

BCA and Fire Safety ASSESSMENT REPORT

Project: Belgrave Street – Manly

Address: 35-39 Belgrave Street & 40, 41, 42, 43
Belgrave Street, Manly

Report no: BCADAR_23061_ R1.0

Date: 04/07/2023

Prepared For: T & P Manly Land Pty Ltd



**HONTAS
HATZI & CO**

Building Code &
Accessibility Consultants

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1. Introduction

Hontas Hatzi & Co. (HHC) have been engaged by T & P Manly Land Pty Ltd to conduct a preliminary assessment of the proposed architectural design documentation against the relevant Deemed to Satisfy (DtS) provisions of the Building Code of Australia (BCA) 2022.

2. Purpose

The purpose of this report is to assess the referenced design documentation against the relevant Deemed to Satisfy (DtS) provisions of the Building Code of Australia (BCA) 2022 and identify those areas (if any) where:

- Compliance is not achieved; or
- Design amendments are required to achieve compliance; or
- Compliance is proposed to be achieved by way of a Performance Solution.

The report is proposed to form part of the documentation supporting the Development Application to the relevant Consent Authority.

3. Scope

The scope of this report is limited to the assessment of the referenced design documentation listed in **Section 5**.

4. Report Limitations

This report is limited to a preliminary assessment of the Deemed to Satisfy (DtS) provisions of the Building Code of Australia (BCA) 2022 and referenced architectural design documentation in **Section 5** of this report.

The design documentation has been assessed to the extent necessary to support the Development Application. This means the design has been assessed as capable of complying with the BCA without necessarily having all the detailed design completed at this stage.

The content of this report is restricted for the exclusive use of the Client. Whilst all care has been taken in the preparation of this report, HHC accepts no responsibility or liability with respect to reliance upon this report by any third party. The recommendations relating to compliance throughout this report reflect the professional opinion and interpretation of HHC.

The report does not include or imply any detailed assessment or compliance with:

- Provisions of the BCA not directly referenced.
- Detailed requirements of Australian Standards which are not directly referenced.
- Structural adequacy and/or design of the building.
- Design and/or operating capabilities of any electrical, fire protection, hydraulic or mechanical services.
- The National Construction Code – Plumbing Code of Australia (Volume 3).
- Any Performance Solution(s) unless specifically referenced.
- The Disability Discrimination Act 1992.
- Any other Acts, Regulations, Planning Instruments and Guidelines unless specifically referenced.
- Requirements of other Regulatory Authorities including, but not limited to, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Local Council, ARTC, Department of Planning and the like.
- Work Health and Safety Act.
- Construction Safety Act.
- Review or testing of any materials or products (unless referenced in this report).
- This document does not, in any way, constitute or form part of a 'Design Declaration' under the *Design and Building Practitioners Act 2020* or the *Design and Building Practitioners Regulation 2021*. This document must not be referenced or referred to in any declarations made under that legislation.

5. Project Information

The following project and building characteristics are noted as part of this assessment:

Project and Building Characteristics	
Description of proposed works	Construction of a new mixed use retail and residential development
Building Classification and Use	- Class 2 – Residential - Class 6 – Retail - Class 7a – Carpark
Rise in Storeys	5
Type of Construction	Type A
Effective Height	Approx. 13.92m (L00 RL5.80m – L04 RL19.720m)
Structural Importance Level	2 (TBC by structural engineer)
Climate Zone	5
Maximum Floor Area and Volume Limitations	- Class 6 (Retail) – 5000m² / 30,000m³ - N/A for Class 7a carpark and Class 2 residential.

This design assessment is based on the following documentation:

- Architectural design documentation prepared by **SJB Architects**:

Drawing No.	Title	Date	Revision
DA-0110	Floor plan – Basement 2	7	28/06/23
DA-0111	Floor plan – Basement 1	8	28/06/23
DA-0112	Floor plan – Ground	8	28/06/23
DA-0113	Floor plan – Level 1	8	28/06/23
DA-0114	Floor plan – Level 2	4	28/06/23
DA-0115	Floor plan – Level 3	4	28/06/23



DA-0116	Floor plan – Level 4	7	28/06/23
DA-0117	Floor plan – Roof	6	28/06/23
DA-1401	Elevation north	3	28/06/23
DA-1402	Elevation east	3	28/06/23
DA-1403	Elevation south	3	28/06/23
DA-1404	Elevation west	2	28/06/23
DA-1501	Section A-A	7	28/06/23
DA-1502	Section B-B	2	28/06/23
DA-4400	Apartment plan – Adaptable Unit Sheet 1	1	28/06/23
DA-4401	Apartment plan – Adaptable Unit Sheet 2	1	28/06/23
DA-6610	External finishes	1	28/06/23

6. Regulatory Framework

This section of the report summarises the key regulatory issues that apply to fire safety.

