

BCA Capability Statement

Project: 105 Miller Street North Sydney
Education Scheme



Prepared for:

Investa

Revision 1

16 April 2025

Reference: 240167

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BCA Capability Statement

+ To	Investa
+ Attention	Callan Salter
+ Email	Csalter@investa.com.au
+ From	Brian Maguire
+ Subject	105 Miller Street, North Sydney - Education Scheme
+ Project No.	240167
+ Date	16 April 2025
+ Pages	25

1.0 Proposed Development

This BCA report is submitted to the Department of Planning and Infrastructure on behalf of our client, Investa Custodian (2) Pty Ltd as Trustee for 105 Miller Street North Sydney Trust (Investa) to support a State Significant Development Application (DA) for the redevelopment and adaptive reuse of an existing State Heritage listed building at 105 Miller Street, North Sydney (the site) as an education facility.

The proposed project comprises the internal alterations to the existing building, a replacement of the existing facade (in a like for like arrangement to address the Heritage considerations), construct new flooring through the building to upgrade fire resistance levels, upgrade the existing building services, and incorporate an extension to the sides and also above the Denison Street Wing of 105 Miller Street, North Sydney.

For a detailed site and project description, refer to the Statement of Environmental Effects and the Architectural Drawings prepared by FJC Architects.

1.1 Capability Statement Objectives

The objectives of this statement are to:

- + Confirm that the DA architectural documentation has been reviewed by an appropriately qualified Building Surveyor and Accredited Certifier.
- + Confirm that the proposed new building works can readily achieve compliance with the BCA pursuant to section 19 of the *Environmental Planning & Assessment (Development Certification & Fire Safety) Regulation 2021*.
- + Accompany the Development Application submission to enable the Consent Authority to be satisfied that subsequent compliance with the fire & life safety and health & amenity requirements of the BCA, will not necessarily give rise to design changes to the building which may necessitate the submission of an application under Section 4.55 of the *Environmental Planning and Assessment Act 1979*.

It should be noted that it is not the intent of this statement to identify all BCA provisions that apply to the subject development. The development will be subject further assessment following receipt of more detailed documentation at Construction Certificate stage.

This statement has been prepared pursuant to clause 18 of the *Building Professionals Regulation 2007*.

1.2 Relevant Version of the BCA

Pursuant to Section 19 of the *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021* the proposed building is subject to compliance with the relevant requirements of the BCA as in force at the day on which the application for the Construction Certificate is made. The current version of the BCA is BCA 2022 with the next edition being BCA 2022 Amendment 1 which is intended to be in force as of 1 May 2025.

Where the building is a multi-storey building and multiple Construction Certificates will be issued under the same development consent, the relevant version of the BCA may be 'locked in' based on the day in which the application is made for the Construction Certificate which involves the **entrance floor**.

1.3 Referenced Documentation

This report has been prepared based on a review of the preliminary DA architectural plans prepared by FJC Architects.

1.4 Building Classification

The new building works have been classified as follows:

+ BCA Classification(s)	Class 5 (administration), Class 6 (retail), Class 7a (carparking), 7b (storage), Class 9b (school)
+ Rise in Storeys	22 (Twenty-two)
+ Storeys Contained	23 (Twenty-three)
+ Type of Construction	Type A Construction
+ Importance Level (Structural)	<i>Importance Level 3 (To be confirmed by Structural Engineer)</i>
+ Sprinkler Protected Throughout	Yes
+ Effective Height	80.93m (RL139.206 – RL58.276)
+ Floor Area (GFA)	<i>Approx 48,000m²</i>
+ Climate Zone	Zone 5

2.0 BCA Assessment – Key Issues

We note the following BCA compliance matters with relation to proposed building works are capable of complying with the BCA. Please note that this is not a full list of BCA clauses, they are the key requirements that relate to the proposed work and the below should be read in conjunction with the BCA.

2.1 Section B – Structure

Part B1

- + New building works are to comply with the structural provisions of the BCA 2022 and referenced standards including AS 1170.
- + The Importance Level provisions of BCA (Section B) are to be acknowledged by the Structural Engineer and addressed to the degree necessary.
- + Consideration may be given to compliance with AS 3826-1998.
- + As the works relate to alterations to an existing building, the Structural Engineer is to certify that the structural capacity of the existing building will not be reduced by the new works.

Comment: Where site investigation identifies departures, it is understood that rectification works will be completed to the degree necessary to either conform with the DtS provisions of the BCA or be supported a Performance Solution.

Note: Refer to Section 3 of this report for additional commentary on the relevant statutory upgrades.

2.2 Section C – Fire Resistance

C2D10

Non-Combustible Building Elements: All materials and or components incorporated in an external wall must be non-combustible. This includes but not limited to:

- + Any external wall claddings.
- + Any framing or integral formwork systems, i.e. timber framing, sacrificial formwork, etc.
- + Any external linings or trims, i.e. external UPVC window linings, timber window blades, etc.
- + Any sarking or insulation contained within the wall assembly.

Comment: The above is not an exhaustive list, and any element incorporated within any external wall assembly must be identified and approved prior to the issue of a Construction Certificate.

C2D11 & Spec. 7

Fire Hazard Properties: A schedule of all wall, floor, and ceiling linings along with associated test reports are to be provided for review to ensure compliance with the fire hazard property requirements of the BCA. Noting:

- + Minimum Group Numbers apply to wall and ceiling linings. AS 5637 test reports must be provided to determine compliance.
- + Minimum Critical Radiant Flux values apply to floor linings. AS ISO 9239.1 test reports must be provided to determine compliance.

TABLE S7C3 OF SPECIFICATION 7– CRITICAL RADIANT FLUX OF FLOOR LININGS AND FLOOR COVERINGS

+ Class of building	+ Building not fitted with a sprinkler system	+ Building fitted with a sprinkler system (other than a FPAA101D or FPAA101H system)	+ Fire-isolated exits and fire control rooms
Class 5, 6, 7, 8 or 9b	2.2 kW/m ²	1.2 kW/m ²	2.2 kW/m ²
Class 9b - Auditorium or audience seating area used mainly for other sports or multi-purpose functions.	2.2 kW/m ²	1.2 kW/m ²	2.2 kW/m ²

TABLE S7C4 OF SPECIFICATION 7 – WALL AND CEILING LINING MATERIALS (MATERIALS GROUPS PERMITTED)

+ Class of building	+ Fire-isolated exits and fire control rooms	+ Public corridors	+ Specific areas	+ Other areas
Class 5, 6, 7, 8 or 9b schools, Sprinklered	Walls: 1 Ceilings: 1	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3
Class 9b other than schools, Sprinklered	Walls: 1 Ceilings: 1	Walls: 1, 2 Ceilings: 1, 2	Walls: 1, 2, 3 Ceilings: 1, 2, 3	Walls: 1, 2, 3 Ceilings: 1, 2, 3

C2D14

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 in accordance with this clause.

