



Project: Alterations to Existing Ski Lodge.

Bobuck Lane, Thredbo.

REPORT NO: 21006

PREPARED FOR: RAN SKI LODGE

REVISION: 01

PREPARED BY: MS | COMPLETE CERTIFICATION PTY LTD | BCA CONSULTING

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EXECUTIVE SUMMARY

An assessment of architectural plans for the proposed alterations at RAN Ski Lodge Thredbo against the Deemed to Satisfy provisions of the Building Code of Australia 2019 Amd 1 (BCA).

The proposed works are for the demolition of the western side of the building containing the sleeping accommodation and reconstruction of this part. The new works will consist of a manager's residence, 15 sole occupancy units and a private garage for parking.

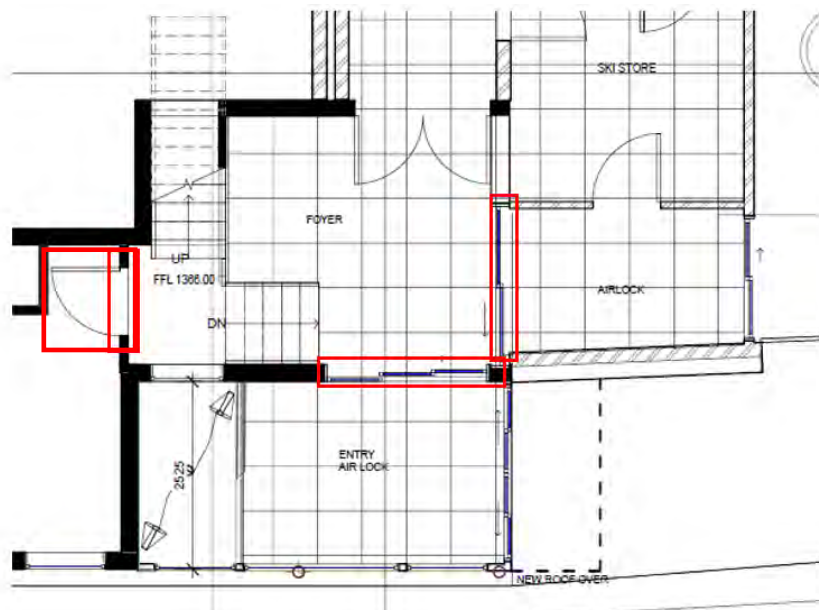
The following summary points are to be read in conjunction with the body of this report.

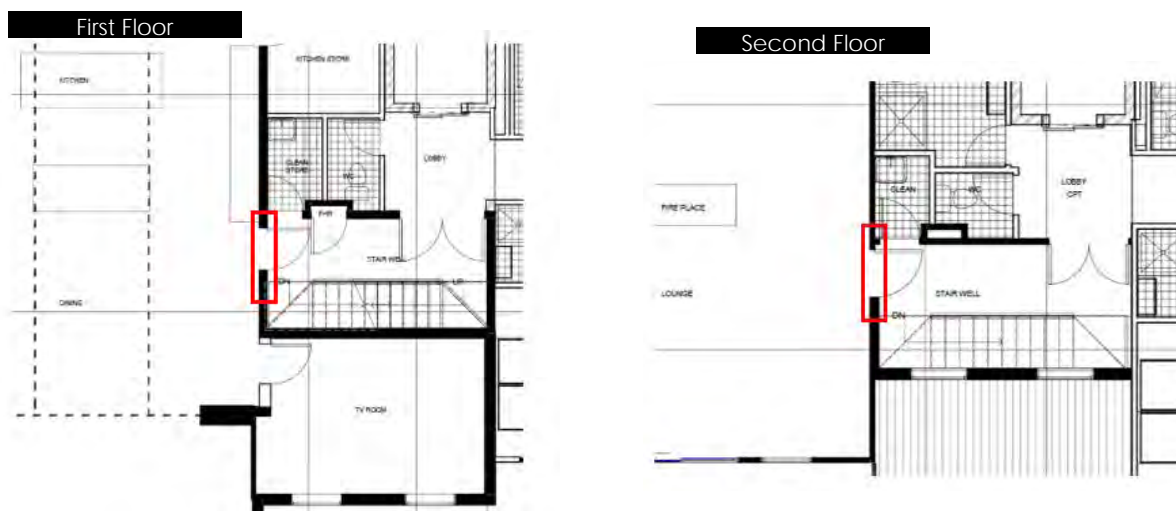
Performance Solutions

The following items need to be rectified to satisfy the Deemed to Satisfy (DTS) provisions or may be addressed via a performance-based solution.

- 1) The sliding doors leading from the required central fire isolated stair to the ground floor entry and airlock are required to achieve FRL-/60/30. The architectural plans indicate glass doors are proposed. (BCA clause C3.8a)
- 2) Doorways from rooms must not open directly into the fire isolated stair (BCA D1.7a)
- 3) The door from the ground floor store room is required to swing in direction of egress into the fire stair and comply to the circulation requirements of BCA 2.20 (a) & (b).
- 4) The fire isolated stair must discharge directly to a road or open space (BCA D1.7b)
- 5) The sliding doors forming part of the fire isolated stair are not permissible under D2.19(b)(iii)
- 6) AS2890.6 requires a shared parking space of 2.4m for angle parking. 1.5m is proposed.
- 7) Where any part of the external wall is more 3.6m above ground level the separating distance to the boundary is to comply to the requirements of G4.6.
(2.5m + 100mm for each 300mm in excess of 3.6m)

Ground Floor





Deemed to Satisfy Requirements

The following items are to be detailed on the construction certificate plans / specification to demonstrate compliance to the deemed to satisfy provisions of the building code of Australia.

1) Fire Resistance, Compartmentation, Separation and Protection of Openings

- a) The concession permitted under BCA Specification C1.1 clause C3.10 permitting the use of timber framing may be applied, provided the nominated criteria can be satisfied.
An excerpt outlining the requirements of this concession are provided in Appendix 1 of this report.
- b) Each building element (external walls, external columns, common walls, internal walls, other loadbearing element, floors etc) are to comply to the requirement of Table 3 of Specification C1.1. *(A copy of Table 3 is provided in Appendix 2)*
- c) The fire hazard properties of the following – Linings, materials and assemblies – must comply with Specification C1.10.
 - (i) Floor linings and floor coverings.
 - (ii) Wall linings and ceiling linings.
 - (iii) Air-handling ductwork.
 - (iv) Lift cars.
 - (v) sarking-type materials
 - (vi) Attachments to floors, ceilings, internal walls and the internal linings of external walls.
 - (vii) Other materials including insulation materials other than sarking-type materials.
- d) Ancillary elements such as claddings, awnings, shade structures or the like which are fixed to or attached to the external wall must be of non-combustible construction. Any attachments are to demonstrate compliance for construction approval.
- e) The lift is required to be separated from the remainder of the building in a shaft achieving FRL90/90/90 for loadbearing construction.
- f) If the building requires a machine room for the lift or any emergency equipment listed in C2.12 it must be provided with separating construction that achieves an FRL of 120/120/120 and doorways being self-closing -/120/30 fire doors:
Separation of on-site pump fire pumps (if required) are to comply to AS2419.1.

- g) Service penetrations through the fire rated walls and floors are to be protected to limit the spread of fire. Only services permitted are compliant electrical wiring and water supply pipes.
- h) Services which pass through or intersect building elements that have an FRL, must be suitably protected to prevent the spread of fire.

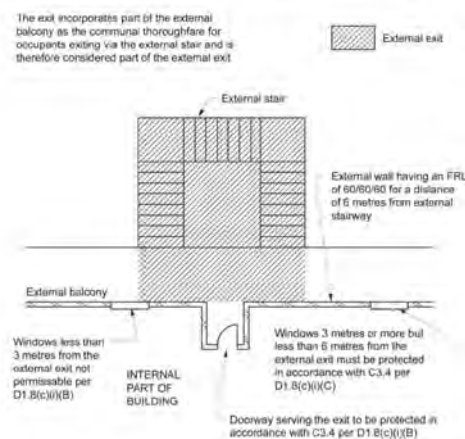
Specification C3.15 prescribes materials and methods of installation for services that penetrate walls, floors and ceilings required to have an FRL.

- i) 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 identical with a prototype tested in accordance with AS 1530.4 to achieve the required FRL.
- j) Internal walls required to be provided with an FRL must extend to the underside of the fire rated floor or ceiling.
- k) Fire-isolated exits must not be penetrated by any services other than those permitted in C3.9.
- l) The doorways to the lift shaft are to be protected with FRL-/60/- Fire doors that comply to AS1735.11.
- m) The doorways from the sole occupancy units are to be self-closing FRL-/60/30 Fire Doors.
- n) In Type A construction any openings in a wall providing access to a ventilating, pipe, garbage or other service shaft must be protected by construction in accordance with clause C3.13.
- o) The top of the lift shaft and fire isolated stair are to be provided with construction achieving FRL-/90/90. As the top of the shafts do not extend beyond the roof covering.

2) Access and Egress.

- a) Fire isolated stairs are required as the building has a rise in storeys of 4. The loadbearing walls are to be non- combustible concrete or masonry & achieve FRL90/90/90.
- b) The external stair being used in lieu of a fire isolated exit on the western elevation of the building is to comply to the requirements of D1.8. Window openings less than 3m are to be protected in accordance with C3.4.

Figure D1.8(1) Protection of the external exit using the external wall of the building in accordance with D1.8(c)(i)



- c) The discharge from the external stairs is to be provide with a minimum width of 1m to the road or open space.
- d) The stair within the fire-isolated shaft is be constructed using non-combustible material as specified in BCA clause D2.2.
- e) If installed in a path of travel to an exit, Electrical distribution boards, Communication cupboards and the like containing motors, etc are to be enclosed with non-combustible construction, and doors are to be provided with smoke seals to the perimeter.
- f) Any enclosure under the stairs is required to be provided with FRL 60/60/60 and self-closing -/60/30 door.
- g) Goings and risers for stairs, landings and handrails to demonstrate compliance on construction plans. (Note AS1428.1 does not permit open risers in the common areas)
- h) Stair treads and landings must have a surface with a slip-resistant classification not less than that listed in Table D2.14 when tested in accordance with AS 4586-2013: Slip resistance classification of new pedestrian surface materials.
- i) The proposed balustrades are to demonstrate compliance to the construction the requirements of BCA clause D2.16. (Ref BCA D2.16)

Where a fall of 4m or more occurs, barriers provided to the balconies or roof must not consist of any horizontal or near horizontal elements between 150-760mm above the surface beneath to facilitate climbing.

Details are also to be provided for any structures or air conditioning units proposed on balconies within 1m of the balustrade.

- i) Handrails required to assist people with a disability are to be provided in accordance with D3.3 (compliant to clause 11 of AS1428.1). 1m clear width between handrails.
- j) Complaint door handles are to be provided to exits doors and doors in the path of travel to comply to the operation of latch requirements of D2.21.
- k) Protection of openable windows for the class 3 parts– the architectural plans/specifications are to demonstrate compliance with clause D2.24 where openable windows are more than 2m or more above the surface beneath. For other windows where the floor below the window is greater than 4m to the surface beneath an 865mm barrier and window protection is also required.

3) Access for People with Disabilities.

- a) The construction certificate plans are to demonstrate compliant access can be provided to and within the common areas and compliant circulation at doors and doorways can be achieved in accordance with clause 13 of AS1428.1.

4) Services and Equipment.

- a) An Accredited Practitioner (Fire Safety) holding Fire System Design accreditation is to be engaged to endorse plans and specifications for the hydrant system for compliance to AS2419.1 – 2005. As required by clause 146B of the EP&A Regulations for the construction approval.
- b) Fire hose reels are required to service the building under this clause G4.8 Alpine areas.

An Accredited Practitioner (Fire Safety) holding Fire System Design accreditation is to be engaged to endorse plans and specifications for the hose reel system for compliance to AS2441.1. As required by clause 146B of the EP&A Regulations for the construction approval.

- c) Table E1.5 requires a sprinkler system to be provided throughout the whole building, as the building has a rise in storeys of 4.

