

A background graphic consisting of a dark blue diagonal band across the page. Behind this band is a grayscale image of a city skyline with several tall buildings. Overlaid on the entire page is a pattern of white, 3D-outlined rectangular blocks of varying sizes, some of which are partially obscured by the dark blue band.

Building Code of Australia

Assessment Report

**Project Address: Tallawong Station Precinct South,
1-15 & 2-12 Conferta Avenue, Rouse Hill**

Building: 1A & 1B

Client: Deicorp Projects (Tallawong Station) P/L

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Disclaimer

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TABLE OF CONTENTS

1. Executive Summary	4
2. Introduction	8
2.1. General	8
2.2. Purpose of Report	8
2.3. Report Basis	8
2.4. Exclusions and Limitations	8
3. Building Code of Australia Assessment.....	10
3.1. Classification (Part A6).....	10
3.2. Effective Height (Schedule 3).....	10
3.3. Rise in Storeys (C1.2)	10
3.4. Type of Construction (C1.1)	10
3.5. Climate Zone (A1.1)	10
3.6. Floor Area and Volume Limitations (Table C2.2)	10
4. Building Code of Australia Assessment.....	11
4.1. Structure (BCA Section B).....	11
4.2. Fire Resistance (BCA Section C)	12
4.3. Fire-Resisting Construction (Specification C1.1).....	18
4.4. Access and Egress (BCA Section D)	20
4.5. Services and Equipment (BCA Section E)	28
4.6. Health and Amenity (BCA Section F).....	31
4.7. Ancillary Provisions (BCA Section G).....	34
4.8. Special Use Buildings (BCA Section H)	38
4.9. Energy Efficiency (BCA Section J – Class 3 and 5 to 9 Buildings)	38
4.9.1. External Fabric (Part J1).....	38
4.9.2. Building Sealing (Part J3)	38
4.9.3. Air Conditioning and Ventilation Systems (Part J5).....	39
4.9.4. Artificial Lighting and Power (Part J6)	40
4.9.5. Heated Water Supply and Swimming Pool and Spa Pool Plant (Part J7).....	41
4.9.6. Facilities for Energy Monitoring (Part J8)	41
4.10. Energy Efficiency (BCA Section J – Class 2 and 4 Buildings)	41
4.10.1. Building Fabric (NSW Part J(A)1).....	41
4.10.2. Building Sealing (NSW Part J(A)2).....	42
4.10.3. Air-Conditioning and Ventilating System (NSW Part J(A)3).....	43
4.10.4. Heated Water Supply (NSW Part J(A)4)	44

4.10.5. Facilities for Energy Monitoring (NSW Part J(A)5)	45
5. Fire Safety Schedule	46
6. Summary of Non-Compliance Issues.....	48
7. Conclusion.....	52
Attachment 1	53

1. EXECUTIVE SUMMARY

The development, the subject of this report, is for the proposed **Building (1A & 1B)** forming part of the Tallawong Station Precinct South development. The mixed-used building consists of commercial and retail spaces and residential levels with associated basement level car parking.

This report has been prepared, on behalf of Deicorp Projects (Tallawong Station) P/L, to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the planning development application documentation for the proposed works. Unless specifically noted this assessment and report deals with the proposed building 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 A2.2.

Spec C1.1

The BCA requires Class 7b Storage areas to be constructed with an FRL of four hours. A Fire Engineered Performance Solution may be used to justify the reduction in the required FRL's for the Class 7b storage areas to that of a Class 7a carparking.

The BCA requires roof lights to be provided with an FRL or non-combustible and be not less than 6m from any opening that projects above the roof. The proposed roof light (skylight) to Podium 1B is located less than 6m to Level 3 residential apartments.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

C2.14

The BCA requires that a public corridor greater than 40 m in length to be divided with smoke-proof walls complying with Clause 2 of Specification C2.5.

Generally, the residential public corridors are less than 40m with the exception of the following areas:

- Building 1B.2 Level 6 & 7 measured 43m >40m;

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.2

As the proposed building has an effective height of greater than 25m two required exits are required to be provided from all areas of the building. Generally, two exits have been provided to all areas with the exception of the following:

Basement 3

- Bicycle parking rooms
- Plant rooms

Basement 2

- Bicycle parking room (southern)
- Plant rooms

Basement 1

- Common waste
- Storage rooms

Basement 1 upper

- Plant room

Building 1A.1

- Podium (level 3)

Building 1B.1

- Ground floor (small retail)
- Level 1 retail

Building 1B.2

- Level 1 Amenities
- Level 8 western lobby

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.4

The BCA requires the 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

The BCA requires the Class 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 exit travel distances in the following areas exceed DtS provisions:

Basement 3

- 35.6m >20m to POC
- 58m >40m maximum distance to an exit

Basement 2

- 30m >20m to POC
- 58m >40m maximum distance to an exit

Basement 1

- 36.5m >20m to POC
- 61m >40m maximum distance to an exit

Basement 1 upper

- 38.8m >20m to POC

Building 1A1

- Residential Level 3, 4, 5 & 6 approximate travel distance of 10.8m > 6m
- Residential Level 7 & 8 approximate travel distance of 9.2m > 6m
- Roof 25m >20m to POC

Building 1A2

- Residential Level 3, 4, 5, 6, 7 & 8 approximate travel distance of 12m > 6m
- Roof 30m >20m to POC

Building 1B1

- Residential Level 1 & 1 Mezzanine approximate travel distance of 6.5m > 6m
- Residential Level 2,3 & 4 approximate travel distance of 11.4m > 6m
- Residential Level 5, 6, 7 approximate travel distance of 8m > 6m
- Roof 23m >20m to POC

Building 1B2

- Residential Level 1 & 1 Mezzanine approximate travel distance of 6.5m > 6m
- Residential Level 3 & 4 approximate travel distance of 10.4m > 6m
- Residential Level 5, 6, 7 approximate travel distance of 10.9m > 6m
- Roof 27m >20m to POC

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.5

The BCA requires alternative exits to be distributed uniformly around the storey and are not to be less than 9m apart, and not more than 45m apart (residential) or in all other cases 60m apart.

The following exits are located **more than 60m** apart and are not in accordance with DtS provision:

Basement 3

- 65m >60m between alternate exits

Basement 2

- 63m >60m between alternate exits

Basement 1

- 77.1m >60m between alternate exits

The following exits are located **less than 9m apart** and are not in accordance with DtS provision:

Building 1A2

- The commercial fire isolated scissor stair from Level 2.

Building 1B2

- The residential fire isolated scissor stair from Level 1 and above.

Building 1B3

- The fire isolated scissor stair from podium 1B.

<p>D1.7</p>	<p>A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.</p> <p>The BCA requires a fire isolated stair to discharge directly, or by way of its own fire-isolated passageway to a road or open space.</p> <p>The following fire isolated stairs discharge into a covered area that is open less than 1/3 of its perimeter:</p> <p>Building 1A.1</p> <ul style="list-style-type: none"> Discharge to eastern façade adjacent new private road; <p>Building 1B.2</p> <ul style="list-style-type: none"> Discharge to western façade adjacent the private park (RT.1B07) <p>A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.</p>
<p>D2.12</p>	<p>The BCA requires roof that forms the open area on the podium floors to have a minimum FRL of 120/120/120 and no opening through this slab are permitted within 3m of the discharge pathway.</p> <p>Podium 1B is provided with a roof light (skylight) that is less than 3m of the path of travel of persons using an exit and is not in accordance with this Clause.</p> <p>A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.</p>
<p>E1.5</p>	<p>A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5.</p> <p>The sprinkler valve room does not open directly to a road or open space and is located in basement 1.</p> <p>A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.</p>
<p>Part G3</p>	<p>The BCA requires Atrium construction to be in accordance with Part G3. The proposed traveller to Retail Plaza 1 – Building 1B connects four storeys and is deemed to be an atrium in accordance with this Clause.</p> <p>The bounding walls of the traveller and the fire and smoke control systems are proposed to be Performance Justified to achieve compliance with this Part.</p>

2. INTRODUCTION

2.1. General

This report serves as an assessment for compliance with the Building Code of Australia in respect to proposed development, located at 1-15 & 2-12 Conferta Avenue Rouse Hill, within the local government area of Blacktown Council. The development consents of two stages as follows:

Stage 1:	<u>Residential Building 1A</u>	(subject of this report)
	<u>Residential Building 1B</u>	
	<u>Full Retail / Commercial</u>	
	<u>Basement carparking</u>	
	Private Park (not included in BCA assessment)	
Stage 2:	Residential Building 2A	
	Residential Building 2B & 2C & 2E	
	Residential Building 2D	

2.2. Purpose of Report

This report has been prepared, on behalf of Deicorp Projects (Tallawong Station) P/L, to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the development application documentation for the proposed works for the **Residential Building 1A & 1B**.

2.3. Report Basis

The following information has been directly referenced or relied upon in the preparation of this report:

- (a) Architectural plans prepared by Turner, as identified in the attached Appendix 1.
- (b) The Building Code of Australia 2019, inclusive of NSW variations + Amendment 1 (where relevant) (See Note 1 & 2);
- (c) Environmental Planning and Assessment Act 1979.
- (d) Environmental Planning and Assessment Regulation 2000.

Note1: Building Code of Australia (BCA) 2019 was adopted in NSW on 1 May 2019. 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.

Note 2 Building Code of Australia (BCA) 2019 Amendment 1 is expected to be adopted from 1 June 2020.

2.4. Exclusions and Limitations

This report does not consider the following, except where specifically mentioned:

- Structural design.
- The Disability Discrimination Act 1992 (access for people with disabilities has been assessed in accordance with Part D3 of the BCA, however additional measures may be required to be provided subject to the Disability Discrimination Act 1992)
- Disability (Access to Premises – Building) Standards 2010.

3. BUILDING CODE OF AUSTRALIA ASSESSMENT

3.1. Classification (Part A6)

The proposed building consists of:

Building	Class	Use	Area
Building 1A & 1B	7a	Carparking	Basement levels 03,02,01, 01 upper
	7b	Loading dock & storage	Part Basement Level 01
	6	Retail	Level 01, Part Level 02
	5	Commercial	Level 03
	2	Residential	Level 02 +

Note: The carpark is shared by the five towers and therefore the building has been deemed a united building for the purpose of the BCA.

3.2. Effective Height (Schedule 3)

The proposed building will have an effective height of **32.60m** being greater than 25m.

(RL86.60 – 54.00 = 32.60m)

3.3. Rise in Storeys (C1.2)

The proposed building will consist of a rise in storeys of eleven (11).

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.

3.5. Climate Zone (A1.1)

The building is located within Climate Zone 5

3.6. Floor Area and Volume Limitations (Table C2.2)

The building is compliant with maximum floor area and volume limits of:

Class 5 -	Maximum Floor Area	8,000m ²
	Maximum Volume	48,000m ³
Class 6 -	Maximum Floor Area	5,000m ²
	Maximum Volume	30,000m ³

Class 7a - The carpark is to be sprinkler protected and as such there are no maximum floor area or volume limitations for this area.

Class 2 - The Class 2 portions of the building are not subject to floor area and volume limitations of C2.2 as Table 3 of Specification C1.1 and Clause C3.11 of the NCC regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 classifications.

4. 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 in accordance with this clause. The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.	Capable of Complying
B1.2	Determination of individual actions	The magnitude of individual actions must be determined in accordance with this clause. The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.	Capable of Complying
B1.4	Determination of structural resistance of materials & forms of construction	<p>The structural resistance of the following materials and forms of construction for the following elements are to be in accordance with the standards nominated in this clause;</p> <ul style="list-style-type: none"> (a) Masonry (b) Concrete (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 <p>The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.</p>	Capable of Complying
B1.5	Structural Software	Structural software used in computer aided design is to comply with the requirements of this provision.	Capable of Complying
B1.6	Construction of buildings in flood hazard areas	A Class 2, 3, 4, 9a or 9c building is required to comply with the ABCB standards for Construction of Buildings in Flood Hazard Areas.	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. A Fire Engineered Performance Solution may be used to justify the reduction in the required FRL's for the Class 7b storage areas to that of a Class 7a carparking.	Performance Solution
C1.2	Calculation in rise in storeys	The building contains a RIS of eleven (11).	Capable of Complying
C1.8	Lightweight construction	Any proposed fire resisting lightweight walls or fire resisting lightweight protection to steel columns is to comply with Specification C1.8.	Capable of Complying
C1.9	Non-combustible building elements	<ol style="list-style-type: none"> In a building required to be Type A or B construction, the following building elements and their components must be non-combustible: <ol style="list-style-type: none"> External walls and common walls, including all components incorporated in them including the façade covering, framing and insulation. The flooring and floor framing of lift pits. Non-loadbearing internal walls where they are required to be fire-resisting. A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in – <ol style="list-style-type: none"> A building required to be Type A construction; and A building required to be Type B construction, subject to C2.10, in: <ol style="list-style-type: none"> a Class 2, 3 or 9 building; and a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys. A loadbearing internal wall and loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification C1.1. The requirements of (1) and (2) do not apply to gaskets, caulking, sealants, termite management systems, glass, thermal breaks associated with glazing systems & dampproof courses. 	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<p>5. The following materials may be used wherever a non-combustible material is required:</p> <ul style="list-style-type: none"> (a) Plasterboard. (b) Perforated gypsum lath with a normal paper finish. (c) Fibrous-plaster sheet. (d) Fire-reinforced cement sheeting. (e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. (f) Sarking that does not exceed 1 mm thickness and have a flammability index of not greater than 5. (g) Bonded lamination materials where – <ul style="list-style-type: none"> (i) Each lamina, including any core, is non-combustible; and (ii) Each adhesive layer does not exceed 1mm in thickness and the total thickness of the adhesive layers does not exceed 2mm; and (iii) The Spread of Flame Index and the Smoke-Developed Index of the bonded laminated materials as a whole do not exceed 0 and 3 respectively. 	
C1.10	Fire hazard properties	Proposed internal linings, materials and assemblies 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.	Capable of Complying
C1.13	Fire protected timber: Concession	This concession is not available.	N/A
C1.14	Ancillary Elements	<p>An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following:</p> <ul style="list-style-type: none"> 1. An ancillary element that is non-combustible. 2. A gutter, downpipe or other plumbing fixture or fitting. 3. A flashing. 	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status									
		<p>4. A grate or grille not more than 2m² in area associated with a building service.</p> <p>5. An electrical switch, socket-outlet, cover plate or the like.</p> <p>6. A light fitting.</p> <p>7. A required sign.</p> <p>8. A sign other than one provided under (1) or (7) that-</p> <p>(a) Achieves a ground number of 1 or 2; and</p> <p>(b) Does not extend beyond one storey; and</p> <p>(c) Does not extend beyond one fire compartment; and</p> <p>(d) Is separated vertically from other signs permitted under (8) by at least 2 storeys.</p> <p>9. An awning, sunshade, canopy, blind or shading hood other than one provided under (1) that –</p> <p>(a) Meets the requirements of Table 4 of Specification C1.10 as for an internal element; and</p> <p>(b) Serves a storey –</p> <p>(i) At ground level; or</p> <p>(ii) Immediately above a storey at ground level; and</p> <p>(iii) Does not serve an exit, where it would render the exit unusable in a fire.</p> <p>10.A part of a security, intercom or announcement system.</p> <p>11.Wiring.</p> <p>12.A paint, lacquer or a similar finish.</p> <p>13.A gasket, caulking, sealant or adhesive directly associated with (1) to (11).</p>										
C2.2	General floor area and volume limitations	<p>The fire compartment sizes meet the requirements of this Clause.</p> <table><tr><th>Classification</th><th>Maximum Floor Area</th><th>Maximum Volume</th></tr><tr><td>Class 5</td><td>8,000m²</td><td>48,000m³</td></tr><tr><td>Class 6</td><td>5,000m²</td><td>30,000m³</td></tr></table> <p>Class 7a - The carpark is to be sprinkler protected and as such there are no maximum floor area or volume limitations for this area.</p>	Classification	Maximum Floor Area	Maximum Volume	Class 5	8,000m ²	48,000m ³	Class 6	5,000m ²	30,000m ³	Capable of Complying
Classification	Maximum Floor Area	Maximum Volume										
Class 5	8,000m ²	48,000m ³										
Class 6	5,000m ²	30,000m ³										

BCA Clause	Title	Assessment and Comment	Status
		Class 2 - The Class 2 portions of the building are not subject to floor area and volume limitations of C2.2 as Table 3 of Specification C1.1 and Clause C3.11 of the NCC regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 classifications.	
C2.6	Vertical separation of openings in external walls	The building is required to be protected with sprinklers throughout and therefore vertical separation is not required.	Noted
C2.7	Separation by fire walls	<p>Fire walls are required to be designed to comply with the clause.</p> <p>The following fire walls are proposed:</p> <ol style="list-style-type: none"> 1. Basement 3 storage parts 2. Basement 2 Resident/Retail carpark 3. Basement 1 western loading dock (1A1) 4. Basement 1 eastern loading dock (1B.2) 5. Basement 1 upper carpark and retail (1B.2) 6. Basement 1 upper loading dock void (1B.2) 7. Level 1 Retail/carpark (1A.2) 8. Level 2 Retail/carpark (1A.2) 9. Level 1 Retail/Residential (1B.2) 10. Level 2 Retail/Residential (1B.2) 	Capable of Complying
C2.8	Separation of classifications in the same storey	<p>If a building has parts of different classifications located alongside one another in the same storey,</p> <ul style="list-style-type: none"> ▪ each building element in that storey must have the higher FRL prescribed in Specification C1.1 for that element for the classifications concerned; or ▪ the parts must be separated in that storey by a fire wall. <p>The proposed fire walls are identified in C2.7 above.</p>	Capable of Complying
C2.9	Separation of classifications in different stories	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.	Capable of Complying
C2.10	Separation of lift shafts	The lift shafts are required to be fire separated from the rest of the building in accordance with this clause.	Capable of Complying
C2.11	Stairways and lifts in one shaft	The stairs and lift shaft are located in different shafts.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
C2.12	Separation of equipment	<p>The following equipment are required to be fire separated from the remainder of the building by 120/120/120 FRL construction:</p> <ul style="list-style-type: none"> ▪ Lift motor rooms and lift control panels. ▪ Emergency Generators. ▪ Central smoke control plant. ▪ Boilers. ▪ Battery systems. 	Capable of Complying
C2.13	Electricity supply system	<p>The electricity substation is required to be fire separated from the remainder of the building. The BCA requires 2 hr separation however the electricity authority generally requires 3 hr separation.</p> <p>Two Substation kiosks have been identified adjacent the loading dock of building (1B2).</p> <p>Any main switchboard located in the building which sustains emergency equipment operating in emergency mode, is required to be fire separated from the remainder of the building by 2 hr fire resisting construction.</p> <p>Construction should achieve an FRL of 120/120/120, doorways are required achieve an FRL of -/120/30 and to be self-closing and all penetrations in enclosures are to be appropriately fire stopped.</p> <p>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.</p> <p>Electrical conductors and switchboards are required to comply with this clause.</p>	Capable of Complying
C2.14	Public corridors in Class 2 & 3 buildings	<p>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 walls complying with smoke proof walls complying with Clause 2 of Specification C2.5.</p> <p>Generally, the public corridors are less than 40m with the exception of the following:</p> <ol style="list-style-type: none"> 1. Building 1B.2 Level 6 & 7 measured 43m >40m; 	Performance Solution
C3.2	Protection of openings in external walls	<p>Openings are located more than 3m from the allotment boundary.</p>	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
C3.3	Separation of external walls and associated openings in different fire compartments	Distance between fire compartments must comply with Table C3.3.	Capable of Complying
C3.4	Acceptable method of protection	<p>Windows requiring protection must be protected by one of the means:</p> <ul style="list-style-type: none"> ▪ External wall-wetting sprinklers with windows that are automatically or permanently fixed in the closed position. ▪ -/60/- fire windows (Automatic or permanently fixed in the closed position) ▪ -/60/- automatic fire shutters ▪ Doorways which require protection can be protected externally with wall wetting sprinklers with doors that are self-closing or automatic closing, or ▪ -/60/30 fire doors which are self-closing or automatic closing. <p>Fire doors, fire windows and fire shutters are required to comply with Specification C3.4.</p> <p>It is expected that protection will be able to be provided via external wall wetting sprinklers located over fixed glazed elements where required.</p>	Note
C3.5	Doorways in fire walls	Doors in fire walls are to have the FRL's and features required by this clause.	Capable of Complying
C3.6	Sliding fire doors	No sliding fire doors proposed.	N/A
C3.7	Protection of doorways in horizontal exits	The building does not contain horizontal exits and the provisions of this part do not apply.	N/A
C3.8	Openings in fire isolated exits	The fire-isolated exits are required to be protected by -/60/30 self-closing fire doors.	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.	Capable of Complying
C3.10	Fire isolated lift shafts	<p>The lift doors are required to be -/60/- fire doors and comply with this provision.</p> <p>A lift call panel, indicator panel or other panel in the wall of a fire-isolated lift shaft must be</p>	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		backed by construction having an FRL of not less than -/60/60 if it exceeds 35 000 mm ² in area.	
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.	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.	Capable of Complying
C3.15	Openings for service installations	Services that penetrate a building element that is required to have an FRL must be protected utilising one of the options listed under this clause. Test certificates describing each individual service penetration and configuration will be required at the construction certificate stage.	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.	Capable of Complying
C3.17	Columns protected with lightweight construction to achieve an FRL	Any columns protected with fire resisting lightweight construction to achieve an FRL must be installed in a manner that's identical to the tested prototype.	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	Exposure to fire source features is to be determined in accordance with this clause.	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.	Capable of Complying
2.3	Lintels	Lintels are to be protected as required by the requirements of this clause.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
2.4	Method of attachment not to reduce the fire resistance of building elements	The method of attaching or installing a finish, lining, ancillary element or service installation to the building element must not reduce the fire-resistance of that element to below that required.	Capable of Complying
2.5	General concessions	Roof top plant rooms need not have an FRL if they are non-combustible and they only contain equipment specified in this clause.	Capable of Complying
2.6	Mezzanine floors: concession	The building does not contain mezzanines that are subject to this provision.	N/A
2.7	Enclosure of shafts	Fire rated shafts are to be enclosed at the top and bottom in accordance with the requirements of this clause.	Capable of Complying
3.1	Fire resistance of building elements	<p>Generally building elements are required to achieve the following FRL's;</p> <p>Carpark & ancillary storage: 2 hrs</p> <p>Storage and loading dock: 4 hrs</p> <p>Residential: 1½ hrs</p> <p>A loadbearing internal wall and a loadbearing fire wall must be of concrete or masonry.</p> <p>It is noted that a number of building elements are required to be of non-combustible construction, including the external walls. It should be noted that where a building element is required to be non-combustible all materials forming that element are to be non-combustible.</p>	Capable of Complying
3.2	Concessions for floors	A floor need not have a FRL in accordance with the concessions given in this clause.	Capable of Complying
3.3	Floor loading of Class 5 and 9b buildings: Concession	If a floor of a Class 5 or 9b building is designed for a live load not exceeding 3kPa then reductions in FRL's are available.	Capable of Complying
3.4	Roof superimposed on concrete slab: Concession	A roof need not have a FRL if its covering is non-combustible and the building meets the requirements of this Clause.	Capable of Complying
3.5	Roof: Concession	<p>The roof is not required to achieve an FRL as the building:</p> <ul style="list-style-type: none"> has a sprinkler system (other than a FPAA101D or FPAA101H system) 	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<p>complying with Specification E1.5 installed throughout; or</p> <ul style="list-style-type: none"> has a rise in storeys of 3 or less; or is of Class 2 or 3; or has an effective height of not more than 25 m and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes 	
3.6	Roof lights	The proposed roof light (skylight) to Podium 1B is located less than 6m to Level 3 residential apartments.	Performance Solution
3.7	Internal wall and column: concession	Concession is not available due to the effective height of the building.	N/A

4.4. Access and Egress (BCA Section D)

BCA Clause	Title	Assessment and Comment	Status
D1.2	Number of exits required	<p>Two exits are to be available to all areas of the building.</p> <p>Generally, two exits have been provided to all areas with the exception of the following:</p> <p>Basement 3</p> <ul style="list-style-type: none"> Bicycle parking rooms Plant rooms <p>Basement 2</p> <ul style="list-style-type: none"> Bicycle parking room (southern) Plant rooms <p>Basement 1</p> <ul style="list-style-type: none"> Common waste Storage rooms <p>Basement 1 upper</p> <ul style="list-style-type: none"> Plant room <p>Building 1A.1</p> <ul style="list-style-type: none"> Podium (level 3) <p>Building 1B.1</p> <ul style="list-style-type: none"> Ground floor (small retail) Level 1 retail <p>Building 1B.2</p>	Performance Solution

BCA Clause	Title	Assessment and Comment	Status
		<ul style="list-style-type: none"> Level 1 Amenities Level 8 western lobby 	
D1.3	When fire isolated exits are required	Stairways that service the basement levels and the upper retail and residential levels are all fire-isolated stairways.	Capable of Complying
D1.4	Exit travel distances	<p>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.</p> <p>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.</p> <p>Class 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.</p> <p>The exit travel distances in the following areas exceed DtS provisions:</p> <p>Basement 3</p> <ul style="list-style-type: none"> 35.6m >20m to POC 58m >40m maximum distance to an exit <p>Basement 2</p> <ul style="list-style-type: none"> 30m >20m to POC 58m >40m maximum distance to an exit <p>Basement 1</p> <ul style="list-style-type: none"> 36.5m >20m to POC 61m >40m maximum distance to an exit <p>Basement 1 upper</p> <ul style="list-style-type: none"> 38.8m >20m to POC <p>Building 1A1</p> <ul style="list-style-type: none"> Residential Level 3, 4, 5 & 6 approximate travel distance of 10.8m > 6m Residential Level 7 & 8 approximate travel distance of 9.2m > 6m Roof 25m >20m to POC <p>Building 1A2</p>	Performance Solution

BCA Clause	Title	Assessment and Comment	Status
		<ul style="list-style-type: none"> Residential Level 3, 4, 5, 6, 7 & 8 approximate travel distance of 12m > 6m Roof 30m >20m to POC <p>Building 1B1</p> <ul style="list-style-type: none"> Residential Level 1 & 1 Mezzanine approximate travel distance of 6.5m > 6m Residential Level 2,3 & 4 approximate travel distance of 11.4m > 6m Residential Level 5, 6, 7 approximate travel distance of 8m > 6m Roof 23m >20m to POC <p>Building 1B2</p> <ul style="list-style-type: none"> Residential Level 1 & 1 Mezzanine approximate travel distance of 6.5m > 6m Residential Level 3 & 4 approximate travel distance of 10.4m > 6m Residential Level 5, 6, 7 approximate travel distance of 10.9m > 6m Roof 27m >20m to POC 	
D1.5	Distance between alternative exits	<p>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.</p> <p>The following exits are located <u>more than 60m</u> apart and are not in accordance with DtS provision:</p> <p>Basement 3</p> <ul style="list-style-type: none"> 65m >60m between alternate exits <p>Basement 2</p> <ul style="list-style-type: none"> 63m >60m between alternate exits <p>Basement 1</p> <ul style="list-style-type: none"> 77.1m >60m between alternate exits <p>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.</p> <p>The following exits are located <u>less than 9m apart</u> and are not in accordance with DtS provision:</p>	Performance Solution

