

0402604000 | info@southernbushfiresolutions.com.au | www.southernbushfiresolutions.com.au

Bushfire Assessment Report

Vikings Club Facility

Poplars Retail Precinct 37 Tompsitt Dr Jerrabomberra, NSW.



Executive Summary

The proposal is for the construction of a new Vikings Club facility with associated landscaping and outdoor dining facilities in the Poplars retail and commercial precinct.

The building is 2 storey BCA class 9b with an APZ that ensures <10kW/m² exposure. The building is required to be type B fire resisting construction and all external walls and components of the walls are required to be non-combustible under the NCC. Additional ember protection measures are recommended to ensure construction is commensurate with the hazard.

Access and landscaping for the new building are considered to exceed the requirements of PBP (2019) and a bushfire specific emergency plan is recommended as part of the overall AS3745 emergency plan for the facility.

This assessment finds that the proposal can achieve specifications for infill development as set out in NSW Planning for Bushfire Protection (2019) through use of acceptable solutions.



	Performance Criteria	Compliance	Comment
Asset Protection Zones	 APZ's are commensurate with the construction of the building. A defendable space is provided. APZs are managed and maintained to prevent the spread of fire towards the building. APZ is provided in perpetuity. APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised. 	Exceeds acceptable solutions	The building is provided with an APZ that achieves a <10kW/m ² exposure @1200K flame temperature. The APZ consists of sealed carpark areas and managed gardens with a high level of access and low maintenance requirement.
Access	 Firefighters are provided with safe all-weather access to structures and hazard vegetation. The capacity of access roads is adequate for firefighting vehicles. There is appropriate access to water supply. Firefighting vehicles can access the dwelling and exit the property safely 	Exceeds acceptable solutions	The site is designed to be accessible to large numbers of vehicles with on-site parking and hardstand available. Hydrant coverage and associated access for firefighting will be required to meet AS2419 under the NCC, ensuring hardstand and water supply is provided.
Water Supplies	 Adequate water supply is provided for firefighting purposes. Water supply is located at regular intervals. Water supply is accessible and reliable for firefighting operations. Flows and pressures are appropriate. The integrity of the supply is maintained. A static water supply is provided where reticulated water is not available 	Exceeds acceptable solutions	There is a reticulated supply in the area with feed hydrants at 50m spacing in Gwendoline Place and 90m spacing in Esmond Avenue. The building is >500m ² and will be required to meet AS2419 hydrant requirements with AS2441 Fire Hose Reels to be installed for NCC compliance.
Electricity services	 Location of electricity services limits the possibility of ignition of the surrounding bushland or the fabric of buildings. 	Meets acceptable solutions	power transmission lines are underground in the area.
Gas Services	 Location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings 	Meets acceptable solutions	No gas is to be installed at this time.

Summary of PBP (2019) Compliance for infill development – Vikings club facility

Construction Standards	 The proposed building can withstand bushfire attack in the form of embers, radiant heat and flame contact. Proposed fences and gates are designed to minimise the spread of bushfire. Proposed class 10a buildings are designed to minimise the spread of bushfire 	Exceeds acceptable solutions	The building is exposed to <10kW/m ² @1200K and is a 2 storey BCA class 9b with type B fire resisting construction. All external walls, insulation and components are required to be non- combustible under the NCC provisions. Recommendations are made for ember protection measures to be applied commensurate with the bazard
Landscaping	 Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind driven embers to cause ignitions. 	Meets acceptable solutions	Landscaping within the APZ is considered to comply with NSW RFS <i>"Asset</i> <i>Protection Zone Standards"</i> in A4 of PBP (2019)

Assessing Officer:

1 mm

Neil Willis grad dip. Bushfire Protection FPA Australia BPAD Level 3- NSW BPAD31129 DATE OF ISSUE: 10 September 2024



SBS ASSESSMENT REFERENCE: 2024052

Limitations and Disclaimer

This bushfire assessment report is primarily concerned with assessing the capacity of the proposed development to meet the legislated requirements for development consent. Where necessary, bushfire protection measures will be recommended.

