Capital Insight Pty Ltd

Proposed Garvan St Vincent's Campus Cancer Centre

Victoria Street, Darlinghurst

BUILDING CODE OF AUSTRALIA 2009 COMPLIANCE STATEMENT

9 June 2009

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6 May 2009

Capital Insight Pty Ltd
77 Berry Street
NORTH SYDNEY NSW 2060

Attention: Charles Foley

Dear Charles

Re: GARVAN ST VINCENTS CAMPUS CANCER CENTRE
VICTORIA STREET, DARLINGHURST
BUILDING CODE OF AUSTRALIA 2009 COMPLIANCE STATEMENT

This compliance statement is to verify that Blackett Maguire + Goldsmith Pty Ltd has undertaken an assessment of the DA design documentation for the proposed Garvan St Vincents campus Cancer Centre (GSVCCC) located at Victoria Street Darlinghurst against the requirements of the Building Code of Australia 2009 (BCA).

EXECUTIVE SUMMARY

Stage 1 comprises the Lowy Packer Building which houses the Victor Chang Cardiac Institute and the Centre of Applied Medical Research.

The University of New South Wales (UNSW) and a Joint venture between Garvan Institute and St Vincent's and Mater Health Sydney (SVMHS) propose to develop Stages 2 (UNSW Virology Centre) and 3 (Garvan / St Vincent's Campus Cancer Centre (GSVCCC)) into two separate projects.

The proposed development entails:

- the erection of multiple basement levels for ancillary car parking:
- specialist laboratories and services (back of house) at level 3
- commercial / retail tenancy and main entry at level 4 (podium)
- outpatient consultation and administration at level 5
- administration at level 6
- administration and laboratories to levels 7-14 (excluding engineering plant at level 11)

The new building, whilst freestanding, will be interconnected to the adjoining Victor Chang Building at basement level 00. Further interconnections occur at upper levels into the Victor Chang Building and the existing adjoining Garvan Building. The development will entail necessary works to the existing Victor Chang Building and Garvan Building to accommodate the proposed interconnections.

OBJECTIVE

The objective of this compliance statement is to:

1. Accompany submission of the Part 3A Application to the Minister to enable the Consent Authority to be satisfied that subsequent compliance with the fire & life

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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 75W of the Environmental Planning and Assessment Act, 1979; and

2. Enable the certifying authority to satisfy its statutory obligations under Clause 143(1) & (3) and Clause 145 of the Environmental Planning and Assessment Regulation, 2000.

3. Enable the certifying authority to satisfy its statutory obligations under Clause 18 of the Building Professionals Regulation 2007.

The compliance statement is not intended to identify all issues of compliance or non-compliance with the BCA with such other issues to be appropriately addressed at the Construction Certificate stage.

In our assessment we have used Architectural plans prepared by BVN Architecture.

DOCUMENTATION

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

- Building Code of Australia 2009 (BCA)
- Guide to the Building Code of Australia 2009
- Draft Fire Engineering Brief (Revision A) dated 22 April 2009 prepared by Solutions Consultants Pty Ltd.

REPORTING TEAM

This compliance statement was prepared by David Blackett, an accredited Building Certifier with the Building Professionals Board (NSW) and Building Services Authority (QLD).

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.

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.

Health-care building - means a building whose occupants or patients undergoing medical treatment generally need physical assistance to evacuate the building during an emergency and includes—

(a) a public or private hospital; or

(b) a nursing home or similar facility for sick or disabled persons needing full-time care; or

(c) a clinic, day surgery or procedure unit where the effects of the predominant treatment administered involve patients becoming non-ambulatory and requiring supervised medical care on the premises for some time after the treatment.

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.

LIMITATIONS AND EXCLUSIONS

The limitations of this compliance statement are as follows:

- The compliance statement does not address issues in relation to the following:

  i. Environmental Planning and Assessment Act and Regulation.

  ii. Local Government Act and Regulations.

  iii. Occupational Health and Safety Act and Regulations.

  iv. WorkCover Authority requirements.

  v. Water, drainage, gas, telecommunications and electricity supply authority requirements.

  vi. Access for people with disabilities or provisions of the Disability Discrimination Act.

