



## **BCA COMPLIANCE ASSESSMENT FOR DEVELOPMENT APPLICATION LODGEMENT**

**Prepared For:-**

Wheeler Heights Developments Pty Ltd

**Regarding:-**

Proposed Seniors Living Development with basement carpark  
44 Rose Ave, Wheeler Heights

A handwritten signature in black ink, appearing to read 'Tim Stenning'. The signature is fluid and cursive, with the first name 'Tim' and last name 'Stenning' clearly distinguishable.

Prepared By: Tim Stenning

Accredited Certifier

Accreditation No: BPB0392

Date: 31 January, 2019

Ref:19003

## EXECUTIVE SUMMARY

This report is an assessment of the proposed development at 44 Rose Ave, Wheeler Heights. The development involves construction of a residential flat building consisting of a basement carpark with 11 carspaces and 2 one and 4 two storey residential units.

The information contained in this 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.)

### Summary of identified issues of non-compliance to be addressed

- 1. Travel Distance in basement carpark** – Travel distance exceeds the maximum allowable to a point of choice where travel to alternative exits is possible. The maximum distance allowable under the DTS provisions of the BCA is 20m to a point of choice.

#### Proposed Fire Safety Schedule

NOTE: The schedule of proposed fire safety measures is based on the plans supplied for the development application lodgement.

Fire safety measure	Standard of performance
Fire Hydrant	BCA2016 E1.3, AS2419.1-2005
Fire Hose reel	BCA2016 E1.4, AS2441-2005
Smoke detection and alarm system	BCA2016 E2.2a, AS3786-2014 (within units) and AS1670.1-2004 (common areas)
Fire seals protecting openings for services	BCA2016 C3.15, AS1530.4
Self-closing solid core doors (units)	BCA2016 C3.11

REVISION	DATE	STATUS	WRITTEN
19003	31/01/19	First Revision	TJS

#### COMMERCIAL IN CONFIDENCE

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## 1.0 INTRODUCTION

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This report provides a Building Code of Australia (BCA) compliance assessment of the proposed development at 44 Rose Ave, Wheeler Heights.

The proposed development involves construction of a two storey seniors living complex containing 6 sole occupancy units and basement carpark.

### 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 2016 Amdt 1 (BCA) Parts C, D, E, F 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.

Architectural drawings prepared by Barry Rush and Associates, job no. 1704

Drawing no.	Title	Version
A00	LOCATION DIAGRAM	DA
A01	SITE ANALYSIS PLAN	DA
A02	SITE PLAN	DA
A03	SITE PLAN DRIVEWAY	DA
A04	BASEMENT FLOOR PLAN	DA
A05	GROUND FLOOR PLAN	DA
A06	FIRST FLOOR PLAN	DA
A07	ROOF PLAN	DA
A08	ELEVATIONS	DA
A09	SECTIONS	DA
A10	GFA/FSR AND LANDSCAPE CALCULATION PLANS	DA
A11	EXTERNAL COLOUR SCHEDULE	DA

### 1.2 LIMITATIONS & EXCLUSIONS

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The following items are outside the scope of this report:

- Reporting on hazardous materials, WH&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.

### 1.3 REPORTING TEAM

The information contained herein has been prepared by:

- Timothy Stenning, Accredited Certifier, Grade A1, BPB 0392

### 2.0 BUILDING CLASSIFICATION

#### 2.1 BUILDING CHARACTERISTICS

Classification of Building or Part:	Class 7a Carpark Class 2 Residential
Rise in Storeys:	2 Storeys *
Storeys contained	3
Effective Height:	<12m
Type of Construction:	Type C
Floor areas: Class 7a Class 2	Approx. 750m <sup>2</sup> Approx. 1500m <sup>2</sup>
C2.2 max compartment sizes:	Class 7a max 3500m <sup>2</sup> therefore OK.

\* The rise in storeys is based on BCA Clause C1.2 (b). Any increase in the floor level of the ground floor may result in the basement carpark being included in the rise on storeys. This would impact on the type of fire resisting construction and required fire resistance levels for the building.

