



BLACKETT
MAGUIRE+
GOLDSMITH

BCA Compliance Statement

Acute Health Services Building Campbelltown Hospital

Health Infrastructure

29 June 2012



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REPORT STATUS				
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17.02.2012	1	Revised report issued to client for submission with the Development Application	AD	DB
23.02.2012	2	Revised report issued to client for submission with the Development Application	AD	DB
29.06.2012	3	Revised BCA report to incorporate Appendix for calculation of Sanitary facilities.	MM	DB

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A. INTRODUCTION

A.1 AIM

This compliance statement is to verify that Blackett Maguire + Goldsmith Pty Ltd have undertaken an assessment of the DA design documentation for the proposed Acute Health Services building at Campbelltown Hospital against the requirements of the Building Code of Australia 2011 (BCA).

The objective of this compliance statement is to:

- Accompany submission of the DA to the consent authority to enable the Department of Planning to be satisfied that subsequent compliance with the fire & life safety, health & amenity and energy efficiency requirements of the BCA, will not give rise to design changes to the building which may necessitate the submission of an application under Section 96 of the Environmental Planning and Assessment Act, 1979; and
- Enable the certifying authority to satisfy its statutory obligations under Clause 145 of the Environmental Planning and Assessment Regulation 2000.

The review is not intended to identify all issues of compliance or non-compliance with the BCA with such other issues to be appropriately addressed prior to the issue of the Construction Certificate pursuant to the provisions under Part 4A of the Environmental Planning and Assessment Act, 1979.

For the purpose of this submission the assessment of the DA design documentation has been undertaken against the deemed-to-satisfy (DTS) provisions of the BCA 2011.

A.2 PROPOSAL

The proposed development consists of a multi level Acute Health Services Building providing health care facilities in association with the existing Campbelltown Hospital. The proposed building will be connected to the existing buildings on site via a covered link way.

A.3 DOCUMENTATION

The following documentation was relied upon when preparing this Compliance Statement:

- Building Code of Australia 2011 (BCA)
- Guide to the Building Code of Australia 2011
- Architectural Drawing Nos. A-AHS-DA-A000 (C), A00 (B), A01 (B), A02 (C), A03 (B), A04 (C), D00 (D), D01 (C), D02 (C), D03 (C), D04 (C), D05 (C), D06 (D), D07 (B), D08 (B), EO1 (D), EO2 (D), EO3 (D), EO4 (D), F01 (D) & F02 (D), prepared by BVN Architecture.

A.4 REPORTING TEAM

The following BM+G Team Members have contributed to this Report:

- Assessment – Adam Durnford (Senior Building Surveyor / Accredited Certifier)
- Report Preparation – Adam Durnford (Senior Building Surveyor / Accredited Certifier)
- Quality Assurance – David Blackett (Director / Accredited Certifier)



A.5 LIMITATIONS & EXCLUSIONS

The limitations and exclusions of this report are as follows:

- The following assessment is based upon a review of the architectural plans for the proposed building only – no site inspection or review of other consultant's drawings have been carried out at this stage.
- No assessment has been undertaken with respect to the Disability Discrimination Act 1992 (DDA). The building owner should be satisfied that their obligations under the DDA have been addressed.
- The Report does not address matters in relation to the following:
 - i. Local Government Act and Regulations.
 - ii. Occupational Health and Safety Act and Regulations.
 - iii. WorkCover Authority requirements.
 - iv. Water, drainage, gas, telecommunications and electricity supply authority requirements.
 - v. Disability Discrimination Act 1992.
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A.6 TERMINOLOGY

Building Code of Australia - Document published on behalf of the Australian Building Codes Board. The BCA is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia and is adopted in NSW under the provisions of the Environmental Planning & Assessment Act & Regulation.

Deemed-to-Satisfy (DTS) Requirements of the BCA – Means the prescriptive provisions of the BCA which are deemed to satisfy the performance requirements.

Effective height - means the height to the floor of the topmost [storey](#) (excluding the topmost [storey](#) if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units) from the floor of the lowest [storey](#) providing direct egress to a road or [open space](#).

Fire Resistance Level (FRL) - means the grading periods in minutes for the following criteria

- (a) structural adequacy; and
- (b) integrity; and
- (c) insulation,

and expressed in that order.

Fire Source Feature (FSF) - the far boundary of a road adjoining the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building.



Open space - means a space on the allotment, or a roof or other part of the building suitably protected from fire, open to the sky and connected directly with a public road.

Performance Requirements of the BCA - A Building Solution will comply with the BCA if it satisfies the Performance Requirements. A Performance requirement states the level of performance that a Building Solution must meet.

