

BUSHFIRE PROTECTION ASSESSMENT

SECTION 96 APPLICATION

FOR

AMENDMENTS TO THE APPROVED

MATER MARIE CATHOLIC COLLEGE

LOT 13 in DP 1083731,
FOREST ROAD,
WARRIEWOOD

Assessment Document Preparation Issue Directors Approval
Number Date
B193290 - 1 Final 01.02.2019 10.05.2019 G.L.Swain

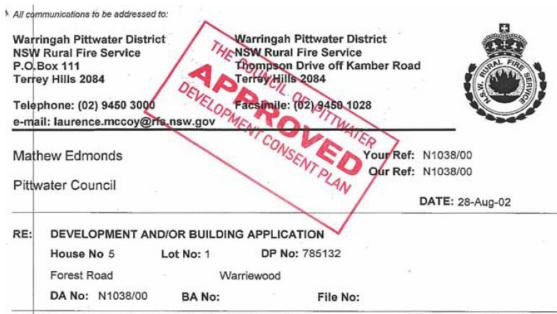
EXECUTIVE SUMMARY

Australian Bushfire Protection Planners Pty Limited has been commissioned by Avium to undertake the Bushfire Consultancy for the proposed Section 96 Application for modification to the Development Consent for the Mater Marie Catholic College sited on Lot 13 in DP 1083731, Forest Road, Warriewood.

The original Development Consent for the redevelopment of Mater Marie Catholic College was issued by Pittwater Council under DA N1038/00 on the 23rd November 2001.

An application to modify the original Development Consent DA N1038/00 was issued by Pittwater Council on the 11th October 2002 and included Consent Conditions D222, 223, 231 and E32(a) – E32(g) – relating to the provision of bushfire protection measures to the proposed development.

Consent Condition E32 (h) refers to compliance with the requirements of the NSW Rural Fire Service dated 28th August 2002. A copy of these requirements is provided below:



As per Planning for Bushfire Protection (2001) and Australian Standard 3959 "Construction of Buildings in bushfire-prone areas", the following is the Bushfire Attack Category and the necessary level of construction.

Bushfire Attack Category: MEDIUM

Construction Type: Level 1 Construction Required

Following an inspection of the proposal at the above address, please be advised that the NSW Rural Fire Service recommends Pittwater Council impose the following conditions:

The development is deemed a 'Special Protection Development' of Planning for Bushfire Protection 2001.

This requires for the slope and vegetation type an Asset Protection Zone to be maintained to a distance of 30 meters, surrounding the chapel. The Asset Protection Zone is to be comprised of a 20 meter Inner Protection Area and 10 meter Outer Protection Area.

Inner Protection Area - This zone is the area immediately adjacent to the dwelling to a radial distance of 20 meters. This area is to be kept free of flammable/combustible plants, rubbish and debris. It is suited to lawns, separated trees and low flammability gardens. No tree is to hang directly over the proposed structure.

Outer Protection Area - This zone is the area immediately adjacent to the Inner Protection Area. It is to be to a radial distance of 10 meters. This area is to be maintained to a maximum vegetation level of 8 tonnes per hectare.

For further information refer to section 4.2 Planning for Bushfire Protection 2001

The access road to the structure and perimeter fire trail around the structure are to be established to a minimum standard to allow access for firefighting vehicles. That is at least 4m wide and capable of carrying vehicles up to 28 Tonnes, or 9 T per axle. One meter either side of the trail/access road should be free from overhanging vegetation.

Leafless Gutters or other mechanical means to be installed on the structures to prevent the build up of flammable materials with the gutters.

Due to the extensive area of adjacent bushland, consideration should be given to the installation of other fire protection measures such as shutters, garden/house sprinkler systems, fire pumps & hoses and the use of fire resistant/retardant plant species.

If water supply is not reticulated, supply is to comply with Policy GOV-PL 720 Water Storage for Domestic and Rural Fire Fighting Purposes. Tanks must be of minimum 45000L capacity with 10000L reserved for fire fighting, outlet to be fitted with a 'stop valve' and stortz fittings.

