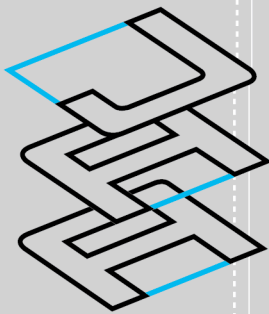


JAMES ALEXANDER & ASSOCIATES

**PROJECT: HOUSE OF ULLR  
THREDBO**



**BCA COMPLIANCE REPORT FOR  
DA SUBMISSION**

DATE: 13 April 2015  
REPORT NO: 1275 REV B  
PREPARED FOR: ANDREW HOFFMAN

PREPARED BY: JA | **BCA CONSULTING**

James Alexander & Associates Pty Ltd ACN 112 996 942

**FIRE SAFETY ENGINEERING | BCA CONSULTING | CERTIFICATION**

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## EXECUTIVE SUMMARY

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This report provides a Building Code of Australia (BCA) compliance assessment of the proposed redevelopment of The House of Ullr at Thredbo. The development comprises alterations and additions to an existing class 3 hotel and restaurant with a view to creating a class 2 residential unit building with a separate class 6 restaurant /bar located on the ground floor.

The major BCA compliance issue identified with this project relates to the proposed internal stair serving the Sole Occupancy Units four floor above ground. The stair is not proposed as being contained in a fire isolated shaft and entrance doors to units open directly into the stairwell. Further the stair does not discharge to open space. The issue is further complicated by the need to provide hydrant protection to the upper levels, as internal hydrant outlets are normally installed within the fire-isolated stair to serve upper level apartments. It would not be possible to extend a hose reel up four floors and into the furthest most points of the top floor unit with a 60m length of hose.

This issue will need to be addressed via a Fire Engineering Report and potentially a clause 188 Exemption from NSW Fire and rescue. The solution may require changes to the architectural plans given the nature of the non-compliance.

Various other non-compliances were identified such as spandrel protection of external wall openings and protection of openings exposed to boundary fire source features as detailed in the report. All non-compliances can be addressed by Fire Engineered Alternative Solutions or amendments to the architectural plans to comply with the Deemed-to-Satisfy provisions.

The following issues may be addressed via the development of a suitable Alternative Solution:

- Protection of openings in external walls located within 3m of a boundary fire source feature.
- Ceiling heights in habitable rooms on the top floor due to raked ceilings.
- Perimeter vehicular access required under G4.6.

REVISION STATUS			
REVISION	DATE	STATUS	WRITTEN
1475 - REV A	27/3/15	Draft 1st Revision	JA
1475 - REV B	13/4/15	Issue to client	JA

### COMMERCIAL IN CONFIDENCE

*This document contains confidential material that is intended solely for James Alexander and Associates Pty Ltd. The project team and all regulatory authorities shall exercise precautionary measures to ensure that the information contained herein is not to be accessed by any third party. James Alexander and Associates Pty Ltd will take no responsibility for the use of any information contained within this report by any third party.*

## 1.0 INTRODUCTION

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This report provides a Building Code of Australia (BCA) compliance assessment of the proposed redevelopment of The House of Ullr at Thredbo. The development comprises alterations and additions to an existing four storey class 3 hotel and restaurant with a view to creating a class 2 residential unit building with a separate class 6 restaurant /bar located on the ground floor.

## 1.1 BASIS OF REPORT

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The key objective of the report is to make a:

- Assessment under the current Building Code of Australia 2014 (BCA) Parts C, D, E, F, H and G and list any departures and information applicable from the BCA that will need to be addressed prior to the issue of the construction certificate
- Provide BCA compliance advice and information where departures are identified.

The following architectural drawings prepared Myson + Berkery Architects were used in the BCA assessment.

A1-00 (G) Ground floor plan  
A1-01 (J) Level 1 plan  
A1-02 (J) Level 2 plan  
A1-03 (H) Level 3 plan  
A2-01 (E) Section  
A2-02 (E) North Elevation  
A2.03 (E) West Elevation

CONTOUR AND DETAIL SURVEY PREPARED BY PETER W BURNS DATED 16/12/14

## 1.2 LIMITATIONS & EXCLUSIONS

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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
- 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.
- Access under part D3.

