

BUILDING CODE OF AUSTRALIA ASSESSMENT REPORT

Frasers Broadway

Project: Block 1&4N
20-102 Broadway, Sydney

Client: Frasers Broadway
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1.0 EXECUTIVE SUMMARY

The development, the subject of this report, is for the construction of a high rise multi residential unit over basement carparking with ground floor retail on the site known as Block 1 & 4N at 20-102 Broadway Chippendale.

This report has been prepared, on behalf of Frasers Broadway, to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the planning development application documentation for the proposed works.

The following non-compliance's with the deemed-to-satisfy provisions of the BCA, in relation to the proposed building work, have been identified and are proposed to be dealt by justification against the performance requirements of the BCA in accordance with BCA Clause A0.5 (b).

BCA DTS CLAUSE	ISSUE
C2.2 – compartmentation Spec C1.1 clause 3.1 & Clause C3.5 – FRL's of loading dock & FRL of fire door separating B1 link to Block 4S E2.2 - Zone smoke control	The loading dock : - Is within a fire compartment with a floor area more than 5000 m² and a volume more than 48,000 m³. - Will have fire resistance less than 4 hrs, including the roller door to the B1 link to Block 4S, and will not be fire separated from the remainder of the carpark. - is not proposed to be provided with zone smoke control.
C2.14 Residential public corridors	The building contain public corridors, in the same 'smoke zone' more than 40 m in length as follows: - Level 02 - 48.3 m - Level 03 to 17 - 49.8 m - Level 18 - 51 m
Specification C1.1 Clause 3.1 skylights	The Level 2 roof has skylights that have an aggregate area of more than 20% the area of the roof surface and one of the skylights is less than 3 m from the external walls of Level 03.
D1.2 Number of exits from ground floor D1.2 Substation egress	The Ground Floor retail tenancies have access to only one exit The Level B1 substation & B0 substation have access to their own exit stair. A second exit is required to be provided from each substation. Should the second exit be provided by way of an AS1657 stairway, performance justification is required as the AS 1657 stairway is not a BCA compliant exit stairway in this case.
D1.3 & D1.7 Level B0 open egress stair discharging into Level B1	There is an open stair connecting Level B0 with Level B1. This stair provides egress from Level B0 to the fire isolated stair on Level B1. The stair does not comply as an exit stair as follows: - The stair is not contained within a fire rated shaft (D1.3 & Spec C1.1); - The stair does not discharge to the outside of the building (D1.7).
D1.4 Residential travel distances	Level 02 to 17 contains units up to 11.17 m to a point of choice. These are to be performance justified. The following areas are more than 20 m to a point of choice or exist: - pool area is up to 23.7 m to a point of choice - Level 16 terrace is 30 m to a point of choice.

D1.4 Basement travel distances	The following basement areas are more than 20 m to a point of choice: • Level B2 ETS Room Block 4N - 25 m • Basement B1 comms room Grid C2 (north-west area under block 4N) – 28m • Level B0 east end carparking and Exhaust fan room – 30 m. The following basement areas are more than 40 m to an exit: • Level B2 ETS Room Block 4N – 52 m (open floor plan) • Level B2 plant room Grid S2-FF – 48 m • Level B2 commercial staff bike area - 43 m
D1.5 Distance between alternative exits	The distance between alternative exits in the basement is up to 70 m. The distance between alternative exits on residential Level 02 is 54 m.
D1.7 Connection into fire stair	Direct connection from the Ground Floor Residential Lobby into the fire isolated exit is proposed to be performance justified.
E1.8 Fire control room	Access to the fire control room involves a change in level exceeding 300 mm.
E2.2 Zone smoke control	The loading dock and retail tenancies are not proposed to contain zone smoke control.
F4.1 Natural light	The study rooms on Level 04 to 17 bounding the west slot rely on natural light via the slop which does not comply with F4.2(b).

The design as proposed is capable of complying with the Building Code of Australia, and will be subject to construction documentation that will provide appropriate details to demonstrate compliance. This report has identified areas of non-compliance with the deemed-to-satisfy provisions and indicates the design intent to demonstrate compliance with the Performance Requirements of the BCA. Whilst the performance based solutions are to be design developed, it is my view that the solutions will not impact on the current design.

2.0 INTRODUCTION

1.1 General

This report serves as an assessment for compliance with the Building Code of Australia for construction of a high rise multi residential unit over basement carparking with ground floor retail on the site known as Block 1 & 4N at 20-102 Broadway Chippendale. The building is to be constructed of reinforced concrete and masonry construction with a curtain wall facade.

1.2 Purpose of the Report

This report has been prepared, on behalf of Frasers Broadway, to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the planning development application documentation for the proposed works.

1.3 Report Basis

This report is based on:

- i. Architectural plans prepared by Foster & Partners, as identified in the attached Appendix 1.
- ii. The National Construction Code Series 2014, Volume One, Building Code of Australia, Class 2 to Class 9 buildings, inclusive of NSW variations (See Note 1).
- iii. Environmental Planning and Assessment Act 1979.
- iv. Environmental Planning and Assessment Regulation 2000.

Notes (1) Building Code of Australia (BCA) 2014 was adopted in NSW on 1 May 2014. The amendment of the BCA in force at the date of lodgement of a Construction Certificate is the version called up by Clause 98 of the Environmental Planning & Assessment Regulation 2000 for the purpose of the building design. Therefore comments may be subject to changes to comply with updated versions of the Building Code of Australia.

1.4 Exclusions & Limitations

This report has been prepared based on the following limitations and exclusions;

- i. Structural design or design of the building, and
- ii. The design basis and/or operating capabilities of electrical, mechanical, hydraulic or fire protection services, and
- iii. This report does not consider heritage significance, and
- iv. This report does not include or imply compliance with;
 - a) The Disability Discrimination Act 1992;
 - b) Demolition Standards not referred to by the BCA;
 - c) Occupational Health & Safety Act;
 - d) Construction Safety Act;
 - e) Requirements of other Regulatory Authorities including, but not limited to, Telstra, Sydney Water, Electricity Supply Authority, WorkCover, TR&MS, Council and the like; and
 - f) Requirements of planning legislation, and
 - g) Any conditions of Development Consent.
- v. The use of this report is limited to its intended purposes and shall not be relied upon by any other party.

3.0 BUILDING CODE OF AUSTRALIA ASSESSMENT

3.1 Classification (A3.2)

The proposed building consists of;

Basement Level B3 to B2:	Class 7a Carpark & Storage*
Basement Level B1:	Class 7a Carpark & Class 7b loading dock
Basement Level B0:	Class 7a Carpark
Ground Floor:	Class 2 Residential, Class 6 retail and Class 7a carpark ramp
Level 02 to Level 18	Class 2 residential

* The storage component has a floor area of less than 10% of the floor area of the story and may adopt the classification of the major use (Class 7a).

3.2 Effective Height (A1.1)

The proposed building will have an effective height of more than 50 m.

3.3 Rise in Storeys (C1.2)

The proposed building will consist of a rise in storeys of eighteen (18).

3.4 Type of Construction (C1.1)

Type A construction in accordance with Specification C1.1 of the BCA, is the applicable type of construction.

