BUILDING REGULATION & FIRE SAFETY ENGINEERING CONSULTANTS

Project:	**134-140 MARSDEN STREET, PARRAMATTA (V BY CROWN)**
Report:	**BCA ASSESSMENT REPORT**
Reference:	**103823-BCA-r6**
Date:	13th August 2014
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DOCUMENT CONTROL

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103823-BCA-r3	**12th August 2013**	**Description:**	134-140 Marsden St, Parramatta **BCA Assessment Report**	
103823-BCA-r4	**12th June 2014**	**Description:**	134-140 Marsden St, Parramatta **Updated BCA Assessment Report**	
103823-BCA-r5	**25th July 2014**	**Description:**	134-140 Marsden St, Parramatta **Updated BCA Assessment Report for S75W submission**	
103823-BCA-r6	**13th August 2014**	**Description:**	134-140 Marsden St, Parramatta **Updated BCA Assessment Report for S75W submission (residential classification change)**	
		Prepared by:	**Lee Kippax** Accredited Certifier Grade A1, No BPB0810	Signature 

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PART 1 BASIS OF ASSESSMENT

1.1 Location and Description

The building development, the subject of this updated report, is located at 134-140 Marsden Street, Parramatta and will be known as V by Crown. It is proposed to construct a high-rise residential building, retail area, conference centre, and basement carparking.

1.2 Purpose

The purpose of this report is to assess the updated design proposal against the Deemed-to-Satisfy Provisions of BCA2011, and to clearly outline those areas (if any) where compliance is not achieved, where areas may warrant redesign to achieve strict BCA compliance or where areas may be able to be assessed against the relevant performance criteria of BCA2011. Such assessment against relevant performance criteria will need to be addressed by means of a separate Performance Based Fire Safety Engineered Assessment Report to be prepared under separate cover.

This updated report addresses the design pursuant of MOD 4 to the approval granted to MP09_0167 under the provisions of S75W of the EP&A Act.

1.3 Building Code of Australia

This report is based on the Deemed-to-Satisfy Provisions of the National Construction Code Series Volume 1 - Building Code of Australia, **2011 Edition** (BCA) incorporating the State variations where applicable. Please note that the version of the BCA applicable to new building works is the version applicable at the time of the lodgement of the Construction Certificate Application to the Accredited Certifying Authority. The BCA is updated generally on the 1st of May each year.

As advised by the Certifying Authority the relevant version of the BCA is BCA2011.

1.4 Limitations

This report does not include nor imply any detailed assessment for design, compliance or upgrading for: -

(a) the structural adequacy or design of the building;

(b) the inherent derived fire-resistance ratings of any proposed structural elements of the building (unless specifically referred to); and

(c) the design basis and/or operating capabilities of any proposed electrical, mechanical or hydraulic fire protection services.

This report does not include, or imply compliance with:

(a) Part D3 and Clause F2.4 of the BCA as this assessment is being carried out by others;

(b) the National Construction Code – Plumbing Code of Australia Volume 3;

(c) the Disability Discrimination Act 1992 including the Disability (Access to Premises – Buildings) Standards 2010 – unless specifically referred to), (The provision of disabled access to the subject development has been assessed against the deemed to satisfy provisions of Part D3 and F2.4 of BCA2011 only);

(d) Demolition Standards not referred to by the BCA;

(e) Work Health and Safety Act;

(f) Requirements of other Regulatory Authorities including, but not limited to, Telstra, Sydney Water, Electricity Supply Authority, WorkCover, RMS, Council and the like; and

(g) Conditions of Development Consent issued by the Local Consent Authority.

1.5 Design Documentation

This report has been based on the Design plans and Specifications listed in Annexure A of this Report.

PART 2 BUILDING DESCRIPTION

For the purposes of the Building Code of Australia (BCA) the development may be described as follows.

2.1 Rise in Storeys (Clause C1.2)

The current design of the building has a rise in storeys of thirty-one (31) as per the previous design.

2.2 Classification (Clause A3.2)

The building has been classified as follows.

Class	Level	Description
2	Part Ground Floor & Part Levels 1-29	Residential Apartments
6	Part Ground Floor	Retail Areas
7a	Basements 1 - 6	Carparking and ancillary areas
9b	Basement 1, Level 1, Level 2 and Level 26	Conference room, gym, archaeology, Kids room, Theatre room and Bar area
10b	Level 1	Swimming pool

It is acknowledged that the 'mezzanine' level incorporates several storage rooms, likely to accommodate ancillary equipment/materials for the uses within the development. Whilst it is not comparable to a 'warehouse' use, the storey has been conservatively interpreted as a class 7b part, therefore needing 4 hours fire rating. This has been discussed with the Certifying Authority where concurrence has been received for the avoidance of doubt.

2.3 Effective Height (Clause A1.1)

The current design of the building has an effective height of more than 50m (being 95.55m) between RL 9450 and RL 105000.

2.4 Type of Construction Required (Table C1.1)

Type A Construction.

2.5 Floor Area and Volume Limitations (Table C2.2)

The building is subject to maximum floor area and volume limits of:-

- Class 9b - Maximum Floor Area 8,000m^2
  Maximum Volume 48,000m^3
- Class 6 - Maximum Floor Area 5,000m^2
  Maximum Volume 30,000m^3
- Class 7a - The carpark is to be sprinkler protected and as such there are no maximum floor area or volume limitations for this area.
- Class 2 - The Class 2 portions of the building are not subject to floor area and volume limitations of C2.2 as Table 3 of Specification C1.1 and Clause C3.11 of the BCA regulates the compartmentation and separation provisions applicable to buildings, or building portions, of Class 2 classifications.

2.6 Fire Compartments

The following fire compartments have been assumed:

1. The basement carparks and loading dock,
2. The storage and back-of-house area; mezzanine level,
3. Retail/residential levels Ground – Level 2, (due to atrium) and archaeology area,
4. Each floor of the residential levels 2-29;

2.7 Exits

The following points in the building have been considered as the exits:

A. Fire-isolated stairways 2 and 4 from the basement levels;
B. Fire-isolated stairway 4 and stairway between gridlines L and M from the archaeology area;
C. The sliding door leading to Marsden Street on the ground floor from the main lobby;
D. The sliding doors to Hunter Street on the ground floor from the main lobby;
E. The break out door leading to the Plaza on the ground from the main lobby;
F. The swinging break-out door to Macquarie Street on the ground floor;
G. The doors to Stair 1 and 2 from the Mezzanine area;
H. The top of the non-fire-isolated stairway 10 from the mezzanine area;
I. Fire-isolated stairways 1, 2 and 3 from the residential levels;
J. The door from the loading dock to Stair 2 discharging to Hunter Street;
K. The northern and southern doorways within the eastern elevation adjacent to retail tenancies 1 and 2, discharging to Marsden Street;
L. The external doorways of all retail tenancies;
M. The stairways associated with the Plant and roof at Levels 28 and 29.

2.8 Climate Zone (Clause A1.1)

The building is located within Climate Zone 6, being in the Parramatta Local Government Area.

PART 3 ESSENTIAL FIRE SAFETY MEASURES

The following fire safety measures are required to be installed in the building, this is a preliminary list to be clarified as the design develops and the fire engineering is confirmed.

Item	Proposed Essential Fire Safety Measure	Minimum Standard of Performance
1.	Access panels, doors and hoppers to fire resisting shafts	BCA2011 Clause C3.13
2.	Automatic fail safe devices	BCA2011 Clause D2.21, AS1670.1-2004 and Manufacturer's Specification
3.	Automatic fire detection and alarm system (*including system monitoring)	BCA2011 Clause E2.2a and Clause 3, 4 and 6 of Specification E2.2a, AS1670.1-2004
4.	Automatic fire suppression system (sprinkler system)	BCA2011 Clause E1.5, AS2118.1-1999
5.	Emergency lighting	BCA2011 Clauses E4.2 & E4.4, AS2293.1-2005
6.	Emergency lifts	BCA2011 Clause E3.4, AS1735.2-2001
7.	Exit signs	BCA2011 Clauses E4.5, E4.6 & E4.8, AS2293.1-2005
8.	Fire control room	BCA2011 Clause E1.8
9.	Fire dampers	BCA2011 Specification C3.15, AS/NZS1668.1-1998, AS1682.1 & 2
10.	Fire doors	BCA2011 Spec C3.4, AS1905.1-2005
11.	Fire hose reel system	BCA2011 Clause E1.4, AS2441-2005
12.	Fire hydrant system	BCA2011 Clause E1.3, AS2419.1-2005
13.	Fire seals protecting openings in fire resisting components of the building	BCA2011 Clause C3.15, AS1530.4-2005
14.	Lightweight Fire Rated Construction	BCA2011 Clause / Specification C1.8
15.	Mechanical air handling systems (auto shut down)	BCA2011 Table E2.2a, AS/NZS1668.2-1991
16.	Paths of travel, stairways, passageways or ramps	BCA2011 Section D
17.	Portable fire extinguishers	BCA2011 Clause E1.6, AS2444-2001
18.	Required (automatic) exit doors	BCA2011 Clause D2.19, AS1670.1-2004
19.	Smoke dampers	AS/NZS1668.1-1998
20.	Smoke detectors and heat detectors	BCA2011 Clause 3 of Specification E2.2a, AS3786-1993
21.	Smoke doors	BCA2011 Specification C3.4
22.	Solid core doors	BCA2011 Clause C3.11
23.	Sound systems and intercom systems for emergency purposes	BCA2011 Clause E4.9, AS1670.4-2004
24.	Wall wetting sprinkler and drencher system	BCA2011 Clause C3.4
25.	Warning and operational signs	BCA2011 Clause D2.23, EP&A Reg. 2000 Clause 183
26.	Fire Engineering Report prepared by Holmes Fire.	The outcomes of the latest Fire Engineering Report prepared by Holmes Fire, (TBA)

PART 4 FIRE RESISTANCE LEVELS

The following fire resistance levels (FRL's) required for the various structural elements of the building, with a fire source feature being the far boundary of a road adjoining the allotment, a side or rear boundary or an external wall of another building on the allotment except a Class 10 structure.

Item	Class 2	Class 7a or 9b	Class 6
Loadbearing External Walls • less than 1.5m to a fire source feature • 1.5 – 3m from fire source feature; • more than 3m from a fire source feature.	 90/90/90 90/60/60 90/60/30	 120/120/120 120/90/90 120/60/30	 180/180/180 180/180/120 180/120/90
Non-Loadbearing External Walls • less than 1.5m to a fire source feature • 1.5 – 3m from fire source feature; • more than 3m from a fire source feature.	 -/90/90 -/60/60 -/-/-	 -/120/120 -/90/90 -/-/-	 -/180/180 -/180/120 -/-/-
External Columns • Less than 3m • 3m or more	 90/-/- -/-/-	 120/-/- -/-/-	 180/-/- -/-/-
Fire Walls	90/90/90	120/120/120	180/180/180
Stair and Lift Shafts • Loadbearing • Non loadbearing	 90/90/90 -/90/90	 120/120/120 -/120/120	 180/120/120 -/120/120
Internal walls bounding sole occupancy units • Loadbearing • Non loadbearing	 90/90/90 -/60/60	 120/-/- -/-/-	 180/-/- -/-/-
Internal walls bounding public corridors, hallways and the like: • Loadbearing • Non loadbearing	 90/90/90 -/60/60	 120/-/- -/-/-	 180/-/- -/-/-
Ventilating, pipe garbage and the like shafts: • Loadbearing • Non loadbearing	 90/90/90 -/90/90	 120/90/90 -/90/90	 180/120/120 -/120/120
Other loadbearing internal walls, beams trusses and columns	90/-/-	120/-/-	180/-/-
Floors	90/90/90	120/120/120	180/180/180
Roofs [1]	90/60/30	120/60/30	180/60/30

N.B.