### 1.3 REPORTING TEAM

The information contained herein has been prepared by:

- James Alexander (Building Surveyor, Grade A1 (unrestricted) Accredited Certifier and PCA BPB 0002)

### 2.0 BUILDING CLASSIFICATION

#### 2.1 BUILDING CHARACTERISTICS

Classification of Building or Part:	Class 6 restaurant/licensed bar Class 2 Residential
Rise in Storeys:	4 Storeys
Storeys contained	4
Effective Height:	(9.04m) Less than 12.5m
Type of Construction:	Type A
Floor areas: Class 6 Class 2	Ground floor class 6 – 232m <sup>2</sup> Ground floor class 2 – 74m <sup>2</sup> Level one class 2 – 283m <sup>2</sup> Level two class 2 – 283m <sup>2</sup> Level three class 2 – 165m <sup>2</sup> Total class 2 – 805m <sup>2</sup>
C2.2 max compartment sizes:	Less than maximums permitted under Table C2.2.

This report is an assessment of the proposed development at House of Ullr Thredbo.  
The information contained in the following table can be used in the following two ways:

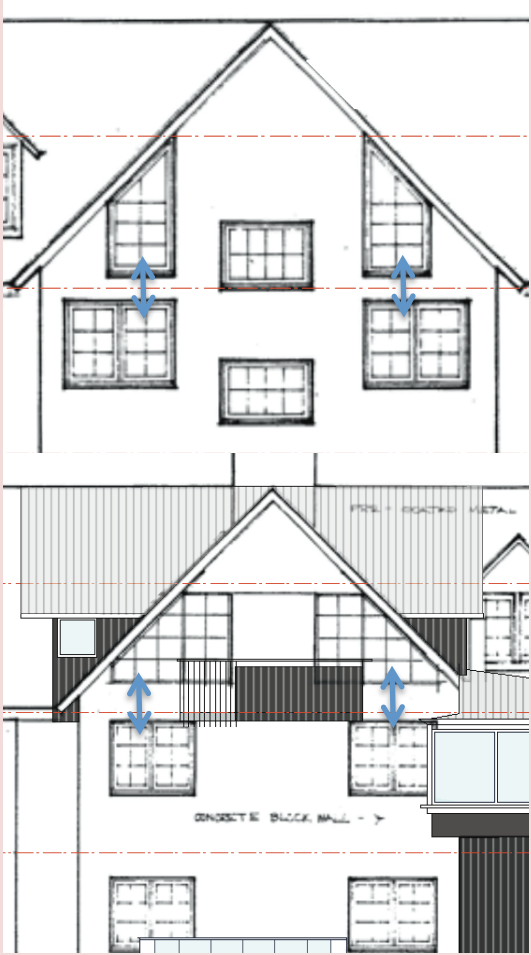
- Grey shaded clauses highlight areas that will need further details to be provided to achieve full compliance in accordance with the deemed-to-satisfy provisions. (DTS)

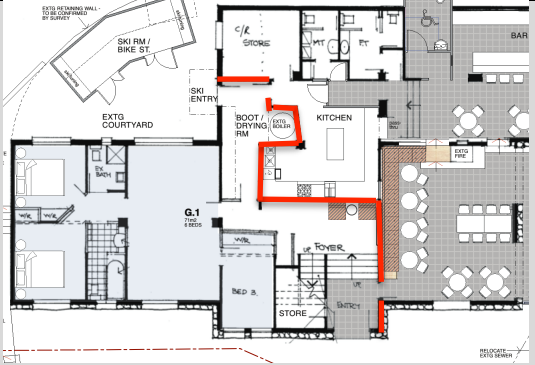
- Red shaded clauses indicate areas of the design that do not comply with the BCA and will be required to be rectified to satisfy the DTS provisions (or addressed via the preparation of an Alternative Solution report which effectively satisfies the BCA via performance based means.)

