

**BUSHFIRE PROTECTION ASSESSMENT FOR THE  
CONSTRUCTION OF ALTERATIONS & ADDITIONS TO  
THE MAGDALENE CATHOLIC HIGH SCHOOL,  
LOT 51 in DP 1077229,  
SEDGWICK STREET,  
SMEATON GRANGE**

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<b>Assessment Number</b>	<b>Document</b>	<b>Preparation Date</b>	<b>Issue Date</b>	<b>Directors Approval</b>
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## EXECUTIVE SUMMARY

*Australian Bushfire Protection Planners Pty Limited* has been commissioned to undertake the Bushfire Consultancy for the proposed alterations and additions to the Magdalene Catholic High School on Lot 51 in DP 1077229, Sedgwick Street, Smeaton Grange.

The proposed works include the construction of a new building [Block L] which will contain General Learning Area [GLA] classrooms. The new building will attach to the north-eastern side of existing Block A1, A2 & A3 Buildings via a new Covered Walkway.

Vehicular access to the existing School is via a driveway off Smeaton Grange Road located to the southwest. The School is located within an industrial area and is bound by Smeaton Grange Road to the southwest, Sedgwick Street to the southeast, Hartley Road to the northeast and existing industrial development to the northwest.

The School site contains managed landscaped gardens and mowed lawns with a small pocket of remnant Sheoak Forest species located adjacent to the Sedgwick Street boundary of the site. The total area of this vegetation is less than one [1] hectare with only a narrow corridor of unmanaged vegetation located immediately adjacent to the south-eastern [Sedgwick Street] boundary.

This vegetation is recorded on the Camden Bushfire Prone Land Map as Category 2 Bushfire Prone Vegetation. As the area of unmanaged vegetation within the school site is less than one [1] hectare in area, this vegetation is NOT bushfire prone vegetation – refer to the NSW Rural Fire Service's document *Guideline for Bushfire Prone Land Mapping*.

The narrow corridor of vegetation within the riparian corridor to Smeaton Creek, located to the southeast of the industrial development opposite to the school site, is recorded on the Bushfire Prone Land Map as Category 1 Bushfire Prone Vegetation with the buffer zone to this vegetation extending onto the school site.

The proposed alterations and additions to the existing school is therefore deemed to be a '*Special Fire Protection Purpose Development*' pursuant to the provisions of Section 100B of the *Rural Fires Act 1997* and requires the issue of a Bushfire Safety Authority from the Commissioner of the NSW Rural Fire Service.

Clause 44 of the Rural Fires Regulation 2013 requires that, for the issue of a Bushfire Safety Authority pursuant to Section 100B of the *Rural Fires Act 1997*, the following matters shall be addressed:

- (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 and performance criteria set out in Chapter 4 (Performance Based Controls) of *Planning for Bush Fire Protection*.

Section 4.2.5 of *Planning for Bush Fire Protection 2006* identifies alterations and additions to existing 'Special Fire Protection Purpose Development', constructed prior to the amendments to the *Environmental Planning & Assessment Act 1979* and the *Rural Fires Act 1997*, introduced on the 1<sup>st</sup> August 2002, as infill development.

Section 4.2.5 of *Planning for Bushfire Protection 2006* states:

*"In circumstances where alterations and additions to existing 'Special Fire Protection Purpose Developments' are proposed, the RFS requires an appropriate combination of bushfire protection measures and compliance with the intent and performance criteria of each measure within Section 4.3.5.*

*Alterations and additions to existing 'Special Fire Protection Purpose Developments' [i.e. approved prior to 1<sup>st</sup> August 2002], which may involve an increase in size and footprint of the building or redevelopment of an existing building are considered to be infill development.*

*This type of development should also seek to achieve a better bushfire risk outcome [such as improved construction standards] than if the development did not proceed.*

*The new building work should comply with A.S.3959 – 2009 or be no closer to the hazard than the existing building. Existing facilities such as water supply should be upgraded".*

This report undertakes an assessment to review compliance with those matters identified by Clause 44 of the *Rural Fires Regulation 2013* and determines the deemed-to-satisfy bushfire protection requirements for the proposed development, in accordance with the provisions of Section 4.2.5 'Infill Development' of *Planning for Bushfire Protection 2006*.



