BUILDING CODE OF AUSTRALIA COMPLIANCE ASSESSMENT REPORT

PROPOSED INFILLED APARTMENT TO EXISTING RESIDENTIAL UNIT BUILDING

22 CENTRAL AVENUE MANLY NSW

DATE ►13/09/2024

REPORT NO. ►7375.3/ Rev. 1.1

PREPARED FOR ►Four Towns Planning

PREPARED BY ► AE&D

AEDGROUP

Innovation & expertise in building regulations

CONTENTS

REVISION STATUS				
REPORT NO/REV	DATE	STATUS	WRITTEN	CHECKED
7375.3/Rev. 1.0	03/09/2024	Final Issue	Jason Yau	Trenton Jones
7375.3/Rev. 1.1	13/09/2024	Final Issue Report updated, based on the confirmation that the base build is not provided with sprinkler system throughout	Jason Yau	Trenton Jones

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

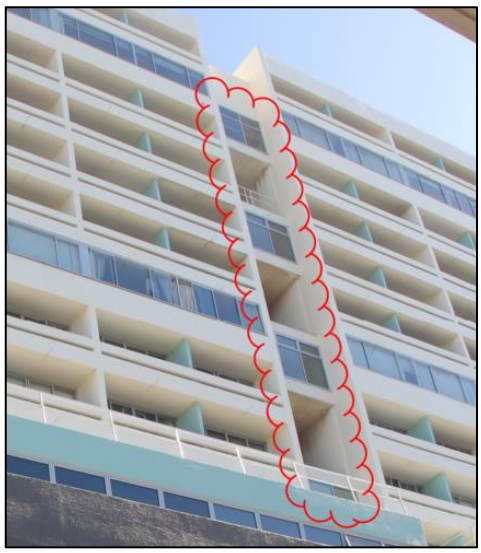
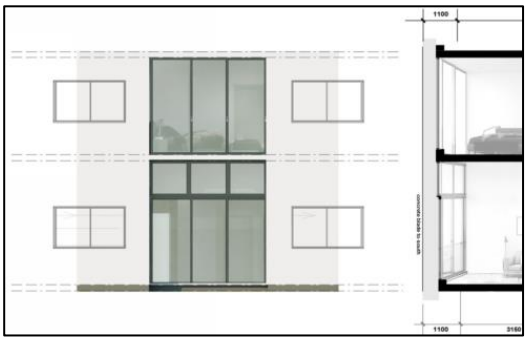
1.0 EXECUTIVE SUMMARY AND RECOMMENDATIONS

This report provides a Building Code of Australia (BCA) 2022 assessment of Proposed Infilled Apartment to Existing Residential Unit Building, to be located at 22 Central Avenue Manly NSW.

The primary purpose of this report is to identify the non-compliance matters contained in the proposed design against the current Deemed-to-Satisfy (DTS) Provisions of the BCA and to provide compliance recommendations to overcome the DTS non-compliances.

1.1 Recommendations

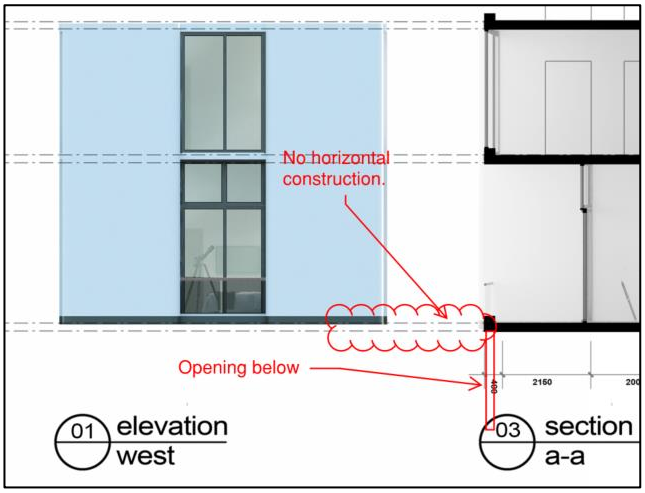
The following is a list of Deemed-to-Satisfy Provisions that should be addressed either by design amendments, additional information **OR** by way of a Performance Solution:

BCA Clause	Deemed-to-Satisfy Provision to be addressed
C3D7 Vertical separation of openings in external walls [2019: C2.6]	***Non-compliance*** ***The building is a Type A Construction, so vertical separation is required for openings in external walls. Where the building is sprinkler-protected throughout, vertical separation is not required.*** ***Despite the effective height being greater than 25m, the base building is not provided with sprinkler system throughout, in accordance with the information from the client's email to AED dated 12/09/2024.*** ***Based on this information, the current design does not comply.*** ***Central Avenue Side*** ***Spandrel as detailed in this BCA clause is provided in the current design separating the openings above and below. This BCA clause is not complied.***   ***Short Street Plaza Side*** ***Similarly, the proposed openings on the Short Street Plaza side are not provided with vertical separation.*** ***Note that, as shown in Figure C3D7c of Guide to C3D7 (see below), a slab with FRL and dimensions specified by this BCA clause is considered as a horizontal spandrel when it is protruding from the external wall with the opening. The proposed lower level of each unit is not provided with such horizontal construction separating the below opening. Therefore, it is not considered as vertical separated by horizontal construction.***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA Clause	Deemed-to-Satisfy Provision to be addressed

This is considered as technical non-compliance.



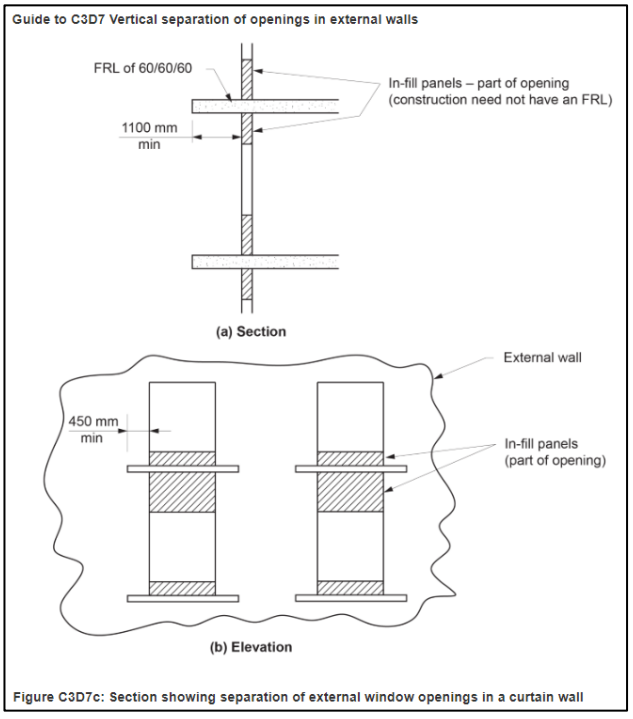
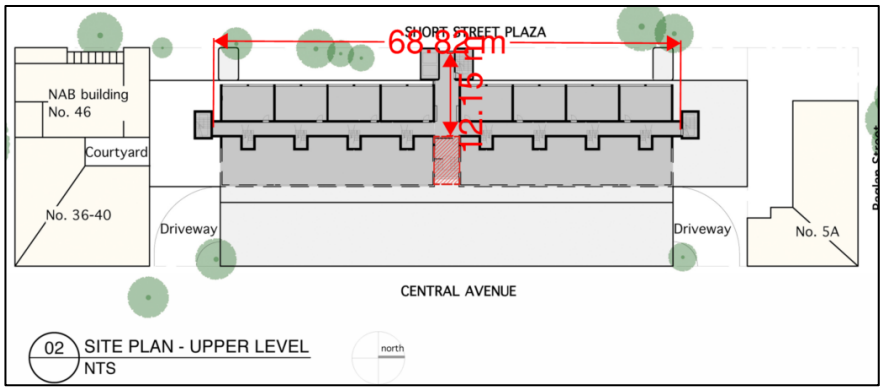


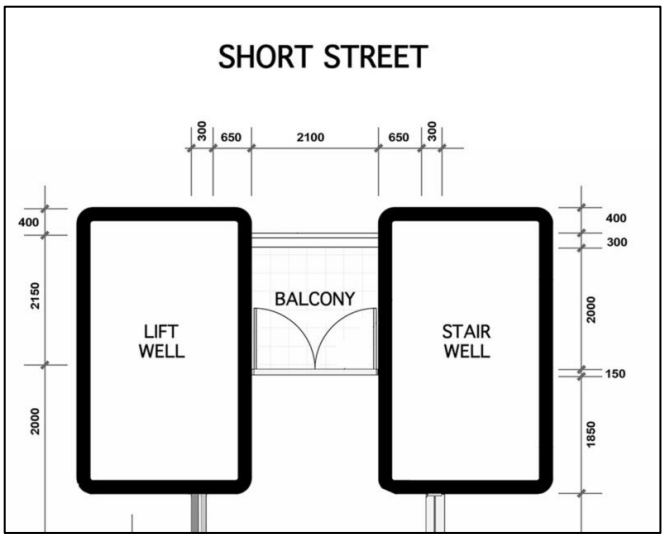
Figure C3D7c: Section showing separation of external window openings in a curtain wall

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA Clause	Deemed-to-Satisfy Provision to be addressed
C3D11 Separation of lift shafts [2019: C2.10]	***Compliance Required*** ***The existing lift shaft must not be compromised by the proposed development and must achieve a FRL of not less than 120/120/120.*** 
C3D15 Public corridors in Class 2 and 3 buildings [2019: C2.14]	***Potential Non-compliance*** ***Based on the Site Plan, the public corridors are approximately 81 meters in total length and do not appear to be provided with any smoke separation.*** ***It is likely that this DtS non-compliance existed in the building prior to the current development. Therefore, it is expected that this issue has already been addressed by a Performance Solution. If an existing Fire Engineering Report has previously addressed this DtS non-compliance (formerly BCA Clause C2.14), a re-assessment by a qualified fire engineer may be required for this proposal.*** ***Please note: The drawing is not to scale, so the measurement is approximate.***  ***Typical upper levels of proposed SOUs.***
C4D3 Protection of openings in external walls [2019: C3.2]	***Compliance Required*** ***BCA Clause C4D3(1) requires that the openings in an external wall that is required to have an FRL must be protected in accordance with C4D5, and if wall-wetting sprinklers are used they must be located externally, and Clause C4D3(1) only apply if the distance between the opening and the fire-source feature to which it is exposed is less than 6 m from the far boundary of a road adjoining the allotment, if not located in a storey at or near ground level.*** ***Given that the distance between the balcony doors and the far end of Short Street Plaza is less than 6 meters, all balcony doors are required to be protected in***

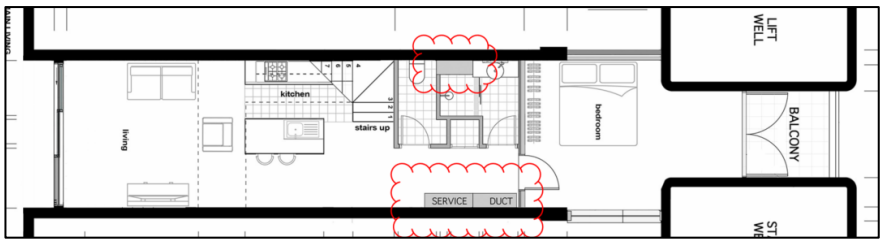
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA Clause	Deemed-to-Satisfy Provision to be addressed
	compliance with BCA Clause C4D5. It is recommended that a Performance Solution be provided to negate the need for fire suppression.

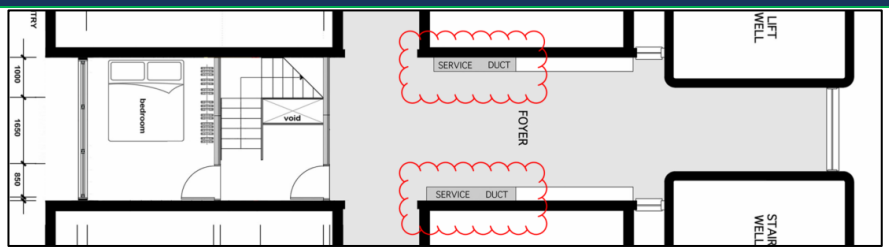
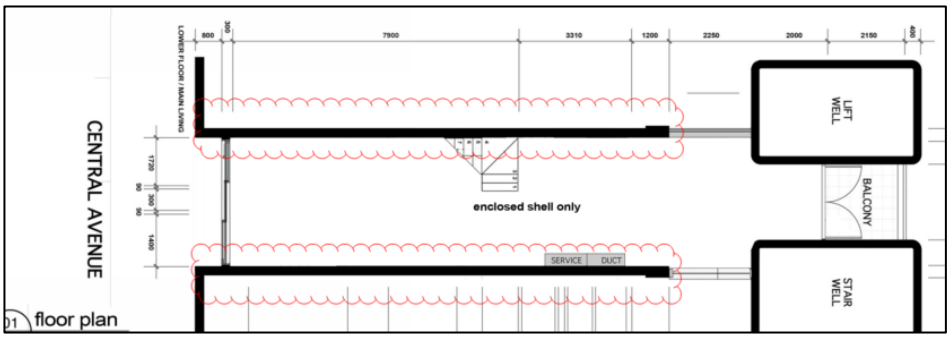
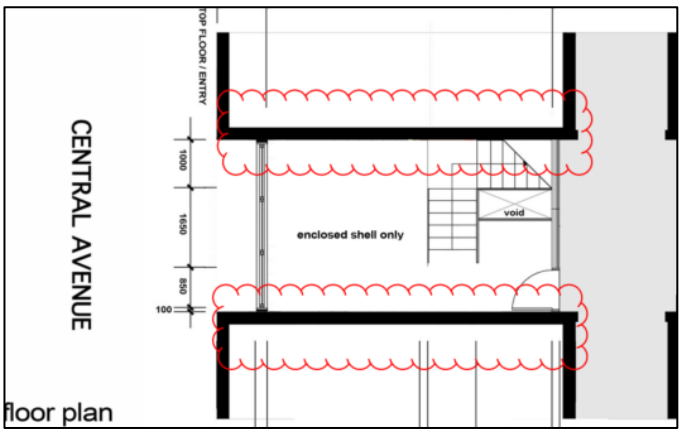


Typical part floor plan of each SOU

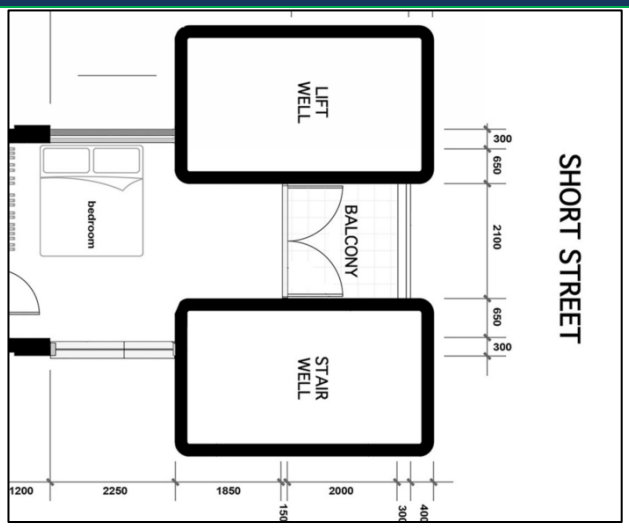
C4D13 Openings in floors and ceilings for services [2019: C3.12]	***Compliance Required*** ***It appears that there are service penetrations throughout all proposed SOUs, as indicated in the clouded areas of the screenshot below. These penetrations must be protected by a shaft that complies with BCA Specification 5 or protected in accordance with BCA Clause C4D15.***



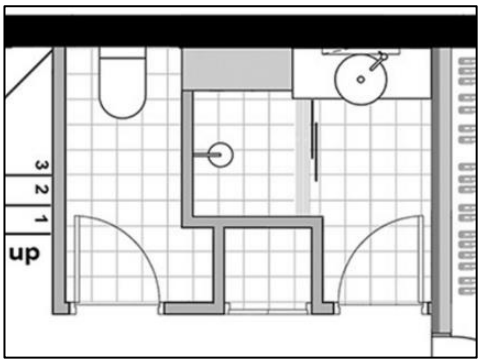
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA Clause	Deemed-to-Satisfy Provision to be addressed
	 ***Typical markups for each SOU.***
S5C11 Type A fire-resisting construction — Fire-resistance of building elements [2019: Spec C1.1: 3.1 and Table 3]	***Compliance Required*** ***The walls highlighted in the screenshot below were originally external walls and, as such, were not required to be fire-rated. However, with the proposed development, these walls will now serve as internal bounding walls between SOUs.*** ***To comply with the relevant standards, ensure that these walls achieve the required Fire Resistance Level (FRL):*** • ***Loadbearing walls: FRL of 90/90/90.*** • ***Non-loadbearing walls: FRL of -/60/60.***   ***Typical markups for each proposed SOU.***
D3D20 Barrier climbability [2019: Table D2.16a]	***Compliance Required*** ***If air-conditioning condensers are proposed for each SOU, the only location for these condensers within an SOU is the balcony.*** ***Ensure that the condenser is positioned in such a way that it does not create any climbable elements, which could result in a potential fall from height.***

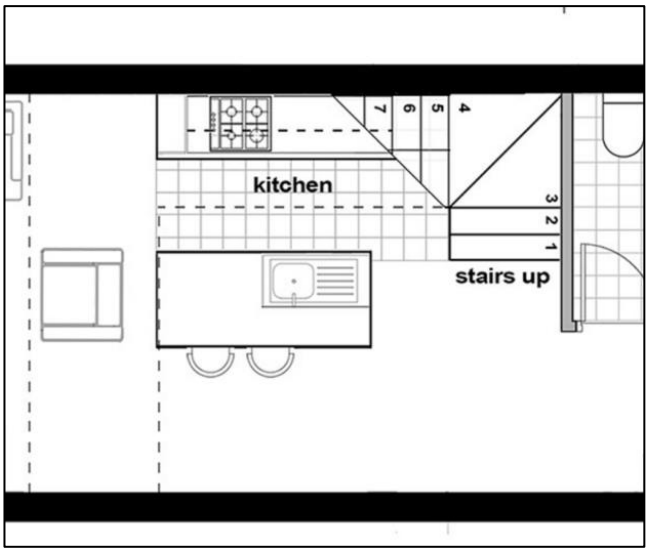
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA Clause	Deemed-to-Satisfy Provision to be addressed
	 ***Typical part floor plan of each SOU.***
E1D2 Fire hydrants [2019: E1.3]	***Compliance Required*** ***This building is required to be equipped with a fire hydrant system. A qualified hydraulic engineer must confirm that the system is compliant and provides compliant system coverage.***
E1D5 Where sprinklers are required: all classifications [2019: Table E1.5]	***Non-compliance*** ***Given that the base building has an effective height of more than 25 meters, the development must be equipped with a fire suppression system throughout in compliance with AS 2118.1 and BCA Specification 17.*** ***As per the email confirmation to AED dated 12/09/2024, the base building is not provided with sprinkler system throughout, so this BCA 2022 Clause E1D5 cannot be complied until the entire building (existing and proposed parts) is provided with a compliant sprinkler system, although the proposed development is for part of the building only.***
E2D5 Buildings more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building [2019: Table E2.2a]	***Compliance Required*** ***This development must be equipped with an automatic smoke detection and alarm system in compliance with BCA Specification 20.***
F4D2 Facilities in residential buildings [2019: F2.1]	***Non-compliance*** ***SOUs Noted as Enclosed Shell Only*** ***The Units are not provided with any facility as required by BCA Clause F4D2.***

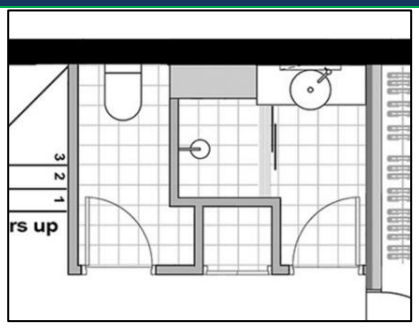
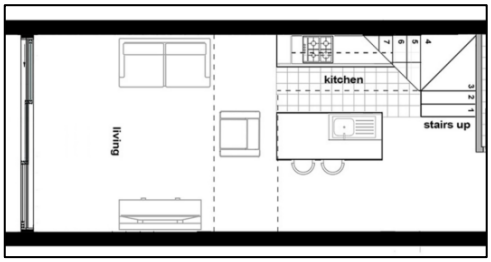
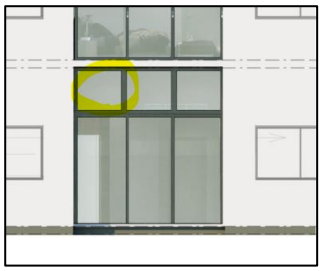
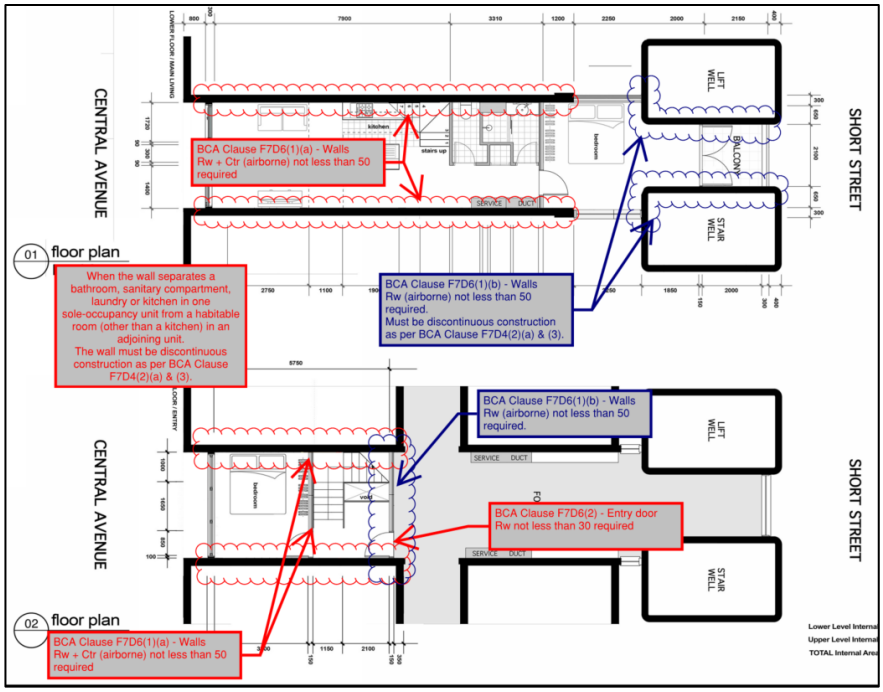
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA Clause	Deemed-to-Satisfy Provision to be addressed
	 ***Typical layout of SOUs noted as Enclosed Shell Only.*** ***SOU*** ***The following facilities required by BCA Clause F4D2 have not been provided to the unit: -*** • ***Laundry - Clothes washing facilities, comprising at least one washtub and a space for a washing machine.*** ***Note: BCA Clause F4D2(c) states that a kitchen sink or washbasin must not be counted as a laundry washtub.*** • ***Laundry –a space for one heat operated drying cabinet or appliance in the same room as the clothes washing facilities. It does not appear there is such space for such facility in the current design.***  ***Wet area in the SOU with internal layout shown.***
F5D2 Height of rooms and other spaces [2019: F3.1]	***Compliance Required*** ***The current design includes sections of the units with internal fitout. However, it does not appear to account for the ceiling space, including the services within.*** ***It is essential to ensure that compliant head height is provided throughout the units, taking into consideration the ceiling space and any services.*** ***Potential Non-compliance*** ***For the Class 2 part of the building, the minimum head height must be no less than 2100mm in kitchen.***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA Clause	Deemed-to-Satisfy Provision to be addressed
	To comply with BCA Clause D3D14, the maximum height of a riser is 190mm. In the SOU with an internal layout, the kitchen area is directly below a private stairway, resulting in a ceiling height that is less than the required 2100mm.  
F6D2 Provision of natural light [2019: F4.1]	***Commentary & Compliance Required*** ***A comment on natural lighting cannot be provided for the units noted as "Enclosed Shell Only," as the design of the internal fitout has not yet been provided.*** ***A re-assessment will be necessary once the internal fitout design is complete.***
NSW F6D6 Ventilation of rooms [2019: F4.5]	***Compliance Required*** ***For the SOU with internal layout shown, the lower-level bedroom and wet areas are not provided with any openable window and/or doors to external space, so mechanical ventilation in compliance BCA Clause F6D6 and AS1668.2 must be provided.***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA Clause	Deemed-to-Satisfy Provision to be addressed
	  ***Where the living room and kitchen are not provided with mechanical ventilation, ensure the openable window must have the area in compliance with BCA Clause F6D7 for natural ventilation.***  
F7D5 Sound insulation rating of floors [2019: F5.4]	***Compliance Required*** ***The floor in the proposed units must have sound insulation rating of floors – an Rw + Ctr (airborne) not less than 50 and an Ln, w (impact) not more than 62.***
F7D6 Sound insulation rating of walls [2019: F5.5]	***Compliance Required*** ***All bounding walls and unit entry doors are required to be provided with the required acoustic rating in compliance with this BCA Clause and the BCA Clause F4D4(2) where applicable. See below markup for details. See this BCA Clause for detailed requirements.*** ***This is just a reminder. All other BCA Part F7 clauses are also required to be complied.*** 

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA Clause	Deemed-to-Satisfy Provision to be addressed
	Typical markup for SOU ***Note that only 1 of 3 SOUs is provided with internal fitout design. It is suggested to provide the details for the other 2 SOUs in order to determine the required acoustic rating and if discontinuous construction is required.***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

2.0 INTRODUCTION

This report provides a Building Code of Australia (BCA) 2022 assessment of Proposed Infilled Apartment to Existing Residential Unit Building, to be located at 22 Central Avenue Manly NSW.

This report provides a BCA assessment table in Section 4.0 that summarises the identified non-compliance matters and offers specific recommendations.

2.1 Basis of Report

The key basis of this report is to address compliance with the Building Code of Australia (BCA) 2022. The scope of services is limited to Sections C – "Fire Resistance", Section D – "Access & Egress", Section E – "Services & Equipment", Section F "Health and Amenity", Section G "Ancillary Provisions" and Section I "Special use Buildings"

This report is based on a desktop assessment of the proposed plans, with specific reference to the following:

- Architectural plans prepared by Urbaine, Drawing Numbers:

	Drawing Title	Drawing No.	Revision	Dated
1.	Location and Site Analysis	URB002		
2.	Site Plan and Section	URB003		June 2024
3.	Floor Plans	URB004A		June 2024
4.	Floor Plans	URB004B		June 2024
5.	Floor Plans	URB004C		June 2024
6.	Elevations and Sections	URB005		June 2024
7.	Floor Areas	URB006		June 2024
8.	East Elevation	URB007		
9.	West Elevation	URB008		

- The Building Code of Australia 2022, prepared by the Australian Building Codes Board.
- The Guide to the BCA 2019 Amendment 1, prepared by the Australian Building Codes Board.

2.2 Purpose of the Report

The purpose of this report is to assess the following:

- Assessment under the current Building Code of Australia 2022 and list any departures from the BCA 2022.
- Provide recommendations to address identified non-compliances, and/or identify potential performance solutions.

