STEVE WATSON
& PARTNERS

222 Waldron Road and 138-140 Campbell Hill Road, Chester Hill

BCA Capability Compliance Report for DA

Reference 2022/0360 R1.0

Prepared for Centurion Project Management

29 April 2024

Steve Watson and Partners Pty Ltd

SYDNEY Level 17, 456 Kent Street, Sydney NSW 2000 | Phone +61 2 9283 6555 | Fax +61 2 9283 8500

MELBOURNE Level 8, 350 Queen Street MELBOURNE, Victoria 3000 | Phone: +61 3 9380 5552 | Fax: +61 3 9380 5558

BRISBANE Level 4, 276 Edward Street BRISBANE, QLD 4000 | +61 7 3088 2333 | Fax: +61 7 3088 2444

CANBERRA Suite 8, 14 Lonsdale Street, Braddon ACT 2612 | +61 2 6100 6606 | Fax: +61 2 6100 6609

info@swpartners.com.au www.swpartners.com.au

ABN 33 600 478 402

Principal Certifying Authority - Steve Watson & Partners

Project Contacts

Client:	Centurion Project Management
Architect:	Boffa Robertson group

SWP Quality System

Job Number/Ref:	2024/0360	**Revision Number:**	R1.0	**Issue Date:**	29th April 2024

Revision History

Rev No	Date	Revision Details	Author	Verifier
R1.0	29/04/2024	Report for SSDA submission	SA	AD

Disclaimer:
This report is based on a desktop audit of preliminary DA documentation only.
Details contained in the report address issues of significance to broad BCA compliance relevant to this stage of design resolution.
This report is based on a review of the DA design documentation only. It represents a compliance report for "documentation to this point in time" and will be subject to amendment and further detailed assessment at the Construction Certificate stage.

Table of Contents

1. INTRODUCTION

This report presents the findings of a preliminary assessment of the proposed re-development for Abel Tasman Village at 222 Waldron Road and 138-140 Campbell Hill Road, Chester Hill against the Deemed-to-Satisfy (DtS) provisions of Building Code of Australia (BCA) 2022.

It has been prepared by building regulations consultants and certifiers from Steve Watson and Partners for Centurion Project Management.

2. PURPOSE

The purpose of this report is to provide an assessment of the design documentation against the current requirements of the BCA that are required to be addressed to permit the lodgement and approval of an application for a State Significant Development Application Lodgement. The scope of this assessment is limited to the design documentation referenced in Appendix A of this report.

3. SCOPE AND LIMITATIONS

3.1. SCOPE

The scope of this assessment is limited to the the design documentation provided by Boffa Robertson group Architects. An assessment of the proposed design has been undertaken against the Deemed-to-Satisfy (DtS) provisions of the relevant sections of the Building Code of Australia 2022 and the applicable Building Regulations.

3.2. LIMITATIONS

The following limitations apply to the assessment:

- This report only considers key BCA compliance issues of the new works.
- The report considers matters of a significant nature only and should not be considered exhaustive.
- The plans are assessed to the extent necessary to apply for a State Significant development application. This means the design has been assessed to be capable of complying with the BCA without necessarily having all the detailed design completed at this stage.
- Details in regard to access for people with disabilities have been assessed to the extent of the deemed-to-satisfy provisions of the BCA/Premises Standard only. A detailed assessment against BCA Clause D4, AS 1428 series, AS/NZS 2890.6 – 2009 and AS 4299 – 1995 is outside the scope of this report. A separate access consultant will be undertaking an assessment in this regard. The assessment does not consider the requirements for people with disabilities under the provisions of the Disabilities Discrimination Act 1992.
- Generally, the assessment does not incorporate a detailed assessment of the requirements of the Australian Standards. Structural and services documentation have not been reviewed.
- Structural and any services documentation have not been reviewed.
- Appraisals are limited to the provisions of the BCA. Other legislative requirements have not been considered. It does not address additional or specific requirements stipulated under other areas such as Safety in Design, Construction Safety, Disability Discrimination, Planning and Environment, Occupational Health and Safety, Health, Dangerous Goods, etc, which may impact on the design and use of the building. It is recommended that appropriate advice from suitably qualified consultants should be obtained for further information on these areas.

4. NATIONAL CONSTRUCTION CODE –VOLUME 1: BUILDING CODE OF AUSTRALIA 2022 CLASS 2 TO CLASS 9 BUILDINGS

The National Construction Code (NCC) is a uniform set of technical provisions for the design and construction of buildings, structures and plumbing/drainage systems which is separated into 3 volumes. Volume 1 of the NCC is the Building Code of Australia (BCA) for Class 2 to 9 buildings which is the document to which the assessment in this report has been undertaken against. The BCA is legislated under The Act and specifies the Performance Requirements for the design and construction of Class 2 to 9 buildings that must be satisfied to achieve compliance. The Performance Requirements can only be satisfied by a Performance Solution, Deemed-to-Satisfy (DTS) solution or a combination of both.

5. PERFORMANCE SOLUTIONS

The BCA is written in a performance format which allows performance-based buildings. This has allowed for innovation and variation from the prescriptive deemed-to-satisfy requirements of the BCA, whilst maintaining the principle levels of health, safety and amenity of building occupants.

Performance solutions are generally adopted when a nominated deemed-to-satisfy provision appears inappropriate for the design, or when a proposed design varies from the prescriptive requirements of the BCA. Subsequently, a performance solution supported by Fire Engineering analysis can determine whether a proposed design that varies from prescriptive requirements, will satisfactorily meet the performance provisions of the BCA. Ultimately, it is with the discretion of the relevant building surveyor whether to accept a deviation from the prescriptive code requirements.