### 3.0 BCA COMPLIANCE SUMMARY

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
<b>SECTION C - FIRE RESISTANCE</b>				
<b>Part C1 - FIRE RESITANCE AND STABILITY</b>				
C1.0	DTS provisions	✓	Note only	Noted
C1.1	Type of Construction Required	✓	Note only	Type C (See C1.5)
C1.2	Calculation of Rise in Storeys	✓	Note only	2 storeys
C1.3	Buildings of Multiple Classification	✓	✓	Class 2 and class 7a
C1.4	Mixed Types of Construction	✓	✓	All type C
C1.5	Two Storey Class 2, 3 or 9c Buildings	✓	Note only	Noted – Type C Construction required
C1.6	Class 4 Parts of Buildings	X	Note only	No class 4 part.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
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	Non-Combustible Building Elements	✓	Compliance advice	Note: Type A or Type B construction not proposed  Loadbearing internal walls and loadbearing fire walls, including those associated with loadbearing shafts, must comply with Spec C1.1 (see Spec C1.1 requirements below)
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 at CC stage.
C1.11	Performance of External Walls in Fire	X	Note only	No tilt up panels proposed.
C1.12	*****	X		Blank
C1.13	Fire-Protected Timber: Concession	X	NA	No fire protected timber proposed
C1.14	Ancillary Elements	X	NA	External walls not required to be non-combustible

## Part C2 - FIRE RESISTANCE

C2.0	Deemed-to-Satisfy Provisions	✓	Note only	Noted
C2.1	Application of Part	✓	Note only	Noted
C2.2	General Floor Area & Volume Limitations	✓	Compliance advice	Does not apply to the class 2 part.  The combined area of the class 7a part will not exceed 2000m <sup>2</sup> .
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
C2.6	Vertical separation of openings in external walls	X	NA	Applies only to Type A fire resisting construction.
C2.7	Separation by fire walls	✓		No firewall separation required.
C2.8	Separation of classifications in the same storey	✓	NA	No separation required. Class 2 and 7a not on the same storey.
C2.9	Separation of classifications in different storeys	✓	Compliance advice	The separation between the class 7 & 2 parts are to be in accordance with Table 5 Spec C1.1. Refer to extract below. NOTE: Self closing fire door required at stairs between class 7a and class 2 parts.
C2.10	Separation of lift shafts	✓	Compliance advice	Lift shafts to fire separated in accordance with Table 5 spec C1.1 Refer extract below.
C2.11	Stairways and lifts in one shaft	✓	✓	Lift not located in stair shaft.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
C2.12	Separation of equipment	✓	Compliance advice	Lift motor room, onsite fire pumps if applicable to be separated by construction achieving FRL 120/120/120.
C2.13	Electricity supply system	✓	Compliance advice	An electricity substation located in the building, main switchboard sustaining emergency equipment, electrical conductors etc. if applicable is required to be separated from remainder of building by construction achieving FRL 120/120/120.
C2.14	Public corridors in Class 2 & 3 buildings	✓	✓	Corridors do not exceed 40 metres.

### Part C3 - PROTECTION OF OPENINGS

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	✓	✓	All external walls and openings shown as 3m or more from boundaries.
C3.3	Separation of openings in different fire compartments	X	NA	No openings in separate fire compartments adjacent.
C3.4	Acceptable methods of protection	X	NA	No openings that require protection
C3.5	Doorways in fire walls	X	NA	
C3.6	Sliding fire doors	X		No sliding fire doors indicated on plans.
C3.7	Protection of doorways in horizontal exits	X		No horizontal exits proposed.
C3.8	Openings in fire isolated exits	X	NA	No fire isolated exits.
C3.9	Service penetrations in fire isolated exits	X	NA	No fire isolated exits required
C3.10	Openings in fire isolated lift shafts	✓	Compliance advice	Doors to lift to have FRL -/60/-
C3.11	Bounding construction Class 2, 3 and 4 buildings	X	NA	No openings that requiring protection under this clause
C3.12	Openings in floors for services	✓	Compliance advice	Service penetrations in slabs between residential portion and carpark to be protected in accordance with C3.15. Provide detail with CC application.
C3.13	Openings in shafts	X	N/A	Not Type A construction
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

The plans for development application lodgement do not indicate the specific method of construction for external walls, floors and columns required to achieve a fire resistance level. Accordingly, this table should be used as guidance for the construction certificate application.