An Accredited Practitioner (Fire Safety) holding Fire System Design accreditation is to be engaged to endorse plans and specifications for the design the fire sprinkler system demonstrating compliance to AS2118.1 for coverage, pressure and flow rates for the sprinkler system to the entire development can be achieved.

- d) Portable Fire Extinguishers are to be installed throughout in accordance with AS 2444. The location, distribution and type of fire extinguishers to comply with the requirements of AS2444 are to be indicated on the construction approval plans.
- e) The fire precautions during construction are to be applied and incorporated in the construction certificate documentation. (Ref BCA E1.9)
- f) Table E2.2a & Specification E2.2a requires the building to be provided with a clause 4 smoke detection system and activate a building occupant warning system complying with clause 7.

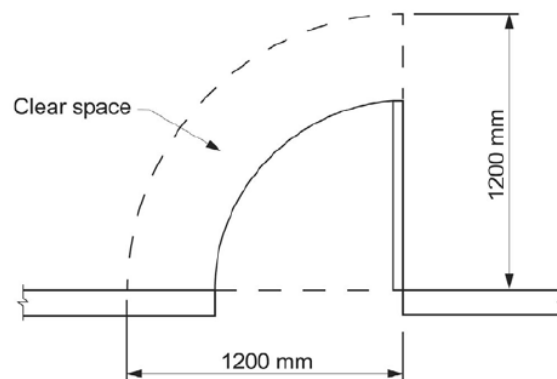
An Accredited Practitioner (Fire Safety) holding Fire System Design accreditation is to be engaged to endorse plans and specifications for the smoke detection system for compliance to AS1670.1 and occupant warning system compliant to clause 7. As required by clause 146B of the EP&A Regulations for the construction approval.

- j) The passenger lift is to comply to the requirements of Clause E1.3 & Specification E3.1.
 - i. Compliant warning signage to be provided.
 - ii. access & egress to the lift landings are to comply to the DTS requirements of part D.
 - iii. the lift must be provided with the accessible features of clause E3.6.
 - iv. the floor dimensions must be 1100mm wide x 1400mm deep.
- g) Emergency Lighting and Exit Signage is required to be installed in accordance with AS2293.1 to the common areas of the building, above external exits and fire stairs.
- h) Exit signs must be provided to doors serving as or forming part of a required throughout the buildings in accordance with AS 2293.1-2005.
- i) If an exit is not readily apparent to persons occupying or visiting the building then directional exit signs must be installed in appropriate positions.

Electrical design plans and certification must be incorporated into the construction certificate plans & specification.

- 5) Any external above ground membranes must be waterproofed as per AS 4654 Parts 1 and 2-2012. Details to be provided prior to Construction certificate.
- 6) Sarking-type materials used for weatherproofing must comply with AS/NZS 4200 Part 1 and 2-1994.
- 7) Bathrooms and laundries in Class 3 buildings must be provided with a floor waste, and the floor of such areas must be graded to such floor waste.

- 8) The door to a fully enclosed sanitary compartment must open outwards, or slide, or be removable from outside of the compartment, unless there is a clear space of at least 1.2m between the closet pan within the compartment and the doorway.



9) Sound Separation

- a) Separating floors 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-
 - (i) sole-occupancy units; or
 - (ii) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification.
- b) The walls separating the class 3 parts are to achieve a sound rating of $R_w + C_{tr}$ (airborne) not less than 50.

Discontinuous construction (cavity wall construction) is required if it separates—

- a) 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
- b) a sole-occupancy unit from a plant room or lift shaft.
- c) 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-
 - (i) 40 if the adjacent room is a habitable room (other than a kitchen); or
 - (ii) 25 if the adjacent room is a kitchen or non-habitable room.
 - (iii) If a storm water pipe passes through a sole-occupancy unit it must be separated in accordance with (i) and (ii).

10) Alpine Areas

- a) Architectural plans indicate required external doors open inwards. Compliant signage to be to be incorporated into the construction certificate plans / specification.
- b) External stairways, ramps, access bridges or other trafficable structures serving the building must-
 - (a) have a floor surface that consists of expanded mesh if it is used as a means of egress; and
 - (b) have any required barrier designed so that its sides are not less than 75% open;

- c) AS2293.1 compliant emergency lighting to be provided to required external exit doors.
- d) The smoke detection system is to be provided with manually operated fire alarm system with call-points complying with AS 1670.1.

11) **Energy Efficiency**

An Energy Efficiency consultant is to address the requirements of Section J.

REVISION STATUS				
REVISION	DATE	STATUS	WRITTEN	CHECKED
01	21/06/2021	ISSUE TO CLIENT	MS	MS

COMMERCIAL IN CONFIDENCE

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1. INTRODUCTION

Complete Certification Pty Ltd have been commissioned to undertake an assessment of architectural plans for the proposed alterations at RAN Ski Lodge Thredbo against the Deemed to Satisfy provisions of the Building Code of Australia 2019 Amd 1 (BCA).

2. DEVELOPMENT DESCRIPTION

The proposed works are for the demolition of the western side of the building containing the sleeping accommodation and reconstruction of this part. The new works will consist of a managers residence and 15 sole occupancy units.



3. External Photos – Existing Building



4. Referenced Documentation

The following documentation has been reviewed, referenced and/or relied upon in the preparation of this report:

- Building Code of Australia 2019 Vol 1 (BCA) and Guide to the BCA 2019 (BCA).
- Architectural drawings prepared by Maco Project Designs dated 14/5/21.

Drawing Title	No.	Drawing Title	No.
Site Plan	A001	Location Plan	A002
Basement Level	A101	Ground level	A102
1st Floor Level	A103	Upper Floor	A104
Roof Level	A105	Elevations	A106
Elevations	A107		

5. Limitations And Exclusions

The limitations and exclusions of this report are as follows:

- No assessment has been undertaken with respect to the Disability Discrimination Act 1992 (DDA, or the Disability (Access to Premises – Buildings) Standards 2010 for the existing building.
- The Report does not address matters in relation to the following.
 - Local Government Act and Regulations:
 - Occupational Health and Safety Act and Regulations.
 - Work Cover Authority requirements.
 - Water, drainage, gas, telecommunications and electricity supply authority requirements.
 - Disability Discrimination Act 1992.
- Complete Certification Pty Ltd do not guarantee acceptance of this report by Local Council, NSW Fire Brigades or other approval / Government Authorities.
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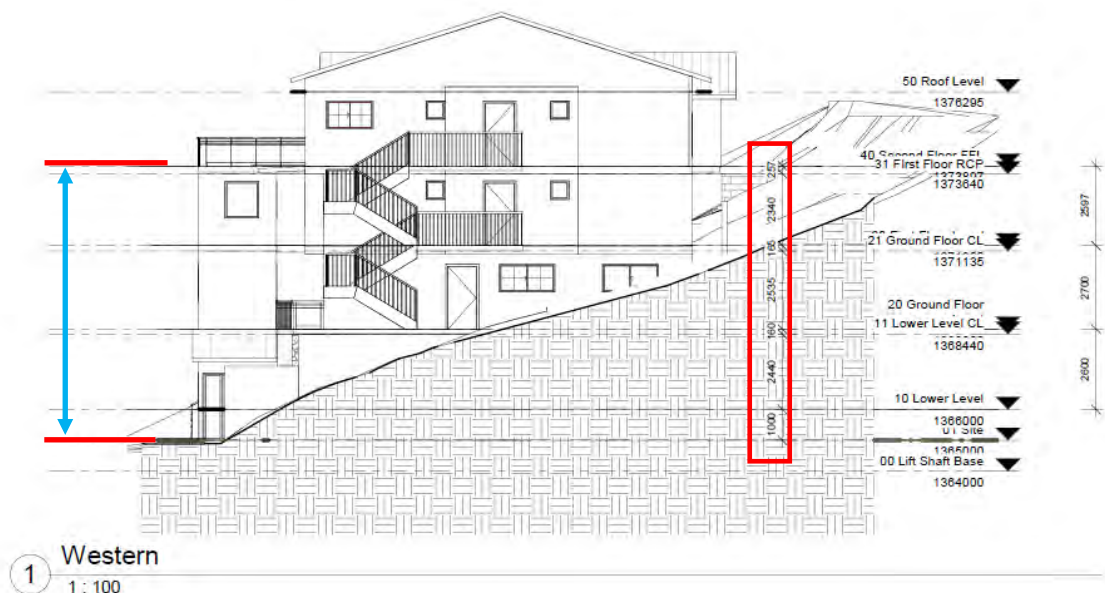
The following items are outside the scope of this report:

- Reporting on hazardous materials, OH&S matters or construction 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
- Assessment 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
- Full compliance for access for people with disabilities under Part D3 and F2.4 of the BCA (a separate compliance report is to be provided from a specialist access consultant if required by council. Noting the building was constructed under superseded construction requirements)
- Consideration of local planning policies
- Environmental, planning or heritage issues
- Requirements of statutory authorities
- Pest inspection or assessment of building damage caused by pests.
- Energy efficiency Part J.

8.0 BCA - CLAUSE-BY-CLAUSE BCA ASSESSMENT

The building has been classified in accordance with the following table:

Part A3 - Classification of Buildings and Structures	<p>Clause A3.2 Classification –</p> <p>Class 3: Ski Lodge & Private Garage</p> <p>(The parking of the vehicles is only on one storey, there is only one such storey and does not contain more than 3 vehicle spaces)</p>
Rise in Storeys:	4 (as per C1.2 of BCA)
Type of Construction:	Type A (as per C2.2 of BCA)
Effective Height:	<p>Effective Height = 8.9m</p> <p>Second FL: RL1373.90m Basement FL: RL1365.00m</p> <p>Effective Height is less than 12m.</p> <p><i>Effective height means the vertical distance between the floor of the lowest storey included in the calculation of rise in storeys and the floor of the topmost storey.</i></p>



Gross floor areas & volume	Does not exceed limits set by table C2.2 for Type A construction.
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KEY	REFERENCE
Capable of Compliance to DTS.	The proposed architectural plans provided for the development application approval indicate DTS compliance can be achieved for construction approval. Plans to be finalised for construction approval.
Compliance to be Verified	The architectural plans provided for development application approval documentation are not at a stage where compliance can be determined. Additional information will be required to be demonstrated on the architectural plans/specifications prior to construction approval. If DTS compliance cannot be achieved, a performance solution is to be developed for the construction approval.
Does Not Comply/Compliance Issue	The referenced plans / building does not comply with this Clause.
Noted	Provisions contained within this BCA clause are provided for guidance or are to be read in conjunction with other BCA Clauses.
Not Applicable	This clause is not applicable to the proposed development

CLAUSE	REFERENCE	COMMENT
SECTION A	GENERAL PROVISIONS	
Part A3.1	Principles of Classification	Noted
Part A3.2	Classification	Class 3.
Part A3.3	Multiple Classifications	Noted

SECTION B	STRUCTURE	
<i>Part B1</i>	<i>Structural Provisions</i>	
Part B1: Structural Provisions	Structural Provisions. <ul style="list-style-type: none"> Structural engineer to provide structural drawings/details and accompanying structural design certificate to demonstrate that all building elements will comply with Section B of the BCA. Glazing must comply with AS 1288-2006 and AS 2047- 1999. Termite management to comply to AS3660.1. 	Structural certification to be provided for construction approval

SECTION C		FIRE RESISTANCE
Part C1		Fire Resistance and Stability
C1.1 – Type of construction required	The minimum type of fire-resisting construction of a building must be that specified in Table C1.1 and Specification C1.1. Refer to specification C1.1 for schedule of FRL's for Type C Construction.	Compliance to be Verified for CC A copy of Table 3 Type A FRL of Building Elements has been provided in Appendix 1 of this report. Wall and floor construction details to be provided for CC. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.
C1.2 – Calculation of Rise in Storeys	The rise in storeys of a building 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 calculated in accordance with the requirements set out in this clause.	The building contains a Rise in Storeys (RIS) of Four (4).
C1.3 – Buildings of multiple classifications	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 C1.1 on the basis that the classification applying to the top storey applies to all storeys.	Noted The building contains class 3 residential units. The parking of vehicle fits within the definition of private garage.
C1.4 – Mixed types of construction	A building may be of mixed types of construction where it is separated in accordance with C2.7 and the type of construction is determined in accordance with C1.1 or C1.3.	Mixed type of construction not proposed. The building will be required to achieve Type A construction throughout.
C1.5 – Two storey Class 2, 3 or 9c buildings	A building having a rise in storeys of two may be of Type C construction provided that it complies with the requirements set out in this clause. A building having a rise in storeys of 2 may be of Type C construction if- (a) it is a Class 2 or 3 building or a mixture of these classes and each sole-occupancy unit has- (i) access to at least 2 exits; or (ii) its own direct access to a road or open space;	Not applicable to this building. The building has a rise in storeys of more than 2.
C1.6 – Class 4 parts of buildings	For the type of construction required by C1.3, a Class 4 part of a building requires the same FRL for building elements and the same construction separating the Class 4 part from the remainder of the building as a Class 2 part in the same type of construction.	Not Applicable. Class 4 managers residence only applies to class 5,6,7 or 8 buildings.
C1.7 – Spectator stands & Indoor Sports Stadiums	An open spectator stand or indoor sports stadium may be of Type C construction subject to the provisions set out in sub-clauses (a) & (b)	Not Applicable to this building.