BCA Clause	Title	Assessment and Comment	Status
		<p>Building 1A2</p> <ul style="list-style-type: none"> The commercial fire isolated scissor stair from Level 2. <p>Building 1B2</p> <ul style="list-style-type: none"> The residential fire isolated scissor stair from Level 1 and above. <p>Building 1B3</p> <ul style="list-style-type: none"> The fire isolated scissor stair from podium 1B. 	
NSW D1.6	Dimensions of exits and paths of travel to exits	A required exit or path of travel to an exit are required to be a minimum unobstructed height of not less than 2m and minimum width of 1m.	Capable of Complying
D1.7	Travel via fire isolated exits	<p>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:</p> <ul style="list-style-type: none"> a public corridor, public lobby or the like; or a sole-occupancy unit occupying all of a storey; or a sanitary compartment, airlock or the like. <p>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;</p> <p>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.</p> <p>The following fire isolated stairs discharge into a covered area that is open less than 1/3 of its perimeter:</p> <p>Building 1A.1</p> <ul style="list-style-type: none"> Discharge to eastern façade adjacent new private road; <p>Building 1B.2</p>	Performance Solution

BCA Clause	Title	Assessment and Comment	Status
		<ul style="list-style-type: none"> Discharge to western façade adjacent the private park (RT.1B07) 	
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	A non-fire-isolated stair serving as a required exit must provide a continuous means of travel by its own flights and landings to a level at which egress to a road or open space is available.	Capable of Complying
D1.10	Discharge from exits	<p>The discharge point of the fire isolated exits is required to be connected to the road by a path that is not less than the exit width to which the external path serves.</p> <p>Where there is a change of level, the path must contain a complying stair or ramp.</p>	Capable of Complying
D1.11	Horizontal exits	Horizontal exits are proposed in basement 2 and comply with the provision of this Clause.	Capable of Complying
D1.12	Non-required stairways, ramps or escalators	Non-required stairways, ramps or travellers are not proposed.	Note
D1.13	Number of persons accommodated	<p>Less than 100 people are accommodated by each stair core in the residential and car parking areas.</p> <p>All retail areas can accommodate 1 person per 3m².</p>	Capable of Complying
D1.16	Plant rooms and lift rooms: concession	<p>A ladder may be used in lieu of a stairway to provide egress from a plant room with a floor area less than 100m² or plant or lift machine rooms with a floor area of less than 200 m², for all but one point of egress.</p> <p>Ladders are required to comply with AS1657 and the requirement of this clause.</p>	Note
D1.17	Access to lift pits	Access to lift pipes is to be in accordance with this clause.	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.	Capable of Complying
D2.3	Non-fire isolated stairs and ramps	It is assumed that the non-fire-isolated stairway will be of concrete construction.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
D2.4	Separation of rising and descending stair flights	<p>The proposal provides connected rising and descending stairs however they are shown and assumed to be separated with smoke proof construction in accordance with this Clause.</p> <p>Rising and descending fire-isolated stairs are required to be separated with non-combustible construction and smoke proof construction in accordance with Clause 2 of Specification C2.5.</p>	Capable of Complying
D2.7	Installation in exits and paths of travel	<p>Access to service shafts and services other than to firefighting 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.</p> <p>Gas or other fuel services must not be installed in a required exit.</p> <p>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).</p> <p>Only electrical wiring associated with services specified in the clause, are permitted to be installed in a fire isolated exit.</p>	Capable of Complying
D2.8	Enclosure of space under stairs and ramps	No enclosure of space proposed.	Complies
D2.9	Width of stairways	<p>Stairways and ramps are to be a minimum of 1m in clear width.</p> <p>A required stairway or ramp that exceeds 2m in width is counted as having a width of only 2m unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2m</p>	Capable of Complying
D2.10	Pedestrian ramps	<p>A ramp must:</p> <ol style="list-style-type: none"> where the ramp is also serving as an accessible ramp under Part D3, be in accordance with AS1428.1; or in any other case, have a gradient not steeper than 1:8. <p>The floor surface of a ramp must have a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS4586.</p>	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
D2.11	Fire-isolated passageways	The fire rating of fire-isolated passageways is required to be achieved from the outside.	Capable of Complying
D2.12	Roof as open space	<p>The following podiums are considered as being a roof being used as open space and is to comply with this Clause.</p> <ol style="list-style-type: none"> 1. Podium 1A.1 (Level 3) 2. Podium 1B (Level2) <p>The roof must comply and have an FRL of not less than 120/120/120, and not have any roof lights or other openings within 3m of the path of travel of persons using the exit to reach a road or open space.</p> <p>Podium 1B is provided with a roof light(skylight) that is less than 3m of the path of travel of persons using an exit.</p>	Performance Solution
NSW D2.13	Goings & risers	<p>Goings and risers are to be designed to comply with this clause including:</p> <ul style="list-style-type: none"> ▪ going and riser dimensions; and ▪ slip resistance. 	Capable of Complying
D2.14	Landings	Landings are to be designed in accordance with this clause.	Capable of Complying
NSW D2.15	Thresholds	Thresholds are to comply with this clause.	Capable of Complying
NSW D2.16	Barriers to prevent falls	Balustrades are to be designed to comply with this clause.	Capable of Complying
D2.17	Handrails	<p>Handrails are required along at least one side of all stairways or ramps, or on both sides of stairs or ramps with a total width of more than 2m.</p> <p>Handrails are required to be installed in accordance with AS1428.1-2009 except for fire-isolated stairs.</p>	Capable of Complying
D2.18	Fixed platforms, walkways, stairways & ladders	Fixed platforms, walkways, stairways & ladders are to be designed in accordance with this clause.	Note
NSW D2.19	Doorways and doors	<p>The sliding doors leading directly to the road or open space must be capable of being opened manually under a force of not more than 110 N.</p> <p>Power-operated doorway required to be opened manually under a force of not more than 110 N and open automatically if it leads directly to a road or open space.</p>	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
D2.20	Swinging doors	<p>A swinging door must not encroach and impede the path of travel/exit width by more than 500mm at any part of its swing. When in the fully open position, it must not encroach into the path of travel/exit width by more than 100mm.</p> <p>Doors in or serving as a required exit must swing in the direction of egress unless they are subject to the concession in this clause.</p> <p>Doors that are required to be readjusted to swing in the direction of egress:</p> <ul style="list-style-type: none"> 1A.1 Lobby 	Capable of Complying
NSW D2.21	Operation of latch	Doors in required exits or forming part of a required exit must be readily openable without a key from the egress side, by a single hand downward action on a single device which is located between 900mm and 1.1m from the floor and comply with the requirements of this clause.	Capable of Complying
D2.22	Re-entry from fire-isolated exits	<p>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:</p> <ul style="list-style-type: none"> 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 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. 	Capable of Complying
D2.23	Signs on doors	A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to exit door and smoke doors, in accordance with this clause.	Capable of Complying
D2.24	Protection of openable windows	<p>A window opening must be provided with protection, in accordance with this clause, if the floor below the window is 2 m or more above the surface beneath in a bedroom in a Class 2.</p> <p>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</p>	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		windows 4m or more above the surface beneath. The barrier must not have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing.	
Part D3 – Access for People with a Disability			
This part is to be covered by a separate Accessibility Report.			

4.5. Services and Equipment (BCA Section E)

BCA Clause	Title	Assessment & Comment	Status
E1.3	Fire hydrants	<p>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 AS 2419.1. Where internal hydrants are provided, they must only serve the storey in which they are located.</p> <p>The location of hydrant booster is adjacent Conferta Avenue.</p> <p>Ensure FIS are provided with sufficient space for internal hydrants.</p> <p>Full details to be provided at CC stage.</p>	Capable of Complying
E1.4	Fire hose reels	<p>Fire hose reels are to be provided to the non-residential areas. The fire hose reel system must be installed in accordance with this clause and AS 2441.</p> <p>Full details to be provided at CC stage.</p>	Capable of Complying
E1.5	Sprinklers	<p>A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5.</p> <p>The sprinkler valve room does not open directly to a road or open space and is located in basement 1.</p> <p>Full details to be provided at CC stage.</p>	Performance Solution
E1.6	Portable fire extinguishers	<p>The building is to be provided with portable fire extinguishers.</p> <p>Within the residential areas a 2.5kg ABE powder extinguisher is to be located within 10m of all unit entry doors.</p> <p>Portable fire extinguishers are to comply with this provision and sections 1, 2, 3 and 4 of AS 2444.</p>	Capable of Complying

BCA Clause	Title	Assessment & Comment	Status
		Full details to be provided at CC stage.	
E1.8	Fire control centres	A fire control centre is required in accordance with Specification E1.8.	Capable of Complying
E1.9	Fire precautions during construction	<p>In a building under construction not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stairway or exit.</p> <p>After the building has reached an effective height of 12 m the required fire hydrants and fire hose reels must be operational in at least every storey that is covered by the roof or the floor structure above, except the 2 uppermost storey's and any required booster connections must be installed.</p>	Capable of Complying
E1.10	Provision for special hazards	No special hazards have been identified.	Note
E2.2	General requirements	<p>All Areas</p> <ul style="list-style-type: none"> Installation of an automatic air pressurisation system to the fire isolated exits, stairways and passageways that service the building. This system should be installed in accordance with AS/ANZ 1668.1. <p>Car parking Areas</p> <ul style="list-style-type: none"> The basements are to be provided with a mechanical ventilation system in accordance with AS1668.2. It is assumed through the building fire sprinkler systems will be utilised in the places required by this Clause. <p>Residential Areas</p> <ul style="list-style-type: none"> A smoke detection and alarm system complying with NCC2019 specification E2.2a must be installed throughout these areas/levels. <p>Commercial Areas and Retail Areas (Class 5 & 6)</p> <ul style="list-style-type: none"> A zone pressurisation system must be provided between vertically separated fire compartments in accordance with AS 1668.1. <p>Retail Areas only (Class 6)</p> <ul style="list-style-type: none"> An automatic smoke exhaust system complying with Specification E2.2b; 	Capable of Complying

BCA Clause	Title	Assessment & Comment	Status
E3.1	Lift installations	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1.	Capable of Complying
E3.2	Stretcher facility in lifts	The lift/s specified in this clause, must be above to 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.	Capable of Complying
E3.3	Warning against use of lifts in fire	Warning signs must be displayed near every lift call button in accordance with this clause.	Capable of Complying
E3.4	Emergency lifts	Emergency lift/s complying with this clause and Spec E3.1 must be installed within the building.	Capable of Complying
E3.5	Landings	Access and egress to and from lift well landings must comply with the DTS provision of Section D	Capable of Complying
E3.6	Passenger lifts	The lifts are required to be of a type and have features for people with disabilities as required by this clause.	Capable of Complying
E3.7	Fire service controls	Fire service controls are required to every lift serving any storey above an effective height of 12m. Fire service controls are required to comply with the requirements of this provision.	Capable of Complying
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.	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.	Capable of Complying
E4.2 to E4.4	Emergency lighting requirements	Emergency lighting must be provided in accordance with these clauses. Emergency lighting is required to comply with AS2293.1-2005.	Capable of Complying
E4.5 to E4.8	Exit signs	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.	Capable of Complying

BCA Clause	Title	Assessment & Comment	Status
E4.9	Emergency warning and intercom systems	EWIS is required in accordance with AS1670.4.	Capable of Complying

4.6. Health and 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.	Capable of Complying
F1.1	Stormwater drainage	Stormwater drainage is required to be designed to comply with AS/NZS 3500.3-2015.	Capable of Complying
F1.4	External above ground membranes	Waterproofing membranes for external above ground use must comply with AS 4654.1-2012 & AS 4654.2-2012	Capable of Complying
F1.5	Roof coverings	Lightweight metal roof sheeting is to comply with AS1562.1.	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.	Capable of Complying
F1.7	Waterproofing of wet areas in buildings	Waterproofing of wet areas are required to comply with this clause 76 AS 3740.	Capable of Complying
F1.9	Damp-proofing	Damp proofing is required to be provided in accordance with this clause.	Capable of Complying
F1.10	Damp-proofing of floor on ground	Damp proofing is required to be provided in accordance with this clause.	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.	Capable of Complying
F1.12	Sub-floor ventilation	Where provided sub-floor ventilation is to be in accordance with this Clause.	Capable of Complying
F1.13	Glazed assemblies	Glazed assemblies to comply with AS 2047 as applicable.	Capable of Complying
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,	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<p>provision of the following facilities within each unit will comply:</p> <ul style="list-style-type: none"> ▪ A bath or shower; and ▪ A closet pan & wash basin; and ▪ Kitchen; and ▪ Wash tub and space for washing machine and drier <p>Sanitary facilities are provided as required.</p>	
F2.3	Facilities in Class 3 to 9 buildings	<p>Sanitary facilities must be provided in accordance with this clause and Table F2.3.</p> <p>Adequate means of disposal of sanitary products must be provided in sanitary facilities for use by females.</p> <p>It is assumed that the following amenities areas listed below have been provided for sanitary facilities and capable of complying with this clause.</p> <p><u>Building 1A</u></p> <ul style="list-style-type: none"> ▪ An area of 46m² is provided for amenities located in the Retail Plaza 2 in building 1A.2 <p><u>Building 1B</u></p> <ul style="list-style-type: none"> ▪ An area of 53.7m² is provided for amenities located in the Retail Plaza 1 area (level 2) near the travellers adjacent RT.1B.10 in building 1B.2 ▪ An area of 162m² is provided for amenities located in the Retail Plaza 3 area near the public lift of building 1B.2 	Capable of Complying
F2.4	Facilities for people with disabilities	<p>Accessible unisex and ambulant sanitary facilities are required in accordance with clause. The design of accessible sanitary facilities is to comply with AS1428.1-2009</p> <p>Please refer to access assessment report.</p>	Noted
F3.1	Height of rooms and other spaces	The minimum ceiling height requirements are to comply with the requirements of this provision.	Capable of Complying
F4.1-4.3	Provision of natural light	Natural lighting must be provided in all habitable rooms of the residential units	Capable of Complying
F4.4	Artificial lighting	Artificial lighting is to be provided in accordance with AS/NZS1680.0 to spaces required by this clause.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
F4.5-4.7	Ventilation of rooms	Ventilation is to be provided by natural or mechanical means in accordance with this provision and Clause F4.6.	Capable of Complying
F4.11	Car park exhaust	Each storey of the carpark must have a system of ventilation complying with AS1668.2	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.	Capable of Complying
F5.2	Determination of airborne sound insulation ratings	<p>A form of construction required to have an airborne sound insulation rating must:</p> <ul style="list-style-type: none"> have the required value for weighted sound reduction index (R_w) or weighted sound reduction index with spectrum adaptation term ($R_w + C_{tr}$) determined in accordance with AS/NZS 1276.1 or ISO 717.1 using results from laboratory measurements; or an acceptable form of construction under Spec F5.2. 	Capable of Complying
F5.3	Determination of impact sound insulation ratings	Determination of impact sound insulation ratings is to be in accordance with this clause. Particular attention is required to the requirements for discontinuous construction	Capable of Complying
F5.4	Sound insulation rating of floor	<p>1. A floor in a Class 2 or 3 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w}$ (impact) not more than 62 if it separates—</p> <p>(a) sole-occupancy units; or</p> <p>(b) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification.</p>	Capable of Complying
F5.5	Sound insulation of walls	Sound insulation of walls and doors is required to be in accordance with this clause.	Capable of Complying
F5.6	Sound insulation rating of internal services	Services that serves or pass through more than one SOU must achieve the required ratings specified by this clause.	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.	Capable of Complying
F6.1	Application of part	Part F6 applies to a sole-occupancy unit of a Class 2 building and a Class 4 part of a building.	noted

BCA Clause	Title	Assessment and Comment	Status
F6.2	Pliable building membrane	Where a pliable building membrane is installed, it is required to be provided in accordance with this clause.	Capable of Complying
F6.3	Flow rate and discharge of exhaust systems	Exhaust systems are required to be provided in accordance with this clause.	Capable of Complying
F6.4	Ventilation of roof spaces	Where ventilation of the roof space are provided, it is required to be provided in accordance with this clause.	Capable of Complying

4.7. Ancillary Provisions (BCA Section G)

BCA Clause	Title	Assessment and comment	Status
G1.2	Refrigerated chambers, strong rooms & vaults	Refrigerated chambers, strong rooms & vaults to comply with the requirements of this provision.	Capable of Complying
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 (windows 3 or more storeys above the ground).	Capable of Complying
G2.2	Installation of appliances	Domestic solid fuel burning appliances are not proposed. Boilers and pressure vessels, as defined by BCA, are required to comply with Specification G2.2	Note
G2.3	Open fireplaces	Open fireplaces are not proposed.	N/A
G2.4	Incinerator rooms	Incinerator rooms are not proposed.	N/A
G3.1	Atriums affected by this part	This Part does not apply to an atrium which: 1. connects only 2 storeys; or 2. connects only 3 storeys if— (c) each storey is provided with a sprinkler system complying with Specification E1.5 throughout; and (d) one of those storeys is situated at a level at which there is direct egress to a road or open space.	Note
G3.2	Dimensions of atrium well	An atrium well must have a width throughout the well that is able to contain a cylinder having a horizontal diameter of not less than 6 m.	N/A

BCA Clause	Title	Assessment and comment	Status
G3.3	Separation of atriums by bounding walls	An atrium must be separated from the remainder of the building at each storey by bounding walls located in accordance with this clause. The proposed traveller to Retail Plaza 1 – Building 1B connects four storeys and is deemed to be an atrium in accordance with this Clause.	Capable of Complying
G3.4	Construction of bounding walls	The bounding walls are required to have a fire rating as specified in this clause It is assumed that the walls of the traveller will not comply and a Fire Engineered Performance Solution may be used to justify the separation.	Performance Solution
G3.5	Constriction at balconies	This clause requires balustrades bounding the atrium to be imperforate, non-combustible and at least 1 m high.	Capable of Complying
G3.6	Separation at roof	In an atrium: <ul style="list-style-type: none"> the roof must have the FRL prescribed in Table 3 of Specification C1.1; or the roof structure and membrane must be protected by a sprinkler system complying with Specification E1.5 	Capable of Complying
G3.7	Means of egress	All areas within the atrium have access to at least two exits.	Capable of Complying
G3.8	Fire & smoke control systems	Fire and smoke control systems are required to comply with Specification G3.8. refer below.	Performance Solution
Spec G3.8 Clause 2	Automatic fire sprinkler system	A sprinkler system (other than a FPAA101D or FPAA101H system) in accordance with BCA Spec E1.5 is required. This clause contains requirements for sprinkler protection including: <ul style="list-style-type: none"> 2.2 Roof protection 2.3 Atrium floor protection 2.4 Sprinkler systems to glazed walls 2.5 Stop valves 	Capable of Complying
Spec G3.8 Clause 3	Smoke control system	This clause contains requirements for smoke control in atrium buildings including: <ul style="list-style-type: none"> 3.2 Operation of atrium mechanical air-handling systems 3.3 Activation of smoke control system 3.4 Smoke exhaust system 	Performance Solution

BCA Clause	Title	Assessment and comment	Status
		<ul style="list-style-type: none"> 3.5 Upward air velocity 3.6 Exhaust fans 3.7 Smoke and heat vents 3.8 Make-up air supply <p>The system of smoke control will not comply with all of these requirements and will be performance justified.</p>	
Spec G3.8 Clause 4	Fire detection and alarm system	BCA Specification G3.8 requires that a building containing an atrium must be provided with automatic fire detection and alarm system in accordance with AS1670.1 and Clause 4 of spec G3.8, including break glass alarms.	Capable of Complying
Spec G3.8 Clause 5	Emergency warning and intercom systems	<p>All buildings containing an atrium must be provided with EWIS which:</p> <ol style="list-style-type: none"> 1. complies with AS 1670.4; and 2. incorporates visual warning devices that: <ul style="list-style-type: none"> (e) operate upon the evacuation signal; and (f) display the words "EVACUATE" in red with letters conforming with the requirements of the Deemed-to-Satisfy Provisions of Part E4 for exit signs. <p>The "EVACUATE" signage is not proposed to be provided and will be performance justified.</p>	Capable of Complying
Spec G3.8 Clause 6	Standby power systems	If a required path of travel to an exit is within an atrium, a suitable alternative power supply must be provided to operate required safety systems, including sprinkler systems and fire hydrant pumps, air handling systems, alarms, warning and communication systems and emergency lighting circuits, in accordance with this clause. The building does not have stand by power systems in accordance with this clause and will be performance justified.	Capable of Complying
Spec G3.8 Clause 7	System for excluding smoke from fire isolated exits	Pressurisation of fire isolated exits is required in accordance with this clause.	Performance Solution
G6.1	Application of part	<p>This part applies to occupiable outdoor areas. Except for G6.2, the Deemed-to-Satisfy Provisions of this Part do not apply to:</p> <ul style="list-style-type: none"> an occupiable outdoor area of a sole-occupancy unit in a Class 2 or 3 building, Class 9c building or Class 4 part of a building; or 	Capable of Complying

BCA Clause	Title	Assessment and comment	Status
		<ul style="list-style-type: none"> an occupiable outdoor area with an area less than 10m². 	
G6.2	Fire hazard properties	<p>(g) Subject to (b), a lining, material or assembly in an occupiable outdoor area must comply with C1.10 as for an internal element.</p> <p>(h) The following fire hazard properties of a lining, material or assembly in an occupiable outdoor area are not required to comply with C1.10:</p> <ul style="list-style-type: none"> (iv) Average specific extinction area. (v) Smoke-Developed Index. (vi) Smoke development rate. (vii) Smoke growth rate index (SMOGRARC). 	Capable of Complying
G6.3	Fire separation	For the purposes of the Deemed-to-Satisfy Provisions of C2.7, C2.8 and C2.9, a reference to a storey includes an occupiable outdoor area, however a fire wall cannot be used to separate an occupiable outdoor area into different fire compartments.	Capable of Complying
G6.4	Provision for escape	For the purposes of the Deemed-to-Satisfy Provisions of Part D1, a reference to a storey or room includes an occupiable outdoor area.	Capable of Complying
G6.5	Construction of exits	For the purposes of the Deemed-to-Satisfy Provisions of Part D2, a reference to a storey or room includes an occupiable outdoor area.	Capable of Complying
G6.6	Firefighting equipment	Except for Clause 7(b)(i) of Specification E1.5, for the purposes of the Deemed-to-Satisfy Provisions of Part E1, a reference to a storey includes an occupiable outdoor area.	Capable of Complying
G6.7	Lift installations	For the purposes of the Deemed-to-Satisfy Provisions of Part E3, a reference to a storey includes an occupiable outdoor area.	Capable of Complying
G6.8	Visibility in an emergency, exit signs and warning systems	For the purposes of the Deemed-to-Satisfy Provisions of Part E4, a reference to a room includes an occupiable outdoor area.	Capable of Complying
G6.9	Light and ventilation	For the purposes of the Deemed-to-Satisfy Provisions of F4.4, F4.8 and F4.9, a reference to a room includes an occupiable outdoor area.	Capable of Complying

4.8. Special Use Buildings (BCA Section H)

Not applicable to this proposal

4.9. Energy Efficiency (BCA Section J – Class 3 and 5 to 9 Buildings)

4.9.1. External Fabric (Part J1)

BCA Clause	Title	Assessment and Comment	Status
J1.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to building elements forming the envelope of a Class 3 and 5 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.	Capable of Complying
J1.3	Roof and Ceiling Construction	A roof or ceiling that is part of the envelope must achieve the Total R-Value in accordance with this clause.	Capable of Complying
J1.4	Roof Lights	The rooflights are required to comply with the requirements of this provision.	Capable of Complying
J1.5	Walls & Glazing	External wall-glazing that are part of the envelope are required to comply with the requirements of this provision.	Capable of Complying
J1.6	Floors	Floors that are part of the envelope are required to comply with the requirements of this provision.	Capable of Complying

4.9.2. Building Sealing (Part J3)

BCA Clause	Status	Assessment and Comment	Status
NSW J3.1	Application of part	The Deemed-to-Satisfy Provisions of this Part apply to building elements forming the envelope of a Class 3 & 5 to 9 building in accordance with this clause.	Note
J3.2	Chimneys and flues	Solid fuel burning appliances are not proposed and the requirements of this provision do not apply.	Capable of Complying
J3.3	Roof Light	The rooflights are required to comply with the requirements of this provision.	Capable of Complying

BCA Clause	Status	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 in accordance with this clause.	Capable of Complying
J3.5	Exhaust Fans	An exhaust fan must be fitted with a sealing device such as a self-closing damper or the like when serving a: <ul style="list-style-type: none"> conditioned space; or a habitable room in climate zone 4, 6, 7 & 8. 	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.	Capable of Complying
J3.7	Evaporative Coolers	Evaporative coolers are not proposed.	Capable of Complying

4.9.3. Air Conditioning and Ventilation Systems (Part J5)

BCA Clause	Status	Assessment and Comment	Status
J5.2	Air Conditioning System control	Any proposed air-conditioning systems must be designed in accordance with this clause.	Capable of Complying
J5.3	Mechanical ventilation system control	Any proposed mechanical ventilation systems must be designed in accordance with this clause.	Capable of Complying
J5.4	Fan systems	Any proposed fan systems must be designed in accordance with this clause.	Capable of Complying
J5.5	Ductwork insulation	Ductwork and fittings in an air-conditioning system must be provided with insulation in accordance with this clause.	Capable of Complying
J5.6	Ductwork sealing	Ductwork in an air-conditioning system with a capacity of 3000 L/s or greater, not located within the only or last room served by the system, must be sealed against air loss in accordance with the duct sealing requirements of AS 4254.1 and AS 4254.2 for the static pressure in the system.	Capable of Complying
J5.7	Pump systems	Pumps and pipework that form part of an air-conditioning system are to be designed in accordance with this clause.	Capable of Complying

BCA Clause	Status	Assessment and Comment	Status
J5.8	Pipework insulation	Piping, vessels, heat exchangers and tanks containing heating or cooling fluid, where the fluid is held at a heated or cooled temperature, that are part of an air-conditioning system, other than in appliances covered by MEPS, must be provided with insulation in accordance with this clause.	Capable of Complying
J5.9	Space heating	A heater used for air-conditioning or as part of an air-conditioning system must be provided with insulation in accordance with this clause	Capable of Complying
J5.10	Refrigerant chillers	An air-conditioning system refrigerant chiller must comply with MEPS and the full load operation energy efficiency ratio and integrated part load energy efficiency ratio in Table J5.10a or Table J5.10b when determined in accordance with AHRI 551/591.	Capable of Complying
J5.11	Unitary air conditioning equipment	Unitary air-conditioning equipment including packaged air-conditioners, split systems, and variable refrigerant flow systems must comply with MEPS and for a capacity greater than or equal to 65 kW _r where required by this clause.	Capable of Complying
J5.12	Heat rejection equipment	The motor rated power of a fan in a cooling tower, closed circuit cooler or evaporative condenser must not exceed the allowances in Table J5.12. The fan in an air-cooled condenser must have a motor rated power in accordance with this clause.	Capable of Complying