It is proposed in Part 5 that it may be possible to rationalised to the FRL's to the fire compartment formed by the Retail/residential levels ground – Level 2 (due to atrium) and archaeology area, this is to be further discussed with the project's fire engineers.

[1] The roof need not comply with any FRL's due to the sprinkler protection of the entire building.

PART 5 MATTERS FOR FURTHER CONSIDERATION

5.1 General

Assessment of the Architectural design documentation against the Deemed-to-Satisfy Provisions of the Building Code of Australia, 2011 (BCA) has revealed the following areas that involve assessment as Performance Based (Fire Engineered) Alternative Solutions, and/or special consideration to clearly indicate methodologies for achieving compliance with the relevant Performance Requirements or Deemed-to-Satisfy Provisions of the BCA.

Annexure B to this report provides a detailed assessment of the proposal against all relevant Deemed-to-Satisfy Provisions of the BCA.

Note: It is important that Annexure B is read in conjunction with the items below, as some matters may not have had sufficient information provided to allow a detailed assessment to be undertaken.

5.2 Performance Based Design – Alternate Solutions

There are specific areas throughout the development where strict Deemed-to-Satisfy BCA Compliance will not be achieved by the proposed design and site constraints.

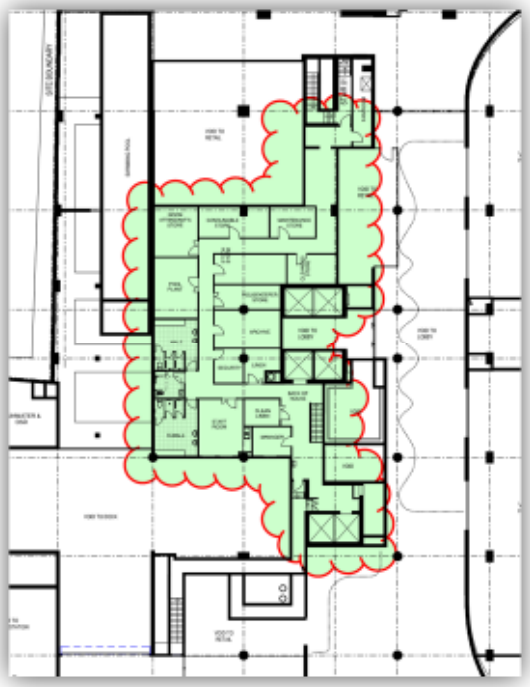
The following matters have been identified by Holmes Fire as being Alternative Solutions:

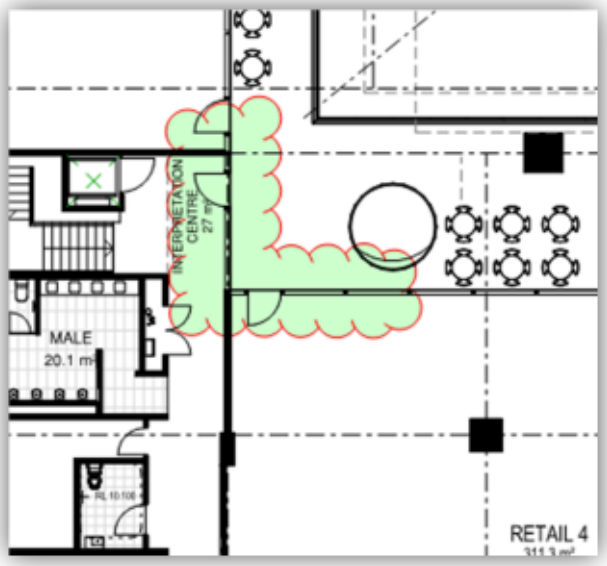
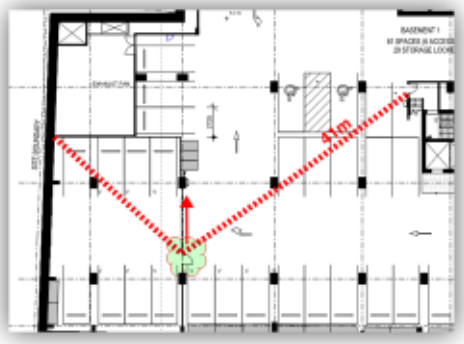
Item	Description of Alternate Solution	DTS Provision	Performance Requirement to be met
1.	Public corridors in the residential portion which exceed 40 m in length are required to be divided by smoke-proof walls. These walls will then require smoke-proof doorways, which, depending on location, will likely be required to swing in both directions. As a minimum Holmes Fire can justify smoke doors which swing in one direction only. It may be possible to remove the smoke doors altogether.	C2.14	CP2 and EP2.2
2.	The external glazed wall of Retail Unit 3 is not protected from the fire compartment containing the Loading Dock. Deemed-to-Satisfy compliant protection is provided in the reverse direction via internal drenchers to Retail Unit 3.	Clause C3.3	CP2
3.	A fire wall separates the Level 1 Class 9b assembly areas from the Class 2 residential area. There are openings in the fire wall (glazed wall and doors) that are not protected in accordance with Clause C2.7(a)(ii) and Clause C3.5(a)(iii). *Alternative solution is to be amended to suit the revised layout.*	Clause C2.7(a)(ii) and Clause C3.5(a)(iii)	CP2
4.	The steel beams and trusses located on Level 3 which overhang the Plaza are not proposed to be protected with passive fire protection and will not achieve the Deemed-to-Satisfy requirement minimum FRL of 180/-/-.	Specification C1.1	CP1 and CP2
5.	Combustible linings to the external walls.	Clause 2.4 of Specification C1.1	CP1
6.	Clause 3.2(a) of BCA Specification C3.4 requires that smoke doors are to swing in the direction of egress or in both directions. The	Specification C3.4 Clause 3.2(a)	DP2

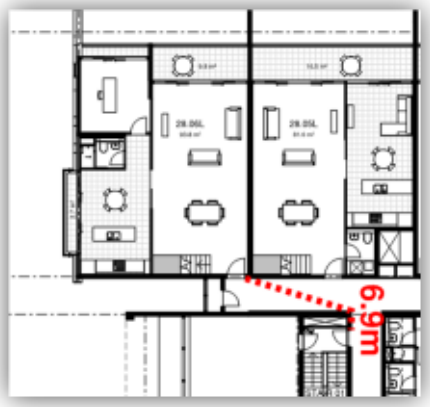
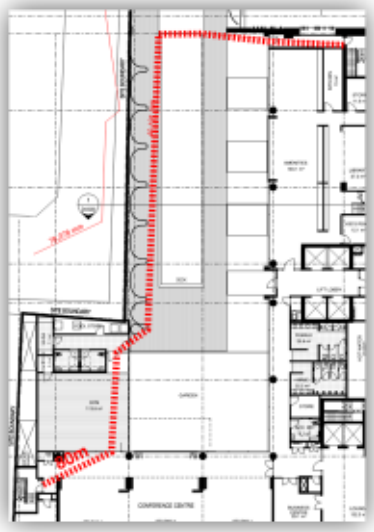
Item	Description of Alternate Solution	DTS Provision	Performance Requirement to be met
	following smoke doors swing in only a single direction where egress is required in both directions to reach alternative exits. • Level 2 (southern wing) – The smoke doors between the Class 2 portion and the central fire isolated stairway (Fire-Stair 2); • Levels 3 to 11 – The set of smoke doors dividing the eastern wing and the set of smoke doors separating the Class 2 parts; and • Levels 18 to 25 – The set of smoke doors dividing the eastern wing.		
7.	Justification of the extended travel distances to an exit (approximately 10m, in lieu of 6m) from the units at the north of Level 3 to Level 28 and units at the south of Levels 18 to Level 25. *Alternative solution is to be amended to suit the revised layout.*	D1.4(a)(i)(A)	DP4 and EP2.2
8.	Justification of the extended travel distances between exits (approximately 65 m in lieu of 45m) within the Level 1 and 2 eastern residential portion. *Alternative solution is to be amended to suit the revised layout.*	D1.5(c)(i)	DP4 and EP2.2
9.	Justification for the discharge of fire-isolated Stairs 1 and 4 within the building/Plaza.	D1.7(b)	DP5 and EP2.2
10.	The doors providing egress from Retail Units 1 and 2 on Ground Floor swing against the direction of egress. *DTS to be applied where possible, however, to be finalised upon further design development and likely sub-division of retail tenancy.*	Clause D2.20(b)	DP2
11.	Fire hose reels are required to serve all areas of the building. Deletion of fire hose reels from the residential portion is proposed.	E1.4	EP1.1
12.	A sprinkler system complying with AS 2118.1–1999 is required to be provided throughout the development. Sprinklers are not proposed to be provided in laundry cupboards that are less than 2.5 m² or in concealed spaces within residential SOUs. Note AS 2118.1-2006 allows for deletion of sprinklers from these areas.	E1.5 / Specification E1.5	EP1.4
13.	A sprinkler system is required to be provided throughout the development. Holmes Fire will investigate deleting the sprinkler system to the awing over the Plaza, under the covering of Level 29 and to the archaeological access areas. *Alternative solution is to be amended to suit the revised layout and consultation with the Fire Services consultant.*	E1.5	EP1.4
14.	The location of the fire control room is not in strict compliance with Specification E1.8 with respect to the 300mm change in floor level.	E1.8	EP1.6

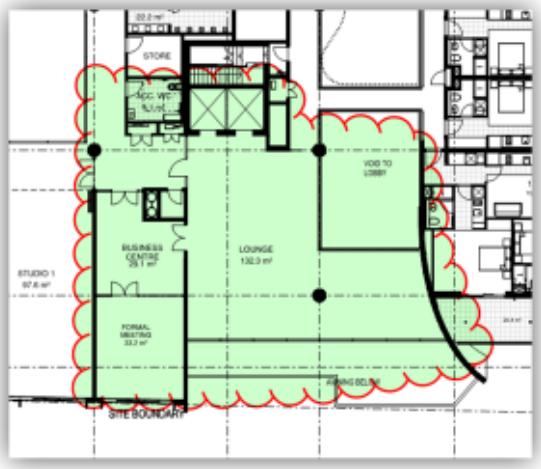
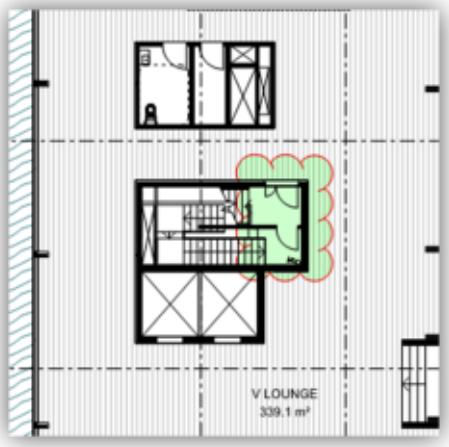
Item	Description of Alternate Solution	DTS Provision	Performance Requirement to be met
15.	Deletion of a zone smoke control system from within the retail and assembly portions including the basement archaeological display and the proposed Bar at level 26. *Alternative solution is to be amended to suit the revised layout.*	E2.2/ Table E2.2a	EP2.2
16.	**Subject to confirmation:** Alteration of smoke detection and alarm system for to reduce unwanted alarms, potentially through use of a double-knock system prior to commencement of building alarm. *Alternative solution is to be amended to suit the revised layout.*	E2.2/ Table E2.2a / Specification E2.2	EP2.2
17.	A sound system and intercom system for emergency purposes (SSISEP) is required to be provided, which incorporates the need for WIP phones. The deletion of WIP phones within the residential portion is proposed. *Alternative solution is to be amended to suit the revised layout.*	E4.9	EP4.3

