Building Code of Australia

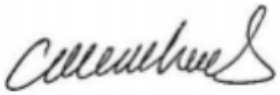
Assessment Report

Project Address: Telopea Stage 1A, Lot 5-7 Sturt Street, Telopea

Client: Frasers Property Australia Pty Ltd (Frasers)
Report Number: 200054
Revision: R06

01 JUNE 2023

REPORT REVISION HISTORY

Revision	Date Issued	Revision Description	
01	12/07/2021	DA Report – Stage 1A (Option B)	
		Prepared by	**Verified by**
		Tariq Sheikh *Building Surveyor*	Chris Michaels *Director*
02	14/07/2021	Final DA Report – Stage 1A (Option B)	
		Prepared by	**Verified by**
		Tariq Sheikh *Building Surveyor*	Chris Michaels *Director*
03	28/10/2022	Draft BCA 2022 Updated Report – Stage 1A	
		Prepared by	**Verified by**
		Vel Nandacumaran *Senior Building Regulations consultant*	Tariq Sheikh *Building Regulations consultant*
04	18/11/2022	BCA 2022 Revised Report – Stage 1A	
		Prepared by	**Verified by**
		Tariq Sheikh *Building Surveyor*	Chris Michaels *Director*
05	25/11/2022	BCA 2022 Revised Report – Stage 1A	
		Prepared by	**Verified by**
		Tariq Sheikh *Building Surveyor*	Chris Michaels *Director*
06	01/06/2023	BCA 2022 – Solar Amenity/façade update	
		Prepared by	**Verified by**
		 Tariq Sheikh *Senior Building Regulation Consultant*	 Chris Michaels *Director*

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1. EXECUTIVE SUMMARY

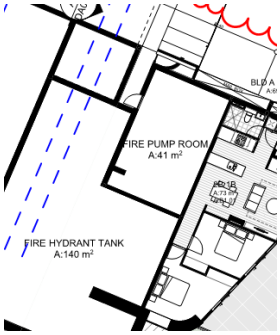
The development, the subject of this report, is for the proposed construction of residential flat buildings which forms part of 'Stage 1a' works.

This report has been prepared by City Plan Services on behalf of Frasers Property Australia Pty Ltd (Frasers) and accompanies a State Significant Development Application (SSDA) submitted to the NSW Department of Planning and Environment (DPE). The SSDA seeks Concept Approval, in accordance with Division 4.4 of the Environmental Planning and Assessment Act 1979 (EP&A Act), for the staged redevelopment of the Telopea 'Concept Plan Area' (CPA), as well as a detailed proposal for the first stage of development, known as 'Stage 1A'.

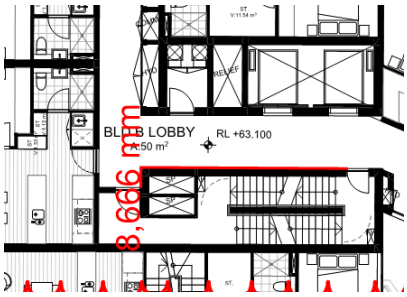
The purpose of this report is to provide a high-level assessment for compliance with the Building Code of Australia in respect to proposed residential development, located at Sturt Street, Telopea, within the local government area of Parramatta Council. The proposed development involves the demolition of existing buildings and construction of residential apartments as part of 'Stage 1A' works.

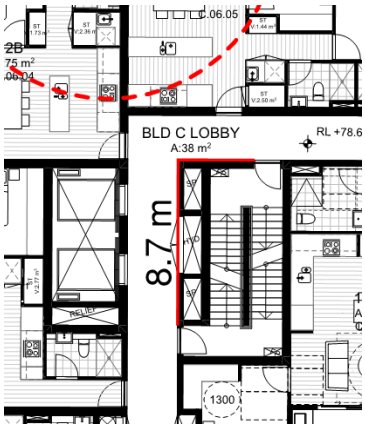
Based on the assessment, the following summary of non-compliance's with the deemed-to-satisfy (DtS) provisions of the BCA, in relation to the proposed residential building work, have been identified and are proposed to be justified against the performance requirements of the BCA in accordance with BCA 2022 Clause A2G2. For the complete detailed summary of matters please refer to Part 6 of this report.

Clause	Performance justification
C3D15 Public corridors in Class 2 and 3 Buildings	The following public corridors exceed 40m without smoke proof walls: Tower B ▪ Upper ground floor Approx. 53 ▪ L2 Approx. 48.2m. Tower D ▪ Upper ground floor Approx. 46m. Tower E ▪ Upper ground floor Approx. 57m ▪ L1 – L8 Approx. 51.4m..

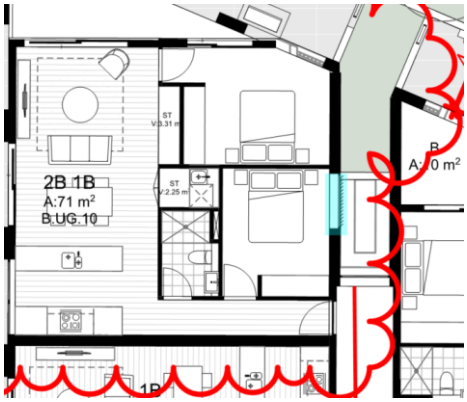
Clause	Performance justification
	 Example of public corridor exceeding 40m
D2D3 Number of exits	The building is required to be provided with a minimum of two exits from each part. The following areas contain only one exit from each storey or part: Basement 01 ▪ Fire Pump Room (B01)  Tower A ▪ The lobby areas (LG -L2)  ▪ Level 8, hot water plant room has only one exit require performance justification. Tower B

Clause	Performance justification
	• Level 14 plant area provide with one exit only.  • Tower E ▪ Unit E.LG.01 (LG) 
D2D5 Exit travel distance	The following areas within the basement design have extended travel distances that exceed DtS limits: Basement 02 ▪ Travel up to 26m to POC ▪ Travel up to 47.5 m to Exit Basement 01 ▪ Travel up to 24m to POC ▪ Travel up to 47.5 m to Exit The following areas have extended travel distances to a point of choice from unit entry doors: Tower A ▪ B02 - Approx. 6.4m to POC ▪ LG – L2 Approx. 8.3m to Exit Tower B ▪ LG Approx. 9.1m to POC ▪ UG Approx. 11.6m to POC ▪ L1- L2 Approx. 11.2m to POC ▪ L3- L13 Approx. 9.3m to POC

Clause	Performance justification
	Tower C ▪ L1- L3 Approx. 10.8m to POC ▪ L4 (Communal) Approx. 29m to POC Tower D ▪ LG Approx. 8.3m to POC ▪ UG Approx. 12m to POC ▪ L1- L8 Approx. 12m to POC Tower E ▪ L1- L7 Approx. 7.0m to POC
D2D6 Distance between alternate exits	The distance between alternative exits does not comply in the following areas: Basement 02 ▪ Access ramp between the east & west carpark – Approx. 65 m between alternate exits Basement 01 ▪ Access ramp between the east & west carpark – Approx. 65 m between alternate exits Lower Ground ▪ Access ramp between the east & west carpark – Approx. 63 m between alternate exits ▪ Fire stairs between the North & South and East & South of the carpark – Approx. 67 m between alternate exits The following distances between alternate exits in the residential part does not comply: Tower B ▪ Distance between alternate exits Approx. 8.6m  Tower C

Clause	Performance justification
	▪ The fire isolated exits serving tower C – Approx. 8.7m in lieu of 9m.  ▪
D2D12 Travel via fire isolated exits	D2D12(1) – Permit room to open directly to fire stair- Performance Solution to address DtS non-compliance.
	D2D12(2) - The following areas requires a Performance Solution to permit FIS discharge into covered area that is not open to 1/3 of its perimeter: Tower D ▪ FIS discharge in covered area approx. 3.21m open in lieu of 5.13m (LG) 
	D2D12(3) – The following walls and openings are located within 6m of the discharge pathway: Tower B ▪ 6 x FS exits with discharge at UG varies between 0.65m - 6m

Clause	Performance justification
	 Tower D ▪ 3 x FS exits with discharge at LG Approx. 2.34-4.2m 
D2D15(4)	The following exits are not located as far apart as practical. Performance justification is required. Tower B ▪ The two residential stairs (western) are located adjacent to each other (UG). ▪ The two residential stairs (eastern) are located adjacent to each other (UG). Tower C ▪ The two residential stairs are located adjacent to each other (LG).
E1D2 Fire hydrants	The fire hydrant booster is located adjacent the entry to Tower A and is not located within sight of the main entrance into the building and not facing the street, noting that there are multiple pedestrian entries. Hydrant located on floor (i.e not within fire isolated exits or within 4m of a non-fire isolated exit) within the carpark to achieve coverage are required to performance justified.
E1D15 Fire control centres	There is a technical non-compliance as the fire control room is in Tower A and is not located from the front entrance of the building given there are multiple entries. Performance justification will need to address this.

Clause	Performance justification
	
F3D5 Wall cladding	External wall cladding must comply with one or a combination of the following: (a) Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700. (b) Autoclaved aerated concrete: AS 5146.3. (c) Metal wall cladding: AS 1562.1. External wall cladding, other than specified above, will require performance justification.
F6D3 Natural light	Natural lighting is required to be provided in all habitable rooms of the residential units. A required window that faces a boundary of the wall of the same building must not be less than a horizontal distance of 1m and 50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill. The following units are proposed to be performance justified: ▪ Units B.UG.10 bedroom window (and similar units above), does not comply within this 50% rule.  Bedroom windows to Units B.UG.11 & 12 (and similar units above) are provided with louvres obstructing natural light reducing aggregate light transmitting area.

Clause	Performance justification
	 Performance justification is proposed.

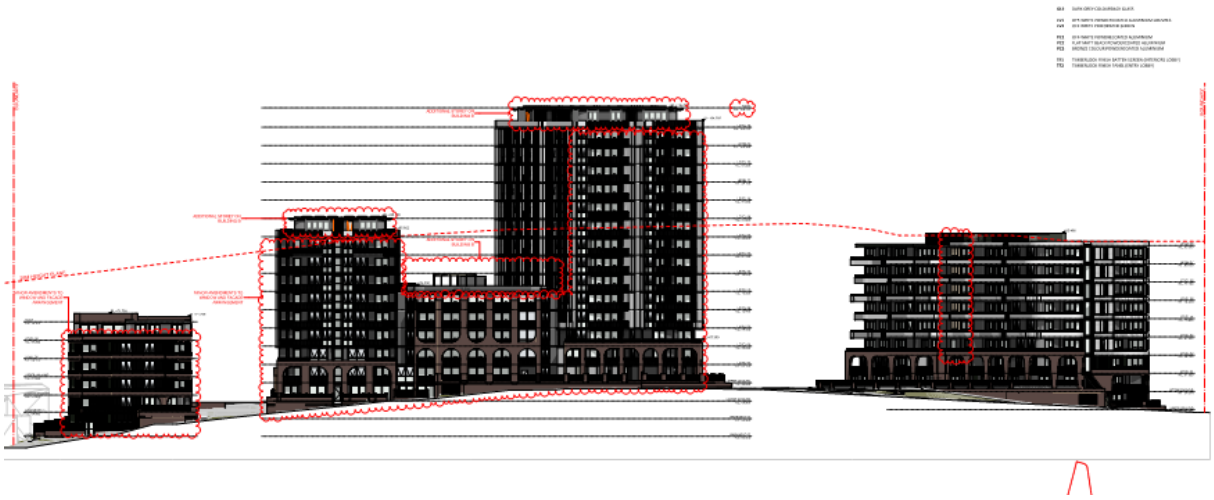
The following matters are to be considered at CC stage.