Compliance with the Performance Requirements can only be achieved by-

- (a) complying with the Deemed-to-Satisfy Provisions; or
- (b) formulating an Alternative Solution which-
 - (i) complies with the Performance Requirements; or
 - (ii) is shown to be at least equivalent to the Deemed-to-Satisfy Provisions; or
- (c) a combination of [\(a\)](#) and [\(b\)](#).

Sole occupancy unit - means a room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier and includes a dwelling.

Storey - means a space within a building which is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but not—

- (a) a space that contains only—
 - (i) a lift shaft, stairway or meter room; or
 - (ii) a bathroom, shower room, laundry, water closet, or other sanitary compartment; or
 - (iii) accommodation intended for not more than 3 vehicles; or
 - (iv) a combination of the above; or
- (b) a mezzanine



B. ASSESSMENT

BUILDING CLASSIFICATION

1. The proposed building is classified as Class 9a (health care).
2. The building has a calculated rise in storeys of six (6).
3. The building is required to be constructed in Type A Construction.
4. The building has an effective height of > 12m and < 25m

SECTION C – FIRE RESISTANCE

5. The new building elements will be required to be constructed in accordance with the FRL's detailed in Table 3 of Specification C1.1 for Type A Construction.
6. Compartmentation sizes as stipulated by Table C2.2 and Clause C2.5 as specific to a Class 9a health care building will be complied with. In this instance, the following is noted:

- Each storey of the Class 9a (where patient care areas are provided) has to be divided into fire compartments not exceeding 2000m² by construction achieving an FRL of not less than 120/120/120. In this instance, it appears that each floor will be separated into two fire compartments
- Within each storey of the Class 9a, ward areas must be divided into floor areas not exceeding 1000m² by construction achieving an FRL of not less than 1000m². These division walls must also be smoke proof.
- Within each storey of the Class 9a, smoke compartments are to be created with a maximum size of 500m².

The preliminary architectural drawings prepared to date indicate compliance with the abovementioned requirements.

7. Separation between fire compartments will be provided in accordance with Clauses C3.3 and C3.4 respectively.

Where the proposed link way connects the new Acute Health Services Building from the existing buildings, fire compartmentation will be provided at either end of the link way. The link way which will be constructed of solid construction and drencher protected glazed elements will ensure fire separation is addressed from the existing building to the new link way.

Fire separation from the link way to the existing buildings will be assessed via a Fire Engineering Assessment to be undertaken by a qualified Fire Safety Engineer in order to address compliance with the relevant Performance Requirements of the BCA.

8. Clause C2.6 requires spandrel separation between openings in the external wall of a building required to be constructed of Type A Construction. Spandrel separation will be provided throughout the building unless an Automatic Fire Suppression System is installed as consented by Clause C2.6.
9. The glazed atriums located either side of the lift shafts which connect Levels 01 – 04 will be subject of a Fire Engineering Assessment to be undertaken by a qualified



Fire Safety Engineer in order to address compliance with the relevant Performance Requirements of the BCA.

10. Any openings located within 6m of another building on the site are required to be protected in accordance with Clause C3.4.

SECTION D – ACCESS & EGRESS

11. The minimum number of exits has been provided from each storey of the building in accordance with Clause D1.2.
12. It is likely that egress travel distance and distance between alternative exits from the link ways will exceed the maximum permitted distances of 30m and 45m respectively for a Class 9a building.

In this instance, the excessive travel distances will be subject of a Fire Engineering Assessment to be undertaken by a qualified Fire Safety Engineer in order to address compliance with the relevant Performance Requirements of the BCA.

13. In order for travel distance to comply with Clause D1.4 and D1.5 from Level 00 to Level 03 from patient care areas, horizontal exits will need to be provided within each of the respective floors with separate fire compartments provided.

Note: Where horizontal exits are created by virtue of separate fire compartments, separation between fire compartments will need to be provided in accordance with Clause C3.3 & C3.4.

14. The corridor widths within the patient care areas have been designed in accordance with Clause D1.6.
15. The fire isolated stairways are to provide independent egress by way of fire isolated passageways on Level B1 to open space.
16. Re-entry provisions are to be provided from within each of the fire isolated stairways in accordance with Clause D2.21.
17. Access for a person with a disability is proposed to be provided to and within the building in accordance with Part D3, AS 1428.1 – 2009 and the Access to Premises Standard.

It is understood that an Access Consultant has been engaged to provide advice in relation to access for a person with a disability to and within the building.



SECTION E – SERVICES & EQUIPMENT

18. Based on the architectural documentation reviewed, we note the following essential fire safety measures will be required to be installed within the building.

