buildings of Multiple Classifications			X		Not applicable.
C1.4			X		Not applicable.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Mixed Types of Construction					
C1.5 Two Storey Class 2, 3 or 9c buildings			X		Not applicable.
C1.6 Class 4 Parts			X		Not applicable.
C1.7 Open Spectator Stands			X		Not applicable.
C1.8 Lightweight Construction				X	<p>(a) Where it is proposed to use <i>lightweight construction</i> (within the meaning of the BCA) this must comply with Specification C1.8 if it is used in a wall system—</p> <ul style="list-style-type: none"> (i) that is required to have an FRL; or (ii) for a lift shaft, stair shaft or service shaft or an external wall bounding a public corridor including a non fire-isolated passageway or non fire-isolated ramp. <p>(b) If lightweight construction is used for the fire-resisting covering of a steel column or the like, and if —</p> <ul style="list-style-type: none"> (i) the covering is not in continuous contact with the column, then the void must be filled solid, to a height of not less than 1.2 m above the floor to prevent indenting; and (ii) the column is liable to be damaged from the movement of vehicles, materials or equipment, then the covering must be protected by steel or other suitable material. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C1.9 Non - combustible building elements				X	<p>(a) In a building <i>required</i> to be of Type A the following building elements and their components must be <i>non-combustible</i>:</p> <ul style="list-style-type: none"> (i) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation (AS 1530.1 test report or CodeMark Certificate to confirm non-combustibility of building elements). (ii) The flooring and floor framing of lift pits. (iii) <i>Non-loadbearing internal walls</i> where they are <i>required</i> to be <i>fire-resisting</i>. <p>(b) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in—</p> <ul style="list-style-type: none"> (i) a building <i>required</i> to be of Type A construction; and <p>(c) A <i>loadbearing internal wall</i> and a <i>loadbearing fire wall</i>, including those that are part of a <i>loadbearing shaft</i>, must comply with Specification C1.1.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(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, damp-proof courses.</p> <p>(e) The following materials may be used wherever a <i>non-combustible</i> material is <i>required</i>:</p> <ul style="list-style-type: none"> (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 <i>combustible</i> surface finish not exceeding 1 mm thickness and where the <i>Spread-of-Flame Index</i> of the product is not greater than 0. (vi) Sarking type materials that do not exceed 1mm in thickness and have a Flammability Index not greater than 5 (AS 1530.2 test report to confirm flammability index of sarking material). (vii) Bonded laminated materials where— <ul style="list-style-type: none"> (A) each lamina, including any core, is <i>non-combustible</i>; and (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2mm; and (C) the <i>Spread-of-Flame Index</i> and the <i>Smoke-Developed Index</i> of the bonded laminated material as a whole do not exceed 0 and 3 respectively. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C1.10 Fire Hazard Properties				X	<p>(a) The fire hazard properties of the following internal linings, materials and assemblies must comply with Specification C1.10 by way of test reports / certificates provided from a <i>registered testing authority</i> (within the meaning of the BCA):</p> <ul style="list-style-type: none"> (i) Floor linings and floor coverings. (ii) Wall linings and ceiling linings. (iii) Air-handling ductwork. (iv) Lift cars. (v) NSW C1.10(a)(v) -In a Class 9b building used as an entertainment venue , a material used to cover closed back upholstered seats; and a public hall or the like a proscenium curtain required by Specification H1.3. (vi) Escalators, moving walkways and non required non fire isolated stairways or pedestrian ramps subject to Specification D1.12.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(vii) Sarking type materials.</p> <p>(viii) Attachments to floors, ceilings, internal walls and the internal linings of external walls.</p> <p>(ix) Other materials including insulation materials other than sarking type materials.</p> <p>(b) NSW: Paint or fire -retardant coatings must not be used in order to make a material comply with the required fire hazard property, except in respect to a material referred to in NSW Specifications C1.10, NSW Table 4 and to which Notes 4 and 5 are applicable.</p> <p>(c) The requirements of (a) do not apply to a material or assembly if it is –</p> <p>(i) plaster, cement render, concrete, terrazzo, ceramic tile or the like; or</p> <p>(ii) a fire protective covering; or</p> <p>(iii) a timber framed window; or</p> <p>(iv) a solid timber handrail or skirting; or</p> <p>(v) a timber-faced door; or</p> <p>(vi) an electrical switch, socket-outlet, cover plate or the like; or</p> <p>(vii) a material used –</p> <p>(A) a roof insulating material applied in continuous contact with a substrate; or</p> <p>(B) an adhesive; or</p> <p>(C) a damp-proof course, flashing, caulking, sealing, ground moisture barrier or the like; or</p> <p>(viii) a paint, varnish, lacquer or similar finish, other than nitro-cellulose lacquer; or</p> <p>(ix) a clear or translucent roof light of glass fibre-reinforced polyester if –</p> <p>(A) the roof in which is installed forms part of a single storey building required to be Type C construction; and</p> <p>(B) the material is used as part of the roof covering; and</p> <p>(C) it is no closer than 1.5m from another roof light of the same type; and</p> <p>(D) each roof light is not more than 14m² in area; and</p> <p>(E) the area of the roof lights per 70m² of roof surface is not more than 14m² in area; or</p> <p>(x) a face plate or neck adaptor of supply and return air outlets of an air handling system; or</p> <p>(xi) a face plate or diffuser plate of light fitting and emergency exit signs and associated electrical wiring and electrical components; or</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(xii) a joinery unit, cupboard, shelving or the like; or</p> <p>(xiii) NSW: an attached non-building fixture and fitting such as –</p> <p>(A) A curtain, blind, or similar décor, other than-</p> <p>(aa) a proscenium curtain required by Specification H1.3; or.</p> <p>(bb) in a Class 9b building used as an entertainment venue, a material that is regulated under NSW Table 4; and</p> <p>(A) A whiteboard, window treatment or the like; or</p> <p>(xiv) Timber treads, risers, landings and associated supporting framework installed in accordance with D2.25 where the Spread-of-Flame Index and the Smoke-Developed Index of the timber does not exceed 9 and respectively; or</p> <p>(xv) Any other material that does not significantly increase the hazards of the fire.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C1.11 Performance of External Walls in Fire			X		Not applicable.
C1.12 Combustible materials			X		Deleted.
C1.13 Fire protected timber: concession			X		Not applicable.
C1.14 Ancillary elements				X	<p>An <i>ancillary element</i> must not be fixed, installed or attached to the internal parts or external face of an <i>external wall</i> that is <i>required</i> to be <i>non-combustible</i> unless it is one of the following:</p> <p>(a) An ancillary element that is non-combustible.</p> <p>(b) A gutter, downpipe or other plumbing fixture or fitting.</p> <p>(c) A flashing.</p> <p>(d) A grate or grill not more than 2m² in an area associated with a building service.</p> <p>(e) An electrical switch, socket outlet, cover plate or the like.</p> <p>(f) A light fitting.</p> <p>(g) A <i>required</i> sign.</p> <p>(h) A sign other than one provided under (a) or (g) that –</p> <p>(i) Achieves a group number 1 or 2; and</p> <p>(ii) Does not extend beyond one storey; and</p> <p>(iii) Does not extend beyond one fire compartment; and</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(iv) Is separated vertically from other signs permitted under (h) by at least 2 storeys.</p> <p>(i) An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that –</p> <p>(i) Meets the requirements of Table 4 of Specification C1.10 as an internal element; and</p> <p>(ii) Serves a storey –</p> <p>(A) At ground level; or</p> <p>(B) Immediately above a storey at ground level; and</p> <p>(iii) Does not serve an exit, where it would render the exit unusable in a fire.</p> <p>(j) A part of a security, intercom or announcement system.</p> <p>(k) Wiring.</p> <p>(l) A paint, lacquer or similar finish,</p> <p>(m) A gasket, caulking, sealant or adhesive directly associated with (a) to (k).</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
Part C2 - Compartmentation & Separation					
C2.1 Application of Part			X		C2.2, C2.3 and C2.4 do not apply to a carpark provided with a sprinkler system (other than a FPAA101D or FPAA101H system complying with Specification E1.5, an open-deck carpark or an open spectator stand.
C2.2 General Floor Area & Volume Limitations	X				Complies.
C2.3 Large Isolated Buildings			X		Not applicable.
C2.4 Requirements for Open Space			X		Not applicable.
C2.5 Class 9a & 9c Buildings			X		Not applicable.
C2.6 Vertical Separation of openings in external walls			X		Not applicable as an AS 2118.1-2017 sprinkler system is required to be installed throughout the building.
C2.7 Separation by Fire Walls				X	<p>(a) Construction – a fire wall must be constructed in accordance with the following:</p> <p>(i) The fire wall has the relevant FRL prescribed by Specification C1.1 for each of the adjoining parts, and if</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>these are different, the greater FRL; except where Tables 3.9, 4.2 and 5.2 of Specification C1.1 permit a lower FRL on the carpark side.</p> <p>(ii) Any openings in the 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.</p> <p>(iii) Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not pass through or cross the fire wall unless the required fire resisting performance of the fire wall is maintained.</p> <p>(b) Separation of buildings – a part of a building separated from the remainder of the building by a fire wall may be treated as a separate building for the DTS provisions of Sections C, D & E if it is constructed in accordance with (a) and the following:</p> <p>(i) The fire wall extends through all storeys and spaces in the nature of storeys that are common to that part and any adjoining part of the building.</p> <p>(ii) The fire wall is carried through to the underside of the roof covering.</p> <p>(iii) Where the roof of one of the adjoining parts is lower than the roof of the other part, the fire wall extends to the underside of –</p> <p>(A) The covering of the higher roof, or not less than 6m above the covering of the lower roof; or</p> <p>(B) The lower roof if it has an FRL not less than that of a fire wall and no openings closer than 3m to any wall above the lower roof; or</p> <p>(C) The lower roof if its covering is non combustibile and the lower part has a sprinkler system (other than a FPAA101D or FPAA101H system complying with Specification E1.5.</p> <p>(c) Separation of fire compartments – a part of a building separated from the remainder of the building by a fire wall may be treated as a separate fire compartment if it is constructed in accordance with (a) and the fire wall extends to the underside of –</p> <p>(i) A floor having an FRL required for a fire wall; or</p> <p>(ii) The roof covering.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C2.8 Separation of Classifications in the same storey				X	<p>The design requirements in this clause apply to the following:</p> <ul style="list-style-type: none"> ▪ Ground –Class 6 (retail) & 7b (storage). ▪ Level 15 – Class 2 (residential) & 9b (communal/ conference room).

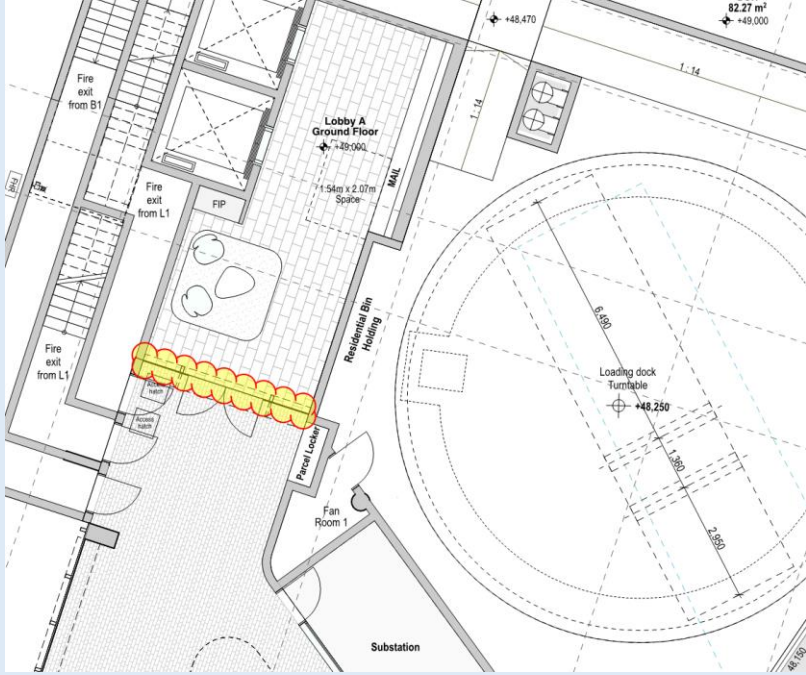
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS										
					<p>The fire engineer has confirmed the FRL of the ground floor retail parts requiring an FRL 180/180/180 will be rationalized by way of a Performance Solution to 120/120/120.</p> <p><u>Design requirements</u></p> <p>In a building containing different classifications located alongside one other in the same storey -</p> <ul style="list-style-type: none">(a) each building element in that storey must have the higher FRL prescribed in Specification C1.1 for that element for the classifications concerned; or(b) the parts must be separated in that storey by a fire wall having –<ul style="list-style-type: none">(i) the higher FRL prescribed in Table 3 or 4; or(ii) the FRL prescribed in Table 5, Specification C1.1, for that element for the Type of construction and classification concerned; or(c) where one part is a carpark complying with Table 3.9, 4.2 or 5.2 of Specification C1.1, the parts may be separated by a fire wall complying with the appropriate table. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>										
C2.9 Separation of Classifications in different storeys				X	<p>The level (FRL) of fire protection required to the storey above is determined by BCA Table 3 of Specification C1.1 corresponding with the building classification of the lower storey. An excerpt from Table 3 has been produced below:</p> <table><tr><td>BCA Class</td><td>FRL (Table 3 of Spec C1.1)</td></tr><tr><td>Class 2</td><td>90/90/90</td></tr><tr><td>Class 6</td><td>180/180/180</td></tr><tr><td>Class 7a</td><td>120/120/120</td></tr><tr><td>Class 7b</td><td>240/240/240</td></tr></table> <p>The fire engineer has confirmed the FRL of the ground floor retail parts requiring an FRL 180/180/180 will be rationalized by way of a Performance Solution to 120/120/120.</p> <p><u>Design requirements</u></p> <p>If parts of different classification are situated one above the other in adjoining storeys they must be separated as follows –</p>	BCA Class	FRL (Table 3 of Spec C1.1)	Class 2	90/90/90	Class 6	180/180/180	Class 7a	120/120/120	Class 7b	240/240/240
BCA Class	FRL (Table 3 of Spec C1.1)														
Class 2	90/90/90														
Class 6	180/180/180														
Class 7a	120/120/120														
Class 7b	240/240/240														

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(a) Type A construction - the floor between the adjoining parts must have an FRL of not less than that prescribed in Specification C1.1 for the classification of the lower storey.</p> <p>(b) Type B or C construction – if one of the adjoining parts is a Class 2, 3 or 4, the floor separating that part from the storey below must –</p> <p>(i) Be a floor/ceiling system incorporating a ceiling which has a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or</p> <p>(ii) Have an FRL of at least 30/30/30; or</p> <p>(iii) Have a fire protective covering on the underside of the floor, including beams incorporated in it if the floor combustible or of metal.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C2.10 Separation of lifts shafts				X	<p>(a) Any lift connecting more than 2 storeys, or more than 3 storeys where the building is sprinkler protected must be separated from the remainder of the building by enclosure in a shaft in which –</p> <p>(i) For Type A construction – the walls have the FRL prescribed by Specification C1.1; and</p> <p>(c) An emergency lift must be contained within a fire resisting shaft having an FRL not less than 120/120/120.</p> <p>(d) Openings for lift landing doors and services must be protected in accordance with the DTS provisions of Part C3.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C2.11 Stairways and lifts in one shaft	X				Complies.
C2.12 Separation of Equipment				X	<p>(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 –</p> <p>(i) lift motors and lift control panels or</p> <p>(ii) Emergency generators used to sustain emergency equipment operating in the emergency mode; or</p> <p>(iii) Central smoke control plant; or</p> <p>(iv) Boilers; or</p> <p>(v) A battery system installed in that building that has a total voltage of 12 volts or more and a storage capacity of 200kWh or more.</p> <p>(b) Equipment need not be separated in accordance with (a) if the equipment comprises-</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none"> (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 pressurizing equipment installed in compliance with AS 1668.1; or (iii) A lift installation without a machine room; or (iv) Equipment otherwise adequately separated from the remainder of the building. <p>(c) Separation of onsite fire pumps must comply with the requirements of AS2419.1.</p> <p>(d) Separating construction must have –</p> <ul style="list-style-type: none"> (i) Except as provided by (ii) – <ul style="list-style-type: none"> (A) An FRL is required by Specification C1.1, but not less than 120/120/120; and (B) Any doorway protected with a -/120/30 self-closing fire door; or (ii) When separating a lift shaft and lift motor room, an FRL not less than 120/-/-. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</p>
C2.13 Electrical Supply				X	<ul style="list-style-type: none"> (a) An electricity sub-station must be separated from the building in accordance with the Energy Authority Requirements (i.e. Ausgrid). (b) A main switchboard located within the building (and which sustains emergency equipment operating in the emergency mode) must – <ul style="list-style-type: none"> (i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and (ii) have any doorway in that construction protected with a self-closing fire door having an FRL of not less than – /120/30. (c) Electrical conductors located within the building that supply – <ul style="list-style-type: none"> (i) a substation located within the building which supplies a main switchboard covered by (b); or (ii) a main switchboard covered by (b), must— (iii) have a classification in accordance with AS/NZS 3013-2005 of not less than— <ul style="list-style-type: none"> (A) if located in a position that could be subject to damage by motor vehicles — WS53W; or (B) otherwise — WS52W; or (iv) be enclosed or otherwise protected by construction having an FRL of not less than 120/120/120

