

**Our Ref: D2021-005**

**2nd November 2021**

## **5 SKYLINE PLACE, FRENCHS FOREST**

## **BUILDING CODE OF AUSTRALIA 2019**

## **CAPABILITY STATEMENT FOR DA SUBMISSION**

Prepared for

**PLATINO PROPERTIES**

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# 0.0 Author and Reviewer

## Revision history

Revision No.	Reviewed by	Description	Date
R01	Dean Morton	Draft	14/01/2021
R02	Dean Morton	Final	18/01/2021
R03	Dean Morton	Revision 1	01/11/2021

## 1.0 Executive Summary

This report has been prepared so as to assess the architectural documentation as detailed in Part 6 in accordance with the Building Code of Australia Volume 1 (BCA) 2019 incorporating amendment 1 and adopted standards.

The proposed development is the construction of a mixed use development including commercial tenancies to the ground floor, basement car parking, residential apartments (for over 55 retirement style accommodation) including 10 units for disabled persons accommodation.

The assessment has revealed that the proposed development will be capable of achieving compliance with BCA 2019. The following matters will require further consideration during detailed design development at the construction stage of the project:

1. The building is to adopt type A construction throughout.
2. The building is to be fire separated at the basement level to ensure stages 1 and 2 as separate buildings and not united.
3. There are extended distances to an exit that are to be subject to a performance solution at the construction certificate stage.
4. The form of acoustic separation between SOU's to both the class 2 parts is to be in accordance with Part F5.
5. Disabled access is generally compliant and subject to detailed review at the construction certificate stage.
6. The form of protection of the path of travel from the fire isolated exits to the road is to be DTS compliant or subject to a performance solution at the construction certificate stage.
7. The wet fire hydrant services including sprinklers, hydrants, fire hose reels and hydrants are to be coordinated with an accredited practitioner (fire safety)
8. The class 6 and 9b parts of the ground floor are subject to compliance with Section J in general and the class 2 parts a combination of BASIX and NSW Section J(A)

## 2.0 Property Description

### 2.1 Location

The subject building is located at 5 Skyline Place in Frenchs Forest and is bounded to the south and west by commercial/industrial use properties. The property is taken to face to the east for the purpose of this report.

### 2.2 Building Description

<b><i>Use / Classification</i></b>	Class 2: Residential apartments levels (level 1 – level 11) Class 3: Ground floor (disability support units) Class 6: Commercial/retail tenancies (ground floor) Class 7a: Car park (basement levels 1-2) Class 9b: Resident common use areas (ground floor & levels 1, 2 & 6)
<b><i>Rise in Storeys</i></b>	The development will have a rise of eight storeys (ten storeys contained)
<b><i>Floor Area</i></b>	<ul style="list-style-type: none"> <li>• Floor area limitations are not applicable to class 2 &amp; 3 parts and class 7a sprinkler protected car parks.</li> <li>• The class 6 parts do not exceed a maximum fire compartment of 5,000m<sup>2</sup></li> <li>• The class 9b parts do not exceed a maximum fire compartment of 8,000m<sup>2</sup></li> </ul>
<b><i>Volume</i></b>	<ul style="list-style-type: none"> <li>• Volume limitations are not applicable to class 2 apartments and class 7a sprinkler protected car parks.</li> <li>• The class 6 parts do not exceed a maximum fire compartment of 30,000m<sup>3</sup></li> <li>• The class 9b parts do not exceed a maximum fire compartment of 48,000m<sup>3</sup></li> </ul>
<b><i>Effective Height</i></b>	The building will have an effective height of 23.00m (RL179.60-RL156.60)
<b><i>Type of Construction</i></b>	The building requires Type A Construction
<b><i>Climate Zone</i></b>	For the purposes of Section J the climate zone is 5
<b><i>Population</i></b>	The population as determined from table D1.13 is: Car park –147 persons per basement storey (1 person per 30m <sup>2</sup> ) Ground floor (total 327): <ul style="list-style-type: none"> <li>• Resident use areas – 235 persons (1 person per 3m<sup>2</sup>)</li> <li>• Commercial tenancies – 92 persons (1 person per 10m<sup>2</sup>)</li> </ul> Level 2 – 200 (105 persons to pool, remainder to common areas)

## 3.0 Building Code of Australia Assessment

### 3.1 Fire Resistance and Stability (Section C, BCA)

#### Fire Resistance

The building is to comply with Clause C1.1 and Clause 2 & 3 of Specification C1.1, for a building required to have Type A construction. Refer to Table 3 of Specification C1.1 of the BCA for the specific Fire Resistance Levels [FRL's].