E1D17 & E2D21 Provision for special hazards	Provide a professional opinion from the Fire Engineer within fire engineering report identifying any additional firefighting measures required to ensure: Suitable additional provision must be made if special problems of fighting fire could arise because of— the nature or quantity of materials stored, displayed or used in a building or on the allotment; or the location of the building in relation to a water supply for fire-fighting purposes.

2. INTRODUCTION

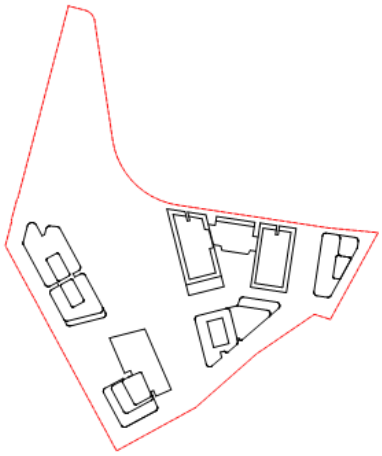
2.1. General

This report has been prepared by City Plan Services on behalf of Frasers Property Australia Pty Ltd (Frasers) and accompanies a State Significant Development application (SSDA) submitted to the NSW Department of Planning and Environment (DPE) for the first stage of development, known as 'Stage 1A'.



The purpose of this report is to provide a high-level assessment for compliance with the Building Code of Australia in respect to proposed development (Stage 1A), located at Sturt Street, Telopea, within the local government area of Parramatta Council. The proposed development involves the demolition of existing buildings and construction of residential apartments as part of 'Stage 1A' works:

Stage 1a: Residential Towers A, B, C, D & E
Basement carparking
Private Park



2.2. Purpose of Report

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

2.3. Report Basis

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

- Architectural plans prepared by Plus Architects, as identified in the attached Appendix 1.
- The Building Code of Australia 2022, inclusive of NSW variations (See Note 1).
- Environmental Planning and Assessment Act 1979.
- Environmental Planning and Assessment Regulation 2000.

Note1: Building Code of Australia (BCA) 2022 Amendment 1 was adopted in NSW on 1 July 2020. The amendment of the BCA in force at the date of lodgement of a Construction Certificate is the version called up by Clause 98 of the Environmental Planning & Assessment Regulation 2000 for the purpose of the building design. Therefore, comments may be subject to changes to comply with updated versions of the Building Code of Australia.

2.4. Exclusions and Limitations

1. This report has been prepared by City Plan for Frasers Property Australia Pty Ltd (Frasers) and may only be used and relied on by Frasers for the purpose agreed between City Plan and Frasers, as set out in section 2.1 and 2.2 of this report.
2. City Plan otherwise disclaims responsibility to any person other than Frasers arising in connection with this report. City Plan also excludes implied warranties and conditions, to the extent legally permissible.
3. City Plan Services Pty Ltd undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.
4. The services undertaken by City Plan in connection with preparing this report are limited to those specifically detailed within the report and subject to scope limitations as set out in the report but specifically exclude:
    - Structural design in any form or content.
    - The Disability Discrimination Act 1992.
    - Disability (Access to Premises – Building) Standards 2010.
    - The existing level of Building Code of Australia compliance unless specifically identified in Section 2.3 within this report.
    - The operational capabilities or compliance of any existing services installed within the building.
    - Assessment of any existing Performance Solutions, including Fire Safety, addressing compliance with the Performance Requirements of the BCA 2022 Volume One.
5. This report is not a Part 6 compliance certificate under the Environmental Planning & Assessment Act 1979 or Regulation 2000.
6. The opinions, conclusions and any recommendations within this report are based on conditions encountered and information reviewed at the date of preparation of the report. City Plan has no responsibility or obligation to update this report to account for events or changes occurring after the date that the report was prepared.
7. The methodologies adopted within this report specifically relate to the subject building and must not be used for any other purpose.

8. City Plan has prepared this report based on information provided by others, including but not limited to Architectural Plans and Annual Fire Safety Statements. City Plan has not independently verified or checked beyond the agreed scope of work the validity of the documentation prepared and provided by others. City Plan accepts no liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions within the information relied upon.
9. The documentation relied upon has been reviewed only to the degree reasonable as pertaining to City Plan's scope, as defined within the contract and fee agreement. It is expressly not City Plan's responsibility to:
    - Familiarise ourselves with all information and documentation relating to the project, or the potential BCA 2022, Access, or fire safety aspect derivatives thereof,
    - Conduct a "full BCA 2022 audit or compliance assessment" in any way defined, implied, or assumed, for matters outside of City Plans scope.
    - Prepare a holistic BCA 2022, Access or Fire Safety strategy for the building or carry out a full assessment of all information and documentation relating to the project, or the potential

      BCA 2022, Access, or Fire Safety aspect derivatives thereof.
10. Where the report relied on a site inspection, the inspection was based on a visual, non-invasive check of representative samples of the building to which the report and scope applied, and to which safe and reasonable access was available/permitted on the date and time of the inspection. The inspection should not be considered as a testing, commissioning or maintenance procedure nor act as a guarantee or warranty of any kind.

3. BUILDING CODE OF AUSTRALIA ASSESSMENT

3.1. Classification (Part A6)

The proposed building consists of:

Building	Class	Use	Area
Building C9 (Residential Towers A, B, C, D & E)	7a	Carparking including (ancillary storage & plant)	Basement levels 02,01 & Part Lower Ground floor
	7b	Loading dock & garbage holding	Part Lower Ground floor and Part Upper ground floor
	2	Residential	Part Basement 02, Part Basement 01, Part Lower Ground (LG), Upper ground (UG) and above

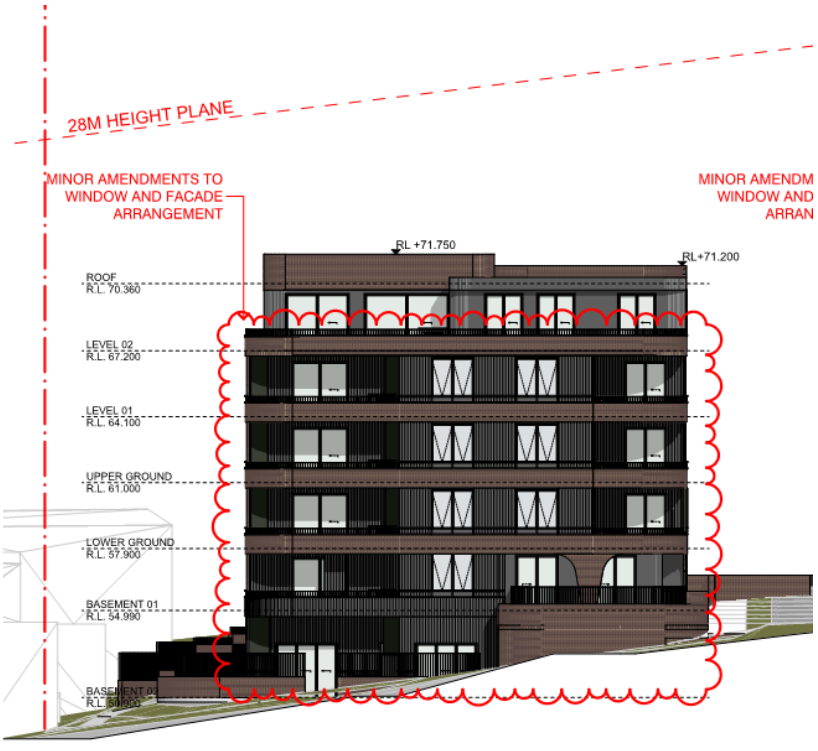
Note: The carpark is shared by the five towers and therefore the building has been deemed a united building for the purpose of the NCC/BCA 2022.

3.2. Effective Height (Schedule 3)

The proposed united building will have an effective height of greater than 50m (53.7m).

RL 103.40 (Level 14) - RL 49.70 (Basement 02) = 53.7m

Note: Tower A shares a common basement carpark. Unit A.B201 of Tower A on the eastern end of the basement 02 storey protrudes more than 1 m above the average finished level of the ground at the external wall and is therefore counted as a storey in the rise in storeys and the effective height is measured by a vertical distance between the floor of the lowest storey and the topmost storey.



3.3. Rise in Storeys (C2D3)

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

3.4. Type of Construction (C2D2)

Type A construction in accordance with Specification 5 of the BCA 2022, is the applicable type of construction.

3.5. Climate Zone Schedule 1

The building is located within Climate Zone 6 within the local government area of Parramatta Council.

3.6. Floor Area and Volume Limitations (Table C3D3)

The building is compliant pursuant to C3D3(1) inter-alia Table C3D3 floor area and volume limits of:

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

Class 7b - The loading dock and garbage holding room

Maximum Floor Area 5,000m2

Maximum Volume 30,000m3

Class 2 - The Class 2 portions of the building are not subject to floor area and volume limitations of C3D3 as Table C3D3 of Specification 5 and Clause C4D12 of the NCC regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 classifications.

4. BUILDING CODE OF AUSTRALIA ASSESSMENT

4.1. Structure (BCA Section B)

BCA Clause	Title	Assessment and Comment	Status
B1D2	Resistance to actions	The resistance of the building must be greater than the most critical action effects resulting from different combinations of actions in accordance with this clause. The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.	Capable of Complying
B1D3	Determination of individual actions	The magnitude of individual actions must be determined in accordance with this clause. The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.	Capable of Complying
B1D4	Determination of structural resistance of materials & forms of construction	The structural resistance of the following materials and forms of construction for the following elements are to be in accordance with the standards nominated in this clause. (a) Masonry (b) Concrete (c) Steel construction (d) Composite steel and concrete (e) Aluminium construction (f) Timber construction (g) Piling (h) Glazing assemblies (i) Termite risk management (j) Roof construction (k) Particleboard structural flooring (l) Lift shafts The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.	Capable of Complying
B1D5	Structural Software	Structural software used in computer aided design is to comply with the requirements of this provision.	Capable of Complying
B1D6	Construction of buildings in flood hazard areas	The building is not located within a flood hazard area.	N/A

4.2. Fire Resistance (BCA Section C)

BCA Clause	Title	Assessment and Comment	Status
C2D2	Type of construction required	The type of fire resisting construction applicable is Type A construction.	Capable of Complying
C2D3	Calculation in rise in storeys	The building contains a RIS of Eighteen (18).	Capable of Complying
C2D9	Lightweight construction	Any proposed fire resisting lightweight walls or fire resisting lightweight protection to steel columns is to comply with Specification 6.	Capable of Complying
C2D10	Non-combustible building elements	1. In a building required to be Type A construction, the following building elements and their components must be non-combustible: (a) External walls and common walls, including all components incorporated in them including the façade covering, framing and insulation. (b) The flooring and floor framing of lift pits. (c) Non-loadbearing internal walls where they are required to be fire-resisting. 2. A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in – (a) A building required to be Type A construction. 3. A loadbearing internal wall and loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification 5. 4. The requirements of (1) and (2) do not apply to the following: (a) Gaskets. (b) Caulking. (c) Sealants. (d) Termite management systems. (e) Glass, including laminated glass, and associated adhesives, including tapes. (f) Thermal breaks associated with— (i) glazing systems; or (ii) external wall systems, where the thermal breaks— (A) are no larger than necessary to achieve thermal objectives; and	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		(B) do not extend beyond one storey; and (C) do not extend beyond one fire compartment. (g) Damp-proof courses. (h) Compressible fillers and backing materials, including those associated with articulation joints, closing gaps not wider than 50 mm. (i) Isolated— (i) construction packers and shims; or (ii) blocking for fixing fixtures; or (i) fixings, including fixing accessories; or (ii) acoustic mounts. (j) Waterproofing materials applied to the external face, used below ground level and up to 250 mm above ground level. (k) Joint trims and joint reinforcing tape and mesh of a width not greater than 50 mm. (l) Weather sealing materials, applied to gaps not wider than 50 mm, used within and between concrete elements. (m) Wall ties and other masonry components complying with AS 2699 Part 1 and Part 3 as appropriate, and associated with masonry wall construction. (n) Reinforcing bars and associated minor elements that are wholly or predominately encased in concrete or grout. (o) A paint, lacquer or a similar finish or coating. Adhesives, including tapes, associated with stiffeners for cladding systems. 5. The following materials, when entirely composed of itself, are non-combustible and may be used wherever a non-combustible material is required: (a) Concrete. (b) Steel, including metallic coated steel. (c) Masonry, including mortar. (a) Aluminium, including aluminium alloy. (b) Autoclaved aerated concrete, including mortar. (c) Iron. (d) Terracotta. (e) Porcelain.	

