STOCKBRIDGE PROPERTIES PTY LTD

BCA ASSESSMENT REPORT

372-374 Mann Street & 35-37 Dwyer Street, North Gosford NSW

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Report Type: BCA
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Jensen Hughes Australia

Providing building regulations, fire engineering, accessibility, and energy consulting services to NSW for over 25 years

Our story begins in 1997 with the founding of BCA Logic to fulfill the demand of a consultancy company whose expertise expanded across the entire life cycle of a building, from consulting on the initial planning through to construction and occupation.

BCA Logic, SGA Fire and BCA Energy joined Jensen Hughes in 2021, a leading global, multi-disciplinary engineering, consulting and technology firm focused on safety, security, and resiliency. We continue to be at the forefront of our industry and work thoroughly to preserve our position by ensuring the successful delivery of projects.

Jensen Hughes was launched in 2014 through the historic merger of Hughes Associates and Rolf Jensen & Associates (RJA), two of the most experienced and respected fire protection engineering companies at the time. Since then, we have gained market leadership in nuclear risk consulting and established commanding positions in areas like forensic engineering, security risk consulting and emergency management. Over the past 22 years, our integration of more than 30 privately held engineering and consulting firms has

dramatically expanded our global footprint, giving us a powerful market presence ten times larger than our nearest competitor in some of our markets and extending our historical lineage back to 1939.

With more than 90 offices and 1500 employees worldwide supporting clients globally across all markets, we utilise our geographic reach to help better serve the needs of our local, regional, and multinational clients. In every market, our teams are deeply entrenched in local communities, which is important to establishing trust and delivering on our promises.

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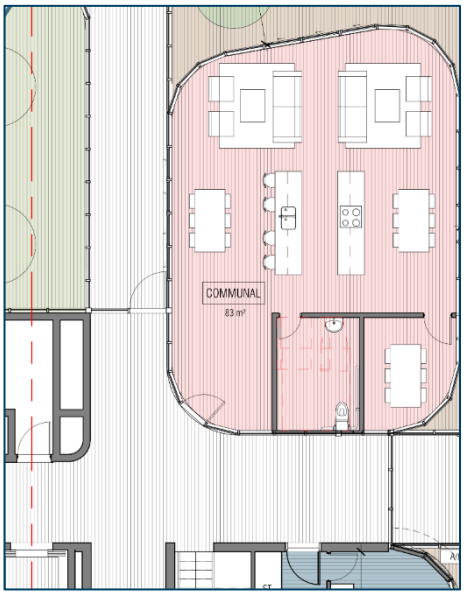
Executive summary

This document provides an assessment of the architectural design drawings for the proposed mixed-use development at 372-374 Mann Street & 35-37 Dwyer Street, North Gosford NSW, against the Deemed-to-Satisfy Provisions of the Building Code of Australia (BCA) 2022 Volume One.

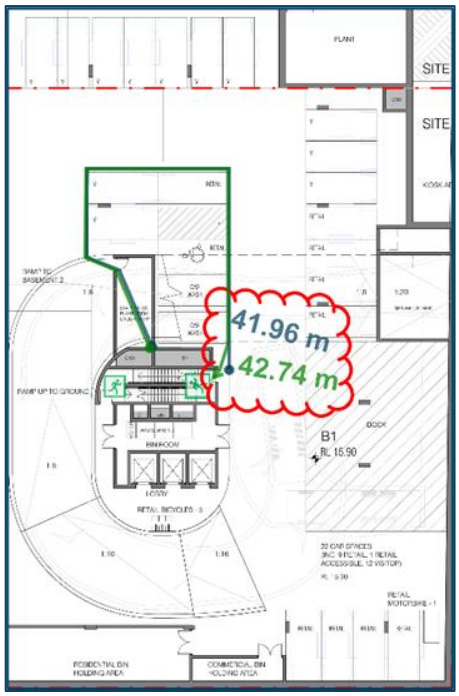
Part 4 of this report outlines the identified BCA compliance issues that require further information or consideration and/or assessment as Performance Solutions. Any Performance Solution will need to be detailed in a separate report and must clearly indicate methodologies for achieving compliance with the relevant BCA Performance Requirements.

Item	Description	BCA Provision
Fire-related Performance Solutions required		
1.	The length of public corridors serving Class 2 parts are greater than **40 m** without smoke separation in the below areas. It is recommended that a Fire Safety Engineer provides early input to determine whether the current arrangement can be rationalised via a Performance Solution. **Site B (Building 2 & 3)** + Lower Ground (B2 & B3) + Upper Ground (B2 Only)	C3D15 - Public corridors in Class 2 and 3 buildings
2.	**Site A (Building 1)** BCA2022 Clause NSW C4D12 requires that the walls bounding the Communal area on Level 20 be constructed of concrete or masonry or be lined internally with a fire-protective covering. It is recommended that a Fire Safety Engineer provides early input to determine whether the glazed construction can be rationalised via a Performance Solution.	NSW C4D12 - Bounding construction: Class 2 and 3 buildings and Class 4 parts

Item	Description	BCA Provision
	 *Site A, Level 20 Glazed bounding construction*	
3.	It is recommended that a Fire Safety Engineer provides early input to determine whether the fire-resistance levels can be rationalised in the following locations: **<u>Site A (Building 1)</u>** - Upper Ground – Class 6 part. - Lower Ground – Class 7b parts. **<u>Site B (Building 2 & 3)</u>** - Basement 2 and Lower Ground – Class 7b parts. - Level 6 Occupiable outdoor area - Columns/Roofs over Pergola Structures.	Specification 5: Fire-resisting construction
4.	Garbage chutes will not be enclosed at their base with fire rated construction. Early input from a Fire Safety Engineer is recommended to determine whether the proposed arrangement can be permitted as part of a Performance Solution.	S5C8: Enclosure of shafts
5.	It is recommended that a Fire Safety Engineer provides early input to determine whether the following extended travel distances can be addressed as part of a Performance Solution: **<u>Site A (Building 1)</u>** - Basement level 1 ▪ **42 m** to a POC in lieu of **20 m**,	D2D5: Exit travel distances S18C4: Permitted concessions

Item	Description	BCA Provision

- **43 m** to an exit lieu of **40 m.**



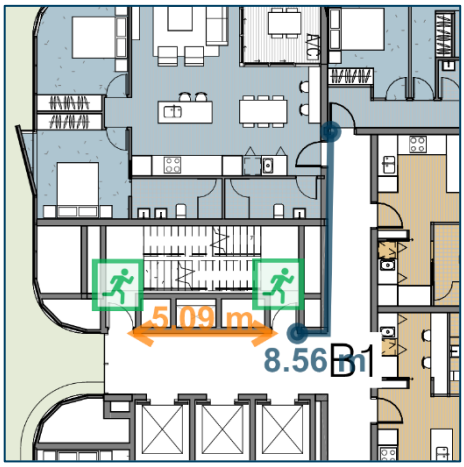
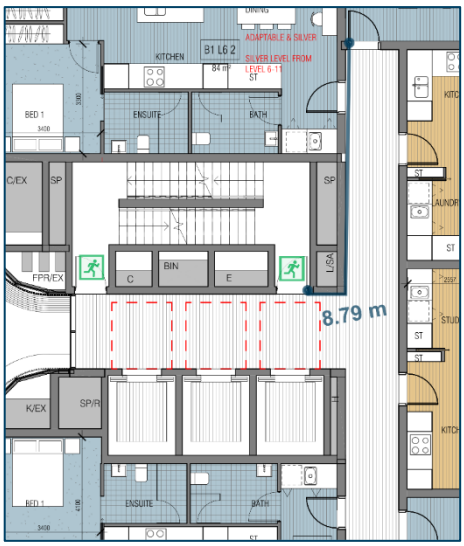
Basement 1 Travel Distances

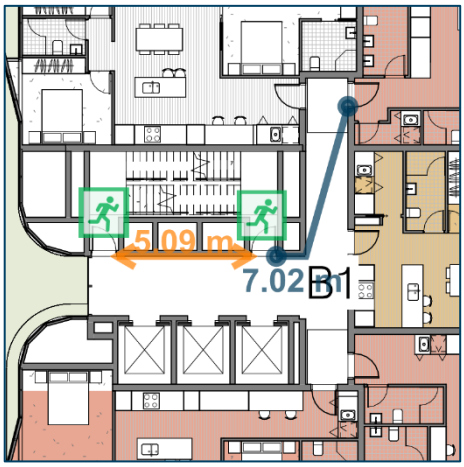
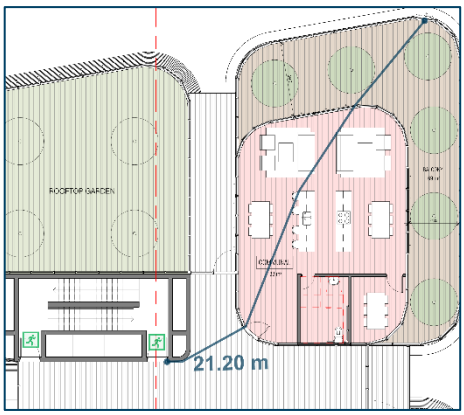
- Lower Ground – **29 m** to a POC in lieu of **20 m**.

Lower Ground

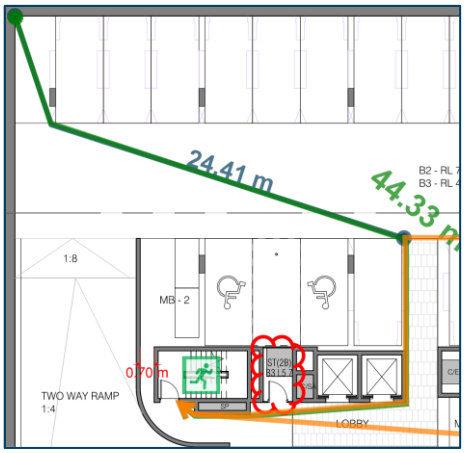
- Level 1 – **7 m** to a POC in lieu of **6 m**.

Item	Description	BCA Provision
	 *Level 1* - Level 2 – **7 m** to a POC in lieu of **6 m**.  *Level 2* - Level 3 - **9 m** to a POC in lieu of **6 m.**	

Item	Description	BCA Provision
	 *Level 3* - Levels 4-16 - **9 m** to a POC in lieu of **6 m**.  *Levels 4-16* - Levels 17-19 - **8 m** to a POC in lieu of **6 m**.	

Item	Description	BCA Provision
	 *Levels 17-19* - Level 20 – **22 m** to a POC in lieu of **6 m**.  *Level 20* **<u>Site B (Buildings 2 & 3)</u>** - Basement level 3 ▪ **25 m** to POC in lieu of **20 m.** ▪ **45 m** to an exit in lieu of **40 m.**	

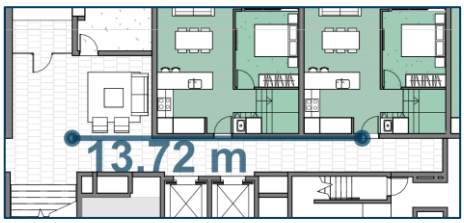
Item	Description	BCA Provision



Basement 3 Travel Distances

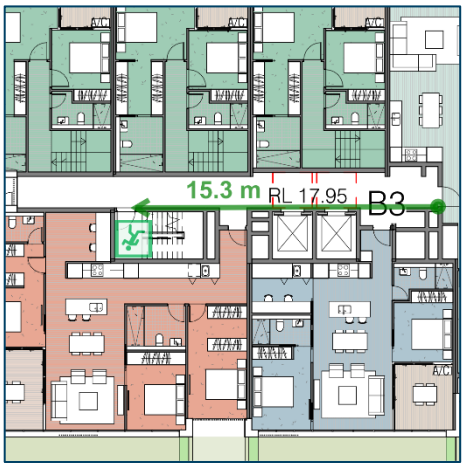
Note 1: The storage space clouded in red is now obstructing previously compliant travel distance to an exit in this location, and thus, creating a new non-compliance. If the storage space were to be relocated, compliant travel distances would be achieved.

- Building 2, Lower Ground – **14 m** to a POC in lieu of **6 m**



Building 2, Lower Ground

- Building 3, Upper Ground – **16 m** to an exit in lieu of **12 m.**



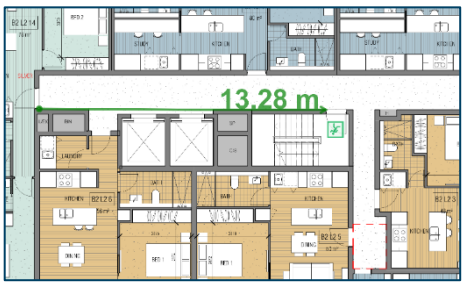
Building 3, Upper Ground

- Building 2 & 3, Level 1 – **15 m** to an exit in lieu of **12 m.**

Building 2 & 3, Level 1

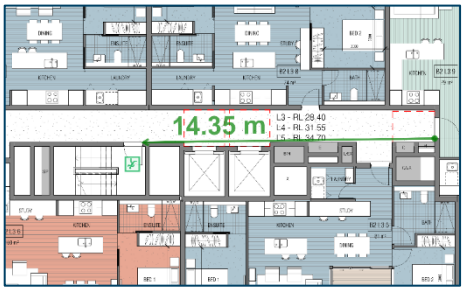
- Level 2 – **15 m** to an exit in lieu of **12 m.**

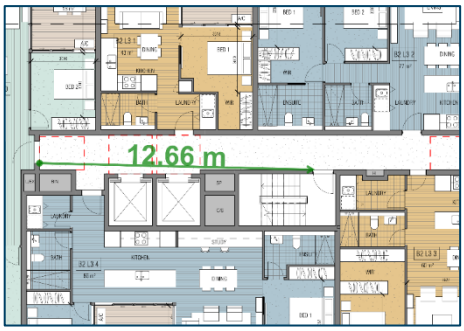
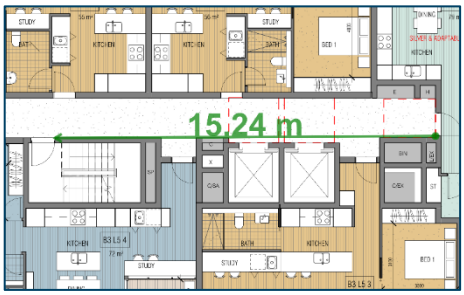
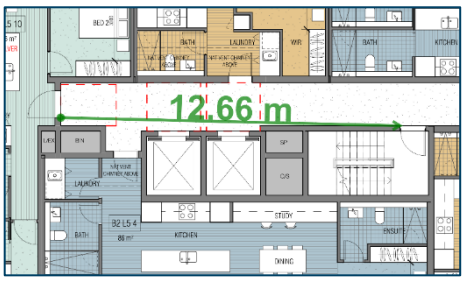
Building 3, Level 2

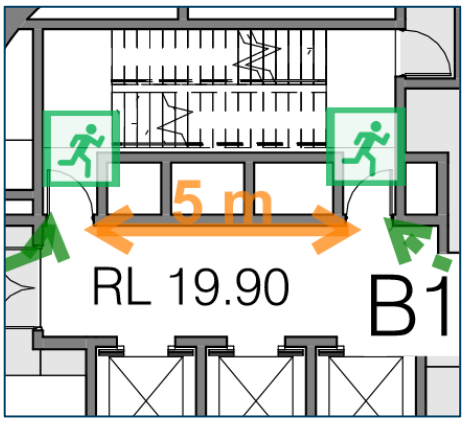
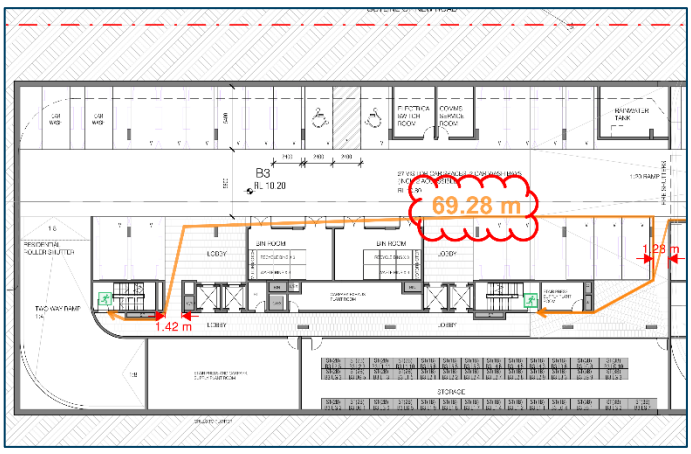