Statutory Fire Safety Measure	Design/Installation Standard
Alarm Signalling Equipment	AS1670.3 – 2004
Automatic Fail Safe Devices	BCA Clause D2.21
Automatic Fire Detection & Alarm System	BCA Spec. E2.2a & AS 1670.1 – 2004.
<i>Automatic Fire Suppression Systems</i>	<i>BCA Spec. E1.5 & AS 2118.1-1999 or AS2118.4, 6 – 1995</i>
Building Occupant Warning System activated by the Sprinkler System	BCA Spec E1.5 Clause 8 and/ or Clause 3.22 of AS 1670.1 – 2004
Break Glass Alarms / Manual Call Points	BCA Section E
Emergency Lifts	BCA Clause E3.4 & AS 1735.1 – 2003
Emergency Lighting	BCA Clause E4.4 & AS 2293.1 – 2005
Emergency Evacuation Plan	AS 3745 – 2002
Exit Signs	BCA Clauses E4.5, E4.6 & E4.8 and AS 2293.1 – 2005
Fire Blankets	AS 3504 – 1995 & AS 2444 – 2001
Fire Control Centre	BCA Specification E1.8
Fire Dampers	BCA Clause C3.15, AS 1668.1 – 1998 & AS 1682.1 & 2 – 1990
Fire Doors	BCA Clause C2.12, C2.13, C3.2, C3.4, C3.5, C3.6 & C3.7, C3.8, C3.11 and AS 1905.1 – 2005
Fire Hydrant Systems	Clause E1.3 & AS 2419.1 – 2005
Fire Rated Walls & Ceilings	BCA Specification C1.1
Fire Seals	BCA Clause C3.15, AS 1530.4 & AS4072.1 – 2005
Lightweight Construction	BCA Clause C1.8 & AS 1530.3 – 1999
Mechanical Air Handling Systems (Shutdown)	BCA Clause E2.2, AS/NZS 1668.1 – 1998 & AS 1668.2 – 1991
Paths of Travel	EP & A Regulation Clause 186



Statutory Fire Safety Measure	Design/Installation Standard
Pressurising Systems (Fire Isolated Stairways)	BCA Clause E2.2 & AS/NZS 1668.1 - 1998
Portable Fire Extinguishers	BCA Clause E1.6 & AS 2444 – 2001
Required Exit Doors (power operated)	BCA Clause D2.19(b)
Sound and Intercom System for Emergency Purposes	BCA Clause E4.9 & AS 1670.1 - 2004
Smoke Dampers	AS/NZS 1668.1 - 1998
Smoke Doors	BCA Spec. C3.4 & C2.5
Smoke Walls	BCA Spec C2.5
<i>Smoke Hazard Management Systems</i> <i>Zone Smoke Control System</i>	<i>BCA Clause E2.2 & AS/NZS 1668.1 - 1998</i>
Stand-by Power Systems	BCA Clause E1.3, E3.4, E4.2 & E4.5 and AS 3000 – 1991
Warning & Operational signs	Section 183 of the EP & A Regulations 2000, AS 1905.1 - 2005, BCA Clause C3.6, D2.23, E3.3 & H101.8

Note 1: The items identified in italics are alternative means of complying with the smoke hazard management provisions of Table E2.2a i.e. of the measures is required to be installed.

Note 2: The above list is only indicative at this stage and is likely to change having regard to the proposed Fire Engineering Assessment that is to be undertaken.

19. Fire hydrant coverage is required to be provided throughout the building in accordance with Clause E1.3.
 - Internal hydrants must be located within each of the fire isolated stairways at each storey.
 - External hydrants if installed must be positioned not less than 10m from the building unless protected by construction achieving an FRL of not less than 90/90/90 which extends 2m either side of the hydrant and 3m above.
20. Fire hose reels are required to be installed throughout the building in accordance with Clause E1.4. The fire hose reels are to be designed in a manner that coverage is not dependant on fire hose reels passing through smoke and fire doors within each storey.



21. A fire control centre is required to be provided. It is noted that the existing fire control centre which services the hospital will be utilised to service the subject new building. The existing fire control centre will be reviewed to ascertain the existing level of compliance achieved.
22. In relation to the provision of smoke hazard management within the building, the following is required to be provided:
 - An Automatic Fire Detection & Alarm System; and
 - Automatic shutdown of the Mechanical Air Handling System; and
 - A Zone Smoke Control System; **OR**
 - An Automatic Fire Suppression System

Note: If an Automatic Fire Suppression System is installed throughout the building, spandrel separation between openings in the external wall of the building will not be required to be provided.

23. Stair pressurisation is required to be provided to each of the fire isolated stairways in accordance with Table E2.2a.
24. Manual call points are to be installed in accordance with Specification E2.2a throughout the building.
25. A minimum number of two (2) emergency lifts are required to be provided to serve each storey of the building. The emergency lifts must be installed within separate banks so that an emergency lift is available within each bank of lifts.
26. A sound and intercom system for emergency purposes will be required to be installed to serve all parts of the Class 9a in accordance with Clause E4.9.