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(d) where emergency equipment is required in a building, all switchboards in the electrical installation, which sustain the electricity supply to the emergency equipment, must be constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of a fault from the non-emergency equipment switchgear.</p> <p>(e) For the purposes of (d), emergency equipment includes but it is not limited to –</p> <ul style="list-style-type: none"> (i) Fire hydrant booster pumps (ii) Pumps for automatic sprinkler systems, water spray, chemical fluid suppression systems or the like. (iii) Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building. (iv) Air handling systems designed to exhaust and control the spread of fire and smoke. (v) Emergency lifts. (vi) Control and indicating equipment. (vii) Emergency warning and intercom systems (EWIS). <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C2.14 Public corridors in Class 2 & 3 Buildings		X			Complies. All public corridors to Class 2 parts of the building are less than 40m in length.
Part C3 - Protection of Openings					
C3.1 Application of Part			X		<p>(a) The DTS provisions of this Part do not apply to-</p> <ul style="list-style-type: none"> (i) Control joints, weep holes and the like in external walls of masonry construction and joints between panels in external walls of pre -cast concrete panel construction if, in all cases they are not larger than necessary for the purpose; and (ii) Non-combustible ventilators for subfloor or cavity ventilation, if each does not exceed 45000m in face area and spaced not less than 2m from any other ventilator in the same wall; and (iii) Openings in the vertical plane formed between building elements at the construction edge or perimeter of a balcony or verandah, colonnade, terrace, or the like and (iv) In a carpark – <ul style="list-style-type: none"> (A) Service penetrations through; and (B) Openings formed by a vehicle ramp in, a floor other than a floor that separates a part not uses as a carpark, providing the connected floors comply as a single fire compartment for the purposes of all other

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>requirements of the DTS provisions of Sections C, D & E.</p> <p>(b) For the purposes of DTS provisions of this Part, openings in building elements required to be fire resisting include doorways, windows (including any associated fanlight), infill panels and fixed or openable glazed areas that do not have the required FRL.</p> <p>(c) For the purposes of the DTS 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 of the perimeter of the building, are deemed to openings in the external wall.</p>
C3.2 Protection of openings in external walls			X		<p>There are no apparent openings within 3m of the north-western boundary.</p> <p><u>Design requirements</u></p> <p>(a) Openings in an external wall that is required to have an FRL must be protected in accordance with C3.4:</p> <p>(i) if the distance between the opening and the fire-source feature is less than 3 m from a side or rear boundary; or</p> <p>(ii) less than 6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a storey at or near ground level; or</p> <p>(iii) less than 6 m from another building on the allotment that is not Class 10;</p> <p>If wall wetting sprinklers are to be used they are to be located externally.</p> <p>(b) if required to be protected under (a), not occupy more than 1/3 of the area of the external wall of the storey in which it is located unless they are in a Class 9b building used as an open spectator stand.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
C3.3 Separation of external walls and associated openings in different fire compartments				X	<p>The openings in the external wall to the retail part of the building and within 6m of the loading dock on ground floor (examples highlighted in yellow below) are to be protected in accordance with C3.4 or alternatively addressed by way of a Performance solution by a fire engineer at CC stage.</p> <p>The fire engineer has confirmed the openings within the separate fire compartments on ground floor will be addressed by way of a Performance Solution at CC stage.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p>Design requirements</p> <p>The distance between parts of external walls and any openings within them in different fire compartments separated by a fire wall must not be less than that set out in Table C3.3, unless—</p> <ul style="list-style-type: none"> (a) those parts of each wall have an FRL not less than 60/60/60; and (b) any openings protected in accordance with C3.4. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C3.4 Acceptable Methods of Protection				X	<ul style="list-style-type: none"> (a) Where protection is required to doorways and windows and other openings they must be protected as follows: <ul style="list-style-type: none"> (i) Doorways <ul style="list-style-type: none"> ❖ Internal or external wall wetting sprinklers as appropriate used with doors that are self-closing or automatic closing; or ❖ -/60/30 fire doors that are self-closing or automatic closing (ii) Windows <ul style="list-style-type: none"> ❖ Internal or external wall wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position or; ❖ -/60- fire windows that are automatic closing or permanently fixed in the closed position or ❖ -/60- automatic closing fire shutters. (iii) Other openings –

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none"> ❖ Excluding voids – internal or external wall wetting sprinklers as appropriate or ❖ Construction having a FRL not less than -/60/-. <p>(b) Fire doors, fire windows and fire shutters must comply with Specification C3.4.</p>
C3.5 Doorways in Fire Walls				X	<p>(a) The aggregate width of openings for doorways in a fire wall, which are not part of a horizontal exit, must not exceed ½ the length of the fire wall, and each doorway must be protected by –</p> <ul style="list-style-type: none"> (i) 2 fire doors or fire shutters, one on each (ii) side of the doorway, each of which has an FRL not less than ½ that required by Specification C1.1 for the fire wall except that each door or shutter must have an insulation level of at least 30; or (iii) A fire door on one side and a fire shutter on the other side of the doorway, each of which complies with (i); or (iv) A single fire door or fire shutter which has an FRL of not less than that required by Specification C1.1 for the fire wall except that each door or shutter must have an insulation level of at least 30. <p>(b) A fire door or fire shutter required by (a)(i), (ii) or (iii) must be self-closing, or automatic closing in accordance with (c) & (d).</p> <p>(c) The automatic closing operation required by (b) must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with AS1670.1 and located on each side of the fire wall not more than 1.5m horizontal distance from the opening.</p> <p>(d) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D) complying with Specification E1.5, is installed in the building, activation of the system in either fire compartment separated by the fire wall must also initiate the automatic closing operation.</p>
C3.6 Sliding Fire Doors			X		Not applicable.
C3.7 Protection of Doorways in horizontal exits			X		Not applicable.
C3.8 Openings in fire isolated exits				X	<p>(a) Doorways that open into fire-isolated stairways, fire-isolated passageways or fire isolated ramps, and are not doorways opening to a road or open space, must be protected by - /60/30 fire doors that are self-closing, or automatic closing in accordance with (b) and (c).</p> <ul style="list-style-type: none"> (i) The automatic-closing operation must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS1670.1 if smoke

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>detectors are unsuitable in the atmosphere, installed in accordance with AS1670.1 and located on each side of the fire wall not more than 1.5m horizontal distance from the approach side of the doorway.</p> <p>(ii) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D) complying with Specification E1.5, is installed in the building, activation of the system in either fire compartment separated by the fire wall must also initiate the automatic closing operation.</p> <p>(b) A window in an external wall of a fire isolated stairway, fire isolated passageway or fire isolated ramp must be protected in accordance with C3.4 if it is within 6m of, and exposed to, a window or other opening in a wall of the same building, other than in the same fire-isolated enclosure.</p> <p><i>Note – Concessions under Specification E1.5a (sprinklered building) for Class 2 & 3 buildings with an effective height of not more than 25m with a rise in storeys of 4 or more.</i></p> <p>❖ FRL's to fire doors reduced to -/30/30 where a AS2118.1 or AS2118.4 sprinkler system installed.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C3.9 Service Penetrations in fire-isolated exits				X	<p>Fire-isolated exits must not be penetrated by any services other than –</p> <p>(a) electrical wiring permitted by D2.7(e) to be installed in the exit; or</p> <p>(b) ducting associated with a pressurisation system if it –</p> <p>(i) is constructed of material having an FRL of not less than -/120/60 where it passes through any other part of the building; and</p> <p>(ii) Does not open into any other part of the building; or</p> <p>(c) Water supply pipes for fire services.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C3.10 Openings in Fire isolated lift shafts				X	<p>(a) Doorways – if a lift shaft is required to be fire isolated, an entrance doorway to that shaft must be protected by -/60/- fire doors that-</p> <p>(i) comply with AS 1735.11, and</p> <p>(ii) are set to remain closed except when discharging or receiving, passengers, goods or vehicles.</p> <p>(b) Lift indicator panels – A lift call panel, indicator panel or other panel in the wall of a fire-isolated lift shaft must be backed by construction having an FRL of not less than -/60/60 if it exceeds 35,000mm² in area.</p>

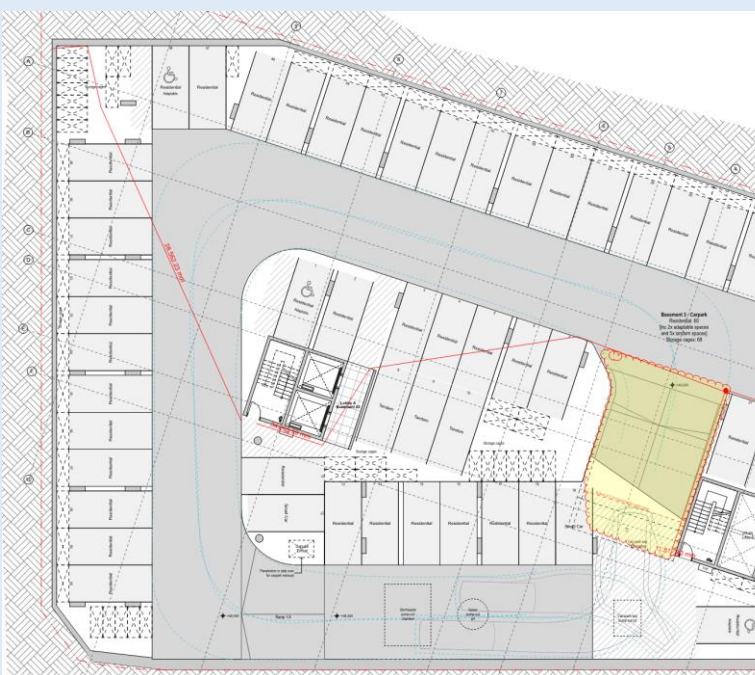


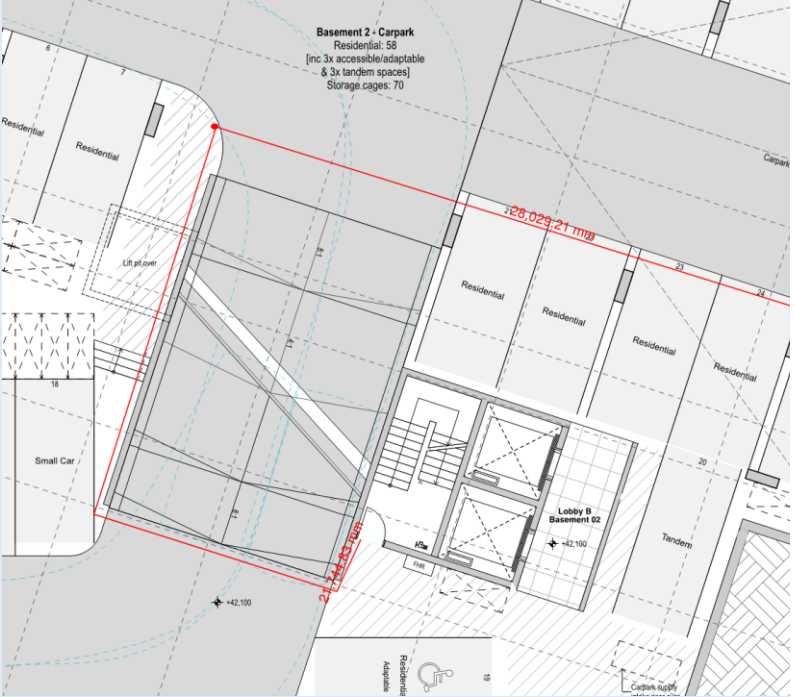
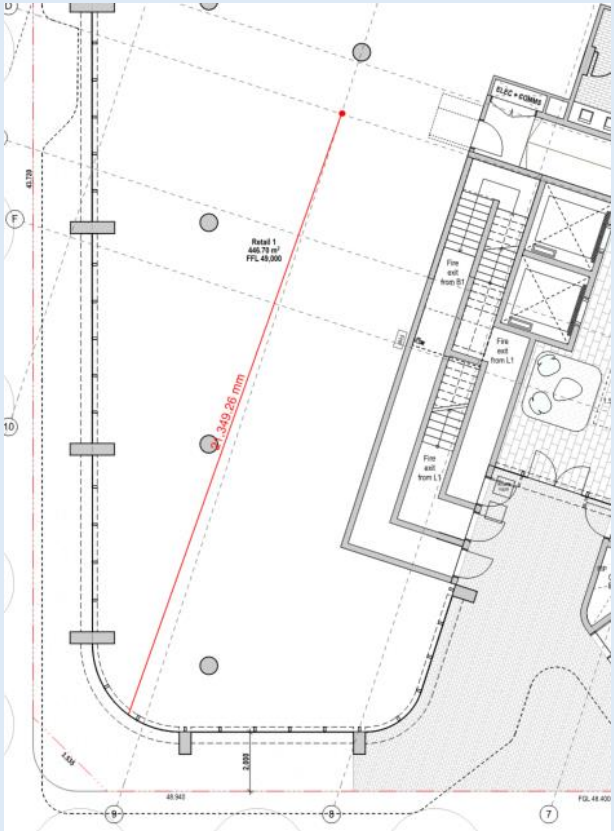
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
C3.11 Bounding Construction				X	<p>(a) A doorway in a Class 2 or 3 building must be protected if it provides access from a sole-occupancy unit to—</p> <ul style="list-style-type: none">(i) a public corridor, public lobby, or the like; or(ii) a room not within a sole-occupancy unit; or(iii) the landing of an internal non fire-isolated stairway that serves as a required exit; or(iv) another sole-occupancy unit. <p>(b) A doorway in a Class 2 or 3 building must be protected if it provides access from a room not within a sole-occupancy unit to (including the bin room and AC room) —</p> <ul style="list-style-type: none">(i) a public corridor, public lobby, or the like; or(ii) the landing of an internal non fire-isolated stairway that serves as a required exit. <p>(d) Protection for a doorway required under (a), (b) or (c) must be at least—</p> <ul style="list-style-type: none">(i) in a building of Type A construction — a self-closing — /60/30 fire door; and <p>(e) Other openings in internal walls which are required to have an FRL with respect to integrity and insulation must not reduce the fire-resisting performance of the wall.</p> <p>(f) A door required by (d) may be automatic-closing in accordance with the following:</p> <ul style="list-style-type: none">(i) The automatic-closing operation must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located not more than 1.5 m horizontal distance from the approach side of the doorway.(ii) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification E1.5, is installed in the building, activation of the system must also initiate the automatic-closing operation. <p>(g) In a Class 2 or 3 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—</p> <ul style="list-style-type: none">(i) another sole-occupancy unit; or(ii) a room not within a sole-occupancy unit, then that external wall must—(iii) be constructed of concrete or masonry, or be lined internally with a fire-protective covering; and

