

## **BUILDING CODE OF AUSTRALIA 2022**

### DRAFT CONSTRUCTION OF NEW MIXED-USE DEVELOPMENT

## **STAGES 3 & 4 NEWCASTLE EAST END**

Report prepared for:	East End Stage 3 Pty Ltd and East End Stage 4 Pty Ltd
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Report prepared by:	Philip Chun BC NSW Pty Ltd Suite 2.02, Level 22 264 George Street Sydney, NSW 2000
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Report Ref:	022-219164_NEE_Stages3&4_BCA Report_230511_SRRM
Job Number:	022-219164
Date:	11 May 2023

#### DOCUMENT ACCEPTANCE

	Name	Signed	Date
Verified by	Scott Reid	Jud.	11.05.2023
		BDC	04824

#### **REVISION HISTORY**

Revision No.	Prepared by	Description	Date
R01	Scott Reid	Preliminary BCA Report	
R02	Scott Reid	Draft BCA Report	12.04.2023
R03	Robert Marinelli	BCA Report for DA submission	11.05.2023

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# 1.0 Introduction

The development, the subject of this report, is for three new mixed-use buildings within Stages 3 and 4 of the Newcastle East End project. The development is located on Hunter Street within the Newcastle Central Business District. Stage 3 has frontage to Hunter Street to the north, Laing Street to the south, Morgan Street to the east and Thorn Street to the west. Stage 4 has frontage to Hunter Street to the north, King Street to the south, Newcomen Street to the east and Morgan Street to the west.



Stages 3 and 4: SJB, DBJ, Curious Practice



Tower Layout Sketch

Stage 3 comprises retail/commercial tenancies on the ground floor and residential apartments above in three towers, known as 3 East and 3 West. Associated parking is provided over three basement levels. For the purposes of the BCA, Stage 3 forms a single building with an effective height of more than 25m.



Sectional Plan – Stage 3

Stage 4 comprises two separate buildings known as 4 North and 4 South. These two buildings are to be separated by a fire wall on Basement Level 2 and the Ground Floor. 4 North contains retail tenancies and appurtenant residential storage facilities on the Ground Floor, a mix of retail and residential uses on Level 1 and residential apartments from Levels 2 to 8. This building has an effective height of less than 25m. 4 South has communal uses on the Lower Ground Floor, residential apartments and storage facilities on the Upper Ground Floor and residential apartments from Levels 1 to 9. This building has an effective height in excess of 25m.



Sectional Plan - Stage 4

We have reviewed the submitted architectural plans as listed in Appendix 1 for compliance with the deemedto-satisfy provisions of Sections B, C, D, E, F, G & J of the Building Code of Australia 2022. Where compliance with the deemed to satisfy provisions is not possible Performance Solutions will be required.



The following non-compliance's with the deemed-to-satisfy provisions of the BCA have been identified and are proposed to be dealt by justification against the performance requirements in accordance with Clause A2G2.

BCA Clause	Variation from deemed-to-satisfy provisions
Fire resisting construction - Specification 5	<ul><li>The fire resistance level in the following storage areas is to be reduced from 240 minutes to 120 minutes:</li><li>i. Ground Floor in 4 North</li><li>ii. Upper Ground Floor in 4 South</li></ul>
Bounding construction – C4D12 and Sound insulation rating of walls - F7D6	<ul> <li>Lifts open directly to apartments on Levels 6 &amp; 8 in 4 North and Level 9 in 4 South.</li> <li>i. Lift doors will not achieve the required FRL of -/60/30 (normally only -/60/-).</li> <li>ii. Lift doors may not achieve the required sound insulation of Rw not less than 30.</li> </ul>
Number of exits required D2D3	<ul> <li>The following areas have access to a single exit: <ul> <li>Residential levels in 3 West will have access to a single exit.</li> <li>The whole of Stage 3 is a single building in excess of 25m in effective height.</li> </ul> </li> <li>Upper Level of café in 4 South has access to a single exit. 4 South has an EH of more than 25m.</li> </ul>
When fire-isolated stairways and ramps and required D2D4	Whilst the stair serving the upper levels of 3 West is not required to be fire-isolated, a Performance Solution to address extend travel distance on these levels requires the stair to be fire-isolated. The stair will not be fire-isolated at roof level and will be subject to a Performance Solution.
Exit travel distances D2D5	Distances to exits will exceed the limits imposed by D2D5 in the following areas and will be subject to a Performance Solution: <b>3 West</b>
	Distance to exit of 7m on residential levels.







