

NSW RURAL FIRE SERVICE (Letter dated 10 August 2016)		
Item	Recommendation	Comments
1	<p>Prior to occupation of the building, the Taronga Zoo emergency management plan shall be updated as per the recommendations of the Bushfire Assessment Report prepared by <i>Australian Bushfire Assessment Consultants</i>, project number 15006, dated February 2016 and include, but not be limited to, the following matters:</p> <ul style="list-style-type: none"> <li>a) Identification of a suitable pedestrian and vehicular pathway from each proposed accommodation building to the identified refuge building/s which provides a fuel reduced pathway for occupants, and is located away from the hazard and does not involve using Bradleys Head Road and does not involve any pathway which is located closer to the hazard (east of Bradleys Head Road), the location of the eastern most accommodation building (Pod C).</li> <li>b) Identify the trigger points for implementing the emergency evacuation/relocation of occupants and clearly state what these triggers are.</li> <li>c) Provide for specific evacuation measures for disabled occupants which meet all the requirements listed in this condition above.</li> <li>d) Identify the procedure for staff to alert relevant response agencies and commence evacuation/relocation of occupants of the accommodation buildings if a bush fire is identified on the proposed CCTV cameras.</li> <li>e) Compliance with Australian Standard AS 3745 2010 <i>Planning for Emergencies in Facilities</i>.</li> </ul>	<p>It is requested that item (a) be amended. It is not feasible, nor practically possible to provide vehicular access to each proposed accommodation building. Pedestrian pathways can be identified from each proposed accommodation building, with perimeter vehicular access available.</p> <p>Pedestrian access to the refuge will be to the west, into the zoo site and away from the hazard.</p> <p>No objection to items (b)-(e).</p>
2	<p>Prior to the occupation of the buildings, a copy of the updated emergency evacuation plan shall be provided to the Local Emergency Management Committee prior to occupation of the development.</p>	<p>There is no objection to this recommendation being imposed as a condition to any consent.</p>

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3	<p>Prior to the occupation of the buildings, the identified refuge building/s shall be upgraded/constructed to comply with the following ember protection requirements:</p> <ol style="list-style-type: none"> <li>Enclose all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum, aperture of 2mm.</li> <li>Where applicable, this includes any sub floor areas, openable windows, vents, weepholes and eaves. External doors are to be fitted with draft excluders.</li> </ol>	<p>The requirements of this recommendation cannot practically be provided to the proposed refuge building(s).</p> <p>The emergency refuge building(s) identified for guests of the TWR is the Lecture Theatre building or the Centenary Theatre (in construction and scheduled for completion in late 2016, prior to construction and occupation of the TWR project).</p> <p>The buildings nominated as refuge buildings are located in excess of 300 metres from any vegetation to the eastern side of Bradleys Head Road – the potential bushfire hazard vegetation to the proposed accommodation buildings.</p> <p>The buildings form an important part of the primary function of the site as a zoological park and are not readily upgradable to meet the requirements of this recommendation.</p> <p>It appears that the recommendation is a standard condition and it is requested that the recommendation be deleted and/or amended to recognize that the buildings cannot be readily upgraded to meet the requirements of the condition.</p>
4	<p>The external eastern and southern facades of Pod 'C' and Pod 'D', as well as the exit stairs and walkways of Pod 'D', and the eastern exit stairs and walkway of Pod 'D', are provided with an automated sprinkler system as part of the fire engineered alternate solution</p>	<p>The requirements of this recommendation are included in the current design.</p>

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5	<p>Prior to use, provide documentation to the principal certifying authority from a suitable qualified bush fire consultant, that the following requirements have been satisfied (unless alternative arrangement are made with the RFS):</p> <ul style="list-style-type: none"> <li>a) A suitable refuge building/s is identified within the Taronga Zoo site which is subject to a radiant heat level not greater than 10kW/m<sup>2</sup> (as specified in Table A2.6 of PBP 2006). This refuge/s will house occupants of the accommodation buildings in the event of a bushfire, where evacuation is not feasible.</li> <li>b) The identified refuge building/s is clearly signposted to identify the building/s as a 'bushfire refuge'.</li> <li>c) The nominated pedestrian pathway/s to the refuge building/s are clearly signposted.</li> <li>d) The identified refuge building/s provides for the maximum capacity of the site (being the total number of all accommodation guests).</li> <li>e) The identified refuge building/s comply with the Acceptance Criteria listed below (as copied from the Australian Building Codes Board <i>Performance Standard for Private Bushfire Shelters</i>) for the total capacity of all accommodation buildings as permitted in any approval: <ul style="list-style-type: none"> <li>(i) Ceiling height Minimum 1.9m</li> <li>(ii) Floor area Minimum 0.75m<sup>2</sup> per person</li> <li>(iii) Volume Minimum 1.2m<sup>3</sup> per person</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>a) The buildings nominated as refuge buildings are located in excess of 300 metres from any vegetation to the eastern side of Bradleys Head Road – the potential bushfire hazard vegetation to the proposed accommodation buildings. The distance of the buildings ensures that they will be subject to a radiant heat level not greater than 10kW/m<sup>2</sup>.</li> <li>b) The primary function of the buildings nominated as refuge buildings was discussed in 3 above and, in this regard, the refuge building(s) cannot be signposted in any manner to identify them as refuge buildings. The zoo has 24-hour security and is managed continuously. Guests will be accompanied to the refuge buildings (if and when required) in a coordinated manner by site management.</li> <li>c) For the same reasons as outlined in (b), the pedestrian pathways to the refuge building(s) cannot be signposted. The zoo site is subject to a high degree of management and guests will be accompanied in the event that they need to be evacuated from their accommodation to the refuge building(s). This will be further developed in the update of the zoo's emergency management plan as per item 1.</li> <li>d) The buildings nominated as refuge buildings can provide for the maximum number of accommodation guests that might be staying on the site at full capacity.</li> <li>e) These requirements are included in the current design.</li> </ul>

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6	Any new landscaping to the site approved as part of this proposal shall incorporate the principles of Appendix 5 of <i>Planning for Bush Fire Protection 2006</i> .	The terms of this recommendation are inconsistent with the use of the site as a zoological park. The landscaping scheme for the proposal has been developed by GDA in accordance with the principles outlined in their letter of 14 September 2016. In most respects these principles provide for the landscaped context of the zoo while incorporating fuel method. This recognizes the intent of the landscaping to integrate with the rest of the zoo site whilst proposing measures to ensure that any landscaping does not give rise to a bushfire hazard around the proposed buildings. Any landscaping identified for the area within the zoo site around the proposed development is to be in keeping with the design intent for the accommodation buildings to integrate with the overall zoological park, rather than be a standalone development within the larger site. In this regard, the landscaping design, by the project landscape architect, will complement the landscaping themes associated with the exhibits planned for the area immediately around the accommodation buildings.