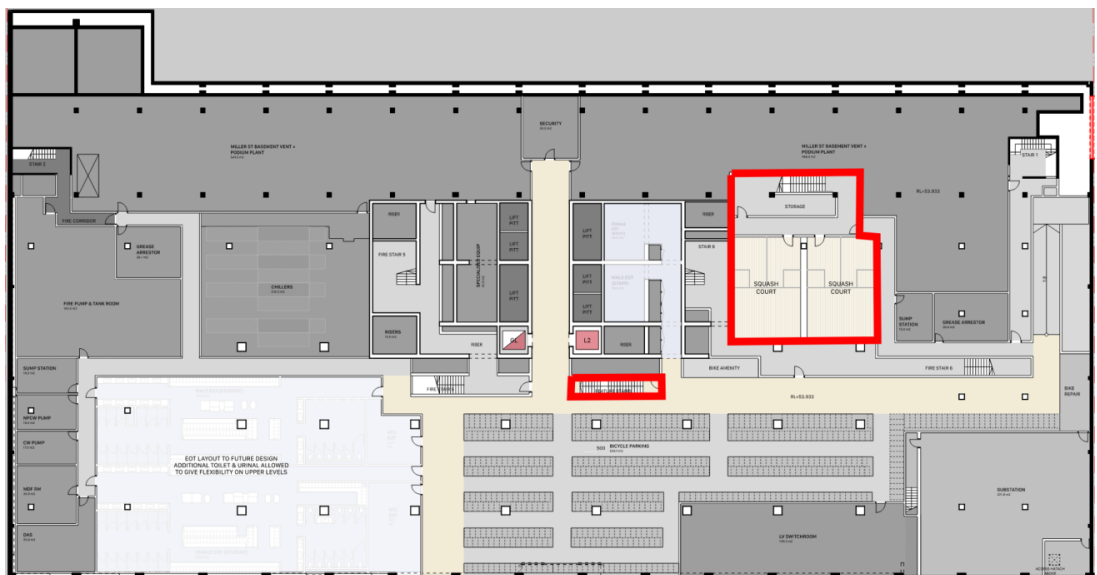
Comment: Compliance is readily achievable. Details demonstrating compliance are to be submitted with the Construction Certificate application.

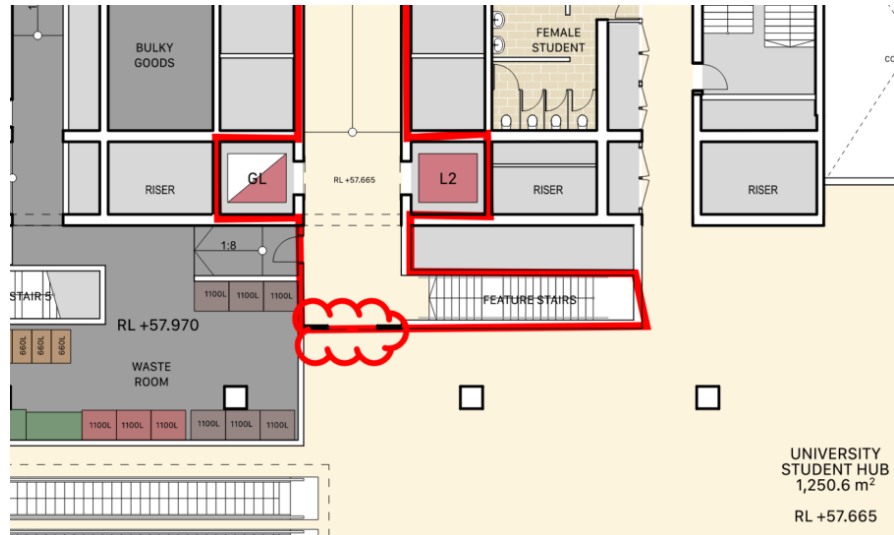
C3D3

General Floor Area and Volume Limitations: The building is to achieve fire compartment sizes not in excess of the DtS requirements of this clause.

Comment: The lower levels (Lower Ground Level – Level 4) are connected by a series of escalators which creates a fire compartment that exceeds the maximum permitted. Accordingly, fire compartment drawings are to be provided prior to the Construction Certificate stage and the excessive compartment size addressed with inclusion within the FER.

Note: The below figures show fire separation on the basement and Lower Ground Level which limits the extent of which floor area is connected.





More generally, the fire separation described in Clauses C3D3, C3D9 & C3D10 is to conform with the requirements of this clause.

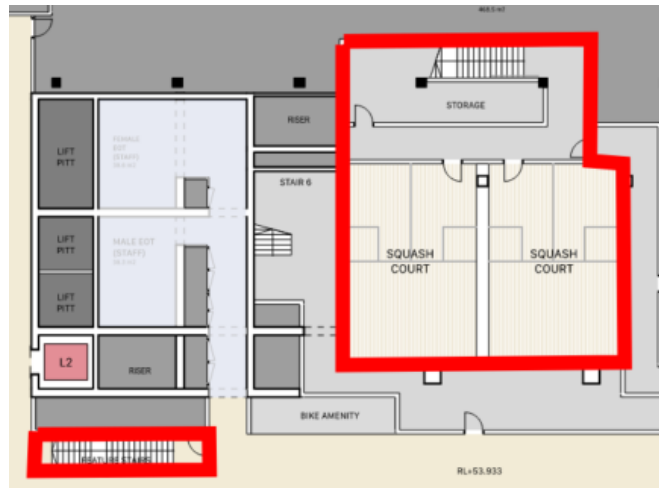
C3D9 & C3D10

Separation of Classifications: Separate classifications will either need to be separated by a fire wall achieving the higher FRL requirement between the two classes, or alternatively the higher FRL must apply to both areas subject to Spec 5.