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BUILDING CODE OF AUSTRALIA 2009 ASSESSMENT

The building has been classified in accordance with the BCA as follows:

Class	Rise in storeys	Type of Construction	Effective Height	Climate Zone
Class 7a (carpark levels B3-02) **Class 5** (ancillary administration, patient consultation & medical centre) **Class 6** (Level 4 retail) **Class 7b** (ancillary storage)	12	Type A	>25m <50m (*effective height is 47.73m*)	Climate Zone 5 (*Section J Energy Efficiency*)
Class 8 (laboratories)				

Section B – Structural Provisions:

The proposed development will generally satisfy the DTS provisions of Section B of the BCA subject to the following:

1. Structural engineering documentation to comply with the structural provisions of BCA clauses B1.2 & B1.3. Structural engineer to verify at Construction Certificate stage.
2. Structural resistance of materials and forms of construction to comply with BCA clause B1.4.

Section C – Fire Resistance and Compartmentation:

The proposed development will generally satisfy the DTS provisions of Section C of the BCA subject to the following:

1. The following FRL requirements will apply to the proposed building in accordance with Table 3 of Specification C1.1 of the BCA and in accordance with the draft Fire Engineering Brief:

Building element	Class of building — FRL: (in minutes)		
	Structural adequacy/ Integrity/ Insulation		
	5 & 7a	**6**	**7b & 8**
EXTERNAL WALL (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 1.5 m	120/120/120	180/180/180	120/120/120*****
1.5 to less than 3 m	120/ 90/ 90	180/180/120	120/120/120*****
3 m or more	120/ 60/ 30	180/120/ 90	120/120/120*****
For non- *loadbearing* parts—			
less than 1.5 m	- /120/120	- /180/180	- /120/120*****
1.5 to less than 3 m	- / 90/ 90	- /180/120	- /120/120*****
3 m or more	- / - / -	- / - / -	- / - / -

Building element	Class of building — FRL: (in minutes)		
	Structural adequacy/ Integrity/ Insulation		
	5 & 7a	**6**	**7b & 8**
EXTERNAL COLUMN not incorporated in an *external wall*, where the distance from any *fire-source feature* to which it is exposed is—			
less than 3 m	120/ - / -	180/ - / -	120/ - / -*****
3 m or more	- / - / -	- / - / -	- / - / -
COMMON WALLS and FIRE WALLS—	120/120/120	180/180/180	120/120/120*****
INTERNAL WALLS—			
Fire-resisting lift and stair *shafts*—			
Loadbearing	120/120/120	180/120/120	120/120/120*****
Non- *loadbearing*	- /120/120	- /120/120	- /120/120*****
Bounding *public corridors*, public lobbies and the like—			
Loadbearing	120/ - / -	180/ - / -	120/ - / -*****
Non- *loadbearing*	- / - / -	- / - / -	- / - / -
Between or bounding *sole-occupancy units*—			
Loadbearing	120/ - / -	180/ - / -	120/ - / -*****
Non- *loadbearing*	- / - / -	- / - / -	- / - / -
Ventilating, pipe, garbage, and like *shafts* not used for the discharge of hot products of combustion—			
Loadbearing	120/ 90/ 90	180/120/120	120/120/120*****
Non- *loadbearing*	- / 90/ 90	- /120/120	- /120/120*****
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES			
and COLUMNS—	120/ - / -	180/ - / -	120/ - / -*****
FLOORS	120/120/120	180/180/180	120/12-/120*****
ROOFS	--/--/--	--/--/--	--/--/--

Note:

a. Required FRLs marked with an ***** indicate to be subject to fire engineering analysis.

b. It is understood the building will be sprinkler protected throughout and therefore the roof will not required an FRL.

c. The DTS FRLs prescribed above may be subject to further change in the proposed fire engineering analysis.