**Structural:** the ability to maintain stability and adequate load-bearing capacity as determined by AS 1530.4.

**Integrity:** the ability to resist the passage of flames and hot gases specified in AS 1530.4.

**Insulation:** The ability to maintain a temperature on the surface not exposed to the furnace below the limits specified in AS 1530.4. FRL's are generally as follows.

Building element	Class of building — FRL: (in minutes) <i>Structural adequacy/Integrity/Insulation</i>			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
<b>EXTERNAL WALL</b> (including any column and other building element incorporated within it) or other external building element, where the distance from any <i>fire-source feature</i> to which it is exposed is—				
For <i>loadbearing</i> parts—				
less than 1.5 m	90/ 90/ 90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/ 60/ 60	120/ 90/ 90	180/180/120	240/240/180
3 m or more	90/ 60/ 30	120/ 60/ 30	180/120/ 90	240/180/ 90
For non- <i>loadbearing</i> parts—				
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
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–
<b>EXTERNAL COLUMN</b> not incorporated in an <i>external wall</i> —				
For <i>loadbearing</i> columns—	90/–/–	120/–/–	180/–/–	240/–/–
For non- <i>loadbearing</i> columns—	–/–/–	–/–/–	–/–/–	–/–/–
<b>COMMON WALLS and FIRE WALLS—</b>				
	90/ 90/ 90	120/120/120	180/180/180	240/240/240
<b>INTERNAL WALLS—</b>				
<i>Fire-resisting</i> lift and stair <i>shafts</i> —				
<i>Loadbearing</i>	90/ 90/ 90	120/120/120	180/120/120	240/120/120
<i>Non-loadbearing</i>	–/ 90/ 90	–/120/120	–/120/120	–/120/120
Bounding <i>public corridors</i> , public lobbies and the like—				
<i>Loadbearing</i>	90/ 90/ 90	120/–/–	180/–/–	240/–/–
<i>Non-loadbearing</i>	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Between or bounding <i>sole-occupancy units</i> —				
<i>Loadbearing</i>	90/ 90/ 90	120/–/–	180/–/–	240/–/–
<i>Non-loadbearing</i>	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Ventilating, pipe, garbage, and like <i>shafts</i> not used for the discharge of hot products of combustion—				
<i>Loadbearing</i>	90/ 90/ 90	120/ 90/ 90	180/120/120	240/120/120
<i>Non-loadbearing</i>	–/ 90/ 90	–/ 90/ 90	–/120/120	–/120/120
<b>OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES and COLUMNS—</b>				
	90/–/–	120/–/–	180/–/–	240/–/–
<b>FLOORS</b>	90/ 90/ 90	120/120/120	180/180/180	240/240/240

Building element	Class of building — FRL: (in minutes) <i>Structural adequacy/Integrity/Insulation</i>			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
<b>ROOFS</b>	90/ 60/ 30	120/ 60/ 30	180/ 60/ 30	240/ 90/ 60

### **Lightweight construction & fire hazard properties**

Where lightweight fire rated construction is proposed for walls, the system must comply with Specification C1.8 of the BCA and the manufactures tested specification.

The fire hazard properties of floor, wall and ceiling linings are to comply with Part C1.10 and Specification C1.10 of the BCA. All materials selected for use in the construction should be accompanied by a valid test report demonstrating compliance with defined fire hazard properties

The use of combustible facade materials as either wall systems or as attachments to a wall are restricted under the BCA. The use of any form of combustible cladding material is prohibited under the deemed to satisfy provisions and any proposed use of materials not tested or deemed non combustible. The use of building materials incorporating plastic polymer type permanent formwork for external walls or fire stair shafts that are required to be of non combustible materials may be required to be assessed as a performance solution.