	Basement Levels 1 and 2 (61m).
Travel via fire-isolated exits D2D12	Paths of travel from fire-isolated exits to the road are exposed to and within 6m of openings in the external walls of the building in the following locations:
	i. Stairs serving 3 East – Path of travel is exposed to openings in external wall
	RESIDENTIAL LOBRY 13 22 27 500 B CL STORE REAL RE
	ii. Stairs serving 3 East – Path exposed to opening of loading dock.
	i. Northeastern stair serving 4 South
Travel via fire-isolated exits	Stair 9 serving 4 South discharges into an enclosed area on Basement

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	Level 1 which is not open for at least 1/3 of its perimeter.
Travel via fire-isolated exits D2D12	4 North Levels 2, 3, 4 & 7 Access to the exit requires involves path of travel through the SOU.
Where sprinklers are required E1D5	Sprinkler protection will not be provided under external awnings
Part E2 Smoke hazard management E2D6 Buildings more than 25m effective height: Class 5, 6, 7b, 8 or 9b buildings	Zone smoke control will not be provided to retail compartments in Stage 3 nor in retail/commercial tenancies in 4 South.

Other matters for consideration.

BCA Clause	Details
	Fire wall/fire doors to separate 4 North and 4 South to extend across walkway on Ground Floor of 4 North

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	In the separate 4N & 4S.
Protection of openings in external walls – C4D3	i. Openings in external walls in 4 North are within 6m of 4 South on Levels 2 and 3 will require protection.
	ii. Openings in external walls of 4 South are within 6m of 4 North on Basement 1 and will require protection.
	<li>iii. The method of protection is to be in accordance with C4D5 and where sprinklers are proposed, these are to be located externally. Fixed windows may impact on ventilation requirements.</li>
	iv. The opening on the Upper Level of the café which requires protection occupies more than 1/3 of the area of the external wall of the storey in which it is located.
Exit travel distances D2D5	3 East
	Distance to a point of choice from Penthouse Garage is in the order of 40m. A maximum distance to a point of choice of 30m can be fire engineered.

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# 3.0 Building Assessment

BCA Parameters	
BCA Classifications	Stage 3
	Class 2 – residential, Class 6 – Retail, Class7b – carpark
	Stage 4
	4 North
	Class 2 – residential, Class 6 – retail, Class 7a – storage
	4 South
	Class 2 – residential, Class 6 – Retail, Class 7a – storage, Class7b –
	carpark, Class 9b - Wellness
Rise in Storeys (RIS)	Stage 3
	Stage 4
	4 North
	<u>4 South</u>
	12
Effective Height	Stage 3
	10 Mezzanine (RI 42 15) in 3 Fast
	Stage 4
	4 North 23.47m Measured from Store on GE(PL 5.55) to Level 7 (PL 20.02)
	Note: Level 8 is a mezzanine by definition under the BCA
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	4 South
	38.01m – Ivieasured from Loading Dock (RL 8.85) to Level 9 (RL 46.86)
Type of Construction	Туре А
Climate Zone	5

# 4.0 Structure

The structural components of the building must comply with the applicable Australian Standards. A structural engineer will need to ensure the structural requirements of BCA Clauses B1D2, B1D3, and B1D4 are considered in the building design (including the importance level of the building). This will mean assessment according to all relevant parts of Section B of the Building Code of Australia and where any provisions cannot be met, a performance solution to be formulated for consideration of the relevant project stakeholders.

Under Part B1D1 of the Building Code of Australia (BCA), a building or structure must be designed to withstand earthquake loads in accordance with AS1170.4-2007, as appropriate. Whilst earthquake loads have obvious implications to the structural design of a building or structure and any alterations to structural elements within an existing building or structure, it is important to note that within AS1170.4-2007, there is also an obligation for certain non-structural parts, components and their connections to be designed & constructed to withstand earthquake loads. All designers need to be aware of this requirement.

# 5.0 Fire Resistance

Clause C2D2 (Type of construction required) - Type A construction is required.

Clause C2D3 (Calculation of rise in storeys) – The Rise in storeys is: Stage : 13, 4 North: 8. 4 South: 12.