C1.8 - Lightweight Construction	Lightweight construction must comply with Specification C1.8 if used in a wall system in accordance with sub-clauses (a) & (b).	Noted. Lightweight construction to comply to the requirements of this clause.
C1.9 – Non-Combustible Building Elements	<p>(a) In a building <i>required</i> to be of Type A or B construction, the following building elements and their components must be <i>non-combustible</i>:</p> <ul style="list-style-type: none"> (i) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation. (ii) The flooring and floor framing of lift pits. (iii) <i>Non-loadbearing internal walls</i> where they are <i>required</i> to be <i>fire-resisting</i>. <p>(b) A <i>shaft</i>, being a lift, ventilating, pipe, garbage, or similar <i>shaft</i> that is not for the discharge of hot products of combustion, that is <i>non-loadbearing</i>, must be of <i>non-combustible</i> construction in—</p> <ul style="list-style-type: none"> (i) a building <i>required</i> to be of Type A construction; and <p>(c) A <i>loadbearing internal wall</i> and a <i>loadbearing fire wall</i>, including those that are part of a <i>loadbearing shaft</i>, must comply with Specification C1.1.</p>	<p>Compliance to be Verified for CC</p> <p>This clause applies to Type A construction requiring the listed building elements to be non-combustible.</p> <p>For this building the concessions provided under specification C1.1 clause 3.10 (b) or 3.10 (c) may be applied provided the specified criteria is undertaken.</p> <p>A copy of Spec C1.1 clause 3.10 is provided in appendix 1 of this report.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</p>
C1.10 – Early Fire Hazard Properties	<p>The fire hazard properties of the following – Linings, materials and assemblies – must comply with Specification C1.10 by way of test reports / certificates provided from a <i>registered testing authority</i> (within the meaning of the BCA):</p> <p>Except that:</p> <ol style="list-style-type: none"> 1. Paint or fire-retardant coatings must not be used to achieve compliance with the required fire hazard properties; and 2. The requirements of this clause are exempted to the materials and assemblies listed under C1.10(c)(i) to (xiv) 	<p>Compliance to be Verified For CC</p> <p>CC plans/documentation to demonstrate compliance for</p> <ul style="list-style-type: none"> (i) Floor linings and floor coverings. (ii) Wall linings and ceiling linings. (iii) sarking-type materials <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</p>
C1.11 - Performance of External walls in Fire	Concrete external walls that could collapse as complete panels (e.g. tilt-up & pre-cast concrete), in a building having a rise in storeys of not more than 2, must comply with Specification C1.11	Not Applicable No pre-cast concrete panels proposed.
C1.12	<i>Repealed</i>	
C1.13 – Fire Protected Timber: Concession	This clause specifies that fire protected timber in a Class 2, 3 or 5 building may be used providing it meets particular criteria and is provided with fire services set out under this clause.	Fire protected timber has not been indicated on the architectural plans.

C1.14 – Ancillary Elements	This Clause specifies that ancillary elements such as claddings, awnings, shade structures or the like which are fixed to or attached to the external wall must be of non-combustible construction.	Compliance to be Verified for CC For Type A Construction, the external wall and its attachments must be of non-combustible construction. Any attachments are to demonstrate compliance for construction approval. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.
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Part C2	Fire Compartmentation & Separation	
C2.1 – Application of Part	C2.2, C2.3 & C2.4 do not apply to a carpark provided with a sprinkler system complying with Specification E1.5, an open deck carpark or an open spectator stand.	Noted
C2.2 – General Floor Area Limitations	This clause sets out the parameters for the area and volume of Class 5, 6, 7, 8 & 9 buildings as required by sub-clauses (a), (b) & (c).	Noted Fire compartment floor area and volume limitations do not exceed the limitations set by Table C2.2.
C2.3 – Large Isolated Buildings	The size of a fire compartment in a building may exceed that specified in Table C2.2 where the provisions of sub-clauses (a), (b) & (c) of this Part apply.	Not a large isolated building
C2.4 – Requirements for Open Spaces and Vehicular Access	An open space and vehicular access required by C2.3 must comply with the requirements of subclauses (a) & (b) of this Part, i.e. generally an unobstructed path of 6m in width is to be provided around all buildings. Differences apply whether the building is provided with a sprinkler system.	Not Applicable to this building. Not a large isolated building.
C2.5 – Class 9a & 9c Buildings	Class 9a and Class 9c buildings must comply with the provisions of sub-clauses (a) & (b) of this Part and the NSW Provisions of the Code.	Not Applicable. Not a 9a or 9c building.
C2.6 – Vertical separation of openings in external Walls	The intent of this clause is to prevent the risk of fire spreading from one floor to another via openings in external walls in buildings of Type A construction.	Capable of compliance to the DTS. The exemption provided in clause C2.6 (b) (iii) can be applied as a sprinkler system complying to Specification E1.5 will be applied throughout the building. Spandrel separation is not required when a compliant sprinkler is provided.
C2.7 – Separation by fire walls	C2.7(a) sets out the requirements for the construction of fire walls that are to provide the separation of buildings. C2.7(b) Indicates the extent a fire wall divides a building into separate buildings for the purposes of the Deemed-to-Satisfy provisions of Sections C, D & E.	N/A A C2.7 fire wall is not proposed to divide the building into separate buildings.

C2.8 – Separation of Classifications in the Same Storey	<p>If a building has parts of different classifications located alongside one another in the same storey, each element must have the required higher FRL for the classifications concerned.</p> <p>Alternatively, the parts may be separated by a fire wall having the higher FRL for the classifications prescribed in Table 5 of BCA Specification C1.1 (for Type C Construction),</p>	<p>Noted.</p> <p>Refer to specification C1.1 for schedule of FRL's for Type A Construction.</p>
C2.9 – Separation of Classifications in different Storeys.	<p>This clause specifies the required separation between parts of a building which are of a different classification, situated one above another, to minimise the risk of a fire in one classification causing the failure of building elements in another classification in a different storey.</p> <p>Type B or C construction — If one of the adjoining parts is of Class 2, 3 or 4, the floor separating the part from the storey below must-</p> <ul style="list-style-type: none"> (i) be a floor/ceiling system incorporating a ceiling which has a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or (ii) <i>have an FRL of at least 30/30/30; or</i> (iii) <i>have a fire-protective covering on the underside of the floor, including beams incorporated in it, if the floor is combustible or of metal.</i> 	<p>Noted. All class 3.</p> <p>Refer to specification C1.1 for schedule of FRL's for Type A Construction.</p>
C2.10 – Separation of lift shafts	<p>This clause applies to all classes of buildings and specifies the protection requirements for openings for lift shafts and lift landing doors.</p> <p>Any lift connecting more than 2 storeys, or 3 storeys if the building is sprinklered must be separated from the remainder of the building in a fire separated shaft complying to Spec C1.1.</p>	<p>Compliance to be Verified</p> <p>The lift is required to be separated from the remainder of the building in a shaft achieving FRL90/90/90 for loadbearing construction.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</p>
C2.11 – Stairways and Lifts in one shaft	<p>A stairway and lift must not be in the same shaft if either the stairway or the lift is required to be in a fire-resisting shaft.</p>	<p>Compliance to be Verified</p> <p>The architectural plans indicate the lift, and the internal stairs will not be contained in the same shaft.</p> <p>Construction details for the fire isolated stair and lift shaft to be provided for CC.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</p>
C2.12 – Separation of equipment	<p>Equipment as listed below must be separated from the remainder of the building with construction that achieves an FRL of 120/120/120 and doorways being self-closing - /120/30 fire doors:</p> <ul style="list-style-type: none"> • Lift motors and lift control panels; or 	<p>Compliance to be Verified.</p> <p>If the building requires a machine room for the lift or any emergency equipment listed in C2.12 it must be provided with separating construction that achieves an</p>

	<ul style="list-style-type: none"> Emergency generators used to sustain emergency equipment operating in the emergency mode; or Central smoke control plant; or Boilers; or A battery or batteries installed in the building that have a voltage exceeding 24 volts and a capacity exceeding 10 ampere hours. Separation of on-site fire pumps must comply with the requirements of AS 2419.1. 	<p>FRL of 120/120/120 and doorways being self-closing -/120/30 fire doors:</p> <p>Separation of on-site pump fire pumps (if required) are to comply to AS2419.1.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</p>
C2.13 – Electricity supply system	To ensure certain types of electrical equipment to operate during an emergency the requirements of sub-clauses (a), (b) (c), (d) & (e) must be complied with relating to sub-stations, sub-mains and main switchboards.	<p>Compliance to be Verified.</p> <p>Any main switchboard located within the building (and which sustains emergency equipment operating in the emergency mode) must –</p> <ul style="list-style-type: none"> a) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and b) have any doorway in that construction protected with a self-closing fire door having an FRL of not less than -/120/30. <p>Emergency equipment includes but it is not limited to: (viii) Pumps for automatic sprinkler systems.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</p>
C2.14 – Public Corridors in Class 2 and 3 Buildings	In a Class 2 or 3 building a public corridor, if more than 40m in length, must be divided at intervals of not more than 40m with smoke-proof walls complying with Clause 2 of Specification C2.5.	<p>Not Applicable.</p> <p>No corridors more than 40m have been indicated in the class 3 part.</p>

Part C3	Protection of Openings	
C3.1 – Application of Part	Openings listed in C3.1(a) need not comply with the Deemed-to-Satisfy Provisions of Part C3 . Openings listed in C3.1(b) & (c) must comply with the relevant Part C3 Deemed-to-Satisfy Provisions	Noted
C3.2 – Protection of openings in external walls	Openings in an external wall that is required to have an FRL must be protected.	<p>Compliance to be Verified.</p> <p>Site plan to identify there are no window openings within 3m of the allotment boundary.</p>

