



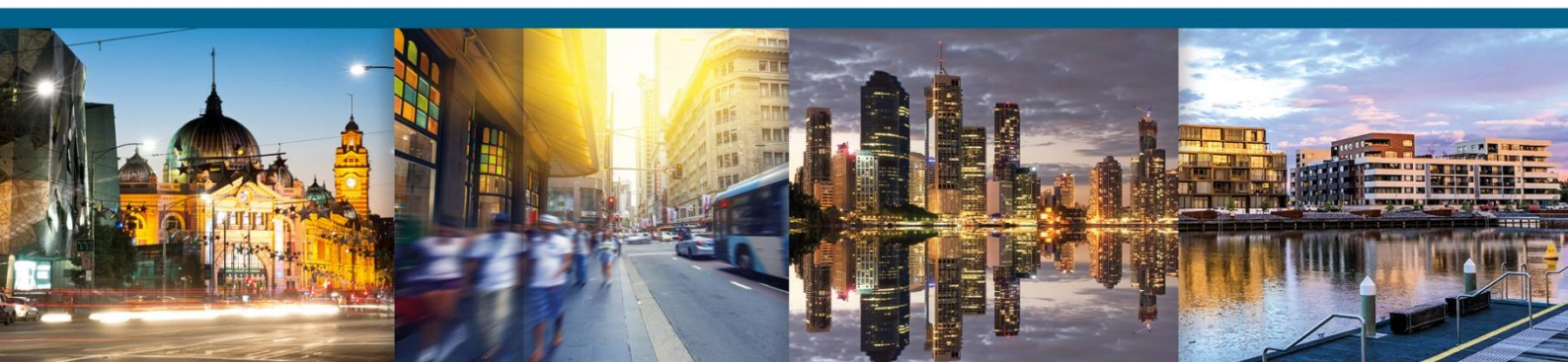
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1 Crescent Street, Holroyd

2024/1725

BCA and Certification Assessment



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Report Revision History

Revision History	
Revision Number:	4.0
Revision Details:	BCA Report for DA Lodgement Only
Date:	Friday, 22 November 2024
Author:	Gary Rafferty
Verifier:	Josh Harvey

Revision History	
Revision Number:	3.0
Revision Details:	BCA Report for DA Lodgement Only
Date:	Friday, 22 November 2024
Author:	Gary Rafferty
Verifier:	Josh Harvey

Revision History	
Revision Number:	2.0
Revision Details:	BCA Report for DA Lodgement Only
Date:	Thursday, 21 November 2024
Author:	Gary Rafferty
Verifier:	Josh Harvey

Revision History	
Revision Number:	1.0
Revision Details:	DRAFT BCA Report for review purposes only
Date:	Monday, 4 November 2024
Author:	Gary Rafferty
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Introduction

This report presents the findings of a preliminary BCA assessment of the proposed new mixed-use development located at 1 Crescent Street, Holroyd. The site is legally described as Lot 700 in Deposited Plan 1241836.

The site comprises an irregularly shaped allotment with an area of 37,877m² and has a primary frontage to Crescent Street to the south and a frontage to Woodville Road to the east. The northern boundary of the site adjoins the Holroyd Sportsground with the M4 Motorway beyond.

The proposed development includes.

- Development of seven residential buildings comprising four shop top housing buildings and three residential flat buildings as outlined below:
- Buildings 1-3 are integrated with an eastern mixed-use podium building, while Building 4 is situated above mixed residential / commercial space, offering shop-top housing.
- Buildings 5-7 consist of residential flat buildings.
- Approximately 134,000m² total floor space comprising:
 - A total of 2,500m² retail GFA and 5,000m² commercial GFA.
 - Communal amenity facilities for residents.
 - Building services areas.
- Shared car parking for Buildings 1-3 and the commercial and retail tenancies within the podium.
- Shared car parking for Buildings 1-3 and the commercial and retail tenancies within the podium.

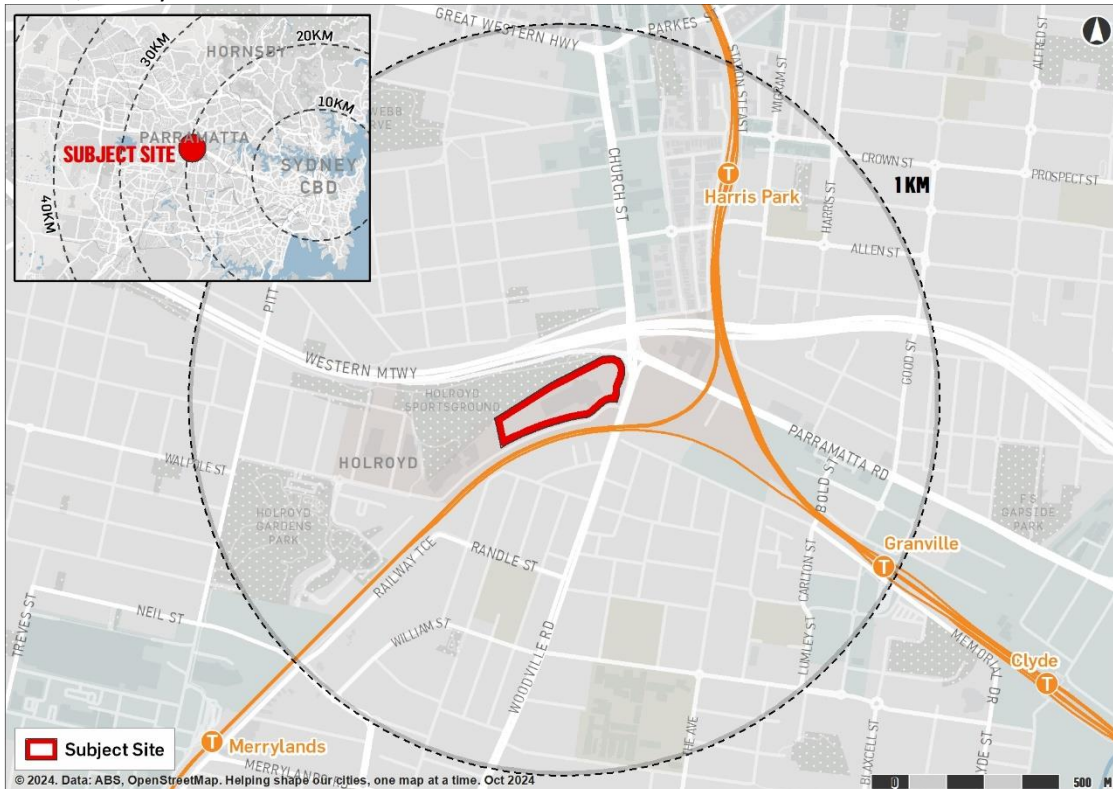
The site is located in the Cumberland Local Government Area (LGA) and is currently vacant and cleared after WesTrac ceased operations of an industrial facility at the site in early 2018. The site contains existing scattered pockets of landscaped vegetation, predominately located along the site's southern and eastern boundaries to Crescent Street and Woodville Road.

