

# Bush Fire Assessment Report

***Proposed:***  
**St Ives Indoor Sports  
Complex**

***At:***  
**St Ives High School  
60 – 70 Horace Road,  
St Ives NSW**

*Reference Number:* 201227B

*Prepared For:*  
**Ku-ring-gai Council  
C/- JDH Architects**

**16<sup>th</sup> April 2021**

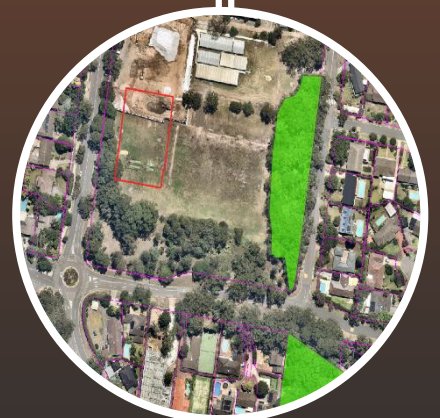
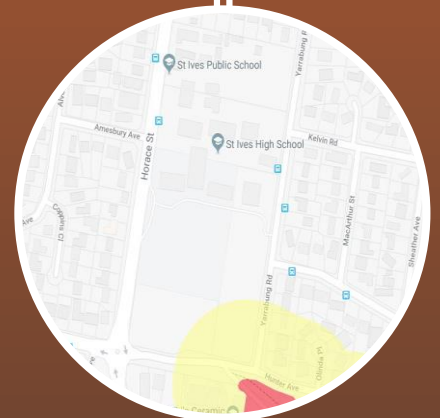
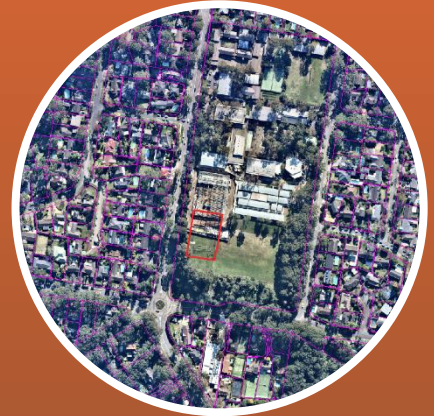


*Prepared By:*  
**Building Code & Bushfire  
Hazard Solutions Pty Limited**

Tel: (02) 9457 6530  
Fax: (02) 9457 6532

PO Box 124  
Berowra NSW 2081  
ABN 19 057 337 774

[www.bushfirehazardsolutions.com.au](http://www.bushfirehazardsolutions.com.au)



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S100B applications under the Rural Fires Act 1997 (subdivisions and Special Fire Protection Purpose Developments) *must* be referred to the NSW Rural Fire Service for review and receipt of a Bushfire Safety Authority (BSA).

The onus is on the applicant to cross reference this document with any conditions of consent issued or any requirements supplied by the NSW Rural Fire Service following development approval. BCBHS can review and cross reference these documents however the onus is on the applicant to provide them to us and request this review.

Where any discrepancy between this document and the NSW Rural Fire Service requirements is found, the conditions of consent always take precedence until such time as an application to review, amend or vary these conditions is approved.

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## List of Abbreviations:

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APZ	Asset Protection Zone
AS3959	Australian Standard 3959 – 2018 as amended
BAL	Bushfire Attack Level
BCA	Building Code of Australia
BPMs	Bushfire Protection Measures
BPLM	Bushfire Prone Land Map
Council	Ku-ring-gai Council
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
NSP	Neighbourhood Safer Place
OPA	Outer Protection Area
PBP	Planning for Bush Fire Protection – 2019
ROW	Right of Way
RF Act	Rural Fires Act - 1997
RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	Special Fire Protection Purpose
SWS	Static Water Supply

## 1.0 Introduction

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Building Code and Bushfire Hazard Solutions has been engaged by Ku-ring-gai Council to provide an independent Bushfire Assessment Report for the proposed St Ives Indoor Sports Complex at 60-70 Horace Street, St Ives (St Ives High School), herein referred to as the subject site.

The development proposal relates to the construction of a new St Ives Indoor Sports Complex within an existing education establishment known as St Ives High School. The proposed St Ives Indoor Sports Complex will form an addition to a new St Ives High School Hall which has recently been completed.

The subject site has street frontage to Horace Street to the west, Hunter Avenue to the south, Yarrabung Road to the east and abuts private residential allotments to the north.

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.

Ku-ring-gai Council's Bushfire Prone Land Map identifies the subject site as containing the 100 metre buffer zone from designated Category 1 Vegetation.

The subject development relates to a listed Special Fire Protection Purpose and is therefore classified as integrated development under section 4.46 of the *Environmental Planning and Assessment Act* 1979. The development is captured under section 100B of the *Rural Fires Act* 1997 and must obtain a Bushfire Safety Authority from the Commissioner of the NSW Rural Fire Service.

