

## PRELIMINARY BCA ASSESSMENT REPORT

<b>To:</b>	Goodman		
<b>Attention:</b>	Richard Seddon	<b>Date:</b>	11/9/2008
<b>From:</b>	Tony Heaslip	<b>Sent by:</b>	Email
<b>Project:</b>	ARCBS – 17 O’Riordan St Green Square	<b>Project No:</b>	80313
<b>Copies:</b>	Goodman – Adrian Tesoriero	<b>Pages:</b>	11

Richard,

As requested, we have undertaken a preliminary review of the proposed development against the deemed-to-satisfy (DTS) provisions of the Building Code of Australia 2008 (BCA) pursuant to the provisions of clause 145 of the *Environmental Planning & Assessment Regulation 2000*.

The following preliminary assessment comments are based on the review of the following plans:

- Architectural plans prepared by Bligh Voller Nield Architecture numbered DA-A-000 to DA-A-003; DA-D-000 to DA-D-007; DA-E-000 to DA-E-003; DA-F-000 to DA-F-003; DA-Z-000 to DA-Z-005; Issue A dated 06.08.08.
- Architectural Plans prepared by DesignInc Melbourne numbered A.2002/G; A.2003/D; A.2004/G and A.2005/I.

The proposed development involves the construction of a processing facility for the Australian Red Cross Blood Service (ARCBS) containing a processing plant, laboratories, office administration areas, warehouse and basement car parking for 97 vehicles.

We note that the proposed development has been deemed a 'Major Project' and that a single Project Application (PA) will be lodged with the NSW Department of Planning for the Base Building, use and fitout for ARCBS.

In summary, the key building characteristics have been identified as follows:

BCA Classification:	Class 7a Carparking ( <i>Basement Level</i> ) Class 8 Laboratory ( <i>Ground to Level 3</i> )
Rise in Storeys:	Four (4)
Type of Construction:	Type A - Large Isolated Building
Effective Height:	12.05m
Total Floor Area:	Approx. 17,000m <sup>2</sup>
Climate Zone (BCA Section J):	5

## BCA SECTION C – FIRE RESISTANCE

### 1. C1.10: Early Fire Hazard Properties

The proposed floor, wall and ceiling linings in the building are required to comply with the requirements under specification C1.10 and C1.10a. Test certificates of the proposed carpets/floor linings will be required to be submitted prior to the Occupation Certificate.

### 2. C2.2: General Floor Area and Volume Limitations

The floor area and volume limitations do not apply to the basement level on the bases that it is a sprinkler protected carpark (BCA clause C2.1).

Notwithstanding the above, Ground Floor to Level 3 has been assessed as a single fire compartment having regard to the proposed atrium connecting these levels. The total floor area of this fire compartment exceeds the limitation prescribed by Table C2.2 for Type A Construction. As such, the building as been assessed as a Large Isolated Building (refer to comments under C2.3 & C2.4 below).

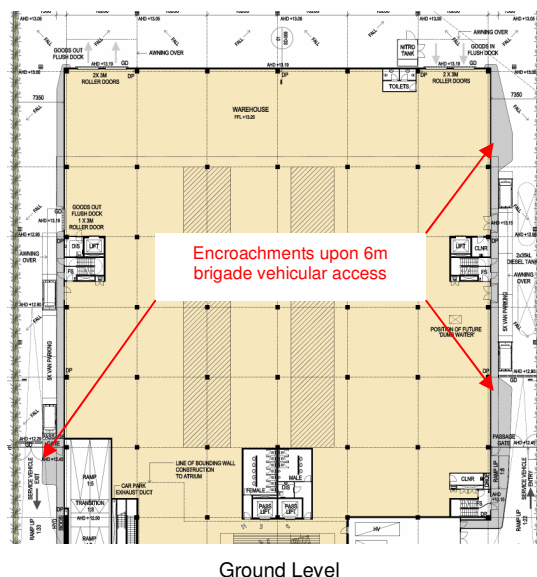
### 3. C2.3: Large Isolated Buildings

The floor area/volume limitations under C2.2 can be exceeded where the building is deemed to be a 'Large Isolated Building'. As the building is not more than 18,000m<sup>2</sup> /108,000m<sup>3</sup>, the provision of sprinklers and perimeter vehicular access (complying with BCA clause C2.4(b) is required to the building (refer to C2.4 below for perimeter vehicular access requirements).