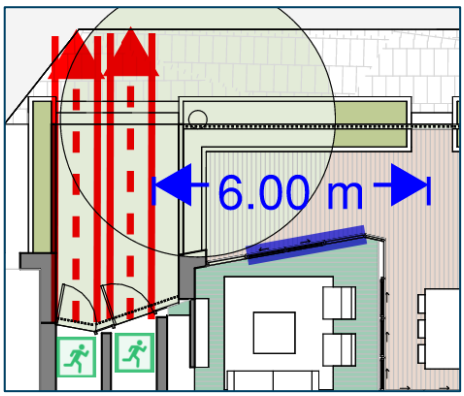
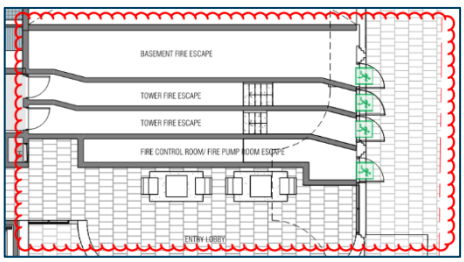
Building 2, Level 2

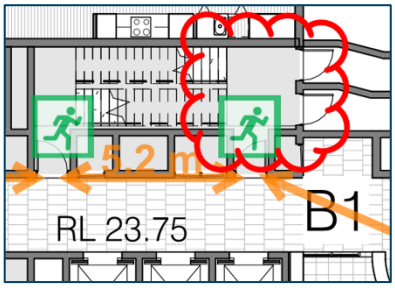
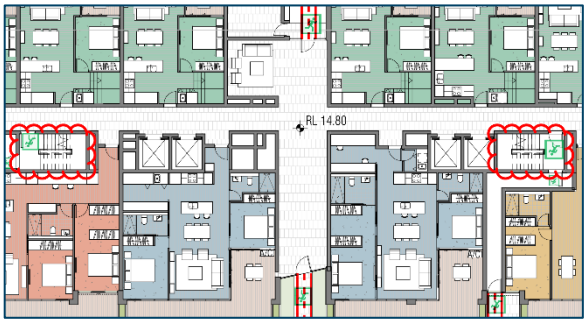
- Level 3 – **15 m** to an exit in lieu of **12 m.**

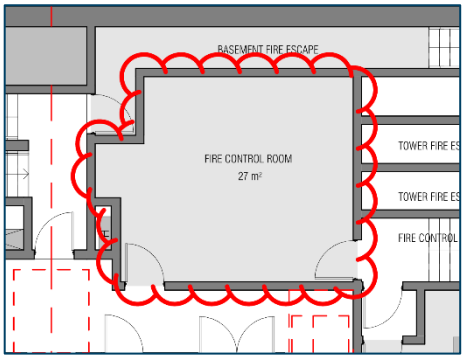
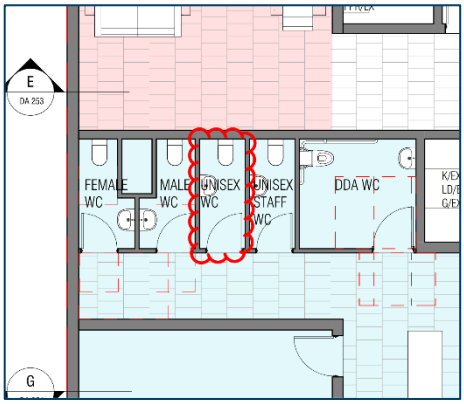


Item	Description	BCA Provision
	Building 3, Level 3  *Building 2, Level 3* - Levels 4-5 – **18 m** to an exit in lieu of **12 m.**  *Building 3, Levels 4-5*  *Building 2, Levels 4-5* **Note 1:** Subject to concurrence from the Fire Safety Engineer, it is likely that the following extended travel distances cannot be reasonably justified as part of a Performance Solution and that the architectural plans will need to be updated to alleviate subject areas as required: • Class 2 areas – More than **15 m** to a POC. • Class 6, 7a & 7b – More than **30 m** to a POC.	

Item	Description	BCA Provision
6.	It is recommended that a Fire Safety Engineer provides early input to determine whether the following distances between alternative exits can be addressed as part of a Performance Solution: **Site A (Building 1)** + All levels (typical), except for Basement 1 level where compliance is met with the minimum distances - **5 m** between alternative exits in lieu of **9 m**.  *All levels (typical), except for Basement 1* **Site B (Buildings 2 & 3)** + Building 2, Basement Level 1, between the most southern fire stair and the next (northern) fire stair distance is **70 m** in lieu of the maximum permitted **60 m** between alternative exits when measured through a POC.  *Site B – Building 3 – Basement Level 1*	D2D6: Distance between alternative exits

Item	Description	BCA Provision
7.	It is recommended that a Fire Safety Engineer provides early input to determine whether the path of travel along the subject building and any unprotected openings can be rationalised via a Performance Solution. The following locations are indicative: **Site B (Buildings 2 & 3)**  *Site B – Building 2 – Lower Ground*  *Site B – Building 3 – Lower Ground*	D2D12: Travel via fire-isolated exits
8.	It is recommended that a Fire Safety Engineer provides early input to determine whether the discharge point of alternative exits may be located as per current design.  *Site A Upper Ground Level Exit discharge*	NSW D2D15(4): Discharge from exits

Item	Description	BCA Provision
9.	It is recommended that a Fire Safety Engineer provides early input to determine whether smoke separation between rising and descending flights can be omitted via a Performance Solution in the following locations: **Site A (Building 1)**  *Site A, Upper Ground Level* **Site B (Buildings 2 & 3)**  *Site B, Building 3, Lower Ground Level*	D3D5: Separation of rising and descending stair flights
10.	It is recommended that a Fire Safety Engineer provides early input to determine whether the following can be addressed as part of a Performance Solution: **Site B (Buildings 2 & 3)** Omission of sprinkler coverage beneath pergola roofs.	E1D4: Sprinklers
11.	The Fire Safety Engineer is to consider the increased fire hazards associated with EVs in carparking areas and is to confirm whether any enhanced fire safety measures are required.	E1D17: Provision for special hazards E2D21: Provision for special hazards
12.	**Site A (Building 1)**	E2D6: Buildings more than 25 m in effective

Item	Description	BCA Provision
	For Class 6 and 7b parts, a zone pressurisation system is to be provided between vertically separated fire compartments. It is recommended that a Fire Safety Engineer provides early input to determine whether the omission of Zone Pressurisation may be considered on a Performance Basis.	height: Class 5, 6, 7b, 8 and 9b buildings
13.	**Site A (Building 1)** It is recommended that a Fire Safety Engineer provides early input to determine whether the location of the Fire Control Room (fire control centre) can be addressed as part of a performance solution.  *Lower Ground Fire Control Room location*	S19C4 Location of fire control centre S19C9: Doors to a fire control room
Non-fire-related Performance Solutions required		
14.	**Site A – Building 1 Upper Ground Level – Class 6 Tenancy** Sanitary facilities serving the Site A Building 1 Upper Ground Level Class 6 Tenancy are to be gender designated, excluding the accessible unisex sanitary facility. Jensen Hughes can prepare a Performance Solution that permits the Unisex WCs. Alternatively, the architectural plans are to be updated to assign a gender to these sanitary facilities.  	NSW F4D4: Facilities in Class 3 to 9 buildings

Item	Description	BCA Provision
	Public Unisex Sanitary Facility	

1.0 Basis of Assessment

1.1 INTRODUCTION

This BCA Assessment report accompanies an Environmental Impact Statement (EIS) pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), in respect of a State Significant Development Application (SSDA) for a proposed mixed-use development at 35-37 Dwyer Street and 372-374 Mann Street, North Gosford.

1.2 PROJECT SITE

The project site is known as 35-37 Dwyer Street and 372-374 Mann Street, North Gosford and is legally known as Lot 4-5 in DP 15954, Lot 2A in DP 407164 and Lot 31 in DP 553523.

The site is irregularly shaped and has an area of 7038.5 m2. The site has a frontage of 86m to Dwyer Street to the north and 34.2m to Mann Street to the east. An aerial photograph of the site is provided in **Figure 1**.

Figure 1 Aerial Photograph

1.3 PROJECT DESCRIPTION

The project is a mixed-use development which includes site preparation works, the construction of three buildings ranging in height from seven storeys to 22 storeys containing residential apartments, commercial/retail floor area and basement car parking, and the construction of a private road, landscaping and public domain improvements.

1.4 PURPOSE

The purpose of this report is to assess the current design proposal against the Deemed-to-Satisfy Provisions of the BCA, and to clearly outline those areas (if any) where compliance is not achieved, where areas may warrant redesign to achieve strict BCA compliance or where areas may be able to be assessed against the relevant performance criteria of the BCA. Such assessment against relevant performance criteria will need to be addressed by means of a separate Fire Engineering Report (FER) for fire safety matters, and

Performance Solution Report for non-fire-safety matters; such reports are to be prepared under separate cover.

1.5 BUILDING CODE OF AUSTRALIA

The NCC has three (3) volumes being:

- Volume One - containing technical design and construction requirements for all Class 2 to 9 buildings.
- Volume Two - containing technical design and construction requirements for certain residential (Class 1) and non-habitable buildings and structures (Class 10).
- Volume Three - Containing technical requirements for the design and construction for plumbing and drainage systems in new and existing buildings.

This report is based on the Deemed-to-Satisfy Provisions of the National Construction Code (NCC) Series Volume One – Building Code of Australia, 2022 Edition (BCA), incorporating the State variations where applicable.

Please note that the version of the BCA applicable to new building works is the version applicable at the time of the lodgement of the Construction Certificate application to the Accredited Certifying Authority, or for Crown projects the date of the invitation for tenders to carry out the Crown building work, or in the absence of tenders the date on which the Crown building work commences.

A reference to the BCA in this report is a reference to **BCA2022**, being volume 1 of the NCC.

1.6 LIMITATIONS

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

1. the structural adequacy or design of the building;
2. the inherent derived fire-resistance ratings of any proposed structural elements of the building (unless specifically referred to); and
3. the design basis and/or operating capabilities of any proposed electrical, mechanical or hydraulic services.

This report does not include, or imply compliance with—

1. the National Construction Code – Plumbing Code of Australia Volume 3;
2. the Disability Discrimination Act 1992 including the Disability ((Access to Premises – Buildings) Standards 2010 – unless specifically referred to) (Note: The provision of access for people with a disability for the subject development has not been assessed against the Deemed-to-Satisfy Provisions of Part D4 and Clauses E3D7, E3D8, F4D5, F4D6, F4D7 and F4D12 of BCA2022 unless otherwise discussed in this report);
3. Demolition Standards not referred to by the BCA;
4. Work Health and Safety Act 2011;
5. Requirements of Australian Standards unless specifically referred to;
6. Requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Local Council, ARTC, Department of Planning and the like; and
7. Conditions of Development Consent issued by the Local Consent Authority.

1.7 DESIGN DOCUMENTATION

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

2.0 Building Description

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

2.1 RISE IN STOREYS (CLAUSE C2D3)

Table 1: Rise in storeys

Building	Rise in storeys
Site A (Building 1)	Twenty-two (22)
Site B (Buildings 2 & 3)	Eight (8)

2.2 CLASSIFICATION (CLAUSE A6G1)

The building has been classified as follows.

Table 2: Building Classification

Class	Level	Description
Site A (Building 1)		
Class 7a	Basement 5 – Basement 1	Carparking
Class 7b	Lower Ground	Storage
Class 6	Upper Ground	Commercial tenancy
Class 2	Levels 1–Level 20	Residential units and associated common areas
Site B (Buildings 2 & 3)		
Class 7a	Basement 3 – Basement 1	Carparking
Class 7b	Lower Ground	Residential storage
Class 2	Lower Ground-Level 5	Residential units and associated common areas

2.3 EFFECTIVE HEIGHT (CLAUSE A1G4)

+ **Site A** (Building 1) has an *effective height* of **66.85 m** (L20 RL 86.750 - Lower Ground RL 19.900).
+ **Site B** (Building 2 & 3) has an *effective height* of **23.05 m** (Roof RL 37.850 – Lower Ground RL 14.800).

2.4 TYPE OF CONSTRUCTION REQUIRED (TABLE C2D2)

The building is required to be of **Type A** Construction.

2.5 FLOOR AREA AND VOLUME LIMITATIONS (TABLE C3D3)

The building is subject to the following maximum floor area and volume limits:

Class 2	The Class 2 portions of the building are not subject to floor area and volume limitations of C3D3 as Specifications 5 and Clause C4D12 of the BCA regulate the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 buildings.	
Class 6	Maximum Floor Area	5000 m^2
	Maximum Volume	30000 m^3
Class 7a	The carpark is to be provided with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17) and as such there are no maximum floor area or volume limitations for this area.	
Class 7b	Maximum Floor Area	5000 m^2
	Maximum Volume	30000 m^3

2.6 FIRE COMPARTMENTS

The following *fire compartments* have been assumed:

Site A (Building 1)

1. Basement 5-Upper Ground – Class 7a areas.
2. Lower Ground – Class 7b areas.
3. Upper Ground – Class 6 commercial tenancy.
4. Upper Ground – Class 2 areas.
5. Level 1-Level 21 – Each storey.

Site B (Building 2 & 3)

1. Basement 3-Lower Ground – Class 7a areas
2. Lower Ground – Class 7b areas.
3. Lower Ground-Level 5 – Class 2 areas.

2.7 EXITS

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

+ Doorways serving fire-isolated stairways.
+ Doorways serving fire-isolated passageways.

+ External doorways leading to open space.

2.8 CLIMATE ZONE

The building is located within Climate Zone **5**.

2.9 LOCATION OF FIRE-SOURCE FEATURES

The fire source features for the subject development are:

Site A (Building 1)

North: The far boundary of Dwyer Street

South: The rear allotment boundary

East: The far boundary of Mann Street

West: The side allotment boundary

Site B (Buildings 2 & 3)

North: The far boundary of Dwyer Street

South: The rear allotment boundary

East: The side allotment boundary

West: The far boundary of the New Road

In accordance with Clause S5C2 of Specification 5, a part of a building element is exposed to a *fire-source feature* if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that–

1. has an FRL of not less than 30/–/–; and
2. is neither transparent nor translucent.

3.0 BCA Assessment

3.1 INTRODUCTION

The assessment undertaken is in relation to the plans prepared for the development consent application. The technical details required for a development consent are far less than that required for a construction certificate and as such, this assessment is designed to address a higher-level assessment of the building against the provisions of the BCA.

The main purpose of this report is to identify any major design changes required to the building, services required to be installed, and the fundamentals of design required by sections C, D, E, F, G and H (where applicable) of the BCA. This report does not address the design requirements for the structure of the building (Section B), or for the detailed design of services (Section E) and is subject to the limitations outlined under Section 1.4 of this report.

