LACHLAN'S LINE A1 PTY LTD

BCA ASSESSMENT REPORT

Lachlans Line Lot 102 – 3 Halifax Street Macquarie Park

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Jensen Hughes Australia

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Executive summary

This document provides an assessment of the architectural design drawings for the proposed residential development at Lachlans Line Lot 102 – 3 Halifax Street Macquarie Park, against the Deemed-to-Satisfy provisions of the Building Code of Australia (BCA) 2022.

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

The architectural design documentation as referred to in this report has been assessed against the applicable provisions of the Building Code of Australia, (BCA) and it is considered that such documentation complies or is capable of complying with that Code.

The below Table outlines the identified BCA compliance issues that require further information or consideration and/or assessment as Performance Solutions. Any Performance Solution will need to be detailed in a separate report and must clearly indicate methodologies for achieving compliance with the relevant BCA Performance Requirements at CC stage.

Item	Description	BCA Provision
Performance Solutions required		
1.	Rationalise the fire-resistance levels and fire separation requirements for Lower Ground & Upper Ground Class 7b parts to 120 minutes in lieu of 240 minutes	C2D2 & S5C11, C3D8, C3D9, C3D10
2.	Permit the garbage chutes serving the residential levels which are contained within fire rated shafts to discharge directly into the waste room on Lower Ground in lieu of having fire rated construction to the bottom of the shaft.	S5C8
3.	Rationalise the public corridor on residential levels to be more than 40m in length without provision of smoke separation, being up to 58m in length.	C3D15
4.	The northern external walls are proposed to be located within 3m of the allotment boundary. Rationalise the non-loadbearing walls to have no FRL and no protection of openings due to the adjoining public park acts as an OSD basin and will not be built upon	C2D2, C4D3
5.	Upper Ground: The plant/storage area will be a separate fire compartment to the residential part. In lieu of protection to both external walls of different fire compartments, it is proposed to provide protection to one side only being the external walls of the plant/storage area and have nil protection to the residential SOU.	C4D4
6.	Level 44: Permit one fire-isolated stair to serve the plant area on this storey in lieu of the required two exits.	D2D3
7.	Basement Car Park Levels: Permit travel distance up to 25m to a point of choice, up to 50m to an exit and up to 75m between exits	D2D5 & D2D6
8.	Basement Level 1: Permit the Manager Office to have up to 22m to a point of choice in lieu of 20m.	D2D5

	Basement Level 1: Permit the Main Switch Room to have up to 28m to a point of choice in lieu of 20m. Lower Ground: Permit the north-eastern external patio area for residents to have up to 25m to a point of choice in lieu of 20m.	
9.	Permit residential SOUs up to 12m to a point of choice in lieu of 6m on the residential levels.	D2D5
10.	Level 7 communal open space area: Permit up to 35m to a point of choice in lieu of 20m.	D2D5
11.	Level 28 & 29: Permit the gym area to have up to 27m to a point of choice in lieu of 20m. Level 29: Permit the plant room to have up to 25m to a point of choice in lieu of 20m.	D2D5
12.	Permit the discharge of fire stairs into a part of the building used for pedestrian access (main entry forecourt) which is not open for 2/3 of its perimeter and permit unprotected openings within 6m of the discharge pathway in the main entry façade.	D2D12(2)(b) & (3)
13.	Permit the residential tower fire-isolated stairs discharge next to each other in lieu of being as far apart as practical.	D2D15(4)
14.	Permit the southern fire-isolated stair which is serving the residential tower and Basement Level 1 residential part to have direct connection between the rising and descending stairs as the rising stair only serves from Basement 1 up to Lower Ground with discharge at Lower Ground storey.	D3D4
15.	BCA E1D2 requires the fire hydrant system to be in accordance with AS 2419.1:2021. However, clause 1.1(c) of AS 2419.1:2021 limits the application of AS 2419.1:2021 to buildings with an effective height not more than 135m. This building has an effective height of 142m. As a result, the fire hydrant system is required to be assessed on a performance -based approach in accordance with Performance Requirements E1P3. Rationalise the location of the fire booster which is not located in accordance with AS 2419.1:2021. The booster is located more than 10m of the hardstand and more than 20m from the principal pedestrian entrance.	E1D2 & E1D17
16.	Permit access via the main entry stair to the Fire Control Room which involves a change in level greater than 300mm, being approximately 500mm. In addition, permit the FCR to have an internal width less than 2.5m, as the width is 2.35m.	E1D15 & S19C4
17.	Rationalise the number of doors required to be open (three doors) for the operation of the stair pressurisation systems serving the basement levels in lieu of every door open in the one fire compartment.	E2D4
18.	Permit the omission of zone pressurisation from Class 7b part on Lower & Upper Ground in an otherwise Class 2 & 7a building.	E2D6

Special Hazards		
19.	Special hazards associated with the parking of electric vehicles and future EV charging stations shall be addressed in accordance with E1D17 within the Fire Engineering Report.	E1D17

1.0 Basis of Assessment

1.1 LOCATION AND DESCRIPTION

The building development known as Lachlan's Line Lot 102, the subject of this report, is located at 3 Halifax Street Macquarie Park. The proposed development includes two residential buildings (Building A northern tower & Building B southern tower) over a common basement.

The development will be staged as follows:

- Stage 1 (DA1): Construction of eight (8) basement levels and the construction of Building A (northern tower) above the northern end of the basement levels. Basement levels contain car parking and plant / ancillary areas. Residential SOUs are contained on the northern end of Basement 1 level and Lower Ground, whilst the remainder of Lower Ground is waste rooms and loading area and main residential lobby. Residential SOUs are located on Upper Ground and Level 1-43. Level 44 is plant areas. Stage 1 will include the construction of private Mews Road with vehicular entry into the basement levels, substations and fire services infrastructure for Building A&B.
- Stage 2 (DA2): Construction of four (4) basement levels which extend from Stage 1 and the construction of Building B (southern tower) above the southern end of the basement levels. Design of Building B is subject to a future Development Application.

This BCA Report will address Stage 1 DA works only.

1.2 PURPOSE

The purpose of this report is to assess the current design proposal against the Deemed-to-Satisfy Provisions of the BCA, and to clearly outline those areas (if any) where compliance is not achieved, where areas may warrant redesign to achieve strict BCA compliance or where areas may be able to be assessed against the relevant performance criteria of BCA 2022. Such assessment against relevant performance criteria will need to be addressed by means of a separate Performance Based Fire Safety Engineered Assessment Report to be prepared under separate cover.