2.3 Limitations of the Report

This report does not assess the following:

- Structural Provisions of the BCA (Section B) have not been considered. A suitably qualified Structural Engineer should be engaged to determine compliance.
- Accessibility Provisions of the BCA (BCA Part D4, BCA Clause E3D7-E3D8 (inclusive), F4D5-F4D7 (inclusive) and F4D12) have not been considered. A suitably qualified Access Consultant should be engaged to determine compliance.
- Accessibility Provisions of the BCA have been assessed however compliance with Disability Discrimination Act 1992 (DDA) is outside the scope of this report. It should be noted that BCA compliance does not necessarily meet the requirements of the Disability Discrimination Act (DDA).
- Energy Efficiency Provisions of the BCA (Section J) have not been considered. A suitably qualified Energy Consultant should be engaged to determine compliance.
- Sections H & I of the BCA have not been considered as part of this assessment.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

- Reporting on hazardous materials, WHS matters, or site contamination.
- Assessment of any structural elements or geotechnical matters relating to the building, including any structural or other assessment of the existing fire-resistant levels of the building.
- Consideration of any fire services operations (including hydraulic, electrical, or other systems).
- Assessment of plumbing and drainage installations, including stormwater.
- Assessment of mechanical plant operations, electrical systems, or security systems.
- Heritage significance.
- Consideration of energy or water authority requirements.
- Consideration of Council's local planning policies.
- Environmental or planning issues.
- Requirements of statutory authorities.
- Pest inspection or assessment building damage caused by pests (general/visual pest invasion or damage will be reported, however invasive or intrusive inspections have not been carried out).
- Provision of any construction approvals or certification under Part 6 of the Environmental Planning & Assessment Act 1979.
- Glazing, shading, lighting calculations and the like required by Section J of the BCA have not been carried out.
- BCA 2022 does not directly specify slip-resistance classification(s) for all *accessible paths of travel*; however, we highlight the need under AS 1428.1-2009 for all *accessible paths of travel* to have a slip-resistant surface. We recommend you should seek surface finish advice from an independent specialist slip safety consultant.
- This report is prepared based on the assumption that the base building has been designed and constructed in compliance with the Deemed-to-Satisfy provisions of the relevant BCA versions and Australian Standards.
- Subject to the above, as per email to AED dated 12/09/2024, the client advised that the base building has not been provided with sprinkler system throughout as per Clause E1.5 of the previous BCA versions.
- The drawings submitted for assessment are not scaled, so the measurements are approximate only.
- Two (2) split units noted as in Levels 3, 4, 5 and 6 are proposed to be enclosed shell only without internal fitout. This assessment has been carried out based on the current design.

  AED has been advised that a separate Development Application will be lodged for the internal fitout of these units. Therefore, despite the absence of the internal fitout details, these spaces are considered as Class 2 SOUs in this assessment, rather than Class 2 non-SOU spaces.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

3.0 BCA ASSESSMENT DATA

The following data is provided in respect to review of the building under the Building Code of Australia 2022 in respect to the compliance assessment of the Proposed Infilled Apartment to Existing Residential Unit Building, to be located at 22 Central Avenue Manly NSW.

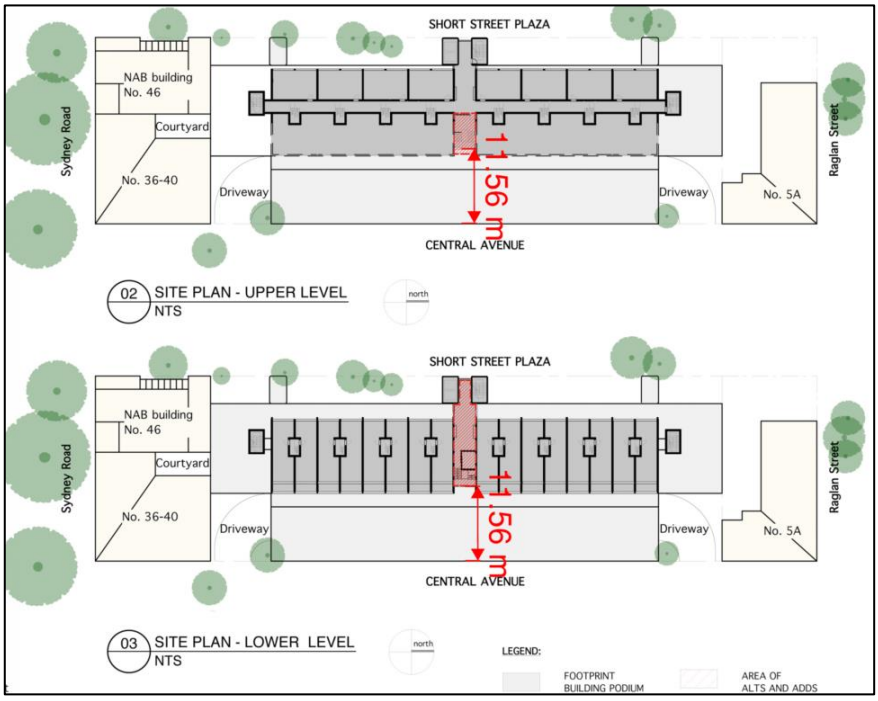
BCA Building Classifications:	Class 2 – Residential Class 6 – Retail Tenancies (N/A to this assessment) Class 7a – Carparking (N/A to this assessment)
Building rise in storeys:	>15 (determined in accordance with C1.2 of the BCA).
Type of Construction:	Type A (determined in accordance with C2D2 of the BCA)
Floor area:	N/A to this assessment because the proposal is Class 2 only.
Effective Height (m):	>25m
Climate Zone (Thermal Design)	5 (determined in accordance with ABCB Climate Map, Sept 2019)

3.1 Location of Fire Source features

The potential *fire source features* to be considered for this building are the external wall of another building on the allotment which is not a Class 10 building, the side or rear of the allotment boundary or the far side of the road bounding the allotment.

In this instance the following setbacks are determined in respect to the fire source features applicable to the building:

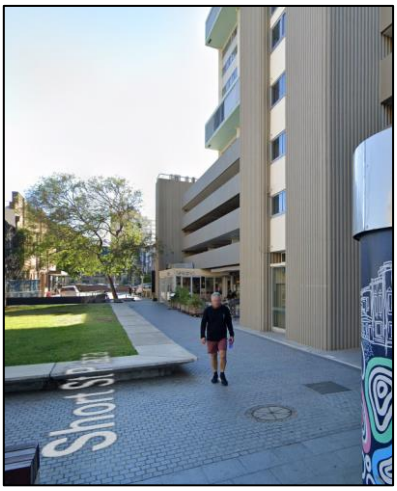
- North – adjacent SOU – N/A
- South – adjacent SOU – N/A
- East – Far end of Central Avenue - >6m
- West – Far end of Short Street Plaza – Potentially with 6m from proposed openings.



Markup showing the distance to Central Avenue.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

SIX Maps screenshot showing allotment boundaries.



Google Map screenshot showing the building and Short Street Plaza.

SIX Maps screenshot showing the width of Short Street Plaza.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

3.2 Summary of Fire Services Required

Summarised below are the BCA Deemed-to-Satisfy fire services required for the building:

- A fire hydrant system must be provided to serve all parts of the building in accordance with BCA Clause E1D2 and AS 2419.1-2021.
- A sprinkler system must be provided throughout all parts of the building in accordance with BCA Part E1, BCA Specification 17.
- Portable fire extinguishers must be provided in accordance with BCA Clause E1D14 and must be selected, located, and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444-2001.
- An automatic smoke and fire detection must be provided in accordance with BCA Part E2, BCA Specification 20, AS 1670.1-2018 and AS 3786-2014, as applicable.
- Service penetrations through building elements required to be fire-resisting must be provided with fire sealing in accordance with BCA Clause C4D15, Specification 13 and AS 1540.4-2014.
- Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in accordance with BCA Clause C4D16.
- Fire doors must be provided in accordance with BCA Clause C4D12, BCA Specification 12 and AS 1905.1-2015.
- Fire dampers must be provided in accordance with BCA Clause C4D15, AS 1668.1-2015, AS 1682.1-2015 and AS 1682.2-2015.

3.3 Building subject to Design and Building Practitioners Act

The Design and Building Practitioners Act 2020 and Design and Building Practitioners Regulation 2021 (the DBP legislation) were established to raise the standards of building design and building work. This legislation applies to class 2 buildings or buildings with a class 2 part.

Design Practitioners (e.g. architects, engineers) have obligations in relation to preparing and declaring Regulated Designs under the DBP legislation. The obligations under the DBP legislation are in addition to design requirements under other legislation.

For more information, please go to:

Design-Practitioners-Handbook-July 2023 Edition
Regulated_Design_Guidance_Material August 2023
Building industry reforms | NSW Fair Trading

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

4.0 BCA ASSESSMENT SUMMARY

The following table details the BCA compliance of the assessed design.

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Section B Structure					
Part B1 Structural provisions					
B1D1 Deemed-to-Satisfy Provisions [2019: B1.0]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements B1P1 to B1P4 are satisfied by complying with B1D2 to B1D6. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable. ***Compliance Required*** • ***Structural engineer to design the balustrading system to comply with Part B1 of the BCA and all relevant Australian Standards.*** • ***Structural engineer to ensure that the system proposed to support the glass panels, spigots or the like, comply with BCA Clause D3D20.*** ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification (and structural details)***
B1D2 Resistance to actions [2019: B1.1]				X	The resistance of a building or structure must be greater than the most critical action effect resulting from different combinations of actions, where— (a) the most critical action effect on a building or structure is determined in accordance with B1D3 and the general design procedures contained in AS/NZS 1170.0; and (b) the resistance of a building or structure is determined in accordance with B1D4. ***Details demonstrating compliance with this clause must be incorporated into the Structural Engineering plans / specification***
B1D3 Determination of individual actions [2019: B1.2]				X	The magnitude of individual actions must be determined in accordance with the following: (a) Permanent actions: (i) the design or known dimensions of the building or structure; and (ii) the unit weight of the construction; and (iii) AS/NZS 1170.1; and (iv) for a Class 7b building, a notional additional permanent roof load of not less than 0.15 kPa to support the addition of solar photovoltaic panels. (b) Imposed actions: (i) the known loads that will be imposed during the occupation or use of the building or structure; and (ii) construction activity actions; and (iii) AS/NZS 1170.1.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(c) Wind, snow and ice and earthquake actions: (i) the applicable annual probability of design event for safety, determined by— (A) assigning the building or structure an Importance Level in accordance with Table B1D3a; and (B) determining the corresponding annual probability of exceedance in accordance with Table B1D3b; and (ii) AS/NZS 1170.2; and (iii) AS/NZS 1170.3 as appropriate; and (iv) AS 1170.4; and (v) in cyclonic areas, metal roof cladding, its connections and immediate supporting members must comply with Specification 4; and (vi) for the purposes of (v), cyclonic areas are those determined as being located in wind regions C and D in accordance with AS/NZS 1170.2. (d) Actions not covered in (a), (b) and (c) above: (i) the nature of the action; and (ii) the nature of the building or structure; and (iii) the Importance Level of the building or structure determined in accordance with Table B1D3a; and (iv) AS/NZS 1170.1. (e) For the purposes of (d) the actions include but are not limited to— (i) liquid pressure action; and (ii) ground water action; and (iii) rainwater action (including ponding action); and (iv) earth pressure action; and (v) differential movement; and (vi) time dependent effects (including creep and shrinkage); and (vii) thermal effects; and (viii) ground movement caused by— (A) swelling, shrinkage or freezing of the subsoil; and (B) landslip or subsidence; and (C) siteworks associated with the building or structure; and (ix) construction activity actions. ***Details demonstrating compliance with this clause must be incorporated into the Structural Engineering plans / specification***
B1D4 Determination of structural resistance of materials and				X	The structural resistance of materials and forms of construction must be determined in accordance with the following, as appropriate: (a) Masonry (including masonry-veneer, unreinforced masonry and reinforced masonry): AS 3700, except— (i) (for piers—isolated or engaged)' is removed from Clause 8.5.1(d); and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
forms of construction [2019: B1.4]					(ii) where Clause 8.5.1 requires design as for unreinforced masonry in accordance with Section 7, the member must also be designed as unreinforced masonry in accordance with Tables 10.3 and 4.1(a)(i)(C) of AS 3700. (b) Concrete: (i) Concrete construction (including reinforced and prestressed concrete): AS 3600. (ii) Autoclaved aerated concrete: AS 5146.1. (iii) Post-installed and cast-in fastenings: AS 5216. (c) Steel construction: (i) Steel structures: AS 4100. (ii) Cold-formed steel structures: AS/NZS 4600. (iii) Residential and low-rise steel framing: NASH Standard – Residential and Low-Rise Steel Framing Part 1 or Part 2. (d) Composite steel and concrete: AS/NZS 2327. (e) Aluminium construction: AS/NZS 1664.1 or AS/NZS 1664.2. (f) Timber construction: (i) Design of timber structures: AS 1720.1. (ii) Timber structures: AS 1684.2, AS 1684.3 or AS 1684.4. (iii) Nailplated timber roof trusses: AS 1720.5. (g) Piling: AS 2159. (h) Glazed assemblies: (i) The following glazed assemblies in an external wall must comply with AS 2047: (A) Windows excluding those listed in (ii). (B) Sliding and swinging glazed doors with a frame, including french and bi-fold doors with a frame. (C) Adjustable louvres. (D) Shopfronts. (E) Window walls with one piece framing. (ii) All glazed assemblies not covered by (i) and the following glazed assemblies must comply with AS 1288: (A) All glazed assemblies not in an external wall. (B) Revolving doors. (C) Fixed louvres. (D) Skylights, roof lights and windows in other than the vertical plane. (E) Sliding and swinging doors without a frame. (F) Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 2047. (G) Second-hand windows, re-used windows and recycled windows. (H) Heritage windows. (I) Glazing used in balustrades and sloping overhead glazing.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(i) Termite Risk Management: Where a primary building element is subject to attack by subterranean termites: AS 3660.1, and— (i) for the purposes of this provision, a primary building element consisting entirely of, or a combination of, any of the following materials is considered not subject to termite attack: (A) Steel, aluminium, or other metals. (B) Concrete. (C) Masonry. (D) Fibre-reinforced cement. (E) Timber — naturally termite resistant in accordance with Appendix C of AS 3660.1. (F) Timber — preservative treated in accordance with Appendix D of AS 3660.1; and (ii) a durable notice must be permanently fixed to the building in a prominent location, such as a meter box or the like, indicating— (A) the termite management system used; and (B) the date of installation of the system; and (C) where a chemical is used, its life expectancy as listed on the appropriate authority's pesticides register label; and (D) the installers or manufacturer's recommendations for the scope and frequency of future inspections for termite activity. (j) Roof construction (except in cyclonic areas): (i) Roof tiling: AS 2050. (ii) Cellulose cement corrugated sheets: AS/NZS 2908.1 with safety mesh installed in accordance with AS/NZS 1562.3 clause 2.4.3.2 except for sub-clause (g)(c)(vii) or plastic sheeting. (iii) Metal roofing: AS 1562.1. (k) Particleboard structural flooring: AS 1860.2. (l) Garage doors and other large access doors in openings not more than 3 m in height in external walls of buildings determined as being located in wind region C or D in accordance with AS/NZS 1170.2: AS/NZS 4505. (m) Lift shafts which are not required to have an FRL, must— (i) except as required by (ii), be completely enclosed with non-perforated material between the bottom of the pit and the ceiling of the lift shaft, other than— (A) at landing doors, emergency doors and pit access doors; and (B) low-rise, low-speed constant pressure lifts; and (C) small-sized, low-speed automatic lifts; and (ii) in atrium and observation areas, be protected with non-perforated material not less than 2.5 m in height— (A) above any places on which a person can stand, which are within 800 mm horizontal reach

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					of any vertical moving lift component including ropes and counterweights; and (B) at the lowest level of the atrium area that the lift serves, on all sides except the door opening, for not less than 2.5 m in height, by enclosure with non-perforated material; and (iii) be of non-brittle material; and (iv) where glazing is used— (A) comply with Table B1D4; or (B) not fail the deflection criteria required by S6C6(c). ***Details demonstrating compliance with this clause must be incorporated into the Structural Engineering plans / specification*** ***Compliance Required*** ***Details demonstrating compliance are to be obtained at CC stage, that all glazing proposed to be used in the balustrades will comply with AS 1288.***
B1D5 Structural software [2019: B1.5]				X	(1) Structural software used in computer aided design of a building or structure, that uses design criteria based on the Deemed-to-Satisfy Provisions of the BCA, including its referenced documents, for the design of steel or timber trussed roof and floor systems and framed building systems, must comply with the ABCB Protocol for Structural Software. (2) Structural software referred to in (1) can only be used for buildings within the following geometric limits: (a) The distance from ground level to the underside of eaves must not exceed 6 m. (b) The distance from ground level to the highest point of the roof, neglecting chimneys, must not exceed 8.5 m. (c) The building width including roofed verandahs, excluding eaves, must not exceed 16 m. (d) The building length must not exceed five times the building width. (e) The roof pitch must not exceed 35 degrees. (3) The requirements of (1) do not apply to design software for individual frame members such as electronic tables similar to those provided in— (a) AS 1684; or (b) NASH Standard Residential and Low-Rise Steel Framing Part 2. ***Details demonstrating compliance with this clause must be incorporated into the Structural Engineering plans / specification***
B1D6 Construction of buildings in flood hazard areas [2019: B1.6]			X		Not applicable. The development is not located in flood hazard area.
Specification 4 Design of buildings in cyclonic areas					
S4C1 Scope			X		Not applicable.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: Spec B1.2: 1]					
S4C2 Roof cladding [2019: Spec B1.2: 2]			X		Not applicable.
Section C Fire resistance					
Part C2 Fire resistance and stability					
C2D1 Deemed-to-Satisfy Provisions [2019: C1.0]			X		Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements C1P1 to C1P9 are satisfied by complying with— (a) C2D2 to C2D14, C3D2 to C3D15 and C4D2 to C4D17; and (b) in a building containing an atrium, Part G3; and (c) for additional requirements for Class 9b buildings, Part I1; and (d) for farm sheds, Part I3.
C2D2 Type of construction required [2019: C1.1]				X	(1) The minimum Type of fire-resisting construction of a building must be determined in accordance with Table C2D2, except as allowed for— (a) certain Class 2, 3 or 9c buildings in C2D6; and (b) a Class 4 part of a building located on the top storey in C2D4(2); and (c) open spectator stands and indoor sports stadiums in C2D8 (2) Each building element must comply with Specification 5 as applicable. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***

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

C2D3 Calculation of rise in storeys [2019: C1.2]			X		(1) The rise in storeys is the sum of the greatest number of storeys at any part of the external walls of the building and any storeys within the roof space— (a) above the finished ground next to that part; or (b) if part of the external wall is on the boundary of the allotment, above the natural ground level at the relevant part of the boundary. (2) A storey is not counted if— (a) it is situated at the top of the building and contains only heating, ventilating or lift equipment, water tanks, or similar service units or equipment; or (b) it is situated partly below the finished ground and the underside of the ceiling is not more than 1 m above the average finished level of the ground at the external wall, or if the external wall is more than 12 m long, the average for the 12 m part where the ground is lowest. (3) In a Class 7 or 8 building, a storey that has an average internal height of more than 6 m is counted as— (a) one storey if it is the only storey above the ground; or

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(b) 2 storeys in any other case. (4) For the purposes of calculating the rise in storeys of a building— (a) a mezzanine is regarded as a storey in that part of the building in which it is situated if its floor area is more than 200 m2 or more than ⅓ of the floor area of the room, whichever is the lesser; and (b) two or more mezzanines are regarded as a storey in that part of the building in which they are situated if they are at or near the same level and have an aggregate floor area more than 200 m2 or more than ⅓ of the floor area of the room, whichever is the lesser.
C2D4 Buildings of multiple classification [2019: C1.3]			X		(1) In a building of multiple classifications, the Type of construction required for the building is the most fire-resisting Type resulting from the application of Table C2D2 on the basis that the classification applying to the top storey applies to all storeys.
C2D5 Mixed types of construction [2019: C1.4]			X		A building may be of mixed Types of construction where it is separated in accordance with C3D8 and the Type of construction is determined in accordance with C2D2 or C2D4.
C2D6 Two storey Class 2, 3 or 9c buildings [2019: C1.5]			X		Not applicable. The development has Rise in Storey greater than 2.
C2D7 Class 4 parts of buildings [2019: C1.6]			X		Not applicable. The development does not contain
C2D8 Open spectator stands and indoor sports stadiums [2019: C1.7]			X		Not applicable. The development does not contain open spectator stands, nor indoor sport stadiums.
C2D9 Lightweight construction [2019: C1.8]				X	(1) Lightweight construction must comply with Specification 6 if it is used in a wall system— (a) that is required to have an FRL; or (b) for a lift shaft, stair shaft or service shaft or an external wall bounding a public corridor including a non-fire-isolated passageway or non-fire-isolated ramp, in a spectator stand, sports stadium, cinema or theatre, railway station, bus station or airport terminal. (2) If lightweight construction is used for the fire-resisting covering of a steel column or the like, and if— (a) the covering is not in continuous contact with the column, then the void must be filled solid, to a height of not less than 1.2 m above the floor to prevent indenting; and (b) the column is liable to be damaged from the movement of vehicles, materials, or equipment, then the covering must be protected by steel or other suitable material. *Lightweight construction*: Construction which incorporates or comprises—

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(a) sheet or board material, plaster, render, sprayed application, or other material similarly susceptible to damage by impact, pressure or abrasion; or (b) concrete and concrete products containing pumice, perlite, vermiculite, or other soft material similarly susceptible to damage by impact, pressure or abrasion; or (c) masonry having a width of less than 70 mm ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C2D10 Non-combustible building elements [2019: C1.9]				X	(1) In a building required to be of Type A or B 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 facade 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 of Type A construction; and (3) A loadbearing internal wall and a loadbearing fire wall, including those that are part of a loadbearing shafts, 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 (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 (iii) fixings, including fixing accessories; or (iv) 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.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(l) Weather sealing materials, applied to gaps not wider than 50mm, 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. (p) Adhesives, including tapes, associated with stiffeners for cladding systems. (q) Fire-protective materials and components required for the protection of penetrations. (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. (d) Aluminium, including aluminium alloy. (e) Autoclaved aerated concrete, including mortar. (f) Iron. (g) Terracotta. (h) Porcelain. (i) Ceramic. (j) Natural stone. (k) Copper. (l) Zinc. (m) Lead. (n) Bronze. (o) 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

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(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 C2D15. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
NSW C2D11 Fire hazard properties [2019: C1.10 and NSW C1.10]				X	(1) The fire hazard properties of the following internal linings, materials and assemblies within a Class 2 to 9 building must comply with Specification 7: (a) Floor linings and floor coverings. (b) Wall linings and ceiling linings. (c) Air-handling ductwork. (d) Lift cars. (e) In Class 9b buildings used as— (i) an entertainment venue, a material used to cover closed back upholstered seats; and (ii) a public hall or the like, a proscenium curtain required by Specification 32. (f) Escalators, moving walkways and non-required non fire-isolated stairways or pedestrian ramps subject to Specification 14. (g) Sarking-type materials. (h) Attachments to floors, ceilings, internal walls, common walls, fire walls and to internal linings of external walls. (i) Other materials including insulation materials other than sarking-type materials. (2) Paint or fire-retardant coatings must not be used in order to make a material comply with a *required fire hazard property*, except in respect of a material referred to in NSW Specification 7, Table S7C4 and to which Notes 4 and 5 are applicable. (3) The requirements of (1) do not apply to a material or assembly if it is— (a) plaster, cement render, concrete, terrazzo, ceramic tile or the like; or (b) a fire-protective covering; or (c) a timber-framed window; or (d) a solid timber handrail or skirting; or (e) a timber-faced door; or (f) an electrical switch, socket-outlet, cover plate or the like; or (g) a material used for— (i) a roof insulating material applied in continuous contact with a substrate; or (ii) an adhesive; or (iii) a damp-proof course, flashing, caulking, sealing, ground moisture barrier, or the like; or (h) a paint, varnish, lacquer or similar finish, other than nitro-cellulose lacquer; or (i) a clear or translucent roof light of glass fibre-reinforced polyester if— (i) the roof in which it is installed forms part of a single storey building required to be Type C construction; and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(ii) the material is used as part of the roof covering; and (iii) it is not closer than 1.5 m from another roof light of the same type; and (iv) each roof light is not more than 14 m2 in area; and (v) the area of the roof lights per 70 m2 of roof surface is not more than 14 m2; or (j) a face plate or neck adaptor of supply and return air outlets of an air handling system; or (k) a face plate or diffuser plate of light fitting and emergency exit signs and associated electrical wiring and electrical components; or (l) a joinery unit, cupboard, shelving, or the like; or (m) an attached non-building fixture and fitting such as— (i) a curtain, blind, or similar decor, other than— (A) a proscenium curtain required by Specification 32; or (B) in a Class 9b building used as an entertainment venue, a material regulated under NSW Table S7C4; and (ii) a whiteboard, window treatment or the like; or (n) timber treads, risers, landings and associated supporting framework installed in accordance with D3D30 where the Spread-of-Flame Index and the Smoke-Developed Index of the timber does not exceed 9 and 8 respectively; or (o) any other material that does not significantly increase the hazards of fire. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C2D12 Performance of external walls in fire [2019: C1.11]			X		Not applicable. This development has Rise-in-Storey more than 2.
C2D13 Fire-protected timber: Concession [2019: C1.13]			X		Fire-protected timber may be used wherever an element is required to be non-combustible, provided— (a) the building is— (i) a separate building; or (ii) a part of a building— (A) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or (B) which is located above or below a part not containing fire-protected timber and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a fire wall for the lower storey; and (b) the building has an effective height of not more than 25 m; and (c) the building has a sprinkler system (other than a FPAA101D or FPAA101H system) throughout complying with Specification 17; and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(d) any insulation installed in the cavity of the timber building element to have an FRL is non-combustible; and (e) cavity barriers are provided in accordance with Specification 9.
C2D14 Ancillary elements [2019: C1.14]				X	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: (a) An ancillary element that is non-combustible. (b) A gutter, downpipe or other plumbing fixture or fitting. (c) A flashing. A grate, grille or similar cover not more than 2 m^2 (d) 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 (iii) does not extend beyond one fire compartment; and (iv) 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). ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C2D15 Fixing of bonded laminated cladding panels			X		Not applicable. No bonded laminated cladding panel is proposed.

