

Our Reference B09974

Morris Bray Architects Pty Ltd
188 Willoughby Road,
Crows Nest
NSW 2065

Attention: Cameron Martin



Re: Response to responses to Part 3A Environmental Assessment for Sydney Adventist Hospital

Dear Cameron,
I have reviewed the responses from:

- *Planning NSW;*
- *NSW Transport;*
- *RTA –Sydney Regional Development Advisory Committee;*
- *NSW Health – Northern Sydney Central Coast;*
- *Sydney Water;*
- *Kur-ring-gai Council; and*
- *Public Submissions.*

Of the responses reviewed the Ku-ring-gai Council provides the comment that *‘there are a number of concerns in relation to bushfire risk, and compliance with Planning for Bushfire Protection 2006*. These are listed on Page 38 – 40 of Council’s response and a response is provided below.

(1) Evacuation:

(a) Development will require a Bushfire Evacuation Plan [BEP] as identified in clause 46 of the Rural Fires Regulation 2002.

Comment:

The Rural Fires Regulation 2002 has been replaced by the Rural Fires Regulation 2008 and is therefore not relevant in the assessment of the EA.

(b) Reference required to AS4083 – 1997 – Planning for Emergencies – health care facilities.

Comment:

Noted

- (c) *Need to consider possible safe refuge area should there be a need to evacuate.*

Comment:

Refer to comment below.

- (d) *Evacuation constraints within this site have been recognised through mapping within the 'Bushfire Evacuation Risk Map' [2008]. Whilst this map applied directly to Seniors Living and Dual Occupancy development, the importance and constraints of evacuation within this area need to be addressed. This should include whether evacuation will be on site or off site. Should off site evacuation be required then consideration of road capacity to facilitate this action should be addressed.*

Comment:

The premise on which the bushfire planning and development of bushfire protection measures were determined for the Hospital, and approved by the NSW Rural Fire Service has been based on providing maximum protection to the hospital precinct from bushfires which may occur in the Lane Cove National Park and the vegetation within the Coups Creek/Lane Cove River corridors.

The aim of the bushfire planning to the Hospital is to provide a safe environment in which patients, staff and visitors can remain without having the need to evacuate/relocate due to bushfire risk.

The protection measures include the provision of maximum width Asset Protection Zones to 'core hospital' uses and construction of buildings to a level which will address the potential levels of radiant heat and ember attack. The maximum width of Asset Protection Zone setback will reduce the radiant heat loading on the exterior of the 'core' buildings to less than 10kW/m² with the building being designed and constructed to comply with BAL 12.5 [12.5 kW/m²].

Ember attack is also addressed in the provision of complying construction standards and the impact of bushfire smoke will be addressed in the provision of smoke filters on the fresh-air intakes to the air-conditioning system.

These precautionary measures provide a safe environment from which there will not be the need to relocate patients, staff or visitors due to bushfire risk.

- (e) *Plans must show how buildings will meet the structural requirements to justify the conclusion that large scale evacuation of the Estate will not be needed in the event of a bushfire.*

Comment:

The proposed buildings are required to address the fire safety provisions of the Building Code of Australia [BCA] – for both structure fires and bushfires. The Construction Certificate documents will address these requirements.

(2) Access and Egress for Emergency Vehicles:

- (a) *The proposed car parks and access roads form a good perimeter access road around the Hospital and serve to provide additional defendable space from the bushfire interface. Council requests that the additional car parking provided to the west of the site [on western side of the pool] should have through access to form a continuous thoroughfare for emergency vehicles. Similarly the car park located behind Jacaranda Lodge should contain a similar thoroughfare to ensure that emergency vehicle response is not compromised*

Comment:

This will be addressed in the detail design at Construction Certificate documentation.

- (b) *Council would like to see two access points to the temporary car park to the northeast of the site so that the safety of visitors/patients or emergency vehicles are not compromised.*

Comment:

The location of the temporary carpark places it adjacent to the 'narrow' section of the Coups Creek corridor and therefore at a lower risk than the western edge of the Hospital Precinct. The layout of the temporary carpark and its access from the main entry road/round about provides satisfactory protection against this level of risk and therefore it is not necessary to provide a secondary access/egress point to Fox Valley Road.

- (c) *All access ways should be well sign posted, with directions to Fox Valley Road and specified evacuation points.*

Comment:

Agreed

- (d) *Along the perimeter roads Council requests that roll and kerb guttering be put in place that provides easy access for fire vehicles to access the Asset Protection Zone [APZ] and bushland interface.*

Comment:

Master Plan shows a perimeter road located to the north of the proposed multi-storey Carpark building and at grade Carpark. This road is located within the Asset Protection Zone and within 2 x 30 metre lengths of canvas hose line or within the 30 metre long 'live' reel hose length from attending fire appliances. It will therefore not be necessary for fire appliances to leave the road pavement to access the Asset Protection Zone [because they are located within it] or the bushland interface as this can be done from the safety of the perimeter road.