Providing the above conditions are implemented, the NSWRFS has no objections to this proposal.

Please do not hesitate to call if you have any queries.

Yours Sincerely,

Laurence McCoy

Planning and Mitigation Officer

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The works approved under Development Consent DA N1038/00 have been substantially completed except for the construction of the approved Library/Staff and Administration/Canteen buildings, located to the south of the existing Chapel, between Block A and the Lecture Theatre.

The Development Consent also approved the establishment of a 30 metre wide Asset Protection Zone to the northwest and west of the completed buildings, which has also been established and maintained.

A further Section 96 Application was approved by the Northern Beaches Council on the 18th December 2017 [Reference S96 No: N1038/00/S96/2] seeking to replace the approved Library/Staff and Administration/Canteen buildings with a single, three level building excavated into the slope of the land. The modification proposed to construct the new building in two [2] stages.

Consent Condition B92 of the consent issues on the 18th December 2017 requires that the details provided in the Construction Certificate are to reflect the recommendations / requirements of the Bushfire Risk Assessment Report prepared by Australian Bushfire Protection Planners Pty Ltd dated 03 April 2017 and the NSW RFS letter – Ref: D17/30092, dated 26th September 2017.

The Bushfire Protection Assessment Report prepared by ABPP, dated 16.04.2017 provides the following recommendations:

Recommendation 1:

Fuel Management:

The management of the approved Asset Protection Zones, landscaped gardens and sporting fields shall continue to be undertaken to the existing standards.

Recommendation 2:

Bushfire Construction Standards to the proposed Building:

The proposed building shall be constructed to comply with Section 3 and Section 5 [BAL 12.5] of A.S. 3959 – 2009 – 'Construction of Buildings in Bushfire Prone Areas'.

Recommendation 3:

Water Supplies for Bushfire-Fighting Operations:

It is recommended that investigation should be undertaken into the provision of a hydrant at the turning area to the west of the Movement Centre.

Recommendation 4:

Fire Trail Access:

It is recommended that the existing turning head west of the Movement Centre shall be upgraded to provide an additional parking/passing bay to allow one fire appliance to park whilst a second appliance uses the turning head to exit the site in a forward direction.

Recommendation 5:

Evacuation Plan:

The existing Evacuation Plan shall be revised and updated to include the management of the College during bushfire emergencies and include the proposed building.

The listed requirements of the NSW Rural Fire Service are as follows:

Asset Protection Zones

The intent of measures is to provide sufficient space and maintain reduced fuel loads so as to ensure radiant heat levels of buildings are below critical limits and to prevent direct flame contact with a building. To achieve this, the following conditions shall apply:

- At the commencement of building works, and in perpetuity, the property shall be managed as an Inner Protection Area (IPA) as outlined within section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document 'Standards for asset protection zones' from the existing school buildings as follows:
 - 30 metres to the north and northwest;
 - · 20 metres to the west; and,
 - To the site boundaries to the east and south.

Water and Utilities

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:

2. The provision of water, electricity and gas shall comply with section 4.2.7 of 'Planning for Bush Fire Protection 2006' including the provision of a hydrant in close proximity to the proposed fire trail turning area.

Access

The intent of measures for fire trails is to provide suitable access for fire management purposes and maintenance of APZs. To achieve this, the following conditions shall apply:

3. The proposed fire trail turning area shall be provided in accordance with the relevant provisions of section 4.1.3(3) of 'Planning for Bush Fire Protection 2006'.

Evacuation and Emergency Management

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:

4. 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'.

Design and Construction

The intent of measures is that buildings are designed and constructed to withstand the potential impacts of bush fire attack. To achieve this, the following conditions shall apply:

 New construction shall comply with Sections 3 and 5 (BAL 12.5) Australian Standard AS3959- 2009 'Construction of buildings in bush fire-prone areas' or NASH Standard (1.7.14 updated) 'National Standard Steel Framed Construction in Bushfire Areas - 2014' as appropriate and section A3.7 Addendum Appendix 3 of 'Planning for Bush Fire Protection 2006'.