1.3 BUILDING CODE OF AUSTRALIA

This report is based on the Deemed-to-Satisfy Provisions of the National Construction Code (**NCC**) Series Volume One – Building Code of Australia, 2022 Amendment One (**BCA**), incorporating the State variations where applicable. Please note that the version of the BCA applicable to new building works is the version applicable at the time of the lodgement of the Construction Certificate application to the Accredited Certifying Authority. The BCA is currently updated on a three-yearly cycle.

A reference to the BCA in this report is a reference to **BCA2022 Amendment 2**, being volume 1 of the NCC.

Figure 1: Site Plan showing the proposed Building A and the future DA application for Building B.

1.4 LIMITATIONS

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

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

This report does not include, or imply compliance with:

1. the National Construction Code – Plumbing Code of Australia Volume 3
2. the Disability Discrimination Act 1992 including the Disability (Access to Premises – Buildings) Standards 2010.
3. Part D4 and F4D5 & F4D6 of BCA2022.
4. Section B & Section J of BCA 2022.
5. Demolition Standards not referred to by the BCA;
6. Work Health and Safety Act 2011;
7. Requirements of Australian Standards unless specifically referred to;
8. Requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Local Council, ARTC, Department of Planning and the like; and
9. Conditions of Development Consent issued by the Local Consent Authority.

1.5 DESIGN DOCUMENTATION

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

2.0 Building Description

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

2.1 RISE IN STOREYS (CLAUSE C2D3)

The building has a rise in storeys of 46 – from Basement 1 to Level 43.

Note: Level 44 contains plant only and is not counted in the rise in storeys.

2.2 CLASSIFICATION (CLAUSE A6G1)

The building has been classified as follows.

Table 1: Building Classification

Class	Level	Description
Class 7a	Basement Level 1-8	Car parking
Class 7b	Part Lower Ground Level Part Upper Ground Level	Loading Dock & Waste areas Storage area
Class 2	Part Basement Level 1, Part Lower Ground Level, Upper Ground Level, Level 1 to Level 21.	Residential Sole-occupancy units Level 7 communal open space and Level 28 & 29 communal amenities

Classification:

- Basement Levels 2-8: The total floor area of the residential storage cages will be designed to be less than 10% of the floor area of the storey. As such, the whole storey can be classified as Class 7a. [Floor area of storey 2,550m^2, storage cages are less than 180m^2 being less than 10%]
- Basement Level 1: Contains visitor parking with a small number of residential storage cages in the corner. The storage cages will be designed to be less than 10% of the floor area of the car park area. As such, the car park area can be classified as Class 7a. Building Manager office is part of the Class 2 residential part.

2.3 EFFECTIVE HEIGHT (CLAUSE A1G4)

The building has an *effective height* of more than 50 metres.

Effective Height: Level 43 RL 177.20 - Basement 1 RL 35.05 = 142.15m.

Note: Level 44 contains plant only and is not counted in the rise in storeys.

2.4 TYPE OF CONSTRUCTION REQUIRED (TABLE C2D2)

The building is required to be of Type A Construction.

2.5 FLOOR AREA AND VOLUME LIMITATIONS (TABLE C3D3)

The building is subject to maximum floor area and volume limits of:-

Class 7b	Maximum Floor Area	5,000m^2
	Maximum Volume	30,000m^3
Class 7a	The carpark is to be provided with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17) and as such there are no maximum floor area or volume limitations for this area.	
Class 2	The Class 2 portions of the building are not subject to floor area and volume limitations of C3D3 as Specifications 5 and Clause C4D12 of the BCA regulate the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 buildings.	

2.6 FIRE COMPARTMENTS

The following *fire compartments* have been assessed:

1. Basement Levels 1-8 form a single fire compartment.
2. Basement Level 1: The Class 2 part will be a separate fire compartment and will be fire separated with a Fire Wall from the car park area.
3. Lower Ground: The residential SOUs and public corridor/lobby area form a separate fire compartment and will be fire separated with a Fire Wall from the Class 7b waste area / loading dock. The waste area / loading dock will be considered a separate fire compartment.
4. Upper Ground: The residential SOUs and public corridor form a separate fire compartment and will be fire separated with a Fire Wall from the plant area / storage cage area. The plant room and storage cages area are connected to the Class 7b waste area / loading dock below due to the double height space.
5. Level 1 to Level 44: Each storey is a separate fire compartment.

2.7 EXITS

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

1. Basement Levels 2-8: Two fire-isolated stairs. [Note: When Building B is constructed after Building A, the fire-isolated stair in the SE corner will also serve as a required exit for the basement car park within Building B. This is why the second door is shown. Nonetheless, the fire stair will only require one exit door when constructed as part of Building A]
2. Basement Level 1: Car park part has access to one fire-isolated stair (south-east corner) and the door into the residential lobby can be utilised as a horizontal exit. Residential part has access to two fire-isolated stairs.
3. Lower Ground: The loading dock and the residential SOUs have access to the northern fire-isolated exit within the public corridor and exit via main lobby entry.
4. Lower Ground eastern external landscape area: This landscape area is landlocked and requires egress back into the building to reach an exit. This area will require access to alternative exits therefore an additional egress door is required into the loading dock. As a result, the landscape area will have access to fire stair in the lobby and egress via the loading dock to open space. Refer Figure 2 below.

5. Upper Ground: Two fire-isolated stairs. The northern fire-isolated stair has two exit doors into the one stair.
6. Level 1-6: Two fire-isolated stairs and the southern fire stair has two exit doors into the stair.
7. Level 7-43: Two fire-isolated stairs.
8. Level 44: One fire-isolated stair to serve the plant area. Provision of one exit will be addressed as a Performance Solution.

2.8 CLIMATE ZONE

The building is located within Climate Zone 6.

2.9 LOCATION OF FIRE-SOURCE FEATURES

The fire source features for the subject development are:

North: The allotment boundary with the public park. The building is within 3m of the boundary however will be addressed with a Performance Solution to rationalise no protection required as the adjoining public park acts as an OSD basin and will not be built upon.

South: Not relevant for this Stage 1 as Building B will be built to the south and be part of the one united building for Building A&B.

East: The far boundary of M2 Motorway

West: The far boundary of Halifax Street.

3.0 BCA Assessment

3.1 INTRODUCTION

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

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

The summary below is to be read in conjunction with the BCA specification contained in Annexure E of the report.

3.2 RELATIONSHIP TO THE DESIGN AND BUILDING PRACTITIONERS ACT

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

- Structure
- Building Enclosure (e.g. Façade);
- Fire Safety Systems (e.g. services, egress and FRL's)
- Waterproofing
- Fire Safety performance solutions

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

3.3 FIRE RESISTANCE AND STABILITY – PART C2 & SPECIFICATION 5

The required fire resistance levels for Type A Construction for the building elements are outlined in Annexure C of this report.

