




Member of the Fire Protection Association of Australia

# Lot 701, DP 1193414, 189 Fox Valley Road, Wahroonga.

Friday, 22 September 2017

Prepared and certified by:	<b>Matthew Willis</b> BPAD – Level 3 Certified Practitioner Certification No: BPD-PA 09337		22/09/2017
Can this proposal comply with AS3959-2009 (inc PBP addendum 3)?	<b>Yes</b>		
What is the expected level of radiant heat on the proposal.	<b>Less than 10 kW per square metre</b>		
Is referral to the RFS required?	<b>Yes</b>		
Can this development comply with the requirements of PBP?	<b>Yes</b>		
Plans by Zanazan Architecture Studio.	<b>Appendix 1</b>		

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# **Bushfire Risk Assessment**

**Friday, 22 September 2017**

**Contact**

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Zanazan Architecture Studio

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Pymont NSW 2009

9212 0201

**Subject Property**

Lot 701, DP 1193414

189 Fox Valley Road

Wahroonga

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## **EXECUTIVE SUMMARY.**

*Bushfire Planning Services has been requested by Mr Shahe Simonian of Zanazan Architecture Studio to supply a bushfire compliance report on Lot 701, DP 1193414, number 189 Fox Valley Road, Wahroonga .*

*This proposal is for the establishment of a new childcare centre within a building previously housing the Wahroonga Adventist Primary School.*

*The Rural Fire Service document Planning for Bushfire Protection considers a childcare centre as a Special Fire Protection Purpose development (SFPP) and is therefore considered as Integrated Development for the purposes of compliance with section 91 of the Environmental Planning and Assessment Act (EPA act) (in combination with the Rural Fires Act requirement for a section 100 B Bushfire Safety Authority).*

*To achieve a section 100B Bushfire Safety Authority from the Rural Fire Service the proposal needs to comply with the requirements of clause 44 of the Rural Fires Regulations.*

*This assessment addresses the requirements of clause 44 of the Rural Fires Regulations and the proposals level of compliance/non-compliance with the requirements of that clause.*

*The proposal is situated on the corner of Fox Valley Road and The Comenarra Parkway in an urban area of Wahroonga.*

*The proposal entails the adaptation of the existing building to be used for Child Care purposes. The proposal is for mainly internal changes and entails minimal changes to the external of the building.*

*The hazard to this proposal is situated to the north east of the development site at a distance of greater than 100m from the closest part of the building that is to house the Child care Centre.*

*Based on the assumptions and measurements contained within this assessment the development is considered to be able to meet the requirements of clause 44 of the Rural Fires Regulation 2008.*

## **GENERAL.**

*This proposal is for the construction of a new childcare centre within an existing structure. As the proposed work for a childcare centre this proposal is deemed as a "Special Fire Protection Purpose" development and as such is considered to be integrated development in accordance with section 91 of the EPA act.*

*Integrated development requires a section 100B Bushfire Safety Authority from the Rural Fire Service to allow the proposal to proceed.*

*This assessment outlines the requirements and the proposals level of compliance with clause 44 of the Rural Fires Regulations 2008. Compliance with clause 44 is required to obtain a Bushfire Safety Authority from the Rural Fire Service.*

*The following text in italics is a copy of clause 44 of the Rural Fires Regulation 2008;*

#### **44 Application for bush fire safety authority**

For the purposes of section 100B (4) of the Act, an application for a bush fire safety authority must be made in writing and must include the following:

- (a) a description (including the address) of the property on which the development the subject of the application is proposed to be carried out,
- (b) a classification of the vegetation on and surrounding the property (out to a distance of 140 metres from the boundaries of the property) in accordance with the system for classification of vegetation contained in Planning for Bush Fire Protection,
- (c) an assessment of the slope of the land on and surrounding the property (out to a distance of 100 metres from the boundaries of the property),
- (d) identification of any significant environmental features on the property,
- (e) the details of any threatened species, population or ecological community identified under the Threatened Species Conservation Act 1995 that is known to the applicant to exist on the property,
- (f) the details and location of any Aboriginal object (within the meaning of the National Parks and Wildlife Act 1974) or Aboriginal place (within the meaning of that Act) that is known to the applicant to be situated on the property,
- (g) a bush fire assessment for the proposed development (including the methodology used in the assessment) that addresses the following matters:
  - (i) the extent to which the development is to provide for setbacks, including asset protection zones,
  - (ii) the siting and adequacy of water supplies for fire fighting,
  - (iii) the capacity of public roads in the vicinity to handle increased volumes of traffic in the event of a bush fire emergency,
  - (iv) whether or not public roads in the vicinity that link with the fire trail network have two-way access,
  - (v) the adequacy of arrangements for access to and egress from the development site for the purposes of an emergency response,
  - (vi) the adequacy of bush fire maintenance plans and fire emergency procedures for the development site,
  - (vii) the construction standards to be used for building elements in the development,
  - (viii) the adequacy of sprinkler systems and other fire protection measures to be incorporated into the development,

(h) an assessment of the extent to which the proposed development conforms with or deviates from the standards, specific objectives and performance criteria set out in Chapter 4 (Performance Based Controls) of Planning for Bush Fire Protection.