6.1. New Building Work

Pursuant to Section 19 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021, all new building work must comply with the relevant requirements of the BCA as in force on the relevant date. Notwithstanding, existing features of an existing building need not comply with the BCA unless an upgrade is required by other clauses of legislation.

6.1. Design Requirements for Residential Apartment Development

Pursuant to Section 15 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021, a Construction Certificate must not be issued by a Certifier, unless the Certifier has received a statement from a qualified designer verifying that the relevant building works plans and specifications achieve or improve the design quality of the development for which development consent was granted, having regard to design quality principles. Similarly, a design statement must also be provided to the Certifier prior to the issue of an Occupation Certificate in accordance with Section 43 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021.

Design quality principles means the principles set out in Schedule 1 of the State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development (2002 EPI 530).

Design statement means a statement by a qualified designer verifying that the development achieves the design quality shown in the plans and specifications for which the construction certificate was issued, having regard to the design quality principle.

6.2. BASIX Certificate Requirements

Section 10 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 requires a Construction Certificate application for BASIX development or BASIX optional development to be accompanied by a BASIX certificate and any other document required by the BASIX certificate.

The Certifier must monitor the fulfillment of commitments listed on the certificate where required in relation to a building. An Occupation Certificate must not be issued unless the

Certifier is satisfied that each of the commitments has been fulfilled and is in receipt of a BASIX Completion Receipt in accordance with Sections 44 and 45 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 respectively.

6.3. The 'Premises Standard' 2010

The Disability (Access to Premises - Buildings) Standards 2010 ("Premises Standard") was implemented and enforceable since 1st of May 2011. The Standard identifies mandatory triggers for upgrades to a building where works are undertaken by the Building Owner or Sole Lessee (or their representative).

The aim of the Premises Standard is to progressively upgrade existing buildings and allow for the removal of access barriers within the built environment. This provides greater certainty for Building Owners and construction professionals when detailing the extent of upgrades to existing building when new works occur.

The Premises Standard applies to a "new building", "a new part of an existing building" and "the affected part of an existing building" where applications for building work are submitted by the Building Owner or Sole Lessee (or their representative).

The upgrade triggers focus on the Principal Pedestrian Entry (PPE) and the "affected part" which is defined as follows and is illustrated in **Figure 1** (below):

- The principal pedestrian entrance of an existing building that contains a new part; and
- Any part of an existing building that contains a new part, that is necessary to provide a continuous accessible path of travel from the entrance to the new part.

New Part

Passenger Lifts

Principal
Pedestrian Entry



Figure 1 – Illustration of “affected part” upgrade

The Premises Standard generally aligns with the National Construction Code/Building Code of Australia (NCC/BCA) and contains various exemptions and concessions that are available in certain instances.

6.4. Referral to Fire and Rescue NSW

Sections 26 to 29 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 outline the requirements when a Certifier must forward the relevant plans and specifications to the Fire Commissioner for review and comment.

The requirements apply at Construction Certificate application stage where a Performance Solution is proposed for *relevant building work* as follows:

- Class 9a building that is proposed to have a floor area of 2,000m² or more.
- A building, other than a Class 9a building, that is proposed to have a fire compartment with a floor area of more than 2,000m².
- A building, other than a class 9a building, that is proposed to have a floor area of more than 6,000m².

- A Class 2, 3 or 9 building of 2 or more storeys, or the Class 4 part of a Class 9 building of 2 or more storeys relating to external combustible cladding.
- A Class 5, 6, 7 or 8 building of 3 storeys or more storeys, or the Class 5 part of a Class 5, 6, 7 or 8 building of 3 or more storeys relating to external combustible cladding.
- A Class 2 or 3 building of 4 or more storeys for a Performance Solution relating to EP1.4 (Automatic Fire Suppression Systems).
- A Class 9b early childhood centre for a Performance Solution relating to Clause D1.18(a) of Volume 1 of the BCA.

7. BCA Assessment

A preliminary assessment of the proposed architectural design documentation has been undertaken for the purposes of, and to the extent necessary, to accompany the Development Application to the relevant Consent Authority.

