

Bushfire Assessment Report

Proposed:
**State Significant
Development**

At:
**St Luke's Grammar School
Dee Why**

Reference Number: 210437

Prepared For:
The Anglican Schools
Corporation

16th November 2020



Prepared By:
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Version Control				
Version	Date	Author	Reviewed by	Details
1	05/11/2020	Stuart McMonnies BPAD Accreditation No. 9400	David McMonnies BPAD Accreditation No. 2354	Draft Report
2	16/11/2020	Stuart McMonnies BPAD Accreditation No. 9400		Final Report

List of Abbreviations:

APZ	Asset Protection Zone
AS3959	Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2018
BAL	Bushfire Attack Level
BPMs	Bushfire Protection Measures
BPLM	Bushfire Prone Land Map
Council	Northern Beaches Council
DA	Development Application
EP&A Act	Environmental Planning and Assessment Act - 1979
ESD	Ecologically Sustainable Development
FRNSW	Fire and Rescue NSW
IPA	Inner Protection Area
NCC	National Construction Code
NP	National Park
NSP	Neighbourhood Safer Places
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

Executive Summary

Building Code and Bushfire Hazard Solutions P/L has been commissioned by The Anglican Schools Corporation to prepare an independent bushfire assessment for the proposed new senior school campus and sports centre at 800 Pittwater Road, Dee Why and 224 Headland Road, North Curl Curl.

There are no physical works proposed for the existing campus of St Luke's Grammar School which is located at 210 Headland Road, Dee Why.

The proposed development comprises of the adaptive re-use of two (2) existing industrial buildings.

The new sports centre (224 Headland Road) includes two (2) basketball courts, a half-sized basketball court and gymnasium. It should be noted that previous development consent (DA2015/1041) has been issued by Warringah Council for modifications and use of Lot 7 as a recreation facility associated with the School. The assessment process included extensive consultation with the NSW Rural Fire Service as Lot 7 is located immediately adjacent Stony Range Regional Botanic Garden.

The new senior school campus (800 Pittwater Road) contains a range of learning spaces, along with an assembly theatre, drama theatre, library, outdoor multi-purpose sports court and new landscaping.

The new senior school campus and sports centre will be linked by a new vertical connection building. The senior school campus will accommodate 600 senior school students (Years 10 -12). The overall student population, including the existing campus, is forecast to be 1,600 students attending the school by 2030.

This application is being assessed as a State Significant Development (SSD).

Northern Beaches Council's Bushfire Prone Land Map does not identify any part of the subject site as containing Category 1, 2 or 3 Vegetation or their associated buffer zones and therefore the subject site is not considered 'bushfire prone'.

In response to a request from the NSW Department of Planning and Environment (Sydney Offices) the NSW Rural Fire Service submitted the following comment in relation to the exhibited Environmental Impact Statement (EIS) for this SSD application:

The site is not mapped as bush fire prone land on the Council's Bush Fire Prone Land Map, however the adjoining Stony Range Regional Botanic Garden is an area that can support a bush fire.

In this regard, a bush fire assessment report shall be prepared by a suitably qualified person which assesses the proposed development against the requirements of Planning for Bush Fire Protection 2019 providing recommendations.

The subject site and adjoining Stony Range Regional Botanic Garden present very unique characteristics in which the typical assessment pathway described in *Planning for Bush Fire Protection 2019* would over-represent the potential threat.

The unique characteristics include:

- Stony Range Regional Botanic Garden was specifically declassified by Council and the NSW Rural Fire Service in 2016 as being any form of bushfire hazard on the Bush Fire Prone Lands Map, which in doing so removed the planning trigger for the application of PBP to all surrounding properties (including the School);
- Council's current Bushfire Prone Land Map was certified on 7th August 2020 by the Commissioner of the NSW RFS following an extensive consultation period. Stony Range Regional Botanic Garden remains not classified as Category 1, 2 or 3 Vegetation;
- There have been no recorded wildfires within Stony Range Regional Botanic Garden;
- The closest recorded wildfire (Allenby Park 2005-06) was located >1.9km to the west of the subject site and Stony Range Regional Botanic Garden;
- The Stony Range Flora Reserve Fire Regime Management Plan (Ecological Australia 2006) is available on Northern Beaches Council's website. This plan includes designated APZs and Land Management Zones;
- Stony Range Regional Botanic Garden has a comprehensive network of paths and trails;
- Elevated sprinklers are located throughout Stony Range Regional Botanic Garden to achieve the desired microclimates;
- Hose points are also available throughout Stony Range Regional Botanic Garden which facilitate early suppression of unplanned fires;
- The subject buildings will be fitted with an internal fire sprinkler system;
- The subject site is located within a NSW Fire & Rescue area with the closest station located in Dee Why (<800m from Stony Range Regional Botanic Garden and the subject site).

In consideration of the above it is understood from preliminary conversations with the NSW Rural Fire Service the bushfire assessment must address the aim and objectives of PBP. In addition it was also requested to consider section 6.4 'Development of existing SFPP developments' of PBP.

