

**STRATHFIELD COUNCIL  
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5 September 2019**

## **BUILDING CODE OF AUSTRALIA 2019 REPORT FOR DA SUBMISSION**

### **PROPOSED RESIDENTIAL DEVELOPMENT – 11-17 COLUMBIA LANE, HOMEBUSH NSW 2140**

Report prepared for: JQZ Group Pty Limited  
Retail 24 & 25  
1 Nipper Street  
Homebush NSW 2140

Attention: Jeremy Hung

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Report Ref: 19-213167\_BCAREportforDASubmission\_R01\_190809

Job Number: 19-213167

Date: 9 August 2019

#### **DOCUMENT ACCEPTANCE**

	<b>Name</b>	<b>Signed</b>	<b>Date</b>
Verified by	Peter Murphy	<b><i>DRAFT FOR COMMENT</i></b>	09/08/2019

#### **REVISION HISTORY**

<b>Revision No.</b>	<b>Prepared by</b>	<b>Description</b>	<b>Date</b>
R01	Peter Murphy	DRAFT BCA Capability Statement to accompany DA submission	09/08/2019



## Introduction and Documentation

At the request of JQZ Group Pty Limited, we offer comments and recommendations in respect to Building Code of Australia 2019 compliance for the proposed residential development located at 11-17 Columbia Lane, Homebush NSW 2140 which comprises;

- 4 basement levels
- Two residential towers located above the basement carpark containing 25 and 26 storeys respectively

We have made every attempt to cover the main issues under Parts B, C, D, E, F, G, H and J of the Building Code of Australia. Any reference to BCA throughout this report infers BCA 2019. Areas of the design are still being refined so that resolution will be possible prior to the issue of a Construction Certificate (CC) for the works.

This report does not assess the impact of the Disability Discrimination Act (DDA) which is outside the scope of the BCA nor does it include compliance with Part D3 of the BCA. Refer to Philip Chun Access Consulting report to address Part D3, DDA and any relevant conditions as they relate to accessibility.

This report is for the exclusive use of the client and cannot be used for any other purpose without prior permission from Philip Chun & Associates Pty Ltd. The report is valid only in its entire form. "Philip Chun and Associates accepts no responsibility for any loss suffered as a result of any reliance upon such assessment or report other than as being accurate at the date the property was inspected for the purposes of the assessment or report."

### Documentation available and assessed:

The drawings assessed are those issued by Mosca Pserras Architects:

Drawing No. (Revision)	Titled	Dated
AP01 - P25	Cover Page	02/07/2019
AP02 - P25	Data	02/07/2019
AP03 - P26	Site Plan	31/07/2019
AP04 - P27	Basement 3 & 4	31/07/2019
AP05 - P27	Basement 2	31/07/2019
AP06 - P27	Basement 1	31/07/2019
AP07 - P28	Ground Floor	31/07/2019
AP08 - P27	Level 1	31/07/2019
AP09 - P27	Level 2-6	31/07/2019
AP10 - P27	Level 7	31/07/2019
AP11 - P26	Level 8	31/07/2019
AP12 - P26	Level 9-12	31/07/2019
AP13 - P26	Level 13	31/07/2019
AP14 - P26	Level 14-16	31/07/2019
AP15 - P26	Level 17	31/07/2019
AP16 - P26	Level 18-21	31/07/2019
AP17 - P26	Level 22	31/07/2019
AP18 - P26	Level 23	31/07/2019
AP19 - P26	Level 24	31/07/2019
AP20 - P26	Level 25	31/07/2019
AP21 - P25	Elevation NE	02/07/2019
AP22 - P25	Elevation N	02/07/2019
AP23 - P25	Elevation SE	02/07/2019
AP24 - P25	Elevation SW	02/07/2019
AP25 - P25	Section A	02/07/2019
AP26 - P25	Section B	02/07/2019
AP27 - P25	Section C	02/07/2019
AP28 - P25	Section D	02/07/2019
AP29 - P25	Adaptable & Livable Units	02/07/2019
AP30 - P25	Materials Palette	02/07/2019



## Building Code of Australia 2019 Comments

### Building Assessment

<b>Building Classification(s)</b>	Basement B1 to B4	Class 7a (Carpark)
	Ground – Level 25 (Building A)	Class 2 (Residential)
	Ground – Level 26 (Building B)	Class 2 (Residential)
<b>Rise in Storeys</b>	26 – Building B	
<b>Type of Construction</b>	Type A Construction	
<b>Effective Height (m)</b>	Approximately 74.5m	

The following information and documentation is required prior to the issue a Construction Certificate.