The measures prescribed cannot guarantee that the development will survive a bushfire event on every occasion. This is primarily due to the degree of vegetation management, the unpredictable behavior of fire, extreme weather conditions and the actions of occupants and firefighters. In extreme conditions buildings may be considered un-defendable. Early evacuation is recommended as the safest course of action for life safety. A comprehensive bushfire survival plan is recommended for all occupants on bushfire prone lands.

Southern Bushfire Solutions has prepared this report with all reasonable diligence on behalf of the proponent. The information contained in this report has been gathered from field investigations of the site, plans provided and consultation with the client.

No assessment has been made of other aspects of the proposal outside the scope of this report.

Version	Date	Reason for issue	Draft
1	Monday 25 March 2024	Initial production	1
1	Wednesday 24 th April 2024	Minor corrections	2
1	Monday 29 th July 2024	Revision of access to Esmond Ave.	3
1	Tuesday 19 th September 2024	Revision of access arrangements and sound barrier removing access to Esmond Ave.	4
Prepared by	Neil Willis (BPAD31129)		
Signature	Maum		

Amendment schedule

Table of Contents

1. Introduction	6
1.1 Background and brief	6
1.2 Aims and Objectives of this Bushfire Assessment	6
1.3 Bushfire Assessment Methodology	7
1.4 Identification of Stakeholders	7
2. Scope of the Proposal	8
2.1 Site Location and Description.	8
2.2 Characteristics and Description of the Proposal	
3. Bushfire Hazard Assessment	
3.1 Context	
3.2 Vegetation type	
3.3 Effective Slope Classification	
3.4 Local Fire and Weather Conditions	15
4. Environmental Features and Considerations	
5. Bushfire Protection Measures	
5.1 Asset Protection Zones (APZ)	
5.2 Access Requirements	
5.3 Water Supply, Electricity and Gas	
5.4 Construction Standards.	
5.5 Landscaping	25
5.6 Emergency Management and Planning	
6. Conclusion	
7. Recommendations	
7.1. With Regard to Construction	
7.2. With Regard to Emergency Management Planning	
References	

1. Introduction

1.1 Background and brief

The Environmental Planning and Assessment Act (1979) requires the Commissioner of the NSW Rural Fire Service (RFS) in conjunction with local councils, to identify and map bushfire prone land (BFPL) as a trigger for development to meet a range of planning and construction requirements for bushfire protection. BFPL maps are to be maintained and made publicly available by local councils.

Non-Residential development has no specific bushfire requirements under the National Construction Code, however appropriate bushfire protection measures must be considered to reduce the impact of bushfire and ensure good practice in planning, building and emergency management to reduce the risk to developments and the occupants and increase the community resilience.

This report is an assessment of the proposal against the aims and objectives for development on bushfire prone land as set out in NSW RFS document Planning for Bushfire Protection (2019) (PBP).

1.2 Aims and Objectives of this Bushfire Assessment

This proposal is for the construction of a 2 storey BCA class 9b building that is required to be fire resisting type B construction. There are no specific criteria for industrial and commercial development, the considerations are addressed through the aims and objectives set out in chapter 1 of PBP:

- Afford buildings and their occupants protection from exposure to a bushfire.
- Provide for a defendable space to be located around buildings,
- Provide appropriate separation between a hazard and buildings which, in combination with other measures prevent the likely spread of fire to other buildings,
- Ensure that appropriate operational access and egress for emergency services and occupants is available,
- Provide for ongoing management and maintenance of the BPM's,
- Ensure that utility services are adequate to meet the needs of firefighters.

The aim of this assessment is to determine the ability of the proposal to achieve an appropriate level of bushfire protection commensurate to the risk to the development. The objectives and performance requirements for infill development as per section 7 of PBP (2019) is used as a base for the assessment.