The summary below is to be read in conjunction with the BCA specification contained in Annexure E of the report. The proposed development is capable of complying with the requirements of the BCA2022; however, further design development is to occur at Construction Certificate (CC) stage to demonstrate compliance with the below provisions.

3.2 RELATIONSHIP TO THE DESIGN AND BUILDING PRACTITIONERS ACT

The Design and Building Practitioners Act requires certain specified design to be certified by a Registered Practitioner and the issuing of a Design Compliance Declaration (DCD). The declared designs include:

+ Structure
+ Building Enclosure (e.g. Façade);
+ Fire Safety Systems (e.g. services, egress and FRLs)
+ Waterproofing
+ Fire Safety performance solutions.

This report contains an assessment of the plans and specifications available, which are not sufficient in detail to allow any DCD to be issued by others. This report is not to be construed as, or used to support to a DCD at Construction Certificate Stage as it is based on development application drawings only.

3.3 FIRE RESISTANCE – SECTION C

3.3.1 Fire resistance and stability – Part C2

+ Subject to the required FRLs being provided in accordance with **Annexure C**, the proposed building is capable of complying with the requirements of the BCA2022 Specification 5 with respect to fire resistance.
+ It is recommended that a Fire Safety Engineer provides early input to determine whether the fire-resistance levels can be rationalised in the following locations:

  Site A (Building 1)

  - Upper Ground – Class 6 part.
  - Lower Ground – Class 7b parts.

  Site B (Building 2 & 3)

  - Basement 2 and Lower Ground – Class 7b parts.

- Level 6 Occupiable outdoor area - Columns/Roofs over Pergola Structures.

+ Since the buildings attract **Type A** construction—
  - external walls and their components are to comply with BCA2022 Clause C2D10; and
  - ancillary elements fixed to external walls are to comply with BCA2022 Clause C2D14.

+ Internal linings and materials are required to meet the specified fire hazard properties of BCA2022 Clause C2D11 and Specification 7.

+ BCA2022 Clause S5C8 requires that the garbage chutes are enclosed at the top and bottom via fire-resistant construction. It is recommended that a Fire Safety Engineer provides early input to determine whether the garbage chute FRL requirements can be rationalised.

3.3.2 Compartmentation and Separation – Part C3

+ Class 2 and 7a parts are not subject to the floor area and volume limitations prescribed in BCA2022 Clause C3D3, noting that the carparking will be provide with a sprinkler system in accordance with AS 2118.1—2017.

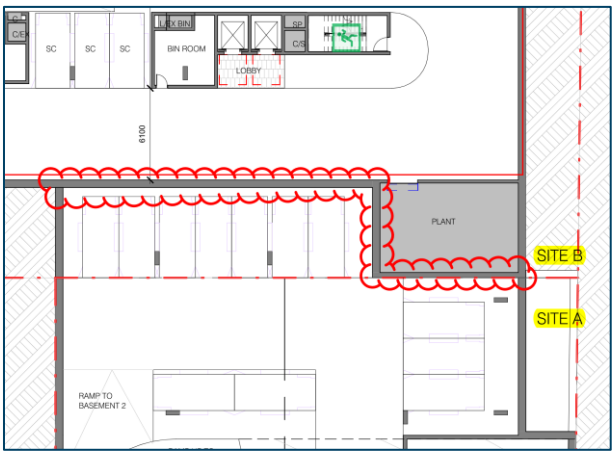
+ Class 6 and 7b parts are within the floor area and volume limitations prescribed in BCA2022 Clause C3D3.

+ Since the buildings are required to be provided with a sprinkler system in accordance with AS 2118.1—2017—

  - spandrel separation is not required in accordance with BCA2022 Clause C3D7; and

  - the internal Fire Pump Rooms located in B1, Lower Ground, and B2 & B3, Basement Level 1 are not required to be fire separated from the remainder of the building in accordance with BCA2022 Clause C3D13 and AS 2419.1—2021.

+ Site A (Building 1) and Site B (Buildings 2 & 3) are considered as two (2) separate buildings; therefore, a fire-resistant wall shall separate them in accordance with BCA2022 Clause C3D8.



Separation of buildings fire wall location

+ The following areas are required to be separated from the remainder of the building by fire-resisting construction that achieves a minimum FRL of 120/120/120 in accordance with BCA2022 Clause C3D14:

- B1, Lower Ground, Electrical Switch Room, if it sustains emergency equipment operating in emergency mode.
- B2, Lower Ground, Electrical Switch Room, if it sustains emergency equipment operating in emergency mode.
- B2 & B3, Basement level 1, Electrical Switch Room, if it sustains emergency equipment operating in emergency mode.

+ The length of public corridor serving Class 2 parts are greater than 40 m; therefore, smoke separation is required in accordance with BCA2022 Clause C3D15 to the below areas. It is recommended that a Fire Safety Engineer provides early input to determine whether smoke separation to the above listed areas can be omitted via a Performance Solution.

  Site B (Building 2 & 3)

  - Lower Ground (B2 & B3)
  - Upper Ground (B2 Only).

3.3.3 Protection of Openings – Part C4

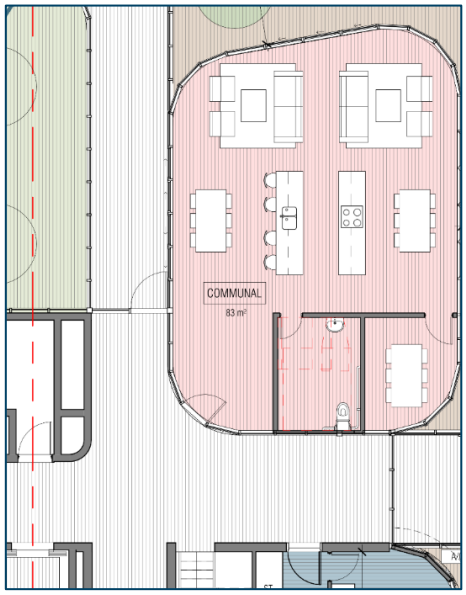
+ The external walls are located more than 3 m from any boundary. As such, there is no requirement to protect any openings within the external walls.

+ BCA2022 Clause C4D6 requires that doorways located in fire walls must have an FRL equivalent to the fire wall, except that the door must have an insulation level of at least 30-minutes.

+ BCA2022 Clause C4D11 requires that passenger lift and car lift doors in fire-isolated shafts are required to achieve a minimum FRL of -/60/-.

+ BCA2022 Clause C4D12 requires that doorways located in Class 2 bounding walls must be self-closing - /60/30 fire doors.

+ Site A – BCA2022 Clause NSW C4D12 requires that the walls bounding the Communal area on Level 20 be constructed of concrete or masonry or be lined internally with a fire-protective covering. It is recommended that a Fire Safety Engineer provides early input to determine whether the glazed construction can be rationalised via a Performance Solution.



Site A, Level 20 Glazed bounding construction

+ Where electrical, plumbing, mechanical or other services pass through an element of construction that is required to achieve a fire resistance level (FRL), the service installation shall not compromise the fire resistance level of the element. As such, the service installation must be fire sealed with a compliant system such as fire collar on PVC pipes or fire rated mastic on electrical cables. Compliance is readily achievable with BCA2022 Clauses C4D13, C4D14 and C4D15.

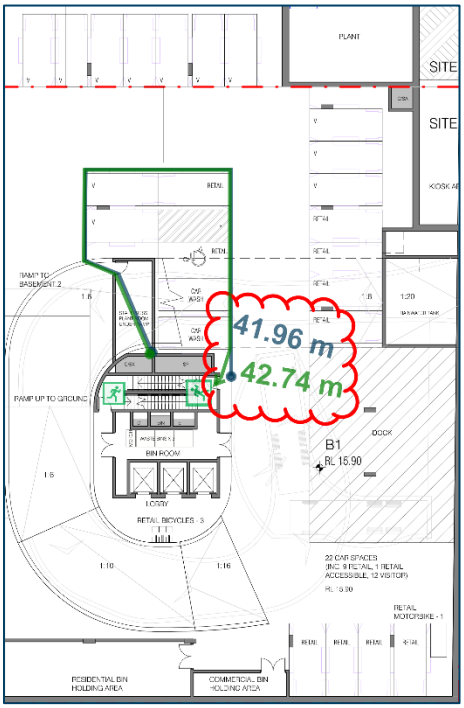
3.4 OCCUPANT ACCESS AND EGRESS – SECTION D

3.4.1 Provision for escape – Part D2

+ Access is provided to at least—
  - one (1) exit from the Ground Floor residential units and Commercial tenancy in accordance with BCA2022 Clause D2D3(2)(b).
  - two (2) exits from all other areas in accordance with BCA2022 Clause D2D3(2)(a), noting that the building has an effective height of more than 25 m; and
+ BCA2022 Clause D2D4 requires that all stairways within common areas are to be constructed as fire-isolated stairways since they pass through more than four (4) storeys.
+ It is recommended that a Fire Safety Engineer provides early input to determine whether the following extended travel distances to a point of choice (POC), and to a required exit can be addressed as part of a Performance Solution:

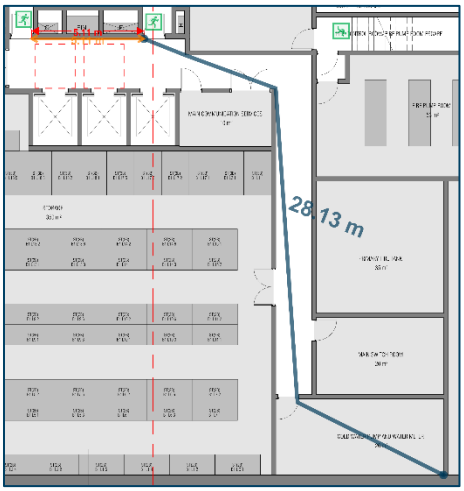
  Site A (Building 1)

  - Basement level 1
    - **42 m** to a POC in lieu of **20 m**,
    - **43 m** to an exit lieu of **40 m.**



Basement 1 Travel Distances

- Lower Ground – **29 m** to a POC in lieu of **20 m**.



Lower Ground

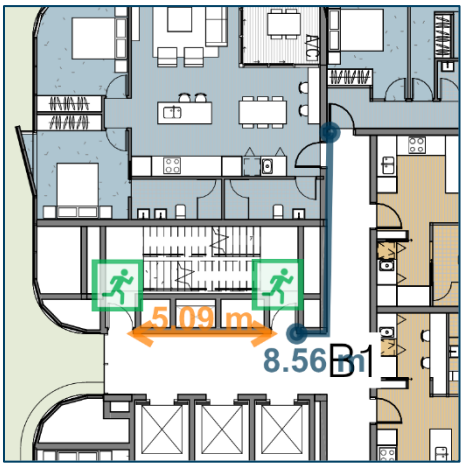
- Level 1 – **7 m** to a POC in lieu of **6 m**.

Level 1

- Level 2 – **7 m** to a POC in lieu of **6 m**.

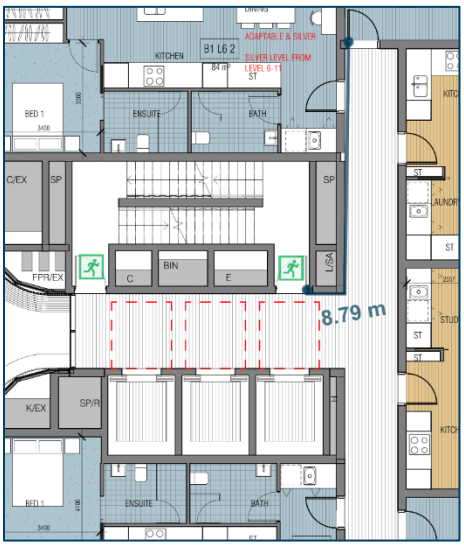
Level 2

- Level 3 - **9 m** to a POC in lieu of **6 m.**



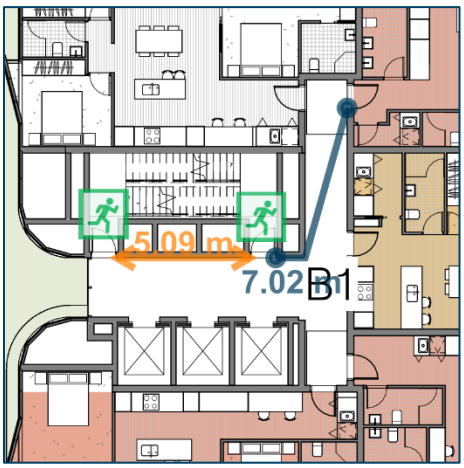
Level 3

- Levels 4-16 - **9 m** to a POC in lieu of **6 m**.



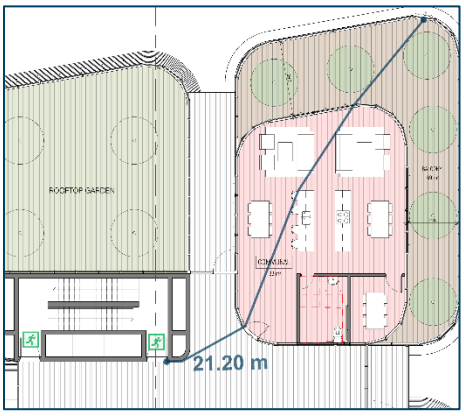
Levels 4-16

- Levels 17-19 - **8 m** to a POC in lieu of **6 m**.



Levels 17-19

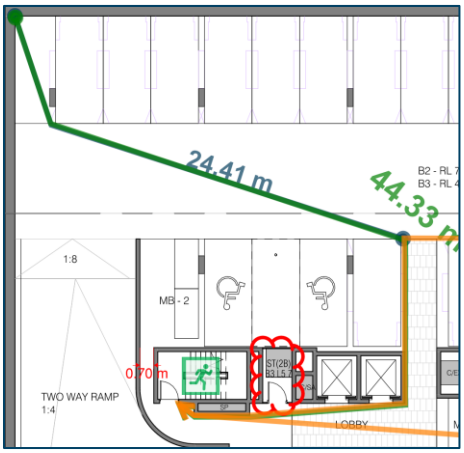
- Level 20 – **22 m** to a POC in lieu of **6 m**.



Level 20

Site B (Buildings 2 & 3)

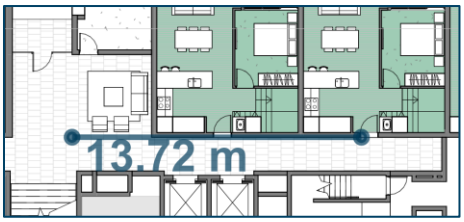
- Basement level 3
  - **25 m** to POC in lieu of **20 m.**
  - **45 m** to an exit in lieu of **40 m.**



Basement 3 Travel Distances

Note 1: The storage space clouded in red is now obstructing previously compliant travel distance to an exit in this location, and thus, creating a new non-compliance. If the storage space were to be relocated, compliant travel distances would be achieved.

- Building 2, Lower Ground – **14 m** to a POC in lieu of **6 m**.