### Section B – Structure

1. **Structural Provisions** – The building will have a rise in storey of 26 and is therefore required to be of not less than Type A construction. The building needs to comply with the requirements BCA B1.2 & Specification B1.2.

Structural engineer to design the building to withstand individual actions in accordance with the following Standards; AS1170.1, AS1170.2 and AS1170.4.

***The structural engineer will need to ensure the structural requirements of BCA clause B1.1, B1.2 B1.4 is considered in the design stage.***

### Section C – Fire Resistance / Compartmentation / Separation

1. **Type of Construction** – The building will have a rise in storey of 26 and is therefore required to be of not less than Type A construction. The building needs to comply with BCA Table 3 for Type A Construction (See appendix A). Structural engineer will need to confirm at CC stage the FRL's of the columns slabs and load bearing walls in accordance with Table 3 of Spec C1.1 i.e. -

**Class 2** – 90 mins

**Class 7a** – 120 mins

***Any departures to the Deemed-to-Satisfy provisions of the BCA will require a Performance Solution from an accredited fire safety engineer.***

2. **Fire Compartmentation** – The fire compartmentation of the Class 2 (Residential) building components are based on a floor by floor separation which is deemed compliant as no floor area limitations under Table C2.2 is applicable to Class 2 building parts.

The carpark contains more than 40 cars and is required to be sprinkler protected. Compartmentation limitations do not apply to a sprinklered carpark (C2.1 of BCA).

3. **Lightweight construction (C1.8)** –
  - (a) Lightweight construction must comply with Specification C1.8 if it is used in a wall system—
    - (i) that is required to have an FRL; or
    - (ii) for a lift shaft, stair shaft or service shaft or an external wall bounding a public corridor including a non fire-isolated passageway or non fire-isolated ramp, in a spectator stand, sports stadium, cinema or theatre, railway station, bus station or airport terminal.
  - (b) If lightweight construction is used for the fire-resisting covering of a steel column or the like, and if—



- (i) the covering is not in continuous contact with the column, then the void must be filled solid, to a height of not less than 1.2 m above the floor to prevent indenting; and
- (ii) the column is liable to be damaged from the movement of vehicles, materials or equipment, then the covering must be protected by steel or other suitable material.

**Architect to note – wall schedule and drawings are to be provided prior to issue of a CC.**

**4. Non-Combustible materials (C1.9) –**

- (a) In a building required to be of Type A or B construction, the following building elements and their components must be non-combustible:
  - (i) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation.
  - (ii) The flooring and floor framing of lift pits.
  - (iii) Non-loadbearing internal walls where they are required to be fire-resisting.
- (b) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in—
  - (i) a building required to be of Type A construction; and
  - (ii) a building required to be of Type B construction, subject to C2.10, in—
    - (A) a Class 2, 3 or 9 building; and
    - (B) a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys.
- (c) A loadbearing internal wall and a loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification C1.1.
- (d) The requirements of (a) and (b) do not apply to the following:
  - (i) Gaskets.
  - (ii) Caulking.
  - (iii) Sealants.
  - (iv) Termite management systems.
  - (v) Glass, including laminated glass.
  - (vi) Thermal breaks associated with glazing systems.
  - (vii) Damp-proof courses.
- (e) The following materials may be used wherever a non-combustible material is required:
  - (i) Plasterboard.
  - (ii) Perforated gypsum lath with a normal paper finish.
  - (iii) Fibrous-plaster sheet.
  - (iv) Fibre-reinforced cement sheeting.
  - (v) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0.
  - (vi) Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5.
  - (vii) Bonded laminated materials where—
    - (A) each lamina, including any core, is non-combustible; and
    - (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and
    - (C) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively.