A request was submitted to meet with the NSW Rural Fire Service to confirm the assessment framework however we were advised a meeting was not necessary in this instance. In addition an offer was extended for the NSW RFS to review the draft version of this report to confirm assessment framework. Following a conversation with the assessing officer the assessment framework was generally agreed upon and the offer to review declined.

In accordance with the bushfire safety measures contained in this report, and consideration of the site specific bushfire risk assessment it is our opinion that when combined, they will provide a reasonable and satisfactory level of bushfire protection to the subject development.

1.0 Introduction

Building Code and Bushfire Hazard Solutions P/L has been commissioned by The Anglican Schools Corporation to prepare an independent bushfire assessment for the proposed new senior school campus and sports centre at 800 Pittwater Road, Dee Why and 224 Headland Road, North Curl Curl.

There are no physical works proposed for the existing campus of St Luke's Grammar School which is located at 210 Headland Road, Dee Why.

The proposed development comprises the adaptive re-use of two (2) existing industrial buildings.

The new sports centre (224 Headland Road) includes two (2) basketball courts, a half-sized basketball court and gymnasium. The new senior school campus (800 Pittwater Road) contains a range of learning spaces, along with an assembly theatre, drama theatre, library, outdoor multi-purpose sports court and new landscaping.

The new senior school campus and sports centre will be linked by a new vertical connection building. The senior school campus will accommodate 600 senior school students (Years 10 -12). The overall student population, including the existing campus, is forecast to be 1,600 students attending the school by 2030.

This application is being assessed as a State Significant Development (SSD).

Northern Beaches Council's Bushfire Prone Land Map does not identify any part of the subject site as containing Category 1, 2 or 3 Vegetation or their associated buffer zones and therefore the subject site is not considered 'bushfire prone'.



2.0 Purpose of Report

The purpose of this Bushfire Assessment Report is to provide an independent bushfire assessment determination of the subject site and surrounding area and to determine if the State Significant Development Application will comply with the relevant specifications and requirements of *Planning for Bush Fire Protection 2019*.

