



# AUSTRALIAN BUSHFIRE CONSULTING SERVICES



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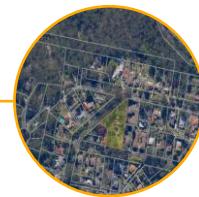
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PO Box 212 Berowra Heights 2082

## Bush Fire Assessment Report



Proposed preschool:

**1 Rosemead Road  
Hornsby NSW**

27<sup>th</sup> November 2019  
Revised 7<sup>th</sup> May 2020  
Reference 19-290 R3

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## Abbreviations:

ABCS	Australian Bushfire Consulting Services Pty Ltd
APZ	Asset protection zone
AS 2419	AS 2419 – 2017 Fire hydrant installations System design, installation and commissioning
AS 3959	Australian Standard 3959 – 2018 Construction of buildings in bushfire prone areas
BAL	Bushfire Attack Level
BCA	Building Code of Australia
BPMs	Bushfire Protection Measures
BPLM	Bushfire Prone Land Map
Council	Hornsby Shire Council
DA	Development Application
EP&A Act	Environmental Planning and Assessment Act - 1979
ESD	Ecologically Sustainable Development
FR NSW	Fire & Rescue NSW
IPA	Inner protection area
LGA	Local Government Area
NCC	National Construction Codes
NP	National Park
NSP	Neighbourhood Safer Place
OPA	Outer protection area
PBP	Planning for Bush Fire Protection – 2019
ROW	Right of Way
RF Act	Rural Fires Act - 1997
RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	Special Fire Protection Purpose
SWS	Static Water Supply

## 1.0 Introduction.

The development seeks approval through NSW Department of Planning for the conversion of an existing dwelling to a preschool at 1 Rosemead Road Hornsby, NSW. The subject site and existing residence is a heritage item known as Mount Errington House and the proposed new use will include facilities for approximately 32 x 3-5 year old's and 48 x Kinder – Y6 (6 – 12 year old's) totalling approximately 80 children and 8-10 staff.

The subject site is mapped as bushfire prone land and therefore the application of *Planning for Bush Fire Protection 2019* (PBP 2019) is relevant to the development proposal.

The aims of PBP 2019 is to *provide for the protection of human life and minimise impacts on property from the threat of bush fire, while having due regard to development potential, site characteristics and protection of the environment*. This is achieved by determining and applying the required asset protection zones, where applicable applying the relevant construction requirements, ensuring satisfactory access and egress has been incorporated into the design and providing safe service supply and adequate water provisions for occupants and attending emergency services.

## 2.0 Property details.

Address: 1 Rosemead Road Hornsby, NSW 2077  
(aka 54 William Street Hornsby, NSW)  
Lot/DP: Lot A DP 327582  
Zoned: R2 Low density residential  
LGA: Hornsby Shire Council

The site has street frontage to Rosemead Road to the northwest and William Street to the south and abuts private residential allotments to the remaining two aspects.

Councils bushfire prone land map depicts the subject site as being only partly within the 100 metre buffer from a Category 1 Vegetation. The dwelling subject to repurposing as a preschool is located outside the 100 metre buffer zone. No bushfire hazard is located within 100 metres of the subject building in any direction.

## 3.0 Legislative context.

In September 2011, EP&A Act pt. 3A was repealed, leading to the creation of two new major project development categories: state significant infrastructure (SSI) and state significant development (SSD). Because of their size, complexity, importance and/or potential impact, DPIE is predominantly responsible for assessing these DAs.

The Minister for Planning and Public Spaces is the consent authority for state significant infrastructure and state significant development applications.

Applications under the now-repealed Part 3A of the EP&A Act and state significant projects are exempt from requiring a Bush Fire Safety Authority and are not required to be assessed under EP&A Act s4.14.

Given the scale of SSI and SSD projects, the requirements of Planning for Bush Fire Protection 2019 should still be applied and seeking advice from the NSW RFS is encouraged.

It is noted that as part of a previously withdrawn development application through Hornsby Council and had the NSW RFS had been consulted issued a BFSA, a copy of which is attached to this report.

## 4.0 Copyright, scope and disclaimer.

This assessment of possible bushfire impact (including smoke, ember, radiant heat and flame contact) and compliance with matters such as Asset Protection Zones, access and service supply is pertinent to the subject site only. Where reference has been made to the surrounding lands, this report does not assess impact to those lands rather it is an assessment of possible bushfire progression and impact on or from those lands towards the subject site.

Apart from any use permitted under the Copyright Act 1968 no part of this document, including any wording, images, or graphics, can be modified, changed or altered in any way without written permission from Australian Bushfire Consulting Services Pty Ltd. This report may only be referenced, distributed or forwarded to other parties in its original format.

This report has been prepared as a submission document in support of a state significant infrastructure planning proposal to the Department Planning Industry and Environment (DPIE) and cannot be relied upon for commencement of works or construction until it has been included within the conditions issued by DPIE as part of their determination. **The onus is on the applicant to cross reference this document with any conditions of issued or any requirements provided by the NSW Rural Fire Service.** I can review and cross reference these documents however the onus is on the applicant / client to provide them to me and request this review.

Where any difference between this document and the development consent (or the NSW Rural Fire Service requirements) is found, the conditions of consent always take precedence until an application to review, amend or vary those conditions is approved.

The statements and opinions contained in this report are given in good faith and in the belief that such statements and opinions are correct and not misleading. AS3959 – 2018 states that “...*there can be no guarantee that a building will survive a bushfire event of every occasion. This is substantially due to the degree of vegetation management, the unpredictable nature and behaviour of fire, and extreme weather conditions*”. The NSW RFS state “*Homes are not designed to withstand fires in catastrophic conditions*”. Correspondingly any representation, statement of opinion, or advice expressed or implied in this document is made on the basis that Australian Bushfire Consulting Services Pty Ltd is not liable to any person for any damage or loss whatsoever which has occurred or may occur in relation to that person taking or not taking (as the case may be) action in respect of any representation, statement or advice made by Australian Bushfire Consulting Services Pty Ltd.

## 5.0 Referenced documents and people.

The following documents have been referenced in the preparation of this report;

- Hornsby Shire Council Bushfire Prone Land Map,
- AS3959 – 2018 Construction of buildings in bushfire prone areas,
- AS 2419 – 2017 Fire hydrant installations System design, installation and commissioning,
- Planning for Bush Fire Protection 2018,
- Rural Fires Act 1997,
- Rural Fires Regulation 2013,
- 10/50 Vegetation Clearing Code of Practice,
- NSW RFS Guide for bush fire prone land mapping V5b Nov 2015,
- Ocean Shores to Desert Dunes – David Andrew Keith 2004.