Utilising the performance provisions may result in more economical and somewhat safer building, however alternative solutions may require additional on-going maintenance. It is in this instance that all parties, such as the building owner, insurance companies, proposed tenants, etc., are aware of this decision-making process and are kept informed of any additional requirements needed to maintain the level of safety.

6. STATUTORY FRAMEWORK

Glossary:

Building Code of Australia - BCA, National Construction Code – NCC, Deemed-to-Satisfy - Dts

Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 - EPAR (DCFS)

Environmental Planning and Assessment Act 1979 No 203 - EPAA

Environmental Planning and Assessment Regulation 2021 - EPAR

The following table summarises the key statutory issues relating to fire safety and the BCA in relation to the certification of new building works approval pathway for proposed works via a State Significant Development Approval.

Issue	Legislative reference	Comment
New Work	Section 19 of the EPAR (DCFS)	All new works must comply with the relevant requirements of the Building Code of Australia as in force at the time the application for the construction certificate was made.

6.1. NEW WORK

Section 19 of the EPAR (DCFS) requires that all new work comply with the current requirements of the BCA.

A new building is being proposed which means that all works proposed in the plans are required to comply with the current requirements of the BCA and appropriate for the new use. All areas of the proposed building will need to comply with the provisions as outlined in the BCA2022 including Section J.

7. DESCRIPTION OF PROPOSAL

Proposed re-development for Abel Tasman Village located at 222 Waldron Road and 138-140 Campbell Hill Road, Chester Hill. The re-development comprises of three new buildings (Buildings A, B & E), Carparking and retail tenancies.

Summary of BCA Parameters

Building Use:	Residential Apartments, Residential Aged Care, Carpark, Storage & Retail Tenancies
Class of Occupancy:	Class 2, 9c & 7a
Type of Construction required:	Type A
Rise in Storeys:	8
Stories Contained	9
Effective Height:	23.48m (Level 6 RL 55.70- Basement RL 32.22)
10% rule	The retail facing Waldron Road, and the storage cages within the carpark both achieve a combined floor areas of less than 10% of the storey and has been assessed as adopting the same classicisation and Fire Resistance Level of the carpark & Ancillary 9c areas. The required FRL's within the carpark are (120/120/120. Note: The cinema, multipurpose and gym areas on the ground level have been treated as being ancillary to the Class 9c building and adopt a Class 9c classification.

8. RELEVANT AUTHORITIES

Where a design incorporates a performance-based design brief for a performance solution involving fire safety requirements in the building, referral to Fire and Rescue NSW under Section 26 & 27 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 is required.

9. STATUTORY FIRE SAFETY MEASURES

All fire/essential safety measures installed within the building are required required to be certified upon completion of the project and prior to occupation of the building by the owner of the building, by issuing a Final Fire Safety Certificate under the Act. The owner is also required under the Act to certify each of the Fire Safety Measures annually by issuing a Fire Safety Statement.

10. ASSESSMENT

Steve Watson and Partners have undertaken a review of the proposed design for the re-development of Abel Tasman Village at 222 Waldron Road and 138-140 Campbell Hill Road, Chester Hill that will form part of the DA submission.

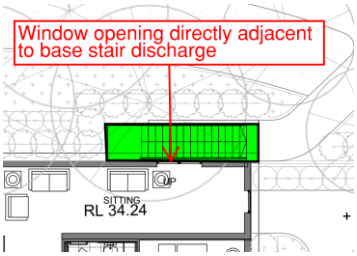
The following is a summary of an assessment of the proposed design against the key relevant Deemed-to-Satisfy provisions of the BCA for Development Application purposes. This report and associated compliance advice is not intended or permitted to be relied on by any other party with respect to their obligations to ensure compliance including but not limited to the making of a compliance declaration under the NSW Design and Building Professionals Act.

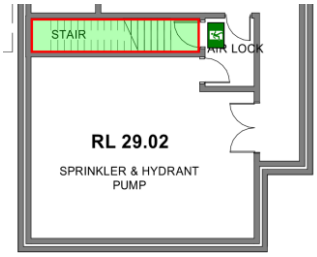
Compliance is proposed to be achieved by satisfying the relevant DtS provisions and where necessary other aspects of the design may need to be addressed by way of Performance Solutions to meet the relevant Performance Requirements of the BCA.

Key Compliance uses or items that my required Fire Engineered via performance solutions:

Item	Possible Non-Compliance/s	DTS Clause	Description	Performance Requirement(s)
1.	Non-combustible building elements	C2D10	Review of combustible materials within all external walls and within internal non-loadbearing walls required to be fire-resisting which may include minor timber noggins/studwork in the internal non-loadbearing walls required to be fire-resisting. Note: Non-combustible material means not deemed combustible as determined by AS 1530.-1994 – Combustibility Tests for Materials.	C1P1 & C1P2
2.	Ancillary Elements	C2D14	External signage if combustible that will be attached to the external face of the external walls.	C1P1 & C1P2
3.	Class 9c Buildings	C3D6	Class 9c building must be divided into areas not more than 500m^2 by smoke-proof walls complying with Specification 11 & fire compartments must be separated from the remainder of the building in accordance with C3D6. If compliance cannot be achieved this will need to be addressed via a fire engineering performance solution.	C1P2, C1P3 & C1P4
4.	Fire Resistance Levels	C2D2 & Specification 5	The basement carpark is required to achieve 2hr fire rating. The retail and car parking storage cages are both less than 10% of the carpark and 9c associated use areas. The Residential Level is required to achieve a 90 minute fire rating	C1P1 & C1P2
5.	Fire Separation	C4D12	A doorway from any other room not within a SOU, must be protected by -/60/30 self-closing fire doors if it opens to a public corridor, public lobby or the like within the residential portion of the building. The storage rooms and garbage chutes as indicated in the plan	C1P1 & C1P2