It is acknowledged the design does not contain all the details necessary for a Construction Certificate, however it is developed to a standard that is considered suitable to accompany the Development Application.

Further detailed reviews will need to be progressively undertaken by Hontas Hatzi & Co as the design develops to ensure it is capable of being approved under a Construction Certificate and contains all relevant details regarding performance-based solutions or other documentation necessary to satisfy the relevant legislative requirements.

The following key BCA provisions apply to the subject scope of works. These compliance matters will need to be considered as part of the design development process:

Section B: Structure

Part B1: Structural Provisions

All new building works are to comply with the relevant structural provisions of BCA Part B1 and AS/NZS 1170 standards.

The Importance Level is to be determined by a Professional Engineer (Structural Engineer) registered on the National Engineering Register and incorporated into the design as required.

Seismic bracing of non-structural building elements and components may be required to comply with Section 8 of AS 1170.4. Where this is required, certification provided by a specialist seismic consultant, or by the architect and services design engineers will be required.

Compliance with these requirements will need to be addressed by the encumbered Professional Engineer (Structural Engineer) and Project Architect during the subsequent design development phase and prior to the issue of a Construction Certificate.

Section C Fire Resistance

Part C1 and C2: Fire Resistance and Stability

The fire resistance requirements are determined based on the rise in storeys, classification of the building and/or maximum floor area and volume limitations of Table C3D3.

Based on the rise in storeys of 5, the building is required to be constructed in accordance with the requirements of Type A Construction and building elements achieve a Fire Resistance Level (FRL) in accordance with Specification 5 – refer to Appendix B for further details.

Table C2D2: Type of construction required

Rise in storeys	Class of building 2, 3, 9	Class of building 5, 6, 7, 8
4 or more	A	A
3	A	B
2	B	C
1	C	C

The following building elements and their components must be non-combustible including:

- External walls and common walls including all components incorporated in them including the face covering, framing and insulation.
- The flooring and floor framing of lift pits.
- Non-loadbearing internal walls where they are required to be fire resisting.
- Additional notes:
 - Load-bearing internal walls (including shafts) and a load-bearing fire wall must be constructed from concrete or masonry.
 - Ancillary elements must also be non-combustible or otherwise comply with clause C2D14 (noting specific provisions for signage attached to the building).

New floor, wall and ceiling internal linings, materials and/or assemblies are to comply with the fire hazard properties requirement outlined in clause C2D11 and Specification 7.

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. Key information required is as follows:

- Minimum Group Numbers applying to wall and ceiling linings. AS 5637 test reports must be provided to determine compliance.
- Minimum Critical Radiant Flux values applying to floor linings. AS ISO 9239.1 test reports must be provided to determine compliance.
- Product data sheets and/or test reports showing the fire hazard properties of materials complying with the above are to be provided at the design development stage.

Any externally located bonded laminated cladding panels must have all layers of cladding mechanically supported or restrained to the supporting frame.

All ancillary elements attached to the external walls are required to be non-combustible, which includes external signage. Where compliance with these requirements cannot be achieved, a Performance Solution from an Accredited Fire Engineer will need to be obtained at the Construction Certificate stage.

Part C3: Compartmentation and Separation

The retail parts of the building must not exceed the maximum floor area and volume limitations of Table C3D3 as outlined below.

Table C3D3: Maximum size of fire compartments or atria

Classification	Type A construction	Type B construction	Type C construction
5, 9b or 9c	Max <i>floor area</i> —8 000 m ²	Max <i>floor area</i> —5 500 m ²	Max <i>floor area</i> —3 000 m ²
	Max <i>volume</i> —48 000 m ³	Max <i>volume</i> —33 000 m ³	Max <i>volume</i> —18 000 m ³
6, 7, 8 or 9a (except for <i>patient care areas</i>)	Max <i>floor area</i> —5 000 m ²	Max <i>floor area</i> —3 500 m ²	Max <i>floor area</i> —2 000 m ²
	Max <i>volume</i> —30 000 m ³	Max <i>volume</i> —21 000 m ³	Max <i>volume</i> —12 000 m ³

Equipment as specified in Clauses C3D13 and C3D14 are required to be fire separated from the remainder of the building. Typically, two hour fire separation is required.

Part C4: Protection of openings

Any opening within 3m of the eastern boundary are required to be protected in accordance with Clause C4D5. Where wall-wetting sprinklers are proposed, the windows must be either automatic closing or permanently fixed in the closed position.