I undertook and inspection of the subject site and surrounding area on 9<sup>th</sup> October 2019 and again on 30<sup>th</sup> March 2020, at these times free access was available within the subject site and within the vegetated areas to the north and west of the subject site. The site plan and elevations by Armada Ref A400, A401 and A402 Rev G have been reviewed and relied upon for this report.

## 6.0 Assessment summary table.

Aspect	North	Northwest	South / east / west
Vegetation Structure	Forest	Forest	n/a
Hazard slope	10-15° downslope	10-15° downslope	n/a
Required Asset Protection Zone Table A1.12.1	100 metres	100 metres	n/a
Existing Asset Protection Zone	≥112 metres	≥124 metres	n/a
Features that may mitigate the impact of bush fire on the development.	<p>The bushfire hazardous vegetation is located to the north and northwest within Hornsby Reserve adjacent to Old Man's Valley (Hornsby Quarry site). The closest part of the Reserve is 112 metres to the north of the subject building.</p> <p>The separation from the hazard interface includes maintained land within the subject site and land considered to be equivalent to an APZ being maintained land within Rosemead Road and Dural Street road reserves and neighboring residential allotments.</p> <p>An additional grassed buffer area within the reserve to the north provides additional separation from the forest interface however this maintenance is not relied upon for this assessment.</p>		
Noteworthy landform & environmental features.	Rosemead Road & Dural Street	Rosemead Road, & Dural Street	Maintained curtilages
AS3959 – 2018 Bushfire Attack Level	BAL Low	BAL Low	n/a
AS3959 – 2018 Proposed construction level	<p>None applicable. The existing building and any new works are located &gt; 100 metres from the bushfire hazard in an area determined to be BAL Low.</p> <p><i>AS3959 – 2018 Construction of buildings in bushfire prone areas: This Standard does not provide construction requirements for buildings assessed in bushfire-prone areas in accordance with Section 2 as being BAL—LOW. The Bushfire Attack Level BAL—LOW is based on insufficient risk to warrant specific bushfire construction requirements.</i></p> <p>Note: BAL Low and nil recommendations is also important in relation to the fact that the usual requirements for bush fire protection may conflict with the conservation of significant heritage fabric and its setting in relation to the heritage item, Mt Errington House. In this instance nil recommendations ensures that there is no conflict with the heritage fabric of this building</p>		



Guideline Ref.	Proposed Development Determinations
Property Access	The most distant external point of the building footprint is less than 70 metres from a public through road that supports the operational use of fire appliances (hydrants) and therefore the property access requirements of Table 5.3b of PBP 2019 are not applicable. Pedestrian access to the hazard interface is available via neighbouring allotments without the need to enter the subject site.
Water Supply	The subject site is connected to reticulated water mains for domestic needs. Hydrants are located within Rosemead Road, William Street and surrounding streets available for the replenishment of fire fighting appliances. The nearest hydrant is located immediately adjacent to the subject a 2 or more locations. The spacing specified in AS2419:2017 is achieved. The existing water supply is considered satisfactory for this development and satisfies Table 5.3c of PBP 2019. A static water supply is not required.
Electrical & Gas Supply	The existing electrical supply to the site is overhead. Reticulated gas is provided in this area. There is no new electrical or gas connections proposed as part of this development. Recommendation of maintenance of vegetation along the power lines onsite will be included within this report.
Evacuation	It is recommended that a Bushfire Emergency Evacuation Plan is prepared in accordance with the NSW Rural Fire Service Guidelines for the Preparation of Emergency/ Evacuation Plan. This plan should include a trigger for safe refuge onsite to avoid relocation in times of imminent bushfire impact and measures for non-occupation of the centre on days of predicted catastrophic fire danger ratings.

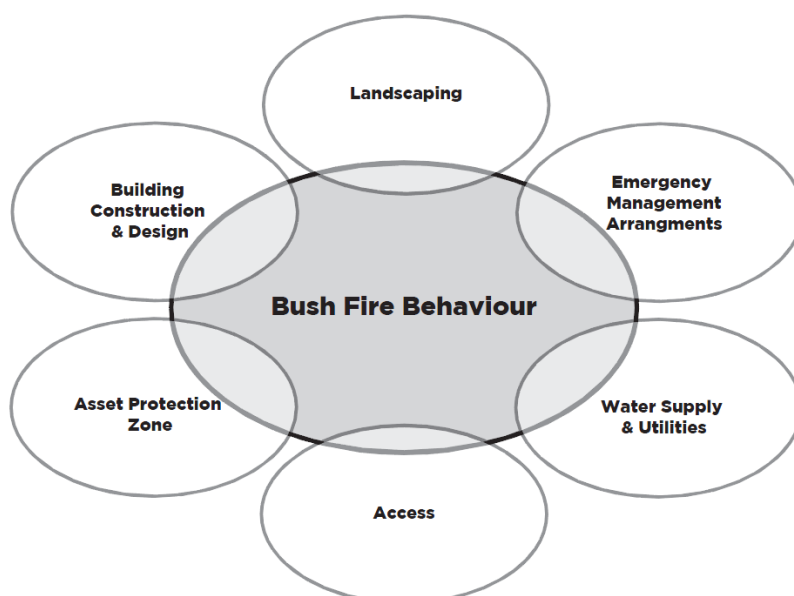


Image 1: Extract from PBP 2019 illustrating bush fire protection measures in combination.