4.9.4. Artificial Lighting and Power (Part J6)

BCA Clause	Status	Assessment and Comment	Status
J6.2	Artificial lighting	Artificial lighting is to be designed in accordance with this provision.	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.	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.	Capable of Complying

BCA Clause	Status	Assessment and Comment	Status
J6.5	Exterior artificial lighting	Artificial lighting around the perimeter of a building must be designed to comply with this clause.	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.	Capable of Complying
J6.7	Lifts	Lifts must be designed to comply with this clause.	Capable of Complying
J6.8	Escalators and moving walkways	Escalators and moving walkways must have the ability to slow to between 0.2 m/s and 0.05 m/s when unused for more than 15 minutes.	Capable of Complying

4.9.5. Heated Water Supply and Swimming Pool and Spa Pool Plant (Part J7)

BCA Clause	Status	Assessment and Comment	Status
J7.2	Hot Water Supply	A heated 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 Australia.	Capable of Complying

4.9.6. Facilities for Energy Monitoring (Part J8)

BCA Clause	Status	Assessment and Comment	Status
J8.3	Facilities for energy monitoring	Facilities for energy monitoring are required to be provided in accordance with this clause.	Capable of Complying

4.10. Energy Efficiency (BCA Section J – Class 2 and 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.

4.10.1. Building Fabric (NSW Part J(A)1)

BCA Clause	Status	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	noted

BCA Clause	Status	Assessment and Comment	Status
		<p>or Class 4 part of a building where a development consent specifies that insulation is to be provided.</p> <p>The DTS provisions for thermal breaks apply to all Class 2 buildings and Class 4 parts.</p>	
NSW J(A)1.2	Compliance with BCA	The sole occupancy units of a Class 2 building and a Class 4 part of the building must comply with the national BCA provisions of J02(b) to (d). Refer to J1.2, J1.3, J1.5 & J1.6 below.	noted
J1.2	Thermal construction — general	<p>Thermal insulation is required to be installed in accordance with AS/NZS 4859.1 and the general requirements of this clause.</p> <p>Reflective & bulk insulation is to be installed in accordance with this clause.</p>	Capable of Complying
J0.4	Roof thermal breaks	Roof thermal breaks are required in accordance with this clause.	Capable of Complying
J0.5	Wall thermal breaks	Wall thermal breaks are required in accordance with this clause.	Capable of Complying
J1.6 (c) & (d)	Floors – floor edge insulation	Floor edge insulation is to comply with this clause	Capable of Complying

4.10.2. Building Sealing (NSW Part J(A)2)

BCA Clause	Status	Assessment and Comment	Status
NSW J(A)2.1	Application of part	<p>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:</p> <ul style="list-style-type: none"> a building in climate zones 2 and 5 where the only means of air-conditioning is by using an evaporative cooler; or a permanent building opening, in a space where a gas appliance is located, that is necessary for the safe operation of a gas appliance; or. parts of those buildings that cannot be fully enclosed 	Capable of Complying
NSW J(A)2.2	Compliance with BCA provisions	<p>The following national provisions apply to the requirements of this clause:</p> <ul style="list-style-type: none"> J3.2 Chimneys and flues J3.3 Roof Lights 	Capable of Complying

BCA Clause	Status	Assessment and Comment	Status
		<ul style="list-style-type: none"> J3.4 External Doors and windows J3.5 Exhaust fans J3.6 Construction of roofs, walls and floors J3.7 Evaporative coolers 	
J3.2	Chimneys and Flues	Open solid fuel burning appliances are not proposed.	N/A
J3.3	Roof lights	Roof lights are to be designed to comply with this clause.	Capable of Complying
J3.4 (a) to (d)	Windows and doors	External windows and doors are required to be designed to comply with this clause.	Capable of Complying
J3.5	Exhaust fans	An exhaust fan must be fitted with a sealing device to prevent air infiltration in a conditioned space or in climate zones 4, 6, 7 and 8.	Capable of Complying
J3.6	Construction of roofs, walls and floors	Roofs, external walls, external floors and any openings are required to be designed and constructed to minimise air leakage.	Capable of Complying

4.10.3. Air-Conditioning and Ventilating System (NSW Part J(A)3)

BCA Clause	Status	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.	Capable of Complying
NSW J(A)3.2	Compliance with BCA provisions	Class 2 buildings and Class 4 parts of buildings must comply with national BCA provisions as identified below.	Capable of Complying
J5.2	Air Conditioning System control	Any proposed air-conditioning systems must be designed in accordance with this clause.	Capable of Complying
J5.3	Mechanical ventilation system control	Any proposed mechanical ventilation systems must be designed in accordance with this clause.	Capable of Complying
J5.4	Fan systems	Any proposed fan systems must be designed in accordance with this clause.	Capable of Complying
J5.5	Ductwork insulation	Ductwork and fittings in an air-conditioning system must be provided with insulation in accordance with this clause.	Capable of Complying

BCA Clause	Status	Assessment and Comment	Status
J5.6	Ductwork sealing	Ductwork in an air-conditioning system with a capacity of 3000 L/s or greater, not located within the only or last room served by the system, must be sealed against air loss in accordance with the duct sealing requirements of AS 4254.1 and AS 4254.2 for the static pressure in the system.	Capable of Complying
J5.7	Pump systems	Pumps and pipework that form part of an air-conditioning system are to be designed in accordance with this clause.	Capable of Complying
J5.8	Pipework insulation	Piping, vessels, heat exchangers and tanks containing heating or cooling fluid, where the fluid is held at a heated or cooled temperature, that are part of an air-conditioning system, other than in appliances covered by MEPS, must be provided with insulation in accordance with this clause.	Capable of Complying
J5.10	Refrigerant chillers	An air-conditioning system refrigerant chiller must comply with MEPS and the full load operation energy efficiency ratio and integrated part load energy efficiency ratio in Table J5.10a or Table J5.10b when determined in accordance with AHRI 551/591.	Capable of Complying
J5.11	Unitary air conditioning equipment	Unitary air-conditioning equipment including packaged air-conditioners, split systems, and variable refrigerant flow systems must comply with MEPS and for a capacity greater than or equal to 65 kW _r where required by this clause.	Capable of Complying
J5.12	Heat rejection equipment	<p>The motor rated power of a fan in a cooling tower, closed circuit cooler or evaporative condenser must not exceed the allowances in Table J5.12.</p> <p>The fan in an air-cooled condenser must have a motor rated power in accordance with this clause.</p>	Capable of Complying

4.10.4. Heated Water Supply (NSW Part J(A)4)

BCA Clause	Status	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.	Capable of Complying

BCA Clause	Status	Assessment and Comment	
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.	Capable of Complying
J7.2	Hot Water Supply	A heated 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 Australia.	Capable of Complying

4.10.5. Facilities for Energy Monitoring (NSW Part J(A)5)

BCA Clause	Status	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.	Capable of Complying
NSW J(A)5.3	Compliance with BCA provisions	Class 2 buildings must comply with the national provision of J8.3.	Capable of Complying
J8.3	Facilities for energy monitoring	Facilities for energy monitoring are required to be provided in accordance with this clause.	Capable of Complying

5. 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.

NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE	PROPOSED
1.	Access panels, doors & hoppers to fire resisting shaft	BCA 2019 C3.13 & AS 1905.1-2015 Amdt 1	YES
2.	Automatic fail-safe devices	BCA 2019 C3.6 sliding fire doors; Spec C3.4 automatic smoke doors; D2.21 (b)(iv) auto unlock of doors; D2.22 (re-entry from fire stairs)	YES
3.	Automatic fire detection and alarm system	BCA 2019 E2.2, Spec E2.2a Clause 5 (combination smoke alarm and smoke detection); Clause 6 (smoke detection for smoke control systems) & AS 1670.1-2018 or AS 3786-2014 Amdt 1 & 2	YES
4.	Automatic fire suppression system	BCA 2019 E1.5, Spec E1.5 & AS 2118.1-2017 Amdt 1 & AS 2118.6-2012	YES
5.	Building occupant warning system	BCA 2019 Spec E2.2a (Clause 7) & AS1670.1-2018 (Clause 3.22)	YES
6.	Emergency Lifts	BCA 2019 E3.4	YES
7.	Emergency lighting	BCA 2019 Clause E4.2, E4.3, E4.4, E1.8, Spec E1.8 Clause 12 (Emergency lighting for fire control room) & AS 2293.1 – 2018	YES
8.	Exit signs	BCA 2019 E4.5, E4.6, E4.8 Spec E4.8 & AS 2293.1- 2018	YES
9.	Fire control centre	BCA 2019 E1.8 & Spec E1.8	YES
10.	Fire dampers	BCA 2019 C3.12, C3.15 & AS1668.1-2015 Amdt 1, AS 1668.2-2012 Amdt 1 & 2	YES
11.	Fire doors	BCA 2019 C2.12 (separation of equipment); C2.13 (electricity supply systems); C3.3 (separation of external walls & associated openings in fire compartments); C3.4, Spec C3.4; C3.5 (doorways & fire walls); Clause C3.6 (sliding fire doors); C3.8 (openings in fire isolated exits), C3.11 (bounding construction); C3.13 (openings in shafts) & AS 1905.1 – 2015 Amdt 1	YES
12.	Fire rated lift landing doors	BCA 2019 C3.10 & AS 1735.11-1986	YES
13.	Fire Hose reel systems	BCA 2019 E1.4 & AS 2441-2005 Amdt 1	YES
14.	Fire hydrant systems	BCA 2019 E1.3 & AS 2419.1-2005 Amdt 1	YES
15.	Fire seals protecting openings in fire resisting components of the building	BCA 2019 C3.12, C3.15 & Spec C3.15, AS 4072.1-2005 Amdt 1, AS 1530.4.-2014	YES
16.	Fire shutters	BCA 2019 C3.4, C3.5 & Spec C3.4 & AS 1905.2-2005	YES

NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE	PROPOSED
17.	Fire windows	BCA 2019 C3.4 & Spec C3.4	YES
18.	Lightweight construction	BCA 2019 C1.8 & Spec C1.8	YES
19.	Mechanical air handling system	BCA 2019 E2.2, Table E2.2a; NSW Table E2.2b, Spec E2.2a, Spec E2.2b & AS 1668.1-2015 Amdt 1. Class 7a (carpark building mechanical ventilation systems) BCA 2019 E2.2, Table E2.2a and Clause 5.5 of AS 1668.1-2015 Amdt 1.	YES
20.	Portable fire extinguishers	BCA 2019 E1.6 & AS 2444-2001	YES
21.	Pressurising system	BCA 2019 Clause E2.2 & AS 1668.1-2015 Amdt 1	YES
22.	Smoke alarms & heat alarms	BCA 2019 E2.2, Spec E2.2a & AS 3786-2014 Amdt 1 & 2	YES
23.	Smoke exhaust system	BCA 2019 E2.2, Spec E2.2b & AS 1668.1-2015 Amdt 1	YES
24.	Smoke detectors & heat detectors	BCA 2019 C3.5 for automatic fire doors in fire walls; C3.6; C3.7 automatic fire doors in horizontal exits; C3.8 automatic fire doors to fire isolated exits; C3.11 automatic closing doors in bounding construction; Spec C3.4 automatic closing smoke doors; E2.2, Spec E2.2a, Spec E2.2b, AS 1670.1-2018 & AS 3786-2014 Amdt 1 & 2	YES
25.	Smoke doors	BCA 2019 C2.14, C3.4, Clause 2 Spec C2.5 & Spec C3.4.	YES
26.	Emergency warning and intercom system	BCA 2019 E4.9 & AS 1670.4-2018	YES
27.	Wall wetting sprinkler and drencher systems	BCA 2019 C3.4 & AS 2118.1-2017 & AS 2118.2-2010	YES
28.	Warning and operational signs	EPA Regulation 2000 (Clause 183), D2.23 (signs on exit doors), E3.3 (lifts), C3.6 sliding fire doors	YES
29.	Zone pressurisation system	BCA 2019 E2.2 & AS 1668.1-2015 Amdt 1	YES

6. SUMMARY OF NON-COMPLIANCE ISSUES

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 A2.2.

Spec C1.1

The BCA requires Class 7b Storage areas to be constructed with an FRL of four hours. A Fire Engineered Performance Solution may be used to justify the reduction in the required FRL's for the Class 7b storage areas to that of a Class 7a carparking.

The BCA requires roof lights to be provided with an FRL or non-combustible and be not less than 6m from any opening that projects above the roof. The proposed roof light (skylight) to Podium 1B is located less than 6m to Level 3 residential apartments.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

C2.14

The BCA requires that a public corridor greater than 40 m in length to be divided with smoke-proof walls complying with Clause 2 of Specification C2.5.

Generally, the residential public corridors are less than 40m with the exception of the following areas:

- Building 1B.2 Level 6 & 7 measured 43m >40m;

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.2

As the proposed building has an effective height of greater than 25m two required exits are required to be provided from all areas of the building. Generally, two exits have been provided to all areas with the exception of the following:

Basement 3

- Bicycle parking rooms
- Plant rooms

Basement 2

- Bicycle parking room (southern)
- Plant rooms

Basement 1

- Common waste
- Storage rooms

Basement 1 upper

- Plant room

Building 1A.1

- Podium (level 3)

Building 1B.1

- Ground floor (small retail)

- Level 1 retail

Building 1B.2

- Level 1 Amenities
- Level 8 western lobby

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.4

The BCA requires the 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

The BCA requires the Class 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 exit travel distances in the following areas exceed DtS provisions:

Basement 3

- 35.6m >20m to POC
- 58m >40m maximum distance to an exit

Basement 2

- 30m >20m to POC
- 58m >40m maximum distance to an exit

Basement 1

- 36.5m >20m to POC
- 61m >40m maximum distance to an exit

Basement 1 upper

- 38.8m >20m to POC

Building 1A1

- Residential Level 3, 4, 5 & 6 approximate travel distance of 10.8m > 6m
- Residential Level 7 & 8 approximate travel distance of 9.2m > 6m
- Roof 25m >20m to POC

Building 1A2

- Residential Level 3, 4, 5, 6, 7 & 8 approximate travel distance of 12m > 6m
- Roof 30m >20m to POC

Building 1B1

- Residential Level 1 & 1 Mezzanine approximate travel distance of 6.5m > 6m
- Residential Level 2,3 & 4 approximate travel distance of 11.4m > 6m

- Residential Level 5, 6, 7 approximate travel distance of 8m > 6m
- Roof 23m >20m to POC

Building 1B2

- Residential Level 1 & 1 Mezzanine approximate travel distance of 6.5m > 6m
- Residential Level 3 & 4 approximate travel distance of 10.4m > 6m
- Residential Level 5, 6, 7 approximate travel distance of 10.9m > 6m
- Roof 27m >20m to POC

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.5

The BCA requires alternative exits to be distributed uniformly around the storey and are not to be less than 9m apart, and not more than 45m apart (residential) or in all other cases 60m apart.

The following exits are located **more than 60m** apart and are not in accordance with DtS provision:

Basement 3

- 65m >60m between alternate exits

Basement 2

- 63m >60m between alternate exits

Basement 1

- 77.1m >60m between alternate exits

The following exits are located **less than 9m apart** and are not in accordance with DtS provision:

Building 1A2

- The commercial fire isolated scissor stair from Level 2.

Building 1B2

- The residential fire isolated scissor stair from Level 1 and above.

Building 1B3

- The fire isolated scissor stair from podium 1B.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.7

The BCA requires a fire isolated stair to discharge directly, or by way of its own fire-isolated passageway to a road or open space.

The following fire isolated stairs discharge into a covered area that is open less than 1/3 of its perimeter:

Building 1A.1

- Discharge to eastern façade adjacent new private road;

Building 1B.2

- Discharge to western façade adjacent the private park (RT.1B07)

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D2.12

The BCA requires roof that forms the open area on the podium floors to have a minimum FRL of 120/120/120 and no opening through this slab are permitted within 3m of the discharge pathway.

Podium 1B is provided with a roof light (skylight) that is less than 3m of the path of travel of persons using an exit and is not in accordance with this Clause.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

E1.5

A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5.

The sprinkler valve room does not open directly to a road or open space and is located in basement 1.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

Part G3

The BCA requires Atrium construction to be in accordance with Part G3. The proposed traveller to Retail Plaza 1 – Building 1B connects four storeys and is deemed to be an atrium in accordance with this Clause.

The bounding walls of the traveller and the fire and smoke control systems are proposed to be Performance Justified to achieve compliance with this Part.

7. 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.

ATTACHMENT 1

Assessed plans prepared by Turner

Plan Title	Drawing No	Revision	Date
GA PLANS OVERALL BASEMENT 03 & 02	DA-110-006	03	6/5/20
GA PLANS OVERALL BASEMENT 02 & 01	DA-110-007	03	6/5/20
GA PLANS OVERALL BASEMENT 01, MEZZ & LEVEL 01	DA-110-008	03	6/5/20
GA PLANS OVERALL MEZZANINES, LEVEL 01 & 02	DA-110-010	03	6/5/20
GA PLANS OVERALL LEVEL 01, 02 & 03	DA-110-020	03	6/5/20
GA PLANS OVERALL LEVEL 01, 02, 03 & 04	DA-110-030	03	6/5/20
GA PLANS OVERALL LEVEL 02, 03, 04 & 05	DA-110-040	03	6/5/20
GA PLANS OVERALL LEVEL 03, 04, 05 & 06	DA-110-050	03	6/5/20
GA PLANS OVERALL LEVEL 04, 05, 06 & 07	DA-110-060	03	6/5/20
GA PLANS OVERALL LEVEL 05, 06, 07 & 08	DA-110-070	03	6/5/20
GA PLANS OVERALL LEVEL 06, 07, 08 & ROOF	DA-110-080	03	6/5/20
GA PLANS OVERALL LEVEL 07, 08 & ROOF	DA-110-090	03	6/5/20
GA PLANS OVERALL LEVEL 08 & ROOF	DA-110-100	03	6/5/20
GA PLANS OVERALL ROOF LEVEL	DA-110-110	03	6/5/20
GA PLANS OVERALL COMBINED ROOF PLAN	DA-110-120	03	6/5/20

A background graphic consisting of a dark blue diagonal band across the page. Behind this band is a grayscale image of a city skyline with several skyscrapers. Overlaid on the entire background is a pattern of white, isometric 3D rectangular blocks of varying sizes, some solid and some outlined, creating a sense of depth and architectural structure.

Building Code of Australia

Assessment Report

**Project Address: Tallawong Station Precinct South,
1-15 & 2-12 Conferta Avenue, Rouse Hill**

Building: 2A

Client: Deicorp Projects (Tallawong Station) P/L

Report Number: 190427

Revision: R1.0

15 MAY 2020

REPORT REVISION HISTORY

Revision	Date Issued	Revision Description	
01	15/05/2020	BCA Draft Report	
		Prepared by	Verified by
		Tariq Sheikh <i>Building Surveyor</i>	Brendan Bennett <i>A1 Certifier</i>

Disclaimer

This report has been prepared by City Plan Services P/L with input from a number of other expert consultants (if relevant). To the best of our knowledge, the information contained herein is neither false nor misleading and the contents are based on information and facts that were correct at the time of writing. City Plan Services P/L accepts no responsibility or liability for any errors, omissions or resultant consequences including any loss or damage arising from reliance in information in this publication.

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TABLE OF CONTENTS

1. Executive Summary	3
2. Introduction	6
2.1. General	6
2.2. Purpose of Report	6
2.3. Report Basis	6
2.4. Exclusions and Limitations	6
3. Building Code of Australia Assessment.....	7
3.1. Classification (Part A6)	7
3.2. Effective Height (Schedule 3)	7
3.3. Rise in Storeys (C1.2)	7
3.4. Type of Construction (C1.1)	7
3.5. Climate Zone (A1.1)	7
3.6. Floor Area and Volume Limitations (Table C2.2)	7
4. Building Code of Australia Assessment.....	8
4.1. Structure (BCA Section B)	8
4.2. Fire Resistance (BCA Section C)	9
4.3. Fire-Resisting Construction (Specification C1.1).....	15
4.4. Access and Egress (BCA Section D)	16
4.5. Services and Equipment (BCA Section E)	23
4.6. Health and Amenity (BCA Section F)	25
4.7. Ancillary Provisions (BCA Section G).....	28
4.8. Special Use Buildings (BCA Section H)	28
4.9. Energy Efficiency (BCA Section J – Class 3 and 5 to 9 Buildings)	28
4.10. Energy Efficiency (BCA Section J – Class 2 and 4 Buildings)	28
4.10.1. Building Fabric (NSW Part J(A)1).....	29
4.10.2. Building Sealing (NSW Part J(A)2).....	29
4.10.3. Air-Conditioning and Ventilating System (NSW Part J(A)3)	30
4.10.4. Heated Water Supply (NSW Part J(A)4)	32
4.10.5. Facilities for Energy Monitoring (NSW Part J(A)5)	32
5. Fire Safety Schedule	33
6. Summary of Non-Compliance Issues.....	35
7. Conclusion	37
Attachment 1	38

1. EXECUTIVE SUMMARY

The development, the subject of this report, is for the proposed **Building (2A)** forming part of the Tallawong Station Precinct South development. The building consists of four residential blocks with three levels of associated basement carparking.

This report has been prepared, on behalf of Deicorp Projects (Tallawong Station) P/L, to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the planning development application documentation for the proposed works. Unless specifically noted this assessment and report deals with the proposed building 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 A2.2.

D1.2

As the proposed building has an effective height of greater than 25m two required exits are required to be provided from all areas of the building. Generally, two exits have been provided to all areas with the exception of the following:

Basement 3

- Storage cages rooms

Mezzanine

- Plant rooms

Building 2A2

- Level 2 & 4

Building 2A3

- Level 2 & 4

Building 2A1

- Ground floor lobby (northern)

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.4

The BCA requires the 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

The BCA requires the Class 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 exit travel distances in the following areas exceed DtS provisions:

Basement 2

- 30m >20m to POC (from centre storage)

Basement 1

- 27m >20m to POC (adjacent fire sprinkler tank)

Building 2A1

- Residential Levels 2 to 7 approximate travel distance of 10.4m > 6m
- Residential Level 8 approximate travel distance of 7.7m > 6m

Building 2A2

- Residential Levels 2 to 3 approximate travel distance of 9m > 6m

Building 2A3

- Residential Levels 2 to 8 approximate travel distance of 9m > 6m

Building 2A4

- Residential Levels 2 to 7 approximate travel distance of 10.5m > 6m
- Residential Level 8 approximate travel distance of 7.3m > 6m

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.5

The BCA requires alternative exits to be distributed uniformly around the storey and are not to be less than 9m apart, and not more than 45m apart (residential) or in all other cases 60m apart.

The following exits are located less than 9m apart and are not in accordance with DtS provision:

Mezzanine

- The fire isolated scissor stair from mezzanine to loading dock level

Building 2A1

- The residential fire isolated scissor stair from Level 2 and above.

Building 2A2

- The residential fire isolated scissor stair from Level 3 and above.

Building 2A3

- The residential fire isolated scissor stair from Level 3 and above.

Building 2A4

- The residential fire isolated scissor stair from Level 1 and above.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

E1.5

A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5.

The sprinkler valve room is located in basement 1 and does not open directly to a road or open space

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

2. INTRODUCTION

2.1. General

This report serves as an assessment for compliance with the Building Code of Australia in respect to proposed development, located at 1-15 & 2-12 Conferta Avenue Rouse Hill, within the local government area of Blacktown Council. The development consents of two stages as follows:

- Stage 1:
- Residential Building 1A
 - Residential Building 1B
 - Full Retail / Commercial
 - Basement carparking
 - Private Park
- Stage 2:
- Residential Building 2A (subject of this BCA report)**
 - Residential Building 2B & 2C & 2E
 - Residential Building 2D

2.2. Purpose of Report

This report has been prepared, on behalf of Deicorp Projects (Tallawong Station) P/L, to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the development application documentation for the proposed works for the **Residential Building 2A**.

2.3. Report Basis

The following information has been directly referenced or relied upon in the preparation of this report:

- (a) Architectural plans prepared by Turner, as identified in the attached Appendix 1.
- (b) The Building Code of Australia 2019, inclusive of NSW variations + Amendment 1 (where relevant) (See Note 1 & 2);
- (c) Environmental Planning and Assessment Act 1979.
- (d) Environmental Planning and Assessment Regulation 2000.

Note1: Building Code of Australia (BCA) 2019 was adopted in NSW on 1 May 2019. 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.

Note 2 Building Code of Australia (BCA) 2019 Amendment 1 is expected to be adopted from 1 June 2020.

2.4. Exclusions and Limitations

This report does not consider the following, except where specifically mentioned:

- Structural design.
- The Disability Discrimination Act 1992 (access for people with disabilities has been assessed in accordance with Part D3 of the BCA, however additional measures may be required to be provided subject to the Disability Discrimination Act 1992)
- Disability (Access to Premises – Building) Standards 2010.

3. BUILDING CODE OF AUSTRALIA ASSESSMENT

3.1. Classification (Part A6)

The proposed building consists of:

Building	Class	Use	Area
Building 2A	7a	Carparking	Basement levels 03,02,01
	7b	Storage & Loading dock	Mezzanine (storage), Part Level 01
	2	Residential	Level 01 +

Note: The carpark is shared by the four towers and therefore the building has been deemed a united building for the purpose of the BCA.

3.2. Effective Height (Schedule 3)

The proposed building will have an effective height of **27.75m** being greater than 25m.

(RL83.35 – 55.60 = 27.75m)

3.3. Rise in Storeys (C1.2)

The proposed building will consist of a rise in storeys of ten (10).

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.

3.5. Climate Zone (A1.1)

The building is located within Climate Zone 5

3.6. Floor Area and Volume Limitations (Table C2.2)

The building is compliant with maximum floor area and volume limits of:

Class 7a - The carpark is to be sprinkler protected and as such there are no maximum floor area or volume limitations for this area.

Class 2 - The Class 2 portions of the building are not subject to floor area and volume limitations of C2.2 as Table 3 of Specification C1.1 and Clause C3.11 of the NCC regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 classifications.

