

# **Appendix No. 4**

## **BCA ANALYSIS**

# **BUILDING CODE OF AUSTRALIA**

## **SYSTEMATIC ANALYSIS** **DEEMED TO COMPLY** **REQUIREMENTS**

**NEW WAREHOUSE, SHOWROOM  
& OFFICE**

AT

**LOT 34 OF DP 1036699  
60 JACK WILLIAMS DRIVE  
PENRITH NSW 2750**

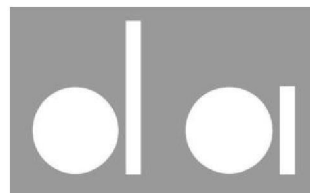
FOR

**CREST OFFICE INTERIORS**

**JUNE 2013**

**DUTAILLIS | ARCHITECTS**

EDUCATION COMMERCIAL INDUSTRIAL  
PO BOX 1039 T: (02) 4821 8373  
95 CLIFFORD STREET F: (02) 4822 1305  
GOULBURN NSW 2580 ABN: 32116 014567  
Email:- [dutailisarchitects@goulburn.net.au](mailto:dutailisarchitects@goulburn.net.au)





Step-by-Step Application	Relevant Clause	Relevant Table	State Variation	Action for Specific Project
1. Classification	Classification A3.2	----	----	Warehouse – 7b Carpark – 7a Office – 5 Showroom – 6
2. Height	Calculation of rise in storeys	----	----	Warehouse – 1 Storey Carpark, Office, Showroom – 3 Storeys
3. Type of Construction	Type of Construction Required C1.1	Table C1.1	----	Type B construction is the minimum requirement.
4. External Building Elements - Fire Resistance Levels	Specification C1.1 - Fire Resistant Construction  Type C Fire Resisting Construction 5.1	Table 5 of Specification C1.1 for Type C Construction	----	Load bearing walls within 18 metres of a boundary or other fire source feature must have a fire rating. Non-load bearing walls and external columns within 3 metres of a boundary or other fire source feature must have a fire rating. The concrete construction generally complies with this section.
5. Floors, Roofs, Internal Walls and other Internal Building Elements - Fire Resistance Levels	Specification C1.1 - Fire Resistant Construction  Type C Fire Resisting Construction 5.1	Table 5 of Specification C1.1 for Type C Construction	----	External walls, common walls, floor and floor framing in lift pit must be non-combustible. Load bearing internal walls must be concrete or masonry. Fire isolated stair shaft must have fire rated construction.
6. Compartmentation and Separation	General Floor Area and Volume Limitation C2.2	Table C2.2	----	Total compartment floor area = 2,190m <sup>2</sup> (approximately)  Note: the floor area is within the required maximum compartment size.  Total compartment volume = 14,750m <sup>3</sup> (approximately) Note: The volume is within the required maximum compartment size.



Step-by-Step Application	Relevant Clause	Relevant Table	State Variation	Action for Specific Project
7. Egress Facilities	Number of Exits Required D1.2 (g)	----	NSW	One exit required.
	Exit Travel Distance D1.4 (c)	----	----	20 metres to an exit or to a choice where the exits are available. No point more than 40 metres from an exit.
	Distance between Alternative Exits D1.5	----	----	Required to be 9 metres apart for the above. Exits should not converge to less than 6 metres within the building.
	Dimensions of Exits and Paths of Travel to Exit D1.6 (a) (b)	----	----	1 metres wide x 2 metres high.
	Discharge of Exits D1.10	----	----	Exit to open space. Exit cannot be blocked by vehicles.
	Number of Persons Accommodated D1.13	----	NSW 01.10(f)	Warehouse – 20 persons maximum Showroom – 65 persons maximum Carpark – 10 persons maximum Office – 30 persons maximum
	Construction of Exits D2.13 to Z.17	Table D1.13 Area per person according to use	----	Balustrades and stair construction must comply with D2.9, D2.13 and D2.16.
8. Access for Disabled Persons	General Building Access Requirement D3.2	Table D3.2	----	Disabled parking required. 1 space only.  Public access to front entry.  General access to throughout building.  Disabled toilet provided for staff and visitors.
9. Protection of Openings in Fire Resisting Construction.	Protection of openings in external walls C3.2	----	NSW C3.2	No openings within 6 metres of a boundary or other building. No requirements for the protection of openings.