		<p>If windows are within 3m they are to be protected in accordance with the requirements of C3.4.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</p>
C3.3 – Protection of Openings in External Walls in Different Fire Compartments	The distance between parts of external walls and any openings within them in different fire compartments separated by a fire wall must be not less than that set out in Table C3.3.	<p>Noted.</p> <p>no separate fire compartments are proposed.</p>
C3.4 – Acceptable Methods of Protection	The distance between parts of external walls and any openings within them in different fire compartments separated by a fire wall must be not less than that set out in Table C3.3.	Noted.
C3.5 – Doorways in Fire Walls	Doorways in fire walls, that are not part of a horizontal exit, must be protected by a fire door or fire shutter that has an FRL of not less than that required for the fire wall except that the insulation rating must be at least 30.	<p>Not applicable</p> <p>No doorways are proposed in fire walls required under clause C2.7.</p>
C3.6 – Sliding Fire Doors	If a doorway in a fire wall is fitted with a sliding fire door which is open when the building is in use it must be activated in accordance with the requirements of this clause and warning signs must be installed on either side of the doorway.	<p>Not Applicable.</p> <p>No sliding doors in fire walls required under clause C2.7 required.</p>
C3.7 – Protection of Doorways in Horizontal Exits	Horizontal exits must be protected by a single fire door unless the subject building is a Class 7 or 8. The doors are to have an FRL as required by Specification C1.1.1 for the wall. The doors must be self-closing or automatic-closing and gives details of the deemed-to-satisfy methods of activation.	<p>Not Applicable</p> <p>No horizontal exits proposed.</p>
C3.8 – Openings in Fire Isolated Exits	Doorways that open into fire-isolated exits must be protected by -/60/30 fire doors that are self-closing or automatic closing upon fire trip. A window in the external walls of fire-isolated exits must be protected in accordance with C3.4 if it is within 6m of and exposed to a window or other opening in a wall of the same building other than in the same fire-isolated enclosure.	<p>Compliance to be Verified.</p> <p>Doorways that open into fire-isolated exits must be protected by -/60/30 fire doors that are self-closing or automatic closing upon fire trip.</p> <p>The architectural plans indicate sliding doors are proposed to the fire isolated stair on the ground floor entry and airlock.</p> <p>Plans to demonstrate BCA DTS compliance or rationalised under a fire engineered solution.</p>
C3.9 – Service Penetrations in Fire Isolated Exits	<p>Fire isolated exits must not be penetrated by any services other than</p> <ul style="list-style-type: none"> - electrical wiring as permitted by D2.7(e), - ducting associated with a pressurisation system or - water supply pipes for fire services. 	<p>Compliance to be Verified.</p> <p>Fire-isolated exits must not be penetrated by any services other than those permitted in C3.9.</p> <p>Details demonstrating compliance with this clause must be incorporated</p>

		into the construction certificate plans / specification.
C3.10 – Openings in Fire Isolated Lift Shafts	Lift shafts are required to be fire-isolated and the entrance doorway must be protected by -/60-fire doors and the lift indicator panels must be backed by construction having an FRL of not less than /60/60 if it exceeds 35000mm ² .	<p>Compliance to be Verified.</p> <p>The doorways to the lift shaft are to be protected with FRL-/60/- Fire doors that comply to AS1735.11.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</p>
C3.11 – Bounding Construction for Class 2, 3 and 4 Buildings	This clause provides the requirements for the level of protection to the bounding walls of sole occupancy units or public corridors in Class 2 & 3 buildings and Class 4 portions of buildings of Types A, B & C Construction.	<p>Compliance to be Verified.</p> <p>The doorways from the sole occupancy units are to be self closing FRL-/60/30 Fire Doors.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</p>
C3.12 – Openings in floors and Ceilings for services	Penetrations through certain floors and ceilings must be protected to limit the spread of fire through openings in these building elements.	<p>Compliance to be Verified.</p> <p>Service penetrations through the fire rated floors / ceilings are to be protected to limit the spread of fire.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</p>
C3.13 – Openings in Shafts	<p>This clause specifies that in buildings of Type A Construction, openings in shafts must be protected (generally with 1 hour fire rated shafts and doors).</p> <p>(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</p> <p>(b) a self-closing –/60/30 fire door or hopper; or</p> <p>(c) an access panel having an FRL of not less than –/60/30; or</p> <p>(d) if the shaft is a garbage shaft — a door or hopper of non-combustible construction.</p>	<p>Compliance to be Verified for CC.</p> <p>In Type A construction any openings in a wall providing access to a ventilating, pipe, garbage or other service shaft must be protected by construction in accordance with clause C3.13.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</p>
C3.14	<i>Repealed</i>	
C3.15 – Openings for service installations	<p>Services which pass through or intersect building elements that have an FRL, must be suitably protected to prevent the spread of fire. This clause applies only to an element required to have an FRL with respect to integrity or insulation.</p> <p>Specification C3.15 prescribes materials and methods of installation for services that penetrate walls, floors and ceilings required to have an FRL.</p>	<p>Where services pass through an element which is required to achieve a FRL (other than an external wall or roof), the service must be fire protected in accordance with this clause.</p>

C3.16 – Construction Joints	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 identical with a prototype tested in accordance with AS 1530.4 to achieve the required FRL.	Noted. Construction to comply.
C3.17 – Columns Protected with Lightweight Construction to Achieve an FRL	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.	Noted No internal columns requiring fire protection identified on the draft architectural plans.

SPECIFICATION C1.1 – FIRE RESISTING CONSTRUCTION			
2.1	Exposure to fire source feature	Noted	
2.2	Fire protection for a support of another part To minimise the risk that a building element required to have a fire-resistance level (FRL) will fail during the failure of another element required to give it vertical or lateral support.	Noted Details to be provided for CC.	Any element required to have an FRL and depends upon vertical or lateral support to maintain its FRL is to comply with this clause.
2.3	Lintels	Noted Details to be provided for CC.	Lintel to achieve same FRL as the wall
2.4	Attachments not to impair fire resistance. To minimise the risk that the method of attaching or installing a finish, lining, ancillary element or service installation will compromise the fire-resistance of a building element. Clause 2.4 a prohibits required FRL of a building part from being reduced by the attachment or installation of facings, finishes, ancillary elements or the installation of ducting or any other service. The reason for controlling this is due to the potential for changes to the fire performance of a building element via attaching or installing another element.	Noted Details to be provided for CC.	Method of attachment for an ancillary item must not reduce the fire resistance of the building element
2.5	General concessions	Noted	Noted
2.5(a)	Steel columns	Noted	Concession noted but NA
2.5(b)	Timber structures	Noted	Concession noted but NA
2.5(c)	Structures on roofs	Noted	Concession noted but NA
2.5(d)	Curtain walls and panel walls	Noted	Concession noted but NA
2.5(e)	*****		Blank
2.5(f)	Balconies and verandas.	Noted	Noted. No balconies or verandas proposed for the new works.

2.6	Mezzanine Floors: Concession	NA	Concession noted but NA
2.7	Enclosure of shafts	Applies	The top of the lift shaft and fire isolated stair are to be provided with construction achieving FRL-/90/90. As the top of the shafts do not extend beyond the roof covering.
2.8	Car parks in Class 2 and 3 buildings	N/A	This concession doesn't apply to this building as it has a rise in storeys of 4. However, the FRL's for class 3 can be applied as the parking spaces fits the definition of private garage.
2.9	Residential care buildings	NA	

3.0 TYPE A CONSTRUCTION

3.1(a)	Fire resistance of building elements	Noted	Refer table 3 extract below.
3.1(b)	*****		BCA clause not used.
3.1(c)	Internal walls required to have an FRL	Applies	Any internal wall required to have an FRL must extend to- <ul style="list-style-type: none"> (i) the underside of the floor next above; or (ii) the underside of a roof complying with Table 3; or (iii) if under Clause 3.5 the roof is not required to comply with Table 3, 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.
3.1(d)	Load-bearing internal walls or fire walls.	Noted	This clause requires loadbearing internal walls to be of concrete or masonry. However, for this building concession 3.10 can be applied as a sprinkler system will be installed.
3.1(e)	*****		BCA Clause not used.
3.1(f)	FRL's to internal and external columns	Noted.	Compliance to be Verified. No internal columns within 1.5m of a window exposed to FSF noted on the architectural plans. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans/ specification.

3.2 –	Concession for floors	Noted	Concession noted
3.3 –	Floor Loading of Class 5 & 9b buildings: Concession	Noted	Not applicable.
3.4 – Roof superimposed on concrete slab: concession,	Roof superimposed on concrete slab: concession,	Noted	Not applicable.
3.5 –	Roof Concession	<u>Concession Applies.</u>	The roof is not required to be provided with an FRL as specified in table 3. The building is class 3 and will contain a sprinkler system. The roof is required to be non-combustible.
3.6 –		N/A	The architectural plans do not indicate any roof lights are proposed.
3.7 – Internal Columns and walls: concession	Roof Lights		Internal columns and walls, the storey immediately below the roof may be lowered to FRL60/60/60.
3.8 –	Open spectator stands and indoor sports stadiums: concession.	Not applicable	
3.9 – Carparks	Not applicable		The carparking spaces are considered to be a private garage.
3.10 –	Class 2 & 3 buildings: concession	Concession can be applied.	Compliance to be Verified. Concession may be applied. An excerpt outlining the requirements of this concession are provided in appendix 1 of this report. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans/ specification.

SECTION D		ACCESS AND EGRESS
PART D1	Provisions for Escape	
D1.1 – Application of part	The Deemed-to-Satisfy provisions of this Part do not apply to the internal parts of a sole-occupancy unit of a Class 2 or 3 building or a Class 4 part of a building.	Noted
D1.2 – Number of Exits Required	This clause requires the provision of sufficient exits to enable safe egress in case of an emergency. Clause D1.2 provides that all buildings must have at least one exit from each storey and sets out circumstances in which more than one exit may be required.	Architectural plans indicate compliance can be achieved. Internal and external stairs to be provided
D1.3 – When Fire isolated exits are required	This clause indicates when fire isolated stairways and ramps are required to enable safe egress from a building in the case of a fire, setting out the limits to which non-fire isolated exits can be used in Class 2, 3, 5, 6, 7, 8 and 9 buildings.	Compliance to be Verified. Fire isolated stairs are required as the building has a rise in storeys of 4. Loadbearing walls are to be non-combustible concrete or masonry & achieve FRL90/90/90. Plans to demonstrate BCA DTS compliance or rationalised under a fire engineered solution.
D1.4 – Exit Travel Distances	<ul style="list-style-type: none"> • Clause specifies the permitted travel distances allowable from Class 2 to Class 9 buildings. • Class 2 buildings, 6m from a single exit of any SOU. • Maximum 20m to an exit or 20m to a point of choice between alternative exits. Maximum distance to one of those exits is 40m. 	Complies The architectural plans indicated the travel distances from the SOU's for the proposed works are cable of compliance.
D1.5 – Distances between alternative exits	<p>Exits required as alternative exits must be –</p> <p>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</p> <ul style="list-style-type: none"> - not less than 9m apart; and - not more than – <ul style="list-style-type: none"> • in a Class 2 or 3 building - 45m apart; or 	Complies The architectural plans indicated the distances between exits for the proposed works are cable of compliance.
D1.6 – Dimensions of exits	This clause sets out the minimum dimensions such as height and width of paths of travel from Class 2 to 9 buildings. It also specifies the minimum dimensions of doorways from the various compartments and the width of exit doors from buildings depending on the uses and functions carried out therein.	Complies. Architectural plans indicate sufficient exits width will be provided.