4. 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 in accordance with this clause. The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.	Capable of Complying
B1.2	Determination of individual actions	The magnitude of individual actions must be determined in accordance with this clause. The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.	Capable of Complying
B1.4	Determination of structural resistance of materials & forms of construction	<p>The structural resistance of the following materials and forms of construction for the following elements are to be in accordance with the standards nominated in this clause;</p> <ul style="list-style-type: none"> (a) Masonry (b) Concrete (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 <p>The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.</p>	Capable of Complying
B1.5	Structural Software	Structural software used in computer aided design is to comply with the requirements of this provision.	Capable of Complying
B1.6	Construction of buildings in flood hazard areas	A Class 2, 3, 4, 9a or 9c building is required to comply with the ABCB standards for Construction of Buildings in Flood Hazard Areas.	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.	Capable of Complying
C1.2	Calculation in rise in storeys	The building contains a RIS of ten (10).	Capable of Complying
C1.8	Lightweight construction	Any proposed fire resisting lightweight walls or fire resisting lightweight protection to steel columns is to comply with Specification C1.8.	Capable of Complying
C1.9	Non-combustible building elements	<ol style="list-style-type: none"> In a building required to be Type A or B construction, the following building elements and their components must be non-combustible: <ol style="list-style-type: none"> External walls and common walls, including all components incorporated in them including the façade covering, framing and insulation. The flooring and floor framing of lift pits. Non-loadbearing internal walls where they are required to be fire-resisting. A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in – <ol style="list-style-type: none"> A building required to be Type A construction; and A building required to be Type B construction, subject to C2.10, in: <ol style="list-style-type: none"> a Class 2, 3 or 9 building; and a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys. A loadbearing internal wall and loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification C1.1. The requirements of (1) and (2) do not apply to gaskets, caulking, sealants, termite management systems, glass, thermal breaks associated with glazing systems & dampproof courses. The following materials may be used wherever a non-combustible material is required: <ol style="list-style-type: none"> Plasterboard. 	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<ul style="list-style-type: none"> (b) Perforated gypsum lath with a normal paper finish. (c) Fibrous-plaster sheet. (d) Fire-reinforced cement sheeting. (e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. (f) Sarking that does not exceed 1 mm thickness and have a flammability index of not greater than 5. (g) Bonded lamination materials where – <ul style="list-style-type: none"> (i) Each lamina, including any core, is non-combustible; and (ii) Each adhesive layer does not exceed 1mm in thickness and the total thickness of the adhesive layers does not exceed 2mm; and (iii) The Spread of Flame Index and the Smoke-Developed Index of the bonded laminated materials as a whole do not exceed 0 and 3 respectively. 	
C1.10	Fire hazard properties	Proposed internal linings, materials and assemblies 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.	Capable of Complying
C1.13	Fire protected timber: Concession	This concession is not available.	N/A
C1.14	Ancillary Elements	<p>An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following:</p> <ol style="list-style-type: none"> 1. An ancillary element that is non-combustible. 2. A gutter, downpipe or other plumbing fixture or fitting. 3. A flashing. 4. A grate or grille not more than 2m² in area associated with a building service. 5. An electrical switch, socket-outlet, cover plate or the like. 6. A light fitting. 	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<p>7. A required sign.</p> <p>8. A sign other than one provided under (1) or (7) that-</p> <ul style="list-style-type: none"> (a) Achieves a ground number of 1 or 2; and (b) Does not extend beyond one storey; and (c) Does not extend beyond one fire compartment; and (d) Is separated vertically from other signs permitted under (8) by at least 2 storeys. <p>9. An awning, sunshade, canopy, blind or shading hood other than one provided under (1) that –</p> <ul style="list-style-type: none"> (a) Meets the requirements of Table 4 of Specification C1.10 as for an internal element; and (b) Serves a storey – <ul style="list-style-type: none"> (i) At ground level; or (ii) Immediately above a storey at ground level; and (iii) Does not serve an exit, where it would render the exit unusable in a fire. <p>10. A part of a security, intercom or announcement system.</p> <p>11. Wiring.</p> <p>12. A paint, lacquer or a similar finish.</p> <p>13. A gasket, caulking, sealant or adhesive directly associated with (1) to (11).</p>	
C2.2	General floor area and volume limitations	<p>The fire compartment sizes meet the requirements of this Clause</p> <p>Class 7a - The carpark is to be sprinkler protected and as such there are no maximum floor area or volume limitations for this area.</p> <p>Class 2 - The Class 2 portions of the building are not subject to floor area and volume limitations of C2.2 as Table 3 of Specification C1.1 and Clause C3.11 of the NCC regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 classifications.</p>	Capable of Complying
C2.6	Vertical separation of openings in external walls	The building is required to be protected with sprinklers throughout and therefore vertical separation is not required.	N/A
C2.7	Separation by fire walls	Fire walls are required to be designed to comply with the clause.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<p>The following fire walls are proposed:</p> <ol style="list-style-type: none"> 1. Between the mezzanine level (storage) and the carpark (2A) 2. The loading dock and residential level 1(2A1) 3. The loading dock and the carpark 4. The carpark and residential lobby (2A1) 	
C2.8	Separation of classifications in the same storey	<p>If a building has parts of different classifications located alongside one another in the same storey,</p> <ul style="list-style-type: none"> ▪ each building element in that storey must have the higher FRL prescribed in Specification C1.1 for that element for the classifications concerned; or ▪ the parts must be separated in that storey by a fire wall. <p>The proposed fire walls are identified in C2.7 above.</p>	Capable of Complying
C2.9	Separation of classifications in different stories	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.	Capable of Complying
C2.10	Separation of lift shafts	The lift shafts are required to be fire separated from the rest of the building in accordance with this clause.	Capable of Complying
C2.11	Stairways and lifts in one shaft	The stairs and lift shaft are located in different shafts.	Capable of Complying
C2.12	Separation of equipment	<p>The following equipment are required to be fire separated from the remainder of the building by 120/120/120 FRL construction:</p> <ul style="list-style-type: none"> ▪ Lift motor rooms and lift control panels. ▪ Emergency Generators. ▪ Central smoke control plant. ▪ Boilers. ▪ Battery systems. <p>The building does not contain any of the above room and the requirements of this provision do not apply.</p>	N/A
C2.13	Electricity supply system	The electricity substation is required to be fire separated from the remainder of the building. The BCA requires 2 hr separation however the electricity authority generally requires 3 hr separation.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<p>A substation kiosk is provided adjacent the loading dock of building (2A1).</p> <p>Any main switchboard located in the building which sustains emergency equipment operating in emergency mode, is required to be fire separated from the remainder of the building by 2 hr fire resisting construction.</p> <p>Construction should achieve an FRL of 120/120/120, doorways are required achieve an FRL of -/120/30 and to be self-closing and all penetrations in enclosures are to be appropriately fire stopped.</p> <p>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.</p> <p>Electrical conductors and switchboards are required to comply with this clause.</p>	
C2.14	Public corridors in Class 2 & 3 buildings	<p>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 walls complying with smoke proof walls complying with Clause 2 of Specification C2.5.</p> <p>Corridors are less than 40m.</p>	Capable of Complying
C3.2	Protection of openings in external walls	Openings are located more than 3m from the allotment boundary.	Capable of Complying
C3.3	Separation of external walls and associated openings in different fire compartments	The building does not contain separate fire compartments which are applicable to this clause.	Capable of Complying
C3.4	Acceptable method of protection	<p>Windows requiring protection must be protected by one of the means:</p> <ul style="list-style-type: none"> External wall-wetting sprinklers with windows that are automatically or permanently fixed in the closed position. -/60/- fire windows (Automatic or permanently fixed in the closed position) -/60/- automatic fire shutters 	Note

BCA Clause	Title	Assessment and Comment	Status
		<ul style="list-style-type: none"> Doorways which require protection can be protected externally with wall wetting sprinklers with doors that are self-closing or automatic closing, or -/60/30 fire doors which are self-closing or automatic closing. <p>Fire doors, fire windows and fire shutters are required to comply with Specification C3.4.</p>	
C3.5	Doorways in fire walls	Doors in fire walls are to have the FRL's and features required by this clause.	Capable of Complying
C3.6	Sliding fire doors	No sliding fire doors proposed.	N/A
C3.7	Protection of doorways in horizontal exits	The building does not contain horizontal exits and the provisions of this part do not apply.	N/A
C3.8	Openings in fire isolated exits	The fire-isolated exits are required to be protected by -/60/30 self-closing fire doors.	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.	Capable of Complying
C3.10	Fire isolated lift shafts	<p>The lift doors are required to be -/60/- fire doors and comply with this provision.</p> <p>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.</p>	Capable of Complying
NSW C3.11	Bounding construction	<p>Doors from sole occupancy units opening into enclosed public corridors are required to be protected by -/60/30 self-closing fire doors.</p> <p>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.</p>	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.	Capable of Complying
C3.15	Openings for service installations	Services that penetrate a building element that is required to have an FRL must be protected utilising one of the options listed under this clause. Test certificates describing each individual service penetration and configuration	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		will be required at the construction certificate stage.	
C3.16	Construction joints	Construction joints in building elements required to be fire resistant are required to be protected in accordance with this clause.	Capable of Complying
C3.17	Columns protected with lightweight construction to achieve an FRL	Any columns protected with fire resisting lightweight construction to achieve an FRL must be installed in a manner that's identical to the tested prototype.	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	Exposure to fire source features is to be determine in accordance with this cause.	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.	Capable of Complying
2.3	Lintels	Lintels are to be protected as required by the requirements of this clause.	Capable of Complying
2.4	Method of attachment not to reduce the fire resistance of building elements	The method of attaching or installing a finish, lining, ancillary element or service installation to the building element must not reduce the fire-resistance of that element to below that required.	Capable of Complying
2.5	General concessions	Roof top plant rooms need not have an FRL if they are non-combustible and they only contain equipment specified in this clause.	Capable of Complying
2.6	Mezzanine floors: concession	The building does not contain mezzanines that are subject to this provision.	N/A
2.7	Enclosure of shafts	Fire rated shafts are to be enclosed at the top and bottom in accordance with the requirements of this clause.	Capable of Complying
3.1	Fire resistance of building elements	Generally building elements are required to achieve the following FRL's; Carpark & ancillary storage: 2 hrs Storage & loading dock: 4 hrs Residential: 1½ hrs	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		A loadbearing internal wall and a loadbearing fire wall must be of concrete or masonry.	
3.5	Roof: Concession	<p>The roof is not required to achieve an FRL as the building:</p> <ul style="list-style-type: none"> has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 installed throughout; or has a rise in storeys of 3 or less; or is of Class 2 or 3; or has an effective height of not more than 25 m and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes 	Capable of Complying
3.6	Roof lights	Roof lights comply with this clause.	Capable of Complying
3.7	Internal wall and column: concession	Concession is not available due to the effective height of the building.	N/A

4.4. Access and Egress (BCA Section D)

BCA Clause	Title	Assessment and Comment	Status
D1.2	Number of exits required	<p>Two exits are to be available to all areas of the building.</p> <p>Generally, two exits have been provided to all areas with the exception of the following:</p> <p>Basement 3</p> <ul style="list-style-type: none"> Storage cages rooms <p>Mezzanine</p> <ul style="list-style-type: none"> Plant rooms <p>Building 2A2</p> <ul style="list-style-type: none"> Level 2 & 4 <p>Building 2A3</p> <ul style="list-style-type: none"> Level 2 & 4 <p>Building 2A1</p> <ul style="list-style-type: none"> Ground floor lobby (northern) 	Performance Solution

BCA Clause	Title	Assessment and Comment	Status
		<p>The following areas does not provide an exit and does not comply with the provisions of this Clause:</p> <p>Building 2A3 & 2A4</p> <ul style="list-style-type: none"> Lift lobby Level 4 	Does not Comply
D1.3	When fire isolated exits are required	Stairways that service the basement levels and the upper residential levels are all fire-isolated stairways.	Capable of Complying
D1.4	Exit travel distances	<p>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.</p> <p>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.</p> <p>Class 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.</p> <p>The exit travel distances in the following areas exceed DtS provisions:</p> <p>Basement 2</p> <ul style="list-style-type: none"> 30m >20m to POC (from centre storage) <p>Basement 1</p> <ul style="list-style-type: none"> 27m >20m to POC (adjacent fire sprinkler tank) <p>Building 2A1</p> <ul style="list-style-type: none"> Residential Levels 2 to 7 approximate travel distance of 10.4m > 6m Residential Level 8 approximate travel distance of 7.7m > 6m <p>Building 2A2</p> <ul style="list-style-type: none"> Residential Levels 2 to 3 approximate travel distance of 9m > 6m <p>Building 2A3</p> <ul style="list-style-type: none"> Residential Levels 2 to 8 approximate travel distance of 9m > 6m <p>Building 2A4</p>	Performance Solution

BCA Clause	Title	Assessment and Comment	Status
		<ul style="list-style-type: none"> Residential Levels 2 to 7 approximate travel distance of 10.5m > 6m Residential Level 8 approximate travel distance of 7.3m > 6m 	
D1.5	Distance between alternative exits	<p>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.</p> <p>The distance between alternative exits are less than 60m and capable of complying.</p> <p>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.</p> <p>The following exits are located less than 9m apart and are not in accordance with DtS provision:</p> <p>Mezzanine</p> <ul style="list-style-type: none"> The fire isolated scissor stair from mezzanine to loading dock level <p>Building 2A1</p> <ul style="list-style-type: none"> The residential fire isolated scissor stair from Level 2 and above. <p>Building 2A2</p> <ul style="list-style-type: none"> The residential fire isolated scissor stair from Level 3 and above. <p>Building 2A3</p> <ul style="list-style-type: none"> The residential fire isolated scissor stair from Level 3 and above. <p>Building 2A4</p> <ul style="list-style-type: none"> The residential fire isolated scissor stair from Level 1 and above. 	Performance Solution
NSW D1.6	Dimensions of exits and paths of travel to exits	A required exit or path of travel to an exit are required to be a minimum unobstructed height of not less than 2m and minimum width of 1m.	Capable of Complying
D1.7	Travel via fire isolated exits	<p>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:</p> <ul style="list-style-type: none"> a public corridor, public lobby or the like; or a sole-occupancy unit occupying all of a storey; or 	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<ul style="list-style-type: none"> a sanitary compartment, airlock or the like. <p>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;</p> <p>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.</p>	
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	A non-fire-isolated stair serving as a required exit must provide a continuous means of travel by its own flights and landings to a level at which egress to a road or open space is available.	N/A
D1.10	Discharge from exits	<p>The discharge point of the fire isolated exits is required to be connected to the road by a path that is not less than the exit width to which the external path serves.</p> <p>Where there is a change of level, the path must contain a complying stair or ramp.</p>	Capable of Complying
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.	Note
D1.13	Number of persons accommodated	The building is a residential flat building with associated carparking. It is reasonable that less than 100 people per stair core will be accommodated in the building.	Capable of Complying
D1.16	Plant rooms and lift rooms: concession	A ladder may be used in lieu of a stairway to provide egress from a plant room with a floor area less than 100m ² or plant or lift machine rooms with a floor area of less than 200 m ² , for all but one point of egress.	Note

BCA Clause	Title	Assessment and Comment	Status
		Ladders are required to comply with AS1657 and the requirement of this clause.	
D1.17	Access to lift pits	Access to lift pipes is to be in accordance with this clause.	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.	Capable of Complying
D2.3	Non-fire isolated stairs and ramps	It is assumed that any non-fire-isolated stairway will be concrete.	N/A
D2.4	Separation of rising and descending stair flights	The proposal provides connected rising and descending stairs however they are separated in with smoke proof construction. Rising and descending fire-isolated stairs are required to be separated with non-combustible construction and smoke proof construction in accordance with Clause 2 of Specification C2.5.	Capable of Complying
D2.7	Installation in exits and paths of travel	Access to service shafts and services other than to firefighting 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 the clause, are permitted to be installed in a fire isolated exit.	Capable of Complying
D2.8	Enclosure of space under stairs and ramps	No enclosure of space under stairs proposed.	N/A
D2.9	Width of stairways	A required stairway or ramp that exceeds 2m in width is counted as having a width of only 2m unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2m	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
D2.10	Pedestrian ramps	<p>A ramp must:</p> <ol style="list-style-type: none"> 1. where the ramp is also serving as an accessible ramp under Part D3, be in accordance with AS1428.1; or 2. in any other case, have a gradient not steeper than 1:8. <p>The floor surface of a ramp must have a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS4586.</p>	Capable of Complying
D2.11	Fire-isolated passageways	The fire rating of fire-isolated passageways is required to be achieved from the outside.	Capable of Complying
D2.12	Roof as open space	No discharge to the roof proposed.	N/A
NSW D2.13	Goings & risers	<p>Goings and risers are to be designed to comply with this clause including:</p> <ul style="list-style-type: none"> ▪ going and riser dimensions; and ▪ slip resistance. 	Capable of Complying
D2.14	Landings	Landings are to be designed in accordance with this clause.	Capable of Complying
NSW D2.15	Thresholds	Thresholds are to comply with this clause.	Capable of Complying
NSW D2.16	Barriers to prevent falls	Balustrades are to be designed to comply with this clause.	Capable of Complying
D2.17	Handrails	<p>Handrails are required along at least one side of all stairways or ramps, or on both sides of stairs or ramps with a total width of more than 2m.</p> <p>Handrails are required to be installed in accordance with AS1428.1-2009 except for fire-isolated stairs.</p>	Capable of Complying
D2.18	Fixed platforms, walkways, stairways & ladders	Fixed platforms, walkways, stairways & ladders are to be designed in accordance with this clause.	Note
NSW D2.19	Doorways and doors	<p>The sliding doors leading directly to the road or open space must be capable of being opened manually under a force of not more than 110 N.</p> <p>Power-operated doorway required to be opened manually under a force of not more than 110 N and open automatically if it leads directly to a road or open space.</p>	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
D2.20	Swinging doors	<p>A swinging door must not encroach and impede the path of travel/exit width by more than 500mm at any part of its swing. When in the fully open position, it must not encroach into the path of travel/exit width by more than 100mm.</p> <p>Doors in or serving as a required exit must swing in the direction of egress unless they are subject to the concession in this clause.</p>	Capable of Complying
NSW D2.21	Operation of latch	Doors in required exits or forming part of a required exits must be readily openable without a key from the egress side, by a single hand downward action on a single device which is located between 900mm and 1.1m from the floor and comply with the requirements of this clause.	Capable of Complying
D2.22	Re-entry from fire-isolated exits	<p>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:</p> <ul style="list-style-type: none"> ▪ 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 ▪ 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. 	Capable of Complying
D2.23	Signs on doors	A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to exit door and smoke doors, in accordance with this clause.	Capable of Complying
D2.24	Protection of openable windows	<p>A window opening must be provided with protection, in accordance with this clause, if the floor below the window is 2 m or more above the surface beneath in a bedroom in a Class 2.</p> <p>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 have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing.</p>	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
Part D3 – Access for People with a Disability			
This part is to be covered by a separate Accessibility Report.			

4.5. Services and Equipment (BCA Section E)

BCA Clause	Title	Assessment & Comment	Status
E1.3	Fire hydrants	<p>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 AS 2419.1. Where internal hydrants are provided, they must only serve the storey in which they are located.</p> <p>Ensure internal hydrants within FIS are provided with sufficient space.</p> <p>Full details to be provided at CC stage.</p>	Capable of Complying
E1.4	Fire hose reels	<p>Fire hose reels are to be provided to the non-residential areas. The fire hose reel system must be installed in accordance with this clause and AS 2441.</p> <p>Full details to be provided at CC stage.</p>	Capable of Complying
E1.5	Sprinklers	<p>A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5.</p> <p>The sprinkler valve room is located in basement 1 and does not open directly to a road or open space.</p> <p>Full details to be provided at CC stage.</p>	Performance Solution
E1.6	Portable fire extinguishers	<p>The building is to be provided with portable fire extinguishers.</p> <p>Within the residential areas a 2.5kg ABE powder extinguisher is to be located within 10m of all unit entry doors.</p> <p>Portable fire extinguishers are to comply with this provision and sections 1, 2, 3 and 4 of AS 2444.</p> <p>Full details to be provided at CC stage.</p>	Capable of Complying
E1.8	Fire control centres	<p>A fire control centre is required in accordance with Specification E1.8.</p>	Capable of Complying

BCA Clause	Title	Assessment & Comment	Status
E1.9	Fire precautions during construction	<p>In a building under construction not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stairway or exit.</p> <p>After the building has reached an effective height of 12 m the required fire hydrants and fire hose reels must be operational in at least every storey that is covered by the roof or the floor structure above, except the 2 uppermost storey's and any required booster connections must be installed.</p>	Capable of Complying
E1.10	Provision for special hazards	No special hazards have been identified.	Note
E2.2	General requirements	<p>All Areas</p> <ul style="list-style-type: none"> Installation of an automatic air pressurisation system to the fire isolated exits, stairways and passageways that service the building. This system should be installed in accordance with AS/ANZ 1668.1. <p>Car parking Areas</p> <ul style="list-style-type: none"> The basements are to be provided with a mechanical ventilation system in accordance with AS1668.2. It is assumed through the building fire sprinkler systems will be utilised in the places required by this Clause. <p>Residential Areas</p> <ul style="list-style-type: none"> A smoke detection and alarm system complying with NCC2019 specification E2.2a must be installed throughout these areas/levels. 	Capable of Complying
E3.1	Lift installations	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1.	Capable of Complying
E3.2	Stretcher facility in lifts	The lift/s specified in this clause, must be above to 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.	Capable of Complying
E3.3	Warning against use of lifts in fire	Warning signs must be displayed near every lift call button in accordance with this clause.	Capable of Complying
E3.4	Emergency lifts	Emergency lift/s complying with this clause and Spec E3.1 must be installed within the building.	Capable of Complying

BCA Clause	Title	Assessment & Comment	Status
E3.5	Landings	Access and egress to and from lift well landings must comply with the DTS provision of Section D	Capable of Complying
E3.6	Passenger lifts	The lifts are required to be of a type and have features for people with disabilities as required by this clause.	Capable of Complying
E3.7	Fire service controls	Fire service controls are required to every lift serving any storey above an effective height of 12m. Fire service controls are required to comply with the requirements of this provision.	Capable of Complying
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.	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.	Capable of Complying
E4.2 to E4.4	Emergency lighting requirements	Emergency lighting must be provided in accordance with these clauses. Emergency lighting is required to comply with AS2293.1-2005.	Capable of Complying
E4.5 to E4.8	Exit signs	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.	Capable of Complying
E4.9	Emergency warning and intercom systems	EWIS is required in accordance with AS1670.4.	Capable of Complying

4.6. Health and 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.	Capable of Complying
F1.1	Stormwater drainage	Stormwater drainage is required to be designed to comply with AS/NZS 3500.3-2015.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
F1.4	External above ground membranes	Waterproofing membranes for external above ground use must comply with AS 4654.1-2012 & AS 4654.2-2012	Capable of Complying
F1.5	Roof coverings	Lightweight metal roof sheeting is to comply with AS1562.1.	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.	Capable of Complying
F1.7	Waterproofing of wet areas in buildings	Waterproofing of wet areas are required to comply with this clause 76 AS 3740.	Capable of Complying
F1.9	Damp-proofing	Damp proofing is required to be provided in accordance with this clause.	Capable of Complying
F1.10	Damp-proofing of floor on ground	Damp proofing is required to be provided in accordance with this clause.	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.	Capable of Complying
F1.12	Sub-floor ventilation	Where provided sub-floor ventilation is to be in accordance with this Clause.	Capable of Complying
F1.13	Glazed assemblies	Glazed assemblies to comply with AS 2047 as applicable.	Capable of Complying
F2.1	Facilities in residential buildings	<p>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:</p> <ul style="list-style-type: none"> ▪ A bath or shower; and ▪ A closet pan & wash basin; and ▪ Kitchen; and ▪ Wash tub and space for washing machine and drier <p>Sanitary facilities are provided as required.</p>	Capable of Complying
F2.3	Facilities in Class 3 to 9 buildings	<p>Sanitary facilities must be provided in accordance with this clause and Table F2.3.</p> <p>Adequate means of disposal of sanitary products must be provided in sanitary facilities for use by females.</p>	N/A

BCA Clause	Title	Assessment and Comment	Status
F2.4	Facilities for people with disabilities	Accessible unisex and ambulant sanitary facilities are required in accordance with clause. The design of accessible sanitary facilities is to comply with AS1428.1-2009.	N/A
F3.1	Height of rooms and other spaces	The minimum ceiling height requirements are to comply with the requirements of this provision.	Capable of Complying
F4.1-4.3	Provision of natural light	Natural lighting must be provided in all habitable rooms of the residential units	Capable of Complying
F4.4	Artificial lighting	Artificial lighting is to be provided in accordance with AS/NZS1680.0 to spaces required by this clause.	Capable of Complying
F4.5-4.7	Ventilation of rooms	Ventilation is to be provided by natural or mechanical means in accordance with this provision and Clause F4.6.	Capable of Complying
F4.11	Car park exhaust	Each storey of the carpark must have a system of ventilation complying with AS1668.2 or permanent natural ventilation in accordance with Section 4 of AS1668.4.	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.	Capable of Complying
F5.2	Determination of airborne sound insulation ratings	A form of construction required to have an airborne sound insulation rating must: <ul style="list-style-type: none"> have the required value for weighted sound reduction index (R_w) or weighted sound reduction index with spectrum adaptation term ($R_w + C_{tr}$) determined in accordance with AS/NZS 1276.1 or ISO 717.1 using results from laboratory measurements; or an acceptable form of construction under Spec F5.2. 	Capable of Complying
F5.3	Determination of impact sound insulation ratings	Determination of impact sound insulation ratings is to be in accordance with this clause. Particular attention is required to the requirements for discontinuous construction	Capable of Complying
F5.4	Sound insulation rating of floor	1. A floor in a Class 2 or 3 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w}$ (impact) not more than 62 if it separates— <ol style="list-style-type: none"> sole-occupancy units; or a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, 	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		public lobby or the like, or parts of a different classification.	
F5.5	Sound insulation of walls	Sound insulation of walls and doors is required to be in accordance with this clause.	Capable of Complying
F5.6	Sound insulation rating of internal services	Services that serves or pass through more than one SOU must achieve the required ratings specified by this clause.	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.	Capable of Complying
F6.1	Application of part	Part F6 applies to a sole-occupancy unit of a Class 2 building and a Class 4 part of a building.	noted
F6.2	Pliable building membrane	Where a pliable building membrane is installed, it is required to be provided in accordance with this clause.	Capable of Complying
F6.3	Flow rate and discharge of exhaust systems	Exhaust systems are required to be provided in accordance with this clause.	Capable of Complying
F6.4	Ventilation of roof spaces	Where ventilation of the roof space are provided, it is required to be provided in accordance with this clause.	Capable of Complying

4.7. Ancillary Provisions (BCA Section G)

BCA Clause	Title	Assessment and comment	Status
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 (windows 3 or more storeys above the ground).	Capable of Complying

4.8. Special Use Buildings (BCA Section H)

4.9. Energy Efficiency (BCA Section J – Class 3 and 5 to 9 Buildings)

4.10. Energy Efficiency (BCA Section J – Class 2 and 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.

4.10.1. Building Fabric (NSW Part J(A)1)

BCA Clause	Status	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 specifies that insulation is to be provided. The DTS provisions for thermal breaks apply to all Class 2 buildings and Class 4 parts.	noted
NSW J(A)1.2	Compliance with BCA	The sole occupancy units of a Class 2 building and a Class 4 part of the building must comply with the national BCA provisions of J02(b) to (d). Refer to J1.2, J1.3, J1.5 & J1.6 below.	noted
J1.2	Thermal construction — general	Thermal insulation is required to be installed in accordance with AS/NZS 4859.1 and the general requirements of this clause. Reflective & bulk insulation is to be installed in accordance with this clause.	Capable of Complying
J0.4	Roof thermal breaks	Roof thermal breaks are required in accordance with this clause.	Capable of Complying
J0.5	Wall thermal breaks	Wall thermal breaks are required in accordance with this clause.	Capable of Complying
J1.6 (c) & (d)	Floors – floor edge insulation	Floor edge insulation is to comply with this clause	Capable of Complying