Building 2, Lower Ground

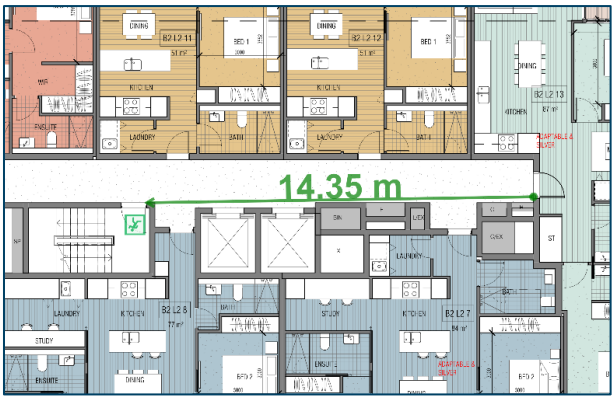
- Building 3, Upper Ground – **16 m** to an exit in lieu of **12 m.**

Building 3, Upper Ground

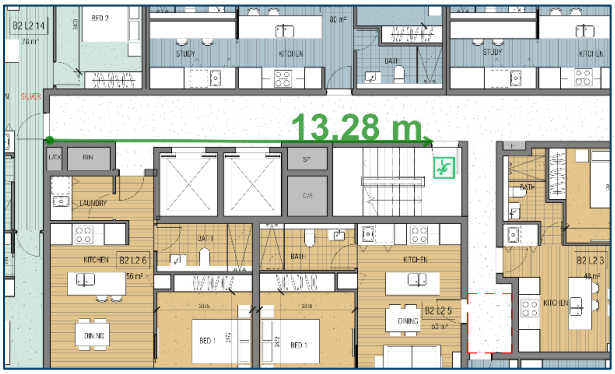
- Building 2 & 3, Level 1 – **15 m** to an exit in lieu of **12 m.**

Building 2 & 3, Level 1

- Level 2 – **15 m** to an exit in lieu of **12 m.**

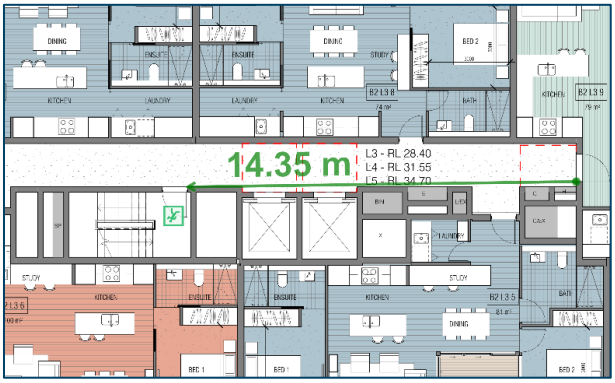


Building 3, Level 2

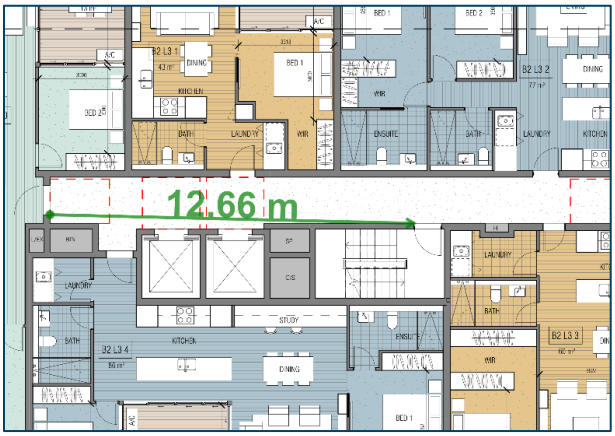


Building 2, Level 2

- Level 3 – **15 m** to an exit in lieu of **12 m.**

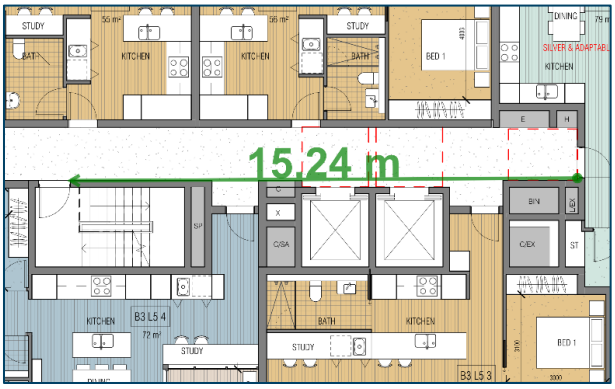


Building 3, Level 3

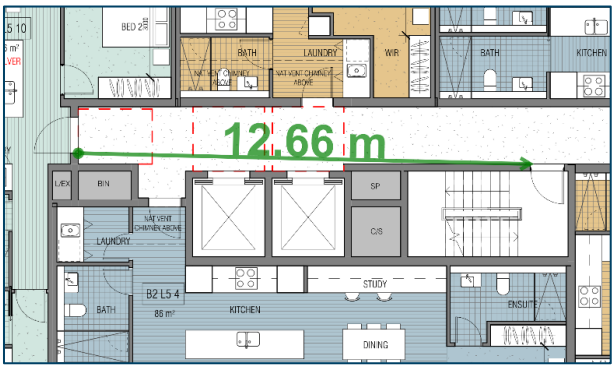


Building 2, Level 3

- Levels 4-5 – **18 m** to an exit in lieu of **12 m.**



Building 3, Levels 4-5

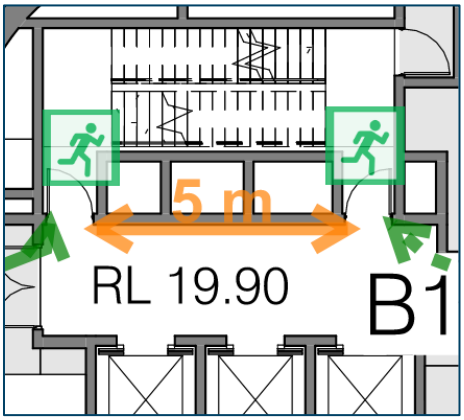


Building 2, Levels 4-5

+ BCA2022 Clause D2D6 requires a minimum distance of **9 m** between alternative exits and a maximum of **45 m** apart for Class 2 parts, and **60 m** apart for class 7 parts. It is recommended that a Fire Safety Engineer provides early input to determine whether the following distances between alternative exits can be addressed as part of a Performance Solution:

Site A (Building 1)

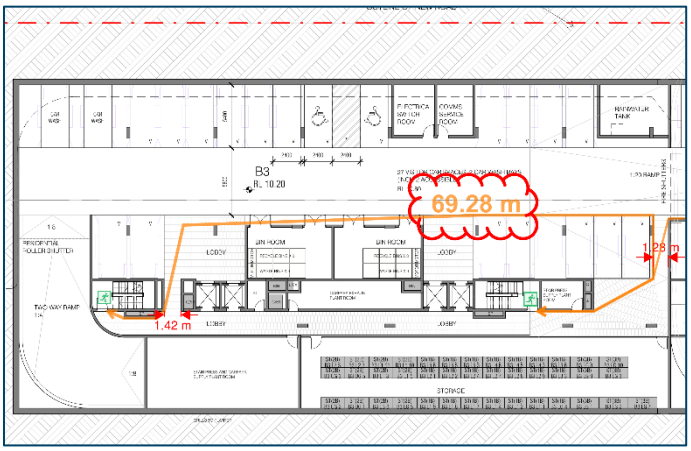
- All levels (typical), except for Basement 1 level where compliance is met - **5 m** between alternative exits in lieu of **9 m**.



All levels (typical), except for Basement 1

Site B (Buildings 2 & 3)

- Building 2, Basement Level 1, between the most southern fire stair and the next (northern) fire stair distance is **70 m** in lieu of the maximum permitted **60 m** between alternative exits.



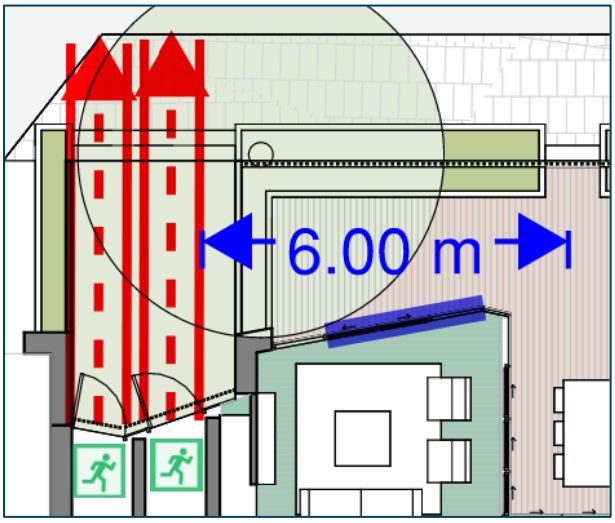
Site B – Building 3 – Basement Level 1

+ Sufficient unobstructed egress width of **1 m** or greater is required to be maintained in accordance with BCA2022 Clause NSW D2D8 within a path of travel to a required exit.

+ In the instance where discharge from the fire-isolated exit is under cover, the design must ensure that there is an unobstructed clear height of **3 m** or more in accordance with BCA2022 Clause D2D12(c).

+ Where a path of travel from the point of discharge on the Upper and/or Lower Ground Floors from a fire-isolated stairway necessitates passing within **6 m** of any part of an external wall, measured horizontally at right angles to the path of travel, that part of the wall must have an FRL of not less than **60/60/60** and extend for a distance of **3 m** above or below, as appropriate, the level of the path of travel in accordance with BCA2022 Clause D2D12(3). It is recommended that a Fire Safety Engineer provides early input to determine whether the path of travel along the subject building and any unprotected openings can be rationalised via a Performance Solution. The following locations are indicative:

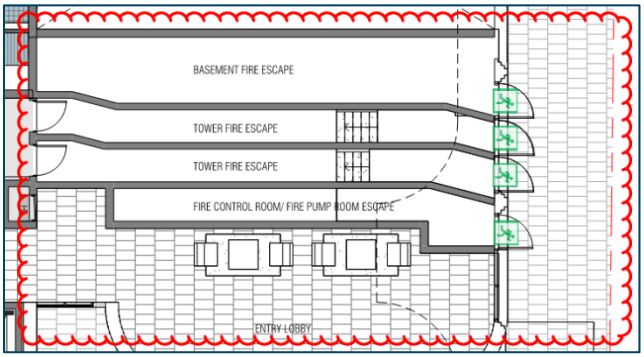
Site B (Buildings 2 & 3)



Site B – Building 2 – Lower Ground

Site B – Building 3 – Lower Ground

+ BCA2022 NSW Clause D2D15(4) requires the discharge point of alternative exits to be as far apart as practicable. It is recommended that a Fire Safety Engineer provides early input to determine whether the discharge point of alternative exits may be located as per current design.



Site A Upper Ground Level Exit discharge

3.4.2 Construction of exits – Part D3

+ Details of treads and risers, landings, thresholds, balustrades, and handrails have not been provided at this stage; however, compliance is readily achievable with BCA2022 Part D3.

+ BCA2022 Clause D3D5 requires separation of rising and descending stair flights in fire-isolated stairways. It is recommended that a Fire Safety Engineer provides early input to determine whether this can be omitted via a Performance Solution in the following locations:

Site A (Building 1)

Site A, Upper Ground Level

Site B (Buildings 2 & 3)

Site B, Building 3, Lower Ground Level

+ Electrical distribution cupboards are to be provided with smoke separation to satisfy the requirements of BCA2022 Clause D3D8. The doors are to be lined internally with fire grade plasterboard or metal backing sheets and smoke seals provided to all four sides, including drop down seals on the bottom. All penetrations from the enclosure are to be suitable sealed against smoke spread by sealing with fire mastic.

+ Building roofs used as open space for exits to discharge must be in accordance with BCA Clause D3D13 and provide an FRL of **120/120/120**. This requirement is applicable to the pedestrian through site link between Buildings 2 & 3.

- Balcony barriers protecting a height of greater than **4 m** above the surface beneath must not incorporate climbable elements between **150-760 mm** above the floor in accordance with BCA2022 D3D20.
- A swinging door in a required exit must swing in the direction of egress in accordance with BCA2022 D3D25.
- Hinged swing doors shown for the bin rooms located on Site B in Basement 1 and 2 levels must be readily openable without a key in the direction of egress and provide a single hand pushing action on a single device located between **900 mm** and **1200 mm** from FFL in accordance with 2022BCA NSW Clause D3D26.
- Window opening protection is to be provided in accordance with BCA2022 Clause D3D29 for Class 2 parts.

3.4.3 Access for people with a disability – Part D4

BCA Part D4 has not been assessed within this report. The accessibility requirements have been assessed in 20250210-118363 ADR1.0.

3.5 SERVICES AND EQUIPMENT- SECTION E

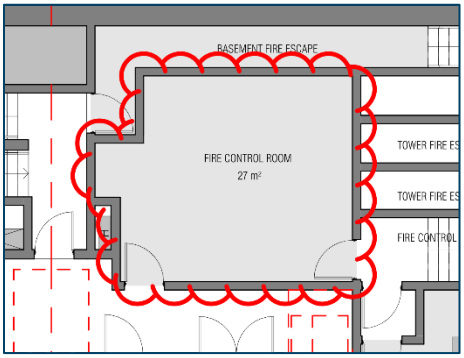
The building is required to be provided with the services and equipment set out in **Annexure B** of this report. The annexure also outlines the standard of performance to be achieved by the services and equipment.

3.5.1 Fire Fighting Equipment – Part E1

Site A (Building 1)

- A fire hydrant system is to be provided in accordance with BCA2022 E1D2 and AS 2419.1—2021 for since the buildings have a floor area greater than 500 m² respectively.
- A fire hose reel system is to be provided in accordance with BCA2022 Clause E1D3 and AS 2441—2005 for Class 6, 7a and & 7b parts since the buildings will be served by one or more internal fire hydrants.
- A sprinkler system is to be provided in accordance with—
  - BCA2022 Clause E1D4;
  - BCA2022 Clause E1D5 since Building 1 has an effective height of more than 25 m;
  - BCA2022 Clause E1D9 since the carpark accommodates more than forty (40) vehicles;
  - BCA2022 Specification 17;
  - AS 2118.1—2017; and
  - AS 2118.6—2012 – **TBC**.
- Portable fire extinguishers are to be provided in accordance with BCA2022 Clause E1D14 and AS 2444—2001.
- A fire control room is to be provided in accordance with BCA2022 Clause E1D15 and Specification 19 since Building 1 has an effective height of more than **50 m**.

+ The fire control room requires the room and be accessible via two (2) paths of travel as per BCA2022 Clause S19C9. One (1) path shall be from the front entrance of the building, and another can remain to be via a fire-isolated passageway leading to a road or open space. Further, S19C4 requires that a fire control centre must be so located in a building that egress from any part of its floor, to a road or open space, does not involve changes in level which in aggregate exceed **300 mm**. The architectural plans are to be updated to illustrate compliance. Alternatively, a Fire Safety Engineer shall provide early input to determine whether the location of the Fire Control Room can be addressed as part of a performance solution.



Lower Ground Fire Control Room location

+ The Fire Safety Engineer is to consider the increased fire hazard associated with EVs in the Class 7a areas and is to confirm whether any enhanced fire safety measures are required in accordance with BCA2022 Clause E1D17.

Site B (Building 2 & 3)

+ A fire hydrant system is to be provided in accordance with BCA2022 E1D2 and AS 2419.1—2021 for since the buildings have a floor area greater than 500 m² respectively.

+ A fire hose reel system is to be provided in accordance with BCA2022 Clause E1D3 and AS 2441—2005 for 7a and & 7b parts since the buildings will be served by one or more internal fire hydrants.

+ A sprinkler system is to be provided in accordance with—

  - BCA2022 Clause E1D4;
  - BCA2022 Clause E1D6;
  - BCA2022 Clause E1D9 since the carpark accommodates more than forty (40) vehicles;
  - BCA2022 Specification 17;
  - BCA2022 Specification 18;
  - AS 2118.1—2017; and
  - AS 2118.6—2012 – **TBC**.

+ It is recommended that a Fire Safety Engineer provides early input to determine whether the requirements for sprinkler coverage in accordance with BCA2022 Clause E1D4 can be omitted for the rooftop pergolas via a Performance Solution.