### **Compartmentation & separation**

Parts of the building with different classifications on the same storey must be fire separated by a fire wall of the higher FRL specified under Specification C1.1 of the BCA for the classifications concerned or the entire storey is to be constructed of the higher FRL. In this regard the ground floor is to adopt the higher FRL of 180 minutes in general based on the class 6 uses throughout the storey and the slab separating level 1 to have a FRL of 180/180/180. To levels 1, 2 and 6 of the eastern tower the FRL of 120 minutes is to be adopted based on the class 9b uses for common areas unless subject to review as a performance solution.

The building is to be fire separated from the stage 1 development at the point of connection at the basement level with fire doors being a FRL of -/120/30 to both buildings to create separate buildings (buildings are not considered united).

### **Protection of Openings**

There are no openings within 3m to a fire source feature that will require protection in accordance with the provisions contained within Part C3 of the BCA.

Bounding construction between residential sole occupant units (SOU) in class 2 buildings are to comply with the provisions of Specification C1.1, and Clause C3.11 of the BCA and generally achieve a FRL of 90/90/90 (loadbearing) or -/60/60 (non loadbearing)

Lift landing doors must achieve an FRL not less than -/60/- in accordance with Clause C3.12 of the BCA and AS 1735.11.

All entry doors to residential units and fire isolated stairs must be protected by self-closing -/60/30 fire doors.

**Vertical Separation of openings**

The proposed building will have sprinklers provided throughout including the class 2 parts and will comply with AS 2118 (parts 1 or 6) and therefore vertical separation by way of spandrels is not applicable.

**Fire sealing of penetrations**

All service penetrations must be sealed to the requirements of Clause C3.12 and C3.15 of the BCA

**Electrical Supply**

Electrical equipment is to be separated from the building in accordance with Clause C2.13 of the BCA. The main switchboard is to be constructed to achieve a fire resistance level of 120/120/120 where bounding to the building with the door being –/120/30 fire rated, unless higher FRL’s required by electricity supplier (may vary based on type of substation required to be provided).

**Protection of Equipment**

The following equipment is to be fire separated with construction complying with Clause C2.12 (d) of the BCA.

- (i) lift motors and lift control panels; or
- (ii) emergency generators used to sustain emergency equipment operating in the emergency mode; or
- (iii) a battery or batteries installed in the building that have a voltage exceeding 12 volts and a storage capacity exceeding 200kWh

Separation of on-site fire pumps must comply with the requirements of AS 2419.1-2005.

**3.2. Access and Egress (Section D, BCA)**

**Number of exits required**

All above ground storeys are required to be afforded access to one exit and within the basement there is to be a minimum of two exits to each storey and is considered compliant. To the disability support section to the ground floor will incorporate common areas accessed from units internally and therefore without a compliant exit arrangement from these spaces.

The non compliant arrangement of exits will be subject to a performance solution at the construction certificate stage.

### **Exit travel distances**

Exit travel distances to the basement levels and the ground floor are compliant.

In the western tower:

- levels 1 & 2 there are travel distances up to 14m from a SOU entry door to a point in choice in travel to alternate exits (12m max)

In the eastern tower:

- levels 1-4 there are travel distances up to 13.2m from a SOU entry door to a point in choice in travel to alternate exits (12m max)
- level 5 up to 13.6m to a point in choice in travel to alternate exits (12m max)
- level 6 to the common roof terrace up to 30m to a point in travel to alternate exits (20m max)

The non compliant travel distances will be assessed as a performance solution at the construction certificate stage.

### **Distance between alternative exits**

The distance between alternative exits is non compliant with Clause D1.4 and exits will exceed 60m apart to the basement levels, up to 65m and to the eastern and western towers the alternate exits will be less than 9m apart, being 7.8m.

The non compliant distances between exit will be assessed as a performance solution at the construction certificate stage.

### **Travel via fire isolated exits**

The point of discharge from the fire isolated exits is to incorporate external walls with a FRL of minimum 60/60/60 and the protection of openings in those walls that are located within 6m at right angles to the path of travel from the point of discharge to the road.