4.0 BUILDING CODE OF AUSTRALIA ASSESSMENT

4.1 Structure (BCA Section B)

BCA Clause	Title	Assessment and Comment	Status
B1.1	Resistance to actions	The resistance of the building must be greater than the most critical action effects resulting from different combinations of actions as required by this clause.	Note
B1.2	Determination of individual actions	The building is to be designed and constructed to accommodate the magnitude of individual actions, in accordance with this clause, generally covering; (a) Permanent actions (b) Imposed actions (c) Wind, snow and ice and earthquake actions (d) Other specified actions A structural engineer is to provide design certification at the Construction Certificate stage that the building has been designed to the relevant structural standards and maintain appropriate supervision during construction to certify that the structure has been constructed in accordance with the design.	The proposed building is capable of complying
B1.4	Determination of structural resistance of materials & forms of construction	The structural resistance of the following materials and forms of construction must be determined, in accordance with this clause; (a) Masonry (b) Concrete construction (c) Steel construction (d) Composite steel and concrete (e) Aluminium construction (f) Timber construction (g) Piling (h) Glazing assemblies (i) Termite risk management (j) Roof construction (k) Particleboard structural flooring (l) Garage doors (m) Lift shafts A structural engineer is to provide design certification at the Construction Certificate stage that the building has been designed to the relevant structural standards and maintain appropriate supervision during construction to certify that the structure has been constructed in accordance with the design. Should any primary building element be constructed of timber, termite risk management will be required to be provided in accordance with this clause.	The proposed building is capable of complying
B1.5	Structural Software	Structural software used in computer aided design is to comply with the requirements of this provision. A Structural engineer is to provide design certification at the Construction Certificate stage.	The proposed building is capable of complying
B1.6	Construction of buildings in flood hazard areas	A Class 2 or 3 building, Class 9a health-care building, Class 9c aged-care building or Class 4 part of a building, in a flood hazard area must comply with the ABCB Standard for Construction of Buildings in Flood Hazard Areas. Design certification will be provided at CC application stage from the Civil Engineer, Architect, Structural Engineer and Services Engineers.	The proposed building is capable of complying

4.2 Fire Resistance (BCA Section C)

BCA Clause	Title	Assessment and Comment	Status
C1.1	Type of construction required	The type of fire resisting construction applicable is Type A construction. Type A construction is the highest of the fire resistant of the types of construction.	Note
C1.2	Calculation in rise in storeys	The building has a rise in storeys of eighteen (18).	Note
C1.8	Lightweight construction	Any proposed lightweight construction shall be designed and installed to comply with the provisions of Specification C1.8 and satisfy the relevant tests.	The proposed building is capable of complying
C1.10	Fire hazard properties	Proposed floor materials, floor coverings, wall and ceiling lining materials are to be selected to comply with the required fire hazard properties of Specification C1.10. Evidence of compliance (test certificates) shall be obtained from the supplier or manufacturer.	The proposed building is capable of complying
C1.11	Performance of external wall in fire	The building has a rise in storeys of more than 2 and the requirements of this provision do not apply.	N/A
C2.2	General floor area and volume limitations	The building complies with the general floor area and volume limitations identified by this clause, except that the loading dock is within a fire compartment exceeding 5,000m ² & 48,000 m ³ . This is to be assessed by performance justification against the relevant performance requirements of the BCA.	Alternative solution
C2.6	Vertical separation of openings in external walls	The building is proposed to be sprinkler protected therefore vertical separation is not required.	Complies
C2.7	Separation by fire walls	A 180/180/180 fire wall is proposed to separated the Ground floor from the basements at the vehicular entry ramp. A 180/180/180 fire wall is proposed to separate the ground floor residential lobby from the remainder of the ground floor. A 120/120/120 fire wall is proposed to separate the basements from Block 4S. The fire resistance of the fire wall is to be performance justified under Clause 3.1 of specification C1.1 below. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
C2.8	Separation of classifications in the same storey	Fire walls are proposed to separate different classifications as specified above in C2.7. The fire resistance levels of the Level B1 loading dock are to be performance justified – refer to Spec C1.1 below.	The proposed building is capable of complying
C2.9	Separation of classifications in different storeys	The floors between parts of different classifications must have an FRL of not less than that prescribed in Specification C1.1 for the classification of the lower storey.	The proposed building is capable of complying
C2.10	Separation of lift shafts	The lift shafts are required to be separated from the rest of the building with walls having an FRL of not less than that required by Table 3 of Specification C1.1.	The proposed building is capable of complying
C2.11	Stairways and lifts in one shaft	The stairs and lift shaft are located in different shafts.	The building complies

BCA Clause	Title	Assessment and Comment	Status
C2.12	Separation of equipment	The following equipment, if installed in the building, is to be fire separated from the remainder of the building by 120/120/120 FRL construction: a) Boilers b) Lift motors and control panels c) Emergency generators used to sustain emergency equipment operating in emergency mode; or d) Central smoke control plant; or e) Batteries installed in a building that have a voltage exceeding 24 volts and capacity exceeding 10ampere hours.	The proposed building is capable of complying
C2.13	Electricity supply system	Fire separation of substations is to be in accordance with this clause and the specific fire resistant construction requirements from the energy authority. The main switchboard board, sustaining emergency equipment, is to be fire separated from the remainder of the building by 120/120/120 construction. All switchboards in the electrical distribution system, which sustain the electricity supply to the emergency equipment, must provide full segregation by way of enclosed metal partitions designed to prevent the spread of any fault from non-emergency equipment switchgear to the emergency equipment switchgear. Electrical conductors and switchboards are required to comply with this clause. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
C2.14	Public corridors in Class 2 & 3 buildings	The building contain public corridors, in the same 'smoke zone' more than 40 m in length as follows: Level 02 - 48.3 m Level 03 to 17 - 49.8 m Level 18 - 51 m <u>Performance justification is proposed.</u>	Alternative solution
C3.2	Protection of openings in external walls	The building does not contain openings required to be protected.	The proposed building complies
C3.3	Separation of external walls and associated openings in different fire compartments	Adequate separation of external walls and associated openings in different fire compartments is provided.	The proposed building complies
C3.4	Acceptable method of protection	N/A	N/A
C3.5	Doorways in fire walls	The doorway separating the Fire Control Room from the residential lift lobby is required to be protected by a -/180/30 fire door. The doorway separating the Level B1 link to Block 4N basement is required to have an FRL. The FRL is to be performance justified.	The proposed building is capable of complying Alternative Solution
C3.6	Sliding fire doors	Sliding fire doors are not proposed.	N/A

BCA Clause	Title	Assessment and Comment	Status
C3.8	Openings in fire isolated exits	The fire-isolated exits are required to be protected by -/60/30 self closing fire doors. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
C3.9	Service penetrations in fire isolated exits	Service are not to penetrate through fire isolated exits unless permitted by this clause. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
C3.10	Fire isolated lift shafts	The lift doors are required to be -/60/- fire doors and comply with this provision. A lift call panel, indicator panel or other panel in the wall of a fire-isolated lift shaft must be backed by construction having an FRL of not less than -/60/60 if it exceeds 35 000 mm² in area. Construction documentation should demonstrate compliance	The proposed building is capable of complying
NSW C3.11	Bounding construction	Doors from sole occupancy units opening into enclosed public corridors are required to be protected by -/60/30 self closing fire doors. A doorway from any other room not within a SOU, must be protected by -/60/30 self closing fire doors if it opens to a public corridor, public lobby or the like within the residential portion of the building. Doorways for garbage room enclosure within the public corridors would also be required to comply with the above requirements. Construction documentation to demonstrate compliance.	The proposed building is capable of complying
C3.12	Openings in floors and ceilings for services	Fire separation between floors is required to be maintained where services penetrate through floors unless the services are located in fire rated shafts. Construction documentation to demonstrate compliance.	The proposed building is capable of complying
C3.15	Openings for service installations	Services that penetrate a building element must be protected utilising one of the options listed under this clause. Construction documentation to demonstrate compliance.	The proposed building is capable of complying
C3.16	Construction joints	Construction joints in building elements required to be fire resistant are required to be protected in accordance with this clause.	The proposed building is capable of complying
C3.17	Columns protected with lightweight construction to achieve an FRL	A column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL or resistance to the incipient spread of fire. Details are to be provided with the construction documentation.	The proposed building is capable of complying