Landscaping

Landscaping to the site is to comply with the principles of Appendix 5 of 'Planning for Bush Fire Protection 2006'.

This report has been prepared for a Section 96 Application to North Beaches Council seeking a modification which permits an increase in the student numbers, construction of a new carpark, alterations to the existing carpark.

The proposed works do not increase the number or modify/extend the existing approved buildings and consist purely of external site works.

The College Campus contains managed landscaped gardens and playing fields with an area of retained vegetation in the northwest corner of the Campus. This vegetation and the vegetation on the land to the north and west of the College is recorded on the Northern Beaches Bushfire Prone Land Map as Category 1 Bushfire Prone Vegetation.

As the College Campus is mapped as 'Bushfire Prone Land', the proposed alterations to the existing carpark and construction of the new carpark is classified as Integrated Development under Section 91(1) of the *Environmental Planning and Assessment Act*.

In addition, under Section 100B of the *Rural Fires Act 1997*, the proposed development is a "Special Fire Purpose Development" that requires the implementation of additional protection measures and requires the issue of a 'Bushfire Safety Authority' by the Commissioner of the NSW Rural Fire Service.

However, due to the previous Development Consent for the construction of the buildings the development proposed in the Section 96 Application is classified, under Section 4.2.5 of *Planning for Bushfire Protection 2006*, as 'infill development' which requires 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*.

This report assesses the requirements of Section 44 of the *Rural Fires Regulation* 2013, necessary to provide compliance with *Section 100B* of the *Rural Fires Act* 1997 (Amended) and the issue of a *Bushfire Safety Authority* by the Commissioner of the NSW Rural Fire Service under *Section 100B(4)* of the *Rural Fires Act*.

Graham Swain

Managing Director,

Encham Swain

Australian Bushfire Protection Planners Pty Limited.

Fire Protection Association [FPA] Australia Member 48781

TABLE OF CONTENTS

EXECUTIVE SUMMARY	3
TABLE OF CONTENTS	8
SECTION 1 INTRODUCTION	9 9 . 12 . 12 . 13 . 13
SECTION 2 PROPERTY DESCRIPTION 2.1 Location 2.2 Topography. 2.3 Vegetation. 2.4 Significant Environmental Features on the College Campus. 2.5 Known Threatened Species, Population or Ecological Community within the College Campus. 2.6 Details and location of Aboriginal Relics or Aboriginal Place.	. 14 . 15 . 16 . 17 . 17
SECTION 3 PRECINCT LEVEL ASSESSMENT 3.1 Certified Bushfire Prone Land Map.	. 18
SECTION 4 BUSHFIRE PROTECTION ASSESSMENT 4.1 Introduction. 4.2 Determination of Asset Protection Zones. 4.3 Assessment of Bushfire Attack (Construction Standards). 4.4 Water Supplies for Fire Fighting Operations. 4.5 Access for Fire Fighting Operations. 4.6 Adequacy of Bushfire Maintenance Plans and Fire Emergency Plans. 4.7 Fuel Management. 4.8 Evacuation. 4.9 Adequacy of Sprinkler Systems & other Fire Protection Measures.	. 19 . 19 . 20 . 20 . 20 . 20 . 21
SECTION 5CONCLUSION	
REFERENCES:	. 23

INTRODUCTION

1.1 Development Proposal.

This report has been prepared for a Section 96 Application to North Beaches Council seeking a modification to the Development Consent Ref: S96 No: N1038/00/S96/2 issued on the 18^{th} December 2017, to permit an increase in the student numbers, construction of a new carpark and alterations to the existing carpark .

Figure 1 – Overall Site Plan showing the location of the new carpark and alterations to the existing carpark under this Section 96 Application.



Figure 2 – Plan of alterations to the existing Carpark.