**Architect and Structural engineer to note. Wall schedule and an external wall system design statement are to be provided prior to issue of a CC. Architect to also confirm the screens on balconies are non-combustible.**

- 5. **Fire Hazard Properties (C1.10) –** All new surface finishes, assemblies and linings are to comply with BCA Clause C1.10 (Specification C1.10) with regard to Fire Hazard Properties. – **Architect to note – test data sheets will be required prior to issue of an Occupation Certificate (OC).**
- 6. **Ancillary Elements (C1.14) –** An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following;
  - An ancillary element that is non-combustible.



- A gutter, downpipe or other plumbing fixture or fitting.
- A flashing.
- A grate or grille not more than 2m<sup>2</sup> in area associated with building service.
- An electrical switch, socket-outlet, cover plate or the like.
- A light fitting.
- A required sign etc.

**Architect and structural engineer to note.**

7. **Spandrels** (C2.6) – not applicable to a sprinkler protected building.
8. **Separation of classifications in the same storey** (C2.8) – If a building has parts of different classifications located alongside one another in the same storey—
- (a) each building element in that storey must have the higher FRL prescribed in Specification C1.1 for that element for the classifications concerned; or
  - (b) the parts must be separated in that storey by a fire wall having—
    - (i) the higher FRL prescribed in Table 3 of Spec C1.1.

**Architect and structural engineer to note – details are to be provided prior to issue of relevant CC.**

9. **Separation of classifications in different storeys** (C2.9) – The floor between the adjoining parts must have an FRL of not less than that prescribed in Specification C1.1 Table 3 Type A Construction for the classification of the lower storey, i.e. 120mins between Class 7a basement floor and Class 2 Ground floor.

**Architect and structural engineer to note – details are to be provided prior to issue of relevant CC.**

10. **Separation of lift shafts** – (C2.10) Any lift connecting more than 2 storeys, or more than 3 storeys if the building is sprinklered must be separated from the remainder of the building by enclosure in a shaft which, in a building required to be of Type A construction is to be separated from the rest of the building as per Table 3 of Spec C1.1. - **Details required prior to issue of CC.**

11. **Separation of equipment** (C2.12) – Essential / emergency equipment including lift motor rooms, switch rooms, emergency generators, central smoke control plant, boilers or batteries are to be separated by fire rated construction with a fire resistance level as required by Specification C1.1 but not less than 120/120/120. **Services engineer to provide further details prior to the issue of a CC.**

12. **Electricity supply system** (C2.13) – Where emergency equipment is required in a building, all switchboards in the electrical distribution system, which sustain the electricity supply to the emergency equipment, must provide full segregation by way of enclosed metal partitions designed to prevent the spread of any fault from non-emergency equipment switchgear to the emergency equipment switchgear. **Services engineer to provide further details prior to the issue of a CC. Confirm with Energy Australia as additional requirements may apply to substations. Services engineer to provide further details prior to the issue of a CC.**

13. **Public corridors in Class 2 and 3 buildings** (C2.14) – In a Class 2 or 3 building, a public corridor, if more than 40m in length, must be divided at intervals of not more than 40 m with smoke-proof walls complying with Clause 2 of Specification C2.5. – **The length of corridors on levels 2 to 6 measures up to 75m in lieu of 40m. Smoke walls or doors are required to break the length of the corridors to less than 40m. Architect to amend design or Fire Safety Engineer to address. Details are to be provided prior to issue of CC.**

14. **Protection of openings in external walls** (C3.2) – Any openings in an external wall required to have an FRL must be protected in accordance with BCA C3.4 and if used, wall-wetting sprinklers are to be externally fitted. – **Compliance readily achievable via means of C3.4 compliance. Architect to note and discuss methods of protection to the Eastern, Southern and Western windows which stand**



***less than 3m from a side boundary. Architect to amend design or Fire Safety Engineer to address. Details are to be provided prior to issue of CC.***