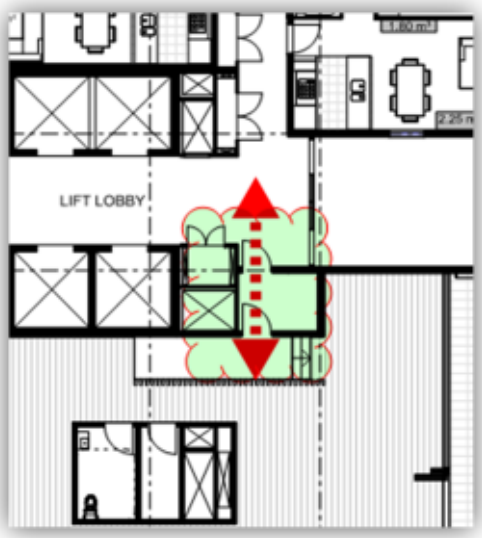
The following additional alternative solutions have initially been identified for the purposes of this updated report:

Item	Description of Alternate Solution	DTS Provision
18.	FRL's to the storage/back-of-house area at Mezzanine level to be rationalised to achieve 3 hours fire rating in lieu of 4 hours as required for a storage classification (being class 7b) by Specification C1.1 of the BCA. Window openings to the compartment walls are expected to be protected in accordance worth clause C3.4 of the BCA. Where they are not, they are to be included in this report and that of the fire engineer's report. 	C1.1

19.	It is anticipated that compliance with respect to separation of externals walls and associated openings in different fire compartments at the external wall junction below is unlikely to comply with the BCA pursuant of the detailed design stage for the S75W design proposal. 	C3.3
20.	a) It is apparent that access to the alternative fire stair at Level 26 from the residential part will be through the Bar area, which is likely to be considered as a 'sole-occupancy unit', contrary to the requirements of this clause. 	D1.2
21.	a) The travel distance from the south west corner of Basement 01 appears to be 41m in lieu of 40m to the fire door of FS02 unless the door is moved to the position as indicated below. 	D1.4

	b) Unless provided with an additional exit pathway (as clouded) the travel distance from the Bar terrace on Level 26 indicated below appears to be 25.5m to a point-of-choice in lieu of 20m.  c) It is acknowledged that the doorway to Unit 28.6L at Level 28 is approx. 7m in lieu of 6m to the nearest fire stair, as shown below.  	
22.	It is apparent that the distance between alternative exits at Level 1 in the vicinity of the external pool, (as the point of origin) is approx. 80m in lieu of 60m as required by this clause. 	D1.5

23.	It is acknowledged that the lounge extension at Level 1 (south end) is likely to be associated with the conference centre/business uses adjacent given its proximity and current configuration, as shown below. Unless otherwise advised, the 'lounge' space is considered to be a class 9b area and therefore is likely to impact on current proposed fire-engineered alternative solutions within this vicinity, (including residential corridor lengths, zone smoke control, fire wall separation between class 9b and class 2 parts, fire hose reel deletion to residential parts, as applicable). Review of the project's fire engineers is to be undertaken pursuant detailed design for completeness and verification of outcomes. 	C2.14 & C2.7/C3.5, E1.4 and E2.2
24.	It is acknowledged that a doorway to the Bar tenancy opens directly into a stairway that is required to be fire-isolated where it is considered the Bar tenancy to be 'sole-occupancy unit' not occupying <u>all of a storey or provided with an airlock</u>, despite the section of staircase providing access to the sanitary facilities. 	D1.7
25.	Where the doorway to the bar tenancy is **<u>considered to be an exit</u>,** (and not a door in the path of travel to an exit from both sides) it is acknowledged it currently opens against the direction of travel for potential evacuees from the residential side. Therefore it is required to swing in both directions in accordance with clause D2.20 of the BCA.	D2.20

	To be further reviewed and determined pursuant of the detailed design stage. 	

5.3 Separation of classifications in the same storey (Clause C2.8)

It has been confirmed that the method of separation between the Bar tenancy and the residential part adjacent at Level 26 is to be in accordance with Spec C1.1 of the BCA where the fire wall and fire door are required to have an FRL of at least 120/120/120 and -/120/30 respectively.

5.4 Dimensions of Exits – (Clause D1.6)

a) In the absence of an indicative seating plans to the conference centre and outdoor spaces there is an estimated population in the region of 500 people to Level 1, as calculated in Clause D1.13, excluding lifts stairways corridors hallways, sanitary compartments, ancillary areas and the like. We also acknowledge transitional areas such as the 'lounge' adjacent to the business centre. On this basis, there is insufficient aggregate exit width from this level.

Based on this population and the assumption that the multi-function & business centre will not be an Entertainment Venue the aggregate exit width of 3m from this level caters for 420 people in total, which is less than the above indicative population.

The options exist to provide an additional 1m wide stairway to the ground floor, which would provide for a further 120 persons giving a total of 540 people, which conservatively could be justified, or clarification on the potential uses and proposed population loads of the multi-function and amenities areas.

Alternatively, a fire-engineered alternative solution could be prepared by the project's fire engineer to justify the egress width based upon a more accurate occupancy loading. This is to be reviewed and confirmed purusdnat of the detailed design stage.

b) The Bar tenancy at Level 26 could accommodate up to 340 patrons (conservatively based upon 1m² per person) and 36 residents to the residential part at the same storey. Therefore the aggregate egress width from this storey is required to be at least 3.5m (accommodating up to 380 people).

It is evident that the two current proposed stairways on this storey provide at least 1m width each between handrails and is therefore in sufficient for the anticipated population for this storey.

It is anticipated that a fire-engineered alternative solution is to be prepared by the project's fire engineer to justify the egress width based upon more accurate occupancy loading. This is to be reviewed and confirmed pursuant of the detailed design stage.

It is noted to ensure that the exits are not blocked in the basement levels where bollards should be provided adjacent to the exit doors to ensure a 1m clear access to these doors.

5.5 Travel via Fire-Isolated Exits – (Clause D1.7)

a) Openings into retail 3 to be provided with internal drenchers in accordance with Clause C3.4 to protect the discharge path of the fire-isolated exits adjacent. Deemed-to-satisfy compliance has been confirmed.

b) Please advise on whether the sprinkler pump room to basement 1 also incorporates the sprinkler alarm valves and the hydrant pump. Your attention is drawn to specification E1.5 of the BCA.

5.6 Number of persons accommodated (Clause D1.13)

As discussed above, the Bar tenancy at Level 26 could accommodate up to 340 patrons (conservatively based upon 1m² per person) and 36 residents to the residential part at the same storey. Therefore the aggregate egress width from this storey is required to be at least 3.5m (accommodating up to 380 people).

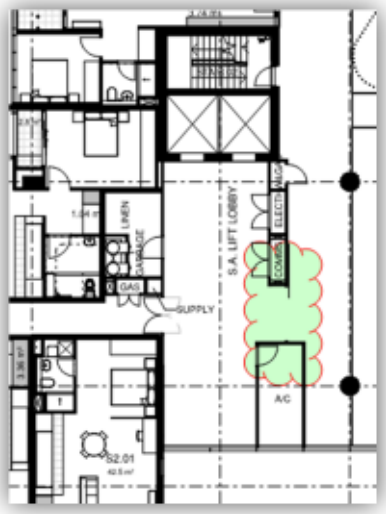
It is evident that the two current proposed stairways on this storey provide at least 1m width each between handrails and is therefore in sufficient for the anticipated population for this storey.

It is anticipated that a fire-engineered alternative solution is to be prepared by the project's fire engineer to justify the egress width based upon more accurate occupancy loading. This is to be reviewed and confirmed pursuant of the detailed design stage.

5.7 Doorways and doors (Clause D2.19)

It is assumed the power-operated doors at all relevant levels in a path of travel to a required exit (as shown below) are able to be opened manually under a force of not more

than 110 N if there is a malfunction or failure of the power source. This is required to be confirmed as part of the detailed design process.



5.8 Operation of latch (Clause D2.21)

It is apparent that the swinging door on Level 18 below separates the residential apartments from the apartments in the same vicinity. Similarly, the doorway between the Bar and the residential part of Level 26 adjacent is a door on the path of travel to an exit from both sides of the door. It has been confirmed that the latching mechanism to these doors will strictly comply with this clause in the following instances.

Level 18

Level 26

5.9 Fire Hydrants – (Clause E1.3)

The following items have been initially identified as being non-compliant, however, it is acknowledged that the fire services consultant is to fully review the design in respect of location of internal hydrants and coverage pursuant of the detailed design stage.

a) On some levels the fire hydrant landing valves are shown to be outside the fire-isolated stairways, as a minimum a landing valve is to be provided at the floor level landing within each of the fire-isolated stairways.

b) Furthermore, a number of additional fire hydrant points are shown throughout the building, these hydrant points are assumed to be additional points to ensure full

coverage of the building, this is to be confirmed by the design engineer as being in compliance with AS2419.1-2005.

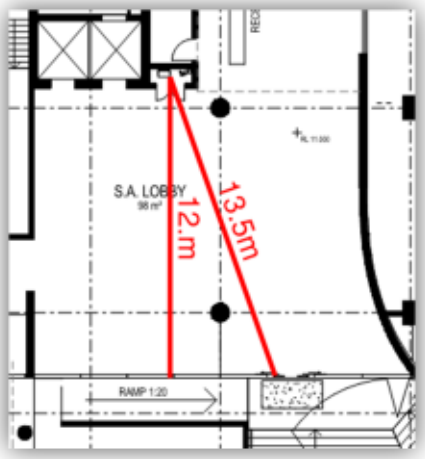
Furthermore, it is noted that Fire hydrant coverage to the South west corner of the basement storeys is not achieved within 40m. Please have this verified by the hydraulic engineer pursuant the detailed design stage and if necessary consider an alternative solution to address this item pursuant of the detailed design stage.

5.10 Fire Hose Reels – (Clause E1.4)

The carparking, retail, commercial and assembly areas will still be required to be provided with Fire Hose reel coverage in accordance with this clause

The following items have been initially identified as being non-compliant, however, it is acknowledged that the fire services consultant is to fully review the design in respect of location of fire hose reels and coverage pursuant of the detailed design stage.

a) It is noted that a number of FHR's shown are located more that 4m from an exit or fire hydrant point. The installation of the FHR's should be rationalise ensuring full compliance with this clause and AS2441-2005.



5.11 Smoke Hazard Management (E2.2b)

It is acknowledged that the Bar area at Level 26 may be considered a Nightclub, discotheque, or the like. Therefore, given the building is already to be sprinkler protected, the Bar area is also required to be provided with fast response heads in accordance with this clause.

It has been confirmed that fast response sprinkler heads are required throughout the development in accordance with the fire engineering report.

5.12 Sanitary Facilities – (Clause F2.3)

The following calculation of the sanitary facilities has been determined based upon the current updated design.