*Any wording that appears in blue italics is quotes from Planning for Bushfire Protection 2006 (PBP).*

*Some of the distance measurements used in this report have been taken from aerial photographs and as such are approximate only. If doubt exists the distances should be verified by survey.*

## **BLOCK DESCRIPTION**

**Clause 44 requirement.** “a description (including the address) of the property on which the development the subject of the application is proposed to be carried out”

- Lot 701
- DP 1193414
- LGA; Ku ring Gai
- Address; 189 Fox Valley Road, Wahroonga

*The area within the subject lot that contains the building that is to be utilised for this proposal is on the north-western corner of the Comenarra Parkway and Fox Valley Road, to the south of the Sydney Adventist Hospital.*

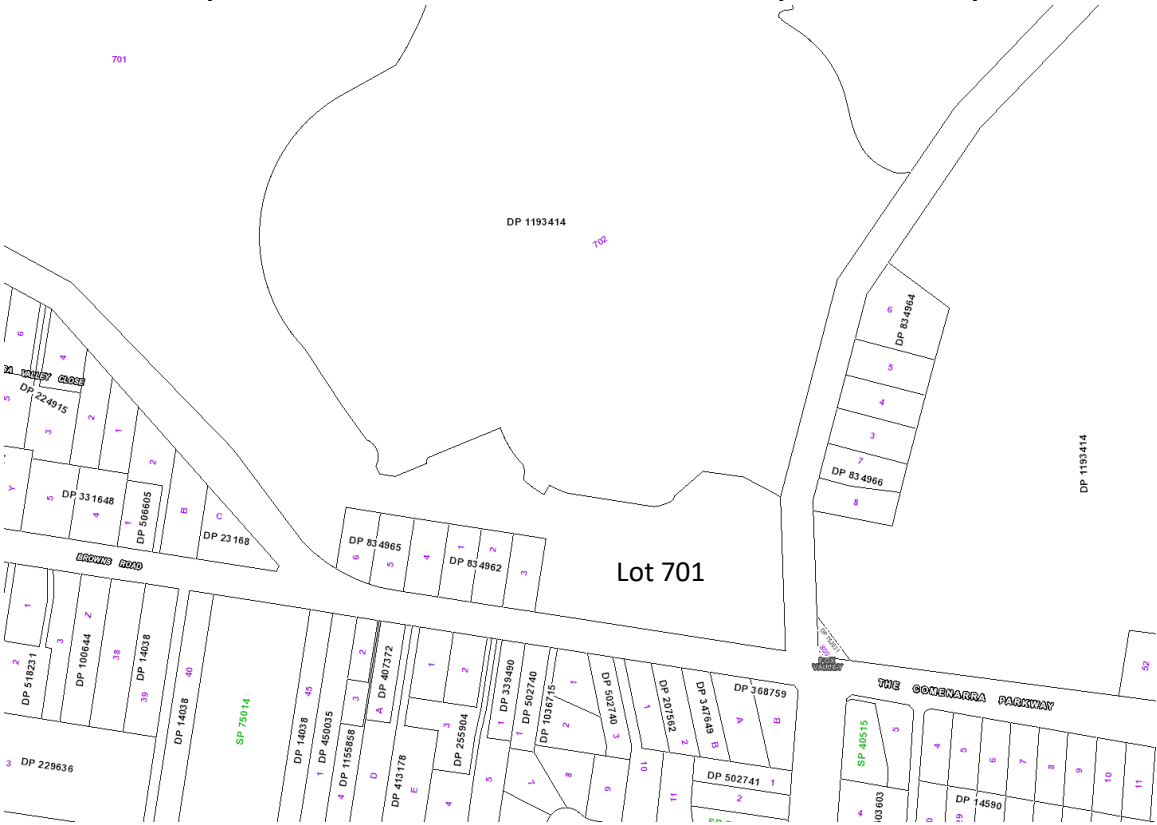
*There is established residential development to the south with commercial development to the West, North and East.*



**Photo 1 (above) shows a general overview of the surrounding area.**



Map 1 is an extract from the councils bushfire prone land map.



Map 2 shows the current cadastral data for the development and surrounding blocks.

## VEGETATION

**Clause 44 requirement** “a classification of the vegetation on and surrounding the property (out to a distance of 140 metres from the boundaries of the property) in accordance with the system for classification of vegetation contained in Planning for Bush Fire Protection”

*The study area for the vegetation is 140m surrounding the development site.*

*The majority of the study area contains existing commercial/medical infrastructure, residential dwellings and associated gardens or land that is otherwise considered managed and of low threat to this development.*

*The nearest mapped hazard to this proposal is to the north-east of the development site.*

*There are two different forest vegetations within 140m of the development site however they are both greater than 100m from the development site.*

*The vegetation categories are;*

- *Sydney Turpentine Ironbark Forest situated to the south-east and north-east with*
- *Coastal Shale Sandstone Forest to the east.*

*Both Forest structures are considered to be Northern Hinterland Wet Sclerophyll Forests.*