### 3.0 BCA COMPLIANCE SUMMARY

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
<b>SECTION C - FIRE RESISTANCE</b>				

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
<b>Part C1 - FIRE RESISTANCE AND STABILITY</b>				
C1.0	DTS provisions	✓	Note only	Noted
C1.1	Type of Construction Required	✓	Note only	Type A
C1.2	Calculation of Rise in Storeys	✓	Note only	4 storeys
C1.3	Buildings of Multiple Classification	✓	✓	Class 2 and class 6
C1.4	Mixed Types of Construction	✓	✓	All type A
C1.5	Two Storey Class 2, 3 or 9c Buildings	X	Note only	
C1.6	Class 4 Parts of Buildings	X	Note only	
C1.7	Open Spectator Stands & Indoor Sports Stadiums	X	Note only	
C1.8	Lightweight Construction	✓	Note only	Where lightweight construction proposed for fire rating purposes it must comply with this clause.
C1.9	*****			Blank
C1.10	Fire Hazard Properties	✓	Compliance advice	Carpets, floor and wall linings of units and common areas to be certified to comply with Spec C1.10 and sarkings to comply with Spec C1.10a. Test reports to be provided demonstrating compliance.
C1.11	Performance of External Walls in Fire	X	Note only	No tilt up panels proposed.
C1.12	Non-Combustible Material	✓	Note only	Noted
<b>Part C2 - FIRE RESISTANCE</b>				
C2.0	Deemed-to-Satisfy Provisions	✓	Note only	Noted
C2.1	Application of Part	✓	Note only	Noted
C2.2	General Floor Area & Volume Limitations	✓	Note only	Does not apply to the class 2 part. The combined area of the class 5,6,7 parts will not exceed 5000m2.
C2.3	Large Isolated Buildings	X		Not a "large isolated building.
C2.4	Requirements for open space & Vehicular Access	X		Not a "large isolated building.
C2.5	Class 9a & 9c Buildings	X		Not a class 9a or 9c

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
C2.6	Vertical separation of openings in external walls	✓	X	<p>Insufficient spandrel separation (less than 900mm) between external window openings between level 2 and 3 on existing gabled roof walls. Elevations to East and South not shown on drawings.</p> 
C2.7	Separation by fire walls	NA		No firewall separation required.
C2.8	Separation of classifications in the same storey	✓	✓	<p>Separation required between class 2 and 6 on the ground floor required as shown. The red line indicates the separating wall required to achieve an FRL of 180/180/180. The doors in this wall must be a self closing fire door achieving an FRL of -/180/30. The glazed section of wall will need to achieve FRL of -/180/180.</p>

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
				 <p>Alternatively the drying room area could be included in the class 6 part.</p>
C2.9	Separation of classifications in different storeys	✓	Compliance advice	The separation between the class 6 & class 2 parts is to be in accordance with Table 3 Spec C1.1. Therefore the separating floor between the restaurant part and the class 2 on level 1 must achieve an FRL of 180/180/180.
C2.10	Separation of lift shafts	NA		No lift
C2.11	Stairways and lifts in one shaft	NA		No lift
C2.12	Separation of equipment	✓	X	Boiler required to be separated from remainder of building by construction achieving FRL 120/120/120.
C2.13	Electricity supply system	NA		No equipment required to be separated in building to which this clause applies.
C2.14	Public corridors in Class 2 & 3 buildings	✓	✓	The public corridors are not in excess of 40m.
<b>Part C3 - PROTECTION OF OPENINGS</b>				
C3.0	Deemed-to-Satisfy Provisions	✓	Note only	Noted
C3.1	Application of Part	✓	Note only	Noted
C3.2	Protection of openings in external walls	✓	X	Window openings to east elevation are located within 3m of the side allotment boundary and therefore are required to be protected in accordance with C3.4. These windows are unlikely to be fixed closed and therefore not able to be drenched as required by C3.4.
C3.3	Separation of openings in different fire compartments	NA		No openings in separate fire compartments adjacent.
C3.4	Acceptable methods of protection	✓	Noted	
C3.5	Doorways in fire walls	✓	Noted	Noted
C3.6	Sliding fire doors	NA		No sliding fire doors indicated on plans.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
C3.7	Protection of doorways in horizontal exits	NA		No horizontal exits required.
C3.8	Openings in fire isolated exits	✓	Compliance advice	Although required, no fire isolated stair shown.
C3.9	Service penetrations in fire isolated exits	✓	Compliance advice	Although required, no fire isolated stair shown
C3.10	Openings in fire isolated lift shafts	NA		No lift
C3.11	Bounding construction Class 2, 3 and 4 buildings	✓	X	Walls bounding units and internal stair are proposed on plan as timber framed stud walls which are not permitted under Type A construction.
C3.12	Openings in floors for services	✓	Compliance advice	Service penetrations to be in fire rated shaft as per Table 3 Spec C1.1.
C3.13	Openings in shafts	✓	Compliance advice	Access panels to service shafts to be fire rated to achieve -/60/30. If in sanitary compartment this may be reduced to -/30/30.
C3.14	*****			Blank
C3.15	Openings for service installations	✓		Noted
C3.16	Construction Joints	✓	Compliance advice	Construction joints required to be fire rated in fire rated suspended slabs if used.
C3.17	Columns protected with lightweight construction to achieve an FRL	✓	✓	No columns to be protected with lightweight construction.