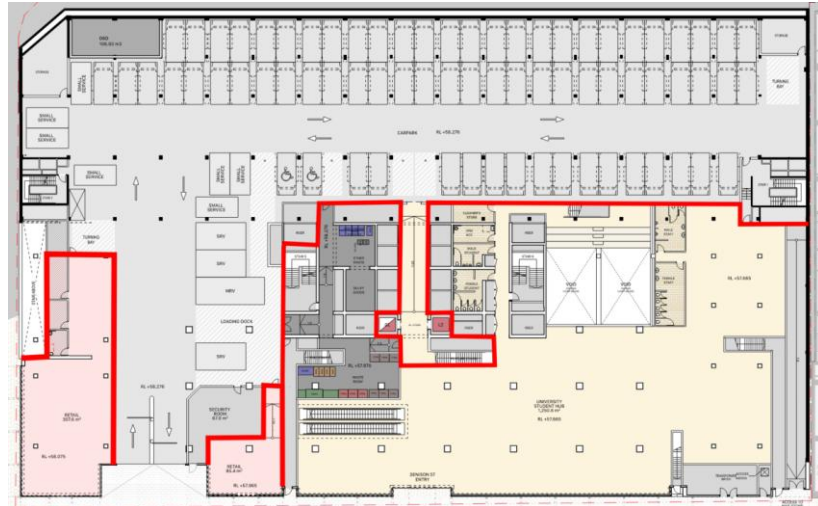
Comment: Fire compartmentation drawings are to be provided with the Construction Certificate application.

Basement - The level contains Bike Parking (Class 7b), Squash Court (Class 9b), End of Trip Facilities and various plant rooms. In lieu of the whole level assuming the 4-hour FRL associated with the Class 7b bike parking area or introducing a fire wall that achieves an FRL of 240/240/240 to separate the bike parking area from the remainder of the floor a Fire Engineered Performance Solution that rationalises the required FRL down to 2-hours will be pursued.

In order to maintain floor-by-floor fire compartmentation the feature stair and the double height Squash Courts (Class 9b) will be fire separated from the remainder of the level.



Lower Ground - The lower Ground Level contain Class 6 (retail), Class 7a (carpark) and Class 9b (squash court and university hub). Accordingly each classification located on the level will be fire separated from each other by 2-hour fire walls as shown in the below figure.



In lieu of fire separating the Class 6 retails parts using a 3-hour fire wall or adopting the higher FRL of 3-hours throughout the level it is understood that a Fire Engineered Performance Solution will be pursued to rationalise a 120 minute FRL.

Note: Notwithstanding that the Lower Ground Level to Level 4 are connected via escalators, the connecting fire compartment is wholly occupied by a Class 9b use.

Levels Ground Floor – Level 14 Each of the levels is wholly occupied by a single classification (Class 9b) and therefore requiring no fire separation in addition to the fire rated floor.

Levels 15 – Level 20 Each of the levels is wholly occupied by a single classification (Class 5) and therefore requiring no fire separation in addition to the fire rated floor.

C3D13

Separation of Equipment: Equipment as listed below must be separated from the remainder of the building with construction that achieves an FRL of 120/120/120 (or that required by Spec 5, whichever is greater) and doorways being self-closing /120/30 fire doors:

- + Lift motors and lift control panels; or
- + A battery or batteries installed in the building that have a voltage exceeding 24 volts and a capacity exceeding 10 ampere hours.

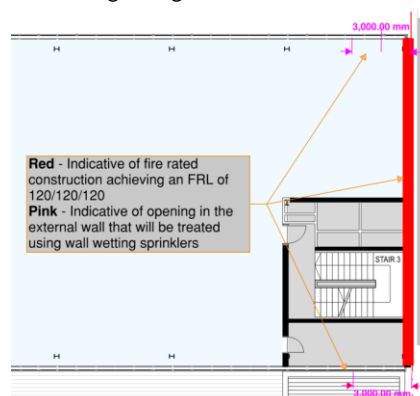
Comment: Architectural drawing demonstrating compliance are to be provided at the Construction Certificate stage.

C4D3 & C4D5

Protection of Openings in External Walls: Openings that are less than 3m from the allotment boundary are required to be protected in accordance with BCA Clause C4D5.

Comment: Portions of the external wall within 3m of the northern boundary are required to achieve a 2-hour FRL and have wall wetting drenchers fitted where the wall incorporates openings (refer to the below figure).

Where portions of the external wall are within 3m of the southern boundary fronting Brett Whitely Place it is proposed to pursue a Fire Engineered Performance Solution instead of documenting fire rated walls and drencher protected glazing.

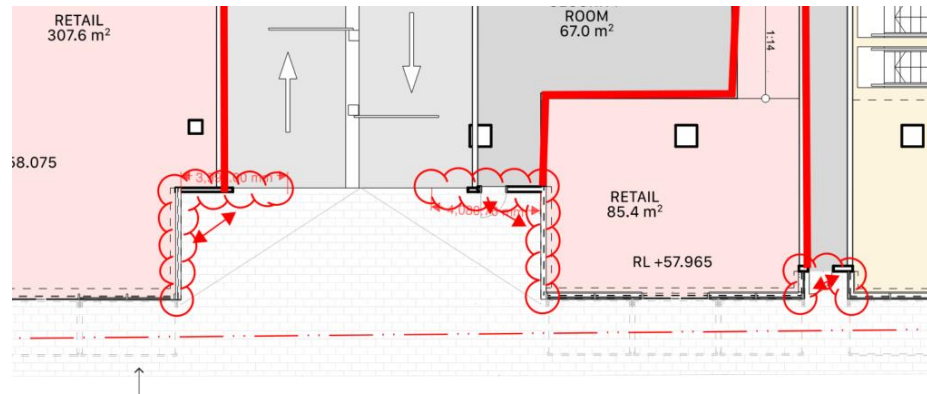


C4D4

Separation of External Walls and Associated Openings in Different Fire Compartments: The distance between parts of external walls and any openings within them in different fire compartments separated by a fire wall must be at least that set out in Table C4D4 unless-

- + Those parts of each wall have an FRL of at least 60/60/60; and
- + Any openings protected in accordance with C4D5.