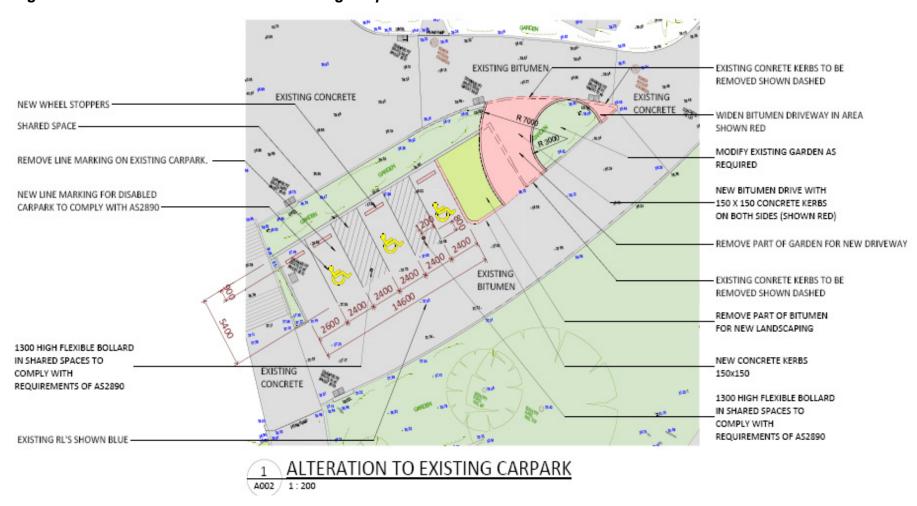
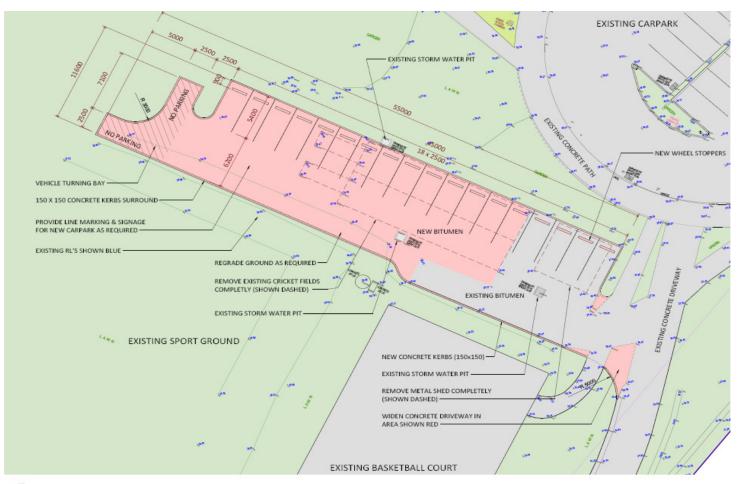


Figure 3 – Plan of proposed new Carpark.



NEW CARPARK 1:200

1.2 Aim of this Assessment.

The aim of this Bushfire Protection Assessment is to examine if there are any bushfire protection measures required to be applied to the works proposed to be undertaken as part of the Section 96 Application.

1.3 Statutory Requirements.

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

1.3.1 Legislation.

(a) Environmental Planning and Assessment Act (EPA Act)

Planning and development within NSW is regulated by the *Environmental Planning & Assessment Act, 1997* (EPA Act). In relation to bushfire planning for new residential, rural residential and special fire protection purpose developments (including Schools) in bushfire prone areas in NSW, Section 4.46 identifies that the proposed development, being a *'Special Fire Protection Purpose Development* located in a bushfire prone area, is classified as *'Integrated Development'* and requires the issue of a Bushfire Safety Authority by the Commissioner of the NSW Rural Fire Service under Section 100B of the Rural Fires Act 1997.

Application for a Bushfire Safety Authority must be lodged as part of the development application process and must demonstrate compliance with *Planning for Bushfire Protection 2006* and other matters which are considered necessary, by the Commissioner, to protect persons, property and the environment from the impact of bushfire.