The external walls and all components of the wall, in a building of Type A Construction, are required to be non-combustible. The plans do not indicate the materials of the external wall and further details will be required to be submitted at CC stage for assessment, however compliance is readily achievable by a number of common wall types.

It is proposed to undertake a performance solution to rationalise the fire-resistance levels for Lower & Upper Ground Class 7b parts to 120 minutes in lieu of 240 minutes.

It is proposed to undertake a performance solution to permit the garbage chutes serving the residential levels which are contained within fire rated shafts to discharge directly into the waste room on Lower Ground in lieu of having fire rated construction to the bottom of the shaft.

The northern external walls are proposed to be located within 3m of the allotment boundary. It is proposed by the applicant to undertake a performance solution to rationalise the non-loadbearing walls to have no

FRL and no protection of openings due to the adjoining public park acts as an OSD basin and will not be built upon.

Subject to the required FRL's being provided, the proposed building is capable of complying with the requirements of the BCA with respect to fire resistance.

3.4 COMPARTMENTATION AND SEPARATION – PART C3

Under the provisions of clause C3D3 of the BCA, the residential portion of the building is not the subject to any floor area and volume limitations.

The class 7b portion of the building have been accessed and the floor area and volume of these compartments is less than that permitted by Clause C3D3 of the BCA. As such compliance with the provisions of the BCA for compartmentation is readily achieved.

The carpark is required to have an AS 2118.1 sprinkler system, therefore the carpark is not the subject of floor area and volume limitations under the provision of clause C3D3 of the BCA.

The building is over 25m effective height and therefore is required to have an AS 2118.1 sprinkler system. As such, spandrel panels are not required under the provisions of clause C3D7 of the BCA to protect opening on different storeys of the building.

The main switchboard is located in the basement level of the building. As the switchboard is required to service emergency equipment required to operate in an emergency, the switch room is to have an FRL of 120/120/120. The design of the switch room is such that compliance can be readily achieved.

It is proposed to undertake a performance solution to rationalise the public corridor from Lower Ground to Level 6 to be more than 40m in length without provision of smoke separation, being up to 58m in length.

Compliance with Part C3 of the BCA can be readily achieved by the proposal.

3.5 PROTECTION OF OPENINGS – PART C4

3.5.1 Openings in external walls

The northern external walls are proposed to be located within 3m of the allotment boundary. It is proposed by the applicant to undertake a performance solution to rationalise the non-loadbearing walls to have no FRL and no protection of openings due to the adjoining public park acts as an OSD basin and will not be built upon.

Where fire walls separate classifications in the same storey, the protection of external walls in different fire compartments shall be in accordance with Clause C4D4. There may be benefits to rationalise protection of openings to one external wall (loading dock solid walls) in lieu of protection to both external walls which will omit protection to the residential parts of the building. For example on Upper Ground, the plant/storage area will be a separate fire compartment to the residential part. In lieu of protection to both external walls of different fire compartments, it is proposed to provide protection to one side only being the external walls of the plant/storage area and have nil protection to the residential SOU.

3.5.2 Bounding Construction

The walls between the SOU's and between the SOU's and corridor are internal walls that require an FRL. In addition, the walls to the lifts and stairs require an FRL. As such, the doors to the sole occupancy units and fire stairs are required to be self-closing FRL --/60/30 fire doors in accordance with clause C4D9 & C4D12 of

the BCA. The doors to the lift are required to have an FRL of -/60/- in accordance with clause C4D11 of the BCA.

Level 28 & 29 communal amenities internal area adjacent to the public corridor require bounding construction (internal walls) with and FRL and self-closing FRL --/60/30 fire doors in accordance with clause C4D12.

Plant rooms adjacent to the public corridor require bounding construction (internal walls) with and FRL and self-closing FRL --/60/30 fire doors in accordance with clause C4D12.

3.5.3 Openings in Floors for Services and Service Installations

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

3.6 OCCUPANT ACCESS AND EGRESS – SECTION D

3.6.1 Egress from the building

Where a building exceeds 25m effective height, a storey and all parts of a storey require access to two exits. Compliance is readily achieved except on Level 44 whereby it is proposed to undertake a Performance Solution to permit one fire-isolated stair to serve the plant area on this storey in lieu of the required two exits.

Egress from the carpark levels is required with sufficient numbers of exits and location to ensure that no point on the floor is more than 20m from an exit, or a point of choice of two exits, in which case the distance to one of those exits is not more than 40m, as required by Clause D2D5 of the BCA. The distance between alternative exits is required by clause D2D6 of the BCA to be no closer than 9m and no further apart than 60m when measured through the point of choice.

It is proposed to undertake a performance solution to permit in the basement levels travel distance up to 25m to a point of choice, up to 50m to an exit and up to 75m between exits. Further to this, Basement Level 1 Main Switch Room is permitted to have up to 28m to a point of choice in lieu of 20m.

In the residential portion of the building, the distance to an exit for SOU entry doors is to be no more than 6m to an exit, or a point of choice of 2 exits in which case the distance between those 2 exits is not to exceed 45m. For rooms other than SOUs, the distance to an exit is to be no more than 20m to an exit, or a point of choice of 2 exits.

It is proposed to undertake a performance solution for the following scenarios:

- Permit up to 12m to a point of choice in lieu of 6m on the residential levels.
- Permit up to 22m to a point of choice in lieu of 20m on Basement Level 1 Managers Office.
- Permit up to 25m to a point of choice in lieu of 20m on Lower Ground north-eastern external patio area.
- Permit up to 35m to a point of choice in lieu of 20m for the Level 7 communal open space area.
- Permit up to 27m to a point of choice in lieu of 20m for the Level 28 & 29 communal gym area.
- Permit up to 25m to a point of choice in lieu of 20m for the Level 29 plant area.

The buildings exit stairs are required to be designed as fire-isolated stairs. As such, the stairs have been assessed, and they are indicated as fire-isolated within separate shafts. Under the provisions of Clause

D3D5 of the BCA, it is noted the northern fire-isolated stair has smoke separation between rising and descending stairs at Upper Ground level before combining into a common fire-isolated passageway which descends down to discharge at Lower Ground storey. This is considered DTS compliant design.

It is proposed to undertake a performance solution to permit the southern fire-isolated stair which is serving the residential tower and Basement Level 1 residential part to have direct connection between the rising and descending stairs as the rising stair only serves from Basement 1 up to Lower Ground with discharge at Lower Ground storey.

It is proposed to undertake a performance solution to permit the discharge of fire stairs into a part of the building used for pedestrian access (main entry) which is not open for 2/3 of its perimeter and permit unprotected openings within 6m in the main entry facade.