Comment: The line of fire separation described in Clause C3D3 results in portions of the eastern external wall bounding separate fire compartments that are exposed to one another. Accordingly, a Fire Engineered Performance Solution permitting protection to vary from that permitted by BCA Cl. C4D5 will be pursued.

**Spec. 5**

Fire-Resisting Construction: The building is required to comply with Table 3 as relevant to FRLs required for buildings of Type A Construction.

Comment: In lieu of fire separating the bike parking area (Class 7b) located on the basement level using a 4-hour fire wall a Fire Engineered Performance Solution will be pursued to rationalise a 2-hour FRL be adopted for the whole level.

Further, A Fire Engineered Performance Solution will be pursued to rationalise the FRL of the fire walls which bound the two retail tenancies located on Ground Level from 3-hours to 2-hour fire walls.

Spec. 12

Fire Doors, Smoke Doors, Fire Windows and Shutters: Fire doors and smoke doors must comply with the requirements of this specification.

Comment: Architectural drawing demonstrating compliance are to be provided at the Construction Certificate stage.

2.3 Section D – Access and Egress

D2D3

Number of exits required: The building has an effective height of >25m. Therefore, access to not less than two exits is required from each part of the building unless otherwise permitted by this clause.

Comment: Basement (Substation), Level 1 (plant) & Level 22 (Plant Area) rely upon a single exit to egress. Accordingly, a Fire Engineered Performance Solution will be pursued.

D2D4

When Fire-Isolated Stairways and Ramps are Required: This clause sets out the requirements for stairways and ramps to be fire-isolated in buildings. It is generally permitted for a required stair to connect up to 3 storeys in a sprinkler protected building, provided that the sprinkler system is not a FPAA101D system.

Comment: Compliance with the DtS provisions of this clause is achieved.

D2D5

Exit Travel Distances: Exit travel distances within the building are required to be not more than 20m to a point of choice between alternative exits and 40m to the nearest one from Class 5 / 6 / 7 / 9 areas.

Comment: A Fire Safety Engineered Performance Solution is to be documented to allow for the following extended travel distances:

Basement Level –

- + The distance to a point of choice is up to 30m when measured from the DAS room
- + The distance to an exit is up to 49m when measured from the DA room.
- + A distance to a single exit is up to 26m when measured from the Substation.

Lower Ground Level

- + The distance to a point of choice of up to 30m when measured from the Squash Court seating area
- + The distance to an exit is up to 56m when measured from the double length parking spaces located adjacent the western wall

Ground level –

- + The distance to a point of choice of up to 28m when measured from the South westernmost corner of the floor.

Level 1–

- + A distance to a single exit is up to 28m when measured from the lift corridor.

Level 2 –

- + The distance to a point of choice of up to 29m when measured from within the Plant Room.

Level 13 –

- + The distance to a point of choice of up to 27m when measured from the Terrace.
Note: Access to the 3 & 4 has been assessed as being available to the roof vent plant spaces only

A Level 22 -

- + A distance to a single exit is up to 36m when measured from the Roof Plant area.

D2D6

Distances Between Alternative Exits: Exits that are required as alternative means of egress must be

- + Distributed as uniformly as practical within the storey served.
- + Located so that unobstructed access to 2 exits is available from all points.
- + Not less than 9m apart & not more than 60m.
- + Located so that alternative paths of travel do not converge <6m.

Comment: A Fire Safety Engineered Performance Solution is to be documented to allow for the following extended travel distances:

Basement –

- + The distance between alternative exits is up to 80m when measured through the BOH corridor that and end of trip facilities

Lower Ground Level –

- + The distance between alternative exits is up to 85m when measured between Stair 1 and Stair 5 within the carparking area.

**D2D7/
D2D8/
D2D9/**

Dimensions of Paths of Travel to an Exit: The minimum clear height through all egress paths is required to be no less than 2m, and a minimum of 1m wide (this width dimension is measured clear of any obstructions such as handrails and joinery).

**D2D10/
D2D11**

Comment: Compliance is readily achievable. Details demonstrating compliance are to be provided at the Construction Certificate stage.

Note: The architectural drawings do not show handrails to stairways. If the provision of handrails reduces the width of a path of travel to less than 1m instances may be required to be captured within the fire engineered Performance Solution.

D2D12

Travel via Fire Isolated Exits: A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from a public corridor/lobby, sole-occupancy unit occupying all of a storey or a sanitary compartment/airlock.

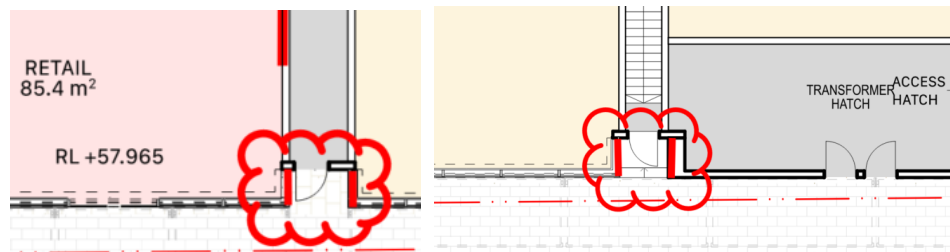
Each fire isolated stairway or ramp must provide independent egress from each storey served and must discharge to –

- + A road or open space; or
- + To a point in a space within the building that is only used for pedestrian movement or car parking that is open a minimum of 2/3 of its perimeter and from which a path of travel under 20m is available to a road or open space; or
- + A covered area that adjoins a road or open space, is open for a minimum of 1/3 of its perimeter, has an unobstructed height of at least 3m throughout and provides a path of travel the point of discharge to a road or open space within 6m.

Where a path of travel from the point of discharge of a fire isolated exit necessitates passing within 6m of any part of an external wall of the same building, that part of the wall must have –

- + an FRL of not less than 60/60/60; and
- + Any openings protected internally in accordance with BCA Clause C4D5,
- + For a distance of 3m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser.

Comment: Occupants discharging the two fire isolated passageways to the eastern frontage on the Lower Ground Level pass within 6m of the external wall which must therefore be fire rated as shown below.



A Fire Engineered Performance Solution will be pursued to permit doorways open directly into fire isolated exits without first passing through an airlock.

Note: It is understood that an airlock will be provided between the Fire services Pump Room and the fire isolated exit located in the Basement Level.