4.3 Fire-Resisting Construction (Specification C1.1)

BCA Clause	Title	Assessment and Comment	Status
2.1	Exposure to fire source features	The requirements of this provision apply to the subject building.	Note
2.2	Fire protection for support of another part	When determining FRL's applicable to a particular building element, the requirements of this clause are required to be complied with.	The proposed building is capable of complying
2.3	Lintels	Lintels are to be protected as required by the requirements of this clause.	The proposed building is capable of complying
2.4	Attachment not to impair fire resistance	A combustible material may be used as a finish or lining to a wall or roof, or in a sign, sunscreen or blind, awning, or other attachment to a building element which has the required FRL if— (i) the material is exempted under C1.10 or complies with the fire hazard properties prescribed in Specification C1.10; and (ii) it is not located near or directly above a required exit so as to make the exit unusable in a fire; and (iii) it does not otherwise constitute an undue risk of fire spread via the facade of the building. The attachment of a facing or finish, or the installation of ducting or any other service, to a part of a building required to have an FRL must not impair the required FRL of that part. Details demonstrating compliance are to be provided with the construction documentation.	The proposed building is capable of complying
2.5	General concessions	Roof top plan rooms need not have an FRL if they are non-combustible and they only contain equipment specified in this clause.	Note
2.6	Mezzanine floors: concession	The building does not contain mezzanine's that are subject to this provision.	N/A
2.7	Enclosure of shafts	The shafts are to be enclosed at the top and bottom in accordance with the requirements of this clause.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
3.1	Fire resistance of building elements	The building is required to be designed to comply with the required fire resistance levels applicable to Type A construction. The following fire resistance requirements generally apply: Residential – 2 hrs Carpark – 2 hrs Retail – 3 hrs Loading Dock – 4 hrs The loading dock is not proposed to be separated from the remainder of the carpark. Separation and FRL's are proposed to be performance justified against the relevant performance requirements of the BCA. External, common walls and the flooring and floor framing of lift pits must be non-combustible. Particular attention is required to the use of aluminum composite panels, which are combustible, and therefore will not comply unless they are designed as an 'attachment' to an external wall. Details are to be provided with the construction certificate documents. Internal walls required to have an FRL with respect to integrity and insulation must be design in accordance with this clause. A loadbearing internal wall and a loadbearing fire wall (including those that are part of a loadbearing shaft) must be of concrete or masonry. Please note that each apartment of the two key apartments is assessed as a separate sole occupancy unit and therefore fire separation from the shared corridor and from each other is required. The two key apartment shared corridor is also to be fire separated from the main common corridor. Please note that for the purpose of this clause, the loggias are to be assessed as internal spaces.	The proposed building is capable of complying
3.5	Roof: Concession	The roof is not required to have an FRL, in a sprinkler protected building, however the covering of the roof must be non-combustible.	The proposed building is capable of complying
3.6	Roof lights	If a roof is required to have an FRL or its covering is required to be non-combustible, rooflights or the like installed in that roof must— (a) have an aggregate area of not more than 20% of the roof surface; and (b) be not less than 3 m from— (i) any part of the building which projects above the roof unless that part has the FRL required of a fire wall and any openings in that part of the wall for 6 m vertically above the rooflight or the like are protected in accordance with C3.4. The Level 02 roof contains skylights which do not comply with this clause. Performance justification is proposed.	Alternative solution

4.4 Access & Egress (BCA Section D)

BCA Clause	Title	Assessment and Comment	Status
D1.2	Number of exits required	Not less than 2 exits must be provided from each storey. The following areas contain access to only one exit and are proposed to be performance justified 1. Ground floor retail. 2. Ground floor residential lift lobby. The Level B1 substation contains an exit stair. A second exit is required to be provided. Should the second exit be provided by way of an AS1657 stairway, performance justification is required as the AS 1657 stairway is not a BCA compliant stairway in this case.	Alternative solution Alternative solution
D1.3	When fire isolated exits are required	Every required exit serving a building must be fire isolated if the exit stair connects and/or pass through more than 3 consecutive storeys. There is an open stair connecting Level B0 with Level B1. This stair provides egress from Level B0 to the fire isolated stair on Level B1. The stair does not comply as an exit stair as follows: (a) The stair is not contained within a fire rated shaft (D1.3 & Spec C1.1); (b) The stair does not discharge to the outside of the building (D1.7).	Alternative solution

BCA Clause	Title	Assessment and Comment	Status
D1.4	Exit travel distances	Class 2 part - The entrance doorway of any sole-occupancy unit must be not be more than 6m from an exit or from a point from which travel in different directions is available or 20m from a single exit serving the storey at the level of egress to a road or open space. Level 02 to 17 contains units up to 11.17 m to a point of choice. These are to be performance justified. No point on the floor of a room which is not in a sole-occupancy unit must be more than 20m from an exit or from a point at which travel in different directions to 2 exits is available. The following areas are more than 20 m to a point of choice or exist: - pool area is up to 23.7 m to a point of choice - Level 16 terrace is 30 m to a point of choice. These are to be performance justified. Class 5, 6 and 7a parts - No point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40m. The following basement areas are more than 20 m to a point of choice: - Level B2 ETS Room Block 4N - 25 m - Basement B1 comms room Grid C2 (north-west area under block 4N) – 28m - Level B0 east end carparking and Exhaust fan room – 30 m. These are to be performance justified. The following basement areas are more than 40 m to an exit: - Level B2 ETS Room Block 4N – 52 m (open floor plan) - Level B2 plant room Grid S2-FF – 48 m - Level B2 commercial staff bike area - 43 m These are to be performance justified. An access door into the Level B2 Carpark Supply Fan Room is to be identified.	Alternative solution Alternative solution Alternative solution Alternative solution
D1.5	Distance between alternative exits	Exits that are required to serve as alternative means of egress must not be more than 45m apart in a residential building and not more than 60m in all other parts. Exits required as alternative means of egress must be located not less than 9m apart and located so that the alternative paths of travel do not converge such that they become less than 6m apart. The distance between alternative exits in the basement is up to 70 m. The distance between alternative exits on residential Level 02 is 54 m. These are to be performance justified.	Alternative solution
NSW D1.6	Dimensions of exits and paths of travel to exits	A required exit and path of travel to an exit are required to be a minimum unobstructed height of not less than 2m and minimum width of 1m.	The building complies