The discharge of southern fire-isolated stairs into the central driveway / mews area is satisfactory as Building A will be constructed first. The egress path from the stair to the public road is more than 6m away from Building A. When Building B is constructed at a later date, assessment of the egress path within proximity of Building B will be further assessed.

Where the egress discharges to open space on the property, a continuous pathway from the point of discharge to the street is required. The plans do indicate such a pathway and as such the provisions of Clause D2D15 of the BCA are readily satisfied.

Details of treads and risers, landings, thresholds, balustrades and handrails have not been provided however compliance is readily achievable. The design of these elements can be assessed at the CC stage.

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

3.7 SERVICES AND EQUIPMENT- PARTS E1, E2 AND E4

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

The building is required to be provided with AS 2118.1:2017 sprinkler system and it is likely the building will adopt a combined sprinkler & hydrant system under AS 2118.6:2012.

In relation to the hydrant system, BCA E1D2 requires the fire hydrant system to be in accordance with AS 2419.1:2021. However, clause 1.1(c) of AS 2419.1:2021 limits the application of AS 2419.1:2021 to buildings with an effective height not more than 135m. This building has an effective height of 142m. As a result, the fire hydrant system is required to be assessed on a performance -based approach in accordance with Performance Requirements E1P3. In addition, it is proposed to undertake a performance solution to rationalise the location of the fire booster which is not located in accordance with AS 2419.1:2021. The booster is located more than 10m of the hardstand and more than 20m from the principal pedestrian entrance.

The fire-isolated stairs serving the residential tower and basement levels 1-8 require stair pressurisation in accordance with Clause E2D4. It is proposed by the applicant to undertake a performance solution to rationalise the number of doors required to be open (three doors) for the operation of the stair pressurisation systems serving the basement levels in lieu of every door open in the one fire compartment.

It is proposed to undertake a performance solution to permit the omission of zone pressurisation from Class 7b part on Lower & Upper Ground.

The location of the Fire Control Room is considered satisfactory subject to performance assessment. It is proposed to undertake a performance solution to permit access via the main entry stair to the Fire Control Room which involves a change in level greater than 300mm. In addition, permit a portion of the FCR to have an internal width less than 2.5m, as the width is 2.35m.

3.8 LIFT INSTALLATIONS – PART E3

Lifts are provided to the building and are located in their own shaft and are serviced by a common lobby.

As the building has an effective height over 25m the building is required to have emergency lifts in accordance with Clause E3D5. One lift from each lift core in Building A which serves every storey are required to be emergency lifts. The building does require the emergency lifts to accommodate a stretcher facility in accordance with Clause E3D3 of the BCA.

Due to the height of the building, it is recommended to consult with the lift designer early to understand the size of the lift pit required. If the lift pit is more than 3m deep, the client will need to consider compliance with BCA Clause D2D22 to provide access to the doors required for access into the bottom of the lift pit.

3.9 FACILITIES IN BUILDINGS – PART F4

Clause F4D2 of the BCA requires the following facilities within a class 2 building:

- Kitchen sink and facilities for food preparation & cooking;
- Bath or shower;
- Closet pan & Washbasin;
- Laundry facilities including a dedicated washtub;

The plans indicate that each of these facilities are provided within each sole occupancy unit and therefore compliance is achieved with Clause F4D2 of the BCA.

3.10 ROOM HEIGHTS – PART F5

The ceiling heights have been assessed in accordance with Part F5 of the BCA which has indicated that compliance is readily achievable within all habitable spaces, corridors and the like.

3.11 LIGHT AND VENTILATION – PART F6

Natural light and ventilation are required to all habitable rooms within a Class 2 building. The plans have been assessed which reveals all habitable spaces are services by windows or glazed doors. The area of the doors and windows are generally considered sufficient in size to provide the required minimum natural light and ventilation to all habitable rooms. Further information will be required such as Door & Window Schedule at Construction Certificate stage to confirm compliance.

A review of the study areas within SOUs shows that provision of natural light & ventilation or borrowed natural light & ventilation can be readily achieved. Level 43 flex rooms in the penthouse apartments will require glazed sliding doors to allow borrowed natural light – compliance can be readily achieved.

For Level 1-6, there are two unit types which are provided with store rooms at the rear of the apartment which are not required to have natural light or mechanical ventilation [noted on drawing DA-2001-A as Unit 04.01 & 04.10].

For class 7b part of the building and all other areas not within an SOU, artificial lighting and mechanical ventilation are required and these systems can be readily installed in the building.

The carpark is required to be provided with a system of mechanical ventilation in accordance with clause F6D11 of the BCA.

4.0 Statement of Compliance

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

The architectural design documentation as referred to in report has been assessed against the applicable provisions of the Building Code of Australia, (BCA) and it is considered that such documentation complies or is capable of complying with that Code.

Annexures

Annexure A - Design Documentation

This report has been based on the following design documentation.

Table 2: Architectural Plans

Architectural Plans Prepared by FJC Studio – Plans Building A			
Drawing Number	**Revision**	**Date**	**Title**
DA-20B1-A	02	27.02.2026	Basement 1
DA-20B2-A	02	27.02.2026	Basement 2
DA-20B8-A	02	27.02.2026	Basement 3-8
DA-20LG-A	02	27.02.2026	Lower Ground Level
DA-20UG-A	02	27.02.2026	Upper Ground Level
DA-2001-A	02	27.02.2026	Level 1-6
DA-2007-A	02	27.02.2026	Level 7
DA-2008-A	02	27.02.2026	Level 8-9
DA-2010-A	01	27.02.2026	Level 10
DA-2011-A	02	27.02.2026	Level 11-12
DA-2013-A	02	27.02.2026	Level 13-27
DA-2028-A	02	27.02.2026	Level 28
DA-2029-A	02	27.02.2026	Level 29
DA-2030-A	02	27.02.2026	Level 30-41
DA-2042-A	02	27.02.2026	Level 42
DA-2043-A	02	27.02.2026	Level 43
DA-2044-A	02	27.02.2026	Level 44
DA-2045-A	02	27.02.2026	Roof Level
DA-3000-A	02	27.02.2026	North & South Elevation
DA-3001-A	02	27.02.2026	East & West Elevation
DA-4000-A	02	27.02.2026	Section 1
DA-4001-A	02	27.02.2026	Section 2

Annexure B - Essential Services

The following fire safety measures are required to be installed in the building. The following table may be required to be updated as the design develops and options for compliance are confirmed.