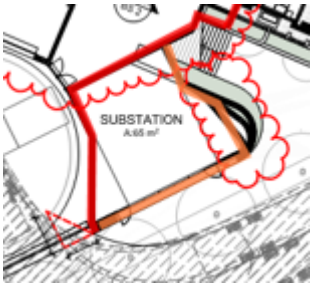
BCA Clause	Title	Assessment and Comment	Status
		(f) Ceramic. (g) Natural stone. (h) Copper. (i) Zinc. (j) Lead. (k) Bronze. (l) Brass. 6.The following materials may be used wherever a non-combustible material is required: (a) Plasterboard. (b) Perforated gypsum lath with a normal paper finish. (c) Fibrous-plaster sheet. (d) Fibre-reinforced cement sheeting. (e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. (f) Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5. (g) Bonded laminated materials where— (i) each lamina, including any core, is non-combustible; and (ii) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and (iii) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively; and (iv) when located externally, are fixed in accordance with C2D1536.	
C2D11	Fire hazard properties	Proposed internal linings, materials and assemblies are to be selected to comply with the required fire hazard properties of Specification 7.	Capable of Complying
C2D13	Fire protected timber: Concession	This concession is not available.	N/A
C2D14	Ancillary Elements	An ancillary element must not be fixed, installed, attached to or supported by the concealed internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following:	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		(a) An ancillary element that is non-combustible. (b) A gutter, downpipe or other plumbing fixture or fitting. (c) A flashing. (d) A grate, grille or similar cover not more than 2 m² in area associated with a building service. (e) An electrical switch, socket-outlet, cover plate or the like. (f) A light fitting. (g) A required sign. (h) A sign other than one provided under (a) or (g) that—(i) achieves a group number of 1 or 2; and (ii) does not extend beyond one storey; and does not extend beyond one fire compartment; and (iii) is separated vertically from other signs permitted under (h) by at least 2 storeys. (i) An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that— (i) meets the relevant requirements of Table S7C7 as for an internal element; and (ii) serves a storey— (A) at ground level; or (B) immediately above a storey at ground level; and (iii) does not serve an exit, where it would render the exit unusable in a fire. (j) A part of a security, intercom or announcement system. (k) Wiring. (l) Waterproofing material installed in accordance with AS 4654.2 and applied to an adjacent floor surface, including vertical upturn, or a roof surface. (m) Collars, sleeves and insulation associated with service installations. (n) Screens applied to vents, weepholes and gaps complying with AS 3959. (o) Wiper and brush seals associated with doors, windows or other openings. (p) A gasket, caulking, sealant or adhesive directly associated with (a) to (o).	

BCA Clause	Title	Assessment and Comment	Status
		Limitations:C2D14 does not apply to ancillary elements fixed, installed or attached to the internal face or lining of an external wall. Notes:C2D14 does not prevent the mounting of domestic air-conditioning condenser units on external walls. Explanatory information: Ancillary elements fixed, installed or attached to the internal face or lining of an external wall may be subject to other provisions such as C2D11.	
C2D15	Fixing of bonded laminated cladding panels	(1) In a building required to be of Type A or B construction, externally located bonded laminated cladding panels must have all layers of cladding mechanically supported or restrained to the supporting frame. (2) An externally located bonded laminated cladding panel need not comply with (1) if it is one of the following: (a) A laminated glass system. (b) Layered plasterboard product. (c) Perforated gypsum lath with a normal paper finish. Fibrous-plaster sheet. (d) Fibre-reinforced cement sheeting. (e) A component of a garage door. Notes: For C2D15(1), mechanical support or restraint means fixing that does not solely rely on chemical adhesive and includes concealed fixing systems such as cassette fixing, channel-type fixing and face fixing. Explanatory information: For structural requirements relating to the fixing of cladding, refer to Section B. For most cladding systems, the requirements of Section B will necessitate mechanical fixing of the cladding panel to the supporting frame.	Capable of Complying
C3D3	General floor area and volume limitations	The fire compartment sizes meet the requirements of this Clause Class 7a - The carpark is to be sprinkler protected and as such there are no maximum floor area or volume limitations for this area. Class 7b - The loading dock and garbage holding room Maximum Floor Area 5,000m2 Maximum Volume 30,000m3	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		Class 2 - The Class 2 portions of the buildings are not subject to floor area and volume limitations of C3D3 as per Table C3D3. Specification 5 and Clause S5C9 of the NCC regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 classifications.	
C3D7	Vertical separation of openings in external walls	The building is required to be protected with sprinklers throughout and therefore vertical separation is not required.	N/A
C3D8	Separation by fire walls	Fire walls are required to be designed to comply with the clause. The following fire walls are proposed: Fire walls are to be provided in the following locations. Basement 02 ▪ Between the Eastern Carpark and the Residential unit (highlighted purple)  Basement 01 ▪ Between the fire pump room and the Residential units (highlighted purple)	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		 Lower Ground floor ▪ Between the Eastern/western Carpark and the Residential corridor (highlighted purple)  ▪ Between the loading dock/garbage holding room (Class 7b) and eastern carpark (highlighted red)	

BCA Clause	Title	Assessment and Comment	Status
		 ▪ Between Substation and the loading dock/garbage holding (Highlight orange)  Upper Ground floor ▪ Between residential units in BLD C and Substation/loading dock (Highlighted red) 	
C3D9	Separation of classifications in the same storey	If a building has parts of different classifications located alongside one another in the same storey, ▪ each building element in that storey must have the higher FRL prescribed in Specification 5 for that element for the classifications concerned; or ▪ the parts must be separated in that storey by a fire wall.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		The proposed fire walls are identified in C3D8 above.	
C3D10	Separation of classifications in different stories	The floors between parts of different classifications must have an FRL of not less than that prescribed in Specification 5 for the classification of the lower storey.	Capable of Complying
C3D11	Separation of lift shafts	The lift shafts are required to be fire separated from the rest of the building in accordance with this clause.	Capable of Complying
C3D12	Stairways and lifts in one shaft	The stairs and lift shaft are located in different shafts.	Capable of Complying
C3D13	Separation of equipment	The following equipment are required to be fire separated from the remainder of the building by 120/120/120 FRL construction: ▪ Lift motor rooms and lift control panels. ▪ Emergency Generators. ▪ Central smoke control plant. ▪ Boilers. ▪ Battery systems.	Capable of Complying
C3D14	Electricity supply system	The electricity substation is required to be fire separated from the remainder of the building. The BCA 2022 requires 2 hours separation however the electricity authority generally requires 3 hours separation. The substation is located adjacent the loading dock at lower ground and upper ground adjacent tower C. Any main switchboard located in the building which sustains emergency equipment operating in emergency mode, is required to be fire separated from the remainder of the building by 2 hr fire resisting construction. Construction should achieve an FRL of 120/120/120, doorways are required achieve an FRL of -/120/30 and to be self-closing and all penetrations in enclosures are to be appropriately fire stopped. All switchboards in the electrical distribution system, which sustain the electricity supply to the emergency equipment, must provide full segregation by way of enclosed metal partitions designed to prevent the spread of any fault from non-emergency equipment switchgear to the emergency equipment switchgear.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		Electrical conductors and switchboards are required to comply with this clause.	
C3D15	Public corridors in Class 2 & 3 buildings	Public corridors within the residential portion of the building are generally separated by smoke proof walls at 40m intervals however the following areas exceed 40m and are proposed to be addressed via a fire engineered performance solution. 26Tower B ▪ Upper ground floor Approx. 53 ▪ L2 Approx. 48.2m. Tower D ▪ Upper ground floor Approx. 46m. Tower E ▪ Upper ground floor Approx. 57m ▪ L1 – L8 Approx. 51.4m.  *Example of public corridor exceeding 40m*	Performance Solution
C4D3	Protection of openings in external walls	Openings are located more than 3m from the allotment boundary.	Capable of Complying
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 not be less than that set out in table C4D4, unless (a) Those parts of each wall have an FRL not less than 60/60/60, and (b) Any opening protected in accordance with C4D5	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
C4D5	Acceptable method of protection	Windows requiring protection must be protected by one of the means: ▪ External wall-wetting sprinklers with windows that are automatically or permanently fixed in the closed position. ▪ -/60/- fire windows (Automatic or permanently fixed in the closed position) ▪ -/60/- automatic fire shutters ▪ Doorways which require protection can be protected externally with wall wetting sprinklers with doors that are self-closing or automatic closing, or ▪ -/60/30 fire doors which are self-closing or automatic closing. Fire doors, fire windows and fire shutters are required to comply with Specification 12.	Capable of Complying
C4D6	Doorways in fire walls	Doors in fire walls are to have the FRL's and features required by this clause.	Capable of Complying
C4D7	Sliding fire doors	No sliding fire doors proposed.	N/A
C4D8	Protection of doorways in horizontal exits	The horizontal exits are required to be protected in accordance with this Clause.	Capable of Complying
C4D9	Openings in fire isolated exits	The fire-isolated exits are required to be protected by -/60/30 self-closing fire doors.	Capable of Complying
C4D10	Service penetrations in fire isolated exits	Services are not to penetrate through fire isolated exits unless permitted by this clause.	Capable of Complying
C4D11	Openings in Fire isolated lift shafts	The lift doors are required to be -/60/- fire doors and comply with this provision. A lift call panel, indicator panel or other panel in the wall of a fire-isolated lift shaft must be backed by construction having an FRL of not less than -/60/60 if it exceeds 35 000 mm^2 in area.	Capable of Complying
NSW C4D12	Bounding construction	Doors from sole occupancy units opening into enclosed public corridors are required to be protected by -/60/30 self-closing fire doors. A doorway from any other room not within a SOU, must be protected by -/60/30 self-closing fire doors if it opens to a public corridor, public lobby, or the like within the residential portion of the building.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
C4D13	Openings in floors and ceilings for services.	Fire separation between floors is required to be maintained where services penetrate through floors unless the services are located in fire rated shafts.	Capable of Complying
C4D14	Openings in shafts	Opening in shafts are required to be protected in accordance with this clause. The garbage rooms containing garbage chutes are considered an extension of the fire rated garbage chutes shaft.	Capable of Complying
C4D15	Openings for service installations	Services that penetrate a building element that is required to have an FRL must be protected utilising one of the options listed under this clause. Test certificates describing each individual service penetration and configuration will be required at the construction certificate stage.	Capable of Complying
C4D16	Construction joints	Construction joints in building elements required to be fire resistant are required to be protected in accordance with this clause.	Capable of Complying
C4D17	Columns protected with lightweight construction to achieve an FRL	Any columns protected with fire resisting lightweight construction to achieve an FRL must be installed in a manner that's identical to the tested prototype.	Capable of Complying