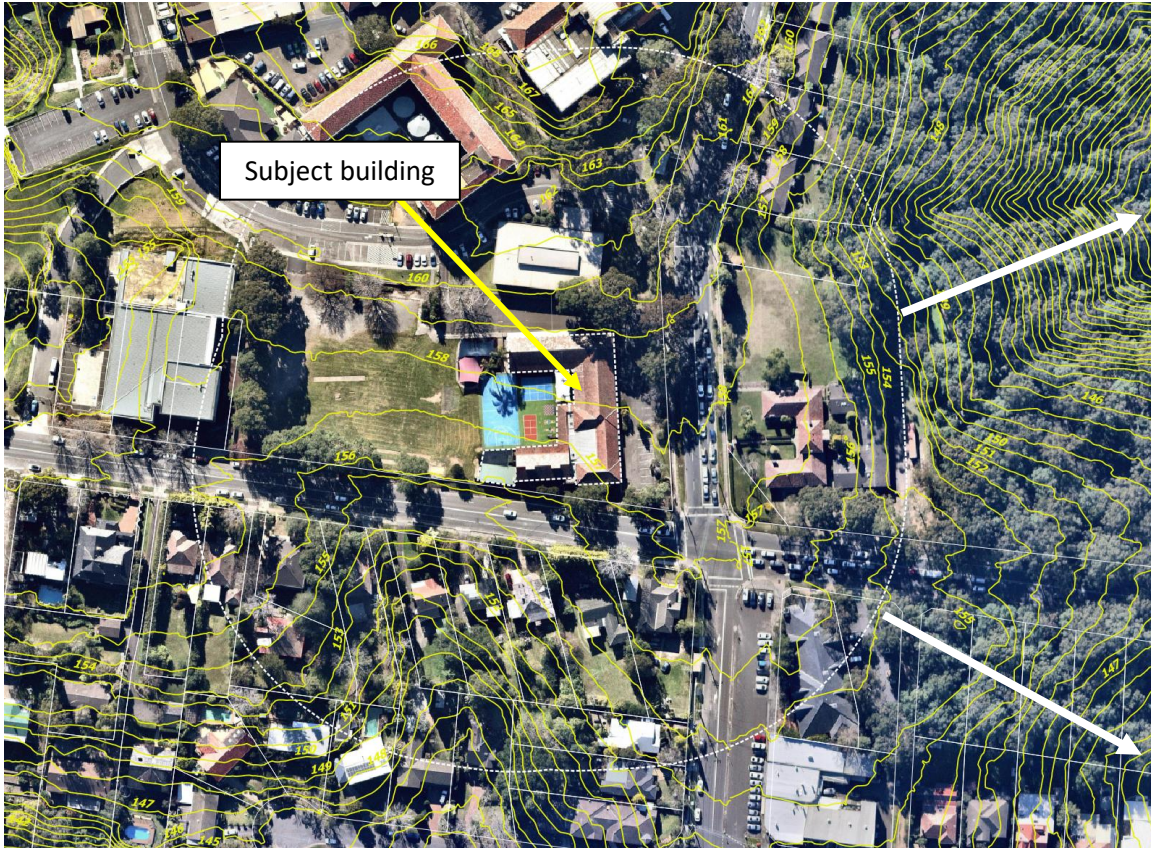
**Photo 2. Is an overview of the general area.**



## SLOPE

**Clause 44 requirement** “an assessment of the slope of the land on and surrounding the property (out to a distance of 100 metres from the boundaries of the property)”

*As there is no hazard within 100m of this proposal the slope beneath the hazardous vegetation is irrelevant to the outcome of this assessment. The slope information is included for reference purposes only.*



Aspect	North East	East	South East	West
Slope	16.2 degrees downslope	N/A	6.6 degrees downslope	N/A

## SIGNIFICANT FEATURES

**Clause 44 requirement** “identification of any significant environmental features on the property”

*I have not been informed of any significant environmental features that would be affected by this proposal.*

## THREATENED SPECIES

**Clause 44 requirement** “the details of any threatened species, population or ecological community identified under the [Threatened Species Conservation Act 1995](#) that is known to the applicant to exist on the property,”

*I have not been informed of any threatened species that would be affected by this proposal.*

## ABORIGINAL HERITAGE

**Clause 44 requirement** “the details and location of any Aboriginal object (within the meaning of the [National Parks and Wildlife Act 1974](#)) or Aboriginal place (within the meaning of that Act) that is known to the applicant to be situated on the property,”

*I have not been informed of any places of cultural significance that would be affected by this proposal.*

## BUSHFIRE ASSESSMENT METHODOLOGY

**Clause 44 requirement** “a bush fire assessment for the proposed development (including the methodology used in the assessment) that addresses the following matters:

*The methodology used in the assessment of bushfire threat to the subject property is outlined in;*

- *Planning for bushfire Protection 2006 as published by the New South Wales Rural Fire Service, and*
- *Australian Standard 3959-2009, Construction of buildings in Bushfire Prone Areas.*

## SETBACKS

(i) **Clause 44 requirement** “the extent to which the development is to provide for setbacks, including asset protection zones,”

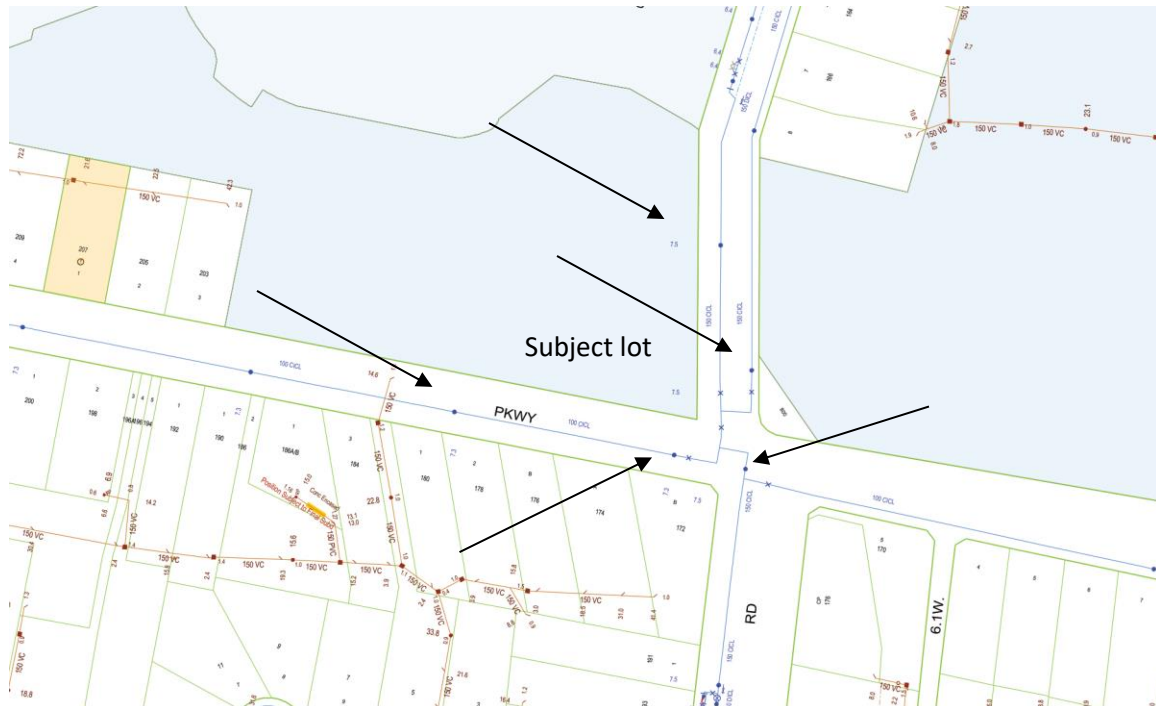
*The Asset Protection Zone setbacks available for compliance with table A2.6 of Planning for Bushfire Protection are to be achieved in the following manner;*