D2D17

Non-Required Stairways, Ramps or Escalators: An escalator, moving walkway or non-required non fire-isolated stairway or ramp-

- + Class 5 / 6 sprinkler protected – May connect to any number of storeys.
- + Class 7b / 8 / 9 and sprinkler protected – May connect three storeys, provided they are consecutive and one storey is situated at a level with direct egress to a road or open space.

Comment: Escalators indirectly connect the Lower Ground Level to Level 4 which exceeds the maximum 3 levels permitted within a sprinkler protected Class 9b building. Accordingly a Fire Engineered Performance Solution will be developed at the Construction Certificate stage.

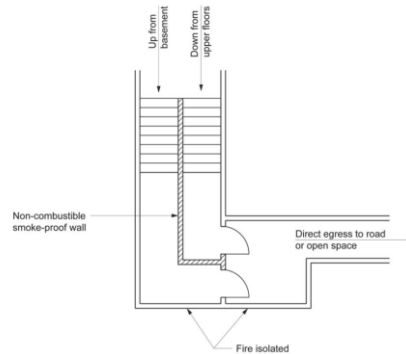
D3D5

Separation of rising and descending stair flights: In a required fire-isolated stairway there must be no direction connection between –

- + A flight rising from a storey below the level of access to open space; and

+ A flight descending from a storey above that level.

Any construction that separates or is common to the rising and descending flights must be non-combustible and smoke proof (refer to the below figure from the BCA Guide).



Comment: Stairs 2 & 4 being rising and descending stairs that converge at Ground Level to discharge from the building will not be separated from one another in accordance with the requirements of this clause. Accordingly, a Fire Engineered Performance Solution will be pursued at the Construction Certificate stage.

**D3D14/
D3D15/
D3D16/
D3D22**

Stairways, Balustrades, and Handrails: Stairways, balustrades and handrails are to be upgraded to achieve compliance with the current provisions of the BCA and AS 1428.1-2009.

Floor finishes will be required to achieve the correct slip resistance in accordance with AS 4586, and associated handbooks HB197 and HB198. This will need to be confirmed compliant at Occupation stage and as such, the selection of materials will need to be considered in relation to these requirements.

Comment: The goings and risers of the existing heritage stair are inconsistent and due to the heritage constraints it is proposed to pursue a Performance Solution to allow the current arrangement to remain.

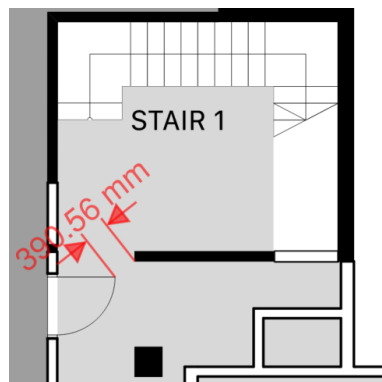
A single centrally located handrail will be documented for the stairway serving bleacher seating located in the Squash Court spectator seating. Further, the stairs used to navigate the change in level between the Ground Level Terrace and Brett Whitley Place will be served by a single centrally located handrail. Accordingly, a Performance Solution addressing the departure will be documented at the Construction Certificate stage.

Note: Ensure that the ramps located within the waste room are provided with handrails.

**D3D25/
D3D26**

Doors and Latching: All egress doorways must swing in the direction of egress and must be readily openable without a key from the side that faces a person seeking egress, by a single handed downward or pushing action on a single device which is located between 900mm and 1100mm from the floor.

Comment: Ensure that the egress door located on the basement level used to access stair 1 does not impinge further than 500mm into the required 1m wide path of travel.



Note: Notwithstanding that the concession of D3D26(5) may be applied as the university by definition is a school, BM+G recommend the use of panic bars to doors used to egress from the Auditorium.

Part D4

Access for People with a Disability: The extent of access required depends on the classification of the building. Buildings and parts of buildings must be accessible as set out in Clause D4D2 unless exempted by Clause D4D5. The building is required to comply with AS1428.1-2009.

Comment: We understand an access consultant has been engaged to provide advice in this regard.

2.4 Section E – Services and Equipment

E1D2

Fire Hydrants: Fire hydrant coverage is required to be provided to the building in accordance with AS2419.1 – 2021.

Comment: It is understood that a new hydrant system complying with AS2419.1-2021 will be installed throughout the building as part of the upgrade strategy.

The fire hydrant booster assembly located on the Miller street frontage is located further than 20m from the main pedestrian entry and further than 10m from a hardstand therefore requiring inclusion within the Fire Engineering Report.

E1D3

Fire Hose Reels: Fire hose reel coverage is required to be provided to the basement car park levels only. Where required to be provided, fire hose reels are to comply with AS 2441 – 2005.

Comment: Design consultant to confirm compliance at the Construction Certificate stage.

E1D15

Fire Control Facility: A Fire Control Centre facility in accordance with Spec 19 must be provided for building with a total floor area of >18,000m² or over 25m Effective Height.

The fire control centre must provide an area from which fire-fighting operations or other emergency procedures can be directed or controlled.

Comment: The fire control room located on the Miller Street frontage does not have a doorway that opens onto the main entry of the building. Accordingly, a Fire Engineered Performance Solution will be pursued.

Note: The Fire Hydrant Booster must be separated from the Fire Control Room

E1D4 – E1D13

Sprinklers: An automatic fire sprinkler system is required to be provided to the building. Depending on the rise in storeys, there are a number of options available.

Comment: The building having an effective height greater than 25m a sprinkler system is required throughout the building. Design consultant to confirm compliance at the Construction Certificate stage.

Note: If the sprinkler valve room will not be located such that direct egress to a road or open space is available a Fire Engineered Performance Solution may be pursued.

E2D4 – E2D20

Smoke Hazard Management: The following smoke hazard management systems are to be installed to the building and will be required throughout:

- + An Automatic Fire Detection and Alarm System complying with AS 1670.1 – 2018 and S20C6.
- + Stairway Pressurisation complying with AS 1668.1 – 2015
- + Automatic smoke exhaust system complying with Specification 21
- + Zone pressurisation system complying with AS1668.1 - 2015
- + Automatic shut-down of mechanical air handling systems upon fire trip in accordance with Section 5 and 6 of AS 1668.1.2015

Comment: Design consultant to confirm compliance at the Construction Certificate stage.