BCA Clause	Title	Assessment and Comment	Status
D1.7	Travel via fire isolated exits	A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from— (i) a public corridor, public lobby or the like; or (ii) a sole-occupancy unit occupying all of a storey; or (iii) a sanitary compartment, airlock or the like. Direction connection from the Ground Level Carpark Supply Fan Room into the fire isolated stair is not permitted. A design change is proposed to comply with this clause. Direct connection from the Ground Floor Residential Lobby into the fire isolated exit is proposed to be performance justified. Each fire-isolated stairway or fire-isolated ramp must provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway to a road or open space. There is an open stair connecting Level B0 with Level B1. This stair provides egress from Level B0 to the fire isolated stair on Level B1. The stair does not comply as an exit stair as follows: • The stair is not contained within a fire rated shaft (D1.3 & Spec C1.1); • The stair does not discharge to the outside of the building (D1.7). Where a path of travel from the point of discharge of a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building, measured horizontally at right angles to the path of travel, that part of the wall must have an FRL of not less than 60/60/60 and any openings protected internally in accordance with C3.4, for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser. The external door into the Ground Floor service corridor discharging to the south is required to be a -/60/30 fire door. Construction Certificate plans are to demonstrate compliance.	Minor design change required Alternative solution
D1.8	External Stairs or ramps in lieu of Fire-isolated exits	External stairs are not provided in lieu of fire isolated exits.	N/A
D1.9	Travel via non-fire-isolated stairways or ramps	Non -fire isolated stairs are not proposed.	N/A
D1.10	Discharge from exits	The discharge point of the fire isolated exits is required to be connected to the road by a minimum 1 m wide path and where there is a change of level, the path must contain a complying stair or ramp. The BCA also specifies that exits must not be blocked at a point of discharge and where necessary suitable barriers must be provided to prevent vehicles from blocking the exit or access to it. Suitable bollards would be required adjacent to the doorways of fire-stairs within the basement carpark, where directly adjacent or exposed to the carpark. The discharge point of alternative exits must be located as far apart as practical.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
D1.11	Horizontal exits	Horizontal exits are not proposed.	N/A
D1.12	Non-required stairways, ramps or escalators	Non-required stairways, ramps or travelators are not proposed.	N/A
D1.13	Number of persons accommodated	Populations have been assessed in accordance with Table D1.13.	Note
D1.16	Plant rooms and lift rooms: concession	A ladder may be used in lieu of a stairway to provide egress from certain plant rooms as permitted by this clause. Where permitted, the ladder: (iii) must comply with— (A) AS 1657 for a plant room or a Class 8 electricity network substation; and (B) AS 1735.2 for a lift machine room.	The proposed building is capable of complying
D1.17	Access to lift pits	Access to lift pits must, where the pit depth is not more than 3m, may be through the lowest landing doors. Where the lift pit depth is more than 3 m, additional access requirements apply in accordance with this clause. The Construction Certificate plans are to demonstrate compliance.	The proposed building is capable of complying
D2.2	Fire-isolated stairways and ramps	A stairway or ramp (including any landings) that is required to be within a fire-resisting shaft must be constructed of non-combustible materials and so that if there is local failure it will not cause structural damage to, or impair the fire-resistance of, the shaft.	The proposed building is capable of complying
D2.3	Non-fire isolated stairs and ramps	Non-fire isolated stairs are not proposed.	N/A
D2.4	Separation of rising and descending stair flights	If a stairway serving as an exit is required to be fire-isolated there must be no direct connection between— (i) a flight rising from a storey below the lowest level of access to a road or open space; and (ii) a flight descending from a storey above that level Any construction that separates or is common to the rising and descending flights must be— (i) non-combustible; and (ii) smoke proof in accordance with Clause 2 of Specification C2.5.	The proposed building is capable of complying
D2.7	Installation in exits and paths of travel	Access to service shafts and services other than to fire-fighting or detection equipment as permitted in the Deemed-to-Satisfy Provisions of Section E, must not be provided from a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp. Gas or other fuel services must not be installed in a required exit. Electrical or telecommunications cupboards opening onto a corridor or the like must be of non-combustible construction and smoke sealed from the corridor (including metal lining to inside face of door and smoke seals to door). Only electrical wiring associated with services specified in this clause, are permitted to be installed in a fire isolated exit.	The proposed building is capable of complying
D2.8	Enclosure of space under stairs and ramps	The space below the required fire-isolated stairways must not be enclosed to form a cupboard or similar enclosed space.	The proposed building is capable of complying
D2.9	Width of stairways	The required width of a stairway must be measured in accordance with this clause.	Note
D2.10	Pedestrian ramps	Pedestrian ramps are to be designed to comply with this clause, including slip resistant classifications.	The building is capable of complying
D2.11	Fire-isolated passageways	The enclosing construction of the fire-isolated passageways on the ground floor must have an FRL when tested for a fire outside the passageway in another part of the building of not less than that required for the stairway shaft.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
NSW D2.13	Goings & risers	Goings and risers are to be designed to comply with this clause, including opening sizes, going and riser dimensions and slip resistant classifications.	The proposed building is capable of complying
D2.14	Landings	Landings are to be designed in accordance with this clause.	The proposed building is capable of complying
NSW D2.15	Thresholds	Thresholds are to be designed to comply with this clause.	The building complies
NSW D2.16	Balustrades and other barriers	Balustrades are to be designed to comply with this clause.	The proposed building is capable of complying
D2.17	Handrails	Handrails are to be provided to stairs and ramps and designed to comply with this clause. Particular attention is required to the design of handrails to assist people with disabilities and handrails in residential units.	The proposed building is capable of complying
D2.18	Fixed platforms, walkways, stairways & ladders	A fixed platform, walkway, stairway, ladder and any going and riser, landing, handrail, balustrade or other barrier attached thereto may comply with AS 1657 in lieu of D2.13, D2.14, D2.16 and D2.17 if it only serves machinery rooms, boiler houses, lift-machine rooms, plant-rooms, and the like.	The proposed building is capable of complying
NSW D2.19	Doorways and doors	A doorway serving as a required exit or forming part of a required exit must be designed in accordance with this clause.	The proposed building is capable of complying
D2.20	Swinging doors	Swinging doors are required to be designed in accordance with this clause in relation to direction of swing; encroachment on stairways, ramps and passageways; and hold open devices.	The proposed building is capable of complying
NSW D2.21	Operation of latch	All the doors in the required exits, or doors forming part of the required exits, must be readily openable in accordance with this clause.	The proposed building is capable of complying
D2.22	Re-entry from fire-isolated exits	Doors of a fire-isolated exit must not be locked from the inside a fire-isolated exit serving any storey above an effective height of 25 m, throughout the exit. This requirement does not apply to a door fitted with a fail-safe device that automatically unlocks the door upon the activation of a fire alarm and— (i) on at least every fourth storey, the doors are not able to be locked and a sign is fixed on such doors stating that re-entry is available; or (ii) an intercommunication system, or an audible or visual alarm system, operated from within the enclosure is provided near the doors and a sign is fixed adjacent to such doors explaining its purpose and method of operation.	The proposed building is capable of complying
D2.23	Signs on doors	A sign ("FIRE SAFETY DOOR—DO NOT OBSTRUCT" or "FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN", as appropriate), must be installed where it can readily be seen on, or adjacent to the following; • A required fire door providing direct access to a fire-isolated exit, • A required smoke door, • door leading from a fire isolated exit to a road or open space, in accordance with this clause.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
D2.24	Protection of openable windows	Window openings must be protected in accordance with this clause. A window opening must be provided with protection, if the floor below the window is 2 m or more above the surface beneath in a bedroom in a Class 2, 3 or 4 building or a Class 9b early childhood centre. Where the lowest level of the window opening is less than 1.7 m above the floor the openable portion of the window must be protected with; - a device to restrict the window opening; or - a screen with secure fittings. A device or screen must not permit a 125 mm sphere to pass through the window opening or screen and resist an outward horizontal action of 250 N against the following; - window restrained by a device; or - screen protecting the opening; and have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden. A barrier with a height not less than 865 mm above the floor is required to an openable window when a child resistant release mechanism is provided and for openable windows 4m or more above the surface beneath. The barrier must not permit a 125 mm sphere to pass through it and must not have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
NSW D2.101	Doors in paths of travel in an entertainment venue	N/A	N/A
D3.1	General building access requirements	Access for people with disabilities is to be provided in accordance with this clause. Construction documentation should demonstrate compliance. The swimming pool has a total perimeter greater than 40 m and is therefore required to be accessible. Refer to Clause D3.10 below.	The proposed building is capable of complying
D3.2	Access to buildings	An accessway must be provided to a building required to be accessible— - from the main points of a pedestrian entry at the allotment boundary; and - from another accessible building connected by a pedestrian link; and - from any required accessible carparking space on the allotment. In a building required to be accessible, an accessway must be provided through building pedestrian entrances as required by this clause. The Construction Certificate application plans are to demonstrate compliance.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
D3.3	Parts of building to be accessible	Every ramp and stairway (except for ramps and stairways in areas exempted by D3.4) must comply with— i. for a ramp, except a fire-isolated ramp, clause 10 of AS 1428.1; and ii. for a stairway, except a fire-isolated stairway, clause 11 of AS 1428.1; and iii. for a fire-isolated stairway, clause 11.1(f) and (g) of AS 1428.1-2009. Every passenger lift must comply with E3.6. Accessways must have passing spaces and turning spaces in accordance with this clause. The Construction Certificate application plans are to demonstrate compliance.	The building is capable of complying
D3.4	Exemptions	The following areas are not required to be accessible: (a) An area where access would be inappropriate because of the particular purpose for which the area is used. (b) An area that would pose a health or safety risk for people with a disability. (c) Any path of travel providing access only to an area exempted by (a) or (b).	Note
D3.5	Accessible Carparking	Accessible carparking spaces are required for the retail component at a rate of 1 per 50 carspaces, or part thereof, and must comply with AS/NZS 2890.6-2009. The Construction Certificate application plans are to demonstrate compliance.	The building is capable of complying
D3.6	Signage	Braille and tactile signage complying with Specification D3.6 and incorporating the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 must identify each sanitary facility. Each doorway required to be provided with an exit sign under E4.5 must be identified with "EXIT" and "LEVEL" followed by the floor level number. Signage in accordance with AS 1428.1 must be provided for accessible unisex sanitary facilities to identify if the facility is suitable for left or right handed use. Signage to identify an ambulant accessible sanitary facility in accordance with AS 1428.1 must be located on the door of the facility.	The building is capable of complying
D3.7	Hearing augmentation	N/A	N/A
D3.8	Tactile indicators	Tactile ground surface indicators are required to be provided as required by this clause. Tactile ground surface indicators are required to comply with sections 1 and 2 of AS/NZS 1428.4.1.	The proposed building is capable of complying
D3.9	Wheelchair seating spaces in Class 9b assembly buildings	N/A	N/A