15. **Doorways in fire walls (C3.5)** – to be fire rated with an FRL of not less than that required by Specification C1.1 for the fire wall except that each door must have an insulation level of at least 30 – ***Compliance readily achievable. Architect to provide door schedule for compliance prior to issue of CC.***
16. **Openings in fire isolated exits (C3.8)** – Any doors opening into a fire isolated passageway, stair or ramp must be fire door with an FRL of not less than -/60/30 that are self closing or an automatic closing door activated by smoke detector or other detector suitable in accordance with AS 1670 or any other required suitable fire alarm system, including a sprinkler system complying with Spec E1.5. - ***Compliance readily achievable. Architect to provide door schedule for compliance prior to issue of CC.***
17. **Service penetrations in fire isolated exits (C3.9)** – All fire isolated exits must not be penetrated by any services other than – electrical wiring permitted by Clause D2.7 of the BCA, water pipes for fire services or ducting associated with a stair pressurization system. - ***Compliance achievable. Services engineer to note prior to the issue of a CC.***
18. **Openings in fire isolated lift shafts (C3.10)** – Entrance doorways in lift shafts required to be fire isolated must be constructed with an FRL of not less than -/60/- and must comply with AS1735.11, and to remain close when not in use. - ***Compliance achievable. Details are to be provided prior to issue of a CC.***
19. **Bounding construction: Class 2 buildings (C3.11)** SOU doors to be self-closing –/60/30 fire doors. ***Compliance readily achievable. Architect to provide door schedule for compliance prior to issue of CC.***
20. **Openings in floors and ceilings for services (C3.12)** –
  - (a) Where a service passes through—
    - (i) a floor that is required to have an FRL with respect to integrity and insulation; or
    - (ii) a ceiling required to have a resistance to the incipient spread of fire, the service must be installed in accordance with (b)
  - (b) A service must be protected—
    - (i) in a building of Type A construction, by a shaft complying with Specification C1.1; or
    - (ii) in a building of Type B or C construction, by a shaft that will not reduce the fire performance of the building elements it penetrates; or
    - (iii) in accordance with C3.15.
  - (c) Where a service passes through a floor which is required to be protected by a fire-protective covering, the penetration must not reduce the fire performance of the covering. ***Compliance achievable. Services engineer to note prior to the issue of a CC.***
21. **Openings in shafts (C3.13)** – In a building required to be of Type A construction, any opening in a wall providing access to ventilating, pipe, garbage or other services shafts must be protected by - an access panel having an FRL of not less than –/60/30 or a self-closing –/60/30 fire door or hopper. - ***Compliance readily achievable. Architect to provide door schedule for compliance prior to issue of CC.***
22. **Openings for service installations (C3.15)** - Electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrations that are required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire, must be fire sealed, fire rated or otherwise comply with listed standards. ***Compliance achievable. Services engineer to note prior to the issue of a CC.***





## Section D – Access and Egress

### 23. Access and Egress – Residential Apartments (Class 2)

- In addition to any horizontal exit, not less than 2 exits must be provided from each story in a building with an effective height of more than 25m (D1.2) – **Complies.**
- The entrance doorway of any sole-occupancy unit must be not more than 6m from an exit or from a point from which travel in different directions to 2 exits is available or 20m from a single exit serving the storey at the level of egress to a road or open space (D1.4) – **The travel distance to a point of choice on levels 2-7 is up to 16m in lieu of 6m, level 1 is up to 13m in lieu of 6m, levels 8-21 is 12m in lieu of 6m and levels 23-24 is 10m in lieu of 6m. Architect to amend design or Fire Safety Engineer to address.**
- Exits that are required as alternative means of egress must be located so that alternative paths of travel do not converge such that they become less than 6m apart or more than 45 apart. The exit paths shall be not less than 9m apart as per D1.5. The discharge point of alternative exits must be located as far apart as practical (D1.10) – **Complies.**
- Widths of exits and corridors must be sufficient to provide safe passage for occupant egress. The unobstructed width of each exit or path of travel to an exit, except for doorways, must be not less than 1m (D1.6) – **Architect to note. Detailed drawings required prior to issue of CC.**
- A doorway must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from a public corridor, public lobby or the like, a sole occupancy unit occupying the entire storey or a sanitary compartment or air lock (D1.7). – **Complies.**
- Each fire-isolated stair must provide independent egress from each storey served and discharge directly by way of its own fire isolated passageway to a road or open space **OR** to a point in a storey or space within the confines of the building, that is used only for pedestrian movement, car parking or the like and is open for at least 2/3 of its perimeter **OR** into a covered area that adjoins a road or open space, is open for at least 1/3 of its perimeter and has an unobstructed clear height throughout including the perimeter openings of not less than 3m and provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6m (D1.7).  
**Fire stairs serving Building A converge and discharge in the same location. Architect to amend design to ensure separation between exits is provided. Alternatively a Performance Solution required to address the departure.**
- If a stairway serving as an exit is required to be fire-isolated there must be no direct connection between a flight rising from a storey below the lowest level of access to a road or open space and a flight descending from a storey above that level. – **Complies.**
- Doors to the required exits must open in the direction of egress (D2.20) – **Complies.**
- The construction and discharge of stairs, landings, thresholds, balustrades and handrails must meet the requirements of the BCA - **Compliance readily achievable. Details to be provided prior to issue of a CC.**
- 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 (D1.10) – **Architect to note.**
- Due to exceeding 25m in effective height doors of a fire isolated exit must not be locked from the inside throughout the fire stair unless the doors are fitted with a fail safe device that auto unlocks the doors on fire trip and on at least every fourth storey, the doors are not able to be locked and a sign is fixed on such doors stating that re-entry is available or otherwise an intercom system