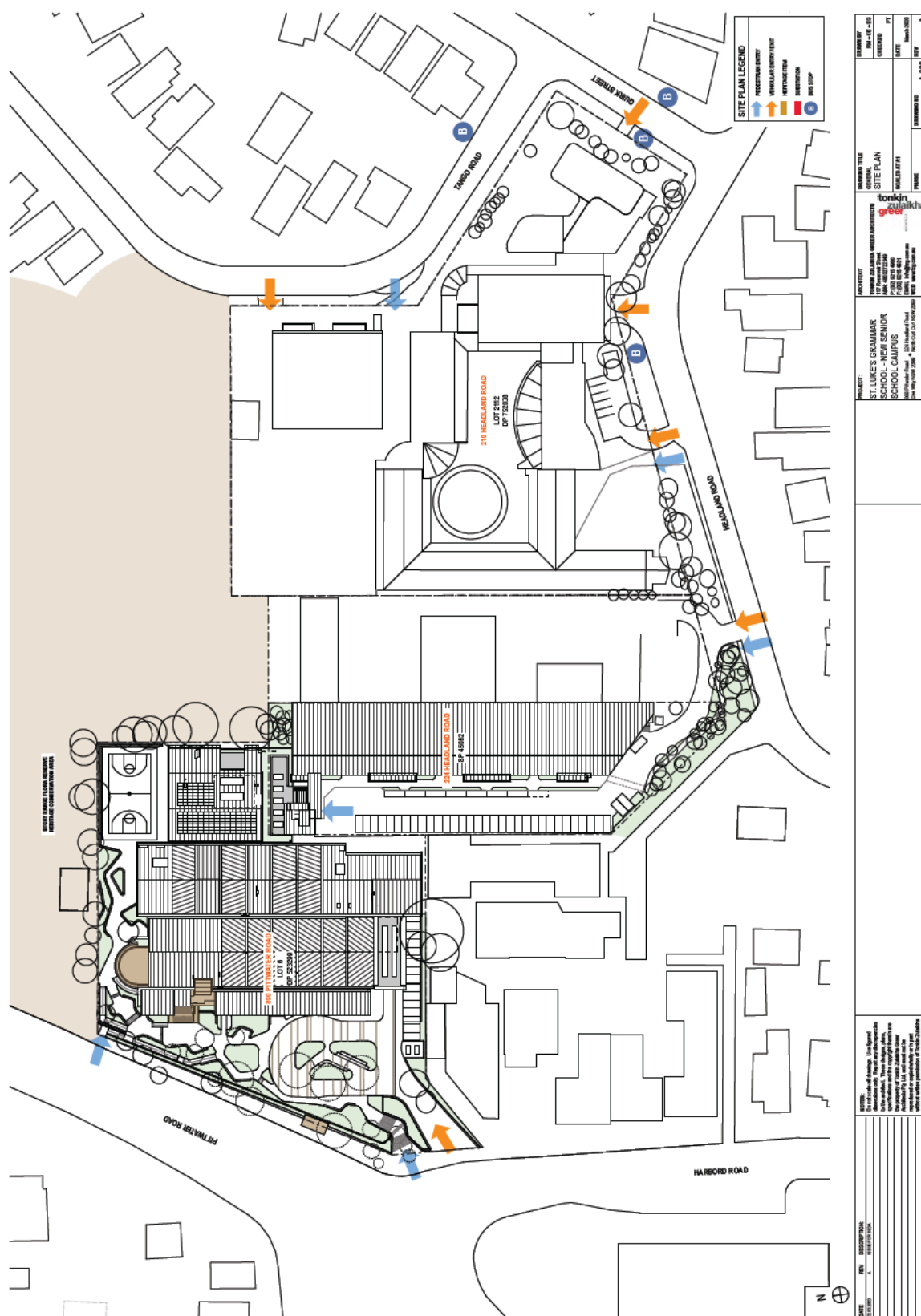
3.0 Scope of this Report

The scope of this report is limited to providing a bushfire assessment and recommendations for the subject property. Where reference has been made to the surrounding lands, this report does not purport to directly assess those lands; rather it may discuss bushfire impact and/or progression through those lands and possible bushfire impact to the subject property.

4.0 Aerial view & Site Plan



Figure 02: Aerial view of the subject site (yellow outline) c/- Nearmap.com (2020)



5.0 Site Assessment

5.01 Location

The subject property is known as St Luke's Grammar School being located at 210 Headland Road, Dee Why (Lot 2112 DP 752038 and Lot 100 DP 1251179). The expansion site captures 224 Head Road, North Curl Curl (SP 45082) and 800 Pittwater Road, Dee Why (Lot 6 DP 523299).

The subject site is located within Northern Beaches Councils local government area.

The existing school campus has street frontage to Headland Road to the south, Tango Avenue to the northeast and Quirk Street to the southeast and abuts Stony Range Regional Botanic Garden to the north and a neighbouring private allotment (zoned IN1: General Industrial) to the west.

The new senior school campus has street frontage to Headland Road to the south and Pittwater Road to the west and abuts Stony Range Regional Botanic Garden to the north and northeast and neighbouring private allotments (zoned IN1: General Industrial) to the east and southwest.

5.02 Vegetation

The subject property was predominately found to comprise of hard surface areas, with some isolated trees and landscape areas.

The subject property abuts Stony Range Regional Botanic Garden to the north which was previously identified on Council Bush Fire Prone Land Map as being a bushfire hazard (Category 2 Vegetation).

An earlier version of Council's current Bush Fire Prone Land Map removed Stony Range Regional Botanic Garden as being Category 2 Vegetation and which subsequently resulted in the subject site no longer being identified as bushfire prone land. As part of the legislated process the Bush Fire Prone Lands Map would have been reviewed and endorsed by the Commissioner of the NSW Rural Fire Service.

The declassification of Stony Range Regional Botanic Garden knowingly removes the planning trigger for sites to be considered 'bushfire prone' and consequently the application of PBP to all surrounding properties (including the School).

Council's current Bushfire Prone Land Map was certified on 7th August 2020 by the Commissioner of the NSW RFS following an extensive consultation period. Stony Range Regional Botanic Garden remains not classified as Category 1, 2 or 3 Vegetation.

Botanic Gardens have an inherent need to display numerous vegetation communities and flora to support their very function. This is typically achieved by modifying the local environmental characteristics to achieve multiple microclimates within a localised area. The Stony Range Regional Botanic Garden was found to have several microclimates including a rainforest gully, sandstone heath, and a lush ecosystem around the Federation Cascades.

The rainforest gully is populated with cedar, coachwood, flame trees, hoop pine, lilly pilly, ferns and palms.

The waterfalls that form the Federation Cascades were constructed by volunteers in 2001 to commemorate 100 years of Federation in Australia. Since then they have created their own ecosystem and now abound in lush plants and ferns and other species endemic to dry sclerophyll forest, scrub and forested wetlands.



The garden is subject to a Plan of Management and periodic hazard reductions / ecological burns and mechanical fuel modification. The Stony Range Flora Reserve Fire Regime Management Plan (Ecological Australia 2006) is available on Northern Beaches Council's website and includes designated APZs and Land Management Zones.

More broadly the NSW Rural Fire Service acknowledge the negligible risk of managed botanic gardens by specifically listing them as vegetation excluded from being bush fire prone in section 7.1.2 of their 'Guide for Bush Fire Prone Land Mapping' (version 5b, 2015).



Photograph 01: View south from within the garden where the vegetation transitions from the rainforest microclimate to the sandstone heath / forest



Photograph 02: View north from within the rainforest area of the garden

Subject
site



Photograph 03: View northwest from within the garden of the vegetation adjacent the subject site

Elevated
sprinkler



Formed
walking
path

Photograph 04: View south from within the rainforest area of the garden

5.03 Fire History

There are areas within NSW that have significant fire history and are recognised as known fire paths. While the fire history is more commonly considered as part of strategic planning (to ensure future development is not exposed to an unacceptable risk), it is useful to consider at a Development Application phase to ensure the land is suitable for development in the context of bushfire risk.

In this instance there have been no recorded wildfires within Stony Range Regional Botanic Garden or the immediate area.