The site is bounded by Parramatta Road/Church Street/Woodville Road intersection to the north east, Woodville Road to the east and Crescent Street to the south. The northern frontage of the site faces the Holroyd Sportsground and the M4 Motorway beyond. It is noted that the eastern portion of the site fronting Woodville Road has been identified for potential future acquisition by Transport of NSW for future planned intersection upgrades to Woodville/Parramatta Road/M4.



Description of Proposed Development

The proposed works involving a new mixed-use residential/retail development located at 1 Crescent Street, Holroyd.



Audit Report and Certification Work

This report is provided with strict regard to the conflict of interest requirements in Part 3 the Building and Development Certifiers Act 2018 and Part 4 of the Building and Development Certifiers Regulation 2020, with particular reference to Clause 25(5) of the Regulation.

Hence, the contents of this report, and any associated correspondence, are provided in the context of a preliminary audit of plans and other design documents. The report is intended to identify BCA or regulatory issues required to be addressed in the design to achieve compliance. It may not be construed to constitute involvement in building design, the preparation of plans and specifications, the provision of advice on how to amend a plan or specification, or to breach any other restriction or limitation imposed under the conflict of interest provisions of the above or any other legislation.

Purpose

The purpose of this report is to identify issues and omissions in the audited documentation that are required to be addressed to permit the lodgement and approval of an application for a Development Consent under Part 4 of the EP&A Act.

This report has been prepared by building regulations consultants and certifiers Steve Watson and Partners for Tiberius (Holroyd) Pty Ltd (ABN 61 061 131 959) atf the Holroyd Unit Trust (ABN 42 891 308 354).



Scope

The scope of this assessment is limited to the design documentation referenced in Appendix A of this report.

Summary of Construction Determination

It should be noted that for the purposes of the BCA Assessment the development is split into three (3) united buildings.

United Building #1 (Phase 1)

Building 1, Building 2 & Building 3 and car-parking, loading dock, retail, commercial and residential areas

United Building #2 (Phase 2)

Building 4, Building 5 and car-parking, commercial and residential areas

United Building #3 (Phase 3)

Building 6, Building 7 and car-parking, commercial and residential areas

United Building #1

BCA Classification	Class 2, 5, 6, 7a, 7b <u>Note:</u> If storage areas are greater than 10% of total floor area for the storey, they should be considered as Class 7b – TBC SWP have considered the loading dock as a 7b part, for the purposes of this BCA Assessment
Effective height	Greater than 50m
Type of construction required	Type A Construction required for all buildings

United Building #2

BCA Classification	Class 2, 5, 6, 7a <u>Note:</u> If storage areas are greater than 10% of total floor area for the storey, they should be considered as Class 7b
Effective height	Greater than 50m
Type of construction required	Type A Construction required for all buildings



Summary of Construction Determination

United Building #3

BCA Classification	Class 2, 7a Note: If storage areas are greater than 10% of total floor area for the storey, they should be considered as Class 7b
Effective height	Greater than 50m
Type of construction required	Type A Construction required for all buildings



Assessment

The following is a summary of an assessment of the proposed design against the relevant Deemed-to-Satisfy provision of the BCA 2022.

Section A: General Provisions

The proposed works involve a new mixed-use residential /retail development with associated car-parking.

The development includes the following BCA Classes:

- **Class 2 – Sole Occupancy Units (SOU's)**
- **Class 5 – Office**
- **Class 6 - Retail**
- **Class 7a – Carpark**
Class 7b – Storage (if storage greater than 10% of total floor area of the storey)
Class 7b – Loading Dock

A2G2(4) – There are new requirements under this Clause for Performance Based Design Brief (PBDB) for all proposed performance solutions and where fire engineering performance solutions are proposed, these will require PBDB & referral to FRNSW via the FEBQ process.

Where a Fire Engineering Performance Solution is being proposed the following process must be undertaken by the fire engineer in accordance with BCA Clause A2G2(4):

- Prepare draft PBDB and submit to relevant stakeholders for internal review and approval.
- Submit final PBDB via email to Fire and Rescue NSW (FRNSW) for comment.