The design of the basement stairs is deemed to be fire isolated however without a compliant shaft through to the ground level discharge and will be subject to a performance solution at the construction certificate stage.

### **Dimensions of exits**

Exits and paths of travel to exits are to comply with D1.6 of the BCA. Generally exits widths are 1m in width clear of any obstruction including hand rails or other fixtures. Reductions in width are available at doorways to not less than 750mm clear to the car park and loading dock areas and class 2 parts.

The unobstructed width of a required exit must not diminish along the path of travel to a road, egress paths are to be defined in association with protection of egress paths.



### **Construction of Stairways**

Goings and risers are to be designed to comply with the provisions of Clause D2.13 of the BCA and to generally achieve a minimum going of 250mm and maximum rise of 190mm.

There is to be no step or ramp within the width of the door leaf to a door threshold unless it is an external door in which the maximum step is not to exceed 190mm. The plans generally detail compliance in this regard.

### **Handrails**

Handrails will be provided to stairways as required by Clause D2.17 of the BCA, including internal stairs within a residential SOU. For non fire isolated stairs they are to be provided both sides of the flight, for fire isolated stairs this can be limited to one side only. The plans generally note compliance.

### **Balustrades**

Balustrades will be provided for all areas where it is possible to fall more than 1m from the floor level to a lower surface. In general balustrades are to have no gap that will permit a 125mm diameter sphere to pass through, balustrades protecting a difference in levels of over 4m must not have horizontal elements between 150mm and 760mm above the floor that facilitate climbing.

Balustrades within fire isolated stairways may be constructed with three horizontal rails with gaps up to 460mm (bottom rail max 150mm above the nosing line or floor). Compliance can be readily achieved and is to be further detailed at the construction certificate stage.

### **Egress Doors**

All exit doors will swing in the direction of egress and are required to be provided with the appropriate hardware in accordance with Clauses D2.20 & D2.21 of the BCA, the latches will be downward or pushing action on a single device located between 900-1100mm above floor level.

Any door automatic door acting as an exit door (final discharge door) will be required to be fitted with fail safe operation to open automatically on activation of any smoke/fire detection system or sprinklers.

### **Protection of openable windows**

Openable windows in bedrooms where the floor is more than 2m above the surface beneath and with a sill height below 1.7m require restricted openings or protection in accordance with D2.24 of the BCA, measures to restrict the window opening may include security mesh or to restrict the opening to not permit a 125mm diameter sphere to pass through.

Where the window opening is restricted calculations are to be provided at Construction Certificate stage that sufficient natural ventilation is provided by Part F4.5.

For all windows not in bedrooms where the fall exceeds 4m from floor level to the surface below the sill height is to be minimum 865mm above floor level or a balustrade or similar provided in front of the opening.

**Access for people with a disability**

The proposed building is required to comply with the following:

- The Disability (Access to Premises — Buildings) Standards 2010;
- Part D3 of BCA;
- Australian Standard AS 1428.1-2009, AS/NZS 1428.4.1-2009, AS/NZS 2890.6-2009

Buildings and parts of buildings must be accessible as required by Table D3.1, unless exempted by D3.4, which requires access as follows:

**Class 2/3** – From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level.

To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, individual shop, eating area, or the like.

Where a ramp complying with AS 1428.1 or a passenger lift is installed—

(a) to the entrance doorway of each sole-occupancy unit; and

(b) to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp

**Class 7a** – To and within any level containing accessible car parking spaces.

**Class 6/9b** – To and within all parts normally used of the occupants.

The following areas are identified with respect to further review for accessibility:

- Lifts are to comply with AS 1735.12 and have an internal lift car dimension of 1600 x 1400mm and a clear doorway opening width of 900mm (refer to requirements for stretcher facilities also)
- The fire stair configuration incorporating an offset tread to the rising flight will permit a compliant handrail, handrails are required to maintain a consistent height throughout the flight between the flight and landings.

- The fire isolated exits are to have a handrail to one side being 30-50mm in diameter and have contrasting nosings being 50-75mm wide as per clause 11.1(f)&(g) of AS 1428.1-2009
- Accessible parking spaces are noted as being provided and are to comply with AS/NZS 2890.6-2009. The shared zones are to include a bollard located 800mm from the front of the space. There is to be a clear height to obstructions of not less than 2.5m.
- The swimming pool is to be accessible in one of the permitted options under clause D3.10
- There is to be a minimum of 1 accessible SOU to the disabled persons accommodation section.