The closest recorded wildfire (Allenby Park 2005-06) was located >1.9km to the west of the subject site and Stony Range Regional Botanic Garden

The subject site is therefore not considered to be within a known fire path. Furthermore in consideration of the previous bushfire history the likelihood of a bushfire occurring within Stony Range Regional Botanic Garden or the immediate area is considered unlikely. This assessment is consistent with the Warringah Pittwater Bush Fire Risk Management Plan.

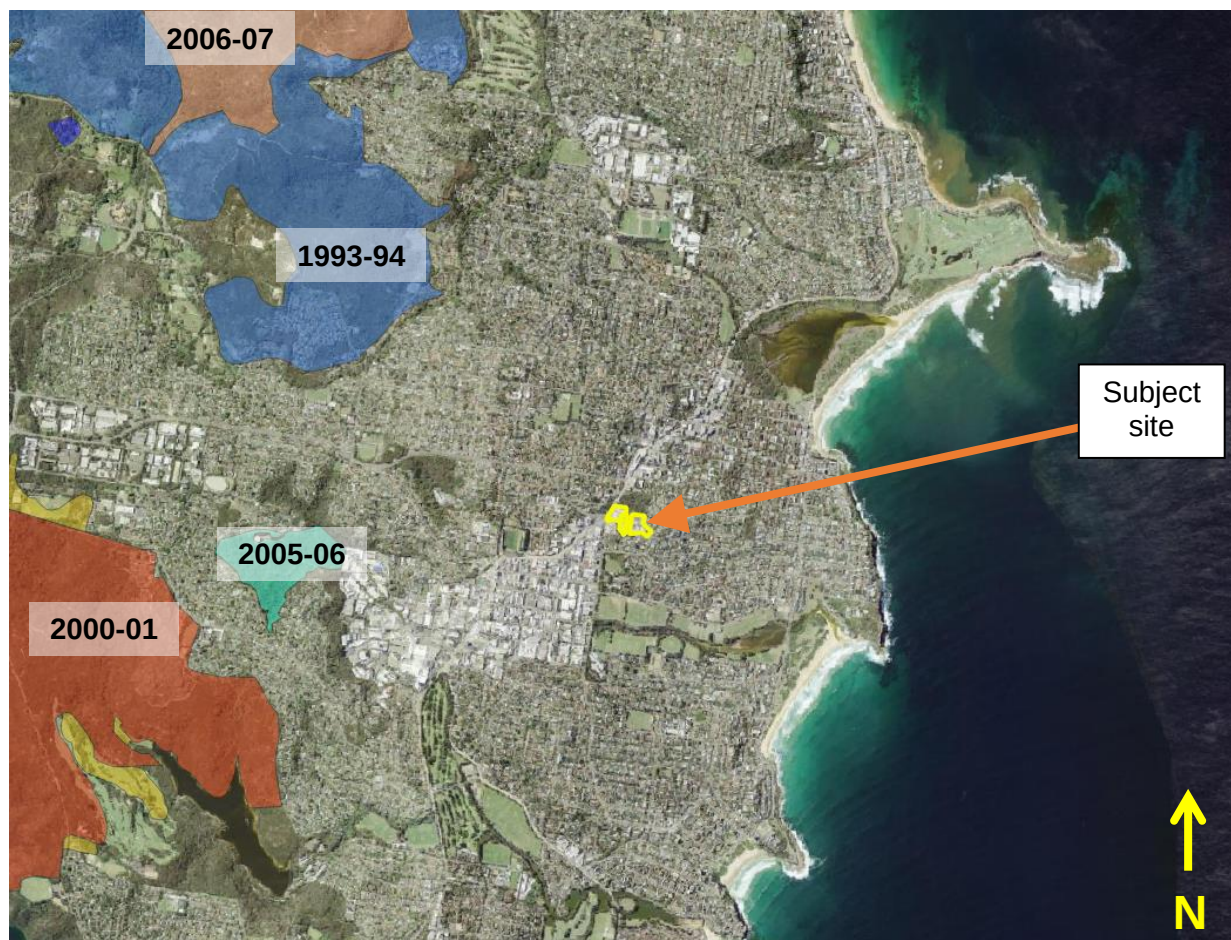


Figure 05: Aerial view of the subject area with previous wildfire history layer
(source NPWS Fire History)

6.0 Bushfire Assessment

6.01 Planning for Bush Fire Protection - 2019

Properties considered to be affected by possible bushfire impact are determined from the local Bushfire Prone Land Map as prepared by Council and or the Rural Fire Service.

Northern Beaches Council's Bushfire Prone Land Map does not identify any part of the subject site as containing Category 1, 2 or 3 Vegetation or their associated buffer zones and therefore the subject site is not considered 'bushfire prone'.

In response to a request from the NSW Department of Planning and Environment (Sydney Offices) the NSW Rural Fire Service submitted the following comment in relation to the exhibited Environmental Impact Statement (EIS) for this SSD application:

The site is not mapped as bush fire prone land on the Council's Bush Fire Prone Land Map, however the adjoining Stony Range Regional Botanic Garden is an area that can support a bush fire.