4.10.2. Building Sealing (NSW Part J(A)2)

BCA Clause	Status	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: <ul style="list-style-type: none"> ▪ a building in climate zones 2 and 5 where the only means of air-conditioning is by using an evaporative cooler; or ▪ a permanent building opening, in a space where a gas appliance is located, that is necessary for the safe operation of a gas appliance; or ▪ parts of those buildings that cannot be fully enclosed 	Capable of Complying

BCA Clause	Status	Assessment and Comment	Status
NSW J(A)2.2	Compliance with BCA provisions	The following national provisions apply to the requirements of this clause: <ul style="list-style-type: none"> J3.2 Chimneys and flues J3.3 Roof Lights J3.4 External Doors and windows J3.5 Exhaust fans J3.6 Construction of roofs, walls and floors J3.7 Evaporative coolers 	Capable of Complying
J3.2	Chimneys and Flues	Open solid fuel burning appliances are not proposed.	N/A
J3.3	Roof lights	Roof lights are to be designed to comply with this clause.	Capable of Complying
J3.4 (a) to (d)	Windows and doors	External windows and doors are required to be designed to comply with this clause.	Capable of Complying
J3.5	Exhaust fans	An exhaust fan must be fitted with a sealing device to prevent air infiltration in a conditioned space or in climate zones 4, 6, 7 and 8.	Capable of Complying
J3.6	Construction of roofs, walls and floors	Roofs, external walls, external floors and any openings are required to be designed and constructed to minimise air leakage.	Capable of Complying

4.10.3. Air-Conditioning and Ventilating System (NSW Part J(A)3)

BCA Clause	Status	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.	Capable of Complying
NSW J(A)3.2	Compliance with BCA provisions	Class 2 buildings and Class 4 parts of buildings must comply with national BCA provisions as identified below.	Capable of Complying
J5.2	Air Conditioning System control	Any proposed air-conditioning systems must be designed in accordance with this clause.	Capable of Complying
J5.3	Mechanical ventilation system control	Any proposed mechanical ventilation systems must be designed in accordance with this clause.	Capable of Complying
J5.4	Fan systems	Any proposed fan systems must be designed in accordance with this clause.	Capable of Complying

BCA Clause	Status	Assessment and Comment	Status
J5.5	Ductwork insulation	Ductwork and fittings in an air-conditioning system must be provided with insulation in accordance with this clause.	Capable of Complying
J5.6	Ductwork sealing	Ductwork in an air-conditioning system with a capacity of 3000 L/s or greater, not located within the only or last room served by the system, must be sealed against air loss in accordance with the duct sealing requirements of AS 4254.1 and AS 4254.2 for the static pressure in the system.	Capable of Complying
J5.7	Pump systems	Pumps and pipework that form part of an air-conditioning system are to be designed in accordance with this clause.	Capable of Complying
J5.8	Pipework insulation	Piping, vessels, heat exchangers and tanks containing heating or cooling fluid, where the fluid is held at a heated or cooled temperature, that are part of an air-conditioning system, other than in appliances covered by MEPS, must be provided with insulation in accordance with this clause.	Capable of Complying
J5.10	Refrigerant chillers	An air-conditioning system refrigerant chiller must comply with MEPS and the full load operation energy efficiency ratio and integrated part load energy efficiency ratio in Table J5.10a or Table J5.10b when determined in accordance with AHRI 551/591.	Capable of Complying
J5.11	Unitary air conditioning equipment	Unitary air-conditioning equipment including packaged air-conditioners, split systems, and variable refrigerant flow systems must comply with MEPS and for a capacity greater than or equal to 65 kW _r where required by this clause.	Capable of Complying
J5.12	Heat rejection equipment	<p>The motor rated power of a fan in a cooling tower, closed circuit cooler or evaporative condenser must not exceed the allowances in Table J5.12.</p> <p>The fan in an air-cooled condenser must have a motor rated power in accordance with this clause.</p>	Capable of Complying

4.10.4. Heated Water Supply (NSW Part J(A)4)

BCA Clause	Status	Assessment and Comment	
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.	Capable of Complying
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.	Capable of Complying
J7.2	Hot Water Supply	A heated 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 Australia.	Capable of Complying

4.10.5. Facilities for Energy Monitoring (NSW Part J(A)5)

BCA Clause	Status	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.	Capable of Complying
NSW J(A)5.3	Compliance with BCA provisions	Class 2 buildings must comply with the national provision of J8.3.	Capable of Complying
J8.3	Facilities for energy monitoring	Facilities for energy monitoring are required to be provided in accordance with this clause.	Capable of Complying

5. 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.

NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE	PROPOSED
1.	Access panels, doors & hoppers to fire resisting shaft	BCA 2019 C3.13 & AS 1905.1-2015 Amdt 1	YES
2.	Automatic fail-safe devices	Spec C3.4 automatic smoke doors; D2.21 (b)(iv) auto unlock of doors; D2.22 (re-entry from fire stairs)	YES
3.	Automatic fire detection and alarm system	BCA 2019 E2.2, Spec E2.2a Clause 5 (combination smoke alarm and smoke detection); Clause 6 (smoke detection for smoke control systems) & AS 1670.1-2018 or AS 3786-2014 Amdt 1 & 2	YES
4.	Automatic fire suppression system	BCA 2019 E1.5, Spec E1.5 & AS 2118.1-2017 Amdt 1	YES
5.	Building occupant warning system	BCA 2019 Spec E2.2a (Clause 7) & AS1670.1-2018 (Clause 3.22)	YES
6.	Emergency Lifts	BCA 2019 E3.4	YES
7.	Emergency lighting	BCA 2019 Clause E4.2, E4.3, E4.4, E1.8	YES
8.	Exit signs	BCA 2019 E4.5, E4.6, E4.8 Spec E4.8 & AS 2293.1- 2018	YES
9.	Fire control centre	BCA 2019 E1.8 & Spec E1.8	YES
10.	Fire dampers	BCA 2019 C3.12, C3.15 & AS1668.1-2015 Amdt 1, AS 1668.2-2012 Amdt 1 & 2	YES
11.	Fire doors	BCA 2019 C2.12 (separation of equipment); C2.13 (electricity supply systems); C3.3 (separation of external walls & associated openings in fire compartments); C3.4, Spec C3.4; C3.5 (doorways & fire walls); C3.8 (openings in fire isolated exits), C3.11 (bounding construction), C3.13 (openings in shafts) & AS 1905.1 – 2015 Amdt 1	YES
12.	Fire rated lift landing doors	BCA 2019 C3.10 & AS 1735.11-1986	YES
13.	Fire Hose reel systems	BCA 2019 E1.4 & AS 2441-2005 Amdt 1	YES
14.	Fire hydrant systems	BCA 2019 E1.3 & AS 2419.1-2005 Amdt 1	YES

NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE	PROPOSED
15.	Fire seals protecting openings in fire resisting components of the building	BCA 2019 C3.12, C3.15 & Spec C3.15, AS 4072.1-2005 <small>Amdt 1</small> , AS 1530.4.-2014	YES
16.	Lightweight construction	BCA 2019 C1.8 & Spec C1.8	YES
17.	Mechanical air handling system	BCA 2019 E2.2, Table E2.2a; NSW Table E2.2b, Spec E2.2a, Spec E2.2b & AS 1668.1-2015 <small>Amdt 1</small> . Class 7a (carpark building mechanical ventilation systems) BCA 2019 E2.2, Table E2.2a and Clause 5.5 of AS 1668.1-2015 <small>Amdt 1</small> .	YES
18.	Portable fire extinguishers	BCA 2019 E1.6 & AS 2444-2001	YES
19.	Pressurising system	BCA 2019 Clause E2.2 & AS 1668.1-2015 <small>Amdt 1</small>	YES
20.	Smoke alarms & heat alarms	BCA 2019 E2.2, Spec E2.2a & AS 3786-2014 <small>Amdt 1 & 2</small>	YES
21.	Smoke exhaust system	BCA 2019 E2.2, Spec E2.2b & AS 1668.1-2015 <small>Amdt 1</small>	YES
22.	Emergency warning and intercom system	BCA 2019 E4.9 & AS 1670.4-2018	YES
23.	Warning and operational signs	EPA Regulation 2000 (Clause 183), D2.23 (signs on exit doors), E3.3 (lifts), C3.6 sliding fire doors	YES

6. SUMMARY OF NON-COMPLIANCE ISSUES

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 A2.2.

D1.2

As the proposed building has an effective height of greater than 25m two required exits are required to be provided from all areas of the building. Generally, two exits have been provided to all areas with the exception of the following:

Basement 3

- Storage cages rooms

Mezzanine

- Plant rooms

Building 2A2

- Level 2 & 4

Building 2A3

- Level 2 & 4

Building 2A1

- Ground floor lobby (northern)

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

The following areas does not provide an exit and does not comply with the provisions of this Clause:

Building 2A3 & 2A4

- Lift lobby Level 4

D1.4

The BCA requires the 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

The BCA requires the Class 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 exit travel distances in the following areas exceed DtS provisions:

Basement 2

- 30m >20m to POC (from centre storage)

Basement 1

- 27m >20m to POC (adjacent fire sprinkler tank)

Building 2A1

- Residential Levels 2 to 7 approximate travel distance of 10.4m > 6m
- Residential Level 8 approximate travel distance of 7.7m > 6m

Building 2A2

- Residential Levels 2 to 3 approximate travel distance of 9m > 6m

Building 2A3

- Residential Levels 2 to 8 approximate travel distance of 9m > 6m

Building 2A4

- Residential Levels 2 to 7 approximate travel distance of 10.5m > 6m
- Residential Level 8 approximate travel distance of 7.3m > 6m

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.5

The BCA requires alternative exits to be distributed uniformly around the storey and are not to be less than 9m apart, and not more than 45m apart (residential) or in all other cases 60m apart.

The following exits are located less than 9m apart and are not in accordance with DtS provision:

Mezzanine

- The fire isolated scissor stair from mezzanine to loading dock level

Building 2A1

- The residential fire isolated scissor stair from Level 2 and above.

Building 2A2

- The residential fire isolated scissor stair from Level 3 and above.

Building 2A3

- The residential fire isolated scissor stair from Level 3 and above.

Building 2A4

- The residential fire isolated scissor stair from Level 1 and above.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

E1.5

A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5.

The sprinkler valve room is located in basement 1 and does not open directly to a road or open space.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

7. 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.

ATTACHMENT 1

Assessed plans prepared by Turner

Plan Title	Drawing No	Revision	Date
GA PLANS OVERALL BASEMENT 03 & 02	DA-110-006	03	6/5/20
GA PLANS OVERALL BASEMENT 02 & 01	DA-110-007	03	6/5/20
GA PLANS OVERALL BASEMENT 01, MEZZ & LEVEL 01	DA-110-008	03	6/5/20
GA PLANS OVERALL MEZZANINES, LEVEL 01 & 02	DA-110-010	03	6/5/20
GA PLANS OVERALL LEVEL 01, 02 & 03	DA-110-020	03	6/5/20
GA PLANS OVERALL LEVEL 01, 02, 03 & 04	DA-110-030	03	6/5/20
GA PLANS OVERALL LEVEL 02, 03, 04 & 05	DA-110-040	03	6/5/20
GA PLANS OVERALL LEVEL 03, 04, 05 & 06	DA-110-050	03	6/5/20
GA PLANS OVERALL LEVEL 04, 05, 06 & 07	DA-110-060	03	6/5/20
GA PLANS OVERALL LEVEL 05, 06, 07 & 08	DA-110-070	03	6/5/20
GA PLANS OVERALL LEVEL 06, 07, 08 & ROOF	DA-110-080	03	6/5/20
GA PLANS OVERALL LEVEL 07, 08 & ROOF	DA-110-090	03	6/5/20
GA PLANS OVERALL LEVEL 08 & ROOF	DA-110-100	03	6/5/20
GA PLANS OVERALL ROOF LEVEL	DA-110-110	03	6/5/20
GA PLANS OVERALL COMBINED ROOF PLAN	DA-110-120	03	6/5/20

A background graphic consisting of a dark blue diagonal band across the page. Behind this band is a grayscale image of a city skyline with a prominent skyscraper. Overlaid on the entire background is a pattern of white, isometric 3D rectangular blocks of varying heights and orientations.

Building Code of Australia

Assessment Report

**Project Address: Tallawong Station Precinct South,
1-15 & 2-12 Conferta Avenue, Rouse Hill**

Building: 2B, 2C & 2E

Client: Deicorp Projects (Tallawong Station) P/L

Report Number: 190427

Revision: R1.0

15 MAY 2020

REPORT REVISION HISTORY

Revision	Date Issued	Revision Description	
01	15/05/2020	BCA Draft Report	
		Prepared by	Verified by
		Tariq Sheikh <i>Building Surveyor</i>	Brendan Bennett <i>A1 Certifier</i>

Disclaimer

This report has been prepared by City Plan Services P/L with input from a number of other expert consultants (if relevant). To the best of our knowledge, the information contained herein is neither false nor misleading and the contents are based on information and facts that were correct at the time of writing. City Plan Services P/L accepts no responsibility or liability for any errors, omissions or resultant consequences including any loss or damage arising from reliance in information in this publication.

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TABLE OF CONTENTS

1. Executive Summary	3
2. Introduction	6
2.1. General	6
2.2. Purpose of Report	6
2.3. Report Basis	6
2.4. Exclusions and Limitations	6
3. Building Code of Australia Assessment.....	7
3.1. Classification (Part A6)	7
3.2. Effective Height (Schedule 3)	7
3.3. Rise in Storeys (C1.2)	7
3.4. Type of Construction (C1.1)	7
3.5. Climate Zone (A1.1)	7
3.6. Floor Area and Volume Limitations (Table C2.2)	7
4. Building Code of Australia Assessment.....	8
4.1. Structure (BCA Section B)	8
4.2. Fire Resistance (BCA Section C)	9
4.3. Fire-Resisting Construction (Specification C1.1).....	15
4.4. Access and Egress (BCA Section D)	16
4.5. Services and Equipment (BCA Section E)	23
4.6. Health and Amenity (BCA Section F)	25
4.7. Ancillary Provisions (BCA Section G).....	28
4.8. Special Use Buildings (BCA Section H)	28
4.9. Energy Efficiency (BCA Section J – Class 3 and 5 to 9 Buildings)	28
4.10. Energy Efficiency (BCA Section J – Class 2 and 4 Buildings)	28
4.10.1. Building Fabric (NSW Part J(A)1).....	29
4.10.2. Building Sealing (NSW Part J(A)2).....	29
4.10.3. Air-Conditioning and Ventilating System (NSW Part J(A)3)	30
4.10.4. Heated Water Supply (NSW Part J(A)4)	32
4.10.5. Facilities for Energy Monitoring (NSW Part J(A)5)	32
5. Fire Safety Schedule	33
6. Summary of Non-Compliance Issues.....	35
7. Conclusion	37
Attachment 1	38

1. EXECUTIVE SUMMARY

The development, the subject of this report, is for the proposed **Building (2B, 2C & 2E)** forming part of the Tallawong Station Precinct South development. The building consists of four residential blocks with two levels of associated basement carparking.

This report has been prepared, on behalf of Deicorp Projects (Tallawong Station) P/L, to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the planning development application documentation for the proposed works. Unless specifically noted this assessment and report deals with the proposed building 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 A2.2.

C2.14

The BCA requires that a public corridor greater than 40 m in length to be divided with smoke-proof walls complying with Clause 2 of Specification C2.5.

Generally, the residential public corridors are less than 40m with the exception of the following areas:

Building 2B1

- Level 5 measured 45m >40m; and

Building 2E1

- Level 4,5,6,7 & 8 measured 41m >40m

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.2

As the proposed building has an effective height of greater than 25m two required exits are required to be provided from all areas of the building. Generally, two exits have been provided to all areas with the exception of the following:

Basement 2

- Bicycle storage room (southern)

Building 2B1

- Mezzanine lobby
- Lobby level 2 (townhouse)
- Part roof (level 5)

Building 2C1

- Lobby adjacent m209

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.4

The BCA requires the 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

The BCA requires the Class 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 exit travel distances in the following areas exceed DtS provisions:

Basement 2

- 30m >20m to POC
- 46m >40m maximum distance to an exit

Basement 1

- 33m >20m to POC
- 50m >40m maximum distance to an exit

Building 2B1

- Level 2, 4,5,6 & 7 approximate travel distance of 10.5m > 6m
- Level 3 approximate travel distance of 19.4m > 6m
- Level 8 approximate travel distance of 7m > 6m
- Part roof (level 5) 29m > 20m to POC
- Roof 26m >20m to POC

Building 2C1

- Resi Waste 30m >20m to POC
- Level 3 approximate travel distance of 12m > 6m
- Levels 4 to 8 approximate travel distance of 10.5m > 6m
- Part roof (level 5) 28m > 20m to POC
- Roof 23m >20m to POC

Building 2C2

- Roof 26m >20m to POC

Building 2E1

- Levels 2 to 8 approximate travel distance of 11.8m > 6m

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.5

The BCA requires alternative exits to be distributed uniformly around the storey and are not to be less than 9m apart, and not more than 45m apart (residential) or in all other cases 60m apart.

The following exits are located less than 9m apart and are not in accordance with DtS provision:

Building 2B1

- The residential fire isolated scissor stair from Level 2 and above.

Building 2C1

- The residential fire isolated scissor stair from Level 1 and above.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

E1.5

A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5.

The sprinkler valve room does not open directly to a road or open space.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

2. INTRODUCTION

2.1. General

This report serves as an assessment for compliance with the Building Code of Australia in respect to proposed development, located at 1-15 & 2-12 Conferta Avenue Rouse Hill, within the local government area of Blacktown Council. The development consents of two stages as follows:

- Stage 1:
- Residential Building 1A 108 Lots
 - Residential Building 1B 222 Lots
 - Full Retail / Commercial
 - Basement carparking
 - Private Park
- Stage 2:
- Residential Building 2A
 - Residential Building 2B & 2C & 2E (subject of this BCA report)**
 - Residential Building 2D

2.2. Purpose of Report

This report has been prepared, on behalf of Deicorp Projects (Tallawong Station) P/L, to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the development application documentation for the proposed works for the **Residential Building 2B & 2C & 2E**.

2.3. Report Basis

The following information has been directly referenced or relied upon in the preparation of this report:

- (a) Architectural plans prepared by Turner, as identified in the attached Appendix 1.
- (b) The Building Code of Australia 2019, inclusive of NSW variations + Amendment 1 (where relevant) (See Note 1 & 2);
- (c) Environmental Planning and Assessment Act 1979.
- (d) Environmental Planning and Assessment Regulation 2000.

Note 1: Building Code of Australia (BCA) 2019 was adopted in NSW on 1 May 2019. 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.

Note 2 Building Code of Australia (BCA) 2019 Amendment 1 is expected to be adopted from 1 June 2020.

2.4. Exclusions and Limitations

This report does not consider the following, except where specifically mentioned:

- Structural design.
- The Disability Discrimination Act 1992 (access for people with disabilities has been assessed in accordance with Part D3 of the BCA, however additional measures may be required to be provided subject to the Disability Discrimination Act 1992)
- Disability (Access to Premises – Building) Standards 2010.

3. BUILDING CODE OF AUSTRALIA ASSESSMENT

3.1. Classification (Part A6)

The proposed building consists of:

Building	Class	Use	Area
Building 2B & 2C & 2E	7a	Carparking	Basement levels 02,01
	7b	Storage & Loading dock	Mezzanine (storage), Part Level 01
	2	Residential	Level 01 +

Note: The carpark is shared by the four towers and therefore the building has been deemed a united building for the purpose of the BCA.

3.2. Effective Height (Schedule 3)

The proposed building will have an effective height of **28.17m** being greater than 25m.

(RL79.27 – 51.10 = 28.17m)

3.3. Rise in Storeys (C1.2)

The proposed building will consist of a rise in storeys of nine (9).

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.

3.5. Climate Zone (A1.1)

The building is located within Climate Zone 5

3.6. Floor Area and Volume Limitations (Table C2.2)

The building is compliant with maximum floor area and volume limits of:

Class 7a - The carpark is to be sprinkler protected and as such there are no maximum floor area or volume limitations for this area.

Class 2 - The Class 2 portions of the building are not subject to floor area and volume limitations of C2.2 as Table 3 of Specification C1.1 and Clause C3.11 of the NCC regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 classifications.

4. 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 in accordance with this clause. The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.	Capable of Complying
B1.2	Determination of individual actions	The magnitude of individual actions must be determined in accordance with this clause. The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.	Capable of Complying
B1.4	Determination of structural resistance of materials & forms of construction	<p>The structural resistance of the following materials and forms of construction for the following elements are to be in accordance with the standards nominated in this clause;</p> <ul style="list-style-type: none"> (a) Masonry (b) Concrete (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 <p>The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.</p>	Capable of Complying
B1.5	Structural Software	Structural software used in computer aided design is to comply with the requirements of this provision.	Capable of Complying
B1.6	Construction of buildings in flood hazard areas	A Class 2, 3, 4, 9a or 9c building is required to comply with the ABCB standards for Construction of Buildings in Flood Hazard Areas.	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.	Capable of Complying
C1.2	Calculation in rise in storeys	The building contains a RIS of nine (9).	Capable of Complying
C1.8	Lightweight construction	Any proposed fire resisting lightweight walls or fire resisting lightweight protection to steel columns is to comply with Specification C1.8.	Capable of Complying
C1.9	Non-combustible building elements	<ol style="list-style-type: none"> In a building required to be Type A or B construction, the following building elements and their components must be non-combustible: <ol style="list-style-type: none"> External walls and common walls, including all components incorporated in them including the façade covering, framing and insulation. The flooring and floor framing of lift pits. Non-loadbearing internal walls where they are required to be fire-resisting. A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in – <ol style="list-style-type: none"> A building required to be Type A construction; and A building required to be Type B construction, subject to C2.10, in: <ol style="list-style-type: none"> a Class 2, 3 or 9 building; and a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys. A loadbearing internal wall and loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification C1.1. The requirements of (1) and (2) do not apply to gaskets, caulking, sealants, termite management systems, glass, thermal breaks associated with glazing systems & dampproof courses. The following materials may be used wherever a non-combustible material is required: <ol style="list-style-type: none"> Plasterboard. 	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		(b) Perforated gypsum lath with a normal paper finish. (c) Fibrous-plaster sheet. (d) Fire-reinforced cement sheeting. (e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. (f) Sarking that does not exceed 1 mm thickness and have a flammability index of not greater than 5. (g) Bonded lamination materials where – (i) Each lamina, including any core, is non-combustible; and (ii) Each adhesive layer does not exceed 1mm in thickness and the total thickness of the adhesive layers does not exceed 2mm; and (iii) The Spread of Flame Index and the Smoke-Developed Index of the bonded laminated materials as a whole do not exceed 0 and 3 respectively.	
C1.10	Fire hazard properties	Proposed internal linings, materials and assemblies 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.	Capable of Complying
C1.13	Fire protected timber: Concession	This concession is not available.	N/A
C1.14	Ancillary Elements	An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following: 1. An ancillary element that is non-combustible. 2. A gutter, downpipe or other plumbing fixture or fitting. 3. A flashing. 4. A grate or grille not more than 2m ² in area associated with a building service. 5. An electrical switch, socket-outlet, cover plate or the like. 6. A light fitting.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<p>7. A required sign.</p> <p>8. A sign other than one provided under (1) or (7) that-</p> <ul style="list-style-type: none"> (a) Achieves a ground number of 1 or 2; and (b) Does not extend beyond one storey; and (c) Does not extend beyond one fire compartment; and (d) Is separated vertically from other signs permitted under (8) by at least 2 storeys. <p>9. An awning, sunshade, canopy, blind or shading hood other than one provided under (1) that –</p> <ul style="list-style-type: none"> (a) Meets the requirements of Table 4 of Specification C1.10 as for an internal element; and (b) Serves a storey – <ul style="list-style-type: none"> (i) At ground level; or (ii) Immediately above a storey at ground level; and (iii) Does not serve an exit, where it would render the exit unusable in a fire. <p>10.A part of a security, intercom or announcement system.</p> <p>11.Wiring.</p> <p>12.A paint, lacquer or a similar finish.</p> <p>13.A gasket, caulking, sealant or adhesive directly associated with (1) to (11).</p>	
C2.2	General floor area and volume limitations	<p>The fire compartment sizes meet the requirements of this Clause</p> <p>Class 7a - The carpark is to be sprinkler protected and as such there are no maximum floor area or volume limitations for this area.</p> <p>Class 2 - The Class 2 portions of the building are not subject to floor area and volume limitations of C2.2 as Table 3 of Specification C1.1 and Clause C3.11 of the NCC regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 classifications.</p>	Capable of Complying
C2.6	Vertical separation of openings in external walls	The building is required to be protected with sprinklers throughout and therefore vertical separation is not required.	N/A
C2.7	Separation by fire walls	Fire walls are required to be designed to comply with the clause.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<p>The following fire walls are proposed:</p> <ol style="list-style-type: none"> 1. The loading dock (2C1) 2. Between the mezzanine level (storage) and the basement carpark (2B1) 	
C2.8	Separation of classifications in the same storey	<p>If a building has parts of different classifications located alongside one another in the same storey,</p> <ul style="list-style-type: none"> ▪ each building element in that storey must have the higher FRL prescribed in Specification C1.1 for that element for the classifications concerned; or ▪ the parts must be separated in that storey by a fire wall. <p>The proposed fire walls are identified in C2.7 above.</p>	Capable of Complying
C2.9	Separation of classifications in different stories	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.	Capable of Complying
C2.10	Separation of lift shafts	The lift shafts are required to be fire separated from the rest of the building in accordance with this clause.	Capable of Complying
C2.11	Stairways and lifts in one shaft	The stairs and lift shaft are located in different shafts.	Capable of Complying
C2.12	Separation of equipment	<p>The following equipment are required to be fire separated from the remainder of the building by 120/120/120 FRL construction:</p> <ul style="list-style-type: none"> ▪ Lift motor rooms and lift control panels. ▪ Emergency Generators. ▪ Central smoke control plant. ▪ Boilers. ▪ Battery systems. <p>The building does not contain any of the above room and the requirements of this provision do not apply.</p>	N/A
C2.13	Electricity supply system	<p>The electricity substation is required to be fire separated from the remainder of the building. The BCA requires 2 hr separation however the electricity authority generally requires 3 hr separation.</p> <p>Two Substation kiosks have been identified adjacent the loading dock of building (2C1).</p> <p>Any main switchboard located in the building which sustains emergency equipment</p>	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<p>operating in emergency mode, is required to be fire separated from the remainder of the building by 2 hr fire resisting construction.</p> <p>Construction should achieve an FRL of 120/120/120, doorways are required achieve an FRL of -/120/30 and to be self-closing and all penetrations in enclosures are to be appropriately fire stopped.</p> <p>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.</p> <p>Electrical conductors and switchboards are required to comply with this clause.</p>	
C2.14	Public corridors in Class 2 & 3 buildings	<p>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 walls complying with smoke proof walls complying with Clause 2 of Specification C2.5.</p> <p>Generally, the public corridors are less than 40m with the exception of the following:</p> <ol style="list-style-type: none"> 1. Building 2B1 Level 5 measured 45m >40m; and 2. Building 2E1 Level 4,5,6,7 & 8 measured 41m >40m 	Performance Solution
C3.2	Protection of openings in external walls	Openings are located more than 3m from the allotment boundary.	Capable of Complying
C3.3	Separation of external walls and associated openings in different fire compartments	The building does not contain separate fire compartments which are applicable to this clause.	Capable of Complying
C3.4	Acceptable method of protection	<p>Windows requiring protection must be protected by one of the means:</p> <ul style="list-style-type: none"> ▪ External wall-wetting sprinklers with windows that are automatically or permanently fixed in the closed position. ▪ -/60/- fire windows (Automatic or permanently fixed in the closed position) 	Note

