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2 February 2009

Mr Rod Winton
Winton Associates
P O Box A282
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Dear Rod

Subject: Prince of Wales Medical Research Institute – Neuroscience Research Precinct
Barker Street Randwick

Reference is made to the Preliminary Plans from Cox Richardson (Project No. 204179.30, dated November 2008, PA-201-2D to PA-210-2D (all Rev 5/6), PA-301 Rev 5 to PA-307 Rev 5, PA-401 Rev 5 and PA-402 Rev 5). Taking into account the level of detail as shown on the plans, the proposal, as depicted in these plans, the proposal has been assessed against the Building Code of Australia 2008, and the following is noted.

Building Description

Rise-in-storeys	Seven (7)
Classification	Basement 1 & 2 – 5 (Office/bunkers) & 7a (Carpark) Ground Floor – 5 (Ambulance Station, Clinics & Offices), 6 (Café), 8 (Storage for Laboratory & Plant) & 9b (Assembly Building – Auditorium & Place of Public Entertainment) Levels 1 to 6 – 5 (Office) & 8 (Laboratory) Roof Plant – 8 (Plant - Laboratory)
Type of Construction	A
Effective Height	Less than 25m

Fire Compartment Floor area and volume limitations	Class 6, 7a & 8	Maximum floor area 5,000m² Maximum volume – 30,000m²
	Class 5 & 9b	Maximum floor area – 8,000m² Maximum volume – 48,000m²
	Class 7a*	No maximum floor area or volume

* Where a carpark is provided with a sprinkler system complying with Specification E1.5 and separated from the rest of the building there are no compartment limits

Fire Resistance (BCA Section C)

Taking into account the position of the building relative to property boundaries, together with its overall floor areas/volumes, the provision under Type A Construction standards, for fire rated building elements, compliance with the Deemed -to-Satisfy Provisions of BCA Section C is possible, with Fire Resistance and Stability (Part C1), Compartmentation and Separation (Part C2) and Protection of Openings (Part C3) being readily achieved.

The Fire Resistance Level (FRL) of building elements will be required to comply with Table 3 of Specification C1.1 of the BCA. As it is unlikely the separations will be separated within the storeys (see Clause C2.8 of the BCA) the higher FRL of 240/240/240 will be required throughout.

It is proposed to provide glass walls to the fire isolated stairs which will not achieve the FRL of 240/120/120 required in Table 3 of Specification C1.1 and the doors will not achieve the FRL of - /60/30 required under Clause C3.8 of the BCA. This will be required to be addressed by a Fire Engineer as an Alternate Solution at Construction Certificate Stage.

At this stage compartment sizes have not been determined. It is likely the separation of compartments into the maximum sizes under Table C2.2 will not be achieved. The building may either be designed as a large isolated building (subject to the provision of perimeter access), oversized fire compartments or by the use of fire walls with drencher protected glass that will be required to be addressed by the Fire Engineer.

Access & Egress (BCA Section D)

Compliance with the Deemed -to-Satisfy Provisions or performance requirements of BCA Section D will be readily achieved with the proposed design to address the following issues:

- Exit travel distances (Clause D1.4 of the BCA)
- Distance between alternate exits (Clause D1.5 of the BCA)
- Travel via fire isolated exits (Clause D1.7 of the BCA).

Additional exits are likely to be required in various areas but these can be addressed at a latter stage.

Access for People with Disabilities (Part D3) being readily achieved with the proposed layout provided all doors provide 800mm clear opening and sufficient circulation space on the latch side of the door. Space for wheelchairs will be required in the auditorium. The access consultant will provide further guidance in respect to these issues.

Fire Fighting Services & Smoke Hazard Management (BCA Section E)

The following fire fighting services are required to serve this facility under Clauses E1.3, E1.4, E1.5, E1.6 and E1.8 of the BCA:

- Fire hydrants
- Fire hose reels
- Sprinklers (due to the atrium)
- Portable fire extinguishers
- Fire control centres

The proposed contents of the building will be required to be addressed to identify if any special hazards exist as referred to in Clause E1.10 of the BCA.

A smoke hazard management system is required in the building under Table E2.2a of the BCA. A smoke exhaust in the atrium and the fire isolated stairs will be required to be pressurised. Table E2.2b will also require shutdown of the air conditioning system (other part of the zone smoke control) in the 9b portion. The parameters of these systems will be required to be addressed by the Fire Engineer during further design.

Emergency lighting, directional signage, illuminated exit signage and a Sound Systems and Intercom Systems for Emergency Purposes (was Emergency Warning and Intercommunication System) is to be provided throughout as required under Part E4. The lift is to be provided with a stretcher facility under Clause E3.2 of the BCA.