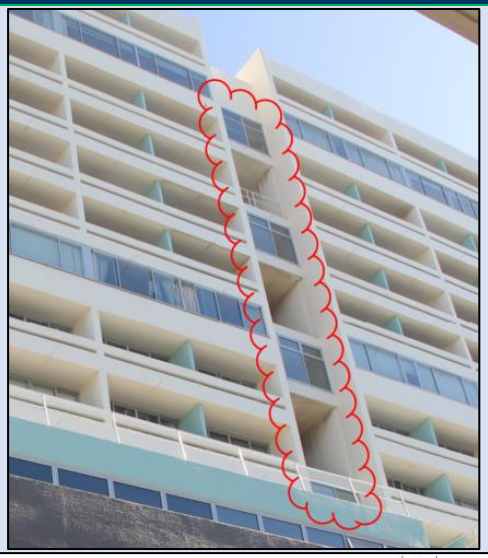
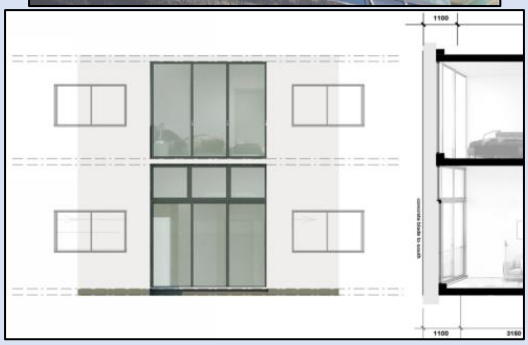
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[New for 2022]					
Part C3 Compartmentation and separation					
C3D1 Deemed-to-Satisfy Provisions [2019: C2.0]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements C1P1 to C1P9 are satisfied by complying with— (a) C2D2 to C2D14, C3D2 to C3D15 and C4D2 to C4D17; and (b) in a building containing an atrium, Part G3; and (c) or additional requirements for Class 9b buildings, Part I1; and (d) for farm sheds, Part I3. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
C3D2 Application of Part [2019: C2.1]			X		(1) C3D3, C3D4 and C3D5 do not apply to a carpark provided with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17, an open-deck carpark or an open spectator stand. (2) C3D13(1)(e) does not apply to a Class 8 electricity network substation.
C3D3 General floor area and volume limitations [2019: C2.2]			X		Not applicable to Class 2.
C3D4 Large isolated buildings [2019 C2.3]			X		Not applicable. The development is not Large Isolated Building.
C3D5 Requirements for open spaces and vehicular access [2019: C2.4]			X		Not applicable. The development is not Large Isolated Building.
C3D6 Class 9 buildings [2019: C2.5]			X		Not applicable. The development does not contain Class 9.
C3D7 Vertical separation of openings in external walls [2019: C2.6]				X	(1) If in a building of Type A construction, any part of a window or other opening in an external wall is above another opening in the storey next below and its vertical projection falls no further than 450 mm outside the lower opening (measured horizontally), the openings must be separated by— (a) a spandrel which— (i) is not less than 900 mm in height; and (ii) extends not less than 600 mm above the upper surface of the intervening floor; and (iii) is of non-combustible material having an FRL of not less than 60/60/60; or (b) part of a curtain wall or panel wall that complies with (a); or

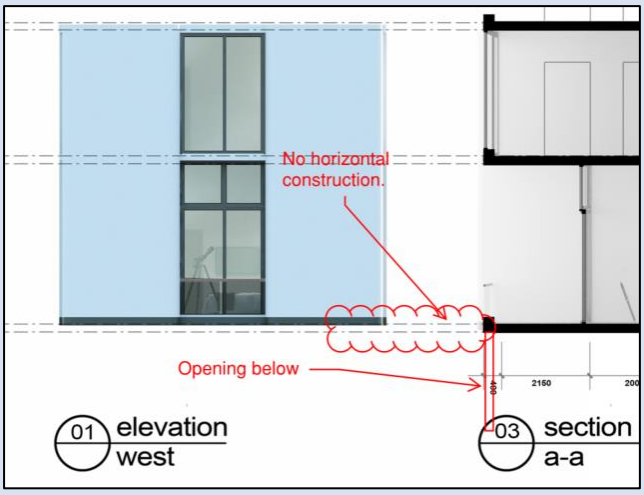
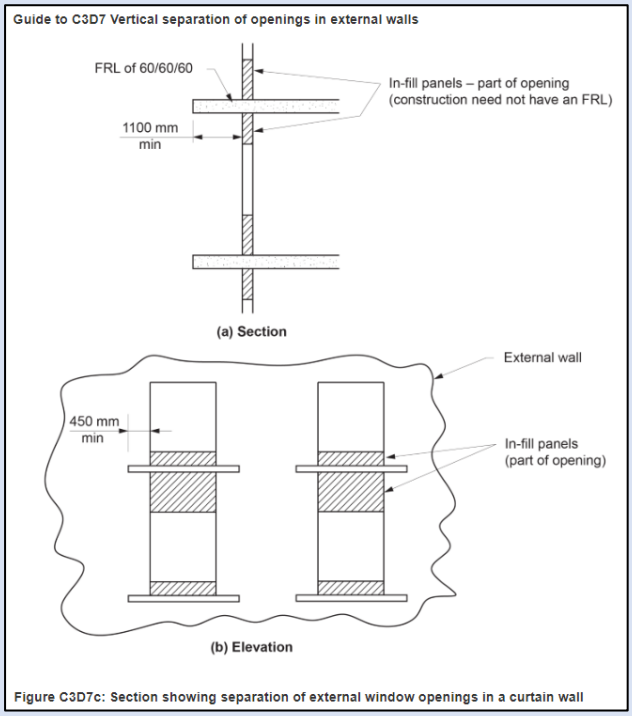
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(c) construction that complies with (a) behind a curtain wall or panel wall and has any gaps packed with a non-combustible material that will withstand thermal expansion and structural movement of the walling without the loss of seal against fire and smoke; or (d) a slab or other horizontal construction that— (i) projects outwards from the external face of the wall not less than 1100 mm; and (ii) extends along the wall not less than 450 mm beyond the openings concerned; and (iii) is non-combustible and has an FRL of not less than 60/60/60. (2) The requirements of (1) do not apply to— (a) an open-deck carpark; or (b) an open spectator stand; or (c) a building which has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 installed throughout; or (d) openings within the same stairway; or (e) openings in external walls where the floor separating the storeys does not require an FRL with respect to integrity and insulation. (3) For the purposes of C3D7, window or other opening means that part of the external wall of a building that does not have an FRL of 60/60/60 or greater. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Non-compliance*** ***The building is a Type A Construction, so vertical separation is required for openings in external walls. Where the building is sprinkler-protected throughout, vertical separation is not required.*** ***Despite the effective height being greater than 25m, the base building is not provided with sprinkler system throughout, in accordance with the information from the client's email to AED dated 12/09/2024.*** ***Based on this information, the current design does not comply.*** ***Central Avenue Side*** ***Spandrel as detailed in this BCA clause is provided in the current design separating the openings above and below. This BCA clause is not complied.***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					  ***Short Street Plaza Side*** ***Similarly, the proposed openings on the Short Street Plaza side are not provided with vertical separation.*** ***Note that, as shown in Figure C3D7c of Guide to C3D7 (see below), a slab with FRL and dimensions specified by this BCA clause is considered as a horizontal spandrel when it is protruding from the external wall with the opening. The proposed lower level of each unit is not provided with such horizontal construction separating the below opening. Therefore, it is not considered as vertical separated by horizontal construction.*** ***This is considered as technical non-compliance.***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					
					
					

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
C3D8 Separation by fire walls [2019: C2.7]				X	(1) Construction — A fire wall must be constructed in accordance with the following: (a) The fire wall has the relevant FRL prescribed by Specification 5 for each of the adjoining parts, and if these are different, the greater FRL, except where S5C19(3)(c)(i), S5C22(3)(c)(i) and S5C25(3)(c)(i) permit a lower FRL on the carpark side. (b) Any openings in a fire wall must not reduce the FRL required by Specification 5 for the fire wall, except where permitted by the Deemed-to-Satisfy Provisions of Part C4. (c) Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or sarking- type material, must not pass through or cross the fire wall unless the required fire-resisting performance of the fire wall is maintained. (2) Separation of buildings — A part of a building separated from the remainder of the building by a fire wall may be treated as a separate building for the purposes of the Deemed-to-Satisfy Provisions of Sections C, D and E if it is constructed in accordance with (1) and the following: (a) The fire wall extends through all storeys and spaces in the nature of storeys that are common to that part and any adjoining part of the building. (b) The fire wall is carried through to the underside of the roof covering. (c) Where the roof of one of the adjoining parts is lower than the roof of the other part, the fire wall extends to the underside of— (i) the covering of the higher roof, or not less than 6 m above the covering of the lower roof; or (ii) the lower roof if it has an FRL not less than that of the fire wall and no openings closer than 3m to any wall above the lower roof; or (iii) the lower roof if its covering is non-combustible and the lower part has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17. (3) Separation of fire compartments — A part of a building separated from the remainder of the building by a fire wall may be treated as a separate fire compartment if it is constructed in accordance with (a) and the fire wall extends to the underside of— (a) a floor having an FRL required for a fire wall; or (b) the roof covering. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C3D9 Separation of classifications in the same storey [2019: C2.8]			X		Not applicable. The proposed SOUs are located within Class 2 part of the building.
C3D10 Separation of classifications in different storeys [2019: C2.9]				X	If parts of different classification are situated one above the other in adjoining storeys, they must be separated as follows: (a) Type A construction — The floor between the adjoining parts must have an FRL of not less than that prescribed in Specification 5 for the classification of the lower storey.

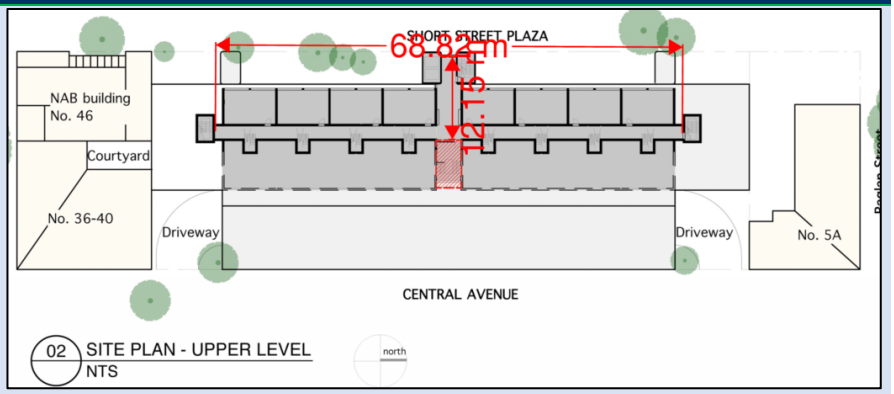
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
C3D11 Separation of lift shafts [2019: C2.10]				X	(1) Any lift connecting more than 2 storeys, or more than 3 storeys if the building is sprinklered, (other than lifts which are wholly within an atrium) must be separated from the remainder of the building by enclosure in a shaft in which— (a) in a building required to be of Type A construction — the walls have the relevant FRL prescribed by Specification 5; and (b) in a building required to be of Type B construction — the walls— (i) if loadbearing, have the relevant FRL prescribed by Tables S5C21a to S5C21f of Specification 5; or (ii) if non-loadbearing, be of non-combustible construction. (3) An emergency lift must be contained within a fire-resisting shaft having an FRL of not less than 120/120/120. (4) Openings for lift landing doors and services must be protected in accordance with the Deemed-to-Satisfy Provisions of Part C4. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Compliance Required*** ***The existing lift shaft must not be compromised by the proposed development and must achieve a FRL of not less than 120/120/120.*** 
C3D12 Stairways and lifts in one shaft [2019: C2.11]			X		Not applicable to this development.
C3D13 Separation of equipment [2019: C2.12]			X		Not applicable. The development does not contact any of the following: - • lift motors and lift control panels; or • emergency generators used to sustain emergency equipment operating in the emergency mode; or • central smoke control plant; or • boilers; or

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					• a battery system installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200 kWh or more. • On-site fire pumps.
C3D14 Electricity supply system [2019: C2.13]			X		Not applicable. This development does not contain any of the following: - • An electricity substation • A main switchboard • An electrical conductors • All switchboards in the electrical installation, which sustain the electricity supply to the emergency equipment • Emergency equipment includes but is not limited to the following: (a) Fire hydrant booster pumps. (b) Pumps for automatic sprinkler systems, water spray, chemical fluid suppression systems or the like. (c) Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building. (d) Air handling systems designed to exhaust and control the spread of fire and smoke. (e) Emergency lifts. (f) Control and indicating equipment. (g) Emergency warning and intercom systems.
C3D15 Public corridors in Class 2 and 3 buildings [2019: C2.14]		X			In a Class 2 or 3 building, a public corridor, if more than 40 m in length, must be divided at intervals of not more than 40 m with smoke-proof walls complying with S11C2. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Potential Non-compliance*** ***Based on the Site Plan, the public corridors are approximately 81 meters in total length and do not appear to be provided with any smoke separation.*** ***It is likely that this DtS non-compliance existed in the building prior to the current development. Therefore, it is expected that this issue has already been addressed by a Performance Solution. If an existing Fire Engineering Report has previously addressed this DtS non-compliance (formerly BCA Clause C2.14), a re-assessment by a qualified fire engineer may be required for this proposal.*** ***Please note: The drawing is not to scale, so the measurement is approximate.***

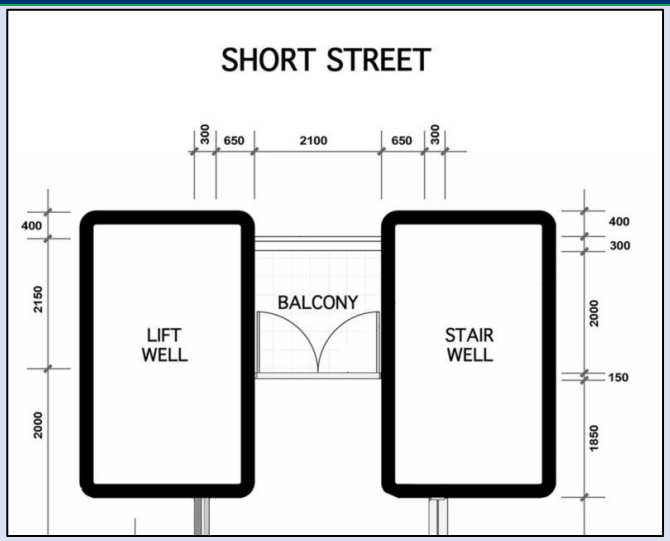
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 ***Typical upper levels of proposed SOUs.***
Part C4 Protection of openings					
C4D1 Deemed-to-Satisfy Provisions [2019: C3.0]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements C1P1 to C1P9 are satisfied by complying with— (a) C2D2 to C2D14, C3D2 to C3D15 and C4D2 to C4D17; and (b) in a building containing an atrium, Part G3; and (c) for additional requirements for Class 9b buildings, Part I1; and (d) for farm sheds, Part I3. (2) Where a Performance Solution is proposed the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
C4D2 Application of Part [2019: C3.1]			X		(1) The Deemed-to-Satisfy Provisions of this Part do not apply to the following: (a) Control joints, weep holes and the like in external walls of masonry construction and joints between panels in external walls of pre-cast concrete panel construction if, in all cases they are not larger than necessary for the purpose. (b) Non-combustible ventilators for subfloor or cavity ventilation, if each does not exceed 45 000 mm2 in face area and is spaced not less than 2 m from any other ventilator in the same wall. (c) Openings in the vertical plane formed between building elements at the construction edge or perimeter of a balcony or verandah, colonnade, terrace, or the like. (d) In a carpark floor other than a floor that separates a part not used as a carpark, and subject to the following openings in a carpark floor: (i) Service penetrations. (ii) Openings formed by a vehicle ramp. (e) The requirements of (d) only apply where the connected carpark levels comply as a single fire compartment for the purposes of all other requirements of the Deemed-to-Satisfy Provisions of Sections C, D and E. (2) For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings in building elements required to be fire-resisting include doorways, windows (including any associated fanlight), infill panels and fixed or openable glazed areas that do not have the required FRL.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(3) For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings, other than those covered under (1)(c), between building elements such as columns, beams and the like, in the plane formed at the construction edge or perimeter of the building, are deemed to be openings in an external wall.
C4D3 Protection of openings in external walls [2019: C3.2]				X	(1) Subject to (2), openings in an external wall that is required to have an FRL must be protected in accordance with C4D5, and if wall-wetting sprinklers are used they must be located externally. (2) The requirements of (1) only apply if the distance between the opening and the fire-source feature to which it is exposed is less than— (a) 3 m from a side or rear boundary of the allotment; or (b) 6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a storey at or near ground level; or (c) 6 m from another building on the allotment that is not Class 10. (3) Openings in an external wall that is required to have an FRL, if required to be protected under (1), must not occupy more than 1/3 of the area of the external wall of the storey in which it is located unless they are in a Class 9b building used as an open spectator stand. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Compliance Required*** ***BCA Clause C4D3(1) requires that the openings in an external wall that is required to have an FRL must be protected in accordance with C4D5, and if wall-wetting sprinklers are used they must be located externally, and Clause C4D3(1) only apply if the distance between the opening and the fire-source feature to which it is exposed is less than 6 m from the far boundary of a road adjoining the allotment, if not located in a storey at or near ground level.*** ***Given that the distance between the balcony doors and the far end of Short Street Plaza is less than 6 meters, all balcony doors are required to be protected in compliance with BCA Clause C4D5. It is recommended that a Performance Solution be provided to negate the need for fire suppression.*** 

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 ***Typical part floor plan of each SOU***
C4D4 Separation of external walls and associated openings in different fire compartments [2019: C3.3]			X		Not applicable. As per Guide to BCA Volume 1's Clause C4D4, Sole-occupancy units in Class 2 and Class 3 buildings are not fire compartments to which C4D4 applies.
C4D5 Acceptable methods of protection [2019: C3.4]			X		(1) Where protection is required, doorways, windows and other openings must be protected as follows: (a) Doorways— (i) internal or external wall-wetting sprinklers as appropriate used with doors that are self-closing or automatic closing; or (ii) –/60/30 fire doors that are self-closing or automatic closing. (b) Windows— (i) internal or external wall-wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position; or (ii) –/60/– fire windows that are automatic closing or permanently fixed in the closed position; or (iii) –/60/– automatic closing fire shutters. (c) Other openings— (i) excluding voids — internal or external wall-wetting sprinklers, as appropriate; or (ii) construction having an FRL not less than –/60/–. (2) Fire doors, fire windows and fire shutters must comply with Specification 12.
C4D6 Doorways in fire walls			X		Not applicable. No fire wall is required nor proposed.

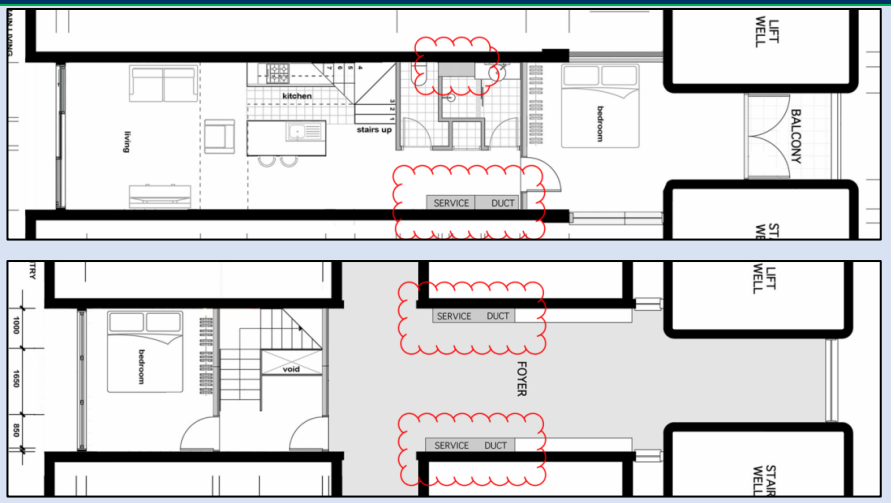
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: C3.5]					
C4D7 Sliding fire doors [2019: C3.6]			X		Not applicable. No sliding fire door is required nor proposed.
C4D8 Protection of doorways in horizontal exits [2019: C3.7]			X		Not applicable. No horizontal exit is required nor proposed.
C4D9 Openings in fire-isolated exits [2019: C3.8]			X		Not applicable to this development.
C4D10 Service penetrations in fire-isolated exits [2019: C3.9]			X		Not applicable to this development.
C4D11 Openings in fire-isolated lift shafts [2019: C3.10]			X		Not applicable to this development.
NSW C4D12 Bounding construction: Class 2 and 3 buildings and Class 4 parts [2019: C3.11]				X	(1) A doorway in a Class 2 building must be protected if it provides access from a sole-occupancy unit to— (a) a public corridor, public lobby, or the like; or (b) a room not within a sole-occupancy unit; or (c) the landing of an internal non fire-isolated stairway that serves as a required exit; or (d) another sole-occupancy unit. (2) A doorway in a Class 2 building must be protected if it provides access from a room not within a sole-occupancy unit to— (a) a public corridor, public lobby, or the like; or (b) the landing of an internal non fire-isolated stairway that serves as a required exit. (4) Except as provided for in NSW C4D12(5), protection for a doorway required under (1), (2) or (3) must be at least— (a) in a building of Type A construction — a self-closing –/60/30 fire door; (6) Other openings in internal walls which are required to have an FRL with respect to integrity and insulation must not reduce the fire-resisting performance of the wall. (7) A door required by (4) or (5) may be automatic-closing in accordance with the following: (a) The automatic-closing operation must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					relevant provisions of AS 1670.1 and located not more than 1.5 m horizontal distance from the approach side of the doorway. (b) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification 17, is installed in the building, activation of the system must also initiate the automatic- closing operation. (8) The requirements of (9) apply in a Class 2 or 3 building where a path of travel to an exit— (a) does not provide a person seeking egress with a choice of travel in different directions to alternative exits; and (b) is along an open balcony, landing or the like; and (c) passes an external wall of— (i) another sole-occupancy unit; or (ii) a room not within a sole-occupancy unit. (9) The external wall mentioned in (8)(c) must— (a) be constructed of concrete or masonry, or be lined internally with a fire-protective covering; and (b) have any doorway fitted with a self-closing, tight-fitting solid core door not less than 35 mm thick; and (c) have any windows or other openings— (i) protected internally in accordance with C4D5; or (ii) located at least 1.5 m above the floor of the balcony, landing or the like. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C4D13 Openings in floors and ceilings for services [2019: C3.12]				X	(1) Where a service passes through— (a) a floor that is required to have an FRL with respect to integrity and insulation; or (b) a ceiling required to have a resistance to the incipient spread of fire, the service must be installed in accordance with (2). (2) A service must be protected— (a) in a building of Type A construction, by a shaft complying with Specification 5; or (c) in accordance with C4D15. (3) Where a service passes through a floor which is required to be protected by a fire-protective covering, the penetration must not reduce the fire performance of the covering. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Compliance Required*** ***It appears that there are service penetrations throughout all proposed SOUs, as indicated in the clouded areas of the screenshot below. These penetrations must be protected by a shaft that complies with BCA Specification 5 or protected in accordance with BCA Clause C4D15.***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 ***Typical markups for each SOU.***
C4D14 Openings in shafts [2019: C3.13]				X	In a building of Type A construction, an opening in a wall providing access to a ventilating, pipe, garbage or other service shaft must be protected by— (a) if it is in a sanitary compartment — a door or panel which, together with its frame, is non-combustible or has an FRL of not less than –/30/30; or (b) a self-closing –/60/30 fire door or hopper; or (c) an access panel having an FRL of not less than –/60/30; or (d) if the shaft is a garbage shaft — a door or hopper of non-combustible construction. ***Where applicable, details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C4D15 Openings for service installations [2019: C3.15]				X	(1) The requirements of (2) apply where an electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrates a building element (other than an external wall or roof) that is required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire. (2) An installation mentioned in (1) must comply with any one of the following: (a) Tested systems — the following applies: (i) The service, building element and any protection method at the penetration— (A) are identical with a prototype assembly of the service, building element and protection method which has been tested in accordance with AS 4072.1 and AS 1530.4 and has achieved the required FRL or resistance to the incipient spread of fire; or (B) differ from a prototype assembly of the service, building element and protection method in accordance with Section 4 of AS 4072.1. (ii) It complies with (i) except for the insulation criteria relating to the service if—

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(A) the service is a pipe system comprised entirely of metal (excluding pipe seals or the like); and (B) any combustible building element is not located within 100mm of the service for a distance of 2 m from the penetration; and (C) combustible material is not able to be located within 100 mm of the service for a distance of 2m from the penetration; and (D) it is not located in a required exit. (iii) The determination of the required FRL must be confirmed in a report from an Accredited Testing Laboratory in accordance with Specifications 1 and 2. (b) Ventilation and air-conditioning — in the case of ventilating or air-conditioning ducts or equipment, the installation is in accordance with AS 1668.1. (c) Compliance with Specification 13 — the following applies: (i) The service is a pipe system comprised entirely of metal (excluding pipe seals or the like) and is installed in accordance with Specification 13 and it— (A) penetrates a wall, floor or ceiling, but not a ceiling required to have a resistance to the incipient spread of fire; and (B) connects not more than 2 fire compartments in addition to any fire-resisting service shafts; and (C) does not contain a flammable or combustible liquid or gas. (ii) The service is sanitary plumbing installed in accordance with Specification 13 and it— (A) is of metal or UPVC pipe; and (B) penetrates the floors of a Class 5, 6, 7, 8 or 9b building; and (C) is in a sanitary compartment separated from other parts of the building by walls with the FRL required by Specification 5 for a stair shaft in the building and a self-closing –/60/30 fire door. (iii) The service is a wire or cable, or a cluster of wires or cables installed in accordance with Specification 13 and it— (A) penetrates a wall, floor or ceiling, but not a ceiling required to have a resistance to the incipient spread of fire; and (B) connects not more than 2 fire compartments in addition to any fire-resisting service shafts. (iv) The service is an electrical switch, outlet, or the like, and it is installed in accordance with Specification 13. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C4D16 Construction joints [2019: C3.16]				X	(1) Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner—

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(a) identical with a prototype tested in accordance with AS 4072.1 and AS 1530.4 to achieve the required FRL; or (b) that differs from a prototype in accordance with Section 4 of AS 4072.1 and achieves the required FRL. (2) The determination of the required FRL must be confirmed in a report from an Accredited Testing Laboratory in accordance with Specifications 1 and 2. (3) The requirements of (1) do not apply where joints, spaces and the like between fire-protected timber elements are provided with cavity barriers in accordance with Specification 9. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
C4D17 Columns protected with lightweight construction to achieve an FRL [2019: C3.17]				X	A column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL or resistance to the incipient spread of fire. ***Where any columns are required to be protected and lightweight construction is proposed, details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Specification 5 Fire-resisting construction					
S5C1 Scope [2019: Spec C1.1: 1]			X		This Specification contains requirements for the fire-resisting construction of building elements.
S5C2 Exposure to fire-source features [2019: Spec C1.1: 2.1]			X		(1) A part of a building element is exposed to a fire-source feature if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that— (a) has an FRL of not less than 30/–/–; and (b) is neither transparent nor translucent. (2) A part of a building element is not exposed to a fire-source feature if the fire-source feature is— (a) an external wall of another building that stands on the allotment and the part concerned is more than 15 m above the highest part of that external wall; or (b) a side or rear boundary of the allotment and the part concerned is below the level of the finished ground at every relevant part of the boundary concerned. (3) If various distances apply for different parts of a building element— (a) the entire element must have the FRL applicable to that part having the least distance between itself and the relevant fire-source feature; or (b) each part of the element must have the FRL applicable according to its individual distance from the relevant fire source feature. (4) The requirements of (3) do not override or permit any exemption from S5C3.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
S5C3 Fire protection for a support of another part [2019: Spec C1.1: 2.2]				X	(1) Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part, subject to (2), must— (a) have an FRL not less than that required by other provisions of this Specification; and (b) if located within the same fire compartment as the part it supports have an FRL in respect of structural adequacy the greater of that required— (i) for the supporting part itself; and (ii) for the part it supports; and (c) be non-combustible— (i) if required by other provisions of this Specification; or (ii) if the part it supports is required to be non-combustible. (2) The following building elements need not comply with (1)(b) and (1)(c)(ii): (a) An element providing lateral support to an external wall complying with S5C24(1)(b) or C2D12. (b) An element providing support within a carpark and complying with S5C19, S5C22 or S5C25. (c) A roof providing lateral support in a building— (i) of Type A construction if it complies with S5C15(a), (b) or (d); (d) A column providing lateral support to a wall where the column complies with S5C6(1) and (2). (e) An element providing lateral support to a fire wall or fire-resisting wall, provided the wall is supported on both sides and failure of the element on one side does not affect the fire performance of the wall. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S5C4 Lintels [2019: Spec C1.1: 2.3]				X	(1) A lintel must have the FRL required for the part of the building in which it is situated. (2) A lintel need not comply with (1) if it does not contribute to the support of a fire door, fire window or fire shutter, and— (a) it spans an opening in— (i) a wall of a building containing only one storey; or (ii) a non-loadbearing wall of a Class 2 or 3 building; or (b) it spans an opening in masonry which is not more than 150 mm thick and— (i) not more than 3m wide if the masonry is non-loadbearing; or (ii) not more than 1.8 m wide if the masonry is loadbearing and part of a solid wall or one of the leaves of a cavity wall. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S5C5 Method of attachment not to reduce the fire-				X	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.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
resistance of building elements [2019: Spec C1.1: 2.4]					***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S5C6 General concessions [2019: Spec C1.1: 2.5]			X		(1) Steel columns — A steel column, other than one in a fire wall or common wall, need not have an FRL in a building that contains— (a) only 1 storey; or (b) 2 storeys in some of its parts and 1 storey only in its remaining parts if the sum of the floor areas of the upper storeys of its 2 storey parts does not exceed the lesser of— (i) 1/8 of the sum of the floor areas of the 1 storey parts; or (ii) in the case of a building to which one of the maximum floor areas specified in Table C3D3 is applicable — 1/10of that area; or (iii) in the case of a building to which two or more of the maximum floor area specified in Table C3D3 is applicable — 1/10 of the lesser of those areas. (2) Timber columns — A timber column may be used in a single storey building if— (a) in a fire wall or common wall the column has an FRL not less than that listed in the appropriate Tables S5C11a to S5C11g, S5C21a to S5C21f or S5C24a to S5C24e; and (b) in any other case where the column is required to have an FRL in accordance with Tables S5C11a to S5C11g, S5C21a to S5C21f or S5C24a to S5C24e, it has an FRL of not less than 30/–/–. (3) Structures on roofs — A non-combustible structure situated on a roof need not comply with the other provisions of this Specification if it only contains— (a) lift motor equipment; or (b) one or more of the following: (i) Hot water or other water tanks. (ii) Ventilating ductwork, ventilating fans and their motors. (iii) Air-conditioning chillers. (iv) Window cleaning equipment. (v) Other service units that are non-combustible and do not contain flammable or combustible liquids or gases. (4) Curtain walls and panel walls — A requirement for an external wall to have an FRL does not apply to a curtain wall or panel wall which is of non-combustible construction and fully protected by automatic external wall-wetting sprinklers. (5) Balconies and verandahs — A balcony, verandah or the like and any incorporated supporting part, which is attached to or forms part of a building, need not comply with Tables S5C11a to S5C11g, S5C21a to S5C21f and S5C24a to S5C24e if— (a) it does not form part of the only path of travel to a required exit from the building; and (b) in Type A construction— (i) it is situated not more than 2 storeys above the lowest storey providing direct egress to a road or open space; and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(ii) any supporting columns are of non-combustible construction.
S5C7 Mezzanine floors: Concession [2019: Spec C1.1: 2.6]			X		Not applicable. No mezzanine floor is proposed.
S5C8 Enclosure of shafts [2019: Spec C1.1: 2.7]				X	(1) Shafts required to have an FRL must be enclosed at the top and bottom by construction having an FRL not less than that required for the walls of a non-loadbearing shaft in the same building. (2) The provisions of (1) need not apply to— (a) the top of a shaft extending beyond the roof covering, other than one enclosing a fire-isolated stairway or ramp; or (b) the bottom of a shaft if it is non-combustible and laid directly on the ground ***Where shaft for services is proposed, details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S5C9 Carparks in Class 2 and 3 buildings [2019: Spec C1.1: 2.8]			X		Not applicable. The Rise-in-Storey of the building is more than 3.
S5C10 Residential care building: Concession [2019: Spec C1.1: 2.9]			X		Not applicable. The development does not contain any residential care building.
S5C11 Type A fire-resisting construction — Fire-resistance of building elements [2019: Spec C1.1: 3.1 and Table 3]				X	(1) In a building required to be of Type A construction— (a) each building element listed in Tables S5C11a to S5C11g and any beam or column incorporated in it, must have an FRL not less than that listed in those Tables for the particular Class of building concerned; and (b) any internal wall required to have an FRL with respect to integrity and insulation must extend to— (i) the underside of the floor next above; or (ii) the underside of a roof complying with Tables S5C11a to S5C11g; or (iii) if under S5C15 the roof is not required to comply with Tables S5C11a to S5C11g, the underside of the non-combustible roof covering and, except for roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not be crossed by timber or other combustible building elements; or (iv) a ceiling that is immediately below the roof and has a resistance to the incipient spread of fire to the roof space between the ceiling and the roof of not less than 60 minutes; and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(c) a loadbearing internal wall and a loadbearing fire wall (including those that are part of a loadbearing shaft) must be constructed from— (i) concrete; or (ii) masonry; or (iii) subject to (2), fire-protected timber; or (iv) any combination of (i) to (iii); and (d) the FRLs specified in Tables S5C11a to S5C11g for an external column apply also to those parts of an internal column that face and are within 1.5 m of a window and are exposed through that window to a fire-source feature. (2) For the purposes of (1)(c)(iii), fire-protected timber may be used, provided that— (a) the building is— (i) a separate building; or (ii) a part of a building— (A) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or (B) which is located above or below a part not containing fire-protected timber and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a fire wall for the lower storey; and (b) the building has an effective height of not more than 25 m; and (c) the building has a sprinkler system (other than a FPAA101D or FPAA101H system) throughout complying with Specification 17; and (d) any insulation installed in the cavity of the timber building element required to have an FRL is non-combustible; and (e) cavity barriers are provided in accordance with Specification 9. (3) For the purposes of Table S5C11a and Table S5C11b, external wall includes any column and other building element incorporated within it or other external building element. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***

