

THE LIVING COMPANY

DRAFT BCA ASSESSMENT REPORT

*Scape Eveleigh - 175-177 Cleveland Street, 1-5 and 6-8
Woodburn Street*



Project number 252955
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Quality management

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Executive summary

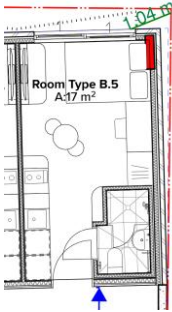
This document provides an assessment of the architectural design drawings for the proposed mixed-use development at Scape Eveleigh located at 175-177 Cleveland Street, 1-5 and 6-8 Woodburn Street, against the Deemed-to-Satisfy provisions of the Building Code of Australia (BCA) 2022 Amendment 2.

Below is a summary of the assessment which outlines the clauses which require further design or clarification.

Part 3 'Matters for Further Consideration' of this report provides additional information for some of the below clauses where further explanation is required.

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 (as outlined in Appendix D) with that Code subject to providing the necessary performance solutions outlined below and providing additional information where indicated below.

Any Performance Solution will need to be detailed in a separate report and must clearly indicate methodologies for achieving compliance with the relevant BCA Performance Requirements.

Item	Description	BCA Provision
Performance solutions required		
1.	To permit reduced FRL requirements to all building elements to the Class 5, 6, 7a/7b, 8 (substation) and Class 9b (communal area) portions throughout the Basement and Ground Floor Storeys from FRL 180 & FRL 240 to FRL 120. This shall be inclusive of all building elements listed in Table S5C11a through S5C11g.	Clause C2D2 and Specification 5
2.	Fire engineered performance solution required for the Fire resisting construction of the curtain wall smoke separation.	Clause C2D2 and Specification 5
3.	To permit Glazed elements within as drencher protected glazing to bounding construction.	Clauses C2D2, C4D12 and Specification 5
4.	A technical departure occurs on levels 1 - 4 against this clause where the non-fire isolated stair and the communal spaces are not fire separated from the corridor space which service the class 3 units.	Clauses C2D2 and C4D12
5.	Fire engineered performance solution required for protection of openings (windows and doors) within 3m of the fire-source feature on Level 1-5 South boundary and Levels 1-4 on the south east boundary.	Clause C4D3
		
6.	In a Class 2 or 3 building, a public corridor, if more than 40 m in length, must be divided at intervals of not more than 40 m with smoke-proof	Clause C4D15

Item	Description	BCA Provision
	walls complying with S11C2. This is currently not provided within all residential levels.	
7.	It is assumed the building will be provided with a garbage chute which terminates into respective bin rooms. As the garbage chute shaft cannot be enclosed at the bottom of the shaft, a FER PS is required to permit the room being considered part of the shaft.	Specification 5 Clause S5C8
8.	A minimum of two exits are required to each storey in the building. A Fire Engineered Performance Solution will be required to address provision of only one exit is provided in lieu of two at the following locations: Communal Gym, Commercial Tenancy 01, Commercial Tenancy 03, communal games room on Ground Floor and Roof Level.	Clause D2D3
9.	The subject open stair EST_04 currently connects six storeys where only allowed to be connected to three number of storeys. Therefore, the subject stair requires to be built as a Fire-isolated stairway as required under Clause D2D4. Alternatively, a fire engineered performance solution is required to address the subject requirement.	Clause D2D4
10.	The following travel distance non-compliances have been identified: <ul style="list-style-type: none"> - Basement: Distance to a point of choice is 32m in lieu of 20m. - Ground Floor Level: Distance to an exit is 46m in lieu of 30m. Distance to a point of choice is 31m in lieu of 20m. - Level 1-4: 82m in lieu of 60m between alternative exits. - Level 5: 81m in lieu of 60m between alternative exits. Distance to an exit from communal area on Level 5 is 24m in lieu of 20m. - Level 6: Client to confirm if egress allowed for the general population, and extent of egress on this level. 	Clause D2D5
11.	The following egress widths are below 1m: <ul style="list-style-type: none"> - Plant rooms and the like. Service Engineers to confirm egress widths of their respective plant rooms once layouts are confirmed. - Other areas where fixed furniture or obstructions may limit pinch points to less than 850mm in egress width. <p>The Fire Safety Engineer to confirm whether a performance solution is feasible or shall the design shall be altered to comply where egress widths are less than 850mm.</p>	Clause D2D8
12.	The discharge point of the fire-isolated stairs FS_05, FS_03 and FS_01 does not meet the requirements of BCA Clause D2D12(2), i.e. the passage discharges within the confines of the building and is not open for at least 2/3 of its perimeter. Fire engineered performance solution required.	Clause D2D12
13.	A fire engineered solution will be required to address openings on Ground floor where openings within 3m of the path of travel of persons using the exit. Applicable to all openings include drainage and service openings.	Clause D3D13
14.	To address where the fire hydrant and sprinkler booster assembly is not located within sight of the principal pedestrian entrance, due to the building being provided with multiple entrances.	Clause E1D2
15.	Fire pump room is located on the Basement Level is accessed via a dedicated airlock which opens to a fire-isolated stair. Due to this design	Clause E1D2 and E1D4