Item	Possible Non-Compliance/s	DTS Clause	Description	Performance Requirement(s)
			extract below need to be separated with -/60/60 and a self-closing fire doors are outlined above. 	
6.	Service Penetrations	C4D10	Required fire hydrant and sprinkler test drain pipes at the top pf the fire isolated stairs, penetrate through the fire isolated stairway. Tested prototype systems are to be provided with the Construction Certificate documentation.	C1P2 & D1P5
7.	Enclosure of shafts	S5C8	The bottom of the garbage chute in the basement level are not fire rated as required by this clause and are required to be addressed via a fire engineered performance solution.	C1P2, C198
8.	Number of Exits	D2D3	The basement under Building A servicing the pump rooms is only serviced by a single stairway / exit and does not comply and is required to be addressed via a fire engineered performance Solution.	D1P4 & E2P2
9.	Exit travel distances	D2D5 & D2D6	The following extended egress travel distances where identified and are required to be addressed via a fire engineered performance Solution; • Commercial Kitchen – 50m to an exit and up to 78m between alternative exits. • Basement – 30m to a Point of choice, 50m to an exit and 80m between alternative exists. Note: Doorway to commercial kitchen is not shown and travel distances will need to be confirmed once the design is fully developed.	D1P4 & E2P2
10.	Distance between Alternative Exits	D2D6	Exits less than 9m apart.	D1P4 & E2P2
11.	Tavel via fire-isolated exits	D2D12	The discharge doorways of all fire-isolated exits need to be documented on the plans. The current plans do not document all the discharge locations. The egress pathway from the	D1P5

Item	Possible Non-Compliance/s	DTS Clause	Description	Performance Requirement(s)
			discharge of all fire isolated exits to the street must be located more than 6m from openings of the same buildings, unless the openings are internally protected with drenchers.	
12.	Tavel via non-fire-isolated exits	D2D14	The egress pathway from the discharge of all fire isolated exits to the street must be adequately protected from fire. Some basement stairs discharge directly adjacent to windows of the ground floor and would not be considered to be adequately protected from fire. 	D1P5
13.	Separation of rising and descending stair flights	D3D5	Stairways ascending from the basement are not separated from the descending stairways from level 1 on the ground level and do not comply. The rising and descending stairways are required to be fire separated. Updated details are required to be included within the updated Construction Certificate plans.	D1P4
14.	Swinging Doors	D3D25	All exit doors are required to swing in the direction of egress.	D1P2 & D1P4
15.	Hydrants	E1D2	The building is likely to have hydrant coverage shortfalls and will require further investigation from the hydraulic consultant.	E1D2
16.	Fire Hose Reels	E1D3	Fire Hose Reels are required to be documented throughout the basement carpark. The remainder of the building is exempt from needing fire hose reels.	E1P1
17.	Provision for Special Hazards	E1D17	Provision for Electric Vehicle parking to be incorporated within the fire engineered performance solution as a special hazard.	E2D21
18.	Fire hydrants	E1D2	The fire hydrant booster assembly will not be located within sight of the main entry to every building on site and is required to be addressed via a	E1P3

Item	Possible Non-Compliance/s	DTS Clause	Description	Performance Requirement(s)
			fire engineered performance solution.	
19.	Fire Hydrants & Sprinklers Pumps	E1D4 & S17C6	The stair leading to the basement hydrant and sprinkler pump room need to be fire rated.  Details to be included within the Construction Certificate Plans.	E1P4

11. OTHER PERFORMANCE SOLUTIONS

Item	Non-Compliance	DTS Clause	Description	Performance Requirement
1.	Weatherproofing	F3D5	Performance Requirement F3P1, for the prevention of the penetration of water through external walls. Compliance can be demonstrated via the following: 1. FV1 Weatherproofing or 2. Engage a Facade engineer to address the performance requirements of F3P1	F3P1

12. SECTION A: GENERAL PROVISIONS

The proposed works involve a new residential development with associated carparking and retail tenancies. The development includes the following BCA Classes:

Lower Basement Floor:

- Class 7a – Plant Room including fire pump room

Basement Floor (Noted as Basement on plans for reference only – not a basement as per NCC definition):

- Class 9c – Common Areas – Cinema/Gym/Laundry/Kitchen
- Class 7a – Carparking
- Class 5 – office
- Note - The retail and storage cages occupy a total floor area of 478m^2 and has a floor area of less than 10% of the basement floor and therefore can adopt the same classification of the storey being Class 7a.

Ground Floor:

- Building A & E - Class 2 - Residential Apartments
- Building B - Class 9c – Residential Aged Care

First Floor:

- Building A & E - Class 2 - Residential Apartments
- Building B - Class 9c – Residential Aged Care

Second Floor:

- Building A & E - Class 2 - Residential Apartments
- Building B - Class 9c – Residential Aged Care

Third Floor:

- Building A & E - Class 2 - Residential Apartments
- Building B - Class 9c – Residential Aged Care

Fourth Floor:

- Building A & E - Class 2 - Residential Apartments
- Building B - Class 9c – Residential Aged Care

Fifth Floor:

- Building A - Class 2 - Residential Apartments

Sixth Floor:

- Building A - Class 2 - Residential Apartments

12.1. SECTION A: GENERAL REQUIREMENTS

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

Where a Fire Engineering Performance Solution is being proposed the following process must be undertaken by the fire engineer in accordance with BCA Clause A2.2(4):

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

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

12.2. SECTION B: STRUCTURE

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

12.3. SECTION C: FIRE RESISTANCE

The building is required to be Type A construction, refer to fire rating requirements at the end of this report.