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

Table 3: Essential Fire Safety Measures

Item	Essential Fire and Other Safety Measures	Standard of Performance
Fire Resistance (Floors – Walls – Doors – Shafts)		
1.	Access Panels & doors/hoppers (fire rated)	**BCA2022 C4D14** (Openings in Shafts) **BCA2022 Specification 12** AS 1905.1:2015 (Fire Resistant Doorsets)
2.	Construction Joints	**BCA2022 C2D2, Specification 5** **BCA2022 C4D16** AS 1530.4:2014 & AS 4072.1:2005
3.	Fire doors	**BCA2022 C3D13** (Separation of Equipment) **BCA2022 C3D14** (Electricity Supply Systems) **BCA2022 C4D5** (Acceptable methods of Protection) **BCA2022 C4D6** (Doors in Fire Walls) **BCA2022 C4D9 (**Openings in Fire Isolated Exits) **BCA2022 C4D11** (Opening in Fire Isolated Lift Shafts) & AS1735.11- 1986 **BCA2022 C4D12** (Bounding Construction) **BCA2022 C4D14** (Opening in Shafts) Specification 19 (Fire Control Centres) Specification 12 & AS1905.1: 2015
4.	Fire seals protecting openings in fire resisting components of the building	**BCA2022 C4D15** (Openings for service installations) **BCA2022 C4D16** (Construction joints) **BCA2022 Specification 13** AS1530.4:2014 & AS4072.1-2005
5.	Protection of openings + Fixed Glazing with internal wall-wetting sprinklers	**BCA2022 C4D4** (Separation of external walls and associated openings in different fire compartments) **BCA2022 C4D5** (Acceptable Methods of Protection) **BCA2022 D2D12** (Travel Via Fire Isolated Exits) AS 2118.1:2017 (Amdt 1&2)
6.	Lightweight construction + Fire Rating of Class 2 Bounding Construction	**BCA2022 C2D2, Specification 5** **BCA2022 C2D9, Specification 6** AS1530.4:2014
7.	Smoke Walls	**BCA2022 C3D15** (Public Corridors Class 2/3)

Item	Essential Fire and Other Safety Measures	Standard of Performance
		BCA2022 D3D5 (Separation of Rising and Descending Stair Flights) Clause S11C2
8.	Smoke Doors + Smoke Seals + Solid Core + Swing in direction of egress/or both ways + Connected to AS1670.1:2018 if held open Smoke detectors within 1.5m both sides + Fail close on power failure	**BCA2022 C3D15** (Public Corridors Class 2/3) Clause S11C2 **BCA2022 D3D5** (Separation of Rising and Descending Stair Flights) **BCA2022 Specification 12** AS1670.1:2018
General		
9.	Fire control room	**BCA2022 E1D15** **Specification 19**
10.	Portable fire extinguishers	**BCA2022 E1D14** AS 2444–2001
11.	Automatic fail safe devices + Fail-safe unlock	**BCA2022 D3D26** (Operation of Latches) **BCA2022 D3D27** (Re-entry from fire-isolated stairs) AS 1670.1:2018 (Amdt 1)
12.	Warning & operational signs	**BCA2022 D3D28** (Signs on Fire Doors) **BCA2022 D4D7** (Braille Exit Signs) (Note: E4D5 (Exit Signs)) **BCA2022 E3D4** (Lift Signs) **BCA2022 Specification 19** (Fire Control Room)
Lifts		
13.	Access to Lift Pits + Subject to confirmation during detailed design phase	**BCA2022 D2D22** (Access to Lift Pits) 'DANGER LIFT WELL – ENTRY OF UNAUTHORISED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES'
14.	Emergency lifts + Lift No XX + Lift No XX	**BCA2022 E3D5**
15.	Stretcher Lifts including + Fire Service Controls + Recall Operation + Drive control switch	**BCA2022 E3D3** **BCA2022 E3D9** (Fire Service Controls) **BCA2022 E3D11** (Fire Service Recall Operation Switch) **BCA2022 E3D12** (Lift Car Fire Service drive control switch)

Item	Essential Fire and Other Safety Measures	Standard of Performance
Electrical Services		
16.	Automatic fire detection & alarm system:	**BCA2022 E2D4, E2D5, E2D12,**) **BCA2022 S20C3** (Smoke alarm system) **BCA2022 S20C6** (Smoke detection for smoke control systems) **BCA2022 S20C7** (BOWS) AS 3786:2014 (Amdt 1-4) AS 1670.1:2018 (Amdt 1), AS 1670.3:2018 (Amdt 1), AS 1670.4:2018 (Amdt 1)
17.	Emergency lighting	**BCA2022 E4D2, E4D4** AS/NZS 2293.1:2018
18.	Exit signs	**BCA2022 E4D5, E4D6, E4D8** AS/NZS 2293.1:2018
19.	Emergency warning and intercom systems (EWIS)	**BCA2022 E4D9** AS 1670.4:2018 (Amdt 1) (EWIS)
20.	System Monitoring + AS2118.1 Sprinkler System	**BCA2022 E1D4 & S17C2** AS 1670.3:2018 (Amdt 1)
Hydraulic Services		
21.	Automatic fire suppression systems	**BCA2022 E1D4, E1D5** **BCA2022 Specification 17** AS 2118.1:2017 (Amdt 1&2) AS 2118.6:2012 (Combined Sprinklers/Hydrant)
22.	Fire hydrant systems + Performance based design required as building is over 135m effective height + NSW Storz Couplings	**BCA2022 E1D2 & E1D17** AS 2419.1:2021 FRNSW Technical Sheet D15/45534.V9 issued 10.01.19, ‘Compatible Hose Connections’
23.	Hose reel systems	**BCA2022 E1D3** AS 2441:2005
Mechanical Services		
24.	Fire dampers	**BCA2022 C4D16** AS 1668.1:2015 (Amdt 1) AS 1682.1:2015 & AS 1682.2:2015
25.	Mechanical air handling systems: + Mechanical ventilation to carpark. + Fire Isolated Exit Pressurisation System	**BCA2022 E2D4 & E2D12** **Specification 20** AS 1668.1:2015 (Amdt 1) AS 1668.1:2015 (Amdt 1)
	Performance Solutions *Fire Engineering Report (FER) prepared at CC stage.	