Graham Swain  
Managing Director,  
**Australian Bushfire Protection Planners Pty Limited.**

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## SECTION 1

### INTRODUCTION

#### 1.1 Aim of this Assessment.

The aim of this report is to prepare a bushfire protection assessment report that addresses the requirements of Clause 44 of the NSW Rural Fires Regulation 2013 and the requirements for ‘*Special Fire Protection Purpose Development*’ Infill Development as detailed in Section 4.2.5 *Planning for Bushfire Protection 2006*.

#### 1.2 Statutory Requirements.

This report has been prepared having regard to the following legislative and planning requirements:

##### 1.2.1 Legislation.

##### ***Environmental Planning and Assessment Act - 1979 (EPA Act)***

Planning and development within NSW is regulated by the *Environmental Planning & Assessment Act, 2017* (EPA Act). Section 4.46 identifies certain development which is deemed to be ‘*Integrated Development*’ requiring the issue of a Bushfire Safety Authority pursuant to Section 100B of the *Rural Fires Act 1997*.

Section 4.47 of the Act states that before granting development consent for consent to carry out the development, the consent authority must obtain from each relevant approval body the general terms of any approval proposed to be granted by the approval body in relation to the development.

##### 1.2.2 Planning Policies.

##### ***Planning for Bushfire Protection – 2006. [Rural Fire Service]***

This document provides guidance on the planning and development control processes in relation to bushfire protection measures for rural residential and residential subdivision, “*Special Fire Protection Purpose Developments*” and Class 5 – 8 and 10 buildings in bushfire prone areas.

The document provides deemed-to-satisfy specifications on the provision of Asset Protection Zones to residential and “*Special Fire Protection Purpose Developments*” – which include Health Retreats; defensible space requirements to other developments and access/water supply provisions for developments in bushfire prone areas.

Provision for the assessment of construction standards to buildings and management / maintenance of the Asset Protection Zones/defensible space to buildings is also provided.

### **1.3 Documentation reviewed in this Assessment.**

- Architectural Plans and Elevations showing the proposed works prepared by Alleanza;
- *Planning for Bushfire Protection 2006* prepared by the NSW Rural Fire Service/Planning N.S.W;
- Australian Standard AS3959 - 2009 *Construction of Buildings in Bushfire Prone Areas*;
- *Rural Fires Regulation 2013*.

### **1.4 Site Inspection.**

Graham Swain of Australian Bushfire Protection Planners Pty Limited inspected the Magdalene Catholic High School on the 25<sup>th</sup> April 2018 to assess the topography, slopes and vegetation classification within and adjoining the school site.

### **1.5 Development Proposal.**

The proposed works include the construction of a new building [Block L] which will contain General Learning Area [GLA] classrooms. The new building will attach to the north-eastern side of existing Block A1, A2 & A3 Buildings via a new Covered Walkway.

Refer to Figure 1 on Page 9 provides a copy of the Site Plan showing the existing development on the site.

Figure 2 on Page 10 provides a copy of the Site Plan showing the location of the proposed classroom extension.

Figure 3 on Page 11 provides a copy of the Ground Floor Plan of the proposed building

Figure 4 on Page 12 provides a copy of the South Elevation of the proposed building.

Figure 5 on Page 12 provides a copy of the North Elevation of the proposed building