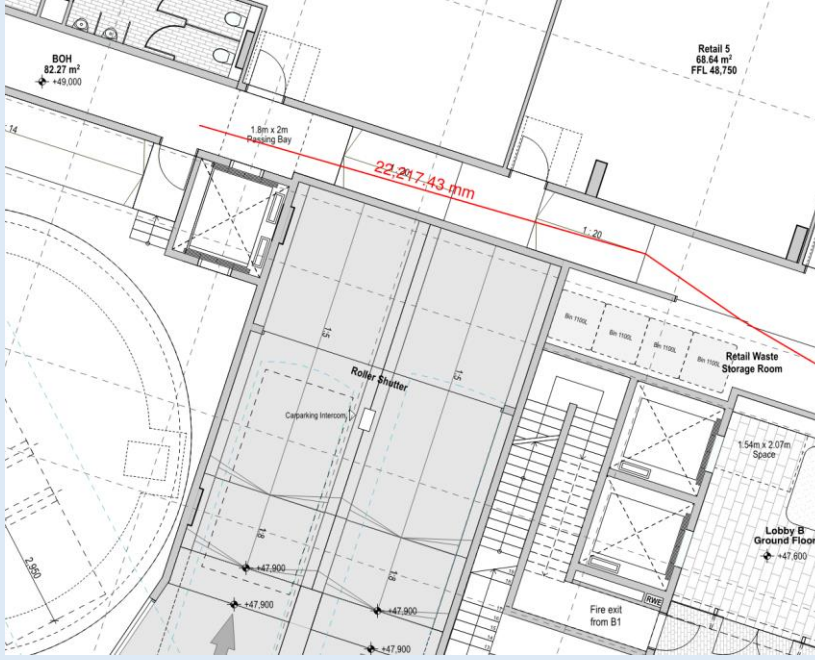



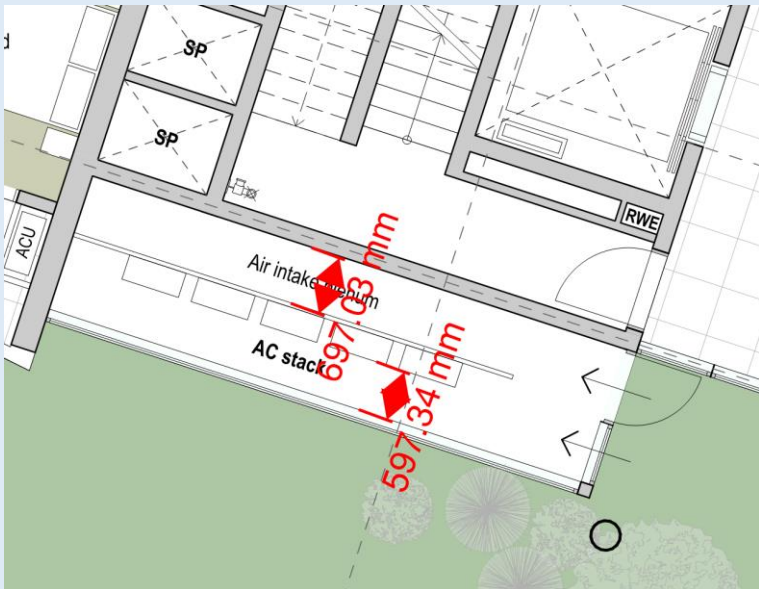
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(iv) have any doorway fitted with a self-closing, tight-fitting solid core door not less than 35 mm thick; and</p> <p>(v) have any windows or other openings—</p> <p>(A) protected internally in accordance with C3.4; or</p> <p>(B) located at least 1.5 m above the floor of the balcony, landing or the like.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C3.12 Openings in floors and ceilings for services				X	<p>Where services pass through a floor which is required to achieve a FRL or a ceiling required to have a RISF, the service must be enclosed within a fire resisting shaft or fire protected in accordance with Clause C3.15.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C3.13 Openings in Shafts				X	<p>The architect is to confirm at CC stage whether the service cupboards within the corridor are to be treated as fire rated shafts or each penetration is to be fire stopped at the floor.</p> <p><u>Design requirements</u></p> <p>In a building of Type A construction, an opening in a wall providing access to a ventilating, pipe, garbage or other service shaft must be fire protected in accordance with this clause.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C3.15 Openings for Service Installations				X	<p>The fire engineer has confirmed the FRL of the penetrations through the loading dock requiring an FRL 240 minutes will be reduced by way of a Performance Solution at CC stage where a tested system providing an FRL of 240 minutes is not available.</p> <p><u>Design requirements</u></p> <p>Where services pass through an element which is required to achieve a FRL (other than an external wall or roof), the service must be fire stopped by a tested system or Specification C3.15.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
C3.16 Construction Joints				X	<p>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 to achieve the required FRL.</p> <p>The requirements above do not apply where joints, spaces and the like between fire protected timber elements are provided with cavity barriers in accordance with Specification C1.13.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
C3.17 Columns protected in lightweight construction to achieve an FRL			X		Any column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of construction which has achieved the required FRL or resistance to the incipient spread of fire. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
SECTION D					
ACCESS & EGRESS					
Part D1 - Provision for Escape					
D1.1 Application of Part			X		The DTS provisions of this Part do not apply to the internal parts of a sole occupancy unit in a Class 2 or 3 building or Class 4 part of a building.
D1.2 Number of Exits required		X			<p>Compliance issue:</p> <p>A single exit is provided to the following areas in lieu of 2 exits:</p> <ul style="list-style-type: none"> Lobby A & B on ground floor; The roof area and level 16 (roof to building B) as this level is provided with a steel pergola. <p>The fire engineer has confirmed the single exit to Lobby A & B will be addressed by way of a Performance Solution at CC stage.</p> <p><u>Design requirements</u></p> <p>(a) All buildings — Every building must have at least one exit from each storey.</p> <p>(b) Class 2 to 8 buildings — In addition to any horizontal exit, not less than 2 exits must be provided from the following:</p> <ol style="list-style-type: none"> Each storey if the building has an effective height of more than 25 m. A Class 2 or 3 building subject to C1.5. <p>(c) Basements — In addition to any horizontal exit, not less than 2 exits must be provided from any storey if egress from that storey involves a vertical rise within the building of more than 1.5 m, unless—</p> <ol style="list-style-type: none"> the floor area of the storey is not more than 50 m²; and the distance of travel from any point on the floor to a single exit is not more than 20 m. <p>(g) Access to exits — Without passing through another sole-occupancy unit every occupant of a storey or part of a storey must have access to—</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(i) an exit; or (ii) at least 2 exits, if 2 or more exits are required. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
D1.3 When Fire Isolated exits are required	X				Complies.
D1.4 Exit Travel Distances		X			<u>Compliance issues:</u> The following areas exceed the maximum distance to an exit: <ul style="list-style-type: none"> Basement level 3 – Architectural plans to detail the gradient of the ramp throughout. Where the ramp provides a gradient no steeper than 1:8 throughout, travel distance to a point of choice will be 28.5m in lieu of 20m. However, where the ramp is greater than 1:8, the travel distance is extended to 54.1m to a point of choice in lieu of 20m from the furthest point of the northern part of the carpark.  <ul style="list-style-type: none"> Basement level 2 -Up to 28m to a point of choice in lieu of 20m and up to 50m to an exit in lieu of 40m.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <ul style="list-style-type: none"> Ground floor (Retail unit 1) – Up to 21.5m to a point of choice in lieu of 20m.  <ul style="list-style-type: none"> Ground floor – Up to 22.5m to a point of choice in lieu of 20m from the bin holding area.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <ul style="list-style-type: none"> Building A (First floor to level 14) – Up to 7.5m to a point of choice from the furthest unit in lieu of 6m; Building B (Level 1 to level 2) – Up to 8m to a point of choice in lieu of 6m. Roof level (Building A) – Up to 24m to a single exit in lieu of 20m.  <ul style="list-style-type: none"> Level 16 (Building B) – Up to 30m to a single exit in lieu of 20m. It should be noted, the travel distance was measured along a pathway providing a minimum 1m width.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
D1.5 Distance Between Alternative Exits		X			<p>Compliance issue:</p> <ul style="list-style-type: none"> Ground floor – The distance between the alternate exits to the substation provide a distance of 3.6m in lieu of 9m. <p>Design requirements</p> <p>Exits that are required as alternative means of egress must be—</p> <ol style="list-style-type: none"> distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas; and not less than 9 m apart; and not more than— <ol style="list-style-type: none"> in a Class 2 or 3 building — 45 m apart; or in all other cases — 60 m apart; and located so that alternative paths of travel do not converge such that they become less than 6 m apart.
D1.6 Dimensions of Exits and paths of Travel to Exits		X			<p>Compliance issue:</p> <p>The width of the path of travel from within the AC room serving the residential levels are less than 1m.</p>  <p>Design requirements</p> <p>In a required exit or path of travel to an exit—</p> <ol style="list-style-type: none"> the unobstructed height throughout must be not 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— <ol style="list-style-type: none"> 1 m; or

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(c) if the storey or mezzanine accommodates more than 100 persons but not more than 200 persons, the aggregate unobstructed width, except for doorways, must be not less than—</p> <p>(i) 1 m plus 250 mm for each 25 persons (or part) in excess of 100; or</p> <p>(d) if the storey or mezzanine accommodates more than 200 persons, the aggregate unobstructed width, except for doorways, must be increased to—</p> <p>(i) 2 m plus 500 mm for every 60 persons (or part) in excess of 200 persons if egress involves a change in floor level by a stairway or ramp with a gradient steeper than 1 in 12; or</p> <p>(ii) in any other case, 2 m plus 500 mm for every 75 persons (or part) in excess of 200; and</p> <p>(f) the unobstructed width of a doorway must be not less than—</p> <p>(iii) the unobstructed width of each exit provided to comply with (b), (c), (d) or (e), minus 250 mm; or</p> <p>(v) in any other case except where it opens to a sanitary compartment or bathroom — 750 mm wide; and</p> <p>(g) the unobstructed width of a required exit must not diminish in the direction of travel to a road or open space, except where the width is increased in accordance with (b)(ii) or (f)(i); and</p> <p>(h) the required width of a stairway or ramp must—</p> <p>(i) be measured clear of all obstructions such as handrails, projecting parts of balustrades or other barriers and the like; and</p> <p>(ii) extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing.</p> <p>(i) to determine the aggregate unobstructed width, the number of persons accommodated must be calculated according to D1.13; and</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D1.7 Travel via Fire Isolated Stairs		X			<p><u>Compliance issues:</u></p> <ul style="list-style-type: none"> The fire-isolated passageways at ground level discharge into areas not open for 1/3rd of its perimeter contrary to D1.7(b)(iii)(B). The openings along the path of travel (and within 6m measured horizontally at right angles and 3m above the path of travel) from the point where the fire-isolated stairways discharge on ground floor are to be protected internally in accordance with C3.4 (openings

The image shows a detailed architectural floor plan of basement level 1. A path consisting of several interconnected rooms or corridors is highlighted with a thick yellow border. This path starts from the left side, moves through a series of small rooms, and then continues towards the right side of the plan. The plan also includes various other features such as stairs, elevators, and structural columns. Red dashed lines indicate fire-rated walls or boundaries.

- It should be noted, the airlock opening into the fire-isolated passageway on basement level 1 has been considered to fall within the category of “or the like” with regards to D1.7(d).


This is a detailed architectural floor plan of a specific area labeled "Lobby A Basement 01" with a reference number "+45.600". The plan shows a central lobby area with two large square openings, possibly for elevators or stairs. To the left of the lobby is a "Fire Exit" door. To the right is an "Airlock" entrance. Further to the right are "Storage cages" and a "Residential Waste Room". The plan uses solid lines for walls, dashed lines for partitions, and arrows to indicate doors and airflow. A red line highlights a boundary or path along the top left corner.

Design requirements

- (a) A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from—
 - (i) a public corridor, public lobby or the like; or
 - (ii) a sole-occupancy unit occupying all of a storey; or
 - (iii) a sanitary compartment, airlock or the like.
- (b) Each fire-isolated stairway or fire-isolated ramp must provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway—
 - (i) to a road or open space; or
 - (ii) to a point—
 - (A) in a storey or space, within the confines of the building, that is used only for pedestrian movement,

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>car parking or the like and is open for at least 2/3 of its perimeter; and</p> <p>(B) from which an unimpeded path of travel, not further than 20 m, is available to a road or open space; or</p> <p>(iii) into a covered area that—</p> <p>(A) adjoins a road or open space;</p> <p>(B) and is open for at least 1/3 of its perimeter; and</p> <p>(C) has an unobstructed clear height throughout, including the perimeter openings, of not less than 3 m; and</p> <p>(D) provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6 m.</p> <p>(c) Where a path of travel from the point of discharge of a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building, measured horizontally at right angles to the path of travel, that part of the wall must have—</p> <p>(i) an FRL of not less than 60/60/60; and</p> <p>(ii) any openings protected internally in accordance with C3.4,</p> <p>for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser.</p> <p>(d) If more than 2 access doorways, not from a sanitary compartment or the like, open to a required fire-isolated exit in the same storey—</p> <p>(i) a smoke lobby in accordance with D2.6 must be provided; or</p> <p>(ii) the exit must be pressurised in accordance with AS/NZS 1668.1.</p> <p>(e) A ramp must be provided at any change in level less than 600 mm in a fire-isolated passageway in a Class 9 building.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D1.8 External Stairways or ramps in lieu of Fire Isolated Stairs			X		Not applicable.
D1.9 Travel by non-fire-isolated stairs				X	<p>(a) A non-fire-isolated stairway or non-fire-isolated ramp 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.</p> <p>(b) In a Class 2, 3 or 4 building, the distance between the doorway of a room or sole occupancy unit and the point of</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>egress to a road or open space by way of a stairway or ramp that is not fire-isolated and is required to serve that room or sole-occupancy unit must not exceed—</p> <p>(i) 30 m in a building of Type C construction; or</p> <p>(ii) 60 m in all other cases.</p> <p>(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 or non-fire-isolated ramp must not exceed 80 m.</p> <p>(d) In a Class 2, 3 or 9a building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than—</p> <p>(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</p> <p>(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.</p> <p>(e) In a Class 5 to 8 or 9b building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than—</p> <p>(i) 20 m from a doorway providing egress to a road or open space or from a fire isolated passageway leading to a road or open space; or</p> <p>(ii) 40 m from one of 2 such doorways or passageways if travel to each of them from the non-fire-isolated stairway or non-fire-isolated ramp is in opposite or approximately opposite directions.</p> <p>(f) In a Class 2 or 3 building, if 2 or more exits are required and are provided by means of internal non-fire-isolated stairways or non-fire-isolated ramps, each exit must—</p> <p>(i) provide separate egress to a road or open space;</p> <p>(ii) and be suitably smoke-separated from each other at the level of discharge.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D1.10 Discharge from Exits				X	<p>(a) 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.</p> <p>(b) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than—</p> <p>(i) the minimum width of the required exit;</p> <p>(ii) or 1 m,</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>whichever is the greater.</p> <p>(c) If an exit discharges to open space that is at a different level than the public road to which it is connected, the path of travel to the road must be by—</p> <p>(i) a ramp or other incline having a gradient not steeper than 1:8 at any part, or not steeper than 1:14 if required by the Deemed-to-Satisfy Provisions of Part D3; or</p> <p>(ii) except if the exit is from a Class 9a building, a stairway complying with the Deemed-to-Satisfy Provisions of the BCA.</p> <p>(d) The discharge point of alternative exits must be located as far apart as practical.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D1.11 Horizontal Exits			X		Not applicable.
D1.12 Non-required stairways, ramps or escalators		X			<p><u>Compliance issue:</u></p> <p>The non-required non-fire-isolated stairways serving the forest rooms on levels 6-8 and 11-13 serve no more than 3 consecutive storeys however, one of those storeys are not situated at a level which there is direct egress to a road or open space.</p> <p>The fire engineer has confirmed this will be addressed by way of a Performance solution at CC stage.</p>  <p><u>Design requirements</u></p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>An escalator, moving walkway or non-required non-fire-isolated stairway or pedestrian ramp—</p> <ul style="list-style-type: none"> (a) must not be used between storeys in— <ul style="list-style-type: none"> (i) a patient care area in a Class 9a health-care building; or (ii) a resident use area in a Class 9c aged care building; and (b) may connect any number of storeys if it is— <ul style="list-style-type: none"> (i) in an open spectator stand or indoor sports stadium; (ii) or in a carpark or an atrium; (iii) or outside a building; or (iv) in a Class 5 or 6 building that is sprinklered throughout, where the escalator, walkway, stairway or ramp complies with Specification D1.12; and (c) except where permitted in (b) must not connect more than— <ul style="list-style-type: none"> (i) 3 storeys if each of those storeys is provided with a sprinkler protection system (other than a FPAA101D system) complying with Specification E1.5 throughout; or (ii) 2 storeys, <p>provided that in each case, those storeys must be consecutive, and one of those storeys is situated at a level at which there is direct egress to a road or open space; and</p> (d) except where permitted in (b) or (c), must not connect, directly or indirectly, more than 2 storeys at any level in a Class 5, 6, 7, 8 or 9 building and those storeys must be consecutive. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
<p>D1.13</p> <p>Number of Persons Accommodated</p> <p>Note NSW Table D1.13</p> <p>Area per person according to use</p>			X		<p>For the purpose of the Deemed-to-Satisfy provisions, the number of persons accommodated in a storey, room or mezzanine must be determined with consideration to the purpose for which it is used and the layout of the floor area by—</p> <ul style="list-style-type: none"> (a) calculating the sum of the numbers obtained by dividing the floor area of each part of the storey by the number of square metres per person listed in Table D1.13 according to the use of that part, excluding spaces set aside for— <ul style="list-style-type: none"> (i) lifts, stairways, ramps and escalators, corridors, hallways, lobbies and the like; and (ii) service ducts and the like, sanitary compartments or other ancillary uses; or (b) reference to the seating capacity in an assembly building or room; or (c) any other suitable means of assessing its capacity. <p><i>Refer NSW Table D1.13 to calculate area per person according to use.</i></p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
D1.14 Measurement of Distances			X		<p>The nearest part of an exit means in the case of—</p> <ul style="list-style-type: none"> (a) a fire-isolated stairway, fire-isolated passageway, or fire-isolated ramp, the nearest part of the doorway providing access to them; and (b) a non-fire-isolated stairway, the nearest part of the nearest riser; and (c) a non-fire-isolated ramp, the nearest part of the junction of the floor of the ramp and the floor of the storey; and (d) a doorway opening to a road or open space, the nearest part of the doorway; and (e) a horizontal exit, the nearest part of the doorway. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D1.15 Method of Measurement			X		<p>The following rules apply:</p> <ul style="list-style-type: none"> (a) In the case of a room that is not a sole occupancy unit in a Class 2 or 3 building or Class 4 part of a building, the distance includes the straight-line measurement from any point of the floor of the room to the nearest part of the doorway leading from it, together with the distance from the part of the doorway to the single required exit or point from which travel in different directions to 2 required exits is available. (b) Subject to (d), the distance from the doorway of a sole occupancy unit in a Class 2 or 3 building is measured in a straight line to the nearest part of the required single exit or point from which travel in different directions to 2 required exits is available. (c) Subject to (d), the distance between exits is measured in a straight line between the nearest parts of those exits. (d) Only the shortest distance is taken along a corridor, hallway, external balcony or other path of travel that curves or changes direction. (e) If more than one corridor, hallway, or other internal path of travel connects required exits, for the purposes of D1.5(c) the measurement is along the path of travel through the point at which travel in different directions to those exits is available, as determined in accordance with D1.4. (f) If a wall (including a demountable internal wall) that does not bound – <ul style="list-style-type: none"> (i) A room; or (ii) A corridor, hallway or the like, causes a change in direction in proceeding to a required exit, the distance is measured along the path of travel past the wall.