- *North, greater than 100m utilising already existing cleared land.*
- *East, greater than 100m utilising already existing cleared land.*
- *South, greater than 100m utilising already existing cleared land.*
- *West, greater than 100m utilising already existing cleared land.*

## WATER

- (ii) **Clause 44 requirement** “the sighting and adequacy of water supplies for fire fighting,”

*The proposed development will have access to a reticulated water supply. There are hydrant points in Fox Valley Road and other surrounding streets.*



**Map 3 above is an extract from Sydney Waters hydrant map. Hydrants are indicated as blue dots on a blue line. As can be seen there are multiple hydrants within close proximity to the subject lot.**

## ACCESS

- (iii) **Clause 44 requirement** “the capacity of public roads in the vicinity to handle increased volumes of traffic in the event of a bush fire emergency,”

*Both Fox Valley Road and the Comenarra Parkway are sealed two-way roads that are capable of handling emergency service vehicles.*

## FIRE TRAILS

- (iv) **Clause 44 requirement** “whether or not public roads in the vicinity that link with the fire trail network have two-way access,”

*Fire trails are not planned or recommended as part of this development proposal.*

## PROPERTY ACCESS

(v) **Clause 44 requirement** “the adequacy of arrangements for access to and egress from the development site for the purposes of an emergency response,”

*Access from Fox Valley Road onto the development site is considered as adequate.*

## MAINTENANCE PLANS

(vi) **Clause 44 requirement** “the adequacy of bush fire maintenance plans and fire emergency procedures for the development site”

*No additional advice or information regarding bushfire maintenance plans & fire emergency procedures has been provided by the proponent.*

*Under the Rural Fires Act 1997 sect 52, the local council's bushfire management committees are required to prepare and submit management plans for the rural fire district or part of the state which it is constituted.*

*The plan covers the following,*

- *a plan of operations and*
- *a bushfire risk management plan.*

*The plan of operations must be reviewed within every 2 years and the bushfire risk plan must be reviewed within each 5 years.*

*Should a bushfire emergency impact upon this area, the implementation of the existing councils Sect. 52 Operations & Risk Plan should be adequate for bushfire suppression, hazard management and maintenance.*

## BUILDING CONSTRUCTION STANDARDS

(vii) **Clause 44 requirement** “the construction standards to be used for building elements in the development,”

*The proposal achieved an expected radiant heat level of less than 10kwm<sup>2</sup>. Given that the proposal is greater than 100m from any identified hazard the construction level for any new works is BAL LOW.*

## SPRINKLER SYSTEMS

(viii) **Clause 44 requirement** “the adequacy of sprinkler systems and other fire protection measures to be incorporated into the development,”

*Currently sprinklers are not considered as necessary in the design of the development.*

## COMPLIANCE WITH CHAPTER 4 OF PBP

**Clause 44 requirement** “assessment of the extent to which the proposed development conforms with or deviates from the standards, specific objectives and performance criteria set out in Chapter 4 (Performance Based Controls) of Planning for Bush Fire Protection.”

<b>Performance Criteria</b>	<b>Acceptable Solution</b>	<b>Compliance</b>	<b>Assessment / Comment</b>
<b><i>Radiant heat levels of greater than 10kW/m<sup>2</sup> will not be experienced by occupants or emergency services workers entering or exiting a building</i></b>	<i>an APZ is provided in accordance with the relevant tables and figures in PBP</i>	Yes	<i>Compliance with table A2.6 of Planning for Bushfire Protection is achievable.</i>  <i>The Asset Protection Zone for this proposal is contained within the subject lot itself and already established and maintained land.</i>
	<i>exits are located away from the hazard side of the building</i>	N/A	
	<i>the APZ is wholly within the boundaries of the development site</i>	No	
<b><i>Applicants demonstrate that issues relating to slope are addressed: maintenance is practical, soil stability is not compromised and the potential for crown fires is negated</i></b>	<i>mechanisms are in place to provide for the maintenance of the APZ over the life of the development</i>	<i>Achievable</i>	<i>As the Asset Protection Zone is contained within already developed allotments it is considered reasonable to expect that this situation will continue into the future.</i>

<b>Performance Criteria</b>	<b>Acceptable Solution</b>	<b>Compliance</b>	<b>Assessment / Comment</b>
	<i>the APZ is not located on lands with a slope exceeding 18 degrees</i>	<i>Not applicable</i>	<i>There is no land with a slope of 18° or greater within the study area needed for the Asset Protection Zone</i>
<b><i>APZs are managed and maintained to prevent the spread of a fire towards the building</i></b>	<i>in accordance with the requirements of 'Standards for Asset Protection Zones (RFS 2005)</i>  <i>(Note - a Monitoring and Fuel Management Program should be required as a condition of development consent)</i>	<i>Reasonably Assumed</i>	All land within the required APZ is considered to be managed land.
<b><i>Vegetation is managed to prevent flame contact and reduce radiant heat to buildings, minimise the potential for wind driven embers to cause ignition and reduce the effect of smoke on residents and fire-fighters</i></b>	compliance with Appendix 5 (PBP)	<i>Reasonably Assumed</i>	
<b><i>Internal road widths and design enable safe access for emergency services and allow crews to work with equipment about the vehicle.</i></b>	<i>internal roads are two-wheel drive, sealed, all-weather roads</i>	<i>Not applicable</i>	No new internal roads are planned as part of this proposal.