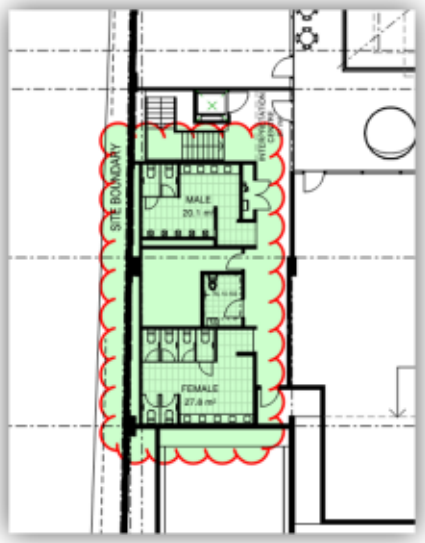
- **Ground floor** - Assuming that, except for the anticipated cafés, (being retail 4 & 5), the remaining retail tenancies (being retail 1, 2 & 3) will be non-food related tenancies the proposed sanitary facilities cater for the following:

    a) Up to 85 patrons to the Interpretation centre

b) Up to 35 staff to the retail tenancies and the Interpretation centre,
c) Up to 250 patrons to the restaurant/cafes (being retail 4 & 5) – 100 male and 150 female)

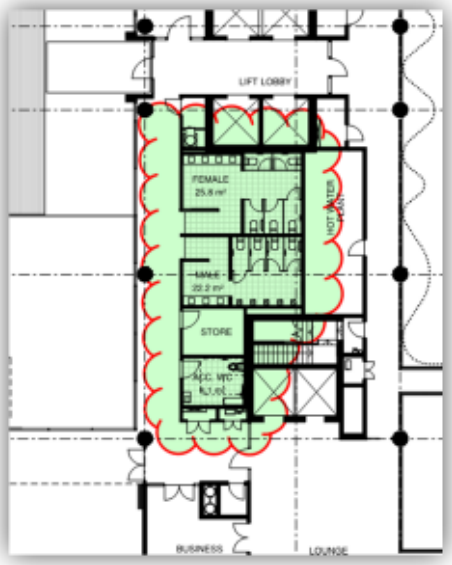
It has been assumed that staff from all retail tenancies will have access to the ground floor facilities.

Please advise if the population allocation requires reconsideration, given that assumptions have been made in the above calculation.



- **Level 1** – Assuming that staff are catered for on the mezzanine level, the toilets to this level cater for up to 500 patrons, being more than calculated to be accommodated by the Conference Centre room/s. However, it is acknowledged that any balance of sanitary facilities can be allocated to other uses on the same storey.

  It is noted that there is no requirement to provide sanitary facilities for customers of non-food related retail tenancies in this building, nor is there a requirement to provide sanitary facilities for occupants of the residential areas in the common areas.



The Bar area at level 26 is provided with sanitary facilities. However, the allocation provided, as shown below, allows for the following male/female ratio:

- **Male Patrons**

  Current sanitary facilities allow up to **150 male patrons** given that there are three (3) urinals proposed and using the concession allowed under clause F2.2 (c) where the unisex sanitary facility can be counted once for each sex.

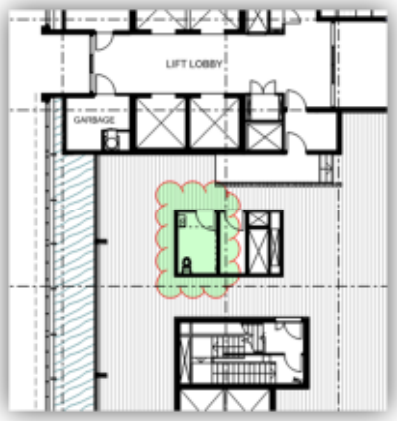
  Based upon an equal split of males and female patrons and using the population loadings as indicated under items 5.4 and 5.6 above it appears that the current proposed male sanitary facilities may be short of the calculated 340 patrons, (being 170 males).

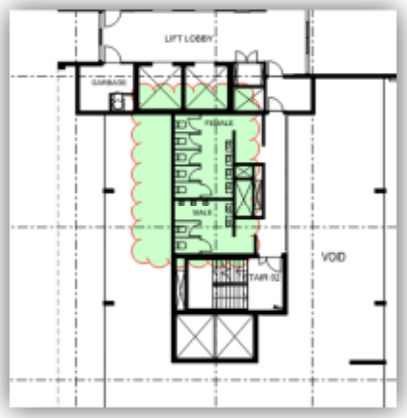
  Please provide the anticipated population of patrons for the Bar Area in order to determine compliance as part of the detailed design stage.

- **Female Patrons**

  Current sanitary facilities allow up to **250 female patrons** given that there are six (6) closet pans proposed using the concession allowed under clause F2.2 (c) where the unisex sanitary facility can be counted once for each sex.

  Please provide the anticipated population of patrons for the Bar Area in order to determine compliance as part of the detailed design stage.





It is further noted that no sanitary facilities are apparent for staff use. Employees and the public may share the same facilities in a 9b part of a building provided the number of facilities provided are not less than the total number of facilities required for employees plus those required for the public.

Please confirm final design pursuant of the detailed design stage.

5.13 Natural Light – Part F1

Natural light is required to all habitable areas within the residential units.

Natural light is to be provided through windows that have an aggregate light transmitting area of 10% of the floor area of the room.

Previous BCA reviews identified that within Unit Types 8A, 8B, 12, 14 and 18 the study/bedroom is not provided with direct natural light. Natural light may be borrowed

through the balcony doors through the adjacent area, however a light transmitting opening is required to be provided from the adjacent area into the study/bedroom. The light transmitting area may be a glazed window or glass doors, or other suitable device. Please provide details of the light transmitting device.

Provide clarification and the method of compliance confirming natural light is provided to <u>all habitable</u> areas within the residential units.

ANNEXURE A

DESIGN DOCUMENTATION

This report has been based on the following latest design documentation received by BCA Logic Pty Ltd pursuant of a S75W Modification 4.

Architectural Plans Prepared by AJ+C Architects, Project 10052 received on 17th July 2014		
Drawing Number	**Revision**	**Title**
DA2001	21	Basement 01
DA2002	17	Basement 02
DA2003	17	Basement 03
DA2004	16	Basement 04
DA2005	17	Basement 05
DA2006	16	Basement 06
DA2100	17	Mezzanine
DA2000	22	Ground Floor
DA2101	23	Level 1
DA2102	19	Level 2
DA2103	21	Level 3
DA2104	21	Levels 4-11
DA2112	16	Level 12-16
DA2117	2	Level 17
DA2118	3	Level 18
DA2119	3	Level 19
DA2120	3	Level 20
DA2121	11	Level 21-25
DA2126	17	Level 26
DA2127	21	Level 27
DA2128	16	Level 28
DA2129	6	Level 29
DA2200	13	Roof
DA3100	16	North Elevation
DA3101	15	South Elevation
DA3102	17	East Elevation
DA3103	15	West Elevation
DA3200	17	Section

ANNEXURE B

DETAILED ASSESSMENT OF THE DEEMED-TO-SATISFY PROVISIONS OF BCA2011

PART 6 BUILDING ASSESSMENT

Outlined below is a detailed assessment of the Deemed-to-Satisfy Provisions of the Building Code of Australia (BCA) including the State variations where applicable.

All Deemed-to-Satisfy clauses that are applicable to the subject building have been referred to below, including a comment adjacent to each clause of the proposal's ability to satisfy each respective clause.

The abbreviations outlined below have been used in the following tables.

N/A	-	Not Applicable. The Deemed-to-Satisfy clause does not apply to the subject building.
Complies	-	The relevant provisions of the Deemed-to-Satisfy clause have been satisfied by the proposed design.
CRA	-	'COMPLIANCE READILY ACHIEVABLE'. It is considered that there was not enough information included in the documentation to accurately determine strict compliance with the individual clause requirements. However, subject to noting the requirements of each clause, compliance can be readily achieved. This information may be included in other documentation, which was not forwarded to this office for assessment, such as door schedules, electrical, mechanical and hydraulic design documentation or architectural specifications.
FI	-	Further Information is necessary to determine the compliance potential of the building design.
AS	-	Alternative Solution with respect to this Deemed-to-Satisfy Provision is necessary to satisfy the relevant Performance Requirements.
DNC	-	Does Not Comply
Noted	-	BCA Clause simply provides a statement not requiring specific design comment or confirmation

DEEMED TO SATISFY CLAUSE ASSESSMENT SUMMARY

Clause	Comment	Status
SECTION B: STRUCTURE		
PART B1 – STRUCTURAL PROVISIONS		
B1.0: Deemed-to-Satisfy Provisions	Noted	-
B1.1: Resistance to Actions	For Information Only – Structural Engineer to certify.	CRA
B1.2: Determination of Individual Actions	No details of loads imposed upon the building – Structural Engineer to certify.	CRA
B1.4: Determination of Structural Resistance of Materials and Forms of Construction	No details of materials and forms of construction – Structural Engineer, Architect and Manufacturers to certify.	CRA
SECTION C: FIRE RESISTANCE		
PART C1 – FIRE RESISTANCE AND STABILITY		
C1.0: Deemed-to-Satisfy Provisions	Noted	-
C1.1: Type of Construction Required	Type A Construction required, an Alternative Solution is proposed to rationalise the FRL's. See Part 5 of this Report.	**AS See Part 5 of this report.**
C1.2: Calculation of Rise in Storeys	The building has a rise in storeys of 31.	Noted
C1.3: Buildings of Multiple Classification	Type A Construction required.	CRA
C1.4: Mixed Types of Construction	Type A Construction required.	CRA
C1.8: Lightweight Construction	Any lightweight construction to comply with manufacturer's specifications and this clause.	CRA
C1.10: Fire Hazard Properties	No details of the fire hazard properties of the materials and assemblies in the proposed building. Fire hazard indices to comply with Specification C1.10.	CRA
C1.12: Non-combustible Materials	For information only.	Noted
PART C2 - COMPARTMENTATION AND SEPARATION		
C2.0: Deemed-to-Satisfy Provisions	Noted	-
C2.1: Application of Part	Noted	-
C2.2: General Floor Area and Volume Limitations	Based on the following fire compartments compliance is achieved: 1.The basement carparks and loading dock (no restriction); 2.Retail/residential levels ground – Level 2 (due to atrium) and archaeology area (approx. 4300m^2); 3.Each floor of the residential levels 2-29 (no restriction);	Complies
C2.6: Vertical Separation of Openings in External Walls	Vertical separation is not required due to the building being sprinkler protected.	N/A
C2.7: Separation by Fire Walls	Fire walls used to separate fire compartments or classification are to comply with this clause. See Part 5 of this Report.	CRA/**AS See Part 5 of this Report.**
C2.8: Separation of Classifications in the Same Storey	Fire walls are to be used to classifications or the entire fire compartment is to be to the higher FRL's.	CRA
C2.9: Separation of Classifications in Different Storeys	The floors separating the storeys are to have the FRL relative to the storey below, for example the floor above the Class 7a areas are to have a FRL of not less than 120/120/120, the floors above the Class 6 area is required to have a FRL of not less than 180/180/180, unless altered by an Alternative Solution. The Class 2 residential areas on levels 1-2 are required to have the same FRL's as the Class 6 retail portion, given the atrium connecting the different classifications unless altered by an Alternative Solution.	CRA
C2.10: Separation of Lift Shafts	The lift shafts connecting more than 3 storeys are to have the FRL as required by Table 3 of Specification C1.1 of the BCA, unless altered by an Alternative Solution. The lift connecting the ground floor and basement level 1 archaeology only connects two storeys in a single fire compartment	CRA