NOTE: In accordance with FRNSW Guidelines, an initial response will be provided within 10 days confirming if they'll be reviewing and commenting on the PBDB. If FRNSW decide to provide comment, they have up to 28 days to do so before the fire engineer can proceed with finalising the FER and the Certifier being able to release the construction approval. If FRNSW decide not to provide comment, the fire engineer can proceed to prepare the FER for submission and approval with the Construction Approval.



Section B: Structure

The structural engineering design of the building will be required to comply with the structural provisions of Part B1 of the BCA and relevant Australian Standards. As the building is a Class 2 if located in a building in a flood hazard area must comply with the ABCB Standard for Construction of Buildings in Flood Hazard Areas in accordance with BCA Clause B1D6.

Section C: Fire Resistance

The building is required to be Type A construction in accordance with BCA Clause C2D2.

Refer to Appendix C for FRL requirement of Type A Construction.

As per BCA Clause C2D4 in a building of multiple classifications, the Type of construction required for the building is the most fire-resisting type of construction.

Any proposed lightweight construction proposed for walls, columns or shafts must be in accordance with BCA Clause C2D9.

In a Type A building all materials used within the external wall system (including insulation and coverings) are required to be non-combustible in accordance with BCA Clause C2D10.

Any external attachments, including awning materials and signage, are required to be non-combustible in accordance with BCA Clause C2D14. In a building required to be of Type A construction, externally located bonded laminated cladding panels must have all layers of cladding mechanically supported or restrained to the supporting frame in accordance with BCA Clause C2D15. Timber is not permitted on an external wall of Type A Construction. If any green walls are proposed to be installed on the external then compliance in relation combustible materials will also need to be considered.

Proposed floor coverings and any proposed wall and ceiling lining materials must comply with BCA Clause C2D11 and the fire hazard properties nominated in Specification 7 of the BCA.

Fire compartment sizes for Type A Construction are detailed below in Table C3D3,

The size of any fire compartment or atrium in a Class 5, 6, 7, 8 or 9 building must not exceed the relevant maximum floor area nor the relevant maximum volume set out in Table C3D3 and C3D6 except as permitted in C3D4. At present fire compartment sizes have not been provided, to ensure compliance with the BCA in this regard additional fire separation maybe required, and this compliance should be confirmed prior to the issue of any construction certificate.

Table C3D3 Maximum size of fire compartments or atria			
Classification	Type A construction	Type B construction	Type C construction
5, 9b or 9c	Max floor area —8 000 m ²	Max floor area —5 500 m ²	Max floor area —3 000 m ²
	Max volume —48 000 m ³	Max volume —33 000 m ³	max volume —18 000 m ³
6, 7, 8 or 9a (except for patient care areas)	Max floor area —5 000 m ²	Max floor area —3 500 m ²	Max floor area —2 000 m ²
	Max volume —30 000 m ³	Max volume —21 000 m ³	Max volume —12 000 m ³



In accordance with BCA Clause C3D8 separation by fire walls is required to be provided.

Construction

A fire wall must be constructed in accordance with the following:

- a) The fire wall has the relevant FRL prescribed by Specification 5 for each of the adjoining parts, and if these are different, the greater FRL, except where S5C18(c), S5C21(3) and S5C25(1) permit a lower FRL on the carpark side.
- b) Any openings in a fire wall must not reduce the FRL required by Specification 5 for the fire wall, except where permitted by the Deemed-to-Satisfy Provisions of Part C4.
- c) Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not pass through or cross the fire wall unless the required fire-resisting performance of the fire wall is maintained.

Separation of buildings

A part of a building separated from the remainder of the building by a fire wall may be treated as a separate building if separated by a fire wall in accordance with the following.

- a) The fire wall extends through all storeys and spaces in the nature of storeys that are common to that part and any adjoining part of the building.
- b) The fire wall is carried through to the underside of the roof covering.
- c) Where the roof of one of the adjoining parts is lower than the roof of the other part, the fire wall extends to the underside of –
 - i. the covering of the higher roof, or not less than 6 m above the covering of the lower roof; or
 - ii. the lower roof if it has an FRL not less than that of the fire wall and no openings closer than 3 m to any wall above the lower roof; or
 - iii. the lower roof if its covering is non-combustible and the lower part has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17.

Separation of fire compartments

Separation of fire compartments — A part of a building separated from the remainder of the building by a fire wall may be treated as a separate fire compartment if it is constructed in accordance with (a) and the fire wall extends to the underside of

- a) a floor having an FRL required for a fire wall; or
- b) the roof covering.

In multiple areas the fire rated garbage chute shafts that are not provided with fire rated bases due to the operational need of such chutes (to allow the garbage to descend into the collection bins) below rooms. These non-compliances with BCA Specification S5C11 for Type A Construction are proposed to be addressed **via fire engineering performance solution**.

BCA Clause C3D13 requires separation of equipment (FRL 120/120/120) for the following;

- Lift motor rooms.
- Emergency generators sustaining emergency equipment operating in emergency mode.
- Central mechanical smoke control plant.
- Boilers.
- A battery system installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200 kWh or more.

Note: Separation of on-site fire pumps must comply with the requirements of AS 2419.1.

The pump room is to comply with the requirements of AS2419.1.



BCA Clause C3D14 relating to electricity supply system requires that an electrical substation located within a building or main switchboard that sustains emergency equipment must be separated from the remainder of the building by 2hr fire rated construction. Switchboards sustaining emergency equipment must be constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of faults.

BCA Clause C3D15 requires public corridor in Class 2 buildings, if more than 40 m in length, must be divided at intervals of not more than 40 m with smoke-proof walls complying with S11C2.

In accordance with BCA Clause C4D3 compliance relating to protection of openings in external walls is required.