Performance Criteria	Acceptable Solution	Compliance	Assessment / Comment
	<p><i>internal perimeter roads are provided with at least two traffic lane widths (carriageway 8 metres minimum kerb to kerb) and shoulders on each side, allowing traffic to pass in opposite directions</i></p>	<p><i>Not applicable</i></p>	
	<p><i>roads are through roads. Dead end roads are not more than 100 metres in length from a through road, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end</i></p>	<p><i>Not applicable</i></p>	
	<p><i>traffic management devices are constructed to facilitate access by emergency services vehicles.</i></p>	<p><i>Not applicable</i></p>	
	<p><i>a minimum vertical clearance of four metres to any overhanging obstructions, including tree branches, is provided.</i></p>	<p><i>Not applicable</i></p>	
	<p><i>curves have a minimum inner radius of six metres and are minimal in</i></p>	<p><i>Not applicable</i></p>	

Performance Criteria	Acceptable Solution	Compliance	Assessment / Comment
	<i>number to allow for rapid access and egress</i>		
	<i>the minimum distance between inner and outer curves is six metres</i>	<i>Not applicable</i>	
	<i>maximum grades do not exceed 15 degrees and average grades are not more than 10 degrees</i>	<i>Not applicable</i>	
	<i>cross-fall of the pavement is not more than 10 degrees</i>	<i>Not applicable</i>	
	<i>roads do not traverse through a wetland or other land potentially subject to periodic inundation (other than flood or storm surge)</i>	<i>Not applicable</i>	
	<i>roads are clearly sign-posted and bridges clearly indicate load ratings</i>	<i>Not applicable</i>	
	<i>the internal road surfaces and bridges have a capacity to carry fully-loaded firefighting vehicles (15 tonnes)</i>	<i>Not applicable</i>	
<b><i>Water supplies are easily accessible and located at regular intervals.</i></b>	<i>Access points for reticulated water supplies to SFPP developments incorporate a ring main system for all internal roads.</i>	<i>Not applicable</i>	Water supply is existing no alterations are proposed. There are several



<b>Performance Criteria</b>	<b>Acceptable Solution</b>	<b>Compliance</b>	<b>Assessment / Comment</b>
	<p><i>Fire hydrant spacing, sizing and pressures comply with AS 2419.1/2005. Where this cannot be met, the RFS will require a test report of the water pressures anticipated by the relevant water supply authority, once development has been completed. In such cases, the location, number and sizing of hydrants shall be determined using fire engineering principles.</i></p> <p><i>The provisions of public roads in section 4.1.3 in relation to parking are met.</i></p>		<p>hydrants located in and around the road reserves of the surrounding streets.</p>
<p><b><i>Non-reticulated water supply areas.</i></b></p> <p><b><i>A water supply reserve dedicated to firefighting purposes is installed and maintained. The supply of water can be an amalgam of minimum quantities for each lot in the development and be reticulated within dedicated fire fighting lines.</i></b></p>	<p><i>10,000 L is the minimum dedicated water supply required for fire fighting purposes for each occupied building, excluding drenching systems.</i></p> <p><i>The provision for suitable connection for RFS and or New South Wales fire brigades purposes in section 4.1.3 in relation to water supplies is made available.</i></p>	<p><i>Not applicable</i></p>	
<p><b><i>Electricity location of electricity services will not lead to</i></b></p>	<p><i>Electrical transmission lines are underground.</i></p>	<p><i>Achievable</i></p>	

<b>Performance Criteria</b>	<b>Acceptable Solution</b>	<b>Compliance</b>	<b>Assessment / Comment</b>
<i>ignition of surrounding bushland or the fabric of buildings or risk to life from damaged electrical infrastructure.</i>			
<b>Gas</b> <i>location of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.</i>	<p><i>Reticulated or bottled gas is installed and maintained in accordance with AS 1596/2002 and the requirements of relevant authorities. Metal piping is to be used.</i></p> <p><i>All fixed LPG tanks are kept clear of all flammable materials and located on the non-hazard side of the development.</i></p> <p><i>If gas cylinders need to be kept close to the building the release valves must be directed away from the building and away from any combustible material, so that they do not act as catalysts to combustion.</i></p> <p><i>Polymer sheathed flexible gas supply lines to gas meters adjacent to buildings are not to be used.</i></p>	<i>Achievable</i>	
<b>An emergency and evacuation management plan is approved by the</b>	<i>An emergency/evacuation plan is prepared consistent with the RFS</i>	<i>Achievable</i>	

<b>Performance Criteria</b>	<b>Acceptable Solution</b>	<b>Compliance</b>	<b>Assessment / Comment</b>
<p><b><i>relevant fire authority for the area.</i></b></p>	<p><i>guidelines for the preparation of emergency evacuation plan.</i></p> <p><i>Compliance with AS 3745/2002 emergency control organisation and procedures for buildings, structures and workplaces for residential accommodation”.</i></p> <p><i>Compliance with AS 4083/1997 “planning for emergencies - for health care facilities”.</i></p>		
<p><b><i>Suitable management arrangements are established for consultation and implementation of the emergency and evacuation plan.</i></b></p>	<p><i>An emergency planning committee is established to consult with residents (and their families in the case of aged care accommodation and schools) and staff in developing and implementing an emergency procedures manual.</i></p> <p><i>Detailed plans of all emergency assembly areas including “on-site” and “offsite” arrangements as stated in a S3745/2002 are clearly displayed, and an annual (as a minimum) trial emergency evacuation is conducted.</i></p>	<p><i>Achievable</i></p>	