C2.11: Stairways and Lifts in One Shaft	As required the lifts and the fire-isolated stairways are located within their own shafts.	Complies
C2.12: Separation of Equipment	All lift motor rooms and any boilers contained within the building are to be enclosed in construction with a minimum FRL of 120/120/120, and doorways protected with self-closing -/120/30. The pump room within the level 1 basement is assumed to contain hydrant pumps, as the building is entirely sprinkler protected this room is not required to be fire rated.	CRA
C2.13: Electricity Supply System	The electricity substation, and the switch room if the main switch room sustains emergency equipment required to operate in emergency mode, is required to be separated from the building with construction having a FRL of 120/120/120, and doorways protected with self-closing -/120/30.	CRA
C2.14: Public Corridors in Class 2 and 3 Buildings	The residential corridors on levels 2-25 exceed 40m in length therefore the corridors are to be separated into lengths of less than 40m with smoke proof walls and doorways complying with Clause 2 of BCA Specification C2.5. The smoke proof doors are to swing in both directions. It is proposed to carry out an Alternative Solution to rationalise this requirement.	**AS See Part 5 of this report.**
PART C3 – PROTECTION OF OPENINGS		
C3.0: Deemed-to-Satisfy Provisions	Noted	-
C3.1: Application of Part	Noted	-
C3.2: Protection of Openings in External Walls	Openings within 3m of the side or rear boundaries are required to be protected.	CRA
C3.3: Separation of External Walls and Associated Openings in Different Fire Compartments	Consideration will need to be given to any required separation between fire compartments that arises as a result of any fire compartmentalisation. The following openings have been identified at this stage: 1) The shutter opening from the loading dock area and the western elevation of retail tenancy 3. 2) The glazing between the retail tenancy and the Interpretation centre. The above openings are required to be protected in accordance with BCA Clause C3.4 or a possible alternate solution can be considered.	CRA/**AS See Part 5 of this report.**
C3.4: Acceptable Methods of Protection	Any openings required to be protected are to be protected with in accordance with this Clause.	CRA
C3.5: Doorways in Fire Walls	Any doorways in fire walls are to represent the FRL's of the fire walls in which they are located, i.e. in a 180/180/180 fire wall the doors are to achieve a FRL of not less than -/180/30, except as altered by an Alternative Solution	CRA/**AS See Part 5 of this report.**
C3.6: Sliding Fire Doors	No sliding fire doors proposed.	N/A
C3.7: Protection of Doorways in Horizontal Exits	Currently no horizontal exits proposed.	Noted
C3.8: Openings in Fire-isolated Exits	The doorways opening into the fire isolated exits are required to be protected by -/60/30 self-closing fire doors, except for the final exit doors. As designated on the door schedule the doorways to the fire-isolated stairs comply.	Complies
C3.9: Service Penetrations in Fire-isolated Exits	Fire-isolated exits may not be penetrated by any services except electrical wiring for lighting, intercom, and water supply pipes for fire services.	CRA
C3.10: Openings in Fire-isolated Lift Shafts	The lift doors are to have a FRL of no less than -/60/- and are to be in accordance with AS1735.11.	CRA
C3.11: Bounding Construction: Class 2, 3 and 4 Buildings	The doorways from all sole-occupancy units, and any other rooms, i.e. linen rooms, plant rooms, A/C rooms, garbage rooms, etc. that open into a residential public corridors/lobbies, are to be self-closing -/60/30 fire doors.	CRA

C3.12: Openings in Floors and Ceilings for Services	All services shafts are to have a FRL as specified in Part 4 of this report.	CRA
C3.13: Openings in Shafts	Access to any service shafts is to be through an access panel, or self-closing fire door, having a FRL of not less than -/60/30.	CRA
C3.15: Openings for Service Installations	Installations through fire rated walls, floors and other elements are to be protected via a method having a FRL relative to the wall they are penetrating.	CRA
C3.16: Construction Joints	Joints are to have the required FRL with respect to integrity and insulation relative to the building element they are joining. Structural Engineer to certify.	CRA
C3.17: Columns Protected with Lightweight Construction to Achieve an FRL	It is considered that all columns will be of concrete construction and therefore will have sufficient fire resistance without the need for light weight construction to provide a FRL. Structural Engineer to certify.	CRA
SPECIFICATION C1.1 – FIRE-RESISTING CONSTRUCTION		
2.0: General Requirements	Noted	-
2.1: Exposure to Fire-Source Features	The building is exposed to the western boundary. The remainder of the building is not exposed to any fire source features, however, all non-loadbearing elements within 3m of the western boundary and all load-bearing elements are to have a FRL as specified in Part 4 of this report as the building is required to be of Type A Construction.	Noted
2.2: Fire Protection for a Support of Another Part	Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part must have an FRL not less than that required by other provisions of this Specification; and if located within the same fire compartment as the part it supports have an FRL in respect of structural adequacy the greater of that required for the supporting part itself and for the part it supports.	Noted
2.3: Lintels	A lintel must have the FRL required for the part of the building in which it is situated, unless it does not contribute to the support of a fire door, fire window or fire shutter, and it spans an opening in masonry which is not more than 150 mm thick and is not more than 3m wide if the masonry is non- loadbearing; or not more than 1.8m wide if the masonry is loadbearing and part of a solid wall or one of the leaves of a cavity wall or is located in a non-loadbearing part of the Class 2 portion of the building.	CRA
2.4: Attachments Not to Impair Fire-resistance	All attachments proposed to the external façade of the building are to be of non-combustible materials that are permitted by this clause. There is an area of combustible attachments which are to be dealt with under an Alternative Solution	**AS See Part 5 of this report.**
2.5: General Concessions	If the A/C plant on the roof contains only air-conditioning chillers and is non-combustible the structure is not required to comply with Specification C1.1.	Noted
2.6: Mezzanine Floors: Concession	This concession is not applicable as the mezzanines are stories.	N/A
2.7: Enclosure of Shafts	Fire rated shafts are required to be enclosed, at the top and bottom, with construction having a FRL required for the walls of a non-load-bearing shaft in the same building, unless the shaft extends beyond the roof covering, with the exception of fire isolated stair and lift shafts that are to have lids with a FRL regardless.	CRA
2.8: Carparks in Class 2 and 3 Buildings	Not available due to the rise in storeys.	N/A
3.0: Type A Fire-resisting Construction	Noted	-
3.1: Fire-resistance of Building Elements	The FRL's of all elements are to be in accordance with the FRL's detailed in the Table contained within Part 4.0 of this report, or as altered by an Alternative Solution.	CRA/**AS See Part 5 of this report.**
3.2: Concessions for Floors	The lowest level basement slab and the floors entirely within a single residential unit does not require a FRL.	Noted
3.4: Roof Superimposed on Concrete Slab: Concession	If the roof is super imposed on a concrete slab it will not need a FRL if the superimposed roof is non-combustible	Noted

		and the concrete slab roof complies with Table 3 of Specification C1.1.	
3.5:	Roof: Concession	The roof is not required to achieve an FRL if it has a non-combustible roof covering.	CRA
3.6:	Rooflights	No roof lights currently proposed to development.	N/A
3.7:	Internal Columns and Walls: Concession	The loadbearing internal columns and walls, except fire walls and shaft walls, to the areas of building immediately below a roof may have a reduced FRL of 60/60/60 if the roof above complies with the concession granted by Clause 3.5 of Specification C1.1	CRA
3.9:	Carparks	This concession is noted; however it is not expected to be used due to the size of the building.	Noted
3.10:	Class 2 Buildings: Concession	Not available due to the rise in storeys.	N/A
SPECIFICATION C1.8 - STRUCTURAL TESTS FOR LIGHTWEIGHT CONSTRUCTION			
1.	Scope	Noted	-
2.	Application	Compliance with this clause is required as necessary.	CRA
3.	Tests	Compliance with this clause is required as necessary.	CRA
4.	Test Specimens	Compliance with this clause is required as necessary.	CRA
5.	Test Methods	Compliance with this clause is required as necessary.	CRA
6.	Criteria for Compliance	Compliance with this clause is required as necessary.	CRA
SPECIFICATION C1.10 - FIRE HAZARD PROPERTIES			
1.	Scope	Noted	-
2.	Application	For Information Only	Noted
3.	Floor linings and floor coverings	No details of Fire Hazard Indices of floor lining and floor covering materials proposed.	CRA
4.	Wall and ceiling linings	No details of Fire Hazard Indices of wall and ceiling lining materials proposed.	CRA
5.	Air-handling Ductwork	No details of Fire Hazard Indices of ductwork proposed.	CRA
6.	Lift Cars	No details of Fire Hazard Indices of Lift Car linings proposed.	CRA
7.	Other materials	No details of Fire Hazard Indices of all materials proposed.	CRA
SPECIFICATION C2.5 – SMOKE-PROOF WALLS IN HEALTH-CARE AND AGED CARE BUILDINGS			
1.	Scope	Noted	-
2.	Class 9a Health-Care Buildings	Compliance with this clause is required as necessary.	CRA
4.	Doorways in Smoke-Proof Walls	Compliance with this clause is required as necessary.	CRA
SPECIFICATION C3.4 – FIRE DOORS, SMOKE DOORS, FIRE WINDOWS AND SHUTTERS			
1.	Scope	Noted	-
2.	Fire Doors	Compliance with this clause is required.	CRA
3.	Smoke Doors	Compliance with this clause is required as necessary.	CRA/**AS See Part 5 of this report.**
4.	Fire Shutters	Compliance with this clause is required as necessary.	CRA
5.	Fire Windows	Compliance with this clause is required as necessary.	CRA
SPECIFICATION C3.15 – PENETRATION OF WALLS, FLOORS AND CEILINGS BY SERVICES			
1.	Scope	Noted	-
2.	Application	Compliance with this clause is required as necessary.	CRA
3.	Metal Pipe Systems	Compliance with this clause is required as necessary.	CRA
4.	Pipes Penetrating Sanitary Compartments	Compliance with this clause is required as necessary.	CRA
5.	Wires and Cables	Compliance with this clause is required as necessary.	CRA
6.	Electrical Switches and Outlets	Compliance with this clause is required as necessary.	CRA
7.	Fire-stopping	Compliance with this clause is required as necessary.	CRA

SECTION D: ACCESS AND EGRESS			
PART D1 – PROVISION FOR ESCAPE			
D1.0:	Deemed-to-Satisfy Provisions	Noted	-
D1.1:	Application of Part	Noted	-
D1.2:	Number of Exits Required	As a building with an effective height exceeding 25m all storeys are required to have access to two exits. The stair from LMR01 at Level 30 (above the roof) is provided with a single stair which has been considered as a stair in a path of travel. This stair travels to the	CRA/**AS See Part 5 of this report.**

SECTION D: ACCESS AND EGRESS		
	Level 28 at which point egress is available in two directions to the two exits. Please refer to Part 5 in relation to the Bar area.	
D1.3: When Fire-Isolated Stairways and Ramps are Required	The stairs connecting the upper levels and the basement levels are required to be fire-isolated stairways. The stairways as shown in shafts are capable of being fire-isolated exits.	CRA
D1.4: Exit Travel Distances	The plenum areas in the basements have travel distances of approximately 45m in lieu of the maximum 40m – this is to be justified in an Alternative Solution. The travel distance from the south west corner of Basement 01 appears to be 41m in lieu of 40m to the fire door of FS02 – this is to be justified in an Alternative Solution. The travel distance from the swimming pool terrace clouded appears to be in excess of 40m to the fire doors of both exits – this is to be justified in an Alternative Solution. Levels 1 and 2 – Unit Type 1 has travel distances of approximately 7.5m to a point of choice in lieu of the maximum 6m – this is to be justified in an Alternative Solution. Levels 3-20 – Unit Types 16, 17 and 19 have travel distances of up to 8.7m to a point of choice in lieu of the maximum 6m – this is to be justified in an Alternative Solution. Level 12 – Unit Types 8A and 23 have travel distances of up to 9m to a point of choice in lieu of the maximum 6m – this is to be justified in an Alternative Solution. It has been assumed for this point that egress over the roof terrace is not available, should access to the roof terrace be available at all times then this item is not a non-compliance – this is to be justified in an Alternative Solution. Levels 13-25 – Unit Types 8a and 24 have travel distances of up to 9.8m to a point of choice in lieu of the maximum 6m – this is to be justified in an Alternative Solution. Levels 21-25 – Unit Type 27 has travel distances of up to 9m to a point of choice in lieu of the maximum 6m – this is to be justified in an Alternative Solution. Levels 21-26 – Unit Type 26A has travel distances of approximately 7.5m to a point of choice in lieu of the maximum 6m – this is to be justified in an Alternative Solution. Unless provided with an additional exit pathway the travel distance from the Bar terrace on Level 26 appears to be 25.5m to a point-of-choice in lieu of 20m– this is to be justified in an Alternative Solution. Level 27 – Unit Type 35A has travel distances of up to 7m to a point of choice in lieu of the maximum 6m – this is to be justified in an Alternative Solution. It is acknowledged that the doorway to Unit 28.6 at Level 28 is approx. 7m in lieu of 6m to the nearest fire stair – this is to be justified in an Alternative Solution.	**FI/AS** **See Part 5 of this report.**
D1.5: Distance Between Alternative Exits	The distance between the alternative exits on Levels 1 and 2 from the Class 2 units is 58m in lieu of the	**FI/AS**