All property development within affected areas is subject to the relevant specifications and requirements detailed in the document 'Planning for Bush Fire Protection - 2019' (PBP). PBP formally adopted on the 1<sup>st</sup> March 2020 provides for the protection of property and life (including fire-fighters and emergency service personnel) from bushfire impact.

In accordance with PBP we have applied the measures described in Chapter 6 'Special Fire Protection Purpose developments'.

## 2.0 Purpose of Report

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The purpose of this Bushfire Assessment Report is to provide Ku-ring-gai Council, JDH Architects and the Rural Fire Service with an independent bushfire assessment together with appropriate recommendations for both new building construction and bushfire mitigation measures considered necessary having regard to construction within a designated 'bushfire prone' area.

The recommendations contained within this report may assist in forming the basis of any specific construction conditions and/or bushfire mitigation measures that the NSW Rural Fire Service may elect to place within any consent conditions issued for the subject development.

## 3.0 Scope of this Report

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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 Compliance Tables & Notes

The following table sets out the projects compliance with *Planning for Bush Fire Protection – 2019*.

	North	East	Southeast	West
<b>Vegetation Structure</b>	Maintained grounds	Remnant	Forest	Maintained grounds
<b>Hazard Slope</b>	N/A	5 degrees down	5 - 10 degrees down	N/A
<b>Minimum Required APZ for new SFPP</b>	N/A	47 metres	93 metres	N/A
<b>Available APZ</b>	N/A	100 metres	>100 metres	N/A
<b>Significant Landscape Features</b>	Maintained grounds / St Ives Primary School	Maintained grounds / Yarrabung Road	Maintained grounds / Hunter Avenue	Maintained grounds / Horace Street
<b>Threatened Species</b>	APZ Existing	APZ Existing	APZ Existing	APZ Existing
<b>Aboriginal Relics</b>	APZ Existing	APZ Existing	APZ Existing	APZ Existing
<b>Bushfire Attack Level</b>	N/A	BAL Low	BAL Low	N/A
<b>Required Construction Level</b>	BAL Low	BAL Low	BAL Low	BAL Low

### Asset Protection Zones Compliance

The proposed St Ives Sports Complex has been positioned in the most appropriate location from a bushfire safety perspective, providing the maximum possible Asset Protection Zones.

The available Asset Protection Zones consist of land within the subject site and land equivalent to an APZ being Hunter Avenue.

### Construction Level Compliance

The highest Bushfire Attack Level to the proposed works was determined from Table A1.12.5 of PBP to be 'BAL Low'.



## Access and Services

Guideline Ref.	Proposed Development Determinations
Property Access	The subject site has street frontage to Horace Street to the west, Yarrabung Road to the east, and Hunter Avenue to the south providing access to carparks and to the new works and existing buildings. The existing access is considered adequate. Attending fire services have access to the hazard interface via Hunter Avenue or Yarrabung Road for fire suppression or hazard reduction activities.
Water Supply	Existing hydrants are available along Horace Street, Yarrabung Road and Hunter Avenue. Hydrants will be installed to service the new building.
Evacuation	It is recommended that the Bush Fire Evacuation Plan be updated as necessary to include the new works and be in accordance with the NSW Rural Fire Service guidelines for emergency management plans.