**Figure 1 – Site Plan of the existing buildings on the School Site.**

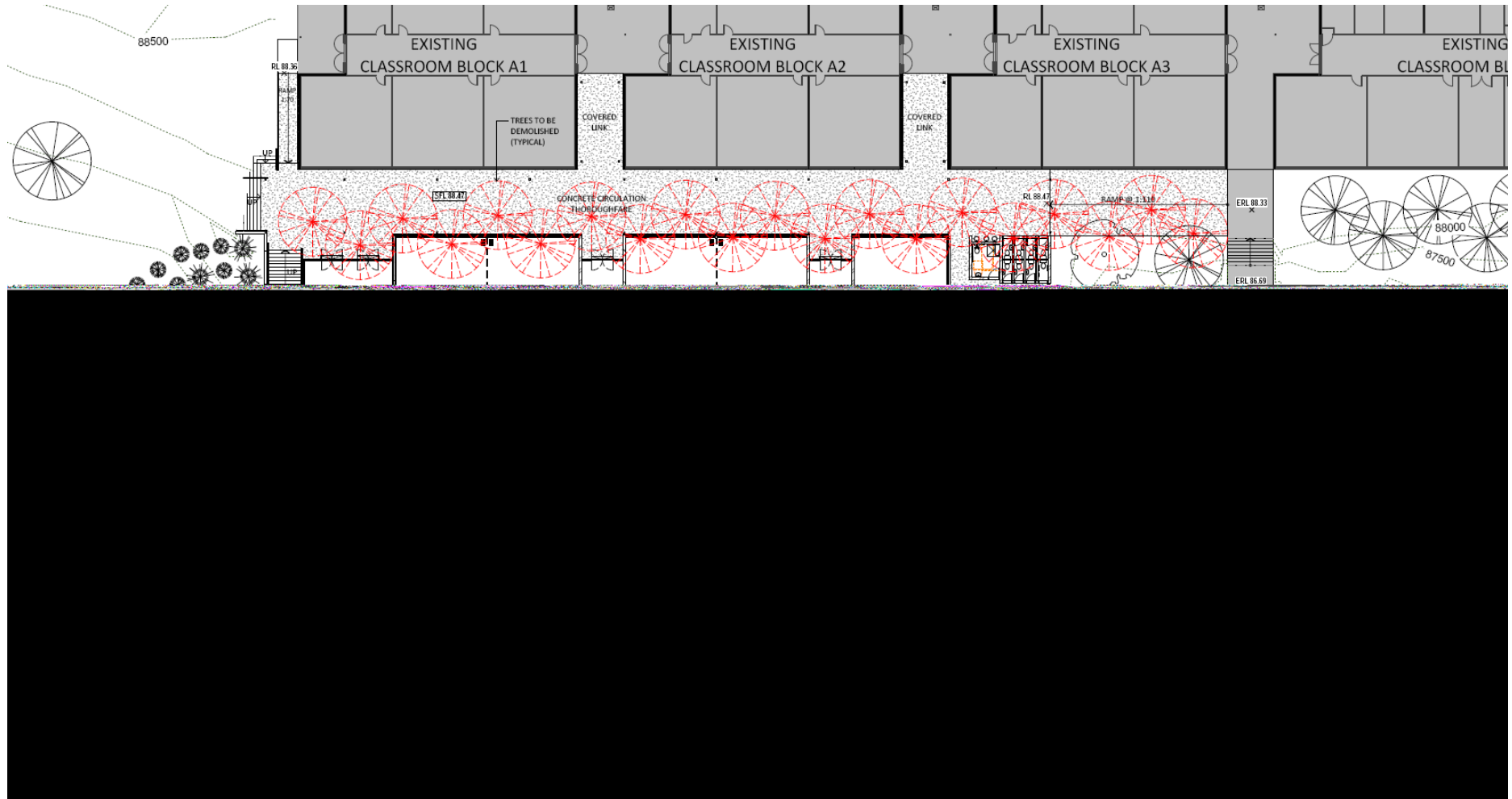




**Figure 2 – Site Plan showing the location of the proposed Classroom extension.**



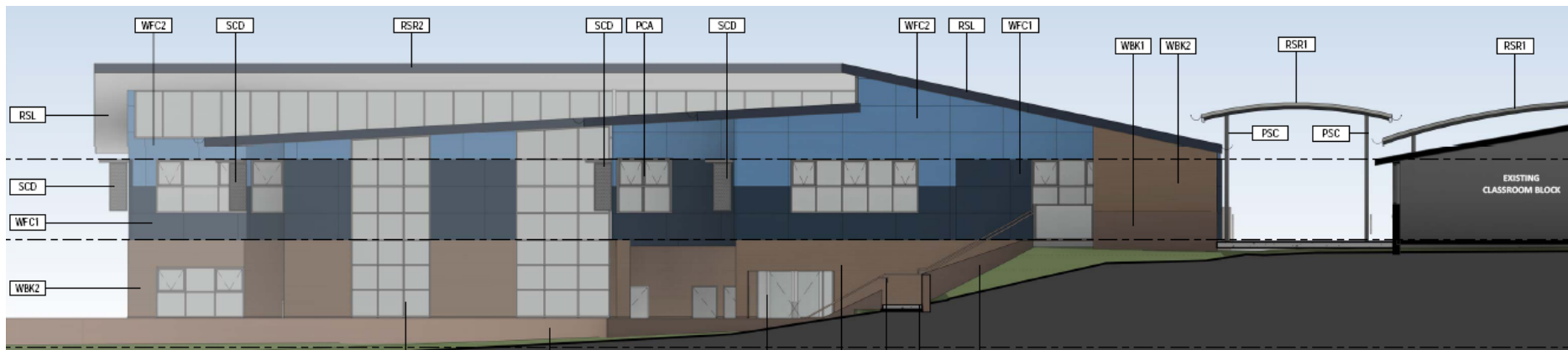
**Figure 3 – Proposed Block L Ground Floor Plan.**



**Figure 4 – Proposed Block L – South Elevation.**



**Figure 5 – Proposed Block L – North Elevation.**





## PROPERTY DESCRIPTION

The Magdalene Catholic High School occupies Lot 51 in DP 11077229, Sedgwick Street, Smeaton Grange.