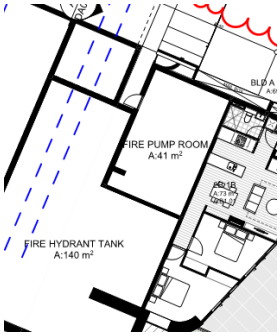
4.3. Fire-Resisting Construction (Specification 5)

BCA Clause	Title	Assessment and Comment	Status
S5C2	Exposure to fire source features	Exposure to fire source features is to be determine in accordance with this cause.	Note
S5C3	Fire protection for support of another part	When determining FRL's applicable to a particular building element, the requirements of this clause are required to be complied with.	Capable of Complying
S5C4	Lintels	Lintels are to be protected as required by the requirements of this clause.	Capable of Complying
S5C5	Method of attachment not to reduce the fire resistance of building elements	The method of attaching or installing a finish, lining, ancillary element or service installation to the building element must not reduce the fire-resistance of that element to below that required.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
S5C6	General concessions	Roof top plant rooms need not have an FRL if they are non-combustible, and they only contain equipment specified in this clause.	Capable of Complying
S5C7	Mezzanine floors: concession	The building does not contain mezzanines that are subject to this provision.	N/A
S5C8	Enclosure of shafts	Fire rated shafts are to be enclosed at the top and bottom in accordance with the requirements of this clause. Bin rooms located in the basement carpark forming part of the garbage shafts are required to be fire separated to ensure compliance with this clause.	Capable of Complying
S5C11	Fire resistance of building elements	Generally building elements are required to achieve the following FRL's; Loading dock & garbage holding: 4 hrs Carpark & ancillary storage: 2 hrs Residential: 1½ hrs A loadbearing internal wall and a loadbearing fire wall must be of concrete or masonry.	Capable of Complying
S5C15	Roof: Concession	The roof is not required to achieve an FRL as the building: ▪ has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 installed throughout; or ▪ has a rise in storeys of 3 or less; or ▪ is of Class 2;	Capable of Complying
S5C16	Roof lights	Roof lights are not permitted to be located less than 3 m from another roof light in the adjoining SOU.	Capable of complying
S5C17	Internal wall and column: concession	Concession is not available due to the effective height of the building.	N/A

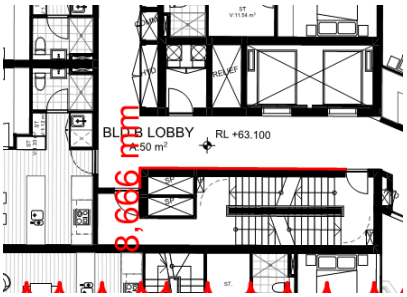
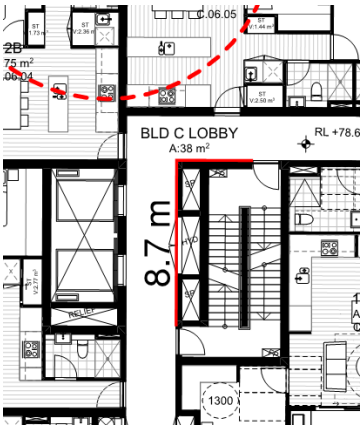
4.4. Access and Egress (NCC Section D)

BCA Clause	Title	Assessment and Comment	Status
D2D3	Number of exits required	The proposed development is generally provided with two exits to all areas with the exception of the following areas which is proposed to be performance justified:	Performance Solution

BCA Clause	Title	Assessment and Comment	Status
		Basement 01 ▪ Fire Pump Room (B01)  Tower A ▪ The lobby areas (LG -L2)  ▪ Level 8, hot water plant room has only one exit require performance justification. Tower B • Level 14 plant area provide with one exit only.  Tower E ▪ Unit E.LG.01 (LG)	

BCA Clause	Title	Assessment and Comment	Status
			
D2D4	When fire isolated exits are required	Stairways that service the basement levels and the upper residential levels are all fire-isolated stairways.	Capable of Complying
D2D5	Exit travel distances	The Deemed to Satisfy (DtS) provisions of the BCA 2022 require exit travel distances in the carpark areas to be no more than 20m to a point of choice (POC) and no more than 40m to the nearest exit. The following areas within the basement design have extended travel distances that exceed DtS limits and will be principally justified by Performance Justification. Basement 02 ▪ Travel up to 26m to POC ▪ Travel up to 47.5 m to Exit Basement 01 ▪ Travel up to 24m to POC ▪ Travel up to 47.5 m to Exit	Performance Solution
		The DtS provisions of the BCA 2022 require exit travel distances in the residential areas to be no greater than 6m from a unit to a POC or a single exit and area not within SOU are required to be no more than 20m to an exit or POC. The following areas below exceed the DtS limits and will be principally justified by performance justification: Tower A ▪ B02 - Approx. 6.4m to POC ▪ LG – L2 Approx. 8.3m to Exit Tower B ▪ LG Approx. 9.1m to POC ▪ UG Approx. 11.6m to POC ▪ L1- L2 Approx. 11.2m to POC	Performance Solution

BCA Clause	Title	Assessment and Comment	Status
		▪ L3- L13 Approx. 9.3m to POC Tower C ▪ L1- L3 Approx. 10.8m to POC ▪ L4 (Communal) Approx. 29m to POC Tower D ▪ LG Approx. 8.3m to POC ▪ UG Approx. 12m to POC ▪ L1- L8 Approx. 12m to POC Tower E ▪ L1- L7 Approx. 7.0m to POC	
D2D6	Distance between alternative exits	Exits that are required to serve as alternative means of egress must not be more than 45m apart in a residential building and not more than 60m in all other parts. The distance between alternative exits generally comply with the maximum DtS distances above with the exception of the following areas that are proposed to be Performance Justified: Basement 02 ▪ Access ramp between the east & west carpark – Approx. 65 m between alternate exits Basement 01 ▪ Access ramp between the east & west carpark – Approx. 65 m between alternate exits Lower Ground ▪ Access ramp between the east & west carpark – Approx. 63 m between alternate exits ▪ Fire stairs between the North & South and East & South of the carpark – Approx. 67 m between alternate exits Exits required as alternative means of egress must be located not less than 9m apart and located so that the alternative paths of travel do not converge such that they become less than 6m apart.	Performance Solution

BCA Clause	Title	Assessment and Comment	Status
		The following distances between exits are proposed to be addressed via a fire engineered performance solution: Tower B ▪ Distance between alternate exits Approx. 8.6m  Tower C ▪ The fire isolated exits serving tower C – Approx. 8.7m in lieu of 9m.  	
NSW D2D8	Width exits and paths of travel to exits	The unobstructed width of each required exit or path of travel to an exit, except for ladders provided in accordance with D2D2138, D3D2339 or I3D5, and doorways, must be not less than— (a) 1 m; or (b) 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a treatment area or ward area; and (c) in a public corridor in a Class 9c aged care building, notwithstanding (2) and (3)— (i) 1.5 m; and (ii) 1.8 m for the full width of the doorway, providing access	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		into a sole-occupancy unit or communal bathroom.	
D2D9	Width of doorways in exits or paths of travel to exits	In a required exit or path of travel to an exit, the unobstructed width of a doorway must be not less than as required by this clause	Capable of Complying
D2D10	Exit width not to diminish in direction of travel	The unobstructed width of a required exit must not diminish in the direction of travel to a road or open space, except where the width is increased in accordance with D2D8(1)(b)61 or D2D9(a)(i)62.	Capable of Complying
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, public lobby or the like; or ▪ a sole-occupancy unit occupying all of a storey; or ▪ a sanitary compartment, airlock or the like.	Capable of Complying
		The DtS provisions of the BCA 2022 requires a fire-isolated stairway (FIS) or fire-isolated ramp to provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway to a road or open space or into a covered area that is open for at least 1/3 of its perimeter and has an unobstructed height of not less than 3m and provides an unimpeded path of travel to a road or open space of not more than 6m. The following areas requires a design change or Performance Solution to permit FIS discharge into covered area that is not open to 1/3 of its perimeter: Tower D ▪ FIS discharge in covered area approx. 3.21m open in lieu of 5.13m (LG)	Performance Solution

BCA Clause	Title	Assessment and Comment	Status
			
		Where a path of travel from the point of discharge of a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building, measured horizontally at right angles to the path of travel, that part of the wall must have an FRL of not less than 60/60/60 and any openings protected internally in accordance with C4D5, for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser. The discharge of the following exits requires occupants to pass part of the external wall which must have an FRL of not less than 60/60/60 and any openings protected internally in accordance with C4D5. The following walls and openings are located within 6m of the discharge pathway. A performance-based solution is proposed to justify DtS non-compliance: Tower B ▪ 6 x FS exits with discharge at UG varies between 0.65m - 6m 	Performance Solution

BCA Clause	Title	Assessment and Comment	Status
		Tower D ▪ 3 x FS exits with discharge at LG Approx. 2.34-4.2m 	
D2D13	External Stairs or ramps in lieu of Fire-isolated exits	External stairs are not provided in lieu of fire isolated exits.	N/A
D2D14	Travel via non-fire-isolated stairways or ramps	A non-fire-isolated stair serving as a required exit must provide a continuous means of travel by its own flights and landings to a level at which egress to a road or open space is available.	N/A
D2D15	Discharge from exits	The discharge point of the fire isolated exits is required to be connected to the road by a path that is not less than the exit width or a minimum 1m to which the external path serves. Where there is a change of level, the path must contain a complying stair or ramp.	Capable of Complying
		Discharge point of alternative exits must be located as far apart as practical. The following exits are not located as far apart as practical. Performance justification is required. Tower B ▪ The two residential stairs (western) are located adjacent to each other (UG). ▪ The two residential stairs (eastern) are located adjacent to each other (UG). Tower C ▪ The two residential stairs are located adjacent to each other (LG).	Performance Solution
D2D16	Horizontal exits	Horizontal exits are proposed between the carpark and residential lobbies on Basement 02 and Lower Ground. These horizontal exits are required to be provided with protection to these exits in accordance with this Clause.	Capable of Complying
D2D17	Non-required stairways, ramps or escalators	Non-required stairways, ramps or travelators are not proposed.	N/A

BCA Clause	Title	Assessment and Comment	Status
D2D18	Number of persons accommodated	The united building are residential apartments towers with associated carparking. It is reasonable that less than 100 people per stair core will be accommodated in each tower.	Capable of Complying
D2D21	Plant rooms and lift rooms: concession	A ladder may be used in lieu of a stairway to provide egress from a plant room with a floor area less than 100m^2 or plant or lift machine rooms with a floor area of less than 200 m^2, for all but one point of egress. Ladders are required to comply with AS1657 and the requirement of this clause.	Note
D2D22	Access to lift pits	Access to lift pits is to be in accordance with this clause.	Capable of Complying
D3D3	Fire-isolated stairways and ramps	A stairway or ramp (including any landings) that is required to be within a fire-resisting shaft must be constructed of non-combustible materials and so that if there is local failure it will not cause structural damage to or impair the fire-resistance of the shaft.	Capable of Complying
D3D4	Non-fire isolated stairs and ramps	It is assumed that any non-fire-isolated stairway will be concrete.	Capable of Complying
D3D5	Separation of rising and descending stair flights	Rising and descending fire-isolated stairs are required to be separated with non-combustible construction and smoke proof construction in accordance with Clause 2 of Specification 11. The proposal provides rising and descending stairs that are connected. The proposed design indicates separation at the descending (residential stairs) with smoke proof construction. Separation is to also be applied at the basement stairs (rising stairs).	Capable of Complying
D3D8	Installation in exits and paths of travel	Access to service shafts and services other than to firefighting or detection equipment as permitted in the Deemed-to-Satisfy provisions of Section E, must not be provided from a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp. Gas or other fuel services must not be installed in a required exit. Electrical or telecommunications cupboards opening onto a corridor or the like must be of non-combustible construction and smoke sealed	Capable of Complying