Clause C2D9 (Lightweight construction) – If lightweight construction is utilised to achieve the required FRL, it must comply with Specification 6 of the BCA. *Details demonstrating compliance must be submitted with the application for a construction certificate.* 

**Clause C2D11 (Fire hazard properties)** – All new surface finishes, assemblies and linings are to comply with BCA Clause C2D11 and Specification 7 including NSW variations with regard to Fire Hazard Properties of varies finishes and materials within the building. *Details demonstrating compliance must be submitted with the application for a construction certificate.* 

The following building elements and their components must be non-combustible:

External walls and common walls, including all components incorporated in them including the façade covering, framing and insulation.

The flooring and floor framing of lift pits.

Non-loadbearing internal walls where they are required to be fire-resisting.

A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing.

A loadbearing internal wall and loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification C1.1.

# Clause C3D3 (General floor area and volume limitations) – Floor area and volume limits are within the prescribed limits.

**C3D14 (Electricity supply system)** – A main switchboard that sustains emergency equipment operating in the emergency mode located within a building must be separated from other parts of the building by construction having an FRL of not less than 120/120/120, and doorways in that construction to be selfclosing fire doors with an FRL of not less than -/120/30. **Designers to also note. Compliance achievable.** 

#### 6.0 Access and Egress

**Clause D2D3 (Number of exits required)** – Stage 3 and 4 South have an effective height of more than 25m. *Performance Solution areas are provided with a single exit..* 

Clause D2D5 (Exit travel distances) – No point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m. *Performance Solution. Travel distances to exits exceed the limits prescribed.* 

Clause D2D6 (Distance between alternative exits) – exits used as alternative means of egress must be no closer than 9m apart and no more than 45m apart. *Performance Solution. Distances between some alternative exits exceed the limits prescribed.* 

Clause D2D7 (Height of exits, paths of travel to exits and doorways) – In a required exit or path of travel to an exit the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm. *Capable of compliance. Architect to note.* 

**Clause D2D8 (Width of exits and paths of travel to exits)** – The minimum unobstructed width of required exit must not be less than 1m within the common areas of the building except doorways where it can be reduced by no more than 250mm. **Design complies.** 

**Clause D2D11 (Determination and measurement of exits and paths of travel to exits)** – The required width of a stairway or ramp in a required exit or path of travel to an exit must be measured clear of all obstructions such as handrails, projecting parts of barriers and the like; and extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing. *Capable of compliance. Architect to note.* 

**Clause D2D14 (Travel by non-fire-isolated stairways)** – A non-fire-isolated stairway serving as a required exit must provide a continuous means of travel by its own flights and landings from every storey served to the level at which egress to a road or open space is provided. *Performance Solution. Some aspects of the design do not satisfy the deemed-to-satisfy provisions.* 

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**Clause D2D15 (Discharge from exits)** – An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it. Where required exit leads to open space, path of travel to the road must be minimum 1m or the minimum width of the required exit. Also, the path of travel to the road must have a gradient not steeper than 1:8 or 1:14 where required by Part D4 of the BCA2022. *Capable of compliance.* 

**Clause D3D8 (Installations in exits and paths of travel)** – services or equipment must be enclosed with non-combustible construction and suitably sealed against smoke spreading from the enclosure where they are installed in a required exit, or in any corridor, hallway, lobby or the like leading to a required exit and the service or equipment comprises of:

- a) electricity meters, distribution boards or ducts; or
- b) central telecommunications distribution boards or equipment; or
- c) electrical motors or other motors serving equipment in the building.

#### Capable of compliance. Architect to note.

**Clause D3D14 – D3D22 (Construction of stairways, balustrade and handrails)** – The construction and discharge of stairs, landings, thresholds, balustrades, and handrails will need to meet the requirements of the BCA and AS1428.1. *Architect to note. Details demonstrating compliance to be provided with the application for s6.28 CDVC.* 

**Clause D3D25 (Swinging doors)** - A swinging door in a required exit or forming part of a required exit must swing in the direction of egress unless it serves a building or part with a floor area not more than 200m2, it is the only required exit from the building or part and it is fitted with a device for holding it in the open position (note: does not apply to internal areas of SOUs). *Design complies.* 

**Clause D3D26 (Operation of latch)** – With the exception of the Community Room, all doors in an exit, forming part of the exit or in the path of travel to the exit must be openable without a key from the egress side by a single hand downward action or single hand push action installed in accordance with this part of the BCA. Door hardware for the Community Room shall be by a single hand pushing action on a single device such as a panic bar located between 900 mm and 1.2 m from the floor. *Architect to note. Details demonstrating compliance to be provided with the application for s6.28 CDVC.* 

Part D4 (Access for people with a disability) – Refer to separate access report.