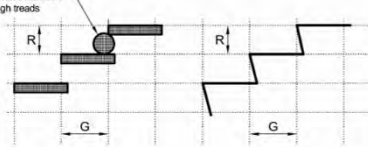
<p>D1.7 – Travel via Fire Isolated Exits</p>	<p>The intent of this clause is to enable occupants to safely enter a fire-isolated exit which discharges to a safe location.</p> <p>D1.7-</p> <p>(a) A doorway from a room must not open directly into a stairway, passageway or ramp that is <i>required</i> to be fire-isolated unless it is from—</p> <p>(i) a <i>public corridor</i>, public lobby or the like; or</p> <p>(ii) a <i>sole-occupancy unit</i> occupying all of a <i>storey</i>; or</p> <p>(iii) a <i>sanitary compartment</i>, airlock or the like</p> <p>(b) Each <i>fire-isolated stairway</i> or <i>fire-isolated ramp</i> must provide independent egress from each <i>storey</i> served and discharge directly, or by way of its own <i>fire-isolated passageway</i>—</p> <p>(i) to a road or <i>open space</i>; or</p> <p>(ii) to a point—</p> <p>(A) in a <i>storey</i> or space, within the confines of the building, that is used only for pedestrian movement, carparking or the like and is open for at least 2/3 of its perimeter; and</p> <p>(B) from which an unimpeded path of travel, not further than 20 m, is available to a road or <i>open space</i>; or</p> <p>(ix) into a covered area that-</p> <p>(A) adjoins a road or <i>open space</i>; and</p> <p>(B) is open for at least 1/3 of its perimeter; and</p> <p>(C) has an unobstructed clear height throughout, including the perimeter openings, of not less than 3 m; and</p> <p>(D) provides an unimpeded path of travel from the point of discharge to the road or <i>open space</i> of not more than 6 m.</p> <p>(c) Where a path of travel from the point of discharge of a fire-isolated <i>exit</i> necessitates passing within 6 m of any part of an <i>external wall</i> of the same building, measured horizontally at right angles to the path of travel, that part of the wall must have-</p> <p>(i) an FRL of not less than 60/60/60; and</p> <p>(ii) any openings protected internally in accordance with C3.4,</p> <p>for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser.</p>	<p>Compliance Issue</p> <ul style="list-style-type: none"> Doorways from rooms must not open directly on the fire isolated stair (other than a public corridor, SOU occupying all of the storey or sanitary compartment) as required in clause C1.7a The fire isolated stair must discharge directly to open space or a point or covered area as defined in clause D1.7(b) <p>Plans to demonstrate BCA DTS compliance or rationalised under a fire engineered solution.</p>
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<p>D1.8 –</p> <p>External stairways in lieu of fire-isolated exits</p>	<p>An external stairway or ramp may serve as a required exit in lieu of a fire-isolated exit serving a storey below an effective height of 25m provided that it is constructed in accordance with the requirements of sub-clauses (a) to (d).</p>	<p>Compliance Issue</p> <p>The external stair being used in lieu of a fire isolated exit on the western elevation of the building is to comply to the requirements of D1.8.</p> <p>Plans to demonstrate BCA DTS compliance or rationalised under a fire engineered solution.</p>
	<p>Figure D1.8(1) Protection of the external exit using the external wall of the building in accordance with D1.8(c)(i)</p> <p>The exit incorporates part of the external balcony as the communal thoroughfare for occupants exiting via the external stair and is therefore considered part of the external exit</p> <p>External stair</p> <p>External wall having an FRL of 60/60/60 for a distance of 6 metres from external stairway</p> <p>External balcony</p> <p>Windows less than 3 metres from the external exit not permissible per D1.8(c)(i)(B)</p> <p>INTERNAL PART OF BUILDING</p> <p>Windows 3 metres or more but less than 6 metres from the external exit must be protected in accordance with C3.4 per D1.8(c)(i)(C)</p> <p>Doorway serving the exit to be protected in accordance with C3.4 per D1.8(c)(i)(B)</p>	
<p>D1.9 –</p> <p>Travel by non fire isolated stairways or ramps</p>	<p>A non-fire isolated stairway or ramp serving as a required exit must provide a continuous means of travel by its own flights and landings from every storey served to the level at which egress to a road or open space is available.</p> <p>In a Class 2, 3 or 4 building, the distance between the doorway of a room or <i>sole-occupancy unit</i> and the point of egress to a road or <i>open space</i> by way of a stairway or ramp that is not fire-isolated and is <i>required</i> to serve that room or <i>sole-occupancy unit</i> must not exceed—</p> <ul style="list-style-type: none"> (i) 30 m in a building of Type C construction; or (ii) 60 m in all other cases. 	<p>Not applicable.</p> <p>The stairs are required to satisfy the requirements applicable to fire isolated stairs.</p>
<p>D1.10 –</p> <p>Discharge from exits</p>	<p>The intent of this clause is to provide safe discharge from an exit to a road or open space.</p> <ul style="list-style-type: none"> a) An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it. b) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than— <ul style="list-style-type: none"> (i) the minimum width of the required exit; (ii) or 1 m, whichever is the greater. 	<p>Compliance to be Verified.</p> <p>The architectural plans for the construction certificate is to demonstrate the external stair being used in lieu of a fire isolated stair will be provided with a path of travel of 1m minimum width to the connect to the road.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</p>

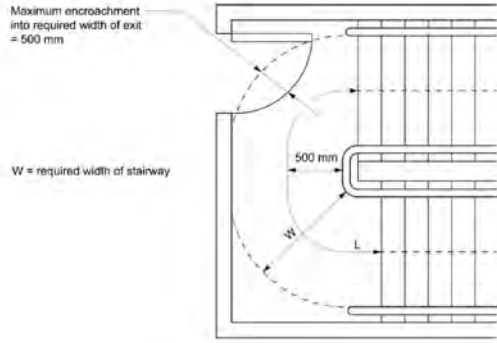
D1.11 – Horizontal Exits	Horizontal exits must not be counted as required exits between sole-occupancy units or in an early childhood centre, primary or secondary school.	Not applicable to this building. No horizontal exits proposed.
D1.12 – Non Required Stairways, Ramps and Escalators	This clause sets out the requirements for the application of non-required exits and the circumstances under which they may be utilised. Clause D1.12 only applies to escalators, moving walkways and travelators, non-required non-fire isolated stairways and non-required non-fire isolated ramps. A non-required stairway cannot be used to connect patient care areas in a class 9a building or resident use areas in a class 9c building.	Not Applicable for this building.
D1.13 – Number of persons accommodated	Clause D1.13 and Table D1.13 are used to calculate the anticipated number of people in particular types of buildings so that minimum exit widths and the required number of sanitary and other facilities can be calculated.	Not applicable for this building.
D1.14 – Measurement of distances	This clause describes the point at which an exit commences with respect to both non-fire-isolated and fire-isolated exits providing the parameters for measuring travel distance.	Noted
D1.15 – Method of measurement	This clause sets out the method of measuring travel distance to an exit in various circumstances by determining the path that a person would walk.	Noted
D1.16 – Plant rooms & lift motor rooms Concession	A ladder may be used in lieu of a stairway to provide egress from a plant room with a floor area of not more than 100m ² ; or all but one point of egress from a plant room or a lift machine room with a floor area not more than 200m ² . Sub-clause (b) sets out the parameters for the ladders permitted to be used in this circumstance.	Not Applicable. No access to plant room requiring ladders.
D1.17 – Access to Lifts Pits	This clause provides the requirements for access to lift pits not more than 3m deep and the requirements of construction of access for lift pits that are more than 3m deep. The requirements for signage to lift pits are also set out.	Not applicable to this building. Architectural plans do not indicate a lift pit will be provided.

PART D2	Construction of Exits	
D2.1 – Application of Part	With the exception of specified clauses in this part the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of sole-occupancy units Class 2 & Class 3 buildings and Class 4 parts of buildings, however applies to all other Classifications.	Noted
D2.2 – Fire Isolated Stairways & Ramps	A stairway or ramp, including landings that are required to be within a fire-resisting shaft must be constructed of non-combustible materials to protect the structural integrity of the shaft.	Compliance to be Verified. The stair contained within the fire isolated shaft is to be constructed using non-combustible material. Details demonstrating compliance with this clause must be incorporated

		into the construction certificate plans / specification.
D2.3 – Non-Fire Isolated stairways and ramps	The non-fire isolated stairways must be constructed according to D2.2, or only of- (a) reinforced or prestressed concrete; or (b) steel in no part less than 6 mm thick; or (c) compliant timber (44mm thick)	Not applicable. A non-fire isolated stairway is not identified in the architectural plans.
D2.4 – Separation of Rising & Descending Stairs	If a stairway serving as an exit is required to be fire isolated, there must be no direct connection between the rising and descending flights of stairs at the level from which egress is obtained. This clause also prescribes the level of construction required to achieve separation.	Not Applicable to this building
D2.5 – Open Access Ramps & Balconies	This clause allows the use of an open access ramp to meet the smoke hazard management requirements of Table E2.2(a) by allowing smoke to vent naturally through an open access ramp or balcony before it reaches a fire-isolated exit. Subclauses (a) and (b) set out the ventilation requirements if this method is used in lieu of stairwell pressurisation.	Not Applicable to this building.
D2.6 – Smoke Lobbies	This clause only applies to a smoke lobby required by D1.7. A smoke lobby required by D1.7 must be constructed in accordance with each of the requirements of sub-clauses (a) to (d)	Not Applicable
D2.7 – Installations in exits and paths of travel	This clause restricts the installation of certain services in fire-isolated exits, non-fire-isolated exits and certain paths of travel to exits. It prescribes which services shall not be installed as well as the circumstances in which certain services may be installed in fire-isolated and non-fire-isolated exits. If installed in a path of travel to an exit, Electrical distribution boards, Communication cupboards and the like containing motors, etc are to be enclosed with non-combustible construction, and doors are to be provided with smoke seals to the perimeter.	Compliance to be verified. EDB cupboards, MSB or the like located within the path of travel must be enclosed in non-combustible construction and be suitably smoke sealed to prevent smoke spreading from the enclosure. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.
D2.8 – Enclosure of space under stairs and ramps	A space below a required fire-isolated stairway or ramp in a fire-isolated shaft must not be enclosed to form a cupboard or other enclosed space. If the required stairway or ramp is non-fire-isolated, (including an external stairway) any cupboard underneath must have an FRL of 60/60/60, with a self-closing -60/30 door.	Compliance to be verified. Any enclosure under the stairs is required to be provided with FRL 60/60/60 and self-closing -60/30 door. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.
D2.9 – Width of stairways	A required stairway or ramp that exceeds 2m in width is counted as having a width of only 2m unless it is divided by a handrail, balustrade or other barrier continuous between landings and each division has a width of not more than 2m.	Not Applicable to this building. No stairs wider than 2m proposed.

D2.10 – Pedestrian ramps	A fire-isolated ramp may be substituted for a fire isolated stairway if the construction enclosing the ramp and the dimensions comply with the requirements for a fire-isolated stairway.	Not Applicable to this building.																												
D2.11 – Fire Isolated Passageways	This clause requires that a fire-isolated passageway must have a FRL at least equivalent to the part of the building in which it is situated and, in any case, not less than 60/60/60.	Not Applicable to this building. No fire isolated passageway proposed.																												
D2.12 – Roof as Open Space	If an exit discharges to a roof of a building, the roof must have an FRL of not less than 120/120/120; and not have any roof lights or other openings within 3m of the path of travel of persons using the exit to reach a road or open space.	Not Applicable to this building The architectural plans do not propose using a roof as open space.																												
D2.13 – Goings and risers	<p>This clause sets out the detailed requirements for the construction and geometry of the goings and risers in required stairways (as detailed below). These details are set out in sub-clauses (a) to (c) and Table D2.13 Riser and Going Dimensions.</p> <table><tr><th></th><th colspan="2">Riser (R)</th><th colspan="2">Going (G) ⁽²⁾</th><th colspan="2">Quantity (2R+G)</th></tr><tr><th></th><th>Max</th><th>Min</th><th>Max</th><th>Min</th><th>Max</th><th>Min</th></tr><tr><td>Public stairways</td><td>190</td><td>115</td><td>355</td><td>250</td><td>700</td><td>550</td></tr><tr><td>Private stairways⁽¹⁾</td><td>190</td><td>115</td><td>355</td><td>240</td><td>700</td><td>550</td></tr></table> <p>125 mm sphere must not pass through treads</p> 		Riser (R)		Going (G) ⁽²⁾		Quantity (2R+G)			Max	Min	Max	Min	Max	Min	Public stairways	190	115	355	250	700	550	Private stairways ⁽¹⁾	190	115	355	240	700	550	<p>Compliance to be verified.</p> <p>Goings and risers are to comply to the requirements of this clause.</p> <p>The stairs must have a surface with a slip-resistance classification not less than that listed in Table D2.14 or a nosing strip with a slip-resistance classification not less than that listed in Table D2.14, as indicated on CC plans.</p> <p>Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.</p>
	Riser (R)		Going (G) ⁽²⁾		Quantity (2R+G)																									
	Max	Min	Max	Min	Max	Min																								
Public stairways	190	115	355	250	700	550																								
Private stairways ⁽¹⁾	190	115	355	240	700	550																								
D2.14 – Landings	<p>The dimensions and gradients of landings in stairways are set out in this clause; for example:</p> <ul style="list-style-type: none">• The landings must not have a gradient any steeper than 1:50,• The length of the landing must not be any less than 750mm long,• Must have a non-slip finish throughout or a non-skid strip near the edge of the landing where it meets the flight below in accordance with the following table: <p>Table D2.14.</p> <table><tr><th rowspan="2">Application</th><th colspan="2">Surface conditions</th></tr><tr><th>Dry</th><th>Wet</th></tr><tr><td>Ramp steeper than 1:14</td><td>P4 or R11</td><td>P5 or R12</td></tr><tr><td>Ramp steeper than 1:20 but not steeper than 1:14</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Tread or landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr></table>	Application	Surface conditions		Dry	Wet	Ramp steeper than 1:14	P4 or R11	P5 or R12	Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11	Tread or landing surface	P3 or R10	P4 or R11	Nosing or landing edge strip	P3	P4	<p>Compliance to be verified.</p> <p>The stair landing must have a non-slip finish throughout or a non-skid strip near the edge of the landing where it meets the flight below in accordance with the following table, as indicated on CC plans.</p> <p>Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.</p>											
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	Dry	Wet																												
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Tread or landing surface	P3 or R10	P4 or R11																												
Nosing or landing edge strip	P3	P4																												
D2.15 – Thresholds	<p>The threshold of a doorway must not:</p> <ul style="list-style-type: none">• incorporate a step or ramp at any point closer to the doorway than the width of the door leaf, and• Not incorporate a step unless the doorway opens to the road or open space, and	<p>Noted.</p> <p>Architectural plans do not indicate a step at the doorway.</p>																												