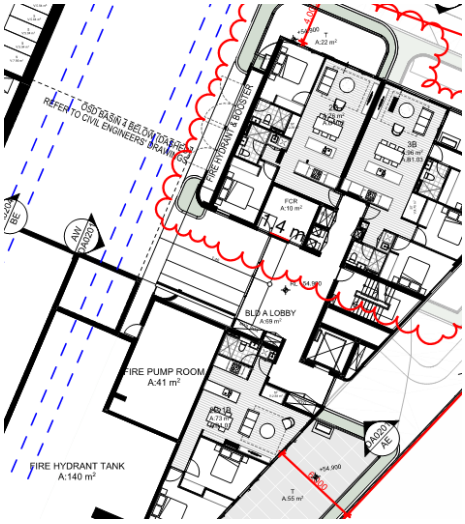
BCA Clause	Title	Assessment and Comment	Status
		from the corridor (including metal lining to inside face of door and smoke seals to door). Only electrical wiring associated with services specified in the clause, are permitted to be installed in a fire isolated exit.	
D3D9	Enclosure of space under stairs and ramps	No enclosure of space under stairs proposed.	N/A
D3D10	Width of stairways	A required stairway or ramp that exceeds 2m in width is counted as having a width of only 2m unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2m	Capable of Complying
D3D11	Pedestrian ramps	A ramp must: 1. where the ramp is also serving as an accessible ramp under Part D4, be in accordance with AS1428.1-2021; or 2. in any other case, have a gradient not steeper than 1:8. The floor surface of a ramp must have a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS4586.	Capable of Complying
D3D12	Fire-isolated passageways	The fire rating of fire-isolated passageways is required to be achieved from the outside.	Capable of Complying
D3D13	Roof as open space	The roof over the basement carpark is deemed to be roof as open space. Exits are provided that discharges to the roof. The roof is required to have an FRL of not less than 120/120/120; and 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.	Capable of Complying
NSW D3D14	Goings & risers	Goings and risers are to be designed to comply with this clause including: ▪ going and riser dimensions; and ▪ slip resistance.	Capable of Complying
D3D15	Landings	Landings are to be designed in accordance with this clause.	Capable of Complying
NSW D3D16	Thresholds	Thresholds are to comply with this clause.	Capable of Complying
NSW D3D17	Barriers to prevent falls	Balustrades are to be designed to comply with this clause.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
D3D19	Openings in barriers	Balustrades are to be designed in accordance with this clause.	Capable of Complying
D3D20	Barrier climbability	Balustrades are to be designed in accordance with this clause.	Capable of Complying
D3D22	Handrails	Handrails are required along at least one side of all stairways or ramps, or on both sides of stairs or ramps with a total width of more than 2m. Handrails are required to be installed in accordance with AS1428.1-2021 except for fire-isolated stairs.	Capable of Complying
D3D23	Fixed platforms, walkways, stairways & ladders	Fixed platforms, walkways, stairways & ladders are to be designed in accordance with this clause.	Note
NSW D3D24	Doorways and doors	The doors to the designated exits are swinging doors. The power operated door at the lobbies of the towers are required to be designed to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm.	Capable of Complying
D3D25	Swinging doors	Exit doors are required to swing in the direction of egress and are to be addressed during the detailed design phase and/or prior to the issue of a construction certificate.	Capable of Complying
NSW D3D26	Operation of latch	Doors in required exits or forming part of a required exits must be readily openable without a key from the egress side, by a single hand downward action on a single device which is located between 900mm and 1.1m from the floor and comply with the requirements of this clause.	Capable of Complying
D3D27	Re-entry from fire-isolated exits	Doors of a fire-isolated exit must not be locked from the inside a fire-isolated exit serving any storey above an effective height of 25m, throughout the exit. This requirement does not apply to a door fitted with a fail-safe device that automatically unlocks the door upon the activation of a fire alarm and: ▪ on at least every fourth storey, the doors are not able to be locked and a sign is fixed on such doors stating that re-entry is available; or	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		▪ an intercommunication system, or an audible or visual alarm system, operated from within the enclosure is provided near the doors and a sign is fixed adjacent to such doors explaining its purpose and method of operation.	
D3D28	Signs on doors	A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to exit door and smoke doors, in accordance with this clause.	Capable of Complying
D3D29	Protection of openable windows	A window opening must be provided with protection, in accordance with this clause, if the floor below the window is 2 m or more above the surface beneath in a bedroom in a Class 2. A barrier with a height not less than 865mm above the floor is required to an openable window when a child resistant release mechanism is provided and for openable windows 4m or more above the surface beneath. The barrier must not have any horizontal or near horizontal elements between 150mm and 760mm above the floor that facilitate climbing.	Capable of Complying
Part D3 – Access for People with a Disability			
D4D2 to D4D13	General building access requirements	In accordance with Clause D4D2(4), access is required to be provided to and within the building.	Refer to separate Access Report.

4.5. Services and Equipment (BCA Section E)

BCA Clause	Title	Assessment & Comment	Status
E1D2	Fire hydrants	A fire hydrant system must be provided in accordance with this clause to serve the whole building and must also be installed in accordance with AS 2419.1-2021. There are currently a few fire hydrant pump rooms located in different locations across Basement 02 and Basement 01. Further design development is required at Construction Certificate stage. The fire hydrant booster is located adjacent the entry to Tower A and is not located within sight of the main entrance into the building and not facing the street, noting that there are multiple pedestrian entries. A Performance Solution is	Capable of Complying /Performance Solution

BCA Clause	Title	Assessment & Comment	Status
		required to justify this technical non-compliance.  Hydrant located on floor (i.e not within fire isolated exits or within 4m of a non-fire isolated exit) within the carpark to achieve coverage are required to performance satisfied. For the purpose of this assessment, we have determined the fire hydrant pump room located next to the fire hydrant booster of tower A as the only pump room and not considered the hydrant pump rooms in the basement area for compliance.	
E1D3	Fire hose reels	A hose reel system must be provided to serve the whole building. The hose reel system must be installed in accordance with this clause and AS 2441.	Capable of Complying
E1D4	Sprinklers	A sprinkler system must be installed throughout the whole building and must comply with Specification 17. Where a combined hydrant and sprinkler system is to be proposed the combined system shall incorporate a ring main for each pressure zone in accordance with AS 2118.6-2012. Pressure reducing valves will be required for towers exceeding 35m in effective heights. Further details are to be provided at Construction Certificate stage.	Capable of Complying
E1D14	Portable fire extinguishers	Portable fire extinguishers are to comply with this provision and sections 1, 2, 3 and 4 of AS 2444.	Capable of Complying

BCA Clause	Title	Assessment & Comment	Status
E1D15	Fire control room	The effective height of the united building is over 50m. A fire control room is required in accordance with Specification 19. There is a technical non-compliance as the fire control room is in Tower A and is not located from the front entrance of the building given there are multiple entries. Performance justification will need to address this. 	Performance Solution
E1D16	Fire precautions during construction	In a building under construction not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stairway or exit. After the building has reached an effective height of 12 m the required fire hydrants and fire hose reels must be operational in at least every storey that is covered by the roof or the floor structure above, except the 2 uppermost storey's and any required booster connections must be installed.	Capable of Complying
E1D17	Provision for special hazards	Provide a professional opinion from the Fire Engineer within fire engineering report identifying any additional firefighting measures required to ensure: Suitable additional provision must be made if special problems of fighting fire could arise because of— the nature or quantity of materials stored, displayed or used in a building or on the allotment; or the location of the building in relation to a water supply for fire-fighting purposes.	Fire engineer advice required.
E2D3	General requirements	A smoke hazard management system is to be provided in accordance with E2D4 to E2D20 The following stairs are required to have stair pressurization installed in accordance with AS/ANZ 1668.1: • All fire isolated stairs serving residential areas have been assessed as serving storeys above 25m effective height.	Capable of Complying

BCA Clause	Title	Assessment & Comment	Status
		The proposed basement storeys do not exceed more than 2 below ground storeys, with Basement 02 storey been assessed as being counted in the rise in storeys. Based on this assessment, the current design of the fire stairs serving the basement storeys, do not connect more than 2 basement storey and in cases where they are providing independent discharge, these basement stairs are not required to be pressurised. Please note, where a basement fire stair is proposed to share a fire isolated passageway for discharge with descending residential fire stairs. These fire stairs are to be assessed as one stair system and therefore are required to be pressurized. Compliance is likely to require performance justification, subject to detailed mechanical engineer input at the design development stage. Car parking Areas ▪ The carparking levels are to be provided with a mechanical ventilation system in accordance with AS1668.2. It is assumed throughout the building, a fire sprinkler system will be utilised in the places required by this Clause. Residential Areas ▪ A smoke detection and alarm system complying with NCC 2022 specification 20 must be installed throughout the residential areas. ▪ An air-handling system which does not form part of a smoke hazard management system in accordance with E2D4 to E2D20 and which recycles air from one fire compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must: ▫ be designed and installed to operate as a smoke control system in accordance with AS 1668.1; or ▫ incorporate smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and be arranged such that the air-handling system is shut down and the smoke dampers are	

BCA Clause	Title	Assessment & Comment	Status
		activated to close automatically by smoke detectors complying with Clause 7.5 of AS 1670.1; and for the purposes of this provision, each SOU in the Class 2 part is treated as a separate fire compartment. ▪ Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one fire compartment (other than a car park ventilation system) and not forming part of a smoke hazard management system must comply with that Section of the Standard.	
E2D4	Fire Isolated Exits	All fire isolated stairs, including associated fire isolated passageway/ramp are required to be provided with automatic air pressurisation in accordance with AS 1668.1-2015. An automatic air pressurisation system for a fire-isolated exit must serve the entire exit.	Capable of Complying
E2D5	An automatic smoke detection and alarm system	Buildings more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building	Capable of Complying
E2D6	Buildings more than 25 m in effective height: Class 5, 6, 7b, 8 or 9b buildings	The Class 5, 6, 7b, 8 or 9b building or part of a building must be provided with a zone pressurisation system between vertically separated fire compartments in accordance with AS 1668.1-2015.	Capable of Complying
E2D21	Provision for special hazards	Additional smoke hazard management measures may be necessary due to the—special characteristics of the building; or special function or use of the building; or special type or quantity of materials stored, displayed or used in a building; or special mix of classifications within a building or fire compartment, which are not addressed in E2D4158 to E2D20159.	Refer to E1D17 above
E3D2	Lift installations	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification 24.	Capable of Complying
E3D3	Stretcher facility in lifts	The lift/s specified in this clause, must be above to accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600 mm wide x 2000 mm long x 1400 mm high above the floor level.	Refer to separate access report by others.
E3D4	Warning against use of lifts in fire	Warning signs must be displayed near every lift call button in accordance with this clause.	Capable of Complying