#### 7.0 Services and Equipment

**E1D2 Fire Hydrants -** A system of fire hydrants is required throughout each building. The systems must be designed and installed to comply with Part E1D2 of BCA2022 and AS 2419.1-2021.

**E1D3 Fire hose reels** - Fire hose reels are to be provided in each building (does not apply to residential levels). *Details demonstrating compliance to be provided with the application for the construction certificate.* 

**E1D4 Sprinklers** - A sprinkler system must be installed throughout each building and must comply with Specifications 17 and 18 as applicable. *Performance Solution to delete sprinkler protection to external awnings* 

**E1D14 Portable Fire Extinguishers -** PFE's are required to be located throughout the building in accordance with Part E1D14 of BCA 2022. *Details demonstrating compliance to be provided with the application for the construction certificate.* 

**E1D15 Fire control centres** - A fire control centre is to be provided in Stage 3 and 4 South in accordance with Specification 19.

**E2D4 Fire-isolated exits** - Auto stair pressurization systems are required in fire-isolated exits serving storeys above 25m in effective height and more than 2 below ground storeys, not counted in the rise in storeys.



**E2D5 Buildings more than 25m in effective height: Class 2 building -** A smoke detection system must be installed in accordance with Specification 20.

**E2D6 Buildings more than 25m effective height: Class 5, 6, 7b, 8 or 9b buildings** – commercial tenancies on the Ground Floor of Stage 3 and Lower and Upper Ground Levels of 4 South will not be provided with zone smoke control. – *Performance Solution* 

**E3D3 Stretcher facility in lifts** - The lift must be above to accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600 mm wide x 2000 mm long x 1400 mm high above the floor level.

**E3D5 Emergency lifts** - Emergency lift/s complying with this clause and Spec E3.1 must be installed within Stage 3 and 4 South.

**E4D2 – E4D8 Emergency lighting and existing sign requirements including design and operation** – Emergency lighting, exit and direction signs are to be located, designed and installed in accordance with Part E4 of BCA 2022 and AS2293.1-2018. *Electrical engineer to design accordingly. Details demonstrating compliance to be provided with the application for the construction certificate.* 

**E4D9 Emergency warning and intercom systems** - EWIS is required to Stage 3 and 4 South in accordance with AS1670.4.

#### 8.0 Surface water management, rising damp and external waterproofing

**Clause F1D3 (Stormwater drainage)** – Stormwater drainage must be designed and constructed in accordance with AS/NZS 3500.3. *Hydraulic engineering details demonstrating compliance to be provided with the application for the construction certificate.* 

**Clause F1D4 (Exposed Joints)** – Exposed joints in the drainage surface on a roof, balcony or similar horizontal surface part of a building must be protected in accordance with Section 2.9 of AS 4654.2 and not be located beneath or run through a planter box, water feature or similar part of the building. *Capable of compliance. Architect to note.* 

**Clause F1D5 (External waterproofing membranes)** – A roof, balcony or similar horizontal surface part of a building must be provided with a waterproofing membrane consisting of materials complying with AS 4654.1 and designed and installed in accordance with AS 4654.2. Section details demonstrating compliance to be provided with the application for the construction certificate.

**Clause F1D6 – F1D7 (Damp-proofing)** – moisture from the ground must be prevented from reaching the structure by installation of damp-proof course or impervious sheet material in accordance with AS3660.1 where required. If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870. *Architectural and structural engineering details demonstrating compliance to be provided with the application for the construction certificate.* 

**F2D2 (Wet area construction)** – Building elements in bathrooms, showers, laundries and sanitary compartments must be water resistant or waterproof in accordance with Specification 26 and comply with AS 3740. Section details demonstrating compliance to be provided with the application for the construction certificate.