## 7.0 Images and maps.

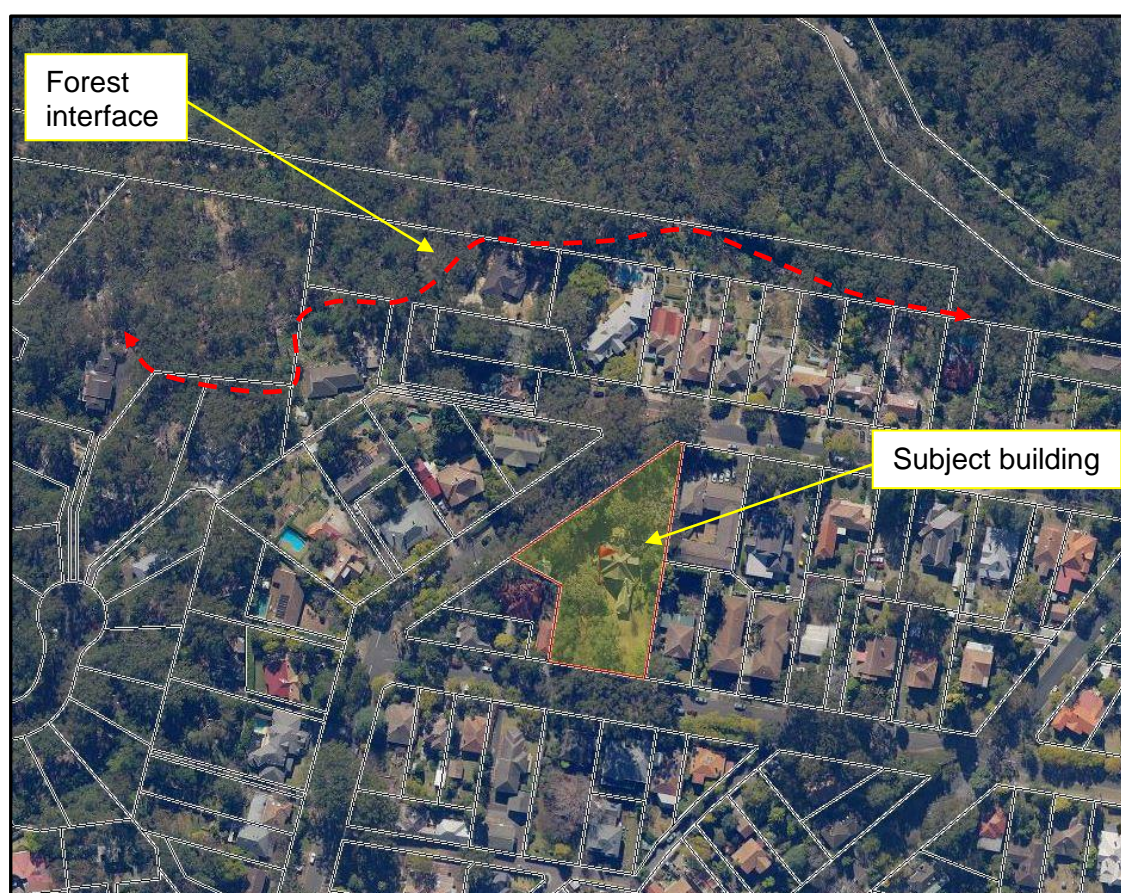


Image 02: Aerial image from Nearmaps database



Image 03: Aerial image from Nearmaps database showing 100 metre radii from subject building



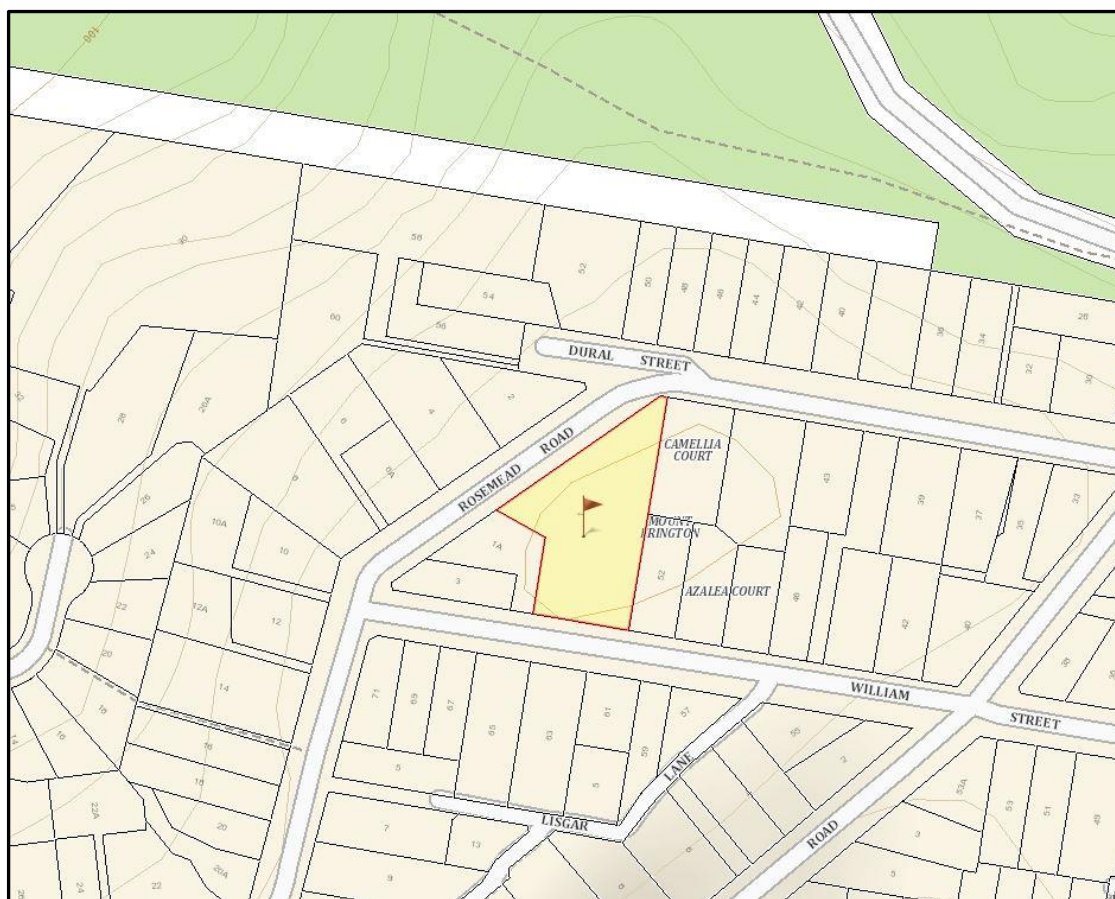


Image 04: 1:25k Topographic image from Dept Land SIX Maps database.