The School site is adjoined to the northwest, northeast and southeast by industrial development. Smeaton Grange Road, the Camden By-Pass/Narellan Road and existing residential development occupy the land to the southwest of the school site.

Refer to Figure 7 – Aerial Photograph of the School Site and adjoining landuse on Page 14.

**Figure 7 – Aerial Photograph of the Magdalene Catholic High School site and adjoining landuses.**



### **2.3 Topography.**

Appendix 2 of *Planning for Bushfire Protection 2006* states that slopes should be assessed, over a distance of at least 100m from a development site and that the gradient of the land should be determined which will most significantly influence the fire behaviour to the site.

The land within the school site rises gently to the western corner of the site from Sedgwick Street and Hartley Road.

The adjacent industrial development is located on level 'pads'. The landform in the Smeaton Creek, located to the rear of the industrial development to the southeast of the school site provides an 'effective' slope of less than 5 degrees across the riparian zone.

Refer to Figure 8 – Topographic Map on Page 15.



Appendix A2.3 of *Planning for Bushfire Protection 2006* provides a methodology for determining the predominant bushfire prone vegetation for at least 140 metres in all directions from the future development on the site. Vegetation is classified using Table A2.1 of *Planning for Bushfire Protection 2006*, which classifies vegetation types into the following groups:

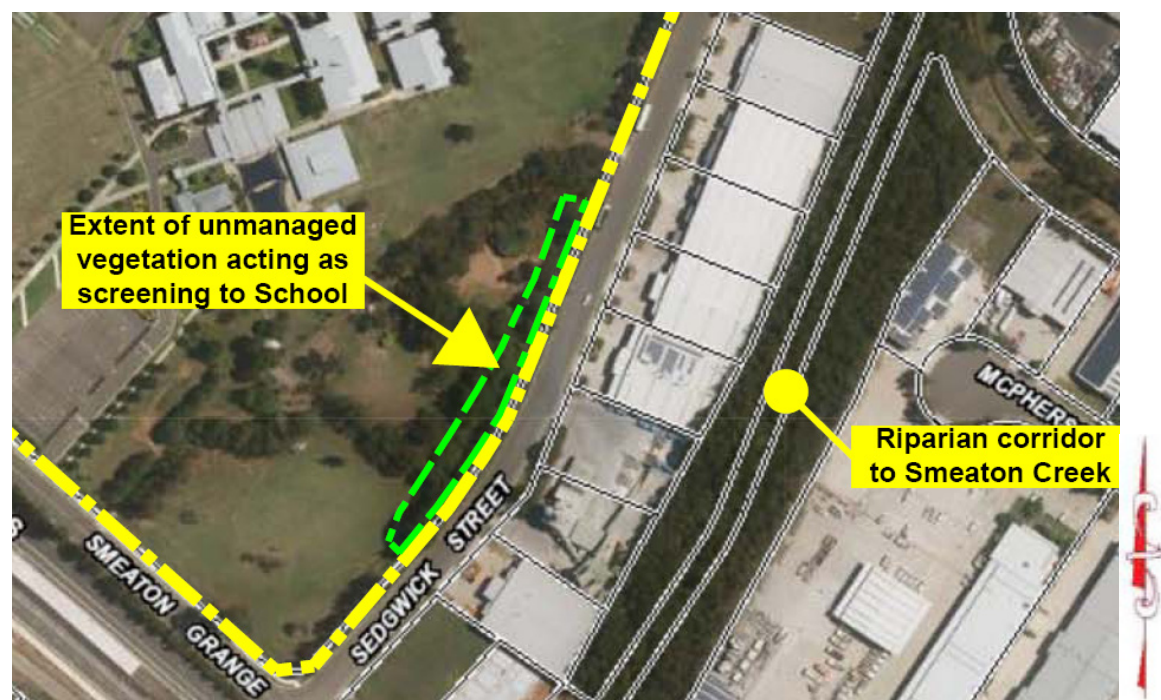
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#### **2.4.1 Vegetation within the School Site.**

The vegetation within the School site consists of managed landscaped gardens and mowed lands. A small patch of remnant Sheoak Forest occupies the central south-eastern portion of the school site. This vegetation has an area less than one [1] hectare and is mostly managed with a narrow band of unmanaged vegetation located immediately adjacent to the south-eastern boundary of the site.