SECTION F – HEALTH & AMENITY

27. In addition to sanitary facilities required by Table F2.3, and as detailed in the attached appendix at the rear of this report, the following facilities are required to be provided:
 - One kitchen or other adequate facility for the preparation and cooking or reheating of food including a kitchen sink and washbasin; and
 - Laundry facilities for the cleansing and drying of linen and clothing or adequate facilities for holding and dispatch or treatment of soiled linen and clothing, sanitary towels and the like and the receipt and storage of clean linen; and
 - One shower for each 8 patients or part thereof; and
 - One island type plunge bath in each storey containing a ward area
28. A slop hopper or other device is required to be provided on any storey containing ward areas or bedrooms to facilitate the emptying of containers of sewage or dirty water and be provided with a flushing apparatus, tap and grating.
29. Sanitary facilities for a person with a disability are required to be provided in accordance with Clause F2.4. In this instance the building is proposed to be provided with accessible sanitary facilities for use by a person with a disability.



30. Natural light is required to all rooms used for sleeping purposes.
31. The building is required to be provided with a system of ventilation either through natural or mechanical means.

SECTION J – ENERGY EFFICIENCY

32. The building will be required to comply with the national provisions of the BCA. In this regard, elements of the architectural and services design will need to comply with the respective provisions of the following:
 - Part J1 – Building Fabric
 - Part J2 – External Glazing
 - Part J3 – Building Sealing
 - Part J5 – Air Conditioning and Ventilation Systems
 - Part J6 – Artificial Lighting and Power
 - Part J7 – Hot Water Supply
 - Part J8 – Access for Maintenance

C. CONCLUSION

After having reviewed the DA design documentation against the BCA, we are of the opinion that the works can generally comply with DTS provisions and where it is not practicable the relevant Performance Requirements of the BCA without giving rise to any significant modifications which would render the final building design inconsistent with the DA consent.

If any modifications do arise as a result of design changes, then they will be appropriately assessed by the Certifying Authority to determine if a Section 96 would be required to be submitted to the Department of Planning.

We note the requirements of Clause 145 of the Regulation and advise that any matters pertaining to compliance with the BCA, including the assessment of any future fire engineered solutions, will be addressed to the satisfaction of the appointed Certifying Authority prior to the issue of the Construction Certificate.



APPENDIX 1

Calculation of Sanitary Facilities

In accordance with Clause F2.2 and Table F2.3 of the BCA, adequate sanitary facilities are to be installed throughout the development to accommodate the proposed population numbers.

We have undertaken a review of the floor amenity calculation table and the following architectural plans prepared by BVN Architecture:

Plan No:	Revision:	Date:
Overall Floor Plan – Level 00	B	29.06.2012
Overall Floor Plan – Level 01	B	29.06.2012
WC – Level 02	B	29.06.2012
WC – Level 03	B	29.06.2012

In this regard, we note that the sanitary facilities for the building holistically have been calculated in accordance with the deemed to satisfy provisions as follows:

Staff - 187

		Closet Pan		Urinal		Wash Basin		Complies Yes / No
Population		Required	Proposed	Required	Proposed	Required	Proposed	
Male Staff	93	5	5 ^{Note1}	3	3 ^{Note2}	4	8 ^{Note1}	Yes
Female Staff	94	7	7 ^{Note1}	N/A	N/A	2	7 ^{Note1}	Yes

Note 1: In accordance with Clause F2.2(c) of the BCA, we have counted the unisex Accessible W/C facility once for each sex.

Note 2: In accordance with Clause F2.6 of the BCA, we have utilised three (3) of the surplus closet pans for use as urinals.

Patients - 152

		Closet Pan		Urinal		Wash Basin		Complies Yes / No
Population		Required	Proposed	Required	Proposed	Required	Proposed	
Male Patients	30	4	7 ^{Note1}	N/A	N/A	4	7 ^{Note1}	Yes
Female Patients	30	4	6 ^{Note1}	N/A	N/A	4	6 ^{Note1}	Yes
Patient Ensuities	92	12	59	N/A	N/A	12	59	Yes

Note 1: In accordance with Clause F2.2(c) of the BCA, we have counted the unisex Accessible W/C facility once for each sex.



Public

		Closet Pan		Urinal		Wash Basin		
Population		Required	Proposed	Required	Proposed	Required	Proposed	Complies Yes / No
Male	-	1 ^{Note1}	7 ^{Note2}	0	0	1 ^{Note1}	7 ^{Note2}	Yes
Female	-	1 ^{Note1}	8 ^{Note2}	N/A	N/A	1 ^{Note1}	8 ^{Note2}	Yes

Note 1: In accordance with table F2.3 of the BCA, a Class 9a health Care building is not required to provide facilities for the public other than providing a unisex accessible sanitary facility to satisfy the accessibility requirements of the table F2.4(a).

Note 2: In accordance with Clause F2.2(c) of the BCA, we have counted the unisex Accessible W/C facility once for each sex.