Annexure C - Fire Resistance Levels

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

Type A Construction

Table 4: Type A Construction

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

Distance from a fire-source feature	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2, 3 or 4 Part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/60/60	120/90/90	180/180/180	240/240/180
3m, or more	90/60/30	120/60/30	180/120/90	240/180/90

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

Distance from a fire-source feature	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2, 3 or 4 Part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	-/90/90	-/120/120	-/180/180	-/240/240
1.5 to less than 3 m	-/60/60	-/90/90	-/180/120	-/240/180
3m, or more	-/-/-	-/-/-	-/-/-	-/-/-

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

Column Type	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2, 3 or 4 Part	Class 5, 7a or 9	Class 6	Class 7b or 8
Loadbearing	90/-/-	120/-/-	180/-/-	240/-/-
Non-loadbearing	-/-/-	-/-/-	-/-/-	-/-/-

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

Wall Type	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2, 3 or 4 Part	Class 5, 7a or 9	Class 6	Class 7b or 8
Loadbearing or non-bearing	90/90/90	120/120/120	180/180/180	240/240/240

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

Location	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2, 3 or 4 Part	Class 5, 7a or 9	Class 6	Class 7b or 8
Fire-resisting lift and stair shafts	90/90/90	120/120/120	180/120/120	240/120/120
Bounding public corridors, public lobbies and the like	90/90/90	120/-/-	180/-/-	240/-/-
Between or bounding sole-occupancy unit	90/90/90	120/-/-	180/-/-	240/-/-
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion	90/90/90	120/90/90	180/120/120	240/120/120

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

Location	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2, 3 or 4 Part	Class 5, 7a or 9	Class 6	Class 7b or 8
Fire-resisting lift and stair shafts	-/90/90	-/120/120	-/120/120	-/120/120
Bounding public corridors, public lobbies and the like	-/60/60	-/-/-	-/-/-	-/-/-
Between or bounding sole-occupancy unit	-/60/60	-/-/-	-/-/-	-/-/-
Ventilating, pipe, garbage, and like shafts not used for	-/90/90	-/90/90	-/120/120	-/120/120

the discharge of hot products of combustion				

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

Building Element	FRL (in minutes): Structural adequacy / Integrity / Insulation			
	Class 2, 3 or 4 Part	Class 5, 7a or 9	Class 6	Class 7b or 8
Other loadbearing internal walls, internal beams, trusses and columns	90/-/-	120/-/-	180/-/-	240/-/-
Floors	90/90/90	120/120/120	180/180/180	240/240/240
Roofs	90/60/30	120/60/30	180/60/30	240/90/60

N.B. There are FRL concessions applicable for fully sprinkler protected building under Clause S5C15 of BCA Specification 5, allowing the roof of the building to have nil FRL.

Annexure D - Definitions

Average specific extinction area

Average specific extinction area means the average specific extinction area for smoke as determined by AS 5637.1:2015.

Critical radiant flux

Critical radiant flux (CRF) means the critical heat flux at extinguishment (CHF in kW/m^2) as determined by AS ISO 9239.1:2003.

Designated bushfire prone area

Designated bushfire prone area means land which has been designated under a power of legislation as being subject, or likely to be subject, to bushfires.

Effective height

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

Envelope

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

1. the exterior of the building; or
2. a non-conditioned space including—
    a. the floor of a rooftop plant room, lift-machine room or the like; and
    b. the floor above a carpark or warehouse; and
    c. the common wall with a carpark, warehouse or the like.

Exit

Exit means –

1. Any, or any combination of the following if they provide egress to a road or open space—
    a. An internal or external stairway.
    b. A ramp.
    c. A fire-isolated passageway.
    d. A doorway opening to a road or open space.
    e. A horizontal exit or a fire-isolated passageway leading to a horizontal exit.

Fire compartment

Fire compartment means –

1. the total space of a building; or

2. when referred to in—

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

    b. the Deemed-to-Satisfy Provisions — any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that required for a fire wall for that type of construction and where all openings in the separating construction are protected in accordance with the Deemed-to-Satisfy Provisions of the relevant Part.

Fire-resistance level (FRL)

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

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

and expressed in that order.

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

Fire-source feature

1. the far boundary of a road, river, lake or the like adjoining the allotment; or
2. a side or rear boundary of the allotment; or
3. an external wall of another building on the allotment which is not a Class 10 building

Fire wall

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

Flammability index

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

Group number

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

Horizontal exit

Horizontal exit means a required doorway between 2 parts of a building separated from each other by a fire wall.

Loadbearing

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

Non-combustible

Non-combustible means—

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

Occupiable outdoor area

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

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

Open space

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

Performance Requirement

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

Performance Solution

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

Sarking-type material

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

Smoke developed index

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

Smoke development rate

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

Smoke growth rate index

Smoke growth rate index (SMOGRA RC) means the index number for smoke used in the regulation of fire hazard properties and applied to materials used as a finish, surface, lining or attachment to a wall or ceiling.

Sole-occupancy unit

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

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

Annexure E - BCA Compliance Specification

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

Architectural Design Certification

1. The FRL's of building elements for the proposed works have been designed in accordance with S5C11 of Specification 5 of BCA2022 for a building of Type A Construction.
2. Lightweight construction used to achieve required fire resistance levels will comply with Specification 6 of BCA2022.
3. Building elements, including external walls and their components in buildings of Type A and B Construction, must be non-combustible in accordance with C2D10 of BCA2022.
4. Materials, floor and wall linings/coverings, surface finishes and air-handling ductwork used in the works will comply with the fire hazard properties of Clause C2D11 and Specification 7 of BCA2022.
5. Any ancillary elements fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible will comply with Clause C2D14 of BCA2022.
6. The parts of different classifications located alongside one another in the same storey will be separated in accordance with Clause C3D9 and Specification 5 of BCA2022.
7. Floors separating storeys of different classifications will comply with BCA Clause C3D10 of BCA2022.
8. Equipment will be separated in accordance with Clause C3D13 of BCA2022.
9. The main switch room sustaining emergency equipment required to operate in emergency mode, will be separated from the remaining building with construction having an FRL 120/120/120 and provided with self-closing -/120/130 fire doors in accordance with Clause C3D14 of BCA2022.
10. The public corridors will be divided into intervals of not more than 40m in length with smoke proof walls in accordance with Clause C3D15, and S11C2 of Specification 11 of BCA2022.
11. The external walls and openings of separate fire compartments will be protected in accordance with Clause C4D4 of BCA2022.
12. Doorways in any fire walls separating fire compartments will be protected in accordance with Clause C4D6 of BCA2022.
13. Doors in a fire-isolated exit will be self-closing or automatic closing fire doors with an FRL of not less than -/60/30 in accordance with Clause C4D9 of BCA2022.
14. Fire-isolated stairways will not be penetrated by services other than those permitted by Clause C4D10 of BCA2022.
15. Services penetrating elements required to possess an FRL including the floor slabs, walls, shafts, etc. will be protected in accordance with Clause C4D13, C4D14 and C4D15 and Specification 13 of BCA2022.
16. Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation will be protected in accordance with BCA Clause C4D16.
17. The lift doors will be --/60/- fire doors complying with AS 1735.11:1986 in accordance Clause C4D11 of BCA2022.