operated from within the enclosure is to be provided near the doors (D2.22). **Compliance readily achievable. Fire Service consultant together with Architect to confirm preferred option for compliance.**

- Signage should be provided to the fire doors leading to the fire-isolated exits. The signage should be in accordance with Clause D2.23 & D3.6 of the BCA. **Compliance readily achievable. Architect to provide signage schedule for compliance prior to issue of CC.**
- Fall protection needed to unit bedroom windows located less than 1.7m high required in accordance with Clause D2.24 - **Architect to note, window schedule required for compliance prior to issue of a CC.**

#### 24. Access and Egress – Carpark, Plant and Communal Areas (Class 2 non-residential & Class 7a)

- Basements - Not less than 2 exits must be provided to any below ground basement carpark levels (D1.2) – **Complies.**
- The maximum distance of travel to an exit is 40m where two exits are available with a point of choice at 20m from the point of origin (D1.4) – **Non-compliances below:**
  - **The travel distances to an exit from the basement levels 1 to 4 are up to 56m in lieu of 40m**
  - **The travel distance to a point of choice from basement level 1 is up to 34m in lieu of 20m**
  - **The travel distance to a point of choice on level 13 communal area is up to 23m in lieu of 20m****Architect to amend design or Fire Safety Engineer to address departures.**
- The distance between alternative exits is not to exceed 60m (D1.5) – **The travel distances between exits on basement level 2 is up to 82m in lieu of 60m. The distance between exits on the communal area of level 8 is up to 63m in lieu of 60m. Architect to amend design or Fire Safety Engineer to address departures.**
- Paths of travel must not converge closer than 6m (D1.5) – **Complies.**
- A doorway must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from a public corridor, public lobby or the like, a sole occupancy unit occupying the entire storey or a sanitary compartment or air lock (D1.7). – **Complies.**

Each fire-isolated stair must provide independent egress from each storey served and discharge directly by way of its own fire isolated passageway to a road or open space **OR** to a point in a storey or space within the confines of the building, that is used only for pedestrian movement, car parking or the like and is open for at least 2/3 of its perimeter **OR** into a covered area that adjoins a road or open space, is open for at least 1/3 of its perimeter and has an unobstructed clear height throughout including the perimeter openings of not less than 3m and provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6m (D1.7). – **Fire stairs serving Building A converge and discharge in the same location. Architect to amend design to ensure separation between exits is provided.**

- Widths of exits and corridors must be sufficient to provide safe passage for occupant egress (D1.6) **Detailed drawings required prior to issue of a CC.**
- 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 (D1.10) – **All basement fire doors should be protected with bollards to prevent vehicles or storage items blocking the exits.**