(b) Rural Fires Act 1997

The objectives of the *Rural Fires Act* are to provide:

- The prevention, mitigation and suppression of fires;
- Coordination of bushfire fighting and prevention
- Protection of people and property from fires; and
- Protection of the environment.

In relation to the management of bushfire fuels on public and private lands within NSW, Sections 63(1) and 63(2) require public authorities and owners / occupiers of land to take all practicable steps to prevent the occurrence of bushfires on, and to minimize the danger of the spread of bushfires.

(c) Rural Fires Regulation 2013.

Section 44 of the *Rural Fires Regulation 2013* provides details of the matters that are required to be addressed for the issue of a *Bushfire Safety Authority* under Section 100B of the *Rural Fires Act*.

1.3.2 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 residential subdivision and Special Fire Protection Purpose Developments in bushfire prone areas.

The Commissioner may determine, under Section 100B of the *Rural Fires Act*, additional measures that are considered necessary to protect the development against the impact of bushfire.

1.4 Documentation reviewed in this Assessment.

- Development Consent No. N10338/-- issued by Pittwater Council;
- Modification of Development Consent N1038/00 Redevelopment of Mater Marie Catholic College, Warriewood – issued by Pittwater Council, dated 23.11.2001;
- Letter from Warringah Pittwater District Office of the NSW Rural Fire Service – dated 28.8.2002;
- Plans prepared by Fulton Trotter Carthey Architects approved under Development Application No. N1038/00;
- Section 96 Application Plans, Elevations and Sections prepared by Alleanza Architecture;
- Section 96 Development Consent issued by the Northern Beaches Council under reference N1038 00 S962 – dated 18th December 2017:
- Section 96 Application Plan prepared by Avium;
- 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;
- Northern Beaches Bushfire Prone Land Map.

1.5 Site Inspection.

Graham Swain of Australian Bushfire Protection Planners Pty Limited inspected the Mater Marie Catholic College on the 27th February 2017 to assess the topography, slopes and vegetation classification within and adjoining the College Campus.

The management of the existing Asset Protection Zone was also inspected and found to comply with the NSW Rural Fire Service's standards.

PROPERTY DESCRIPTION

2.1 Location.

The Mater Marie Catholic College Campus site occupies an irregular shaped parcel of land to the south of the western terminus of Forest Road, Warriewood.

Figure 4 – Location of the Mater Marie Catholic College on Lot 13 in DP 1083731, Forest Road, Warriewood

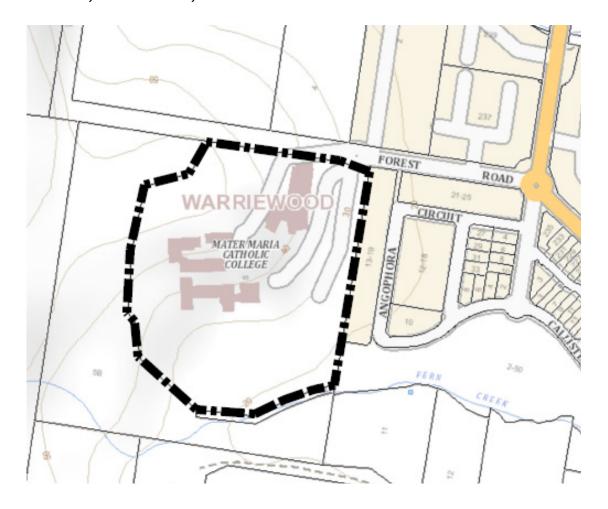


Figure 5 – Aerial Photograph of the Mater Marie Catholic College on Lot 13 in DP 1083731, Forest Road, Warriewood.