BCA Clause	Title	Assessment and Comment	Status
D3.10	Swimming Pools	Not less than 1 means of accessible water entry/exit in accordance with Specification D3.10 must be provided to the swimming pool. The accessible entry/exit must be by means of; (i) a fixed or movable ramp and an aquatic wheelchair; or (ii) a zero depth entry at a maximum gradient of 1:14 and an aquatic wheelchair; or (iii) a platform swimming pool lift and an aquatic wheelchair; or (iv) a sling-style swimming pool lift. Where a swimming pool has a perimeter of more than 70 m in length, at least one accessible water entry/exit must be provided by a means specified in (b)(i), (ii) or (iii). Latching devices on gates and doors forming part of a swimming pool safety barrier need not comply with AS 1428.1. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
D3.11	Ramps	On an accessway— (a) a series of connected ramps must not have a combined vertical rise of more than 3.6 m; and (b) a landing for a step ramp must not overlap a landing for another step ramp or ramp.	The proposed building is capable of complying
D3.12	Glazing on an accessway	On an accessway, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1.	The proposed building is capable of complying

4.5 Services & Equipment (BCA Section E)

BCA Clause	Title	Assessment and Comment	Status
E1.3	Fire hydrants	A fire hydrant system must be provided in accordance with this clause to serve the whole building and must also be installed in accordance with AS2419.1. Where internal hydrants are provided, they must only serve the storey in which they are located. The hydrant pump room on Level B1 is required to be relocated so that it is accessed from the fire stair via a fire rated airlock. The Construction Certificate application plans are to demonstrate compliance. The location of the hydrant boosters is to be visible from the main entrance. The boosters require fire rated protection (90/90/90 FRL) 2 m each side and 3 m above the boosters. The Construction Certificate application plans are to demonstrate compliance.	The proposed building is capable of complying Minor design change required Minor design change required
E1.4	Fire hose reels	A hose reel system must be provided to serve the building, except for the Class 2 residential class. The hose reel system must be installed in accordance with this clause and AS2441. The Construction Certificate application plans are to demonstrate compliance. The fire hose reel adjacent to the fire control room is required to be relocated to within 4 m of an exit.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
E1.5	Sprinklers	A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5.	The proposed building is capable of complying
E1.6	Portable fire extinguishers	Portable fire extinguishers are to comply with this provision and sections 1, 2, 3 and 4 of AS2444. Particular attention is required to the provision of portable fire extinguishers in the Class 2 residential building portion in lieu of fire hose reels.	The proposed building is capable of complying
E1.8	Fire control centres	A fire control room in accordance with Specification E1.8 must be provided. Access to the fire control room involves a change in level exceeding 300 mm and this is to be performance justified. The fire control room is required to be provided with a pressurisation system in accordance with Specification E1.8.	Alternative solution The proposed building is capable of complying
E1.9	Fire precautions during construction	In a building under construction portable fire extinguishers and hydrants are required to be provided as required by this clause.	The proposed building is capable of complying
E1.10	Provision for special hazards	There are no special hazards.	N/A
E2.2	General requirements (Smoke Hazard Management)	The following smoke hazard management measures are required: • Pressurisation of fire isolated stairs; • Smoke detection and alarm system in accordance with Spec E2.2a to the Class 2 (residential) building. • Zone smoke control to loading dock and retail tenancies • Sprinkler system for loading dock. • The basement carpark is to be provided with mechanical ventilation in accordance with Table E2.2a for Class 7a buildings • Smoke detection for smoke control systems in accordance with Spec E2.2a. • Building occupant waring system in accordance with Spec E2.2a. The loading dock and retail tenancies are not proposed to contain zone smoke control. This is to be assessed by performance justification against the relevant performance requirements of the BCA. The Class 6 part of the fire compartment is less than 2000 m², therefore smoke exhaust is not required. An air-handling system which does not form part of a smoke hazard management system in accordance with Table E2.2a or Table E2.2b 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— (i) be designed and installed to operate as a smoke control system in accordance with AS/NZS 1668.1; or (ii) (A) incorporate smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and (B) be arranged such that the air-handling system is shut	The proposed building is capable of complying, except where mentioned below Alternative solution

BCA Clause	Title	Assessment and Comment	Status
		down and the smoke dampers are activated to close automatically by smoke detectors complying with Clause 4.10 of AS/NZS 1668.1; and for the purposes of this provision, each sole-occupancy unit in a Class 2 or 3 building is treated as a separate fire compartment.	
E2.3	Provision for special hazards	There are no special hazards.	N/A
E3.1	Lift installations	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1. The Construction Certificate application documents are to demonstrate compliance.	The building is capable of complying
E3.2	Stretcher facility in lifts	A stretcher facility in accordance with must be provided— (i) in at least one emergency lift required by E3.4; or (ii) where an emergency lift is not required, if passenger lifts are installed to serve any storey above an effective height of 12 m, in at least one of those lifts to serve each floor served by the lifts. The stretcher facility must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600 mm wide x 2000 mm long x 1400 mm high above the floor level.	The proposed building is capable of complying
E3.3	Warning against use of lifts in fire	Warning signage for the passenger lifts is to be provided in accordance with this clause.	The proposed building is capable of complying
E3.4	Emergency lifts	Emergency lifts are to be provided in accordance with this clause.	The proposed building is capable of complying
E3.5	Landings	Access and egress to and from liftwell landings must comply with the DTS provision of Section D.	The proposed building is capable of complying
E3.6	Passenger lifts	Every passenger lift must comply with the requirements of this provision, including lift type; accessible feature; and restrictions on the use of constant pressure devices for operation of the lift.	The proposed building is capable of complying
E3.7	Fire service controls	Where lifts serve any storey above an effective height of 12m, the following must be provided: (a) A fire control switch complying with E3.9 for— (i) a group of lifts; or (ii) a single lift not in a group that serves the storey. (b) A lift car fire service drive control switch complying with E3.10 for every lift.	The proposed building is capable of complying
E3.8	Aged care buildings	N/A	N/A
E3.9	Fire service recall operation switch	Each group of lifts must be provided with one fire service recall control switch where fire service controls are required by E3.7. Fire recall operation switches are to comply with the requirements of this provision.	The proposed building is capable of complying
E3.10	Lift car fire service drive control switch	Lift car fire service drive control switch required by E3.7 must be activated from within the car and the switch must comply with the requirements of this clause.	The proposed building is capable of complying
E4.2	Emergency lighting requirements	Emergency lighting must be provided in accordance with this clause. Emergency lighting is required to comply with AS 2293.1-2005.	The proposed building is capable of complying
E4.5	Exit signs	An exit signage must be provided in accordance with this clause. Exit signage is required to comply with AS2293.1-2005 and be clearly visible at all times.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
NSW E4.6	Direction signs	If an exit is not readily apparent to persons occupying or visiting the building then exit signs must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a required exit.	The proposed building is capable of complying
E4.9	Sound systems and intercom systems for emergency purposes	A sound system and intercom system for emergency purposes complying where applicable with AS1670.4-2004 must be installed in the building.	The proposed building is capable of complying