Item	Description	BCA Provision
	arrangement, The fire-isolated stair is not pressurised in accordance with AS1668.1:2015 and as such, access to the pump room does not comply with the requirements of AS2419.1:2021 Clause 6.11.2 (c).	
16.	To allow the internal hydrants to be located more than 4m from a required exits. The location of the additional non-compliant internal fire hydrants are on the Ground Floor Level.	Clause E1D2
17.	Omission of sprinklers from the main switchboard room. Sprinkler protection will be omitted from the electrical/NBN/Switch Rooms located on the Basement Level, FEBQ to mention C3D7 being covered under this performance solution.	Clauses E1D4 and C3D7
18.	To omit fire hose reels to fire rated rooms and small enclosures; garbage / bin rooms, as fire hose reels are technically not permitted to pass through fire/smoke doorsets. Note: Client to confirm if there are any other rooms they would like to seek a Fire engineered performance solution subject to this clause.	Clause E1D3
19.	Fire engineered performance solution required to omit servicing of smoke detectors within all lift shafts.	Specification 20
20.	Fire engineered performance solution required to allow no automatic fire detection or alarm system will be installed within the electrical substation on Ground Level.	Clauses E2D5, E4D9 and Specification 20
21.	Fire engineered performance solution to sought to address the provision of EV Charging and Solar Panels (PV) as this is considered as a special hazard.	Clauses E1D17 and E2D21
22.	A non-fire engineered performance solution will be required to demonstrate that the construction of the new external walls (other than glazing, masonry, autoclaved aerated concrete, and metal wall cladding for which Deemed-to-Satisfy Provisions are provided) is such that they will prevent the penetration of water that could cause unhealthy or dangerous conditions or loss of amenity to occupants and undue dampness or deterioration of building elements. Note: Departures (if any) are to be confirmed by the facade engineer	Clauses F3D4 and F3D5
Building Code of Australia compliance matters to be addressed		
1.	Client to provide details of the location of kitchen exhaust shafts within the retail tenancies. Confirmation to be provided about Kitchen exhaust shafts to be fire rated 3 hours throughout the entire building. Alternatively, a fire engineered performance solution is to be provided.	Clause C4D13, Clause C4D15 and Specification 5
2.	Services engineers to confirm if there will be any areas with reduced 1m clear widths e.g. within plant rooms and roof level. If there are no known instances of this occurring then this performance solution can be removed where not required.	Clauses D2D7 and D2D8
3.	The seating proposed at the terrace location on Level 5 may incorporate horizontal or near horizontal elements that could facilitate climbing between 150mm and 760mm above the floor. Confirmation to be provided to ensure compatibility issues are addressed in design or alternatively, a non-fire engineered performance solution to be sought.	Clause D3D20
4.	Natural light and Ventilation (natural or mechanical) must be provided to all habitable rooms in the Class 3 areas. Architect to verify that natural lighting and ventilation complies to each habitable room.	Clauses F6D2, F6D3 and F6D4.

Item	Description	BCA Provision
5.	The building must provide for a safe manner of cleaning any windows located three (3) or more storeys above ground level as per NSW Clause G1D5. Two (2) options are available for cleaning the windows: 1.The windows can be cleaned wholly from within the building; or 2.Provisions are made for cleaning windows by a method complying with the Work Health and Safety Act 2011 and regulations made under the Act.	Clause G1D5
Further information required		
1.	All grades of paths of travel connecting discharge points from fire-isolated exits to public roads shall be no steeper in any part than 1:8 grade. Where also required to be accessible this path shall be no steeper than 1:14. Details to be confirmed in subsequent design stages.	Clause D2D15
2.	No information has been provided on the barriers to prevent falls. Further details are to be provided in regards to the barriers along stairways, balconies and ramps proposed	Clause D3D17, D3D18, D3D19, D3D20
3.	Handrails are required on both sides at all non-fire isolated stairs/ramps located on Ground Floor Level and Level 1, where they are to be provided in accordance with Clause D3D22. Further information to be provided in regards to the handrail details in sectional and elevations design documentation.	Clause D3D22
4.	Sanitary facilities have not been finalised within this design documentation. The number of sanitary facilities throughout the building are to be provided within the design documentation in the subsequent stages.	Clause F4D5
5.	Where provided in retail tenancies, further information is required to confirm the commercial kitchens are to be provided with a Kitchen Exhaust Hood complying with AS 1668.1-2015 and AS1668.2-2012 if any of the following is provided: <ul style="list-style-type: none"> - any cooking apparatus has a total maximum electrical power input exceeding 8kW or; - a total gas power input exceeding 29 Mj/hr or; - total maximum power input to more than one apparatus exceeds 0.5kW electrical power or 1.8Mj gas per m2 of the room. 	Clause F6D12

Dimensions and tolerances

The BCA contains the minimum standards for building construction and safety, and therefore generally stipulates minimum dimensions which must be met. Jensen Hughes's assessment of the plans and specifications has been undertaken to ensure the minimum dimensions have been met.

The designer and builder should ensure that the minimum dimensions are met onsite, and consideration needs to be given to construction tolerances for wall set outs, applied finishes and skirtings to corridors and bathrooms for example, tiling bed thicknesses and the like which can adversely impact on critical matters such as access for people with disabilities, stair and corridor widths and balustrade heights.

Performance-based design – performance solutions

There are specific areas throughout the development where strict Deemed-to-Satisfy BCA Compliance may not be achieved by the proposed design and site constraints. These matters may need to be addressed in a detailed Performance Solution and/or Fire Engineering Report, to be prepared for this development under separate cover:

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NCC clause numbering

BCA2022 Amendment 2 uses a new structure and clause referencing system to create better consistency across all volumes of the NCC. While the new Section-Part-Type-Clause system makes the NCC look different at first, it's intended to improve user experience and make it more web accessible.

The new structure results in a reorganisation of specifications and parts, some of which are contained in the table below.

The NCC uses a uniform clause numbering system across each of its three volumes. This system is called Section-Part-Type-Clause (SPTC). In each clause number-

- + The first letter indicates which NCC section or part it sits within;
- + The first number indicates the number of the Part within a section or the number of a Specification.
- + The second letter indicates the clause type. It will be either G, O, F, P, V, D, or C. and these are explained below.
- + The second number is the clause number within each Part of Specification.

The clause Types used in the NCC are as follows:

- + G = Governing requirements (mandatory)
- + O = Objective (guidance)
- + F = Functional Statement (guidance)
- + P = Performance Requirement (mandatory) V = Verification Method (optional)
- + D = Deemed-to-Satisfy Provision (optional)
- + C = Clause in a Specification (can be mandatory or optional depending on how the Specification is called up by the NCC).