2.1	Exposure to fire source feature	<b>Noted</b>	Complies
2.2	Fire protection for a support of another part	<b>Noted</b>	Columns in carpark to have FRL for structural integrity. Refer Table 5 extract for FRL's.
2.3	Lintels	<b>Noted</b>	Fire door lintels to match internal walls FRL
2.4	Attachments not to impair fire resistance	<b>Noted</b>	Attachments to exterior of building to comply with Spec 1.10a for fire hazard properties.
2.5	General concessions	<b>Noted</b>	Noted
2.5(a)	Steel columns	<b>Noted</b>	Concession noted. Plans do not indicate method of construction
2.5(b)	Timber structures	<b>Noted</b>	Concession noted. Plans do not indicate method of construction.
2.5(c)	Structures on roofs	<b>Noted</b>	Concession noted
2.5(d)	Curtain walls and panel walls	<b>Noted</b>	Concession noted but NA
2.5(e)	*****		Blank
2.5(f)	Balconies and verandas	<b>NA</b>	Concession noted.
2.6	Mezzanine Floors: Concession	<b>NA</b>	Concession noted but NA
2.7	Enclosure of shafts	<b>NA</b>	
2.8	Car parks in Class 2 and 3 buildings	<b>Applicable</b>	Concession noted. The carpark may be considered class 2 for the purposes of determining the relevant fire resisting construction.
2.9	Residential aged care buildings	<b>NA</b>	Concession noted but NA

### 5.0 Type C Construction

5.1(a)	Fire resistance of building elements	<b>Noted</b>	Refer table 5 extract below.
5.1(b)	External walls	<b>NA</b>	No external walls requiring an FRL.
5.1(c)	Bounding walls	Compliance advice	If bounding walls utilise lightweight construction, wall is to comply with Spec C1.8
5.1(d)	Internal walls bounding sole occupancy units.	Compliance advice	Internal wall required to have an FRL must extend <ul style="list-style-type: none"> <li>I. To the underside of the floor next above; or</li> <li>II. To the underside of a ceiling with a 60 minute resistance to the incipient spread of fire; or</li> <li>III. To the underside of a non-combustible roof covering.</li> </ul> Provide detail with the construction certificate application.
5.1(e)	Floor separating 7a and Class 2	<b>Compliance advice</b>	The floor separating the Class 7a carpark and the Class 2 residential portions of the building must have an FRL not less than 30/30/30
5.1(f)	Class 9c – floor above carpark	<b>NA</b>	.

<b>Table 4 Spec C1.1 extract</b>		Note: Class 7a carpark can utilise the same FRL's as the class part.
<b>BUILDING ELEMENT</b>	<b>CLASS 2 and 7a</b>	<b>Comment</b>
<b>EXTERNAL WALL (distance to fire source feature)</b>		
<i>Loadbearing</i>		
Less than 1.5m	90/90/90	NA
1.5 to less than 3m	-/-/-	Complies
3 or more	-/-/-	Complies
<i>Non-Loadbearing</i>		
Less than 1.5m	90/-/-	NA
1.5 to less than 3m	-/-/-	NA
3m or more	-/-/-	Complies
<b>EXTERNAL COLUMN</b>		
Less than 1.5m	90/-/-	Note concession for columns supporting balconies and verandahs C2.5(f)
1.5m or more	-/-/-	
<b>COMMON WALLS &amp; FIRE WALLS</b>	90/90/90	NA
<b>INTERNAL WALLS</b>		
Internal walls bounding public corridors etc.:	60/60/60	NA – No public corridors
Internal walls between or bounding sole occupancy units:	60/60/60	Provide additional bounding construction detail with CC application
Bounding a stair if required to be rated	60/60/60	Provide additional bounding construction detail with CC application
<b>ROOF</b>	-/-/-	FRL not required for roof.



CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
<b>SECTION D - ACCESS AND EGRESS</b>				
<b>Part D1 - PROVISION FOR ESCAPE</b>				
D1.0	Deemed-to-Satisfy Provisions	✓		Noted
D1.1	Application of Part	✓		Applies and noted
D1.2	Number of exits required	✓	✓	Two provided from basement carpark.
D1.3	When Fire isolated exits are required	✓	✓	Fire isolated exits not required.
D1.4	Exit Travel Distances	✓	X	Each sole occupancy unit discharges to open space.  Travel distance in carpark to a point of choice where travel in two different directions to alternative exits exceeds 20m.
D1.5	Distances between alternative exits	✓	✓	Complies
D1.6	Dimensions of exits and paths of travel to exits	✓	<b>Note</b>	The egress stairs from the first floor units and the basement carpark must be at least 1m wide clear of handrails.
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	<b>NA</b>	Fire isolated stairs not required.
D1.8	External stairways	X	<b>NA</b>	
D1.9	Travel by non fire isolated stairways or ramps	✓	✓	Complies.
D1.10	Discharge from exits	✓	✓	Complies
D1.10(f) NSW	Class 9b - place of public entertainment	X	<b>NA</b>	Not a place of public entertainment.
D1.11	Horizontal exits	X	<b>NA</b>	No horizontal exits shown.
D1.12	Non-Required stairways ramps and escalators	X	<b>NA</b>	Ramps proposed do not connect stories.
D1.13	Number of persons accommodated	✓	✓	Noted
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, if required 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>				

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
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	✓	NA	No fire isolated stairs
D2.3	Non-Fire-Isolated stairways and ramps	✓	✓	Concrete assumed.
D2.4	Separation of rising and descending stair flights	✓	✓	Applies only to fire isolated stairs.
D2.5	Open access ramps and balconies	X	NA	
D2.6	Smoke lobbies	X		Smoke lobby not shown.
D2.7	Installations in exits and paths of travel	✓	Compliance advice	Door to electrical distribution board in basement to be enclosed by non-combustible construction, suitably sealed against the spread of smoke
D2.8	Enclosure of space under stairs and ramps	✓	✓	Complies
D2.9	Width of stairways	✓	Compliance advice	Ensure 1m clear width for exit stairs. Refer to D1.6 above. No minimum width of stairs within the residential units .
D2.10	Pedestrian ramps	X		No ramps shown.
D2.11	Fire Isolated passageways	✓	NA	No fire isolated passageways shown.
D2.12	Roof as open space	X		Roof not used as open space.
D2.13	Goings and risers	✓	Compliance advice	Ensure rise and run dimensions comply. Provide detail with CC application.
D2.14	Landings	✓	Compliance advice	Ensure minimum dimensions of landings achieved.
D2.15	Thresholds	✓	✓	To comply.
D2.16	Barrier to prevent falls	✓	✓	Detail not shown. Ensure compliance with this clause. Provide detail with construction certificate application.
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	✓	✓	Complies.
D2.20(b)	Swinging doors	✓	✓	Complies
D2.21	Operation of latch	✓	Compliance advice	Exit doors must be openable without a key from the side that faces a person seeking egress by a single handed downward action on a single device which is located between 900mm and 1.1m from the floor.

CLAUSE	REFERENCE	APPLICABLE	COMPLIES	COMMENT
D2.22	Re-entry from fire isolated exits	✓	NA	
D2.23	Signs on doors	✓	Compliance advice	No exit door signs from carpark shown
D2.24	Protection of openable windows	✓	Compliance advice	Where a floor is more than 2m above the ground beneath windows in bedrooms must have a sill height of 1.7m or a device capable of restricting the window opening or a screen with secure fittings.
D2.25	Timber stairways: Concession	X	NA	No timber stairs proposed.