Compliance Required

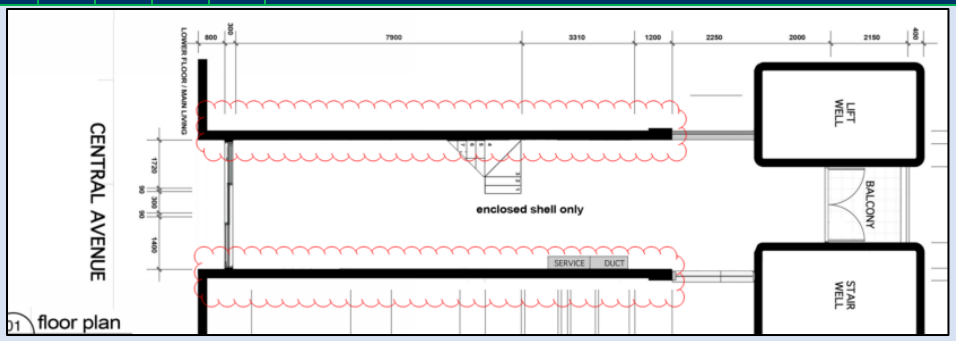
The walls highlighted in the screenshot below were originally external walls and, as such, were not required to be fire-rated. However, with the proposed development, these walls will now serve as internal bounding walls between SOUs.

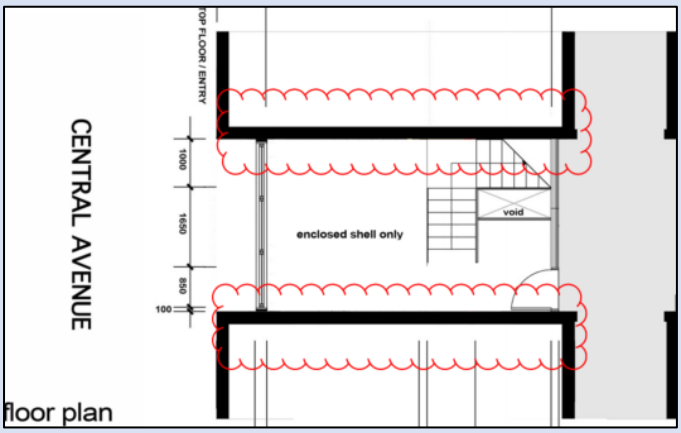
To comply with the relevant standards, ensure that these walls achieve the required Fire Resistance Level (FRL):

- ***Loadbearing walls: FRL of 90/90/90.***
- ***Non-loadbearing walls: FRL of -/60/60.***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS





Typical markups for each proposed SOU.

Compliance Required

External

External walls, that are required by this BCA Clause to have the FRLs must be tested from both directions. i.e. the required FRLs must be achieved in both directions and tested by an accredited laboratory in accordance with AS1530.4.

Table S5C11a: Type A construction: FRL of loadbearing parts of external walls

Distance from a *fire-source feature*	FRL (in minutes): *Structural adequacy/ Integrity / Insulation*			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/60/60	120/90/90	180/180/120	240/240/180
3 m or more	90/60/30	120/60/30	180/120/90	240/180/90

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

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

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS

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

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

Fire Walls

Note that, regardless if the proposed fire wall is loadbearing or not, the fire wall must be providing with a rating for structural adequacy.

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

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

Internal

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

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

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

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

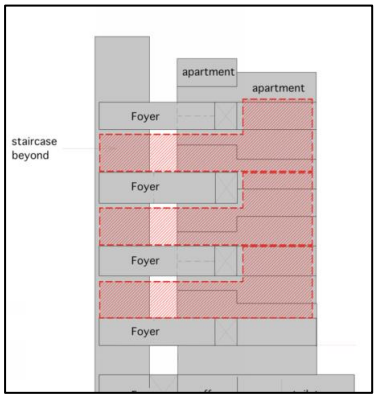
Others

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

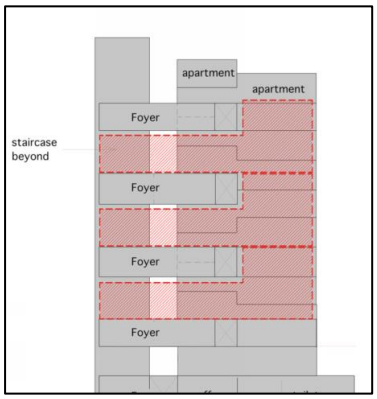
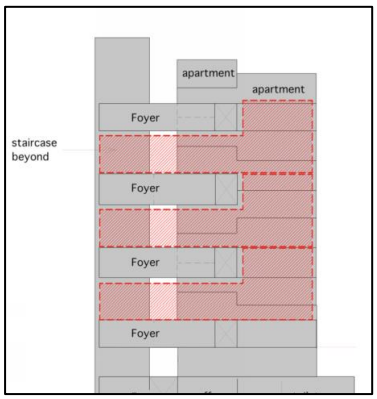
BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS

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

Building element	FRL (in minutes): *Structural adequacy / Integrity / Insulation*			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Other *loadbearing* internal walls, internal beams, trusses and columns	90/–/–	120/–/–	180/–/–	240/–/–
Floors	90/90/90	120/120/120	180/180/180	240/240/240
Roofs	90/60/30	120/60/30	180/60/30	240/90/60

S5C12 Type A fire-resisting construction — Concessions for floors [2019: Spec C1.1: 3.2]			X		A floor need not comply with Tables S5C11a to S5C11g if— (a) it is laid directly on the ground; or (b) in a Class 2, 3, 5 or 9 building, the space below is not a storey, does not accommodate motor vehicles, is not a storage or work area, and is not used for any other ancillary purpose; or (c) it is a timber stage floor in a Class 9b building laid over a floor having the required FRL and the space below the stage is not used as a dressing room, store room, or the like; or (d) it is within a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building; or (e) it is an open-access floor (for the accommodation of electrical and electronic services and the like) above a floor with the required FRL.
S5C13 Type A fire-resisting construction — Floor loading of Class 5 and 9b buildings: Concession [2019: Spec C1.1: 3.3]			X		Not applicable. The development does not contain any Class 5 nor 9b part.
S5C14 Type A fire-resisting construction — Roof superimposed on concrete slab: Concession [2019: Spec C1.1: 3.4]			X		Not applicable. The development does not involve any roof. 

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
S5C15 Type A fire-resisting construction — Roof: Concession [2019: Spec C1.1: 3.5]			X		Not applicable. The development does not involve any roof. 
S5C16 Type A fire-resisting construction — Roof lights [2019: Spec C1.1: 3.6]			X		Not applicable. The development does not involve any roof. 
S5C17 Type A fire-resisting construction — Internal columns and walls: Concession [2019: Spec C1.1:3.7]			X		Not applicable. The effective height is more than 25m.
S5C18 Type A fire-resisting construction — open spectator stands and indoor sports stadiums: Concession			X		Not applicable. The development does not contain any open spectator stands nor indoor sports stadiums.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: Spec C1.1: 3.8]					
S5C19 Type A fire-resisting construction — carparks [2019: Spec C1.1: 3.9 and Table 3.9]			X		Not applicable. This development does not involve any carpark.
S5C20 Type A fire-resisting construction — Class 2 and 3 buildings: Concession [2019: Spec C1.1: 3.10]			X		Not applicable. This development has Rise-in-Storey more than 4.
S5C21 Type B fire-resisting construction — fire-resistance of building elements [2019: Spec C1.1: 4.1 and Table 4]			X		Not applicable. The building is Type A Construction.
S5C22 Type B fire-resisting construction — carparks [2019: Spec C1.1: 4.2 and Table 4.2]			X		Not applicable. The building is Type A Construction.
S5C23 Type B fire-resisting construction — Class 2 and 3 buildings: Concession [2019: Spec C1.1: 4.3]			X		Not applicable. The building is Type A Construction.
S5C24 Type C fire-resisting construction — fire-resistance of building elements [2019: Spec C1.1: 5.1 and Table 5]			X		Not applicable. The building is Type A Construction.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
S5C25 Type C fire-resisting construction — carparks [2019: Spec C1.1: 5.2 and Table 5.2]			X		Not applicable. The building is Type A Construction.
Specification 6 Structural tests for lightweight construction					
S6C1 Scope [2019: Spec C1.8: 1]			X		This Specification describes tests to be applied to and criteria to be satisfied by a wall system of lightweight construction.
S6C2 Application [2019: Spec C1.8: 2]			X		A wall system need not be tested in accordance with this Specification for static pressure or impact if it is designed and constructed in accordance with the Deemed-to-Satisfy Provisions of Part B1 to resist the appropriate pressures and impacts defined in this Specification.
S6C3 Walls of certain Class 9b buildings [2019: Spec C1.8: 3.1]			X		(1) Lightweight construction forming— (a) a wall of a lift shaft and stair shaft; and (b) an external and internal wall bounding a public corridor, public lobby or the like, including a fire-isolated and non-fire-isolated passageway or ramp, in spectator stand, sports stadium, cinema or theatre, railway or bus station or airport terminal, must be subjected to the tests and must fulfil the criteria set out in (2). (2) For the purposes of (1), the following tests and criteria apply: (a) The materials tests of S6C10(a) and the criteria of S6C11(a). (b) A static test by the imposition of a uniformly distributed load of 1.0 kPa (or its equivalent) in accordance with S6C10(b) and the damage and deflection criteria of S6C11(b) and (c) respectively. (c) A dynamic test by the fall of the impact bag through a height of 350 mm in accordance with S6C10(c) and the damage and deflection criteria of S6C11(b) and (d) respectively. (d) The surface indentation test of S6C10(d) and the surface indentation criterion of S6C11(e).
S6C4 Walls of shafts and fire-isolated exits generally [2019: Spec C1.8: 3.2]			X		A wall of lightweight construction that is required to be fire-resisting and which bounds a lift shaft, stair shaft, or service shaft, fire-isolated passageway or fire-isolated ramp must be subjected to the following tests and must fulfil the following criteria: (a) The materials tests of S6C10(a) and the criteria of S6C11(a). (b) A static test by the imposition of a uniformly distributed load of 0.35 kPa (or its equivalent) in accordance with S6C10(b) and the damage and deflection criteria of S6C11(b) and (c) respectively. (c) A dynamic test by the fall of the impact bag through a height of 150 mm in accordance with S6C10(c) and the damage and deflection criteria of S6C11(b) and (d) respectively. (d) The surface indentation test of S6C10(d) and the surface indentation criterion of S6C11(e).

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
S6C5 Additional requirements for lift shafts [2019: Spec C1.8: 3.3]			X		(1) In addition to the requirements of S6C3 and S6C4, a wall system for use in a lift shaft that is required to be fire-resisting must be subjected to dynamic test by the imposition of— (a) where the lift car speed is 7 m/s or less — 10^6 cycles of a uniformly distributed load between 0 and 0.2 kPa (or its equivalent); or (b) where the lift car speed is greater than 7 m/s — 10^6 cycles of a uniformly distributed load between 0 and 0.35 kPa (or its equivalent) in accordance with S6C10(e) and must fulfil the damage criteria of S6C11. (2) The wall system must be subjected to the static test in accordance with S6C4(b) after the successful conclusion of the dynamic test specified in (1).
S6C6 Walls generally [2019: Spec C1.8: 3.4]			X		An external and internal wall of lightweight construction that is required to be fire-resisting, other than one covered by S6C3, S6C4 or S6C5, must be subjected to the following tests and must fulfil the following criteria: (a) The materials tests of S6C10(a) and the criteria of S6C11(a). (b) A static test by the imposition of a uniformly distributed load of 0.25 kPa (or its equivalent) in accordance with S6C10(b) and the damage and deflection criteria of S6C11(b) and (c) respectively. (c) A dynamic test by fall of the impact bag through a height of 100 mm in accordance with S6C10(c) and the damage and deflection criteria of S6C11(b) and (d) respectively. (d) The surface indentation test of S6C10(d) and the surface indentation criterion of S6C11(e).
S6C7 General requirements for testing [2019: Spec C1.8: 4.1]			X		Testing must be carried out on either— (a) construction in-situ; or (b) a laboratory specimen of the construction.
S6C8 Testing in-situ [2019: Spec C1.8: 4.2]			X		If testing is carried out in-situ, it must be done on that part of the construction least likely, because of the particular combination of the height of the walls, the support conditions, and other aspects of the construction, to resist the loads.
S6C9 Testing of specimens [2019: Spec C1.8: 4.3]			X		If a laboratory specimen is tested, the specimen must span only in the direction corresponding to the height of the wall and testing must be done in accordance with either (a) or (b) below: (a) The test specimen— (i) height (or length, if the specimen is tested horizontally) must be identical with the height between supports in the actual construction; and (ii) must be supported at the top and bottom (or at each end if tested horizontally) by components identical with, and in a manner identical with, the actual construction. (b) If the distance between supports of the actual construction is more than 3 m, then a smaller specimen may be tested but— (i) the distance between supports must be not less than 3 m; and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(ii) forces, reactions and support conditions must be modelled so as to reproduce the behaviour of the actual construction if it were tested in-situ.
S6C10 Test methods [2019: Spec C1.8: 5]			X		Tests must be carried out in accordance with the following: (a) Material tests — The methods specified for the constituent materials of the construction of the standards adopted by reference in the NCC. (b) For resistance to static pressure — The provisions for testing walls under transverse load in ASTM E72-15, except that— (i) support conditions must be as specified in S6C9; and (ii) equivalent load shall mean the quarter-point load that produces the same deflection or central moment as appropriate; and (iii) the timber species nominated in that standard may be substituted with a different species. (c) For resistance to impact — The provisions for testing wall systems in ASTM E695-03, except that— (i) the point of impact must be set 1.5 m above finished floor level or 1.5 m above the part of the specimen that corresponds to finished floor level; and (ii) the impact bag must be not less than 225 mm in diameter and not more than 260 mm in diameter and have a mass of not less than 27.2 kg or more than 27.3 kg; and (iii) the mass must be achieved by putting loose, dry sand into the bag and must be adjusted before each series of impact tests; and (iv) where the impact bag and suspension cannot be vertical at the instant of impact on a curved surface or an inclined surface, the height of drop is the net height at the point of impact. (d) For resistance to surface indentation — The test for resistance to surface indentation must be carried out at three points on the surface of an undamaged sample sheet as follows: (i) A steel ball of 10 mm diameter with a load of 150 N must be placed gently on the surface of the sheet and allowed to \ remain in position for 5 minutes. (ii) The ball and load must then be removed and the diameter of each impression of the ball on the surface measured. (e) For resistance of lift shaft construction to repetitive load — As for (b) except that— (i) it is sufficient to test one specimen with the pressure applied from the side of the construction on which the lift will operate; and (ii) the load must be applied dynamically at a frequency not less than 1 Hz and not more than 3 Hz; and (iii) equivalent load shall mean the quarter-point load that produces the same central moment as the distributed load.
S6C11 Criteria for compliance			X		The wall system or the specimen of it must fulfil the following criteria: (a) Materials — Materials must comply with the applicable standard adopted by reference in the NCC.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: Spec C1.8: 6]					(b) Damage — There must be no crack, penetration or permanent surface-deformation to a depth of more than 0.5 mm or any other non-elastic deformation or fastener failure. (c) Deflection — Static pressure — Under static pressure the deflection must not be more than— (i) 1/240th of the height between supports; or (ii) for construction other than a lift shaft — 30 mm; or (iii) for a lift shaft — 20 mm. (d) Deflection — Impact — Under impact the instantaneous deflection must not be more than— (i) 1/120th of the height of the wall between supports; or (ii) for construction other than a lift shaft — 30 mm; or (iii) for a lift shaft— 20 mm. (e) Surface indentation — No impression must be more than 5 mm in diameter.
Specification 7 Fire Hazard Properties					
S7C1 Scope [2019: Spec C1.10: 1]			X		This Specification sets out requirements in relation to the fire hazard properties of linings, materials and assemblies in Class 2 to 9 buildings as set out in Table S7C2.
S7C2 Application [2019: Spec C1.10: 2]			X		Linings, materials and assemblies must comply with the appropriate requirement described in Table S7C2.
S7C3 Floor linings and floor coverings [2019: Spec C1.10: 3]				X	A floor lining or floor covering must have— (a) a critical radiant flux not less than that listed in Table S7C3; and (b) in a building not protected by a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17, a maximum smoke development rate of 750 percent-minutes; and (c) a group number complying with S7C6(b), for any portion of the floor covering that is continued more than 150 mm up a wall. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S7C4 Wall and ceiling linings [2019: Spec C1.10: 4]				X	(1) A wall or ceiling lining system must comply with the group number specified in Table S7C4 and for buildings not fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 have— (a) a smoke growth rate index not more than 100; or (b) an average specific extinction area less than 250 m^2 /kg. (2) A group number of a wall or ceiling lining and the smoke growth rate index or average specific extinction area must be determined in accordance with AS 5637.1. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S7C5				X	Rigid and flexible ductwork in a Class 2 to 9 building must comply with the fire hazard properties set out in AS 4254.1 and AS 4254.2.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Air-handling ductwork [2019: Spec C1.10: 5]					***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S7C6 Lift cars [2019: Spec C1.10: 6]				X	Materials used as— (a) floor linings and floor coverings must have a critical radiant flux not less than 2.2; and (b) wall and ceiling linings must be a Group 1 material or a Group 2 material in accordance with AS5637.1. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
NSW S7C7 Other materials [2019: Spec C1.10: 7]				X	Materials and assemblies not included in S7C3, S7C4, S7C5 or S7C6 must not exceed the indices set out in NSW Table S7C7. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Specification 8 Performance of external walls in fire					
Not applicable.					
Specification 9 Cavity barriers for fire-protected timber (Where fire-protected timber is proposed)					
S9C1 Scope [2019: Spec C1.13: 1]			X		This Specification sets out requirements for cavity barriers in fire-protected timber construction.
S9C2 Requirements [2019: Spec C1.13: 2]				X	(1) Cavity barriers must be provided in the following locations where fire-protected timber is used in any of the listed elements: (a) At concealed cavities adjacent to junctions between fire-resisting floor/ceiling assemblies and fire-resisting walls. (b) At concealed cavities adjacent to junctions between fire-resisting floor/ceiling assemblies and fire-resisting or non-combustible external walls. (c) At concealed cavities adjacent to junctions between fire-resisting walls and fire-resisting or non-combustible external walls. (d) Around the perimeter of door and window openings in fire-resisting construction. (2) Cavity barriers must be installed so they are tight fitting and are able to withstand thermal expansion and structural movement without the loss of seal against fire and smoke. (3) In addition to cavity barriers required by (1), horizontal and vertical cavity barriers are to be provided to wall cavities within, around or adjacent to fire-protected timber elements as follows: (a) Horizontal cavity barriers — at not more than 5 m centres. (b) Vertical cavity barriers — at not more than 10 m centres. (4) Cavity barriers must— (a) achieve the performance specified in Table S9C2 based on the highest FRL of the elements they are mounted within or seal against; or (b) consist of—

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(i) timber with the minimum thickness specified in Table S9C2; or (ii) polythene-sleeved mineral wool or mineral wool slabs or strips placed under compression to achieve the minimum thickness specified in Table S9C2. (5) Cavity barriers provided around openings may be formed by the window or door frame if— (a) the frame is constructed of steel or timber with the minimum thickness specified in Table S9C2 for timber; and (b) the frame is tightly fitted to rigid construction and mechanically fixed in position. (6) The FRL of cavity barriers in fire-protected timber construction must be determined in accordance with Specifications 1 and 2 applying the criteria for control joint systems specified in Section 10 of AS 1530.4 with the cavity barrier system fitted within an opening between timber members exposed directly to the furnace heating conditions. (7) Notwithstanding anything to the contrary in Specifications 1 and 2 or AS 1530.4, the test results from (6) may be used when the fire-protected timber is constructed from timber having a nominal density at least equal to the tested timber. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Specification 10 Fire-protected timber (Where fire-protected timber is proposed)					
S10C1 Scope [2019: Spec C1.13a: 1]			X		This Specification contains requirements for fire-protected timber and procedures for determining the time at which the temperature at the interface between the protection system and the timber is exceeded.
S10C2 General requirements [2019: Spec C1.13a: 2.1]				X	(1) Fire-protected timber must— (a) utilise a non-combustible fire-protective covering fixed in accordance with the system requirements to achieve an FRL not less than that required for the building element; and (b) have a non-combustible fire-protective covering fixed in accordance with system requirements— (i) to achieve a resistance to the incipient spread of fire of not less than 45 minutes when tested in accordance with— (A) for horizontal elements — Section 4 of AS 1530.4; and (B) for other elements — the relevant test procedures from Section 4 of AS 1530.4 applied to the element lining; or (ii) which consists of not less than 2 layers of 13 mm thick, fire-protective grade plasterboard. (2) For the purposes of (1), the non-combustible fire-protective covering provided under (1)(b) may form all or part of the non-combustible fire-protective covering provided under (1)(a). ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S10C3 Massive timber				X	(1) Fire-protected timber, where the timber is massive timber, need not comply with S10C2 if the fire-protected timber—