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

FIRE RESISTANCE OF BUILDINGS

12.3.1. C2D9 - Any proposed lightweight construction proposed for walls, columns or shafts must be in accordance with BCA Clause C2D9 Specification 6.

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

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

12.3.4. C2D14 - Any external attachments, including awning materials and signage, are required to be non-combustible.

12.3.5. C2D15 - In a building required to be of Type A construction, externally located bonded laminated cladding panels must have all layers of cladding mechanically supported or restrained to the supporting frame.

12.3.6. NSW C3D6 – Class 9c building must be divided into areas not more than 500m^2 by smoke-proof walls complying with Specification 11 & fire compartments must be separated from the remainder of the building in accordance with C3D8 and Specification 5.

12.3.7. NSW C3D6 – Doorways located within smoke walls are required to have 400mm high smoke

reservoir between the door head and the impervious ceiling above.

12.3.8. NSW C3D6 – Smoke doors in the residential corridors of the age care building (Building B) are not detailed to swing in both directions in accordance with Specification 12 & S12C4. Compliance is required to be addressed by modified pivot doors or addressed via a fire engineered performance solution.

12.3.9. C3D7 - The proposed building is to be protected with a sprinkler system complying with BCA specification 17 & 18, (AS2118.1/AS2118.6) as a result, the requirement under C3D7 vertical separation between openings (spandrels) in external walls do not apply.

12.3.10. C3D8 – Construction of fire walls

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

a) The fire wall has the relevant FRL prescribed by Specification 5 for each of the adjoining parts, and if these are different, the greater FRL, except where S5C18(c), S5C21(3) and S5C25(1) permit a lower FRL on the carpark side.

b) Any openings in a fire wall must not reduce the FRL required by Specification 5 for the fire wall, except where permitted by the Deemed-to-Satisfy Provisions of Part C4.

c) Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not pass through or cross the fire wall unless the required fire-resisting performance of the fire wall is maintained.

12.3.11. C3D10 - Fire separation of classifications in different storeys should be provided in accordance with BCA Clause C3D10 and 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.

12.3.12. C3D11 - Lifts connecting more than 2 storeys, or more than 3 storeys if the building is sprinklered, must be separated from the remainder of the building by enclosure in a shaft in which the walls have the relevant FRL prescribed by Specification 5. Openings for lift landing doors and services must be protected in accordance with the Deemed-to-Satisfy Provisions of Part C4.

12.3.13. C3D13 - Separation of equipment shall achieve an FRL of 120/120/120 for the following:

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

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

12.3.14. C3D14 - Electrical substation located within a building or main switchboard that sustains emergency equipment must be separated from the remainder of the building by 2hr fire rated construction. Switchboards sustaining emergency equipment must be constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of faults.

12.3.15. C3D15 - Public corridors in Class 2 buildings must be divided at intervals of not more than 40m with smoke-proof walls complying with BCA Clause S11C2. The residential corridors in the residential buildings do not exceed 40m and comply with the requirements of this Clause.

12.3.16. C4D3 - Openings in the external walls of the building are located more than 3m from the allotment boundary and more than 6m from adjoining buildings and comply.

12.3.17. C4D4 - Separation of external walls and associated openings in different fire compartments comply

with the requirements of BCA Clause C4D4.

12.3.18. C4D6 - Doorways in firewalls are to be protected by a fire door that has an FRL of not less than that required for the firewall except that the insulation rating must be at least 30 in accordance with BCA Clause C4D6.

12.3.19. C4D9 – A -/60/30 self-closing fire doors are required to doorways providing access to fire isolated stairways.

12.3.20. C4D9 – A window or other opening in the external wall of the fire isolated exit is to be protected in accordance with Clause C4D5 if it is within 6m of, and exposed to, a window or other opening in the wall of the same building. Future assessment of this requirement will be required later in the design development however the building is capable of complying.

12.3.21. C4D10 - Service penetrations other than electrical wiring for essential service installations, pressurisation ducts with an FRL of -/120/60, or water pipes for fire services are not permitted in fire isolated exits.

12.3.22. C4D11 - Openings in fire isolated lift shafts are to be protected by -/60/- fire doors complying with AS1735.11. Lift indicator panels are to be backed by construction having an FRL of not less than -/60/60 if they exceed 35,000mm2 (175 X 200 mm).

12.3.23. C4D12 - Bounding constriction between the Class 2 residential parts and the residential corridors are to be protected with self-closing -/60/30 fire doors.

12.3.24. C4D13- Services passing through floors are to be placed within fire resisting shafts or fire stopped in accordance with Clause C4D15.

12.3.25. C4D14 - 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:

- If it is 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
- A self-closing -/60/30 fire door or hopper, or
- An access panel with an FRL of not less than -/60/30, or
- If the shaft is a garbage shaft - a door or hopper of non-combustible construction.

12.3.26. C4D15 - Services penetrations through 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, must comply with a tested system or Specification 13. Methods and materials used are to be identical to tested prototypes and in accordance with AS4072.1 and AS1530.4 and must achieve the required FRL or resistance to the incipient spread of fire or other specified method. Ventilation and air-conditioning systems are to be installed in accordance with AS/NZS 1668.1. It is also noted that since 1 May 2022, test reports carried out under earlier standards to AS1530.4-2014 can no longer be relied upon to demonstrate compliance with the BCA.