### 5.0 Aerial view of the subject site

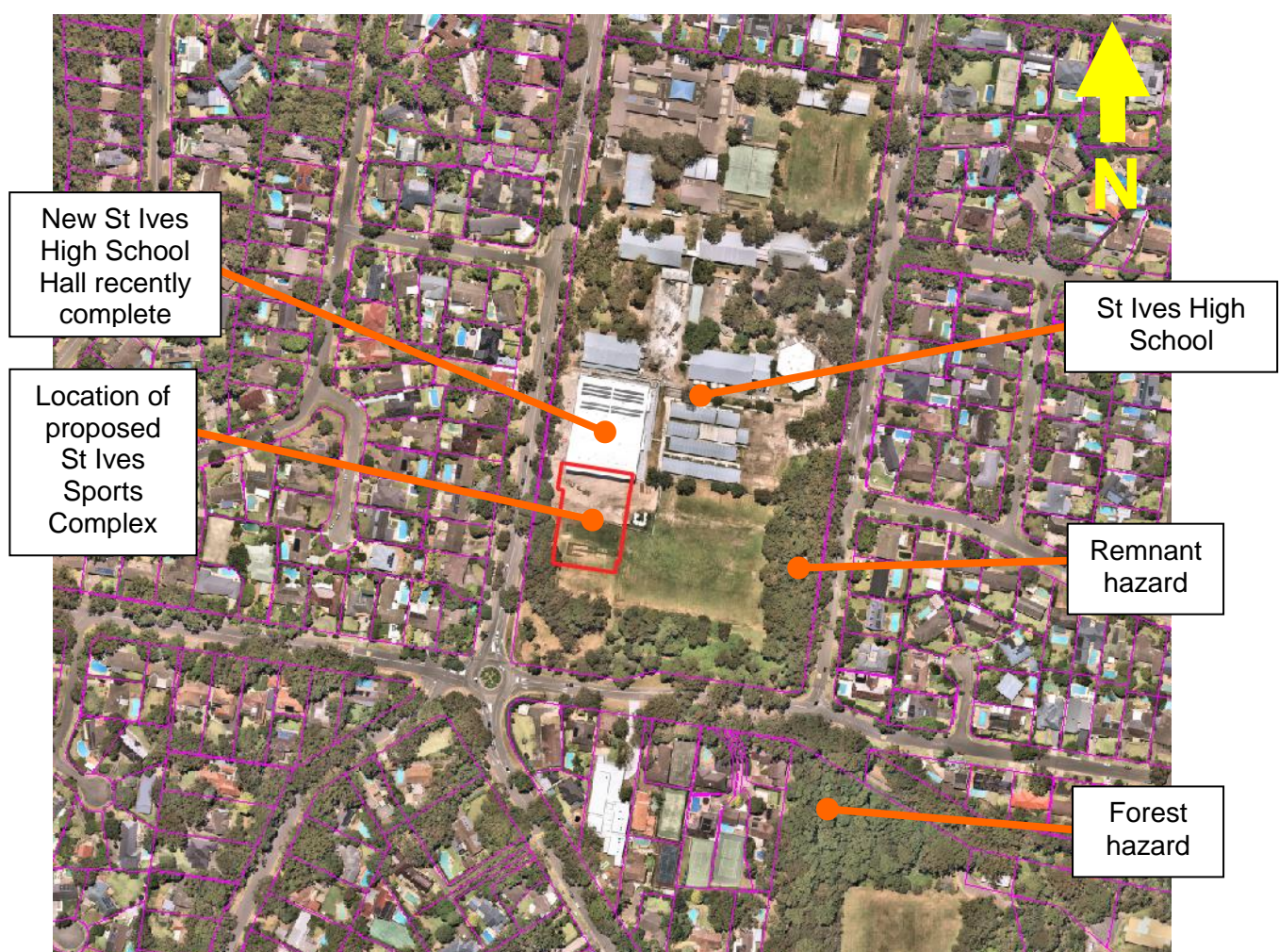
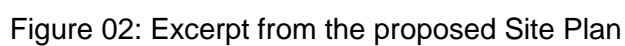


Figure 01: Aerial view of the subject area c/- Nearmap







## 6.0 Bushfire Assessment

### 6.01 Preface

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. All property development within affected areas is subject to the conditions detailed in the document 'Planning for Bush Fire Protection - 2019' (PBP). Set back distances for the purpose of creating Asset Protection Zones (APZ's) must be applied and any buildings must then conform to corresponding regulations detailed in Australian Standard 3959 – 2018 'Construction of buildings in bushfire prone areas'.

Planning for Bush Fire Protection – 2019, (PBP) formally adopted on the 1<sup>st</sup> March 2020 provides for the protection of property and life (including fire-fighters and emergency service personnel) from bushfire impact.

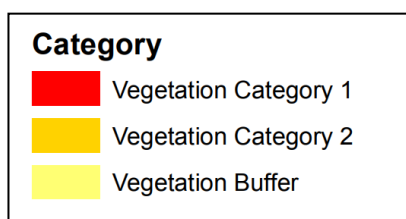
The thrust of the document is to ensure that developers of new properties or sub-divisions include the constraints associated with the construction of buildings in bushfire prone areas within their proposed development sites. PBP is applicable to proposed development located on land containing Category 1, 2 or 3 Vegetation and or their associated buffer zones.

The document also acknowledges 'infill' developments associated with re-development of existing properties and allows some higher levels of building safety where the increased 'set backs' (APZ's) may not be achievable.

The subject development relates to the construction of a new St Ives Sports Complex within an existing listed Special Fire Protection Purpose (SFPP) development.

The development is classified as integrated development under section 4.46 of the *Environmental Planning and Assessment Act 1979* and captured under section 100B of the *Rural Fires Act 1997*. The proposal must therefore obtain a Bushfire Safety Authority from the Commissioner of the NSW Rural Fire Service.

The site contains a functional SFPP development and has therefore been assessed under the provisions of section 6.4 'Development of existing SFPP facilities' of Planning for Bush Fire Protection 2019.