#### SPEC C1.1 – FIRE RESISTING CONSTRUCTION

2.1	Exposure to fire source feature	Noted		External walls of building are exposed to fire sources features.
2.2	Fire protection for a support of another part	Noted		Internal columns and load bearing walls to achieve required FRL.
2.3	Lintels	Noted		Window lintels to have FRL to match external wall FRL.
2.4	Attachments not to impair fire resistance	Noted		Attachments to exterior of building to comply with Spec 1.10a for fire hazard properties.
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
2.5(d)	Curtain walls and panel walls	Noted		Concession noted but NA
2.5(e)	*****			Blank
2.5(f)	Balconies and verandas	NA		Concession noted but NA



2.6	Mezzanine Floors: Concession	NA	Concession noted but NA
2.7	Enclosure of shafts	Noted	No service or lift shaft identified. If proposed the top must be enclosed with fire rated construction.
2.8	Car parks in Class 2 and 3 buildings	NA	Concession noted but NA, two levels of carparking.
2.9	Residential aged care buildings	NA	Concession noted but NA
<b>3.0</b>	<b>Type A Construction</b>		
3.1(a)	Fire resistance of building elements	Noted	Refer table 3 extract below.
3.1(b)	External walls	Noted	Proposed external walls must be of non-combustible construction and achieve FRL.
3.1(c)	Internal walls required to have an FRL	Noted	Must extend to underside of ceiling with RISF or roof with FRL.
3.1(d)	Load-bearing internal walls	Noted	Required to be of concrete or masonry.
3.1(e)	Non load-bearing internal required to have FRL	Noted	Must be of non-combustible construction and not timber as proposed.
3.1(f)	Floor in a Class 9c Building	NA	No internal columns within 1.5m of a window exposed to FSF.

Table 3 Spec C1.1 extract			
BUILDING ELEMENT	CLASS 2	CLASS 5 & 7a	Comment
<b>EXTERNAL WALL (distance to fire source feature)</b>			
<i>Loadbearing</i>			
Less than 1.5m	90/90/90	120/120/120	
1.5 to less than 3m	90/60/60	120/90/90	East elevation
3m or more	90/60/30	120/60/30	External walls must achieve stated FRL's.
<i>Non-Loadbearing</i>			
Less than 1.5m	-/90/90	-/120/120	
1.5 to less than 3m	-/90/60	-/90/90	
3m or more	-/-/-	-/-/-	
<b>EXTERNAL COLUMN</b>			
Less than 3m	90/-/-	120/-/-	
3m or more	-/-/-	-/-/-	
<b>COMMON WALLS &amp; FIRE WALLS</b>	90/90/90	120/120/120	
<b>INTERNAL WALLS</b>			
Fire-resisting lift and stair shafts: Load bearing Non-load bearing	90/90/90 -/90/90	120/120/120 -120/120	Lift shaft and stair shaft to achieve stated FRL's.
Internal walls bounding public corridors etc.: Load bearing Non-load bearing	90/90/90 -/60/60	120/-/- -/-/-	The bounding walls between the internal stair and units must achieve -/60/60, assumed non-loadbearing.
Internal walls between or bounding sole occupancy units (bedrooms): Load bearing Non-load bearing	90/90/90 -/60/60	120/-/- -/-/-	Walls between SOU's required to achieve FRL stated. Existing loadbearing walls separating SOU's must achieve 90/90/90.

<b>Table 3 Spec C1.1 extract</b>			
<b>BUILDING ELEMENT</b>	<b>CLASS 2</b>	<b>CLASS 5 &amp; 7a</b>	<b>Comment</b>
Shafts not used for the discharge of hot products of combustion: Load bearing Non-load bearing	90/90/90 -/90/90	120/90/90 -/90/90	
<b>OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES &amp; COLUMNS</b>	90/-/-	120/-/-	Internal walls and columns to GF to achieve 180/-/- and on upper levels 90/-/-.
<b>FLOORS</b>	90/90/90	120/120/120	Floors separating units to achieve FRL 90/90/90. Floor separating restaurant from units above to achieve FRL 180/180/180. Existing floor unlikely to achieve this FRL.
<b>ROOF</b>	90/60/30	120/60/40	FRL not required to roof if sheet metal roofing installed.