12.4. SECTION D: ACCESS AND EGRESS

12.4.1. D2D3 – Lower Basement under Building A requires two exits. These non-compliance is proposed to be addressed via fire engineering performance solution.

12.4.2. D2D4 – The stairs serving building A & B are required to be fire isolated as they connect more than 4 storeys in a Class 2 building and more than 2 storeys in the Age Care building.

12.4.3. D2D4 - The stairs serving Building E do not need to be fire isolated provided the stairs serving the

basement and the residential tower are fire separated from each other on the ground floor.

12.4.4. D2D5 - No point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m. Extended travel distances are proposed to be addressed via fire engineering performance solution.

12.4.5. D2D6 - Distances between alternative exits are not to exceed 45m within the residential building and 60m in all other parts of the building. Extended travel distances between alternative exits within the basement are proposed to be addressed via fire engineering performance solution.

12.4.6. D2D7 - In a required exit or path of travel to an exit the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980mm. The building is likely to comply.

12.4.7. D2D9 – The unobstructed width of each required exit must not be less than 1000mm, and doorways within the residential age care building may be reduced to 800mm except within residential use areas, the width must not be less than 870mm. Doorways leading from a public corridor to a SOU must be not less than 1070mm. Doorways with the residential building can be reduced to 750mm for egress doors and 850mm on any accessible path of travel and entry doors to an SOU.

12.4.8. D2D10 – 1000mm exit width travel is required to road/open space

12.4.9. D2D12 - Each fire-isolated stairway or fire-isolated ramp must provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway to a road or open space in accordance with BCA Clause D2D12(2). The path of travel from the fire isolated exit must not pass within 6m of unprotected openings of the building. Compliance is to be determined once the landscape is finalised and the path of travel to the street defined. Any non-compliance can be addressed via a fire engineered performance solution. This non-compliance is proposed to be addressed via a fire engineering performance solution.

12.4.10. BCA Clause D2D12 (1) - A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from:

- a public corridor, public lobby or the like; or
- a sole-occupancy unit occupying all of a storey; or
- a sanitary compartment, airlock or the like.

The proposed design complies.

12.4.11. D2D14 - The basement stairs discharging to the ground floor does not technically discharge to compliant open space, as the discharge is adjacent to unprotected openings in the external wall, which are not defined as open space as the area is not considered to be adequately protected from fire. This non-compliance is proposed to be addressed via a fire engineering performance solution.

12.4.12. D2D15 – Exits must not be blocked nor be capable of being blocked at its point of discharge and the required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than 1000mm. If an exit discharges to open space that is at a different level than the public road to which it is connected, the path of travel to the road must be by a ramp or other incline having a gradient not steeper than 1:8 at any part, or not steeper than 1:14 must be provided or a compliant stair. Compliance is to be determined once the landscape is finalised and the path of travel to the street defined.

12.4.13. D2D22 - Access requirements apply to lift pits over 3m in depth via an access doorway.

12.4.14. D3D3 - Fire isolated shafts must be constructed of non-combustible materials and so that if there is local failure it will not cause structural damage or impair the fire resistance of the shaft. All fire

isolated passageways are required to comply with BCA Clause D3D12.

12.4.15. D3D4 - Required stairs in a building having a rise in storeys of not more than 2 must be constructed only of reinforced or prestressed concrete, or steel not less than 6mm thick, or timber that has a finished thickness of not less than 44mm and an average density of not less than 800 kg/m3 at a moisture content of 12%.

12.4.16. D3D5 - Separation of rising and descending stair flights in fire isolated stairs is required to comply with BCA Clause D3D5 and there must be no direct connection between a flights rising from a storey below the lowest level of access to a road or open space and a flight descending from a storey above that level. Amended plans are required to be submitted demonstrating compliance at the Construction Certificate Stage of the development.

12.4.17. D3D8 – Installations in exits and paths of travel. Any new electrical meters, distribution boards (telecommunications or electrical) in the path of travel must be contained within a non-combustible enclosure with the doorways fitted with smoke seals in accordance with this clause.

12.4.18. D3D9 – If the stairs within building E are proposed to be constructed as non-fire-isolated stairs, the storage rooms located under the stairs must be enclosed by walls have an FRL of not less than 60/60/60 and any doorway to the enclosed space is fitted with a self-closing -/60/30 fire door.

12.4.19. D3D11 - Ramps serving as required exits must have a gradient not less than 1:8. If the ramp is required for disabled access under Part D4 it must comply with AS1428.1-2009. The surface of the ramp must also have a non-slip finish.

12.4.20. D3D14 - The construction of all stairways including goings, risers and slip resistance classification is to comply with Clause D3D14 of the BCA. Landings at the top and bottom of the stairway are to comply with Clause D3D15 of the BCA. Handrails are to be provided to the new stairs in accordance with Clause D3D22 and Clause 11 and 12 of AS1428.1 – 2009.

12.4.21. D3D22 – Handrails are required along at least one side of the stairways or ramps, or on both sides of stairs or ramps if required by Part D4. Handrails should be fixed at a height of not less than 865mm measured above the nosing of the floor surface of the ramp and be continuous with no obstruction.

12.4.22. D3D23 - Fixed platforms walkways, stairways, and ladders - Platforms, walkways, stairs, ladders and the like that give access to and around plant and equipment, machine rooms, attic spaces and other low use areas of the building are permitted provided that construction details are to AS1657.