- Doors to swing in the direction of egress – **Complies.**
- The construction and discharge of stairs, landings, thresholds, balustrades and handrails must meet the requirements of the BCA - **Compliance readily achievable. Details to be provided prior to issue of a CC.**
- A swinging door in a required exit or forming part of a required exit must not encroach (D2.20) – **Compliance readily achievable. Details to be provided prior to issue of a CC.**
- All doors need to be provided with a free lever latch located at 900-1100mm high or be fitted with fail-safe device which automatically unlocks the door upon fire trip (D2.21) - **Compliance readily achievable. Architect to provide door schedule for compliance prior to issue of CC.**
- Signage should be provided to the fire doors leading to the fire-isolated exits. The signage should be in accordance with Clause D2.23 & D3.6 of the BCA and Clause 183 of the Environmental Planning and Assessment Act 2000 - **Compliance readily achievable. Architect to provide signage schedule for compliance prior to issue of CC.**

25. **Access for people with disabilities** – Refer to Philip Chun Access Consulting report for compliance with the following;

- a review of the CC drawings resulting in an Access Compliance Report,
- review any applicable conditions of consent and provide sign-off,
- any requirements of Livable Housing Requirements,
- AS1428.1-2009, AS4299-1995 & AS2890 requirements.

## **Section E – Services and Equipment**

26. **Fire Hydrants (E1.3)** – The building must be served with fire hydrants complying with the requirements of BCA Clause E1.3 and AS 2419.1-2005 – **Hydraulic / Fire Services consultant to provide details prior to issue of CC.**

27. **Hydrant Booster** – To comply with AS 2419.1-2005 except where a sprinkler system is installed throughout a building in accordance with AS 2118.1, AS 2118.4 or AS 2118.6 the fire hydrant booster protection requirements of clauses 7.3(c)(ii) and 7.3(d)(iii) of AS 2419.1 do not apply. **Architect to note – details are to be provided prior to issue of CC.**

28. **Pumprooms** – Pumprooms located within a building shall have—

- (a) a door opening to a road or open space, or a door opening to fire-isolated passage or stair which leads to a road or open space; and
  - (b) except where the building is sprinkler protected in accordance with AS 2118.1, enclosing walls with an FRL not less than that prescribed by the BCA for a firewall for the particular building classification served by the fire hydrant system.
- Complies.**

29. **Fire Hose-reels (E1.4)** – The basement carpark must be provided with hose-reel coverage complying with the requirements of BCA Clause E1.4 and AS 2441-2005. Hose-reels are to be located within 4m of an exit or an internal fire hydrant – **Hydraulic consultant to provide details prior to issue of CC. Architect to include in design.**

30. **Sprinklers (E1.5)** – A Sprinkler system is required to be provided throughout the entire building as per BCA Clause E1.5 and AS2118.1 or AS2118.6 (if combined sprinkler and hydrant system). Sprinkler valve enclosure / room location to be confirmed in accordance with the requirements of Clause 6 of Specification E1.5 of the BCA. **Fire services consultant to provide details prior to issue of CC. Any departures to be addressed by Fire Safety Engineer.**



31. **Extinguishers (E1.6)** – Fire extinguishers are required to be installed to the class 2 buildings parts in lieu of fire hose reels. Extinguishers are to be of an ABE type and distributed throughout the floors so that the travel distance from the entrance doorway of any sole occupancy unit is not more than 10m from a fire extinguisher. Fire extinguishers must be provided to all locations which are deemed a potential risk to the occupants of the building, i.e. areas such as main switchboards – **Fire services consultant to provide details prior to issue of CC.**
32. **Fire Control Centre (E1.8)** – A fire control centre facility in accordance with Specification E1.8 is required to be installed in the building as the effective height is greater than 25m. A fire control centre must be so located in a building that egress from any part of its floor, to a public road or open space, does not involve changes in level which in aggregate exceed 300 mm (refer Clause 3 of Specification E1.8 of the BCA). **Architect and Fire services consultant to provide details prior to issue of CC.**
33. **Smoke Hazard Management (Part E2 of the BCA)** - The following criterion applies to the building in terms of smoke hazard management and covers the various uses of the building.