E2D21	<p>Provisions for Special Hazards: It is noted that there are electrical vehicle (EV) charging stations proposed and are considered a special hazard.</p> <p>Comment: This proposal is to be assessed in the trial design or separate fire safety assessment at the Construction Certificate stage.</p>
E3D5	<p>Emergency Lifts: An emergency lift (complying with AS 1735.2 or Appendix A of AS 1735.1) must be installed in a building exceeds 25m in effective height.</p> <p>The emergency lift must be connected to a standby power supply system where installed; be contained within a fire resisting shaft; and have the following <u>minimum</u> internal dimensions (measured clear of all obstructions including handrails):</p> <ul style="list-style-type: none"> + Depth of car – 2280mm + Width of car – 1600mm + Floor to ceiling height – 2300mm + Door height – 2100mm + Door width – 1300mm <p>Comment: Noting that there is more than one lift serving each level of the building a minimum of <u>two emergency lifts serving each level are required</u> to be provided and be contained in separate fire isolated shafts from one another. Architectural drawings identifying the lifts that are designated as being the emergency lifts are to be provided at the Construction Certificate stage.</p>
E4D2 - E4D8	<p>Emergency Lighting and Exits Signs: Emergency lighting and exit signage to be provided in accordance with E4D2 E4D5 complying with AS 2293.1 – 2018.</p> <p>Comment: Design consultant to confirm compliance at the Construction Certificate stage.</p>
E4D9	<p>Emergency Warning & Intercom Systems (EWIS): Emergency Warning Intercom System (EWIS) complying with AS 1670.4 - 2018 must be installed in a building with an effective height of more than 25 m.</p> <p>Comment: Design consultant to confirm compliance at the Construction Certificate stage.</p>

2.5 Section F – Health and Amenity

Part F1	<p>Damp and Weatherproofing: Damp and weatherproofing to comply with the prescriptive requirements of clauses F1D1-F1D8.</p> <p>Comment: Compliance to be verified at the Construction Certificate stage</p>																												
Part F4	<p>Sanitary Facilities: Sanitary facilities must be provided to comply with the relevant requirements of this part, as applicable to the building’s classification and use.</p> <p>Comment: The number of sanitary facilities is sufficient to account for each type of population contained within the building</p> <table border="1" style="margin-top: 10px;"> <thead> <tr style="background-color: #333; color: white;"> <th colspan="5">+ Level Basement (EOT)</th> </tr> <tr style="background-color: #f4a460;"> <th colspan="5">Occupancy Class as per F4D4</th> </tr> <tr style="background-color: #ccc;"> <th rowspan="2">Students</th> <th>Closet Pans</th> <th>Urinals</th> <th>Washbasins</th> <th rowspan="2">Population</th> </tr> <tr style="background-color: #ccc;"> <th>Proposed</th> <th>Proposed</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Male</td> <td style="text-align: center;">7</td> <td style="text-align: center;">6</td> <td style="text-align: center;">9*</td> <td style="text-align: center;">500</td> </tr> <tr> <td>Female</td> <td style="text-align: center;">10</td> <td style="text-align: center;">-</td> <td style="text-align: center;">7*</td> <td style="text-align: center;">350</td> </tr> </tbody> </table> <p>*The drawings do not clearly show the number of washbasins however the number identified in the above table aligns with the population served by the number of pans and urinals available.</p>	+ Level Basement (EOT)					Occupancy Class as per F4D4					Students	Closet Pans	Urinals	Washbasins	Population	Proposed	Proposed	Proposed	Male	7	6	9*	500	Female	10	-	7*	350
+ Level Basement (EOT)																													
Occupancy Class as per F4D4																													
Students	Closet Pans	Urinals	Washbasins	Population																									
	Proposed	Proposed	Proposed																										
Male	7	6	9*	500																									
Female	10	-	7*	350																									

Note: The above table is based upon a total population of staff being 870 (Male-435 & Female – 435) and students being 4,870 (Male-2435 & Female-2435).

Note: A campus wide approach has been used to provide the required number of sanitary facilities and is reliant upon all students being afforded the ability to access the EOT facilities.

+ Level Basement (Squash Court)				
Occupancy Class as per F4D4				
Sporting Participants	Closet Pans	Urinals	Washbasins	Population
	Proposed	Proposed	Proposed	
Male	1	1	1	10
Female	1	-	1	10
Spectators	Closet Pans	Urinals	Washbasins	Population
	Proposed	Proposed	Proposed	
Male	1	1	1	100
Female	1	-	1	15

Note: Sufficient number of showers is available within the EOT to account for the number of sporting participants occupying the Squash Court however, at least one accessible shower must be provided for each gender.

+ Lower Ground (University Hub & Retail)				
Occupancy Class as per F4D4				
Student	Closet Pans	Urinals	Washbasins	Population
	Proposed	Proposed	Proposed	
Male	2	2	2	50
Female	5	-	4	100
Staff	Closet Pans	Urinals	Washbasins	Population
	Proposed	Proposed	Proposed	
Male	2	2	2	40
Female	5	-	2	60
Retail	Closet Pans	Urinals	Washbasins	Population
	Proposed	Proposed	Proposed	
Male	1	0	1	10
Female	1	-	1	15

Note: The staff are not allocated an accessible WC and are not permitted to share the student accessible WC therefore a **Performance Solution** will be prepared at the Construction Certificate stage.

Note: The population for the facilities located within the Retail areas has been calculated store for sale of goods not a café or restaurant.

Further, the smaller retail tenancy located adjacent the security room is not provided with access to sanitary facilities. Accordingly, the sanitary facilities designated for use of the tenancy are to be shown on the Construction Certificate drawings.

+ Level1 (Auditorium & Circulation)				
Occupancy Class as per F4D4				
Student	Closet Pans	Urinals	Washbasins	Population
	Proposed	Proposed	Proposed	
Male	3	3	4	150
Female	6	-	4	150
Staff	Closet Pans	Urinals	Washbasins	Population
	Proposed	Proposed	Proposed	

	Proposed	Proposed	Proposed	
Male	2	2	2	40
Female	3	-	2	35

+ Level 2-14 (learning Areas)

Occupancy Class as per F4D4

Student	Closet Pans	Urinals	Washbasins	Population
	Proposed	Proposed	Proposed	
Male	3	3	4	150
Female	6	-	4	150
Staff	Closet Pans	Urinals	Washbasins	Population
	Proposed	Proposed	Proposed	
Male	2	2	2	40
Female	3	-	2	35

+ Levels 17-20 – Administrative

Occupancy Class as per F4D4

	Closet Pans	Urinals	Washbasins	Population
	Proposed	Proposed	Proposed	
Male	3	2	5	45
Female	5	-	5	40

Note: Both accessible sanitary facilities have been allocated to staff on these levels

F5D2

Ceiling Heights: The floor to ceiling heights must be as follows:

The minimum ceiling heights in a Class 5 / 6 / 7 building are as follows:

- + Generally – 2.4m.
- + Corridor, passageways, or the like – 2.1m.