This vegetation is incorrectly recorded on the Camden Bushfire Prone Land Map as Category 2 Bushfire Prone Vegetation – refer to Figure 9 – Aerial Photograph below showing the extent of unmanaged vegetation within the School Site.

***Figure 9 – Aerial Photograph below showing the extent of unmanaged vegetation within the School Site.***



#### **2.4.2 Vegetation within 140 metres of the School Site.**

The predominant vegetation on the adjoining industrial development consists of managed landscaped gardens.

The riparian corridor to Smeaton Creek contains remnant Sheoak Forest with a width of less than 50 metres. This vegetation is reclassified as 'low hazard' forest and for the purpose of determining bushfire protection measures is classified as 'rainforest' – refer to Figure 9.



### **2.5 Significant Environmental Features on the School Site.**

The land within the School Site does not contain significant environmental features such as SEPP 44 Koala Habitat; SEPP 14 Wetlands; SEPP 26 Littoral Rainforests; Land slip areas or National Parks Estate; Areas of Geological interest; Steep Lands [ $>18$  degrees] or riparian corridors.

### **2.6 Known Threatened Species, Population or Ecological Community within the School Site.**

A small pocket of unmanaged Sheoak Forest forms a screen along the south-eastern boundary of the site. This vegetation is not recorded as containing a threatened species, population or ecological community.

### **2.7 Details and location of Aboriginal Relics or Aboriginal Place.**

No Aboriginal relics or Aboriginal places are located within the School site.