### **3.3. Services and Equipment (Section E, BCA)**

#### **Hydrant Systems**

The buildings are required to be provided with a system of hydrant coverage in accordance with the provisions of Clause E1.3 of the BCA and AS 2419.1- 2005. It is noted the design is to incorporate a ring main configuration, static water supplies, a relay pump arrangement, pump room and boosters.

The design of the service is to be undertaken by an accredited practitioner (fire safety) at the construction certificate stage.

#### **Hose Reel Systems**

The building will be provided with a fire hose reel system in accordance with the provisions of Clause E1.4 of the BCA and AS 2441-2005. This system must cover the car park section, ground floor and class 9b uses throughout the development. Locations of fire hose reels are required to be located 4m from an exit. The design of the service is to be undertaken by an accredited practitioner (fire safety) at the construction certificate stage.

#### **Portable Fire Extinguishers**

Fire extinguishers are to be provided in accordance the provisions of Clause E1.6 of the BCA and AS2444 - 2001. There is to be a type ABE 2.5kg extinguisher located within 10m of the entry door to every apartment in the class 2 parts.

#### **Exit and Emergency Lighting**

Emergency lighting will be provided throughout the building in accordance with Part E4 of the BCA and AS/NZS 2293.1.2018.

### **Lifts**

A stretcher lift in accordance with Clause E3.2 of the BCA will be required as each building has an effective height of greater than 12m. A sign must be provided in accordance with Clause E3.3 of the BCA warning against the use of lifts in a fire.

Fire service controls including a fire service recall control switch are to be provided in accordance with Clause E3.7, E3.9 and E3.10 as the building exceeds 12m in effective height.

Compliance with Specification E3.1 is required for an electric or electrohydraulic lift installation

Every passenger lift is to be provided with handrails, minimum internal floor dimensions, clear door opening dimensions and car control buttons in accordance with AS1735.12 and be fitted with a series of sensory devices per clause E3.6 of the BCA.

A sign must be provided in accordance with Clause E3.3 of the BCA warning against the use of lifts in a fire.

### **Sprinklers**

The building is required to be provided with a system of fire sprinkler coverage in accordance with the provisions of Clause E1.5 of the BCA and AS 2118.1-2017 (or AS 2118.6-2012).

The design of the service is to be undertaken by an accredited practitioner (fire safety) at the construction certificate stage.

### **Smoke Hazard Management**

The building is to be provided with the following smoke control measures:

- Class 2: An automatic smoke detection and alarm system in accordance with Clause 3, 4 or 5 of Specification E2.2a and AS 1670.1-2018 and AS 3786-2014.
- Class 7a: The mechanical exhaust system of the car park areas is to comply with clause 5.5 of AS/NZS 1668.1-2015 except that metal blade fans suitable for operation at normal temperature with non fire rated control cabling may be used where not naturally ventilated.
- Building occupancy warning system as per clause 7 of Specification E2.2a and clause 3.22 of AS 1670.1-2018 installed to sound throughout the entire building to all occupied parts.
- Basement stairs having three entry doors are to be provided with automatic pressurization in accordance with AS/NZS 1668.1-2015.

### **3.4. Health and Amenity (Section F, BCA)**

#### **Damp and Weatherproofing**

Adequate measures will be employed to ensure compliance Part F1 of the BCA is achieved in terms of weatherproofing, this is to include compliance with AS 4654.2-2012 in respect of waterproofing of external balconies.

#### **Sanitary and Other facilities**

Within each apartment there is to be facilities for cooking, washing and laundry facilities comprising a wash tub and space for a washing machine and either a clothes line min 7.5m long or space for a heat operated dryer in the same room as the washing machine. Plans generally detail compliance in this regard.

There is to be facilities provided for staff of the commercial/retail type uses within the building and will be subject to review at the construction certificate stage.