	<ul style="list-style-type: none"> Where there is a difference in levels at the threshold, then either a threshold ramp or a step ramp may be provided in accordance with AS1428.1-2009, where required to be accessible. 	
D2.16 – Barriers to prevent falls.	<p>This clause details where balustrades are required to be provided and sets out in specific detail the construction requirements.</p>	<p>Compliance to be verified for CC.</p> <p>Barriers to prevent falls are to be provided where the trafficable surface is more than 1m to the surface beneath. The barriers are to comply to the requirements of this clause.</p> <p>Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.</p>
D2.17 – Handrails	<p>This Clause sets out the requirements regarding the location, spacing and extent of handrails required to be installed in buildings.</p> <p>AS 1428.1—2009</p> <p>PLAN</p> <p>SECTIONAL VIEW</p> <p>DIMENSIONS IN MILLIMETRES</p>	<p>Compliance to be verified for CC.</p> <p>Handrails required to assist people with a disability to be provided in accordance with D3.3 (compliant to clause 11 of AS1428.1)</p> <p>1m clear width between handrails.</p> <p>Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.</p>

D2.18 – Fixed platforms, walkways stairways and ladders	A fixed platform, walkway, stairway, ladder, any going and riser, any balustrade or other barrier attached thereto may comply with AS1657 if it only serves a machinery or plant room or non-habitable part of a sole-occupancy unit in a Class 2 building or Class 4 part.	Noted. Not applicable to this building.
D2.19 – Doorways and doors	This clause applies to all doorways and refers to the types of doors that cannot be used in buildings of prescribed uses, the use of power operated doors and the force required to operate sliding doors.	Compliance issue The sliding doors forming serving the fire isolated stair and forming part of the required exit are not permissible under clause D2.19(b)(iii). The sliding door leading directly to the road or open space must be openable at a force of no more than 110N. Plans to demonstrate BCA DTS compliance or rationalised under a fire engineered solution.
D2.20 – Swinging doors	A swinging door in a required exit or forming part of a required exit <i>must swing in the direction of egress and must not otherwise impede egress.</i> (class 2 exempt) <small>Figure D2.20 Illustration of door to a fire-isolated stairway complying with D2.20(a)</small> 	Compliance issue The doors opening into the fire isolated stair are to open in the direction of egress into the stair and comply to the requirements of D2.20 (a) Plans to demonstrate BCA DTS compliance or rationalised under a fire engineered solution.
D2.21 – Operation of latch	A door in a required exit or forming part of a required exit and in a path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress, by a single downward action or pushing action on a single device which is located between 900mm & 1100mm from the floor. This clause prohibits the use of devices such as deadlocks and knobs (rather, lever latches are required). D2.21 also sets out exceptions in relation to buildings where special security arrangements are required in relation to the uses carried out.	Compliance to be verified for CC. Complaint door handles are to be provided to exits doors and doors in the path of travel to comply to the operation of latch requirements. These requirements are not required within the SOU for class 2. Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.

D2.22 – Re-entry from Fire Isolated Exits	This clause details instances where fire isolated exit doors are required to provide re-entry from within the stairway.	Not Applicable to this building.
D2.23 – Signs on doors	This clause requires the use of signs to alert persons that the operation of fire doors and doors discharging from fire isolated exits, must not be impaired and must be installed where they can be readily seen.	Compliance to be verified for CC. <i>Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.</i>
D2.24 – Protection of Openable Windows	<p><u>Class 3 (Bedrooms)</u></p> <p>A window opening in a <u>bedroom</u> of a Class 3SOU must be provided with protection if:</p> <ul style="list-style-type: none"> the level of the floor outside the window is below 2m or more; and the lowest level of the window opening is less than 1.7m above the inside floor level. <p>A window required to be protected must comply with any of the following methods:</p> <ol style="list-style-type: none"> The window is designed such that any opening does not allow a 125mm sphere to pass through (E.g. louvres); or The window is fitted with a fixed or dynamic device that is capable of restricting the window opening so it does not allow a 125mm sphere to pass through and is difficult for a young child to operate. The restricting device must be capable of resisting a 250 N force when directed against the window such as a casement window or in attempting to push a sliding window open. An internal screen with similar parameters may be installed; or The window is fitted with an internal or external screen that does not permit a 125 mm sphere to pass through and is capable of resisting an outward horizontal force of 250 N against the window restrained by a device or screen protecting the opening. 	<p>Compliance to be verified for CC.</p> <p>Windows to the bedrooms are to be fitted with a restriction device or not open more than 125mm where the floor outside is more than 2m.</p> <p><i>Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.</i></p>
D2.25 – Timber Stairways - Concession	This clause relates to the concession applied to timber stairways where the building is sprinkler protected.	Noted. Not applicable to this building.

PART D3 Access for People with a Disability								
D3.0 – DTS Provisions		Noted						
D3.1 – General access requirements	<p><u>Class 3 Residential</u></p> <p>From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level..</p> <p>To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, TV room, individual shop, dining room, public viewing area, ticket purchasing service, lunch room, lounge room, or the like.</p> <p>Where a ramp complying with AS 1428.1 or a passenger lift is installed-</p> <p>(a) to the entrance doorway of each sole-occupancy unit; and</p> <p>(b) to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp.</p> <p><u>Sole-occupancy units (SOU)</u> If the building or group of buildings contain—</p> <table><tr><td></td><td>To and within—</td></tr><tr><td>1 to 10 SOU's</td><td>1 Accessible SOU</td></tr><tr><td>11 to 40 SOUS's</td><td>2 Accessible SOU's</td></tr></table>		To and within—	1 to 10 SOU's	1 Accessible SOU	11 to 40 SOUS's	2 Accessible SOU's	<p>Compliance to be verified for CC.</p> <p>The architectural details indicate accessible SOU's will be provided on the first and second floors.</p> <p>Access can be provided to each accessible SOU from the road via the lift.</p> <p>Compliant access to be demonstrated on the construction plans to the common areas.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification by the appointed access consultant.</i></p>
	To and within—							
1 to 10 SOU's	1 Accessible SOU							
11 to 40 SOUS's	2 Accessible SOU's							
D3.2 – Access to buildings	<p>Access to be provided from the main point of pedestrian entry at the allotment and from any accessible carparking space on the allotment.</p>	<p>Compliance to be verified for CC.</p> <p>The entrance doorways, and airlocks are to be compliant to AS1428.1. Access is to be provided from the carpark to the building.</p> <p><i>Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.</i></p>						
D3.3 – Parts of the building to be accessible	<p>Stairs, ramps, accessways and passenger lifts are to comply to AS1428.1</p>	<p>Compliance to be verified for CC.</p> <p><i>Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.</i></p>						
D3.4 – Exemptions	<p>Certain area of buildings are exempted from access requirements</p>	<p>Noted.</p>						

D3.5 – Car parking	Table D3.5 sets the requirements for carparking for people with a disability.	Compliance Issue. 1 accessible parking space is proposed with a shared area of 1.5m. AS2890.6 requires shared space of 2.4m for angle parking Plans to demonstrate BCA DTS compliance or rationalised under a performance solution.
D3.6 – Signage	Compliant signage to be provided.	Capable of Compliance to DTS Compliant signage to be provided prior to occupation of the building. <i>Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.</i>
D3.7 – Hearing augmentation	NA	
D3.8 – Tactile Indicators	Tactile indicators for the vision impaired to be provided	Capable of Compliance to DTS Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.
D3.9 – Wheelchair seating in class 9b buildings	N/A	Not a 9b assembly building
D3.10 – Swimming pools	N/A	No swimming pools proposed.
D3.11 – Ramps	Ramps must not rise more than 3.6m.	N/A no series of access ramps proposed
D3.12 – Glazing on an accessway	No Glazing on accessways	N/A

SECTION E		SERVICES AND EQUIPMENT
Part E1		Fire Fighting Equipment
E1.1	Left Blank	
E1.2	Left Blank	
E1.3 – Fire Hydrants	fire hydrant system must be provided to serve a building having a total floor area greater than 500m ² and where a fire brigade is available to attend a building fire, installed in accordance with the provisions of AS2419.1-2005.	Compliance to be verified for CC An Accredited Practitioner (Fire Safety) holding Fire System Design accreditation is to be engaged to endorse plans and specifications for the hydrant system for compliance to

		<p>AS2419.1 – 2005. As required by clause 146B of the EP&A Regulations for the construction approval.</p> <p>Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.</p>
E1.4 – Fire Hose Reels	This clause requires that the fire hose reel system must be installed in accordance with AS 2441.1 - 2005 and sets out the detail for location and uses of fire hose reels.	<p>Compliance to be verified for CC</p> <p>Fire hose reels are not required to service the building under this clause. However, required under clause G4.8 Alpine areas.</p> <p>An Accredited Practitioner (Fire Safety) holding Fire System Design accreditation is to be engaged to endorse plans and specifications for the hose reel system for compliance to AS2441.1. As required by clause 146B of the EP&A Regulations for the construction approval.</p> <p>Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.</p>
E1.5 – Sprinklers	A sprinkler system must be installed in a building or part of a building when required by Table E1.5 and comply with Specification E1.5.	<p>Compliance to be verified for CC</p> <p>Table E1.5 requires a sprinkler system to be provided throughout the whole building if the building has a rise in storeys of 4 or more.</p> <p>An Accredited Practitioner (Fire Safety) holding Fire System Design accreditation is to be engaged to endorse plans and specifications for the design the fire sprinkler system demonstrating compliance to AS2118.1 for coverage, pressure and flow rates for the sprinkler system to the entire development can be achieved.</p> <p>Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.</p>
E1.6 – Portable Fire Extinguishers	Portable fire extinguishers must be provided in accordance with Table E1.6 of the BCA and must be selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444-2001.	<p>Capable of Compliance to DTS</p> <p>The location, distribution and type of fire extinguishers to comply with the requirements of AS2444.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>

E1.7	<i>Left blank</i>	
E1.8 – Fire Control Centres	A fire control centre facility in accordance with Specification E1.8 must be provided for a building having an effective height of more than 25m and in a Class 6, 7, 8 or 9 building with a total floor area of more than 18,000m ² .	Not Applicable to this building.
E1.9 – Fire precautions during construction	<ul style="list-style-type: none"> During construction, not less than one portable 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 / temporary exit: 	noted.
E1.10 – Provisions for Special Hazards	<p>Suitable provision must be made if special problems of firefighting could arise because of.</p> <p>(a) The nature or quantity of materials stored, displayed or used in a building on the allotment; or</p> <p>(b) The location of the building in relation to a water supply for firefighting purposed.</p>	Compliance to be verified for CC Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.