Fire isolated exits	Requirements
A fire isolated stairway including any associated fire isolated passageway or fire isolated ramp serving – (i) any storey above an effective height of 25m; or (ii) more than 2 below ground storeys, not counted in the rise in storeys in accordance with C1.2, must be provided with an automatic air pressurisation system for fire isolated exits in accordance with AS/NZS 1668.1.	<ul style="list-style-type: none"><li>All fire isolated stairs will require automatic air pressurisation. <b>Mechanical consultant to note and provide details prior to issue of CC.</b></li></ul>
Buildings more than 25m in effective height	Requirements
A <b>Class 2 building</b> or part of a building and Class 4 part of a building must be provided with an automatic smoke detection and alarm system complying with Specification E2.2a.	<ul style="list-style-type: none"><li>Needs a smoke detection and alarm system in accordance with E2.2a <b>Fire consultant to note and provide details prior to issue of CC.</b></li></ul>
A <b>Class 7a</b> building (Carpark portion), including a basement, must be provided with a mechanical ventilation system in accordance with AS 1668.2 must comply with Clause 5.5 of AS/NZS 1668.1 except that – (a) fans with metal blades suitable for operation at normal temperature may be used; and (b) the electrical power and control cabling need not be fire rated.	<ul style="list-style-type: none"><li>Smoke detectors in accordance with Clause 4.10.1 shall be installed in the supply air system in accordance with Clause 4.10.5(b). <b>Mechanical consultant to note and provide details prior to issue of CC.</b></li></ul>

34. **Emergency Lift** – At least 1 emergency lift is required to be installed in a building having an effective height of more than 25m and where two or more lifts are provided serving all storeys of the building at least two emergency lifts are to be provided. The emergency lifts may be combined with the passenger lifts as the passenger lifts serve every storey.

Emergency lifts must serve every level of the building including the basement levels and must be accessible for people with disabilities.

All lift cars must be provided with fire service controls in accordance with AS 1735.2. A stretcher facility must be provided to at least one emergency lift and must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600 mm wide x 2000 mm long x 1400 mm high above the floor level. **Lift consultant to confirm compliance prior to issue of CC.**



**Note access consultant to confirm lift cars comply with requirements for persons with a disability.**

35. **Exit and emergency lighting** – Emergency lighting must be installed in every fire isolated stair or passageway and in every storey of a class 7 building with a floor area greater than 300 square meters also in a class 2 part of a building in every passageway corridor, hallway or the like having a length of more than 6m from the entrance doorway of any sole-occupancy unit to the entrance door way to a fire isolated stair. **Electrical engineer to provide details prior to issue of CC.**
36. **Emergency Warning and Intercom Systems (EWIS)** – A EWIS is required to comply with AS1670.4-2018 as the effective height of the building exceeds 25m – **Fire services consultant to provide details prior to issue of CC.**

### **Section F – Health and Amenity**

37. **Stormwater drainage (F1.1)** - Stormwater drainage must comply with AS/NZS 3500.3. **Hydraulic services consultant to provide details prior to issue of CC.**
38. **Waterproofing of wet areas in buildings (F1.7)** - (a) In a Class 2 building, building elements in wet areas must— (i) be water resistant or waterproof in accordance with Table F1.7; and (ii) comply with AS 3740. **Architect to note and provide details prior to issue of CC.**
39. **Provision of floor wastes (F1.11)** In a Class 2 building, a bathroom or laundry located at any level above a sole-occupancy unit or public space must have—(a) a floor waste; and (b) the floor graded to the floor waste to permit drainage of water. **Architect to note and provide details prior to issue of CC.**
40. **Sanitary Facilities (F2.1)** – Sanitary and other facilities for Class 2 building and a must be provided in accordance with Table F2.1.  
Within each sole-occupancy unit, provide—
- a) a kitchen sink and facilities for the preparation and cooking of food; and
  - b) a bath or shower; and
  - c) a closet pan and washbasin.
- Laundry facilities, provide either—
- a) in each sole-occupancy unit—
    - (i) clothes washing facilities, comprising at least one washtub and space for a washing machine; and
    - (ii) clothes drying facilities comprising—
      - A. clothes line or hoist with not less than 7.5 m of line; or
      - B. space for one heat-operated drying cabinet or appliance in the same room as the clothes washing facilities; or
- Note: A kitchen sink or washbasin must not be counted as a laundry washtub.  
**Complies - further details required for compliance prior to issue of a CC.**
41. **Construction for sanitary facilities (F2.5)** - Doors to fully enclosed sanitary compartments are to open outwards, or slide or have 1.2 metres clear space between door and closet pan or be readily removable from the outside of the sanitary compartment. **Architect to note.**
42. **Room Sizes (F3.1)** - The minimum ceiling height of 2.7m is required to all habitable rooms excluding kitchens. All other rooms are required to have a minimum height of 2.1m. Retail / Commercial space requires 2.4m. Note that SEPP 65 will require 2.7m minimum ceiling height to habitable rooms. **Complies.**