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					<ul style="list-style-type: none"> (iii) If permanent fixed seating is provided, the distance is measured along the path of travel between the rows of seats. (iv) In the case of a non-fire isolated stairway or non-fire isolated ramp, the distance is measured along a line connecting the nosings of the treads, along the slope of the ramp, together with the distance connecting those lines across any intermediate landing.
D1.16 Plant Rooms and lift Motor Rooms: Concession				X	<ul style="list-style-type: none"> (a) A ladder may be used in lieu of a stairway to provide egress from— <ul style="list-style-type: none"> (i) a plant room with a floor area of not more than 100 m²; or (ii) all but one point of egress from a plant room, a lift machine room or a Class 8 electricity network substation with a floor area of not more than 200 m². (b) A ladder permitted under (a)— <ul style="list-style-type: none"> (i) may form part of an exit provided that in the case of a fire-isolated stairway it is contained within the shaft; or (ii) may discharge within a storey in which case it must be considered as forming part of the path of travel; and (iii) for a plant room or a Class 8 electricity network substation, must comply with AS 1657; and (iv) for a lift machine room, where access is provided from within a machine room to a secondary floor, a fixed rung type ladder complying with AS 1657 may be used, provided that— <ul style="list-style-type: none"> (A) the height between the floors is not more than 2800 mm; and (B) the ladder is inclined at an angle to the horizontal not less than 65 degrees nor more than 75 degrees; and (C) the distance between the front face of the ladder and any adjacent obstruction is not less than— <ul style="list-style-type: none"> (aa) 960 mm, where the ladder is inclined 65 degrees to the horizontal; or (bb) 760 mm, where the ladder is inclined 75 degrees to the horizontal; or (cc) a distance that is determined by interpolating the values in (aa) and (bb), where the ladder is inclined at any angle between 65 degrees and 75 degrees to the horizontal; and (D) a clear space not less than 600 mm exists between the foot of the ladder and any equipment. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
D1.17 Access to lift pits			X		<p>Access to lift pits must—</p> <ul style="list-style-type: none"> (a) where the pit depth is not more than 3 m, be through the lowest landing doors; or (b) where the pit depth is more than 3 m, be provided through an access doorway complying with the following: <ul style="list-style-type: none"> (i) In lieu of D1.6, the doorway must be level with the pit floor and not be less than 600 mm wide by 1980 mm high clear opening, which may be reduced to 1500 mm where it is necessary to comply with (ii). (ii) No part of the lift car or platform must encroach on the pit doorway entrance when the car is on a fully compressed buffer. (iii) Access to the doorway must be by a stairway complying with AS 1657. (iv) In lieu of D2.21, doors fitted to the doorway must be— <ul style="list-style-type: none"> (A) of the horizontal sliding or outwards opening hinged type; and (B) self-closing and self-locking from the outside; and (C) marked on the landing side with the letters not less than 35 mm high: <p>“DANGER LIFTWELL – ENTRY OF UNAUTHORIZED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES”</p>
Part D2 - Construction of Exits					
D2.1 Application of Part			X		<p>Except for D2.13, D2.14 (a), D2.16, D2.17(d), D2.17(e) and D2.18, the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of the Class 2 sole-occupancy units.</p> <p>Note NSW D2.1 (entertainment venues)</p>
D2.2 Fire-Isolated stairways and ramps				X	<p>A stairway or ramp (including any landings) that is required to be in a fire resisting shaft must be constructed –</p> <ul style="list-style-type: none"> (a) Of non-combustible materials; and (b) So that if there is local failure it will not cause structural damage to or impair the fire resistance of the shaft. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)</i></p>
D2.3 Non-fire Isolated stairways and ramps			X		<p>In a building having a rise in storeys of more than 2, required stairs and ramps (including any landings and any supporting building elements) which are not required to be within a fire resisting shaft, must be constructed according to D2.2, or only of -</p> <ul style="list-style-type: none"> (a) reinforced or prestressed concrete; or (b) steel in no part less than 6 mm thick; or (c) timber that— <ul style="list-style-type: none"> (i) has a finished thickness of not less than 44 mm; and

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					<p>(ii) has an average density of not less than 800 kg/m³ at a moisture content of 12%; and</p> <p>(iii) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue".</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2.4 Separation of Rising and Descending Stairs	X				<p>Complies.</p> <p><u>Design requirements</u></p> <p>If a stairway serving as a required exit is required to be fire isolated –</p> <p>(a) There must be no direct connection between –</p> <p>(i) A flight rising from a storey below the lowest level of access to a road or open space; and</p> <p>(ii) A flight descending from a storey above that level ; and</p> <p>(b) Any construction that separates or is common to the rising and descending flights must be-</p> <p>(i) Non-combustible; and</p> <p>(ii) Smoke proof in accordance with Clause 2 of Specification C2.5.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2.5 Open Access ramps and balconies			X		<p>Open access ramps or balconies provided to meet the smoke hazard management requirements of Table E2.2a must have ventilation openings that satisfy the requirements of this clause.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2.6 Smoke Lobbies			X		<p>Smoke lobbies required by D1.7 must be sized and smoke separated from the occupied areas in the storey in accordance with the requirements of this clause.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2.7 Installations in Exits and Paths of Travel				X	<p>(a) Access to service shafts and services other than to fire-fighting or detection equipment as permitted in the Deemed-to-Satisfy Provisions of Section E, must not be provided from a fire-isolated stairway.</p> <p>(b) An opening to any chute or duct intended to convey hot products of combustion from a boiler, incinerator, fireplace or the like must not be located in any part of a required exit or any corridor, hallway, lobby or the like leading to a required exit.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(c) Gas or other fuel services must not be installed in a required exit</p> <p>(d) Services or equipment comprising –</p> <ul style="list-style-type: none"> (i) Electricity meters, distribution boards or cuts; or (ii) Central telecommunications distribution boards or equipment; or (iii) Electrical motors or other motors service equipment in the building, <p>May be installed in –</p> <ul style="list-style-type: none"> (i) A required exit, except for fire-isolated exits specified in (a); or (ii) In any corridor, hallway, lobby or the like leading to a required exit, <p>If the services or equipment are enclosed by non-combustible construction or a fire-protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure</p> <p>(e) Electrical wiring may be installed in a fire-isolated exit if the wiring is associated with;</p> <ul style="list-style-type: none"> (i) A lighting, detection, or pressurization system serving the exit; or (ii) A security, surveillance or management system serving the exit; or (iii) An intercommunication system or an audible or visual alarm system in accordance with D2.22; or (iv) The monitoring of hydrant or sprinkler isolating valves. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2.8 Enclosure of Space Under Stairs and ramps				X	<p>(a) Fire-isolated stairways and ramps — If the space below a required fire-isolated stairway or fire-isolated ramp is within the fire-isolated shaft, it must not be enclosed to form a cupboard or similar enclosed space.</p> <p>(b) Non fire-isolated stairways 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</p> <p>unless—</p> <ul style="list-style-type: none"> (i) the enclosing walls and ceilings have an FRL of not less than 60/60/60; and (ii) any access doorway to the enclosed space is fitted with a self-closing –/60/30 fire door. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2.9 Width of Stairs			X		<p>A required stairway or ramp that exceeds 2 m in width is counted as having a width of only 2 m unless it is divided by a handrail,</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>balustrade or other barrier continuous between landings and each division has a width of not more than 2 m.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2.10 Pedestrian Ramps				X	<p>(a) A fire isolated ramp may be substituted for a fire isolated stairway if the construction enclosing the ramp and the width and ceiling height comply with the requirements for a fire isolated stairway.</p> <p>(b) A ramp serving as a required exit must –</p> <p>(i) Where the ramp is also serving as an accessible ramp under Part D3, be in accordance with AS1428.1; or</p> <p>(ii) In any other case, have a gradient not steeper than 1:8.</p> <p>(c) The floor surface of a ramp must have a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS4586.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2.11 Fire-Isolated Passageways			X		<p>(a) The enclosing construction of a fire isolated passageway must have an FRL when tested for a fire outside the passageway in another part of the building of –</p> <p>(i) If the passageway discharges from a fire isolated stairway or ramp – not less than that required for the stairway or ramp shaft; or</p> <p>In any other case – not less than 60/60/60.</p> <p>(b) Notwithstanding (a)(ii), the top of construction of a fire isolated passageway need not have an FRL if the walls of the fire rated passageway extend to the underside of –</p> <p>(i) A non-combustible roof covering; or</p> <p>(ii) A ceiling having a resistance to the incipient spread of fire of not less than 60 minutes separating the roof space or ceiling space in all areas surrounding the passageway within the fire compartment.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2.12 Roof as Open Space				X	<p>Compliance issue:</p> <p>The fire engineer has confirmed the drainage openings within 3m of the path of travel to the fire stairs on the podium roof will be addressed by way of a Performance Solution at CC stage.</p> <p><u>Design requirements</u></p> <p>If an exit discharges to the roof of a building the roof must –</p> <p>(a) Have an FRL not less than 120/120/120; and</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(b) Not have any roof lights or other openings with 3m of the path of travel of persons using the exit to reach a road of open space.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.13 Goings & Risers				X	<p>(a) A stairway must have—</p> <ul style="list-style-type: none"> (i) not more than 18 and not less than 2 risers in each flight; and (ii) going (G), riser (R) and quantity (2R + G) in accordance with Table D2.13, except as permitted by (b) and (c); and (iii) constant goings and risers throughout each flight, except as permitted by (b) and (c), and the dimensions of goings (G) and risers (R) in accordance with (a)(ii) are considered constant if the variation between— <ul style="list-style-type: none"> (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; and (iv) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and (v) treads which have— <ul style="list-style-type: none"> (A) a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or (B) a nosing strip with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; and (vi) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 storeys; and (vii) in a Class 9b building, not more than 36 risers in consecutive flights without a change in direction of at least 30°; and (viii) in the case of a required stairway, no winders in lieu of a landing. (ix) conspicuous edges to the treads of steps in a Class 9b building used as an entertainment venue; and (x) in a Class 9b building used as an entertainment venue, not more than one helical stairway serving as a required exit and that stairway must— <ul style="list-style-type: none"> (A) have a width of not less than 1500 mm; and (B) be of constant radius; and

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					<p>(C) be constructed so that each tread, when measured 500 mm in from its narrow end, has a width of at least 280 mm; and</p> <p>(xi) in a Class 9b building used as an entertainment venue, in a curved stairway serving as a required exit— an internal radius of not less than twice the width of the stair.</p> <p>(b) In the case of a non-required stairway—</p> <p>(i) the stairway must have—</p> <p>(A) not more than 3 winders in lieu of a quarter landing; and</p> <p>(B) not more than 6 winders in lieu of a half landing; and</p> <p>(ii) the going of all straight treads must be constant throughout the same flight and the dimensions of goings (G) is considered constant if the variation between—</p> <p>(A) adjacent goings, is no greater than 5 mm; and</p> <p>(B) the largest and smallest going within a flight, does not exceed 10 mm; and</p> <p>(iii) the going of all winders in lieu of a quarter or half landing may vary from the going of the straight treads within the same flight provided that the going of all such winders is constant.</p> <p>(c) Where a stairway discharges to a sloping public walkway or public road—</p> <p>(i) the riser (R) may be reduced to account for the slope of the walkway or road; and</p> <p>(ii) the quantity (2R+G) may vary at that location.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.14 Landings				X	<p>In a stairway</p> <p>(a) Landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing must –</p> <p>(i) Be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing; and</p> <p>(ii) Have –</p> <p>(A) A surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS4586; or</p> <p>(B) A strip at the edge of the landing with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS4586, where the edge leads to a flight below; and</p> <p>(b) In a Class 9a building –</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none"> (i) The area of any landing must be sufficient to move a stretcher, 2m long and 600 mm wide, at a gradient not more than the gradient of the stairs, with at least one end of the stretcher on the landing while changing direction between flights; or (ii) The stair must have a change of direction of 180°, and the landing a clear width of not less than 1.6m and a clear length of not less than 2.7m. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2.15 Thresholds				X	<p>The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless—</p> <ul style="list-style-type: none"> (c) in a building required to be accessible by Part D3, the doorway— <ul style="list-style-type: none"> (i) opens to a road or open space; and (ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or (e) in other cases— <ul style="list-style-type: none"> (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. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2.16 Balustrades and other Barriers Note NSW D2.16				X	<ul style="list-style-type: none"> (a) A continuous barrier must be provided along the side of— <ul style="list-style-type: none"> (i) a roof to which general access is provided; and (ii) a stairway or ramp; and (iii) a floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and (iv) any delineated path of access to a building, if the trafficable surface is 1 m or more above the surface beneath. (b) The requirements of (a) do not apply to— <ul style="list-style-type: none"> (i) the perimeter of a stage, rigging loft, loading dock or the like; or (ii) areas referred to in D2.18; or (iii) a retaining wall unless the retaining wall forms part of, or is directly associated with a delineated path of access to a building from the road, or a delineated path of access between buildings; or

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					<p>(iv) a barrier provided to an openable window covered by D2.24.</p> <p>(c) A barrier required by (a) must be constructed in accordance with NSW Table D2.16a 1.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.17 Handrails				X	<p><u>Design requirements</u></p> <p>(a) Except for handrails referred to in D2.18, handrails must be—</p> <p>(i) located along at least one side of the ramp or flight; and</p> <p>(iii) located along each side if the total width of the stairway or ramp is 2 m or more; and</p> <p>(iii) in a Class 9b building used as a primary school—</p> <p>(A) have one handrail fixed at a height of not less than 865 mm; and</p> <p>(B) have a second handrail fixed at a height between 665 mm and 750 mm, measured above the nosings of stair treads and the floor surface of the ramp, landing or the like; and</p> <p>(iv) in any other case, fixed at a height of not less than 865 mm measured above the nosings of stair treads and the floor surface of the ramp, landing, or the like; and</p> <p>(v) continuous between stair flight landings and have no obstruction on or above them that will tend to break a hand-hold; and</p> <p>(vi) in a required exit serving an area required to be accessible, designed and constructed to comply with clause 12 of AS 1428.1, except that clause 12(d) does not apply to a handrail required by (a)(iii)(B).</p> <p>(b) Handrails—</p> <p>(i) in a Class 9a health-care building must be provided along at least one side of every passageway or corridor used by patients, and must be—</p> <p>(A) fixed not less than 50 mm clear of the wall; and</p> <p>(B) where practicable, continuous for their full length.</p> <p>(ii) in a Class 9c aged care building must be provided along both sides of every passageway or corridor used by residents, and must be—</p> <p>(A) fixed not less than 50 mm clear of the wall; and</p> <p>(B) where practicable, continuous for their full length.</p> <p>(c) Handrails required to assist people with a disability must be provided in accordance with D3.3.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(d) Handrails to a stairway or ramp within a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building must—</p> <ul style="list-style-type: none"> (i) be located along at least one side of the flight or ramp; and (ii) be located along the full length of the flight or ramp, except in the case where a handrail is associated with a barrier, the handrail may terminate where the barrier terminates; and (iii) have the top surface of the handrail not less than 865 mm vertically above the nosings of the stair treads or the floor surface of the ramp; and (iv) have no obstruction on or above them that will tend to break a handhold, except for newel posts, ball type stanchions, or the like. <p>(e) The requirements of (d) do not apply to—</p> <ul style="list-style-type: none"> (i) handrails referred to in D2.18; or (ii) a stairway or ramp providing a change in elevation of less than 1 m; or (iii) a landing; or (iv) a winder where a newel post is installed to provide a handhold. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
D2.18 Fixed Platforms, walkways and ladders				X	<p>A fixed platform, walkway, stairway, ladder and any going and riser, landing, handrail or barrier attached thereto may comply with AS1657 in lieu of D2.13, D2.14 D2.16 and D2.17 if it only serves:</p> <ul style="list-style-type: none"> (a) Machinery rooms, boiler houses, lift machine rooms, plant-rooms and the like; or (b) Non-habitable rooms, such as attics, storerooms and the like that are not used on a frequent or daily basis in the internal parts of a sole occupancy unit in a Class 2 building or Class 4 part of the building. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
D2.19 Doorways & Doors	X				<p><u>Design requirements</u></p> <p>(a) A doorway in a resident use area of a Class 9c building must not be fitted with –</p> <ul style="list-style-type: none"> (i) A sliding fire door; or (ii) A sliding smoke door; or (iii) A revolving door; or (iv) A roller shutter door; or (v) A tilt-up door.