<i>Part E2</i>	<i>Smoke Hazard Management</i>	
E2.1 – Application of Part	(a) The Deemed-to-Satisfy Provisions	Noted
E2.2 – General requirements for smoke hazard management (including Tables E2.2a & E2.2b)	<p>Class 2 to 9 buildings must comply with the provisions of this Clause to remove smoke during a fire, to control the operation of air handling systems and to prevent the spread of smoke between compartments.</p> <p>j) Alarms must be installed within each <i>sole-occupancy unit</i>, and located on or near the ceiling in any storey—</p> <p>(A) containing bedrooms—</p> <p>(aa) between each part of the <i>sole-occupancy unit</i> containing bedrooms and the remainder of the <i>sole-occupancy unit</i>; and</p> <p>(bb) where bedrooms are served by a hallway, in that hallway; and</p> <p>(B) not containing any bedrooms, in egress paths.</p> <p>ii) Where there is more than one alarm installed within a <i>sole-occupancy unit</i>, alarms must be interconnected within that <i>sole-occupancy unit</i>.</p> <p>Inbuilt sounders to the alarms to achieve 85dB(A) at the entry door to the SOU.</p>	Compliance to be verified for CC <p>Table E2.2a & Specification E2.2a requires the building to be provided with a clause 4 smoke detection system and activate a building occupant warning system complying with clause 7.</p> <p>An Accredited Practitioner (Fire Safety) holding Fire System Design accreditation is to be engaged to endorse plans and specifications for the smoke detection system for compliance to AS1670.1 and occupant warning system compliant to clause 7. As required by clause 146B of the EP&A Regulations for the construction approval.</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
E2.3 – Provision for Special Hazards	No special hazards	Noted

Part E3		Lift Installations
E3.1	Left blank	
E3.2 Stretcher Facilities in Lifts	<p>Stretcher facilities, complying with this clause, must be provided in lifts in at least one emergency lift as required by E3.4 or in a storey above an effective height of 12m.</p> <p>A stretcher facility must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600mm wide x 2000mm long x 1400mm high above the floor level.</p>	<p>Not Applicable</p> <p>A stretcher lift is not required as the building does not have an effective height of more than 12m.</p>
E3.3 Warning against use of lifts in fire	Warning signs required to be provided must be displayed where they can be readily seen	<p>Noted</p> <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>
E3.4 Emergency Lifts	An emergency lift (complying with AS1735.2 or Appendix A of AS1735.1) must be installed in: A building exceeds 25m in effective height; and	<p>Not Applicable</p> <p>Building does not have an effective height exceeding 25m.</p>
E3.5 Landings	Access and egress to and from lift well landings must comply with the Deemed-to-Satisfy Provisions of Part D.	Not applicable.
E3.6 Passenger lifts	In an accessible building, every passenger lift must be one of the types identified in Table E3.6a, have accessible features in accordance with Table E3.6b and not rely on a constant pressure device for its operation if the lift car is fully enclosed.	<p>Compliance to be verified for CC</p> <p>The lift must not rely on a constant pressure device for its operation if the lift car is fully enclosed.</p> <ul style="list-style-type: none"> - The lift must have a handrail compliant to AS1535.12. - The proposed lift must have accessible features outline in AS1535.12. - The lift floor dimensions must be 1100mm wide x 1400mm deep. - The lift must be provided with a passenger protection system. - The lift must be provided with lift car and landing control buttons complying with AS1735.2. - Lighting is be provided in accordance with AS1735.2. - The lift is to be provided with Emergency hands-free communication, including a button that alerts a call centre of a problem and a light to signal that the call has been received. <p>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</p>

E3.7 Fire service controls	In passenger lifts designed in accordance with AS 1735 Parts 1 and 2, all lift cars serving any storey above an effective height of 12m must be provided with fire service controls.	Not applicable. Not required. The building does not have an effective height of more than 12m.
E3.8 Aged Care Buildings	Where residents in an aged care building are on levels which do not have direct access to a road or open space a building must be provided with either at least one lift to accommodate a stretcher in accordance with E3.2(b) or a ramp in accordance with AS1428.1 and the ramp must discharge to a level providing direct access to a road or open space.	Not Applicable.
E3.9 Fire Service recall switch	This Clause looks at the specific requirements relating to Fire service control switches and the need for operation.	Not Applicable. A group of lifts is not proposed.
E3.10 Lift car drive recall switch	This clause identifies the requirements for the position and location of a service drive control switch.	Not Applicable. A lifts car fire service drive switch is not required by E3.7.

<i>Part E4</i>		<i>Visibility in an Emergency, Exit Signs and Warning Systems</i>
E4.1	<i>Repealed</i>	
E4.2 – Emergency Lighting	This clause details when emergency lighting must be installed in Class 2 to 9 buildings.	Compliance to be verified for CC Emergency lighting is required to the proposed fire stair, common corridors compliant to AS2293.1. <i>Electrical Design Certification must be incorporated into the construction certificate specification</i>
E4.3 – Measurement of distances	Distance, other than vertical rise, must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.	Noted
E4.4 – Design and operation of emergency lighting	Every required emergency lighting system must comply with AS2293.1. Design Certification should be provided by the electrical consultant verifying compliance.	Compliance to be verified for CC Design of the emergency lighting system to comply to AS2293.1 Electrical design plans and certification must be incorporated into the construction certificate specification.
E4.5 – Exit Signs	An exit sign must be clearly visible to persons approaching the exit and must be installed on, above or adjacent to each door providing egress from a building. Sub-clauses (a) to (d) set out the situations where exit signs are required to be installed	Compliance to be verified for CC Exit signs must be provided to doors serving as or forming part of a required throughout the buildings in accordance with AS 2293.1-2005. Electrical design plans and certification must be incorporated into the construction certificate specification.

E4.6 – Direction Signs	If an exit is not readily apparent to persons occupying or visiting the building then exit signs must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a required exit.	Compliance to be verified for CC If an exit is not readily apparent to persons occupying or visiting the building then directional exit signs must be installed in appropriate positions. Electrical design plans and certification must be incorporated into the construction certificate specification
E4.7 – Class 2 & 3 Buildings and Class 4 parts exemptions.	This clause grants an exemption for Class 2, 3 and Class 4 parts of buildings from the need to comply with E4.5 if the provisions of sub-clauses (a) & (b) are complied with.	Noted. E4.5 does not apply to an entrance door of a sole occupancy unit in a Class 2 building.
E4.8 – Design and operation of exit signs	Every required exit sign must comply with AS/NZS 2293.1 and be clearly visible at all times when the building is occupied by any person having the legal right of entry into the building.	Noted Exit signs must comply with: • AS 2293.1-2005; For a photoluminescent exit sign, Specification E4.8.
E4.9 – Emergency Warning & Intercom systems	This clause sets out the types of buildings requiring the installation of a sound system and intercom system to assist with the emergency evacuation of occupied. This clause specifies that sound and intercom systems must comply with AS 1670.4	Not Applicable

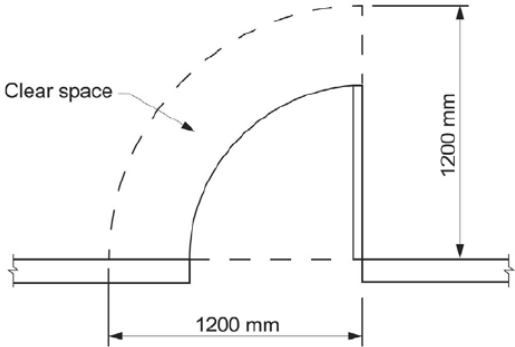
SECTION F – HEALTH AND AMENITY.

<i>Part F1</i>	<i>Damp & Weatherproofing</i>	
F1.0 Deemed -to-Satisfy Provisions	Performance Requirements FP1.4, for the prevention of the penetration of water through external wall, must be complied.	Noted.
F1.1 Stormwater Drainage	Stormwater drainage must comply with AS/NZS 3500.3- 2015.	Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F1.4 External above ground membranes	Any external above ground membranes must be waterproofed as per AS 4654 Parts 1 and 2-2012.	Compliance to be verified for CC Method of achieving compliance for the waterproofing of the external decks to be provided. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F1.5 Roof coverings	Information clause relevant to the Australian Standards applicable to different types of roof coverings.	Noted. Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification
F1.6 Sarking	Sarking-type materials used for weatherproofing must comply with AS/NZS 4200 Part 1 and 2-1994.	Noted.

F1.7 Waterproofing of wet area	Wet areas must be waterproofed in accordance with AS 3740-2010 and F1.7 of the BCA.	Compliance to be verified for CC New works within the wet areas to comply to AS3740. <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
F1.9 Damp-proofing	Where a damp-proof course is required, it must consist of a material that complies with AS/NZS 2904-1995; or impervious sheet material in accordance with AS 3660.1- 2014	Noted. Building is existing.
F1.10 Damp-proofing of floors on the ground	If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870-2011 (N/A to areas that do not require weatherproofing – refer specific clause exemptions).	Noted. Building is existing.
F1.11 Provision of Floor Wastes	Bathrooms and laundries in Class 2 buildings must be provided with a floor waste, and the floor of such areas must be graded to such floor waste. Drainage (puddle) flanges are required to be installed to all floor wastes as required under AS3740-2010.	Compliance to be verified for CC <i>The class 2 residential apartments are to be provided with floor wastes.</i> <i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i>
F1.12 Sub Floor Ventilation	Not applicable.	
F1.13 Glazed Assemblies	Refer to Part B1.	Noted Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification

PART F2 - SANITARY & OTHER FACILITIES

F2.0 – DTS Provisions	Noted	
F2.1 – Facilities in residential buildings	For facilities in Class 3 buildings other than residential care buildings, the following applies: (i) For residents in each building or group of buildings, provide— (A)a bath or shower; and (B)a closet pan; and (C)a washbasin, for each 10 residents for whom private facilities are not provided.	Complies Each SOU is provided with an ensuite.

F2.2 – Calculation of number of occupants and facilities.	(a) The number of persons accommodated must be calculated according to D1.13	Noted
F2.3 – Facilities in Class 3 to 9 Buildings, Table F2.3	Applies to class 3 to 9 buildings	Not applicable
F2.4 – Facilities for people with disabilities	Facilities constructed to comply to AS1428.1	<p>Compliance to be verified for CC</p> <p>The architectural plans indicate an accessible sanitary facility is provided in each accessible SOU.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F2.5 – Construction of sanitary compartments	<ul style="list-style-type: none"> Doors and partitions that separate adjacent compartments; and the door to a fully enclosed sanitary compartment must open outwards, or slide, or be removable from outside of the compartment, unless there is a clear space of at least 1.2m between the closet pan within the compartment and the doorway. 	<p>Compliance to be verified for CC</p> <p>Swinging doors located within 1.2m of a pan are to be provided with lift off hinges.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
F2.6 – Interpretation: urinals and wash basins	Informational clause relevant to urinal and washbasin design.	Noted. N/A
F2.7 – NSW Warm water installations	Hot water, warm water and cooling water systems to be installed in accordance with AS 3666.1.	Noted.

F2.8 – Waste Management	Not a class 9a or 9c building.	
F2.9 – Accessible adult change facilities	Not applicable	

PART F3 - ROOM HEIGHTS

F3.0 – DTS	Noted	
F3.1 – Height of rooms	The ceiling height must be not less than— a) in a Class 3 building— ii. a kitchen, laundry, or the like -2.1m; and iii. a corridor, passageway, or the like — 2.1 m; and iv. a habitable room excluding a kitchen - 2.4m.	Architectural plans indicate the room heights are compliant.