**F3D2 (Roof covering)** – metal sheet roofing must comply with AS 1562.1. *Capable of compliance. Construction plans to include sufficient notation.* 

**F3D3 (Sarking)** – Sarking-type material used for weatherproofing of roofs and walls must comply with AS 4200.1 and AS 4200.2. *Capable of compliance. Product specifications demonstrating compliance to be provided with the application for the construction certificate.* 

**F3D4 (Glazed assemblies)** – glazed assemblies in external walls must comply with AS2047. **Capable of compliance.** *for the construction certificate.* 

F3D5 (Wall cladding) – External wall cladding must comply with one or a combination of the following:



- a) Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700.
- b) Autoclaved aerated concrete: AS 5146.3.
- c) Metal wall cladding: AS 1562.1.

Any other type of cladding must be detailed in a performance solution report. Architect to note.

**F6D5 (Artificial lighting)** – Artificial lighting in a class 2 building must be provided in required stairways, passageways, ramps, sanitary compartments, bathrooms, shower rooms, airlocks, laundries, common stairways and other spaces used in common by the occupants of the building in accordance with AS1680.0. Electrical engineer to note. *Details demonstrating compliance to be provided with the application for the construction certificate.* 

**F6D6 (Ventilation of room)** – A habitable room, office, shop, factory, workroom, sanitary compartment, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have natural ventilation complying with F6D7; or a mechanical ventilation or air-conditioning system complying with AS 1668.2 and AS/NZS 3666.1. *Mechanical engineer to note. Design drawings and certification to be provided with the application for the construction certificate.* 

**F6D9 (Restriction on location of sanitary compartments)** – A sanitary compartment must not open directly into:

- a) a kitchen or pantry; or
- b) a public dining room or restaurant; or
- c) a room used for public assembly; or
- d) a workplace normally occupied by more than one person. *Design complies.*

**F8D3 (External wall construction)** – Where pliable building membranes are installed, they must comply with AS4200.1 & 2 and requirement of this section of the BCA – *Architect to note. Details demonstrating compliance to be provided with the application for the construction certificate.* 

#### 9.0 Sound transmission and insulation

Part F7 Sound transmission and insulation – Residential parts are to comply with the sound transmission and insulation requirements in accordance with Specifications 28 and 29. *A Performance Solution may be required where lift doors open directly to apartments.* 

#### **10.0 Condensation management**

Condensation management must be provided in accordance with Part F8 Condensation management. *Capable of compliance.* 

#### 11.0 Swimming pools and water recirculation systems

**NSW G1D2** A swimming pool with a depth of water more than 300 mm and which is associated with a Class 2 building, must have suitable barriers to restrict access by young children to the immediate pool surrounds in accordance with AS 1926 Parts 1 and 2. *Capable of complying* 

A water recirculation system in a swimming pool with a depth of water more than 300 mm must comply with AS 1926.3 *Capable of complying* 

#### 12.0 Energy efficiency

**Class 2 buildings:** The provisions of this Section J(A) are designed to complement the requirements of BASIX which are implemented via a Development Consent or Complying Development as applicable.

**Class 5 to 9 parts of the building**s must be designed in accordance with energy efficiency measures as outlined the NSW variation of the BCA Part J(B). Your attention is drawn to the following provisions:

- a) Energy efficacy (BCA Part J2)
- b) Building fabric including insulation & glazing (BCA Part J4)
- c) Building sealing (BCA Part J5)
- d) Air conditioning and ventilating systems (BCA Part J6)
- e) Artificial lighting and power (BCA Part J7)

- f) Heated water supply and swimming pool and spa pool plant (BCA Part J8)
- g) Facilities for energy monitoring (BCA Part J9)

**Note:** From 1 May 2023 to 30 September 2023 NSW Section J of NCC 2019 Amendment 1 may apply instead of Section J of NCC 2022 Volume One. From 1 October 2023 Section J of NCC 2022 Volume One applies.