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(b) A doorway serving as a required exit or forming part of a required exit, or a doorway in a patient care area of a Class 9a health-care building –</p> <p>(i) Must not be fitted with a revolving door; and</p> <p>(ii) Must not be fitted with a roller shutter or tilt-up door unless –</p> <p>(A) It serves a Class 6, 7 or 8 building or part with a floor area not more than 200m²; and</p> <p>(B) The doorway is the only required exit from the building or part; and</p> <p>(C) It is held in the open position while the building or part is lawfully occupied; and</p> <p>(iii) Must not be fitted with a sliding door unless –</p> <p>(A) It leads directly to a road or open space; and</p> <p>(B) The door is able to be opened manually under a force of not more than 110 N; and</p> <p>(iv) If fitted with a door which is power-operated –</p> <p>(A) It must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and</p> <p>(B) If it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.</p> <p>(v) In a Class 9b building used as an entertainment venue –</p> <p>(A) Must not be fitted with a collapsible gate, accordion door, turnstile or rigid barrier; and</p> <p>(B) If fitted with a door, must be –</p> <p>(aa) A swing door which opens in the direction of egress; and</p> <p>(bb) Doors hung in two folds where the unobstructed width of the doorway is more than 1m; and</p> <p>(C) A doorway or opening within sight of the audience but not intended for egress must have a notice displayed clearly indicating its purpose and such a notice must not be internally illuminated; and</p> <p>(D) Notwithstanding (b)(iii), a sliding door may be fitted where –</p> <p>(aa) It leads directly to a road or open space and forms a main entrance; and</p> <p>(bb) It is capable of swinging in the direction of egress when pressure is applied to the inside face of the door; and</p>



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					<p>(cc) The door is provided with signage that clearly indicates to persons seeking egress, the potential for swinging the door open in an emergency.</p> <p>(c) A power-operated door in a path of travel to a required exit, except for a door in a patient care area of a Class 9a health-care building as provided in (b), must be able to open manually under a force of not more than 110 N if there is a malfunction or failure of the power source.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
D2.20 Swinging Doors				X	<p><u>Design requirements</u></p> <p>A swinging door in a required exit or forming part of a required exit –</p> <p>(a) Must not encroach –</p> <p>(i) At any part of its swing by more than 500mm of the require width (including any landings) of a required –</p> <p>(A) Stairway; or</p> <p>(B) Ramp; or</p> <p>(C) Passageway,</p> <p>If it is likely to impede the path of travel of the people already using the exit; and</p> <p>(ii) When fully open, by more than 100 mm on the required width of the required exit, and</p> <p>The measurement of encroachment in each case is to include door handles or other furniture or attachments to the door; and</p> <p>(b) Must swing in the direction of egress unless</p> <p>(i) It serves a building part with a floor area not more than 200m², it is the only required exit from the building part and it is fitted with a device for holding it in the open position; or</p> <p>(ii) It serves a sanitary compartment or airlock (in which case it may swing in either direction; and</p> <p>(c) Must not otherwise impede the path or direction of egress.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
D2.21 Operation of Latch				X	<p>(a) A door in a required exit, forming part of a required exit or in the path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress by –</p> <p>(i) A single hand downward action or pushing action on a single device which is located between 900mm and 1.1</p>



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					<p>m from the floor and if serving an area required to be accessible by Part D3 –</p> <p>(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</p> <p>(B) have a clearance between the handle and the back plate or door face at the center grip section of the handle of not less than 35mm and not more than 45mm; or</p> <p>(ii) a single hand pushing action on a single device which is located between 900mm and 1.2m from the door; and</p> <p>(iii) where the latch operation device referred to in (ii) is not located on the door leaf itself –</p> <p>(A) manual controls to power operated doors must be at least 25mm wide, proud of the surrounding surface and located –</p> <p>(aa) not less than 500mm from an internal corner; and</p> <p>(bb) for a hinged door, between 1m and 2m from the door leaf in any position; and</p> <p>(cc) for a sliding door, within 2m of the doorway and clear of a surface mounted door in the open position.</p> <p>(B) Braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device.</p> <p>(b) The requirements of (a) do not apply to a door that –</p> <p>(i) Serves a vault, strong-room, sanitary compartment, or the like; or</p> <p>(ii) Serves only, or is within –</p> <p>(A) A sole occupancy unit in a Class 2 or 4 building or part; or</p> <p>(B) A sole occupancy unit in a Class 3 building (other than the entry door to a sole occupancy unit of a boarding house, guest house, hostel, lodging house or backpacker accommodation); or</p> <p>(C) A sole occupancy unit with a floor area not more than 200m² in a Class 5, 6, 7 or 8 building; or</p> <p>(D) A space which is otherwise inaccessible to persons at all times when the door is locked; or</p> <p>(iii) Serves –</p> <p>(A) Australian Government Security Zones 4 or 5; or</p> <p>(B) The secure parts of banks, detention centre, mental health facility, early childhood centre or the like; and it can be immediately unlocked –</p>





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					<p>(C) By operating a fail-safe control switch, not contained within the protective enclosure, to actuate a device to unlock the door; or</p> <p>(D) By hand by a person or persons, specifically nominated by the owner, properly instructed as to the duties and responsibilities involved and available at all times when the building is lawfully occupied so that persons in the building or part may immediately escape if there is a fire; or</p> <p>(iv) Is fitted with a fail-safe device which automatically unlocks the door upon the activation of any sprinkler system (other than a FPAA101D system) complying with Specification E1.5, or smoke , or any other detector system deemed suitable in accordance with AS1670.1 installed throughout the building, and is readily operable when unlocked; or</p> <p>(v) is in a Class 9a or 9c building and—</p> <p>(A) is one leaf of a two-leaf door complying with D1.6(f)(i) or D1.6(f)(iv) provided that it is not held closed by a locking mechanism and is readily openable; and</p> <p>(B) the door is not required to be a fire door or smoke door.</p> <p>(c) The requirements of (a) do not apply in a Class 9b building (other than a school, an early childhood centre or a building used for religious purposes) to a door in a required exit, forming part of a required exit or in the path of travel to a required exit serving a storey or room accommodating more than 100 persons, determined in accordance with D1.13, in which case it must be readily openable—</p> <p>(i) without a key from the side that faces a person seeking egress; and</p> <p>(ii) by a single hand pushing action on a single device such as a panic bar located between 900 mm and 1.2 m from the floor; and</p> <p>(iii) where a two-leaf door is fitted, the provisions of (i) and (ii) need only apply to one door leaf if the appropriate requirements of D1.6 are satisfied by the opening of that one leaf; and</p> <p>(iv) where the door is a door in a path of travel providing re-entry to the building from a balcony, terrace or the like, it may be fitted with key-operated fastenings only, the tongues of which must be locked in the retracted position whenever the building is occupied by the public, so the door can yield to pressure.</p> <p>(d) The requirements of (a) and (c) do not apply to a door serving a Class 9b building used as an entertainment venue where the following provisions apply to a door or gate used by the public—</p>



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					<ul style="list-style-type: none"> (i) on a door, the single device operating the latch or bolts must be a panic bar if those doors are to be secured; or (ii) an exit door or gate used by the public as the main entrance may be fitted with key-operated fastenings only, the tongues of which must be locked in the retracted position whenever the building is occupied by the public so the door or gate can yield to pressure from within; or (iii) a door from a balcony, terrace or the like, being a door in a path of travel providing re-entry to the building, may comply with the locking provision of (ii) above. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2.22 Re-entry from Fire isolated exits				X	<ul style="list-style-type: none"> (a) Doors of a fire isolated exit must not be locked from the inside as follows: <ul style="list-style-type: none"> (i) In a Class 9a health care building. (ii) In a Class 9c building. (iii) In a fire-isolated exit serving any storey above an effective height of 25m, throughout the exit. (b) The requirements of (a) do not apply to a door fitted with a fail-safe device that automatically unlocks the door upon activation of a fire alarm and – <ul style="list-style-type: none"> (i) On at least every fourth storey, the doors are not able to be locked and a sign is fixed on such doors stating that reentry is available; or (ii) An intercommunication system, or an audible or visual alarm system, operated from the enclosure is provided near the doors and a sign is fixed adjacent to such doors explaining its purpose and method of operation. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
D2.23 Signs on Doors				X	<ul style="list-style-type: none"> (a) A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to— <ul style="list-style-type: none"> (i) a required— <ul style="list-style-type: none"> (A) fire door providing direct access to a fire-isolated exit, except a door providing direct egress from a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building; and (B) smoke door, <p>on the side of the door that faces a person seeking egress and, if the door is fitted with a device for holding it in the open position, on either the wall adjacent to the doorway or both sides of the door; and</p> (ii) a—



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<ul style="list-style-type: none">(A) fire door forming part of a horizontal exit; and(B) smoke door that swings in both directions; and(C) door leading from a fire isolated exit to a road or open space, on each side of the door. <p>(b) A sign referred to in (a) must be in capital letters not less than 20 mm high in a colour contrasting with the background and state—</p> <ul style="list-style-type: none">(i) for an automatic door held open by an automatic hold-open device— “FIRE SAFETY DOOR—DO NOT OBSTRUCT”; or(ii) for a self-closing door— “FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN”; or(iii) for a door discharging from a fire-isolated exit— “FIRE SAFETY DOOR—DO NOT OBSTRUCT”. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.24 Protection of openable windows				X	<ul style="list-style-type: none">(a) A window opening must be provided with protection, if the floor below the window is 2 m or more above the surface beneath in—<ul style="list-style-type: none">(i) a bedroom in a Class 2 or 3 building or Class 4 part of a building; or(ii) a Class 9b early childhood centre.(b) Where the lowest level of the window opening is less than 1.7 m above the floor, a window opening covered by (a) must comply with the following:<ul style="list-style-type: none">(i) The openable portion of the window must be protected with—<ul style="list-style-type: none">(A) a device capable of restricting the window opening; or(B) a screen with secure fittings.(ii) A device or screen required by (i) must—<ul style="list-style-type: none">(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—<ul style="list-style-type: none">(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.



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					<p>(c) A barrier with a height not less than 865 mm above the floor is required to an openable window—</p> <p>(i) in addition to window protection, when a child resistant release mechanism is required by (b)(ii)(C); and</p> <p>(ii) where the floor below the window is 4 m or more above the surface beneath if the window is not covered by (a).</p> <p>(d) A barrier covered by (c) except for (e) must not—</p> <p>(i) permit a 125 mm sphere to pass through it; and</p> <p>(ii) have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing.</p> <p>(e) A barrier required by (c) to an openable window in—</p> <p>(i) fire-isolated stairways, fire-isolated ramps and other areas used primarily for emergency purposes, excluding external stairways and external ramps; and</p> <p>(ii) Class 7 (other than car parks) and Class 8 buildings and parts of buildings containing those classes,</p> <p>must not permit a 300 mm sphere to pass through it.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
D2.25 Timber stairways concession			X		Not applicable.
Part D3 - Access for People with Disabilities – Excluded from this report.					
SECTION SERVICES & EQUIPMENT					E
Part E1 - Fire Fighting Equipment					
E1.3 Fire Hydrants		X			<p>Compliance issue:</p> <ul style="list-style-type: none"> An FPAS accredited hydrant designer is to design the fire hydrant system and certify the hydrant system complies with AS 2419.1-2005 – including coverage, pressure and flow. The building is required to be protected throughout by a sprinkler system complying with Specification E1.5 of the BCA and therefore fire hydrant booster protection in accordance with Clause 7.3 (c)(ii) and 7.3(d)(iii) does not apply. As there are multiple entrances to the building, a performance solution is required for the location of the hydrant booster assembly identifying the main entrance with the purpose of fire-fighting operations. The fire engineer has confirmed this will be addressed by way of a Performance Solution at CC stage. Where any external hydrants are located within 10m of the building, the hydrants are to be protected in



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					<p>accordance with AS 2419-2005 or addressed by way of a Performance Solution at CC stage.</p> <ul style="list-style-type: none">▪ A fire brigade relay pump in accordance with AS 2419 to enable relay boosting of each 50m pressure stage.▪ Fire hydrants to be connected to a ring main as the building has an effective height in excess of 25m. <p><u>Design requirements</u></p> <p>(a) A hydrant system must be provided to serve a building –</p> <ul style="list-style-type: none">(i) Having a total floor area greater than 500m²; and(ii) Where a fire brigade station is –<ul style="list-style-type: none">(A) No more than 50 km from the building as measured along roads; and(B) Equipped with equipment capable of utilising a fire hydrant. <p>(b) The fire hydrant system-</p> <ul style="list-style-type: none">(i) Must be installed in accordance with AS2419.1, except –<ul style="list-style-type: none">(A) A Class 8 electricity network station need not comply with clause 4.2 of AS 2419.1 if –<ul style="list-style-type: none">(aa) it cannot be connected to town main supply; and(bb) one-hour water storage is provided for fire-fighting; and(B) Where a sprinkler system is installed throughout a building in accordance with AS 2118.1, AS 2118.4, AS 2118.6, FPAA101H or FPAA101D the fire hydrant booster protection requirements of Clause 7.3(c)(ii) and 7.3(d)(iii) of AS 2419.1 do not apply, and(C) A fire hydrant booster assembly may be located between 3.5m and 10m of the building, and need not comply with Clause 7.3(d)(iii) of AS 2419.1 where the assembly is protected by an adjacent fire rated freestanding wall that –<ul style="list-style-type: none">(aa) achieves an FRL of not less than 90/90/90; and(bb) extends not less than 1m each side of the outermost fire hydrant booster risers within the assembly and is not less than 3m wide; and(cc) extends to a height of not less than 2m above finished ground level; and(ii) Where internal fire hydrants are provided, they must serve only the storey on which they are located except that a sole occupancy unit –<ul style="list-style-type: none">(A) In a Class 2 or 3 building or Class 4 part may be served by a single fire hydrant located at the level of egress from the sole occupancy unit; or



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					<p>(B) Of not more than 2 storeys in a Class 5, 6, 7, 8 or 9 building may be served by a single fire hydrant located at the level of egress from that sole occupancy unit provided the fire hydrant can provide coverage to the whole of the sole occupancy unit.</p> <p><i>Hydraulic Services Design Certification and associated plans must be incorporated into the construction certificate specification</i></p>
E1.4 Fire Hose Reels		X			<p><u>Compliance issues:</u></p> <p>Fire hose reels have not been detailed within the residential waste rooms on basement level 1.</p> <p><u>Design requirements</u></p> <p>(a) E1.4 does not apply to –</p> <ul style="list-style-type: none"> (i) A Class 2, 3 or 5 building or Class 4 part of a building; or (ii) A Class 8 electricity network substation; or (iii) A Class 9c building; or (iv) Classrooms and associated corridors in a primary or a secondary school. <p>(b) A fire hose reel system must be provided –</p> <ul style="list-style-type: none"> (i) to serve the whole building where one or more internal fire hydrants area installed; or (ii) where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500m². <p>(c) The fire hose reel system must –</p> <ul style="list-style-type: none"> (i) Have hose reels installed in accordance with AS 2441; and (ii) Provide hose reels to serve only the storey in which they are located except a sole occupancy unit of not more than 2 storeys in a Class 6, 7, 8 and 9 building may be served by a single fire hose reel located at the level of egress from that sole occupancy unit provided the fire hose reel can provide coverage to the whole of the sole occupancy unit. <p>(d) Fire hose reels must be located internally, externally or in combination, to achieve the system coverage as specified in AS2441.</p> <p>(e) In achieving system coverage, one or a combination of the following criteria for individual internally located fire hose reels must be met in determining the layout of any fire hose reel system:</p> <ul style="list-style-type: none"> (i) Fire hose reels must be located adjacent to an internal hydrant (other than one in a fire isolated exit). Except that

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					<p>a fire hose reel need not be located adjacent to every fire hydrant, provided system coverage can be achieved.</p> <p>(ii) Fire hose reels must be located within 4m of an exit, except that a fire hose reel need not be located adjacent to every exit, provided system coverage can be achieved.</p> <p>(iii) Where system coverage is not achieved by compliance with (i) and (ii), additional fire hose reels may be located in paths of travel to an exit to achieve the required coverage.</p> <p>(f) Fire hose reels must be located so that the fire hose will not pass through doorways fitted with fire or smoke doors, except</p> <p>(i) Doorways in walls referred to in C2.5(a)(v) in a Class 9a building and C2.5(b)(iv) in a Class 9c building, separating ancillary use areas of high potential fire hazard; and</p> <p>(ii) Doorways in walls referred to in C2.12 or C2.13 separating equipment or electrical supply systems; and</p> <p>(iii) Doorways opening into shafts referred to in C3.13.</p> <p>(g) Where the normal water supply cannot achieve the flow and pressures required by AS 2441, or is unreliable –</p> <p>(i) A pump; or</p> <p>(ii) Water storage facility; or</p> <p>(iii) Both a pump and water storage facility,</p> <p>Must be installed to provide the minimum flow and pressures required by clause 6.1 of AS 2441.</p> <p><i>Hydraulic Services Design Certification and associated plans must be incorporated into the construction certificate specification</i></p>
E1.5 Sprinklers		X			<p><u>Compliance issue:</u></p> <ul style="list-style-type: none"> The sprinkler valve is located in a secure room which does not have direct egress to a road or open space due to egress via 2 flights of stairs in lieu of a single flight described under the BCA Guide. The fire engineer has confirmed this will be addressed by way of a Performance Solution at CC stage. Covered balconies that exceed 6m² floor area or have a depth in excess of 2m measured perpendicularly from the external wall shall be sprinkler protected as per Clause 5.9.10 of AS 2118.1-2017. Sprinkler coverage is required to be provided to all cupboards and rooms. The sprinkler system is to be designed by an FPA accredited sprinkler designer to comply with E1.5, Specification E1.5 and AS 2118.1-2017. <p><u>Design requirements</u></p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>A sprinkler system must -</p> <ul style="list-style-type: none"> (a) Be installed in a building or part of a building when required by Table E1.5; and (b) Comply with Specification E1.5 and Specification E1.5a as applicable as summarised below – <p><i>Hydraulic Services Design Certification must be incorporated into the construction certificate specification</i></p>
<p>E1.6</p> <p>Portable Extinguishers</p> <p>Fire</p>				X	<ul style="list-style-type: none"> (a) Portable fire extinguishers must be – <ul style="list-style-type: none"> (i) Provided as listed in Table E1.6; (ii) For a Class 2, 3, or 5 building or Class 4 part of a building, provided – <ul style="list-style-type: none"> (A) To serve the whole Class 2, 3, or 5 building or Class 4 part of a building where one or more internal fire hydrants are installed; or (B) Where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500m², and for the purpose of this clause, a sole occupancy unit in a Class 2 or 3 building or Class 4 part of a building is considered to be a fire compartment; and (iii) Subject (b), selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444. (b) Portable fire extinguishers provided in a Class 2 or 3 building or Class 4 part of a building must be – <ul style="list-style-type: none"> (i) An ABE type fire extinguisher; and (ii) A minimum size of 2.5kg; and (iii) Distributed outside a sole occupancy unit – <ul style="list-style-type: none"> (A) To serve only the storey on 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 10m. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
<p>E1.8</p> <p>Fire Control Centre</p>		X			<p>The fire control room is to be accessible via two paths of travel, one from the front entrance and the other direct from a public place of fire-isolated exit and the doorway have an FRL no less than -/120/30. The fire control room is to have an area no less than 10m². The fire control room on the ground floor is provided with a single exit in lieu of 2 exits.</p> <p>The fire control room is to be ventilation by way of natural ventilation from a window or doorway in an external wall from open space or a pressurisation system installed in accordance with AS 1668.1.</p>