1.0 Basis of assessment

1.1 Location and description

The building development, the subject of this report, is located at 175-177 Cleveland Street, 1-5 and 6-8 Woodburn Street, Redfern NSW 2016. Pedestrian entrances are from Eveleigh Street and Woodburn Street the main vehicular entrance is from Eveleigh Street.

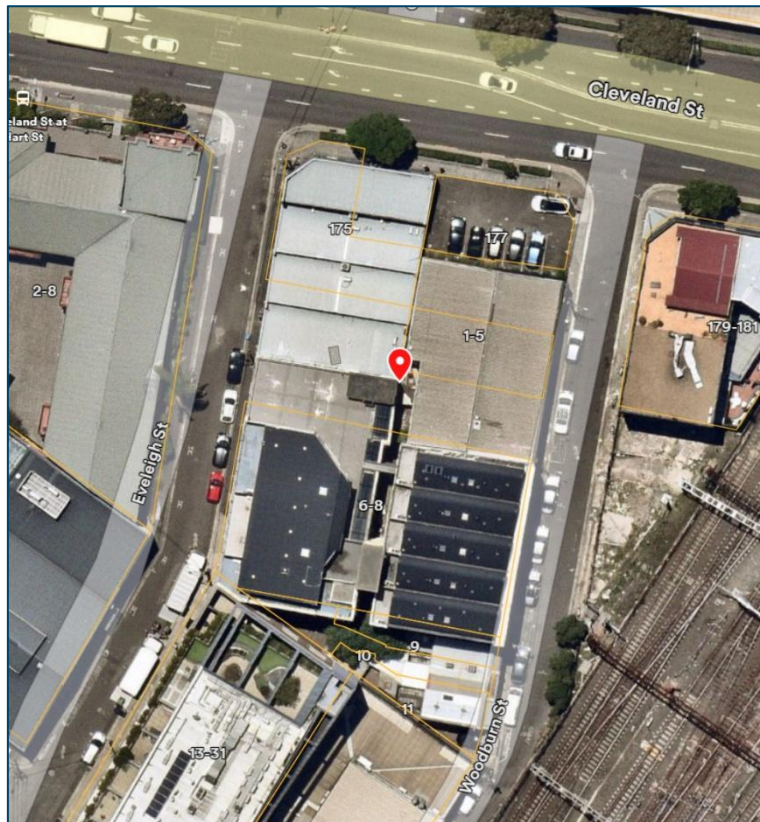


Figure 1: Site Location (Courtesy of Nearmap)

1.2 Purpose

The purpose of this report is to assess the current design proposal against the Deemed-to-Satisfy Provisions of 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. Such assessment against relevant performance criteria will need to be addressed by means of a separate Performance-based Assessment (Performance Solution) Report to be prepared under separate cover.

1.3 Building Code of Australia

The National Construction Code (**NCC**) is Australia's primary set of technical design and construction provisions for buildings.

As a performance-based code, it sets the minimum required level for the safety, health, amenity, accessibility and sustainability of certain buildings. The Australian Building Codes Board, on behalf of the

Australian Government and each State and Territory government, produces and maintains the National Construction Code.

The NCC has three (3) volumes being:

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

This report is based on the Deemed-to-Satisfy Provisions of the National Construction Code (**NCC**) Series Volume One – Building Code of Australia, 2022 Edition (**BCA**) Amendment 2, 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.

1.4 Limitations

This report is not a Design Compliance Declaration (DCD) under the Design and Building Practitioners Act 2020, nor is it to be construed as such.

This report is limited to a visual assessment of the plans and specifications provided and does not include any assessment or interrogation of the BIM model or the like.

This report does not include nor imply any detailed assessment for design, compliance or upgrading for:
the structural adequacy or design of the building;

the inherent derived fire-resistance ratings of any proposed structural elements of the building (unless specifically referred to); and

the design basis and/or operating capabilities of any proposed electrical, mechanical or hydraulic services.

This report does not include, or imply compliance with:

the National Construction Code – Plumbing Code of Australia Volume Three;

the Disability Discrimination Act 1992 including the Disability ((Access to Premises – Buildings) Standards 2010 – unless specifically referred to), (Note: The provision of access for people with a disability has not been assessed against the Deemed-to-Satisfy Provisions of Part D4 and Clauses E3D8, F4D5 and F4D12 of the BCA unless otherwise discussed in this report);

Demolition Standards not referred to by the BCA;

Work Health and Safety Act 2011;

Requirements of Australian Standards unless specifically referred to;

Requirements of other Regulatory Authorities including, but not limited to, Telecommunications Supply Authorities, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Local Council, ARTC, Department of Planning and the like; and

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 Appendix A of this Report.

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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 (six) 6.

2.2 Classification (clause A6G1)

The building has been classified as follows.

Table 1 Building Classification(s)

Class	Level	Description
Class 7a and Class 7b	Basement Level	Carparking and Storage
Class 6, Class 8 and Class 9b	Ground Floor Level	Retail tenancies, Electrical Substation, Communal Games room, Gym, community multi-purpose room
Class 3	Level 1 to Level 4	Co-living SOUs
Class 3 and Class 9b	Level 5	Co-living SOUs, communal open space and common kitchen

2.3 Effective height (clause A1G4)

The building has an effective height of 36.40 (the floor of Level 5) - 18.50 (the floor of Ground Floor Level) = 17.90m.

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 5 & 9b	Maximum Floor Area	8,000m ²
	Maximum Volume	48,000m ³
Class 6, 7b & 8	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 3

The Class 3 portions of the building are not subject to floor area and volume limitations of C3D3 as Table S5C11a of Specification 5 and Clause C4D12 of the BCA regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 3 classifications.

