



## **Bushfire Assessment**

### **Proposed redevelopment**

**Hastings Secondary  
College Port Macquarie  
Campus – 16 Owen Street,  
Port Macquarie  
School Infrastructure NSW  
27 April 2021**

**(Ref: 21013)**

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report by  
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# 1 Introduction

<b>Street or property name:</b>	16 Owen Street		
<b>Suburb, town or locality:</b>	Port Macquarie	<b>Postcode:</b>	2444
<b>Lot/DP no:</b>	Lot 111 DP 1270315		
<b>Local Government Area:</b>	Port Macquarie - Hastings		
<b>Type of development:</b>	Additions to existing Special Fire Protection Purpose (SFPP)		

## 1.1 Background

Peterson Bushfire has been commissioned by School Infrastructure NSW (SINSW) on behalf of the Department of Education (DOE) to prepare a Bushfire Assessment Report to accompany a State Significant Development Application (SSDA) to the NSW Department of Planning, Industry and Environment (DPIE) for proposed upgrades to Hastings Secondary College (Port Macquarie Campus), previously known as Port Macquarie High School.

Hastings Secondary College consists of two campuses, being Westport and Port Macquarie. This report has been prepared for proposed works at the Port Macquarie Campus, which consists of two properties, the main campus and the Ag Plot.

The works subject to this proposal are to be carried out on the main Port Macquarie campus which is located at 16 Owen Street, Port Macquarie (the site). The site has a secondary street frontage to Burrawan Street and adjoins Oxley Oval along the eastern boundary.

On 23 December 2020, the Secretary of the DPIE issued Secretary's Environmental Assessment Requirements (SEARs) for SSD Application No. 11920082. This report has been prepared in accordance with the SEARs requirements.

## 1.2 Location of subject land description of proposal

The site is located approximately 1.2 km south east of the Port Macquarie town centre (refer to Figure 1), with access from Oxley Highway (Gordon Street) via Owen Street to the centre, William Street via Owen Street to the north and Burrawan Street via Owen Street to the south. A maintenance access road exists to the east of the site along Burrawan Street.

The site is located at 16 Owen Street, Port Macquarie and is legally known as Lot 111 in DP 1270315. The Port Macquarie Campus site is located within a coastal setting (east), with residential (single two storey and residential flat buildings) located to the west and south and Port Macquarie Bowling Club to the north. The surrounding street network provides on-street parking. Maintenance vehicular access is located off Burrawan Street.

No Natural watercourses are mapped as traversing the site. Scattered vegetation is located throughout the site, with a small area of vegetation concentrated towards the pedestrian access area.

The Port Macquarie Campus site is gently sloping downwards in three general 'platforms' towards the north, with distinct views out towards the ocean and the Hastings River. It also has a distinct view line to the row of Norfolk pine trees along the coastline. The siting of the campus provides many opportunities for ongoing cultural connection to Country. Current built form has an established language of two (2) story, face brick, low pitched metal roof buildings.

### 1.3 Description of proposal

The upgrades will support high-quality educational outcomes to meet the needs of students within the local community and deliver innovative learning and teaching spaces as follows:

- Demolition works to accommodate new works;
- Upgrade to school entry;
- Construction of new two (2) storey Creative and Performing Arts (CAPA) building;
- Construction of new Police Citizens Youth Club (PCYC);
- Partial refurbishment of Building L;
- Refurbishment and alteration to Building B;
- Removal of Building S and demountable buildings;
- New lift connections, covered outdoor learning area (COLA) and covered walkways;
- Associated earthworks, landscaping, stormwater works, service upgrades; and
- Tree removal/ tree safety works.

No change to current staff or student numbers is proposed. Refer Figure 2 for site plan.

### 1.4 Assessment requirements

This Bushfire Assessment Report has been prepared to address Key Issue No.20 'Bushfire' of the Planning Secretary's Environmental Assessment Requirements (SEARs) issued 23 December 2020 (SSD 11920082). The Key Issue is as follows:


*Provide a bushfire assessment that details proposed bushfire protection measures and demonstrates compliance with Planning for Bush Fire Protection (NSW RFS, 2019).*

Chapter 6 of Planning for Bush Fire Protection 2019 (referred to as 'PBP' throughout this report) addresses Special Fire Protection Purpose (SFPP) development and outlines the assessment methodology and protection measures, such as Asset Protection Zones (APZ), Bushfire Attack Levels (BAL), adequate access and water supply for fire-fighting, and vegetation management.