### 4. C2.4: Perimeter Vehicular Access

A minimum unobstructed width of 6m is required around the building for perimeter vehicular access with no part of its furthest boundary more than 18m from the building. Furthermore, the 6m vehicular access must have a load bearing capacity and unobstructed height to permit the operation and passage of fire brigade vehicles, and must provide reasonable pedestrian access from the vehicular access to the building.

The referenced plans generally show compliance with the above, however there is a relatively minor non-compliance on the northern and southern sides where the kerb/footpath encroaches upon the required 6m vehicular access as indicated below.



We note that a fire engineered Alternative Solution will be prepared by Rawfire to address this DTS non-compliance in consultation with the NSW Fire Brigades. It is understood that the fire engineered Alternative Solution will effectively demonstrate that the current proposal satisfies BCA Performance Requirement CP9 with no additional measures being required.

The Alternative Solution will be referred to the NSW Fire Brigades prior to issue of the CC in accordance with clause 144 of the EP&A Regulation 2000. In the unlikely event that the brigades do not support this Alternative Solution then the footpaths/kerbs will need to be recessed to ensure that a minimum 6m width is achieved. In this instance, it is considered that a change of this nature could be addressed at CC stage without giving rise to any inconsistencies with the Development Consent.

#### **5. C2.9: Separation of Classifications in Different Storeys**

Where parts of different classifications are situated one above the other in adjoining storeys, the floor is required to have an FRL for that prescribed in Specification C1.1 for the Classification of the lower storey i.e. the floor above the carpark may have an FRL of 120/120/120.

#### **6. C2.10: Separation of Lifts**

As the proposed lift shafts connect more than 3 storeys, they are required to be separated from the remainder of the building in a shaft having an FRL prescribed in Specification C1.1 below.

#### **7. C2.12: Separation of Equipment**

Where it is proposed to install lift motor rooms, emergency generators, boilers or battery rooms they are required to be separated by construction having an FRL as required by Specification C1.1, but not less than 120/120/120. Any doorways into such rooms are required to be self closing fire doors possessing an FRL of -/120/30.

#### **8. C2.13: Electricity Supply System**

The proposed electrical substation and the main switch room which sustains emergency equipment operating in emergency mode, are required to be enclosed in construction possessing an FRL of 120/120/120 and any door to such rooms must be a self closing -/120/30 fire door.

#### **9. C3.8: Openings in Fire Isolated Exits**

The doors to the fire isolated exits are required to be self closing or automatic closing -/60/30 fire doors.

#### **10. C3.9: Service Penetrations in Fire Isolated Exits**

The fire isolated exits in the building must not be penetrated by any services other than electrical wiring associated with lighting, detection or pressurization, security, monitoring of hydrant or sprinkler valves or water supply pipes for fire services.

#### **11. C3.10: Openings in Fire Isolated Lift Shafts**

The entrance doorway to the lift shafts are required to be protected by -/60/- fire doors that comply with AS 1735.11 and are set to remain closed except when discharging or receiving passengers or goods or vehicles. Lift indicator panels, call panels etc., must be backed by construction having an FRL of not less than -/60/60.

#### **12. C3.12: Openings in floors and ceilings for services**

Where a service passes through a floor or a ceiling required to have a resistance to the incipient spread of fire the service must be protected by a shaft complying with Specification C1.1 or in accordance with BCA clause C3.15.

### 13. C3.15: Openings for Service Installations

Where service installations penetrate floors or walls required to have an FRL they are to be protected by fire seals having an FRL with respect to integrity and insulation of the building element concerned. Fire seals are required to comply with Specification C3.15. Where the mechanical ventilation system penetrates floors or walls that require an FRL the installation is to comply with AS/NZS 1668.1.

### 14. Specification C1.1: Fire Resisting Construction

Building elements will need to comply with BCA Specification C1.1 as applicable to Type A Construction for the classifications concerned.