Performance Criteria	Acceptable Solution	Compliance	Assessment / Comment
<p><b><i>In relation to eco-tourism accommodation:</i></b></p> <p><b><i>suitable refuge areas and evacuation/management arrangements are in place commensurate with the bushfire risk.</i></b></p>	<p><i>At least one building should be used as a local refuge area and comply with the APZ and construction requirements for residential buildings</i></p> <p><i>Cavan's are within 50 m of a refuge building and are clearly signposted.</i></p> <p><i>The pass from cabins to the refuge areas are safe with management of surface fuels to less than or equal to 4 t per hectare.</i></p> <p><i>The overall accommodation for tourist does not exceed 12 persons.</i></p> <p><i>A mechanism for the relocation of occupants on days of a total fire ban or adverse fire activity is provided in the local area in which the development operates.</i></p>	<p><i>Not applicable</i></p>	

***Explanation of terms;***

- ***'Achievable'***. *With appropriate design this aspect can achieve the acceptable solution.*
- ***'Assumed'***. *It is considered reasonable to assume this requirement has been met.*
- ***'N/A'***. *This item is not considered as relevant to this proposal.*
- ***'Yes'***. *This item can/does comply with the acceptable solution.*

**COMPLIANCE WITH THE AIMS AND OBJECTIVES OF PLANNING FOR BUSHFIRE PROTECTION.**

<u>Aims of Planning for Bushfire Protection</u>	<u>Opinion</u>	<u>Compliant</u>
The aim of PBP is to use the NSW development assessment system to provide for the protection of human life (including fire fighters) and to minimise impacts on property from the threat of bush fire, while having due regard to development potential, on-site amenity and protection of the environment".	<i>The development assessment procedure has identified that the subject lot is considered to be bushfire prone land. It is considered that this proposal can comply with the aim of PBP of minimising the impacts of a bushfire on the property.</i>	Yes
<u>PBP specific objectives</u>	<u>Opinion</u>	<u>Compliant</u>
Afford occupants of any building adequate protection from exposure to a bush fire;	<i>In accordance with table A2 .6 of Planning for Bushfire Protection.</i>	Yes
Provide for a defensible space to be located around buildings;	<i>It is considered there is adequate defensible space around the development.</i>	Yes
Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent direct flame contact and material ignition	<i>Flame contact between the building and identified hazard is considered highly unlikely.</i>	Yes
Ensure that safe operational access and egress for emergency service personnel and residents is available	<i>It is considered that the access and egress for the site is adequate for firefighting purposes.</i>	Yes
Provide for ongoing management and maintenance of bush fire protection measures,	<i>Normal maintenance can provide for this.</i>	Yes

including fuel loads in the asset protection zone (APZ);		
Ensure that utility services are adequate to meet the needs of fire fighters (and others assisting in bush firefighting).	<i>All utilities are to be in accordance with the requirements of the Building Code of Australia and appropriate Australian Standards.</i>	Yes

## **BUSHFIRE SAFETY AND COMPLIANCE RECOMMENDATIONS.**

<i>Number</i>	<i>PBP objective</i>	<i>Recommendation</i>
<b>1.</b>	<i>Asset Protection Zone</i>	<i>a) It is recommended that the maintenance plan for the day-care include the regular maintenance of the Asset Protection Zone on the subject lot.</i>
<b>2.</b>	<i>Building Construction Standard</i>	<i>b) Standard BCA requirements. The proposal achieves a AS 3959 2009 BAL LOW attack level.</i>
<b>3.</b>	<i>Emergency</i>	<i>c) An Emergency /Evacuation Plan is to be prepared consistent with the NSW Rural Fire Service document Guidelines for the Preparation of Emergency/Evacuation Plan. The plan should include the non-use of the Ordination Hall in times of Extreme and Catastrophic bushfire danger periods.</i>

## **CONCLUSIONS**

*It is shown through this assessment that this proposal has all the necessary requirements to meet the conditions of clause 44 of the Rural Fires Regulations and that it is reasonable to expect that the Rural Fire Service will issue a section 100B Bushfire Safety Authority for this development.*

*Bushfires are affected by many external influences such as climactic conditions, vegetation type, moisture content of the fuel, slope of the land and human intervention to name a few and are difficult to predict.*

*This report does not intend to provide a guarantee that the subject property will survive if a bushfire should impact the surrounding area. The purpose of this report is to show the developments level of compliance or in some cases non-compliance with the New South Wales legislation regarding building in bushfire prone areas.*

*Where non-compliance is found measures will be suggested that should make the building less susceptible to the various attack mechanisms of a bushfire and comply with the performance requirements of the Building Code of Australia.*

*The opinions expressed in this report are based on the writers experience and interpretation of the relevant guidelines and standards. Notwithstanding the above, these guidelines and standards are open to interpretation. All care has been taken to ensure that the opinions expressed in this report are consistent with past successful outcomes.*

*If any further clarification is required for this report please do not hesitate to contact me using the details above.*