In this regard, a bush fire assessment report shall be prepared by a suitably qualified person which assesses the proposed development against the requirements of Planning for Bush Fire Protection 2019 providing recommendations.

The subject site and adjoining Stony Range Regional Botanic Garden present very unique characteristics in which the typical assessment pathway described in *Planning for Bush Fire Protection 2019* would over-represent the potential threat.

The unique characteristics include:

- Stony Range Regional Botanic Garden was specifically declassified by Council and the NSW Rural Fire Service in 2016 as being any form of bushfire hazard on the Bush Fire Prone Land Map, which in doing so removed the planning trigger for the application of PBP to all surrounding properties (including the School);
- Council's current Bushfire Prone Land Map was certified on 7th August 2020 by the Commissioner of the NSW RFS following an extensive consultation period. Stony Range Regional Botanic Garden remains not classified as Category 1, 2 or 3 Vegetation;
- There have been no recorded wildfires within Stony Range Regional Botanic Garden;
- The closest recorded wildfire (Allenby Park 2005-06) was located >1.9km to the west of the subject site and Stony Range Regional Botanic Garden;
- The Stony Range Flora Reserve Fire Regime Management Plan (Ecological Australia 2006) is available on Northern Beaches Council's website. This plan includes designated APZs and Land Management Zones;
- Stony Range Regional Botanic Garden has a comprehensive network of paths and trails;
- Elevated sprinklers are located throughout Stony Range Regional Botanic Garden to achieve the desired microclimates;
- Hose points are also available throughout Stony Range Regional Botanic Garden which facilitate early suppression of unplanned fires;
- The subject buildings will be fitted with an internal fire sprinkler system;
- The subject site is located within a NSW Fire & Rescue area with the closest station located in Dee Why (<800m from Stony Range Regional Botanic Garden and the subject site).

In consideration of the above it is understood from preliminary conversations with the NSW Rural Fire Service the bushfire assessment must address the aim and objectives of PBP. In addition it was also requested to consider section 6.4 'Development of existing SFPP developments' of PBP.

A request was submitted to meet with the NSW Rural Fire Service to confirm the assessment framework however we were advised a meeting was not necessary in this instance. In addition an offer was extended for the NSW RFS to review the draft version of this report to confirm assessment framework. Following a conversation with the assessing officer the assessment framework was generally agreed upon and the offer to review declined.

6.02 Aim & Objectives

All development on bushfire prone land must satisfy the aim and objectives of *Planning for Bush Fire Protection* 2019 (PBP).

Firstly it must be acknowledged that the subject site is not identified as being bushfire prone land.

The NSW RFS have identified the adjoining Stony Range Regional Botanic Garden is an area that can support a bush fire and subsequently requested a bushfire assessment report be prepared which assesses the proposed development against the requirements of PBP.

Regardless of the site not being identified as bushfire prone land the following details the aim and objectives of PBP and the proposals ability to comply.

Aim: *The aim of PBP 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.*

The subject site and adjacent Stony Range Regional Botanic Garden present very unique characteristics. While it is acknowledged that all vegetation has the potential to burn, including that within Stony Range Regional Botanic Garden, an assessment must be viewed in the context of the site characteristics.

Stony Range Regional Botanic Garden is a highly modified and managed landscape which is located in a highly visible location (adjacent Pittwater Road). In the unlikely event an unplanned fire occurs within the garden it is highly probable fire services will be alerted early given the exposure of the site. Even in the event onsite staff / volunteers do not successfully extinguish the fire attending fire services would be expected onsite within minutes given the proximity of the closest 24hr fire station (<800m).

The proposal includes various fire safety measures which will enhance the resilience of the subject buildings and subsequently the protection afforded to their occupants. Specifically relating to 800 Pittwater Road this includes:

- Compliance with Type A construction. All building elements are required to have a fire resistance level (FRL) as listed in Table 3 of Specification C1.1 of BCA, except where addressed in the proposed Fire Engineering Report as a Performance Solution.
- A fire sprinkler system provided throughout the building in accordance with BCA Clause E1.5 and AS 2118.1-2017.
- The building shall be provided with a smoke detection and alarm system for Class 9b school levels in accordance with BCA Spec E2.2a Clause 4 and AS 1670.1.

- An Emergency Warning and Intercom System (EWIS) provided throughout the building in accordance with BCA Spec E4.9 and AS 1670.4-2018.
- A maintenance program developed with all essential safety measures (active, passive and management) maintained in accordance with AS 1851 and AS 2293.2, and is to incorporate system interface testing, where relevant.
- A fire hydrant system shall be provided to the building in accordance with BCA Clause E1.3 and AS 2419.1-2005.
- Fire hose reels shall be provided in accordance with BCA Clause E1.4 and AS 2441-2005 to Class 7a carpark and Class 9b areas that are not “classrooms and associated corridors”.

In consideration of the attributes of the garden and existing fire service coverage it is considered extremely unlikely a fire could develop to a sufficient intensity to impact the subject buildings with any substance or pose an unacceptable risk to the occupants.