4.5 Health & Amenity (BCA Section F)

BCA Clause	Title	Assessment and Comment	Status
F1.0	Deem to satisfy provisions	Performance requirement FP1.4, for the prevention of the penetration of water through external walls, is required to be complied with.	The proposed building is capable of complying
F1.1	Stormwater drainage	Stormwater drainage is required to be designed to comply with AS/NZS3500.3-2003.	The proposed building is capable of complying
F1.4	External above ground membranes	Waterproofing membranes for external above ground use must comply with AS4654.1-2012 & AS4654.2-2012.	The proposed building is capable of complying
F1.5	Roof coverings	Lightweight metal roof sheeting is to comply with AS1562.1.	The proposed building is capable of complying
F1.6	Sarking	Sarking-type materials used for weatherproofing of roofs and walls are required to comply with AS/NZS 4200 Parts 1 and 2.	The proposed building is capable of complying
F1.7	Waterproofing of wet areas in buildings	Waterproofing of wet areas is required to comply with this clause.	The proposed building is capable of complying
F1.9	Damp-proofing	Damp proof course is required to be provided to walls to comply with this clause.	The proposed building is capable of complying
F1.10	Damp-proofing of floor on ground	Damp-proofing is required to be provided in accordance with the requirements of this provision.	The proposed building is capable of complying
F1.11	Provision of floor wastes	The floor of each bathroom and laundry in the residential sole occupancy units are to be provided with a floor waste.	The proposed building is capable of complying
F1.12	Sub-floor ventilation	There is no sub floor space.	N/A
F1.13	Glazed assemblies	Proposed glazed assemblies identified in this clause are to comply with the AS 2047 requirements for the resistance to water penetration.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
F2.1	Facilities in residential buildings	The residential portion of the building is to be provided with appropriate facilities in accordance with Table F2.1. Generally provision of the following facilities within each unit will comply. • A bath or shower; and • A closet pan & wash basin. • Kitchen • Wash tub and space for washing machine and drier Sanitary facilities are provided as required. A caretaker's facility comprising a closet pan and wash pan is required to be provided at or near the ground level.	The proposed building complies
F2.3	Facilities in Class 3 to 9 buildings	Sanitary facilities must be provided in accordance with this clause and Table F2.3. Sanitary facilities for the retail portion of the building are required to be identified.	The proposed building is capable of complying
F2.4	Accessible sanitary facilities	Accessible sanitary facilities are required in accordance with this clause. A unisex accessible facility and ambulant facilities are required at the sanitary facilities on Level B1.	The proposed building is capable of complying Minor design change required
F2.5	Construction of sanitary compartments	The construction of sanitary compartments is required to comply with this requirement. Doorways located less than 1.2m from the closet pan are required to swing outwards, slide or be capable of being removed from the outside (lift off hinges).	The proposed building is capable of complying
F3.1	Height of rooms and other spaces	The minimum ceiling height requirements are to comply with the requirements of this provision.	The proposed building is capable of complying
F4.1	Provision of natural light	Natural lighting must be provided in all habitable rooms of the residential units. Natural lighting must comply with BCA F4.2 & F4.3. The study rooms on Level 04 to 17 bounding the west slot rely on natural light via the slop which does not comply with F4.2(b). Performance justification is proposed. The method of achieving the natural lighting requirements to the enclosed study rooms that do not have a window on Level 04 to 17 is to be provided at CC application stage.	The proposed building is capable of complying
F4.4	Artificial lighting	Artificial lighting is to be provided in accordance with AS/NZS1680.0 and in accordance with this clause.	The proposed building is capable of complying
F4.5	Ventilation of rooms	Ventilation is to be provided by natural or mechanical means in accordance with this provision and Clause F4.6.	The proposed building is capable of complying
F4.8	Restriction on the position of water closets and urinals	A room containing a closet pan or urinal must not open directly into certain rooms, unless permitted by F4.9.	The proposed building is capable of complying
F4.9	Airlocks	Mechanical ventilation and screening of doors is to be provided as required by this clause.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
F4.11	Car park exhaust	Each storey of the carpark must have a system of mechanical ventilation complying with AS1668.2.	The proposed building is capable of complying
F4.12	Kitchen local exhaust	A commercial kitchen must be provided with a kitchen exhaust hood complying with AS/NZS 1668.1-1998 and AS 1668.2-1991 as required by this clause.	The proposed building is capable of complying
F5.1	Application of part	The sound insulation requirements of F5.2, F5.3, F5.4, F5.5, F5.6 & F5.7 only apply to the Class 2, 3 and 9c component of the building.	Note
F5.2	Determination of airborne sound insulation ratings	Determination of airborne sound insulation ratings is to be in accordance with this clause.	Note
F5.3	Determination of impact sound insulation ratings	Determination of impact sound insulation ratings must be in accordance with this clause. Particular attention is required to the requirements for discontinuous construction in some circumstances. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
F5.4	Sound insulation rating of floor	Sound insulation of floors is required to be in accordance with this clause. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
F5.5	Sound insulation of walls	Sound insulation of walls and doors is required to be in accordance with this clause. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
F5.6	Sound insulation rating of services	Services that serves or pass through more than one SOU must achieve the required ratings specified by this clause. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
F5.7	Sound isolation of pumps	A flexible coupling must be installed at the point of connection between service pipes in a building and any circulating or other pump. Construction documentation should demonstrate compliance.	The proposed building is capable of complying

4.6 Ancillary Provisions (Section G)

BCA Clause	Title	Assessment and Comment	Status
G1.1	Swimming Pools	Where required by the Swimming Pool Act 1992 and the Swimming Pools Regulation 2008, swimming pool fencing is required to be installed in accordance with AS1926.1-2007. A water recirculation system in a swimming pool with a depth of water more than 300 mm must comply with AS 1926.3-2010. Construction documentation should demonstrate compliance.	The proposed building is capable of complying
G1.2	Refrigerated chambers, strongrooms & vaults	There are no proposed Refrigerated chambers, strongrooms & vaults	N/A
NSW G1.101	Provision for the cleaning of windows	The method of provision for the cleaning of windows is required to be in accordance with this clause.	The proposed building is capable of complying

4.7 Energy Efficiency – (Section J – Class 3 and 5 to 9 buildings)

4.7.1 External fabric (Part J1)

BCA Clause	Title	Assessment and Comment	Status
J0.1	Application of Section J	Note	Note
J1.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to building elements forming the envelope of a Class 2 to 9 building in accordance with this clause.	Note
J1.2	Thermal Construction - General	Required insulation, reflective insulation and bulk insulation is to be installed in accordance with this clause and AS/NZS 4859.1.	The proposed building is capable of complying
J1.3	Roof and Ceiling Construction	A roof or ceiling that is part of the envelope must be designed and constructed and achieve the required Total R-Value and in accordance with this clause, including the provision of thermal breaks.	The proposed building is capable of complying
J1.4	Roof Lights	Roof lights, including any associated shaft and diffuser, that form part of the envelope, must be designed and constructed in accordance with this clause.	The proposed building is capable of complying
J1.5	Walls	Walls that form part of the envelope, must be designed and constructed in accordance with this clause including the provision of thermal breaks.	The proposed building is capable of complying
J1.6	Floors	A floor that is part of the envelope is required to comply with this clause.	The proposed building is capable of complying