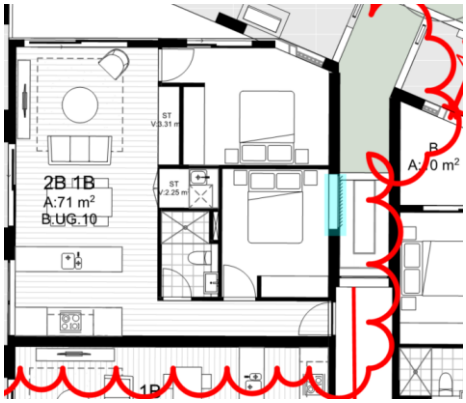
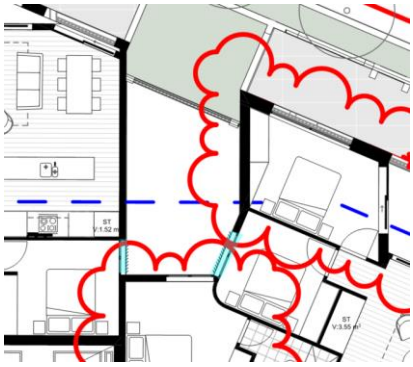
BCA Clause	Title	Assessment & Comment	Status
E3D5	Emergency lifts	Emergency lift/s complying with this clause and Spec 24 must be installed within the building.	Capable of Complying
E3D6	Landings	Access and egress to and from lift well landings must comply with the DTS provision of Section D	Capable of Complying
E3D7	Passenger lifts	The lifts are required to be of a type and have features for people with disabilities as required by this clause.	Capable of Complying
E3D9	Fire service controls	Fire service controls are required to every lift serving any storey above an effective height of 12m. Fire service controls are required to comply with the requirements of this provision.	Capable of Complying
E3D11	Fire service recall operation switch	Each group of lifts must be provided with one fire service recall control switch where fire service controls are required by E3D9. Fire recall operation switches are to comply with the requirements of this provision.	Capable of Complying
E3D12	Lift car fire service drive control switch	Lift car fire service drive control switch required by E3D9 must be activated from within the car and the switch must comply with the requirements of this clause.	Capable of Complying
E4D2 to E4D4	Emergency lighting requirements	Emergency lighting must be provided in accordance with these clauses. Emergency lighting is required to comply with AS2293.1-2005.	Capable of Complying
E4D5 to E4D8	Exit signs	Exit signage must be provided in accordance with this clause. Exit signage is required to comply with AS2293.1-2005 and be clearly visible at all times.	Capable of Complying
E4D9	Emergency warning and intercom systems	EWIS is required in accordance with AS1670.4.	Capable of Complying

4.6. Health and Amenity (BCA Section F)

BCA Clause	Title	Assessment and Comment	Status
Part F1 Surface water management, rising damp and external waterproofing			
F1D2 Application of Part	Applications	(1) F1D4 and F1D5 do not apply to a roof with a covering complying with F3D2(a) to (d). (2) F1D3 to F1D5 do not apply to a balcony, podium or similar horizontal surface.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
F1D3	Stormwater Drainage	Stormwater drainage is required to be designed to comply with AS/NZS 3500.3-2021.	Capable of Complying
F1D4	Exposed joints	Exposed joints in the drainage surface on a roof, balcony, podium or similar horizontal surface part of a building must— (a) 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	Capable of Complying
F1D5	External above ground membranes	Waterproofing membranes for external above ground use must comply with AS 4654.1-2012 & AS 4654.2-2012	Capable of Complying
F1D6	Damp-proofing	Damp proofing is required to be provided in accordance with this clause.	Capable of Complying
F1D7	Damp-proofing of floor on ground	Damp proofing is required to be provided in accordance with this clause.	Capable of Complying
F1D8	Sub-floor ventilation	Where provided sub-floor ventilation is to be in accordance with this Clause.	Capable of Complying
Part F2 Wet areas and overflow protection			
F2D2	Wet area construction	Wet areas, as required by this clause, must be water resistant or waterproof in accordance with Specification 26; and comply with AS 3740-2021	Capable of Complying
F2D3	Rooms containing urinals	Rooms containing urinals are to be designed in accordance with this clause.	Capable of Complying
F2D4	Floor wastes	Floor wastes and falls to floor wastes are required to be provided in accordance with this clause	Capable of Complying
Part F3 Roof and wall cladding			
F3D2	Roof coverings	A roof must be covered with— (a) roof tiles complying with AS 2049-2002, fixed in accordance with AS 2050; or (b) metal sheet roofing complying with AS 1562.1-2018; or (c) plastic sheet roofing designed and installed in accordance with AS 1562.3-206; or (d) terracotta, fibre-cement and timber slates and shingles designed and	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
		installed in accordance with AS 4597-1999, except in cyclonic areas; or an external waterproofing membrane complying with F1D5.	
F3D3	Sarking	Sarking-type material used for weatherproofing of roofs and walls must comply with AS 4200.1-2017 and AS 4200.2-2017.	Capable of Complying
F3D4	Glazed assemblies	Glazed assemblies to comply with AS 2047 as applicable.	Capable of Complying
F3D5	Wall cladding	External wall cladding must comply with one or a combination of the following: (d) Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700. (e) Autoclaved aerated concrete: AS 5146.3. (f) Metal wall cladding: AS 1562.1. External wall cladding, other than specified above, will require performance justification.	Performance solution
Part F4 Sanitary and other facilities			
F4D2	Facilities in residential buildings	The residential portion of the building is to be provided with appropriate facilities in accordance with Clauses F4D2(1) & (2). Generally, provision of the following facilities within each unit will comply: ▪ A bath or shower; and ▪ A closet pan & wash basin; and ▪ Kitchen; and ▪ Wash tub and space for washing machine and drier.	Capable of Complying
Part F5 Room heights			
F5D2	Height of rooms and other spaces	The minimum ceiling height requirements are to comply with the requirements of this provision.	Capable of Complying
Part F6 Light and ventilation			
F6D2 to F6D4	Provision of natural light	Natural lighting is required to be provided in all habitable rooms of the residential units. A required window that faces a boundary of the wall of the same building must not be less than a horizontal distance of 1m and 50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill.	Performance solution

BCA Clause	Title	Assessment and Comment	Status
		The following units are proposed to be performance justified: ▪ Units B.UG.10 bedroom window (and similar units above), does not comply within this 50% rule.  Bedroom windows to Units B.UG.11 & 12 (and similar units above) are provided with louvres obstructing natural light reducing aggregate light transmitting area.  Performance justification is proposed.	
F6D5	Artificial lighting	Artificial lighting is to be provided in accordance with AS/NZS1680.0 to spaces required by this clause.	Capable of Complying
F6D7 & F6D8	Ventilation of rooms	Ventilation is to be provided by natural or mechanical means in accordance with this provision and Clause F6D7.	Capable of Complying
F6D11	Car park exhaust	Each storey of the carpark must have a system of ventilation complying with AS1668.2 or permanent natural ventilation in accordance with Section 4 of AS1668.4.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
Part F7 Sound transmission and insulation			
F7D2	Application of part	The sound transmission and insulation requirements of F7D3, F7D4, F7D5, F7D6, F7D7 & F7D8 only apply to the Class 2 component of the building.	Capable of Complying
F7D3	Determination of airborne sound insulation ratings	A form of construction required to have an airborne sound insulation rating must: ▪ have the required value for weighted sound reduction index (R_w) or weighted sound reduction index with spectrum adaptation term ($R_w + C_{tr}$) determined in accordance with AS/NZS 1276.1 or ISO 717.1 using results from laboratory measurements; or ▪ an acceptable form of construction under Spec 28.	Capable of Complying
F7D4	Determination of impact sound insulation ratings	Determination of impact sound insulation ratings is to be in accordance with this clause. Particular attention is required to the requirements for discontinuous construction	Capable of Complying
F7D5	Sound insulation rating of floor	1. A floor in a Class 2 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w}$ (impact) not more than 62 if it separates— (a) sole-occupancy units; or (b) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification.	Capable of Complying
F7D6	Sound insulation of walls	Sound insulation of walls and doors is required to be in accordance with this clause.	Capable of Complying
F7D7	Sound insulation rating of internal services	Services that serves or pass through more than one SOU must achieve the required ratings specified by this clause.	Capable of Complying
F7D8	Sound isolation of pumps	A flexible coupling must be installed at the point of connection between service pipes in a building and any circulating or other pump.	Capable of Complying
Part F8 Condensation management			
F8D2	Application of part	Part F8 applies to a sole-occupancy unit of a Class 2 building.	noted
F8D3 External wall construction	Pliable building membrane	Where a pliable building membrane is installed, it is required to be provided in accordance with this clause.	Capable of Complying

BCA Clause	Title	Assessment and Comment	Status
F8D4	Exhaust systems	Exhaust systems are required to be provided in accordance with this clause.	Capable of Complying
F8D5	Ventilation of roof spaces	Where ventilation of the roof space are provided, it is required to be provided in accordance with this clause.	Capable of Complying

4.7. Ancillary Provisions (BCA Section G)

BCA Clause	Title	Assessment and comment	Status
NSW G1D5	Provision for the cleaning of windows	The method of provision for the cleaning of windows is required to be in accordance with this clause (windows 3 or more storeys above the ground).	Capable of Complying
G2D2	Installation of appliances	Domestic solid fuel burning appliances are not proposed. Boilers and pressure vessels, as defined by BCA, are required to comply with Specification 30	Capable of Complying
G6D1	Application of part	This part applies to occupiable outdoor areas. Except for G6D2, the Deemed-to-Satisfy Provisions of this Part do not apply to: ▪ an occupiable outdoor area of a sole-occupancy unit in a Class 2, or ▪ an occupiable outdoor area with an area less than 10m².	Capable of Complying

4.8. Energy Efficiency (BCA Section J – Class 2 and 4 Buildings)

B For a Class 2 building or a Class 4 part of a building, where a relevant development consent or an application for a complying development certificate requires compliance with a BASIX Single Dwelling or Multi Dwelling Certificate issued under Version 3.0 or earlier, NSW Section J of NCC 2019 Amendment 1 applies. For a Class 2 building or a Class 4 part of a building, where a relevant development consent or an application for a complying development certificate requires compliance with a BASIX Single Dwelling or Multi Dwelling Certificate issued under Version 4.0 or later, Section J of NCC 2022 applies.

For a Class 2 building or a Class 4 part of a building, where a relevant development consent or an application for a complying development certificate requires compliance with a BASIX Alterations and Additions Certificate, NSW Section J of NCC 2019 Amendment 1 applies.