18. Doorways and other opening in internal walls required to have an FRL will be protected in accordance with Clause C4D12 of BCA2022.
19. A lintel will have the FRL required for the part of the building in which it is situated, unless it does not contribute to the support of a fire door, fire window or fire shutter, and it spans an opening in masonry which is not more than 150 mm thick and is not more than 3m wide if the masonry is non- loadbearing; or not more than 1.8m wide if the masonry is loadbearing and part of a solid wall or one of the leaves of a cavity wall, or it spans an opening in a non-loadbearing wall of the Class 2 or 3 building, in accordance with Specification 5 Clause S5C4 BCA2022.
20. The top and bottom of the riser shafts will achieve an FRL not less than the FRL required for the walls of the shaft in accordance with Clause S5C8 of Specification 5 of BCA2022.
21. Smoke-proof walls to separate rising and descending stairs will be in accordance with Specification 11 of BCA2022.
22. Fire doors will comply with AS 1905.1:2015 and Specification C4D5 of BCA2022.
23. Smoke doors will be constructed so smoke will not pass from one side of the doorway to the other in accordance with Specification 12 of BCA2022.
24. The number of exits provided to the building will be in accordance with Clause D2D3 of BCA2022.
25. The required exits will be fire-isolated in accordance with Clause D2D4 of BCA2022.
26. Travel distances to exits will be in accordance with Clause D2D5 of BCA2022.
27. The alternative exits will be distributed uniformly around the storey and will not be less than 9m apart, and not more that 45m apart in the residential portion or 60m, in accordance with Clause D2D6 of BCA2022.
28. The dimensions of exits and paths of travel to exits will be provided in accordance with Clause D2D7 to D2D11 of BCA2022.
29. The fire-isolated exits will be in accordance with Clause D2D12 of BCA2022.
30. Discharge from exits will be in accordance with Clause D2D15 of BCA2022.
31. The ladder from the plant, lift machine rooms, and electricity network substation in lieu of a stairway will be in accordance with Clause D2D21 of BCA2022.
32. Access to the lift pit will be in accordance with Clause D2D22 of BCA2022.
33. The stairway or ramp within the fire-isolated shaft is to be non-combustible, and if there is a local failure not cause structural damage or impair the fire resistance of the shaft, in accordance with Clause D3D3 of BCA2022.
34. The construction separating rising and descending stairs in the fire-isolated exit stairway will be non-combustible and smoke proof, in accordance with Clause D3D5 of BCA2022.
35. The construction of EDB's and telecommunications distribution boards will be in accordance with Clause D3D8 of BCA2022 with the enclosure bounded by non-combustible construction or fire protective covering and smoke seals provided around the perimeter of the non-combustible doors and any openings sealed with non-combustible mastic to prevent smoke spreading from the enclosure.
36. New pedestrian ramps will comply with AS 1428.1:2009, Clause D3D11 and Part D4 of BCA2022. The floor surface of a ramp must have a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013.
37. The fire-isolated passageway will be in accordance with Clause D3D12 of BCA2022.

38. The roof of the building where the exit discharges will have an FRL of 120/120/120, and will not have roof lights or openings within 3m of the path of travel in accordance with Clause D3D13 of BCA2022.
39. Stair geometry to the new stairways will be in accordance with Clause D3D14 of BCA2022. Stair treads are to have a surface with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013.
40. Landings and door thresholds throughout the development will be provided in accordance with Clause D3D15 and D3D16 of BCA2022. Landings to have either a surface with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013 or a strip at the edge of the landing with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013 where the edge ledge to a flight below.
41. The handrails and balustrades to all stairs and throughout the building will be in accordance with Clause D3D17 to D3D21, and D3D22 of BCA2022.
42. The fixed platform, walkway, stairway and ladder and any associated going and riser, landing handrail, balustrade, located within the machinery room, boiler house, lift-machine room, plant-room, or non-habitable attic/storeroom within the sole occupancy unit will comply with AS 1657:2013 or Part D3 of BCA2022.
43. The doorways and doors will be in accordance with Clause D3D24 and D3D25 of BCA2022.
44. Door latching mechanisms will be in accordance with Clause D3D26 of BCA2022.
45. Re-entry doors from the fire-isolated exits will be in accordance with Clause D3D27 of BCA2022.
46. Signage will be provided on fire and smoke doors in accordance with Clause D3D28 of BCA2022.
47. The openable portion of a window in a bedroom of a Class 2 building will be protected with a restricting device or secure screen that does not allow a 125mm sphere to pass through the opening or screen and resist an outward horizontal action of 250N in accordance with Clause D3D29 of BCA2022. In addition to window protection, and for other openable windows 4 meters or more above the ground below, a barrier with a height not less than 865mm above the floor will be installed to the openable window.
48. The fire control centre will be in accordance with Specification 19 of BCA2022.
49. Fire precautions whilst the building is under construction fire precautions will be in accordance with Clause E1D16 of BCA2022.
50. Additional provisions will be made in accordance with Clause E1D17 of BCA2022, due to the special hazards associated with the building works or the location of the building works.
51. External above ground waterproofing membranes will comply with Clause F1D5 of BCA2022 and AS 4654 Parts 1 & 2:2012.
52. The new roof covering will be in accordance with Clause F3D2 of BCA2022.
53. Any sarking proposed will be installed in accordance with Clause F3D3 of BCA2022.
54. Waterproofing of all wet areas to the building will be carried out in accordance with Clause F2D2 and F2D3 of BCA2022 and AS 3740:2010.
55. Damp proofing of the proposed structure will be carried out in accordance with Clause F1D6 and F1D7 of BCA2022.
56. Floor wastes will be installed to bathrooms and laundries above sole occupancy units or public space in accordance with Clause F2D4 of BCA2022.