# Appendix A

The following plans prepared by SJB Architects, Burbach Block Jaggers and Curious Practice have been assessed for the purpose of this report:

Drawing No/Rev.	Titled	Date
DA-3E-1001/3	FLOOR PLAN -3E -BASEMENT 03	31/03/2023
DA-3E-1002/3	FLOOR PLAN -3E -BASEMENT 02	31/03/2023
DA-3E-1003/3	FLOOR PLAN -3E -BASEMENT 01	31/03/2023
DA-3E-1004/D	FLOOR PLAN - 3E - GROUND PLAN	27/03/2023
DA-3E-1005/D	FLOOR PLAN - 3E - LOADING LEVEL PLAN	27/03/2023
DA-3E-1006/D	FLOOR PLAN - 3E - LEVEL 1 PLAN	27/03/2023
DA-3E-1007/D	FLOOR PLAN - 3E - LEVEL 2 PLAN	27/03/2023
DA-3E-1008/D	FLOOR PLAN - 3E - LEVEL 3 PLAN	27/03/2023
DA-3E-1009/D	FLOOR PLAN - 3E - LEVEL 4 PLAN	27/03/2023
DA-3E-1010/D	FLOOR PLAN - 3E - LEVEL 5 PLAN	27/03/2023
DA-3E-1011/D	FLOOR PLAN - 3E - LEVEL 6 PLAN	27/03/2023
DA-3E-1012/D	FLOOR PLAN - 3E - LEVEL 7 PLAN	27/03/2023
DA-3E-1013/D	FLOOR PLAN - 3E - LEVEL 8 PLAN	27/03/2023
DA-3E-1014/D	FLOOR PLAN - 3E - LEVEL 9 PLAN	27/03/2023
DA-3E-1015/D	FLOOR PLAN - 3E - LEVEL 10 PLAN	27/03/2023
	FLOOR PLAN - 3E - LEVEL 10 MEZZANINE	27/03/2023
DA-3E-1016/A	PLAN	
DA-3E-1017/D	FLOOR PLAN - 3E - PLANT PLAN	27/03/2023
DA-3E-1018/D	FLOOR PLAN - 3E - ROOF PLAN	27/03/2023
DA-3E-1401/C	ELEVATIONS – 3E – NORTH ELEVATION	27/03/2023
DA-3E-1402/C	ELEVATIONS – 3E – SOUTH ELEVATION	27/03/2023
DA-3E-1403/C	ELEVATIONS – 3E – EAST ELEVATION	27/03/2023
DA-3E-1404/C	ELEVATIONS – 3E – WEST ELEVATION	27/03/2023
DA-3E-1405/C	ELEVATIONS – 3E – LANEWAY NORTH	27/03/2023
	ELEVATION	
	ELEVATIONS – 3E – LANEWAY SOUTH	27/03/2023
DA-3E-1406/C	ELEVATION	
DA-3E-1501/B	SECTIONS – 3E – BUILDING SECTION A	27/03/2023
DA-3E-1502/B	SECTIONS – 3E – BUILDING SECTION B	27/03/2023
DA-3E-1503/B	SECTIONS – 3E – BUILDING SECTION C	27/03/2023
DA-3E-9001/C	MATERIAL SCHEDULE	27/03/2023
DA-3E-1001/3	FLOOR PLAN -3E - BASEMENT 03	31/03/2023
DA-3E-1002/3	FLOOR PLAN -3E - BASEMENT 02	31/03/2023
DA-3E-1003/3	FLOOR PLAN -3E - BASEMENT 01	31/03/2023
DA-3E-1001/3	FLOOR PLAN -3W - BASEMENT 03	31/03/2023
DA-3E-1002/3	FLOOR PLAN -3W - BASEMENT 02	31/03/2023
DA-3E-1003/3	FLOOR PLAN -3W - BASEMENT 01	31/03/2023
DA-3W-1004/3	FLOOR PLAN - 3W - GROUND	31/03/2023
DA-3W-1005/3	FLOOR PLAN - 3W - LEVEL 01	31/03/2023
DA-3W-1006/3	FLOOR PLAN - 3W - LEVEL 02	31/03/2023
DA-3W-1007/3	FLOOR PLAN - 3W - LEVEL 03	31/03/2023
DA-3W-1008/3	FLOOR PLAN - 3W - LEVEL 04	31/03/2023
DA-3W-1009/3	FLOOR PLAN - 3W - LEVEL 05	31/03/2023
DA-3W-1010/3	FLOOR PLAN -3W -LEVEL 06	31/03/2023
DA-3W-1011/3	FLOOR PLAN -3W -LEVEL 07	31/03/2023
DA-3W-1012/3	FLOOR PLAN -3W -ROOF	31/03/2023