Any service penetrations through fire rated floor and/or walls are to be adequately protected by fire rated shafts and/or sealed in accordance with the relevant provisions of Clause C4D15.

Bounding construction, doorways and other openings to the public corridors serving the residential parts of the building must comply with Clause C4D12. Compliance is proposed to be achieved via a combination of DtS and on a performance basis in conjunction with the Performance Solution proposed for the atrium discussed at Section G below.

Section D: Access and Egress

Part D2: Provision for escape

The number of exits provided on each storey complies with clause D2D3.

The central stairway connects a total of 5 storeys (Ground L00 to Level 4) and is not fire-isolated as required by Clause D2D4. The stairway discharges within the confines of the ground floor lift / main entry lobby and is approximately 18m from the road or open space. Compliance is proposed to be addressed via a Performance Solution from an Accredited Fire Engineer at the Construction Certificate stage.

Travel distances based on the proposed location of the exits would appear to indicate compliance with the DfS provisions of the BCA except as follows:

- Alternative paths of travel from the back-of-house ground floor areas converge such that they become less than 6m apart.
- Up to 19m to a single exit with no point of choice in lieu of 12m from the residential parts of the building on Levels 1 to 4.

All paths of travel to an exit, or within a required exit, must achieve a minimum unobstructed width of 1000mm and height throughout not less than 2000mm. Doorways are permitted to achieve an unobstructed height not less than 1980mm and clear opening width of 850mm.

The table below identifies the area and population density ratios that have been applied to determine the total population within the retail parts of the building, as follows:

Population Assessment						
Area	Use	Total area (m ²)	FOH/BOH Split Retail (80/20%) F & B (70/30%)	Fixtures and fittings 30% deduction Net Area (m ²)	DfS density / Staff %	Total Population
Speciality Retail	Class 6	166m ²	FOH – 133m ²	93m ²	3m ²	31
			BOH – 33m ²	23m ²	10%	3
F & B	Class 6	256m ²	FOH – 180m ²	125m ²	1m ²	125
			BOH – 76m ²	53m ²	10%	12
Population Summary			Total Retail Patrons Population			31
			Total Retail Staff Population			3
			Total F & B Patrons Population			125
			Total F & B Staff Population			12

	Total Population	171
NOTES AND ASSUMPTIONS: - The F&B tenancies will be provided with their own dedicated sanitary facilities for patrons in accordance with Part F4 of the BCA as part of the respective fitout. - Sanitary facilities for specialty retail patrons are not required to be provided in accordance with Table F4D4C given the total population is <600. - For the purposes of calculating population and minimum sanitary facilities under Clauses D2D18 and F4D3.3 of the BCA: <u>Specialty Retail</u> - Twenty percent (20%) of the total floor area is considered to be BOH and remaining 80% will be FOH. - An additional 30% will be subtracted from the FOH area for permanent fixtures, fixed shelving, racking and the like to determine the net area. - Population density is 3m² per person in accordance with Table D2D18. <u>F & B Tenancies</u> - Thirty percent (30%) of the total floor area is considered to be BOH and remaining 70% will be FOH. - An additional 30% will be subtracted from the FOH area for permanent fixtures, fixed shelving, racking and the like to determine the net area. - Population density is 1m² per person in accordance with Table D2D18. <u>Staff (Specialty Retail and F&B)</u> - Staff population is assumed to be 10% of the net FOH patron population. - A common unisex accessible facility may be counted once for the male and female members in accordance with Clause F4D3(3) of the BCA. - Staff and patrons are permitted to share the same facilities in accordance with Clause F4D4(5) of the BCA. - At least one ambulant sanitary compartment must be provided within each the male and female facilities complying with Section 16 of AS1428.1 – 2009.		

Part D3: Construction of exits

Stairway goings, risers and slip resistance classification is to comply with relevant provisions Clause D3D14 of the BCA. Landings at the top and bottom of stairways / ramps must comply with Clause D3D15.

Any new electrical meters, distribution boards (telecommunications or electrical) in the path of travel must be contained within a non-combustible enclosure with the doorways fitted with smoke seals in accordance with Clause D3D8 of the BCA.