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: Spec C1.13a: 2.2]					(a) utilises a non-combustible fire-protective covering fixed in accordance with system requirements to achieve an FRL not less than that required for the building element; and (b) has a non-combustible fire-protective covering fixed in accordance with system requirements— (i) so as the temperature at the interface between the protection system and the timber does not exceed 300°C during a fire resistance test performed in accordance with S10C3 for the application and periods listed in Table S10C3; or (ii) not less than that specified by Table S10C3; and (c) has any cavity filled with non-combustible insulation, or no cavity, between— (i) the surface of the timber and the fire-protective covering; or (ii) timber elements within the fire-protective covering. (2) For the purposes of (1), the non-combustible fire-protective covering provided under (1)(b) may form all or part of the non-combustible fire-protective covering provided under (1)(a). ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S10C4 Form of test [2019: Spec C1.13a: 3.1]				X	(1) Tests must be carried out in accordance with the Standard Fire Test, or an equivalent or more severe test, on the timber element with the proposed non-combustible coverings fixed in a representative manner, with the time the timber interface temperatures exceeded 300°C confirmed in a report from an Accredited Testing Laboratory. (2) If a fire protection system incorporates joints, the test specimens must incorporate representative joints. (3) Interface temperatures must be measured over the following features by a minimum of two thermocouples: (a) At joint positions in the protection systems. (b) At least 200 mm from any joint. (c) At service penetrations. (d) At any other locations where, in the opinion of the Accredited Testing Laboratory, the interface temperature may be higher than the above positions. (4) The temperatures must be measure in accordance with Appendix C1 and Section 2 of AS 1530.4 as appropriate. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S10C5 Smaller specimen permitted [2019: Spec C1.13a: 3.2]			X		An Accredited Testing Laboratory may carry out the test specified in S10C4 at pilot scale provided— (a) a specimen (which must be not less than 1000 mm x 1000 mm) adequately represents the proposed construction in the building; and (b) the fire resistance of the specimen has already been determined in a full scale test performed in accordance with AS 1530.4 to demonstrate adequate retention of the fire protection system in conjunction with the timber elements being protected; and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(c) the results of the test do not apply to construction larger than limits defined by the Accredited Testing Laboratory conducting the pilot examination.
S10C6 Acceptance criteria [2019: Spec C1.13a: 3.3]			X		The time the timber interface temperature exceeds 300°C must be taken as the minimum time any of the thermocouples specified in S10C4 exceeded 300°C.
Specification 11 Smoke-proof walls in healthcare and residential care buildings					
S11C1 Scope [2019: Spec C2.5: 1]			X		Not applicable.
S11C2 Class 9a health-care buildings [2019: Spec C2.5: 2]			X		Smoke-proof walls required by C3D6 in Class 9a health-care buildings must comply with the following: (a) Be non-combustible and extend to the underside of— (i) the floor above; or (ii) a non-combustible roof covering; or (iii) a ceiling having a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes. (b) Not incorporate any glazed areas unless the glass is safety glass as defined in AS 1288. (c) Only have doorways which are fitted with smoke doors complying with Specification 12. (d) Have all openings around penetrations and the junctions of the smoke-proof wall and the remainder of the building stopped with non-combustible material to prevent the free passage of smoke. (e) Incorporate smoke dampers where air-handling ducts penetrate the wall unless the duct forms part of a smoke hazard management system required to continue air movement through the duct during a fire.
S11C3 Class 9c buildings [2019: Spec C2.5: 3]			X		Not applicable.
S11C4 Doorways in smoke-proof walls [2019: Spec C2.5: 4]				X	A door required by C3D6 or this Specification to be smoke-proof or have an FRL, other than one that serves a fire compartment provided with a zone pressurisation system in accordance with AS 1668.1, must provide a smoke reservoir by not extending within 400 mm of the underside of— (a) a roof covering; or (b) the floor above; or (c) an imperforate false ceiling that will prevent the free passage of smoke. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Specification 12 Fire doors, smoke doors, fire windows and shutters					
S12C1 Scope			X		This Specification sets out requirements for the construction of fire doors, smoke doors, fire windows and fire shutters.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: Spec C3.4: 1]					
S12C2 Fire Doors [2019: Spec C3.4: 2]				X	A required fire door must— (a) comply with AS 1905.1; and (b) not fail by radiation through any glazed part during the period specified for integrity in the required FRL. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S12C3 General requirements for smoke doors [2019: Spec C3.4: 3.1]			X		Smoke doors must be constructed so that smoke will not pass from one side of the doorway to the other and, if they are glazed, there is minimal danger of a person being injured by accidentally walking into them.
S12C4 Construction Deemed-to-Satisfy [2019: Spec C3.4: 3.2]			X		A smoke door of one or two leaves satisfies S12C3 if it is constructed as follows: (a) The leaves are side-hung to swing— (i) in the direction of egress; or (ii) in both directions. (b) The leaves are solid-core and at least 35 mm thick, or are capable of resisting smoke at 200°C for 30 minutes. (c) The leaves are fitted with smoke seals. (d) The leaves— (i) are normally in the closed position; or (ii) operate such that— (A) they are closed automatically with the automatic closing operation initiated by smoke detectors, installed in accordance with the relevant provisions of AS 1670.1, located on each side of the doorway not more than 1.5 m horizontal distance from the doorway; and (B) in the event of power failure to the door, they will fail-safe in the closed position. (e) The leaves return to the fully closed position after each manual opening. (f) Any glazing incorporated in the door complies with AS 1288. (g) If a glazed panel is capable of being mistaken for an unobstructed exit, the presence of the glass must be identified by an opaque mid-height band, mid-rail, crash-bar or other opaque construction.
S12C5 Fire shutters [2019: Spec C3.4: 4]			X		Not applicable. Not fire shutter is proposed.
S12C6 Fire windows [2019: Spec C3.4: 6]			X		Not applicable. Not fire window is proposed.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Specification 13 Penetration of walls, floors and ceilings by services (Where Specification 13 is proposed to be complied)					
S13C1 Scope [2019: Spec C3.15: 1]			X		This Specification prescribes materials and methods of installation for services that penetrate walls, floors and ceilings required to have an FRL.
S13C2 Application [2019: Spec C3.15: 2]			X		(1) This Specification applies to installations permitted under the Deemed-to-Satisfy Provisions of the BCA as alternatives to systems that have been demonstrated by test to fulfil the requirements of C4D15(2)(a). (2) This Specification does not apply to installations in ceilings required to have a resistance to the incipient spread of fire nor to the installation of piping that contains or is intended to contain a flammable liquid or gas.
S13C3 Metal pipe systems [2019: Spec C3.15: 3]				X	(1) A pipe system comprised entirely of metal (excluding pipe seals or the like) that is not normally filled with liquid must not be located within 100 mm, for a distance of 2 m from the penetration, of any combustible building element or a position where combustible material may be located, and must be constructed of— (a) copper alloy or stainless steel with a wall thickness of at least 1 mm; or (b) cast iron or steel (other than stainless steel) with a wall thickness of at least 2 mm. (2) An opening for a pipe system comprised entirely of metal (excluding pipe seals or the like) must— (a) be neatly formed, cut or drilled; and (b) be no closer than 200 mm to any other service penetration; and (c) accommodate only one pipe. (3) A pipe system comprised entirely of metal (excluding pipe seals or the like) must be wrapped but must not be lagged or enclosed in thermal insulation over the length of its penetration of a wall, floor or ceiling unless the lagging or thermal insulation fulfils the requirements of S13C7. (4) The gap between a metal pipe and the wall, floor or ceiling it penetrates must be fire-stopped in accordance with S13C7. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S13C4 Pipes penetrating sanitary compartments [2019: Spec C3.15: 4]				X	If a pipe of metal or UPVC penetrates the floor of a sanitary compartment in accordance with C4D15(2)(c)(ii)— (a) the opening must be neatly formed and no larger than is necessary to accommodate the pipe or fitting; and (b) the gap between pipe and floor must be fire-stopped in accordance with S13C7. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S13C5 Wires and cables [2019: Spec C3.15: 5]				X	If a wire or cable or cluster of wires or cables penetrates a floor, wall or ceiling— (a) the opening must be neatly formed, cut or drilled and no closer than 50 mm to any other service; and (b) the opening must be no larger in cross-sectional area than—

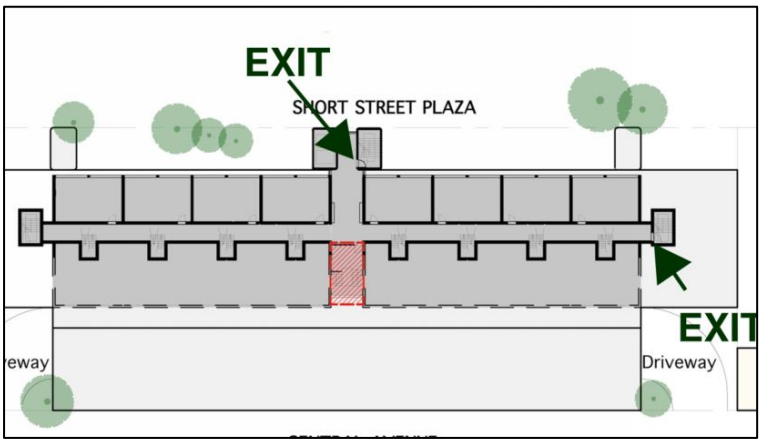
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(i) 2000 mm2 if only a single cable is accommodated and the gap between cable and wall, floor or ceiling is no wider than 15 mm; or 500 mm2 (ii) in any other case; and (c) the gap between the service and the wall, floor or ceiling must be fire-stopped in accordance with S13C7. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S13C6 Electrical switches and outlets [2019: Spec C3.15: 6]				X	If an electrical switch, outlet, socket or the like is accommodated in an opening or recess in a wall, floor or ceiling— (a) the opening or recess must not— (i) be located opposite any point within 300 mm horizontally or 600 mm vertically of any opening or recess on the opposite side of the wall; or (ii) extend beyond half the thickness of the wall; and (b) the gap between the service and the wall, floor or ceiling must be fire-stopped in accordance with S13C7. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S13C7 Fire-stopping [2019: Spec C3.15: 7]				X	(1) Material: The material used for the fire-stopping of service penetrations must be concrete, high-temperature mineral fibre, high-temperature ceramic fibre or other material that does not flow at a temperature below 1120°C when tested in accordance with ISO 540, and must have— (a) demonstrated in a system tested in accordance with C4D15(2)(a) that it does not impair the fire-resisting performance of the building element in which it is installed; or (b) demonstrated in a test in accordance with (5) that it does not impair the fire-resisting performance of the test slab. (2) Installation: Fire-stopping material must be packed into the gap between the service and wall, floor or ceiling in a manner, and compressed to the same degree, as adopted for testing under (1)(a) or (b). (3) Hollow construction: If a pipe penetrates a hollow wall (such as a stud wall, a cavity wall or a wall of hollow blockwork) or a hollow floor/ceiling system, the cavity must be so framed and packed with fire-stopping material that is— (a) installed in accordance with (2) to a thickness of 25 mm all round the service for the full length of the penetration; and (b) restrained, independently of the service, from moving or parting from the surfaces of the service and of the wall, floor or ceiling. (4) Recesses: If an electrical switch, socket, outlet or the like is accommodated in a recess in a hollow wall or hollow floor/ceiling system— (a) the cavity immediately behind the service must be framed and packed with fire-stopping material in accordance with (3); or (b) the back and sides of the service must be protected with refractory lining board identical with and to the same thickness as that in which the service is installed. (5) Test: The test to demonstrate compliance of a fire-stopping material with this Specification must be conducted as follows: (a) The test specimen must comprise a concrete slab not less than 1 m square and not more than100 mm thick, and appropriately

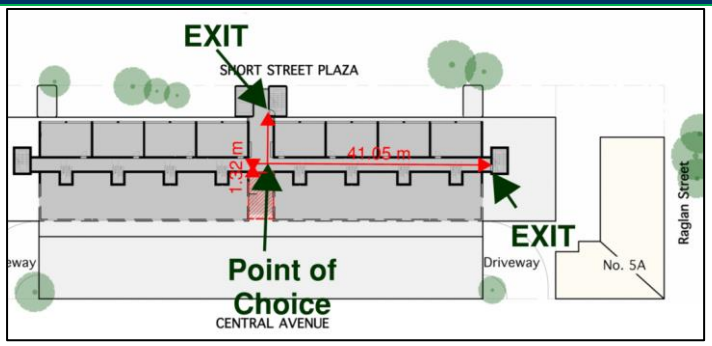
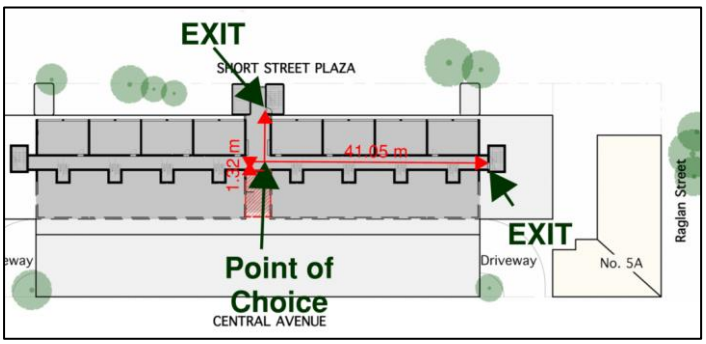
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					reinforced if necessary for structural adequacy during manufacture, transport and testing. (b) The slab must have a hole 50 mm in diameter through the centre and the hole must be packed with the fire-stopping material. (c) The slab must be conditioned in accordance with AS 1530.4. (d) Two thermocouples complying with AS 1530.4 must be attached to the upper surface of the packing each about 5 mm from its centre. (e) The slab must be tested on flat generally in accordance with Section 10 of AS 1530.4 and must achieve an FRL of 60/60/60 or as otherwise *required*. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Section D Access and Egress					
Part D2 Provision for escape					
D2D1 Deemed-to-Satisfy Provisions [2019: D1.0]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements D1P1 to D1P6, D1P8 and D1P9 are satisfied by complying with— (a) D2D2 to D2D23, D3D2 to D3D30 and D4D2 to D4D13; and (b) in a building containing an atrium, Part G3; and (c) in a building in an alpine area, Part G4; and (d) for a building containing an occupiable outdoor area, Part G6; and (e) for additional requirements for Class 9b buildings, Part I1; and (f) for public transport buildings, Part I2; and (g) for farm sheds, Part I3. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable. (3) Performance Requirement D1P7 must be complied with if lifts are to be used to assist occupants to evacuate a building.
D2D2 Application of Part [2019: D1.1]			X		The Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a sole-occupancy unit in a Class 2 or 3 building or a Class 4 part of a building.
NSW D2D3 Number of exits required [2019: D1.2]				X	(1) All buildings — Every building must have at least one exit from each storey. (2) Class 2 to 8 buildings — (a) In addition to any horizontal exit, not less than 2 exits must be provided from the following: (i) Each storey if the building has an effective height of more than 25 m. (ii) A Class 2 or 3 building subject to C2D6. (b) The requirements of (a)(i) do not apply to a part of a storey that— (i) is provided with direct egress to a road or open space; and (ii) satisfies D2D5 by the provision of 1 exit.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(7) Access to exits — Without passing through another sole-occupancy unit every occupant of a storey or part of a storey must have access to— (a) an exit; or (b) at least 2 exits if 2 or more exits are required. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Commentary*** ***Based on Site Plan, Dwg No. URB003, shows there are two (2) existing Exits provided.*** ***Please advise AED for re-assessment of this BCA clause and other exit-related clauses, where these Exits are not provided to the proposed SOUs.*** 
D2D4 When fire-isolated stairways and ramps are required [2019: D1.3]			X		Not applicable to this development.
D2D5 Exit travel distances [2019: D1.4]				X	(1) Class 2 buildings — (a) The entrance doorway of any sole-occupancy unit must be not more than— (i) 6 m from an exit or from a point from which travel in different directions to 2 exits is available; or (ii) 20 m from a single exit serving the storey at the level of egress to a road or open space; and (b) no point on the floor of a room which is not in a sole-occupancy unit must be more than 20 m from an exit or from a point at which travel in different directions to 2 exits is available. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Commentary*** ***The entrance doorway of the proposed sole-occupancy unit is about 1.4m (within 6 m) from a point from which travel in different directions to 2 exits is available.***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					
D2D6 Distance between alternative exits [2019: D1.5]				X	Exits that are required as alternative means of egress must be— (a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas; and (b) not less than 9 m apart; and (c) not more than— (i) in a Class 2 building — 45 m apart; or (d) located so that alternative paths of travel do not converge such that they become less than 6m apart. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Commentary*** ***The distance between the alternative Exits is about 41.05m through the point of choice (within 45m).*** ***Note – this assessment is for the proposed development only.*** 
D2D7 Height of doorways in exits and paths of travel to exits [2019: D1.6(a)]			X		Not applicable. Required Exits and path of travel to an Exit are existing and not form part of this development.
NSW D2D8 Width of exits and paths of travel to exits			X		Not applicable. Required Exits and path of travel to an Exit are existing and not form part of this development.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: D1.6(b), (c), (d) and (e)]					
NSW D2D9 Width of doorways in exits or paths of travel to exits [2019: D1.6, NSW D1.6(f)(vi)]			X		Not applicable. Required Exits and path of travel to an Exit are existing and not form part of this development.
D2D10 Exit width not to diminish in direction of travel [2019: D1.6(g)]			X		Not applicable. Required Exits are existing and not form part of this development.
D2D11 Determination and measurement of exits and paths of travel to exits [2019: D1.6(h) and (i)]				X	For the purposes of D2D7 to D2D10 the following apply: (a) The required width of a stairway or ramp in a required exit or path of travel to an exit must— (i) be measured clear of all obstructions such as handrails projecting parts of barriers and the like; and (ii) extend without interruption, except for ceiling cornices, to a height not less than 2m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing. (b) To determine the aggregate unobstructed width, the number of persons accommodated must be calculated according to D2D18. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D2D12 Travel via fire-isolated exits [2019: D1.7]			X		Not applicable. The fire isolated exits are existing and not form part of this development.
D2D13 External stairways or ramps in lieu of fire-isolated exits [2019: D1.8]			X		Not applicable to this development.
D2D14 Travel by non-fire-isolated stairways or ramps [2019: D1.9]			X		Not applicable to this development.
NSW D2D15 Discharge from exits [2019: D1.10]			X		Not applicable to this development.
D2D16 Horizontal exits			X		Not applicable to this development.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: D1.11]					
D2D17 Non-required stairways, ramps or escalators [2019: D1.12]			X		Not applicable to this development.
NSW D2D18 Number of persons accommodated [2019: D1.13]			X		For the purposes of the Deemed-to-Satisfy Provisions, the number of persons accommodated in a storey, room or mezzanine must be determined with consideration to the purpose for which it is used and the layout of the floor area by— (a) calculating the sum of the numbers obtained by dividing the floor area of each part of the storey by the number of square metres per person listed in Table D2D18 according to the use of that part, excluding spaces set aside for— (i) lifts, stairways, ramps and escalators, corridors, hallways, lobbies and the like; and (ii) service ducts and the like, sanitary compartments or other ancillary uses; or (b) reference to the seating capacity in an assembly building or room; or (c) any other suitable means of assessing its capacity.
D2D19 Measurement of distances [2019: D1.14]			X		The nearest part of an exit means in the case of— (a) a fire-isolated stairway, fire-isolated passageway, or fire-isolated ramp, the nearest part of the doorway providing access to them; and (b) a non-fire-isolated stairway, the nearest part of the nearest riser; and (c) a non-fire-isolated ramp, the nearest part of the junction of the floor of the ramp and the floor of the storey; and (d) a doorway opening to a road or open space, the nearest part of the doorway; and (e) a horizontal exit, the nearest part of the doorway
D2D20 Method of measurement [2019: D1.15]			X		The following rules apply: (a) In the case of a room that is not a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building, the distance includes the straight-line measurement from any point on the floor of the room to the nearest part of a doorway leading from it, together with the distance from that part of the doorway to the single required exit or point from which travel in different directions to 2 required exits is available. (b) Subject to (d), the distance from the doorway of a sole-occupancy unit in a Class 2 or 3 building or a Class 4 part of a building is measured in a straight line to the nearest part of the required single exit or point from which travel in different directions to 2 required exits is available. (c) Subject to (d), the distance between exits is measured in a straight line between the nearest parts of those exits. (d) Only the shortest distance is taken along a corridor, hallway, external balcony or other path of travel that curves or changes direction.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(e) If more than one corridor, hallway, or other internal path of travel connects required exits, for the purposes of D2D6(c) the measurement is along the path of travel through the point at which travel in different directions to those exits is available, as determined in accordance with D2D5. (f) If a wall (including a demountable internal wall) that does not bound a room, corridor, hallway or the like causes a change of direction in proceeding to a required exit, the distance is measured along the path of travel past that wall. (g) If permanent fixed seating is provided, the distance is measured along the path of travel between the rows of seats. (h) In the case of a non-fire-isolated stairway or non-fire-isolated ramp, the distance is measured along a line connecting the nosings of the treads, or along the slope of the ramp, together with the distance connecting those lines across any intermediate landings.
D2D21 Plant rooms, lift machine rooms and electricity network substations: Concession [2019: D1.16]			X		Not applicable to this development.
D2D22 Access to lift pits [2019: D1.17]			X		Not applicable to this development.
D2D23 Egress from primary schools [2019: D1.18]			X		Not applicable to this development.
Part D3 Construction of exits					
D3D1 Deemed-to-Satisfy Provisions [2019: D2.0]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements D1P1 to D1P6, D1P8 and D1P9 are satisfied by complying with— (a) D2D2 to D2D23, D3D2 to D3D30 and D4D2 to D4D13; and (b) in a building containing an atrium, Part G3; and (c) in a building in an alpine area, Part G4; and (d) for a building containing an occupiable outdoor area, Part G6; and (e) for additional requirements for Class 9b buildings, Part I1; and (f) for public transport buildings, Part I2; and (g) for farm buildings and farm sheds, Part I3. (2) Where a Performance Solution is proposed the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable. (3) Performance Requirement D1P7 must be complied with if lifts are to be used to assist occupants to evacuate a building.
NSW D3D2			X		(1) Except for—

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Application of Part [2019: NSW D2.1(c)]					(a) D3D14, D3D15(a), D3D17, D3D18, D3D19, D3D20, D3D22(5), D3D22(6), D3D26 and D3D29, the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a sole-occupancy unit in a Class 3 building; and **(b) D3D14, D3D15(a), D3D17, D3D18, D3D19, D3D20, D3D22(5), D3D22(6), D3D23 and D3D29, the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a sole-occupancy unit in a Class 2 building or Class 4 part of a building.** (2) In a Class 9b building used as an entertainment venue— (a) Clauses NSW D3D14(1)(i), (j), and (k), NSW D3D16(d), NSW D3D18(1)(d), and NSW D3D24(2)(e) apply to only those parts of the building used by the public; and (b) the general requirements of Part D3 apply to all other parts of the building.
D3D3 Fire-isolated stairways and ramps [2019: D2.2]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
D3D4 Non-fire-isolated stairways and ramps [2019: D2.3]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
D3D5 Separation of rising and descending stair flights [2019: D2.4]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
D3D6 Open access ramps and balconies [2019: D2.5]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
D3D7 Smoke lobbies [2019: D2.6]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
D3D8 Installations in exits and paths of travel [2019: D2.7]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
D3D9 Enclosure of space under stairs and ramps [2019: D2.8]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
D3D10 Width of required stairways and ramps [2019: D2.9]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
D3D11 Pedestrian ramps [2019: D2.10]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
D3D12 Fire-isolated passageways [2019: D2.11]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
D3D13 Roof as open space [2019: D2.12]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
NSW D3D14 Goings and risers [2019: D2.13]				X	(1) A stairway must have— (a) not more than 18 and not less than 2 risers in each flight; and (b) going (G), riser (R) and quantity (2R + G) in accordance with Table D3D14, except as permitted by (2) and (3); and (c) constant goings and risers throughout each flight, except as permitted by (2) and (3), and the dimensions of goings (G) and risers (R) in accordance with (1)(b) are considered constant if the variation between— (i) adjacent risers, or between adjacent goings, is no greater than 5 mm; and (ii) the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm; and (d) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and (e) treads which have— (i) a surface with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; or (ii) a nosing strip with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; and (f) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 storeys; and (g) in a Class 9b building, not more than 36 risers in consecutive flights without a change in direction of at least 30°; and (h) in the case of a required stairway, no winders in lieu of a landing; and (i) conspicuous edges to the treads of steps in a Class 9b building used as an entertainment venue; and

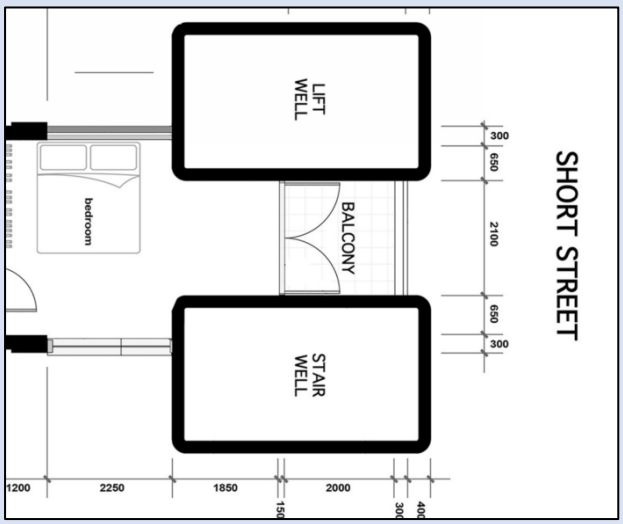
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(j) in a Class 9b building used as an entertainment venue, not more than one helical stairway serving as a required exit and that stairway must— (i) have a width of not less than 1500 mm; and (ii) be of constant radius; and (iii) be constructed so that each tread, when measured 500 mm in from its narrow end, has a width of at least 280 mm; and (k) in a Class 9b building used as an entertainment venue, in a curved stairway serving as a required exit — an internal radius of not less than twice the width of the stair. (2) In the case of a non-required stairway— (a) the stairway must have— (i) not more than 3 winders in lieu of a quarter landing; and (ii) not more than 6 winders in lieu of a half landing; and (b) the going of all straight treads must be constant throughout the same flight and the dimensions of goings (G) is considered constant if the variation between— (i) adjacent goings, is no greater than 5 mm; and (ii) the largest and smallest going within a flight, does not exceed 10 mm; and (c) the going of all winders in lieu of a quarter or half landing may vary from the going of the straight treads within the same flight provided that the going of all such winders is constant. (3) Where a stairway discharges to a sloping public walkway or public road— (a) the riser (R) may be reduced to account for the slope of the walkway or road; and (b) the quantity (2R+G) may vary at that location. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D3D15 Landings [2019: D2.14]				X	In a stairway— (a) landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing must— (i) be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing; and (ii) have— (A) a surface with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; or (B) a strip at the edge of the landing with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586, where the edge leads to a flight below; and ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
NSW D3D16 Thresholds			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: D2.15, NSW D2.15(d), (e)]					
D3D17 Barriers to prevent falls [2019: D2.16(a), (b) and (c)]				X	(1) A continuous barrier must be provided along the side of— (a) a roof to which general access is provided; and (b) a stairway or ramp; and (c) a floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and (d) any delineated path of access to a building, if the trafficable surface is 1 m or more above the surface beneath. (2) The requirements of (1) do not apply to— (a) the perimeter of a stage, rigging loft, loading dock or the like; or (b) areas referred to in D3D23; or (c) a retaining wall unless the retaining wall forms part of, or is directly associated with a delineated path of access to a building from the road, or a delineated path of access between buildings; or (d) a barrier provided to an openable window covered by D3D29. (3) A barrier required by (1) must be constructed in accordance with D3D18, D3D19, D3D20 and, if a wire barrier is used, D3D21. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
NSW D3D18 Height of barriers [2019: Table D2.16a]				X	(1) The height of a barrier required by D3D17 must be not less than the following: (a) For stairways or ramps with a gradient of 1:20 or steeper — 865 mm. (b) For landings to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed 500 mm in length — 865 mm. (e) For all other locations – 1m. (2) For a barrier provided under (1) — (a) barrier heights are measured vertically from the surface beneath, except that for stairways the height must be measured above the nosing line of the stair treads; and (b) a transition zone may be incorporated where the barrier height changes from 865 mm on a stair flight or ramp to 1 m at a landing or floor. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D3D19 Openings in barriers [2019: Table D2.16a]				X	(1) Except where allowed by (2), openings in a required barrier must not allow a 125 mm sphere to pass through. (5) For a barrier provided under (1), the maximum 125 mm barrier opening for a stairway, such as a non fire-isolated stairway, is measured above the nosing line of the stair treads. (6) Where a required barrier is fixed to the vertical face forming an edge of a landing, balcony, deck, stairway or the like, the opening formed between the barrier and the face must not exceed 40 mm.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(7) For the purposes of (6), the opening is measured horizontally from the edge of the trafficable surface to the nearest internal face of the barrier. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D3D20 Barrier climbability [2019: Table D2.16a]				X	(1) A barrier required by D3D17, located on a floor more than 4 m above the surface beneath, must not incorporate horizontal or near horizontal elements that could facilitate climbing between 150 mm and 760 mm above the floor. (2) The requirements of (1) do not apply to— (a) fire-isolated stairways, fire-isolated ramps and other areas used primarily for emergency purposes, other than— (i) external stairways; and (ii) external ramps; and (b) Class 7 (other than carparks) and Class 8 buildings. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Compliance Required*** ***If air-conditioning condensers are proposed for each SOU, the only location for these condensers within an SOU is the balcony.*** ***Ensure that the condenser is positioned in such a way that it does not create any climbable elements, which could result in a potential fall from height.***  ***Typical part floor plan of each SOU.***
D3D21 Wire barriers [2019: D2.16(d)]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
D3D22 Handrails				X	(5) Handrails to a stairway or ramp within a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building must— (a) be located along at least one side of the flight or ramp; and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: D2.17]					(b) be located along the full length of the flight or ramp, except in the case where a handrail is associated with a barrier, the handrail may terminate where the barrier terminates; and (c) have the top surface of the handrail not less than 865 mm vertically above the nosings of the stair treads or the floor surface of the ramp; and (d) have no obstruction on or above them that will tend to break a handhold, except for newel posts, ball type stanchions, or the like. (6) The requirements of (5) do not apply to— (a) handrails referred to in D3D23; or (b) a stairway or ramp providing a change in elevation of less than 1m; or (c) a landing; or (d) a winder where a newel post is installed to provide a handhold. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D3D23 Fixed platforms, walkways, stairways and ladders [2019: D2.18]				X	A fixed platform, walkway, stairway, ladder and any going and riser, landing, handrail or barrier attached thereto may comply with AS 1657 in lieu of D3D14, D3D16, D3D17, D3D18, D3D19, D3D20, D3D21 and D3D22 if it only serves— (a) machinery rooms, boiler houses, lift-machine rooms, plant-rooms, and the like; or (b) non-habitable rooms, such as attics, storerooms and the like that are not used on a frequent or daily basis in the internal parts of a sole-occupancy unit in a Class 2 building or Class 4 part of a building. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
NSW D3D24 Doorways and doors [2019: D2.19]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
D3D25 Swinging doors [2019: D2.20]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
NSW D3D26 Operation of latch [2019: D2.21]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
D3D27 Re-entry from fire-isolated exits [2019: D2.22]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
D3D28 Signs on doors [2019: D2.23]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
D3D29 Protection of openable windows [2019: D2.24]				X	(1) A window opening must be provided with protection, if the floor below the window is 2 m or more above the surface beneath in— (a) a bedroom in a Class 2] building; (2) Where the lowest level of the window opening is less than 1.7 m above the floor, a window opening covered by (1) must comply with the following: (a) The openable portion of the window must be protected with— (i) a device capable of restricting the window opening; or (ii) a screen with secure fittings. (b) A device or screen required by (a) must— (i) not permit a 125 mm sphere to pass through the window opening or screen; and (ii) resist an outward horizontal action of 250 N against the— (A) window restrained by a device; or (B) screen protecting the opening; and (iii) have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden. (3) A barrier with a height not less than 865 mm above the floor is required to an openable window— (a) in addition to window protection, when a child resistant release mechanism is required by (2)(b)(iii); and (b) where the floor below the window is 4 m or more above the surface beneath if the window is not covered by (1). (4) A barrier covered by (3) except for (5) must not— (a) permit a 125 mm sphere to pass through it; and (b) have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing. (5) A barrier required by (3) to an openable window in— (a) fire-isolated stairways, fire-isolated ramps and other areas used primarily for emergency purposes, excluding external stairways and external ramps; and (b) Class 7 (other than carparks) and Class 8 buildings and parts of buildings containing those classes, must not permit a 300 mm sphere to pass through it. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
D3D30 Timber stairways: Concession [2019: D2.25]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
NSW D3D31 Doors in paths of travel to an entertainment venue [2019: NSW D2.101]			X		Not applicable. As per BCA Clause NSW D3D2(1)(b), this clause is not applicable.
Part D4 Access for people with a disability					