## Legend

 Subject Land



 **DKGIS**  
Date: 4/02/2021

0 125 250 500  
Metres

**Figure 1: Location**

Coordinate System: GDA 1994 MGA Zone 56

Imagery: © Nearmap



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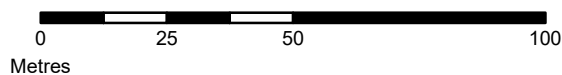
### Legend

-  Cadastre  
 Subject Land



DKGIS

Date: 20/04/2021



### Figure 2: The Proposal

Coordinate System: GDA 1994 MGA Zone 56

Imagery: © Nearmap

## 2 Bushfire hazard

An assessment of the bushfire hazard is necessary to determine the application of bushfire protection measures such as Asset Protection Zone (APZ) location and dimension. This section provides a detailed account of the vegetation communities (bushfire fuels) and the topography (effective slope) that combine to create the bushfire hazard that may affect bushfire behaviour at the site.

The 'predominant vegetation' and 'effective slope' influencing fire behaviour has been assessed in accordance with the methodology specified by PBP.

### 2.1 Bushfire prone land

The purpose of bushfire prone land mapping is to identify lands that may be subject to bushfire risk based simply of the presence of vegetation that could act as a hazard. The maps are a planning tool used to trigger further detailed assessment. They do not present a scalable measure of hazard, threat or risk. These parameters are to be determined under further assessment in accordance with PBP (i.e. this Bushfire Assessment Report).

Any development proposal within a lot containing mapped bushfire prone land (i.e. bushfire prone property) is to comply with the requirements of PBP.

The local Bushfire Prone Land Map presented in Figure 3 shows that the subject land is not identified as bushfire prone land. The nearest bushfire prone land is located approximately 30 m to the east. A description of the bushfire prone vegetation is provided in Section 3.

Regardless of the mapping affectation, the SEARs have requested an assessment of the proposal against PBP.

### 2.2 Predominant vegetation

The bushfire hazard within the 140 m assessment area consists of coastal headland heath over 130 m to the east beyond Pacific Drive as mapped on Figure 4. The vegetation is classified as 'tall heath' in accordance with PBP for the determination of Asset Protection Zones (APZ) and Bushfire Attack Levels (BAL).

There are no bushfire hazards within 100 m of the subject land. The lands to the north, west and south consist of managed and developed properties, and the land to the east consists of managed (i.e. regularly mown) parkland and oval.








### 2.3 Effective slope

The slope contributing to the rate of fire spread towards a proposed development is measured underneath the hazard where it is situated within 100 m of the subject land. As there are no bushfire hazards within 100 m of the subject land, the effective slope has not been considered. The general topography of the surrounding lands can be appreciated by the 2 m contour intervals shown on Figure 4.





### Legend

	Cadastre		Vegetation Category 1		Vegetation Category 3
	Subject Land		Vegetation Category 2		
	Bushfire Prone Land				
	Vegetation Buffer				

**Figure 3: Bushfire Prone Land**



Date: 4/02/2021

0 25 50 100  
Metres

Coordinate System: GDA 1994 MGA Zone 56

Imagery: © Nearmap





### Legend

- Contour - 2m
- Cadastre
- Subject Land

- Vegetation Assessment Buffer - 140m

### Vegetation Formation

- Tall Heath



Date: 20/04/2021

0 25 50 100  
Metres

**Figure 4: Bushfire Hazard Assessment**

Coordinate System: GDA 1994 MGA Zone 56

Imagery: © Nearmap



### 3 Bushfire protection measures

PBP requires the assessment of a suite of bushfire protection measures that in total provide an adequate level of protection for Special Fire Protection Purpose (SFPP) development. The measures required to be assessed are listed in Table 1 below and are discussed in detail in the remainder of this section.

**Table 1: PBP bushfire protection measures**

Bushfire protection measures	Considerations
Asset Protection Zones (APZ)	Location and dimension of APZ building setbacks from identified hazards including prescriptions of vegetation management.
Building construction standards (BALs)	Mapping and application of BALs across the site to highlight affected buildings.
Access	Assessment to include access to and within the site, perimeter access, and design standards of any internal roads.
Water supply and other utilities	List requirements for reticulated water supply and hydrant provisions, and any static water supplies for fire-fighting.
Emergency and evacuation management	Preparation of a 'Bushfire Emergency Management and Evacuation Plan'.

#### 3.1 Asset Protection Zones (APZ)

As there are no bushfire hazards within 100 m of the subject land, a specific APZ is not required. The managed lands separating the tall heath from the school provide an APZ greatly exceeding the possible maximum APZ requirements of PBP.