Subject property



Figure 03: Extract from Ku-ring-gai Council's Bushfire Prone Land Map

## 6.02 Location

The subject property is known as St Ives High School located at 60 - 70 Horace Street, St Ives NSW (Lots 4 & 5 DP 1209, Lot 1 DP 376563, Lot 1 DP 122431 and Lot 1 DP 122432) and is within Ku-ring-gai Councils Local Government Area. The subject property has street frontage to Horace Street to the west, Hunter Avenue to the south, Yarrabung Road to the east and abuts private residential allotments to the north.

The vegetation identified on Ku-ring-gai Council's BPLM as being the hazard is to the southeast within Barra Brui Bush linking to Garigal National Park. An area of Sydney Turpentine Ironbark Forest (STIF) is also located along the eastern boundary within the subject site.

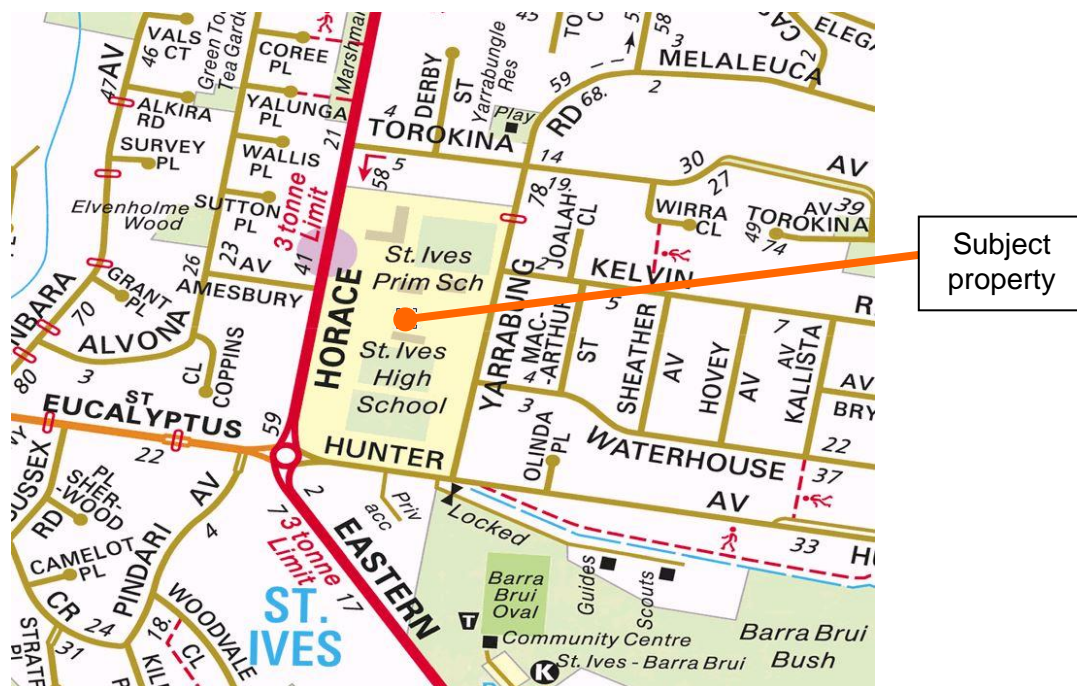


Figure 04: Extract from Street-directory.com.au

## 6.03 Vegetation

The predominant vegetation within the subject site around the existing buildings was found to consist of maintained lawns, landscaped gardens, playing fields and lawns.

The vegetation identified on Ku-ring-gai Council's BPLM as being the hazard is to the southeast within Barra Brui Bush linking to Garigal National Park.

The vegetation posing a hazard to the southeast beyond Hunter Avenue was found to consist of trees 5 - 20 metres in height with a foliage cover of 30 - 70% and an understory of small trees, shrubs and grasses.

For the purpose of assessment under Planning for Bush Fire Protection the vegetation posing a hazard to the southeast has been determined to be Forest.

The subject site contains a small pocket of Sydney Turpentine Ironbark Forest (STIF), a listed Critically Endangered Ecological Community, along its eastern boundary. We have not assigned any management requirements to this area and subsequently addressed this vegetation as a potential bushfire hazard.



This area was found to be less than a hectare in size (0.43) and provides a less than 50 metre fire run toward the proposed building. In accordance with A1.11.1 of PBP the vegetation to the east is assessed as Remnant and treated the same as Rainforest.