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DA-3W-1401/3	ELEVATIONS - 3W - NORTH	31/03/2023
DA-3W-1402/3	ELEVATIONS - 3W - SOUTH	31/03/2023
DA-3W-1403/3	ELEVATIONS - 3W - EAST	31/03/2023
DA-3W-1404/3	ELEVATIONS - 3W - WEST	31/03/2023
DA-3W-1501/2	SECTIONS - 3W - BUILDING SECTION A	31/03/2023
DA-3W-1502/2	SECTIONS - 3W - BUILDING SECTION B	31/03/2023
DA-3W-9001/3	MATERIAL SCHEDULE - 3W	31/03/2023
DA-4N-0252/B	FLOOR PLAN - 4N - LEVEL 01	31/03/2023
DA-4N-0253/B	FLOOR PLAN - 4N - LEVEL 02	31/03/2023
DA-4N-0254/B	FLOOR PLAN - 4N - LEVEL 05	31/03/2023
DA-4N-0271/B	FLOOR PLAN - 4N - NORTH ELEVATION	31/03/2023
DA-4N-0272/B	FLOOR PLAN - 4N - WEST ELEVATION	31/03/2023
DA-4N-0273/B	FLOOR PLAN - 4N - EAST ELEVATION	31/03/2023
DA-4N-1001/B	FLOOR PLAN - 4N - GROUND	31/03/2023
DA-4N-1002/B	FLOOR PLAN - 4N - LEVEL 01	31/03/2023
DA-4N-1003/B	FLOOR PLAN - 4N - LEVEL 02	31/03/2023
DA-4N-1004/B	FLOOR PLAN - 4N - LEVEL 03	31/03/2023
DA-4N-1005/B	FLOOR PLAN - 4N - LEVEL 04	31/03/2023
DA-4N-1006/B	FLOOR PLAN - 4N - LEVEL 05	31/03/2023
DA-4N-1007/3	FLOOR PLAN - 4N - LEVEL 06	11/05/2023
DA-4N-1018/3	FLOOR PLAN - 4N - LEVEL 07	11/05/2023
DA-4N-1019/3	FLOOR PLAN - 4N - LEVEL 08	11/05/2023
DA-4N-1010/B	FLOOR PLAN - 4N - ROOF	31/03/2023
DA-4N-1401/B	ELEVATIONS - 3E - NORTH ELEVATION	31/03/2023
DA-4N-1402/B	ELEVATIONS - 3E - EAST ELEVATION	31/03/2023
DA-4N-1403/B	ELEVATIONS - 3E - EAST SECTIONAL	31/03/2023
DA-4N-1404/B	ELEVATIONS - 3E - SOUTH ELEVATION	31/03/2023
DA-4N-1405/B	ELEVATIONS - 3E - WEST ELEVATION	31/03/2023
DA-4N-1406/B	ELEVATIONS - 3E - WEST SECTIONAL	31/03/2023
DA-4N-1501/B	SECTIONS - 4N - BUILDING SECTION A	31/03/2023
DA-4N-1502/B	SECTIONS - 4N - BUILDING SECTION B	31/03/2023
DA-4N-9001/B	MATERIAL SCHEDULE	31/03/2023
DA-4S-1001/8	FLOOR PLAN -4S -BASEMENT 03	31/03/2023
DA-4S-1002/11	FLOOR PLAN -4S -BASEMENT 02	31/03/2023
DA-4S-1003/11	FLOOR PLAN -4S -BASEMENT 01	31/03/2023
DA-4S-1004/10	FLOOR PLAN -4S -LOWER GROUND	31/03/2023
DA-4S-1005/9	FLOOR PLAN -4S -UPPER GROUND	31/03/2023
DA-4S-1006/9	FLOOR PLAN -4S -LEVEL 01	31/03/2023
DA-4S-1007/9	FLOOR PLAN -4S -LEVEL 02 (KING ST)	31/03/2023
DA-4S-1008/9	FLOOR PLAN -4S -LEVEL 03	31/03/2023
DA-4S-1009/9	FLOOR PLAN -4S -LEVEL 04	31/03/2023
DA-4S-1010/9	FLOOR PLAN -4S -LEVEL 05	31/03/2023
DA-4S-1011/9	FLOOR PLAN -4S -LEVEL 06	31/03/2023
DA-4S-1012/9	FLOOR PLAN -4S -LEVEL 07	31/03/2023
DA-4S-1013/9	FLOOR PLAN -4S -LEVEL 08	31/03/2023
DA-4S-1014/9	FLOOR PLAN -4S -LEVEL 09	31/03/2023
DA-4S-1015/9	FLOOR PLAN -4S -ROOF	31/03/2023
DA-4S-1401/5	ELEVATIONS - 4S - SHEET 1	31/03/2023
DA-4S-1402/5	ELEVATIONS - 4S - SHEET 2	31/03/2023
DA-4S-1403/5	ELEVATIONS - 4S - SHEET 3	31/03/2023
DA-4S-1404/5	ELEVATIONS - 4S - SHEET 4	31/03/2023