#### **Sanitary Facilities for People with Disabilities**

Accessible facilities are required be provided in accordance with the provisions of Clause F2.3 and AS1428.1 – 2009 for staff uses and to resident common use areas will be subject to review at the construction certificate stage.

#### **Ceiling Heights**

The following minimum building ceiling heights must be maintained.

- Common kitchen, laundry or the like – 2.1m
- Corridor, passageway or the like – 2.1m in class 2 parts
- Bathroom, shower, sanitary compartment or the like – 2.1m
- Habitable rooms including common areas – 2.4m
- Stairways – 2.0m
- Car parking areas – 2.2m (for disabled accessible spaces and shared zones min 2.5m)

#### **Natural and Artificial Lighting**

Natural lighting is to be provided class 2 sole occupancy units to habitable rooms and is to be not less than 10% of the floor are of the room concerned based on the light transmitting area of the glazing element (eg exclusive of framing elements), artificial lighting may be provided throughout other parts in accordance with the provisions of Clause F4.4 of the BCA and AS 1680.0. Compliance can be readily achieved and is subject to detailed design development at the construction certificate stage.

**Ventilation**

The building is required to be provided with ventilation in accordance with the provisions of Clause F4.5 of the BCA. Ventilation may be provided by natural means or a mechanical system complying with AS 1668.2-2012.

**Sound Transmission and Insulation**

Class 2:

The floor separating the residential units and separating the sole occupancy units from public areas must achieve a sound insulation rating of  $R_w+C_{tr}$  (airborne) of not less than 50 and an  $L_n,w+C_i$  (impact) not more than 62.

Walls separating units must achieve a sound insulation rating of  $R_w+C_{tr}$  (airborne) of not less than 50.

Walls separating units from plant rooms, lift shafts, stairways corridors or other public areas must have an insulation rating of  $R_w$  (airborne) not less than 50.

Walls separating a bathroom, sanitary compartment, laundry or kitchen in one sole occupancy unit from a habitable room in another or separating a unit from a lift shaft must be of discontinuous construction.

The doorway separating to sole occupancy unit from the public area must have an  $R_w$  not less than 30.

Soil, waste & stormwater services must be separated by construction having an  $R_w+C_{tr}$  (airborne) not less than

- 40 if the room is a habitable room
- 25 if the room is a non-habitable room

**3.5. Ancillary Provisions (Section G, BCA)**

**Cleaning of Windows**

As per NSW Clause G1.101 a building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level.

This is satisfied where—

- (i) the windows can be cleaned wholly from within the building; or
- (ii) provision is made for the cleaning of the windows by a method complying with the Work Health and Safety Act 2011 and regulations made under that Act.

### 3.6. Energy Efficient Construction (Section J, BCA)

The class 2 sole occupancy units are subject to BASIX requirements and the relevant NSW J(A) variations to BCA Part J. All other parts of the building are to comply with the requirements of NSW J(B). The following BCA Section J (both J(A) and J(B)) provisions are applicable to the class 2, 6, 9b & 7a parts:

#### **Building Fabric**

Parts of the building forming an envelope to a conditioned space are to achieve the minimum construction requirements for insulation R-Values required by BCA Part J1 for the class 6 and 9b parts of the building.

The class 2 parts are to primarily comply with BASIX for thermal comfort requirements.

#### **Building Sealing**

Openings in the building such as doors, windows, exhaust fans and ventilation systems forming part of an envelope to a conditioned space must be sealed to the requirements of Part J3 of the BCA to prevent loss of conditioned air.

In that regard, all external doorways and windows must be fitted with a draft seal, exhaust fans to have dampers, there are to be tight fitting skirting boards, cornices and architraves. The requirement for seals does not apply to fire doors fitted between the fire-isolated stairways in the conditioned areas of the building.

#### **Air-conditioning and Ventilation System**

The design of all mechanical air-conditioning and ventilation systems must achieve compliance with Part J5 of the BCA with regard to input power and efficiency features for the class 2 part as applicable under NSW J(A)

#### **Artificial Lighting and Power**

The building is to maintain maximum lighting power levels and control systems as applicable. The design of lighting systems must comply with BCA Part J6.