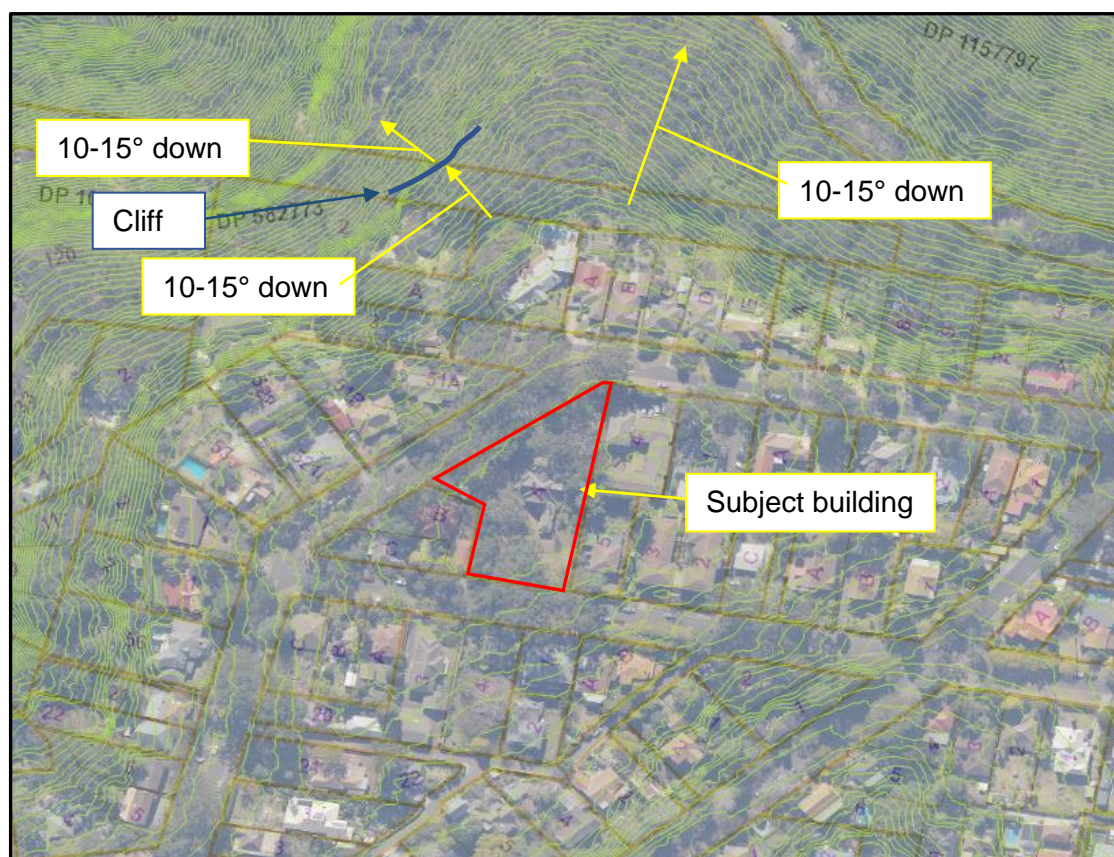


Image 05: 1 metre contours from NSW Gov. Elevation Foundation Data



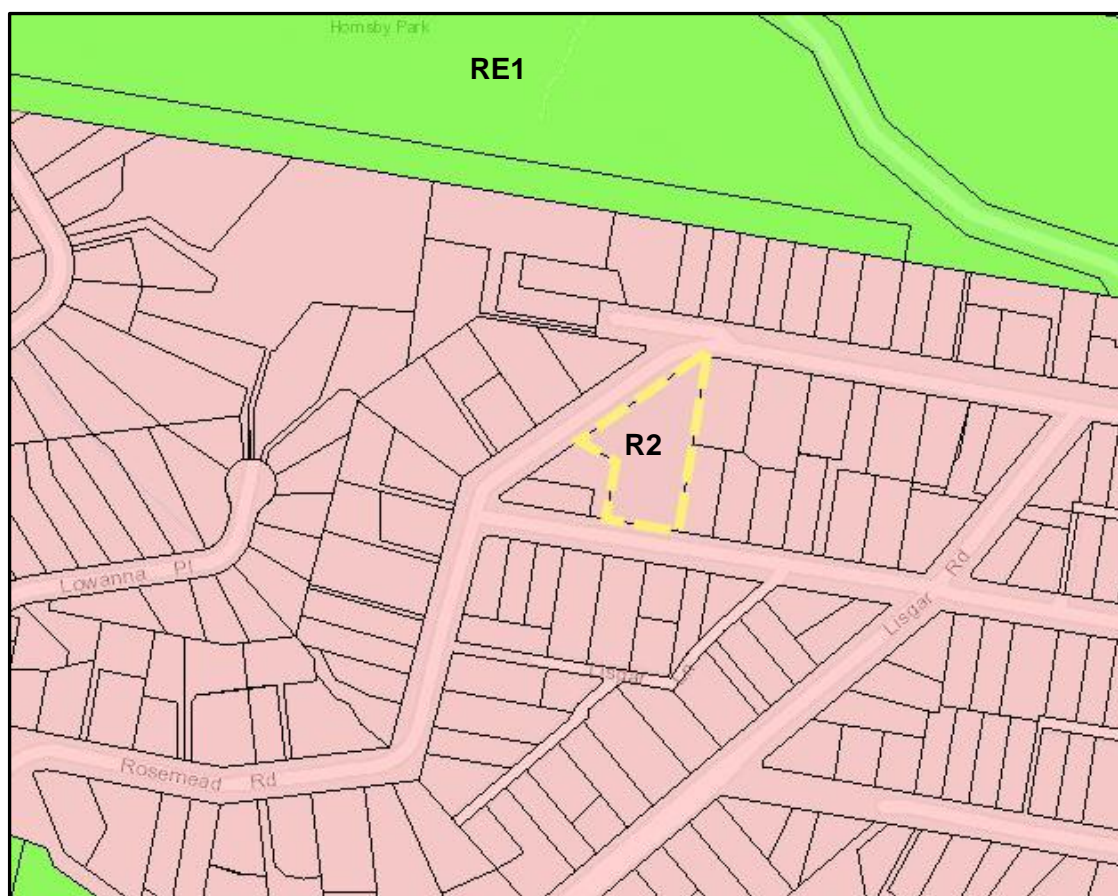


Image 06: LEP Zones extract from NSW Dept Planning property information mapping

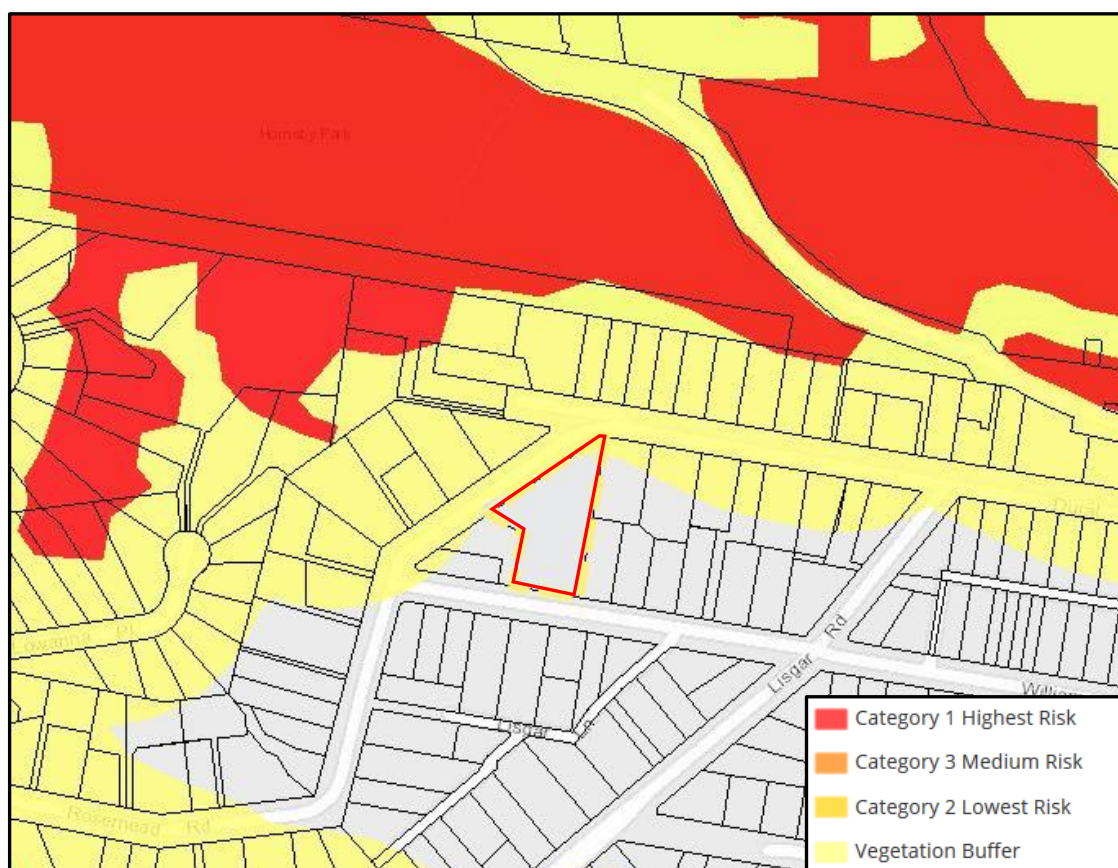


Image 07: Extract of Councils Bushfire Prone Land Map from NSW Dept Planning property information mapping