In accordance with Spec S5C8 as the fire rated garbage chute shafts that are not provided with fire rated bases due to the operational need of such chutes (to allow the garbage to descend into the collection bins) below rooms. This non-compliance is proposed to be addressed **via fire engineering performance solution**.

Section D: Access and Egress

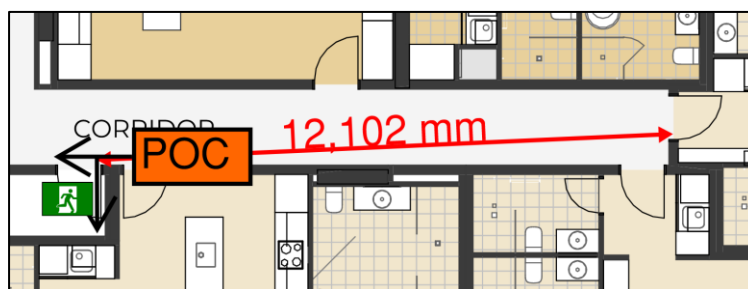
In accordance with BCA Clause D2D3 as all buildings have an effective of greater than 25m two (2) exits are required from all levels. In some instances, the residential lobbies are provided with a single exit (horizontal exit towards car-park not considered egress from residential areas) and have extended travel distances.

Fire isolated exits have been provided in accordance with D2D4.

Single exits have been provided in some residential ground floor levels (horizontal exit not assessed for egress purposes) and therefore extended travel distances of up to 27m in lieu of 20m in accordance with BCA Clause D2D5.

Travel distances are exceeded with the following.

- 27m in lieu of 20m from an SOU to a single exit on Ground Floor.
- Extended travel distances of up to 12.1m to an exit from a Sole Occupancy Unit (SOU) in lieu of 6.0m. SWP have been advised that minor internal changes will be made prior to the issue of a Construction Certificate (CC) as only a distance of up to 12m is justifiable through a fire engineering performance solution.



- Up to 30m to a point of choice in areas in lieu of 20m.
- Allowance for up to 50m to an exit in lieu of 40m in car-parking/retail/commercial areas.

These non-compliances are proposed to be addressed **via fire engineering performance solution**.



The following areas have travel distances between alternative exits which are deemed-to-satisfy (DTS) in accordance with BCA Clause D2D6.

- Distance between alternative exits is up to 80m in lieu 60m.
- Distance between alternative exits is 5.8m in lieu of 9m.

These non-compliances are proposed to be addressed **via fire engineering performance solution**.

In accordance with BCA Clause D2D7 in a required exit or path of travel to an exit the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm.

In accordance with BCA Clause D2D8 the unobstructed width of each required exit must not be less than 1000mm. Egress & egress widths from retail/commercial tenancy areas cannot be assessed as exits have not been detailed (TBC).

Multiple fire-isolated egresses discharge on the ground floor discharge into a covered area, passes within 6m of unprotected openings in the external wall and in order to reach a road / open space the occupants are required to travel via an adjoining boundary.

These non-compliances with BCA clause D2D12 are proposed to be addressed **via fire engineering performance solution**.

In accordance with BCA Clause D3D3 all fire isolated shafts must be constructed of non-combustible materials and so that if there is local failure it will not cause structural damage or impair the fire resistance of the shaft.

Separation of rising and descending stair flights in fire isolated stairs is required to comply with BCA Clause D3D5 and there must be no direct connection between a flight rising from a storey below the lowest level of access to a road or open space and a flight descending from a storey above that level. The drawings show that separation is provided between stair flights in the fire isolated stairs.

D3D8 Installation in exits and paths of travel - Services or equipment comprising electricity meters, distribution boards (DB's), central telecommunication distribution boards / equipment, electrical motors or other motors serving equipment in the building, can be installed in the existing corridors or the like leading to a required exits if the services or equipment are enclosed with non-combustible construction or appropriate fire-protective covering and doorways suitably sealed against smoke spread from the enclosure.

All exit discharge to roof as open space. Under D3D13 roof as open space must not have any roof lights or other openings within 3 m of the path of travel of persons using the exit to reach a road or open space. The construction of the new stairways including goings, risers and slip resistance classification is to comply with Clause D3D14 of the BCA. Landings at the top and bottom of the stairway is to comply with Clause D3D15 of the BCA.

The Access consultant is to review and confirm all Handrails are in accordance with Clause D3D22 and Clause 11 and 12 of AS1428.1 – 2009.



D3D26 Hardware to all doors in an exit or in the path of travel to an exit are to be lever action type handles that are openable without a key by a single hand from the side facing a person seeking egress in accordance with Clause D3D16 of the BCA. Windows (which are required to) must be restricted to not permit a 125 mm sphere to pass through the window opening or screen in accordance with D3D29.

Access for people with a disability provisions of the BCA Part D4, AS1428.1 – 2009 and the Access to Premises Standards has not been reviewed within this report. Refer to separate access consultant's report.



Section E: Services and Equipment

The hydrant booster assembly(s) location is not within sight of main principal entry to the buildings then this non-compliance is proposed to be addressed **via fire engineering performance solution**. It is noted the hydraulic engineer must ensure that compliant coverage is provided to all areas of the building and must provide design certification to accompany the drawings certifying the design complies with Clause E1D2 of the BCA and AS2419.1 (noting any non-compliances, which are to be addressed as a performance solution).

The building is required to be provided with fire hose reels complying with Clause E1D3 of the BCA and AS 2441 – 2005.

The building is required to be protected by a sprinkler system in accordance with BCA Clause E1D4, E1D5, E1D6, E1D9 and BCA Specification 17. Confirmation to be provided by the hydraulic consultant and detailed on the relevant drawings prior to the issue of the Construction Certificate.