### PART D3 – ACCESS FOR PEOPLE WITH DISABILITIES

D3.0	Deemed-to-Satisfy Provisions	✓		Noted.
D3.1	General building access requirements	✓	Compliance advice	Access to common areas of class 2 building area required. No common recreation facilities provided. Access to units 1-6 on ground floor provided via lift and pathway.  Carpark access required to any level containing accessible carparking spaces.
D3.2	Access to buildings	✓	✓	Access from carpark to ground floor units via a lift.  Lift floor dimension must be at least 1100mm x 1400mm.  Internal stair is non fire isolated, therefore the stair and handrail construction must comply with AS1428.1-2009.
D3.3	Parts of building to be accessible	✓	Compliance advice	Class 2 Common areas, access to unit doors, and class 7a parts.  Accessible passenger lift from carpark to ground floor must be provided in accordance with E3.6.
D3.4	Exemptions	✓	NA	Not applicable to this building.
D3.5	Accessible Carparking	✓	✓	No accessible carspace provided. The BCA does not require accessible carspaces in class 7a carparks associated with Class 2 buildings.
D3.6	Signage	✓	Compliance advice	Applies only to exit signage within the carpark and residential common areas.  Braille and tactile signage required to identify exits.
D3.7	Hearing augmentation	X	NA	
D3.8	Tactile indicators	✓	Compliance advice	Required on stairways and external pedestrian ramps.
D3.9	Wheelchair seating spaces in class 9b assembly buildings	X	NA	
D3.10	Swimming pools	X	NA	

D3.11	Ramps	✓	Compliance advice	Applies to external pedestrian ramps linking to building to Rose Ave. The building is capable of complying. Provide details of handrails, slip resistance and tactile indicators with the CC application.
D3.12	Glazing on an accessway	✓	Compliance advice	Glazing at the entry doors to the common stairways will require marking in compliance with AS1428.1. Provide detail with the CC application.

## 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	✓	Compliance advice	Hydrant coverage to be provided in compliance with AS 2419.1.  An external fire hydrant booster assembly or a hydrant pump room location has been located. Provide additional detail with CC plans. See clause 6.4.2 of AS2419.1-2005.
E1.4	Hose Reels	✓	Compliance advice	Fire Hose Reels to be installed in accordance with AS2441 and required to service each level of the carpark only. Not required in the class 2 portion.
E1.5	Sprinklers	✓	Compliance advice	Sprinklers not required
E1.6	Portable Extinguishers	✓	Compliance advice	PFE's to be installed throughout carpark 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	AS 3786 smoke detection system required to class 2 SOU's.  AS1670.1-2004 smoke detection and alarm system required in common areas.

				Basement carpark may be required to be fitted with mechanical ventilation in accordance with AS 1668.2 and comply with clause 5.5 of AS 1668.1.  Ventilation system required to basement car park levels in accordance with AS 1668.1 and AS1668.2.
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	✓	NA	Not required
E3.3	Warning against use of lifts in fire	✓	Compliance advice	Signage required.
E3.4	Emergency lifts	✓	NA	Emergency not lift required in accordance with this clause.
E3.5	Landings	✓	Compliance advice	Required
E3.6	Facilities for people with disabilities	✓	Compliance advice	Required to class 7a parts and to common areas of class 2 portion. Provide detail with the CC application.
E3.7	Fire Service Controls	✓	Compliance advice	Required
E3.8	Aged Care Buildings	X	NA	
E3.9	Fire Service Recall Control Switch	✓	Compliance Advice	The lift is to be provided with recall controls in accordance with this clause. Provide additional detail with CC application
E3.10	Lift Car Fire Service Drive Control Switch	✓	Compliance Advice	The lift is to be provided with drive control switches in accordance with this clause. Provide additional detail with CC application