<b>CLAUSE</b>	<b>REFERENCE</b>	<b>APPLICABLE</b>	<b>COMPLIES</b>	<b>COMMENT</b>
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## SECTION D - ACCESS AND EGRESS

### Part D1 - PROVISION FOR ESCAPE

D1.0	Deemed-to-Satisfy Provisions	✓		Noted
D1.1	Application of Part	✓		Applies and noted
D1.2	Number of exits required	X		
D1.3	When Fire isolated exits are required	✓	X	The internal stair serves four levels and is not contained in a fire isolated shaft.
D1.4	Exit Travel Distances	✓	✓	Travel distances within 6m of stair on upper levels.
D1.5	Distances between alternative exits	✓	✓	Distance between exits less than 45m and more than 9m.
D1.6	Dimensions of exits and paths of travel to exits	✓	✓	1m wide exit paths shown.
D1.6(f) NSW	Class 9b - Place of public entertainment	X		Not a place of public entertainment.
D1.6(h) NSW	Class 9b - Place of public entertainment	X		Not a place of public entertainment.
D1.7	Travel via fire isolated exits	✓	X	The doors to SOUs open directly to internal stair shaft.  The stair discharges within the building in an enclosed space.
D1.8	External stairways	X		External stair in lieu of fire isolated stair not proposed.
D1.9	Travel by non fire isolated stairways or ramps	✓	✓	Distance to open space less than 80m.
D1.10	Discharge from exits	✓	✓	A compliant path of travel via stairs, path or ramps must be provided to a road.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
D1.10(f) NSW	Class 9b - place of public entertainment	X		Not a place of public entertainment.
D1.11	Horizontal exits	X		No horizontal exits shown.
D1.12	Non-Required stairways ramps and escalators	X		Ramps proposed do not connect stories.
D1.13	Number of persons accommodated	✓	✓	Restaurant area calculated at 118m <sup>2</sup> . Therefore 118 patrons and 2 staff behind bar equals 120 persons. Kitchen staff assumed at 5, therefore total 125.
D1.14	Measurement of distances	✓	Note only	Noted
D1.15	Method of measurement	✓	Note only	Noted
D1.16	Plant rooms & lift motor rooms: Concession	✓	Compliance advice	Plant room detail not shown. Access ladders to comply with AS 1657.
D1.17	Access to lift pits	✓	Noted	Access to lift pits to comply
<b>Part D2 - CONSTRUCTION OF EXITS</b>				
D2.0	Deemed-to-Satisfy Provisions	✓	Note only	Noted
D2.1	Application of Part	✓	Note only	Applies in part (a) Clauses D2.13, D2.14(a) & D 2.16 do not apply to internal parts of Class 3 SOU's (b) Clauses <b>D2.13, D2.14(a), D 2.16 &amp; D2.18</b> do not apply to internal parts of <b>Class 2 SOU's</b>
D2.2	Fire-Isolated stairways & ramps	✓	✓	Concrete stairs.
D2.3	Non-Fire-Isolated stairways and ramps	✓	✓	Concrete
D2.4	Separation of rising and descending stair flights	X		No rising stair.
D2.5	Open access ramps and balconies	X		No open access ramp proposed or required to meet smoke hazard management.
D2.6	Smoke lobbies	X		Smoke lobby not shown.
D2.7	Installations in exits and paths of travel	✓	✓	No services shown in exit paths.
D2.8	Enclosure of space under stairs and ramps	✓	Compliance advice	Space under stairs not to be enclosed for cupboards.
D2.9	Width of stairways	✓	Compliance advice	Stair width to be 1m min measured from inside of handrails.
D2.10	Pedestrian ramps	✓	Compliance advice	Gradient of ramp to unit 2.4 to be not more than 1:14.
D2.11	Fire Isolated passageways	✓		Fire isolated passageways require FRL.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
D2.12	Roof as open space	X		Roof not used as open space.
D2.13	Treads and risers	✓	Compliance advice	Ensure rise and run dimensions comply.
D2.14	Landings	✓	Compliance advice	Ensure min dimensions of landings achieved.
D2.15	Thresholds	✓	✓	To comply.
D2.16	Balustrades	✓	✓	Detail not shown. Ensure compliance with this clause. Where glass balustrades used then an angle must be installed to top.
D2.17	Handrails	✓	✓	Detail not shown. Ensure compliance with this clause.
D2.18	Fixed platforms, walkways stairways and ladders	✓	Compliance advice	Compliance with AS 1657 required for access to and within plant rooms.
D2.19	Doorways and doors	X		No revolving, sliding or roller shutter exit shown.
D2.20(a)	Swinging doors	✓	✓	Doors swings do not impeded path of travel.
D2.20(b)	Swinging doors	✓	✓	All exit doors on ground floor shown as opening in due to G4.3.
D2.21	Operation of latch	✓	Compliance advice	Lever handles required to exit doors and doors in a path of travel to an exit.
D2.22	Re-entry from fire isolated exits	X		Effective height less than 25m hence this clause does not apply.
D2.23	Signs on doors	✓	Compliance advice	Signage required to fire doors in accordance with this clause. Signage required to any smoke doors installed as part of FER required.
D2.24	Protection of openable windows	✓	Compliance advice	Windows to be protected in accordance with this clause.