SECTION D: ACCESS AND EGRESS		
	maximum 45m. This is to be justified in an Alternative Solution. The distance between the alternative exits from the plenums within the basement carpark levels is approximately 90m in lieu of the maximum 60m, and to the pool area – this is to be justified in an Alternative Solution. It is noted that in considering this clause that whilst all areas are required to be provided with two exits based on the building exceeding 25m in effective height just because two exits are provided does not automatically cause these exits to be alternate exits and therefore it has been considered that where alternate exits are not required to achieve a point of choice the two exits may be within 9m of one another.	**See Part 5 of this report.**
D1.6: Dimensions of Exits and Paths of Travel to Exits	With a possible population of 547 people to Level 1 there is insufficient aggregate exit width from this level. Please also refer to the Bar area in discussed in Part 5 of this report.	**FI** **See Part 5 of this report**
D1.7: Travel via Fire-Isolated Exits	It is considered that fire-isolated stairways 1 and 4 at the northern end of the building discharge within the building– this is to be justified in an Alternative Solution. Openings into retail 3 to be provided with internal drenchers in accordance with Clause C3.4 to protect the discharge path of the fire-isolated exits. The plant room on level 27 must open directly into an airlock which opens into the fire-isolated passage way, unless the plant room is for the stair pressurisation system associated with the fire-isolated stairway, in this case the plant room may open into the fire-isolated stairway. If the “fire sprinkler room” located within the basement level 1 is to contain hydrant pumps, the door is to open directly through an airlock into the fire-isolated stairway.	**AS/ FI** **See Part 5 of this report**
D1.9: Travel by Non Fire-Isolated Stairways or Ramps	The following stairs have been considered as required non-fire-isolated stairs – Stair 7 from room B1.14 and Stair 10 from room M.01. Travel via both of these stairs is satisfactory.	Complies
D1.10: Discharge from Exits	The discharge points of the exits are satisfactory.	Compiles
D1.11: Horizontal Exits	No horizontal exits currently proposed.	N/A
D1.12: Non-Required Stairways, Ramps or Escalators	Stair 5 from room B1.13 been considered as a non-required stair.	Complies
D1.13: Number of Persons Accommodated	Based on the floor areas of each area and the ratio give in BCA Table D1.13 the population loads have been calculated: Please also refer to the Bar area in discussed in Part 5 of this report.	**FI** **Refer to Part 5 of this report.**
D1.14: Measurement of Distances	Information only.	Noted
D1.15: Method of Measurement	Information only.	Noted
D1.16: Plant Rooms and Lift Motor Rooms: Concession	A ladder may be provided to the plant room on the roof in accordance with this Clause.	Noted
D1.17: Access to Lift Pits	Access to the lift pit is assumed to be through the bottom landing doors as the pit is assumed to be less than 3m deep.	CRA
PART D2 – CONSTRUCTION OF EXITS		
D2.0: Deemed-to-Satisfy Provisions	Noted	-
D2.1: Application of Part	Noted	-
D2.2: Fire-Isolated Stairways and Ramps	It is assumed that the fire isolated stairways will be constructed of reinforced concrete and therefore comply. The structural engineer is to certify that the shaft will withstand a local failure.	CRA
D2.3: Non-Fire-Isolated Stairways and Ramps	The non-fire-isolated stairways are to comply with this clause.	CRA

SECTION D: ACCESS AND EGRESS		
D2.4: Separation of Rising and Descending Stair Flights	Rising and descending stairs comply.	Complies
D2.7: Installations in Exits and Paths of Travel	Electrical and comms cupboards located in corridors and in the basement carpark are to be enclosed in non-combustible construction and smoke sealed.	CRA
D2.8: Enclosure of Space Under Stairs and Ramps	No enclosures shown under stairways.	Complies
D2.9: Width of Stairways and Ramps	The stairways are to be a minimum of 1m wide measured clear of handrails.	CRA
D2.10: Pedestrian Ramps	Ramps are considered to be walkways with gradients of steeper than 1:20. Ramps to be considered by the access consultant.	Noted
D2.11: Fire-Isolated Passageways	The fire-isolated passageways are to have a FRL of no less than that required for the fire-isolated stairway that they serve. The FRL may be measured from the outside of the passageway only.	CRA
D2.12: Roof as Open Space	There are no exits discharging to a roof.	Complies
D2.13: Goings and Risers	Stair geometry to all stairs throughout the development to comply with Table D2.13.	CRA
D2.14: Landings	Landings are to comply with this Clause and have a non-slip finish.	CRA
D2.15: Thresholds	The threshold of a doorway must not incorporate a step any closer to the doorway than the width of the door leaf, unless the door opens to open space, an external stairway or external balcony and the door sill is not more than 190mm above the finished floor level. Not all door thresholds have been indicated at this stage. Thresholds to comply with this clause.	CRA
D2.16: Balustrades or Other Barriers	Balustrades are required to be 1m above the floor of any balcony, path or the like. Details of the dimensions and configurations of the balustrading to the stairways and balconies have not been supplied at this stage. If the windows to the units are openable and more than 4m above the surface beneath the sill height is to be a minimum 865m above the finished floor level and any horizontal or near horizontal elements between 150mm and 760mm above the floor must not facilitate climbing.	CRA
D2.17: Handrails	Handrails are to be provided to a least one side of all stairways and both sides where required for disabled access.	CRA
D2.18: Fixed Platforms, Walkways Stairways and Ladders	This concession applies to the A/C plant on the roof, access to the plant room may comply with AS1657 in lieu of Clauses D2.13, D2.14, D2.16 & D2.17 of the BCA	CRA
D2.19: Doorways and Doors	Exit doors are swinging doors, or where sliding doors are to comply with this clause.	**FI** **See Part 5 of this Report**
D2.20: Swinging Doors	All swinging doors in a required exit for forming part of a required exit are to swing in the direction of egress. The following doors are not shown as swinging in the direction of egress. 1) At least 2 exit doors from the retail tenancies 1 and 2 leading to Marsden Street; 2) Level 26 Bar tenancy doorway. Refer to Part 5 of this report.	**AS/FI** **See Part 5 of this Report**
D2.21: Operation of Latch	Latching mechanisms to required exit doors are to be readily openable with a single handed downward or pushing motion, as are the latches to doors in a path of travel and are to comply with this clause.	**FI** **See Part 5 of this Report**
D2.22: Re-entry from Fire-Isolated Exits	Re-entry from the fire-isolated stairway to comply with this clause, to be confirmed.	CRA
D2.23: Signs on Doors	Required signage is to be located on all fire and smoke doors stating “Fire Safety Door, Do Not Obstruct, Do Not Keep Open” and the discharge door from the fire isolated stairways are to state “Fire Safety Door – Do Not Obstruct” in capital letters not less than 20mm in height.	CRA

SECTION D: ACCESS AND EGRESS		
NSW D2.101: Doors in Path of Travel in a Place of Public Entertainment	No entertainment venues considered to be provided in the building.	Noted
PART D3 - ACCESS FOR PEOPLE WITH A DISABILITY		
This Part has not been assessed for this report, please see third party access assessment report.		

SECTION E: SERVICES AND EQUIPMENT		
PART E1 – FIRE FIGHTING EQUIPMENT		
E1.0: Deemed-to-Satisfy Provisions	Noted	-
E1.3: Fire Hydrants	The building is to be provided with fire hydrants in accordance with this clause and AS2419.1.	**FI See Part 5 of this report**
E1.4: Fire Hose Reels	Fire hose reels are required in accordance with AS2441. An alternative solution to remove the Fire Hose Reels from the residential portions of the building has been proposed.	**AS/ FI See Part 5 of this report**
E1.5: Sprinklers	The entire building is to be provided with sprinklers protection.	**AS/ FI See Part 5 of this report**
E1.6: Portable Fire Extinguishers	The building is to be provided with extinguishers in accordance with this clause and AS2444.	CRA
E1.8: Fire Control Centres	The building is required to be provided with a fire control centre.	**AS/ DNC See Part 5 of this report**
E1.9: Fire Precautions During Construction	Information only. Whilst the building is under construction there is to be not less than one fire extinguisher provided at all times to each storey. Once the building has reached an effective height of over 12m the hydrants and hose reels and booster connections must be operational to all levels except the 2 uppermost storeys under construction.	Noted
SPECIFICATION E1.5 - FIRE SPRINKLER SYSTEMS		
1. Scope	Noted	-
2. Adoption of AS 2118	The system is to comply with this clause, certification to be provided.	CRA
3. Separation of Sprinklered and Non-Sprinklered Areas	All areas to be sprinkler protected.	CRA
4. Protection of Openings	The system is to comply with this clause, certification to be provided.	CRA
5. Fast Response Sprinklers	The system is to comply with this clause, certification to be provided.	CRA
6. Sprinkler Valve Enclosures	The system is to comply with this clause, certification to be provided.	CRA
7. Water Supply	The system is to comply with this clause, certification to be provided.	CRA
8. Building Occupant Warning System	The system is to comply with this clause, certification to be provided.	CRA
9. Connection to Other Systems	The system is to comply with this clause, certification to be provided.	CRA
10. Anti-tamper Devices	The system is to comply with this clause, certification to be provided.	CRA
11. Sprinkler Systems in Carparks	The system is to comply with this clause, certification to be provided.	CRA
SPECIFICATION E1.8 - FIRE CONTROL CENTRES		
1. Scope	Noted	-
2. Purpose and Content	The fire control centre is to comply with this clause, certification to be provided.	CRA
3. Location of Fire Control Centre	The fire control centre could be interpreted to be located so as to require a rise from the street of more than 300mm.	**AS/ DNC See Part 5 of this report**
4. Equipment Not Permitted within a Fire Control Centre	The fire control centre is to comply with this clause, certification to be provided.	CRA
5. Ambient Sound Level for a Fire Control Centre	The fire control centre is to comply with this clause, certification to be provided.	CRA
6. Construction of a Fire Control Room	The fire control centre is to be located within a room as the building has an effective height of more than 50m.	CRA