Building element	Class of building—FRL: (in minutes)			
	Structural adequacy/Integrity/Insulation			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
<b>EXTERNAL WALL</b> (including any column and other building element incorporated therein) or other external building element, where the distance from any fire-source feature to which it is exposed is—				
For loadbearing parts—				
less than 1.5m	90/ 90/ 90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/ 60/ 60	120/ 90/ 90	180/180/120	240/240/180
3 or more	90/ 60/ 30	120/ 60/ 30	180/120/ 90	240/180/ 90
For non-loadbearing parts—				
less than 1.5 m	- / 90/ 90	- /120/120	- /180/180	- /240/240
1.5 to less than 3 m	- / 60/ 60	- / 90/ 90	- /180/120	- /240/180
3 m or more	- / - / -	- / - / -	- / - / -	- / - / -
<b>EXTERNAL COLUMN</b> not incorporated in an external wall, where the distance from any fire-source feature to which it is exposed is—				
less than 3 m	90/ - / -	120/ - / -	180/ - / -	240/ - / -
3 m or more	- / - / -	- / - / -	- / - / -	- / - / -
<b>COMMON WALLS and FIRE WALLS—</b>	90/ 90/ 90	120/120/120	180/180/180	240/240/240
<b>INTERNAL WALLS—</b>				
Fire-resisting lift and stair shafts—				
Loadbearing	90/ 90/ 90	120/120/120	180/120/120	240/120/120
Non-loadbearing	- / 90/ 90	- /120/120	- /120/120	- /120/120
Bounding public corridors, public lobbies and the like—				
Loadbearing	90/ 90/ 90	120/ - / -	180/ - / -	240/ - / -
Non-loadbearing	- / 60/ 60	- / - / -	- / - / -	- / - / -
Between or bounding sole-occupancy units—				
Loadbearing	90/ 90/ 90	120/ - / -	180/ - / -	240/ - / -
Non-loadbearing	- / 60/ 60	- / - / -	- / - / -	- / - / -
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion—				
Loadbearing	90/ 90/ 90	120/ 90/ 90	180/120/120	240/120/120
Non-loadbearing	- / 90/ 90	- / 90/ 90	- /120/120	- /120/120
<b>OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES and COLUMNS—</b>				
	90/ - / -	120/ - / -	180/ - / -	240/ - / -
<b>FLOORS</b>	90/ 90/ 90	120/120/120	180/180/180	240/240/240
<b>ROOFS</b>	90/ 60/ 30	120/ 60/ 30	180/ 60/ 30	240/ 90/ 60

Note:

- 'Fire Service Feature' is defined in Section A of the BCA as the side and rear allotment boundaries of the site and/or any of the other buildings on the allotment
- Loadbearing walls to be constructed of concrete or masonry construction.
- Non-loadbearing walls required to have an FRL must be constructed of non-combustible construction
- All internal walls that are required to have a fire rating must extend to the underside of the slab above.
- The proposed fire rated stair shafts must be enclosed at the top by construction achieving a minimum FRL of -/120/120. *Note: A fire rated ceiling over the shafts will not satisfy the above requirement – the FRL lid is to be rated in both directions or is to be of solid masonry construction.*
- The shafts (such as lift/services etc) must be enclosed at the top by construction achieving a minimum FRL of -/90/90 or extend beyond the roof covering.

- g) The roof need not have an FRL as detailed above where its covering is non-combustible and the building is sprinkler protected throughout.
- h) Structural drawings and design certification from a Structural Engineer are to be submitted with the Construction Certificate application confirming that the design complies with the requirements of Specification C1.1.

## **BCA SECTION D – ACCESS AND EGRESS**

### **15. D1.2: Number of Exits Required**

The number of exits serving each storey complies with BCA clause D1.2.

### **16. D1.3: When Fire Isolated Exits are Required**

As the proposed exit stairs connect more than 3 storeys in a sprinkler protected building they are required to be fire isolated.

### **17. D1.4: Exit Travel Distances**

In accordance with this provision no point on the floor must be more than 20 metres from a single exit or a point from which travel in different directions to two exits is available. Where two exits are available no point on the floor must be more than 40 metres to a single exit.

The following is a list of areas that do not achieve compliance with the requirements of D1.4:

- Level 3 (incl. fitout):  
Distance to one of two alternative exits exceeds the prescribed maximum of 40m (51m proposed).
- Level 2 (incl. fitout):  
Distance to a point of choice to alternative exits exceeds the prescribed maximum of 20m (maximum 28m proposed from external Terrace).  
Distance to one of two alternative exits exceeds the prescribed maximum of 40m (maximum 50m proposed).
- Level 1 (incl. fitout):  
Distance to one of two alternative exits exceeds the prescribed maximum of 40m (maximum 45m proposed).
- Ground Floor (incl. fitout):  
Distance to one of two alternative exits exceeds the prescribed maximum of 40m (maximum 50m proposed).