DA-4S-1501/5	SECTIONS - 4S - SHEET 01	31/03/2023
DA-4S-1502/5	SECTIONS - 4S - SHEET 02	31/03/2023
DA-4S-1503/3	SECTIONS - 4S - SHEET 03	31/03/2023
DA-4S-9001/4	MATERIAL SCHEDULE - 4S	31/03/2023

# Appendix B

The following table is a list of the required fire safety measures for this development. This list is to be treated as a guide as to what the buildings are considered to require.

NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 79 OF EP&A (DEVELOPMENT CERTIFICATION AND FIRE SAFETY) REGULATION)	STANDARD OF PERFORMANCE
1.	Access panels, doors & hoppers to fire resisting shaft	BCA 2022 C4D14 & AS 1905.1-2015, AS 1905.2-2005
2.	Automatic fire detection and alarm system	BCA 2022 E2D3, Specification 20, S20C4 (smoke detection system) and AS 1670.1-2018
3.	Automatic fire suppression system	BCA 2022 E1D4, Specification 17, AS 2118.1-2017 Amdt 1
4.	Emergency Lifts	BCA 2022 E3D5, E3D9, E3D10, E3D11, E3D12 & Specification 24
5.	Emergency lighting	BCA 2022 E4P2, E4P4 & AS 2293.1–2018
6.	Emergency warning intercom system	BCA 2022 E4D9, & AS 1670.4-2018.
7.	Exit signs	BCA 2022 E4D5, E4D6, E4D8, Specification 25 & AS 2293.1-2018.
8.	Fire blankets	AS 2444-2001
9.	Fire control centre	BCA 2022 E1D15 & Specification 19
10.	Fire dampers	BCA 2022 C4D13, C4D15, AS/NZS 1668.1-2015 Amdt 1, AS 1668.2-2012 Amdt 1 & 2, AS 1682.1-2015 & AS 1682.2-2015.
11.	Fire doors	BCA 2022 C3D13 (separation of equipment), C3D14 (electricity supply systems), C4D4 (separation of external walls & associated openings in fire compartments), C4D5, Specification 12; C4D6 (doorways & fire walls), C4D9 (openings in fire isolated exits), C4D12 (bounding construction) & AS 1905.1–2015 <sub>Amdt 1</sub>
12.	Fire rated lift landing doors	BCA 2022 C4D11 & AS 1735.11-1986
13.	Fire Hose reel systems	BCA 2022 E1D3 & AS 2441-2005 Amdt 1
14.	Fire hydrant systems	BCA 2022 C3D13 (separation of fire pumps), E1D2, Specification 18 & AS 2419.1-2021
15.	Fire seals protecting openings in fire resisting components of the building	BCA 2022 C4D13, C4D15, Specification 13 AS 1530.42014 & AS 4072.1-2005 Amdt 1
16.	Mechanical air handling system	BCA 2022 C3D13 (separation of equipment), Class 7a (carpark building mechanical ventilation systems) BCA 2022 E2D3, E2D12 & Clause 5.5 of AS/NZS 1668.1-2015 <sub>Amdt1</sub>
17.	Portable fire extinguishers	BCA 2022 E1D14 & AS 2444-2001.
18.	Pressurising system	BCA 2022 E2D3 & AS/NZS 1668.1-2015
19.	Wall wetting sprinkler and drencher systems	BCA 2022 C4D5, & AS 2118.2-2010.
20.	Warning and operational signs	EP&A (Development Certification and Fire Safety) Regulations - (Clause 108, D3D28 Signs on exit doors, E3D5 (lifts),