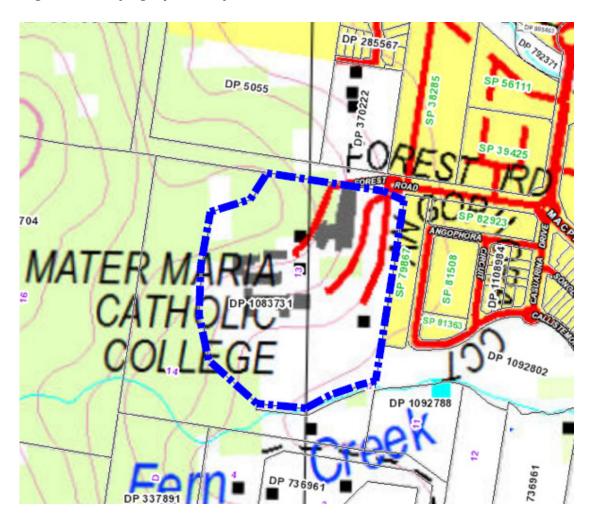
2.2 Topography.

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 College Campus occupies the southern and eastern end of a broad ridgeline that rises to the west from the western terminus of Forest Road.

The ridgeline rises to the west and northwest from the rear of the existing development footprint – refer to Figure 6 – Topographic Map on Page 16.

Figure 6 - Topographic Map.



2.3 Vegetation.

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:

- (a) Forests [wet & dry sclerophyll forests];
- (b) Woodlands;
- (c) Plantations being pine plantations not native plantations;
- (d) Forested Wetlands;
- (e) Tall Heaths;
- (f) Freshwater Heaths;
- (g) Short Heaths;
- (h) Alpine Complex;
- (i) Semi arid Woodlands;
- (j) Arid Woodlands; and
- (k) Rainforests.

The vegetation within the immediate curtilage to the buildings within the College Campus consists of managed landscaped gardens and managed Ovals/Playing Fields.

The north-western corner of the College Campus contains partially managed Dry Sclerophyll Low Open Ridgetop Forest which extends onto the adjoining property to the northwest. The western portion of the College Campus contains a narrow band of Dry Sclerophyll Low Open Ridgetop Forest which extends onto the adjoining property to the west and southwest.

This vegetation has been classified as Category 1 Bushfire Prone Vegetation on the Northern Beaches Bushfire Prone Land Map.

This is the only vegetation which creates a bushfire hazard to the College buildings.

2.4 Significant Environmental Features on the College Campus.

The land within the College Campus 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 or riparian corridors. The south-western and western portion of the Campus contains steep land.

2.5 Known Threatened Species, Population or Ecological Community within the College Campus.

There are no known threatened species, populations or ecological communities within the College Campus.

2.6 Details and location of Aboriginal Relics or Aboriginal Place.

No known Aboriginal relics or Aboriginal places are located within the development precinct of the College Campus.

PRECINCT LEVEL ASSESSMENT

3.1 Certified Bushfire Prone Land Map.

The following Figure 7 is a copy of an extract of the Northern Beaches Council [Pittwater] Bushfire Prone Land Map showing the extent of the Category 1 Bushfire Prone Vegetation on the College Campus and adjoining land.

Bushfire Map

Bushfire Prone Land
Bushfire Category 1
Bushfire Category 2

Figure 7 – Plan of Bushfire Prone Land.

The site inspection undertaken on the 27th February 2017 examined the vegetation within the College Campus and confirmed that the extent of unmanaged vegetation which could legally be recorded as bushfire prone vegetation is not accurately shown on the Northern Beaches Bushfire Prone Land Map as the map records the managed vegetation within the approved [and maintained] Asset Protection Zone to the northwest of the existing buildings.

Bushfire Buffer

BUSHFIRE PROTECTION ASSESSMENT

4.1 Introduction.

Section 44 of the *Rural Fires Regulation 2013* requires that an application for a *Bushfire Safety Authority*, under Section 100B of the *Rural Fires Act 1997*, must include a bushfire assessment for the proposed development (including the methodology used in the assessment) that addresses the extent to which the development provides:

- Asset protection zones,
- The siting and adequacy of water supplies for fire fighting operations,
- Capacity of public roads to handle increased volumes of traffic during a bushfire emergency,
- Whether or not public roads link with the fire trail network and have two way access,
- The adequacy of access and egress for the purposes of emergency response,
- The adequacy of bushfire maintenance plans and fire emergency procedures,
- The construction standards to be used for building elements.