12.4.23. D3D25 Swinging doors - Defined exit doors that serve a part of a building with a floor area over 200m^2 must swing outward in the direction of exit travel. All exit doorways are yet to be defined on the plan, in particular the discharge of the fire-isolated exits. Compliance can be readily be achieved.

12.4.24. D3D26 - Hardware to all doors in an exit or in the path of travel to an exit are to be lever action type handles that are openable without a key by a single hand from the side facing a person seeking egress in accordance with Clause D3D16 of the BCA. Compliance can be readily be achieved.

12.4.25. D4 - Compliance for access for people with a disability provisions of the BCA, AS1428.1 – 2009 and the Access to Premises Standards has not been reviewed by SWP, and a full compliance review should be undertaken by a suitably qualified access consultant.

12.5. SECTION E: SERVICES AND EQUIPMENT

12.5.1. E1D2 - The proposed development is required to be served by a fire hydrant system complying with Clause E1D2 of the BCA and AS 2419.1 – 2021. Any non-compliances should be addressed via a fire engineered performance solution prepared by a suitably qualified Fire Engineer. The location of the substation in relation to the hydrant booster is to be considered (i.e. needs to be greater than 10m).

12.5.2. E1D3 - The building car-parking (Class 7a) parts are required to be served by fire hose reels complying with Clause E1D3 of the BCA and AS 2441 – 2005. The Class 2 & age care parts of the building do not require fire hose-reels. Detailed design documentation is to be provided at the construction certificate stage and is capable of complying.

12.5.3. E1D4 - The building is required to be protected by a sprinkler system in accordance with BCA Clause E1D4, E1D7 and BCA Specification 17 & 18. The location of the sprinkler valve/room is to ensure it has direct egress to a road or open space. Confirmation of the valve room location is to be provided by the hydraulic consultant and detailed on the relevant drawings prior to the issue of the development application.

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

12.5.5. E1D17 – If the proposed development contains provisions for EV charging. The fire engineer is to specify requirements within the fire engineering report in line with any consultation or discussions with FRNSW.

12.5.6. E2D3 - The Air-Handling System to the building maybe required to automatically shut down to E2D3, Clause S20C6 of Specification 20 and AS 1668.1 – 2015. The suitably qualified mechanical engineer is to verify.

12.5.7. E2D4 – The fire-isolated exits within the Class 9c residential care are to be protected with ann automatic air pressurisation system for fire-isolated exits in accordance with AS 1668.1

12.5.8. E2D8 - The building requires an automatic smoke detection and alarm system complying with Specification 20.

12.5.9. E2D12 - Class 7a car-park is required to be provided with a mechanical ventilation system in accordance with AS 1668.2, must comply with clause 5.5 of AS 1668.1 and must incorporate fire/smoke dampers when penetrating fire rated building elements.

12.5.10. E3 - The proposed passenger lifts will be required to be one of types identified in E3D7, subject to the limitations on use specified in the Table. The lift also is required to incorporate the accessible features in accordance with Clause E3D8 of the BCA. Buildings greater than 12m in effective height require a lift sized to accommodate a stretcher facility in accordance with E3D2 and the stretcher facility must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600 mm wide x 2000 mm long x 1400 mm high above the floor level. The lift must serve every level to which lift access is provided. Confirmation to be provided the lift is suitably sized to accommodate the stretcher lift requirements noted above.

12.5.11. E4 - Emergency Lighting Requirements & Exit Signage – The proposed development will require emergency lighting in accordance with Clauses E4D2 & E4D4 of the BCA and AS 2293.1 – 2018. The building will also require exit signage in accordance with Clauses E4D5, NSW E4D6 & E4D8 of the BCA and AS 2293.1 – 2018. In accordance with BCA Clause S20C7 a building occupant warning system is required to be installed and system monitoring is required in accordance with BCA Clause S20C8.

12.6. SECTION F: HEALTH AND AMENITY

12.6.1. F1 - Surface water management, rising damp and external waterproofing is required to comply with BCA Clause F1D1-F1D8. Wet areas and overflow protection is required to comply with BCA Clause F2D1-F1D4.

12.6.2. F2 - Wet areas and overflow protection is required to comply with BCA Clause F2D1-F2D4.

12.6.3. F3- Roof and wall cladding is required to comply with BCA Clause F3D1-F3D5 - Where a Deemed-to-Satisfy Solution is proposed, Performance Requirement F3P1 is satisfied by complying with F3D2 to F3D5.

Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.

12.6.4. F4 - Sanitary and other facilities are required to be provided in accordance with part F2 of BCA 2022. Accessible sanitary facility are required in accordance with BCA Clause F4D5, F4D6, F4D7 and AS1428.1. Compliance for access for people with a disability provisions of the BCA, AS1428.1 – 2009 and the Access to Premises Standards has not been reviewed by SWP, and a full compliance review should be undertaken by a suitably qualified access consultant.

12.6.5. F5 – Room heights throughout various parts of the buildings shall comply with Part F5 of NCC 2022.

12.6.6. F6 - Natural light is required to be provided in accordance with BCA Clause F6D2. Ventilation will be required to all rooms occupied by a person for any purpose by means of natural ventilation complying with Clause F6D7 of the BCA or mechanical ventilation/air-conditioning complying with AS 1668.2 –2012. Sound transmission and insulation is required to be provided in accordance with BCA Clauses F7D1-F7D8 and acoustic compliance has not been reviewed by SWP, and a full compliance review should be undertaken by a suitably qualified acoustic consultant.