The above exit travel distances non-compliance will be required to be addressed by an Alternative Solution which addresses BCA Performance Requirements DP4 and EP2.2.

### **18. D1.5: Distances Between Alternative Exits**

The following is a list of non-compliances with the distance between alternative exits provisions of D1.5:

- Level 3 (incl. fitout): Distance between alternative exits exceeds the prescribed maximum of 60m (maximum 76m proposed)
- Level 2 (incl. fitout): Distance between alternative exits exceeds the prescribed maximum of 60m (maximum 77m proposed)
- Level 1 (incl. fitout): Distance between alternative exits exceeds the prescribed maximum of 60m (maximum 66m proposed)
- Ground Floor (incl. fitout): Distance between alternative exits exceeds the prescribed maximum of 60m (maximum 88m proposed).
- Basement carpark: Distance between alternative exits exceeds the prescribed maximum of 60m (maximum 62m proposed).

The above non-compliances will be addressed by an Alternative Solution to address Performance Requirements DP4 and EP2.2.

## 19. D1.6 Dimensions of Exits

The unobstructed height in a required exit or in a path of travel to an exit must not exceed 2 metres, except for a doorway which may be reduced to 1980mm. The width of the exits and any path of travel are required to be not less than 1 metre.

We have calculated the populations for each floor level below in accordance with D1.13 in relation to the required exit widths from each level. The required and proposed exit widths are as follows:

Level	Population	Required Exit Width	Proposed Exit Width	Complies
Roof/Plant	<100	1m	2m	Yes
Level 3	240	2.5m	4m	Yes
Level 2	200	2m	4m	Yes
Level 1	180	2m	4m	Yes
Ground Floor	130	1.5m	3m	Yes
Basement	135	2m	4m	Yes

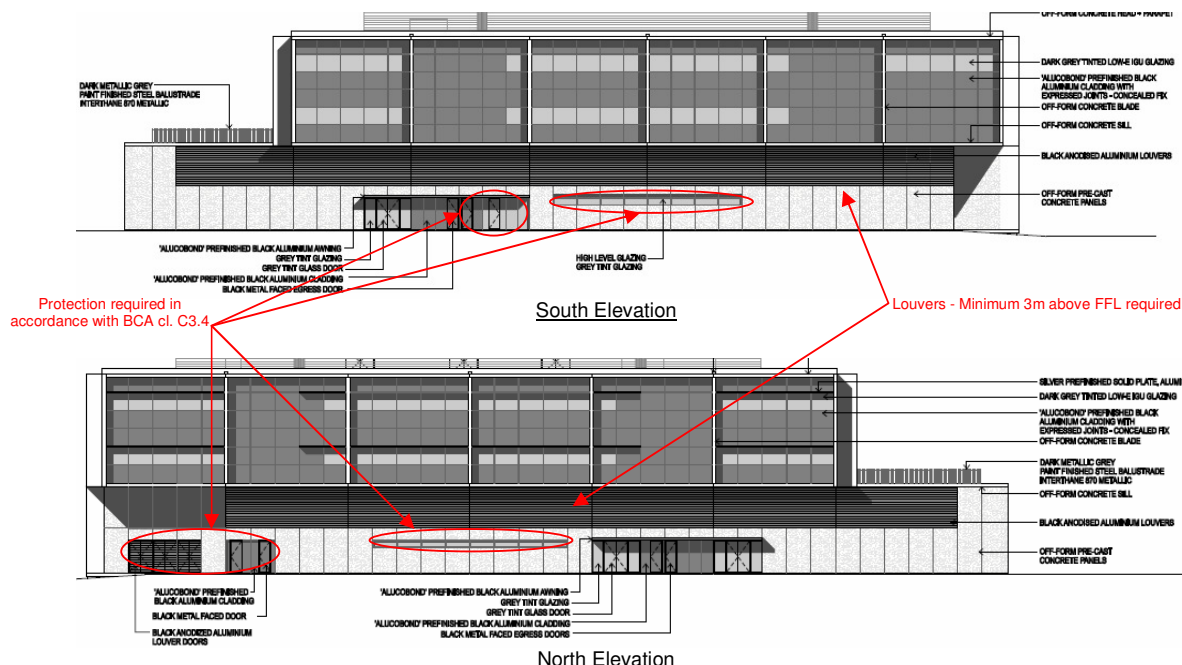
*Note: The above populations have been calculated in accordance with Clause D1.13 using a combination of seating capacity, Table D1.13 and advice from the proposed tenant. Any future fitout of change of building use will require re-assessment.*

## 20. D1.7 Travel via Fire Isolated Exits

A doorway from a room must not open directly into a fire isolated stair unless it is from a public corridor, a sole occupancy unit occupying all of one storey or a sanitary compartment or air lock. In this regard building is considered to be one sole occupancy unit and therefore comply with this clause.