Step-by-Step Application	Relevant Clause	Relevant Table	State Variation	Action for Specific Project
10. Fire Fighting Equipment				
a) Fire Hydrants	E1.3	----	AE1.3	Required. The system of street Hydrants should be inspected to confirm adequate coverage.
b) Hose Reels	E1.4	----	----	Required. To be located within 4 metres of an exit.
c) Sprinklers	E1.5	E1.5	----	Not required.
d) Portable Fire Extinguisher	E1.6	----	----	Required. To be installed and certified by supplier.
e) Fire Control Centre	E1.8	----	----	Not required.
f) Other	Fire Precautions during Construction E1.9	----	----	Required. Contractor to provide service.
11. Smoke Hazard Management				
System required table	E2.2	E2.2	NSW E2.2b	Building is required to comply with this section. The building is single storey and has no fire compartments Fire stair pressurisation is required. No smoke detection is required. No smoke exhaust is required. No smoke and heat vents are required. No sprinklers are required.
a) Fire stair pressurisation				
b) Smoke detection alarm systems				
c) Smoke exhaust systems				
d) Smoke & Heat Vents				
e) Sprinklers				
12. Lifts	E3	----	----	Lift height is less than 12 metres. No requirement for emergency lift or stretcher access to lift.
13. Emergency Lighting, Exits Signs and Warning Systems	Emergency Lighting Requirements E4.2 & E4.4	----	SA E4.2	Required. To be provided by an Electrical Contractor.
	Exit Signs E4.5, E4.6 & E4.8	----	NSW E4.6	Required. To be provided by an Electrical Contractor.



Step-by-Step Application	Relevant Clause	Relevant Table	State Variation	Action for Specific Project
14. Structural Provisions	Section B - Structure	Section B - Structure	NT, QLD & NSW	Required. To be provided by Structural/Civil Engineers.
15. Health & Amenity				
a) Damp & weatherproofing	Stormwater F1.1	----	----	Required. Refer to Hydraulic Documents.
	Roof coverings F1.5	----	----	Required. Refer to typical sections.
	Waterproofing of wet areas in buildings F1.7	----	Table F1.7	Required. Refer to typical sections.
	Damp proofing F1.9	----	SA F1.9	Required. Refer to typical sections.
	Damp proofing of floors on ground F1.10	----	SA F1.10	Required. Refer to typical sections.
	Glazing F1.13	----	----	Required. Contractor certification.
b) Sanitary & other facilities	Facilities for Class 3 to 9 buildings F2.3	Table F2.4 SA Table F2.4 VIC Table F2.3	SA Table F2.3 VIC Table F2.3	No public facilities are required. Maximum number of employees = 50 (25 Male, 25 female) Requirements are as follows:- <ul style="list-style-type: none"> <li>- 2 female WC pans are required.</li> <li>- 2 female basins are required.</li> <li>- 2 male WC pans are required</li> <li>- 1 male urinals are required</li> <li>- 2 male hand basins are required</li> </ul>
	Facilities for people with disabilities F2.4	Table F2.4 SA Table F2.4	----	Disabled toilets are required. <ul style="list-style-type: none"> <li>- 1 Unisex facility on the first or second floor is required.</li> </ul>
	Construction of sanitary components	----	NSW F4.5	Doors to fully enclosed sanitary compartments will have lift off hinges or open out.
c) Room sizes	Height of rooms and other spaces F3.1	----	----	Ceilings to be minimum 2.4 metres.



Step-by-Step Application	Relevant Clause	Relevant Table	State Variation	Action for Specific Project
15. Health & Amenity (cont...) d) Light & Ventilation	Artificial lighting F4.4	----	----	Required. Artificial lighting to be provided.
15. Health & Amenity (cont'd)..... e) Sound Transmission & Insulation	Ventilation of rooms F4.5  Part F5	----	----	Required. Air-conditioning with fresh air makeup to be provided for internal rooms to use natural ventilation with vents on roof. Toilet facilities to be mechanically ventilated to the roof.  No requirements
16. Ancillary Provisions	----	----	----	No requirements.
17. Special Use Building	----	----	----	No requirements.
18. Buildings of Mixed Classification	----	----	----	No requirements.
19. Maintenance	----	----	----	Safety measures for Building Integrity must be adopted. Annual Fire Safety Certificate provided.
20. Part J	----	----	----	Refer to separate report.



**AUSTRALIAN STANDARDS**

<b>STANDARD</b>	<b>ACTION</b>
<b>AS1288 – Glazing Materials</b>	Refer to Part J of the BCA report for additional information on glazing. Contractor to install and certify glazing for all safety aspects not otherwise noted on the Schedule.
<b>AS3600 – Termites</b>	Termite protection required. To be chemical treatment. To be certified by installer.
<b>AS1668 – Mechanical Ventilation</b>	Mechanical ventilation provided to the following areas:- <ul style="list-style-type: none"><li>- All toilet facilities.</li><li>- Low volume make up air to the air conditioner cassettes.</li><li>- Store Rooms.</li></ul> Contractor to certify installations.