BCA Clause	Title	Assessment and Comment	Status
		<ul style="list-style-type: none"> -/60/- automatic fire shutters Doorways which require protection can be protected externally with wall wetting sprinklers with doors that are self-closing or automatic closing, or -/60/30 fire doors which are self-closing or automatic closing. <p>Fire doors, fire windows and fire shutters are required to comply with Specification C3.4.</p>	
C3.5	Doorways in fire walls	Doors in fire walls are to have the FRL's and features required by this clause.	Capable of Complying
C3.6	Sliding fire doors	No sliding fire doors proposed.	N/A
C3.7	Protection of doorways in horizontal exits	The building does not contain horizontal exits and the provisions of this part do not apply.	N/A
C3.8	Openings in fire isolated exits	The fire-isolated exits are required to be protected by -/60/30 self-closing fire doors.	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.	Capable of Complying
C3.10	Fire isolated lift shafts	<p>The lift doors are required to be -/60/- fire doors and comply with this provision.</p> <p>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.</p>	Capable of Complying
NSW C3.11	Bounding construction	<p>Doors from sole occupancy units opening into enclosed public corridors are required to be protected by -/60/30 self-closing fire doors.</p> <p>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.</p>	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.	Capable of Complying
C3.15	Openings for service installations	Services that penetrate a building element that is required to have an FRL must be protected utilising one of the options listed under this clause. Test certificates describing each	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		individual service penetration and configuration will be required at the construction certificate stage.	
C3.16	Construction joints	Construction joints in building elements required to be fire resistant are required to be protected in accordance with this clause.	Capable of Complying
C3.17	Columns protected with lightweight construction to achieve an FRL	Any columns protected with fire resisting lightweight construction to achieve an FRL must be installed in a manner that's identical to the tested prototype.	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	Exposure to fire source features is to be determined in accordance with this clause.	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.	Capable of Complying
2.3	Lintels	Lintels are to be protected as required by the requirements of this clause.	Capable of Complying
2.4	Method of attachment not to reduce the fire resistance of building elements	The method of attaching or installing a finish, lining, ancillary element or service installation to the building element must not reduce the fire-resistance of that element to below that required.	Capable of Complying
2.5	General concessions	Roof top plant rooms need not have an FRL if they are non-combustible and they only contain equipment specified in this clause.	Capable of Complying
2.6	Mezzanine floors: concession	The building does not contain mezzanines that are subject to this provision.	N/A
2.7	Enclosure of shafts	Shafts required to have a FRL must be enclosed at the top and bottom of the shaft by construction having a FRL of not less than that required for the walls of a non-load-bearing shaft.	Capable of Complying
3.1	Fire resistance of building elements	Generally building elements are required to achieve the following FRL's; Carpark & ancillary storage: 2 hrs	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		Storage: 4 hrs Residential: 1½ hrs A loadbearing internal wall and a loadbearing fire wall must be of concrete or masonry.	
3.5	Roof: Concession	The roof is not required to achieve an FRL as the building: <ul style="list-style-type: none"> has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 installed throughout; or has a rise in storeys of 3 or less; or is of Class 2 or 3; or has an effective height of not more than 25 m and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes 	Capable of Complying
3.6	Roof lights	Roof lights comply with this clause.	Capable of Complying
3.7	Internal wall and column: concession	Concession is not available due to the effective height of the building.	N/A

4.4. Access and Egress (BCA Section D)

BCA Clause	Title	Assessment and Comment	Status
D1.2	Number of exits required	Two exits are to be available to all areas of the building. Generally, two exits have been provided to all areas with the exception of the following: Basement 2 <ul style="list-style-type: none"> Bicycle storage room (southern) Building 2B1 <ul style="list-style-type: none"> Mezzanine lobby Lobby level 2 (townhouse) Part roof (level 5) Building 2C1 <ul style="list-style-type: none"> Lobby adjacent m209 	Performance Solution
D1.3	When fire isolated exits are required	Stairways that service the basement levels and the upper residential levels are all fire-isolated stairways.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
D1.4	Exit travel distances	<p>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.</p> <p>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.</p> <p>Class 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.</p> <p>The exit travel distances in the following areas exceed DtS provisions:</p> <p>Basement 2</p> <ul style="list-style-type: none"> • 30m >20m to POC • 46m >40m maximum distance to an exit <p>Basement 1</p> <ul style="list-style-type: none"> • 33m >20m to POC • 50m >40m maximum distance to an exit <p>Building 2B1</p> <ul style="list-style-type: none"> • Level 2, 4,5,6 & 7 approximate travel distance of 10.5m > 6m • Level 3 approximate travel distance of 19.4m > 6m • Level 8 approximate travel distance of 7m > 6m • Part roof (level 5) 29m > 20m to POC • Roof 26m >20m to POC <p>Building 2C1</p> <ul style="list-style-type: none"> • Resi Waste 30m >20m to POC • Level 3 approximate travel distance of 12m > 6m • Levels 4 to 8 approximate travel distance of 10.5m > 6m • Part roof (level 5) 28m > 20m to POC • Roof 23m >20m to POC <p>Building 2C2</p> <ul style="list-style-type: none"> • Roof 26m >20m to POC <p>Building 2E1</p>	Performance Solution

BCA Clause	Title	Assessment and Comment	Status
		<ul style="list-style-type: none"> Levels 2 to 8 approximate travel distance of 11.8m > 6m Roof 29m > 20m to POC 	
D1.5	Distance between alternative exits	<p>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.</p> <p>The distance between alternative exits are less than 60m and capable of complying.</p> <p>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.</p> <p>The following exits are located less than 9m apart and are not in accordance with DtS provision:</p> <p>Building 2B1</p> <ul style="list-style-type: none"> The residential fire isolated scissor stair from Level 2 and above. <p>Building 2C1</p> <ul style="list-style-type: none"> The residential fire isolated scissor stair from Level 1 and above. 	Performance Solution
NSW D1.6	Dimensions of exits and paths of travel to exits	A required exit or path of travel to an exit are required to be a minimum unobstructed height of not less than 2m and minimum width of 1m.	Capable of Complying
D1.7	Travel via fire isolated exits	<p>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:</p> <ul style="list-style-type: none"> a public corridor, public lobby or the like; or a sole-occupancy unit occupying all of a storey; or a sanitary compartment, airlock or the like. <p>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;</p> <p>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</p>	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		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.	
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	A non-fire-isolated stair serving as a required exit must provide a continuous means of travel by its own flights and landings to a level at which egress to a road or open space is available.	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 path that is not less than the exit width to which the external path serves. Where there is a change of level, the path must contain a complying stair or ramp.	Capable of Complying
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.	Note
D1.13	Number of persons accommodated	The building is a residential flat building with associated carparking. It is reasonable that less than 100 people per stair core will be accommodated in the building.	Capable of Complying
D1.16	Plant rooms and lift rooms: concession	A ladder may be used in lieu of a stairway to provide egress from a plant room with a floor area less than 100m ² or plant or lift machine rooms with a floor area of less than 200 m ² , for all but one point of egress. Ladders are required to comply with AS1657 and the requirement of this clause.	Note
D1.17	Access to lift pits	Access to lift pipes is to be in accordance with this clause.	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.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
D2.3	Non-fire isolated stairs and ramps	It is assumed that any non-fire-isolated stairway will be concrete.	N/A
D2.4	Separation of rising and descending stair flights	<p>The proposal provides connected rising and descending stairs however they are separated in with smoke proof construction.</p> <p>Rising and descending fire-isolated stairs are required to be separated with non-combustible construction and smoke proof construction in accordance with Clause 2 of Specification C2.5.</p>	Capable of Complying
D2.7	Installation in exits and paths of travel	<p>Access to service shafts and services other than to firefighting 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.</p> <p>Gas or other fuel services must not be installed in a required exit.</p> <p>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).</p> <p>Only electrical wiring associated with services specified in the clause, are permitted to be installed in a fire isolated exit.</p>	Capable of Complying
D2.8	Enclosure of space under stairs and ramps	No enclosure of space under stairs proposed.	N/A
D2.9	Width of stairways	A required stairway or ramp that exceeds 2m in width is counted as having a width of only 2m unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2m	Capable of Complying
D2.10	Pedestrian ramps	<p>A ramp must:</p> <ol style="list-style-type: none"> 1. where the ramp is also serving as an accessible ramp under Part D3, be in accordance with AS1428.1; or 2. in any other case, have a gradient not steeper than 1:8. <p>The floor surface of a ramp must have a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS4586.</p>	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
D2.11	Fire-isolated passageways	The fire rating of fire-isolated passageways is required to be achieved from the outside.	Capable of Complying
D2.12	Roof as open space	No discharge to the roof proposed.	N/A
NSW D2.13	Goings & risers	Goings and risers are to be designed to comply with this clause including: <ul style="list-style-type: none"> going and riser dimensions; and slip resistance. 	Capable of Complying
D2.14	Landings	Landings are to be designed in accordance with this clause.	Capable of Complying
NSW D2.15	Thresholds	Thresholds are to comply with this clause.	Capable of Complying
NSW D2.16	Barriers to prevent falls	Balustrades are to be designed to comply with this clause.	Capable of Complying
D2.17	Handrails	Handrails are required along at least one side of all stairways or ramps, or on both sides of stairs or ramps with a total width of more than 2m. Handrails are required to be installed in accordance with AS1428.1-2009 except for fire-isolated stairs.	Capable of Complying
D2.18	Fixed platforms, walkways, stairways & ladders	Fixed platforms, walkways, stairways & ladders are to be designed in accordance with this clause.	Note
NSW D2.19	Doorways and doors	The sliding doors leading directly to the road or open space must be capable of being opened manually under a force of not more than 110 N. Power-operated doorway required to be opened manually under a force of not more than 110 N and open automatically if it leads directly to a road or open space.	Capable of Complying
D2.20	Swinging doors	A swinging door must not encroach and impede the path of travel/exit width by more than 500mm at any part of its swing. When in the fully open position, it must not encroach into the path of travel/exit width by more than 100mm. Doors in or serving as a required exit must swing in the direction of egress unless they are subject to the concession in this clause.	Capable of Complying
NSW D2.21	Operation of latch	Doors in required exits or forming part of a required exit must be readily openable without	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		a key from the egress side, by a single hand downward action on a single device which is located between 900mm and 1.1m from the floor and comply with the requirements of this clause.	
D2.22	Re-entry from fire-isolated exits	<p>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:</p> <ul style="list-style-type: none"> 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 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. 	Capable of Complying
D2.23	Signs on doors	A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to exit door and smoke doors, in accordance with this clause.	Capable of Complying
D2.24	Protection of openable windows	<p>A window opening must be provided with protection, in accordance with this clause, if the floor below the window is 2 m or more above the surface beneath in a bedroom in a Class 2.</p> <p>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 have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing.</p>	Capable of Complying
Part D3 – Access for People with a Disability			
This part is to be covered by a separate Accessibility Report.			

4.5. Services and Equipment (BCA Section E)

BCA Clause	Title	Assessment & Comment	Status
E1.3	Fire hydrants	<p>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 AS 2419.1. Where internal hydrants are provided, they must only serve the storey in which they are located.</p> <p>The location of hydrant booster is adjacent new road east.</p> <p>Ensure FIS are provided with sufficient space for internal hydrants.</p> <p>Full details to be provided at CC stage.</p>	Capable of Complying
E1.4	Fire hose reels	<p>Fire hose reels are to be provided to the non-residential areas. The fire hose reel system must be installed in accordance with this clause and AS 2441.</p> <p>Full details to be provided at CC stage.</p>	Capable of Complying
E1.5	Sprinklers	<p>A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5.</p> <p>The sprinkler valve room does not open directly to a road or open space.</p> <p>Full details to be provided at CC stage.</p>	Performance Solution
E1.6	Portable fire extinguishers	<p>The building is to be provided with portable fire extinguishers.</p> <p>Within the residential areas a 2.5kg ABE powder extinguisher is to be located within 10m of all unit entry doors.</p> <p>Portable fire extinguishers are to comply with this provision and sections 1, 2, 3 and 4 of AS 2444.</p> <p>Full details to be provided at CC stage.</p>	Capable of Complying
E1.8	Fire control centres	<p>A fire control centre is required in accordance with Specification E1.8.</p>	Capable of Complying
E1.9	Fire precautions during construction	<p>In a building under construction not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stairway or exit.</p> <p>After the building has reached an effective height of 12 m the required fire hydrants and fire hose reels must be operational in at least every</p>	Capable of Complying

BCA Clause	Title	Assessment & Comment	Status
		storey that is covered by the roof or the floor structure above, except the 2 uppermost storey's and any required booster connections must be installed.	
E1.10	Provision for special hazards	No special hazards have been identified.	Note
E2.2	General requirements	<p>All Areas</p> <ul style="list-style-type: none"> Installation of an automatic air pressurisation system to the fire isolated exits, stairways and passageways that service the building. This system should be installed in accordance with AS/ANZ 1668.1. <p>Car parking Areas</p> <ul style="list-style-type: none"> The basements are to be provided with a mechanical ventilation system in accordance with AS1668.2. It is assumed through the building fire sprinkler systems will be utilised in the places required by this Clause. <p>Residential Areas</p> <ul style="list-style-type: none"> A smoke detection and alarm system complying with NCC2019 specification E2.2a must be installed throughout these areas/levels. 	Capable of Complying
E3.1	Lift installations	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1.	Capable of Complying
E3.2	Stretcher facility in lifts	The lift/s specified in this clause, must be above to 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.	Capable of Complying
E3.3	Warning against use of lifts in fire	Warning signs must be displayed near every lift call button in accordance with this clause.	Capable of Complying
E3.4	Emergency lifts	Emergency lift/s complying with this clause and Spec E3.1 must be installed within the building.	Capable of Complying
E3.5	Landings	Access and egress to and from lift well landings must comply with the DTS provision of Section D	Capable of Complying
E3.6	Passenger lifts	The lifts are required to be of a type and have features for people with disabilities as required by this clause.	Capable of Complying

BCA Clause	Title	Assessment & Comment	Status
E3.7	Fire service controls	Fire service controls are required to every lift serving any storey above an effective height of 12m. Fire service controls are required to comply with the requirements of this provision.	Capable of Complying
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.	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.	Capable of Complying
E4.2 to E4.4	Emergency lighting requirements	Emergency lighting must be provided in accordance with these clauses. Emergency lighting is required to comply with AS2293.1-2005.	Capable of Complying
E4.5 to E4.8	Exit signs	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.	Capable of Complying
E4.9	Emergency warning and intercom systems	EWIS is required in accordance with AS1670.4.	Capable of Complying

4.6. Health and 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.	Capable of Complying
F1.1	Stormwater drainage	Stormwater drainage is required to be designed to comply with AS/NZS 3500.3-2015.	Capable of Complying
F1.4	External above ground membranes	Waterproofing membranes for external above ground use must comply with AS 4654.1-2012 & AS 4654.2-2012	Capable of Complying
F1.5	Roof coverings	Lightweight metal roof sheeting is to comply with AS1562.1.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
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.	Capable of Complying
F1.7	Waterproofing of wet areas in buildings	Waterproofing of wet areas are required to comply with this clause 76 AS 3740.	Capable of Complying
F1.9	Damp-proofing	Damp proofing is required to be provided in accordance with this clause.	Capable of Complying
F1.10	Damp-proofing of floor on ground	Damp proofing is required to be provided in accordance with this clause.	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.	Capable of Complying
F1.12	Sub-floor ventilation	Where provided sub-floor ventilation is to be in accordance with this Clause.	Capable of Complying
F1.13	Glazed assemblies	Glazed assemblies to comply with AS 2047 as applicable.	Capable of Complying
F2.1	Facilities in residential buildings	<p>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:</p> <ul style="list-style-type: none"> ▪ A bath or shower; and ▪ A closet pan & wash basin; and ▪ Kitchen; and ▪ Wash tub and space for washing machine and drier <p>Sanitary facilities are provided as required.</p>	Capable of Complying
F2.3	Facilities in Class 3 to 9 buildings	<p>Sanitary facilities must be provided in accordance with this clause and Table F2.3.</p> <p>Adequate means of disposal of sanitary products must be provided in sanitary facilities for use by females.</p>	N/A
F2.4	Facilities for people with disabilities	Accessible unisex and ambulant sanitary facilities are required in accordance with clause. The design of accessible sanitary facilities is to comply with AS1428.1-2009.	N/A
F3.1	Height of rooms and other spaces	The minimum ceiling height requirements are to comply with the requirements of this provision.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
F4.1-4.3	Provision of natural light	Natural lighting must be provided in all habitable rooms of the residential units	Capable of Complying
F4.4	Artificial lighting	Artificial lighting is to be provided in accordance with AS/NZS1680.0 to spaces required by this clause.	Capable of Complying
F4.5-4.7	Ventilation of rooms	Ventilation is to be provided by natural or mechanical means in accordance with this provision and Clause F4.6.	Capable of Complying
F4.11	Car park exhaust	Each storey of the carpark must have a system of ventilation complying with AS1668.2 or permanent natural ventilation in accordance with Section 4 of AS1668.4.	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.	Capable of Complying
F5.2	Determination of airborne sound insulation ratings	A form of construction required to have an airborne sound insulation rating must: <ul style="list-style-type: none"> have the required value for weighted sound reduction index (R_w) or weighted sound reduction index with spectrum adaptation term ($R_w + C_{tr}$) determined in accordance with AS/NZS 1276.1 or ISO 717.1 using results from laboratory measurements; or an acceptable form of construction under Spec F5.2. 	Capable of Complying
F5.3	Determination of impact sound insulation ratings	Determination of impact sound insulation ratings is to be in accordance with this clause. Particular attention is required to the requirements for discontinuous construction	Capable of Complying
F5.4	Sound insulation rating of floor	1. A floor in a Class 2 or 3 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w}$ (impact) not more than 62 if it separates— <ol style="list-style-type: none"> sole-occupancy units; or a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification. 	Capable of Complying
F5.5	Sound insulation of walls	Sound insulation of walls and doors is required to be in accordance with this clause.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
F5.6	Sound insulation rating of internal services	Services that serves or pass through more than one SOU must achieve the required ratings specified by this clause.	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.	Capable of Complying
F6.1	Application of part	Part F6 applies to a sole-occupancy unit of a Class 2 building and a Class 4 part of a building.	noted
F6.2	Pliable building membrane	Where a pliable building membrane is installed, it is required to be provided in accordance with this clause.	Capable of Complying
F6.3	Flow rate and discharge of exhaust systems	Exhaust systems are required to be provided in accordance with this clause.	Capable of Complying
F6.4	Ventilation of roof spaces	Where ventilation of the roof space are provided, it is required to be provided in accordance with this clause.	Capable of Complying

4.7. Ancillary Provisions (BCA Section G)

BCA Clause	Title	Assessment and comment	Status
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 (windows 3 or more storeys above the ground).	Capable of Complying

4.8. Special Use Buildings (BCA Section H)

4.9. Energy Efficiency (BCA Section J – Class 3 and 5 to 9 Buildings)

4.10. Energy Efficiency (BCA Section J – Class 2 and 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.

4.10.1. Building Fabric (NSW Part J(A)1)

BCA Clause	Status	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 specifies that insulation is to be provided. The DTS provisions for thermal breaks apply to all Class 2 buildings and Class 4 parts.	noted
NSW J(A)1.2	Compliance with BCA	The sole occupancy units of a Class 2 building and a Class 4 part of the building must comply with the national BCA provisions of J02(b) to (d). Refer to J1.2, J1.3, J1.5 & J1.6 below.	noted
J1.2	Thermal construction — general	Thermal insulation is required to be installed in accordance with AS/NZS 4859.1 and the general requirements of this clause. Reflective & bulk insulation is to be installed in accordance with this clause.	Capable of Complying
J0.4	Roof thermal breaks	Roof thermal breaks are required in accordance with this clause.	Capable of Complying
J0.5	Wall thermal breaks	Wall thermal breaks are required in accordance with this clause.	Capable of Complying
J1.6 (c) & (d)	Floors – floor edge insulation	Floor edge insulation is to comply with this clause	Capable of Complying

4.10.2. Building Sealing (NSW Part J(A)2)

BCA Clause	Status	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: <ul style="list-style-type: none"> a building in climate zones 2 and 5 where the only means of air-conditioning is by using an evaporative cooler; or a permanent building opening, in a space where a gas appliance is located, that is necessary for the safe operation of a gas appliance; or. parts of those buildings that cannot be fully enclosed 	Capable of Complying

BCA Clause	Status	Assessment and Comment	Status
NSW J(A)2.2	Compliance with BCA provisions	The following national provisions apply to the requirements of this clause: <ul style="list-style-type: none"> J3.2 Chimneys and flues J3.3 Roof Lights J3.4 External Doors and windows J3.5 Exhaust fans J3.6 Construction of roofs, walls and floors J3.7 Evaporative coolers 	Capable of Complying
J3.2	Chimneys and Flues	Open solid fuel burning appliances are not proposed.	N/A
J3.3	Roof lights	Roof lights are to be designed to comply with this clause.	Capable of Complying
J3.4 (a) to (d)	Windows and doors	External windows and doors are required to be designed to comply with this clause.	Capable of Complying
J3.5	Exhaust fans	An exhaust fan must be fitted with a sealing device to prevent air infiltration in a conditioned space or in climate zones 4, 6, 7 and 8.	Capable of Complying
J3.6	Construction of roofs, walls and floors	Roofs, external walls, external floors and any openings are required to be designed and constructed to minimise air leakage.	Capable of Complying

4.10.3. Air-Conditioning and Ventilating System (NSW Part J(A)3)

BCA Clause	Status	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.	Capable of Complying
NSW J(A)3.2	Compliance with BCA provisions	Class 2 buildings and Class 4 parts of buildings must comply with national BCA provisions as identified below.	Capable of Complying
J5.2	Air Conditioning System control	Any proposed air-conditioning systems must be designed in accordance with this clause.	Capable of Complying
J5.3	Mechanical ventilation system control	Any proposed mechanical ventilation systems must be designed in accordance with this clause.	Capable of Complying
J5.4	Fan systems	Any proposed fan systems must be designed in accordance with this clause.	Capable of Complying

BCA Clause	Status	Assessment and Comment	Status
J5.5	Ductwork insulation	Ductwork and fittings in an air-conditioning system must be provided with insulation in accordance with this clause.	Capable of Complying
J5.6	Ductwork sealing	Ductwork in an air-conditioning system with a capacity of 3000 L/s or greater, not located within the only or last room served by the system, must be sealed against air loss in accordance with the duct sealing requirements of AS 4254.1 and AS 4254.2 for the static pressure in the system.	Capable of Complying
J5.7	Pump systems	Pumps and pipework that form part of an air-conditioning system are to be designed in accordance with this clause.	Capable of Complying
J5.8	Pipework insulation	Piping, vessels, heat exchangers and tanks containing heating or cooling fluid, where the fluid is held at a heated or cooled temperature, that are part of an air-conditioning system, other than in appliances covered by MEPS, must be provided with insulation in accordance with this clause.	Capable of Complying
J5.10	Refrigerant chillers	An air-conditioning system refrigerant chiller must comply with MEPS and the full load operation energy efficiency ratio and integrated part load energy efficiency ratio in Table J5.10a or Table J5.10b when determined in accordance with AHRI 551/591.	Capable of Complying
J5.11	Unitary air conditioning equipment	Unitary air-conditioning equipment including packaged air-conditioners, split systems, and variable refrigerant flow systems must comply with MEPS and for a capacity greater than or equal to 65 kW _r where required by this clause.	Capable of Complying
J5.12	Heat rejection equipment	<p>The motor rated power of a fan in a cooling tower, closed circuit cooler or evaporative condenser must not exceed the allowances in Table J5.12.</p> <p>The fan in an air-cooled condenser must have a motor rated power in accordance with this clause.</p>	Capable of Complying

4.10.4. Heated Water Supply (NSW Part J(A)4)

BCA Clause	Status	Assessment and Comment	
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.	Capable of Complying
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.	Capable of Complying
J7.2	Hot Water Supply	A heated 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 Australia.	Capable of Complying

4.10.5. Facilities for Energy Monitoring (NSW Part J(A)5)

BCA Clause	Status	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.	Capable of Complying
NSW J(A)5.3	Compliance with BCA provisions	Class 2 buildings must comply with the national provision of J8.3.	Capable of Complying
J8.3	Facilities for energy monitoring	Facilities for energy monitoring are required to be provided in accordance with this clause.	Capable of Complying

5. 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.

NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE	PROPOSED
1.	Access panels, doors & hoppers to fire resisting shaft	BCA 2019 C3.13 & AS 1905.1-2015 Amdt 1	YES
2.	Automatic fail-safe devices	Spec C3.4 automatic smoke doors; D2.21 (b)(iv) auto unlock of doors; D2.22 (re-entry from fire stairs)	YES
3.	Automatic fire detection and alarm system	BCA 2019 E2.2, Spec E2.2a Clause 5 (combination smoke alarm and smoke detection); Clause 6 (smoke detection for smoke control systems) & AS 1670.1-2018 or AS 3786-2014 Amdt 1 & 2	YES
4.	Automatic fire suppression system	BCA 2019 E1.5, Spec E1.5 & AS 2118.1-2017 Amdt 1	YES
5.	Building occupant warning system	BCA 2019 Spec E2.2a (Clause 7) & AS1670.1-2018 (Clause 3.22)	YES
6.	Emergency Lifts	BCA 2019 E3.4	YES
7.	Emergency lighting	BCA 2019 Clause E4.2, E4.3, E4.4, E1.8	YES
8.	Exit signs	BCA 2019 E4.5, E4.6, E4.8 Spec E4.8 & AS 2293.1- 2018	YES
9.	Fire control centre	BCA 2019 E1.8 & Spec E1.8	YES
10.	Fire dampers	BCA 2019 C3.12, C3.15 & AS1668.1-2015 Amdt 1, AS 1668.2-2012 Amdt 1 & 2	YES
11.	Fire doors	BCA 2019 C2.12 (separation of equipment); C2.13 (electricity supply systems); C3.3 (separation of external walls & associated openings in fire compartments); C3.4, Spec C3.4; C3.5 (doorways & fire walls); C3.8 (openings in fire isolated exits), C3.11 (bounding construction), C3.13 (openings in shafts) & AS 1905.1 – 2015 Amdt 1	YES
12.	Fire rated lift landing doors	BCA 2019 C3.10 & AS 1735.11-1986	YES
13.	Fire Hose reel systems	BCA 2019 E1.4 & AS 2441-2005 Amdt 1	YES
14.	Fire hydrant systems	BCA 2019 E1.3 & AS 2419.1-2005 Amdt 1	YES

NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE	PROPOSED
15.	Fire seals protecting openings in fire resisting components of the building	BCA 2019 C3.12, C3.15 & Spec C3.15, AS 4072.1-2005 Amdt 1, AS 1530.4.-2014	YES
16.	Lightweight construction	BCA 2019 C1.8 & Spec C1.8	YES
17.	Mechanical air handling system	BCA 2019 E2.2, Table E2.2a; NSW Table E2.2b, Spec E2.2a, Spec E2.2b & AS 1668.1-2015 Amdt 1. Class 7a (carpark building mechanical ventilation systems) BCA 2019 E2.2, Table E2.2a and Clause 5.5 of AS 1668.1-2015 Amdt 1.	YES
18.	Portable fire extinguishers	BCA 2019 E1.6 & AS 2444-2001	YES
19.	Pressurising system	BCA 2019 Clause E2.2 & AS 1668.1-2015 Amdt 1	YES
20.	Smoke alarms & heat alarms	BCA 2019 E2.2, Spec E2.2a & AS 3786-2014 Amdt 1 & 2	YES
21.	Smoke exhaust system	BCA 2019 E2.2, Spec E2.2b & AS 1668.1-2015 Amdt 1	YES
22.	Emergency warning and intercom system	BCA 2019 E4.9 & AS 1670.4-2018	YES
23.	Warning and operational signs	EPA Regulation 2000 (Clause 183), D2.23 (signs on exit doors), E3.3 (lifts), C3.6 sliding fire doors	YES

6. SUMMARY OF NON-COMPLIANCE ISSUES

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 A2.2.

C2.14

The BCA requires that a public corridor greater than 40 m in length to be divided with smoke-proof walls complying with Clause 2 of Specification C2.5.

Generally, the residential public corridors are less than 40m with the exception of the following areas:

Building 2B1

- Level 5 measured 45m >40m; and

Building 2E1

- Level 4,5,6,7 & 8 measured 41m >40m

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.2

As the proposed building has an effective height of greater than 25m two required exits are required to be provided from all areas of the building. Generally, two exits have been provided to all areas with the exception of the following:

Basement 2

- Bicycle storage room (southern)

Building 2B1

- Mezzanine lobby
- Lobby level 2 (townhouse)
- Part roof (level 5)

Building 2C1

- Lobby adjacent m209

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.4

The BCA requires the 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

The BCA requires the Class 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 exit travel distances in the following areas exceed DtS provisions:

Basement 2

- 30m >20m to POC
- 46m >40m maximum distance to an exit

Basement 1

- 33m >20m to POC
- 50m >40m maximum distance to an exit

Building 2B1

- Level 2, 4,5,6 & 7 approximate travel distance of 10.5m > 6m
- Level 3 approximate travel distance of 19.4m > 6m
- Level 8 approximate travel distance of 7m > 6m
- Part roof (level 5) 29m > 20m to POC
- Roof 26m >20m to POC

Building 2C1

- Resi Waste 30m >20m to POC
- Level 3 approximate travel distance of 12m > 6m
- Levels 4 to 8 approximate travel distance of 10.5m > 6m
- Part roof (level 5) 28m > 20m to POC
- Roof 23m >20m to POC

Building 2C2

- Roof 26m >20m to POC

Building 2E1

- Levels 2 to 8 approximate travel distance of 11.8m > 6m

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.5

The BCA requires alternative exits to be distributed uniformly around the storey and are not to be less than 9m apart, and not more than 45m apart (residential) or in all other cases 60m apart.

The following exits are located less than 9m apart and are not in accordance with DtS provision:

Building 2B1

- The residential fire isolated scissor stair from Level 2 and above.

Building 2C1

- The residential fire isolated scissor stair from Level 1 and above.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

E1.5

A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5.

The sprinkler valve room does not open directly to a road or open space.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

7. 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.

ATTACHMENT 1

Assessed plans prepared by Turner

Plan Title	Drawing No	Revision	Date
GA PLANS OVERALL BASEMENT 03 & 02	DA-110-006	03	6/5/20
GA PLANS OVERALL BASEMENT 02 & 01	DA-110-007	03	6/5/20
GA PLANS OVERALL BASEMENT 01, MEZZ & LEVEL 01	DA-110-008	03	6/5/20
GA PLANS OVERALL MEZZANINES, LEVEL 01 & 02	DA-110-010	03	6/5/20
GA PLANS OVERALL LEVEL 01, 02 & 03	DA-110-020	03	6/5/20
GA PLANS OVERALL LEVEL 01, 02, 03 & 04	DA-110-030	03	6/5/20
GA PLANS OVERALL LEVEL 02, 03, 04 & 05	DA-110-040	03	6/5/20
GA PLANS OVERALL LEVEL 03, 04, 05 & 06	DA-110-050	03	6/5/20
GA PLANS OVERALL LEVEL 04, 05, 06 & 07	DA-110-060	03	6/5/20
GA PLANS OVERALL LEVEL 05, 06, 07 & 08	DA-110-070	03	6/5/20
GA PLANS OVERALL LEVEL 06, 07, 08 & ROOF	DA-110-080	03	6/5/20
GA PLANS OVERALL LEVEL 07, 08 & ROOF	DA-110-090	03	6/5/20
GA PLANS OVERALL LEVEL 08 & ROOF	DA-110-100	03	6/5/20
GA PLANS OVERALL ROOF LEVEL	DA-110-110	03	6/5/20
GA PLANS OVERALL COMBINED ROOF PLAN	DA-110-120	03	6/5/20

A background graphic consisting of a dark blue diagonal band across the page. Behind this band is a grayscale image of a city skyline with a prominent skyscraper. Overlaid on the entire page are faint, white, 3D wireframe outlines of rectangular blocks, some of which are partially obscured by the dark blue band.

Building Code of Australia

Assessment Report

**Project Address: Tallawong Station Precinct South,
1-15 & 2-12 Conferta Avenue, Rouse Hill**

Building: 2D

Client: Deicorp Projects (Tallawong Station) P/L

Report Number: 190427

Revision: R1.0

15 MAY 2020

REPORT REVISION HISTORY

Revision	Date Issued	Revision Description	
01	15/05/2020	BCA Draft Report	
		Prepared by	Verified by
		Tariq Sheikh <i>Building Surveyor</i>	Brendan Bennett <i>A1 Certifier</i>

Disclaimer

This report has been prepared by City Plan Services P/L with input from a number of other expert consultants (if relevant). To the best of our knowledge, the information contained herein is neither false nor misleading and the contents are based on information and facts that were correct at the time of writing. City Plan Services P/L accepts no responsibility or liability for any errors, omissions or resultant consequences including any loss or damage arising from reliance in information in this publication.

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TABLE OF CONTENTS

1. Executive Summary	3
2. Introduction	5
2.1. General	5
2.2. Purpose of Report	5
2.3. Report Basis	5
2.4. Exclusions and Limitations	5
3. Building Code of Australia Assessment.....	6
3.1. Classification (Part A6)	6
3.2. Effective Height (Schedule 3)	6
3.3. Rise in Storeys (C1.2)	6
3.4. Type of Construction (C1.1)	6
3.5. Climate Zone (A1.1)	6
3.6. Floor Area and Volume Limitations (Table C2.2)	6
4. Building Code of Australia Assessment.....	7
4.1. Structure (BCA Section B)	7
4.2. Fire Resistance (BCA Section C)	8
4.3. Fire-Resisting Construction (Specification C1.1).....	14
4.4. Access and Egress (BCA Section D)	15
4.5. Services and Equipment (BCA Section E)	21
4.6. Health and Amenity (BCA Section F)	24
4.7. Ancillary Provisions (BCA Section G).....	27
4.8. Special Use Buildings (BCA Section H)	27
4.9. Energy Efficiency (BCA Section J – Class 3 and 5 to 9 Buildings)	27
4.10. Energy Efficiency (BCA Section J – Class 2 and 4 Buildings)	27
4.10.1. Building Fabric (NSW Part J(A)1).....	28
4.10.2. Building Sealing (NSW Part J(A)2).....	28
4.10.3. Air-Conditioning and Ventilating System (NSW Part J(A)3)	29
4.10.4. Heated Water Supply (NSW Part J(A)4)	31
4.10.5. Facilities for Energy Monitoring (NSW Part J(A)5)	31
5. Fire Safety Schedule	32
6. Summary of Non-Compliance Issues.....	34
7. Conclusion	36
Attachment 1	37

1. EXECUTIVE SUMMARY

The development, the subject of this report, is for the proposed **Building (2D)** forming part of the Tallawong Station Precinct South development. The building consists of three residential blocks with three levels of associated basement carparking.

This report has been prepared, on behalf of Deicorp Projects (Tallawong Station) P/L, to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the planning development application documentation for the proposed works. Unless specifically noted this assessment and report deals with the proposed building 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 A2.2.

D1.2

As the proposed building has an effective height of greater than 25m two required exits are required to be provided from all areas of the building. Generally, two exits have been provided to all areas with the exception of the following:

Basement 2

- Storage room (western)

Building 2D1

- Bicycle parking (mezzanine level)

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.4

The BCA requires the 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

The BCA requires the Class 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 exit travel distances in the following areas exceed DtS provisions:

Basement 3

- 23m >20m to POC (from storage area)

Basement 2

- 23m >20m to POC (from storage area)
- 31m >20m to POC (eastern end)

Basement 1

- 26m >20m to POC (Water pump room)
- 30m >20m to POC (eastern end)

Building 2D1

- 30m > 20m to POC Mezzanine level (bicycle storage)
- Level 2 approximate travel distance of 12m > 6m

- Level 3 approximate travel distance of 11.2m > 6m
- Level 4 to 8 approximate travel distance of 6.5m > 6m

Building 2D2

- Level 2 & 3 approximate travel distance of 12.5m > 6m

Building 2D3

- Level 2 & 3 approximate travel distance of 11.4m > 6m
- Level 4 to 8 approximate travel distance of 10.7m > 6m

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.5

The BCA requires alternative exits to be distributed uniformly around the storey and are not to be less than 9m apart, and not more than 45m apart (residential) or in all other cases 60m apart.

The following exits are located **less than 9m apart** and are not in accordance with DtS provision:

Building 2D1

- The fire isolated scissor stair on mezzanine level.
- The residential fire isolated scissor stair from Level 2 and above.

Building 2D2

- The residential fire isolated scissor stair from Level 2 and above.

Building 2D3

- The residential fire isolated scissor stair from Level 2 and above.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

E1.5

A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5.

The sprinkler valve room is located on the mezzanine level (2D1) and does not open directly to a road or open space.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

2. INTRODUCTION

2.1. General

This report serves as an assessment for compliance with the Building Code of Australia in respect to proposed development, located at 1-15 & 2-12 Conferta Avenue Rouse Hill, within the local government area of Blacktown Council. The development consents of two stages as follows:

- Stage 1:
- Residential Building 1A
 - Residential Building 1B
 - Full Retail / Commercial
 - Basement carparking
 - Private Park
- Stage 2:
- Residential Building 2A
 - Residential Building 2B & 2C & 2E
 - Residential Building 2D (subject of this BCA report)**

2.2. Purpose of Report

This report has been prepared, on behalf of Deicorp Projects (Tallawong Station) P/L, to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the development application documentation for the proposed works for the **Residential Building 2D**.

2.3. Report Basis

The following information has been directly referenced or relied upon in the preparation of this report:

- (a) Architectural plans prepared by Turner, as identified in the attached Appendix 1.
- (b) The Building Code of Australia 2019, inclusive of NSW variations + Amendment 1 (where relevant) (See Note 1 & 2);
- (c) Environmental Planning and Assessment Act 1979.
- (d) Environmental Planning and Assessment Regulation 2000.

Note 1: Building Code of Australia (BCA) 2019 was adopted in NSW on 1 May 2019. 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.

Note 2 Building Code of Australia (BCA) 2019 Amendment 1 is expected to be adopted from 1 June 2020.

2.4. Exclusions and Limitations

This report does not consider the following, except where specifically mentioned:

- Structural design.
- The Disability Discrimination Act 1992 (access for people with disabilities has been assessed in accordance with Part D3 of the BCA, however additional measures may be required to be provided subject to the Disability Discrimination Act 1992)
- Disability (Access to Premises – Building) Standards 2010.

3. BUILDING CODE OF AUSTRALIA ASSESSMENT

3.1. Classification (Part A6)

The proposed building consists of:

Building	Class	Use	Area
Building 2D	7a	Carparking	Basement levels 03,02,01
	7b	Storage & loading dock	Part Basement Level 03, Mezzanine, Level 01 (LD)
	2	Residential	Level 01 +

Note: The carpark is shared by the three residential towers and therefore the building has been deemed a united building for the purpose of the BCA.

3.2. Effective Height (Schedule 3)

The proposed building will have an effective height of **27.12m** being greater than 25m.

(RL81.80 – 54.68 = 27.12m)

3.3. Rise in Storeys (C1.2)

The proposed building will consist of a rise in storeys of ten (10).

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.

3.5. Climate Zone (A1.1)

The building is located within Climate Zone 5

3.6. Floor Area and Volume Limitations (Table C2.2)

The building is compliant with maximum floor area and volume limits of:

Class 7a - The carpark is to be sprinkler protected and as such there are no maximum floor area or volume limitations for this area.

Class 2 - The Class 2 portions of the building are not subject to floor area and volume limitations of C2.2 as Table 3 of Specification C1.1 and Clause C3.11 of the NCC regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 classifications.

4. 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 in accordance with this clause. The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.	Capable of Complying
B1.2	Determination of individual actions	The magnitude of individual actions must be determined in accordance with this clause. The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.	Capable of Complying
B1.4	Determination of structural resistance of materials & forms of construction	<p>The structural resistance of the following materials and forms of construction for the following elements are to be in accordance with the standards nominated in this clause;</p> <ul style="list-style-type: none"> (a) Masonry (b) Concrete (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 <p>The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.</p>	Capable of Complying
B1.5	Structural Software	Structural software used in computer aided design is to comply with the requirements of this provision.	Capable of Complying
B1.6	Construction of buildings in flood hazard areas	A Class 2, 3, 4, 9a or 9c building is required to comply with the ABCB standards for Construction of Buildings in Flood Hazard Areas.	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.	Capable of Complying
C1.2	Calculation in rise in storeys	The building contains a RIS of ten (10).	Capable of Complying
C1.8	Lightweight construction	Any proposed fire resisting lightweight walls or fire resisting lightweight protection to steel columns is to comply with Specification C1.8.	Capable of Complying
C1.9	Non-combustible building elements	<ol style="list-style-type: none"> In a building required to be Type A or B construction, the following building elements and their components must be non-combustible: <ol style="list-style-type: none"> External walls and common walls, including all components incorporated in them including the façade covering, framing and insulation. The flooring and floor framing of lift pits. Non-loadbearing internal walls where they are required to be fire-resisting. A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in – <ol style="list-style-type: none"> A building required to be Type A construction; and A building required to be Type B construction, subject to C2.10, in: <ol style="list-style-type: none"> a Class 2, 3 or 9 building; and a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys. A loadbearing internal wall and loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification C1.1. The requirements of (1) and (2) do not apply to gaskets, caulking, sealants, termite management systems, glass, thermal breaks associated with glazing systems & dampproof courses. The following materials may be used wherever a non-combustible material is required: <ol style="list-style-type: none"> Plasterboard. 	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<ul style="list-style-type: none"> (b) Perforated gypsum lath with a normal paper finish. (c) Fibrous-plaster sheet. (d) Fire-reinforced cement sheeting. (e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. (f) Sarking that does not exceed 1 mm thickness and have a flammability index of not greater than 5. (g) Bonded lamination materials where – <ul style="list-style-type: none"> (i) Each lamina, including any core, is non-combustible; and (ii) Each adhesive layer does not exceed 1mm in thickness and the total thickness of the adhesive layers does not exceed 2mm; and (iii) The Spread of Flame Index and the Smoke-Developed Index of the bonded laminated materials as a whole do not exceed 0 and 3 respectively. 	
C1.10	Fire hazard properties	Proposed internal linings, materials and assemblies 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.	Capable of Complying
C1.13	Fire protected timber: Concession	This concession is not available.	N/A
C1.14	Ancillary Elements	<p>An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following:</p> <ol style="list-style-type: none"> 1. An ancillary element that is non-combustible. 2. A gutter, downpipe or other plumbing fixture or fitting. 3. A flashing. 4. A grate or grille not more than 2m² in area associated with a building service. 5. An electrical switch, socket-outlet, cover plate or the like. 6. A light fitting. 	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<p>7. A required sign.</p> <p>8. A sign other than one provided under (1) or (7) that-</p> <ul style="list-style-type: none"> (a) Achieves a ground number of 1 or 2; and (b) Does not extend beyond one storey; and (c) Does not extend beyond one fire compartment; and (d) Is separated vertically from other signs permitted under (8) by at least 2 storeys. <p>9. An awning, sunshade, canopy, blind or shading hood other than one provided under (1) that –</p> <ul style="list-style-type: none"> (a) Meets the requirements of Table 4 of Specification C1.10 as for an internal element; and (b) Serves a storey – <ul style="list-style-type: none"> (i) At ground level; or (ii) Immediately above a storey at ground level; and (iii) Does not serve an exit, where it would render the exit unusable in a fire. <p>10. A part of a security, intercom or announcement system.</p> <p>11. Wiring.</p> <p>12. A paint, lacquer or a similar finish.</p> <p>13. A gasket, caulking, sealant or adhesive directly associated with (1) to (11).</p>	
C2.2	General floor area and volume limitations	<p>The fire compartment sizes meet the requirements of this Clause</p> <p>Class 7a - The carpark is to be sprinkler protected and as such there are no maximum floor area or volume limitations for this area.</p> <p>Class 2 - The Class 2 portions of the building are not subject to floor area and volume limitations of C2.2 as Table 3 of Specification C1.1 and Clause C3.11 of the NCC regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 classifications.</p>	Capable of Complying
C2.6	Vertical separation of openings in external walls	The building is required to be protected with sprinklers throughout and therefore vertical separation is not required.	N/A
C2.7	Separation by fire walls	Fire walls are required to be designed to comply with the clause.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<p>The following fire walls are proposed:</p> <ol style="list-style-type: none"> 1. Storage part in basement 3 carpark (2D); 2. Between the mezzanine level (storage) and the basement 1 carpark (2D1); 3. Carpark entry and level 1 residential building (2D2); and 4. Loading dock and residential building (2D1) 	
C2.8	Separation of classifications in the same storey	<p>If a building has parts of different classifications located alongside one another in the same storey,</p> <ul style="list-style-type: none"> ▪ each building element in that storey must have the higher FRL prescribed in Specification C1.1 for that element for the classifications concerned; or ▪ the parts must be separated in that storey by a fire wall. <p>The proposed fire walls are identified in C2.7 above.</p>	Capable of Complying
C2.9	Separation of classifications in different stories	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.	Capable of Complying
C2.10	Separation of lift shafts	The lift shafts are required to be fire separated from the rest of the building in accordance with this clause.	Capable of Complying
C2.11	Stairways and lifts in one shaft	The stairs and lift shaft are located in different shafts.	Capable of Complying
C2.12	Separation of equipment	<p>The following equipment are required to be fire separated from the remainder of the building by 120/120/120 FRL construction:</p> <ul style="list-style-type: none"> ▪ Lift motor rooms and lift control panels. ▪ Emergency Generators. ▪ Central smoke control plant. ▪ Boilers. ▪ Battery systems. <p>The building does not contain any of the above room and the requirements of this provision do not apply.</p>	N/A
C2.13	Electricity supply system	The electricity substation is required to be fire separated from the remainder of the building. The BCA requires 2 hr separation however the electricity authority generally requires 3 hr separation.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		<p>One Substation kiosk identified adjacent the loading dock of building (2D1).</p> <p>Any main switchboard located in the building which sustains emergency equipment operating in emergency mode, is required to be fire separated from the remainder of the building by 2 hr fire resisting construction.</p> <p>Construction should achieve an FRL of 120/120/120, doorways are required achieve an FRL of -/120/30 and to be self-closing and all penetrations in enclosures are to be appropriately fire stopped.</p> <p>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.</p> <p>Electrical conductors and switchboards are required to comply with this clause.</p>	
C2.14	Public corridors in Class 2 & 3 buildings	<p>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 walls complying with smoke proof walls complying with Clause 2 of Specification C2.5.</p> <p>Corridors are less than 40m.</p>	Capable of Complying
C3.2	Protection of openings in external walls	Openings are located more than 3m from the allotment boundary.	Capable of Complying
C3.3	Separation of external walls and associated openings in different fire compartments	The building does not contain separate fire compartments which are applicable to this clause.	Capable of Complying
C3.4	Acceptable method of protection	<p>Windows requiring protection must be protected by one of the means:</p> <ul style="list-style-type: none"> External wall-wetting sprinklers with windows that are automatically or permanently fixed in the closed position. -/60/- fire windows (Automatic or permanently fixed in the closed position) -/60/- automatic fire shutters 	Noted

BCA Clause	Title	Assessment and Comment	Status
		<ul style="list-style-type: none"> Doorways which require protection can be protected externally with wall wetting sprinklers with doors that are self-closing or automatic closing, or -/60/30 fire doors which are self-closing or automatic closing. <p>Fire doors, fire windows and fire shutters are required to comply with Specification C3.4.</p>	
C3.5	Doorways in fire walls	Doors in fire walls are to have the FRL's and features required by this clause.	Capable of Complying
C3.6	Sliding fire doors	No sliding fire doors proposed.	N/A
C3.7	Protection of doorways in horizontal exits	The building does not contain horizontal exits and the provisions of this part do not apply.	N/A
C3.8	Openings in fire isolated exits	The fire-isolated exits are required to be protected by -/60/30 self-closing fire doors.	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.	Capable of Complying
C3.10	Fire isolated lift shafts	<p>The lift doors are required to be -/60/- fire doors and comply with this provision.</p> <p>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.</p>	Capable of Complying
NSW C3.11	Bounding construction	<p>Doors from sole occupancy units opening into enclosed public corridors are required to be protected by -/60/30 self-closing fire doors.</p> <p>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.</p>	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.	Capable of Complying
C3.15	Openings for service installations	Services that penetrate a building element that is required to have an FRL must be protected utilising one of the options listed under this clause. Test certificates describing each individual service penetration and configuration	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		will be required at the construction certificate stage.	
C3.16	Construction joints	Construction joints in building elements required to be fire resistant are required to be protected in accordance with this clause.	Capable of Complying
C3.17	Columns protected with lightweight construction to achieve an FRL	Any columns protected with fire resisting lightweight construction to achieve an FRL must be installed in a manner that's identical to the tested prototype.	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	Exposure to fire source features is to be determined in accordance with this clause.	Noted
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.	Capable of Complying
2.3	Lintels	Lintels are to be protected as required by the requirements of this clause.	Capable of Complying
2.4	Method of attachment not to reduce the fire resistance of building elements	The method of attaching or installing a finish, lining, ancillary element or service installation to the building element must not reduce the fire-resistance of that element to below that required.	Capable of Complying
2.5	General concessions	Roof top plant rooms need not have an FRL if they are non-combustible and they only contain equipment specified in this clause.	Capable of Complying
2.6	Mezzanine floors: concession	The building does not contain mezzanines that are subject to this provision.	N/A
2.7	Enclosure of shafts	Fire rated shafts are to be enclosed at the top and bottom in accordance with the requirements of this clause.	Capable of Complying
3.1	Fire resistance of building elements	Generally building elements are required to achieve the following FRL's; Carpark & ancillary storage: 2 hrs Storage & loading dock: 4 hrs Residential: 1½ hrs	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		A loadbearing internal wall and a loadbearing fire wall must be of concrete or masonry.	
3.5	Roof: Concession	<p>The roof is not required to achieve an FRL as the building:</p> <ul style="list-style-type: none"> has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 installed throughout; or has a rise in storeys of 3 or less; or is of Class 2 or 3; or has an effective height of not more than 25 m and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes 	Capable of Complying
3.6	Roof lights	Roof lights comply with this clause.	Capable of Complying
3.7	Internal wall and column: concession	Concession is not available due to the effective height of the building.	N/A

4.4. Access and Egress (BCA Section D)

BCA Clause	Title	Assessment and Comment	Status
D1.2	Number of exits required	<p>Two exits are to be available to all areas of the building.</p> <p>Generally, two exits have been provided to all areas with the exception of the following:</p> <p>Basement 2</p> <ul style="list-style-type: none"> Storage room (western) <p>Building 2D1</p> <ul style="list-style-type: none"> Bicycle parking (mezzanine level) 	Performance Solution
		One exit is provided to Lobby level 2 Building 2D1, a second opening (assumed to be the second exit) is shown on the FIS however no door is provided.	Does not comply
D1.3	When fire isolated exits are required	Stairways that service the basement levels and the upper residential levels are all fire-isolated stairways.	Capable of Complying
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	Performance Solution

BCA Clause	Title	Assessment and Comment	Status
		<p>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.</p> <p>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.</p> <p>Class 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.</p> <p>The exit travel distances in the following areas exceed DtS provisions:</p> <p>Basement 3</p> <ul style="list-style-type: none"> 23m >20m to POC (from storage area) <p>Basement 2</p> <ul style="list-style-type: none"> 23m >20m to POC (from storage area) 31m >20m to POC (eastern end) <p>Basement 1</p> <ul style="list-style-type: none"> 26m >20m to POC (Water pump room) 30m >20m to POC (eastern end) <p>Building 2D1</p> <ul style="list-style-type: none"> 30m > 20m to POC Mezzanine level (bicycle storage) Level 2 approximate travel distance of 12m > 6m Level 3 approximate travel distance of 11.2m > 6m Level 4 to 8 approximate travel distance of 6.5m > 6m <p>Building 2D2</p> <ul style="list-style-type: none"> Level 2 & 3 approximate travel distance of 12.5m > 6m <p>Building 2D3</p> <ul style="list-style-type: none"> Level 2 & 3 approximate travel distance of 11.4m > 6m Level 4 to 8 approximate travel distance of 10.7m > 6m 	
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.	Performance Solution