Photograph 02: View of the vegetation to the southeast within Barra Brui Bush



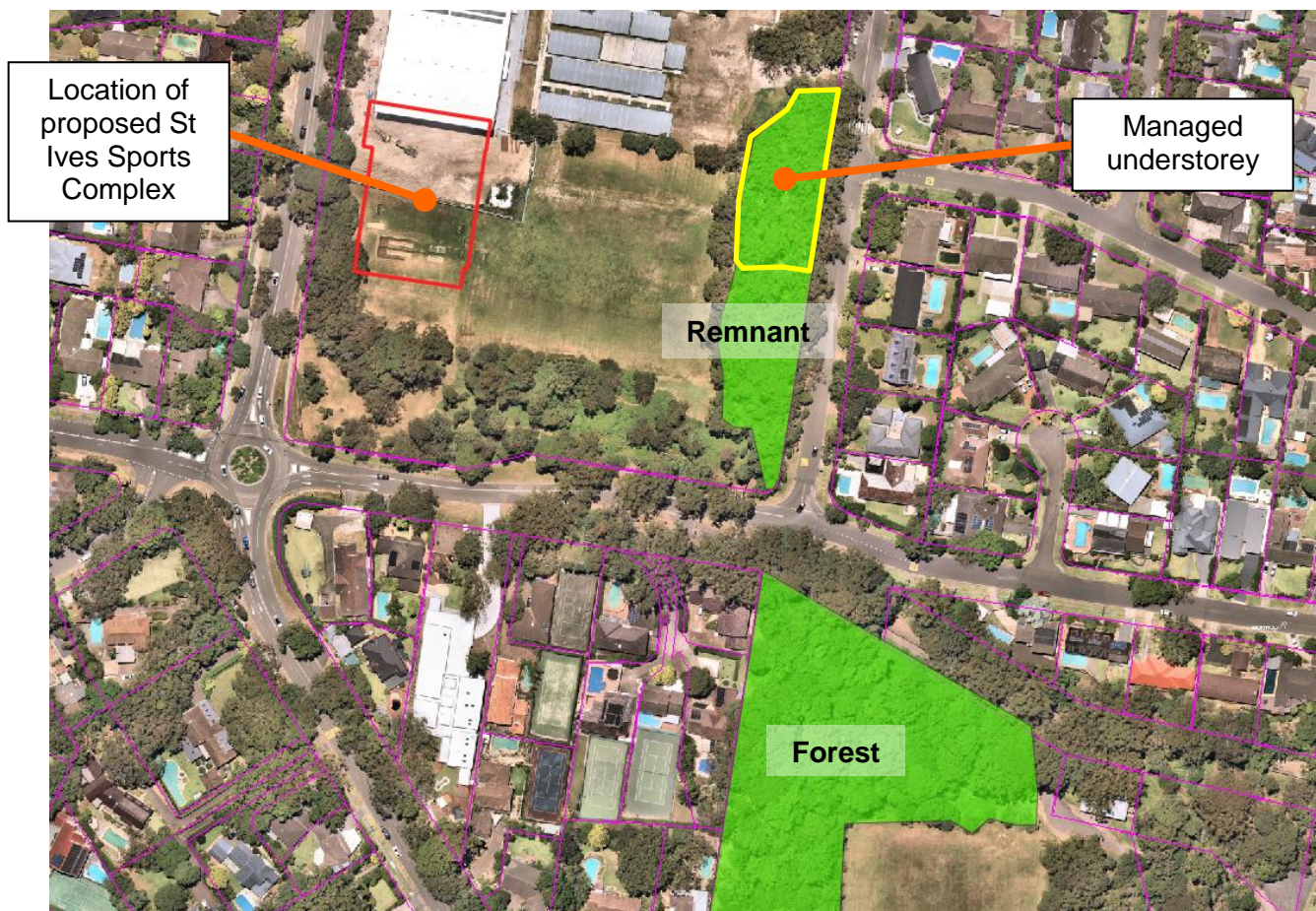
Photograph 03: View into the vegetation to the east within the subject site





Managed  
understorey

Photograph 04: View of the northern portion of the assessed Remnant hazard with managed understorey



Location of  
proposed St  
Ives Sports  
Complex

Managed  
understorey

Remnant

Forest

Figure 05: Aerial view of the subject area overlaid with vegetation assessment



## 6.04 Slope and Topography

The slope that would most significantly affect bushfire behaviour within the hazard must be assessed for at least 100 metres from within the hazards.

The slope that would most significantly influence bushfire behaviour was measured onsite using an inclinometer and verified from topographic imagery of the subject area and found to be:

- 5 degrees down slope within the hazard to the east
- 5 - 10 degrees down slope within the hazard to the southeast



Figure 06: Extract from ELVIS – Geoscience Australia (1m contours)



## 6.05 Asset Protection Zones

Asset Protection Zones (APZs) for new Special Fire Protection Purpose (SFPP) development are determined from Table A1.12.1 of PBP or bushfire design modelling achieving a radiant heat impact of no more than  $10\text{kW/m}^2$  at the closest point of the available building footprint.