12.6.7. F8D1-F8D5 Condensation management throughout the building is required to comply with BCA Clauses F8D1-F8D5.

12.6.8. F6D5 - Artificial lighting in accordance with BCA Clause F6D5 is required to all rooms that are frequently occupied, all accessible spaces, all corridors and circulation spaces and path of egress in accordance with AS/NZS 1680.0. F6D9 Restriction on location of sanitary compartments - A room containing a closet pan or urinal must not open directly into a room used for public assembly or a workplace normally occupied by more than one person.F6D10 Airlocks - If the room containing a closet pan or urinal opens directly into rooms identified in F6D9 above then an airlock of not less than 1.1 m2 and fitted with self-closing doors at all access doorways or the room containing the closet pan or toilet facility must be provided with mechanical ventilation and the doorway to the room adequately screened from view. The door from the accessible toilet opening to the locker area which is considered part of a workplace and as such the door needs screening or an air lock is required.

12.7. SECTION G: ANCILLARY PROVISIONS

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

12.8. SECTION J: ENERGY EFFICIENCY

In NSW for a Class 2 building or Class 5 to 9 building, from 1 May 2023 to 30 September 2023 NSW Section J of NCC 2019 Volume One Amendment 1 may apply instead of Section J of NCC 2022 Volume One and from 1 October 2023 Section J of NCC 2022 Volume One applies.

The buildings are to be designed to achieve compliance with the relevant provisions of Part J1 to J9

respectively and the Residential Building is required to be design to Comply with BASIX.

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

Section J compliance has not been reviewed by SWP, and a full compliance review should be undertaken by a suitably qualified acoustic consultant to ensure compliance with BCA Part 7 has been complied with prior to the issue of any construction certificate.

13. CONCLUSION

The design as shown on the drawings referenced at the end of this report maybe capable of complying with the requirements of the relevant sections of the of the Act and EPAR (DCFS) 2022, EPAR 2021 and the BCA 2022 subject to resolution of the identified areas of non-compliance and compliance with the recommendations provided within the report including any performance-based determinations.

Further regulatory reviews will need to be progressively undertaken as the design develops to ensure compliance is achieved.

A final detailed review will be undertaken to by Steve Watson and Partners to verify compliance prior to the issue of a Construction Certificate.

APPENDIX A - Referenced Drawings

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

2108/A1 - DRAWINGS

DWG NO.	DRAWING TITLE	SCALE
2108/A1DA00	COVER PAGE	N.T.S
2108/A1DA01	SITE PLAN	1:500
2108/A1DA02	DEMOLITION PLAN	1:250
2108/A1DA03	LOWER BASEMENT FLOOR PLAN - OVERALL	1:250
2108/A1DA04	BASEMENT FLOOR PLAN - OVERALL	1:250
2108/A1DA05	GROUND FLOOR PLAN - OVERALL	1:250
2108/A1DA06	FIRST FLOOR PLAN - OVERALL	1:250
2108/A1DA07	SECOND FLOOR PLAN - OVERALL	1:250
2108/A1DA08	THIRD FLOOR PLAN - OVERALL	1:250
2108/A1DA09	FOURTH FLOOR PLAN - OVERALL	1:250
2108/A1DA10	FIFTH FLOOR PLAN - OVERALL	1:250
2108/A1DA11	SIXTH FLOOR PLAN - OVERALL	1:250
2108/A1DA12	NOT USED	
2108/A1DA13	ROOF PLAN - OVERALL	1:250
2108/A1DA14	OVERALL ELEVATIONS 1	1:250
2108/A1DA15	OVERALL ELEVATIONS 2	1:250
2108/A1DA16	OVERALL SECTIONS 1	1:250
2108/A1DA17	OVERALL SECTIONS 2	1:250
2108/A1DA18	BUILDING A - LOWER BASEMENT FLOOR PLAN	1:100
2108/A1DA19	BUILDING A - BASEMENT FLOOR PLAN	1:100
2108/A1DA20	BUILDING A - GROUND FLOOR PLAN	1:100
2108/A1DA21	BUILDING A - TYPICAL FIRST - FOURTH FLOOR PLAN	1:100
2108/A1DA22	BUILDING A - FIFTH FLOOR PLAN	1:100
2108/A1DA23	BUILDING A - SIXTH FLOOR PLAN	1:100
2108/A1DA24	BUILDING A - ROOF PLAN	1:100
2108/A1DA25	BUILDING A - ELEVATIONS	1:200
2108/A1DA26	BUILDING A - SECTIONS	1:200
2108/A1DA27	BUILDING B - BASEMENT FLOOR PLAN - NORTH 1	1:100
2108/A1DA28	BUILDING B - BASEMENT FLOOR PLAN - NORTH 2	1:100
2108/A1DA29	BUILDING B - BASEMENT FLOOR PLAN - SOUTH	1:100
2108/A1DA30	BUILDING B - GROUND FLOOR PLAN - NORTH	1:100
2108/A1DA31	BUILDING B - GROUND FLOOR PLAN - SOUTH	1:100
2108/A1DA32	BUILDING B - FIRST FLOOR PLAN - NORTH	1:100
2108/A1DA33	BUILDING B - FIRST FLOOR PLAN - SOUTH	1:100
2108/A1DA34	BUILDING B - TYPICAL SECOND - THIRD FLOOR PLAN - NORTH	1:100
2108/A1DA35	BUILDING B - TYPICAL SECOND - THIRD FLOOR PLAN - SOUTH	1:100
2108/A1DA36	BUILDING B - FOURTH FLOOR PLAN - NORTH	1:100
2108/A1DA37	BUILDING B - FOURTH FLOOR PLAN - SOUTH	1:100
2108/A1DA38	BUILDING B - ROOF PLAN - NORTH	1:100
2108/A1DA39	BUILDING B - ROOF PLAN - SOUTH	1:100
2108/A1DA40	BUILDING B - ELEVATIONS 1	1:200
2108/A1DA41	BUILDING B - ELEVATIONS 2	1:200
2108/A1DA42	BUILDING B - SECTIONS	1:200
2108/A1DA43	BUILDING E - GROUND FLOOR PLAN	1:100
2108/A1DA44	BUILDING E - TYPICAL FIRST - THIRD FLOOR PLANS	1:100
2108/A1DA45	BUILDING E - FOURTH FLOOR & ROOF PLAN	1:100
2108/A1DA46	BUILDING E - ELEVATIONS	1:200
2108/A1DA47	BUILDING E - SECTIONS	1:200
2108/A1DA48	BUILDING B - TYPICAL BEDROOM & ENSUITE LAYOUT 1 - 1 BED - TYPE 1	1:20
2108/A1DA49	BUILDING B - TYPICAL BEDROOM & ENSUITE LAYOUT 2 - 1 BED - TYPE 2	1:20
2108/A1DA50	BUILDING B - TYPICAL BEDROOM & ENSUITE LAYOUT 3 - 1 BED - TYPE 3	1:20
2108/A1DA51	BUILDING B - TYPICAL BEDROOM & ENSUITE LAYOUT 4 - 1 BED - TYPE 4	1:20
2108/A1DA52	BUILDING B - TYPICAL BEDROOM & ENSUITE LAYOUT 5 - 2 BED - TYPE 1	1:20
2108/A1DA53	BUILDING B - TYPICAL BEDROOM & ENSUITE LAYOUT 6 - ENSUITE - TYPE 1 & 2	1:20
2108/A1DA54	BUILDING B - TYPICAL BEDROOM & ENSUITE LAYOUT 7 - ENSUITE - TYPE 3 & 4	1:20