SECTION E: SERVICES AND EQUIPMENT			
		The construction of the room is to comply with this clause.	
7.	Protection of Openings in a Fire Control Room	The fire control centre is to comply with this clause, certification to be provided.	CRA
8.	Doors to a Fire Control Room	The fire control centre is to comply with this clause, certification to be provided.	CRA
9.	Size and Contents of a Fire Control Room	The fire control centre is to comply with this clause, certification to be provided.	CRA
10.	Ventilation and Power Supply for a Fire Control Room	The fire control centre is to comply with this clause, certification to be provided.	CRA
11.	Sign for a Fire Control Room	The fire control centre is to comply with this clause, certification to be provided.	CRA
12.	Lighting for a Fire Control Room	The fire control centre is to comply with this clause, certification to be provided.	CRA
PART E2 – SMOKE HAZARD MANAGEMENT			
E2.0:	Deemed-to-Satisfy Provisions	Noted	-
E2.1:	Application of Part	Noted	-
E2.2:	General Requirements (including Tables E2.2a and E2.2b)	The fire-isolated stairways to all levels are to be pressurised in accordance with AS1668.1. It is proposed at this stage to prepare an alternative solution to remove the pressurisation system from the basement levels. Under Clause E1.5 the entire building is to be sprinkler protected. The residential areas are to be provided with an automatic smoke detection and alarm system compliant with Specification E2.2a. The retail, and assembly spaces are to be provided with a zone smoke control system in accordance with AS1668.1. It is proposed at this stage to prepare an alternative solution to remove this requirement. The air-conditioning to the Class 9b parts are to automatically shut down on fire trip. The carparking levels are to have a mechanical system in accordance with AS1668.2 and Section 5 of AS1668.1 except as modified by this clause in the BCA.	**FI/AS See Part 5 of this report**
SPECIFICATION E2.2a – SMOKE DETECTION AND ALARM SYSTEMS			
1.	Scope	Noted	-
2.	Type of System	The system is to comply with this clause, certification to be provided.	CRA
3.	Smoke Alarm System	The system is to comply with this clause as necessary, certification to be provided. Care is to be taken to ensure sufficient smoke alarms are provided within the residential units, in particular where there is more than 1 bedroom.	CRA
4.	Smoke Detection System	The system is to comply with this clause as necessary, certification to be provided.	CRA
5.	Smoke Detection for Smoke Control Systems	The system is to comply with this clause, certification to be provided.	CRA
6.	Building Occupant Warning System	The system is to comply with this clause, certification to be provided.	CRA
7.	System Monitoring	The system is to comply with this clause, certification to be provided.	CRA
PART E3 – LIFT INSTALLATIONS			
E3.0:	Deemed-to-Satisfy Provisions	Noted	-
E3.2:	Stretcher Facility in Lifts	The lifts appear to be of sufficient size to permit a stretcher facility.	CRA
E3.3:	Warning Against Use of Lifts in Fire	Warning signage against using the lifts in the event of a fire must be provided in accordance with this Clause.	CRA
E3.4:	Emergency Lifts	At least 2 emergency lifts are required to serve the storeys served by the passenger lifts, and at least 1 emergency lift is required in each shaft. The emergency	**FI/CRA See Part 5 of this report**

SECTION E: SERVICES AND EQUIPMENT		
	lift is to comply with AS1735.2 or Appendix A of AS1735.1. It is noted there is one fire lift, and additional emergency lift is to be indicated.	
E3.5: Landings	Lift landing dimensions are to comply with this Clause	CRA
E3.6: Passenger Lifts	The lifts are to comply with AS1735.12. Lift dimensions comply.	CRA
E3.7: Fire Service Controls	Fire controls are required to the lifts.	CRA
PART E4 – EMERGENCY LIGHTING, EXIT SIGNS AND WARNING SYSTEMS		
E4.0: Deemed-to-Satisfy Provisions	Noted	-
E4.2: Emergency Lighting Requirements	Emergency lighting is to be installed in every fire-isolated exit, each floor level, common corridor and the like.	CRA
E4.3: Measurement of Distance	Information Only	Noted
E4.4: Design and Operation of Emergency Lighting	To comply with AS 2293.1-2005.	CRA
E4.5: Exit Signs	Exits signs are to be provided above or adjacent to a door providing egress as well as directional signage throughout the entire development where necessary. Based on the RCP's additional exit and directional signage is required to be provided.	CRA
E4.6: Direction Signs	Where an exit is not readily apparent a directional sign is to be installed indicating the direction of egress being primarily within the carpark areas. Based on the RCP's additional exit and directional signage is required to be provided.	CRA
E4.7: Class 2 and 3 Buildings and Class 4 Parts: Exemptions	For Information Only	Noted
E4.8: Design and Operation of Exit Signs	To comply with AS 2293.1-2005.	
E4.9: Sound Systems and Intercom Systems for Emergency Purposes	A SSISEP is required in the building.	**AS See Part 5 of this report**

SECTION F: HEALTH AND AMENITY		
PART F1 – DAMP AND WEATHERPROOFING		
F1.0: Deemed-to-Satisfy Provisions	Noted	-
F1.1: Stormwater Drainage	Stormwater drainage to comply with AS 3500.3.2.	CRA
F1.5: Roof Coverings	The roof coverings are to comply with this Clause.	CRA
F1.6: Sarking	The sarking is to comply with AS 4200.	CRA
F1.7: Water Proofing of Wet Areas in Buildings	Waterproofing to wet areas to comply with AS 3740.	CRA
F1.9: Damp-proofing	Moisture is to be prevented from reaching the walls above a damp-proof course, and the underside of the suspended floors.	CRA
F1.10: Damp-proofing of Floors on the Ground	A vapour barrier in accordance with AS 2870 must be installed.	CRA
F1.11: Provision of Floor Wastes	In the residential units the bathrooms are to be graded to a floor waste.	CRA
F1.13: Glazed Assemblies	Glazed assemblies are to comply with AS 2047 and AS 1288.	CRA
PART F2 – SANITARY AND OTHER FACILITIES		
F2.0: Deemed-to-Satisfy Provisions	Noted	-
F2.1: Facilities in Residential Buildings (including Table F2.1)	Each residential unit is shown to have access to a kitchen, bathroom and laundry.	Complies
F2.2: Calculation of Number of Occupants and Facilities	Based on the floor areas of each area and the ratio give in BCA Table D1.13 the following population loads have been calculated: • Basement Levels – the population of the basement levels is calculated to be 110, however it is considered the transitory population from carpark levels, is calculated to be 100 people per storey moving through these areas. • Ground retail – less than 100 people per tenancy/area.	Noted

SECTION F: HEALTH AND AMENITY		
	• The population of the general residential areas are considered to be less than 100 persons per level. Level 1 - • Business centre on Level 1 – possible 450 people based on floor area and possible ratio of 1 person/m^2. • Amenities area – considered to be analogous to a gym – 75 people based on floor area and possible ration of 1 person/$3m^2$ • Residential area is considered to accommodate 22 people based on there being 2 people per bedroom This gives a total potential population of 547 people on Level 1.	
F2.3: Facilities in servi to 9 Buildings (including Table F2.3)	Ground floor - Assuming that, except for the café, the remaining retail tenancies will be non-food related tenancies the proposed sanitary facilities are described in Part 5 of this report. Level 1 – Assuming that staff are catered for on the mezzanine floor, the toilets to this level cater are described in Part 5 of this report. Level, 26 – Bar - Proposed sanitary facilities are described in Part 5 of this report.	**FI** **See Part 5 of this report**
F2.4: Accessible Sanitary Facilities (including Table F2.4)	This Clause has not been assessed for this report, please see third party access assessment report.	
F2.5: Construction of Sanitary Compartments	Where the pans to the bathroom areas are within 1.2m of the doorway with the doorway swinging inwards, the doors are to be removable from outside the bathroom.	CRA
F2.6: Interpretation: Urinals and Washbasins	Information only.	Noted
PART F3 – ROOM SIZES		
F3.0: Deemed-to-Satisfy Provisions	Noted	-
F3.1: Height of Rooms and Other Spaces	Habitable room heights are to be a minimum of 2.4m, to the kitchen, laundry and passageways 2.1m, in the residential areas of the building. The commercial, retail and assembly areas are to have a minimum ceiling height of 2.4m.	CRA
PART F4 – LIGHT AND VENTILATION		
F4.0: Deemed-to-Satisfy Provisions	Noted	-
F4.1: Provision of Natural Light	Natural light is required to all habitable rooms in the Class 2 flats.	Noted
F4.2: Methods and Extent of Natural Lighting	Natural light is to be provided through windows that have an aggregate light transmitting area of 10% of the floor area of the room.	CRA
F4.3: Natural Light Borrowed From Adjoining Room	Natural light may be borrowed through the balcony doors to service the studies within Class 2 units that are not provided with windows. The balcony doors are to have an aggregate light transmitting area of not less than 10% of the combined lounge room/kitchen and study. Further assessment will be required once the plans are updated indicating the size of the openings.	**FI** **See Part 5 of this report**
F4.4: Artificial Lighting	Artificial lighting is to comply with AS1680.0	CRA
F4.5: Ventilation of Rooms	Natural or mechanical ventilation, complying with AS1668.1 is to be provided to the residential areas, mechanical ventilation is assumed to be provided to the ground floor level shops to comply with AS1668.2	CRA
F4.6: Natural Ventilation	Natural ventilation where proposed is to be via windows having an aggregate opening of not less than 5% of the floor area of the room.	CRA
F4.7: Ventilation Borrowed From Adjoining Room	Natural ventilation may be borrowed through the balcony doors to service the studies within Class 2 units that are not provided with windows. The balcony doors are to have a ventilating area of not less than 5% of the combined lounge room/kitchen and study. Further assessment will be required once the plans are updated indicating the size of the openings.	CRA

SECTION F: HEALTH AND AMENITY		
F4.8: Restriction on Position of Water Closets and Urinals	It is assumed that all bathrooms, ensuites and WC's will be mechanically exhausted.	CRA
F4.9: Airlocks	It is assumed that all bathrooms, ensuites and WC's will be mechanically exhausted.	CRA
F4.11: Carparks	Ventilation complying with AS 1668.2-1991 is to be provided to the carpark.	CRA
F4.12: Kitchen Local Exhaust Ventilation	No commercial kitchens shown at this stage.	Noted
PART F5 – SOUND TRANSMISSION AND INSULATION		
F5.0: Deemed-to-Satisfy Provisions	Noted	-
F5.1: Application of Part	Noted	-
F5.2: Determination of Airborne Sound Insulation Ratings	For Information Only	Noted
F5.3: Determination of Impact Sound Insulation Ratings	For Information Only	Noted
F5.4: Sound Insulation Rating of Floors	The floor separating the sole occupancy units must have a $R_w + C^tr$ (airborne) not less than 50 and an $L_{n,w} + C_1$ (impact) not more than 62 if it separates SOU's or SOU's from plant or other public areas. Acoustic Engineer to certify.	CRA
F5.5: Sound Insulation Rating of Walls	The walls separating the sole occupancy units must have a $R_w + C^tr$ (airborne) not less than 50, and an R_w not less than 50 where the wall separates a SOU and public area or plant room. Doors to SOU's are to also have an R_w not less than 30. Acoustic Engineer to certify.	CRA
F5.6: Sound Insulation Rating of Services	If a soil or waste pipe passes through more than one unit the pipe must be separated from the rooms with construction that has a $R_w + C^tr$ (airborne) not less than 45 if adjacent to a habitable room, or 25 if adjacent to a kitchen or other room. Acoustic Engineer to certify.	CRA
F5.7: Sound Isolation of Pumps	For information only.	Noted
SPECIFICATION F5.2 – SOUND INSULATION FOR BUILDING ELEMENTS		
1. Scope	Noted	-
2. Construction Deemed-to-Satisfy	Acoustic Engineer to certify.	CRA
SPECIFICATION F5.5 – IMPACT SOUND – TEST OF EQUIVALENCE		
1. Scope	Noted	-
2. Construction to be Tested	Acoustic Engineer to certify.	CRA
3. Method	Acoustic Engineer to certify.	CRA

SECTION G: ANCILLARY PROVISIONS		
PART G1 - MINOR STRUCTURES AND COMPONENTS		
G1.0: Deemed-to-Satisfy Provisions	Noted	-
G1.1: Swimming Pools	Swimming pools in NSW are to provided with safety fencing as required by the Swimming Pools Act 1992, and a water recirculation system in a swimming pool must comply with AS1926.3, with the exception of spas which must comply with AS1926.3 except that the specified distance between two outlets connected to a common line may be not less than 600mm.	CRA
G1.2: Refrigerated Chambers, Strong-Rooms and Vaults	No Refrigerated Chambers, Strong-Rooms and Vaults proposed at this stage.	Noted
NSW G1.101: Provision for Cleaning of Windows	As the building is greater than 3 storeys high provision for the cleaning of the windows in a safe manner is required. Thus provision for cleaning of windows to all elevations of the building will be required. Full details of means of window cleaning to be provided.	CRA
PART G3 - ATRIUM CONSTRUCTION		
G3.1: Atriums Affected by this Part	Based on the atrium only connecting ground, level 1 and level 2 the atrium only connects three storeys in a sprinkler protected building. Therefore compliance with this part is not required. It is noted that the mezzanine area is not part of the fire compartment shared with the atrium as it is part of the loading dock area fire compartment and provides back-of-house facilities, or potentially its own fire	Noted

SECTION G: ANCILLARY PROVISIONS		
	compartment. Therefore the mezzanine level is not connected to the atrium.	