1.3 Bushfire Assessment Methodology

This bushfire assessment follows the methodology summarized in the following table:

Methodology	Task	Considerations
Desktop analysis to ascertain scope and requirements of the development.	Collate and review available mapping resources, relevant policy documents and development plans.	 NSW SIX Mapping, Google maps. Development plans provided by client. NSW Planning for Bushfire Protection (2019) AS3959-Construction of Buildings in Bushfire Prone Areas (2018)
Site inspection and consultation with the proponent	View the site and bushfire hazard; classify dominant vegetation and measure slope and distances. Detailed discussion with the proponent to establish objectives and limitations of the proposal.	The site inspection enables verification of mapping data and classification of the surrounding vegetation, slope, Asset Protection Zones and environmental constraints. Photographing of relevant features for presentation.
Detailed assessment	Perform assessment of the development proposal against performance requirements of PBP and AS3959.	Assess the ability of the proposal to meet the intent and performance criteria of the relevant sections of PBP and make recommendations to address identified shortfalls.
Report	Preparation of Bushfire Assessment Report.	Produce necessary documentation to demonstrate the ability to achieve the aims and objectives of PBP to accompany the development application.

1.4 Identification of Stakeholders

Company	Position	Name	Contact
Construction Consultants	Project Officer	Sean Richards	PH: 0431 111 827 E: sean@constructionconsultants.net.au
Queanbeyan Palerang Regional Council	Approval Authority		PH: (02) 6226 1477 E: council@qprc.nsw.gov.au
NSW Rural Fire Service	Referral Authority		PH: (02) 8741 5555 E: records@rfs.nsw.gov.au
Southern Bushfire Solutions	BPAD Consultant	Neil Willis	PH: 0402 604 000 E: info@southernbushfiresolutions.com.au

2. Scope of the Proposal

2.1 Site Location and Description.

The site is located in a recent commercial subdivision in South Jerrabomberra, at the urban interface with Jerrabomberra Grassland reserve that is a conservation area. The subject lot is approximately 1.98ha total area, zoned B1 Neighborhood Centre and B7 Business Park.



Figure 1: Location of proposed development



Figure 2: Land Zoning of the area

Bushfire prone land mapping is yet to catch up to the new development, and shows the site exposed to Vegetation Category 3. This is considered to be medium bush fire risk vegetation represented as dark orange on a Bush Fire Prone Land map and will be given a 30-metre buffer. This category consists of, Grasslands, freshwater wetlands, semi-arid woodlands, alpine complex and arid shrublands. (NSW Rural Fire Service, 2015)



Figure 3: Bushfire Prone Land Map

2.2 Characteristics and Description of the Proposal

The proposal is to design and construct a new club facility on the site for the community. The proposed building is a 2 storey, BCA class 9b assembly building with gaming and hospitality areas and function rooms. Consideration has been given to ensure appropriate access and amenity of the site and that the context and character of the development is consistent with the environment. There is extensive landscaping of the site with al fresco dining options available on the grounds.



Figure 5: Context and character of the proposal

02 BUILT FORM & SCALE Massings



"Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place".



Design response

he approach we took in the design and placement of our massing involves areful consideration of the site and its neighbouring context, announcing ntrances and prioritising views. In the southern facade the main entrance (Image above) reaches out the vietors into the building before filtering them into the differen rogrammatic spaces within via the central corridor.

The latter splits the internal program in gaming and BOH to the south an the outward facing Food & Beverage to the landscaped gardens in the north Massing wise these volumes step down in height and overall size to present of langed, below down problem of the back of the south of the sout

Figure 6: Architectural drawings for built form and scale of the proposal

ENTRAL CORRIDOR



Figure 7: Landscape design characteristics

3. Bushfire Hazard Assessment

3.1 Context

The Poplars retail and commercial precinct is located adjacent to the existing residential area of Jerrabomberra. Stage 1 has been completed with supermarket, service station and fast food outlets already constructed. Civil works for stage 2 of the retail and commercial precinct is expected to commence soon and remove the remaining areas of vegetation within the subdivision with an isolated pocket retained on lot 12. Jerrabomberra Grassland conservation area will remain at the western interface of the precinct.

Online data review reveals that bushfire prone land mapping for the area classifies this as Category 3 vegetation which consists of grasslands freshwater wetlands, semi-arid woodlands, alpine complex and arid shrublands. Site assessment is completed as per the methodology set out in Appendix 1 of NSW planning for Bushfire (2019).

3.2 Vegetation type

PBP (2019) requires identification of the vegetation surrounding the proposed development to a distance of 140 meters. NSW state vegetation type mapping identifies the primary hazard vegetation type in the area as *"Temperate Montane Grassland"* This is consistent with "Grassland" vegetation type in A1 of NSW Planning for Bushfire Protection.