*Yours Sincerely*

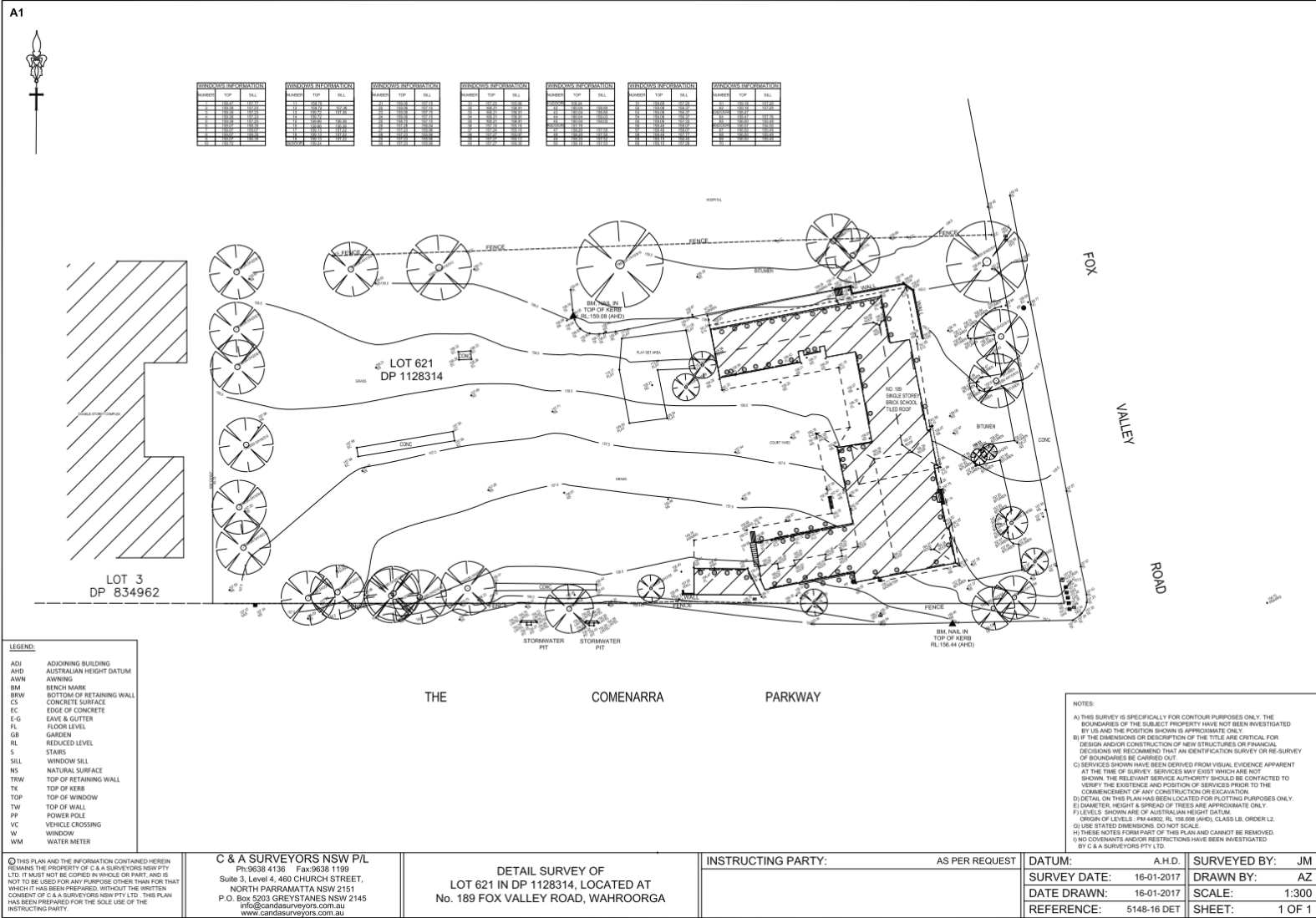


*Matthew Willis*

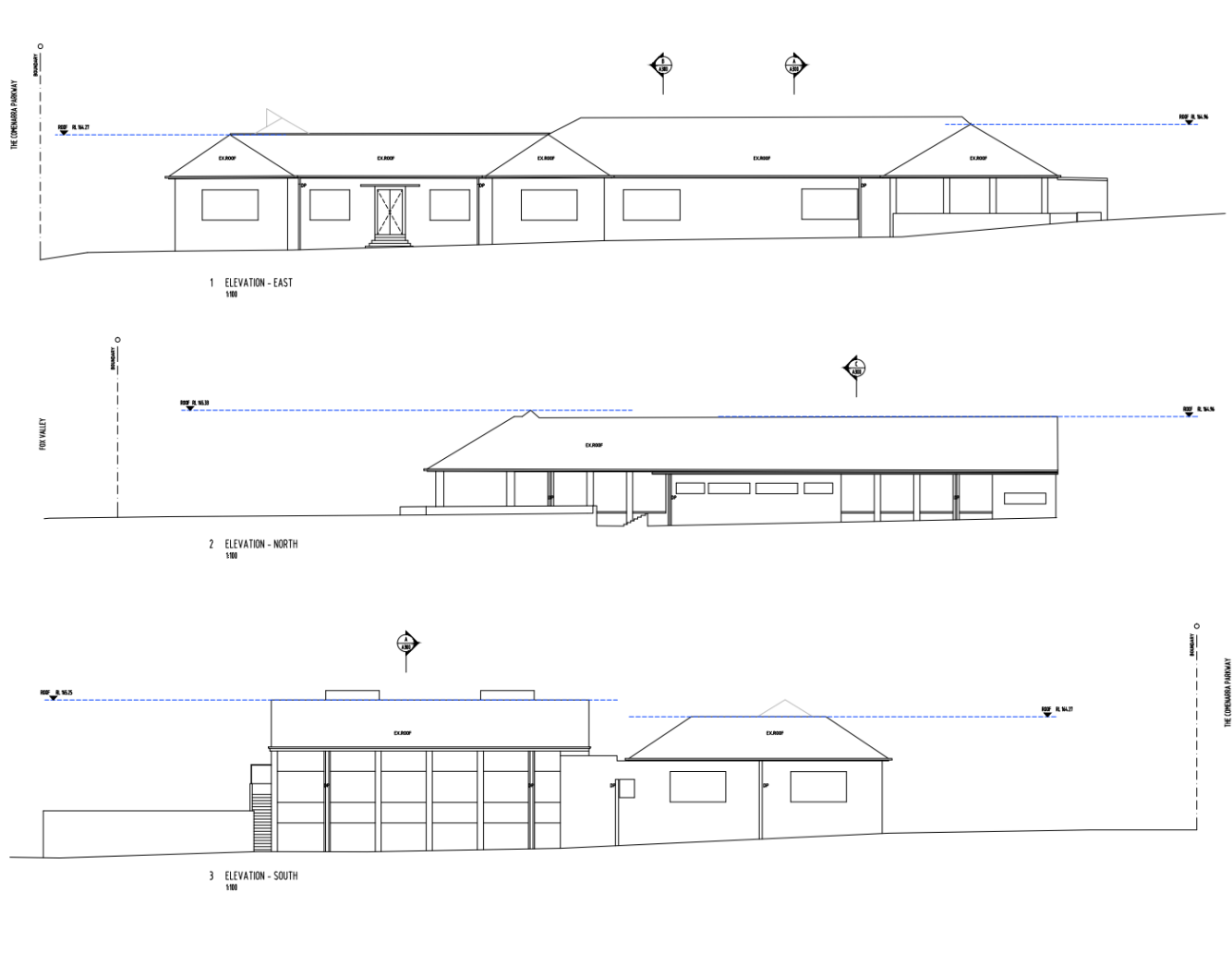
*Grad Dip Planning for Bushfire Prone Areas*