BCA Clause	Title	Assessment and Comment	Status
		<p>The distance between alternative exits are less than 60m and capable of complying.</p> <p>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.</p> <p>The following exits are located <u>less than 9m apart</u> and are not in accordance with DtS provision:</p> <p>Building 2D1</p> <ul style="list-style-type: none"> • The fire isolated scissor stair on mezzanine level. • The residential fire isolated scissor stair from Level 2 and above. <p>Building 2D2</p> <ul style="list-style-type: none"> • The residential fire isolated scissor stair from Level 2 and above. <p>Building 2D3</p> <ul style="list-style-type: none"> • The residential fire isolated scissor stair from Level 2 and above. 	
NSW D1.6	Dimensions of exits and paths of travel to exits	A required exit or path of travel to an exit are required to be a minimum unobstructed height of not less than 2m and minimum width of 1m.	Capable of Complying
D1.7	Travel via fire isolated exits	<p>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:</p> <ul style="list-style-type: none"> ▪ a public corridor, public lobby or the like; or ▪ a sole-occupancy unit occupying all of a storey; or ▪ a sanitary compartment, airlock or the like. <p>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;</p> <p>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</p>	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser.	
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	A non-fire-isolated stair serving as a required exit must provide a continuous means of travel by its own flights and landings to a level at which egress to a road or open space is available.	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 path that is not less than the exit width to which the external path serves. Where there is a change of level, the path must contain a complying stair or ramp.	Capable of Complying
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.	Noted
D1.13	Number of persons accommodated	The building is a residential flat building with associated carparking. It is reasonable that less than 100 people per stair core will be accommodated in the building.	Capable of Complying
D1.16	Plant rooms and lift rooms: concession	A ladder may be used in lieu of a stairway to provide egress from a plant room with a floor area less than 100m ² or plant or lift machine rooms with a floor area of less than 200 m ² , for all but one point of egress. Ladders are required to comply with AS1657 and the requirement of this clause.	Noted
D1.17	Access to lift pits	Access to lift pipes is to be in accordance with this clause.	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.	Capable of Complying
D2.3	Non-fire isolated stairs and ramps	It is assumed that any non-fire-isolated stairway will be concrete.	N/A

BCA Clause	Title	Assessment and Comment	Status
D2.4	Separation of rising and descending stair flights	<p>The proposal provides connected rising and descending stairs however they are separated with smoke proof construction.</p> <p>Rising and descending fire-isolated stairs are required to be separated with non-combustible construction and smoke proof construction in accordance with Clause 2 of Specification C2.5.</p>	Capable of Complying
D2.7	Installation in exits and paths of travel	<p>Access to service shafts and services other than to firefighting 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.</p> <p>Gas or other fuel services must not be installed in a required exit.</p> <p>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).</p> <p>Only electrical wiring associated with services specified in the clause, are permitted to be installed in a fire isolated exit.</p>	Capable of Complying
D2.8	Enclosure of space under stairs and ramps	No enclosure of space under stairs proposed.	N/A
D2.9	Width of stairways	A required stairway or ramp that exceeds 2m in width is counted as having a width of only 2m unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2m	Capable of Complying
D2.10	Pedestrian ramps	<p>A ramp must:</p> <ol style="list-style-type: none"> where the ramp is also serving as an accessible ramp under Part D3, be in accordance with AS1428.1; or in any other case, have a gradient not steeper than 1:8. <p>The floor surface of a ramp must have a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS4586.</p>	Capable of Complying
D2.11	Fire-isolated passageways	The fire rating of fire-isolated passageways is required to be achieved from the outside.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
D2.12	Roof as open space	No discharge to the roof proposed.	N/A
NSW D2.13	Goings & risers	Goings and risers are to be designed to comply with this clause including: <ul style="list-style-type: none"> going and riser dimensions; and slip resistance. 	Capable of Complying
D2.14	Landings	Landings are to be designed in accordance with this clause.	Capable of Complying
NSW D2.15	Thresholds	Thresholds are to comply with this clause.	Capable of Complying
NSW D2.16	Barriers to prevent falls	Balustrades are to be designed to comply with this clause.	Capable of Complying
D2.17	Handrails	Handrails are required along at least one side of all stairways or ramps, or on both sides of stairs or ramps with a total width of more than 2m. Handrails are required to be installed in accordance with AS1428.1-2009 except for fire-isolated stairs.	Capable of Complying
D2.18	Fixed platforms, walkways, stairways & ladders	Fixed platforms, walkways, stairways & ladders are to be designed in accordance with this clause.	Noted
NSW D2.19	Doorways and doors	The sliding doors leading directly to the road or open space must be capable of being opened manually under a force of not more than 110 N. Power-operated doorway required to be opened manually under a force of not more than 110 N and open automatically if it leads directly to a road or open space.	Capable of Complying
D2.20	Swinging doors	A swinging door must not encroach and impede the path of travel/exit width by more than 500mm at any part of its swing. When in the fully open position, it must not encroach into the path of travel/exit width by more than 100mm. Doors in or serving as a required exit must swing in the direction of egress unless they are subject to the concession in this clause.	Capable of Complying
NSW D2.21	Operation of latch	Doors in required exits or forming part of a required exit must be readily openable without a key from the egress side, by a single hand downward action on a single device which is	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		located between 900mm and 1.1m from the floor and comply with the requirements of this clause.	
D2.22	Re-entry from fire-isolated exits	<p>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:</p> <ul style="list-style-type: none"> ▪ 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 ▪ 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. 	Capable of Complying
D2.23	Signs on doors	A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to exit door and smoke doors, in accordance with this clause.	Capable of Complying
D2.24	Protection of openable windows	<p>A window opening must be provided with protection, in accordance with this clause, if the floor below the window is 2 m or more above the surface beneath in a bedroom in a Class 2.</p> <p>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 have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing.</p>	Capable of Complying
Part D3 – Access for People with a Disability			
This part is to be covered by a separate Accessibility Report.			

4.5. Services and Equipment (BCA Section E)

BCA Clause	Title	Assessment & 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	Capable of Complying

BCA Clause	Title	Assessment & Comment	Status
		<p>accordance with AS 2419.1. Where internal hydrants are provided, they must only serve the storey in which they are located.</p> <p>The location of the proposed fire hydrant booster is to the front of residential building 2D1 adjacent new road south.</p> <p>Ensure FIS are provided with sufficient space for internal hydrants.</p> <p>Full details to be provided at CC stage.</p>	
E1.4	Fire hose reels	<p>Fire hose reels are to be provided to the non-residential areas. The fire hose reel system must be installed in accordance with this clause and AS 2441.</p> <p>Full details to be provided at CC stage.</p>	Capable of Complying
E1.5	Sprinklers	<p>A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5.</p> <p>The sprinkler valve room is located on the mezzanine level (2D1) and does not open directly to a road or open space.</p> <p>Full details to be provided at CC stage.</p>	Performance Solution
E1.6	Portable fire extinguishers	<p>The building is to be provided with portable fire extinguishers.</p> <p>Within the residential areas a 2.5kg ABE powder extinguisher is to be located within 10m of all unit entry doors.</p> <p>Portable fire extinguishers are to comply with this provision and sections 1, 2, 3 and 4 of AS 2444.</p> <p>Full details to be provided at CC stage.</p>	Capable of Complying
E1.8	Fire control centres	<p>A fire control centre is required in accordance with Specification E1.8.</p> <p>The FCC is located within building 2D2 lobby adjacent the lifts.</p>	Capable of Complying
E1.9	Fire precautions during construction	<p>In a building under construction not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stairway or exit.</p> <p>After the building has reached an effective height of 12 m the required fire hydrants and fire hose reels must be operational in at least every storey that is covered by the roof or the floor</p>	Capable of Complying

BCA Clause	Title	Assessment & Comment	Status
		structure above, except the 2 uppermost storey's and any required booster connections must be installed.	
E1.10	Provision for special hazards	No special hazards have been identified.	Noted
E2.2	General requirements	<p>All Areas</p> <ul style="list-style-type: none"> Installation of an automatic air pressurisation system to the fire isolated exits, stairways and passageways that service the building. This system should be installed in accordance with AS/ANZ 1668.1. <p>Car parking Areas</p> <ul style="list-style-type: none"> The basements are to be provided with a mechanical ventilation system in accordance with AS1668.2. It is assumed through the building fire sprinkler systems will be utilised in the places required by this Clause. <p>Residential Areas</p> <ul style="list-style-type: none"> A smoke detection and alarm system complying with NCC2019 specification E2.2a must be installed throughout these areas/levels. 	Capable of Complying
E3.1	Lift installations	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification E3.1.	Capable of Complying
E3.2	Stretcher facility in lifts	The lift/s specified in this clause, must be above to 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.	Capable of Complying
E3.3	Warning against use of lifts in fire	Warning signs must be displayed near every lift call button in accordance with this clause.	Capable of Complying
E3.4	Emergency lifts	Emergency lift/s complying with this clause and Spec E3.1 must be installed within the building.	Capable of Complying
E3.5	Landings	Access and egress to and from lift well landings must comply with the DTS provision of Section D	Capable of Complying
E3.6	Passenger lifts	The lifts are required to be of a type and have features for people with disabilities as required by this clause.	Capable of Complying

BCA Clause	Title	Assessment & Comment	Status
E3.7	Fire service controls	Fire service controls are required to every lift serving any storey above an effective height of 12m. Fire service controls are required to comply with the requirements of this provision.	Capable of Complying
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.	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.	Capable of Complying
E4.2 to E4.4	Emergency lighting requirements	Emergency lighting must be provided in accordance with these clauses. Emergency lighting is required to comply with AS2293.1-2005.	Capable of Complying
E4.5 to E4.8	Exit signs	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.	Capable of Complying
E4.9	Emergency warning and intercom systems	EWIS is required in accordance with AS1670.4.	Capable of Complying

4.6. Health and 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.	Capable of Complying
F1.1	Stormwater drainage	Stormwater drainage is required to be designed to comply with AS/NZS 3500.3-2015.	Capable of Complying
F1.4	External above ground membranes	Waterproofing membranes for external above ground use must comply with AS 4654.1-2012 & AS 4654.2-2012	Capable of Complying
F1.5	Roof coverings	Lightweight metal roof sheeting is to comply with AS1562.1.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
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.	Capable of Complying
F1.7	Waterproofing of wet areas in buildings	Waterproofing of wet areas are required to comply with this clause 76 AS 3740.	Capable of Complying
F1.9	Damp-proofing	Damp proofing is required to be provided in accordance with this clause.	Capable of Complying
F1.10	Damp-proofing of floor on ground	Damp proofing is required to be provided in accordance with this clause.	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.	Capable of Complying
F1.12	Sub-floor ventilation	Where provided sub-floor ventilation is to be in accordance with this Clause.	Capable of Complying
F1.13	Glazed assemblies	Glazed assemblies to comply with AS 2047 as applicable.	Capable of Complying
F2.1	Facilities in residential buildings	<p>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:</p> <ul style="list-style-type: none"> ▪ A bath or shower; and ▪ A closet pan & wash basin; and ▪ Kitchen; and ▪ Wash tub and space for washing machine and drier <p>Sanitary facilities are provided as required.</p>	Capable of Complying
F2.3	Facilities in Class 3 to 9 buildings	<p>Sanitary facilities must be provided in accordance with this clause and Table F2.3.</p> <p>Adequate means of disposal of sanitary products must be provided in sanitary facilities for use by females.</p>	N/A
F2.4	Facilities for people with disabilities	Accessible unisex and ambulant sanitary facilities are required in accordance with clause. The design of accessible sanitary facilities is to comply with AS1428.1-2009.	N/A
F3.1	Height of rooms and other spaces	The minimum ceiling height requirements are to comply with the requirements of this provision.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
F4.1-4.3	Provision of natural light	Natural lighting must be provided in all habitable rooms of the residential units	Capable of Complying
F4.4	Artificial lighting	Artificial lighting is to be provided in accordance with AS/NZS1680.0 to spaces required by this clause.	Capable of Complying
F4.5-4.7	Ventilation of rooms	Ventilation is to be provided by natural or mechanical means in accordance with this provision and Clause F4.6.	Capable of Complying
F4.11	Car park exhaust	Each storey of the carpark must have a system of ventilation complying with AS1668.2 or permanent natural ventilation in accordance with Section 4 of AS1668.4.	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.	Capable of Complying
F5.2	Determination of airborne sound insulation ratings	<p>A form of construction required to have an airborne sound insulation rating must:</p> <ul style="list-style-type: none"> have the required value for weighted sound reduction index (R_w) or weighted sound reduction index with spectrum adaptation term ($R_w + C_{tr}$) determined in accordance with AS/NZS 1276.1 or ISO 717.1 using results from laboratory measurements; or an acceptable form of construction under Spec F5.2. 	Capable of Complying
F5.3	Determination of impact sound insulation ratings	Determination of impact sound insulation ratings is to be in accordance with this clause. Particular attention is required to the requirements for discontinuous construction	Capable of Complying
F5.4	Sound insulation rating of floor	<p>1. A floor in a Class 2 or 3 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w}$ (impact) not more than 62 if it separates—</p> <p>(a) sole-occupancy units; or</p> <p>(b) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification.</p>	Capable of Complying
F5.5	Sound insulation of walls	Sound insulation of walls and doors is required to be in accordance with this clause.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
F5.6	Sound insulation rating of internal services	Services that serves or pass through more than one SOU must achieve the required ratings specified by this clause.	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.	Capable of Complying
F6.1	Application of part	Part F6 applies to a sole-occupancy unit of a Class 2 building and a Class 4 part of a building.	noted
F6.2	Pliable building membrane	Where a pliable building membrane is installed, it is required to be provided in accordance with this clause.	Capable of Complying
F6.3	Flow rate and discharge of exhaust systems	Exhaust systems are required to be provided in accordance with this clause.	Capable of Complying
F6.4	Ventilation of roof spaces	Where ventilation of the roof space are provided, it is required to be provided in accordance with this clause.	Capable of Complying

4.7. Ancillary Provisions (BCA Section G)

BCA Clause	Title	Assessment and comment	Status
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 (windows 3 or more storeys above the ground).	Capable of Complying

4.8. Special Use Buildings (BCA Section H)

4.9. Energy Efficiency (BCA Section J – Class 3 and 5 to 9 Buildings)

4.10. Energy Efficiency (BCA Section J – Class 2 and 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.

4.10.1. Building Fabric (NSW Part J(A)1)

BCA Clause	Status	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 specifies that insulation is to be provided. The DTS provisions for thermal breaks apply to all Class 2 buildings and Class 4 parts.	noted
NSW J(A)1.2	Compliance with BCA	The sole occupancy units of a Class 2 building and a Class 4 part of the building must comply with the national BCA provisions of J02(b) to (d). Refer to J1.2, J1.3, J1.5 & J1.6 below.	noted
J1.2	Thermal construction — general	Thermal insulation is required to be installed in accordance with AS/NZS 4859.1 and the general requirements of this clause. Reflective & bulk insulation is to be installed in accordance with this clause.	Capable of Complying
J0.4	Roof thermal breaks	Roof thermal breaks are required in accordance with this clause.	Capable of Complying
J0.5	Wall thermal breaks	Wall thermal breaks are required in accordance with this clause.	Capable of Complying
J1.6 (c) & (d)	Floors – floor edge insulation	Floor edge insulation is to comply with this clause	Capable of Complying

4.10.2. Building Sealing (NSW Part J(A)2)

BCA Clause	Status	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: <ul style="list-style-type: none"> a building in climate zones 2 and 5 where the only means of air-conditioning is by using an evaporative cooler; or a permanent building opening, in a space where a gas appliance is located, that is necessary for the safe operation of a gas appliance; or. parts of those buildings that cannot be fully enclosed 	Capable of Complying

BCA Clause	Status	Assessment and Comment	Status
NSW J(A)2.2	Compliance with BCA provisions	The following national provisions apply to the requirements of this clause: <ul style="list-style-type: none"> J3.2 Chimneys and flues J3.3 Roof Lights J3.4 External Doors and windows J3.5 Exhaust fans J3.6 Construction of roofs, walls and floors J3.7 Evaporative coolers 	Capable of Complying
J3.2	Chimneys and Flues	Open solid fuel burning appliances are not proposed.	N/A
J3.3	Roof lights	Roof lights are to be designed to comply with this clause.	Capable of Complying
J3.4 (a) to (d)	Windows and doors	External windows and doors are required to be designed to comply with this clause.	Capable of Complying
J3.5	Exhaust fans	An exhaust fan must be fitted with a sealing device to prevent air infiltration in a conditioned space or in climate zones 4, 6, 7 and 8.	Capable of Complying
J3.6	Construction of roofs, walls and floors	Roofs, external walls, external floors and any openings are required to be designed and constructed to minimise air leakage.	Capable of Complying

4.10.3. Air-Conditioning and Ventilating System (NSW Part J(A)3)

BCA Clause	Status	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.	Capable of Complying
NSW J(A)3.2	Compliance with BCA provisions	Class 2 buildings and Class 4 parts of buildings must comply with national BCA provisions as identified below.	Capable of Complying
J5.2	Air Conditioning System control	Any proposed air-conditioning systems must be designed in accordance with this clause.	Capable of Complying
J5.3	Mechanical ventilation system control	Any proposed mechanical ventilation systems must be designed in accordance with this clause.	Capable of Complying
J5.4	Fan systems	Any proposed fan systems must be designed in accordance with this clause.	Capable of Complying

BCA Clause	Status	Assessment and Comment	Status
J5.5	Ductwork insulation	Ductwork and fittings in an air-conditioning system must be provided with insulation in accordance with this clause.	Capable of Complying
J5.6	Ductwork sealing	Ductwork in an air-conditioning system with a capacity of 3000 L/s or greater, not located within the only or last room served by the system, must be sealed against air loss in accordance with the duct sealing requirements of AS 4254.1 and AS 4254.2 for the static pressure in the system.	Capable of Complying
J5.7	Pump systems	Pumps and pipework that form part of an air-conditioning system are to be designed in accordance with this clause.	Capable of Complying
J5.8	Pipework insulation	Piping, vessels, heat exchangers and tanks containing heating or cooling fluid, where the fluid is held at a heated or cooled temperature, that are part of an air-conditioning system, other than in appliances covered by MEPS, must be provided with insulation in accordance with this clause.	Capable of Complying
J5.10	Refrigerant chillers	An air-conditioning system refrigerant chiller must comply with MEPS and the full load operation energy efficiency ratio and integrated part load energy efficiency ratio in Table J5.10a or Table J5.10b when determined in accordance with AHRI 551/591.	Capable of Complying
J5.11	Unitary air conditioning equipment	Unitary air-conditioning equipment including packaged air-conditioners, split systems, and variable refrigerant flow systems must comply with MEPS and for a capacity greater than or equal to 65 kW _r where required by this clause.	Capable of Complying
J5.12	Heat rejection equipment	<p>The motor rated power of a fan in a cooling tower, closed circuit cooler or evaporative condenser must not exceed the allowances in Table J5.12.</p> <p>The fan in an air-cooled condenser must have a motor rated power in accordance with this clause.</p>	Capable of Complying

4.10.4. Heated Water Supply (NSW Part J(A)4)

BCA Clause	Status	Assessment and Comment	
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.	Capable of Complying
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.	Capable of Complying
J7.2	Hot Water Supply	A heated 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 Australia.	Capable of Complying

4.10.5. Facilities for Energy Monitoring (NSW Part J(A)5)

BCA Clause	Status	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.	Capable of Complying
NSW J(A)5.3	Compliance with BCA provisions	Class 2 buildings must comply with the national provision of J8.3.	Capable of Complying
J8.3	Facilities for energy monitoring	Facilities for energy monitoring are required to be provided in accordance with this clause.	Capable of Complying

5. 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.

NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE	PROPOSED
1.	Access panels, doors & hoppers to fire resisting shaft	BCA 2019 C3.13 & AS 1905.1-2015 Amdt 1	YES
2.	Automatic fail-safe devices	Spec C3.4 automatic smoke doors; D2.21 (b)(iv) auto unlock of doors; D2.22 (re-entry from fire stairs)	YES
3.	Automatic fire detection and alarm system	BCA 2019 E2.2, Spec E2.2a Clause 5 (combination smoke alarm and smoke detection); Clause 6 (smoke detection for smoke control systems) & AS 1670.1-2018 or AS 3786-2014 Amdt 1 & 2	YES
4.	Automatic fire suppression system	BCA 2019 E1.5, Spec E1.5 & AS 2118.1-2017 Amdt 1	YES
5.	Building occupant warning system	BCA 2019 Spec E2.2a (Clause 7) & AS1670.1-2018 (Clause 3.22)	YES
6.	Emergency Lifts	BCA 2019 E3.4	YES
7.	Emergency lighting	BCA 2019 Clause E4.2, E4.3, E4.4, E1.8	YES
8.	Exit signs	BCA 2019 E4.5, E4.6, E4.8 Spec E4.8 & AS 2293.1- 2018	YES
9.	Fire control centre	BCA 2019 E1.8 & Spec E1.8	YES
10.	Fire dampers	BCA 2019 C3.12, C3.15 & AS1668.1-2015 Amdt 1, AS 1668.2-2012 Amdt 1 & 2	YES
11.	Fire doors	BCA 2019 C2.12 (separation of equipment); C2.13 (electricity supply systems); C3.3 (separation of external walls & associated openings in fire compartments); C3.4, Spec C3.4; C3.5 (doorways & fire walls); C3.8 (openings in fire isolated exits), C3.11 (bounding construction), C3.13 (openings in shafts) & AS 1905.1 – 2015 Amdt 1	YES
12.	Fire rated lift landing doors	BCA 2019 C3.10 & AS 1735.11-1986	YES
13.	Fire Hose reel systems	BCA 2019 E1.4 & AS 2441-2005 Amdt 1	YES
14.	Fire hydrant systems	BCA 2019 E1.3 & AS 2419.1-2005 Amdt 1	YES

NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE	PROPOSED
15.	Fire seals protecting openings in fire resisting components of the building	BCA 2019 C3.12, C3.15 & Spec C3.15, AS 4072.1-2005 Amdt 1, AS 1530.4.-2014	YES
16.	Lightweight construction	BCA 2019 C1.8 & Spec C1.8	YES
17.	Mechanical air handling system	BCA 2019 E2.2, Table E2.2a; NSW Table E2.2b, Spec E2.2a, Spec E2.2b & AS 1668.1-2015 Amdt 1. Class 7a (carpark building mechanical ventilation systems) BCA 2019 E2.2, Table E2.2a and Clause 5.5 of AS 1668.1-2015 Amdt 1.	YES
18.	Portable fire extinguishers	BCA 2019 E1.6 & AS 2444-2001	YES
19.	Pressurising system	BCA 2019 Clause E2.2 & AS 1668.1-2015 Amdt 1	YES
20.	Smoke alarms & heat alarms	BCA 2019 E2.2, Spec E2.2a & AS 3786-2014 Amdt 1 & 2	YES
21.	Smoke exhaust system	BCA 2019 E2.2, Spec E2.2b & AS 1668.1-2015 Amdt 1	YES
22.	Emergency warning and intercom system	BCA 2019 E4.9 & AS 1670.4-2018	YES
23.	Warning and operational signs	EPA Regulation 2000 (Clause 183), D2.23 (signs on exit doors), E3.3 (lifts), C3.6 sliding fire doors	YES

6. SUMMARY OF NON-COMPLIANCE ISSUES

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 A2.2.

D1.2

As the proposed building has an effective height of greater than 25m two required exits are required to be provided from all areas of the building. Generally, two exits have been provided to all areas with the exception of the following:

Basement 2

- Storage room (western)

Building 2D1

- Bicycle parking (mezzanine level)

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

D1.4

The BCA requires the 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

The BCA requires the Class 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 exit travel distances in the following areas exceed DtS provisions:

Basement 3

- 23m >20m to POC (from storage area)

Basement 2

- 23m >20m to POC (from storage area)
- 31m >20m to POC (eastern end)

Basement 1

- 26m >20m to POC (Water pump room)
- 30m >20m to POC (eastern end)

Building 2D1

- 30m > 20m to POC Mezzanine level (bicycle storage)
- Level 2 approximate travel distance of 12m > 6m
- Level 3 approximate travel distance of 11.2m > 6m
- Level 4 to 8 approximate travel distance of 6.5m > 6m

Building 2D2

- Level 2 & 3 approximate travel distance of 12.5m > 6m

Building 2D3

- Level 2 & 3 approximate travel distance of 11.4m > 6m

D1.5

- Level 4 to 8 approximate travel distance of 10.7m > 6m

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

The BCA requires alternative exits to be distributed uniformly around the storey and are not to be less than 9m apart, and not more than 45m apart (residential) or in all other cases 60m apart.

The following exits are located less than 9m apart and are not in accordance with DtS provision:

Building 2D1

- The fire isolated scissor stair on mezzanine level.
- The residential fire isolated scissor stair from Level 2 and above.

Building 2D2

- The residential fire isolated scissor stair from Level 2 and above.

Building 2D3

- The residential fire isolated scissor stair from Level 2 and above.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

E1.5

A sprinkler system must be installed throughout the whole building and must comply with Specification E1.5.

The sprinkler valve room is located on the mezzanine level (2D1) and does not open directly to a road or open space.

A Fire Engineered Performance Solution may be investigated to justify the above deviations from the DtS requirements of the BCA.

7. 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.

ATTACHMENT 1

Assessed plans prepared by Turner

Plan Title	Drawing No	Revision	Date
GA PLANS OVERALL BASEMENT 03 & 02	DA-110-006	03	6/5/20
GA PLANS OVERALL BASEMENT 02 & 01	DA-110-007	03	6/5/20
GA PLANS OVERALL BASEMENT 01, MEZZ & LEVEL 01	DA-110-008	03	6/5/20
GA PLANS OVERALL MEZZANINES, LEVEL 01 & 02	DA-110-010	03	6/5/20
GA PLANS OVERALL LEVEL 01, 02 & 03	DA-110-020	03	6/5/20
GA PLANS OVERALL LEVEL 01, 02, 03 & 04	DA-110-030	03	6/5/20
GA PLANS OVERALL LEVEL 02, 03, 04 & 05	DA-110-040	03	6/5/20
GA PLANS OVERALL LEVEL 03, 04, 05 & 06	DA-110-050	03	6/5/20
GA PLANS OVERALL LEVEL 04, 05, 06 & 07	DA-110-060	03	6/5/20
GA PLANS OVERALL LEVEL 05, 06, 07 & 08	DA-110-070	03	6/5/20
GA PLANS OVERALL LEVEL 06, 07, 08 & ROOF	DA-110-080	03	6/5/20
GA PLANS OVERALL LEVEL 07, 08 & ROOF	DA-110-090	03	6/5/20
GA PLANS OVERALL LEVEL 08 & ROOF	DA-110-100	03	6/5/20
GA PLANS OVERALL ROOF LEVEL	DA-110-110	03	6/5/20
GA PLANS OVERALL COMBINED ROOF PLAN	DA-110-120	03	6/5/20