A continuous balustrade with a minimum height of 1000mm and maximum openings of 125mm must be provided along the side of a roof to which has general access, a stairway or ramp, floor, landing, balcony, delineated path of access to a building etc. where the change in level to the surface beneath is greater than 1m. Where it is possible to fall 4m to the surface beneath, the balustrade must not contain any horizontal (or near horizontal members) that facilitate climbing between 150mm and 760mm. These provisions apply also to any other building element that is within 1m of the balustrade – i.e. planter boxes, air-conditioning units, water and gas fittings etc.

Handrails are required to be provided at a height of 865-1000mm alongside all stairways and ramps. Public stairs and ramps which are located within an accessible path of travel must also comply with the relevant provisions of AS1428.1.

All doorways serving as required exits must swing in the direction of egress (i.e. open outwards) and be fitted with hardware complying with Clause D3D26. Typically, free downward action levers are provided and/or automatic fail-safe devices.

Sliding doors serving as required exits are only permitted where they lead directly to a road or open space. If power operated, they must also be able to be opened manually under a force of not more than 110N if there is a malfunction or power failure and open automatically on activation of a fire / smoke alarm.

Protection of openable windows in accordance with Clause D3D29 is required in all bedrooms and lounge rooms or the like. Compliance generally requires 865mm barriers and screens / devices that restrict the ability to open windows more than 125mm. Details demonstrating compliance are to be provided at the Construction Certificate stage.

BCA Part D4: Access for persons with a disability

Access for persons with a disability is provided throughout all areas as required by Part D4. The principal pedestrian entrance is located along the eastern boundary of the property (Whistler Street). Lift access is proposed between all storeys from Basement 2 up to Level 4.

New accessible and ambulant sanitary facilities compliant with AS1428.1 – 2009 are proposed on the ground floor for retail staff as shown on the plans.

Spatially all other accessways, including corridors, doorways, ramps and circulation areas are capable of complying with AS1428.1-2009.

The Manly Development Control Plan requires access in accordance with AS4299 (Type C – Essential Adaptable Housing) to be provided to at least 25% of the dwelling. The development comprises 25 residential apartments, which includes 7 that are designed as being capable of complying with AS4299, and therefore satisfying the 25% requirement of the Manly DCP. Each adaptable residential apartment is provided with a dedicated car parking space within the basement.

Section E: Services and Equipment

This section outlines the essential fire safety measures including performance requirements of those measures which must be provided to the building.

Part E1: Fire fighting equipment

Fire hydrants

A fire hydrant system designed and installed in accordance with BCA Clause E1D2 & AS 2419.1. The location of the booster assembly is required to be:

- Within or affixed to the façade of the building containing the principal pedestrian entrance and not more than 20m from the principal pedestrian entrance which is identified by a visual alarm device; OR
- Remote from the building and within sight of the principal pedestrian entrance to the building –
 - adjacent to the site boundary and the principal vehicle access; or
 - not more than 20m from the façade of the building containing the principal pedestrian entrance and not more than 20m from the main pedestrian entrance.

The location of booster on Belgrave Street is located greater than 20m from the principal pedestrian entrance which is considered to be from Whistler Street. Compliance is proposed to be addressed by means of a Performance Solution at Construction Certificate stage. The booster must also be located in a position not less than 10m from the substation.

The location of all proposed fire hydrants outlets (internal and external) will need to be shown to allow a review to be undertaken and confirm compliance at the Construction Certificate stage.

Fire hose reels

Designed and installed in accordance with BCA Clause E1D3 & AS 2441 throughout all retail, carpark, BOH and plantroom areas.

The location of all proposed fire hose reels will need to be shown to allow a review to be undertaken and confirm compliance at the Construction Certificate stage.

Sprinklers

A sprinkler system must be provided throughout the building in accordance with Clauses E1D6, E1D9, E1D12 and Specification 17/18. The system must comply with either the requirements of AS2118.1 or AS2118.6 for a combined sprinkler and hydrant system. The system must also be connected to and activate the building occupant warning system.

Portable fire extinguishers

Provided to areas required by BCA Clause E1D14 of the BCA and selected, located and distributed in accordance with Sections 1 to 4 of AS2444.

Part E2: Smoke hazard management

The Class 2 residential parts of the building must be provided with an automatic smoke detection system complying with Specification 20.

The Class 7a basement carpark must be provided with a mechanical ventilation system in accordance with AS 1668.2 and complying with clause 5.5 of AS 1668.1.

NOTE: Additional smoke hazard management measures may be required as part of the Performance Solution addressing compliance of the central stairway.