The fire control rooms provided (separate buildings) do not provide access via the front entrance of the building or via a fire isolated stair and the required doors do not open into the room in accordance with Specification 19C9. This non-compliance is proposed to be addressed **via fire engineering performance solution**.

The building will require portable fire extinguishers complying with Clause E1D14 of the BCA and the requirements of AS 2444 – 2001.

Any proposed future EV charging in basement is to be considered a special hazard as per BCA Clause E1D17 AND E2D21. PV Panels are installed on the roofs and these items will require a separate assessment from fire engineer will be required prior to the issue of the relevant Construction Certificate.

BCA Part E2 Spec 20 requires the building to be provided with Automatic Fire Detection and Alarm System (Smoke Detection System) and an EWIS E4D9, in accordance with Clause S20C4, S20C5 and S20C7, AS1670.1 and AS3786. Fire compartment sizes are to be provided for the Class 6 parts to be provided to ascertain if compliance with BCA Clause E2D15 relating to Class 6 buildings – in fire compartments more than 2000 m²: Class 6 building (containing an enclosed common walkway or mall serving more than one Class 6 sole-occupancy unit).

Stair pressurisation & smoke hazard management is required to be provided in accordance with BCA Clause E2D4 relating to fire isolated exits. As the building in Class 2, 5, 6 & 9b, 7a,7b and has an effective height greater than 25m compliance with E2D5, E2D6 is required.

The building is technically required to be provided with a zone pressurisation system between vertically separated fire compartments in accordance with BCA Clause E2D6. This non-compliance is proposed to be addressed **via fire engineering performance solution**.



The Class 7a carpark is required to be provided with a mechanical ventilation system in accordance with AS 1668.2, must comply with clause 5.5 of AS 1668.1 and must incorporate fire/smoke dampers when penetrating fire rated building elements.

The proposed passenger lift will be required to be one of types identified in E3D7.

Emergency lifts are required to be provided in accordance with BCA 2022 Clause E3D5.

The building will require emergency lighting in accordance with Clauses E4D2 & E4D4 of the BCA and AS 2293.1. The building will require exit signage in accordance with Clauses E4D5, E4D6 and E4D8 of the BCA and AS 2293.1.



Section F: Health and Amenity

Surface water management, rising damp and external waterproofing is required to comply with BCA Clause F1D1-F1D8.

Wet areas and overflow protection is required to comply with BCA Clause F2D1-F2D4.

Roof and wall cladding is required to comply with BCA Clause F3D1-F3D5.

Sanitary and other facilities are required to be provided. The Class 2 residential building is required to be provided with the following:

- (a) Within each sole-occupancy unit, provide—
 - (i) a kitchen sink and facilities for the preparation and cooking of food; and
 - (ii) a bath or shower; and
 - (iii) a closet pan; and
 - (iv) a washbasin.
- (b) For laundry facilities, provide either—
 - (i) in each sole-occupancy unit—
 - A. clothes washing facilities, comprising at least one washtub and a space for a washing machine; and
 - B. clothes drying facilities comprising clothes line or a hoist with not less than 7.5 m of line, or space for one heat operated drying cabinet or appliance in the same room as the clothes washing facilities; or
 - (ii) a separate laundry for each 4 sole-occupancy units, or part thereof, that must comprise—
 - A. clothes washing facilities, comprising at least one washtub and a space for a washing machine; and
 - B. clothes drying facilities comprising clothes line or a hoist with not less than 7.5 m of line per sole- occupancy unit, or space for one heat operated drying cabinet or appliance.
- (c) For the purposes of (a) and (b), a kitchen sink or washbasin must not be counted as a laundry washtub.



Sanitary facilities are required to be provided in accordance with BCA Clause D2D18, as detailed below.

Table F4D4d Sanitary facilities in Class 6 buildings – restaurants, cafes, bars

User group	Facility type	Design occupancy	Number
Male patrons	Closet pans	1 - 100	1
		101 - 300	2
		>300	Add 1 per 200
	Urinals	1 - 50	1
		51 - 100	2
		101 - 150	3
		151 - 200	4
		201 - 250	5
		>250	Add 1 per 100
	Washbasins	1 - 50	1
		51 - 200	2
		>200	Add 1 per 200
Female patrons	Closet pans	1 - 25	1
		26 - 50	2
		51 - 100	3
		101 - 150	4
		151 - 200	5
		201 - 250	6
		>250	Add 1 per 100
	Washbasins	1 - 50	1
		51 - 150	2
		>150	Add 1 per 200

Table F4D4a Sanitary facilities in Class 3, 5, 6 and 9 buildings other than schools

User group	Facility type	Design occupancy	Number
Male employees	Closet pans	1 - 20	1
		>20	Add 1 per 20
	Urinals	1 - 10	0
		11 - 25	1
		26 - 50	2
		>50	Add 1 per 50
	Washbasins	1 - 30	1
		>30	Add 1 per 30
Female employees	Closet pans	1 - 15	1
		>15	Add 1 per 15
	Washbasins	1 - 30	1
		>30	Add 1 per 30

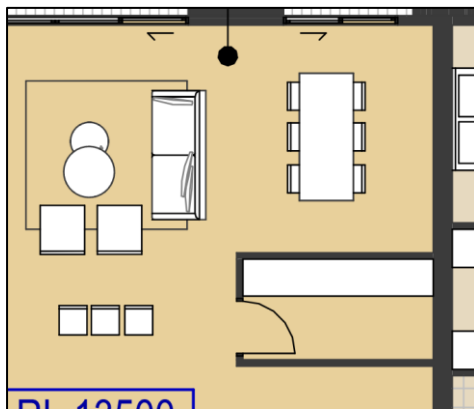
In accordance with BCA Clause F5D2 the height of rooms and other spaces in a Class 2, 5, 6 building must be not be less than-

- (a) for a kitchen, laundry, or the like — 2.1 m; and
- (b) for a corridor, passageway or the like — 2.1 m; and
- (c) for a habitable room excluding a kitchen — 2.4 m.