2. The total floor area and total volume of the building will be the subject of a fire engineering analysis to accommodate the proposed atrium.

3. The new building will be located in closed proximity to adjoining boundaries and adjoining buildings (fire source features) and will require the issue of protection of openings to be addressed either by way of fire rated system(s) or an alternative fire engineered solution.

4. All new surface finishes, assemblies and linings are to comply with clause C1.10 (Specification C1.10 & C1.10a) with regard to Fire Hazard Properties.

5. The building will include an atrium void that will connect levels 03-14. The proposed atrium will be subject to a fire engineered alternative solution to address the following departures from DTS:

    a. Interconnection of floor areas (fire compartment size)

    b. Atrium well construction and deficiency of FRLs

c. Smoke hazard management throughout the building including within & via the atrium

6. The ventilation void to the western side of the building which connects levels 7-14 will be addressed with a fire engineered solution to address the following departures from DTS:

   a. Interconnection of floor areas (fire compartment size)

   b. Absence of fire resisting service shaft

   c. Smoke hazard management throughout the building including within & via the atrium

7. It is understood that the exhaust duct to the fume cupboards will not be protected with fire dampers at the connection of the consecutive storeys. This issue will be addressed with a fire engineered solution.

8. Fire / smoke separation between the new and existing buildings at the interconnection points will be addressed by the fire safety engineer.

Section D – Access and Egress:

The proposed development will generally satisfy the DTS provisions of Section D of the BCA subject to the following:

1. The proposed building will be subject of a fire engineering analysis for travel distance, distance between alternative exits and discharge from fire isolated exits within and from various floors.

2. Latch hardware to all exit doors will comply with the DTS provisions of Part D2.21 of the BCA, including provision of re-entry from the fire isolated stairways.

3. Each floor will be provided with access for people with disabilities.

4. The proposed stairways will be provided with handrail to at least one side.

5. The following will apply in relation to the construction of all stairways:
   - Stairway must have not more than 18 and not less than 2 risers in each flight.
   - Goings and risers within the stair flights must be constant throughout.
   - Goings and risers are to be in accordance with BCA Table D2.13 i.e.:

	Riser (R)	Going (G)	Quantity (2R+G)
Maximum	190	355	700
Minimum	115	250	550

6. The height of the balustrades above the nosings of the stairways is to be a minimum 865mm whereas the height above landings and the like are to be a minimum of 1m.

7. The proposed passenger lift will comply with BCA Part D3, AS1428.1 and AS1735.12 with respect to access and facilities for people with disabilities.

Section E – Essential Fire Safety Measures

The proposal will generally satisfy the requirements of Section E of the BCA subject to implementation of the following:

Essential Fire and Other Safety Measures	Standard of Performance
Access Panels, Doors & Hoppers	BCA Clause C3.13 &b AS 1530.4 - 2005
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.
Automatic Fire Suppression Systems (throughout all parts of the building)	BCA Spec. E1.5 & AS 2118.1-1999 or AS2118.4, 6 - 1995
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
Emergency Lifts	BCA Clause E3.4 & AS 1735.2 - 2001
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 Control Centres / Rooms	BCA Spec E1.8
Fire Blankets	AS 3504 – 2006 & AS 2444 - 2001
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 Hose Reels	BCA Clause E1.4 & AS 2441 – 2005 and fire engineering analysis to be prepared by Solutions Consultants.
Fire Hydrant Systems	Clause E1.3 & AS 2419.1 – 2005 and fire engineering analysis to be prepared by Solutions Consultants.
Fire Resistance Levels and Fire Compartment Size	BCA Specification C1.1 and fire engineering analysis to be prepared by Solutions Consultants.
Fire Seals	BCA Clause C3.15 & AS 1530.4 – 2005 & AS 4072.1 – 2005 and fire engineering analysis to be prepared by Solutions Consultants.
Fire Windows	BCA Spec. C3.4
Lightweight Fire resisting Construction	BCA Clause C1.8 & AS 1530.3 – 1999
Mechanical Air Handling Systems (manual Override for the carpark levels)	BCA Clause E2.2, AS/NZS 1668.1 - 1998 & AS 1668.2 – 1991
Paths of Travel & Travel Distances	EP & A Regulation Clause 186, Part D1 & 2 of the BCA and fire engineering analysis to be prepared by Solutions Consultants.
Portable Fire Extinguishers	BCA Clause E1.6 & AS 2444 – 2001