The minimum required APZs for new SFPP development were determined from Table A1.12.1 of PBP to be 93 metres to the southeast and 47 metres to the east.

As the proposal relates to the re-development of an existing SFPP facility it is eligible for assessment under the provisions of section 6.4 'Development of existing SFPP facilities' of *Planning for Bush Fire Protection* 2019, which can allow for a reduction in the minimum required APZs for new SFPP development.

Regardless of being eligible for the application of section 6.4 of PBP the proposed St Ives Sports Complex has been positioned in the most appropriate location from a bushfire safety perspective, providing the maximum possible Asset Protection Zones.

The closest point of the proposed St Ives Sports Complex was found to be located >100 metres from the bushfire hazard to the southeast and 100 metres from the bushfire hazard to the east, significantly exceeding the minimum required APZs for new SFPP development.

The Asset Protection Zones consist of land within the subject site and land equivalent to an APZ being Hunter Avenue.

Following a detailed inspection of the subject site I am satisfied the APZ to the east is existing.

To satisfy the APZ requirements an area to the southeast will require management of groundcovers / grasses. This understorey / groundcover management is also required to the south of the building. This management requires ongoing slashing / mowing and weed treatment.

In relation to impact to native trees this would be limited to those immediately adjacent the building envelope. The prescriptive requirement is that tree canopies do not overhang buildings.

Maintained  
grounds



Photograph 05: View of the existing managed land within the south-western portion of the subject site

## 6.06 Fire Fighting Water Supply

The school is connected to the reticulated town's water main for its needs. There are existing hydrants located along Horace Street, Hunter Avenue and Yarrabung Road for the replenishment of attending fire services.

An internal hydrant system will be extended to service the proposed St Ives Sports Complex.

The proposed water supply is considered adequate for the replenishment of attending fire services.

## 6.07 Property Access

Clear access to the school is available from existing public road infrastructure.

The proposal includes a new access drive from Horace Street to the proposed basement carpark.

Persons seeking to egress from the proposed building will be able to do so freely from the new access drive and along existing public road infrastructure.

Similarly, fire services will have free access to the proposed new works via Horace Street and the proposed access drive. Attending fire services have access to the hazard interface via Hunter Avenue, Yarrabung Road and school grounds for fire suppression or hazard reduction activities.

It is recommended that the Bush Fire Evacuation Plan be updated as necessary to include the new works and be in accordance with the NSW Rural Fire Service guidelines for emergency management plans.

The existing and proposed access provisions are considered adequate.

## 6.08 Aim & Objectives of PBP

The following table details the aim and objectives of Planning for Bush Fire Protection 2019 and the proposals ability to comply.

Aim / Objective	Comment
<p><b>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.</b></p>	<p>With the inclusion of the recommendations made herein it is of our opinion that the aim of PBP has been satisfied.</p>
<p><b>(i) afford buildings and their occupants protection from exposure to a bush fire;</b></p>	<p>The proposal includes Asset Protection Zones exceeding the minimum requirements for Special Fire Protection Purpose Developments under Chapter 6 of PBP.</p> <p>The proposed building is within an area which attracts a Bushfire Attack Level of BAL Low.</p>
<p><b>(ii) provide for a defensible space to be located around buildings;</b></p>	<p>The proposed building is located &gt;100 metres from the bushfire hazard to the southeast and 100 metres from the bushfire hazard to the east providing an ample defensible space.</p>
<p><b>(iii) provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;</b></p>	<p>The proposal includes Asset Protection Zones exceeding the minimum requirements for Special Fire Protection Purpose Developments under Chapter 6 of PBP.</p> <p>The proposed building is within an area which attracts a Bushfire Attack Level of BAL Low.</p>
<p><b>(iv) ensure that appropriate operational access and egress for emergency service personnel and occupants is available;</b></p>	<p>The subject site has street frontage to Horace Street to the west, Hunter Avenue to the south and Yarrabung Road to the east.</p> <p>Access to the bushfire hazards is available for attending fire services via Hunter Avenue and Yarrabung Road.</p>



Aim / Objective	Comment
(v) provide for ongoing management and maintenance of bush fire protection measures, (BPMs); and	The Asset Protection Zones will be maintained in accordance with the NSW Rural Fire Service's document 'Standards for Asset Protection Zones' and Appendix 4 of <i>Planning for Bush Fire Protection</i> 2019.
(vi) ensure that utility services are adequate to meet the needs of firefighters.	<p>Existing hydrants are available along Horace Street, Hunter Avenue, Yarrabung Road and throughout the subject site for the replenishment of attending fire services.</p> <p>The existing hydrant network will be extended to service the new building.</p>

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

## 7.0 Site & Bushfire Determination

### 7.01 Planning for Bush Fire Protection

Planning for Bush Fire Protection – 2019 (PBP) is applicable to those lands determined as being within a 'bushfire prone area' in accordance with a local Bushfire Prone Land Map as provided by the Rural Fire Service and Council.