Part E3: Lift installations

All electric and electrohydraulic passenger lift installations must comply with Specification 24. The building has an effective height of greater than 12m, therefore stretcher facilities are required. The lifts must have accessible features complying with the relevant requirements of BCA Clause E3D8.

Part E4: Visibility in an emergency, exit signs and warning systems

Emergency lighting and exit signage is to be provided throughout to ensure compliance with Part E4 of the BCA and AS/NZS2293-2018. Where exit signs are proposed to be mounted above a height of 2.7m, a Performance Solution will be required at Construction Certificate stage.

Section F: Health and Amenity

Part F1: Surface water management, rising damp and external waterproofing

Stormwater drainage must be designed and constructed in accordance with AS/NZS 3500.3.

Exposed joints in the drainage surface on a roof, balcony, podium or similar horizontal surface part of a building must be protected in accordance with Section 2.9 of AS 4654.2 and not be located beneath or run through a planter box, water feature or similar part of the building.

Part F2: Wet areas and overflow protection

Building elements in a bathroom, shower, slop hopper, sink compartment or sanitary compartment must be water resistant or waterproof in accordance with Specification 26 and comply with AS370.

The floor surface of rooms containing urinals must be an impervious material and graded to a floor waste. The minimum continuous fall of a floor plane to the floor waste must be 1:80 and a maximum of 1:50.

Part F3: Roof and wall cladding

External wall cladding and waterproofing of external walls is typically addressed by means of a Performance Solution prepared by suitably qualified façade engineer or registered architect. The Performance Solution demonstrates the proposed assembly prevents the penetration of water that could cause unhealthy or dangerous conditions, or loss of amenity for occupants; and undue dampness or deterioration of building elements. The solution is to be prepared prior to the issue of the Construction Certificate. Notwithstanding, BCA 2022 has introduced some D+S provisions that relate to waterproofing of external walls. These provisions apply only to:

- Masonry, including masonry veneer, unreinforced and reinforced masonry compliant with AS 3700; or
- Autoclaved aerated concrete compliant with AS 5146.3; or
- Metal wall cladding compliant with AS 1562.1; or
- Any one or a combination of the systems above.

Part F4: Sanitary and other facilities

Sanitary facilities required for staff in accordance with Clause F4D4 are outlined in the table:

Minimum Required Facilities						
Area	Occupant Numbers			WC Required	Urinal Required	Basin Required
	Total	Sex	50/50 Split			
Staff Retail and F&B	15	Male	8	1	0	1
		Female	8	1	-	1
		Accessible	-	Min. 1 x accessible WC complying with AS1428.1 – 2009 required		

The design indicates the residential apartments are provided with facilities as required by Clause F4D2.

Part F5 and F6: Room heights, light and ventilation

Room heights are to comply with clause F5D2, as follows:

- Kitchen, laundry, corridors, passageways and the like – 2.1m
- Habitable rooms – 2.4m
- Bathrooms/sanitary compartments – 2.1m
- Above a stairway, ramp or landing or the like – 2m measured vertically above the nosing line of the stairway treads or the floor surface of the ramp, landing or the like
- Carpark, plantrooms, storerooms or the like – 2.1m
- Retail tenancies including commercial kitchen areas – 2.4m

Natural lighting complying with Clauses F6D2-F6D4 must be provided to all habitable rooms of the residential apartments. Compliance is readily achievable subject to a detailed review at Construction Certificate stage.

Artificial lighting complying with clause F6D4 and AS1680.0-2009 is to be provided throughout.

Mechanical ventilation complying with clause F6D6 and AS1668.2-2012 is to be provided throughout. Where natural ventilation is proposed, compliance with Clauses F6D7-8 must be demonstrated.

Part F7: Sound transmission and insulation

The provisions of this Part apply only to the Class 2 residential portions of the building. A separate detailed assessment will be undertaken by a qualified acoustic consultant in consultation with the project architect at the Construction Certificate stage.

Section G: Ancillary Provisions**Part G3: Atrium construction**

The central courtyard and stairway both contain voids that connect 5 storeys forming an atrium. Compliance with the provisions of this Part is proposed to be addressed by means of a Performance Solution prepared by an Accredited Fire Engineer.

Section J: Energy Efficiency

The building works are subject to compliance with the Energy Efficiency Provisions of Section J relating to:

This Part sets the thermal performance properties of building fabric, the energy efficiency of key energy using equipment and the features a building must have to facilitate the future installation of distributed energy resources. The discipline of energy efficiency has become a specialised field which necessitates the involvement of third party services consultants, engineers and ESD consultants to provide advice during the design and documentation phases. Performance based BCA J1V3 assessments may also be adopted for projects where compliance with DtS provisions of the BCA is problematic.