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
BCA Part D4 - Access for people with a disability is not included in this assessment. It is suggested to engage a qualified access consultant to provide a detailed assessment report.					
Specification 14 Non-required stairways, ramps and escalators					
Not applicable to this development.					
Specification 15 Braille and tactile signs					
The assessment of this Specification is not included. It is suggested to engage a qualified access consultant for a detailed assessment for this Specification.					
Specification 16 Accessible water entry/exit from swimming pools					
Not applicable to this development.					
Section E Services and equipment					
Part E1 Fire fighting equipment					
E1D1 Deemed-to-Satisfy Provisions [2019: E1.0]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements E1P1 to E1P6 are satisfied by complying with— (a) E1D2 to E1D16; and (b) in a building containing an atrium, Part G3; and (c) in a building in an alpine area, Part G4; and (d) for a building containing an occupiable outdoor area, Part G6; and (e) for additional requirements for Class 9b buildings, Part I1; and (f) for farm buildings and farm sheds, Part I3. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
E1D2 Fire hydrants [2019: E1.3]				X	(1) A fire hydrant system must be provided to serve a building— (a) having a total floor area greater than 500 m^2; and (b) where a fire brigade station is— (i) no more than 50 km from the building as measured along roads; and (ii) equipped with equipment capable of utilising a fire hydrant. (2) The fire hydrant system must be installed in accordance with AS 2419.1. (3) Notwithstanding (2), a Class 8 electricity network substation need not comply with clause 4.2 of AS 2419.1 if— (a) it cannot be connected to a town main supply; and (b) one hour water storage is provided for fire-fighting. (4) Where internal fire hydrants are provided, they must serve only the storey on which they are located except that a sole-occupancy unit— (a) in a Class 2 or 3 building or Class 4 part of a building may be served by a single fire hydrant located at the level of egress from that sole-occupancy unit; or

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(b) of not more than 2 storeys in a Class 5, 6, 7, 8 or 9 building may be served by a single fire hydrant located at the level of egress from that sole-occupancy unit provided the fire hydrant can provide coverage to the whole of the sole-occupancy unit. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification. Relevant fire safety systems are required to be designed and endorsed by an accredited practitioner (fire safety) in accordance with Section 22 of the EP&A (DC&FS) Regulation 2021.*** ***Compliance Required*** ***This building is required to be equipped with a fire hydrant system. A qualified hydraulic engineer must confirm that the system is compliant and provides compliant system coverage.***
E1D3 Fire hose reels [2019: E1.4]			X		Not applicable. This development is for Class 2 part only.
E1D4 Sprinklers [2019: E1.5]				X	A sprinkler system must— (a) be installed in a building or part of a building when required by E1D5 to E1D13 as applicable; and (b) comply with Specification 17 and Specification 18 as applicable. Notes NSW has requirements for fire sprinkler systems in certain residential aged care facilities. See the Department of Planning and Environment website www.planning.nsw.gov.au. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification. Relevant fire safety systems are required to be designed and endorsed by an accredited practitioner (fire safety) in accordance with Section 22 of the EP&A (DC&FS) Regulation 2021.***
E1D5 Where sprinklers are required: all classifications [2019: Table E1.5]				X	Sprinklers are required throughout all buildings if any part of the building has an effective height of more than 25 m— (a) including an open-deck carpark within a multi-classified building; but (b) excluding— (i) an open-deck carpark being a separate building; and (ii) a Class 8 electricity network substation, with a floor area not more than 200 m^2 located within a multi- classified building. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Non-compliance*** ***Given that the base building has an effective height of more than 25 meters, the development must be equipped with a fire suppression***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					system <u>throughout</u> in compliance with AS 2118.1 and BCA Specification 17. ***As per the email confirmation to AED dated 12/09/2024, the base building is not provided with sprinkler system throughout, so this BCA 2022 Clause E1D5 cannot be complied until the entire building is provided with a compliant sprinkler system, although the proposed development is for part of the building only.***
E1D6 Where sprinklers are required: Class 2 and 3 buildings other than residential care buildings [2019: Table E1.5]			X		Not applicable. The effective height is more than 25m.
E1D7 Where sprinklers are required: Class 3 building used as a residential care building [2019: Table E1.5]			X		Not applicable. This development does not contain Class 3 part.
E1D8 Where sprinklers are required: Class 6 building [2019: Table E1.5]			X		Not applicable. This development does not involve Class 6 part.
E1D9 Where sprinklers are required: Class 7a building, other than an open-deck carpark [2019: Table E1.5]			X		Not applicable. This development does not involve Class 7a part.
E1D10 Where sprinklers are required: Class 9a health-care building used as a residential care building, Class 9c buildings			X		Not applicable. This development does not contain Class 9a nor 9c part.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: Table E1.5]					
E1D11 Where sprinklers are required: Class 9b buildings [2019: Table E1.5]			X		Not applicable. This development does not involve Class 9b part.
E1D12 Where sprinklers are required: additional requirements [2019: Table E1.5]			X		Not applicable. This development does not contain any atrium nor large isolated buildings.
E1D13 Where sprinklers are required: occupancies of excessive hazard [2019: Table E1.5 (Note 4)]			X		Not applicable. This development does not contain any occupancies of excessive hazard.
E1D14 Portable fire extinguishers [2019: E1.6 and Table E1.6]				X	(1) Portable fire extinguishers must be— (a) provided as listed in (3) and (4); and (b) for a Class 2, 3 or 5 building or Class 4 part of a building, provided— (i) to serve the whole Class 2, 3 or 5 building or Class 4 part of a building where one or more internal fire hydrants are installed; or (ii) where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500 m^2, and for the purposes of this clause, a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building is considered to be a fire compartment; and (c) subject to (2), selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444. (2) Portable fire extinguishers provided in a Class 2 or 3 building or Class 4 part of a building must be— (a) an ABE type fire extinguisher; and (b) a minimum size of 2.5 kg; and (c) distributed outside a sole-occupancy unit— (i) to serve only the storey at which they are located; and (ii) so that the travel distance from the entrance doorway of any sole-occupancy unit to the nearest fire extinguisher is not more than 10 m. (3) In Class 2 to 9 buildings (except within sole-occupancy units of a Class 9c building), portable fire extinguishers must be provided as follows: (a) To cover Class AE or E fire risks associated with emergency services switchboards.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(b) To cover Class F fire risks involving cooking oils and fats in kitchens. (c) To cover Class B fire risks in locations where flammable liquids in excess of 50 litres are stored or used (not including that held in fuel tanks of vehicles). (d)To cover Class A fire risks in normally occupied fire compartments less than 500 m^2 not provided with fire hose reels (excluding open-deck carparks). (e)To cover Class A fire risks in classrooms and associated corridors in primary and secondary schools not provided with fire hose reels. (f) To cover Class A fire risks associated with a Class 2, 3 or 5 building or Class 4 part of a building. (4) In addition to the requirements of (3), portable fire extinguishers must be provided to cover Class A and E fire risks in the following occupancies in buildings, or parts of a building: (a) A Class 9a health-care building, including a Class 9a building used as a residential care building. (b) Class 3 parts of detention and correctional occupancies. (c) Class 3 accommodation for children, aged persons and people with disabilities, including a Class 3 building used as a residential care building. (d) A Class 9c building. (5) For the purposes of (3) and (4): (a) Fire risks are defined in accordance with AS 2444. (b) An emergency services switchboard is one which sustains emergency equipment operating in the emergency mode. (c) A Class E fire extinguisher need only be located at each nurses' station, supervisors' station or the like. (d) Additional extinguishers may be required to cover fire risks in relation to special hazards provided for in E1D17. (e) The fire risks in a Class 2 or 3 building or Class 4 part of a building must include risks within any sole-occupancy units, however portable fire extinguishers are not required to be located within a sole-occupancy unit unless the sole-occupancy unit has a floor area greater than 500 m^2. (6) For the purposes of (4), where applicable, a Class E fire extinguisher need only be located at each nurses' station, supervisors' station or the like. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
E1D15 Fire control centres [2019: E1.8]			X		Not applicable to this development.
E1D16 Fire precautions during construction [2019: E1.9]			X		In a building under construction— (a) 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; and (b) after the building has reached an effective height of 12 m—

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(i) 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 storeys; and (ii) any required booster connections must be installed.
E1D17 Provision for special hazards [2019: E1.10]			X		Not applicable. This development does not contain any special hazards.
Part E2 Smoke hazard management					
E2D1 Deemed-to-Satisfy Provisions [2019: E2.0]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements E2P1 to E2P2 are satisfied by complying with— (a) E2D2 to E2D21; and (b) in a building containing an atrium, Part G3; and (c) in a building in an alpine area, Part G4; and (d) for additional requirements for Class 9b buildings, Part I1. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
E2D2 Application of Part [2019: E2.1]			X		(1) The Deemed-to-Satisfy Provisions of this Part do not apply to— (a) an open-deck carpark; or (b) an open spectator stand; or (c) a Class 8 electricity network substation with a floor area not more than 200 m^2, located within a multi-classified building. (3) The smoke exhaust and smoke-and-heat vent provisions of this Part do not apply to any area not used by occupants for an extended period of time such as a storeroom with a floor area less than 30 m^2, sanitary compartment, plant room or the like.
E2D3 General Requirements [2019: E2.2]				X	(1) 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, subject to (2), be designed and installed— (a) to operate as a smoke control system in accordance with AS 1668.1; or (b) such that it— (i) incorporates smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and (ii) is arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with clause 7.5 of AS 1670.1. (2) For the purposes of (1), each sole-occupancy unit in a Class 2 or 3 building is treated as a separate fire compartment. (3) Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one fire compartment (other than a carpark ventilation system) and not forming part of a smoke hazard management system must comply with these Sections of the Standard.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(4) A smoke detection system must be installed in accordance with S20C6 to operate AS 1668.1 systems that are provided for zone pressurisation and automatic air pressurisation for fire-isolated exits. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
E2D4 Fire-isolated exits [2019: Table E2.2a]			X		Not applicable to this development.
E2D5 Buildings more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building [2019: Table E2.2a]				X	An automatic smoke detection and alarm system complying with Specification 20 must be provided to the following: (a) **A Class 2 or 3 building which is more than 25 m in effective height.** (b) A Class 2 or 3 part of a building, or a Class 4 part of a building, in a building which is more than 25 m in effective height. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Compliance Required*** ***This development must be equipped with an automatic smoke detection and alarm system in compliance with BCA Specification 20.***
E2D6 Buildings more than 25 m in effective height: Class 5, 6, 7b, 8 or 9b buildings [2019: Table E2.2a]			X		Not applicable. This development does not involve Class 5, 6, 7, 8, nor 9b part.
E2D7 Buildings more than 25 m in effective height: Class 9a buildings [2019: Table E2.2a]			X		Not applicable. This development does not contain Class 9a part.
E2D8 Buildings not more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building [2019: Table E2.2a]			X		Not applicable. The effective height of the building is more than 25m.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
E2D9 Buildings not more than 25 m in effective height: Class 5, 6, 7b, 8 and 9b buildings [2019: Table E2.2a]			X		Not applicable. The effective height of the building is more than 25m.
NSW E2D10 Buildings not more than 25 m in effective height: large isolated buildings subject to C3D4 [2019: NSW Table E2.2a]			X		Not applicable. The effective height of the building is more than 25m.
E2D11 Buildings not more than 25 m in effective height: Class 9a and 9c buildings [2019: Table E2.2a]			X		Not applicable. The effective height of the building is more than 25m.
E2D12 Class 7a buildings [2019: Table E2.2a]			X		Not applicable. This development does not involve Class 7a part.
E2D13 Basements (other than Class 7a buildings) [2019: Table E2.2a]			X		Not applicable. This development does not involve work in basement.
E2D14 Class 6 buildings – in fire compartments more than 2000 m^2: Class 6 building (not containing an enclosed common walkway or mall serving more than one Class 6 sole-occupancy unit) [2019: Table E2.2b]			X		Not applicable. This development does not involve Class 6 part.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
E2D15 Class 6 buildings – in fire compartments more than 2000 m^2: Class 6 building (containing an enclosed common walkway or mall serving more than one Class 6 sole-occupancy unit) [2019: Table E2.2b]			X		Not applicable. This development does not involve Class 6 part.
NSW E2D16 Class 9b – assembly buildings: all [2019: NSW Table E2.2b]			X		Not applicable. This development does not involve Class 9b part.
NSW E2D17 Class 9b – assembly buildings: night clubs, discotheques and the like [2019: NSW Table E2.2b]			X		Not applicable. This development does not involve Class 9b part.
NSW E2D18 Class 9b – assembly buildings: exhibition halls, museums and art galleries [2019: NSW Table E2.2b]			X		Not applicable. This development does not involve Class 9b part.
NSW E2D19 Class 9b – assembly buildings: other assembly buildings (not listed in NSW E2D16 to E2D18)			X		Not applicable. This development does not involve Class 9b part.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: NSW Table E2.2b]					
NSW E2D20 Class 9b assembly buildings: other assembly buildings (not listed in E2D16 to E2D19)				X	This clause has deliberately been left blank. E2D20 does not apply in NSW. This clause is deleted from the BCA in NSW, as requirements for Class 9b – Assembly buildings in NSW are covered under NSW E2D16 to NSW E2D19.
E2D21 Provision for special hazards [2019: E2.3]			X		Not applicable. This development does not contain any special hazards.
Part E3 Lift Installations					
Not applicable. This development does not involve work to the existing lifts nor propose any new lift.					
Part E4 Visibility in an emergency, exit signs and warning systems					
E4D1 Deemed-to-Satisfy Provisions [2019: E4.0]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements E4P1 to E4P3 are satisfied by complying with— (a) E4D2 to E4D9; and (b) in a building containing an atrium, Part G3; and (c) in a building in an alpine area, Part G4; and (d) for a building containing an occupiable outdoor area, Part G6; and (e) for additional requirements for Class 9b buildings, Part I1; and (f) for farm buildings and farm sheds, Part I3. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
E4D2 Emergency lighting requirements [2019: E4.2]			X		Not applicable. The development do not involve corridor.
E4D3 Measurement of distance [2019: E4.3]			X		Distances, other than vertical rise, must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.
E4D4			X		Not applicable.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Design and operation of emergency lighting [2019: E4.4]					
E4D5 Exit signs [2019: E4.5]			X		Not applicable, due to BCA Clause E4D7(b).
NSW E4D6 Direction signs [2019: NSW E4.6]			X		Not applicable.
E4D7 Class 2 and 3 buildings and Class 4 parts: exemptions [2019: E4.7]			X		E4D5 does not apply to— (a) a Class 2 building in which every door referred to is clearly and legibly labelled on the side remote from the exit or balcony— (i) with the word “EXIT” in capital letters 25 mm high in a colour contrasting with that of the background; or (ii) by some other suitable method; and (b) an entrance door of a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building.
E4D8 Design and operation of exit signs [2019: E4.8]			X		Not applicable.
E4D9 Emergency warning and intercom systems [2019: E4.9]				X	An emergency warning and intercom system complying, where applicable, with AS 1670.4 must be installed— **(a) in a building with an effective height of more than 25 m**; ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Specification 17 Fire Sprinkler systems					
S17C1 Scope [2019: Spec E1.5: 1]			X		This Specification sets out requirements for the design and installation of fire sprinkler systems.
S17C2 Application of automatic fire sprinkler standards [2019: Spec E1.5: 2]				X	Subject to this Specification, an automatic fire sprinkler system must comply with— (a) for all building classifications: AS 2118.1; or (d) for a combined sprinkler and fire hydrant system: AS 2118.6; ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S17C3 Separation of sprinklered and non-sprinklered areas				X	Where a part of a building is not protected with sprinklers, the sprinklered and non-sprinklered parts must be fire-separated with a wall or floor which must— (a) comply with any specific requirement of the Deemed-to-Satisfy Provisions of the BCA; or

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: Spec E1.5: 3]					(b) where there is no specific requirement, comply with the relevant part of AS 2118, FPAA101D or FPAA101H. ***Where applicable, details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S17C4 Protection of openings [2019: Spec E1.5: 4]				X	Any openings, including those for service penetrations, in construction separating sprinklered and non-sprinklered parts of a building, including the construction separating the areas nominated for omitted protection in AS 2118.1, must be protected in accordance with the Deemed-to-Satisfy Provisions of Part C4. ***Where applicable, details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S17C5 Quick response sprinklers [2019: Spec E1.5: 5]				X	Quick response sprinklers may be installed only if they are suitable for the type of application proposed and it is demonstrated that the sprinkler system is designed to accommodate their use. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S17C6 Sprinkler valve enclosures [2019: Spec E1.5: 6]				X	(1) Sprinkler alarm valves must be located in a secure room or enclosure which has direct egress to a road or open space. (2) All sprinkler valve rooms and enclosures must be secured with a system suitable for use by the fire brigade. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S17C7 Water supply [2019: Spec E1.5: 7]				X	(1) A required sprinkler system must be provided with at least one water supply. (2) A required sprinkler system in a building greater than 25 m in effective height must be provided with dual water supply except that a secondary water supply storage capacity of 25,000 litres may be used if— (a) the storage tank is located at the topmost storey of the building; and (b) the building occupancy is classified as no more hazardous than Ordinary Hazard 2 (OH2) under AS 2118.1; and (c) an operational fire brigade service is available to attend a building fire. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S17C8 Building occupant warning system [2019: Spec E1.5: 8]				X	A required sprinkler system, except a FPAA101D sprinkler system, must be connected to and activate a building occupant warning system complying with S20C7. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S17C9 Connection to other systems [2019: Spec E1.5: 9]				X	Where a smoke hazard management system is installed and is actuated by smoke detectors, the sprinkler system must, wherever practicable, be arranged to also activate the smoke hazard management system. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
S17C10 Anti-tamper devices [2019: Spec E1.5: 10]				X	(1) Where a sprinkler system is installed— (a) over any stage area in a theatre, public hall or the like, visual and audible status indication of sprinkler valves must be provided at the location normally used by the stage manager; or (b) in a space housing lift electrical and control equipment (including machine rooms, secondary floors and sheave rooms), any valves provided to control sprinklers in these spaces must be located adjacent to the space. (2) Any valves provided to control sprinklers required by (1) must be fitted with anti-tamper monitoring devices connected to a monitoring panel. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S17C11 Sprinkler systems in carparks [2019: Spec E1.5: 11]			X		A sprinkler system protecting a carpark complying with S5C19(3) in a multi-classified building must— (a) be independent of the sprinkler system protecting any part of the building not used as a carpark; or (b) if forming part of a sprinkler system protecting a part of the building not used as a carpark, be designed such that the section protecting the non-carpark part can be isolated without interrupting the water supply or otherwise affecting the effective operation of the section protecting the carpark.
S17C12 Residential care buildings [2019: Spec E1.5: 12]			X		Not applicable. This development does not contain any residential care building.
S17C13 Sprinkler systems in lift installations [2019: Spec E1.5: 13]			X		(1) Where sprinklers are installed in a space housing lift electrical and control equipment, including machine rooms, secondary floors and sheave rooms, sprinklers in these spaces must— (a) have heads protected from accidental damage by way of a guard that will not impair the performance of the head; and (b) be capable of being isolated and drained, either separately or collectively, without isolating any other sprinklers within the building. (2) Valves provided to control sprinklers referred to in (1) must be installed in accordance with S17C10(2).
S17C14 Early childhood centres [New for 2022]			X		Not applicable to this development.

Specification 18 Class 2 and 3 buildings not more than 25m in effective height

Not applicable.

The building has effective height more than 25m.

Specification 19 Fire control centres

Not applicable to this development.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Specification 20 Smoke detection and alarm systems					
S20C1 Scope [2019: Spec E2.2a: 1]			X		This Specification describes the installation and operation of automatic smoke detection and alarm systems.
S20C2 Type of system [2019: Spec E2.2a: 2]				X	A required automatic smoke detection and alarm system must be provided in accordance with the following: (a) Class 2 buildings — (i) a smoke alarm system complying with S20C3; or (ii) a smoke detection system complying with S20C4; or (iii) a combination of a smoke alarm system and a smoke detection system complying with S20C5. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S20C3 Smoke alarm system [2019: Spec E2.2a: 3]				X	(1) In all Class 2 - 9 buildings provided with a smoke alarm system, the following applies: (a) A smoke alarm system must— (i) consist of smoke alarms complying with AS 3786; and (ii) be powered from the consumer mains source. (b) In kitchens and other areas where the use of the area is likely to result in smoke alarms causing spurious signals, subject to (c)— (i) any other alarm deemed suitable in accordance with AS 1670.1 may be installed provided that smoke alarms are installed elsewhere in the sole-occupancy unit in accordance with (2)(a) and (2)(b); or (ii) an alarm acknowledgement facility may be installed. (c) Where a kitchen or other area referred to in (b) is in a building protected with a sprinkler system complying with Specification 17 (other than a FPAA101D system), alarms need not be installed in the kitchen or other area likely to result in spurious signals. (2) In a Class 2 building provided with a smoke alarm system, the following applies: (a) Alarms must be installed within each sole-occupancy unit, and located on or near the ceiling in any storey— (i) containing bedrooms— (A) between each part of the sole-occupancy unit containing bedrooms and the remainder of the sole occupancy unit; and (B) where bedrooms are served by a hallway, in that hallway; and (ii) not containing any bedrooms, in egress paths. (b) Where there is more than one alarm installed within a sole-occupancy unit, alarms must be interconnected within that sole-occupancy unit. (c) Subject to (d), alarms must be— (i) installed in public corridors and other internal public spaces, located in accordance with the requirements for smoke detectors in AS 1670.1; and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(ii) connected to activate a building occupant warning system in accordance with S20C7. (d) In a Class 2 building protected with a sprinkler system complying with Specification 17 (other than a FPAA101D system), alarms are not required in public corridors and other internal public spaces. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S20C4 Smoke detection system [2019: Spec E2.2a: 4]				X	(1) In all Class 2 - 9 buildings provided with a smoke detection system, the following applies: (a) A smoke detection system must— (i) subject to (2) and (3), comply with AS 1670.1; and (ii) activate a building occupant warning system in accordance with S20C7. (b) In kitchens and other areas where the use of the area is likely to result in smoke detectors causing spurious signals, subject to (c)— (i) any other detector deemed suitable in accordance with AS 1670.1 may be installed provided that smoke detectors are installed elsewhere in the sole-occupancy unit in accordance with the requirements for alarms in S20C3(2)(a) and (2)(b); or (ii) an alarm acknowledgement facility may be installed. (c) Where a kitchen or other area referred to in (b) is in a building protected with a sprinkler system complying with Specification 17 (other than a FPAA101D or FPAA101H system), detectors need not be installed in the kitchen or other areas likely to result in spurious signals. (2) In a Class 2 building provided with a smoke detection system, the following applies: (a) Smoke detectors must be installed— (i) within each sole-occupancy unit, in accordance with the requirements for alarms in S20C3(2)(a) and (2)(b); and (ii) subject to (b), in public corridors and other internal public spaces. (b) In a Class 2 or 3 building or Class 4 part of a building protected with a sprinkler system complying with Specification 17 (other than a FPAA101D or FPAA101H system), smoke detectors are not required in public corridors and other internal public spaces. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S20C5 Combined smoke alarm and smoke detection system [2019: Spec E2.2a: 5]				X	(1) A Class 2 building provided with a combination of a smoke alarm system and smoke detection system in accordance with S20C2 must— (a) be provided with a smoke alarm system complying with S20C3 within sole-occupancy units; and (b) subject to (2), be provided with a smoke detection system complying with S20C4 in areas not within sole-occupancy units. (2) In a Class 2 building protected with a sprinkler system complying with Specification 17 (other than a FPAA101D or FPAA101H system), smoke detectors are not required in public corridors and other internal public spaces.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
S20C6 Smoke detection for smoke control systems [2019: Spec E2.2a: 6]				X	(1) Smoke detectors required to activate air pressurisation systems for fire-isolated exits and zone pressurisation systems must— (a) be installed in accordance with AS 1670.1; and (b) have additional smoke detectors installed adjacent to each bank of lift landing doors set back horizontally from the door openings by a distance of not more than 3 m. (2) Smoke detectors required to activate— (a) automatic shutdown of air-handling systems in accordance with E2D14 to E2D20; or (b) a smoke exhaust system in accordance with Specification 21, must comply with the requirements of (3). (3) Smoke detectors referred to in (2) must— (a) be spaced— (i) not more than 20 m apart and not more than 10 m from any wall, bulkhead or smoke curtain; and (ii) in enclosed malls and walkways in a Class 6 building not more than 15 m apart and not more than 7.5 m from any wall, bulkhead or curtain; and (b) have a sensitivity— (i) in accordance with AS 1670.1 in areas other than a multi-storey walkway and mall in a Class 6 building; and (ii) not exceeding 0.5% smoke obscuration per metre with compensation for external airborne contamination as necessary, in a multi-storey walkway and mall in a Class 6 building. (4) Smoke detectors provided to activate a smoke control system must— (a) either— (i) form part of a building fire or smoke detection system complying with AS 1670.1; or (ii) be a separate dedicated system incorporating control and indicating equipment complying with AS 1670.1; and (b) activate a building occupant warning system complying with S20C7, except that smoke detectors provided solely to initiate automatic shutdown of air-handling systems in accordance with (2)(a) need not activate a building occupant warning system. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S20C7 Building occupant warning system [2019: Spec E2.2a: 7]				X	Subject to E4D9, a building occupant warning system provided as part of a smoke hazard management system must comply with clause 3.22 of AS 1670.1 to sound through all occupied areas except— (a) in a Class 2 building provided with a smoke alarm system in accordance with S20C3(2)(c)— (i) the sound pressure level need not be measured within a sole-occupancy unit if a level of not less than 85 dB(A) is provided at the door providing access to the sole-occupancy unit; and (ii) the inbuilt sounders of the smoke alarms may be used to wholly or partially meet the requirements; and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(b) in a Class 2 building provided with a smoke detection system in accordance with S20C4(2), the sound pressure level from a building occupant warning system need not be measured within a sole-occupancy unit if a level of not less than 100 dB(A) is provided at the door providing access to the sole-occupancy unit; and ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
NSW S20C8 System monitoring [2019: NSW Spec E2.2a: 8]			X		Not applicable. This development does not include any of the following: - (a) A smoke detection system in a Class 3 building provided in accordance with S20C2(b)(i) or S20C2(b)(ii). (b) A smoke detection system in a Class 9a health-care building, if the building accommodates more than 20 patients. (c) A smoke detection system in a Class 9c building. (d) Smoke detection in accordance with S20C6 provided to activate— (i) a smoke exhaust system in accordance with Specification 21; or (ii) smoke-and-heat vents in accordance with Specification 22.