APPENDIX B - Fire Rating Requirements – Type A Construction

S5C11

Fire resistance

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

Distance from a *fire-source feature*	FRL (in minutes): *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	–/–/–	–/–/–	–/–/–	–/–/–

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*	–/–/–	–/–/–	–/–/–	–/–/–

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

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

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

Appendix C – Schedule of potential proposed statutory Fire Safety Measures

Measure	Standard of Performance
Access Panels, Doors And Hoppers To Fire Resisting Shafts	BCA 2022 Clause C4D14 and tested prototypes (AS 1530.4 – 2014)
Automatic Fail Safe Devices	Scheduled devices release upon trip of smoke detection, fire detection and sprinkler activation in accordance with BCA 2022 Clause D3D26
Automatic Fire Detection And Alarm System *(Smoke Detection System)*	BCA 2022 Clause E2D9 and AS 1670.1 – 2018
Automatic Air Pressurisation For Fire Isolated Exits	BCA 2022 Clause E2D4 and AS1668.1-2015
Automatic Fire Suppression Systems *(Sprinklers)*	BCA 2022 Specification 17 & 18 and AS 2118.1 – 2017/AS2118.4-2012
Building Occupant Warning System	BCA 2022 Clause S20C7 and AS 1670.1 – 2018
Emergency Lighting	BCA 2022 Clause E4D2, E4D4 and AS/NZS 2293.1 – 2018
Exit Signs	BCA 2022 Clause E4D5, E4D6 and E4D8 and AS/NZS 2293.1 – 2018
Fire Alarm Monitoring System	BCA 2022 Clause S20C8 and AS 1670.3 – 2018
Fire Dampers	BCA 2022 Clause C4D15 and AS 1668.1 – 2015 (AS 1682.1 – 2015 and AS 1682.2 – 2015)
Fire Doors	BCA 2022 Specification 12 and AS/NZS 1905.1 – 2015
Fire Engineering Report	TBC
Fire Hydrants Systems	BCA 2022 Clause E1D2 and AS 2419.1 – 2021
Fire Seals Protecting Opening In Fire Resisting Components Of The Building	BCA 2022 Clause C4D15, AS 1530.4 – 2014, AS 4072.1 – 2005 and installed in accordance with the tested prototype.
Hose Reel System	BCA 2022 Clause E1D3 and AS 2441 – 2005
Lightweight Construction	BCA 2022 Specifications C2D9, Clause A2G3 and AS 1530.4 – 2014
Mechanical Air Handling System *(Carpark Mechanical Ventilation System)*	BCA 2022 Table E2D12, AS/NZ 1668.1 – 2015
Portable Fire Extinguishers	BCA 2022 Clause E1D14 and AS 2444 – 2001
Smoke Detectors And Heat Detectors *(Detectors For The Automatic Closing Operation Of Fire Doors To Fire Isolated Exits)*	BCA 2022 Clause C4D9 and AS 1670.1 – 2018
Smoke Dampers	AS/NZS 1668.1-2015
Smoke Doors	BCA Clause S12C4
Warning And Operational Signs	BCA 2022 Clauses D2D22, D3D28, E33D4

NOTE: Fire safety schedule may need to be amended subject to the inclusion of a fire engineered performance solution.

STEVE WATSON
& PARTNERS

BUILDING CODE CONSULTANTS
BUILDING SURVEYORS AND CERTIFIERS

SYDNEY | MELBOURNE | BRISBANE | CANBERRA