The minimum ceiling heights in a Class 9b building are as follows:

- + Theatre, public hall, or other assembly building or part accommodating more than 100 persons – 2.7m.

In any building:

- + Bathrooms, sanitary compartments, tea preparations rooms, pantries, store rooms or the like – 2.1m,
- + A commercial kitchen – 2.4m,
- + Above a stairway, ramp, landing or the like – 2m.

2.6 Section G – Ancillary Provisions

Part G6

Occupiable Outdoor Areas: Occupiable Outdoor Areas (such as the communal rooftop space) are required to comply with the fire hazard property, provision for escape, construction of exits, firefighting equipment, lift installations, visibility in an emergency, exit signs and warning systems, and light and ventilation provisions of the BCA (as specifically prescribed under this part) as if it were an internal building part.

2.7 Section I – Special Use Buildings

NSW Part I4

Entertainment Venues: In this instance it is understood that the Auditorium will not be used as an Entertainment Venue. A client brief confirming they do not intend on using the space in a way that would constitute an entertainment venue by definition at the Construction Certificate stage.

2.8 Section J – Energy Efficiency

Section J

Energy Efficiency: The new building works subject to compliance with the Energy Efficiency Provisions of BCA 2022 Section J (and NSW Section J where relevant). It is expected that a consolidated report will be commissioned to confirm all relevant requirements have been complied and coordinated:

Performance Requirements

- + NSW J1P1: Does not apply to a Class 2 building or a Class 4 part.
- + NSW J1P5: Only applies to a Class 2 and a Class 4 part.
- + NSW J1P6 (Building Sealing): Applies to a Class 2 and a Class 4 part, except in climate zones 2 and 5 where the only means of air conditioning is via evaporative cooling; and a permanent building opening in a space where a gas appliance is located, that is necessary for the safe operation of a gas appliance; and parts that cannot be fully enclosed.
- + NSW J1P7 (Services): Only applies to a Class 2 and a Class 4 part.

DtS requirements relating to Class 2

- + NSW J2D1 and J2D2;
- + NSW J3D2 to J3D15 (Elemental provisions for Class 2);
- + *NSW J4D2: The building envelope provisions do not apply to a Class 2 building;*
- + NSW J5D2 to J5D8: Building Sealing requirements apply in most circumstances;
- + NSW J6D2 to J2D9 (Air-Conditioning and Ventilation): J2D10 does not apply to a Class 2 building;
- + NSW J7D2 to J7D9 (Air-Conditioning and Ventilation): Applies to Class 2 buildings;
- + NSW J8 (Heated water supply and swimming pool/spa plant);
- + NSW J9 (Energy Monitoring and On-Site Distributed Energy Resources);

The Construction Certificate documentation from the architect, mechanical, electrical, and hydraulic engineers are to incorporate details demonstrating compliance with the above provisions (as applicable to their respective disciplines).

Comment: Compliance Readily Achievable. Section J or J1V3 report to be submitted at the Construction Certificate stage to have compiled all the relevant Section J compliance items, in chronological order.

3.0 Statutory Upgrade Requirements

The following statutory upgrade triggers apply to the subject building works:

- + A certifier must not issue a construction certificate for building work that authorises the alteration, enlargement, or extension of an existing building (where no change of use is proposed), unless on completion of the building work, the fire protection and structural capacity of the building will not be reduced.
- + The consent authority (Council) may require the building to be brought into total or partial conformity with the Building Code of Australia. In relation to the subject project, this upgrade provision is triggered by the proposed building works representing more than half the total volume of the building.

4.0 Summary of Performance Solutions

The following comprises a summary of the BCA DtS non-compliances that Require Performance Solutions.

C3D3	The lower levels (Lower Ground Level – Level 4) are connected by a series of escalators which creates a fire compartment that exceeds the maximum permitted
C3D9, C3D10 & Spec 5	The Class 7b bike parking will not be fore separated from the remainder of the basement level and the FRL of the fire wall which separates the Class 6 retail tenancies will be rationalised from the required 3-hour FRL down to a 2-hour FRL.
C4D3	Glazed portions of the external wall located within 3m of the northern boundary fronting Brett Whitely Place will not be protected by wall wetting drenchers.
C4D4	Fire separation of the retail tenancies results in external walls (including openings within) of opposing fire compartments being exposed to one another that will not be treated in accordance with the requirements of C4D5.
D2D3	Basement Level (substation), Level 1 (Northern Plant) & Level 22 (Upper Plant) rely upon a single exit to egress the level in lieu of the minimum 2 exits required.
D2D5	<p>A Fire Safety Engineered Performance Solution is to be documented to allow for the following extended travel distances:</p> <p>Basement Level –</p> <ul style="list-style-type: none">+ The distance to a point of choice is up to 30m when measured from the DAS room+ The distance to an exit is up to 49m when measured from the DA room.+ A distance to a single exit is up to 26m when measured from the Substation. <p>Lower Ground Level</p> <ul style="list-style-type: none">+ The distance to a point of choice of up to 30m when measured from the Squash Court seating area+ The distance to an exit is up to 56m when measured from the double length parking spaces located adjacent the western wall <p>Ground level –</p> <ul style="list-style-type: none">+ The distance to a point of choice of up to 28m when measured from the South westernmost corner of the floor. <p>Level 1–</p> <ul style="list-style-type: none">+ A distance to a single exit is up to 28m when measured from the lift corridor. <p>Level 2 –</p> <ul style="list-style-type: none">+ The distance to a point of choice of up to 29m when measured from within the Plant Room. <p>Level 13 –</p> <ul style="list-style-type: none">+ The distance to a point of choice of up to 27m when measured from the Terrace. <i>Note: Access to the 3 & 4 has been assessed as being available to the roof vent plant spaces only</i> <p>A Level 22 -</p> <ul style="list-style-type: none">+ A distance to a single exit is up to 36m when measured from the Roof Plant area.
D2D6	A Fire Safety Engineered Performance Solution is to be documented to allow for the following extended travel distances:

	<p>Basement –</p> <ul style="list-style-type: none"> + The distance between alternative exits is up to 80m when measured through the BOH corridor that and end of trip facilities <p>Lower Ground Level –</p> <ul style="list-style-type: none"> + The distance between alternative exits is up to 85m when measured between Stair 1 and Stair 5 within the carparking area.
D2D12	There a numerous instances throughout the building where doors open directly onto plant rooms (or the like) and are not provided with airlocks.
D2D17	Escalators indirectly connect the Lower Ground Level to Level 4 which exceeds the maximum 3 levels permitted within a sprinkler protected Class 9b building.
D3D5	Stairs 2 & 4 being rising and descending stairs that converge at Ground Level to discharge from the building will not be separated from one another in accordance with the requirements of this clause.
E1D2	The fire hydrant booster assembly located on the Miller street frontage is located further than 20m from the main pedestrian entry and further than 10m from a hardstand therefore requiring inclusion within the Fire Engineering Report.
E1D15	Access to the fire control room will not be available from the front entry of the building.

5.0 Preliminary Fire Safety Schedule

The following table is a list of the required fire safety measures within the building. These measures may be subject to further change pending the outcomes of the final compliance review.

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
Access Panels, Doors & Hoppers	BCA 2022 Clause C4D14 AS 1530.4 – 2014 Manufacturer's Specifications	✓	✓
Alarm Signalling Equipment	AS 1670.3 – 2018	✓	✓
Automatic Fail Safe Devices	BCA 2022 Clause D3D26	✓	✓
Automatic Fire Detection & Alarm System	BCA 2022 Spec. 20 & 23 AS 1670.1 – 2018	✓	✓
Automatic Fire Suppression Systems	BCA 2022 Spec. 17 & 18 AS 2118.1 – 2017 or AS 2118.4, 6 – 2012	✓	✓
Building Occupant Warning System activated by the Sprinkler System	BCA 2022 Spec. 17 Clause 8 and / or Clause 3.22 of AS 1670.1 – 2018	✓	✓
Emergency Lifts	BCA 2022 Clause E3D5 AS 1735.2 – 2001	✓	✓
Emergency Lighting	BCA 2022 Clauses E4D2 & E4D4 AS 2293.1 – 2018	✓	✓
Emergency Evacuation Plan	AS 3745 – 2010	✓	✓
Emergency Warning Intercom System (EWIS)	BCA 2022 Clause E4D9 & Spec. 31 S31C19 AS 1670.4 - 2018	✓	✓
Exit Signs	BCA 2022 Clauses E4D5, NSW E4D6 & E4D8 AS 2293.1 – 2018	✓	✓
Fire Control Room	BCA 2022 Spec. 19	✓	✓
Fire Blankets	BCA 2022 Clause E1D14 AS 3504 – 1995 & AS 2444 – 2001	✓	✓
Fire Dampers	BCA 2022 Clause C4D15 AS 1668.1 – 2015 & AS 1682.1 & 2 – 2015 Manufacturer's Specification	✓	✓
Fire Doors	BCA 2022 Clauses C3D13, C3D14, C4D3, C4D5, C4D6. AS 1905.1 – 2015 Manufacturer's Specification	✓	✓
Fire Hose Reels	BCA 2022 Clause E1D3 AS 2441 – 2005	✓	✓

+ Statutory Fire Safety Measure	+ Design/Installation Standard	+ Existing	+ Proposed
Fire Hydrant Systems	BCA 2022 Clause E1D2 AS 2419.1 – 2021	✓	✓
Fire Seals	BCA 2022 Clause C4D15 AS 1530.4 – 2014 & AS 4072.1 – 2014 Manufacturer’s Specification	✓	✓
Lightweight Construction	BCA 2022 Clause C2D9 AS 1530.4 – 2014 Manufacturer’s Specification	✓	✓
Mechanical Air Handling Systems (Automatic Shutdown)	BCA 2022 Clause E2D3 AS/NZS 1668.1 – 2015 & AS 1668.2 – 2012	✓	✓
Portable Fire Extinguishers	BCA 2022 Clause E1D14 AS 2444 – 2001	✓	✓
Required Exit Doors (Power Operated)	BCA 2022 Clause D3D24(2)	✓	✓
Smoke Hazard Management Systems + Stair Pressurisation + Smoke Exhaust + Zone Smoke Control	BCA 2022 Part E2 AS/NZS 1668.1 –2015	✓	✓
Smoke and/or Heat Detectors (auto shutdown or smoke exhaust)	BCA Spec. 20 S20C6 AS 1668.1 - 2015	✓	✓
Wall-Wetting Sprinklers	BCA 2022 Clause C4D5 AS 2118.2 – 2010	✓	✓
Warning & Operational Signs	BCA 2022 Clauses D3D26, D3D28, D4D7, E4D4 & Spec. 14 AS 1905.1 – 2015 EP&A (DCFS) Regulation 2021 Section 108	✓	✓
Fire Engineered Performance Solutions relating to: 1.	BCA 2022 Performance Requirements ... Fire Safety Engineering Report prepared by ... Report No. ... Revision ... dated ...	✓	✓

Please note that the above schedule will need to be revised prior to issue of the Construction Certificate to reference any proposed Fire Engineering Report and incorporate any additional measures required by the proposed Performance Solutions.

6.0 Conclusion

This report contains an assessment of the referenced architectural documentation for the proposed development against the Deemed-to-Satisfy provisions and Performance Requirements of the National Construction Code Series (Volume 1) Building Code of Australia 2022.

In view of the above assessment we can confirm that subject to the above measures being appropriately addressed by the project design team, compliance with the provisions of the BCA is readily achievable.

In addition, it is considered that such matters can adequately be addressed in the preparation of the Construction Certificate documentation without giving rise to any inconsistencies with the Development Approval.

Should you require further assistance or clarification please do not hesitate to contact the undersigned on 02 9211 7777

Prepared by:



Josh Hagenson
Building Surveyor
BM + G Pty Ltd

Reviewed by:



Brian Maguire
Director
BM + G Pty Ltd