4.7.2 External Glazing (Part J2)

BCA Clause	Title	Assessment and Comment	Status
J2.4	Glazing	Glazing must be designed in accordance with J2.4 to achieve the aggregate air-conditioning energy value. A glazing calculator results are to be provided with the construction documentation to demonstrate compliance.	The proposed building is capable of complying
J2.5	Shading	Required shading must be designed in accordance with the requirements of this condition.	The proposed building is capable of complying

4.7.3 Building Sealing (Part J3)

BCA Clause	Title	Assessment and Comment	Status
J3.2	Chimneys and flues	Solid fuel burning appliances are not proposed and the requirements of this provision do not apply.	N/A
J3.3	Roof Light	Roof lights are to be designed to comply with this clause.	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
J3.4	Windows and doors	Windows and doors forming part of the envelope are required to be sealed to restrict air infiltration as required by this clause. The bottom edge of a swing door required to be sealed must have a draft protection device and the other edges of doors and windows must have a foam or rubber compression strip, fibrous seal or the like. An entrance to a building, if leading to a conditioned space must have an airlock, self-closing door, revolving door or the like, other than where the conditioned space has a floor area of not more than 50 m². The Construction Certificate application plans/specs are to have details demonstrating compliance.	The proposed building is capable of complying
J3.5	Exhaust Fans	A miscellaneous exhaust fan must be fitted with a sealing device such as a self-closing damper or the like when serving a; (a) conditioned space; or (b) a habitable room in climate zone 4, 5, 6, 7 & 8.	The proposed building is capable of complying
J3.6	Construction of roofs, walls and floors	Roofs, ceilings, walls, floors and any openings are required to be designed and constructed to minimise air leakage in accordance with this clause.	The proposed building is capable of complying
J3.7	Evaporative Coolers	Evaporative coolers are not proposed.	N/A

4.7.4 Air Conditioning and Ventilation Systems (Part J5)

BCA Clause	Title	Assessment and Comment	Status
J5.2	Air Conditioning and Ventilating system	Any proposed air-conditioning systems and mechanical ventilation systems are required to comply with the requirements of this provision.	The proposed building is capable of complying
J5.3	Time Switch	The mechanical ventilation system and air conditioning system design would be required to be designed in accordance with the requirements of this provision.	The proposed building is capable of complying
J5.4	Heating and chilling systems	Any heating or cooling system for air-conditioning would be required to be designed in accordance with the requirements of this provision.	The proposed building is capable of complying
J5.5	Miscellaneous exhaust system	A miscellaneous exhaust system with an air flow rate of more than 1000 L/s, that is associated with equipment having a variable demand such as a stove in a commercial kitchen or a chemical bath in a factory is required to be design to comply with this clause.	The proposed building is capable of complying

4.7.5 Artificial Lighting and Power (Part J6)

BCA Clause	Title	Assessment and Comment	Status
J6.2	Artificial lighting	Artificial lighting is to be designed in accordance with this provision.	The proposed building is capable of complying
J6.3	Interior artificial lighting and power control	Artificial lighting and power control are to be designed and provided in accordance with this provision.	The proposed building is capable of complying
J6.4	Interior decorative and display lighting	Interior decorative and display lighting, such as for foyer mural or art display, must be controlled in accordance with this clause.	The proposed building is capable of complying
J6.5	Artificial lighting around the perimeter of a building	Artificial lighting around the perimeter of a building must be designed to comply with this clause.	The proposed building is capable of complying
J6.6	Boiling water and chilled water storage units	Power supply to a boiling water or chilled water storage unit is required to be controlled by a time switch in accordance with Spec J6.	The proposed building is capable of complying

4.7.6 Hot Water Supply and Swimming Pool and Spa Pool Plant (Part J7)

BCA Clause	Title	Assessment and Comment	Status
J7.2	Hot Water Supply	A hot water supply system for food preparation and sanitary purposes, must be designed and installed in accordance with Part B2 of NCC Volume three – Plumbing Code of Australasia.	The proposed building is capable of complying
J7.3	Swimming pool heating and pumping	Swimming pool heating and pumping must be designed to comply with this clause.	N/A
J7.4	Spa pool heating and pumping	A spa pool is not proposed.	N/A

4.7.7 Access for Maintenance and Facilities for Energy Monitoring (Part J8)

BCA Clause	Title	Assessment and Comment	Status
NSW J8.2	Access for maintenance	Access for maintenance must be provided to services, equipment and other building elements identified in this clause	The proposed building is capable of complying

BCA Clause	Title	Assessment and Comment	Status
J8.3	Facilities for energy monitoring	The building must have a facility to record the consumption of gas and electricity. A building must have the facility to record individually the energy consumption of services identified in this clause.	The proposed building is capable of complying

4.8 Energy Efficiency – (Section J – Class 2 & 4 buildings)

The provisions of this Section J(A) are designed to complement the requirements of BASIX which are implemented via a Development Consent or Complying Development as applicable. BASIX is a web-based planning tool design to assess the potential performance of certain residential buildings against a range of sustainability indices.

4.8.1 Building Fabric (NSW Part J(A)1)

BCA Clause	Title	Assessment and Comment	Status
NSW J(A)1.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to thermal insulation in a Class 2 building or Class 4 part of a building where a development consent or environmental planning instrument requires it.	Note
NSW J(A)1.2	Thermal construction	Thermal insulation is required to be installed in accordance with AS/NZS 4859.1 and the general requirements the J1.2 (national provisions) where a development consent or environmental planning instrument requires it. In addition, a thermal break is required to be provided between external cladding and framing in accordance with J1.3(e) and J1.5(f) as appropriate (national provision). Details are to be provided with the construction documentation submitted with the construction certificate.	The proposed building is capable of complying

4.8.2 Building Sealing (NSW Part J(A)2)

BCA Clause	Title	Assessment and Comment	Status
NSW J(A)2.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to a Class 2 building and a Class 4 part of a building, but exclude the following: (a) a building in climate zones 2 and 5 where the only means of air-conditioning is by using an evaporative cooler; and (b) a building ventilation opening that is necessary for the safe operation of a gas appliance. (c) parts of those buildings that cannot be fully enclosed	Note
NSW J(A)2.2	Compliance with BCA provisions	The following national provisions apply to the requirements of this clause; i. J3.2 Chimneys and flues ii. J3.3 Roof Lights iii. J3.4 External Doors and windows iv. J3.5 Exhaust fans v. J3.6 Construction of roofs, walls and floors	The proposed building is capable of complying

4.8.3 Air-Conditioning and Ventilating system (NSW Part J(A)3)

BCA Clause	Title	Assessment and Comment	Status
NSW J(A)3.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to a Class 2 building and a Class 4 part of a building.	Note
NSW J(A)3.2	Compliance with BCA provisions	Class 2 buildings and Class 4 parts of buildings must comply with the following national BCA provisions; i. J5.2 Air conditioning and ventilating systems ii. J5.3 Time Switches iii. J5.4 Heating and cooling systems iv. J5.5 Ancillary exhaust systems	The proposed building is capable of complying

4.8.4 Hot Water Supply (NSW Part J(A)4)

BCA Clause	Title	Assessment and Comment	Status
NSW J(A)4.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to a Class 2 building and a Class 4 part of a building.	Note
NSW J(A)4.2	Compliance with the BCA provisions	Class 2 buildings and Class 4 parts of buildings must comply with the national BCA provisions of J7.2. A hot water supply system for food preparation and sanitary purposes, must be designed and installed in accordance with Part B2 of NCC Volume three – Plumbing Code of Australasia.	The proposed building is capable of complying

4.8.5 Access for Maintenance (NSW Part J(A)5)

BCA Clause	Title	Assessment and Comment	Status
NSW J(A)5.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to a Class 2 building except within a sole occupancy unit.	Note
NSW J(A)5.3	Access for maintenance	Class 2 buildings must comply with the national provision of J8.2 and J8.3.	The proposed building is capable of complying