The height of rooms and other spaces in any building must be not be less than—

- (a) for a bathroom, shower room, sanitary compartment, other than an accessible adult change facility, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like — 2.1 m; and
- (b) for a commercial kitchen — 2.4 m; and
- (c) above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like.

Natural light is required to be provided in accordance with BCA Clause F6D2 & F6D3 in Class 2 buildings to all habitable rooms (including study's). The architectural drawings should achieve compliance prior to the issue of any construction certificate.



The architect is to provide detailed natural light calculations outlining how natural light complies with BCA Clause F6D3 to ensure compliance prior to the issue of any construction certificate.

Artificial lighting in accordance with BCA Clause F6D5 is required to all rooms that are frequently occupied, all accessible spaces, all corridors and circulation spaces and path of egress in accordance with AS/NZS 1680.0.

Ventilation will be required to all rooms occupied by a person for any purpose by means of natural ventilation complying with Clause F6D7 of the BCA or mechanical ventilation/air-conditioning complying with AS 1668.2 –2012.

Sound transmission and insulation is required to be provided in accordance with BCA Clauses F7D1-F7D8 and acoustic compliance has not been reviewed by SWP, and a full compliance review should be undertaken by a suitably qualified acoustic consultant. Condensation management throughout the building is required to comply with BCA Clauses F8D1-F8D5.



Section G: Ancillary Provisions

In accordance with G6D1-G6D9 (Occupiable Outdoor Areas) compliance in relation to fire hazard properties, fire separation, provision for escape, construction of exits, firefighting equipment, lift installations, visibility in an emergency, exit signs and warning systems, light & ventilation is required on the communal outdoor areas which have been considered occupiable outdoor areas.

Section I: Ancillary Provisions

Not applicable.

Section J: Energy Efficiency

Basix compliance is applicable to this development.

In NSW for a Class 3 building or Class 5 to 9 building, from 1 May 2023 to 30 September 2023 NSW Section J of NCC 2019 Volume One Amendment 1 may apply instead of Section J of NCC 2022 Volume One and from 1 October 2023 Section J of NCC 2022 Volume One applies. The buildings are to be designed to achieve compliance with the relevant provisions of Part J1 to J9 respectively.

- Part J1 - Energy efficiency performance requirements
- Part J2 - Energy efficiency
- Part J3 - Elemental provisions for a sole-occupancy unit of a Class 2 building or a Class 4 part of a building
- Part J4 - Building Fabric
- Part J5 - Building Sealing
- Part J6 - Air-Conditioning and ventilation
- Part J7 - Artificial lighting and power
- Part J8 - Heated water supply and swimming pool and spa pool plant
- Part J9 - Energy monitoring and on-site distributed energy resources

Section J & Basix compliance has not been reviewed by SWP, and a full compliance review should be undertaken by a suitably qualified acoustic consultant to ensure compliance with BCA Part J & Section J has been complied with prior to the issue of any construction certificate.



Conclusion

This report documents a preliminary audit of the proposed design against the BCA 2022 and the relevant legislative requirements for the issue of a Development Consent Approval.

We confirm the proposed design, as shown on the drawings referenced in Appendix A, is capable of achieving compliance with the BCA once further information is provided. The proposed design will therefore be capable of being approved under a Development Consent Approval, subject to the provision of further details regarding performance-based solutions and other documentation necessary to satisfy the relevant legislative requirements.



Potential Fire Engineering Alternative Solutions

Item	Non-Compliance	DTS Clause	Description
1	Fire Rating of garbage chute/room	Specification S5C8	The fire rated garbage chute shafts that are not provided with fire rated bases due to the operational need of such chutes (to allow the garbage to descend into the collection bins) below rooms.
2	Extended travel distances	D2D5	Multiple extended travel distances occur throughout the development which exceed the DTS travel distances in D2D5.
3	Distance between alternative exits	D2D6	Multiple extended travel distances occur throughout the development which exceed the DTS travel distances in D2D6 and some alternative exits are located less than 9m apart.
4	Fire isolated stairs discharges do not fully comply with the DTS provisions	D2D12	The fire-isolated stairway(s) in multiple locations discharge into a covered area, pass within 6m of unprotected openings in the external wall and in order to reach a road / open space the occupants are required to travel via an adjoining boundary. Multiple areas in which access directly into fire stair is not via an airlock/corridor.
5	Fire hydrant booster assembly location	Clause E1D2 of the BCA and AS 2419.1 – 2021.	The hydrant booster assembly location is not within sight of main principle entry.
6	Zone smoke control	E2D6	The building is technically required to be provided with a zone pressurisation system between vertically separated fire compartments in accordance with BCA Clause E2D6.
7	Fire Control Room	Specification 19C9	The fire control rooms provided (separate buildings) do not provide access via the front entrance of the building or via a fire isolated stair and the required doors do not open into the room in accordance with Specification 19C9



Appendix A – Referenced Documentation

The following documentation was used in the preparation of this report:

Drawing No.	Title	Rev	Date	Drawn By
DA-1-22LG	Lower Ground Floor Plan	B	20.11.24	Woods Bagot
DA-1-2200	Ground Floor Plan	B	20.11.24	Woods Bagot
DA-1-2201	Level 1	B	20.11.24	Woods Bagot
DA-1-2202	Level 2	B	20.11.24	Woods Bagot
DA-1-2203	Level 3	B	20.11.24	Woods Bagot
DA-1-2204	Level 4	B	20.11.24	Woods Bagot
DA-1-2205	Level 5	B	20.11.24	Woods Bagot
DA-1-2206	Level 6	B	20.11.24	Woods Bagot
DA-1-2207	Level 7	B	20.11.24	Woods Bagot
DA-1-2210	Level 10	B	20.11.24	Woods Bagot
DA-1-2224	Level 24	B	20.11.24	Woods Bagot
DA-1-2233	Level 33	B	20.11.24	Woods Bagot
DA-1-2234	Level 34	B	20.11.24	Woods Bagot
DA-1-2235	Level 35	B	20.11.24	Woods Bagot
DA-1-2236	Level 36	B	20.11.24	Woods Bagot
DA-2-22LG	Lower Ground Floor Plan	B	20.11.24	Woods Bagot
DA-2-2200	Ground Floor Plan	B	20.11.24	Woods Bagot
DA-2-2201	Level 1	B	20.11.24	Woods Bagot
DA-2-2202	Level 2	B	20.11.24	Woods Bagot
DA-2-2203	Level 3	B	20.11.24	Woods Bagot
DA-2-2204	Level 4	B	20.11.24	Woods Bagot
DA-2-2205	Level 5	B	20.11.24	Woods Bagot
DA-2-2206	Level 6	B	20.11.24	Woods Bagot
DA-2-2210	Level 10	B	20.11.24	Woods Bagot
DA-2-2213	Level 13	B	20.11.24	Woods Bagot
DA-2-2218	Level 18	B	20.11.24	Woods Bagot
DA-2-2219	Level 19	B	20.11.24	Woods Bagot
DA-2-2220	Level 20	B	20.11.24	Woods Bagot
DA-3-22LG	Lower Ground Floor Plan	B	20.11.24	Woods Bagot



Drawing No.	Title	Rev	Date	Drawn By
DA-3-22LG	Lower Ground Floor Plan	B	20.11.24	Woods Bagot
DA-3-2200	Ground Floor Plan	B	20.11.24	Woods Bagot
DA-3-2201	Level 1	B	20.11.24	Woods Bagot
DA-3-2202	Level 2	B	20.11.24	Woods Bagot
DA-3-2203	Level 3	B	20.11.24	Woods Bagot
DA-3-2204	Level 4	B	20.11.24	Woods Bagot
DA-3-2205	Level 5	B	20.11.24	Woods Bagot
DA-3-2206	Level 6	B	20.11.24	Woods Bagot
DA-3-2210	Level 10	B	20.11.24	Woods Bagot
DA-3-2213	Level 13	B	20.11.24	Woods Bagot
DA-3-2220	Level 20	B	20.11.24	Woods Bagot
DA-3-2221	Level 21	B	20.11.24	Woods Bagot
DA-3-2222	Level 22	B	20.11.24	Woods Bagot
DA-1-3211	Building 1-Elevations – North & West	B	20.11.24	Woods Bagot
DA-1-3212	Building 1-Elevations – South & East	B	20.11.24	Woods Bagot
DA-1-3221	Building 2- Elevations – North & West	B	20.11.24	Woods Bagot
DA-1-3222	Building 2-Elevations – South & East	B	20.11.24	Woods Bagot
DA-1-3223	Building 2 - Sections	B	20.11.24	Woods Bagot
DA-1-3231	Building 3- Elevations – North & West	B	20.11.24	Woods Bagot
DA-1-3232	Building 3-Elevations – South & East	B	20.11.24	Woods Bagot
DA-1-3233	Building 3 - Sections	B	20.11.24	Woods Bagot
DA-2-3241	Building 4- Elevations – North & West	B	20.11.24	Woods Bagot
DA-2-3242	Building 4-Elevations – South & East	B	20.11.24	Woods Bagot
DA-2-3243	Building 4-Sections	B	20.11.24	Woods Bagot
DA-2-3251	Building 5 – Elevations – North & West	B	20.11.24	Woods Bagot
DA-2-3252	Building 5 – Elevation – South & East	B	20.11.24	Woods Bagot
DA-2-3253	Building 5 - Sections	B	20.11.24	Woods Bagot
DA-3-3261	Building 6 – Elevations – North & West	B	20.11.24	Woods Bagot
DA-3-3262	Building 6 – Elevations – South & East	B	20.11.24	Woods Bagot
DA-3-3263	Building 6 - Sections	B	20.11.24	Woods Bagot
DA-3-3271	Building 7 – Elevations – North & West	B	20.11.24	Woods Bagot



Drawing No.	Title	Rev	Date	Drawn By
DA-3-3272	Building 7 – Elevations – South & East	B	20.11.24	Woods Bagot
DA-3-3273	Building 7 - Sections	B	20.11.24	Woods Bagot