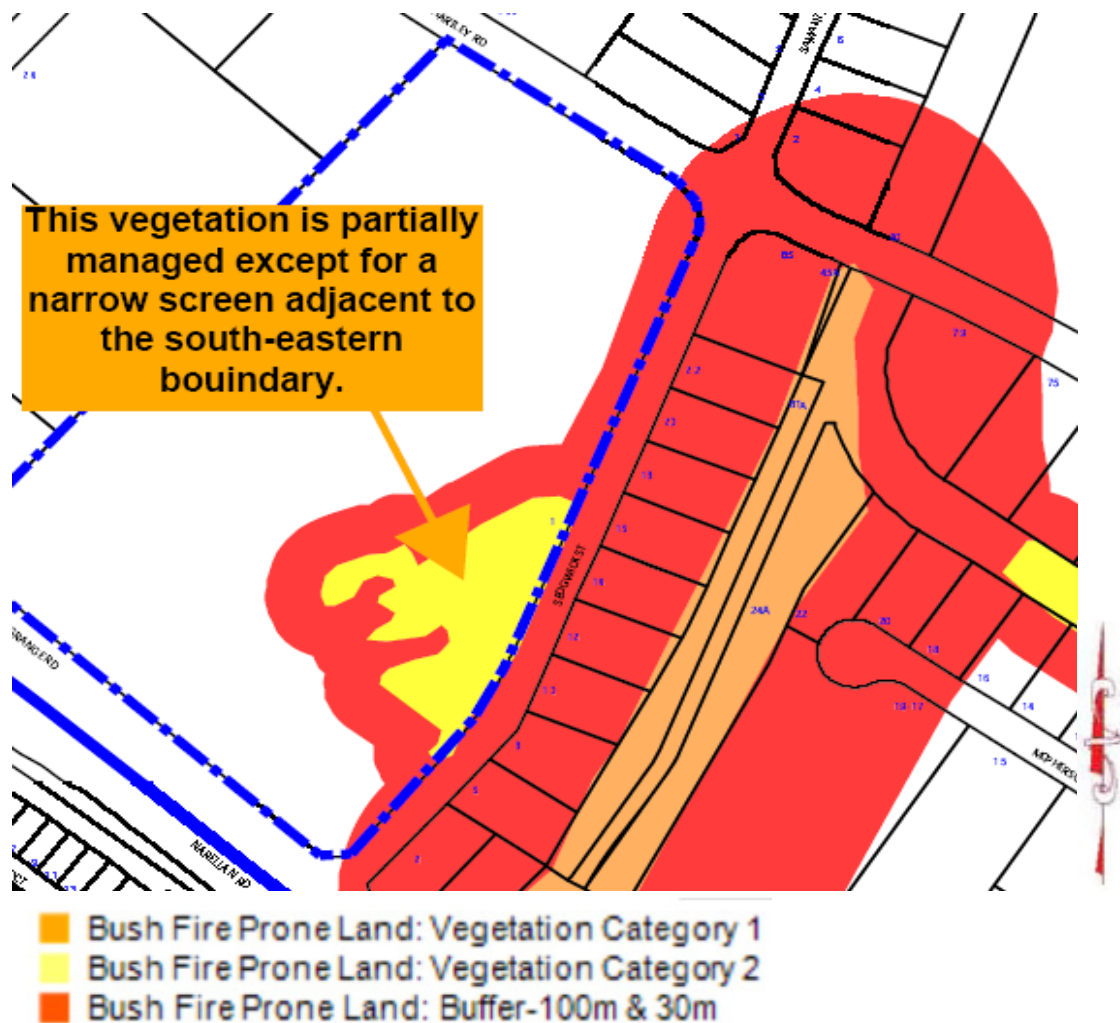
## SECTION 3

### PRECINCT LEVEL ASSESSMENT

#### 3.1 Certified Bushfire Prone Land Map.

Figure 10 is a copy of an extract of the Certified Camden Council Bushfire Prone Land Map showing the extent of the mapped Category 2 Bushfire Prone Vegetation on the school site and the Category 1 Bushfire Prone Vegetation within the riparian corridor to Smeaton Creek.

**Figure 10 – Plan of Bushfire Prone Land.**



The site inspection confirmed that the mapped Category 2 Bushfire Prone Vegetation within the school site consists of a small area [< one hectare] of remnant Sheoak Forest with the majority of this vegetation having a mowed understorey of grass. A screen strip of unmanaged vegetation extends along the inside of the south-eastern fence to the site. This vegetation is deemed not to constitute a bushfire hazard.

The map accurately records the extent of Category 1 Bushfire Prone Vegetation in the narrow riparian corridor to Smeaton Creek.

## SECTION 4

### BUSHFIRE PROTECTION ASSESSMENT

#### 4.1 Introduction.

Clause 44(h) of the *Rural Fires Regulation 2013* requires that for the purposes of Section 100B of the *Rural Fires Act 1997* a bushfire assessment is to be prepared for the proposed development 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.

Section 4.2.5 of *Planning for Bushfire Protection 2006* states that the Rural Fire Service requires, where alterations and additions are planned for existing 'Special Fire Protection Purpose Development', an appropriate combination of bushfire protection measures and compliance with the intent and performance criteria of each measure within Section 4.3.5 of *Planning for Bushfire Protection 2006*.

The performance criteria include:

1. A defendable space is provided onsite;
2. Buildings are sited and designed to minimise the risk of bushfire attack;

3. It is demonstrated that the proposed building can withstand bushfire attack in the form of wind, smoke, embers, radiant heat and flame contact;
4. Safe operational access is provided for emergency services personnel while residents are seeking to relocate [satisfying the intent and performance criteria for access roads in Sections 4.1.3 & 4.2.7 of *Planning for Bushfire Protection 2006*;
5. Adequate water and electricity services are provided for firefighting operations. Gas & electricity services are located so as not to contribute to the risk of fire to a building; and
6. Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and potential wind driven embers to cause ignitions.

The following sections of this report examine these matters.

#### **4.2 Asset Protection Zones.**

The bushfire prone vegetation which creates the hazard to Magdalene Catholic High School consists of the Sheoak Forest in the narrow riparian corridor to Smeaton Creek. This corridor has a width of less than 50 metres and therefore presents a low level of hazard to the school site.

The required width of Asset Protection Zone from the 'rainforest' vegetation in the riparian corridor is 40 metres. The actual separation width is more than 120 metres to the south-east corner of the proposed Building L, exceeding the maximum width of Asset Protection Zone found in Table A2.6 of *Planning for Bushfire Protection 2006*.

Furthermore, the existing industrial complexes located to the west of the creek provide shielding to the school site.