+ Portable fire extinguishers are to be provided in accordance with BCA2022 Clause E1D14 and AS 2444—2001.

+ The Fire Safety Engineer is to consider the increased fire hazard associated with EVs in the Class 7a areas and is to confirm whether any enhanced fire safety measures are required in accordance with BCA2022 Clause E1D17.

3.5.2 Smoke Hazard Management - Part E2

Site A (Building 1)

+ An automatic fire detection and alarm system is to be provided in accordance with—
  - BCA2022 Clause E2D3;
  - BCA2022 Clause E2D5 since Building 1 has an effective height of more than **25 m**;
  - BCA2022 Specification 20;
  - AS 1670.1—2018; and
  - AS 3786—2014.

+ An automatic air pressurisation system is to be provided within fire-isolated stairways in accordance with BCA2022 E2D4 and AS 1668.1—2015.

+ For Class 6 and 7b parts, a zone pressurisation system is to be provided between vertically separated fire compartments in accordance with BCA2022 Clause E2D6 and AS 1668.1—2015 since the building has an effective height of more than **25 m**. It is recommended that a Fire Safety Engineer provides early input to determine whether the omission of Zone Pressurisation may be considered on a performance basis.

+ For Class 7a parts, a carpark mechanical ventilation system is to be provided in accordance with BCA2022 Clause E2D12 and Clause 5.5 of AS 1668.1—2015.

+ If the buildings are served by an air-handling system/s which does not form part of a smoke hazard management system 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, the air-handling system/s must be provided with auto-shutdown capability in accordance with BCA2022 Clause E2D3, AS 1668.1—2015 and AS 1670.1—2018.

+ The Fire Safety Engineer is to consider the increased fire hazard associated with EVs in the Class 7a areas and is to confirm whether any enhanced fire safety measures are required in accordance with BCA2022 Clause E2D21.

Site B (Buildings 2 & 3)

+ An automatic fire detection and alarm system is to be provided in accordance with—
  - BCA2022 Clause E2D3;
  - BCA2022 Clause E2D8;
  - BCA2022 Clause E2D9;

- BCA2022 Specification 20;
- AS 1670.1—2018; and
- AS 3786—2014.

+ An automatic air pressurisation system is to be provided within fire-isolated stairways in accordance with BCA2022 E2D4 and AS 1668.1—2015.

+ For Class 7a parts, a carpark mechanical ventilation system is to be provided in accordance with BCA2022 Clause E2D12 and Clause 5.5 of AS 1668.1—2015.

+ If the buildings are served by an air-handling system/s which does not form part of a smoke hazard management system 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, the air-handling system/s must be provided with auto-shutdown capability in accordance with BCA2022 Clause E2D3, AS 1668.1—2015 and AS 1670.1—2018.

+ The Fire Safety Engineer is to consider the increased fire hazard associated with EVs in the Class 7a areas and is to confirm whether any enhanced fire safety measures are required in accordance with BCA2022 Clause E2D21.

3.5.3 Lift Installations - Part E3

Site A (Building 1)

+ Since the passenger lifts serve a storey with an effective height of more than **12 m**, at least two (2) of the three (3) lifts are required to be—
  - able to accommodate 600 mm wide x 2000 mm long x 1400 mm high stretcher facility in accordance with BCA2022 Clause E3D3; and
  - emergency lifts in accordance with BCA2022 Clause E3D5, and
  - provided with lift floor dimensions of not less than 1400 mm wide x 1600 mm deep in accordance with BCA2022 Clause E3D8(b); and
  - provided with fire service controls in accordance with BCA2022 Clause E3D9; and
  - provided with fire service recall control switch in accordance with BCA2022 Clause E3D11; and
  - provided with a lift car fire service drive control switch in accordance with BCA2022 Clause E3D12.

+ Since the passenger lifts serve a storey with an effective height of more than 25 m, they must be constructed as emergency lifts in accordance with BCA2022 Clause E3D5.

Site B (Buildings 2 & 3)

+ Since the passenger lifts serve a storey with an effective height of more than **12 m**, at least one (1) lift in each tower is required to be able to accommodate 600 mm wide x 2000 mm long x 1400 mm high stretcher facility in accordance with BCA2022 Clause E3D3.

+ Since the passenger lifts serve accessible buildings, the below are also required, for each lift -

- floor dimensions of not less than 1400 mm wide x 1600 mm deep in accordance with BCA2022 Clause E3D8.

+ Where lifts serve any storey above an effective height of 12 m, the following must be provided -
  - fire service controls in accordance with BCA2022 Clause E3D9; and
  - each group of lifts provided with fire service recall control switch in accordance with BCA2022 Clause E3D11; and
  - provided with a lift car fire service drive control switch in accordance with BCA2022 Clause E3D12.

3.5.4 Visibility in emergency, exit signs and warning systems - Part E4

Site A (Building 1)

+ Emergency lighting is to be provided in accordance with BCA2022 Clauses E4D2 and E4D4, and AS/NZS 2293.1—2018.
+ Exit signage is to be provided in accordance with BCA2022 Clauses E4D5, NSW E4D6, E4D7 and E4D8, and AS/NZS 2293.1—2018.
+ Since Building 1 has an effective height of more than **25 m**, an emergency warning and intercom system is to be provided in accordance with BCA2022 Clause E4D9 and AS 1670.4—2018.

Site B (Buildings 2 & 3)

+ Emergency lighting is to be provided in accordance with BCA2022 Clauses E4D2 and E4D4, and AS/NZS 2293.1—2018.
+ Exit signage is to be provided in accordance with BCA2022 Clauses E4D5, NSW E4D6, E4D7 and E4D8, and AS/NZS 2293.1—2018.

3.6 HEALTH AND AMENITY - SECTION F

3.6.1 Surface water management, rising damp and external waterproofing – Part F1

+ Stormwater drainage is to be provided in accordance with BCA2022 Clause F1D3 and AS/NZS 3500.3—2021.
+ Exposed joints are to be provided in accordance with BCA2022 Clause F1D4 and AS 4654.2—2012.
+ External waterproofing membranes are to be provided in accordance with BCA2022 Clause F1D5, AS 4654.1—2012 and AS 4654.2—2012.
+ Damp-proofing is to be provided in accordance with BCA2022 Clause F1D6.

3.6.2 Wet areas and overflow protection – Part F2

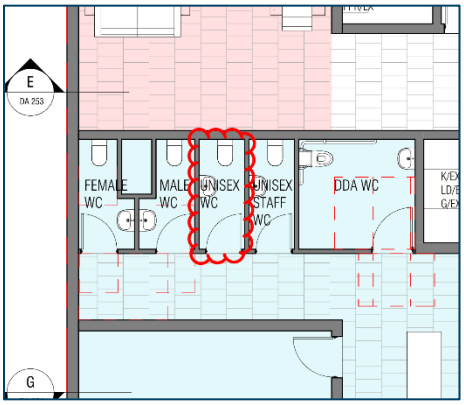
+ New wet areas are to be waterproofed in accordance with the requirements of BCA2022 Part F2 and AS 3740—2021.
+ Floor wastes are to be provided in Class 2 bathroom and laundries located at any level above a sole-occupancy unit or public space in accordance with the requirements of BCA2022 Clause F2D4.

3.6.3 Roof and wall cladding – Part F3

+ The following elements are capable of complying with BCA2022 Part F3:
  - Metal sheet roofing.
  - External waterproofing membranes applied to suspended slabs acting as roofs.
  - New sarking materials used for the weatherproofing of roof and walls.
  - New glazed assemblies.

3.6.4 Sanitary and other facilities – Part F4

+ The following sanitary facilities are detailed within each sole-occupancy unit (SOU) in accordance with BCA2022 Clause F4D2 for a Class 2 building:
  - Kitchen sink
  - Bath or shower
  - Closet pan
  - Washbasin
  - Laundry facilities.
+ The carparking areas are not required to be provided with dedicated sanitary facilities since they are considered ancillary to the other building uses within the building.
+ Based on peak population numbers advised (72 patrons and 4 staff), a sufficient number of sanitary facilities have been shown to achieve compliance in accordance with BCA2022 Clause NSW F4D4.
+ BCA2022 Clause NSW F4D4 requires that sanitary facilities serving the Site A Building 1 Upper Ground Level Class 6 Tenancy are to be gender designated, excluding the accessible unisex sanitary facility. Jensen Hughes can prepare a Performance Solution that permits the Unisex WCs. Alternatively, the architectural plans are to be updated to assign a gender to these sanitary facilities.



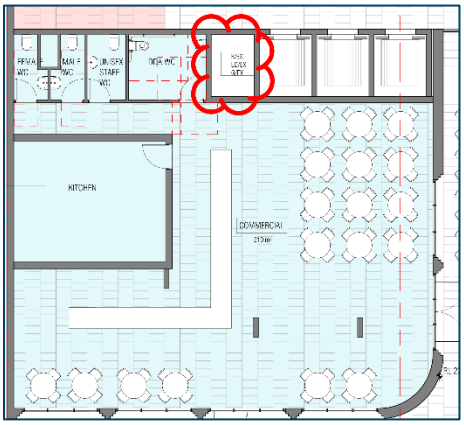
Public Unisex Sanitary Facility

3.6.5 Room heights – Part F5

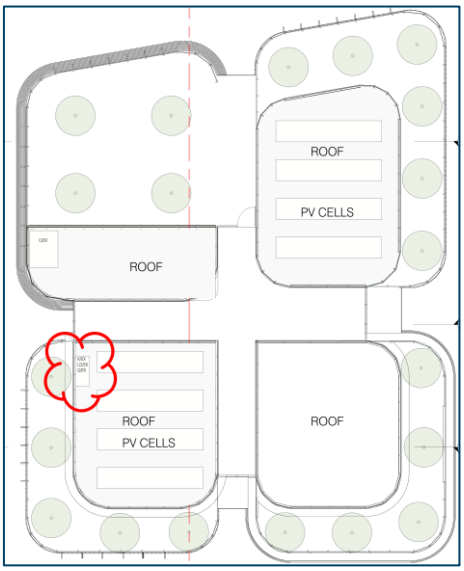
Reflected ceiling plans have not been provided at this stage; however, the subject buildings can comply with the requirements of BCA2022 Part F5 based on preliminary section details.

3.6.6 Light and Ventilation – Part F6

+ For Class 2 areas, the following is required:
  - Habitable rooms are to be provided with natural light in accordance with BCA2022 Clauses F6D3 and F6D4.
  - Where natural light is not provided in non-habitable rooms in accordance with BCA2022 Clause F6D3, artificial lighting in accordance with BCA2022 Clause F6D5 and AS/NZS 1680.0—2009.
  - Where natural ventilation is not provided in accordance with BCA2022 Clauses F6D7 and F6D8, a mechanical ventilation system in accordance with BCA2022 Clause F6D6, AS 1668.2—2012 and AS/NZS 3666.1—2014.
  - Sanitary compartments that open directly into kitchens are to be provided with mechanical exhaust ventilation in accordance with BCA2022 Clause F6D10.
+ For Class 6 and 7b areas, the following is required:
  - Artificial lighting in accordance with BCA2022 Clause F6D5 and AS/NZS 1680.0—2009.
  - Where natural ventilation is not provided in accordance with BCA2022 Clauses F6D7 and F6D8, a mechanical ventilation system in accordance with BCA2022 NSW Clause F6D6 and AS 1668.2—2012.
+ For Class 7a areas, the following is required:
  - Artificial lighting in accordance with BCA2022 Clause F6D5 and AS/NZS 1680.0—2009.
  - A mechanical ventilation system in accordance with BCA2022 Clause F6D11 and AS 1668.2—2012.
+ Clauses 3.10.2 and 4.9 of AS 1668.2-2012 requires that the carpark exhaust must be located not less than **6 m** from a property boundary or natural ventilation device (e.g. openable window/door serving an SOU).
+ BCA2022 Clause F6D12 requires that a commercial kitchen containing a cooking apparatus exceeding the values specified in this Clause must be provided with a kitchen exhaust hood complying with AS 1668.2—2012. The architectural plans show the approximate location of exhaust discharge to the roof of the building, however, design development must ensure that, Type B effluent with a flow rate exceeding 1000 L/s shall be not less than **6 m** from a property boundary, any boundary to a public street, any outdoor intake opening or any natural ventilation device or opening in accordance with Clause 3.10.3(c) of AS 1668.2—2012.



Site A Upper Ground Level Commercial Tenancy



Site A Roof Plan

3.6.7 Sound transmission and insulation – Part F7

BCA2022 Part F7 is a specialist area that outlines the acoustic separation requirements for the building. Compliance with BCA2022 Part F7 requires detailed input from an Acoustic Engineer. Given the specialist nature of BCA2022 Part F7, it is not within the scope of this report.

3.7 ANCILLARY PROVISIONS - SECTION G

3.7.1 Minor structure and components – Part G1

A building must provide for a safe manner of cleaning any windows located three (3) or more storeys above ground level in accordance with BCA2022 NSW Clause G1D1. The following options are available for cleaning the windows:

+ The windows can be cleaned wholly from within the building.
+ Provisions are made for cleaning windows by a method complying with the Work Health and Safety Act 2011 and regulations made under the Act.

3.7.2 Occupiable outdoor areas – Part G6

The external communal areas in the following locations are considered as occupiable outdoor areas and are to comply with the requirements of BCA2022 Part G6:

+ Site A (Building 1) – Level 20.
+ Site B (Buildings 2 & 3) – Level 6.

3.8 ENERGY EFFICIENCY - SECTION J

BCA2022 Section J is a specialist area that addresses the building fabric, building sealing, mechanical ventilation, lighting and building management systems. Compliance with BCA2022 Section J generally requires detailed design by a combination of consultants which may include Energy consultants, Façade Engineers and Mechanical and electrical engineers. Given the specialist nature of BCA2022 Section J, and the need for design by other consultants, it is not within the scope of this report.

4.0 Statement of Compliance

The plans assessed were developed to a standard suitable for submission as a development application and do not contain all the details necessary information to allow a CC to be issued. As such, this assessment was limited to the major items of the BCA with the view of identifying any items that may result in a modified development consent being required, or additional key items that need to be included in the design.

The architectural design documentation as referred to in report has been assessed against the applicable provisions of the Building Code of Australia, (BCA) and it is considered that such documentation complies or is capable of complying with that Code, subject to all matters for further consideration identified in this report being addressed in the design, and subject to compliance with all Annexures and Specifications included with this report.

Annexures

Annexure A - Design Documentation

This report has been based on the following design documentation.