A detailed assessment will need to be undertaken by an appropriately qualified consultant(s) in consultation with the project architect. Design certification and details demonstrating compliance will need to be provided from these consultants and project architect certifying compliance with this clause at the Construction Certificate stage.

8. Items Requiring Performance Solutions

The following summary outlines the BCA DtS non-compliances associated with the new works that require further investigation at the design development stage and the possible issue of a Performance Solution.

The feasibility and any additional requirements that will apply as a result of the performance solution will need to be confirmed by the professional preparing the performance solution.

Item No.	Non-Compliance	DtS Clause	Description	Performance Requirement
1.	Garbage chute shafts	C2D2 S5C8	The bottom of the shaft serving as the garbage chute is not proposed to be enclosed. The chutes discharge into the residential waste room on ground floor.	C1P2
2.	Fire-isolated stairway	D2D4 D2D12	The central stairway connects 5 storeys and is not proposed to be fire-isolated. The stairway discharges within the confines of the ground floor lift / main entry lobby which is not open for 2/3 of its perimeter.	D1P5 and E2P2
3.	Bounding Construction and Atrium Provisions	C4D12, Part G3 and Spec 5	The central courtyard and stairway both contain voids that connect 5 storeys forming an atrium. The bounding construction of the residential apartments contain multiple openings into the public corridor / open balcony / atrium, and on Level 4, the bounding construction does not extend to the gated entry "lobby" of each SOU. Performance based compliance is proposed for the requirements Part G3 and Specification 31.	C1P2, C1P8, D1P5, E2P2



Item No.	Non-Compliance	DTS Clause	Description	Performance Requirement
4.	Exit travel distances	D2D5 D2D6	Residential (Levels 1 to 4) Up to 19m to a single exit in lieu of 12m. Common GF BOH Areas Alternative paths of travel from the back-of-house ground floor areas converge such that they become less than 6m apart	D1P4 and E2P2
5.	Fire hydrant system	E1D2	The booster assembly which is affixed within the western façade is located greater than 20m from the principal pedestrian entry which is considered to be the lobby off Whistler Street. NOTE: Booster must also be located no less than 10m from the substation.	E1P3
6.	Sprinklers	E1D4 E1D6	The sprinkler valves are located within the ground floor residential waste room which does not have direct egress to a road or open space. Egress is via the vehicular driveway which is located beneath the building above.	E1P4
7.	Weatherproofing of external walls	F3D5	The external walls are proposed to be constructed of materials not nominated in Clause F3D5.	F3P1

9. Conclusion

Hontas Hatzi & Co Pty Ltd have completed a preliminary BCA compliance assessment of the project design documentation prepared for the Development Application lodgment to the Consent Authority.

We confirm the new works are capable of complying with the relevant provisions of the NCC/BCA 2022 and referenced Australian Standards, subject to the satisfactory resolution of all recommendations outlined in **Sections 7 and 8** of this report.

Further detailed reviews will need to be progressively undertaken by Hontas Hatzi & Co as the design develops to ensure it is capable of being approved under a Construction Certificate and contains all relevant details regarding performance-based solutions or other documentation necessary to satisfy the relevant legislative requirements.

10. Appendix A – Statutory Fire Safety Measures

The following draft fire safety measures are required for the new building works.

The fire safety measures may need to be revised at Construction Certificate stage to include:

- Reference to any relevant fire safety Performance Solution(s).