The proposed fire stairs discharge directly to open space in accordance with the requirements of this clause.

Where the path of travel from the fire isolated stairs to the roadway passes within 6 metres of any part of an external wall (measured at right angles) that part of the wall must have an FRL of at least 60/60/60; and any opening must be protected internally in accordance with C3.4 for a distance of 3m above the level of the path of travel or the height of the wall, whichever is lesser. The following openings will require protection having regard to the discharge from the northern and southern fire stairs.





#### **21. D1.10: Discharge from Exits**

Where necessary, suitable barriers such as bollards are required to be provided to prevent vehicles from blocking an exit or access to it.

#### **22. D1.12: Non-required stairways**

The proposed stairway within the void/atrium is considered a non-required stairway. The proposed stairway does not comply with BCA clause D1.12 as it connects more than three (3) storeys in a sprinkler protected building. Given the location of this stairway within the atrium, the above non-compliance may be addressed by a fire engineered Alternative Solution to address the relevant Performance Requirements.

#### **23. D2.4: Separation of Rising and Descending Stair Flights**

The proposed separation of the rising and descending stair flights to the fire stairs is considered to be compliant with the provisions of D2.4. The separating construction must be non-combustible and smoke proof in accordance with clause 2 of Specification C2.5.

#### **24. D2.7: Installations in exits and Path of Travel**

Services or equipment comprising electricity meters, distribution boards, central telecommunication distribution boards/equipment, electrical motors or other motors serving equipment in the building, can be installed in a corridor or the like, leading to a required exit if the services or equipment are enclosed with non-combustible construction or appropriate fire-protection covering and doorways suitably sealed against smoke spread from the enclosure.

#### **25. D2.9: Width of stairways**

The required width of a stairway must be measured clear of all obstructions such as handrails, projecting parts of balustrades or other barriers and the like; and extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor of the landing.

#### **26. D2.13/D2.14/D2.16/D2.17 – General Requirements for Stair Design**

The design of the proposed stairs within the building are required to comply with the treads and risers provisions of D2.13, the landings requirements of D2.14, the balustrade provisions of D2.16 and the handrail requirements of D2.17. Further details will be required prior to issue of the Construction Certificate demonstrating compliance with the above, particularly with respect to the stairway located within the void.

#### **27. D2.19: Doorways and doors**

The proposed roller shutters in the rear elevation at Ground Floor level have been assessed as required exits serving the 'Goods Out' and 'Airlock' areas pursuant to clause D2.19(b)(ii). As such, these doors are required to remain in the open position while the building or part is lawfully occupied.

#### **28. D2.20: Swinging Doors**

Required exit doors or doors forming part of a required exit are required to swing in the direction of egress. The referenced plans generally comply in this regard.

#### **29. D2.21: Operation of latch**

A door in a required exit or in a path of travel to an exit must be readily openable from the side facing a person seeking egress, by a single hand downward action or pushing action on a device located between 900mm and 1100mm above finished floor level; or is fitted with a fail-safe device that automatically unlocks the door on fire trip in accordance with D2.21(a)(iv).

### 30. D2.23: Warning & Operational Signs

A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to, a-

(a) required fire door providing direct access to the fire isolated exit on the side of the door that faces a person seeking egress; and

(b) door leading from a fire isolated exit to a road or open space, on each side of the door.

The signs must be in capital letters not less than 20 mm high in a colour contrasting with the background and state-

(i) for an automatic door held open by an automatic hold-open device-

"FIRE SAFETY DOOR-DO NOT OBSTRUCT "; or

(ii) for a self-closing door-

"FIRE SAFETY DOOR

DO NOT OBSTRUCT

DO NOT KEEP OPEN "; or

(iii) for a door discharging from a fire-isolated exit-

"FIRE SAFETY DOOR-DO NOT OBSTRUCT "

### 31. D3.2 & D3.3: General Building Access Requirements

Disabled access is required to the building from the allotment boundary and any accessible car parking spaces, to the principal public entrance.