4.8.1. Building Fabric (NSW Part J4)

BCA Clause	Assessment and Comment	Status
Part J3 Elemental provisions for a sole-occupancy unit of a Class 2 building or a Class 4 part of a building		

BCA Clause	Assessment and Comment	Status
NSW J3D2 Application of Part	The Deemed-to-Satisfy Provisions of this Part apply to building elements forming the external building fabric of a sole-occupancy unit of a Class 2 building and a Class 4 part of a building	Note
J3D5 Roof thermal breaks of a sole-occupancy unit of a Class 2 building or a Class 4 part of a building	Thermal breaks are to be provided where required by this clause.	Capable of Complying
J3D6 Wall thermal breaks of a sole-occupancy unit of a Class 2 building or a Class 4 part of a building	Thermal breaks are to be provided where required by this clause.	Capable of Complying
NSW J3D10 Floors of a sole-occupancy unit of a Class 2 building or a Class 4 part of a building	Concrete slab on ground with in-slab or in-screed heating is to comply with clause.	Capable of Complying
Part J4 Building fabric		
NSW J4D3 Thermal construction — general	Insulation is to be provided in accordance with this clause	Capable of Complying
Part J5 Building sealing		
J5D2 Application of Part	The Deemed-to-Satisfy Provisions of this Part apply to building elements forming the envelope, other than areas exempt by this clause.	Note
J5D3 Chimneys and flues	The chimney or flue of an open solid-fuel burning appliance must be provided with a damper or flap that can be closed to seal the chimney or flue.	Capable of Complying

BCA Clause	Assessment and Comment	Status
J5D4 Roof lights	(1) A roof light must be sealed, or capable of being sealed, when serving— a conditioned space; or a habitable room in climate zones 4, 5, 6, 7 or 8. (2) A roof light required by (1) to be sealed, or capable of being sealed, must be constructed with— an imperforate ceiling diffuser or the like installed at the ceiling or internal lining level; or a weatherproof seal; or a shutter system readily operated either manually, mechanically or electronically by the occupant.	Capable of Complying
J5D5 Windows and doors	Windows and doors are to be designed in accordance with this clause, inclusive of: (a) windows compliant with AS 2047; (b) seals to restrict air infiltration; and (c) unconditioned zones for cafes, restaurants, open front shop; and as required by this clause.	Capable of Complying
J5D6 Exhaust fans	An exhaust fan must be fitted with a sealing device such as a self-closing damper or the like when serving— a conditioned space; or a habitable room in climate zones 4, 5, 6, 7 or 8.	Capable of Complying
J5D7 Construction of ceilings, walls and floors	Ceilings, walls, floors and any opening such as a window frame, door frame, roof light frame or the like must be constructed to minimise air leakage in accordance with this clause — when forming part of the envelope; or in climate zones 4, 5, 6, 7 or 8.	Capable of Complying
J5D8 Evaporative coolers	An evaporative cooler must be fitted with a self-closing damper or the like— when serving a heated space; or in climate zones 4, 5, 6, 7 or 8.	Capable of Complying
Part J6 Air-conditioning and ventilation		
NSW J6D2 Application of part	The Deemed-to-Satisfy Provisions of this Part do not apply to a Class 8 electricity network substation.	Note
J6D3 Air-conditioning system control	An air-conditioning system is to be designed in accordance with this clause.	Capable of Complying
J6D4 Mechanical ventilation system control	Mechanical ventilation control is to be designed in accordance with this clause.	Capable of Complying
J6D5 Fans and duct systems	Fans and duct systems to be designed in accordance with this clause.	Capable of Complying
J6D6 Ductwork insulation	Ductwork insulation to be provided in accordance with this clause.	Capable of Complying

BCA Clause	Assessment and Comment	Status
J6D6 Ductwork sealing	Ductwork sealing is to be provided in accordance with this clause.	Capable of Complying
J6D8 Pump systems	Pumped systems are to be designed in accordance with this clause.	Capable of Complying
J6D9 Pipework insulation	Pipework insulation to be provided in accordance with this clause	Capable of Complying
J6D11 Refrigerant chillers	Refrigerant chillers are to be designed in accordance with this clause.	Capable of Complying
J6D12 Unitary air-conditioning equipment	Unitary air-conditioning equipment are to be designed in accordance with this clause.	Capable of Complying
J6D13 Heat rejection equipment	Unitary air-conditioning equipment are to be designed in accordance with this clause.	Capable of Complying
Part J8 Heated water supply and swimming pool and spa pool plant		
J8D2 Heated water supply	A heated water supply system for food preparation and sanitary purposes must be designed and installed in accordance with Part B237 of NCC Volume Three — Plumbing Code of Australia.	Capable of Complying
Part J9 Energy monitoring and on-site distributed energy resources		
J9D3 Facilities for energy monitoring	Facilities for energy monitoring are to be designed in accordance with this clause.	Capable of Complying
J9D4 Facilities for electric vehicle charging equipment	Facilities for electric vehicle charging equipment are to be designed in accordance with this clause.	Capable of Complying
J9D5 Facilities for solar photovoltaic and battery systems	Facilities for Facilities for solar photovoltaic and battery systems are to be designed in accordance with this clause.	Capable of Complying

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

For a Class 3 building or Class 5 to 9 building:

(a) 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.
(b) From 1 October 2023 Section J of NCC 2022 Volume One applies.

The below is based on BCA 2022.

BCA Clause	Assessment and Comment	Status
Part J4 Building fabric		
J4D2 Application of Part	The Deemed-to-Satisfy Provisions of this Part apply to building elements forming the envelope of a Class 3 and Class 5 to 9 building.	Note
J4D3 Thermal construction — general	Insulation is to be provided in accordance with this clause.	Capable of Complying
J4D4 Roof and ceiling construction	A roof or ceiling must achieve a Total R-Value required by this clause.	Capable of Complying
J4D5 Roof lights	Roof lights must have— a (a) total area of not more than 5% of the floor area of the room or space served; and (b) transparent and translucent elements, including any imperforate ceiling diffuser, with a combined performance of—for Total system SHGC, in accordance with Table J4D5; and for Total system U-Value, not more than U3.9.	Capable of Complying
J4D6 Walls and glazing	Walls and glazing must be designed to comply with this clause	Capable of Complying
J4D7 Floors	Floor s must be designed to comply with this clause	Capable of Complying
Part J5 Building sealing		
J5D2 Application of Part	The Deemed-to-Satisfy Provisions of this Part apply to building elements forming the envelope of a Class 3 and Class 5 to 9 building, other than areas exempt by this clause.	Note
J5D3 Chimneys and flues	The chimney or flue of an open solid-fuel burning appliance must be provided with a damper or flap that can be closed to seal the chimney or flue.	Capable of Complying

BCA Clause	Assessment and Comment	Status
J5D4 Roof lights	(1) A roof light must be sealed, or capable of being sealed, when serving— a conditioned space; or a habitable room in climate zones 4, 5, 6, 7 or 8. (2) A roof light required by (1) to be sealed, or capable of being sealed, must be constructed with— an imperforate ceiling diffuser or the like installed at the ceiling or internal lining level; or a weatherproof seal; or a shutter system readily operated either manually, mechanically or electronically by the occupant.	Capable of Complying
J5D5 Windows and doors	Windows and doors are to be designed in accordance with this clause, inclusive of: (a) windows compliant with AS 2047; (b) seals to restrict air infiltration; (c) unconditioned zones for cafes, restaurants, open front shop; and (d) rapid roller doors as required by this clause.	Capable of Complying
J5D6 Exhaust fans	An exhaust fan must be fitted with a sealing device such as a self-closing damper or the like when serving— a conditioned space; or a habitable room in climate zones 4, 5, 6, 7 or 8.	Capable of Complying
J5D7 Construction of ceilings, walls and floors	Ceilings, walls, floors and any opening such as a window frame, door frame, roof light frame or the like must be constructed to minimise air leakage in accordance with this clause — when forming part of the envelope; or in climate zones 4, 5, 6, 7 or 8.	Capable of Complying
J5D8 Evaporative coolers	An evaporative cooler must be fitted with a self-closing damper or the like— when serving a heated space; or in climate zones 4, 5, 6, 7 or 8.	Capable of Complying
Part J6 Air-conditioning and ventilation		
NSW J6D2 Application of part	The Deemed-to-Satisfy Provisions of this Part do not apply to a Class 8 electricity network substation.	Note
J6D3 Air-conditioning system control	An air-conditioning system is to be designed in accordance with this clause.	Capable of Complying
J6D4 Mechanical ventilation system control	Mechanical ventilation control is to be designed in accordance with this clause.	Capable of Complying
J6D5 Fans and duct systems	Fans and duct systems to be designed in accordance with this clause.	Capable of Complying

BCA Clause	Assessment and Comment	Status
J6D6 Ductwork insulation	Ductwork insulation to be provided in accordance with this clause.	Capable of Complying
J6D6 Ductwork sealing	Ductwork sealing is to be provided in accordance with this clause.	Capable of Complying
J6D8 Pump systems	Pumped systems are to be designed in accordance with this clause.	Capable of Complying
J6D9 Pipework insulation	Pipework insulation to be provided in accordance with this clause	Capable of Complying
NSW J6D10 Space heating	Space heating is to be provided in accordance with this clause	Capable of Complying
J6D11 Refrigerant chillers	Refrigerant chillers are to be designed in accordance with this clause.	Capable of Complying
J6D12 Unitary air-conditioning equipment	Unitary air-conditioning equipment are to be designed in accordance with this clause.	Capable of Complying
J6D13 Heat rejection equipment	Unitary air-conditioning equipment are to be designed in accordance with this clause.	Capable of Complying
Part J7 Artificial lighting and power		
NSW J7D2 Application of Part	J7D3, J7D4 and J7D6(1)(b) do not apply to a Class 8 electricity network substation.	Note
NSW J7D3 Artificial lighting	Artificial lighting is to be designed in accordance with this clause.	Capable of Complying
NSW J7D4 Interior artificial lighting and power control	Interior artificial lighting and power control is to be designed in accordance with this clause.	Capable of Complying
J7D5 Interior decorative and display lighting	Interior decorative and display lighting is to be designed in accordance with this clause.	Capable of Complying
J7D6 Exterior artificial lighting	Exterior artificial lighting is to be designed in accordance with this clause.	Capable of Complying

BCA Clause	Assessment and Comment	Status
J7D7 Boiling water and chilled water storage units	Boiling water and chilled water storage units are to be designed in accordance with this clause.	Capable of Complying
J7D8 Lifts	Lifts are to be designed in accordance with this clause.	Capable of Complying
J7D9 Escalators and moving walkways	Escalators and moving walkways are to be designed in accordance with this clause.	Capable of Complying
Part J8 Heated water supply and swimming pool and spa pool plant		
J8D2 Heated water supply	A heated water supply system for food preparation and sanitary purposes must be designed and installed in accordance with Part B237 of NCC Volume Three — Plumbing Code of Australia.	Capable of Complying
NSW J8D3 Swimming pool heating and pumping	Swimming pool heating and pumping is to be design in accordance with this clause.	Capable of Complying
NSW J8D4 Spa pool heating and pumping	Spa pool heating and pumping is to be design in accordance with this clause.	Capable of Complying
Part J9 Energy monitoring and on-site distributed energy resources		
J9D2 Application of Part	The Deemed-to-Satisfy Provisions of this Part do not apply to a Class 8 electricity network substation.	Capable of Complying
J9D3 Facilities for energy monitoring	Facilities for energy monitoring are to be designed in accordance with this clause.	Capable of Complying
J9D4 Facilities for electric vehicle charging equipment	Facilities for electric vehicle charging equipment are to be designed in accordance with this clause.	Capable of Complying

BCA Clause	Assessment and Comment	Status
J9D5 Facilities for solar photovoltaic and battery systems	Facilities for Facilities for solar photovoltaic and battery systems are to be designed in accordance with this clause.	Capable of Complying

5. FIRE SAFETY SCHEDULE

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

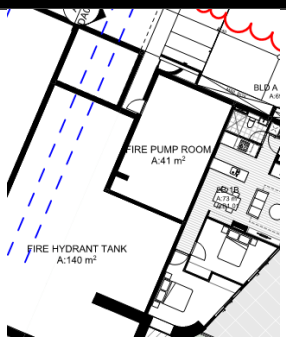
NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE	PROPOSED
1.	Access panels, doors & hoppers to fire resisting shaft	BCA 2022, C4D14 & AS 1905.1-2015 Amdt 1	YES
2.	Automatic fail-safe devices	D3D26 (b) auto unlock of doors; D3D27 (re-entry from fire stairs)	YES
3.	Automatic fire detection and alarm system	BCA 2022 E2D3, Spec 20 Clause S20C5 (combination smoke alarm and smoke detection); Clause S20C6 (smoke detection for smoke control systems) & AS 1670.1-2018 or AS 3786-2014 Amdt 1 & 2	YES
4.	Automatic fire suppression system	BCA 2022 E1D4 to E1D6, Spec 17 & AS 2118.1-2017 Amdt 1	YES
5.	Emergency Lifts	BCA 2022 E3D5	YES
6.	Emergency lighting	BCA 2022 Clause E4D2, E4D3, E4D4, E1D15	YES
7.	Emergency warning and intercom system	BCA 2022 E4D9 & AS 1670.4-2018	YES
8.	Exit signs	BCA 2022 E4D5, NSW E4D6, E4D8 Spec 25 & AS 2293.1- 2018	YES
9.	Fire control room	BCA 2022 E1D15 & Spec 19	YES
10.	Fire dampers	BCA 2022 C4D13, C4D15 & AS1668.1-2015 Amdt 1, AS 1668.2-2012 Amdt 1 & 2	YES
11.	Fire doors	BCA 2022 C3D13 (separation of equipment); C3D14 (electricity supply systems); C4D4 (separation of external walls & associated openings in fire compartments); C4D5, Spec 12; C4D6 (doorways & fire walls); C4D9 (openings in fire isolated exits), C4D12 (bounding construction), C4D14 (openings in shafts) & AS 1905.1 – 2015 Amdt 1	YES
12.	Fire rated lift landing doors	BCA 2022 C4D11 & AS 1735.11-1986	YES
13.	Fire Hose reel systems	BCA 2022 E1D3 & AS 2441-2005 Amdt 1	YES