57. All new glazing to be installed throughout the development will be in accordance with Clause F3D4 of BCA2022 and AS 1288:2006 / AS 2047:2014.
58. Sanitary facilities will be provided in the building in accordance with Clause F4D2 of BCA2022.
59. The construction of the sanitary facilities will be in accordance with Clause F4D8 of BCA2022.
60. Ceiling heights to the new areas will be in accordance with Clause F5D2 of BCA2022.
61. Natural light will be provided in accordance with Clause F6D2, F6D3, and F6D4 of BCA2022.
62. Natural ventilation will be provided in accordance with Clause F6D6, F6D7 and F6D8 of BCA2022.
63. Water closets and urinals will be located in accordance with Clause F6D9 of BCA2022.
64. The sanitary compartments will be either be provided with mechanical exhaust ventilation or an airlock in accordance with Clause F6D10 of BCA2022.
65. Pliable building membranes installed in external walls will comply with Clause F8D3 of BCA2022 and where a pliable building membrane is not installed in an external wall, the primary water control layer will be separated from water sensitive materials by a drained cavity.
66. Every storey of the carpark will be provided with an adequate system of mechanical ventilation in accordance with Clause F6D11 of BCA2022.
67. A safe manner for cleaning of windows located 3 or more storeys above ground level will be provided in accordance with the Work Health & Safety Act 2011 and regulations made under that Act in accordance with NSW G1D5 of BCA2022.
68. The construction of the residential portions of the development will be undertaken in accordance with the relevant BASIX commitments that form part of the Development Consent approval.
69. Building Fabric and Thermal Construction will be in accordance with Part J4 of BCA2022.
70. Glazing will be in accordance with Part J4 of BCA2022.
71. Building sealing will be in accordance with Part J5 of BCA2022.
72. Facilities for Energy Monitoring will be provided in accordance with Clause J9D3 of BCA2022.

Electrical Services Design Certification:

73. A smoke detection and alarm system will be installed throughout the building in accordance with E2D4 & E2D5 and Specification 20 of BCA2022.
74. Emergency lighting will be installed throughout the development in accordance with Clause E4D2, E4D4 of BCA2022 and AS/NZS 2293.1:2018.
75. Exit signage will be installed in accordance with Clause E4D5, E4D7, and E4D8 of BCA2022 and AS/NZS 2293.1:2018.
76. An emergency warning and intercom system (EWIS) will be provided to the building in accordance with Clause E4D9 of BCA2022.
77. Artificial lighting will be installed throughout the development in accordance Clause F6D5 of BCA2022 and AS/NZS 1680.0:2009.
78. Lighting power and controls will be installed in accordance with Part J7 of BCA2022.
79. Electrical conductors located within the building that supply a main switchboard that sustains emergency equipment will comply with Clause C3D14 of BCA2022.

Hydraulic Services Design Certification:

80. Storm water drainage will be provided in accordance with Clause F1D3 of BCA2022 and AS/NZS 3500.3:2018
81. Fire hydrant system will be installed in accordance with Clause E1D2 of BCA2022 and AS 2419.1:2021 – subject to performance assessment due to the building being over 135m effective height.
82. Fire hose reels will be installed in accordance with Clause E1D3 of BCA2022 and AS 2441:2005.
83. A sprinkler system will be installed in accordance with Clause E1D4 of BCA2022 Specification 17 and appropriate part(s) of AS 2118.
84. Portable fire extinguishers will be installed in accordance with Clause E1D14 of BCA2022 and AS 2444:2001.
85. The heated water supply systems will be designed and installed to NCC Volume 3 – Plumbing code and Clause J8D2 of BCA2022.

Mechanical Services Design Certification:

86. An air-handling system which does not form part of a smoke hazard management system will be installed in accordance with Clause E2D3 of BCA2022, and AS 1668.1:2015.
87. Stair pressurisation will be installed in the building in accordance with E2D4 to E2D13 of BCA2022 and AS 1668.1:2015.
88. Where not naturally ventilated the building will be mechanically ventilated in accordance with Clause F6D6 of BCA2022 and AS 1668.2:2012.
89. Every storey of the car park will be mechanically ventilated in accordance with Clause F6D11 of BCA2022 and AS 1668.2:2012 as applicable.
90. Exhaust systems installed in a kitchen, bathroom, sanitary compartment or laundry of a Class 2 or 4 sole-occupancy unit will have a minimum flow rate and discharge location in accordance with Clause F8D4 of BCA2022.
91. The air-conditioning and ventilations systems will be designed and installed in accordance with Part J6 of BCA2022
92. Rigid and flexible ductwork will comply with the fire hazard properties set out in AS 4254 Parts 1 and 2.

Structural Engineers Design Certification:

93. The material and forms of construction for the proposed works will be in accordance with Clause B1D3, B1D4 and B1D6 of BCA2022 as follows:
    - Dead and Live Loads – AS/NZS 1170.1:2002
    - Wind Loads – AS/NZS 1170.2:2011
    - Earthquake actions – AS 1170.4:2007
    - Masonry – AS 3700:2018
    - Concrete Construction – AS 3600:2018
    - Steel Construction AS 4100:1998
    - Aluminium Construction – AS/NZS 1664.1 or 2:1997
    - Timber Construction – AS 1720.1:2010

- ABCB Standard for Construction of Buildings in Flood Hazard Areas.

94. The FRL's of the structural elements for the proposed works have been designed in accordance with Specification 5 of BCA2022, including S5C11 for a building of Type A Construction.
95. The lift shaft will have an FRL in accordance with Clause C3D11 and Specification 5 of BCA2022.
96. Lightweight construction used to achieve required fire resistance levels will comply with Specification 6 of BCA2022.
97. The construction joints to the structure will be in accordance with Clause C4D16 of BCA2022 to reinstate the FRL of the element concerned.
98. Upon completion of the works, a structural engineer will be able to certify that local failure will be in accordance with Clause D3D3 of BCA2022 for the fire isolated stairs.

Lift Services Design Certification:

99. The lifts throughout the development will be provided with stretcher facilities in accordance with Clause E3D3 of BCA2022 and will be capable of accommodating a stretcher with a patient lying horizontally by providing a clear space not less than 600mm wide x 2000mm long x 1400mm high above the floor level.
100. Warning signage in accordance with Clause E3D4 of BCA2022 will be provided to the lifts to advise not to use the lifts in a fire.
101. Emergency lifts will be provided in the building in accordance with Clause E3D5 of BCA2022.
102. A fire service recall control switch is to be installed on a landing at a location nominated by the appropriate authority in accordance with Clause E3D11.
103. A lift car fire service drive control switch is to be installed within the lift car in accordance with Clause E3D12.
104. Access and egress to the lift well landings will comply with the Deemed-to-Satisfy Provisions of D4 of the BCA2022 and will be suitable to accommodate disabled persons.
105. The type of lifts will also be suitable to accommodate persons with a disability in accordance with Clause E3D7 and E3D8 and will also have accessible features in accordance with E3D7 and E3D8 of BCA2022.
106. The lifts will comply with AS 1735.12:1999 in accordance with Clause E3D7 and E3D8 of BCA2022.
107. All electric passenger lifts and electrohydraulic passenger lifts shall comply with Specification 24 of BCA2022.

Acoustic Services Design Certification:

108. The sound transmission and insulation of the residential portions of the development will comply with Part F7 of BCA2022.