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					<p>The FIP is to be located in an area where its floor does not involve changes in level in aggregate greater than 300mm.</p> <p><u>Design requirements</u></p> <p>A Fire Control Centre facility complying with Specification E1.8 must be provided for:</p> <ul style="list-style-type: none"> (a) A building with an effective height of more than 25m; and (b) A Class 6, 7, 8 or 9 building with a total floor area of more than 18,000m². <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
E1.9 Fire Precautions during construction				X	<p>In a building under construction –</p> <ul style="list-style-type: none"> (a) not less than one portable fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required / temporary exit; and (b) After the building has reach an effective height of 12m – <ul style="list-style-type: none"> (i) the required fire hydrants and fire hose reels must be operational on all floor / roof covered storeys, except for the 2 uppermost storeys; and (ii) Any required booster connections must be installed. <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
E1.10 Provision for Special Hazards			X		Not applicable.
Part E2 Smoke Hazard Management					
E2.2 General Requirements (inclusive of Table E2.2a / Table E2.2b & NSW amendments)				X	<p><u>General smoke hazard management requirements</u></p> <ul style="list-style-type: none"> (a) A building must comply with (b), (c), (d) and— <ul style="list-style-type: none"> (i) Table E2.2a as applicable to Class 2 to 9 buildings such that each separate part complies with the relevant provisions for the classification; and (ii) Table E2.2b as applicable to Class 6 and 9b buildings such that each separate part complies with the relevant provisions for the classification. (b) An air-handling system which does not form part of a smoke hazard management system in accordance with Table E2.2a or Table E2.2b and which recycles air from one fire compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must—

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(i) be designed and installed to operate as a smoke control system in accordance with AS 1668.1; or</p> <p>(ii)</p> <p>(A) incorporate smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and</p> <p>(B) be arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with clause 7.5 of AS 1670.1; and</p> <p>for the purposes of this provision, each sole-occupancy unit in a Class 2 or 3 building is treated as a separate fire compartment.</p> <p>(c) Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one fire compartment (other than a carpark ventilation system) and not forming part of a smoke hazard management system must comply with that Section of the Standard.</p> <p>(d) A smoke detection system must be installed in accordance with Clause 6 of Specification E2.2a to operate AS 1668.1 systems that are provided for zone pressurisation and automatic air pressurisation for fire-isolated exits.</p> <p><i>Note: Smoke alarms in sole occupancy units are required to be interconnected.</i></p> <p><u>Fire-isolated exits</u></p> <p>The fire-isolated stairways serving the residential levels are required to be provided with automatic air pressurisation system in accordance with AS 1668.1-2015.</p> <p><u>Class 2 (Residential)</u></p> <p>The class 2 parts must be provided with an automatic smoke detection and alarm system complying with Spec E2.2a.</p> <p>Clause 2 of Specification E2.2a provides options for the installation of an automatic smoke detection and alarm system. The Class 2 parts must be provided with one of the following options:</p> <p>1. A smoke alarm system complying with Clause 3 of Specification E2.2a.</p> <p>A smoke alarm system would need to comply with AS 3786- 2014, be powered from the consumer mains source and where there is more than one alarm installed within the SOU, they must all be interconnected within that SOU.</p> <p>OR</p> <p>2. A smoke detection system (and building occupant warning system) complying with Clause 4 of Specification E2.2a.</p> <p>A smoke detection system throughout the building must be installed to AS 1670.1-2015 and be connected to activate a building occupant</p>

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					<p>warning system as per clause 6 of Spec E2.2a noting that BOWS is also required throughout the carpark areas.</p> <p>OR</p> <p>3. a combination of a smoke alarm system complying with Clause 3 within sole-occupancy units and a smoke detection system (and building occupant warning system) complying with Clause 4 in areas not within the sole-occupancy units.</p> <p><u>Class 7a carpark</u></p> <p>The Class 7a carpark must be provided with a mechanical ventilation system in accordance with AS 1668.2-2012 and must comply with Clause 5.5 of AS/NZS 1668.1-2015 and fans with metal blades suitable for operation at normal temperature may be used; and the electrical power and control cabling need not be fire rated.</p> <p><u>Class 5, 6 and 7b</u></p> <p>The fire engineer has confirmed zone smoke control will be omitted by way of a Performance Solution at CC stage.</p> <p>The class 5, 6 and 7b portions are to be provided with sprinkler coverage.</p> <p><u>Auto-shutdown – class 9b (communal/ conference room)</u></p> <p>The class 9b communal/ conference room must be provided with auto-shutdown of the air-handling system as per BCA specification E2.2a and E2.2b and AS 1668.1.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
E2.3 Provision for Special Hazards			X		Not applicable.
Part E3 - Lift Installations					
E3.1 Lift installations				X	<p>An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
E3.2 Stretcher Facility in Lifts				X	<p>(a) A stretcher facility in accordance with (b) must be provided—</p> <p>(i) in at least one emergency lift required by E3.4; or</p> <p>(ii) where an emergency lift is not required, if passenger lifts are installed to serve any storey above an effective height of 12 m, in at least one of those lifts to serve each floor served by the lifts.</p> <p>(b) A stretcher facility must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear</p>

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					<p>space not less than 600 mm wide x 2000 mm long x 1400 mm high above the floor level.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
E3.3 Warning Against the use of lifts in Fire				X	<p>A warning sign must—</p> <p>(a) be displayed where it can be readily seen—</p> <p>(i) near every call button for a passenger lift or group of lifts throughout a building; except</p> <p>(ii) a small lift such as a dumb-waiter or the like that is for the transport of goods only; and</p> <p>(b) comply with the details and dimensions of Figure E3.3 and consist of—</p> <p>(i) incised, inlaid or embossed letters on a metal, wood, plastic or similar plate securely and permanently attached to the wall; or</p> <p>(ii) letters incised or inlaid directly into the surface of the material forming the wall.</p> <p>“DO NOT USE LIFTS IF THERE IS A FIRE”</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
E3.4 Emergency Lifts				X	<p>(a) At least one emergency lift complying with (d) must be installed in—</p> <p>(i) a building which has an effective height of more than 25 m; and</p> <p>(b) An emergency lift may be combined with a passenger lift and must serve those storeys served by the passenger lift so that all storeys of the building served by passenger lifts are served by at least one emergency lift.</p> <p>(c) Where two or more passenger lifts are installed and serve the same storeys, excluding a lift that is within an atrium and not contained wholly within a shaft—</p> <p>(i) at least two emergency lifts must be provided to serve those storeys; and</p> <p>(ii) if located within different shafts, at least one emergency lift must be provided in each shaft.</p> <p>(d) An emergency lift must—</p> <p>(i) be contained within a fire-resisting shaft in accordance with C2.10; and</p> <p>(ii) in a Class 9a building serving a patient care area—</p> <p>(A) have minimum dimensions, measured clear of all obstructions, including handrails, etc complying with Table E3.4; and</p>

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					<p>(B) be connected to a standby power supply system where installed; and</p> <p>(iii) if the building has an effective height of more than 75 m, have a rating of at least—</p> <p>(A) 600 kg if not provided with a stretcher facility; or</p> <p>(B) 900 kg if provided with a stretcher facility.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
E3.5 Landings				X	<p>Access and egress to and from lift-well landings must comply with the Deemed-to-Satisfy Provisions of Section D.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
E3.6 Facilities for People with Disabilities					Excluded from this report
E3.7 Fire Service Controls				X	<p>Where lifts serve any storey above an effective height of 12 m, the following must be provided:</p> <p>(a) A fire service recall control switch complying with E3.9 for—</p> <p>(i) a group of lifts; or</p> <p>(ii) a single lift not in a group that serves the storey.</p> <p>(b) A lift car fire service drive control switch complying with E3.10 for every lift.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
E3.8 Residential Care Buildings			X		Not applicable.
E3.9 Fire service recall operation switch				X	<p>Information relevant to specific fire service recall control switch requirements.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
E3.10 Lift car fire service drive control switch				X	<p>Information relevant to specific lift car fire service drive control switch requirements.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
Part E4 - Visibility in an Emergency, Exit signs and Warning Systems					
E4.2 Emergency Lighting Requirements				X	<p>An emergency lighting system must be installed—</p> <p>(a) in every fire-isolated stairway, fire-isolated passageway or fire-isolated ramp; and</p>



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					<p>(b) in every storey of a Class 5, 6, 7, 8 or 9 building where the storey has a floor area more than 300 m²—</p> <p>(i) in every passageway, corridor, hallway, or the like, that is part of the path of travel to an exit; and</p> <p>(ii) in any room having a floor area more than 100 m² that does not open to a corridor or space that has emergency lighting or to a road or open space; and</p> <p>(iii) in any room having a floor area more than 300 m²; and</p> <p>(c) in every passageway, corridor, hallway, or the like, having a length of more than 6 m from the entrance doorway of any sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building to the nearest doorway opening directly to—</p> <p>(i) a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp; or</p> <p>(ii) an external stairway serving instead of a fire-isolated stairway under D1.8; or</p> <p>(iii) an external balcony leading to a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp; or</p> <p>(iv) a road or open space; and</p> <p>(d) in every required non-fire-isolated stairway; and</p> <p>(e) in a sole-occupancy unit in a Class 5, 6 or 9 building if—</p> <p>(i) the floor area of the unit is more than 300 m²; and</p> <p>(ii) an exit from the unit does not open to a road or open space or to an external stairway, passageway, balcony or ramp, leading directly to a road or open space; and</p> <p>(f) in every room or space to which there is public access in every storey in a Class 6 or 9b building if—</p> <p>(i) the floor area in that storey is more than 300 m²; or</p> <p>(ii) any point on the floor of that storey is more than 20 m from the nearest doorway leading directly to a stairway, ramp, passageway, road or open space; or</p> <p>(iii) egress from that storey involves a vertical rise within the building of more than 1.5 m, or any vertical rise if the storey concerned does not admit sufficient light; or</p> <p>(iv) the storey provides a path of travel from any other storey required by (i), (ii) or (iii) to have emergency lighting; and</p> <p>(g) in a Class 9a health-care building—</p> <p>(i) in every passageway, corridor, hallway, or the like, serving a treatment area or a ward area; and</p> <p>(ii) in every room having a floor area of more than 120 m² in a patient care area; and</p> <p>(h) in every Class 9c building excluding within sole-occupancy units; and</p> <p>(i) in every required fire control centre.</p>



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					<i>Electrical Design Certification must be incorporated into the construction certificate specification</i>
E4.3 Measurement of Distance			X		Distances, other than vertical rise, must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.
E4.4 Design and Operation of Emergency Lighting				X	The emergency lighting system must comply with AS/NZS 2293.1-2018
E4.5 Exit Signs				X	<p>An exit sign must be clearly visible to persons approaching the exit, and must be installed on, above or adjacent to each—</p> <ul style="list-style-type: none"> (a) door providing direct egress from a storey to— <ul style="list-style-type: none"> (i) an enclosed stairway, passageway or ramp serving as a required exit; and (ii) an external stairway, passageway or ramp serving as a required exit; and (iii) an external access balcony leading to a required exit; and (b) door from an enclosed stairway, passageway or ramp at every level of discharge to a road or open space; and (c) horizontal exit; and (d) door serving as, or forming part of, a required exit in a storey required to be provided with emergency lighting in accordance with E4.2. <p><i>Electrical design plans and certification must be incorporated into the construction certificate specification</i></p>
E4.6 Direction Signs (inclusive of NSW E4.6)				X	<p>If an exit is not readily apparent to persons occupying or visiting the building, then exit signs must be installed—</p> <ul style="list-style-type: none"> (a) in appropriate positions in corridors, hallways, lobbies, foyers, auditoria, and the like, indicating the direction to a required exit; and (b) in a Class 9b building used as an entertainment venue — in any external egress path to a road where the exit does not open directly onto a road <p><i>Electrical Design Certification must be incorporated into the construction certificate specification and directional exit sign locations must be illustrated on the architectural floor plans</i></p>
E4.7 Class 2 & 3 Buildings & Class 4 Parts: Exemption				X	<p>Informational clause - Exit doors in Class 2 parts need not comply with E4.5 provided every exit door is clearly and legibly labelled on the side remote from the exit with the word "EXIT" in capital letters 25mm high in a colour contrasting with that of the background or some other suitable method.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
E4.8				X	Exit signs must comply with:

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Design & Operation of Exit Signs					(a) AS/NZS 2293.1-2018; or (b) For a photoluminescent exit sign, Specification E4.8. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
E4.9 Emergency Warning & Intercom Systems				X	An emergency warning and intercom system complying where applicable with AS 1670.4 must be installed— (a) in a building with an effective height of more than 25 m. Electrical Design Certification must be incorporated into the construction certificate specification
SECTION F					
HEALTH & AMENITY					
Part F1 - Damp & Weatherproofing					
F1.0 Deemed -to-Satisfy Provisions			X		Performance Requirements FP1.4, for the prevention of the penetration of water through external wall must be addressed by way of a Performance Solution. There are no Deemed -to Satisfy Provisions for this Performance Solution in respect to external walls. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F1.1 Stormwater Drainage				X	Stormwater drainage must comply with AS/NZS 3500.3-2018. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F1.4 External above ground membranes				X	Any external above ground membranes must be waterproofed as per AS 4654 Parts 1 and 2-2012. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F1.5 Roof coverings				X	A roof must be covered with— (a) concrete roofing tiles complying with AS 2049 and fixed, except in cyclonic areas, in accordance with AS 2050, as appropriate; or (b) terracotta roofing tiles complying with AS 2049 and fixed, except in cyclonic areas, in accordance with AS 2050; or (c) cellulose cement corrugated sheeting complying with AS/NZS 2908.1 and installed in accordance with AS/NZS 1562.2; or (d) metal sheet roofing complying with AS 1562.1; or (e) plastic sheet roofing designed and installed in accordance with AS/NZS 4256 Parts 1, 2, 3 and 5 and AS/NZS 1562.3; or

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					<p>(f) Terracotta, fibre-cement and timber slates and shingles designed and installed to complying with AS 4597 except in cyclonic areas</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F1.6 Sarking				X	<p>Sarking-type materials used for weatherproofing must comply with AS/NZS 4200.1 and AS 4200.2.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F1.7 Waterproofing of wet area				X	<p>(a) In a Class 2 and 3 building and a Class 4 part of a building, building elements in wet areas must—</p> <p>(i) be water resistant or waterproof in accordance with Table F1.7; and</p> <p>(ii) comply with AS 3740.</p> <p>(b) In a Class 5, 6, 7, 8 or 9 building, building elements in the bathroom or shower room, a slop hopper or sink compartment, a laundry or sanitary compartment must—</p> <p>(i) be water resistant or waterproof in accordance with Table F1.7; and</p> <p>(ii) comply with AS 3740,</p> <p>as if they were in a Class 2 or 3 building or a Class 4 part of a building.</p> <p>(c) Where a slab or stall type urinal is installed—</p> <p>(i) the floor surface of the room containing the urinal must—</p> <p>(A) be an impervious material; and</p> <p>(B) where no step is installed—</p> <p>(aa) be graded to the urinal channel for a distance of 1.5 m from the urinal channel; and</p> <p>(bb) the remainder of the floor be graded to a floor waste; and</p> <p>(C) where a step is installed—</p> <p>(aa) the step must have an impervious surface and be graded to the urinal channel; and</p> <p>(bb) the floor behind the step must be graded to a floor waste; and</p> <p>(ii) the junction between the floor surface and the urinal channel must be impervious.</p> <p>(d) Where a wall hung urinal is installed—</p> <p>(i) the wall must be surfaced with impervious material extending from the floor to not less than 50 mm above the top of the urinal and not less than 225 mm on each side of the urinal.</p>


BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS						
					<div><div>(ii) the floor must be surfaced with impervious material and graded to a floor waste.</div><div>(e) In a room with timber or steel-framed walls and containing a urinal—<div><div>(i) the wall must be surfaced with an impervious material extending from the floor to not less than 100 mm above the floor surface; and</div><div>(ii) the junction of the floor surface and the wall surface must be impervious.</div></div></div><div>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</div></div>						
F1.9 Damp-proofing				X	<div>Where a damp-proof course is required, it must consist of a material that complies with AS/NZS 2904-1995; or impervious sheet material in accordance with AS 3660.1-2000</div> <div>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</div>						
F1.10 Damp-proofing of floors on the ground				X	<div>If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870-2011 (N/A to areas that do not require weatherproofing – refer specific clause exemptions).</div> <div>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</div>						
F1.11 Provision of Floor Wastes				X	<div>Bathrooms and laundries in Class 2, 3 or 4 buildings must be provided with a floor waste, and the floor of such areas must be graded to such floor waste.</div> <div>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</div>						
F1.12 Sub Floor Ventilation			X		Not applicable.						
F1.13 Glazed Assemblies				X	<div>Information relevant to the provision of glazed assemblies within external walls in accordance with AS 2047-2014.</div> <div>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</div>						
Part F2 - Sanitary & Other Facilities											
F2.1 Facilities in residential buildings				X	<div>Within each SOU the following are to be provided:</div> <table><tr><th>Facilities required</th><th>Facilities provided</th></tr><tr><td>Kitchen sink and facilities for the preparation and cooking of food</td><td>Complies.</td></tr><tr><td>A bath or shower</td><td>Complies.</td></tr></table>	Facilities required	Facilities provided	Kitchen sink and facilities for the preparation and cooking of food	Complies.	A bath or shower	Complies.
Facilities required	Facilities provided										
Kitchen sink and facilities for the preparation and cooking of food	Complies.										
A bath or shower	Complies.										