Essential Fire and Other Safety Measures	Standard of Performance
Protection of External Openings	BCA Part C3 and fire engineering analysis to be prepared by Solutions Consultants.
Pressurising Systems (stair and lift shafts)	BCA Clause E2.2 & AS/NZS 1668.1 – 1998 and fire engineering analysis to be prepared by Solutions Consultants.
Required Exit Doors (power operated)	BCA Clause D2.19(d)
Smoke Hazard Management Systems (zone smoke control & atrium smoke exhaust)	BCA Part E2 & AS/NZS 1668.1 - 1998 and fire engineering analysis to be prepared by Solutions Consultants.
Smoke Dampers	AS/NZS 1668.1 - 1998
Smoke Doors	BCA Spec. C3.4 & C2.5
Sound Systems and Intercom Systems for Emergency Purposes (EWIS)	BCA Clause E4.9 & AS 1670.4 – 2004 & AS 4428.4 – 2004 and fire engineering analysis to be prepared by Solutions Consultants.
Stand-by Power Systems	BCA Clause E1.3, E3.4, E4.2 & E4.5 and AS 3000 – 2000
Wall wetting sprinklers	BCA Clause C3.4 & AS 2118.2 – 1995
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:

In addition to the above, the proposed fire engineering analysis to be prepared by Solutions Consultants will seek to:

- Omit DTS requirement for zone smoke control
- Omit DTS requirement for protection of various openings in external walls

Section F– Health and Amenity

The proposal will generally satisfy the DTS provisions of Section F of the BCA subject to the following:

1. Ventilation of all parts of the building, including the carpark and laboratories, will be in accordance with BCA with respect to natural and or mechanical ventilation to comply with AS1668.1 & 2.
2. Stormwater drainage for the new building works will comply with AS 3500 & Council requirements where applicable.
3. New sarking-type materials used for insulation to comply with AS/NZS 4200 Parts 1 and 2.
4. Artificial lighting is required throughout the building and is to comply with AS/NZS 1680.1.
5. Toilets will be provided throughout the building will be provided to comply with the following ratio requirements of Part F2 of the BCA:

Class 6 retail (café / restaurant):

User Group	Closet Pans		Urinals		Washbasins	
	Design Occupancy	Number	Design Occupancy	Number	Design Occupancy	Number
Male employees	1 — 20	1	1 — 10	0	1 — 30	1
	> 20	Add 1 per 20	11 — 25	1	> 30	Add 1 per 30
			26 —50	2		
			>50	Add 1 per 50		
Female employees	1 — 15	1			1 — 30	1
	> 15	Add 1 per 15			> 30	Add 1 per 30
Male patrons	1 — 100	1	1 — 50	1	1 — 50	1
	101 — 300	2	51 — 100	2	51 — 200	2
	>300	Add 1 per 200	101 — 150	3	>200	Add 1 per 200
			151 — 200	4		
			201 — 250	5		
			>250	Add 1 per 100		
Female patrons	1 — 25	1			1 — 50	1
	26 — 50	2			51 — 150	2
	51 — 100	3			>150	Add 1 per 200
	101 — 150	4				
	151 — 200	5				
	201 — 250	6				
	>250	Add 1 per 100				
Note:	***Sanitary facilities need not be provided for patrons if the building accommodates not more than 20 people.***					