Health & Amenity (BCA Section F)

Compliance with such issues as damp/weatherproofing (BCA Part F1), sanitary and other facilities (BCA Part F2), ceiling heights (BCA Part F3) and Light and Ventilation (BCA Part F4) will be required to be achieved.

Specific details of compliance with the ventilation requirements of Part F4 of the BCA will be required to be certified by the Mechanical Engineer. The car park ventilation is to comply with AS1668.2 and Clause 5.5 of AS/NZS1668.1 with metal fan blades (if required) under Table E2.2a of the BCA.

Ancillary Provisions (BCA Section G)

Compliance with such issues of window cleaning (NSW Clause G1.101) and coolrooms (Clause G1.2) will be readily achieved.

If the atrium is to be surrounded by glass walls these will be need to be protected by drenchers as required under Part G3 of the BCA.

Special Use Buildings (BCA Section H)

The auditorium in the building is to be used as a Place of Public Entrainment (POPE) and will be required to comply with this part of the BCA. The non POPE part should be separated from the rest of the building with a wall with an FRL of not less than 60/60/60 (as required under Clause H101.2). The line of separation has not been detailed at this time.

No stage floor area has been nominated but it appears to be a non-conventional stage less than $50m^2$. The seating layout has not been detailed will be required to comply with either Clause H101.11 or 12.

The electrical system will be required to be altered to ensure the main isolation switch is readily accessible to the NSW Fire Brigade (Clause H101.19.1) and a separate sub-mains is required (Clause H101.19.3). These matters will be required to be confirmed by an Electrical Consultant.

Energy Efficiency (BCA Section J)

Compliance with such issues of Building Fabric, External Glazing, Building Sealing, Air Movement, Air-conditioning and Ventilation Systems, Artificial Lighting and Power, Hot Water Supply and Access for Maintenance will be required to meet the requirements of this section of the BCA. This will require the design to be developed to meet these requirements with the assistance of appropriate consultants.

In summary, the documentation has been assessed against the applicable provisions of the Building Code of Australia 2008, and it is considered that such documentation depicts a Class 5, 6, 7a, 8 and 9b building that can readily comply with that Code.

Should you require any further information or explanation please do not hesitate to contact me.

Yours faithfully,

Robert Briant
Associate
Accredited Certifier BPB 0048

Schedule of Essential Services

The following essential services are required to be provided in the building. All services will require an inspection by a competent person for installation compliance to the relevant Australian Standard and the BCA and be certified accordingly. This will be required to be carried out on a yearly basis and in accordance with AS1851.

Fire Safety Measure	Standard	BCA Clause(s)	Proposed Fire Safety Measures
Access panels, doors & hoppers to fire resisting shafts	AS 1530.4 - 2005	C3.13	☒
Automatic fail safe devices	-	C3.8, D2.21, Spec C3.4	☒
Automatic fire detection & alarm systems	AS 1670.1 – 2004 AS 4428.1 – 1998	Spec E2.2a	☒
Automatic fire suppression systems	AS 2118.1 – 1999	Spec E1.5	☒
Emergency lighting	AS/NZS 2293.1 - 1998	E4.2, E4.4	☒
Emergency lifts	AS 1735.2 – 1993	E3.4	☒
Sound systems and intercom systems for emergency purposes	AS 1670.4 – 2004 AS 4428.4 – 2004	E4.9, Spec G3.8	☒
Exit signs	AS/NZS 2293.1 - 1998	E4.5, E4.6, E4.7 and E4.8	☒
Fire control centres and rooms	-	E1.8, Spec E1.8	☒
Fire dampers	AS 1668.1	Spec E2.2a	☒
Fire doors	AS/NZS 1905.1 – 1997	Spec C3.4	☒
Fire hydrant systems	AS 2419.1 – 1994	E1.3	☒
Fire seals protecting openings in fire resisting components	AS 4072.1 – 1992 AS 1530.4 – 1997 AS 1038.15 – 1995	Spec C3.15	☒
Fire hose reel systems	AS 2441 – 1988	E1.4	☒
Mechanical air handling systems (shutdown and smoke exhaust)	AS 1668.1 – 1998 AS 1668.2 – 1991	E2.2	☒
Perimeter vehicle access for emergency vehicles	-	C2.4	☒
Portable fire extinguishers & fire blankets	AS 2444 – 1995	E1.6	☒
Smoke dampers	AS 1668.1 & 2	-	☒
Smoke doors	-	Spec C3.4	☒
Standby power systems	-	Spec G3.8	☒
Wall wetting sprinklers & drencher systems	AS 2118.1 – 1999	C3.2, C3.4, D1.7, Spec G3.8	☒
Warning and operational signs	-	C3.6, E3.3, D2.23 & Spec E1.8	☒
Other Measures: Alternate Solution			☒
Paths of Travel		Section D BCA	☒