Appendix B – Schedule of potential proposed statutory Fire Safety Measures

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>Smoke Detection System To Operate Zone Smoke Control Or Stair Pressurisation System</i>)	BCA 2022 S20C6 and AS 1670.1 - 2018
Automatic Fire Detection And Alarm System (<i>Smoke Detection System To Automatically Shutdown Air-Handling System</i>)	BCA 2022 S20C6 and AS 1670.1 - 2018
Automatic Fire Detection And Alarm System (<i>Smoke Detection System To Activate Smoke Exhaust System</i>)	BCA 2022 S20C6 and AS 1670.1 - 2018
Automatic Fire Suppression Systems (<i>Sprinklers</i>)	BCA 2022 Specification 17 and AS 2118.1 - 2017
Automatic Fire Suppression Systems (<i>Combined Sprinkler And Hydrant System</i>)	BCA 2022 Specification 17 and AS 2118.6 - 2012
Emergency Lifts	BCA 2022 Clause E3D5
Emergency Lighting	BCA 2022 Clause E4D2, E4D4 and AS/NZS 2293.1 - 2018
Emergency Warning And Intercommunication System	BCA 2022 Clause E4D9, Specification 31 and AS 1670.4 - 2018
Exit Signs	BCA 2022 Clause E4D5, NSW E4D6, E4D7, E4D8 and AS/NZS 2293.1 - 2018
Fire Alarm Monitoring System	BCA 2022 S20C8 and AS 1670.3 - 2018
Fire Control Room	BCA 2022 Specification 19
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 Engineering Performance Solution Report	Fire Engineering Performance Solution Report prepared by..... Revision..... Dated..... 1. 2.
Fire Hydrants Systems	BCA 2022 Clause E1D2 and AS2419.1-2021
Fire Seals Protecting Opening In Fire Resisting	BCA 2022 Clause C4D15, Specification 13, AS 1530.4 - 2014, AS 4072.1 -



Measure	Standard of Performance
Components Of The Building	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
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>Air-Handling System Design To Operate As A Smoke Control System</i>)	BCA 2022 Clause E2D3 and AS 1668.1 - 2015
Mechanical Air Handling System (<i>Automatic Air Pressurisation System</i>)	BCA 2022 Clause E2D4, E2D8, E2D9 and AS 1668.1 - 2015
Mechanical Air Handling System (<i>Zone Smoke Control System</i>)	BCA 2022 Clause E2D6, E2D7, E2D9, E2D11, E2D13 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
Mechanical Air Handling System (<i>Automatic Smoke Exhaust System</i>)	BCA 2022 Specification 21
Portable Fire Extinguishers	BCA 2022 Clause E1D14 and AS 2444 - 2001
Smoke Detectors And Heat Detectors (<i>Detectors For The Automatic Closing Operation Of Fire Doors And Fire Shutters In Fire Walls</i>)	BCA 2022 Clause C4D6 and AS 1670.1 - 2018
Smoke Detectors And Heat Detectors (<i>Detectors For The Automatic Closing Operation Of Horizontal Exits</i>)	BCA 2022 Clause C4D8 and AS 1670.1 - 2018
Smoke Detectors And Heat Detectors (<i>Detectors For The Automatic Closing Operation Of Fire Doors To Fire Isolated Exits</i>)	BCA 2022 Clause C4D9 and AS 1670.1 - 2018
Smoke Doors	BCA 2022 Specification 12
Wall Wetting Sprinkler And Drencher Systems	BCA 2022 Clause C4D5, Specification 31
Warning And Operational Signs	BCA 2022 Clauses D2D22, NSW D3D24, D3D28, D4D7 E3D4, E3D11, E3D12, and Specification 14, E1D15



Appendix C – Fire-resistance levels

The below exemptions & table contain the fire-resistance levels (FRL) required under Specification 5 Tables S5C11 of the BCA.

Table S5C11a: Type A construction: FRL of loadbearing parts of external walls				
Distance from a fire-source feature	FRL (in minutes): <i>Structural adequacy/ Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/60/60	120/90/90	180/180/120	240/240/180
3 m or more	90/60/30	120/60/30	180/120/90	240/180/90



S5C11

Fire resistance

Table S5C11b: Type A construction: FRL of non-loadbearing parts of external walls

Distance from a fire-source feature	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	–/90/90	–/120/120	–/180/180	–/240/240
1.5 to less than 3 m	–/60/60	–/90/90	–/180/120	–/240/180
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–

Table S5C11c: Type A construction: FRL of external columns not incorporated in an external wall

Column type	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
<i>Loadbearing</i>	90/–/–	120/–/–	180/–/–	240/–/–
<i>Non-loadbearing</i>	–/–/–	–/–/–	–/–/–	–/–/–

Table S5C11d: Type A construction: FRL of common walls and fire walls

Wall type	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
<i>Loadbearing or non-loadbearing</i>	90/90/90	120/120/120	180/180/180	240/240/240

Table S5C11e: Type A construction: FRL of loadbearing internal walls

Location	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
<i>Fire-resisting lift and stair shafts</i>	90/90/90	120/120/120	180/120/120	240/120/120
Bounding <i>public corridors</i> , public lobbies and the like	90/90/90	120/–/–	180/–/–	240/–/–
Between or bounding <i>sole-occupancy units</i>	90/90/90	120/–/–	180/–/–	240/–/–
Ventilating, pipe, garbage, and like <i>shafts</i> not used for the discharge of hot products of combustion	90/90/90	120/90/90	180/120/120	240/120/120

Table S5C11f: Type A construction: FRL of non-loadbearing internal walls

Location	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
<i>Fire-resisting lift and stair shafts</i>	–/90/90	–/120/120	–/120/120	–/120/120
Bounding <i>public corridors</i> , public lobbies and the like	–/60/60	–/–/–	–/–/–	–/–/–
Between or bounding <i>sole-occupancy units</i>	–/60/60	–/–/–	–/–/–	–/–/–
Ventilating, pipe, garbage, and like <i>shafts</i> not used for the discharge of hot products of combustion	–/90/90	–/90/90	–/120/120	–/120/120



Table S5C11g: Type A construction: FRL of other building elements not covered by Tables S5C11a to S5C11f

Building element	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Other <i>loadbearing</i> 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