We note that a platform lift is proposed adjacent to the main entry to provide access for people with disabilities. The use of platform lifts does not comply with deemed-to-satisfy provisions of the BCA and AS 1428.1. As such, the proposed platform lift will need to be supported by an Alternative Solution prepared by a suitable qualified access consultant.

Access is also required to and across those floor levels serviced by the passenger lifts and to all disabled toilet facilities. All internal door openings are required to have a clear opening of 800mm and comply with the circulation space requirements under AS 1428.1.

Please note that it may be appropriate for an Access Consultant be engaged to review and report on the drawings at the CC Application Stage having regard to the *Disability Discrimination Act*, along with the provisions of BCA Part D3 and AS 1428.1.

### 32. D3.5: Carparking

We note that three (3) car spaces for people with disabilities is proposed at basement level, which satisfies the minimum number required under Table D3.5. The car spaces are required to comply with AS 2890.1. Details are to be submitted with the Construction Certificate application.

### 33. D3.6: Identification of Access Facilities

The toilet facilities are to be provided with clear and legible Braille and tactile signage complying with Specification D3.6 and incorporating the international symbol of access or deafness in accordance with AS 1428.1.

### 34. D3.8: Tactile Indicators

Tactile indicators are required to be provided to any stair or ramp used by the public. In addition tactile indicators are to be provided where there is an overhead obstruction less than 2 metres above floor level, other than a doorway. Furthermore they are required to be provided where a vehicular way is adjacent to a principal public entrance if there is no kerb or kerb ramp. Tactile indicators must be Type B indicators in accordance with AS 1428.4.



## BCA SECTION E – SERVICES AND EQUIPMENT

35. The following fire safety measures are required for this building, in accordance with the provisions of Section E.

Statutory Fire Safety Measure	Design/Installation Standard
- Alarm Signalling Equipment	AS1670.3 – 2004
- Automatic Fire Detection & Alarm System	BCA Spec. E2.2a, BCA Spec. G3.8, & AS 1670.1 - 2004.
- Automatic Fire Suppression Systems (Sprinklers)	BCA Spec. E1.5, BCA Spec. G3.8, & AS 2118.1-1999.
- Emergency Lighting	BCA Clause E4.4 & AS 2293.1 - 2005
- EWIS	BCA Specification G3.8, AS 1670.4 – 2004 & AS 4428.4
- Exit Signs	BCA Clauses E4.5, E4.6 & E4.8 and AS 2293.1 - 2005
- Fire Hose Reels	BCA Clause E1.4 & AS 2441 – 2005
- Fire Hydrant Systems	Clause E1.3 & AS 2419.1 - 2005
- Mechanical Air Handling Systems	BCA Clause E2.2, AS/NZS 1668.1 - 1998 & AS 1668.2
- Perimeter Vehicular Access	BCA Clause C2.4
- Portable Fire Extinguishers	BCA Clause E1.6 & AS 2444 – 2001
- Pressurising Systems	BCA Clause E2.2, BCA Specification G3.8 & AS/NZS 1668.1 - 1998
- Smoke Control System	BCA Specification G3.8
- Stretcher Lift Facility	BCA clause E3.2
- Stand-by Power Systems	BCA Specification G3.8
- Wall-Wetting Sprinklers	BCA Clause C3.4, D1.7 & AS 2118.2 - 1995
- Warning & Operational signs	Section 183 of the EP & A Regulations 2000, AS 1905.1 - 2005, BCA Clause D2.23 & E3.3

### Notes:

1. The above list of fire safety measures is not a Fire Safety Schedule, rather it is a summary of the requirements of Section E and BCA Part G3 only. The above required measures are based upon the classification of the building, floor area and effective height of the building
2. Given the size of the building, hydrant and hose reel locations may not comply in order to achieve coverage to all areas of the building. An Alternative Solution may be required to address this issue. The relevant performance requirements are EP1.1 and EP1.3.
3. The standards of performances nominated above may vary as a result of the proposed fire engineered alternative solutions.