Planning for Bushfire Protection 2006 provides a methodology to determine the Asset Protection Zones and Bushfire Attack / Construction Standards required for Special Protection Developments that are designated as bushfire prone.

Planning for Bushfire Protection 2006 also provides specifications on the provision of access and water supplies for fire fighting operations and construction standards to buildings. These matters, and the remaining items identified by Section 44 of the Rural Fires Regulation 2013 are examined in Sections 4.4 - 4.9 of this report.

4.2 Determination of Asset Protection Zones.

Appendix 2 of *Planning for Bushfire Protection 2006* provides the following procedure for determining setback distances (Asset Protection Zones):

- (a) Determine vegetation formations as follows:
 - Identify all vegetation in all directions from the site for a distance of 140 metres;
 - Consult Table A2.1 to determine the predominant vegetation type;
 and
 - Select the predominant vegetation formation as described in Table A2.1.

- (b) Determine the effective slope of the land under the predominant vegetation Class.
- (c) Determine the appropriate Fire Danger Index [FDI] from Table A2.2.
- (d) Consult Table A2.6 and determine the appropriate setback [Asset Protection Zone] for the assessed land use, vegetation formation and slope range [for Special Fire Purpose Development].

The works proposed within the Section 96 Modification only include the construction of external earthworks and pavement of the new carpark and extension to the existing carpark.

These works do not involve the erection of a building and therefore there is no requirement to satisfy the provision of Asset Protection Zones.

4.3 Assessment of Bushfire Attack (Construction Standards).

There is no building proposed in this Section 96 Application. Therefore there is no requirement to address the requirements of both Part 2.3.4 and GF5.1 of the Building Code of Australia or Australian Standard A.S. 3959 – 2009 – 'Construction of Building in Bushfire Prone Areas'.

4.4 Water Supplies for Fire Fighting Operations.

The existing College Campus is connected to a reticulated mains supply which extends from the Sydney Water street mains in Forest Road.

The previous Section 96 Application Consent addressed the provision of water supplies for fire-fighting operations.

4.5 Access for Fire Fighting Operations.

The existing access to the College Campus is via an internal road network that was approved in Development Consent No. N1038/00.

Supplementary fire-fighting access is provided to the north-western corner of the Campus via the existing fire/access road extension off Forest Road.

4.6 Adequacy of Bushfire Maintenance Plans and Fire Emergency Plans.

The Development Consent required the preparation of preparation of a Bushland Management which includes the maintenance of the approved Asset Protection Zone. A Fire Emergency Plan is not required as part of this Section 96 Application.

4.7 Fuel Management.

The management of the approved Asset Protection Zones, landscaped areas, grounds and the playing fields within the College Campus is being and will continue to be undertaken by the College.

4.8 Evacuation.

The existing Evacuation Plan shall be revised and updated to include the management of the College during bushfire emergencies and include the proposed building.

4.9 Adequacy of Sprinkler Systems & other Fire Protection Measures.

There is no requirement for the installation of bushfire sprinklers or other bushfire protection measures.

CONCLUSION

A Section 96 Application is to be lodged with the Northern Beaches Council seeking approval to modify Development Consent No. N1038/00 [approved by the Northern Beaches Council on the 18th December 2017] to allow for an increase in student numbers and the following external works:

1. Construction of a new Carpark;

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2. Construction of alterations to the existing Carpark.

These works do not include works to an existing building or construction of a new building and therefore the proposed modifications are not required to satisfy the bushfire protection measures pursuant to Section 100B of the *Rural Fires Act 1997*.

Graham Swain

Managing Director,

Australian Bushfire Protection Planners Pty Limited.

Fire Protection Association [FPA] Australia Member 48781

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;
- Native Vegetation Act;
- Bushfire Environmental Assessment Code 2006;
- Building Code of Australia;
- Australian Standard A.S. 3959-2009 "Construction of Buildings in Bushfire Prone Areas";
- Northern Beaches [Pittwater] Bushfire Prone Land Map.