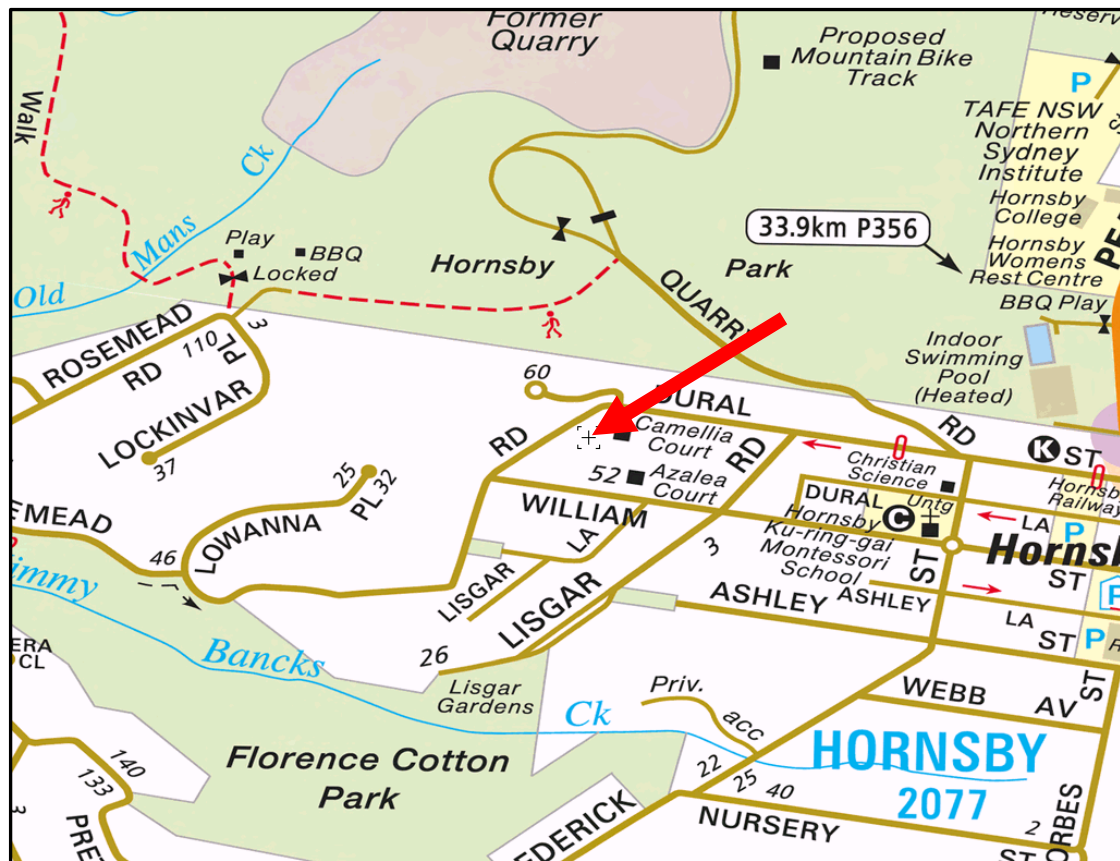


Image 08: Extract from streetdirectory.com.au

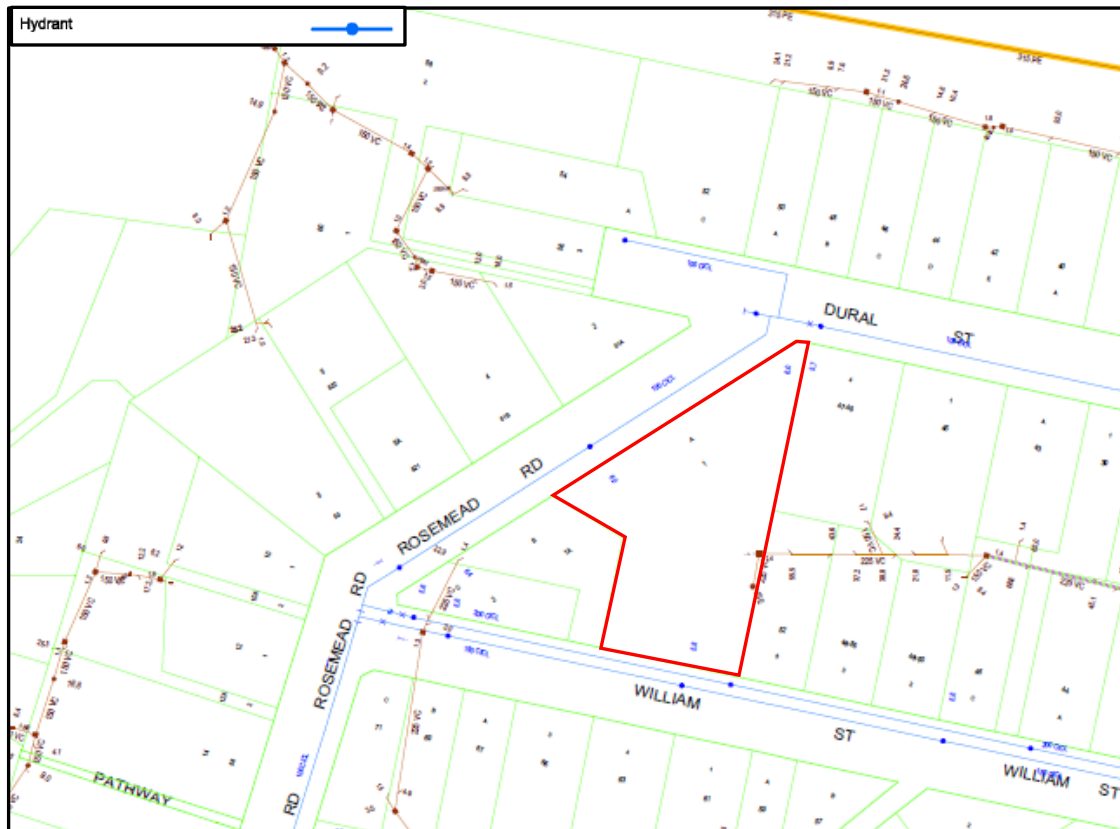


Image 09: DBYD Sydney Water response showing existing hydrant network



## 8.0 Bushfire hazard assessment

Properties considered to be bushfire prone land are identified on Councils Bush Fire Prone Land Map as being:

- within or within 100 m of Category 1 (high) hazards or,
- within or within 30 m of Category 2 (low) hazards or,
- within or within 30 m of Category 3 (medium) hazards.

The NSW RFS document PBP 2019 is applicable to all development on bushfire prone land, this includes an assessment of the proposals adequacy in providing an appropriate combination of bushfire protection measures in terms of asset protection zones, landscaping, access and service supply. This document also provides a means of determining the necessary level of building construction under AS3959 - 2018. All integrated development on bushfire prone land must be accompanied with a bushfire hazard assessment that includes;

- (a) a description (including the address) of the property on which the development the subject of the application is proposed to be carried out;
- (b) a classification of the vegetation on and surrounding the property (out to a distance of 140 metres from the boundaries of the property) in accordance with the system for classification of vegetation contained in Planning for Bush Fire Protection;
- (c) an assessment of the slope of the land on and surrounding the property (out to a distance of 100 metres from the boundaries of the property);
- (d) identification of any significant environmental features on the property;
- (e) the details of any threatened species, population or ecological community identified under the Threatened Species Conservation Act 1995 that is known to the applicant to exist on the property;
- (f) the details and location of any Aboriginal object (within the meaning of the National Parks and Wildlife Act 1974) or Aboriginal place (within the meaning of that Act) that is known to the applicant to be situated on the property;
- (g) a bush fire assessment for the proposed development (including the methodology used in the assessment) that addresses the following matters:
  - (i) the extent to which the development is to provide for setbacks, including Asset Protection Zones;
  - (ii) the siting and adequacy of water supplies for fire fighting;
  - (iii) the capacity of public roads in the vicinity to handle increased volumes of traffic in the event of a bush fire emergency;
  - (iv) whether or not public roads in the vicinity that link with the fire trail network have two-way access;
  - (v) the adequacy of arrangements for access to and egress from the development site for the purposes of an emergency response;
  - (vi) the adequacy of bush fire maintenance plans and fire emergency procedures for the development site;
  - (vii) the construction standards to be used for building elements in the development;
  - (viii) the adequacy of sprinkler systems and other fire protection measures to be incorporated into the development;
  - (h) an assessment of the extent to which the proposed development conforms with or deviates from the standards, specific objectives, performance criteria and acceptable solutions set out in Chapters 5-8 of PBP; and
  - (i) identify any fire trails that exist on the property that are on the Register of Certified Fire Trails under RF Acts.

## 8.1 Site

The site has street frontage to Rosemead Road to the northwest and William Street to the south and abuts private residential allotments to the remaining two aspects.

The properties surrounding the site are all managed private allotments. Councils bushfire prone land map depicts the subject site as being only partly within the 100 metre buffer from a Category 1 Vegetation. The dwelling subject to repurposing as a preschool is located outside the 100 metre buffer zone.



Photograph 01: View south of the subject site taken from Rosemead Road

## 8.2 Vegetation

The vegetation must be assessed for a distance of 140 metres of the development site or asset as per Keith (2004). This includes vegetation both within and external to the site boundaries. Where mixes of vegetation formations are located together, the vegetation formation providing the greater hazard shall be used for the purpose of this assessment.

The bushfire hazardous vegetation is located to the north and northwest within Hornsby Reserve adjacent to Old Man's Valley (Hornsby Quarry site). The closest part of the Reserve is 112 metres to the north of the subject building.

The vegetation to the north and northwest was found to consist of trees to 25 metres in height with a sparse understorey of isolated shrubs. Midstrata is limited due to significant sandstone rock outcropping. A large cliff is also present to the northwest which creates two plateaus of vegetation separated by the rock wall of the cliff face.

Further north and northeast outside the assessment area the shrub layer and mid stratum thickened. In this area a BMX track / mountain bike course crisscrossed through the vegetation providing additional access for fire crews.

An additional grassed buffer area within the reserve to the north provides additional separation from the forest interface however this maintenance is not relied upon for this assessment.

For the purposes of assessment under Table A1.12.1 & A1.12.5 the vegetation to the north & northwest has been assessed as Keith Classification Dry Sclerophyll Forest.





Photograph 02: View west within Hornsby Reserve approx. 160 metres northwest of the subject site



Photograph 03: Grassed area within Hornsby Reserve approx. 120 metres north of the subject building



Photograph 04: View south towards the subject site taken approx. 170 metres north of the subject building



### 8.3 Topography

The slope must be assessed over a distance of at least 100 m from the building footprint towards the various vegetation communities constituting the hazard. In assessing the slope, it may be found that there are a variety of slopes covering different distances. The gradient within the hazard (vegetation) which will most significantly influence the fire behaviour must be determined.

In this instance no bushfire hazardous vegetation was found within the 100 metres assessment area and technically no slope assessment is warranted, however for completion an assessment is included herein.

The slope was determined onsite using an inclinometer and verified by topographic mapping to be;

- 10-15 degrees downslope to the north
- 10-15 degrees downslope to the northwest



Image 12: Theodolite app image looking northwest above the cliff taken northwest of the subject site



Image 13: Theodolite app image looking northeast taken due north of the subject site

## 8.4 Asset Protection Zones

An Asset Protection Zone (APZ) is a buffer zone between a bush fire hazard and buildings, which is managed progressively to minimise fuel loads and reduce potential radiant heat levels, flame, ember and smoke attack. A fuel-reduced, physical separation between buildings and bush fire hazards is the key element in the suite of bushfire protection measures. Minimum APZs for preschool development (Special Fire Protection Purpose development) are normally determined under Table A1.12.1 of PBP 2019 and are such that, during a bushfire event, a building footprint is not exposed to greater than 10 k/Wm<sup>2</sup> expected radiant heat impact.

In this circumstance the minimum APZ attributed to a greenfield development determined from Table A1.12.1 of PBP 2019 is 100 metres to the north and northwest. In this instance the minimum required APZ to both aspects is exceeded.