## BCA SECTION F – HEALTH AND AMENITY

### 36. F2.3: Facilities in Class 3 to 9 Buildings

Having regard to the populations details under D1.6 above, it is considered that the number of sanitary facilities serving the building (as shown on the referenced fitout plans) are deficient in the following areas:

- Level 1: One male closet pan, one urinal and one male washbasin deficient.
- Level 2: One male urinal deficient.
- Level 3: One male closet pan, two urinals and one male washbasin deficient.

Please note that we have not assessed sanitary facility numbers for the carpark areas of the building as they are considered to be ancillary to the remainder of the building.

As access to the accessible toilet facilities are not via an airlock, the doorways to the must be screened from view.

### **37. F2.4: Facilities for People with Disabilities**

It is noted that disabled toilet facilities are proposed on each of the level of the building which is considered to achieve compliance with the provisions of Table F2.4. The fitout of the accessible toilet facilities are required to comply with AS 1428.1.

### **38. Part F4: Light & Ventilation**

Artificial lighting is required throughout the building and is to comply with AS/NZS 1680.1.

The building is to be provided with ventilation provide through natural or mechanical means. If natural ventilation is to be utilised, then the openings must constitute an opening size not less than 5% of the floor area of the room required to be ventilated. Any rooms not naturally ventilated will be required to be mechanically ventilated in accordance with AS 1668.1 & AS 1668.2.

## **BCA PART G3: ATRIUM CONSTRUCTION**

### **39. G3.1: Atriums affected by this part**

We note that an atrium is proposed over the main entry Lobby which connect Ground Floor through to Level 3 (four storeys in total). As a result, the atrium provisions of Part G3 apply to the proposed development.

### **40. G3.2: Dimensions of atrium well**

An atrium well must have a width throughout the well that is able to contain a cylinder having a horizontal diameter of not less than 6m. The proposed atrium does not comply in this regard.

### **41. G3.3 & G3.4: Separation of atrium by bounding walls**

Given the floor area of each storey bounding the atrium, the atrium is required to be separated from the remainder of the building at Levels 1, 2 & 3 by bounding walls set back not more than 3.5m from the perimeter of the atrium well by bounding construction complying with BCA clause G3.4.

We note that the bounding construction required above will be specified as part of the proposed fire engineered Alternative Solution.

### **42. G3.5: Separation of atrium by bounding walls**

If a bounding wall separating an atrium from the remainder of the building is set back from the perimeter of the atrium well, a balustrade or other barrier that is imperforate and non-combustible, and not less than 1 m high must be provided.

### **43. G3.6: Separation at roof**

The roof to the atrium must have the FRL prescribed in Table 3 of Specification C1.1 (refer to item 15 above) or the roof structure and membrane must be protected by a sprinkler system complying with Specification E1.5.

### **44. G3.7: Means of egress**

All areas within the atrium must have access to at least two (2) exits.

### **45. G3.8: Fire & smoke control systems**

Fire services required arising from the proposed atrium have been identified under item 34 above.

NOTE: Given the nature of the proposed atrium and the compliance issues identified under Part G3 above, it is considered that a performance based fire engineered Alternative Solution may be appropriate to address the abovementioned non-compliances with the BCA DTS provisions.

## BCA SECTION J: ENERGY EFFICIENCY

### 46. Section J – Energy Efficiency

The proposed building is subject to the Energy Efficiency requirements under this section. In this regard details demonstrating that the design complies with the requirements of J1 – Building Fabric, J2 – External Glazing and J3 – Building Sealing are to be submitted with the Construction Certificate application.

Design certification from the design engineers confirming compliance with Parts J5 – Air Conditioning and Ventilation Systems, J6 – Artificial Lighting and Power, J7 – Hot Water Supply and J8 – Access for Maintenance are to be submitted with the Construction Certificate application.

In view of the above assessment it is considered that such BCA compliance matters can be appropriately addressed in the preparation of the Construction Certificate design documentation by a combination of minor plan amendments and fire engineered Alternative Solutions without giving rise to any inconsistencies with the development consent.

As such, we are satisfied that any design modifications required to the building in order to satisfy the fire & life safety and health & amenity requirements of the BCA will not be of a nature that will necessitate the need for submission of an application under Section 75W of the *Environmental Planning & Assessment Act 1979*.

We trust the above is of assistance and should you wish to discuss please do not hesitate to call Dean Goldsmith or the undersigned on 02 9211 7777.

Yours Sincerely,



Tony Heaslip  
**Associate**  
**Blackett Maguire + Goldsmith Pty Ltd**