"Grassland"

"Dominated by Perennial Grasses and presence of broad leaved herbs on flat topography. Lack of woody plants. Plants include grasses, daisies, legumes, geraniums, slatbushes and copperburrs" (NSW Rural Fire Service, 2019)

This vegetation formation is considered to have an overall fuel load of 6t/Ha for fire behaviour modelling.



Figure 8: NSW Vegetation Mapping

3.3 Effective Slope Classification

The "effective slope" for the bushfire assessment is the slope under the vegetation that directly influences bushfire behavior. PBP (2019) requires the effective slope to be determined under the dominant vegetation type for a distance of 100m. The following digital analysis and LiDAR slope classification has been used for slope classification:



Figure 9: Digital Elevation and LiDAR slope analysis of the assessment area

Consideration of the online data and confirmation by site inspection reveals that the site is built out on three sides, and only exposed to the primary run of fire from the grassland reserve to the northwest. Three transects are taken on this aspect with the worst-case scenario used to determine vegetation and slope classification inputs for bushfire modelling.



Figure 10: Assessment of potential fire runs towards the building



Figure 11: Transect 1 – Grassland 2.2⁰ upslope at the boundary of the site



Figure 12: Retail development to the south of the site has removed the hazard



Figure 13: Residential development on Esmond Avenue with existing APZ



Figure 14: Water retention dam within the site to be landscaped



Figure 15: view of the site from the west with residential development beyond.

3.4 Local Fire and Weather Conditions

The fire season for the Southern Ranges fire district is typically from November through to March, with hot summer temperatures above 30 degrees and low relative humidity. The wind can be strong and gusty, typically coming from the North to North-West and the potential for rapid changes.

At landscape level, bushfire's typically come from the North to North-West due to the dominant wind direction. However, localised influences can dramatically alter the fire behavior and result in bushfire travelling in any direction. These weather patterns coupled with the potential for dry lightning storms and incidental ignitions from surrounding properties are a significant factor in the overall fire risk for the area.

For bushfire assessment purposes, Queanbeyan Palerang LGA is in the Southern Ranges Fire Area and has a Fire Danger Index (FDI) of 100 assumed as a 1:50 year event according to NSW RFS.

4. Environmental Features and Considerations

The proposal is for construction on a new commercial lot that is clear of vegetation. No Bushfire Protection Measures will be implemented outside the footprint of the development and no additional vegetation removal is required. Access and services are existing and limited environmental impact is expected as a result of this proposal.

5. Bushfire Protection Measures

The following sections are a detailed assessment of the planned development against the standards for bushfire protection measures for infill development detailed in Table 7.4a of Planning for Bushfire Protection (2019):

5.1 Asset Protection Zones (APZ)

The APZ is a fuel reduced area surrounding a building or structure. The intent of the APZ detailed in PBP (2019) is:

"To minimise the risk of bushfire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities" (NSW Rural Fire Service, 2019)

An Asset Protection Zone (APZ) is the most important feature in preparing a property for bushfire. The size of the APZ is directly related to the BAL rating for construction and the BAL rating may not be appropriate if the APZ is compromised.

PERFORMANCE CRITERIA TO BE ACHIEVED: Table 7.4a of PBP states that the intent of measures may be achieved where: APZs are provided commensurate with the construction of the building. A defendable space is provided. APZs are managed and maintained to prevent the spread of fire towards the building. APZ is provided in perpetuity. APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised. METHOD OF MEETING THE PERFORMANCE CRITERIA: Compliance with acceptable solutions. The proposal is for construction of a BCA class 9b assembly building in a commercial-retail area with grassland hazard at the western boundary of the lot. A class 9b assembly building does not have any accommodation element and is not considered SFPP under 100B of the Rural Fires Act. The acceptable solution for residential development is compliance with A1 12 2 of PBP, which specifies a minimum

The acceptable solution for residential development is compliance with A1.12.2 of PBP, which specifies a minimum 10m APZ for flat and upslope grassland to be contained within the boundary.