(i) afford buildings and their occupants protection from exposure to a bush fire;

The proposal includes various fire safety measures which will enhance the resilience of the subject buildings and subsequently the protection afforded to their occupants. Specifically relating to 800 Pittwater Road this includes:

- Compliance with Type A construction. All building elements are required to have a fire resistance level (FRL) as listed in Table 3 of Specification C1.1 of BCA, except where addressed in the proposed Fire Engineering Report as a Performance Solution.
- A fire sprinkler system provided throughout the building in accordance with BCA Clause E1.5 and AS 2118.1-2017.
- The building shall be provided with a smoke detection and alarm system for Class 9b school levels in accordance with BCA Spec E2.2a Clause 4 and AS 1670.1.
- An Emergency Warning and Intercom System (EWIS) provided throughout the building in accordance with BCA Spec E4.9 and AS 1670.4-2018.
- A maintenance program developed with all essential safety measures (active, passive and management) maintained in accordance with AS 1851 and AS 2293.2, and is to incorporate system interface testing, where relevant.
- A fire hydrant system shall be provided to the building in accordance with BCA Clause E1.3 and AS 2419.1-2005.
- Fire hose reels shall be provided in accordance with BCA Clause E1.4 and AS 2441-2005 to Class 7a carpark and Class 9b areas that are not “classrooms and associated corridors”.

In relation to 224 Headland Road it should be noted that previous development consent (DA2015/1041) has been issued by Warringah Council for modifications and use of Lot 7 as a recreation facility associated with the School. The assessment process included extensive consultation with the NSW Rural Fire Service as Lot 7 is located immediately adjacent Stony Range Regional Botanic Garden.

As requested at the time by the NSW Rural Fire Service Lot 7 was upgraded for ember protection.

In consideration of the existing and proposed construction type and the attributes of Stony Range Regional Botanic Garden we consider the buildings and their occupants are afforded the protection from exposure to a bushfire.

(ii) provide for a defensible space to be located around buildings;

Attending fire services have logical fire-fighting platforms in each of the properties including the proposed outdoor basketball court within 800 Pittwater Road, existing carpark within 224 Headland Road and carpark / oval within 210 Headland Road.

In addition attending fire services have direct access to Stony Range Regional Botanic Garden via Pittwater Road and Tango Road and throughout via the comprehensive trail network.

(iii) provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;

As outlined above in consideration of the existing and proposed construction type and the attributes of Stony Range Regional Botanic Garden we are of the opinion that the spread of fire to the buildings is unlikely.

(iv) ensure that appropriate operational access and egress for emergency service personnel and occupants is available;

The entry / exit points from the subject buildings are illustrated below in an excerpt from the Site Plan.