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS																																																								
					<div><div>A closet pan and washbasin</div><div>Complies.</div></div> <div><div>Clothes washing facilities, comprising at least one washtub and space for a washing machine</div><div>Complies.</div></div> <div><div>Clothes drying facilities comprising a clothes line or hoist with not less than 7.5m of line or a space for one heat-operated drying cabinet or appliance in the same room as the clothes washing facilities</div><div>To be detailed at CC stage.</div></div> <div>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</div>																																																								
F2.2 Calculation of number of occupants and fixtures			X		<div>Informational clause.</div> <div><div>❖ The number of persons accommodated must be calculated according to D1.13 if it cannot be more accurately determined by other means.</div><div>❖ Unless the premises are used predominantly by one sex, sanitary facilities must be provided on the basis of equal numbers of males and females.</div><div>❖ In calculating the number of sanitary facilities to be provided under F2.1 and F2.3, a unisex facility required for people with a disability may be counted once for each sex.</div><div>❖ For the purposes of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary towels.</div></div>																																																								
F2.3 Facilities for Class 3 to 9 Buildings				X	<div>Based on the number of sanitary facilities detailed on the ground floor and the assumption the retail tenancies are café's, restaurants or bars, the following occupant numbers are supported:</div> <div><div>▪ Up to 40 employees (50/50 split - 20 males and 20 females); and</div><div>▪ Up to 200 patrons (50/50 split – 100 males and 100 females).</div></div> <div><table><tr><th colspan="2">Building classification</th><th colspan="6">Class 6 - restaurants, cafes, bars</th></tr><tr><th colspan="4"></th><th colspan="4">Required sanitary facilities</th></tr><tr><th>Gender</th><th>Design Occupancy</th><th>User Group</th><th></th><th>Closet Pans</th><th>Urinals</th><th>Washbasins</th><th>Shower</th></tr><tr><td>Male</td><td>20</td><td>employees</td><td></td><td>1</td><td>1</td><td>1</td><td>NA</td></tr><tr><td>Female</td><td>20</td><td>employees</td><td></td><td>2</td><td>NA</td><td>1</td><td>NA</td></tr><tr><td>Male</td><td>100</td><td>patrons</td><td></td><td>1</td><td>2</td><td>2</td><td>NA</td></tr><tr><td>Female</td><td>100</td><td>patrons</td><td></td><td>3</td><td>NA</td><td>2</td><td>NA</td></tr></table></div> <div>Design requirements</div>	Building classification		Class 6 - restaurants, cafes, bars										Required sanitary facilities				Gender	Design Occupancy	User Group		Closet Pans	Urinals	Washbasins	Shower	Male	20	employees		1	1	1	NA	Female	20	employees		2	NA	1	NA	Male	100	patrons		1	2	2	NA	Female	100	patrons		3	NA	2	NA
Building classification		Class 6 - restaurants, cafes, bars																																																											
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Female	20	employees		2	NA	1	NA																																																						
Male	100	patrons		1	2	2	NA																																																						
Female	100	patrons		3	NA	2	NA																																																						

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>(a) Except where permitted by (b), (c), (f), F2.4(a) and F2.4(b), separate sanitary facilities for males and females must be provided for Class 3, 5, 6, 7, 8 or 9 buildings in accordance with Table F2.3.</p> <p>(b) If not more than 10 people are employed, a unisex facility may be provided instead of separate facilities for each sex.</p> <p>(c) If the majority of employees are of one sex, not more than 2 employees of the other sex may share toilet facilities if the facilities are separated by means of walls, partitions and doors to afford privacy.</p> <p>(d) Employees and the public may share the same facilities in a Class 6 and 9b building (other than a school or early childhood centre) provided the number of facilities provided is not less than the total number of facilities required for employees plus those required for the public.</p> <p>(e) Adequate means of disposal of sanitary towels must be provided in sanitary facilities for use by females.</p> <p>(f) Separate sanitary facilities for males and females need not be provided for patients in a ward area of a class 9a building.</p>
F2.4 Facilities for People with Disabilities					Excluded from this report.
F2.5 Construction of Sanitary Compartments				X	<p>Sanitary compartments must have:</p> <p>(a) Doors and partitions that separate adjacent compartments; and</p> <p>(b) the door to a fully enclosed sanitary compartment must open outwards, or slide, or be removable from outside of the compartment, unless there is a clear space of at least 1.2m between the closet pan within the compartment and the doorway.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F2.6 Interpretation: Urinals and washbasins			X		<p>Information relevant to urinal and washbasin design.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F2.7 Microbial Control Note NSW F2.7 (Clause Deleted)			X		N/A Clause Deleted in NSW.
F2.8 Waste Management					Information relevant to requirements for Class 9a & 9c.
F2.9			X		Not applicable.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Accessible adult change facilities					
Part F3					
Room Sizes					
F3.1 Height of Rooms and other spaces				X	<p>The ceiling height must be not less than—</p> <p>(a) in a Class 2 or 3 building or Class 4 part of a building—</p> <p>(i) a kitchen, laundry, or the like — 2.1 m;</p> <p>(ii) and a corridor, passageway or the like — 2.1 m; and</p> <p>(iii) a habitable room excluding a kitchen — 2.4 m; and</p> <p>(iv) in a room or space with a sloping ceiling or projections below the ceiling line within -</p> <p>(A) a habitable room—</p> <p>(aa) in an attic — a height of not less than 2.2 m for not less than two thirds of the floor area of the room or space; and</p> <p>(bb) in other rooms — a height of not less than 2.4 m for not less than two thirds of the floor area of the room or space; and</p> <p>(B) a non-habitable room — a height of not less than 2.1 m for not less than two thirds of the floor area of the room or space; and</p> <p>when calculating the floor area of a room or space, any part that has a ceiling height of less than 1.5 m is not included; and</p> <p>(b) in a Class 5, 6, 7 or 8 building—</p> <p>(i) except as allowed in (ii) and (f) — 2.4 m; and</p> <p>(ii) a corridor, passageway, or the like — 2.1 m; and</p> <p>(f) In any building—</p> <p>(i) a bathroom, shower room, sanitary compartment, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like — 2.1 m; and</p> <p>(ii) a commercial kitchen & required accessible change room facility — 2.4 m; and</p> <p>(iii) above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like.</p>
Part F4 - Light & Ventilation					
F4.1 Provision of natural light				X	<p>Natural lighting must be provided to all habitable rooms in Class 2 buildings.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F4.2		X			<u>Compliance issue:</u>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Methods and extent of natural lighting					<p>The windows that face the northern boundary are required to be setback not less than 3.58m from the boundary to achieve compliance with F4.2(b)(iii) – calculated at 50% of the square root of the exterior height of the wall in which the windows are located. The plans detail a setback of >7m which complies with F4.2(b)(iii).</p> <p><u>Design requirements</u></p> <p>(a) Required natural lighting must be provided by—</p> <p>(i) windows, excluding roof lights, that—</p> <p>(A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the floor area of the room; and</p> <p>(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</p> <p>(ii) roof lights, that—</p> <p>(A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the floor area of the room; and</p> <p>(B) are open to the sky; or</p> <p>(iii) a proportional combination of windows and roof lights required by (i) and (ii).</p> <p>(b) Except in a Class 9c aged care building, in a Class 2, 3 or 9 building or Class 4 part of a building 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 not be less than a horizontal distance from that boundary or wall that is the greater of—</p> <p>(i) generally — 1 m; and</p> <p>(ii) in a patient care area or other room used for sleeping purposes in a Class 9a building — 3 m; and</p> <p>(iii) 50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill.</p>
F4.3 Natural light borrowed from adjoining room				X	<p>The study areas are required to be provided with natural light as per the requirements of this clause.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 <p><u>Design requirements</u></p> <p>(a) Natural lighting to a room in a Class 2 building, Class 4 part of a building or in a sole occupancy unit of a Class 3 building, may come through a glazed panel or opening from an adjoining room (including an enclosed verandah) if—</p> <p>(i) both rooms are within the same sole-occupancy unit or the enclosed verandah is on common property; and</p> <p>(ii) the glazed panels or openings have an aggregate light transmitting area of not less than 10% of the floor area of the room to which it provides light; and the adjoining room has—</p> <p>(A) windows, excluding roof lights, that—</p> <p>(aa) have an aggregate light transmitting area of not less than 10% of the combined floor areas of both rooms; and</p> <p>(bb) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or</p> <p>(B) roof lights, that—</p> <p>(aa) have an aggregate light transmitting area of not less than 3% of the combined floor areas of both rooms; and</p> <p>(bb) are open to the sky; or</p> <p>(C) a proportional combination of windows and roof lights required by (A) and (B).</p> <p>(B) The areas specified in (a)(ii) and (a)(iii) may be reduced as appropriate if direct natural light is provided from another source.</p>



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
F4.4 Artificial lighting				X	Information relevant to the provision of artificial lighting in accordance with AS/NZS 1680.0-2009 to specific building areas. <i>Electrical Design Certification must be incorporated into the construction certificate specification</i>
F4.5 Ventilation of Rooms				X	<u>Design requirements</u> All rooms including storage and garbage/ bin rooms and the public corridors are to be provided with Clause F4.6 compliant natural ventilation OR a mechanical ventilation or air-conditioning system complying with AS 1668.2-2012. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
F4.6 Natural Ventilation			X		<u>Design requirements</u> (a) Natural ventilation provided in accordance with F4.5(a) must consist of permanent openings, windows, doors or other devices which can be opened— (i) with ventilating area 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. (b) The requirements of (a)(i) do not apply to a Class 8 electricity network substation. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
F4.7 Ventilation borrowed from adjoining room			X		Natural ventilation to a room may come through a window, opening, ventilating door or other device from an adjoining room (including an enclosed verandah) if both rooms are within the same sole-occupancy unit or the enclosed verandah is common property, and— (a) in a Class 2 building, a sole-occupancy unit of a Class 3 building or Class 4 part of a building— (i) the room to be ventilated is not a sanitary compartment; and (ii) the window, opening, door or other device has a ventilating area of not less than 5% of the floor area of the room to be ventilated; and (iii) the adjoining room has a window, opening, door or other device with a ventilating area of not less than 5% of the combined floor areas of both rooms; and (b) in a Class 5, 6, 7, 8 (except a Class 8 electricity network substation) or 9 building— (i) the window, opening, door or other device has a ventilating area of not less than 10% of the floor area of



BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>the room to be ventilated, measured not more than 3.6 m above the floor; and</p> <p>(ii) the adjoining room has a window, opening, door or other device with a ventilating area of not less than 10% of the combined floor areas of both rooms; and</p> <p>(c) the ventilating areas specified in (a) and (b) may be reduced as appropriate if direct natural ventilation is provided from another source.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F4.8 Restriction of position of water closets and urinals			X		<p>Rooms containing closet pans or urinals must not open directly into kitchen / pantry areas, public dining areas, Class 3 dormitory areas, public assembly areas (excluding early childhood centres, primary schools and open spectator stands) and a workplace normally occupied by more than one person.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F4.9 Airlocks				X	<p>Information relevant to the provision of airlocks and the like to separate rooms prohibited under Clause F4.8 from opening directly into another room.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F4.11 Carparks				X	<p>Every storey of a carpark (except an open deck carpark) must have:</p> <p>(a) a system of mechanical ventilation complying with AS1668.2-2012; or</p> <p>(b) a system of natural ventilation complying with Section 4 of AS 1668.4-2012.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F4.12 Kitchen local exhaust			X		<p>Information relevant to the provision of a kitchen exhaust hood complying with AS/NZS 1668.1-2015 and AS 1668.2-2012 for commercial kitchens.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
Part F5 - Sound Transmission					
F5.1 Application of Part				x	The provisions of this Part apply to Class 2, 3 and 9c buildings only.
F5.2 Determination of airborne sound insulation ratings			X		<p>A form of construction required to have an airborne sound insulation rating must—</p> <p>(a) have the required value for weighted sound reduction index (Rw) or weighted sound reduction index with spectrum</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					<p>adaptation term ($R_w + C_{tr}$) determined in accordance with AS/NZS 1276.1 or ISO 717.1 using results from laboratory measurements; or</p> <p>(b) comply with Specification F5.2.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F5.3 Determination of impact sound insulation ratings				X	<p>(a) A floor in a building required to have an impact sound insulation rating must—</p> <p>(i) have the required value for weighted normalised impact sound pressure level ($L_{n,w}$) determined in accordance with AS/ISO 717.2 using results from laboratory measurements; or</p> <p>(ii) comply with Specification F5.2.</p> <p>(b) A wall in a building required to have an impact sound insulation rating must—</p> <p>(i) for a Class 2 or 3 building be of discontinuous construction; and</p> <p>(ii) for a Class 9c aged care building, must—</p> <p>(A) for other than masonry, be two or more separate leaves without rigid mechanical connection except at the periphery; or</p> <p>(B) be identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with Specification F5.5 than a wall listed in Table 2 of Specification F5.2.</p> <p>(c) For the purposes of this Part, discontinuous construction means a wall having a minimum 20 mm cavity between 2 separate leaves, and</p> <p>(i) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and</p> <p>(ii) for other than masonry, there is no mechanical linkage between leaves except at the periphery.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F5.4 Sound Insulation of floors between units				X	<p>(a) A floor in a Class 2 or 3 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:</p> <p>(i) SOU's; or</p> <p>(ii) An SOU from a plant room, lift shaft, stairway, public corridor, public lobby or parts of a different classification.</p> <p>(iii) A floor in a Class 9c aged care building separating SOU's must achieve an R_w not less than 45.</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F5.5 Sound insulation of walls between units				X	<p>(a) A wall in a Class 2 or 3 building must—</p> <ul style="list-style-type: none"> (i) have an $R_w + C_{tr}$ (airborne) not less than 50, if it separates sole-occupancy units; and (ii) have an R_w (airborne) not less than 50, if it separates a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification; and (iii) comply with F5.3(b) if it separates— <ul style="list-style-type: none"> (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 (B) a sole-occupancy unit from a plant room or lift shaft. <p>(b) A door may be incorporated in a wall in a Class 2 or 3 building that separates a sole occupancy unit from a stairway, public corridor, public lobby or the like, provided the door assembly has an R_w not less than 30.</p> <p>(c) A wall in a Class 9c aged care building must have an R_w not less than 45 if it separates—</p> <ul style="list-style-type: none"> (i) sole-occupancy units; or (ii) a sole-occupancy unit from a kitchen, bathroom, sanitary compartment (not being an associated ensuite), laundry, plant room or utilities room. <p>(d) In addition to (c), a wall separating a sole-occupancy unit in a Class 9c aged care building from a kitchen or laundry must comply with F5.3(b).</p> <p>(e) Where a wall required to have sound insulation has a floor above, the wall must continue to—</p> <ul style="list-style-type: none"> (i) the underside of the floor above; or (ii) a ceiling that provides the sound insulation required for the wall. <p>(f) Where a wall required to have sound insulation has a roof above, the wall must continue to—</p> <ul style="list-style-type: none"> (i) the underside of the roof above; or (ii) a ceiling that provides the sound insulation required for the wall. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
F5.6 Sound insulation rating of services				X	Ducts and pipes must achieve an $R_w + C_{tr}$ (airborne) of no less than 40 if the adjacent room is habitable or 25 if non-habitable.