43. **Light** – Natural light must be provided to all habitable rooms within the apartments in accordance with Clause F4.2 of the BCA. The windows should have an aggregate light transmitting area of not less than 10% of the floor area of the room – **Details required at CC stage to assess compliance.**

Artificial lighting must comply with Clause F4.4 of the BCA and AS/NZS 1680.0-2009.

44. **Mechanical ventilation** – Mechanical ventilation must be provided where natural ventilation cannot be provided. **Mechanical services consultant to provide details prior to issue of CC.**
45. **Carparks (F4.11)** Every storey of a carpark, except an open-deck carpark, must have—  
(a) a system of mechanical ventilation complying with AS 1668.2; or  
(b) a system of natural ventilation complying with Section 4 of AS 1668.4. **Mechanical services consultant to provide details prior to issue of CC.**
46. **Sound Insulation** - The proposal will need to meet the sound insulation requirements of Part F5 of the BCA – **Compliance readily achievable. Acoustic Consultant to provide a detailed report for compliance prior to CC. The report must also address any DA Conditions of Consent.**

### Section G - Ancillary Provisions

47. **Occupiable Outdoor Areas (G6)** – outdoor areas that are normally occupied such as balconies and Communal areas will need to comply with Part 6 of the BCA. **Architect to note – details are to be provided prior to issue of CC.**
48. **Window Cleaning NSW (G1.101)**  
a) A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level.  
b) A building satisfies (a) 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.  
**Confirm the method of compliance prior to issue of CC.**

### Section J – Energy Efficiency

49. **Energy Efficiency (Part J)** – This section is mandatory for Class 5 to 9 projects. The building is within Climate Zone 5 and will be required to comply with Parts J5 and J6, **mechanical services and electrical services consultants' confirmation will be required prior to issue of CC.**

**A Section J Consultants report will be required prior to the issue of a Construction Certificate for any non BASIX related areas.**

**A BASIX certificate is needed for Class 2 parts.**

**Note: BCA 2019 allows a transitional period up to 1 May 2020 whereby compliance with Part J may be in accordance with BCA 2016 (Amdt 1) in lieu of BCA 2019. Energy Efficient Consultant's report required including JV3 report if this is the preferred method of meeting compliance with Part J.**



### **Other - Fire Safety Engineering**

Based on the reviews to date including the mark-ups previously provided by this office we note the following Fire Engineering Performance Solutions are required for this development. These may change once the design is developed and service consultants drawings are provided for our first review.

#### **Section C of BCA:**

1. Protection to openings to the Eastern, Southern and Western boundaries- BCA 3.2 & C3.4.
2. Corridors lengths of Class 2 and Class 3 parts are up to 75m in lieu of 40m.

#### **Section D of BCA:**

3. The travel distances between exits on basement level 2 is up to 82m in lieu of 60m and on level 13 is up to 63m in lieu of 60m;
4. The travel distance to a point of choice on basement level 1 is up to 34m in lieu of 20m and on level 13 is up to 23m in lieu of 20m ;
5. The travel distances to an exit on basement levels 1 – 4 are up to 56m in lieu of 40m
6. The travel distance to a point of choice on levels 2-7 is up to 16m in lieu of 6m, level 1 is up to 13m in lieu of 6m, levels 8-21 is 12m in lieu of 6m and levels 23-24 is 10m in lieu of 6m.

### **Conclusion**

We have assessed the drawings with respect to the Building Code of Australia 2019. We are confident that the design is generally capable of meeting a combination of the Deemed-to-Satisfy and Performance Requirements of the Building Code of Australia 2019. Areas of the design are still being developed but likely to be addressed prior to issue of a construction certificate.



**Appendix A**  
**Table 3 - TYPE A CONSTRUCTION: FRL OF BUILDING ELEMENTS**

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