(3) Construction Standards:

- (a) *The construction standards of the proposed development need to be reviewed to ensure that recent changes to Australian Standard AS3959 – Construction in Bushfire Prone Areas have been taken into account. For example – the report states [pg 46]:*

'The core hospital component of the Stage 1A, 1B; Stages 2 & 3 Hospital development consists of buildings which are located more than 100 ... there is no requirement to provide additional protection against burning ember impact on the structure however, smoke filters shall be fitted to any new air-conditioning system.'

Comment:

The Bushfire Protection Assessment Report prepared by ABPP actually states:

The core hospital component of the Stage 1A, 1B; Stages 2 & 3 Hospital development consists of buildings which are located more than 100 metres from the unmanaged vegetation within the Coups Creek riparian zone/E2 Environmental Protection Zone. This separation width reduces the radiant heat rating on the exposed elevations of these buildings to less than 10kW/m² – therefore complying with the maximum levels of radiant heat permitted for a 'Special Fire Purpose Development'.

As these proposed buildings will be fully air-conditioned, with automatic closing doors and windows which will be closed at all times, there is no requirement to provide additional protection against burning ember impact on the structure however, smoke filters shall be fitted to any new air-conditioning system.

Whilst this advice was provided under the provisions of AS3959 – 1999 the advice remains the same for AS3959 – 2009 as the buildings are to be designed and built to comply with the Type A construction as defined by the BCA and will therefore not be exposed to ignitions by burning embers.

The advice in relation to the smoke filters remains.

(b) It is also noted that the north-western corner of the new CSB expansion [Stage 1B], extends into the 100m APZ. Construction standards would therefore need to be increased.

Comment:

The CSB building does not extend into the Asset Protection Zone.

(c) The new podium arrival stage 2 is located directly adjacent to [<10m from] the new stage 1A and 1B core hospital buildings. As such this podium should comply with the adjoining buildings required level of construction [BAL – Low].

Comment:

The new podium structure will be constructed to the following standard as recommended in the Bushfire Protection Assessment Report prepared by ABPP:

Ancillary, Non-Core Hospital Buildings [e.g. Carparking buildings / Service Buildings]

Non combustible construction with defendable space provided.

This level of construction exceeds BAL – Low.

- (d) Carpark construction [if retained adjacent to the bushland] needs to demonstrate that any proposed shielding devices and mesh to reduce radiant heat levels and entry of embers into the structure have the ability to withstand exposure to radiant heat.*

Comment:

These components will be constructed from non-combustible materials of sufficient size and density to withstand the expected levels of radiant heat.

(4) Building Footprints:

This section of the Council response deals with design matters rather than specific bushfire protection requirements. The recommendation to provide an alternate fire access by modifying the proposed recreational trail will not be supported by the NSW Rural Fire Service as a perimeter road/carpark is the minimum requirement for this type of development.

An increase in the construction standards to the Clinical Services Building, beyond that which is proposed, is not required as the bushfire risk to this building is low due to the 100 metre wide separation to unmanaged vegetation in the Coups Creek corridor.

(5) Landscaping:

- (a) 'On the Site Changes and Key Landscape Issues where it states the "New mass planting areas against the road will assist visual integration of the roadway with bushland --- ensure new planting is suitable in terms of bushfire management and safety requirements", should note: "in accordance with APZ requirements".*

Comment:

Agree.

- (b) Development must demonstrate ongoing management of APZ's*

Comment:

The Bushfire Management Plan identifies the protocols for the management of the APZs.

(6) Fire Management Plan:

- (a) A Fire Management Plan is required as part of the Biodiversity Management Plan. It is not possible to assess consistency within this plan in its absence.*

Comment:

The Fire Management Plan has been completed and included in the Biodiversity Management Plan.

(7) Oxygen Tanks:

This is not a bushfire issue.

(8) Static Water Supply:

- (a) *The draft Statement of Commitments proposes static water supply tanks that double as potable water storage. However, for potable water the draft Statement commits only to a minimum storage of 3 hours for maintenance. Water from these tanks is therefore unlikely to be available during a bushfire.*

Comment:

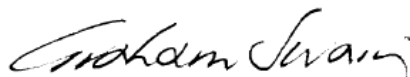
The Static Water Supply Tank diagram included in the ABPP report identifies that there are five [5] 120,000 litre storage tanks specifically for structural and bushfire fighting with one of the 120,000 litre tanks specifically for bushfire fighting operations.

In addition, the ABPP report includes a plan that shows two additional 120,000 litre storage tanks specifically for potable water supply.

The statement in the in the Ku-ring-gai Council response is therefore totally unfounded as all five tanks are interconnected so that a total of 600,000 litres of water are available for bushfire operations.

If you require any further information please contact the undersigned.

Yours faithfully,



Graham Swain.

Managing Director,

Australian Bushfire Protection Planners Pty Limited

1.11.2010