#### 3.2 Landscaping

The school property currently satisfies the standard of an Inner Protection Area (IPA) as described by Appendix 4 of PBP. The design and installation of proposed landscaping is also to comply with an IPA standard as per Appendix 4 of PBP.

#### 3.3 Bushfire Attack Level (BAL)

Buildings are required to be designed and constructed in accordance with the relevant Bushfire Attack Level (BAL). The BAL relates to a suite of construction specifications listed within Australian Standard *AS 3959-2018 Construction of buildings in bushfire-prone areas* (AS 3959).

The BAL for the school property has been determined in accordance with PBP Table A1.12.6. As the subject land is not within 100 m of a bushfire hazard, the entire proposal is rated BAL-LOW. There is insufficient bushfire threat to warrant the application of specific protection measures for buildings rated BAL-LOW. AS 3959 therefore does not apply in this case.



### 3.4 Access

PBP requires an access design that enables safe evacuation whilst facilitating adequate emergency and operational response. All bushfire prone areas should have an alternate access or egress option depending on the bushfire risk, the density of the development, and the chances of the road being cut by fire for a prolonged period.

The surrounding public roads provide satisfactory alternate access for evacuation and emergency response. The roads comply with the PBP Acceptable Solutions for public access.

Access to buildings can be gained directly from Owen Street forming the western boundary and Burrawan Street forming the southern boundary. Fire appliances would stand on the adjacent public roads at the location of hydrants and booster assembly to attend a fire at the school.

In the north western corner of the subject site a new access driveway proposed. This driveway will link an underground carpark with Owen Street. This driveway will not be suitable for fire appliances. Fire appliances would stand on the adjacent public roads at the location of hydrants.

The existing service accessways (school gates, pedestrian access ways and vehicular driveways) off Burrawan Street and Owen Street will remain unaltered and new internal access roads are not proposed. Additional access provisions are not required for the proposal.

### 3.5 Water supply and utilities

#### ***Water supply***

Fire hydrants are to be installed to ensure compliance with PBP and AS 2419.1 – 2005 *Fire Hydrant Installations - System Design, Installation and Commissioning*.

#### ***Electricity supply***

Electrical supply is provided underground and therefore complies with PBP.

#### ***Gas supply***

Any gas services are to be installed and maintained in accordance with AS/NZS 1596-2014 *The storage and handling of LP gas*.

### 3.6 Emergency management and evacuation

A 'Bushfire Emergency Management and Evacuation Plan' in accordance with the NSW Rural Fire Service document 'A Guide to Developing a Bushfire Emergency Management and Evacuation Plan' (RFS 2014) is not required in this instance due to the large separation from the bushfire hazard (i.e. not bushfire prone land).

## 4 Conclusion and recommendations

### 4.1 Conclusive summary

This report presents an assessment of the proposed upgrade redevelopment works to the Port Macquarie Campus of Hastings Secondary College against the specifications and requirements of *Planning for Bush Fire Protection 2019* (PBP).

The subject land is not identified as bushfire prone land and the nearest bushfire hazard is located greater than 100 m from the school property. As such a specific APZ or BAL is not required. The existing access arrangements also comply.

The assessment demonstrates that the proposal, together with the recommendations (see Section 4.2 below), complies with *Planning for Bush Fire Protection 2019*.

### 4.2 Recommendations

The recommendations made within Section 3 of this assessment are repeated below:

1. Any proposed landscaping is to satisfy the standard of an Inner Protection Area (IPA) as listed within Appendix 4 of *Planning for Bush Fire Protection 2019*.
2. Fire hydrants are to be installed to ensure compliance with PBP and AS 2419.1 – 2005 *Fire Hydrant Installations - System Design, Installation and Commissioning*.
3. Any gas services are to be installed and maintained in accordance with AS/NZS 1596-2014 *The storage and handling of LP gas*.



David Peterson





## References

NSW Rural Fire Service (RFS). 2014. *A Guide to Developing a Bushfire Emergency Management and Evacuation Plan*. State of New South Wales through the NSW Rural Fire Service.

NSW Rural Fire Service (RFS). 2019. *Planning for Bush Fire Protection: A Guide for Councils, Planners, Fire Authorities and Developers*. State of New South Wales through the NSW Rural Fire Service.

Standards Australia. 2005. *Fire hydrant installations - System design, installation and commissioning*, AS2419.1, Fourth edition 2005, Standards Australia International Ltd, Sydney.

Standards Australia. 2014. *The storage and handling of LP Gas*, AS/NZS 1596-2014, Standards Australia International Ltd, Sydney.

Standards Australia. 2018. *Construction of buildings in bushfire-prone areas*, AS 3959, Standards Australia International Ltd, Sydney.