PART F4 - LIGHT AND VENTILATION

F4.0 – DTS Provisions	Noted	
F4.1 – Provision of Natural light	Noted Class 3 habitable rooms must be provided with natural light.	Plans indicate the provision of natural light will comply. Compliance to be verified for CC.
F4.2 – Methods and extent of natural lighting		Plans indicate the provision of natural light will comply. Compliance to be verified for CC.
F4.3 – Natural light borrowed from adjoining room	Borrowed ⁷ light can be used to calculate natural light.	Noted
F4.4 – Artificial lighting	Artificial lighting to be designed and installed in accordance with AS 1680.0.	Noted
F4.5 – Ventilation of rooms	All rooms to be provided with Clause F4.6 compliant natural ventilation OR a mechanical ventilation or air-conditioning system complying with AS 1668.2-2012.	Plans indicate the provision of natural ventilation will comply. Compliance to be verified for CC.
F4.6 – Natural ventilation	(a) Natural ventilation provided in accordance with F4.5(a) must consist of permanent openings, windows, doors or other devices which can be opened— (i) with ventilating area not less than 5% of the floor area of the room required to be ventilated; and (ii) open to— (a) a suitably sized court, or space open to the sky; or (b) an open veranda, carport, or the like; or (c) an adjoining room in accordance with F4.7.	Plans indicate the provision of natural ventilation will comply. Compliance to be verified for CC.

F4.7 – Ventilation borrowed from adjoining rooms	Natural ventilation to a room may come through a window, opening, ventilating door or other device from an adjoining room (including an enclosed veranda) if both rooms are within the same sole-occupancy unit or the enclosed veranda is common property	Noted
F4.8 – Restriction on position of water closets and urinals	Rooms containing closet pans or urinals must not open directly into kitchen / pantry areas and a workplace occupied by more than one person.	Noted
F4.9 – Airlocks	Not required if mechanical ventilation provided.	Noted
F4.10 *****	Repealed	
F4.11 – Car parks	The carpark is to be provided with mechanical ventilation compliant to AS1662.2 or be provide with a system of natural ventilation complying with section 4 of AS1668.4.	No underground carpark proposed. Parking spaces are private garage.
F4.12 – Kitchen local exhaust ventilation	The commercial kitchens are to be provided with a kitchen exhaust hood compliant to AS1662.1 and AS1668.2.	No commercial kitchen proposed.

PART F5 - SOUND TRANSMISSION		
F5.1 Application of Part	The provisions of this Part apply to the Class 2 Part.	
F5.2 Determination of airborne sound insulation ratings	<p>A form of construction required to have an airborne sound insulation rating must—</p> <p>(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 1276.1 or ISO 717.1 using results from laboratory measurements; or</p> <p>(b) comply with Specification F5.2.</p>	<p>Noted.</p> <p>Sound compliance to be achieved.</p>
F5.3 Determination of impact sound insulation ratings	<p>(a) A wall in a building required to have an impact sound insulation rating must—</p> <p>(i) for a Class 3 building be of discontinuous construction; and</p> <p>(b) For the purposes of this Part, discontinuous construction means a wall having a minimum 20 mm cavity between 2 separate leaves, and</p> <p>(i) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and</p> <p>(ii) for other than masonry, there is no mechanical linkage between leaves except at the periphery.</p>	Noted.

F5.4 Sound Insulation of floors between units	<p>A floor in a Class 3 building part must achieve an $R_w + C_{tr}$ (airborne) not less than 50, and an $L_{n,w} + C_i$ (impact) not more than 62, if separating:</p> <ul style="list-style-type: none"> • SOU's; or • An SOU from a plant room, lift shaft, public corridor, public lobby or parts of a different classification. 	<p>Compliance to be verified for CC.</p> <p>Sound separation for floors to achieved $R_w + C_{tr}$ (airborne) not less than 50, and an $L_{n,w} + C_i$ (impact) not more than 62.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification.</i></p>
F5.5 Sound insulation of walls between units	<p>(a) A wall in a Class 3 building must-</p> <ul style="list-style-type: none"> (i) have an $R_w + C_{tr}$ (airborne) not less than 50, if it separates sole-occupancy units; and (ii) 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 (iii) comply with F5.3(b) if it separates— <ul style="list-style-type: none"> a. 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 b. a sole-occupancy unit from a plant room or lift shaft. 	<p>Compliance to be verified for CC.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F5.6 Sound insulation rating of services	Ducts and pipes must achieve an $R_w + C_{tr}$ (airborne) of no less than 40 if the adjacent room is habitable or 25 if non-habitable.	<p>Compliance to be verified for CC.</p> <p><i>Details demonstrating compliance with this clause must be incorporated into the construction certificate plans / specification</i></p>
F5.7 Sound isolation of pumps	A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating pump.	<p>Noted</p> <p>No service shafts proposed.</p>

Part F6		Condensation Management
F6.0 Deemed to satisfy provisions	Relevant DTS provisions	Noted
F6.1 Application of Part	Condensation management requirements apply to class 2 & 4 buildings	Not Applicable The building is class 3.

Part G4	Construction in Alpine Areas	
G4.0 Deemed to satisfy provisions	Relevant DTS provisions	Noted
G4.1 Application of part	The provisions of this section apply to any building constructed in an alpine area.	The building is in an alpine area.
G4.2 *****	Clause not utilised in BCA	
G4.3 External Doors	External doorways that are subject to the build up of snow are to open inwards and be provided with compliant signage	Complies Architectural plans indicate required external doors open inwards. External entry/egress doors are sliding. Signage to be provided for OC.
G4.4 Emergency Lighting	Additional emergency lighting to be provided to enable people to evacuate a building in an alpine area in an emergency without being impaired by lack of light.	Compliance to be verified for CC. Emergency lighting to be provided to external exit doors. Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.
G4.5 External Trafficable structures	External stairways, ramps, access bridges or other trafficable structures serving the building must— (a) have a floor surface that consists of expanded mesh if it is used as a means of egress; and (b) have any required barrier designed so that its sides are not less than 75% open:	Compliance to be verified for CC. Compliance is to be demonstrated on the construction certificate plans or addressed as part of a fire engineered performance solution. Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification.
G4.6 Clear Space Around Buildings	To enable people to evacuate and emergency services to access a building in an alpine area in an emergency without being impeded by snow build-up around the building.	Compliance issue. Where any part of the external wall is more 3.6m above ground level the separating distance to the boundary is to comply to the requirements of G4.6. Plans to demonstrate BCA DTS compliance or rationalised under a performance solution.
G4.7 *****		
G4.8 fire fighting services and equipment	To provide for the installation of adequate fire safety equipment suitable to the conditions experienced in alpine areas. (a) A Class 3, building must have— (i) a manually operated fire alarm system with call-points complying with AS 1670.1; and (ii) fire hydrants installed in accordance with E1.3(b); and	Compliance to be verified for CC. (ii) manually operated fire alarm system with call-points complying with AS 1670.1; and (ii) fire hydrants installed in accordance with E1.3(b); and (iii) fire hose reels installed in accordance with E1.4(b) to (g) & G4.8.

	<p>(iii) fire hose reels installed in accordance with E1.4(b) to (g), except that—</p> <p>(A) in a Class 2 or 3 building—</p> <p>(aa) for the purpose of E1.4(b), a sole-occupancy unit is considered to be a fire compartment; and</p> <p>(bb) for the purpose of E1.4(c)(ii), a sole-occupancy unit may be served by a single fire hose reel located at the level of egress from that sole-occupancy unit; and</p> <p>(cc) for the purpose of E1.4(f), a fire hose may pass through a doorway in bounding construction referred to in C3.11.</p>	<p>Details demonstrating compliance with this clause to be incorporated into the construction certificate plans/ specification</p>
G4.9 Fire Orders	<p>Fire orders are required to enable occupants to evacuate a building in an alpine area in an emergency without being impeded by lack of knowledge of the fire safety system, egress routes or evacuation procedures.</p> <p>Every Class 2, 3 or 9 building must display a notice clearly marked "FIRE ORDERS" in suitable locations near the main entrance and on each storey, explaining-</p> <p>(a) the method of operation of the fire alarm system and the location of all call-points; and</p> <p>(b) the location and methods of operation of all fire-fighting equipment; and</p> <p>(c) the location of all exits</p> <p>(d) the procedure for evacuation of the building.</p>	<p>Capable of compliance.</p> <p>Fire orders compliant to the requirements of G4.9 to be provided for the development.</p> <p>Details demonstrating compliance with this clause to be incorporated into the construction certificate plans / specification</p>



Matthew Stewart
A1 Accredited Building Certifier
June 2021.

APPENDIX 1 – BCA Clause - 3.10 Class 2 and 3 buildings: Concession

- (a) In a Class 2 or 3 building with a *rise in storeys* of not more than 3—
- (i) notwithstanding C1.9(a) and (b) and C2.6, timber framing may be used for—
 - (A) *external walls*; and
 - (B) *common walls*; and
 - (C) the floor framing of lift pits; and
 - (D) *non-loadbearing internal walls* which are *required to be fire-resisting*; and
 - (E) *non-loadbearing shafts*, except *shafts* used for the discharge of hot products of combustion; &
 - (F) spandrels or horizontal construction provided for the purposes of C2.6; and
 - (ii) notwithstanding Clause 3.1(d) of Specification C1.1, for *loadbearing internal walls* and *loadbearing fire walls*—
 - (A) timber framing may be used; and
 - (B) *non-combustible* materials may be used.
- (b) A Class 2 or 3 building having a *rise in storeys* of **not more than 4** may have the top three *storeys* constructed in accordance with (a) provided—
- (i) the lowest *storey* is used solely for the purpose of parking motor vehicles or for some other ancillary purpose; and
 - (ii) the lowest *storey* is constructed of concrete or masonry including the floor between it and the Class 2 or 3 part of the building above; and
 - (iii) the lowest *storey* and the *storey* above are separated by construction having an FRL of not less than 90/90/90 with no openings or penetrations that would reduce the *fire-resisting* performance of that construction except that a doorway in that construction may be protected by a *–60/30 self-closing* fire door.
- (c) In a Class 2 or 3 building complying with (a) or (b) **and fitted with a sprinkler system (other than a FPAA101D or FPAA101H system)** complying with Specification E1.5, any FRL criterion prescribed in Table 3—
- (i) for any floor and any loadbearing wall, may be reduced to 60, except any FRL criterion of 90 for an external wall must be maintained when tested from the outside; and
 - (ii) for any non-loadbearing internal wall, need not apply if—
 - (A) it is lined on each side with 13 mm standard grade plasterboard or similar non-combustible material; and
 - (B) it extends—
 - (aa) to the underside of the floor next above; or
 - (bb) to the underside of a ceiling with a resistance to the incipient spread of fire of 60 minutes; or
 - (cc) to the underside of a non-combustible roof covering; and
 - (C) any insulation installed in the cavity of the wall is non-combustible; and
 - (D) any construction joint, space or the like between the top of the wall and the floor, ceiling or roof is smoke sealed with intumescent putty or other suitable material; and
 - (E) any doorway in the wall is protected by a self-closing, tight fitting, solid core door not less than 35 mm thick.

APPENDIX 2 – SPECIFICATION C1.1 FRL - BUILDING ELEMENTS CLASS 3 BUILDING

BUILDING ELEMENT	FRL: BUILDING ELEMENT FRL: (IN MINUTES) <i>Structural adequacy / integrity / insulation</i>
Class 3	
EXTERNAL WALL: <i>where the distance from any fire-source feature to which it is exposed is-</i> (including any column and other building element incorporated within it) or other external building element,	
Loadbearing Parts -	
Less than 1.5m	90 / 90 / 90
1.5 to less 3m	90 / 60 / 60
3m or more	90 / 60 / 30
Non-loadbearing Parts -	
Less than 1.5m	- /90/90
1.5 to less 3m	- /60/60
3m or more	- / - / -
EXTERNAL COLUMN (not incorporated in an external wall)	
Loadbearing Columns	90 / - / -
Non-loadbearing Columns	- / - / -
INTERNAL WALLS	
Fire-resisting Lift and Stair Shafts	
Loadbearing	90/90/ 90
Non-Loadbearing	- /90/ 90
Bounding Public Corridors, Public Lobbies and the Like	
Loadbearing	90/90/90
Non-Loadbearing	- /60/60
Between or Bounding sole Occupancy units	
Loadbearing	90/90/90
Non-loadbearing	- /60/60
Ventilating, pipe, garage and the like. Shafts not used for discharge of hot products of combustion	
Loadbearing	90/90/90
Non-loadbearing	- /90/90
FLOORS	
	90/90/90