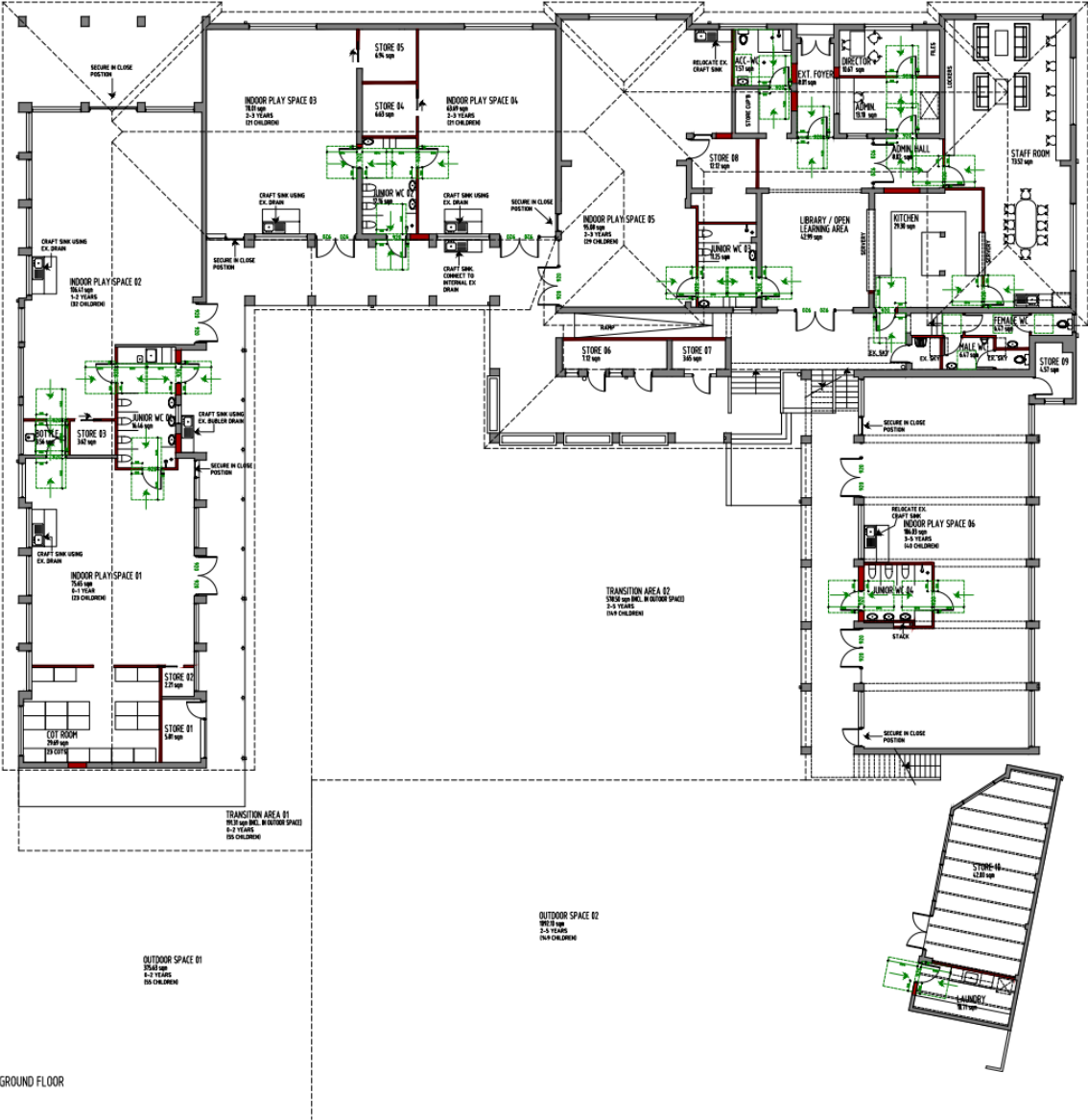
*Bushfire Planning Services Pty Limited.*

APPENDIX 1

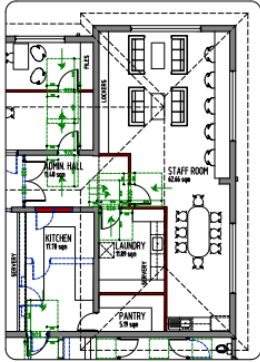








1 PLAN - GROUND FLOOR  
1/01



2 PLAN - GROUND FLOOR  
1/00 (ALTERNATIVE)

## **REFERENCES**

### **National Construction Code**

Building Code of Australia

Volumes 1&2

Canprint

### **New South Wales Rural Fires Act 1997**

Section 100b

### **Planning NSW [2006]**

Planning for Bushfire Protection

A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners

### **Standards Australia [2009]**

Australian Standards 3959

Australian Building Code Board

Edition 2009

### **Rural Fires Regulation 2008**

Clause 44