2.6 Fire compartments

The following fire compartments have been assumed:

1. Class 7a carpark and Class 7b storage on Basement are considered a single fire compartment
2. Class 5 office portion, Class 6 commercial portion and the Class 9b communal portions on the Ground Floor have been considered a single fire compartment subject to a fire engineered performance solution
3. Class 8 substation on Ground floor is considered to be a separate single fire compartment.
4. Class 9b portion on Level 5 is considered as a single fire compartment
5. Each respective Class 3 Residential storey is considered a single fire compartment except on Level 5 (please refer to the above comment)

2.7 Exits

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

1. Each of the fire doors opening into the Fire-Isolated stairs located throughout the building are considered as exits.
2. Subject to a performance solution, the first riser of non-fire isolated stair EST_04 throughout the building is considered as an exit.
3. The point where road or open space is achieved on Ground Floor and Level 1 are considered as exits.

2.8 Climate zone

The building is located within Climate Zone 5.

2.9 Building importance level

Certain Australian Standards (particularly structural standards) require the Importance Level of the building to be determined. The importance level relates to the individual actions on a building listed in clause B1D3 of the BCA

From our assessment of the subject building, it is considered that the most appropriate **Importance Level is 2**. The Importance Level should be confirmed with the client to ensure that this satisfies their expectations with respect to the use and operation of the building.

Table B1D3a of the BCA provides the following:

Importance Level	Building Types	Jensen Hughes Interpretation and Examples
1	Buildings or structures presenting a low degree of hazard to life and other property in the case of failure.	1 and 2 storey factory buildings
2	Buildings or structures not included in Importance Level 1, 3 and 4.	Residential apartment buildings and associated carparking. Office buildings
3	Buildings or Structures that are designed to contain a large number of people.	Stadia, Entertainment venues, shopping centres. Transport facilities
4	Buildings or Structures that are essential to post-disaster recovery or associated with hazardous facilities.	Data centres, evacuation centres

The Guide to the BCA provides a generic description of building types which have Importance Levels assigned. The Guide state that the "Importance Level" concept is applicable to building structural safety only. Specific examples from the Guide are provided below. The examples provided by the Guide are not exhaustive of all building types.

Importance Level 1:

- Farm buildings and farm sheds.
- Isolated minor storage facilities.
- Minor temporary facilities.

Importance Level 2:

- Low rise residential construction.
- Buildings and facilities below the limits set for Importance Level 3.

Importance Level 3:

- Buildings and facilities where more than 300 people can congregate in one area.
- Buildings and facilities with a primary school, a secondary school or day care facilities with a capacity greater than 250.
- Buildings and facilities with a capacity greater than 500 for colleges or adult educational facilities.
- Health care facilities with a capacity of 50 or more residents but not having surgery or emergency treatment facilities.
- Jails and detention facilities.
- Any occupancy with an occupant load greater than 5000.
- Power generating facilities, water treatment and waste water treatment facilities, any other public utilities not included in Importance Level 4.
- Buildings and facilities not included in Importance Level 4 containing hazardous materials capable of causing hazardous conditions that do not extend beyond property boundaries.

Importance Level 4:

- Buildings and facilities designated as essential facilities.

-
- Buildings and facilities with special post disaster functions.
 - Medical emergency or surgery facilities.
 - Emergency service facilities: fire, rescue, police station and emergency vehicle garages.
 - Utilities required as backup for buildings and facilities of Importance Level 4.
 - Designated emergency shelters.
 - Designated emergency centres and ancillary facilities.
 - Buildings and facilities containing hazardous materials capable of causing hazardous conditions that extend beyond property boundaries.
 - Importance Levels must be assigned on a case by case basis.

2.10 Location of fire-source features

For the purposes of assessing the subject building with respect to the fire rating of external walls and the protection of the openings, the fire source features for the subject development are:

North: Far boundary of Cleveland Street [>6m]

South: Rear allotment boundary shared with 9- 10 Woodburn Avenue. [<3m]

East: Far boundary of Eveleigh Street [>6m]

West: Far boundary of Woodburn Street [>6m]

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

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

3.0 Matters for further consideration

3.1 General

Assessment of the Architectural design documentation against the Deemed-to-Satisfy Provisions of the BCA has revealed the following areas where compliance with the BCA may require further consideration and/or may involve assessment as Performance-based *Performance Solutions*. Any *Performance Solutions* will be required to clearly indicate methodologies for achieving compliance with the relevant *Performance Requirements*.

1. Client to provide details of the location of kitchen exhaust shafts within the retail tenancies. Confirmation to be provided about Kitchen exhaust shafts to be fire rated 3 hours throughout the entire building. Alternatively, a fire engineered performance solution is to be provided. **(Clause C4D13, Clause C4D15 and Specification 5)**
2. Services engineers to confirm if there will be any areas with reduced 1m clear widths e.g. within plant rooms and roof level. If there are no known instances of this occurring then this performance solution can be removed where not required. **(Clauses D2D7 and D2D8)**
3. All grades of paths of travel connecting discharge points from fire-isolated exits to public roads shall be no steeper in any part than 1:8 grade. Where also required to be accessible this path shall be no steeper than 1:14. Details to be confirmed in subsequent design stages. **(Clause D2D15)**
4. No information has been provided on the barriers to prevent falls. Further details are to be provided in regards to the barriers along stairways, balconies and ramps proposed. **(Clause D3D17, D3D18, D3D19, D3D20)**
5. The seating proposed at the terrace location on Level 5 may incorporate horizontal or near horizontal elements that could facilitate climbing between 150mm and 760mm above the floor. Confirmation to be provided to ensure compatibility issues are addressed in design or alternatively, a non-fire engineered performance solution to be sought. **(Clause D3D20)**
6. Handrails are required on both sides at all non-fire isolated stairs/ramps located on Ground Floor Level and Level 1, where they are to be provided in accordance with Clause D3D22. Further information to be provided in regards to the handrail details in sectional and elevations design documentation. **(Clause D3D22)**
7. Sanitary facilities have not been finalised within this design documentation. The number of sanitary facilities throughout the building are to be provided within the design documentation in the subsequent stages. **(Clause F4D5)**
8. Natural light and Ventilation (natural or mechanical) must be provided to all habitable rooms in the Class 3 areas. Architect to verify that natural lighting and ventilation complies to each habitable room. **(Clauses F6D2, F6D3 and F6D4)**
9. Where provided in retail tenancies, further information is required to confirm the commercial kitchens are to be provided with a Kitchen Exhaust Hood complying with AS 1668.1-2015 and AS1668.2-2012 if any of the following is provided: **(Clause F6D12)**
 - any cooking apparatus has a total maximum electrical power input exceeding 8kW or;
 - a total gas power input exceeding 29 MJ/hr or;
 - total maximum power input to more than one apparatus exceeds 0.5kW electrical power or 1.8MJ gas per m² of the room.