Specification 21 Smoke exhaust systems

Not applicable to this development.

Specification 22 Smoke-and-heat vents

Not applicable to this development.

Specification 23 Residential fire safety

Not applicable to this development.

This Specification describes the requirements for residential fire safety systems referenced in BCA Specification 18, which is not applicable to this development due to effective height being more than 25m.

Specification 24 Lift installations

Not applicable to this development.

Specification 25 Photoluminescent exit signs

Not applicable to this development.

Section F Health and Amenity

Part F1 External waterproofing, rainwater management and rising damp

F1D1 Deemed-to-Satisfy Provisions			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F1P1 to F1P4 are satisfied by complying with F1D2 to F1D8.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: F1.0]					(2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
F1D2 Application of Part [New for 2022]			X		(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 part of a building— (a) where the flooring is of timber decking or other perforated flooring; or (b) which is located directly above ground.
F1D3 Stormwater Drainage [2019: F1.1]				X	Stormwater drainage must be designed and constructed in accordance with AS/NZS 3500.3. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F1D4 Exposed Joints [New for 2022]				X	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 (b) not be located beneath or run through a planter box, water feature or similar part of the building. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F1D5 External waterproofing membranes [2019: F1.4]				X	A roof, **balcony**, podium, or similar horizontal surface part of a building must be provided with a waterproofing membrane— (a) consisting of materials complying with AS 4654.1; and (b) designed and installed in accordance with AS 4654.2. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F1D6 Damp-proofing [2019: F1.9]				X	(1) Except for a building covered by (3), moisture from the ground must be prevented from reaching— (a) the lowest floor timbers and the walls above the lowest floor joists; and (b) the walls above the damp-proof course; and (c) the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders. (2) Where a damp-proof course is provided, it must consist of— (a) a material that complies with AS/NZS 2904; or (b) impervious sheet material in accordance with AS 3660.1. (3) The following buildings need not comply with (1): (a) A Class 7 or 8 building where in the particular case there is no necessity for compliance. (b) A garage, tool shed, sanitary compartment, or the like, forming part of a building used for other purposes. (c) An open spectator stand or open-deck carpark. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F1D7			X		Not applicable. The development does not have a floor of a room is laid on the ground or on fill, moisture from the ground.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Damp-proofing of floors on the ground [2019: F1.10]					
F1D8 Subfloor ventilation [2019: F1.12]			X		Not applicable to this development.
Part F2 Wet areas and overflow protection					
F2D1 Deemed-to-Satisfy Provisions [New for 2022]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F2P1 and F2P2 are satisfied by complying with F2D2 to F2D4. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
F2D2 Wet area construction [2019: F1.7(a) and (b)]				X	(1) In a Class 2 building, building elements in wet areas must— (a) be water resistant or waterproof in accordance with Specification 26; and (b) comply with AS 3740. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F2D3 Rooms containing urinals [2019: F1.7(c), (d) and (e)]			X		Not applicable to this development.
F2D4 Floor wastes [2019: F1.11]				X	(1) In a Class 2 building, a bathroom or laundry located at any level above a sole occupancy unit or public space must have a floor waste. (2) Where a floor waste is installed— (a) the minimum continuous fall of a floor plane to the waste must be 1:80; and (b) the maximum continuous fall of a floor plane to the waste must be 1:50. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Part F3 Roof and wall cladding					
F3D1 Deemed-to Satisfy Provisions [New for 2022]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirement F3P1 is satisfied by complying with F3D2 to F3D5. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
F3D2 Roof coverings [2019: F1.5]				X	A roof must be covered with— (a) roof tiles complying with AS 2049, fixed in accordance with AS 2050; or (b) metal sheet roofing complying with AS 1562.1; or

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(c) plastic sheet roofing designed and installed in accordance with AS 1562.3; or (d) terracotta, fibre-cement and timber slates and shingles designed and installed in accordance with AS 4597, except in cyclonic areas; or **(e) an external waterproofing membrane complying with F1D5.** ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F3D3 Sarking [2019: F1.6]				X	Sarking-type material used for weatherproofing of roofs and walls must comply with AS 4200.1 and AS 4200.2. ***Where applicable, details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F3D4 Glazed assembles [2019: F1.13]				X	(1) Subject to (2) and (3), the following glazed assemblies in an external wall, must comply with AS 2047 requirements for resistance to water penetration: (a) Windows. (b) Sliding and swinging glazed doors with a frame, including French and bi-fold doors with a frame. (c) Adjustable louvres. (d) Shopfronts. (e) Window walls with one piece framing. (2) The following buildings need not comply with (1): (a) A Class 7 or 8 building where in the particular case there is no necessity for compliance. (b) A garage, tool shed, sanitary compartment, or the like, forming part of a building used for other purposes, except where the construction of the garage, tool shed, sanitary compartment or the like contributes to the weatherproofing of the other part of the building. (c) An open spectator stand or open-deck carpark. (3) The following glazed assemblies need not comply with (1): (a) All glazed assemblies not in an external wall. (b) Revolving doors. (c) Fixed louvres. (d) Skylights, roof lights and windows in other than the vertical plane. (e) Sliding and swinging glazed doors without a frame. (f) Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 2047. (g) Second-hand windows, re-used windows and recycled windows. (h) Heritage windows. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F3D5 Wall cladding				X	(1) External wall cladding must comply with one or a combination of the following:

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[New for 2022]					(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. (2) The following buildings need not comply with (1): (a) A Class 7 or 8 building where in the particular case there is no necessity for compliance. (b) A garage, tool shed, sanitary compartment, or the like, forming part of a building used for other purposes, except where the construction of the garage, tool shed, sanitary compartment or the like contributed to the weatherproofing of another part of the building that is required to be weatherproofed. (c) An open spectator stand or open deck carpark. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Part F4 Sanitary and other facilities					
F4D1 Deemed-to-Satisfy Provisions [2019: F2.0]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F4P1 to F4P6 are satisfied by complying with— (a) F4D2 to F4D12; and (b) for public transport buildings, Part I2; and (c) for farm sheds, Part I3. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
F4D2 Facilities in residential buildings [2019: F2.1]		X			(1) For facilities in Class 2 buildings, the following applies: (a) Within each sole-occupancy unit, provide— (i) a kitchen sink and facilities for the preparation and cooking of food; and (ii) a bath or shower; and (iii) a closet pan; and (iv) a washbasin. (b) For laundry facilities, provide either— (i) in each sole-occupancy unit— (A) clothes washing facilities, comprising at least one washtub and a space for a washing machine; and (B) clothes drying facilities comprising clothes line or a hoist with not less than 7.5 m of line, or space for one heat operated drying cabinet or appliance in the same room as the clothes washing facilities; or (ii) a separate laundry for each 4 sole-occupancy units, or part thereof, that must comprise— (A) clothes washing facilities, comprising at least one washtub and a space for a washing machine; and (B) clothes drying facilities comprising clothes line or a hoist with not less than 7.5 m of line per sole

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS

occupancy unit, or space for one heat operated drying cabinet or appliance.

(c) For the purposes of (a) and (b), a kitchen sink or washbasin must not be counted as a laundry washtub.

Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification

Non-compliance

SOUs Noted as Enclosed Shell Only

The Units are not provided with any facility as required by BCA Clause F4D2.

Typical layout of SOUs noted as Enclosed Shell Only.

SOU

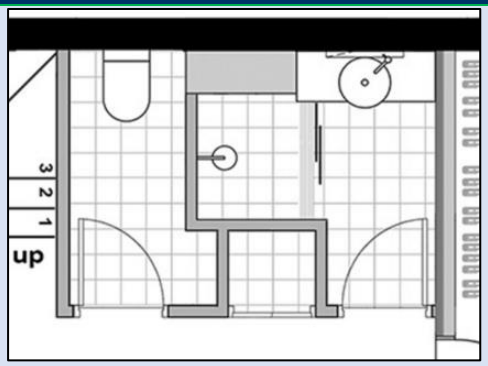
The following facilities required by BCA Clause F4D2 have not been provided to the unit: -

- ***Laundry - Clothes washing facilities, comprising at least one washtub and a space for a washing machine.***

  Note: BCA Clause F4D2(c) states that a kitchen sink or washbasin must not be counted as a laundry washtub.

- ***Laundry –a space for one heat operated drying cabinet or appliance in the same room as the clothes washing facilities. It does not appear there is such space for such facility in the current design.***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 ***Wet area in the SOU with internal layout shown.***
F4D3 Calculation of number of occupants and facilities [2019: F2.2]			X		(1) The number of persons accommodated must be calculated according to D2D18 if it cannot be more accurately determined by other means. (2) Unless the premises are used predominantly by one sex, sanitary facilities must be provided on the basis of equal numbers of males and females. (3) In calculating the number of sanitary facilities to be provided under F4D2 and F4D4, a unisex facility required for people with a disability (other than a facility provided under F4D12) may be counted once for each sex. (4) For the purposes of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary products.
F4D4 Facilities in Class 3 to 9 buildings [2019: F2.3]			X		Not applicable. This development does not contain any Class 3 to 9 part.
F4D5 Accessible sanitary facilities [2019: F2.4]					***The assessment of this BCA clause is not included. It is recommended to engage a qualified access consultant to provide a detailed assessment.***
F4D6 Accessible unisex sanitary compartments [2019: Table F2.4a]					***The assessment of this BCA clause is not included. It is recommended to engage a qualified access consultant to provide a detailed assessment.***
F4D7 Accessible unisex showers [2019: Table F2.4b]					***The assessment of this BCA clause is not included. It is recommended to engage a qualified access consultant to provide a detailed assessment.***
F4D8 Construction of sanitary compartments [2019: F2.5]				X	(1) Other than in an early childhood centre, sanitary compartments must have doors and partitions that separate adjacent compartments and extend— (a) from floor level to the ceiling in the case of a unisex facility; or (b) to a height of not less than 1.5 m above the floor if primary school children are the principal users; or (c) 1.8 m above the floor in all other cases.

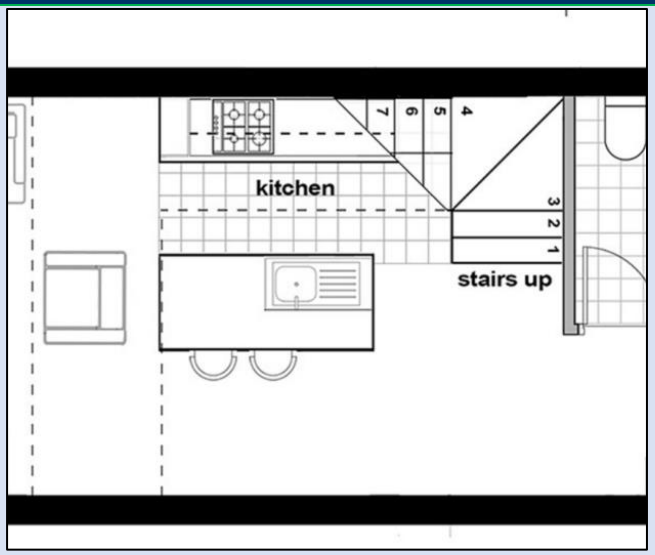
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(2) The door to a fully enclosed sanitary compartment must— (a) open outwards; or (b) slide; or (c) be readily removable from the outside of the sanitary compartment, unless there is a clear space of at least 1.2 m, measured in accordance with Figure F4D8, between the closet pan within the sanitary compartment and the doorway. (3) In an early childhood centre, facilities for use by children must have each sanitary compartment screened by a partition which, except for the doorway, is opaque for a height of at least 900 mm but not more than 1200 mm above the floor level. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F4D9 Interpretation: urinals and washbasins [2019: F2.6]			X		Not applicable. No urinal is proposed .
F4D11 Waste management [2019: F2.8]			X		Not applicable. This development does not contact Class 9 part.
F4D12 Accessible adult change facilities [2019: F2.9]					***The assessment of this BCA clause is not included. It is recommended to engage a qualified access consultant to provide a detailed assessment.***
Part F5 Room heights					
F5D1 Deemed-to-satisfy Provisions [2019: F3.0]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirement F5P1 is satisfied by complying with— (a) F5D2; and (b) for farm sheds, Part I3. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
F5D2 Height of rooms and other spaces [2019: F3.1]		X			(1) The height of rooms and other spaces in a Class 2 or 3 building or Class 4 part of a building must be not less than— (a) for a kitchen, laundry, or the like — 2.1 m; and (b) for a corridor, passageway or the like — 2.1 m; and (c) for a habitable room excluding a kitchen — 2.4 m; and (d) in a habitable room, or space within a habitable room, with a sloping ceiling or projections below the ceiling line— (i) in an attic — a height of not less than 2.2 m for not less than two-thirds of the floor area of the room or space; and (ii) in other rooms — a height of not less than 2.4 m for not less than two-thirds of the floor area of the room or space; and (e) in a non-habitable room, or space within a non-habitable room, with a sloping ceiling or projections below the ceiling line — a

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					height of not less than 2.1 m for not less than two-thirds of the floor area of the room or space. (2) For the purposes of (1), when calculating the floor area of a room or space, any part that has a ceiling height of less than 1.5 m is not included. (8) The height of rooms and other spaces in any building must be not less than— (a) for a bathroom, shower room, sanitary compartment, other than an accessible adult change facility, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like — 2.1 m; and (b) for a commercial kitchen — 2.4 m; and (c) above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like; and (d) for a required accessible adult change facility — 2.4 m. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Compliance Required*** ***The current design includes sections of the units with internal fitout. However, it does not appear to account for the ceiling space, including the services within.*** ***It is essential to ensure that compliant head height is provided throughout the units, taking into consideration the ceiling space and any services.*** ***Potential Non-compliance*** ***For the Class 2 part of the building, the minimum head height must be no less than 2100mm in kitchen.*** ***To comply with BCA Clause D3D14, the maximum height of a riser is 190mm. In the SOU with an internal layout, the kitchen area is directly below a private stairway, resulting in a ceiling height that is less than the required 2100mm.***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					 
Part F6 Light and Ventilation					
F6D1 Deemed-to-Satisfy Provisions [2019: F4.0]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F6P1 to F6P5 are satisfied by complying with— (a) F6D2 to F6D12; and (b) for a building containing an occupiable outdoor area, Part G6; and (c) for farm buildings and farm sheds, Part I3. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
F6D2 Provision of natural light [2019: F4.1]				X	Natural light must be provided in: (a) A Class 2 building— to all habitable rooms. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***

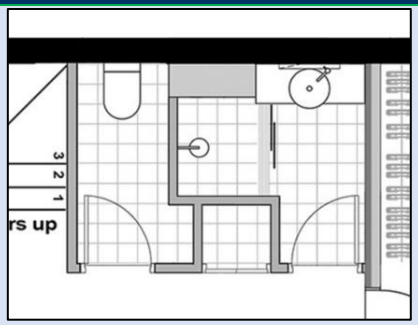
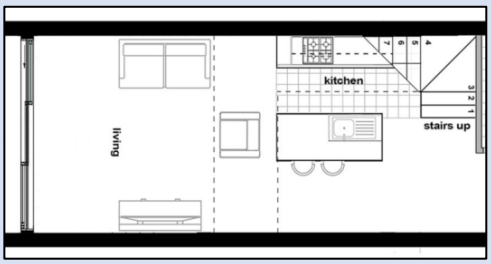
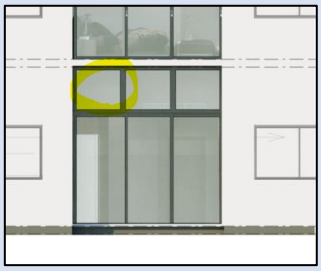
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Commentary & Compliance Required ***A comment on natural lighting cannot be provided for the units noted as "Enclosed Shell Only," as the design of the internal fitout has not yet been provided.*** ***A re-assessment will be necessary once the internal fitout design is complete.***
F6D3 Methods and extent of natural light [2019: F4.2]				X	(1) Required natural light must be provided by— (a) windows, excluding roof lights, that— (i) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the floor area of the room; and (ii) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or (b) roof lights, that— (i) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the floor area of the room; and (ii) are open to the sky; or (c) a proportional combination of windows and roof lights required by (a) and (b) (2) Except in a Class 9c aged care building, in a Class 2, 3 or 9 building or Class 4 part of a building, a required window that faces a boundary of an adjoining allotment or a wall of the same building or another building on the allotment must not be less than a horizontal distance from that boundary or wall that is the greater of— (a) generally — 1 m; and (c) 50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F6D4 Natural light borrowed from adjoining room [2019: F4.3]				X	(1) Natural light to a room in a Class 2 building or Class 4 part of a building or in a sole-occupancy unit of a Class 3 building, may come through one or more glazed panels or openings from an adjoining room (including an enclosed verandah) if— (a) both rooms are within the same sole-occupancy unit or the enclosed verandah is on common property; and (b) the glazed panels or openings have an aggregate light transmitting area of not less than 10% of the floor area of the room to which it provides light; and (c) the adjoining room has— (i) windows, excluding roof lights, that— (A) have an aggregate light transmitting area of not less than 10% of the combined floor areas of both rooms; and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(B) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or (ii) roof lights, that— (A) have an aggregate light transmitting area of not less than 3% of the combined floor areas of both rooms; and (B) are open to the sky; or (iii) a proportional combination of windows and roof lights required by (i) and (ii). (2) The areas specified in (1)(b) and (c) may be reduced as appropriate if direct natural light is provided from another source. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F6D5 Artificial lighting [2019: F4.4]				X	(1) Artificial lighting must be provided— (a) in required stairways, passageways, and ramps; and (b) if natural light of a standard equivalent to that required by F6D3 is not available, and the periods of occupation or use of the room or space will create undue hazard to occupants seeking egress in an emergency, in— (ii) a Class 2 building — to sanitary compartments, bathrooms, shower rooms, airlocks, laundries, common stairways and other spaces used in common by the occupants of the building; and (2) The artificial lighting system must comply with AS/NZS 1680.0. (3) The system may provide a lesser level of illumination to the following spaces during times when the level of lighting would be inappropriate for the use: (a) A theatre, cinema or the like, when performances are in progress, with the exception of aisle lighting required by Part I1. (b) A museum, gallery or the like, where sensitive displays require low lighting levels. (c) A discotheque, nightclub or the like, where to create an ambience and character for the space, low lighting levels are used. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
NSW F6D6 Ventilation of rooms [2019: F4.5]				X	A habitable room, office, shop, factory, workroom, sanitary compartment, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have— (a) natural ventilation complying with F6D7; or (b) a mechanical ventilation or air-conditioning system complying with AS 1668.2. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Compliance Required*** ***For the SOU with internal layout shown, the lower-level bedroom and wet areas are not provided with any openable window and/or doors to external space, so mechanical ventilation in compliance BCA Clause F6D6 and AS1668.2 must be provided.***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					  ***Where the living room and kitchen are not provided with mechanical ventilation, ensure the openable window must have the area in compliance with BCA Clause F6D7 for natural ventilation.***  
F6D7 Natural ventilation [2019: F4.6]				X	(1) Natural ventilation provided in accordance with F6D6(a) must consist of openings, windows, doors or other devices which can be opened— (a) with a ventilating area not less than 5% of the floor area of the room required to be ventilated; and (b) open to— (i) a suitably sized court, or space open to the sky; or (ii) an open verandah, carport, or the like; or (iii) an adjoining room in accordance with F6D8. (2) The requirements of (1)(a) do not apply to a Class 8 electricity network substation. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F6D8 Ventilation borrowed from adjoining room [2019: F4.7]				X	Natural ventilation to a room may come through a window, opening, door or other device from an adjoining room (including an enclosed verandah) if both rooms are within the same sole-occupancy unit or the enclosed verandah is common property, and— (a) in a Class 2 building— (i) the room to be ventilated is not a sanitary compartment; and (ii) the window, opening, door or other device has a ventilating area of not less than 5% of the floor area of the room to be ventilated; and (iii) the adjoining room has a window, opening, door or other device with a ventilating area of not less than 5% of the combined floor areas of both rooms; and (c) the ventilating areas specified in (a) and (b) may be reduced as appropriate if direct natural ventilation is provided from another source.

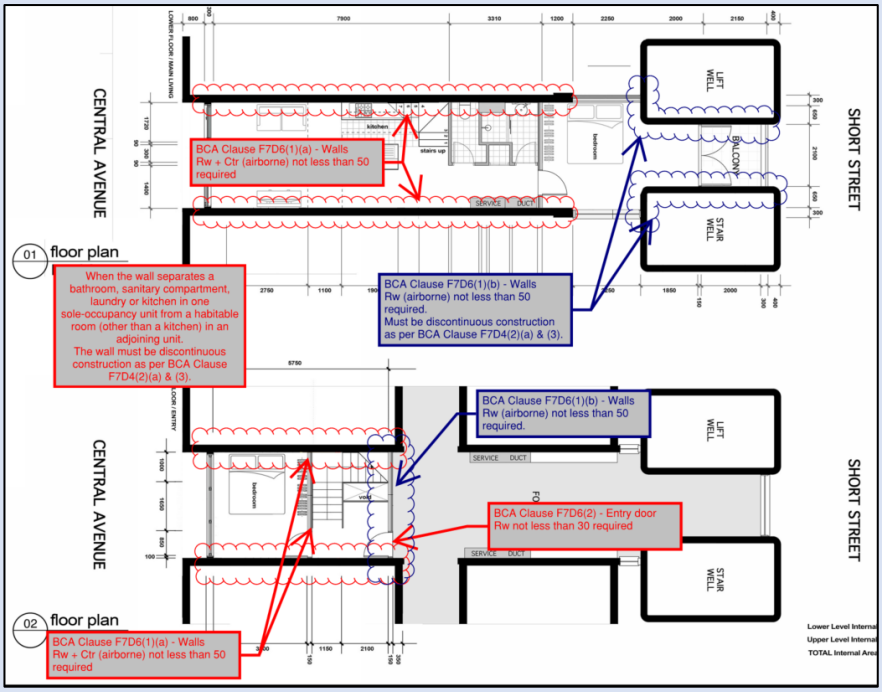
AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F6D9 Restriction on location of sanitary compartments [2019: F4.8]	X				A sanitary compartment must not open directly into— (a) a kitchen or pantry; or (b) a public dining room or restaurant; or (c) a dormitory in a Class 3 building; or (d) a room used for public assembly (which is not an early childhood centre, primary school or open spectator stand); or (e) a workplace normally occupied by more than one person. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F6D10 Airlocks [2019: F4.9]			X		If a sanitary compartment is prohibited under F6D9 from opening directly to another room— (a) in a sole-occupancy unit in a Class 2 building— (i) access must be by an airlock, hallway or other room; or (ii) the sanitary compartment must be provided with mechanical exhaust ventilation; and
F6D11 Carparks [2019: F4.11]			X		Not applicable to this development.
F6D12 Kitchen local exhaust ventilation [2019: F4.12]			X		Not applicable to this development. Commercial kitchen is not proposed.
Part F7 Sound transmission and insulation					
F7D1 Deemed-to-Satisfy Provisions [2019: F5.0]			X		(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F7P1 to F7P4 are satisfied by complying with F7D2 to F7D8. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
F7D2 Application of Part [2019: F5.1]			X		The Deemed-to-Satisfy Provisions of this Part apply to Class 2 and 3 buildings and Class 9c buildings.
F7D3 Determination of airborne sound insulation ratings [2019: F5.2]				X	A form of construction required to have an airborne sound insulation rating must— (a) 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 ISO 717.1 using results from laboratory measurements; or (b) comply with Specification 28. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F7D4				X	1) A floor in a building required to have an impact sound insulation rating must—

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Determination of impact sound insulation ratings [2019: F5.3]					(a) have the required value for weighted normalised impact sound pressure level ($L_{n,w}$) determined in accordance with AS ISO 717.2 using results from laboratory measurements; or (b) comply with Specification 28. (2) A wall in a building required to have an impact sound insulation rating must— (a) for a Class 2 or 3 building be of discontinuous construction and (3) For the purposes of this Part, discontinuous construction means a wall having a minimum 20 mm cavity between 2 separate leaves, and— (a) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and (b) for other than masonry, there is no mechanical linkage between leaves except at the periphery. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F7D5 Sound insulation rating of floors [2019: F5.4]				X	(1) A floor in a Class 2 or 3 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w}$ (impact) not more than 62 if it separates— (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. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Compliance Required*** ***The floor in the proposed units must have sound insulation rating of floors – an Rw + Ctr (airborne) not less than 50 and an Ln, w (impact) not more than 62.***
F7D6 Sound insulation rating of walls [2019: F5.5]				X	(1) A wall in a Class 2 or 3 building must— (a) have an $R_w + C_{tr}$ (airborne) not less than 50, if it separates sole-occupancy units; and (b) have an R_w (airborne) not less than 50, if it separates a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification; and (c) comply with F7D4(2) if it separates— (i) a bathroom, sanitary compartment, laundry or kitchen in one sole-occupancy unit from a habitable room (other than a kitchen) in an adjoining unit; or (ii) a sole-occupancy unit from a plant room or lift shaft. (2) A door may be incorporated in a wall in a Class 2 or 3 building that separates a sole-occupancy unit from a stairway, public corridor, public lobby or the like, provided the door assembly has an R_w not less than 30. (5) Where a wall required to have sound insulation has a floor above, the wall must continue to— (a) the underside of the floor above; or (b) a ceiling that provides the sound insulation required for the wall. (6) Where a wall required to have sound insulation has a roof above, the wall must continue to—