### 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 the carpark and all internal stairs (except within units) in accordance with this clause and AS 2293.1-2005. Provide detail with the CC application.
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.
E4.5	Exit signs	✓	Compliance advice	Exit signs must be installed in accordance with this clause and AS 2293.1-2005.
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	✓	Compliance advice	Damp proofing must be provided in accordance with F1.9.
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 laundries. Provide detail with construction certificate application.
F1.12	Sub-floor ventilation	✓	NA	No subfloor space proposed.
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	✓	Compliance advice	Clothes drying facilities to be provided through a line or hoist or heat operated drying cabinet. A toilet facility for employees is not required.
F2.2	Calculation of number of occupants and fixtures	✓	✓	Noted
F2.3	Facilities in Class 3 to 9 Buildings, Table F2.3	✓	✓	Not Applicable
F2.4	Facilities for people with disabilities	✓	✓	Accessible facilities not required to class 2 units.
F2.5	Construction of sanitary compartments	✓	Compliance advice	Lift of hinges required where a WC is within 1.2m of a door that swings inwards.
F2.6	Interpretation: urinals and wash basins	✓	✓	NA

F2.7 NSW	Warm water installations	✓		Hot water, warm water and cooling water systems 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	✓	✓	Complies. The sloping ceiling height on the first floor of units 1, 2, 4 and 5 must allow at least 2/3 of the first floor bedrooms to be at least 2.4m ceiling height. Provide additional detail and dimensions at CC stage.

### Part F4 - LIGHT AND VENTILATION

F4.0	Deemed-to-Satisfy Provisions	✓		Noted
F4.1	Provision of Natural light	✓		Required to comply in habitable rooms within residential units only.
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 within the basement carpark to be designed and installed in accordance with AS 1680.0.
F4.5	Ventilation of rooms	✓	Compliance advice	Appears compliant. Mechanical ventilation required to laundries and sanitary compartments provided without windows.
F4.5 (b) NSW	Mechanical Ventilation	✓	Compliance advice	If mechanical ventilation is proposed to sanitary compartments then must be installed in accordance with AS1668.2.
F4.6	Natural ventilation	✓	✓	Natural ventilation provided to SOU habitable rooms.
F4.7	Ventilation borrowed from adjoining rooms	✓	✓	Ventilation from bedrooms can be relied upon as borrowed ventilation if required to achieve compliance
F4.8	Restriction on position of water closets and urinals	✓	✓	Complies
F4.9	Airlocks	X		Mechanical exhaust required to ground floor WC's in units 1-5.
F4.10	*****			Repealed
F4.11	Car parks	✓	Compliance advice	Mechanical ventilation required to AS1668.1. Provide detail with construction certificate application.
F4.12	Kitchen local exhaust ventilation	X		No commercial kitchen.

**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	Ratings to be achieved between units and the carpark in accordance with this clause.  Provide detail with construction certificate application.  Does not apply to floors within a sole occupancy unit.
F5.5	Sound Insulation of walls between units	✓	Compliance advice	Ratings to be achieved between units and between units and common areas in accordance with this clause.  Provide detail with construction certificate application.
F5.6	Sound insulation rating for services	✓		Ratings to be achieved for service ducts.
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	✓		Noted. Detail required for construction certificate stage.
Spec F5.5	Impact Sound Test Equivalence	✓		Noted

**SECTION G - ANCILLARY PROVISIONS****Part G1 - MINOR STRUCTURES & COMPONENTS**

G1.0	Deemed-to-Satisfy provisions	X		Noted
G1.1	Swimming pools	X		
G1.2	Refrigerated chambers, strong rooms & vaults	X		
NSW G1.101	Provision for cleaning windows	✓	NA	A building must provide a safe manner of cleaning any windows located 3 or more storeys above ground level.

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

G2.0	Deemed to satisfy provisions	✓		Noted
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.
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G2.4	Incinerator rooms	X	No incinerators proposed.
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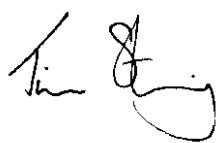
**Part G3 - ATRIUM CONSTRUCTION**

G3.1	Atriums affected by this Part	X	The building does not have an atrium.
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#### 4.0 CONCLUSION

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 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-engineered solution.



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30<sup>th</sup> January 2019.