10. The building must provide for a safe manner of cleaning any windows located three (3) or more storeys above ground level as per NSW Clause G1D5. Two (2) options are available for cleaning the windows:

- The windows can be cleaned wholly from within the building; or
- Provisions are made for cleaning windows by a method complying with the Work Health and Safety Act 2011 and regulations made under the Act. **(Clause G1D5)**

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Appendix A Design documentation

This report has been based on the following design documentation.

Table 2 Architectural plans

Architectural plans prepared by Turner			
Drawing Number	Revision	Date	Title
A-110-100	NA	12.12.2025	Basement Plan
A-110-101	NA	12.12.2025	Ground Floor Plan
A-110-110	NA	12.12.2025	Level 01
A-110-120	NA	12.12.2025	Level 2-4 (Typical Levels)
A-110-130	NA	12.12.2025	Level 05
A-110-140	NA	12.12.2025	Roof Plan
A-200-010	NA	12.12.2025	North Elevation (Cleveland St)
A-200-020	NA	12.12.2025	East Elevation (Woodburn St)
A-200-030	NA	12.12.2025	South Elevation
A-200-040	NA	12.12.2025	West Elevation (Eveleigh St)
A-310-010	NA	12.12.2025	Internal North Section
A-310-020	NA	12.12.2025	Internal East Section
A-310-030	NA	12.12.2025	Internal South Section
A-310-040	NA	12.12.2025	Internal West Section

Appendix B Essential services

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

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

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 Door sets)
2.	Construction Joints	BCA2022 C2D2, Specification 5 BCA2022 C4D16 AS 1530.4:2014 AS 4072.1:2005
3.	Fire doors	BCA2022 C3D6 (Class 9b) 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 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.	Lightweight construction	BCA2022 C2D2, Specification 5 BCA2022 C2D9, Specification 6 BCA2022 C4D12 (Bounding Construction) AS1530.4:2014
6.	Smoke Doors	BCA2022 C3D15 (Public Corridors Class 2/3) Clause S11C2 BCA2022 Specification 12 AS1670.1:2018

Item	Essential Fire and Other Safety Measures	Standard of Performance
General		
7.	Portable fire extinguishers	BCA2022 E1D14 AS 2444-2001
8.	Fire blankets	AS 2444-2001
General Egress		
9.	Evacuation Training	AS 3745:2010
10.	Operation of Door latches	D3D26 (Operation of Latch) AS 1670.1:2018
11.	Required Automatic Doors	D3D24 (Doorways and Doors)
12.	Swing of Exit Doors	D3D24 (Swinging Doors)
13.	Warning operational signs	BCA2022 D3D28 (Signs on Fire Doors) BCA2022 D4D7 (Braille Exit Signs) (Note: E4D5 (Exit Signs)) BCA2022 E3D4 (Lift Signs)
Lifts		
14.	Access to Lift Pits + Located at lowest level or if 3m provided through an access door	BCA2022 D2D22 (Access to Lift Pits) 'DANGER LIFT WELL – ENTRY OF UNAUTHORISED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES'
15.	Stretcher Lifts	BCA2022 E3D3 BCA2022 E3D9 (Fire Service Controls) BCA2022 E3D11 (Fire Service Recall Operation Switch) BCA2022 E3D12 (Lift Car Fire Service drive control switch) BCA2022 Specification 24 AS 1735.11:1986 (Fire rated landing doors)
Electrical Services		
16.	Automatic fail-safe devices	BCA2022 D3D26 (Operation of Latches)
17.	Automatic fire detection alarm:	BCA2022 Part E2D3, E2D4, E2D8, E2D9, E2D12, E2D13, E2D20 , Specification 20 BCA2022 C4D6 (Doors in Fire Walls) BCA2022 C4D9 (Openings in Fire-Isolated Exits) BCA2022 C4D12 (Bounding Construction) BCA2022 D3D26 (Operation of Latch) BCA2022 S20C4 (Smoke detection system) BCA2022S20C5 (Combined smoke alarm and smoke detection system)

Item	Essential Fire and Other Safety Measures	Standard of Performance
		BCA2022S20C6 (Smoke detection for smoke control systems) BCA2022S20C7 (BOWS) BCA2022S20C8 (System Monitoring) AS 3786:2014 (Amdt 1-4) AS 1670.1:2018 (Fire) – Section 4 and 5 (Detectors) AS 1670.3:2018 (Fire Alarm Monitoring)
18.	Emergency lighting	BCA2022 E4D2, E4D4 AS/NZS 2293.1:2018
19.	Exit signs	BCA2022 E4D55 (Exit Signs) BCA2022 E4D6 (Direction Signs) BCA2022 E4D8 (Design and Operation - Exits) AS/NZS 2293.1:2018
20.	System Monitoring	BCA2022 S20C8 AS 1670.3 (Amdt 1) Monitoring Required for any: <ul style="list-style-type: none"> + Any Sprinkler System + Class 3 building with a Clause S20C2 smoke detection system
Hydraulic Services		
21.	Automatic fire suppression systems	BCA2022 E1D4, E1D5, E1D6, E1D9, E1D11, BCA2022 Specification 17 AS 2118.1:2017 (Sprinklers)
22.	Fire hydrant systems	BCA2022 E1D2 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
24.	Wall-wetting sprinkler / drenchers	BCA2022 C4D5, AS 2118.2: Wall-wetting sprinkler / drenchers
Mechanical Services		
25.	Fire dampers	BCA2022 E2, Specification 20, Specification 21 BCA2022 C4D16 AS 1668.1:2015 (Amdt 1) AS 1682.1:2015 AS 1682.2:2015
26.	1. Mechanical air handling systems 2. Mechanical ventilation to carpark.	BCA2022 E2, Specification 20, Specification 21