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(a) the underside of the roof above; or (b) a ceiling that provides the sound insulation required for the wall. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification*** ***Compliance Required*** ***All bounding walls and unit entry doors are required to be provided with the required acoustic rating in compliance with this BCA Clause and the BCA Clause F4D4(2) where applicable. See below markup for details. See this BCA Clause for detailed requirements.*** ***This is just a reminder. All other BCA Part F7 clauses are also required to be complied.***  ***Typical markup for SOU*** ***Note that only 1 of 3 SOUs is provided with internal fitout design. It is suggested to provide the details for the other 2 SOUs in order to determine the required acoustic rating and if discontinuous construction is required.***
F7D7 Sound insulation rating of internal services [2019: F5.6]				X	(1) If a duct, soil, waste or water supply pipe, including a duct or pipe that is located in a wall or floor cavity, serves or passes through more than one sole-occupancy unit, the duct or pipe must be separated from the rooms of any sole-occupancy unit by construction with an $R_w + C_{tr}$ (airborne) not less than— (a) 40 if the adjacent room is a habitable room (other than a kitchen); or (b) 25 if the adjacent room is a kitchen or non-habitable room. (2) If a stormwater pipe passes through a sole-occupancy unit, it must be separated in accordance with (1)(a) and (b). ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
F7D8 Sound isolation of pumps [2019: F5.7]				X	A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Part F8 Condensation management					
F8D1 Deemed-to-Satisfy Provisions [2019: F6.0]			X		(1) Compliance with Performance Requirement F8P1 is satisfied by complying with Deemed-to-Satisfy Provisions F8D2 to F8D5. (2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
F8D2 Application of Part [2019: F6.1]			X		The Deemed-to-Satisfy Provisions of this Part only apply to a sole-occupancy unit of a Class 2 building and a Class 4 part of a building.
F8D3 External wall construction [2019: F6.2]				X	(1) Where a pliable building membrane is installed in an external wall, it must— (a) comply with AS 4200.1; and (b) be installed in accordance with AS 4200.2; and (c) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building. (2) Where a pliable building membrane, sarking-type material or insulation layer is installed on the exterior side of the primary insulation layer of an external wall it must have a vapour permeance of not less than— (a) in climate zones 4 and 5, 0.143 µg/N.s; and (b) in climate zones 6, 7 and 8, 1.14 µg/N.s. (3) Except for single skin masonry and single skin concrete, where a pliable building membrane is not installed in an external wall, the primary water control layer must be separated from water sensitive materials by a drained cavity. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F8D4 Exhaust systems [2019: F6.3]				X	(1) An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of— (a) 25 L/s for a bathroom or sanitary compartment; and (b) 40 L/s for a kitchen or laundry. (2) Exhaust from a kitchen, kitchen range hood, bathroom, sanitary compartment or laundry must discharge directly or via a shaft or duct to outdoor air. (3) Where space for a clothes drying appliance is provided in accordance with F4D2(1)(b), space must also be provided for ducting from the clothes drying appliance to outdoor air. (4)(3) does not apply if a condensing-type clothes drying appliance is installed. (5) An exhaust system that is not run continuously and is serving a bathroom or sanitary compartment that is not ventilated in accordance with F6D7 must— (a) be interlocked with the room's light switch; and (b) include a run-on timer so that the exhaust system continues to operate for 10 minutes after the light switch is turned off.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(6) Except for rooms that are ventilated in accordance with F6D7, a room with space for ducting a clothes drying appliance to outdoor air in accordance with (3) must be provided with make-up air in accordance with AS 1668.2 ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
F8D5 Ventilation of roof spaces [2019: F6.4]			X		Not applicable. The climate zone of this development is 5.
Specification 26 Waterproofing and water-resistance requirements for building elements in wet areas					
S26C1 Scope [2019: Table F1.7]			X		This Specification sets out requirements for building elements in wet areas that are required to be— (a) water resistant; or (b) waterproof.
S26C2 Application [2019: Table F1.7]			X		(1) The requirements of this Specification apply to— (a) shower areas (enclosed and unenclosed); and (b) areas outside a shower area; and (c) areas adjacent to baths and spas; and (d) other areas as set out in clause S26C7. (2) Where a shower is above a bath or spa, use requirements for a shower.
S26C3 Shower area (enclosed and unenclosed) [2019: Table F1.7]				X	(1) For a shower area with a hob, step-down or level threshold, the following applies: (a) The floor of the shower area must be waterproof, including any hob or step-down; and (b) The walls of the shower area must be waterproof not less than 1800 mm above the floor substrate. (c) Wall junctions and joints within the shower area must be waterproof. (d) Wall/floor junctions within the shower area must be waterproof. (e) Penetrations within the shower area must be waterproof. (2) A shower with a preformed shower base must also comply with the requirements of (1), except for (a) which is not applicable. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S26C4 Area outside shower area [2019: Table F1.7]				X	(1) For concrete, compressed fibre-cement and fibre-cement sheet flooring, the floor of the room must be water resistant. (2) For timber floors including particleboard, plywood and other timber based flooring materials, the floor of the room must be waterproof. (3) Wall/floor junctions must be waterproof ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S26C5 Areas adjacent to baths and spas without showers [2019: Table F1.7]				X	(1) For areas adjacent to a bath and spa, the following applies: (a) For concrete, compressed fibre-cement and fibre-cement sheet flooring, the floor of the room must be water resistant. (b) For timber floors including particleboard, plywood and other timber based flooring materials, the floor of the room must be waterproof.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(c) Tap and spout penetrations must be waterproof where they occur in horizontal surfaces. (2) For areas adjacent to a non-freestanding bath and spa, the following applies: (a) Walls must be water resistant— (i) to a height of not less than 150 mm above the vessel, for the extent of the vessel, where the vessel is within 75 mm of a wall; and (ii) to all exposed surfaces below vessel lip. (b) Wall junctions and joints must be water resistant within 150 mm above a vessel for the extent of the vessel. (c) Wall/floor junctions must be waterproof for the extent of the vessel. (3) For inserted baths and spas, the following applies: (a) For floors and horizontal surfaces: (i) Any shelf area adjoining the bath or spa must be waterproof and include a waterstop under the vessel lip. (ii) There are no requirements for the floor under a bath or spa. (b) For walls: (i) Waterproof to not less than 150 mm above the lip of a bath or spa. (ii) There are no requirements for walls beneath the lip of a bath or spa. (c) For wall junctions and joints: (i) Waterproof junctions within 150 mm of a bath or spa. (ii) There are no requirements for junctions and joints in walls beneath the lip of a bath or spa. (d) Tap and spout penetrations must be waterproof where they occur in horizontal surfaces. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S26C6 Other areas [2019: Table F1.7]				X	(1) For walls adjoining other types of vessels (e.g. sink, basin or laundry tub), the following applies: (a) Walls must be water resistant to a height of not less than 150 mm above the vessel, for the extent of the vessel, where the vessel is within 75 mm of a wall. (b) Waterproof wall junctions where a vessel is fixed to a wall. (c) Waterproof tap and spout penetrations where they occur in surfaces required to be waterproof or water resistant. (2) For laundries and WCs, other than WCs as described in (3), the following applies: (a) Water resistant floor of the room. (b) Water resistant wall/floor junctions. (c) Waterproof penetrations where they occur in surfaces required to be waterproof. (3) For WCs with a handheld bidet spray installation, the following applies: (a) Waterproof floor of the room. (b) Walls must be—

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(i) waterproof within a 1500 mm radius from the wall connection of the handheld bidet spray device to a height of not less than 150 mm above the floor substrate; and (ii) water resistant within a 1500 mm radius from the wall connection of the handheld bidet spray device to a height of not less than 1200 mm above the finished floor level of the WC. (c) Waterproof wall junctions within the WC area within 1500 mm radius from the wall connection of the handheld bidet spray device. (d) Waterproof wall/floor junctions within the WC area within 1500 mm radius from the wall connection of the handheld bidet spray device. (e) Waterproof penetrations in WC area. (4) For bathrooms and laundries required to be provided with a floor waste by F2D4, the following applies: (a) Waterproof floor of the room. (b) Waterproof wall/floor junctions. (c) Waterproof penetrations where they occur through the floor. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
Specification 27 Accessible adult change facilities					
Not applicable.					
Specification 28 Sound insulation for building elements					
S28C1 Scope [2019: Spec F5.2: 1(a)]			X		This Specification lists the weighted sound reduction index RW for some common forms of construction.
S28C2 Discontinuous construction [2019: Spec F5.2: 1(b)]				X	Wall systems listed in S28C4 to S28C7 having a minimum 20 mm cavity between 2 separate leaves are deemed to be discontinuous construction if— (a) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and (b) for other than masonry, there is no mechanical linkage between leaves except at the periphery. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S28C3 Construction Deemed-to-Satisfy [2019: Spec F5.2: 2]				X	(1) The forms of wall construction described in S28C4 to S28C7 and floor construction described in S28C8 to S28C10, are considered to have the R_w, $R_w + C_{tr}$ and $L_{n,w}$ stated in those clauses. (2) The forms of construction referred to in (1) must be installed as follows: (a) Masonry units must be laid with all joints filled solid, including those between the masonry and any adjoining construction. (b) Joints between concrete slabs or panels and any adjoining construction must be filled solid. (c) For sheeting materials— (i) if one layer is required on both sides of a wall, it must be fastened to the studs with joints staggered on opposite sides; and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(ii) if two layers are required, the second layer must be fastened over the first layer so that the joints do not coincide with those of the first layer; and (iii) joints between sheets or between sheets and any adjoining construction must be taped and filled solid. (d) Timber or steel-framed construction — perimeter framing members must be securely fixed to the adjoining structure and— (i) bedded in resilient compound; or (ii) the joints must be caulked so that there are no voids between the framing members and the adjoining structure. (e) Services must not be chased into concrete or masonry elements. (f) A door or panel required to have a certain $R_w + C_{tr}$ that provides access to a duct, pipe or other service must— (i) not open into any habitable room (other than a kitchen); and (ii) be firmly fixed so as to overlap the frame or rebate of the frame by not less than 10 mm, be fitted with a sealing gasket along all edges and be constructed of— (A) wood, particleboard or blockboard not less than 33 mm thick; or (B) compressed fibre-reinforced cement sheeting not less than 9 mm thick; (C) or other suitable material with a mass per unit area not less than 24.4 kg/m^2 (g) A water supply pipe must— (i) only be installed in the cavity of discontinuous construction; and (ii) in the case of a pipe that serves only one sole-occupancy unit, not be fixed to the wall leaf on the side adjoining any other sole-occupancy unit and have a clearance not less than 10 mm to the other wall leaf. (h) Electrical outlets must be offset from each other— (i) in masonry walling, not less than 100 mm; and (ii) in timber or steel-framed walling, not less than 300 mm. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S28C4 Acceptable forms of construction for walls — masonry [2019: Spec F5.2: Table 2]				X	(1) Acceptable forms of construction for masonry walls are set out in (2) to (9). (2) Two leaves of 110 mm clay brick masonry with— (a) a cavity of not less than 50 mm between leaves; and (b) 50 mm thick glass wool insulation with a density of 11 kg/m^3 or 50 mm thick polyester insulation with a density of 20 kg/m^3 in the cavity, has an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, if constructed as shown in Figure S28C4a. (3) Two leaves of 110 mm clay brick masonry with— (a) a cavity of not less than 50 mm between leaves; and (b) 13 mm cement render on each outside face,

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					has an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, when constructed as shown in Figure S28C4b. (4) A single leaf of 110 mm clay brick masonry with— (a) a row of 70 mm x 35 mm timber studs or 64 mm steel studs at 600 mm centres, spaced 20 mm from the masonry wall; and (b) 50 mm thick glass or mineral wool insulation with a density of 11 kg/m^3 c positioned between studs; and (c) one layer of 13 mm plasterboard fixed to outside face of studs and outside face of masonry, has an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, if constructed as shown in Figure S28C4c. (5) A single leaf of 90 mm clay brick masonry with— (a) a row of 70 mm x 35 mm timber studs or 64 mm steels studs at 600 mm centres, spaced 20 mm from each face of the masonry wall; and (b) 50 mm thick mineral insulation or glass wool insulation with a density of 11 kg/m3 positioned between studs in each row; and (c) one layer of 13 mm plasterboard fixed to studs on each outside face, has an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, if constructed as shown in Figure S28C4d. (6) A single leaf of 150 mm brick masonry with 13 mm cement render on each face has an R_w of not less than 50 if constructed as shown in Figure S28C4e. (7) A single leaf of 220 mm brick masonry with 13 mm cement render on each face has an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, if constructed as shown in Figure S28C4f. (8) 110 mm thick brick masonry with 13 mm cement render on each face has an Rw of not less than 45 if constructed as shown in Figure S28C4g. (9) 110 mm thick concrete brickwork has an R_w of not less than 45 if constructed as shown in Figure S28C4h. ***Where masonry construction is proposed, details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S28C5 Acceptable forms of construction for walls — concrete [2019: Spec F5.2: Table 2]				X	(1) Acceptable forms of construction for concrete walls are set out in (3) to (12). (2) For the purposes of this clause, the term 'concrete panel' is a reference to a solid in-situ concrete panel or solid pre-cast concrete panel. (3) A 150 mm thick concrete panel has an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, if constructed as shown in Figure S28C5a. (4) A 150 mm thick concrete panel with one layer of 10 mm plasterboard fixed to 28 mm metal furring channels on each face, has an R_w of not less than 50, if constructed as shown in Figure S28C5b. (5) A 200 mm thick concrete panel with one layer of 13 mm plasterboard or 13 mm cement render on each face has an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, if constructed as shown in Figure S28C5c. (6) A 100 mm thick concrete panel with— (a) a row of 64 mm steel studs at 600 mm centres, spaced 25 mm from the concrete panel; and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(b) 80 mm thick polyester insulation or 50 mm thick glass wool insulation with a density of 11kg/m3 , positioned between studs; and (c) two layers of 13 mm plasterboard fixed to outside face of studs and one layer of 13 mm plasterboard fixed to outside face of concrete panel, has an with an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, if constructed in accordance with Figure S28C5d. (7) A 125 mm thick concrete panel with— (a) a row of 64 mm steel studs at 600 mm centres, spaced 20 mm from the concrete panel; and (b)70 mm polyester insulation with a density of 9 kg/m3, positioned between studs; and (c) one layer of 13 mm plasterboard fixed to the outside face of the studs, has an with an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, if constructed in accordance with Figure S28C5e. (8) A 125 mm thick concrete panel has an R_w of not less than 50, if constructed as shown in Figure S28C5f. (9) A 100 mm concrete panel with 13 mm cement render or one layer of 13 mm plasterboard on each face has an R_w of not less than 50, if constructed as shown in Figure S28C5g. (10) A 190 mm thick concrete blockwork has an R_w of not less than 45, if constructed as shown in Figure S28C5h. (11) A 140 mm thick concrete blockwork, the face shell thickness of the blocks being not less than 44 mm and with— (a) 50 mm x 50 mm timber battens spaced at not more than 610 mm centres screw-fixed on one face of the blocks into resilient plugs with rubber inserts between battens and the wall; and (b) the face of the battens clad with 13 mm plasterboard, has an R_w of not less than 45, if constructed as shown in Figure S28C5i. (12) A concrete panel, 100 mm thick, has an R_w of not less than 45, if constructed as shown in Figure S28C5j. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S28C6 Acceptable forms of construction for walls — autoclaved aerated concrete [2019: Spec F5.2: Table 2]				X	(1) Acceptable forms of construction for autoclaved aerated concrete walls are set out in (2) to (5). (2) A 75 mm thick autoclaved aerated concrete wall panel with— (a) a row of 64 mm steel studs at 600 mm centres, spaced 20 mm from the autoclaved aerated concrete wall panel; and (b)75 mm thick glass wool insulation with a density of 11 kg/m3 positioned between studs; and (c) one layer of 10 mm moisture resistant plasterboard or 13 mm fire protective grade plasterboard fixed to outside face of studs and outside face of autoclaved aerated concrete wall panel, has an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, if constructed as shown in Figure S28C6a. (3) A 75 mm thick autoclaved aerated concrete wall panel with— (a) a row of 64 mm steel studs at 600 mm centres, spaced 35 mm from the autoclaved aerated concrete panel wall; and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(b) 28 mm metal furring channels fixed to the outside face of the autoclaved aerated concrete wall panel, with 50 mm thick polyester insulation with a density of 9 kg/m3 positioned between furring channels and one layer of 13 mm fire protective grade plasterboard fixed to furring channels; and (c) 105 mm thick glass wool insulation with a density of 7 kg/m3 positioned between studs; and (d) one layer of 13 mm fire protective grade plasterboard fixed to the outside face of the studs, has an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, if constructed as shown in Figure S28C6b. 4) Two leaves of 75 mm autoclaved aerated concrete wall panel with— (a) a cavity not less than 30 mm between panels containing 50 mm glass wool insulation with a density of 11 kg/m3; and (b) one layer of 10 mm plasterboard fixed to outside face of each panel, has an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, if constructed as shown in Figure S28C6c. (5) A 75 mm thick autoclaved aerated concrete wall panel with— (a) one layer of 10 mm moisture resistant plasterboard on one face; (b) 28 mm metal furring channels and resilient mounts, 75 mm polyester insulation with a density of 9 kg/m3 and 13 mm fire-protective grade plasterboard fixed to the other face, has an R_w of not less than 50, if constructed as shown in Figure S28C6d. ***Where autoclaved aerated concrete is proposed, details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S28C7 Acceptable forms of construction for walls — timber and steel framing [2019: Spec F5.2: Table 2]			X		(1) Acceptable forms of construction for ~~timber and~~ steel framing wall are set out in (2) to (11). (2) Two rows of 70 x 35 mm timber studs at 450 mm centres with— (a) an air gap not less than 20 mm between the rows of studs; and (b) 75 mm thick glass or mineral wool insulation with a density of 8 kg/m³ or 60 mm thick polyester insulation with a density of 11 kg/m³ positioned between one row of studs; and (c) two layers of 13 mm fire protective grade plasterboard or one layer of 6 mm fibre-cement sheet and one layer of 13 mm fire protective grade plasterboard, fixed to outside face of studs, has an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, if constructed as shown in Figure S28C7a. (3) One row of 70 mm x 35 mm staggered timber studs, without noggings between adjacent studs, at not less than 450 mm centres, fixed to 90 mm x 35 mm wall plates with— (a) 75 mm thick glass or mineral wool insulation with a minimum density of 8 kg/m³ positioned between studs; and (b) two layers of 13 mm fire-protective grade plasterboard fixed to outside face of studs, has an R_w of not less than 50, if constructed as shown in Figure S28C7b.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(4) One row of 70 mm x 35 mm timber studs at not less than 600 mm centres with— (a) 75 mm thick glass or mineral wool insulation with a minimum density of 8 kg/m³ positioned between studs; and (b) two layers of 13 mm fire-protective grade plasterboard fixed to outside face of studs, has an R_w of not less than 45, if constructed as shown in Figure S28C7c. (5) One row of 70 mm x 35 mm timber studs at not less than 450 mm centres with— (a) 28 mm furring channels installed horizontally on one side; and (b) two layers of 13 mm fire-protective plasterboard fixed on each face, has an R_w of not less than 45, if constructed as shown in Figure S28C7d. (6) Two rows of 64 mm steel studs at 600 mm centres with— (a) an air gap not less than 20 mm between the rows of studs; and (b) 50 mm thick glass wool insulation or 60 mm thick polyester insulation with a density of 11kg/m³ positioned between one row of studs; and (c) two layers of 13 mm fire-protective grade plasterboard or one layer of 6 mm fibre-cement sheet and one layer of 13 mm fire-protective grade plasterboard, fixed to outside face of studs, has an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, if constructed as shown in Figure S28C7e. (7) Two rows of 64 mm steel studs at 600 mm centres with— (a) an air gap not less than 80 mm between the rows of studs; and (b) 200 mm thick polyester insulation with a density of 14 kg/m3 positioned between studs; and (c) one layer of 13 mm fire-protective grade plasterboard and one layer 13 mm plasterboard on one outside face and one layer of 13 mm fire-protective grade plasterboard on the other outside face, has an $R_w + C_{tr}$ of not less than 50 and an R_w of not less than 50, if constructed as shown in Figure S28C7f. (8) One row of 92 mm steel studs at 600 mm centres with— (a) 50 mm thick glass wool insulation with a density of 11 kg/m3 or 60 mm thick polyester insulation with a density of 8 kg/m3, positioned between studs; and (b) two layers of 13 mm fire-protective grade plasterboard or one layer of 6 mm fibre-cement sheet and one layer of 13 mm fire-protective grade plasterboard, fixed to each face, has an R_w of not less than 50, if constructed as shown in Figure S28C7g. (9) One row of 64 mm steel studs with 2 layers of 16 mm fire-protective grade plasterboard fixed to each face has an R_w of not less than 45, if constructed as shown in Figure S28C7h. (10) One row of 64 mm steel studs with— (a) one layer of 16 mm fire-protective grade plasterboard fixed to one face; and (b) 50 mm thick glass or mineral wool insulation with a density of 11 kg/m3 positioned between the studs; and

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
					(c) two layers of fire-protective grade plasterboard fixed to the other face, the inner layer being 16mm thick and the outer layer being 13 mm, has an R_w of not less than 45, if constructed as shown in Figure S28C7i. (11) One row of 64 mm steel studs with two layers of 13 mm plasterboard on each face has an R_w of not less than 45, if constructed as shown in Figure S28C7j. ***Where steel framing construction is proposed, details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S28C8 Acceptable forms of construction for floors — concrete [2019: Spec F5.2: Table 3]				X	(1) Acceptable forms of construction for concrete floors are set out in (2) to (4). (2) 150 mm thick concrete slab with— (a) 28 mm metal furring channels and isolation mounts fixed to underside of slab, at 600 mm centres; and (b) 65 mm thick polyester insulation with a density of 8 kg/m3, positioned between furring channels; and (c) one layer of 13 mm plasterboard fixed to furring channels, has an R_w + Ctr of not less than 50, an $L_{n,w}$ of not more than 62 and an R_w of not less than 50, if constructed as shown in Figure S28C8a. (3) 200 mm thick concrete slab with carpet on underlay has an R_w + Ctr of not less than 50, an $L_{n,w}$ of not more than 62 and an R_w of not less than 50, if constructed as shown in Figure S28C8b. (4) 100 mm thick concrete slab has an R_w + Ctr of not less than 45 and an R_w of not less than 45, if constructed as shown in Figure S28C8c. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S28C9 Acceptable forms of construction for floors — autoclaved aerated concrete [2019: Spec F5.2: Table 3]				X	(1) An acceptable form of construction for autoclaved aerated concrete floors is set out in (2). (2) 75 mm thick autoclaved aerated concrete floor panel with— (a) 8 mm ceramic tiles with flexible adhesive and waterproof membrane, located above the slab; and (b) timber joists at 600 mm centres; and (c) R1.5 glass wool insulation positioned between timber joists; and (d) 28 mm metal furring channels and resilient mounts fixed to underside of joists; and (e) two layers of 13 mm plasterboard fixed to furring channels, has an $R_w + C_{tr}$ of not less than 50, an $L_{n,w}$ of not more than 62 and an R_w of not less than 50, if constructed as shown in Figure S28C9. ***Where autoclaved aerated concrete is proposed., details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***
S28C10 Acceptable forms of construction for floors — timber			X		Not applicable.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
[2019: Spec F5.2: Table 3]					
Specification 29 Impact sound- test of equivalence					
S29C1 Scope [2019: Spec F5.5: 1]			X		This Specification describes a method of test to determine the comparative resistance of walls to the transmission of impact sound.
S29C2 Construction to be tested [2019: Spec F5.5: 2]			X		(1) The test is conducted on a specimen of prototype wall construction and on a specimen of one or other of the constructions specified in S28C4 to S28C7. (2) The testing of a construction specified in S28C4 to S28C7 need not be repeated for subsequent comparisons provided complete records of the results, the test equipment and the technique of testing are kept so that identical equipment can be employed and an identical technique can be adopted in the testing of specimens of prototype wall construction.
S29C3 Method [2019: Spec F5.5: 3]			X		(1) The wall constructions to be compared must be tested in accordance with AS 1191. (2) A horizontal steel platform 510 mm x 460 mm x 10 mm thick must be placed with one long edge in continuous and direct contact with the wall to be tested on the side of the wall on which the impact sound is to be generated. (3) A tapping machine complying with ISO 140/6 — 1998 (E) must be mounted centrally on the steel platform. (4) The sound transmission through the wall must be determined in accordance with AS 1191 except that the tapping machine as mounted on the steel platform must be used as the source of sound. (5) The impact sound pressure levels measured in the receiving room must be converted into normalised levels using a reference equivalent absorption area of 10 m2. Specification 29 Impact sound – test of equivalence Preview D.
Section G Ancillary Provisions					
Part G1 Minor structures and components					
G1D1 Deemed-to-Satisfy Provisions [2019: G1.0]			X		(1) Performance Requirement G1P1 must be complied with. (2) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements G1P2 to G1P5 are satisfied by complying with G1D2 to G1D4. (3) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.
NSW G1D2 Swimming pools [2019: G1.1]			X		Not applicable. This development does not contain any swimming pool.
G1D3 Refrigerated chambers, strong-rooms and vaults [2019: G1.2]			X		Not applicable. This development does not contain any refrigerated chambers, strong-rooms and vaults.
G1D4			X		Not applicable.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS
Outdoor play spaces [2019: G1.3]					This development does not contain any outdoor play area.
NSW G1D5 Provision for cleaning windows [2016: NSW G1.101]				X	(1) A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level. (2) A building satisfies (1) where— (a) the windows can be cleaned wholly from within the building; or (b) provision is made for the cleaning of the windows by a method complying with the Work Health and Safety Act 2011 and regulations made under that Act. ***Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification***

Part G2 Boilers, pressure vessels, heating appliances, fireplaces, chimneys and flues

Not applicable.

The development does not contain boilers, pressure vessels, heating appliances, fireplaces, chimneys and flues.

Part G3 Atrium Construction

Not applicable.

The development does not have atrium construction.

Part G4 Construction in alpine areas

Not applicable.

The development is not located in alpine area.

Part G5 Construction in bushfire prone areas

Not applicable.

The development is not located in bushfire prone area.

Part G6 Occupiable outdoor areas

Not applicable.

As per BCA Clause G6D1(3)(a), an occupiable outdoor area of a sole-occupancy unit in a Class 2 building.

This development only contains the occupiable outdoor area of the sole-occupancy units in a Class 2 building – the balconies.

Part G7 Liveable housing design

NSW Part G7 Liveable housing design			X		This Part has been deliberately left blank. Part G7 does not apply in NSW as liveable housing design requirements do not apply to sole-occupancy units in a Class 2 building in NSW.

Specification 30 Installation of boilers and pressure vessels

Not applicable.

Boilers and pressure vessels are not proposed.

Specification 31 Fire and smoke control systems in buildings containing atriums

Not applicable.

The development does not contain atrium.

Specification 43 Bushfire protection for certain Class 9 buildings

Not applicable.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

BCA DEEMED-TO-SATISFY PROVISION	COMPLIES	DOES NOT COMPLY	NA or Informational	Compliance Required	COMMENTS

The development is not located in bushfire prone area.

Section I Special use buildings

Part I1 Class 9b Buildings

Not applicable.

The development does not contain any stage nor backstage area.

Part I2 Public transport buildings

Not applicable.

The development does not contain any public transport building.

Part I3 Farm buildings and farm sheds

Not applicable.

The development does not contain any farm building.

Specification 32 Construction of proscenium walls

Not applicable.

The development does not contain the construction of proscenium walls for theatres, public halls, or the like.

NSW Part I4 Class 9b Buildings

Not applicable.

The development does not contain entertainment venue as described in the Environmental Planning and Assessment Regulation 2021.

NSW Part I5 Temporary Structures

Not applicable.

The development does not contain any temporary structures used as entertainment venues.

NSW Part I6 Drive-in theatres

Not applicable.

The development does not contain any drive-in theatre.

Section J Energy Efficiency

This assessment does not include energy efficiency.

It is recommended to engage a qualified consultant to prepare an assessment report.

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

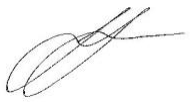
5.0 CONCLUSION

This report provides a Building Code of Australia 2022 (BCA) assessment of the proposed Proposed Infilled Apartment to Existing Residential Unit Building

The primary purpose of this report was to identify the non-compliance matters contained in the proposed design philosophy against the current Deemed-to-Satisfy (DTS) Provisions of the BCA and to provide compliance recommendations to overcome the DTS non-compliances.

This report provided a BCA assessment table in Section 3.0 that summarises the identified non-compliance matters and offers specific recommendations that are also outlined in the Executive Summary.

Further, if compliance with the deemed-to-satisfy provisions is not achievable or desirable, Alternative Solutions could be further developed and verified by an appropriately qualified BCA Consultant or Fire Safety Engineer.

Prepared by: -	**Reviewed by: -**
 Jason Yau Building Surveyor For AED Group	 Trenton Jones Director Building Surveyor – Unrestricted (Accreditation Number: BDC0203) AED Group

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495

6.0 ATTACHMENT A - INSPECTION & MAINTENANCE

6.1 Fire Safety Measures

The fire safety measures within the building must be maintained to ensure correct operation at all times the building is occupied. All firefighting equipment should be tagged when tested/inspected and log books kept up-to-date for all smoke detection, warning systems and sprinkler systems (where installed).

An annual fire safety certificate must be submitted to the local consent authority and the NSW Fire Brigade each year indicating satisfactory performance of the fire safety measures contained within the building. The annual fire safety statement should be displayed in a prominent place within the building (i.e. the main entry foyer)

The correct operation and maintenance of the buildings fire safety measures is critical in affording an adequate level of fire safety.

6.2 Good Housekeeping

The ongoing management of the building should ensure good housekeeping procedures. The following matters should be considered by building management:

- Ensure exits and paths of travel to exits remain unobstructed (in particular stairways)
- Avoid storage of materials in unoccupied areas
- Limit storage of flammable/combustible materials to designated and approved areas
- Prevent chocking open fire/smoke doors
- Prevent storage of materials that could hinder access to firefighting equipment

AE&D Pty Ltd A: Suite 3.04, 55 Miller Street, Pyrmont NSW 2009
Southern Highlands A: Unit 6, 13 Lyell Street, Mittagong NSW 2575
P: (02) 9571 8433 E: admin@aedconsulting.com.au W: www.aedconsulting.com.au ABN: 15 149 587 495