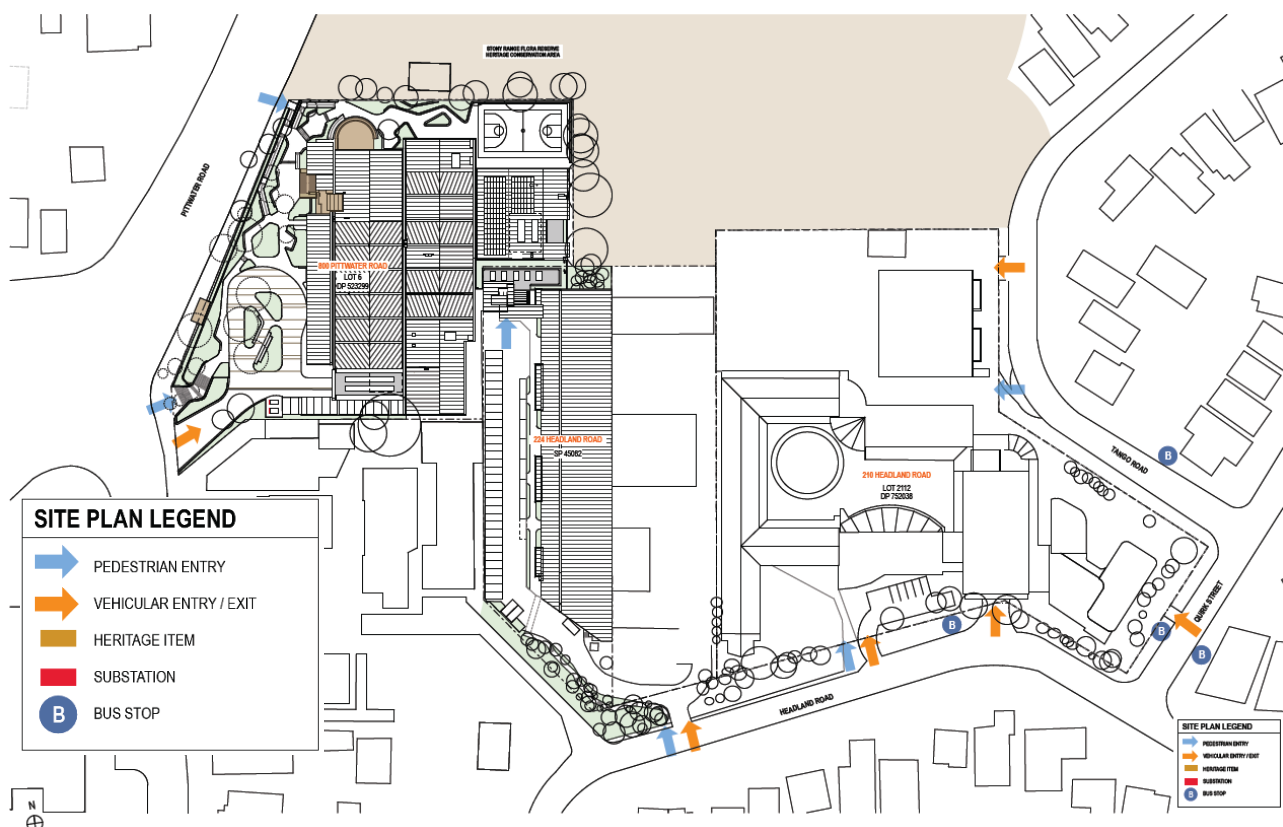


Figure 06: Extract from Site Plan showing access points

As shown the evacuation routes are away from Stony Range Regional Botanic Garden onto existing public roads.

Attending fire services have logical fire-fighting platforms in each of the properties including the proposed outdoor basketball court within 800 Pittwater Road, existing carpark within 224 Headland Road and carpark / oval within 210 Headland Road.

(v) provide for ongoing management and maintenance of bush fire protection measures, (BPMs); and

A maintenance program must be developed for all essential safety measures (active, passive and management) and maintained in accordance with AS 1851 and AS 2293.2.

In addition an emergency management and evacuation plan must be developed and implemented prior to Occupation Certificate. The plan must satisfy the requirements of AS 3745 and include a section on bushfire emergency.

(vi) ensure that utility services are adequate to meet the needs of firefighters.

A fire hydrant system will be provided to the building (800 Pittwater Road) in accordance with BCA Clause E1.3 and AS 2419.1-2005. The fire hydrant booster assembly connections and all fire hydrant valves will be fitted with Storz aluminium alloy delivery couplings manufactured and installed in accordance with clauses 7.1 and 8.5.11.1 of AS 2419.1-2005.

Fire hose reels will be provided in accordance with BCA Clause E1.4 and AS 2441-2005 to Class 7a carpark and Class 9b areas that are not "classrooms and associated corridors".

It is of our opinion that the proposal can satisfactorily comply with the aim and objectives of Planning for Bush Fire Protection 2019.

6.03 Additional considerations

In addition to addressing the aim and objectives of PBP it was requested by the NSW Rural Fire Service to consider section 6.4 'Development of existing SFPP developments' of PBP. A request was submitted to meet with the NSW Rural Fire Service to confirm the assessment framework however we were advised a meeting was not necessary in this instance.

The objectives that apply to existing SFPP development and our comments of the projects compliance or otherwise are as follows:

Objective	Comment
provide an appropriate defensible space;	See section 6.02
site the building in a location which ensures appropriate separation from the hazard to minimise potential for material ignition;	The proposal does not include any new buildings but rather repurposing two existing buildings. In consideration of the existing and proposed construction type and the attributes of Stony Range Regional Botanic Garden we are of the opinion that the spread of fire to the buildings is unlikely. The subject building being type A construction also precludes external building ignition.
provide a better bush fire protection outcome for existing buildings;	The proposal includes extensive upgrades to the subject buildings including hydrants, internal fire sprinkler system, Emergency Warning Intercom System and fire detection system.
new buildings should be located as far from the hazard as possible and should not be extended towards or situated closer to the hazard than the existing buildings (unless they can comply with section 6.8);	There are no new buildings proposed as part of this application. New building works also do not extend closer to Stony Range Regional Botanic Garden than existing building works.
ensure there is no increase in bush fire management and maintenance responsibility on adjoining land owners without their written confirmation;	There is no increase in bushfire management or maintenance responsibility on adjoining land owners.
ensure building design and construction enhances the chances of occupant and building survival; and	The proposed building upgrades enhance the resilience of the subject buildings and subsequently protection afforded to the occupants.

provide for safe emergency evacuation procedures including capacity of existing infrastructure (such as roads).

An emergency management and evacuation plan must be developed and implemented prior to Occupation Certificate. The plan must satisfy the requirements of AS 3745 and include a section on bushfire emergency.

7.0 Recommendations

The following recommendations are provided as the minimum necessary for compliance with Planning for Bush Fire Protection – 2019. Additional recommendations are provided to supplement these minimum requirements where considered necessary.

Asset Protection Zones

1. That all grounds not built upon shall be maintained as an Inner Protection Area as detailed in the NSW Rural Fire Service's document 'Standards for Asset Protection Zones' and Appendix 4 of Planning for Bush Fire Protection 2019.

Landscaping

2. That any new landscaping is to comply with Appendix 4 of *Planning for Bush Fire Protection 2019*.

Emergency management

3. That a Bush Fire Emergency Management and Evacuation Plan is prepared for the school consistent with the relevant requirements detailed in Table 6.8b of *Planning for Bush Fire Protection 2019*.