Maximum illumination power densities for the car parking and ancillary use areas are to be as follows:

- First 15m of entry to car park 11.5 W/m<sup>2</sup> (day time) and 2.5 W/m<sup>2</sup> (night time for first 20m)
- Generally throughout car park 2 W/m<sup>2</sup>
- Plant rooms 2 W/m<sup>2</sup>
- For areas not listed to table J6.2 directly to comply with note 1 to the table

For other spaces:

- Corridors 5 W/m<sup>2</sup>
- Toilet (end of trip) 3 W/m<sup>2</sup>
- Entry lobby 9 W/m<sup>2</sup>
- Office tenancies 4.5W/m<sup>2</sup> (for ambient lighting levels above 200lx)

### **Hot Water Supply**

Hot water supply systems will be installed in accordance with Part J7 of the BCA and AS/NZS 3500.4 and incorporate insulation to inlet and outlet lines of hot water storage units.

### **Access for Maintenance and Facilities for Monitoring of Energy Use**

The building is to have facilities for maintenance and energy monitoring in compliance with BCA Part J8 and the NSW variations.



## 4. Fire Safety and Other Measures

### 4.1. Proposed Fire Safety Measures

In terms of the proposed works the following fire safety measures are proposed to be installed;

Fire Safety Measure	Standard of Performance
Access panels, doors and hoppers to fire-resisting shafts	BCA 2019 amdt 1 Clause C3.13
Automatic fail safe devices	BCA 2019 amdt 1 Clause D2.19, Spec C3.4, AS 1670.1-2018
Automatic fire detection and alarm system	BCA 2019 amdt 1 Clause, E2.2, Spec. E2.2a, AS 1670.1-2018
Automatic fire suppression system	BCA 2019 amdt 1 Clause E1.5, Spec. E1.5, AS 2118.1 (parts 1 or 6)
Emergency lighting	BCA 2019 amdt 1 Clause E4.2 & E4.4, AS/NZS 2293.1-2018
Exit and directional signage	BCA 2019 amdt 1 Clause E4.4, E4.5, (NSW E4.6) & E4.8, AS/NZS 2293.1-2018
Fire dampers	BCA 2019 amdt 1 Clause E2.2, AS/NZS 1668.1-2015, AS 1682.2-1990
Fire doorsets	BCA 2019 amdt 1 Clause C3.5, C3.8, AS 1905.1-2015
Fire Engineering Report	Report prepared by: TBA
Fire hydrant systems	BCA 2019 amdt 1 Clause C2.12, E1.3, AS 2419.1-2005
Fire hose reel systems	BCA 2019 amdt 1 Clause E1.4, AS 2441-2005
Fire seals (protecting openings and service penetrations in fire resisting components of the building)	BCA 2019 amdt 1 Clause C3.15, Spec C3.15, Manufacturer's specifications
Lightweight construction	BCA 2019 amdt 1 Clause C1.8, Spec A2.3, Spec C1.8, Manufacturer's specifications
Mechanical air handling systems (including automatic shut down of air handling systems as part of class 9b part)	BCA 2019 amdt 1 Clause E2.2, Table E2.2a, AS/NZS 1668.1-2015, AS 1668.2-2012 (clause 5.5 car park exhaust operation)
Openings in fire-isolated lift shafts	BCA 2019 amdt 1 Clause C3.10, AS 1735.11-1986
Building occupant warning system	BCA 2019 amdt 1 Clause E2.2, Spec E2.2a, AS 1670.1-2018
Portable fire extinguishers	BCA 2019 amdt 1 Clause E1.6, AS 2444-2001
Power operated exit doors	BCA 2019 amdt 1 Clause D2.19, D2.21
Pressurising systems (fire isolated exit automatic pressurisation)	BCA 2019 amdt 1 Clause E2.2, Table E2.2a, Spec E2.2a, AS/NZS 1668.1-2015
Warning and operational signs	BCA 2019 amdt 1 Clause C3.6, D2.23, D3.6, E3.3, Spec E1.8, Clause 183 of the Environmental Planning and Assessment Regulation 2000

## 5. Conclusion

Following an assessment of the proposed building it is considered that the proposed building, can achieve compliance with the provisions of BCA 2019 amendment 1, without alteration that would necessitate an amendment to the development consent.