### PART D3 – ACCESS FOR PEOPLE WITH DISABILITIES

D3.0	Deemed-to-Satisfy Provisions	✓		
D3.1	Application of part	✓		Refer access consultant assessment of this clause.
D3.2	General access requirements			
D3.3	Parts of building to be accessible			
D3.4	Concessions			
D3.5	Car parking			
D3.6	Identification of accessible facility			
D3.7	Tactile Indicators			

## SECTION E - SERVICES AND EQUIPMENT

### Part E1 - FIRE FIGHTING EQUIPMENT

E1.0	Deemed-to-Satisfy Provisions	✓		Noted
E1.1	*****			Repealed
E1.2	*****			Repealed
E1.3	Fire Hydrants	✓	X	Hydrant coverage to be provided in compliance with AS 2419.1.  Internal hydrants to be provided in fire isolated stair to serve upper levels.  Flow and pressure tests of existing water mains to be undertaken to determine requirement for hydrant booster connection. Flow required at 20l/s in accordance with AS 2419.1.
E1.4	Hose Reels	✓	Compliance advice	Fire Hose Reels to be installed in accordance with AS2441 and G4.9.
E1.5	Sprinklers	X		Sprinklers not required under this clause.
E1.6	Portable Extinguishers	✓	Compliance advice	PFE's to be installed throughout in accordance with AS 2444.
E1.7	*****			Repealed
E1.8	Fire Control Centres	✓	NA	Not required.
E1.9	Fire precautions during construction	✓		Builder to ensure extinguishers on site during construction.
E1.10	Provision for special hazards	X		The building is assumed not to incorporate any special hazards.

### Part E2 - SMOKE HAZARD MANAGEMENT

E2.0	Deemed-to-Satisfy Provisions	✓		Noted
E2.1	Application of Part	✓		Applies
E2.2	General requirements (including Tables E2.2a & b)	✓	Compliance advice	Smoke detection system in accordance with Clause 4 of this spec and G4.8, and AS 1670.1-2004 to be installed throughout.  BOWS to comply with clause 6 of this spec.
E2.3	Provision for special hazard	X		The building is assumed not to incorporate any special hazards.

### Part E3 - LIFT INSTALLATIONS

E3.0	Deemed-to-Satisfy Provisions		Noted
E3.1	*****		Repealed
E3.2	Stretcher facility in lifts	X	No lift shown on drawings.
E3.3	Warning against use of lifts in fire	X	
E3.4	Emergency lifts	X	
E3.5	Landings	X	
E3.6	Facilities for people with disabilities	X	
E3.7	Fire Service Controls	X	
E3.8	Aged care buildings	X	
E3.9	Fire service recall control switch	X	
E3.10	Lift car fire service drive control switch	X	