Item	Essential Fire and Other Safety Measures	Standard of Performance
	<p>3. Auto-shutdown of Air-handling System.</p> <ul style="list-style-type: none"> + Any system that recycles air from one fire compartment to another, or operates in a manner that may spread smoke and does not operate as a smoke control system as per AS 1668.1:2015; + (NSW Part E2) - Any system in a Class 9b assembly building which does not form part of a smoke hazard management system, other than: <ul style="list-style-type: none"> - non-ducted individual room units with a capacity of not more than 1000 L/s; or - miscellaneous exhaust are systems installed as per Section 5 and 6 of AS 1668.1:2015. 	<p>AS 1668.1:2015 (Amdt 1)</p> <p>Note: 5.5.3 Override control</p> <p>To enable manual control by attending emergency services personnel, fans that are not required to shut down on initiation of fire mode in the car park shall be provided with a control switch at the designated building entry point.</p> <p>Note: Signage should be located at the car park entry indicating the location of the control switches.</p>
<p>E2D3 General Requirements</p> <ol style="list-style-type: none"> 1. An air-handling system which does not form part of a smoke hazard management system in accordance with E2D4 to E2D20 and which recycles air from one fire compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must, subject to (2), be designed and installed— <ol style="list-style-type: none"> a. to operate as a smoke control system in accordance with AS 1668.1; or b. such that it— <ol style="list-style-type: none"> i. incorporates smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and ii. is arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with clause 7.5 of AS 1670.1. 2. For the purposes of (1), each sole-occupancy unit in a Class 2 or 3 building is treated as a separate fire compartment. 3. Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one fire compartment (other than a carpark ventilation system) and not forming part of a smoke hazard management system must comply with these Sections of the Standard. 4. A smoke detection system must be installed in accordance with S20C6 to operate AS 1668.1 systems that are provided for zone pressurisation and automatic air pressurisation for fire-isolated exits 		

Appendix 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 3	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 3	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 3	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 3	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 3	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 3	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 the discharge of hot products of combustion	-/90/90	-/90/90	-/120/120	-/120/120

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 3	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 car park portions under Clause S5C19 of BCA Specification 5, reducing the carpark FRL's down from 120/120/120 to 60/60/60.

Appendix 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/m²) 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
a non-conditioned space including—
the floor of a rooftop plant room, lift-machine room or the like; and
the floor above a carpark or warehouse; and
the common wall with a carpark, warehouse or the like.

Exit

Exit means –

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

Fire compartment

Fire compartment means –

1. the total space of a building; or

2. when referred to in—

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

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

Fire-resistance level (FRL)

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

1. structural adequacy; and

integrity; and

insulation,

and expressed in that order.

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

Fire-source feature

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

a side or rear boundary of the allotment; or

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

Fire wall

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

Flammability index

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

Group number

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

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

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

to which access is provided, other than access only for maintenance; and

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 (SMOGR_A 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
 - a room or suite of rooms in a Class 3 building which includes sleeping facilities; or
 - a room or suite of associated rooms in a Class 5, 6, 7, 8 or 9 building; or
 - 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.

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Appendix E BCA compliance specification

The following BCA matters (including any applicable NSW variations) 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 and to satisfy their obligations under the Design and Building Practitioners Act 2020 within their individual design compliance declarations.

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. Lightweight construction used to achieve required fire resistance levels will comply with Specification C2D9 of the BCA.
2. Building elements must be non-combustible in accordance with C2D10 of the BCA.
3. 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 the BCA.
4. 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 the BCA.
5. 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 the BCA.
6. Floors separating storeys of different classifications will comply with BCA Clause C3D10 of the BCA.
7. Equipment will be separated in accordance with Clause C3D13 of the BCA.
8. The electricity substation, any main switch room sustaining emergency equipment required to operate in emergency mode, will be separated from the remaining building with construction having an FRL 120/120/120 and provided with self-closing -/120/130 fire doors in accordance with Clause C3D14 of the BCA.
9. Openings in the external walls that are required to have an FRL will be in located in accordance with Clause C4D3 and C4D4 of the BCA or protected in accordance with Clause C4D5 of the BCA.
10. The external walls and openings of separate fire compartments will be protected in accordance with Clause C4D4.
11. Doorways in any fire walls separating fire compartments will be protected in accordance with Clause C4D6 of the BCA.
12. 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 the BCA.
13. Fire-isolated stairways will not be penetrated by services other than those permitted by Clause C4D10 of the BCA.
14. 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 the BCA.
15. 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.
16. The lift doors will be -/60/- fire doors complying with AS 1735.11:1986 in accordance Clause C4D11 of the BCA.