## 6. Referenced plans

Plans prepared by PA Studio

D. No.	NAME	REV	DATE	D. No.	NAME	REV	DATE
DA000	COVER PAGE	A	11.10.21	DA902	SHADOW DIAGRAMS - MARCH 21 - EQUINOX	A	11.10.21
DA001	DRAWING LIST	A	11.10.21	DA904	CENTRAL COURTYARD SUN ACCESS	A	11.10.21
DA201	SITE PLAN	A	11.10.21	DA1001	SOLAR ACCESS	A	11.10.21
DA301	LOWER BASEMENT CARPARK	A	11.10.21	DA1002	CROSS VENTILATION	A	11.10.21
DA302	BASEMENT CARPARK	A	11.10.21	DA1101	FLOOR AREA CALCULATIONS	A	11.10.21
DA303	GROUND FLOOR PLAN	A	11.10.21	DA1102	DWELLING TYPES AND NET FLOOR AREAS	A	11.10.21
DA304	LEVEL 1 FLOOR PLAN	A	11.10.21	DA1103	DCP LANDSCAPE CALCULATION	A	11.10.21
DA305	LEVEL 2 FLOOR PLAN	A	11.10.21	DA1104	ADG LANDSCAPE CALCULATION	A	11.10.21
DA306	LEVEL 3 FLOOR PLAN	A	11.10.21	DA1105	SEPP LANDSCAPE CALCULATION	A	11.10.21
DA307	LEVEL 4 FLOOR PLAN	A	11.10.21	DA1106	SITE COVERAGE	A	11.10.21
DA308	LEVEL 5 FLOOR PLAN	A	11.10.21	DA1201	UNITS N4, N4R, ST7, ST7R, N6 & N6R	A	11.10.21
DA309	LEVEL 6 FLOOR PLAN	A	11.10.21	DA1202	UNITS M1 & M3	A	11.10.21
DA310	LEVEL 7 FLOOR PLAN	A	11.10.21	DA1203	UNIT TYPES N2 & N2R	A	11.10.21
DA311	ROOF PLAN	A	11.10.21	DA1204	UNITS N3, N3R, M7 & M7R	A	11.10.21
DA312	COMMON AREAS	A	11.10.21	DA1205	UNITS M8, M8R & M9	A	11.10.21
DA313	DEMOLITION PLAN	A	11.10.21	DA1206	UNITS P1, P2 & P3	A	11.10.21
DA314	WASTE MANAGEMENT PLAN	A	11.10.21	DA1207	UNITS M5, M5R, N8 & N9	A	11.10.21
DA401	SECTIONS S1 & S2	A	11.10.21	DA1208	UNITS M10 & M10R - WEST BUILDING	A	11.10.21
DA402	SECTIONS S3 & S4	A	11.10.21	DA1209	UNITS N8B, N8C & N8D	A	11.10.21
DA403	SECTION S5	A	11.10.21	DA1210	UNITS N10B, N10C & N10D	A	11.10.21
DA501	EAST ELEVATION	A	11.10.21	DA1211	UNIT N10A - EAST BUILDING	A	11.10.21
DA502	NORTH ELEVATION	A	11.10.21	DA1212	UNITS N10B, N10C & N10D - EAST BUILDING	A	11.10.21
DA503	WEST ELEVATION	A	11.10.21	DA1213	UNIT TYPES N2e, N2eR, N7 & N7R	A	11.10.21
DA504	SOUTH ELEVATION	A	11.10.21	DA1214	UNITS S1, M5, N8 & N9	A	11.10.21
DA601	MATERIALS AND FINISHES	A	11.10.21	DA1301	EXTERNAL VIEWS	A	11.10.21
DA701	DETAILS & SECTION THROUGH EXIT RAMP	A	11.10.21	DA1302	LANDSCAPED AREAS	A	11.10.21
DA801	BASIX COMMITMENTS	A	11.10.21	DA1303	COMMON AREAS	A	11.10.21
DA901	SHADOW DIAGRAMS - JUNE 21 - MID WINTER	A	11.10.21	DA1401	SURVEY PLAN	A	11.10.21