SECTION I: MAINTENANCE		
PART I1 – EQUIPMENT AND SAFETY INSTALLATIONS		
I1.0: Deemed-to-Satisfy Provisions	Noted	-
NSW I1.1: Essential Fire Safety Measures	Essential fire or other safety measures must be maintained and certified on an ongoing basis.	Noted

SECTION J: ENERGY EFFICIENCY (Class 3 and 5-9)		
PART J0 – ENERGY EFFICIENCY		
J0.1: Application of Section J	Noted	-
J0.2: Heating & Cooling Loads of SOU's to Class 2 & 4 parts	Not applicable in NSW.	Noted
J0.3: Ceiling Fans	Not applicable in NSW.	Noted
PART J1 – BUILDING FABRIC		
J1.0: Deemed-to-Satisfy Provisions	Noted	-
J1.1: Application of Part	This part is applicable to the Class 6 retail areas, and Class 9b areas. The thermal envelope of the conditioned areas include all floors, walls and ceilings where shared with the outside and any unconditioned areas of the building such as the lift shaft, etc.	Noted
J1.2: Thermal Construction General	No details insulation must comply with AS4859.1 and be installed as per this clause. To be further assessed at CC Stage.	CRA
J1.3: Roof and Ceiling Construction	No details, the R-value as specified in Table J1.3 is to be provided, the minimum R-value will be 3.2 but may be increased based on adjustment factors of Table J1.3b. To be further assessed at CC stage.	CRA
J1.4: Roof Lights	No rooflights proposed.	CRA
J1.5: Walls	The walls forming part of the thermal envelope are to comply with Table J1.5a. This will require an r-value of up to 2.8 in the walls. To be further assessed at CC stage.	CRA
J1.6: Floors	The slab separating the ground floor retail area from the basement level carparks forms part of the thermal envelope of these areas, the floor will require an r-value of up to 2. To be further assessed at CC stage.	CRA
PART J2 – GLAZING		
J2.0: Deemed-to-Satisfy Provisions	Noted	-
J2.1: Application of Part	This part is applicable to the Class 6 retail areas, and Class 9b areas. The thermal envelope of the conditioned areas include all floors, walls and ceilings where shared with the outside and any unconditioned areas of the building such as the lift shaft, etc.	Noted
J2.4: Glazing	Insufficient details of glazing proposed for use at this stage, to be further assessed at CC stage.	Noted
J2.5: Shading	Shading is to be considered were applicable.	Noted
PART J3 – BUILDING SEALING		
J3.0: Deemed-to-Satisfy Provisions	Noted	-
J3.1: Application of Part	This part is applicable to the Class 6 retail areas, and Class 9b areas. The thermal envelope of the conditioned areas include all floors, walls and ceilings where shared with the outside and any unconditioned areas of the building such as the lift shaft, etc.	Noted
J3.2: Chimneys and Flues	No chimneys or flues proposed.	N/A
J3.3: Roof Lights	No rooflights proposed.	N/A
J3.4: External Windows and Doors	The windows and doors must be sealed, or the windows may comply with AS2047. Main entry doors to the retail areas are to be self-closing.	CRA
J3.5: Exhaust Fans	The exhaust fans to the sanitary facilities in the this portion of the building, and any other miscellaneous exhaust fans to other conditioned spaces, are to pre-fitted with a sealing device, such as a self-closing damper of the like.	CRA

SECTION J: ENERGY EFFICIENCY (Class 3 and 5-9)		
J3.6: Construction of Roofs, Walls and Floors	The roof, walls, floors and any other openings, such as window or doors, are to be constructed to minimise air leakage by being enclosed by internal lining systems that are close fitting at ceiling, wall and floor junctions or are sealed by caulking, skirting, architraves, cornices or the like.	CRA
J3.7: Evaporative Coolers	Evaporative coolers are not proposed to be used in these buildings.	CRA
PART J4 – AIR MOVEMENT		
Deleted	Part J4 deleted in BCA2012	-
PART J5 – AIR-CONDITION AND VENTILATION SYSTEMS		
J5.0: Deemed-to-Satisfy Provisions	Noted	-
J5.2: Air-conditioning and Ventilation Systems	Air-conditioning and mechanical ventilation systems to comply with this clause, certification to be provided by mechanical engineer at the CC stage.	CRA
J5.3: Time Switch	Air-conditioning and mechanical ventilation systems to comply with this clause, certification to be provided by mechanical engineer at the CC stage.	CRA
J5.4: Heating and Chilling Systems	Air-conditioning to comply with this clause, certification to be provided by mechanical engineer at the CC stage.	CRA
J5.5: Miscellaneous Exhaust Systems	Exhaust systems to comply with this clause, certification to be provided by mechanical engineer at the CC stage.	CRA
PART J6 – ARTIFICIAL LIGHTING AND POWER		
J6.0: Deemed-to-Satisfy Provisions	Noted	-
J6.1: Application of Part	This part is applicable to all areas of the building.	Noted
J6.2: Artificial Lighting	Interior artificial lighting is to comply with this clause. Electrical engineer to certify at the CC stage.	CRA
J6.3: Interior Artificial Lighting and Power Control	Lighting controls are to be in accordance with this clause, which sets requirements on location of switching and sets limits on floor areas controlled by a switch.	CRA
J6.4: Interior Decorative and Display Lighting	Lighting falling under this clause is to be separately switched from other lighting, be under a manual switch and controlled with a time switch.	CRA
J6.5: Artificial Lighting Around the Perimeter of a Building	Perimeter lighting is to be controlled by a daylight sensor or time switch and where it exceeds 100W have an average light source density of 60 Lumens/W or be controlled by a motion sensor complying with Specification J6.	CRA
J6.6: Boiling Water and Chilled Water Storage Units	The power supply to a fixed boiling water or chilled water storage unit must be controlled by a time switch in accordance with Specification J6.	CRA
PART J7 – HOT WATER SUPPLY		
J7.0: Deemed-to-Satisfy Provisions	Noted	-
J7.2: Hot Water Supply	The hot water supply systems must be designed and installed in accordance with Section 8 of AS3500.4.	CRA
J7.3: Swimming Pool Heating and Pumping	Any heating for a swimming pool must be in accordance with this clause which sets out requirements for heating sources.	CRA
J7.4: Spa Pool Heating and Pumping	Spa pool heating and pumping is required to be in accordance with this clause.	CRA
PART J8 – ACCESS FOR MAINTENANCE		
J8.0: Deemed-to-Satisfy Provisions	Noted	-
J8.1: Application of Part	This part is applicable to all areas except within the units.	Noted
NSW J8.2: Access for Maintenance	Access for maintenance must be provided to all services and their components including time switches, motion detectors, thermostats, outside air dampers, reflectors, lenses and diffusers of light fittings, heat transfer equipment and adjustable or motorised shading devices.	CRA
J8.3: Facilities for Energy Monitoring	A building with a floor area of more than 500m^2 must have an energy monitoring facility to record the consumption of gas and electricity. A building with a floor area of more than 2500m^2 must have the facility to individually record the consumption of air conditioning plant, artificial lighting, appliance	CRA

SECTION J: ENERGY EFFICIENCY (Class 3 and 5-9)		
	power, central hot water supply, lifts, escalators and other ancillary plant .	

SECTION J: ENERGY EFFICIENCY (Class 2)		
NSW PART J(A)1 – BUILDING FABRIC		
NSW J(A)1.0: Deemed-to-Satisfy Provisions	Reference to BCA2009 is required to meet BCA2012 provisions	Noted
NSW J(A)1.1: Application of Part	Applies to the new Class 2 portions where thermal insulation is required as a DA Condition.	Noted
NSW J(A)1.2: Compliance with BCA Provisions	To be included in the specification to AS/NZS4859.1 and Clause J1.2, for the new portion of the building. The installation is to be certified by an appropriate consultant.	CRA
NSW PART J(A)2 – BUILDING SEALING		
NSW J(A)2.0: Deemed-to-Satisfy Provisions	Noted	-
NSW J(A)2.1: Application of Part	This part is applicable to the Class 2 portions of the building, excluding any rooms where a building ventilation opening is necessary for the safe operation of a gas appliance and portions of the building that cannot be fully enclosed.	Noted
NSW J(A)2.2: Compliance with BCA Provisions	Compliance is to be achieved with Clauses J3.2, J3.4, J3.5 and J3.6.	Noted
J3.3: Roof Lights	No rooflights.	Noted
J3.4: External Windows and Doors	The windows and doors must be sealed, or the windows may comply with AS2047, doors are still to be sealed.	CRA
J3.5: Exhaust Fans	The exhaust fans to the sanitary facilities in the this portion of the building, and any other miscellaneous exhaust fans to other conditioned spaces, are to pre-fitted with a sealing device, such as a self-closing damper of the like.	CRA
J3.6: Construction of Roofs, Walls and Floors	The roof, walls, floors and any other openings, such as window or doors, are to be constructed to minimise air leakage by being enclosed by internal lining systems that are close fitting at ceiling, wall and floor junctions or are sealed by caulking, skirting, architraves, cornices or the like.	CRA
NSW PART J(A)3 – AIR-CONDITIONING AND VENTILATING SYSTEMS		
NSW J(A)3.0: Deemed-to-Satisfy Provisions	Noted	-
NSW J(A)3.1: Application of Part	Noted	-
NSW J(A)3.2: Compliance with BCA Provisions	Compliance is to be achieved with Clauses J5.2, J5.3, J5.4 and J5.5.	Noted
J5.2: Air-conditioning and Ventilation Systems	Compliance required, design certification to be provided by Mechanical Engineer.	CRA
J5.3: Time Switch	Compliance required, design certification to be provided by Mechanical Engineer.	CRA
J5.4: Heating and Chilling Systems	Compliance required, design certification to be provided by Mechanical Engineer.	CRA
J5.5: Miscellaneous Exhaust Systems	Compliance required, design certification to be provided by Mechanical Engineer.	CRA
NSW PART J(A)4 – HOT WATER SUPPLY		
NSW J(A)4.0: Deemed-to-Satisfy Provisions	Noted	-
NSW J(A)4.1: Application of Part	Noted	-
NSW J(A)4.2: Compliance with BCA Provisions	The hot water supply system must comply with Clause J7.2.	Noted
J7.2: Hot Water Supply	The hot water supply systems must be designed and installed in accordance with Section 8 of AS3500.4.	CRA
NSW PART J(A)5 – ACCESS FOR MAINTENANCE		
NSW J(A)5.0: Deemed-to-Satisfy Provisions	Noted	-
NSW J(A)5.1: Application of Part	Noted	-
NSW J(A)5.2: Access for Maintenance	Access for maintenance must be provided to all services and their components.	CRA