

1 April 2019

Northern Beaches Christian School
C/- WMK Architecture
Level 2, 364 Kent Street
Sydney NSW 2000
Attn: Imran Radin

Dear Imran,

RE: Bushfire statement - NBCS Campus Utilisation Project

The Northern Beaches Christian School (NBCS) engaged Peterson Bushfire to assess the proposed Campus Utilisation Project development application regarding improvements to primarily the outdoor areas of the school. The project seeks to improve and expand on the outdoor learning and play areas by introducing new facilities and landscaping.

1. Purpose of review

The objective of the bushfire review is to provide comment on the proposed design and provide a statement as to the compliance of the design with Asset Protection Zone fuel management requirements, namely an Inner Protection Area (IPA) standard.

2. Standard

An IPA is typically an area or zone closer to the building that has the objective of managing heat intensities at the building surface and provide a safe environment for refuge, evacuation and fire-fighters. An IPA standard refers to the amount, type and spatial distribution of trees, shrubs, gardens and other landscaping elements and combustible materials surrounding the built environment. Vegetative fuels that have built-up around buildings or inappropriate landscaping can aid in the spread of fire from the fire source (i.e. bushland) to the building. Landscaping can act as a threat in its own right if not planned and maintained in accordance with the IPA requirements. Secondary fires in landscaping can ignite nearby timber or crack glazing, letting embers into the building. The IPA is to be a safe environment that students can take refuge or undertake evacuation. Fire-fighters also need to access the IPA to defend a property.

3. Proposal

The works consist of primarily outdoor improvements such as playgrounds, themed gardens, seating and break-out areas, covered outdoor learning spaces, as well as replacement of some windows with sliding doors and internal reconfiguration.

4. Bushfire environment

As presented in the Bushfire Assessment Report by Eco Logical Australia (24 January 2012) approved as part of DA2012/0123 for the construction of the administration building, the school adjoins forest hazard within Ku-Ring-Gai Chase National Park to the north-east. Secondary bushfire threat is presented by small forest remnants classified as 'low hazard vegetation' within the adjoining golf course to the west, and rural properties to the east.

5. Review and recommendations

Overall, the proposed works are acceptable within the IPA environment surrounding the school buildings. This is due to the fact that most of the works involve playground elements, seating and landscape infrastructure. Proposed vegetation management focuses on retaining and complementing the existing garden beds, and promotes fire-resisting species. The following comments are made:

1. Care is to be taken in plant species selection across the school, particularly at the north-eastern end of the school adjacent the direction of the primary bushfire threat. Fire-resisting species should be used over sclerophyllous species (e.g. eucalypts). Trees with natural fire-resistant qualities (e.g. high moisture content such as mesic species) are preferred.
2. It's important that the tree crowns do not grow within 2 m of the roofline. Crowns between trees should also be separated by a minimum of 2 m.
3. Plants should be separated from the building facade by 2 m. This reduces combustion and allows fire-fighter access for suppression.
4. Covered structures for outdoor learning are structurally non-combustible (steel). Hardwood battens and seating are acceptable as all structures are in BALs no higher than BAL-29.

5. The raised hardwood decking and seating adjacent the Senior School, and hardwood seating between the Gym and Block F, are acceptable as they are located in areas not subject to a BAL higher than BAL-29.
6. The timber boardwalk in the southern-western corner is adjacent the boundary opposite the low hazard vegetation, placing the structure in BAL-FZ. This is acceptable as the structure will be separated from the nearest building by more than 10 m.
7. Window or door installation are to comply with the relevant BAL. A BAL-29 standard will ensure compliance is met for all installations.
8. Internal works do not require compliance with bushfire standards.

Please don't hesitate to call using the number below should you have any questions.

Yours sincerely,



David Peterson