#### Part E4 - EMERGENCY LIGHTING, EXIT SIGNS AND WARNING SYSTEMS

E4.0	Deemed-to-Satisfy Provisions	✓		Noted
E4.1	*****			Repealed
E4.2	Emergency Lighting	✓	Compliance advice	Emergency lighting is to be provided throughout in accordance with this clause and AS 2293.1-2005.
E4.3	Measurement of distances	✓		Noted
E4.4	Design and operation of emergency lighting	✓		The emergency lighting provided must comply with AS 2293.1-2005 to enclosed corridors, stair and restaurant.
E4.5	Exit signs	✓	Compliance advice	Exit signs must be installed in accordance with this clause and AS 2293.1-2005 to exit doors.
E4.6	Direction signs	✓	Compliance advice	Required where applicable.
E4.7	Class 2 and 3 Buildings and Class 4 parts exemptions	X		Not applicable to this class 2 building.
E4.8	Design and operation of exit signs	✓		Noted
E4.9	Sound system	✓	NA	NA

#### SECTION F - HEALTH AND AMENITY

**Part F1 - DAMP & WEATHER PROOFING**

F1.1	Stormwater drainage	✓	Compliance advice	Stormwater drainage must comply with AS/NZS 3500.3.
F1.5	Roof coverings	✓	Compliance advice	Roof covering must comply with AS 1562.1.
F1.6	Sarking	✓	Compliance advice	Sarking materials to comply with AS NZS 4200 Parts 1 and 2 and Spec C1.10.
F1.7	Waterproofing of wet areas in buildings	✓	Compliance advice	Wet areas must be waterproofed to AS 3740.
F1.8	*****		Compliance advice	Blank
F1.9	Damp-proofing	✓	X	Damp proofing must be provided in accordance with F1.9. Fill appears to be accumulating against the rear external wall and therefore moisture is likely to be penetrating wall and entering building. This fill must be removed and ground level lowered, with impervious surface laid to fall away from building.
F1.10	Damp-proofing of floors on the ground	✓	Compliance advice	A vapour barrier is to be provided to floors laid directly on ground in accordance with AS 2890.
F1.11	Provision of floor wastes	✓	Compliance advice	Floor wastes to be provided to sanitary compartments and cleaners store.
F1.12	Sub-floor ventilation	X		Slab on ground
F1.13	Glazed assemblies	✓	Compliance advice	Glazed assemblies must comply with AS 2047 and AS 1288.

**Part F2 - SANITARY & OTHER FACILITIES**

F2.0	Deemed-to-Satisfy Provisions	✓		Noted
F2.1	Facilities in residential buildings	✓	X	Separate laundry facilities not shown in unit G.1 and 2.1
F2.2	Calculation of number of occupants and fixtures	✓	✓	Noted
F2.3	Facilities in Class 3 to 9 Buildings, Table F2.3	✓	✓	Noted
F2.4	Facilities for people with disabilities	✓	Compliance advice	Accessible facilities not required to class 2 units. Accessible sanitary facility shown in unit 2.4, compliance of facility to be assessed by access consultant.
F2.5	Construction of sanitary compartments	✓	✓	
F2.6	Interpretation: urinals and wash basins	✓	✓	NA
F2.7	Warm water installations	✓		Hot water, warm water and cooling water systems

NSW				to be installed in accordance with AS 3666.1.
F2.8	Waste Management	X		Not a class 9a or 9c building.

### Part F3 - ROOM SIZES

F3.0	Deemed-to-Satisfy Provisions	✓		Noted
F3.1	Height of rooms	✓	X	Dwgs indicate ceiling height compliance on all levels except level 3. Habitable rooms on level 3 have areas less than 2.4m generally due to raked ceilings..

### Part F4 - LIGHT AND VENTILATION

F4.0	Deemed-to-Satisfy Provisions	✓		Noted
F4.1	Provision of Natural light	✓		To comply.
F4.2	Methods and extent of natural lighting	✓	✓	Natural light provided.
F4.3	Natural light borrowed from adjoining room	✓	✓	Natural light to be compliant
F4.4	Artificial lighting	✓	✓	Artificial lighting to be designed and installed in accordance with AS 1680.0.
F4.5	Ventilation of rooms	✓	✓	Appears compliant
F4.5 (b) NSW	Mechanical Ventilation	✓	Compliance advice	If mechanical ventilation is proposed to sanitary compartments then must be installed in accordance with AS3666.1.
F4.6	Natural ventilation	✓	✓	Natural ventilation provided to SOU habitable rooms.
F4.7	Ventilation borrowed from adjoining rooms	✓	✓	Not required, windows to all bedrooms shown.
F4.8	Restriction on position of water closets and urinals	✓	✓	Does not open directly to eating or food prep area.
F4.9	Airlocks	X		Not required
F4.10	*****			Repealed
F4.11	Car parks	X		No carpark
F4.12	Kitchen local exhaust ventilation	✓	Compliance advice	Commercial exhaust to cooktops required

### Part F5 - SOUND TRANSMISSION AND INSULATION

F5.0	Deemed-to-Satisfy Provisions	✓		Noted
F5.1	Application of Part	✓		Applies to class 2 parts.