#### **4.3 Buildings are sited and designed to minimise the risk of bushfire attack:**

The location of the proposed addition to the School does not compromise the safety to the proposed building with the building being shielded by the existing industrial complexes therefore further reducing the risk of bushfire attack.

#### **4.4 Construction Standard of Buildings:**

The intent and performance criteria within Section 4.3.5 of *Planning for Bushfire Protection 2006* requires that it is demonstrated that the proposed additions can withstand bushfire attack in the form of wind, smoke, embers, radiant heat and flame contact.



This report has established that the new additions to the School are located more than 120 metres from the bushfire hazard in the riparian corridor to Smeaton Creek with additional shielding provided by the adjacent industrial buildings.

Therefore, no bushfire construction standards are required for the proposed works.

#### **4.5 Access:**

Vehicular & pedestrian access to the Magdalene Catholic High School is provided directly off Smeaton Grange Road via the existing driveway. Due to the negligible level of bushfire risk to the site there is no further access requirements.

#### **4.6 Water & Electricity Services:**

Water and electricity services to the existing buildings are located underground.

Complying fire-fighting water supplies are provided to the buildings in accordance with the provisions of the Building Code of Australia and A.S. 2419.1 – 2005, from a main located in Smeaton Grange Road, Sedgwick Street and Hartley Road.

#### **4.7 Landscape Management.**

The existing maintenance of the gardens, open lawn areas and maintained land within the curtilage to the existing buildings provides managed areas which comply with the prescriptions of an Inner Asset Protection Zone as defined by Appendix 5 of *Planning for Bushfire Protection 2006* and the NSW Rural Fire Service's '*Standards for Asset Protection Zones*'.

This maintenance shall continue, with the exception of the narrow screen along the Sedgwick Street frontage.

#### **4.8 Adequacy of bush fire maintenance plans and fire emergency procedures for the development site:**

The bushfire hazard to the Magdalene Catholic High School is negligible and therefore there is no requirement for the provision of a bushfire maintenance plan or emergency procedures plan.

#### **4.9 Emergency Planning.**

There is no requirement for the Emergency Management Plan for the School to include procedures for the risk of bushfire.

## SECTION 5

### RECOMMENDATIONS

#### **Recommendation 1:**

##### ***Asset Protection Zone Management:***

Except for the narrow band of screening adjacent to the Sedgwick Street boundary, the whole of the school site shall continue to be maintained including the mowing/slashing of the open lawn areas and beneath the remnant tree canopy.

## SECTION 6

### CONCLUSION

Approval is being sought for the construction of a Classroom extension to the existing buildings within the Magdalene Catholic High School on Lot 51 in DP 1077229 Sedgwick Street, Smeaton Grange.

This report has reviewed the proposed development against the requirements of clause 44 of the NSW Rural Fires Regulation 2013 and the requirements for '*Special Fire Protection Purpose Development*' as detailed in *Planning for Bushfire Protection 2006* guidelines and has determined that the proposed development is classified as 'infill development' pursuant to Section 4.2.5 of *Planning for Bushfire Protection 2006*.

Section 4.2.5 of *Planning for Bushfire Protection 2006* identifies that in circumstances where alterations and additions to existing '*Special Fire Protection Purpose Development*' are planned the NSW Rural Fire Service require an appropriate combination of bushfire protection measures and compliance with the intent and performance criteria of each measure within Section 4.3.5 of *Planning for Bushfire Protection 2006*.

The report has examined the vegetation within the school site and confirms that this vegetation is mostly managed, has an area less than one [1] hectare and does not constitute bushfire prone vegetation.

The report has also confirmed that a fire which may occur in the riparian corridor to Smeaton Creek will not have an impact on the school site and the risk is negligible.



Graham Swain,  
Managing Director,  
***Australian Bushfire Protection Planners Pty Limited.***

## REFERENCES:

- N.S.W Rural Fire Service – Planning for Bushfire Protection 2006;
- *Environmental Planning & Assessment Act – 1979*;
- *Rural Fires Act – 1997*;
- *Rural Fires Regulation 2013*;
- NSW Rural Fire Service – *Guideline for Bushfire Prone Land Mapping 2015*;
- *Biodiversity Conservation Act 2016*;
- *Native Vegetation Act 2003*;
- *Bushfire Environmental Assessment Code 2006*;
- Building Code of Australia;
- Australian Standard A.S 3959-2009 “*Construction of Buildings in Bushfire Prone Areas*”;
- Camden Bushfire Prone Land Map.