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					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F5.7 Sound isolation of pumps				X	A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating pump. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
Part F6 – Condensation Management					
F6.1 Application of Part				X	The Deemed-to-Satisfy Provisions of this Part only apply to a sole-occupancy unit of a Class 2 building and a Class 4 part of a building.
F6.2 Pliable building membrane				X	(a) Where a pliable building membrane is installed in an external wall, it must— (i) comply with AS/NZS 4200.1; and (ii) be installed in accordance with AS 4200.2; and (iii) be a vapour permeable membrane for climate zones 6, 7 and 8; and (iv) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building. (b) 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.
F6.3 Flow rate and discharge of exhaust systems				X	(a) An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of— (i) 25 L/s for a bathroom or sanitary compartment; and (ii) 40 L/s for a kitchen or laundry. (b) Exhaust from a kitchen must be discharged directly or via a shaft or duct to outdoor air. (c) Exhaust from a bathroom, sanitary compartment, or laundry must be discharged— (i) directly or via a shaft or duct to outdoor air; or (ii) to a roof space that is ventilated in accordance with F6.4.
F6.4 Ventilation of roof spaces				X	(a) Where an exhaust system covered by F6.3 discharges directly or via a shaft or duct into a roof space, the roof space must be ventilated to outdoor air through evenly distributed openings. (b) Openings required by (a) must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitch is greater than 22°, or 1/150 of the respective ceiling area if the roof pitch is less than or equal to 22°. (c) 30% of the total unobstructed area required by (b) must be located not more than 900 mm below the ridge or highest

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					point of the roof space, measured vertically, with the remaining required area provided by eave vents.
SECTION ANCILLIARY PROVISIONS					G
Part G1 - Minor Structures and Components					
G1.1 Swimming Pools			X		Not applicable.
NSW G1.101 Provision for cleaning windows				X	<p>A safe manner for cleaning of windows located 3 or more storeys above ground level must be provided, and compliance is achieved where:</p> <ul style="list-style-type: none"> (a) The windows can be cleaned wholly from within the building; or (b) Via a method complying with the Work Health and Safety Act 2011 and regulations made under that Act. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
G1.2 Refrigeration chambers, strong-rooms and vaults					<p>A refrigerated or cooling chamber of sufficient size for a person to enter must incorporate the safety requirements of this clause relevant to an internal latching device, internal lighting, external lamp indicator and alarm bell features.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
G1.3 Outdoor play areas			X		Not applicable.
Part G2 - Boilers, Pressure Vessels, Heating Appliances, Fireplaces, Chimneys and Flues					
G2.2 Installation of appliances			X		Not applicable.
G2.3 Open fire places			X		Not applicable.
G2.4 Incinerator rooms			X		Not applicable.
Part G3 - Atrium Construction					
G3.1 Application of Part		X			<p>Drawing A-110-005 & A-110-010, Rev P3 details a 3-storey void within the forest room. It is noted the requirements of this clause do not apply to an atrium which connects only 3 storeys within an AS 2118.1-2017 sprinkler protected building however, levels 5 and 10 are not located at a level where direct egress is provided to a road or open space and therefore is to be addressed by way of a Performance solution by the fire engineer.</p> <p>This part does not apply to an atrium which:</p>

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(a) Connects only 2 storeys; or (b) Connects only 3 storeys, (i) if each storey is sprinkler protected (other than a FPAA101D or FPAA101H system) complying with specification E1.5 throughout; and (ii) one of those storeys is situated at a level at which there is direct egress to a road or open space.
G3.2 Dimensions of atrium well			X		Not applicable.
G3.3 Separation of atrium by bounding walls			X		Not applicable.
G3.4 Construction of bounding walls			X		Not applicable.
G3.5 Construction at balconies			X		Not applicable.
G3.6 Separation at roof			X		Not applicable.
G3.7 Means of egress			X		Not applicable.
G3.8 Fire and smoke control systems			X		Not applicable.
Part G4 - Construction in Alpine Areas					
G4.1 Application of Part			X		Not applicable.
G4.3 External doorways			X		Not applicable.
G4.4 Emergency lighting			X		Not applicable.
G4.5 External ramps			X		Not applicable.
G4.6 Discharge of exits			X		Not applicable.
G4.7 External trafficable structures			X		Not applicable.
G4.8 Fire-fighting services and equipment			X		Not applicable.
G4.9 Fire orders			X		Not applicable.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Part G5 - Construction in Bushfire Prone Areas					
G5.1 Application of Part			X		Not applicable.
G5.2 Protection			X		Not applicable.
Part G6 - Occupiable Outdoor Areas					
G6.1 Application of Part				X	<p>The DTS provisions of this part apply to buildings containing an outdoor area in addition to the other DTS provisions of the BCA. It does not apply to such areas within a sole occupancy unit.</p> <p><i>Note – occupiable outdoor area is a defined as a space on a roof, balcony, or similar part of a building that is open to the sky; and to which access is provided, other than access only for maintenance; and that is not open space or directly connected to open space.</i></p>
G6.2 Fire hazard properties				X	<p>(a) A lining, material or assembly in an occupiable area must comply with C1.10 as for an internal element.</p> <p>(b) The following fire hazard properties of a lining, material or assembly in an occupiable area are not required to comply with C1.10:</p> <ul style="list-style-type: none"> (i) Average specific extinction area. (ii) Smoke-development Index. (iii) Smoke development rate. <p>(c) Smoke growth rate index.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
G6.3 Fire separation				X	For the purposes of DTS provisions of C2.7, C2.8 and C2.9, a reference to a storey includes an occupiable outdoor area, however a fire wall cannot be used to separate an occupiable area into different fire compartments.
G6.4 Provision for escape				X	For the purposes of the DTS provisions of Part D1, a reference to a storey or room includes an occupiable outdoor area.
G6.5 Construction of exits				X	For the purposes of the DTS provisions of Part D2, a reference to a storey includes an occupiable outdoor area.
G6.6 Firefighting equipment				X	For the purposes of the DTS provisions of Part E1, a reference to a storey includes an occupiable outdoor area.
SECTION J ENERGY EFFICIENCY - Excluded from this report					



5.0 CONCLUSION

This report provides a Building Code of Australia 2019 – Amdt 1 (BCA) assessment of the proposed Mixed-use development be located at MIDTOWN ESTATE – LOT C3, EPPING ROAD, MACQUARIE PARK.

The primary purpose of this report was to identify the non-compliance matters contained in the proposed design philosophy against the current Deemed-to-Satisfy (DTS) Provisions of the BCA and to provide compliance recommendations to overcome the DTS non-compliances.

This report provided a BCA assessment table in Section 3.0 that summarises the identified non-compliance matters and offers specific recommendations that are also outlined in the Executive Summary.

Further, if compliance with the deemed-to-satisfy provisions is not achievable or desirable, Alternative Solutions could be further developed and verified by an appropriately qualified BCA Consultant or Fire Safety Engineer.

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6.0 ATTACHMENT A - INSPECTION & MAINTENANCE

6.1 Fire Safety Measures

The fire safety measures within the building must be maintained to ensure correct operation at all times the building is occupied. All firefighting equipment should be tagged when tested/inspected and log books kept up-to-date for all smoke detection, warning systems and sprinkler systems (where installed).

An annual fire safety certificate must be submitted to the local consent authority and the NSW Fire Brigade each year indicating satisfactory performance of the fire safety measures contained within the building. The annual fire safety statement should be displayed in a prominent place within the building (i.e. the main entry foyer)

The correct operation and maintenance of the buildings fire safety measures is critical in affording an adequate level of fire safety.

6.2 Good Housekeeping

The ongoing management of the building should ensure good housekeeping procedures. The following matters should be considered by building management:

- ❖ Ensure exits and paths of travel to exits remain unobstructed (in particular stairways)
- ❖ Avoid storage of materials in unoccupied areas
- ❖ Limit storage of flammable/combustible materials to designated and approved areas
- ❖ Prevent chocking open fire/smoke doors
- ❖ Prevent storage of materials that could hinder access to firefighting equipment

7.0 ATTACHMENT B – REQUIREMENTS TYPE A CONSTRUCTION

3.1 Fire-resistance of Building Elements

In a building required to be of Type A construction—

- (a) each building element listed in Table 3 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and
- (b) * * * *
- (c) any internal wall required to have an FRL with respect to integrity and insulation must extend to—
 - (i) the underside of the floor next above; or
 - (ii) the underside of a roof complying with Table 3; or
 - (iii) if under Clause 3.5 the roof is not required to comply with Table 3, the underside of the non-combustible roof covering and, except for roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not be crossed by timber or other combustible building elements; or
 - (iv) a ceiling that is immediately below the roof and has a resistance to the incipient spread of fire to the roof space between the ceiling and the roof of not less than 60 minutes; and
- (d) a loadbearing internal wall and a loadbearing fire wall (including those that are part of a loadbearing shaft) must be constructed from—
 - (i) concrete; or
 - (ii) masonry; or
 - (iii) fire-protected timber, provided that—
 - (A) the building is—
 - (aa) a separate building; or
 - (ee) a part of a building—
 - (AA) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or
 - (BB) which is located above or below a part not containing fire-protected timber and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a fire wall for the lower storey; and
 - (B) the building has an effective height of not more than 25 m; and
 - (C) the building has a sprinkler system (other than a FPAA101D or FPAA101H system) throughout complying with Specification E1.5; and
 - (D) any insulation installed in the cavity of the timber building element required to have an FRL is non-combustible; and
 - (E) cavity barriers are provided in accordance with Specification C1.13; or
 - (iv) any combination of (i) to (iii); and
 - (e) * * * * *
 - (f) the FRLs specified in Table 3 for an external column apply also to those parts of an internal column that face and are within 1.5 m of a window and are exposed through that window to a fire-source feature.

Table 3 Type A Construction: FRL of Building Elements

Building Element	Class of building – FRL: (in minutes)			
	<i>Structural adequacy/Integrity/Insulation</i>			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it is exposed is—				
For loadbearing parts—				
Less than 1.5m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3m	90/60/60	120/90/90	180/180/120	240/240/180
3m or more	90/60/30	120/60/30	180/120/90	240/180/90

Building Element	Class of building – FRL: (in minutes) <i>Structural adequacy/Integrity/Insulation</i>			
For non-loadbearing parts—				
Less than 1.5m	-/90/90	-/120/120	-/180/180	-/240/240
1.5 to less than 3m	-/60/60	-/90/90	-/180/120	-/240/180
3m or more	-/-/-	-/-/-	-/-/-	-/-/-
EXTERNAL COLUMN not incorporated in an external wall—				
For loadbearing columns -	90/-/-	120/-/-	180/-/-	240/-/-
For non-loadbearing columns -	-/-/-	-/-/-	-/-/-	-/-/-
COMMON WALLS AND FIRE WALLS	90/90/90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS				
Fire-resisting lift and stair shafts				
Loadbearing	90/90/90	120/120/120	180/120/120	240/120/120
Non-loadbearing	-/90/90	-/120/120	-/120/120	-/120/120
Bounding public corridors, public lobbies and the like -				
Loadbearing	90/90/90	120/-/-	180/-/-	240/-/-
Non-loadbearing	-/60/60	-/-/-	-/-/-	-/-/-
Between or bounding sole-occupancy units				
Loadbearing	90/90/90	120/-/-	180/-/-	240/-/-
Non-loadbearing	-/60/60	-/-/-	-/-/-	-/-/-
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion -				
Loadbearing	90/90/90	120/90/90	180/120/120	240/120/120
Non-loadbearing	-/90/90	-/90/90	-/120/120	-/120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES				
And Columns -	90/-/-	120/-/-	180/-/-	240/-/-
Floors	90/90/90	120/120/120	180/180/180	240/240/240
Roofs	90/60/30	120/60/30	180/60/30	240/90/60

3.2 Concessions for floors

A floor need not comply with Table 3 if—

- it is laid directly on the ground; or
- in a Class 2, 3, 5 or 9 building, the space below is not a storey, does not accommodate motor vehicles, is not a storage or work area, and is not used for any other ancillary purpose; or
- it is a timber stage floor in a Class 9b building laid over a floor having the required FRL and the space below the stage is not used as a dressing room, store room, or the like; or
- it is within a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building; or
- it is an open-access floor (for the accommodation of electrical and electronic services and the like) above a floor with the required FRL.

3.3 Floor loading of Class 5 and 9b buildings: Concession

If a floor in a Class 5 or 9b building is designed for a live load not exceeding 3 kPa—

- the floor next above (including floor beams) may have an FRL of 90/90/90; or
- the roof, if that is next above (including roof beams) may have an FRL of 90/60/30.

3.4 Roof superimposed on concrete slab: Concession

A roof superimposed on a concrete slab roof need not comply with Clause 3.1 as to fire-resisting construction if—

- (a) the superimposed roof and any construction between it and the concrete slab roof are non-combustible throughout; and
- (b) the concrete slab roof complies with Table 3.

3.5 Roof: Concession

A roof need not comply with Table 3 if its covering is non-combustible and the building—

- (a) has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 installed throughout; or
- (b) has a rise in storeys of 3 or less; or
- (c) is of Class 2 or 3; or
- (d) has an effective height of not more than 25 m and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes.

3.6 Roof lights

If a roof is required to have an FRL or its covering is required to be non-combustible, roof lights or the like installed in that roof must—

- (a) have an aggregate area of not more than 20% of the roof surface; and
- (b) be not less than 3 m from—
 - (i) any boundary of the allotment other than the boundary with a road or public place; and
 - (ii) any part of the building which projects above the roof unless that part has the FRL required of a fire wall and any openings in that part of the wall for 6 m vertically above the roof light or the like are protected in accordance with C3.4; and
 - (iii) any roof light or the like in an adjoining sole-occupancy unit if the walls bounding the unit are required to have an FRL; and
 - (iv) any roof light or the like in an adjoining fire-separated section of the building; and
- (c) if a ceiling with a resistance to the incipient spread of fire is required, be installed in a way that will maintain the level of protection provided by the ceiling to the roof space.

3.7 Internal columns and walls: Concession

For a building with an effective height of not more than 25 m and having a roof without an FRL in accordance with Clause 3.5, in the storey immediately below that roof, internal columns other than those referred to in Clause 3.1(f) and internal walls other than fire walls and shaft walls may have—

- (a) in a Class 2 or 3 building: FRL 60/60/60; or
- (b) in a Class 5, 6, 7, 8 or 9 building—
 - (i) with rise in storeys exceeding 3: FRL 60/60/60; or
 - (ii) with rise in storeys not exceeding 3: no FRL.

3.8 Open spectator stands and indoor sports stadiums: Concession

In an open spectator stand or indoor sports stadium, the following building elements need not have the FRL specified in Table 3:

- (a) The roof if it is non-combustible.
- (b) Columns and loadbearing walls supporting only the roof if they are non-combustible.
- (c) Any non-loadbearing part of an external wall less than 3 m—
 - (i) from any fire-source feature to which it is exposed if it has an FRL of not less than –/60/60 and is non-combustible; or
 - (ii) from an external wall of another open spectator stand if it is non-combustible.

3.9 Carparks

- (a) Notwithstanding Clause 3.1, a carpark may comply with Table 3.9 if it is an open-deck carpark or is protected with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 and is—

- (i) a separate building; or
 - (ii) a part of a building—

- (A) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or
 - (B) which is located above or below another classification, and the floor separating the classifications complies with C2.9; or
 - (C) which is located above another Class 7 part of the building not used for carparking, and the floor separating the parts complies with Table 3 for a Class 7 part other than a carpark; or
 - (D) which is located below another Class 7 part of the building not used for carparking, and the floor separating the parts complies with Table 3.9.
- (b) For the purposes of this Clause, a carpark—
- (i) includes—
 - (A) an administration area associated with the functioning of the carpark; and
 - (B) where the carpark is sprinklered, is associated with a Class 2 or 3 building and provides carparking for separate sole-occupancy units, each carparking area with an area not greater than 10% of its floor area for purposes ancillary to the sole-occupancy units; but
 - (ii) excludes—
 - (A) except for (b)(i), any area of another classification, or other part of a Class 7 building not used for carparking; and
 - (B) a building or part of a building specifically intended for the parking of trucks, buses, vans and the like.

Table 3.9 - Requirements for carparks

Building Element			FRL (not less than) <i>Structural adequacy/Integrity/Insulation</i> ESA/M (not greater than)
Wall			
(a)	External Wall		
	(i)	Less than 3m from a fire-source feature to which it is exposed:	
		Loadbearing	60/60/60
	Non-loadbearing	-/60/60	
	(ii)	3m or more from a fire-source feature to which it is exposed	-/-/-
(b)	Internal Wall		
	(i)	Loadbearing, other than one supporting only the roof (not used for carparking)	60/-/-
	(ii)	Supporting only the roof (not used for carparking).	-/-/-
	(iii)	Non-loadbearing	-/-/-
(c)	Fire wall		
	(i)	From the direction used as a carpark	60/60/60
	(ii)	From the direction not used as a carpark	As required by Table 7.1
Column			
(a)	Supporting only the roof (not used for carparking) and 3m or more from a fire-source to which it is exposed		-/-/-
(b)	Steel column other than one covered by (a) and one that does not support a part of a building that is not used as a carpark		60/-/- or 25m ² /tonne
(c)	Any other column not covered by (a) or (b)		60/-/-
Beam			

Building Element		FRL (not less than) <i>Structural adequacy/Integrity/Insulation</i> ESA/M (not greater than)
(a)	Steel floor beam in continuous contact with a concrete floor slab	60/-/- or 30m ² /tonne
(b)	Any other beam	60/-/-
Fire resisting lift and stair shaft (within the carpark only)		60/60/60
Floor slab and vehicle ramp		60/60/60
Roof (not used for carparking)		-/-/-

Notes to Table 3.9:

1. ESA/M means the ratio of exposed surface area to mass per unit length.

2. Refer to Specification E1.5 for special requirements for a sprinkler system in a carpark complying with Table 3.9 and located within a multi-classified building.

3.10 Class 2 and 3 buildings: Concession

- (a) A Class 2 or 3 building having a rise in storeys of not more than 3 need not comply with Clause 3.1(d) of Specification C1.1 and the requirements of C1.9(a), (b) and C2.6 for non-combustible material, if it is constructed using—
 - (i) timber framing throughout; or
 - (ii) non-combustible material throughout; or
 - (iii) a combination of (i) and (ii), provided—
 - (iv) * * * * *
 - (v) any insulation installed in the cavity of a wall required to have an FRL is non-combustible; and
 - (vi) the building is fitted with an automatic smoke alarm system complying with Specification E2.2a.
- (b) A Class 2 or 3 building having a rise in storeys of not more than 4 may have the top three storeys constructed in accordance with (a) provided—
 - (i) the lowest storey is used solely for the purpose of parking motor vehicles or for some other ancillary purpose; and
 - (ii) the lowest storey is constructed of concrete or masonry including the floor between it and the Class 2 or 3 part of the building above; and
 - (iii) the lowest storey and the storey above are separated by construction having an FRL of not less than 90/90/90 with no openings or penetrations that would reduce the fire-resisting performance of that construction except that a doorway in that construction may be protected by a -/60/30 self-closing fire door.
- (c) In a Class 2 or 3 building complying with (a) or (b) and fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5, any FRL criterion prescribed in Table 3—
 - (i) for any floor and any loadbearing wall, may be reduced to 60, except any FRL criterion of 90 for an external wall must be maintained when tested from the outside; and
 - (ii) for any non-loadbearing internal wall, need not apply if—
 - (A) it is lined on each side with 13 mm standard grade plasterboard or similar non-combustible material; and
 - (B) it extends—
 - (aa) to the underside of the floor next above; or
 - (bb) to the underside of a ceiling with a resistance to the incipient spread of fire of 60 minutes; or
 - (cc) to the underside of a non-combustible roof covering; and
 - (C) any insulation installed in the cavity of the wall is non-combustible; and
 - (D) any construction joint, space or the like between the top of the wall and the floor, ceiling or roof is smoke sealed with intumescent putty or other suitable material; and
 - (E) any doorway in the wall is protected by a self-closing, tight fitting, solid core door not less than 35 mm thick.