NO	FIRE SAFETY MEASURES (AS SET OUT UNDER CLAUSE 166 OF EP&A ACT REGULATIONS)	STANDARD OF PERFORMANCE	PROPOSED
14.	Fire hydrant systems	BCA 2022 E1D2 & AS 2419.1-2021	YES
15.	Fire seals protecting openings in fire resisting components of the building	BCA 2022 C4D13, C4D15 & Spec 13, AS 4072.1-2005 Amdt 1, AS 1530.4.-2014	YES
16.	Lightweight construction	BCA 2022 C2D9 & Spec 6	YES
17.	Mechanical air handling system	BCA 2022 E2D3, E2D5; Spec 20 and NSW S20C8, Spec 21 & AS 1668.1-2015 Amdt 1. Class 7a (carpark building mechanical ventilation systems) BCA 2022, E2D3, E2D12 and Clause 5.5 of AS 1668.1-2015 Amdt 1.	YES
18.	Portable fire extinguishers	BCA 2022 E1D14 & AS 2444-2001	YES
19.	Pressurising system	BCA 2022 Clause E2D3 & AS 1668.1-2015 Amdt 1	YES
20.	Smoke alarms & heat alarms	BCA 2022 E2D3, Spec 20 & AS 3786-2014 Amdt 1 & 2	YES
21.	Warning and operational signs	EPA Regulation 2000 (Clause 183), BCA 2022, D3D28 (signs on exit doors) & E3D4 (lifts)	YES

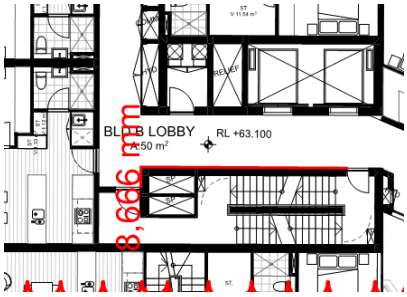
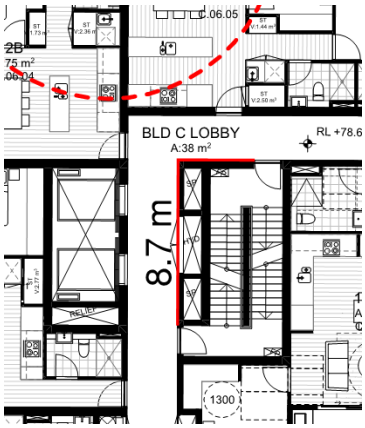
6. SUMMARY OF NON-COMPLIANCE ISSUES

The following non-compliance's with the deemed-to-satisfy provisions of the BCA 2022, in relation to the proposed building work, have been identified and are proposed to be dealt by justification against the performance requirements of the BCA 2022 in accordance with Clause A2G2.

Clause	Performance justification
C3D15 Public corridors in Class 2 and 3 Buildings	The following public corridors exceed 40m without smoke proof walls: Tower B ▪ Upper ground floor Approx. 53 ▪ L2 Approx. 48.2m. Tower D ▪ Upper ground floor Approx. 46m. Tower E ▪ Upper ground floor Approx. 57m ▪ L1 – L8 Approx. 51.4m..  Example of public corridor exceeding 40m
D2D3 Number of exits	The building is required to be provided with a minimum of two exits from each part. The following areas contain only one exit from each storey or part: Basement 01 ▪ Fire Pump Room (B01)

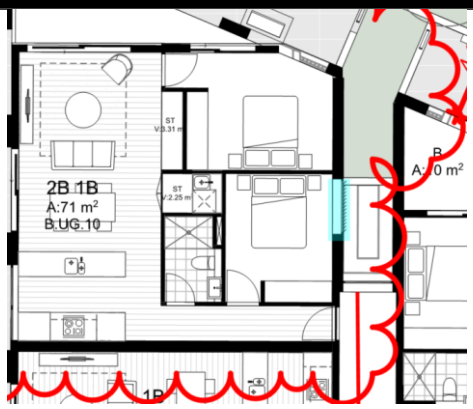
Clause	Performance justification
	 Tower A ▪ The lobby areas (LG -L2)  ▪ Level 8, hot water plant room has only one exit require performance justification. Tower B • Level 14 plant area provide with one exit only. •  Tower E ▪ Unit E.LG.01 (LG)

Clause	Performance justification
	
D2D5 Exit travel distance	The following areas within the basement design have extended travel distances that exceed DtS limits: Basement 02 ▪ Travel up to 26m to POC ▪ Travel up to 47.5 m to Exit Basement 01 ▪ Travel up to 24m to POC ▪ Travel up to 47.5 m to Exit The following areas have extended travel distances to a point of choice from unit entry doors: Tower A ▪ B02 - Approx. 6.4m to POC ▪ LG – L2 Approx. 8.3m to Exit Tower B ▪ LG Approx. 9.1m to POC ▪ UG Approx. 11.6m to POC ▪ L1- L2 Approx. 11.2m to POC ▪ L3- L13 Approx. 9.3m to POC Tower C ▪ L1- L3 Approx. 10.8m to POC ▪ L4 (Communal) Approx. 29m to POC Tower D ▪ LG Approx. 8.3m to POC ▪ UG Approx. 12m to POC ▪ L1- L8 Approx. 12m to POC Tower E ▪ L1- L7 Approx. 7.0m to POC
D2D6 Distance between alternate exits	The distance between alternative exits does not comply in the following areas: Basement 02 ▪ Access ramp between the east & west carpark – Approx. 65 m between alternate exits

Clause	Performance justification
	Basement 01 ▪ Access ramp between the east & west carpark – Approx. 65 m between alternate exits Lower Ground ▪ Access ramp between the east & west carpark – Approx. 63 m between alternate exits ▪ Fire stairs between the North & South and East & South of the carpark – Approx. 67 m between alternate exits The following distances between alternate exits in the residential part does not comply: Tower B ▪ Distance between alternate exits Approx. 8.6m  Tower C ▪ The fire isolated exits serving tower C – Approx. 8.7m in lieu of 9m. ▪ 
D2D12 Travel via fire isolated exits	D2D12(1) – Permit room to open directly to fire stair- Performance Solution to address DtS non-compliance.
	D2D12(2) - The following areas requires a Performance Solution to permit FIS discharge into covered area that is not open to 1/3 of its perimeter:

Clause	Performance justification
	Tower D ▪ FIS discharge in covered area approx. 3.21m open in lieu of 5.13m (LG) 
	D2D12(3) – The following walls and openings are located within 6m of the discharge pathway: Tower B ▪ 6 x FS exits with discharge at UG varies between 0.65m - 6m  Tower D ▪ 3 x FS exits with discharge at LG Approx. 2.34-4.2m 
D2D15(4)	The following exits are not located as far apart as practical. Performance justification is required.

Clause	Performance justification
	Tower B ▪ The two residential stairs (western) are located adjacent to each other (UG). ▪ The two residential stairs (eastern) are located adjacent to each other (UG). Tower C ▪ The two residential stairs are located adjacent to each other (LG).
E1D2 Fire hydrants	The fire hydrant booster is located adjacent the entry to Tower A and is not located within sight of the main entrance into the building and not facing the street, noting that there are multiple pedestrian entries. Hydrant located on floor (i.e not within fire isolated exits or within 4m of a non-fire isolated exit) within the carpark to achieve coverage are required to performance satisfied.
E1D15 Fire control centres	There is a technical non-compliance as the fire control room is in Tower A and is not located from the front entrance of the building given there are multiple entries. Performance justification will need to address this. 
F3D5 Wall cladding	External wall cladding must comply with one or a combination of the following: (a) Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700. (b) Autoclaved aerated concrete: AS 5146.3. (c) Metal wall cladding: AS 1562.1. External wall cladding, other than specified above, will require performance justification.
F6D3 Natural light	Natural lighting is required to be provided in all habitable rooms of the residential units. A required window that faces a boundary of the wall of the same building must not be less than a horizontal distance of 1m and 50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill. The following units are proposed to be performance justified: ▪ Units B.UG.10 bedroom window (and similar units above), does not comply within this 50% rule.

Clause	Performance justification
	 Bedroom windows to Units B.UG.11 & 12 (and similar units above) are provided with louvres obstructing natural light reducing aggregate light transmitting area.  Performance justification is proposed.

7. CONCLUSION

The design as proposed is capable of complying with the Building Code of Australia and will be subject to construction documentation that will provide appropriate details to demonstrate compliance. This report has identified areas of non-compliance with the deemed-to-satisfy provisions and indicates the design intent to demonstrate compliance with the Performance Requirements of the NCC/BCA 2022 Volume 1.

ATTACHMENT 1

Assessed plans prepared by Plus Architects

Plan Title	Drawing No	Revision	Date
BASEMENT 02 PLAN	PLA-AR-DA0097	H	25/05/2023
BASEMENT 01 PLAN	PLA-AR-DA0098	G	25/05/2023
OVERALL LOWER GROUND FLOOR PLAN	PLA-AR-DA0099	K	25/05/2023
OVERALL UPPER GROUND FLOOR PLAN	PLA-AR-DA0100	J	25/05/2023
OVERALL LEVEL 01 FLOOR PLAN	PLA-AR-DA0101	I	25/05/2023
OVERALL LEVEL 02 FLOOR PLAN	PLA-AR-DA0102	I	25/05/2023
OVERALL LEVEL 03 FLOOR PLAN	PLA-AR-DA0103	I	25/05/2023
OVERALL LEVEL 04 FLOOR PLAN	PLA-AR-DA0104	I	25/05/2023
OVERALL LEVEL 05 FLOOR PLAN	PLA-AR-DA0105	J	25/05/2023
OVERALL LEVEL 06 FLOOR PLAN	PLA-AR-DA0106	I	25/05/2023
OVERALL LEVEL 07 FLOOR PLAN	PLA-AR-DA0107	I	25/05/2023
OVERALL LEVEL 08 FLOOR PLAN	PLA-AR-DA0108	H	25/05/2023
OVERALL LEVEL 09 FLOOR PLAN	PLA-AR-DA0109	I	25/05/2023
OVERALL LEVEL 10-12 FLOOR PLAN	PLA-AR-DA0110	H	25/05/2023
LEVEL 11 FLOOR PLAN	PLA-AR-DA0111	H	25/05/2023
LEVEL 12 FLOOR PLAN	PLA-AR-DA0112	G	25/05/2023
LEVEL 13 FLOOR PLAN	PLA-AR-DA0113	G	25/05/2023
LEVEL 14 FLOOR PLAN	PLA-AR-DA0114	G	25/05/2023
ROOF PLAN	PLA-AR-DA0115	E	25/05/2023