Class 5 Administration & Medical Centre

User Group	Closet Pans		Urinals		Washbasins	
	Design Occupancy	Number	Design Occupancy	Number	Design Occupancy	Number
Male employees	1 — 20	1	1 — 10	0	1 — 30	1
	> 20	Add 1 per 20	11 — 25	1	> 30	Add 1 per 30
			26 —50	2		
			>50	Add 1 per 50		
Female employees	1 — 15	1			1 — 30	1
	> 15	Add 1 per 15			> 30	Add 1 per 30

Class 8 Laboratories

User Group	Closet Pans		Urinals		Washbasins	
	Design Occupancy	Number	Design Occupancy	Number	Design Occupancy	Number
Male employees	1 — 20	1	1 — 10	0	1 — 20	1
	> 20	Add 1 per 20	11 — 25	1	> 20	Add 1 per 20
			26 —50	2		
			>50	Add 1 per 50		
Female employees	1 — 15	1			1 — 20	1
	> 15	Add 1 per 15			> 20	Add 1 per 20

In addition to the above (for all cases) the design will incorporate minimum one (1) unisex wheelchair accessible WC for persons with a disability to be provided for each 100 closet pans + urinals.

Section J – Energy Efficiency Requirements:

The proposal will generally satisfy the Performance Requirements of Section J of the BCA subject to the following:

1. Minimum energy efficiency design measures will be implemented into the building design to satisfy the following requirements, as applicable for Climate Zone 5 under the BCA:

    - building fabric (insulation)
    - external glazing
    - building sealing to doors, exhaust vents and windows
    - efficiency of the running of air conditioning systems and mechanical ventilation systems with respect to insulation of ductwork, timer switches, etc
    - performance of glazing
    - artificial lighting & power controls (interior and exterior lighting)
    - hot water systems
    - access and maintenance of energy efficiency systems

Fire Engineering

The proposed building and interconnection to the adjoining Victor Chang Building and Garvan Building will be the subject of various fire engineered alternative solutions to the DTS provisions of the BCA.

The following table presents a summary of the proposed alternative solutions to the DTS provisions:

BCA DTS Provision	Description of Proposed Departure from BCA DTS Provisions	Performance Requirements
Clause C1.1, Spec C1.1	Reduction in the Fire Resistance Level (FRL) of building elements from 4 hours to 2 hours.	CP1, CP2
Clause C2.7, C3.5	Rationalisation of fire separation between the proposed connections between the GSVCCC and the adjacent Victor Chang and Garvan buildings.	CP2
Clause C3.2	Rationalisation to the protection of openings in external walls which are located within 3m of allotment boundaries, or within 6m of adjacent buildings.	CP2
Clause C3.15	Variation to the protection of service penetrations through fire rated shafts associated with the fume cupboard exhaust systems.	CP2, CP8
Clause D1.4, D1.5	Potential variations in egress travel distances and/or distance between alternative exits.	DP4, DP5
Clause E1.3	Potential variations in the location of fire brigade booster connections.	EP1.3
Clause E1.4	Potential variations in the location of fire hose reels or their passage through required fire/smoke walls.	EP1.1
Table E2.2a	Variation to the provision of a zone smoke control system.	EP2.2
BCA E4.9	Variation to the provision of sound systems and intercom systems for emergency purposes may be required.	EP4.3
Part G3	Variation to atrium construction.	CP1, CP2, DP4, DP5, EP2.2

Conclusion

In view of the above assessment it is considered that such matters, including preparation of the proposed fire engineered alternative solutions, can be appropriately addressed in the preparation of the Construction Certificate design documentation without giving rise to any inconsistencies with the development consent.

We trust that the above submission is of assistance to the Consent Authority and we are satisfied that any design modifications required to the building in order to satisfy the fire and life safety and health and amenity requirements of the BCA2009 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.

Should you wish to discuss please do not hesitate to contact the undersigned on 02 9211 7777.

Yours sincerely,

David J. Blackett (MPIA, MAIBS)
Accredited Certifier
BPB Accreditation No.0032