The most appropriate method of determining site bushfire hazard under the terms of PBP is to consider the site in a singular form.

*Bushfire prone areas are defined as those areas;*

- *containing or within 100m of Category 1 Vegetation; or*
- *containing or within 30m of Category 2 or 3 Vegetation.*

In this instance the subject property has been identified as being bushfire prone land therefore it is appropriate to apply PBP.

### 7.02 Australian Standard AS 3959 – 2018 'Construction of buildings in bushfire –prone areas'

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

### 7.03 Correlation between bushfire impact and AS3959

Bushfire Attack Level	Maximum radiant heat impact (kW/m <sup>2</sup> )	Level of construction under AS3959-2018
Low		No special construction requirements
12.5	≤12.5	BAL - 12.5
19	12.6 to 19.0	BAL - 19
29	19.1 to 29.0	BAL - 29
40	29.1 to 40.0	BAL - 40
Flame Zone	>40.0	BAL FZ No deemed to satisfy provisions

## 7.04 Viable Construction Method

The aim of Planning for Bush Fire Protection – 2006 is to use the NSW development assessment system to provide for protection of human life (including firefighters) and to minimise impacts on property from the threat of bushfire.

The highest Bushfire Attack Level to the proposed works was determined from Table A1.12.5 of PBP to be 'BAL Low' therefore there are no construction provisions required under AS 3959 – 2018.

## 8.0 Recommendations

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The following recommendations are provided as the minimum necessary for compliance with Planning for Bush Fire Protection – 2019 and Australian Standard 3959 'Construction of buildings in bushfire-prone areas' - 2018. Additional recommendations are provided to supplement these minimum requirements where considered necessary.

### Asset Protection Zones

1. All grounds within the subject site from the proposed St Ives Sports Complex to the northern, southern and western boundaries and for a minimum distance of 100 metres to the east are required to be maintained as an Asset Protection Zone and in accordance with Appendix 4 of Planning for Bush Fire Protection 2019.

Note 01:

Following a detailed inspection of the subject site I am satisfied the APZ to the east is existing.

To satisfy the APZ requirements an area to the southeast will require management of groundcovers / grasses. This understorey / groundcover management is also required to the south of the building. This management requires ongoing slashing / mowing and weed treatment.

Note 02:

I have reviewed the Landscape Plan prepared by Space Landscape Design (L-100 and L-200, rev F, dated 09.04.21) and am satisfied that the proposed planting, inclusive of trees, is acceptable.

### Construction

N/A

### Emergency Management

2. That the bushfire emergency / evacuation plan is updated consistent with the NSW Rural Fire Service Guidelines for the *Preparation of Emergency / Evacuation Plan*.

### Water Supply

3. That the new hydrant sizing, spacing and pressures must comply with AS2419.1 – 2005.



## 9.0 Conclusion

The development proposal relates to the construction of a new St Ives Indoor Sports Complex within an existing education establishment known as St Ives High School. The proposed St Ives Indoor Sports Complex will form an addition to the new St Ives Hall School Hall which was recently completed.

The vegetation identified on Ku-ring-gai Council's BPLM as being the hazard is to the southeast within Barra Brui Bush connecting to Garigal National Park.

The subject site contains a small pocket of Sydney Turpentine Ironbark Forest (STIF), a listed Critically Endangered Ecological Community, along its eastern boundary. We have not assigned any management requirements to this area and subsequently addressed this vegetation as a potential bushfire hazard.

The minimum required APZs for new SFPP development were determined from Table A1.12.1 of PBP to be 93 metres to the southeast and 47 metres to the east.

As the proposal relates to the re-development of an existing SFPP facility it is eligible for assessment under the provisions of section 6.4 'Development of existing SFPP facilities' of *Planning for Bush Fire Protection* 2019, which can allow for a reduction in the minimum required APZs for new SFPP development.

Regardless of being eligible for the application of section 6.4 of PBP the proposed St Ives Sports Complex has been positioned in the most appropriate location from a bushfire safety perspective, providing the maximum possible Asset Protection Zones.

The closest point of the proposed St Ives Indoor Sports Complex was found to be located >100 metres from the bushfire hazard to the southeast and 100 metres from the bushfire hazard to the east, significantly exceeding the minimum required APZs for new SFPP development.

The highest Bushfire Attack Level to the proposed St Ives Sports Complex was determined to be 'BAL Low' therefore there are no construction provisions applicable under AS3959 – 2018.