Table 3: Architectural Plans

Architectural Plans Prepared by CURZON + PARTNERS			
Drawing Number	**Revision**	**Date**	**Title**
DA 000	G	9/04/25	COVER PAGE
DA 00	E	23/04/25	DRAWING REGISTER
DA 001	C	24/01/25	CONTEXT ANALYSIS PLAN
DA 002	C	24/01/25	SITE ANALYSIS PLAN
DA 003	C	24/01/25	SURVEY PLAN
DA 004	C	24/01/25	EXISTING SITE AXONOMETRICS
DA 005	C	24/01/25	EXISTING AERIAL AXONOMETRICS
DA 006	C	24/01/25	SITE ANALYSIS TREE STUDY
DA 007	C	24/01/25	SITE ANALYSIS SURROUNDING TYPOLOGY STUDY
DA 008	C	24/01/25	SITE ANALYSIS MOVEMENT AND ACCESS
DA 009.1	C	24/01/25	SITE AERIAL VIEW
DA 009.2	C	24/01/25	SITE AERIAL VIEW 2
DA 009	C	24/01/25	SITE ANALYSIS TOPOGRAPHY AND LANDSCAPE
DA 030	E	9/04/25	LAND ZONING
DA 031	C	9/04/25	FLOOR SPACE RATIO
DA 032	C	9/04/25	HEIGHT OF BUILDING
DA 033	C	2/10/24	DCP SETBACKS
DA 034	C	2/10/24	DCP SETBACKS DIAGRAM
DA 035	C	2/10/24	PROPOSED SETBACKS DIAGRAM

Architectural Plans Prepared by CURZON + PARTNERS			
Drawing Number	**Revision**	**Date**	**Title**
DA 036	D	9/04/25	ROAD STAGING DIAGRAM
DA 050	G	23/04/25	SITE PLAN - EXISTING CONTEXT
DA 051	G	23/04/25	SITE PLAN - FUTURE CONTEXT
DA 103	H	23/04/25	BASEMENT 5 PLAN
DA 104	J	23/04/25	BASEMENT 4 PLAN
DA 105	P	23/04/25	BASEMENT 3 PLAN
DA 106	Q	23/04/25	BASEMENT 2 PLAN
DA 107	S	23/04/25	BASEMENT 1 PLAN
DA 108	P	23/04/25	LOWER GROUND FLOOR PLAN
DA 109	N	23/04/25	UPPER GROUND PLAN
DA 110	I	23/04/25	LEVEL 1 PLAN
DA 111	I	23/04/25	LEVEL 2 PLAN
DA 112	C	23/04/25	LEVEL 3 PLAN
DA 113	I	23/04/25	LEVEL 4-5 PLAN
DA 114	I	23/04/25	LEVEL 6-16 PLAN
DA 115	I	23/04/25	LEVEL 17-19 PLAN
DA 116	I	23/04/25	LEVEL 20 PLAN
DA 117	I	23/04/25	ROOF PLAN
DA 140	G	9/04/25	LANDSCAPE PLAN
DA 141	H	9/04/25	DEEP SOIL PLAN
DA 200-1	C	20/03/25	MANN STREET ELEVATION (EAST) - MATERIALS
DA 200	G	23/04/25	MANN STREET ELEVATION (EAST)

Architectural Plans Prepared by CURZON + PARTNERS			
Drawing Number	**Revision**	**Date**	**Title**
DA 201-1	C	20/03/25	DWYER STREET ELEVATION (NORTH) - MATERIALS
DA 201	G	23/04/25	DWYER STREET ELEVATION (NORTH)
DA 202-1	C	20/03/25	THROUGH SITE LINK ELEVATION (SOUTH) - MATERIALS
DA 202	G	23/04/25	THROUGH SITE LINK ELEVATION (SOUTH)
DA 203-1	C	20/03/25	NEW PRIVATE ROAD ELEVATION (WEST) - MATERIALS
DA 203	G	23/04/25	NEW PRIVATE ROAD ELEVATION (WEST)
DA 204-1	C	20/03/25	SITE A - WEST ELEVATION - MATERIALS
DA 204	G	23/04/25	SITE A - WEST ELEVATION
DA 205-1	C	20/03/25	SITE B - EAST ELEVATION - MATERIALS
DA 205	G	23/04/25	SITE B - EAST ELEVATION
DA 206-1	C	20/03/25	SITE B - SOUTH ELEVATION - MATERIALS
DA 206	D	23/04/25	SITE B - SOUTH ELEVATION
DA 250	C	23/04/25	SECTION AA
DA 251	C	23/04/25	SECTION BB AND CC
DA 252	C	23/04/25	SECTION DD
DA 253	C	23/04/25	SECTION EE
DA 254	C	23/04/25	SECTION FF AND GG
DA 260	D	23/09/24	MANN ST SECTION
DA 261	C	2/10/24	DWYER STREET B1 SECTION
DA 262	D	2/10/24	DWYER STREET B2 SECTION
DA 263	D	2/10/24	NEW PRIVATE ROAD SECTION

Architectural Plans Prepared by CURZON + PARTNERS			
Drawing Number	**Revision**	**Date**	**Title**
DA 264	D	2/10/24	SITE A DRIVEWAY SECTION
DA 265	D	2/10/24	SITE B B2 DRIVEWAY SECTION
DA 300	G	23/04/25	MATERIALITY SHEET - B1 - NORTH & EAST ELEVATION
DA 301	G	23/04/25	MATERIALITY SHEET - B1 - SOUTH & WEST ELEVATION
DA 302	E	23/04/25	MATERIALITY SHEET - B2 - ELEVATIONS
DA 303	E	23/04/25	MATERIALITY SHEET - B3 - ELEVATIONS
DA 340	B	24/01/25	RENDER
DA 342	B	24/01/25	RENDER
DA 343	C	9/04/25	RENDER
DA 345	B	24/01/25	RENDER
DA 347	B	24/01/25	RENDER
DA 349	B	24/01/25	RENDER
DA 350	C	9/04/25	RENDER
DA 351	C	9/04/25	RENDER
DA 352	C	9/04/25	RENDER
DA 353	C	9/04/25	RENDER
DA 354	C	9/04/25	RENDER
DA 400	E	24/01/25	AXONOMETRIC VIEW 1
DA 401	E	24/01/25	AXONOMETRIC VIEW 2
DA 402	E	24/01/25	AXONOMETRIC VIEW 3
DA 403	E	24/01/25	AXONOMETRIC VIEW 4

Architectural Plans Prepared by CURZON + PARTNERS			
Drawing Number	**Revision**	**Date**	**Title**
DA 452	B	24/01/25	SHADOW DCP
DA 453	B	24/01/25	SHADOW COMPARISON
DA 454	A	24/01/25	SUN EYE VIEW DIAGRAMS
DA 455	A	24/01/25	SUN EYE VIEW DIAGRAMS
DA 500	E	24/01/25	AREA SCHEDULE
DA 501	D	21/02/25	GFA SCHEDULE - SITE A
DA 502	D	21/02/25	GFA SCHEDULE - SITE B
DA 503	/	/	BUILDING HEIGHT ANALYSIS
DA 504	E	9/04/25	SOLAR ANALYSIS - SITE A
DA 505	E	9/04/25	SOLAR ANALYSIS - SITE B
DA 506	H	9/04/25	NATURAL VENTILATION - SITE A
DA 508	E	9/04/25	NATURAL VENTILATION - SITE B
DA 509	A	9/04/25	COMMUNAL OPEN SPACE
DA 511	B	13/03/25	CARPARKING CALCULATIONS
DA 512	B	9/04/25	STORAGE VOLUMES - B1
DA 513	C	9/04/25	STORAGE VOLUMES - B2
DA 514	C	9/04/25	STORAGE VOLUMES - B3
DA 515	C	9/04/25	STORAGE VOLUMES - BASEMENT B1
DA 516	C	9/04/25	STORAGE VOLUMES - BASEMENT B2&B3
DA 517	B	9/04/25	KEY AVIATION COMPLIANCE SECTION
DA 600	A	24/01/25	B1 TYPICAL NORTH BALCONY AND FACADE DETAIL

Architectural Plans Prepared by CURZON + PARTNERS			
Drawing Number	**Revision**	**Date**	**Title**
DA 601	A	24/01/25	B1 TYPICAL EAST AND WEST BALCONY AND FACADE DETAIL
DAB1-100	P	23/04/25	LOWER GROUND & UPPER GROUND PLAN
DAB1-101	K	23/04/25	L1 & L2 PLAN
DAB1-102	J	23/04/25	TYPICAL TOWER PLAN
DAB1-103	F	23/04/25	L17-20 PLAN
DAB1-104	I	23/04/25	L21 & ROOF PLAN
DAB1-105	D	23/04/25	ADAPTABLE & SILVER LEVEL APARTMENTS - B1 SHEET 1
DAB1-106	C	23/04/25	ADAPTABLE & SILVER LEVEL APARTMENTS - B1 SHEET 2
DAB2-100	K	23/04/25	B2 LOWER GROUND FLOOR PLAN
DAB2-101	I	23/04/25	B2 UPPER GROUND FLOOR PLAN
DAB2-102	F	23/04/25	B2 LEVEL 1 FLOOR PLAN
DAB2-103	C	23/04/25	B2 LEVEL 2 FLOOR PLAN
DAB2-104	G	23/04/25	B2 LEVEL 3 PLAN
DAB2-105	F	23/04/25	B2 LEVEL 4 PLAN
DAB2-106	F	23/04/25	B2 LEVEL 5 PLAN
DAB2-107	H	23/04/25	B2 LEVEL 6 PLAN
DAB2-108	H	23/04/25	B2 ROOF PLAN
DAB2-110	D	23/04/25	ADAPTABLE & SILVER LEVEL APARTMENTS - B2 SHEET 1
DAB2-111	D	23/04/25	ADAPTABLE & SILVER LEVEL APARTMENTS - B2 SHEET 2

Architectural Plans Prepared by CURZON + PARTNERS			
Drawing Number	**Revision**	**Date**	**Title**
DAB2-112	B	23/04/25	ADAPTABLE & SILVER LEVEL APARTMENTS - B2 SHEET 2
DAB3-100	K	23/04/25	B3 LOWER GROUND FLOOR PLAN
DAB3-101	H	23/04/25	B3 UPPER GROUND FLOOR PLAN
DAB3-102	H	23/04/25	B3 LEVEL 1 FLOOR PLAN
DAB3-103	D	23/04/25	B3 LEVEL 2 FLOOR PLAN
DAB3-104	I	23/04/25	B3 LEVEL 3 PLAN
DAB3-105	H	23/04/25	B3 LEVEL 4 PLAN
DAB3-106	H	23/04/25	B3 LEVEL 5 PLAN
DAB3-107	H	23/04/25	B3 LEVEL 6 PLAN
DAB3-108	H	23/04/25	B3 ROOF PLAN
DAB3-110	D	23/04/25	ADAPTABLE & SILVER LEVEL APARTMENTS - B3 SHEET 1
DAB3-111	D	23/04/25	ADAPTABLE & SILVER LEVEL APARTMENTS - B3 SHEET 2
5 Sheets	/	23/04/25	250423 North Gosford - Response to BCA Markups
17 Sheets	/	25/03/25	20250325-118363 BCAR2.0 Extract -KC Markup

Annexure B - Essential Services

The following fire safety measures are required to be installed in the building. The following table may be required to be updated as the design develops and options for compliance are confirmed, including any omissions or additions as a result of the fire engineering processes.

This section provides information for the design team, including service designers, and may need to be updated upon receipt of final designs and performance solutions at the construction approval stage.

Site A (Building 1)

Table 4: Essential Fire Safety Measures

Item	Essential Fire and Other Safety Measures	Standard of Performance
Fire Resistance (Floors – Walls – Doors – Shafts)		
1.	Access Panels & doors/hoppers (fire rated)	**BCA2022 C4D14** (Openings in Shafts) **BCA2022 Specification 12** AS 1905.1:2015 (Fire Resistant Door sets)
2.	Construction Joints	**BCA2022 C2D2** **BCA2022 C4D16** **BCA2022 Specification 5** AS 1530.4:2014 AS 4072.1:2005
3.	Fire doors	**BCA2022 C3D13** (Separation of Equipment) **BCA2022 C3D14** (Electricity Supply Systems) **BCA2022 C4D6** (Doors in Fire Walls) **BCA2022 C4D9 (**Openings in Fire Isolated Exits) **BCA2022 C4D11** (Opening in Fire Isolated Lift Shafts) **BCA2022 C4D12** (Bounding Construction) **BCA2022 C4D14** (Opening in Shafts) **BCA2022 Specification 12** **BCA2022 Specification 19** AS1735.11- 1986 AS1905.1: 2015
4.	Fire seals protecting openings in fire resisting components of the building	**BCA2022 C4D15** (Openings for service installations) **BCA2022 Specification 13** AS 1530.4:2014 AS 4072.1-2005
5.	Lightweight construction	**BCA2022 C2D2**

Item	Essential Fire and Other Safety Measures	Standard of Performance
		BCA2022 C2D9 **BCA2022 C4D12** (Bounding Construction) **BCA2022 Specification 5** **BCA2022 Specification 6** AS 1530.4:2014
6.	Smoke Walls - **TBC**	**BCA2022 D3D5** (Separation of Rising and Descending Stair Flights)
7.	Smoke Doors	**BCA2022 C3D15** (Public Corridors Class 2/3) **BCA2022 Clause S11C2** **BCA2022 D3D5** (Separation of Rising and Descending Stair Flights) **BCA2022 Specification 12**
General		
8.	Fire control room	**BCA2022 E1D15** **BCA2022 Specification 19** (Fire Control Centres)
9.	Portable fire extinguishers	**BCA2022 E1D14** AS 2444–2001
General Egress		
10.	Warning & operational signs	**BCA2022 D3D28** (Signs on Fire Doors) **BCA2022 D4D7** (Braille Exit Signs) **BCA2022 E3D4** (Lift Signs) **BCA2022 Specification 15** **BCA2022 Specification 19** (Fire Control Room)
Lifts		
11.	Access to lift pits	**BCA2022 D2D22** (Access to Lift Pits)
12.	Emergency lifts	**BCA2022 E3D5** AS 1735.1:2003 (Appendix A) or AS 1735.2:2001
13.	Stretcher Lifts, including— + Fire Service Controls + Recall Operation + Drive control switch	**BCA2022 E3D3** **BCA2022 E3D9** (Fire Service Controls) **BCA2022 E3D11** (Fire Service Recall Operation Switch) **BCA2022 E3D12** (Lift Car Fire Service drive control switch) **BCA2022 Specification 24**

Item	Essential Fire and Other Safety Measures	Standard of Performance
Electrical Services		
14.	Automatic fail-safe devices - **TBC**	**BCA2022 D3D26** (Operation of Latches) **BCA2022 D3D27** (Re-entry from fire-isolated stairs) AS1670.1:2018 (Fire)
15.	Automatic fire detection & alarm system	**BCA2022 E2D3** **BCA2022 E2D4** **BCA2022 E2D5** **BCA2022 E2D6** **BCA2022 E2D21** **BCA2022 Specification 20** AS1670.1:2018 AS1670.4:2018 AS 3786:2014
16.	Emergency lighting	**BCA2022 E4D2** **BCA2022 E4D4** AS/NZS 2293.1:2018
17.	Exit signs	**BCA2022 E4D5** (Exit Signs) **BCA2022 E4D6** (Direction Signs) **BCA2022 NSW E4D7** (Residential Concession) **BCA2022 E4D8** (Design and Operation Exits) AS/NZS 2293.1:2018
18.	Emergency warning and intercom systems (EWIS)	**BCA2022 E4D9** AS 1670.4 (Amdt 1) (EWIS)
19.	System Monitoring	AS 1670.3:2018 **Note:** Monitoring is required for any sprinkler system.
Hydraulic Services		
20.	Automatic fire suppression systems	**BCA2022 E1D4** **BCA2022 E1D5** **BCA2022 E1D9** **BCA2022 E1D17** **BCA2022 Specification 17** AS 2118.1:2017 (Sprinklers) AS 2118.6:2012 (Combined Sprinklers/Hydrant) - **TBC**
21.	Fire hydrant systems	**BCA2022 E1D2** AS 2419.1:2021