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17. Doorways and other openings in internal walls required to have an FRL will be protected in accordance with Clause C4D12 of the BCA.
 18. Columns protected by light weight construction will achieve an FRL not less than the FRL for the element it is penetrating, in accordance with Clause C4D17 of the BCA.
 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 3 building, in accordance with S5C4 of the BCA.
 20. All attachments to the external façade of the building will be fixed in a way that does not affect the fire resistance of that element in accordance with S5C6 of the BCA.
 21. The top and bottom of the riser shafts will achieve an FRL not less than the FRL required for the walls of the shaft in accordance with S5C8 of the BCA.
 22. Fire doors will comply with AS 1905.1:2015 and Specification 12 of the BCA.
 23. The number of exits provided to the building will be in accordance with Clause D2D3 of the BCA.
 24. The required exits will be fire-isolated in accordance with Clause D2D4 of the BCA.
 25. Travel distances to exits will be in accordance with Clause D2D5 of the BCA.
 26. The alternative exits will be distributed uniformly around the storey and will not be less than 9m apart, and not more than 45m apart in the residential portion or patient care areas in the health-care building or 60m, in accordance with Clause D2D6 of the BCA.
 27. The dimensions of exits and paths of travel to exits, including the height, width, and width of doorways will be provided in accordance with D2D7 to D2D10 of the BCA.
 28. The fire-isolated exits will be in accordance with Clause D2D12 of the BCA.
 29. The external stairway or ramp serving as a required exit will be in accordance with Clause D2D13 of the BCA.
 30. Discharge from exits will be in accordance with Clause D2D15 of the BCA.
 31. The non-required stairways and ramps will be in accordance with Clause D2D17 of the BCA.
 32. Access to the lift pit will be in accordance with Clause D2D22 of the BCA.
 33. The non-fire isolated stairs will be constructed in accordance with Clause D3D4 of the BCA.
 34. The construction of EDB's and telecommunications distribution boards will be in accordance with Clause D3D8 of the BCA 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.
 35. 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 the BCA.
 36. Stair geometry will be in accordance with Clause D3D14 of the BCA. Stair treads are to have a surface with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013.
 37. Landings and door thresholds throughout the development will be provided in accordance with Clause D3D15 and D3D16 of the BCA. Landings will 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.

38. The handrails and balustrades to all stairs and throughout the building will be in accordance with D3D17 to D3D22 of the BCA.
39. The doorways and doors will be in accordance with Clause D3D24 and D3D25 of the BCA.
40. Door latching mechanisms will be in accordance with Clause D3D26 of the BCA.
41. Signage will be provided on fire doors in accordance with Clause D3D28 of the BCA.
42. Fire precautions whilst the building is under construction will be in accordance with Clause E1D16 of the BCA.
43. Additional provisions will be made in accordance with Clause E1D17 of the BCA, due to the special hazards associated with the building works or the location of the building works.
44. Non-illuminated exit signage will be installed in accordance with Clause E4D7, and of the BCA.
45. External above ground waterproofing membranes will comply with Clause F1D5 of the BCA and AS 4654 Parts 1 & 2:2012.
46. The new roof covering will be in accordance with Clause F3D2 of the BCA.
47. Any sarking proposed will be installed in accordance with Clause F3D3 of the BCA.
48. Waterproofing of all wet areas to the building will be carried out in accordance with Clause F2D2 of the BCA and AS 3740:2010.
49. Damp proofing of the proposed structure will be carried out in accordance with Clause F1D6 and F1D7 of the BCA.
50. Floor wastes will be installed to bathrooms and laundries above sole-occupancy units or public space in accordance with Clause F2D4 of the BCA.
51. All new glazing will be in accordance with Clause F3D4 of the BCA and AS 1288:2021 / AS 2047:2014 (incorporating amendments 1 and 2).
52. Sanitary facilities will be provided in the building in accordance with Clause F4D1, and F4D2 to F4D8 of the BCA.
53. Accessible sanitary facilities will be provided in the building in accordance with Clause F4D5 and F4D6 of the BCA and AS1428.1:2009.
54. The construction of the sanitary facilities will be in accordance with Clause F4D8 of the BCA.
55. Ceiling heights will be in accordance with Clause F5D2 of the BCA.
56. Natural light will be provided in accordance with Clause F6D6, F6D7, and F6D8 of the BCA.
57. Natural ventilation will be provided in accordance with Clause F6D6, F6D7, and F6D8 of the BCA.
58. Water closets and urinals will be located in accordance with Clause F6D9 of the BCA.
59. The sanitary compartments will either be provided with mechanical exhaust ventilation or an airlock in accordance with Clause F6D10 of the BCA.
60. Every storey of the carpark will be provided with an adequate system of permanent natural or mechanical ventilation in accordance with Clause F6D11 of the BCA.

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61. 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 the BCA.
 62. The stoves, heaters or similar appliances installed in the building will be in accordance with AS/NZS 2918:2018 and Clause G2D2 of the BCA.
 63. The occupiable outdoor area is to comply with the requirements of Part G6 of the BCA.
 64. Essential fire or other safety measures will be maintained and certified on an ongoing basis, in accordance with the provisions of the Environmental Planning and Assessment Regulation, 2000.

Electrical Services Design Certification:

65. A smoke detection and alarm system will be installed throughout the building in accordance with Part E2 of the BCA.
66. Emergency lighting will be installed throughout the development in accordance with Clause E4D2 and E4D4 of the BCA and AS/NZS 2293.1:2018.
67. Exit signage will be installed in accordance with Clause E4D5, E4D7 and E4D8 of the BCA and AS/NZS 2293.1:2018.
68. An emergency warning and intercom system (EWIS) will be provided to the building in accordance with Clause E4D9 of the BCA.
69. Artificial lighting will be installed throughout the development in accordance Clause F6D5 of the BCA and AS/NZS 1680.0:2009.
70. Electrical conductors located within the building that supply a main switchboard that sustains emergency equipment will comply with Clause C3D14 of the BCA.

