



NSW RURAL FIRE SERVICE

Department of Planning and Environment (Sydney Offices)
GPO Box 39
Sydney NSW 2001

Your reference: SSD-10456
Our reference: DA20201126004465-SEARS-1

ATTENTION: Minoshi Weerasinghe

Date: Tuesday 15 December 2020

Dear Sir/Madam,

State Significant Development - Entertainment Facility Draft Conditions of Consent

Taronga Zoo - Upper Australia Precinct (SSD-10456) 2A Bradleys Head Road Mosman NSW 2088, 22//DP843294

Reference is made to correspondence dated 23/11/2020 seeking draft conditions of consent for the above State Significant Development in accordance with the *Environmental Planning and Assessment Act 1979*.

New South Wales Rural Fire Service (NSW RFS) has considered the information submitted and provides the following recommended conditions;

General Conditions

Emergency and Evacuation

The intent of measures is to provide suitable emergency and evacuation arrangements for occupants of the development.

1. The existing Bush Fire Emergency Management and Evacuation Plan must be updated to include the proposed exhibit Upper Australia Precinct and be consistent with the NSW RFS document: *A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan*. Specific updates should include:

- Emphasis that evacuation routes are to be into the zoo site toward the west (away from the bushfire hazard outside the eastern boundary of the zoo) and not to the overflow carpark to the north.
- Re-assessment of the bushfire risk rating considering the Mosman North Sydney Willoughby Bush Fire Management Committee Bush Fire Risk Management Plan 2017-2022 assesses the likelihood of a bush fire as 'Likely' and the consequence as 'Catastrophic'.
- Consideration should be given to planned closure of the zoo based on specific triggers such as Extreme and/or Catastrophic Fire Danger Rating forecasts.

Asset Protection Zones

The intent of measures is to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting fire fighting activities. To achieve this, the following conditions shall apply:

Postal address

NSW Rural Fire Service
Locked Bag 17
GRANVILLE NSW 2142

Street address

NSW Rural Fire Service
4 Murray Rose Ave
SYDNEY OLYMPIC PARK NSW 2127

T (02) 8741 5555
F (02) 8741 5550
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2. From the start of building works, and in perpetuity to ensure ongoing protection from the impact of bush fires, a Vegetation Management Plan must be in place over the proposed exhibit Upper Australia Precinct to ensure its ongoing management as an Outer Protection Area (OPA) in accordance with Appendix 4 of *Planning for Bush Fire Protection 2019*.

When establishing and maintaining an OPA the following requirements apply in accordance with the requirements of Appendix 4 of *Planning for Bush Fire Protection 2019*:

- tree canopy cover should be less than 30%;
- canopies should be separated by 2 to 5 metres.
- shrubs should not form a continuous canopy;
- shrubs should form no more than 20% of ground cover;
- grass should be kept mown to a height of less than 100mm; and
- leaf and other debris should be removed.

Construction Standards

The intent of measures is to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities. To achieve this, the following conditions apply:

3. Where possible, consideration should be given to any structural elements that are not critical to the aesthetic of the proposed exhibit Upper Australia Precinct being constructed from non-combustible materials. Any necessary timber construction should utilise hardwood species where possible.

Water and Utility Services

The intent of measures is to provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building. To achieve this, the following conditions shall apply:

4. The provision of water, electricity and gas must comply the following in accordance with Table 5.3c of *Planning for Bush Fire Protection 2019*:

- reticulated water is to be provided to the development where available;
- fire hydrant, spacing, design and sizing complies with the relevant clauses of Australian Standard AS 2419.1:2005;
- hydrants are not located within any road carriageway;
- all above-ground water service pipes are metal, including and up to any taps;
- where practicable, electrical transmission lines are underground;
- where overhead, electrical transmission lines are proposed as follows:
 - a. lines are installed with short pole spacing (30 metres), unless crossing gullies, gorges or riparian areas; and
 - b. no part of a tree is closer to a power line than the distance set out in accordance with the specifications in *ISSC3 Guideline for Managing Vegetation Near Power Lines*.

Landscaping Assessment

The intent of measures is for landscaping. To achieve this, the following conditions shall apply:

5. Landscaping and revegetation within the proposed exhibit Upper Australia Precinct should incorporate the principles of Appendix 4 of *Planning for Bush Fire Protection 2019*. Specifically, the following principles should be included as part of any landscaping plan:

- A species list of all plantings including estimated size at maturity and a preference for species with low flammability.
- A maintenance regime that provides for ongoing adequate canopy separation between trees i.e thinning and regular pruning to avoid adjoining canopies, and provides for ongoing pruning of lower limbs of trees.
- Adequate spacing between plantings to avoid continuous vegetation pathways resulting in the creation of 'fire paths' towards vulnerable buildings.

- Regular removal of fine fuels to maintain a fuel reduced landscape.
- Suitable impervious areas are provided immediately surrounding the building, such as pathways.
- Grassed areas, mowed lawns or ground cover plantings are provided in close proximity to the building.
- Species are avoided that have rough fibrous bark, or which keep/shed bark in long strips or retain dead material in their canopies.
- Smooth bark species of tree are chosen which generally do not carry a fire up the bark into the crown.
- Planting of deciduous species is avoided which may increase fuel at surface/ ground level (i.e. leaf litter).

For any queries regarding this correspondence, please contact Rohini Belapurkar on 1300 NSW RFS.

Yours sincerely,

Kalpana Varghese

**Team Leader, Dev. Assessment & Planning
Planning and Environment Services**