Item	Essential Fire and Other Safety Measures	Standard of Performance
22.	Hose reel systems	**BCA2022 E1D3** AS 2441:2005
23.	Wall-wetting sprinkler / drenchers - **TBC**	**BCA2022 C4D5** AS 2118.2: Wall-wetting sprinkler / drenchers
Mechanical Services		
24.	Fire dampers	**BCA2022 C4D16** **BCA2022 Part E2** **BCA2022 Specification 20** AS 1668.1:2015 (Amdt 1) AS 1682.1:2015 & AS 1682.2:2015
25.	Mechanical air handling systems, including— + auto-shutdown of air-handling system – **TBC**; + mechanical ventilation to carpark; + fire-isolated exit pressurisation system; and + zone Pressurisation System - **TBC**.	**BCA2022 E2D3 – TBC** **BCA2022 E2D4** **BCA2022 E2D6 - TBC** **BCA2022 E2D12** **BCA2022 E2D21** **BCA2022 Specification 20** AS 1668.1:2015
26.	Smoke dampers - **TBC**	**BCA2022 E2D3** **BCA2022 Specification 20** AS 1668.1:2015 (Amdt 1) AS 1682.1:2015 AS 1682.2:2015

Site B (Buildings 2 & 3)

Table 4: Essential Fire Safety Measures

Item	Essential Fire and Other Safety Measures	Standard of Performance
Fire Resistance (Floors – Walls – Doors – Shafts)		
1.	Access Panels & doors/hoppers (fire rated)	**BCA2022 C4D14** (Openings in Shafts) **BCA2022 Specification 12** AS 1905.1:2015 (Fire Resistant Door sets) AS 1905.2:2005 (Fire Resistant roller shutters) - **TBC**
2.	Construction Joints	**BCA2022 C2D2** **BCA2022 C4D16** **BCA2022 Specification 5** AS 1530.4:2014 AS 4072.1:2005
3.	Fire doors	**BCA2022 C3D14** (Electricity Supply Systems) **BCA2022 C4D6** (Doors in Fire Walls) **BCA2022 C4D9** (Openings in Fire Isolated Exits) **BCA2022 C4D11** (Opening in Fire Isolated Lift Shafts) **BCA2022 C4D12** (Bounding Construction) **BCA2022 C4D14** (Opening in Shafts) **BCA2022 Specification 12** **BCA2022 Specification 19** AS1735.11- 1986 AS1905.1: 2015
4.	Fire seals protecting openings in fire resisting components of the building	**BCA2022 C4D15** (Openings for service installations) **BCA2022 Specification 13** AS 1530.4:2014 AS 4072.1-2005
5.	Lightweight construction	**BCA2022 C2D2** **BCA2022 C2D9** **BCA2022 C4D12** (Bounding Construction) **BCA2022 Specification 5** **BCA2022 Specification 6** AS1530.4:2014
6.	Smoke Walls - **TBC**	**BCA2022 C3D15** (Public Corridors Class 2/3)

Item	Essential Fire and Other Safety Measures	Standard of Performance
		BCA2022 D3D5 (Separation of Rising and Descending Stair Flights)
7.	Smoke Doors - **TBC**	**BCA2022 C3D15** (Public Corridors Class 2/3) Clause S11C2 **BCA2022 D3D5** (Separation of Rising and Descending Stair Flights) **BCA2022 D3D7** (Smoke Lobby) **BCA2022 Specification 12** AS1670.1:2018
General		
8.	Fire control centre	**BCA2022 E1D15** **Specification 19** (Fire Control Centres)
9.	Portable fire extinguishers	**BCA2022 E1D14** AS 2444–2001
General Egress		
10.	Warning & operational signs	**BCA2022 D3D28** (Signs on Fire Doors) **BCA2022 D4D7** (Braille Exit Signs) **BCA2022 E3D4** (Lift Signs) **BCA2022 Specification 15**
Lifts		
11.	Access to lift pits	**BCA2022 D2D22** (Access to Lift Pits)
12.	Stretcher Lifts including— + Fire Service Controls + Recall Operation + Drive control switch	**BCA2022 E3D3** **BCA2022 E3D9** (Fire Service Controls) **BCA2022 E3D11** (Fire Service Recall Operation Switch) **BCA2022 E3D12** (Lift Car Fire Service drive control switch) **BCA2022 Specification 24**
Electrical Services		
13.	Automatic fail-safe devices - **TBC**	**BCA2022 D3D26** (Operation of Latches) AS1670.1:2018 (Fire)
14.	Automatic fire detection & alarm system	**BCA2022 E2D3** **BCA2022 E2D4** **BCA2022 E2D8** **BCA2022 E2D9** **BCA2022 Specification 20** AS1670.1:2018

Item	Essential Fire and Other Safety Measures	Standard of Performance
		AS 3786:2014
15.	Emergency lighting	**BCA2022 E4D2** **BCA2022 E4D4** AS/NZS 2293.1:2018
16.	Exit signs	**BCA2022 E4D5** (Exit Signs) **BCA2022 NSW E4D6** (Direction Signs) **BCA2022 E4D7** (Residential Concession) **BCA2022 E4D8** (Design and Operation - Exits) AS/NZS 2293.1:2018
17.	System Monitoring	AS 1670.3 (Amdt 1) **Note:** Monitoring is required for any sprinkler system.
Hydraulic Services		
18.	Automatic fire suppression systems	**BCA2022 E1D4** **BCA2022 E1D5** **BCA2022 E1D6** **BCA2022 E1D9** **BCA2022 E1D17** **BCA2022 Specification 17** **BCA2022 Specification 18** AS 2118.1:2017 (Sprinklers) AS 2118.6:2012 (Combined Sprinklers/Hydrant) - **TBC**
19.	Fire hydrant systems	**BCA2022 E1D2** AS 2419.1:2021
20.	Hose reel systems	**BCA2022 E1D3** AS 2441:2005
21.	Wall-wetting sprinkler / drenchers - **TBC**	**BCA2022 C4D5** **BCA2022 D2D12** AS 2118.2: Wall-wetting sprinkler / drenchers
Mechanical Services		
22.	Fire dampers	**BCA2022 C4D16** **BCA2022 Part E2** **BCA2022 Specification 20** AS 1668.1:2015 (Amdt 1) AS 1682.1:2015 & AS 1682.2:2015

Item	Essential Fire and Other Safety Measures	Standard of Performance
23.	Mechanical air handling systems, including— + auto-shutdown of air-handling system – **TBC**; + mechanical ventilation to carpark; and + fire-isolated exit pressurisation system.	**BCA2022 E2D3 – TBC** **BCA2022 E2D4** **BCA2022 E2D6 - TBC** **BCA2022 E2D12** **BCA2022 E2D21** **BCA2022 Specification 20** AS 1668.1:2015
24.	Smoke dampers - **TBC**	**BCA2022 E2D3** **BCA2022 Specification 20** AS 1668.1:2015 (Amdt 1) AS 1682.1:2015 AS 1682.2:2015

Annexure C - Fire Resistance Levels

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

Type A Construction

Table 5: Type A Construction

Table S5C11a: Type A construction: FRL of loadbearing parts of external walls

Distance from a fire-source feature	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2	Class 7a	Class 6	Class 7b
Less than 1.5 m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/60/60	120/90/90	180/180/180	240/240/180
3m, or more	90/60/30	120/60/30	180/120/90	240/180/90

Table S5C11b: Type A construction: FRL of non-loadbearing parts of external walls

Distance from a fire-source feature	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2	Class 7a	Class 6	Class 7b
Less than 1.5 m	-/90/90	-/120/120	-/180/180	-/240/240
1.5 to less than 3 m	-/60/60	-/90/90	-/180/120	-/240/180
3m, or more	-/-/-	-/-/-	-/-/-	-/-/-

Table S5C11c: Type A construction: FRL of external columns not incorporated in an external wall.

Column Type	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2	Class 7a	Class 6	Class 7b
Loadbearing	90/-/-	120/-/-	180/-/-	240/-/-
Non-loadbearing	-/-/-	-/-/-	-/-/-	-/-/-

Table S5C11d: Type A construction: FRL of common walls and fire walls

Wall Type	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2	Class 7a	Class 6	Class 7b
Loadbearing or non-bearing	90/90/90	120/120/120	180/180/180	240/240/240

Table S5C11e: Type A construction: FRL of loadbearing internal walls

Location	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2	Class 7a	Class 6	Class 7b
Fire-resisting lift and stair shafts	90/90/90	120/120/120	180/120/120	240/120/120
Bounding public corridors, public lobbies and the like	90/90/90	120/-/-	180/-/-	240/-/-
Between or bounding sole-occupancy unit	90/90/90	120/-/-	180/-/-	240/-/-
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion	90/90/90	120/90/90	180/120/120	240/120/120

Table S5C11f: Type A construction: FRL of non-loadbearing internal walls

Location	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2	Class 7a	Class 6	Class 7b
Fire-resisting lift and stair shafts	-/90/90	-/120/120	-/120/120	-/120/120
Bounding public corridors, public lobbies and the like	-/60/60	-/-/-	-/-/-	-/-/-
Between or bounding sole-occupancy unit	-/60/60	-/-/-	-/-/-	-/-/-
Ventilating, pipe, garbage, and like shafts not used for	-/90/90	-/90/90	-/120/120	-/120/120

Location	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2	Class 7a	Class 6	Class 7b
the discharge of hot products of combustion				

Table S5C11g: Table A construction: FRL of other building elements not covered by Tables S5C11a to S5C11f

Building Element	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2	Class 7a	Class 6	Class 7b
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

Note 1: Floors laid directly on the ground (e.g. slab-on-ground construction) are not required to achieve an FRL in accordance with BCA2022 Clause S5C12(a) of the BCA.

Note 2: Floors contained within a *sole-occupancy unit* in a Class 2 or 3 building or Class 4 part of a building are not required to achieve an FRL in accordance with BCA2022 Clause S5C12(d) of the BCA.

Note 3: A roof is not required to achieve an FRL if its covering is non-combustible and the building is sprinkler protected in accordance with BCA2022 Specification 17.

Note 4: A roof superimposed on a concrete slab roof is not required to achieve an FRL in accordance with BCA2022 Clause S5C14 if—

- the superimposed roof and any construction between it and the concrete slab roof are non-combustible throughout; and
- the concrete slab roof complies with BCA2022 Table S5C11g.

Note 5: For **Site B**, BCA2022 Clause S18C4(1) provides the following FRL concessions for Class 2 portions:

- The FRL for all other non-loadbearing internal walls, as required by BCA2022 Specification 5, may be reduced to **–/45/45** and the FRL for service penetrations through non-loadbearing internal walls and shafts, as required by BCA2022 Clause C4D15, may be reduced to **–/45/15.**
- The FRL for fire-isolated stairways enclosed with non-loadbearing construction, as required by BCA2022 Clause D2D4, may be reduced to **–/45/45.**

Note 6: Early input from a Fire Safety Engineer to determine whether FRLs can be reduced in line with the remainder of:

- **Site A**, Building 1 Lower Ground.
- **Site B**, Buildings 2 & 3 Lower Ground.

Annexure D - Definitions

Critical radiant flux

Critical radiant flux (CRF) means the critical heat flux at extinguishment (CHF in kW/m2) as determined by AS ISO 9239.1:2003.

Effective height

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

Envelope

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

1. the exterior of the building; or
2. a non-conditioned space including—

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

the floor above a carpark or warehouse; and

the common wall with a carpark, warehouse or the like.

Exit

Exit means –

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

An internal or external stairway.

A ramp.

A fire-isolated passageway.

A doorway opening to a road or open space.

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

Fire compartment

Fire compartment means –

1. the total space of a building; or

when referred to in—

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

the Deemed-to-Satisfy Provisions — any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that required for a fire wall for that type of construction and where

all openings in the separating construction are protected in accordance with the Deemed-to-Satisfy Provisions of the relevant Part.

Fire-resistance level (FRL)

Fire-resistance level (FRL) means the grading periods in minutes determined in accordance with Specification A2.3, for the following criteria—

1. structural adequacy; and
2. integrity; and
3. insulation,

and expressed in that order.

Note: A dash means that there is no requirement for that criterion. For example, 90/–/– means there is no requirement for an FRL for integrity and insulation, and –/–/– means there is no requirement for an FRL.

Fire-source feature

1. the far boundary of a road, river, lake or the like adjoining the allotment; or

a side or rear boundary of the allotment; or

an external wall of another building on the allotment which is not a Class 10 building.

Fire wall

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

Flammability index

Flammability Index means the index number as determined by AS 1530.2:1993.

Group number

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

Loadbearing

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

Non-combustible

Non-combustible means—

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

Occupiable outdoor area

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

1. that is open to the sky; and
2. to which access is provided, other than access only for maintenance; and
3. that is not open space or directly connected with open space.

Open space

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

Performance Requirement

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

Performance Solution

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

Sarking-type material

Sarking-type material means a material such as a reflective insulation or other flexible membrane of a type normally used for a purpose such as waterproofing, vapour management or thermal reflectance.

Smoke developed index

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

Smoke development rate

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

Sole-occupancy unit

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

1. a dwelling; or
2. a room or suite of rooms in a Class 3 building which includes sleeping facilities; or
3. a room or suite of associated rooms in a Class 5, 6, 7, 8 or 9 building; or
4. a room or suite of associated rooms in a Class 9c building, which includes sleeping facilities and any area for the exclusive use of a resident.

Annexure E - BCA Compliance Specification

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

Architectural Design Certification

1. The FRLs of building elements for the proposed works have been designed in accordance with S5C11 of Specification 5 of BCA2022 for a building of Type A Construction.
2. Lightweight construction used to achieve required fire resistance levels will comply with Specification 6 of BCA2022.
3. Building elements, including external walls and their components in buildings of Type A and B Construction, must be non-combustible in accordance with C2D10 of BCA2022.
4. Materials, floor and wall linings/coverings, surface finishes and air-handling ductwork used in the works will comply with the fire hazard properties of Clause C2D11 and Specification 7 of BCA2022.
5. Any ancillary elements fixed, installed, or attached to the internal parts or external face of an external wall that is required to be non-combustible will comply with Clause C2D14 of BCA2022.
6. The parts of different classifications located alongside one another in the same storey will be separated in accordance with Clause C3D9 and Specification 5 of BCA2022.
7. Floors separating storeys of different classifications will comply with BCA Clause C3D10 of BCA2022.
8. Equipment will be separated in accordance with Clause C3D13 of BCA2022.
9. Any electricity substation, any main switch room sustaining emergency equipment required to operate in emergency mode, will be separated from the remaining building with construction having an FRL 120/120/120 and provided with self-closing -/120/130 fire doors in accordance with Clause C3D14 of BCA2022.
10. The public corridors will be divided into intervals of not more than 40m in length with smoke proof walls in accordance with Clause C3D15, and S11C2 of Specification 11 of BCA2022. The smoke doors shall swing in both directions, or otherwise be installed to swing in the direction of egress.
11. Openings in the external walls that are required to have an FRL will be in located in accordance with Clause C4D3 and C4D4 of BCA2022 or protected in accordance with Clause C4D5 of BCA2022.
12. Doorways in any fire walls separating fire compartments will be protected in accordance with Clause C4D6 of BCA2022.
13. Doors in a fire-isolated exit will be self-closing or automatic closing fire doors with an FRL of not less than -/60/30 in accordance with Clause C4D9 of BCA2022.
14. Fire-isolated stairways will not be penetrated by services other than those permitted by Clause C4D10 of BCA2022.
15. Services penetrating elements required to possess an FRL including the floor slabs, walls, shafts, etc. will be protected in accordance with Clause C4D13, C4D14 and C4D15 and Specification 13 of BCA2022.
16. Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation will be protected in accordance with BCA Clause C4D16.