Measure	Standard of Performance
Access Panels, Doors and Hoppers to Fire Resisting Shafts	BCA 2022 Clause C4D14 and tested prototypes (AS 1530.4 - 2014)
Automatic Fail Safe Devices	Scheduled devices release upon trip of smoke detection, fire detection and sprinkler activation in accordance with BCA 2022 Clause D3D26.
Automatic Fire Detection and Alarm System (<i>Smoke Detection System</i>)	BCA 2022 S20C4 and AS 1670.1 - 2018
Automatic Fire Detection And Alarm System (<i>Smoke Alarm System</i>)	BCA 2022 S20C3 and AS 3786 - 2014
Automatic Fire Detection And Alarm System (<i>Within Atriums</i>)	BCA 2022 Specification 31 and AS 1670.1 - 2018
Automatic Fire Suppression Systems (<i>Sprinklers</i>)	BCA 2022 Specification 17 and AS 2118.1 - 2017
Building Occupant Warning System	BCA 2022 S20C7 and AS 1670.1 - 2018
Emergency Lighting	BCA 2022 Clause E4D2, E4D4 and AS/NZS 2293.1 - 2018
Emergency Warning and Intercommunication System	BCA 2022 Specification 31 and AS 1670.4 - 2018
Exit Signs	BCA 2022 Clause E4D5, NSW E4D6, E4D7, E4D8 and AS/NZS 2293.1 - 2018
Fire Dampers	BCA 2022 Clause C4D15 and AS 1668.1 - 2015 (AS 1682.1 - 2015 and AS 1682.2 - 2015)
Fire Doors	BCA 2022 Specification 12 and AS/NZS 1905.1 - 2015
Fire Hydrants Systems	BCA 2022 Clause E1D2 and AS 2419.1 - 2021
Fire Seals Protecting Opening In Fire Resisting Components Of The Building	BCA 2022 Clause C4D15, Specification 13, AS 1530.4 - 2014, AS 4072.1 - 2005 and installed in accordance with the tested prototype.
Hose Reel System	BCA 2022 Clause E1D3 and AS 2441 - 2005
Lightweight Construction	BCA 2022 Specification 6, Clause A2G3 and AS 1530.4 - 2014



Measure	Standard of Performance
Mechanical Air Handling System (<i>Automatic Shut Down Of Air-Handling System</i>)	BCA 2022 Clause E2D3 and AS 1668.1 - 2015
Mechanical Air Handling System (<i>Carpark Mechanical Ventilation System</i>)	BCA 2022 Clause E2D12, Clause 5.5 of AS/NZ 1668.1 - 2015 and fans with metal blades suitable for operation at normal temperature may be used and the electrical power and control cabling need not be fire rated
Portable Fire Extinguishers	BCA 2022 Clause E1D14 and AS 2444 - 2001
Stand-By Power Systems	BCA 2022 S31C20
Wall Wetting Sprinkler and Drencher Systems	BCA 2022 Clause C4D5, Specification 31
Warning And Operational Signs	BCA 2022 Clauses D2D22, D4D7 E3D4, E3D11, E3D12 and G3D8

11. Appendix B – Fire Resisting Levels

Type A Construction: FRL of Building Elements

BUILDING ELEMENT Class of building – FRL (Structural adequacy/Integrity/Insulation in minutes)

	2,3 or 4 part	5, 9 or 7a	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it is exposed is-				
For loadbearing parts-				
less than 1.5m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/60/60	120/ 90/ 90	180/180/120	240/240/180
3m or more	90/60/30	120/ 60/ 30	180/120/90	240/180/ 90
For non-loadbearing parts-				
less than 1.5 m	-/90/90	- /120/120	- /180/180	- /240/240
1.5 to less than 3 m	-/60/60	- / 90/ 90	- /180/120	- /240/180
3 m or more	- / - / -	- / - / -	- / - / -	- / - / -
EXTERNAL COLUMN not incorporated in an external wall-				
For loadbearing columns	90/ - / -	120/ - / -	180/ - / -	240/ - / -
For non-loadbearing columns	- / - / -	- / - / -	- / - / -	- / - / -
COMMON WALLS & FIRE WALLS	90/90/90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS				
Fire-resisting lift and stair shafts-				
Loadbearing	90/90/90	120/120/120	180/120/120	240/120/120
Non-loadbearing	- /90/90	- /120/120	- /120/120	- /120/120
Bounding public corridors, public lobbies and the like-				
Loadbearing	90/90/90	120/ - / -	180/ - / -	240/ - / -
Non-loadbearing	- /60/60	- / - / -	- / - / -	- / - / -
Between or bounding sole-occupancy units-				
Loadbearing	90/90/90	120/ - / -	180/ - / -	240/ - / -
Non-loadbearing	- /60/60	- / - / -	- / - / -	- / - / -
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of Combustion-				
Loadbearing	90/90/90	120/ 90/ 90	180/120/120	240/120/120
Non-loadbearing	- /90/90	- / 90/ 90	- /120/120	- /120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES				
and COLUMNS	90/ - / -	120/ - / -	180/ - / -	240/ - / -
FLOORS	90/90/90	120/120/120	180/180/180	240/240/240
ROOFS	90/60/30	120/ 60/ 30	180/60/30	240/ 90/ 60



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