Hydraulic Services Design Certification:

71. Storm water drainage will be provided in accordance with Clause F1D3 of the BCA and AS/NZS 3500.3:2018
72. Fire hydrant system will be installed in accordance with Clause E1D2 of the BCA and AS 2419.1:2021 as required.
73. Fire hose reels will be installed in accordance with Clause E1D3 of the BCA and AS 2441:2005.
74. A sprinkler system will be installed in accordance with Clauses E1D4 to E1D13 of the BCA as applicable, and, Specification 17 and appropriate part(s) of AS 2118.
75. Portable fire extinguishers will be installed in accordance with Clause E1D14 of the BCA and AS 2444:2001.
76. The heated water supply systems will be designed and installed to NCC Volume Three – Plumbing Code and Clause J7.2 of the BCA.

Mechanical Services Design Certification:

77. An air-handling system which does not form part of a smoke hazard management system will be installed in accordance with Clause E2D3 of the BCA, and AS 1668.1:2015.
78. Where not naturally ventilated the building will be mechanically ventilated in accordance with Clause F6D6 of the BCA and AS 1668.2:2012.

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79. Every storey of the car park will be ventilated in accordance with Clause F6D11 of the BCA and where not naturally ventilated it will be mechanically ventilated in accordance with AS 1668.2:2012 as applicable.
 80. The commercial kitchen will be provided with a kitchen exhaust system in accordance with Clause F6D12 of the BCA, and AS 1668.1:2015 and AS 1668.2:2012.
 81. Exhaust systems installed in a kitchen, bathroom, sanitary compartment or laundry of a Class 2 sole-occupancy unit will have a minimum flow rate and discharge location in accordance with Clause F8D4 of the BCA.
 82. The air-conditioning and ventilations systems will be designed and installed in accordance with Part J5 of the BCA
 83. Rigid and flexible ductwork will comply with the fire hazard properties set out in AS 4254 Parts 1 and 2.

Structural Engineers Design Certification:

84. The material and forms of construction for the proposed works will be in accordance with Clause B1D2, B1D3 and B1D4 of the BCA as follows:
 - a. Dead and Live Loads – AS/NZS 1170.1:2002 (incorporating amendments 1 and 2)
 - b. Wind Loads – AS/NZS 1170.2:2021
 - c. Earthquake actions – AS 1170.4:2007
 - d. Masonry – AS 3700:2018
 - e. Concrete Construction – AS 3600:2018
 - f. Steel Construction AS 4100:1998
 - g. Aluminium Construction – AS/NZS 1664.1 or 2:1997
 - h. Timber Construction – AS 1720.1:2010
 - i. ABCB Standard for Construction of Buildings in Flood Hazard Areas.
85. The FRL's of building elements for the proposed works have been designed in accordance with Tables S5C11a to S5C11g of the BCA for a building of Type A Construction
86. The lift shaft will have an FRL in accordance with S5C8 of the BCA.
87. Lightweight construction used to achieve required fire resistance levels will comply with Specification 6 of the BCA.
88. The construction joints to the structure will be in accordance with Clause C4D16 of the BCA to reinstate the FRL of the element concerned.
89. The concrete panel external walls will be in accordance with Specification C2D12 of the BCA.
90. Upon completion of the works, a structural engineer will be able to certify that local failure will be in accordance with Clause D3D3 of the BCA for the fire isolated stairs.

Lift Services Design Certification:

91. The lifts throughout the development will be provided with stretcher facilities in accordance with Clause E3D3 of the BCA 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.

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92. Warning signage in accordance with Clause E3D4 of the BCA will be provided to advise not to use the lifts in a fire.
 93. Access and egress to the lift landings will comply with the Deemed-to-Satisfy Provisions of D4 of the BCA and will be suitable to accommodate disabled persons.
 94. The type of lifts will be suitable to accommodate persons with a disability in accordance with Clause E3D8 and will have accessible features in accordance with that clause.
 95. The lifts will comply with AS 1735.12:1999 in accordance with Clause E3D8 of the BCA.
 96. All electric passenger lifts and electrohydraulic passenger lifts shall comply with Specification 24 of the BCA.

Acoustic Services Design Certification:

97. The sound transmission and insulation of the residential portions of the development will comply with Part F75 of the BCA.

NSW Specification Design Certificate:

98. Materials, floor and wall linings/coverings, surface finished and air-handling ductwork used in the works will comply with the fire hazard properties in accordance with Clause C2D11, NSW Clause C2D11, Specification 7 and NSW Specification 7 of the BCA.
99. The building will be separated in accordance with Clause C3D6, and NSW Clause C3D6 of the BCA.
100. Doorways and other openings in internal walls required to have an FRL will be protected in accordance with Clause C4D12, and NSW Clause C4D12 (4) and (5) of the BCA.
101. The number of exits provided to the building will be in accordance with Clause D2D3 and NSW Clause D2D3(4) of the BCA.
102. The discharge points of exits will be in accordance with Clause D2D15, and NSW Clause D2D15(6) of the BCA.
103. The width of doorways in exits and paths of travel to exits will be provided in accordance with Clause D2D9, and NSW Clause D2D9(a) to (g) of the BCA.
104. Stair geometry to the new stairways will be in accordance with Clause D3D14, and NSW Clause D3D14(1) of the BCA. Stair treads are to have a surface with a slip-resistance classification complying with Table D3D154 when tested in accordance with AS 4586:2013 or a nosing strip with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013.
105. Landings and door thresholds throughout the development will be provided in accordance with Clause D3D15 and D3D16.15, and NSW Clause D3D16(a) to (e) of the BCA. Landings to have either a surface with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586:2013 or a strip at the edge of the landing with a slip-resistance classification complying with Table D3D15 when tested in accordance with AS 4586:2013 where the edge leads to a flight below.
106. The height of barriers is to be in accordance with D3D18 and NSW D3D18(1) of the BCA.
107. The doorways and doors will be in accordance with Clause D3D24, NSW Clause D3D24(2) of the BCA.
108. Insulation will be in accordance with AS/NZS 4859.1:2018 and will be installed as required by NSW Part J1 of the BCA.