5.0 FIRE SAFETY SCHEDULE

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

MEASURE	STANDARD OF PERFORMANCE
Access panels, doors and hoppers to fire resisting shaft	BCA2014 C3.13 & AS1905.1-2005, AS1905.2-2005
Automatic fail safe devices	BCA 2014 Spec C3.4, D2.21 & D2.22
Automatic fire detection and alarm system	BCA 2014 E2.2, Spec E2.2a & AS1670.1-2004 Amdt 1, AS 3786-1993 Amdt 1, 2, 3 & 4. AS/NZS 1668.1-1998 Amdt 1
Automatic fire suppression system	BCA2014 E1.5, Spec E1.5 & AS2118.1-1999 amdt 1, AS2118.6-2012
Building occupant warning system	BCA 2014 Spec E2.2a (Clause 6) & of AS1670.1-2004 (Amdt 1) (Clause 3.22)
Emergency Lifts	BCA 2014 E3.4 & Spec E3.1
Emergency lighting	BCA 2014 Clause E4.2, E4.3, E4.4 & AS 2293.1 – 2005 Amdt 1 BCA 2014 Spec E1.8 Clause 12 & Spec E3.1 Clause 3
Sound systems & intercom systems for emergency purposes	BCA2014 E4.9 & AS1670.4-2004
Exit signs	BCA2014 E4.5, E4.6 & AS 2293.1-2005 Amdt
Fire control room	BCA 2014 E1.8 & Spec E1.8
Fire dampers	BCA 2014 C3.12, C3.15 & AS/NZS1668.1-1998 Amdt 1, AS 1668.2-2012, AS1682.1-1990, AS1682.2-1990
Fire doors	BCA 2014 Spec C3.4 & AS/NZS 1905.1 – 2005
Fire rated lift landing doors	BCA 2014 C3.10 & AS 1735.11-1986
Fire hose reel systems	BCA 2014 E1.4 & AS 2441-2005 Amdt 1.
Fire hydrant systems	BCA 2014 E1.3 & AS 2419.1-2005 Amdt 1
Fire seals protecting openings in fire resisting components of the building	BCA 2014 C3.12, C3.15 & Spec C3.15 AS 4072.1-2005 Amdt 1 AS 1530.4.-2005
Lightweight construction	BCA 2014 C1.8 & Spec C1.8
Mechanical air handling system	BCA 2014 E2.2, Table E2.2, Spec E2.2a & AS/NZS 1668.1-1998 Amdt 1 Class 7a carpark building mechanical ventilation systems - BCA 2013 E2.2, Table E2.2a and clause 5.5 of AS/NZS 1668.1 Amdt 1
Portable fire extinguishers	BCA 2014 E1.6 & AS 2444-2001
Pressurising system	BCA 2014 Clause E2.2 & AS/NZS1668.1-1998 Amdt 1
Smoke alarms and heat alarms	BCA2014 E2.2, Spec E2.2a & AS 3786-1993 Amdt 1, 2, 3 & 4
Smoke dampers	BCA 2014 E2.2, & Spec C2.5 (class 9a & 9c)
Smoke detectors and heat detectors	BCA2014 E2.2, Spec E2.2a & Spec C3.4 AS1670.1-2004
Smoke doors	BCA 2013 Spec C3.4
Warning and operational signs	EPA Regulation (reg 183), BCA 2014 E3.3 (lifts), BCA 2014 C3.6 sliding doors, BCA 2014 D2.23 Signs on exit doors
Fire engineering items	TBA

6.0 SUMMARY OF NON-COMPLIANCE ISSUES

The following is a summary table of non-compliance with the deemed-to-satisfy provisions of the BCA, identification of the Performance Requirements of the BCA and the appropriate justification method.

SUMMARY OF NON-COMPLIANCE ISSUES WITH DEEMED-TO-SATISFY PROVISIONS OF BCA

BCA CLAUSE	PERFORMANCE REQUIREMENTS	ISSUE
C2.2 Spec C1.1 clause 3.1, C3.5 & E2.2	CP2, & EP2.2	The loading dock : - Is within a fire compartment with a floor area more than 5000 m² and a volume more than 48,000 m³. - Will have fire resistance less than 4 hrs, including the roller door to the B1 link to Block 4S, and will not be fire separated from the remainder of the carpark. - is not proposed to be provided with zone smoke control
C2.14	EP2.2	The building contain public corridors, in the same 'smoke zone' more than 40 m in length as follows: - Level 02 - 48.3 m - Level 03 to 17 - 49.8 m - Level 18 - 51 m
Specification C1.1 Clause 3.1	CP2.2	The Level 2 roof has skylights that have an aggregate area of more than 20% the area of the roof surface and one of the skylights is less than 3 m from the external walls of Level 03.
D1.2	DP4	The Ground Floor retail tenancies have access to only one exit.
D1.2	DP4 & DP2	The Level B1 substation & B0 substation have access to their own exit stair. A second exit is required to be provided from each substation. Should the second exit be provided by way of an AS1657 stairway, performance justification is required as the AS 1657 stairway is not a BCA compliant exit stairway in this case.
D1.3 & D1.7	DP4, DP5 & CP2.2	There is an open stair connecting Level B0 with Level B1. This stair provides egress from Level B0 to the fire isolated stair on Level B1. The stair does not comply as an exit stair as follows: - The stair is not contained within a fire rated shaft (D1.3 & Spec C1.1); - The stair does not discharge to the outside of the building (D1.7).
D1.4	DP4	Level 02 to 17 contains units up to 11.17 m to a point of choice. These are to be performance justified. The following areas are more than 20 m to a point of choice or exist: - pool area is up to 23.7 m to a point of choice - Level 16 terrace is 30 m to a point of choice. The following basement areas are more than 20 m to a point of choice: - Level B2 ETS Room Block 4N - 25 m - Basement B1 comms room Grid C2 (north-west area under block 4N) – 28m - Level B0 east end carparking and Exhaust fan room – 30 m. The following basement areas are more than 40 m to an exit:

		• Level B2 ETS Room Block 4N – 52 m (open floor plan) • Level B2 plant room Grid S2-FF – 48 m • Level B2 commercial staff bike area - 43 m
D1.5	DP4	The distance between alternative exits in the basement is up to 70 m. The distance between alternative exits on residential Level 02 is 54 m.
D1.7	DP4	Direct connection from the Ground Floor Residential Lobby into the fire isolated exit is proposed to be performance justified.
E1.8	EP1.6	Access to the fire control room involves a change in level exceeding 300 mm.
F4.1	FP4.1	The study rooms on Level 04 to 17 bounding the west slot rely on natural light via the slop which does not comply with F4.2(b).

7.0 CONCLUSION

The design as proposed is capable of complying with the Building Code of Australia, and will be subject to construction documentation that will provide appropriate details to demonstrate compliance. This report has identified areas of non-compliance with the deemed-to-satisfy provisions and indicates the design intent to demonstrate compliance with the Performance Requirements of the BCA. Whilst the performance based solutions are to be design developed, it is my view that the solutions will not impact on the current design.

Chris Michaels
For and on behalf of City Plan Services Pty Ltd

APPENDIX 1

Assessed plans prepared by Foster + Partners

Plan Title	Drawing No	Revision	Date
Basement 03	A-SK101	p17	07/05/14
Basement 02	A-SK102	p17	07/05/14
Basement 01	A-SK103	p17	07/05/14
Basement B0	A-SK104	p17	07/05/14
Ground Floor	A-SK-0522		05/06/14
Level 02	A-SK-0522		05/06/14
Level 03	A-SK-0522		05/06/14
Level 04	A-SK-0522		05/06/14
Level 05	A-SK-0522		05/06/14
Level 06	A-SK-0522		05/06/14
Level 07-15	A-SK-0522		05/06/14
Level 16	A-SK-0522		05/06/14
Level 17	A-SK-0522		05/06/14
Level 18	A-SK-0522		05/06/14