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  
Building Code & Bushfire Hazard Solutions P/L



**Stuart McMonnies**

Manager Bushfire Section  
G. D. Design in Bushfire Prone Areas.  
Certificate IV Fire Technology  
Fire Protection Association of Australia BPAD – L3 Accredited Practitioner  
Accreditation number – BPAD 9400



## 10.0 Annexure 01

### List of Referenced Documents

Australian Building Codes Board (2019). *National Construction Code Volume One - Building Code of Australia*. ABCB

ELVIS -Elevation -Foundation Spatial Data. Elevation.fsdf.org.au. Available at: <http://elevation.fsdf.org.au/>

Keith, D. (2004). "Ocean Shores to Desert Dunes" Department of Environment and Conservation, Sydney

Landscape Plan prepared by Space Landscape Design (L-100 and L-200, rev F, dated 09.04.21)

NSW Department of Planning and Environment (2019). *Planning Portal*. Accessed at: <https://www.planningportal.nsw.gov.au/>

NSW Rural Fire Service (2019). *Planning for Bushfire Protection. A Guide for Councils, Planners, Fire Authorities and Developers*.

OEH (2016). *The Native Vegetation of the Sydney Metropolitan Area. Volume 2: Vegetation Community Profiles*. Version 3.0. NSW Office of Environment and Heritage, Sydney.

Proposed Site Plan prepared by JDH Architects (project no 1175, dwg no DA-101, rev A, dated 08/04/2021)

Rural Fire Service NSW (2005). *Standards for Asset Protection Zones*

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

Standards Australia (2014). *AS/NZS 1596 The storage and handling of LP Gas*

Acknowledgements to:

NSW Department of Lands – SIXMaps  
Street-directory.com.au  
Geoscience Australia  
Nearmap

### Attachments

Attachment 01: N/A



# Building Code & Bushfire Hazard Solutions

(Pty. Limited) ABN 19 057 337 774  
PO Box 124, Berowra NSW 2081  
Telephone: (02) 9457 6530  
[www.bushfirehazardsolutions.com.au](http://www.bushfirehazardsolutions.com.au)



JDH Architects  
[Christoph@jdharchitects.com.au](mailto:Christoph@jdharchitects.com.au)

19<sup>th</sup> November 2021  
Our Ref. 201227

Attention: Christoph Jaensch

**Re: ST IVES INDOOR SPORTS COMPLEX  
REQUEST FOR UPDATED LANDSCAPE PLAN CERTIFICATION**

Christoph,

It is understood that on review of the Development Application Kuring-gai Council has requested five (5) replenishment trees to offset the previously removed tree canopy for DA0590/18 and recommended three (3) additional trees within the Horace Street site frontage between the proposed driveway and existing driveway. In addition it is understood Council have requested a certification of the updated Landscape Plan to ensure compliance with the bushfire planning requirements.

Building Code & Bushfire Hazard Solutions P/L (BCBHS) provided a Bushfire Assessment Report (ref 201227B, dated 16<sup>th</sup> April 2021) addressing the proposed works and the relevant specifications and requirements of Planning for Bush Fire Protection 2019, which formed part of the submission package for this application. This report included a certification of the Landscape Plan prepared by Space Landscape Design (L-100 and L-200, rev F, dated 09.04.21).

In response to Council's request for additional information the Landscape Plan prepared by Space Landscape Design has been revised with the current version being 'I' (dated 08/11/21). In addition the Proposed Site Plan prepared by JDH Architects Pty Ltd has been updated to reflect the location of the eight (8) additional replenishment trees with the current version being 'D' (dated 10/11/21).

It is acknowledged that Council have recommended three (3) indigenous canopy trees capable of attaining heights greater than 13.0m be provided along the Horace Street site frontage between the proposed driveway and existing driveway.

The planting of three (3) canopy trees of this size in this location is not considered consistent with the bushfire management objectives and subsequently one (1) has been proposed in this location with the balance provided elsewhere on the site where canopy breaks can be achieved.

I have reviewed the Landscape Plan prepared by Space Landscape Design (L-100, rev I, dated 08.11.21) and Proposed Site Plan prepared by JDH Architects Pty Ltd (1175, dwg no DA-101, rev D, dated 10/11/21) and am satisfied that the proposed planting, inclusive of trees, is acceptable.

It must be noted that to satisfy the APZ requirements an area to the southeast will require management of groundcovers / grasses. This understorey / groundcover management is also required to the south of the building. This management requires ongoing slashing / mowing and weed treatment.

I am available to meet either Council or the NSW Rural Fire Service should the need arise.

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

Prepared by  
Building Code & Bushfire Hazard Solutions



**Stuart McMonnies**

Manager Bushfire Section  
G. D. Design in Bushfire Prone Areas.  
Certificate IV Fire Technology  
Fire Protection Association of Australia BPAD – L3 Accredited Practitioner  
Accreditation number – BPAD9400