The separation from the hazard interface includes maintained land within the subject site and land considered to be equivalent to an APZ being maintained land within Rosemead Road and Dural Street road reserves and neighboring residential allotments.

Recommendations will be included within this report to ensure that at the commencement of subdivision and in perpetuity all land within the subject site is to be maintained as an Asset Protection Zone / Inner Protection Area (IPA). The Asset Protection Zone shall be in accordance with Appendix 4 of PBP 2019 and the NSW RFS document Standards for Asset Protection Zones.

In this case the asset protection zones are existing and simple grounds maintenance removing fallen leaf litter, tidy up gardens and ongoing management is required. Other work required onsite would be to prune one Juniper tree so that branches are located 2-5 metres from the building and pruning of limbs around the onsite power supply so that no part of a tree is closer to a power line than the distance set out in *ISSC3 Guideline for Managing Vegetation Near Power Lines* (1.5 metres in this instance). No tree removal is necessary as such there is minimal impact on the environment of the proposed bushfire protection measures.

## 8.5 Access & egress

The most distant external point of the building footprint is less than 70 metres from a public through road that supports the operational use of fire appliances (hydrants) and therefore the property access requirements of Table 5.3b of PBP 2019 are not applicable.

Free pedestrian access will remain available around the building envelope and pedestrian access from the site is available to both Rosemead Road and William Street. Fire services can access the hazard interface for fire suppression and hazard reduction activities without the need to enter the subject site.

## 8.6 Services

The subject site is connected to reticulated water mains for domestic needs. Hydrants are located within Rosemead Road, William Street and surrounding streets available for the replenishment of fire fighting appliances. The nearest hydrant is located immediately adjacent to the subject a 2 or more locations. The spacing specified in AS2419:2017 is achieved. The existing water supply is considered satisfactory for this development and satisfies Table 5.3c of PBP 2019. A static water supply is not required.

The existing electrical supply to the site is overhead. Reticulated gas is provided in this area. There is no new electrical or gas connections proposed as part of this development. Recommendation of maintenance of vegetation along the power lines onsite will be included within this report. Recommendations of this report will include pruning of limbs around the onsite power supply so that no part of a tree is closer to a power line than the distance set out in *ISSC3 Guideline for Managing Vegetation Near Power Lines* (1.5 metres in this instance).



## 8.7 Emergency management

It is recommended that a Bushfire Emergency Evacuation Plan is prepared in accordance with the NSW Rural Fire Service Guidelines for the Preparation of Emergency/ Evacuation Plan. This plan should include a trigger for safe refuge onsite to avoid relocation in times of imminent bushfire impact and measures for non-occupation of the centre on days of predicted catastrophic fire danger ratings.

## 8.8 Construction

Australian Standard 3959 – 2018 'Construction of buildings in bushfire-prone areas' provides for six (6) levels of building construction these being BAL - Low, BAL - 12.5, BAL - 19, BAL - 29, BAL - 40 and BAL - FZ. The Australian Standard 3959 specifies construction standards for buildings within various Bushfire Attack Levels as determined by the Planning for Bushfire Protection – 2019 document. The NSW Rural Fire Service will not accept deemed to satisfy provisions for BAL Flame Zone and therefore have a NSW variation to the listed standard provisions of BAL FZ under AS3959 - 2018.

There are no construction recommendations necessary for the existing building being repurposed for the preschool. The existing building and any new works are located > 100 metres from the bushfire hazard in an area determined to be BAL Low.

*AS3959 – 2018 Construction of buildings in bushfire prone areas: This Standard does not provide construction requirements for buildings assessed in bushfire-prone areas in accordance with Section 2 as being BAL—LOW. The Bushfire Attack Level BAL—LOW is based on insufficient risk to warrant specific bushfire construction requirements.*

BAL Low and nil recommendations is also important in relation to the fact that the usual requirements for bush fire protection may conflict with the conservation of significant heritage fabric and its setting in relation to the heritage item, Mt Errington House. In this instance nil recommendations ensures that there is no conflict with the heritage fabric of this building.

PBP 2019 Fences and Gates:

*Fences and gates in bush fire prone areas may play a significant role in the vulnerability of structures during bush fires. In this regard, all fences in bush fire prone areas should be made of either hardwood or non-combustible material.*

*However, in circumstances where the fence is within 6m of a building or in areas of BAL-29 or greater, they should be made of non-combustible material only.*

In this instance the fences are a significant distance from the dwelling and the property is surrounded by existing development with an array of fencing materials. I note that PBP 2019 does not distinguish any allowances for fences located on large allotments such as this property or for dwellings determined to be BAL Low. In this instance I recommended that, similar to the regulations surrounding Class 10a Structures, the above fence requirements are applicable to fences within 6 metres of the building only.

## 8.8 Risk

The level of risk is determined using the combination of likelihood and consequences. The purpose of analysing risk is to establish an understanding of the level of bushfire threat and will help to evaluate the appropriateness of bushfire protection measures recommended for a development application.

This section of the report is a predictive risk evaluation only and assumes development consent includes the recommendations contained within this report. It has been based on an abridged version of the assessment process detailed within the Bush Fire Risk Management Planning Guidelines for Bushfire Risk Management Committees. This evaluation does not reflect the Bushfire Attack Level determined under PBP 2019 or AS3959 - 2018.



The likelihood of a bush fire occurring can be determined using fire history data or local knowledge. The likelihood must be considered in the context of long term planning and not simply if a bush fire is likely to occur during the next five years. The consequences of a bush fire event can be determined by considering the vulnerability of the asset. Vulnerability is related to the capacity of an asset to cope with or recover from the impacts of a bush fire.

Likelihood Rating	Description and indicative probability
Almost certain	Expected to occur, many recorded incidents, strong anecdotal evidence, high opportunity, reason or means to occur; may occur or be exceeded once in every 5 years.
Likely	Will probably occur; consistent record of incidents and good anecdotal evidence; considerable opportunity, reason or means to occur; may occur or be exceeded once in every 10 years.
Possible	Might occur; a few recorded incidents in each locality and some anecdotal evidence; some opportunity, reason or means to occur; may occur or be exceeded once in every 20 years.
Unlikely	Is not expected to occur; isolated recorded incidents in this community, anecdotal evidence in other communities; little opportunity, reason or means to occur;

Consequence Rating	Description and indicative result
Minor	Inconsequential or no damage. Little or no disruption to occupation. Little or no financial loss.
Moderate	Localised damage that is rectified by routine arrangements. Normal functioning with some inconvenience. Localised displacement of people who return within 24 hours. Personal support satisfied through local arrangements.
Major	Significant damage that requires external resources. Displacement for more than 24 hours duration. Extensive resources required for personal support.
Catastrophic	Extensive damage. Extensive personal support. General and widespread displacement for extended durations.