Services (where applicable)

Water:

4. That the new internal hydrant system is to comply with the requirements detailed in Table 6.8c of Planning fir Bush Fire Protection 2019, specifically:
 - fire hydrant spacing, design and sizing comply with the relevant clauses of AS 2419.1:2005;
 - hydrants are not located within any road carriageway;
 - fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2005.
 - all above-ground water service pipes external to the building are metal, including and up to any taps.
 - fire hose reels are constructed in accordance with AS/NZS 1221:1997 Fire hose reels, and installed in accordance with the relevant clauses of AS 2441:2005 Installation of fire hose reels.

Electricity:

5. Any new electrical services must comply with Table 6.8c of *Planning for Bush Fire Protection 2019*, specifically:
 - where practicable, electrical transmission lines are underground.
 - where overhead electrical transmission lines are proposed:
 - lines are installed with short pole spacing (30 metres), unless crossing gullies, gorges or riparian areas; and
 - no part of a tree is closer to a power line than the distance set out in *ISSC3 Guideline for Management Vegetation Near Power Lines*.

Gas:

6. Any new gas services must comply with Table 6.8c of *Planning for Bush Fire Protection 2019*, specifically:
 - reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 - *The storage and handling of LP Gas*, the requirements of relevant authorities, and metal piping is used;
 - all fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side;
 - connections to and from gas cylinders are metal;
 - if gas cylinders need to be kept close to the building, safety valves are directed away from the building and at least 2m away from any combustible material, so they do not act as a catalyst to combustion;
 - polymer-sheathed flexible gas supply lines to gas meters adjacent to buildings are not to be used; and
 - above-ground gas service pipes external to the building are metal, including and up to any outlets.

8.0 Conclusion

The development proposal relates to the establishment of a new senior school campus and sports centre at 800 Pittwater Road, Dee Why and 224 Headland Road, North Curl Curl. The proposed development comprises of the adaptive re-use of two (2) existing industrial buildings.

There are no physical works proposed for the existing campus of St Luke's Grammar School which is located at 210 Headland Road, Dee Why.

This application is being assessed as a State Significant Development (SSD).

Northern Beaches Council's Bushfire Prone Land Map does not identify any part of the subject site as containing Category 1, 2 or 3 Vegetation or their associated buffer zones and therefore the subject site is not considered 'bushfire prone'.

In response to a request from the NSW Department of Planning and Environment (Sydney Offices) the NSW Rural Fire Service submitted the following comment in relation to the exhibited Environmental Impact Statement (EIS) for this SSD application:

The site is not mapped as bush fire prone land on the Council's Bush Fire Prone Land Map, however the adjoining Stony Range Regional Botanic Garden is an area that can support a bush fire.

In this regard, a bush fire assessment report shall be prepared by a suitably qualified person which assesses the proposed development against the requirements of Planning for Bush Fire Protection 2019 providing recommendations.

The subject site and adjoining Stony Range Regional Botanic Garden present very unique characteristics in which the typical assessment pathway described in *Planning for Bush Fire Protection 2019* would over-represent the potential threat.

The unique characteristics include:

- Stony Range Regional Botanic Garden was specifically declassified by Council and the NSW Rural Fire Service in 2016 as being any form of bushfire hazard on the Bush Fire Prone Land Map, which in doing so removed the planning trigger for the application of PBP to all surrounding properties (including the School);
- Council's current Bushfire Prone Land Map was certified on 7th August 2020 by the Commissioner of the NSW RFS following an extensive consultation period. Stony Range Regional Botanic Garden remains not classified as Category 1, 2 or 3 Vegetation;
- There have been no recorded wildfires within Stony Range Regional Botanic Garden;
- The closest recorded wildfire (Allenby Park 2005-06) was located >1.9km to the west of the subject site and Stony Range Regional Botanic Garden;
- The Stony Range Flora Reserve Fire Regime Management Plan (Ecological Australia 2006) is available on Northern Beaches Council's website. This plan includes designated APZs and Land Management Zones;
- Stony Range Regional Botanic Garden has a comprehensive network of paths and trails;
- Elevated sprinklers are located throughout Stony Range Regional Botanic Garden to achieve the desired microclimates;

- Hose points are also available throughout Stony Range Regional Botanic Garden which facilitate early suppression of unplanned fires;
- The subject buildings will be fitted with an internal fire sprinkler system;
- The subject site is located within a NSW Fire & Rescue area with the closest station located in Dee Why (<800m from Stony Range Regional Botanic Garden and the subject site).

In accordance with the bushfire safety measures contained in this report, and consideration of the site specific bushfire risk assessment it is our opinion that when combined, they will provide a reasonable and satisfactory level of bushfire protection to the subject development.

We are therefore in support of the development.

Should you have any enquiries regarding this project please contact me at our office.

Prepared by
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9.0 Annexure 01

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Standards Australia (2018). *AS3959 Construction of buildings in bushfire-prone areas*.

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Tonkin Zulaikha Geer Architects (2020), various plans – project number 18032, dated March 2020

Acknowledgements to:

Geoscience Australia
Northern Beaches Council's Bushfire Prone Land Map
Nearmap
NSW Gov. ePlanning Spatial Viewer
Street-directory.com.au

Attachments

Attachment 01: N/A