F5.2	Determination of airborne sound insulation ratings	✓		Noted
F5.3	Determination of impact sound insulation ratings	✓		Noted
F5.4	Sound insulation rating of floors	✓	Compliance advice	If slabs then they are to be 200 thick minimum. If lightweight then must achieve required transmission as per this clause.
F5.5	Sound Insulation of walls between units	✓	X	<p>Sound transmission ratings to be achieved between units and between units and corridors, in accordance with this clause. Sound insulation rating required between SOU's and public corridors must achieve an <math>R_w + C_{tr}</math> of not less than 50.</p> <p>Discontinuous construction required to following walls:</p> <ul style="list-style-type: none"> <li>• Bathroom 1.1 and living room 1.3</li> <li>• Kitchen 1.3 and foyer 1.1</li> <li>• Bathroom 2.1 and living room 2.3</li> <li>• Kitchen 2.3 and foyer 2.1</li> </ul>
F5.6	Sound insulation rating for services	✓	Compliance advice	Ratings to be achieved for service shafts, plumbing penetrations etc.
F5.7	Isolation of Pumps	X		No pumps indicated on plans.
F5.8	Walls between a bedroom and kitchen or laundry in Class 9c building	X		Not a class 9c.
Spec F5.2	Sound isolation for building elements	X		Noted
Spec F5.5	Impact Sound Test Equivalence	X		Noted

## SECTION G - ANCILLARY PROVISIONS

### Part G1 - MINOR STRUCTURES & COMPONENTS

G1.0	Deemed-to-Satisfy provisions	X		Noted
NSW G1.10	Provision for cleaning windows	✓	X	Method required for cleaning windows above three floors in accordance with Work Health and Safety Act 2011 to be identified on drawings.
G1.1	Swimming pools	X		
G1.2	Refrigerated chambers, strong rooms & vaults	X		Not shown

### Part G2 - HEATING APPLIANCES, FIRE PLACES, CHIMNEYS & FLUES

G2.0	Deemed to satisfy	✓		Noted
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	provisions		
G2.1	*****		Blank
G2.2	Installation of appliances	X	No solid fuel burning heaters proposed.
G 2.3	Open fireplaces	X	No open fireplaces proposed.
G2.4	Incinerator rooms	X	No incinerators proposed.

### Part G3 - ATRIUM CONSTRUCTION

G3.1	Atriums affected by this Part	X	The building does not have an atrium.
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### Part G4 - CONSTRUCTION IN ALPINE AREAS

G4.0	Deemed to satisfy provisions	✓		Noted
G4.1	Application of Part	✓		Applies
G4.2	*****			Blank
G4.3(a)	External doorways	✓	Compliance advice	Signage required to doors in accordance with this clause.
G4.3(b)	External doorways	✓	Compliance advice	To be noted.
G4.4	Emergency lighting	✓	Compliance advice	External emergency lighting required to all exit doors in building.
G4.5	External ramps	✓	Compliance advice	Must be minimum 1:12 for alpine and 1:14 for accessible.
G4.6	Discharge of exits	✓	X	Distance from external wall to boundary on east elevation does not comply with this clause.
G4.7	External trafficable structures	✓	Compliance advice	External ramp to be of construction achieving compliance with this clause.
G4.8	Fire fighting services & equipment	✓	Compliance advice	Refer Spec E2.2
G4.9	Fire orders	✓	Compliance advice	Required to be installed in accordance with this clause.

### Part G5 - CONSTRUCTION IN BUSHFIRE PRONE AREAS

G5.0	Deemed-to-Satisfy provisions	X		Noted
G5.1	Application of this Part	X		Not applicable – not in bushfire prone zone.



## 4.0 CONCLUSION

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The primary purpose of this report is to identify non-compliance matters in comparison to the current Deemed-to-Satisfy provisions of the BCA under Parts C, D, E, F, H and G. This report has identified several non-compliances, which need to be addressed via a change in the architectural details or via an alternative solution or fire engineering report solution.

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