Consequence Likelihood	Minor	Moderate	Major	Catastrophic
Almost certain	Medium	High	Extreme	Extreme
Likely	Low	Medium	High	Extreme
Possible	Insignificant	Low	Medium	High
Unlikely	Insignificant	Insignificant	Low	Medium

The bushfire risk to this development is determined to be medium and the package of bushfire protection measures recommended in section 9 of this report are considered satisfactory.

## 9.0 Recommendations

### 9.1 Asset Protection Zones / landscaping

1. That all grounds within the subject property are to be maintained as an Asset Protection Zone / Inner Protection Area as detailed in Appendix 4 of Planning for Bushfire Protection 2019 and the NSW RFS document Standards for Asset Protection Zones.

### 9.2 Emergency management plan.

2. That a Bushfire Emergency Evacuation Plan is prepared in accordance with the NSW Rural Fire Service Guidelines for the Preparation of Emergency/ Evacuation Plan. This plan shall address refuge onsite as the primary response to imminent bushfire impact (avoiding late evacuation) and non-occupation of the preschool on days of predicted catastrophic fire danger ratings.

### 9.3 Construction

3. That any new fencing within 6 metres of the building is required to be of non-combustible material.

### 9.4 Services (Water Electricity and Gas)

4. That pruning of limbs around the onsite power supply is to occur so that no part of a tree is closer to a power line than the distance set out in ISSC3 *Guideline for Managing Vegetation Near Power Lines* (1.5 metres in this instance).

### 9.5 Access

None applicable

## 10.0 Conclusion

The subject property is determined to be bushfire prone land and the development must, to the degree necessary, meet the intent of measures and performance requirements of PBP 2019.


In new special fire protection purpose development this is achieved with an appropriate combination of bushfire protection measures, especially an APZ, to ensure in a bushfire event no special fire protection purpose development will be exposed to radiant heat levels greater than 10 kW/m<sup>2</sup>. In addition to an APZ suitable access, services supply and means of maintaining the bushfire protection measures for the life of the development are applied. Where necessary construction measures are also included.

This bushfire hazard and determination has been made on a site-specific basis which includes an assessment of the local bushland area and its possible impact to the subject property. Inclusive of the recommendations made herein the proposal meets the aims and objectives of PBP 2019 by compliance with the intent of measures and deemed to satisfy requirements of that document.

I am satisfied the recommendations included herein will provide a reasonable and satisfactory level of bushfire protection to the proposed development.

I am therefore in support of the development.

Australian Bushfire Consulting Services Pty Ltd



### **Wayne Tucker**

Managing Director  
G. D. Design in Bushfire Prone Areas.  
Certificate IV Fire Technology  
Ass Dip Applied Science  
FPA Australia BPAD Level 3 Accredited Practitioner  
BPAD Accreditation No. BPAD9399





## List of attachments

Attachment 01: NSW Rural Fire Service Bushfire Safety Authority. This BFSA was issued for a previous development application lodge with Hornsby Council which was withdrawn and undetermined.



## NSW RURAL FIRE SERVICE

The Council of the Shire of Hornsby  
PO Box 37  
HORNSBY NSW 1630

Your reference: DA/1119/2019  
Our reference: DA20200203000411-Original-1

**ATTENTION:** Benjamin Jones

Date: Friday 14 February 2020

Dear Sir/Madam,

**Integrated Development Application**  
**s100B – SFPP – Child Care Centre**  
**1 Rosemead Rd Hornsby NSW 2077 AUS, A//DP327582**

I refer to your correspondence dated 28/01/2020 seeking general terms of approval for the above Integrated Development Application.

The New South Wales Rural Fire Service (NSW RFS) has considered the information submitted. General Terms of Approval, under Division 4.8 of the *Environmental Planning and Assessment Act 1979*, and a Bush Fire Safety Authority, under section 100B of the *Rural Fires Act 1997*, are now issued subject to the following conditions:

### 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:***

#### [C1]

From the start of building works, the entire property must be managed as an inner protection area (IPA). The IPA must comprise:

- Minimal fine fuel at ground level;
  - Grass mowed or grazed;
  - Trees and shrubs retained as clumps or islands and do not take up more than 20% of the area;
  - Trees and shrubs located far enough from buildings so that they will not ignite the building;
  - Garden beds with flammable shrubs not located under trees or within 10 metres of any windows or doors;
  - Minimal plant species that keep dead material or drop large quantities of ground fuel;
  - Tree canopy cover not more than 15%;
  - Tree canopies not located within 2 metres of the building;
  - Trees separated by 2-5 metres and do not provide a continuous canopy from the hazard to the building;
- and,

#### 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  
[www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)



- Lower limbs of trees removed up to a height of 2 metres above the ground.

## **Landscaping Assessment**

**[C2]**

Landscaping of the site should comply with following principles of Appendix 5 of 'Planning for Bush Fire Protection 2006':

- Suitable impervious areas are provided immediately surrounding the building such as courtyards, paths and driveways.
- Grassed areas, mowed lawns or ground cover plantings are provided in close proximity to the building.
- Planting is limited in the immediate vicinity of the building.
- Planting does not provide a continuous canopy to the building (i.e. trees or shrubs should be isolated or located in small clusters).
- Landscape species are chosen in consideration needs of the estimated size of the plant at maturity.
- 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).
- Climbing species are avoided to walls and pergolas.
- Combustible materials such as woodchips/mulch and flammable fuel are stored away from the building.
- Combustible structures such as garden sheds, pergolas and materials such timber garden furniture are located way from the building.
- Low flammability vegetation species are used.

## **Emergency and Evacuation Planning Assessment**

***The intent of measures is to provide suitable emergency and evacuation (and relocation) arrangements for occupants of special fire protection purpose developments. To achieve this, the following conditions shall apply:***

**[C3]**

A Bush Fire Emergency Management and Evacuation Plan shall be prepared consistent with 'Development Planning- A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan December 2014'.

For any queries regarding this correspondence, please contact Marc Ellwood on 1300 NSW RFS.

Yours sincerely,

Kalpana Varghese

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



NSW RURAL FIRE SERVICE

# BUSH FIRE SAFETY AUTHORITY

SFPP – Child Care Centre

1 Rosemead Rd Hornsby NSW 2077 AUS, A//DP327582

RFS Reference: DA20200203000411-Original-1

Your Reference: DA/1119/2019

This Bush Fire Safety Authority is issued on behalf of the Commissioner of the NSW Rural Fire Service under s100b of the Rural Fires Act (1997) subject to the attached General Terms of Approval.

This authority confirms that, subject to the General Terms of Approval being met, the proposed development will meet the NSW Rural Fire Service requirements for Bush Fire Safety under *s100b of the Rural Fires Act 1997*.

**Kalpana Varghese**

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

Friday 14 February 2020