17. The lift doors will be -/60/- fire doors complying with AS 1735.11:1986 in accordance Clause C4D11 of BCA2022.
18. Doorways and other opening in internal walls required to have an FRL will be protected in accordance with Clause C4D12 of BCA2022.
19. Columns protected by light weight construction will achieve an FRL not less than the FRL for the element it is penetrating, in accordance with Clause C4D17 of BCA2022.
20. A lintel will have the FRL required for the part of the building in which it is situated, unless it does not contribute to the support of a fire door, fire window or fire shutter, and it spans an opening in masonry which is not more than 150 mm thick and is not more than 3m wide if the masonry is non- loadbearing; or not more than 1.8m wide if the masonry is loadbearing and part of a solid wall or one of the leaves of a cavity wall, or it spans an opening in a non-loadbearing wall of the Class 2 or 3 building, in accordance with Specification 5 Clause S5C4 BCA2022.
21. The top and bottom of the riser shafts will achieve an FRL not less than the FRL required for the walls of the shaft in accordance with Clause S5C8 of Specification 5 of BCA2022.
22. Fire doors will comply with AS 1905.1:2015 and Specification C4D5 of BCA2022.
23. Smoke doors will be installed in accordance with Specification 12 of BCA2022.
24. Fire shutters and fire windows will be in accordance with Specification 12 of BCA2022.
25. The number of exits provided to the building will be in accordance with Clause D2D3 of BCA2022.
26. The required exits will be fire-isolated in accordance with Clause D2D4 of BCA2022.
27. Travel distances to exits will be in accordance with Clause D2D5 of BCA2022.
28. The alternative exits will be distributed uniformly around the storey and will be not be less than 9m apart, and not more that 45m apart in any residential portions or patient care areas in the health-care building, or otherwise not more than 60m apart, in accordance with Clause D2D6 of BCA2022.
29. The dimensions of exits and paths of travel to exits will be provided in accordance with Clause D2D7 to D2D11 of BCA2022.
30. The fire-isolated exits will be in accordance with Clause D2D12 of BCA2022.
31. The external stairway or ramp serving as a required exit will be in accordance with Clause D2D13 of BCA2022.
32. Discharge from exits will be in accordance with Clause D2D15 of BCA2022.
33. The non-required stairways, ramps and escalators will be in accordance with Clause D2D17 of BCA2022.
34. The ladder from the plant, lift machine rooms, and electricity network substation in lieu of a stairway will be in accordance with Clause D2D21 of BCA2022.
35. Access to the lift pit will be in accordance with Clause D2D22 of BCA2022.
36. The stairway or ramp within the fire-isolated shaft is to be non-combustible, and if there is a local failure not cause structural damage or impair the fire resistance of the shaft, in accordance with Clause D3D3 of BCA2022.
37. The non-fire isolated stairs will be constructed in accordance with Clause D3D4 of BCA2022.
38. The construction separating rising and descending stairs in the fire-isolated exit stairway will be non-combustible and smoke proof, in accordance with Clause D3D5 of BCA2022.

39. The smoke lobby to the fire-isolated exit will be constructed in accordance with Clause D3D7 of BCA2022.
40. The construction of EDBs and telecommunications distribution boards will be in accordance with Clause D3D8 of BCA2022 with the enclosure bounded by non-combustible construction or fire protective covering and smoke seals provided around the perimeter of the non-combustible doors and any openings sealed with non-combustible mastic to prevent smoke spreading from the enclosure.
41. The fire-isolated passageway will be in accordance with Clause D3D12 of BCA2022.
42. The roof of the building where the exit discharges will have an FRL of 120/120/120 and will not have roof lights or openings within 3m of the path of travel in accordance with Clause D3D13 of BCA2022.
43. Stair geometry to the new stairways will be in accordance with Clause D3D14 of BCA2022. Stair treads are to have a surface with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013.
44. Landings and door thresholds throughout the development will be provided in accordance with Clause D3D15 and D3D16 of BCA2022. Landings to have either a surface with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013 or a strip at the edge of the landing with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013 where the edge ledge to a flight below.
45. The handrails and balustrades to all stairs and throughout the building will be in accordance with Clause D3D17 to D3D21, and D3D22 of BCA2022.
46. The fixed platform, walkway, stairway and ladder and any associated going and riser, landing handrail, balustrade, located within the machinery room, boiler house, lift-machine room, plantroom, or non-habitable attic/storeroom within the sole occupancy unit will comply with AS 1657:2018 or Part D3 of BCA2022.
47. The doorways and doors will be in accordance with Clause D3D24 and D3D25 of BCA2022.
48. Door latching mechanisms will be in accordance with Clause D3D26 of BCA2022.
49. Re-entry doors from the fire-isolated exits will be in accordance with Clause D3D27 of BCA2022.
50. Signage will be provided on fire and smoke doors in accordance with Clause D3D28 of BCA2022.
51. The openable portion of a window in a 9b early childhood centre or a bedroom of a Class 2, 3, 4 building will be protected with a restricting device or secure screen that does not allow a 125mm sphere to pass through the opening or screen and resist an outward horizontal action of 250N in accordance with Clause D3D29 of BCA2022. In addition to window protection, and for other openable windows 4 meters or more above the ground below, a barrier with a height not less than 865mm above the floor will be installed to the openable window.
52. The fire control centre will be in accordance with Clause E1D15 and Specification 19 of BCA2022.
53. The fire control rooms will be in accordance with Clause E1D15 and Specification 19 of BCA2022.
54. Fire precautions whilst the buildings are under construction will be in accordance with Clause E1D16 of BCA2022.
55. Additional provisions will be made in accordance with Clause E1D17 and E2D21 of BCA2022, due to the special hazards associated with the building works or the location of the building works.
56. External above ground waterproofing membranes will comply with Clause F1D5 of BCA2022 and AS 4654 Parts 1 & 2:2012.

57. The new roof covering will be in accordance with Clause F3D2 of BCA2022.
58. Any sarking proposed will be installed in accordance with Clause F3D3 of BCA2022.
59. Waterproofing of all wet areas to the building will be carried out in accordance with Clause F2D2 and F2D3 of BCA2022 and AS 3740:2010.
60. Damp proofing of the proposed structure will be carried out in accordance with Clause F1D6 and F1D7 of BCA2022.
61. Floor wastes, including falls to floor wastes (including any voluntarily proposed floor wastes), will be installed in accordance with Clause F2D4 of BCA2022.
62. All new glazing to be installed throughout the development will be in accordance with Clause F3D4 of BCA2022 and AS 1288:2006 / AS 2047:2014.
63. Sanitary facilities will be provided in the building in accordance with Clause F4D2, Table F4D2, Clause F4D4 and Table F4D4 of BCA2022.
64. Accessible sanitary facilities will be provided in the building in accordance with Clause F4D5, F4D6, Table F4D6 of BCA2022 and AS1428.1:2009.
65. The construction of the sanitary facilities will be in accordance with Clause F4D8 of BCA2022.
66. Ceiling heights will be in accordance with Clause F5D2 of BCA2022.
67. Natural light will be provided in accordance with Clause F6D2, F6D3, and F6D4 of BCA2022.
68. Natural or mechanical ventilation will be provided in accordance with Clause F6D6, F6D7 and F6D8 of BCA2022.
69. Water closets and urinals will be located in accordance with Clause F6D9 of BCA2022.
70. The sanitary compartments will be either be provided with mechanical exhaust ventilation or an airlock in accordance with Clause F6D10 of BCA2022.
71. Pliable building membranes installed in external walls will comply with Clause F8D3 of BCA2022 and where a pliable building membrane is not installed in an external wall, the primary water control layer will be separated from water sensitive materials by a drained cavity.
72. Every storey of the carpark will be provided with an adequate system of permanent natural or mechanical ventilation in accordance with Clause F6D11 of BCA2022.
73. A safe manner for cleaning of windows located 3 or more storeys above ground level will be provided in accordance with the Work Health & Safety Act 2011 and regulations made under that Act in accordance with NSW G1D5 of BCA2022.
74. The construction of the residential portions of the development will be undertaken in accordance with the relevant BASIX commitments that form part of the Development Consent approval.
75. Essential fire or other safety measures must be maintained and certified on an ongoing basis, in accordance with the provisions of the Environmental Planning and Assessment Regulation, 2021.
76. Building Fabric and Thermal Construction will be in accordance with Part J4 of BCA2022.
77. Glazing will be in accordance with Part J4 of BCA2022.
78. Building sealing will be in accordance with Part J5 of BCA2022.
79. Facilities for Energy Monitoring will be provided in accordance with Clause J9D3 of BCA2022.

Electrical Services Design Certification:

A smoke detection and alarm system will be installed throughout the building in accordance with E2D4 to E2D13, and Specification 20 of BCA2022.

Emergency lighting will be installed throughout the development in accordance with Clause E4D2, E4D4 of BCA2022 and AS/NZS 2293.1:2018.

Exit signage will be installed in accordance with Clause E4D5, E4D7, and E4D8 of BCA2022 and AS/NZS 2293.1:2018.

An emergency warning and intercom system (EWIS) will be provided to the building in accordance with Clause E4D9 of BCA2022.

Artificial lighting will be installed throughout the development in accordance Clause F6D5 of BCA2022 and AS/NZS 1680.0:2009.

Lighting power and controls will be installed in accordance with Part J7 of BCA2022.

Electrical conductors located within the building that supply a main switchboard that sustains emergency equipment will comply with Clause C3D14 of BCA2022.

Hydraulic Services Design Certification:

Storm water drainage will be provided in accordance with Clause F1D3 of BCA2022 and AS/NZS 3500.3:2018

Fire hydrant system will be installed in accordance with Clause E1D2 of BCA2022 and AS 2419.1:2005 as required.

Fire hose reels will be installed in accordance with Clause E1D3 of BCA2022 and AS 2441:2005.

A sprinkler system will be installed in accordance with Clause E1D4 of BCA2022 Specification 17, Specification 18 and appropriate part(s) of AS 2118.

Portable fire extinguishers will be installed in accordance with Clause E1D14 of BCA2022 and AS 2444:2001.

Mechanical Services Design Certification:

An air-handling system which does not form part of a smoke hazard management system will be installed in accordance with Clause E2D3 of BCA2022, and AS 1668.1:2015.

Stair pressurisation will be installed in the building in accordance with E2D4 to E2D13 of BCA2022 and AS 1668.1:2015.

A smoke exhaust system will be installed in the building in accordance with E2D14 to E2D20, and Specification 22 of BCA2022.

Where not naturally ventilated the building will be mechanically ventilated in accordance with Clause F6D6 of BCA2022 and AS 1668.2:2012.

Every storey of the car park will be ventilated in accordance with Clause F6D11 of BCA2022 and where not naturally ventilated it will be mechanically ventilated in accordance with AS 1668.2:2012 as applicable.

The commercial kitchen will be provided with a kitchen exhaust hood in accordance with Clause F6D12 of BCA2022, and AS 1668.1:2015 and AS 1668.2:2012.

Exhaust systems installed in a kitchen, bathroom, sanitary compartment, or laundry of a Class 2 or 4 sole-occupancy unit will have a minimum flow rate and discharge location in accordance with Clause F8D4 of BCA2022.

Where exhaust discharges directly or via shaft into a roof space of a Class 2 or 4 sole-occupancy unit, ventilation of the roof space will comply with Clause F8D5 of BCA2022.

The air-conditioning and ventilations systems will be designed and installed in accordance with Part J6 of BCA2022

Rigid and flexible ductwork will comply with the fire hazard properties set out in AS 4254 Parts 1 and 2.

Structural Engineers Design Certification:

The material and forms of construction for the proposed works will be in accordance with Clause B1D3, B1D4 and B1D6 of BCA2022 as follows:

Dead and Live Loads – AS/NZS 1170.1:2002

Wind Loads – AS/NZS 1170.2:2011

Earthquake actions – AS 1170.4:2007

Masonry – AS 3700:2018

Concrete Construction – AS 3600:2018

Steel Construction AS 4100:1998

Aluminium Construction – AS/NZS 1664.1 or 2:1997

Timber Construction – AS 1720.1:2010

ABCB Standard for Construction of Buildings in Flood Hazard Areas.

The FRLs of the structural elements for the proposed works have been designed in accordance with Specification 5 of BCA2022, including S5C11 for a building of Type A Construction.

The lift shaft will have an FRL in accordance with Clause C3D11 and Specification 5 of BCA2022.

Lightweight construction used to achieve required fire resistance levels will comply with Specification 6 of BCA2022.

The construction joints to the structure will be in accordance with Clause C4D16 of BCA2022 to reinstate the FRL of the element concerned.

The concrete panel external walls will be in accordance with Specification 5 of BCA2022.

Upon completion of the works, a structural engineer will be able to certify that local failure will be in accordance with Clause D3D3 of BCA2022 for the fire isolated stairs.

Lift Services Design Certification:

The lifts throughout the development will be provided with stretcher facilities in accordance with Clause E3D3 of BCA2022 and will be capable of accommodating a stretcher with a patient lying horizontally by providing a clear space not less than 600mm wide x 2000mm long x 1400mm high above the floor level.

Warning signage in accordance with Clause E3D4 of BCA2022 will be provided to the lifts to advise not to use the lifts in a fire.

An emergency lift will be provided in the building in accordance with Clause E3D5 of BCA2022.

A fire service recall control switch is to be installed on a landing at a location nominated by the appropriate authority in accordance with Clause E3D11.

A lift car fire service drive control switch is to be installed within the lift car in accordance with Clause E3D12.

Access and egress to the lift well landings will comply with the Deemed-to-Satisfy Provisions of D4 of the BCA2022 and will be suitable to accommodate disabled persons.

The type of lifts will also be suitable to accommodate persons with a disability in accordance with Clause E3D7 and E3D8 and will also have accessible features in accordance with E3D7 and E3D8 of BCA2022.

The lifts will comply with AS 1735.12:1999 in accordance with Clause E3D7 and E3D8 of BCA2022.

All electric passenger lifts and electrohydraulic passenger lifts shall comply with Specification 24 of BCA2022.

NSW Specification Design Certificate:

Materials, floor and wall linings/coverings, surface finished, and air-handling ductwork used in the works will comply with the fire hazard properties in accordance with Clause C2D11, NSW Clause C2D11, Specification 5 and NSW Specification 5 of BCA2022.

Doorways and other openings in internal walls required to have an FRL will be protected in accordance with Clause C4D12, and NSW Clause C4D12(4) of BCA2022.

The number of exits provided to the building will be in accordance with Clause D2D3 and NSW Clause D2D3(4) of BCA2022.

The discharge points of exits will be in accordance with Clause D2D15, and NSW Clause D2D15(6) of BCA2022.

The width of doorways in exits and paths of travel to exits will be provided in accordance with Clause D2D9, and NSW Clause D2D9(a) to (f) of the BCA2022.

Stair geometry to the new stairways will be in accordance with Clause D3D14, and NSW Clause D3D14(1) of the BCA. Stair treads are to have a surface with a slip-resistance classification complying with Table D3D154 when tested in accordance with AS 4586:2013 or a nosing strip with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013.

Landings and door thresholds throughout the development will be provided in accordance with Clause D3D15 and D3D162.15, and NSW Clause D3D16(a) to (e) of the BCA. Landings to have either a surface with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS

4586:2013 or a strip at the edge of the landing with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013 where the edge leads to a flight below.

The height of barriers is to be in accordance with D3D18 and NSW D3D18(1) of the BCA2022.

The doorways and doors will be in accordance with Clause D3D24, NSW Clause D23D24(2) of the BCA2022.

The door latching mechanisms to the proposed required exit doors will be in accordance with Clause D3D26 and NSW Clause D3D26(5) and (6) of the BCA2022.

A smoke detection and alarm systems will be installed throughout the building in accordance with E2D10, NSW E2D10 and NSW Specification 20 of BCA2022.

Exit signage will be installed in accordance with Clause E4D5, NSW Clause E4D6, E4D7, and E4D8 of BCA2022 and AS/NZS 2293.1:2018.

The buildings will be mechanically ventilated in accordance with Clause F6D6, NSW F6D6 of BCA2022 and AS 1668.2:2012.