The building is setback a total of 42m from the primary hazard with large area of carpark providing separation from the hazard and ensuring access and maintenance of the APZ for the life of the asset.

Radiant heat calculations reveal that the building is exposed to <10kw/m² @ 1200K and the APZ exceeds the minimum requirement.



Figure 16: Plan detailing 10m APZ with additional 32m separation provided by sealed carpark



Figure 17: Radiant heat calculation across the site

5.2 Access Requirements

Access

The intent of measures for access detailed in PBP (2019) is:

"To provide safe operational access to structures and water supply for emergency services while residents are seeking to evacuate from an area" (NSW Rural Fire Service, 2019)

The purpose of property access is to provide firefighters with safe access to properties, provide evacuation routes for firefighters and residents. Roads should provide sufficient width for firefighters to work with equipment around the vehicle without impeding residents that are seeking to evacuate the area.

PERFORMANCE CRITERIA TO BE ACHIEVED:

Table 7a of PBP states that the intent may be achieved where:

- Firefighting vehicles are provided with safe all-weather access to structures and hazard vegetation.
- The capacity of access roads is adequate for firefighting vehicles.
- There is appropriate access to water supply.
- Firefighting vehicles can access the dwelling and exit the property safely.

METHOD OF MEETING THE PERFORMANCE CRITERIA:

Access exceeds the acceptable solutions listed in PBP (2019).

Firefighting and vegetation maintenance access is provided for the length of the interface via the perimeter that is established management fire trail along the grassland interface at the western side with access via Esmond avenue, Gwendoline Place and Tompsitt Dr.

The site is designed to be accessible for large volumes of traffic with on-site parking provided and back-ofhouse access for heavy vehicles to deliver and receive goods into the loading dock. The large parking area between the hazard and building ensure defendable space and access is also provided within the site. The sound barriers prevent access through the site to Esmond Avenue.

Access to water supply and feed hydrants are available in the public road frontage. As the building exceeds 500m² it is required to comply with E1.2 and E1.3 of the NCC and provide hydrant coverage and appropriate access consistent with AS2419 and fire hose reels to AS2441

The sound barriers prevent access to Esmond Avenue, however emergency access is available within the site via the maintenance trail if required.



Figure 17: Traffic plan demonstrating large areas of hardstand for parking and location of fire trail access in the grassland.

5.3 Water Supply, Electricity and Gas.

The intent of measures for services detailed in PBP (2019) is:

"To provide adequate services of water for the protection of buildings during and after the passage of a bushfire, and to locate gas and electricity so as not to contribute to the risk of fire to the buildings" (NSW Rural Fire Service, 2019)

An adequate supply of water is essential for firefighting. A reticulated supply is to be provided where possible, and a static water supply to be made available for non-reticulated development.

PERFORMANCE CRITERIA TO BE ACHIEVED:

Table 7.4a of PBP states that the intent may be achieved where:

- Adequate water supply is provided for firefighting purposes.
- Water supply is located at regular intervals.
- Water supply is accessible and reliable for firefighting operations.
- Flows and pressures are appropriate.

Water Supply

- The integrity of the supply is maintained.
- A static water supply is provided for firefighting purposes in areas where reticulated water is not available.

METHOD OF MEETING THE PERFORMANCE CRITERIA:

Water supply exceeds the acceptable solutions listed in PBP (2019).

As a BCA class 9b building greater than 500m2 the building is required to have fire hydrant system installed to AS2419 and fire hose reels to AS2441 under the National Construction Code.

Feed hydrants are available in the public road in Gwendoline Place and Esmond Avenue to assist firefighting operations around the site.



Figure 18: Feed Hydrants locations in the vicinity of the building

Electricity Supply	 PERFORMANCE CRITERIA TO BE ACHIEVED: Table 7a of PBP (2019 states that the intent may be achieved where: Location of electricity services limits the possibility of ignition of the surrounding bushland or the fabric of buildings
	METHOD OF MEETING THE PERFORMANCE CRITERIA:
Elect	rical supply meets the acceptable solutions of PBP(2019)
Powe	er supply lines are underground in the area.
ly	PERFORMANCE CRITERIA TO BE ACHIEVED:
ddn	Table 7a of PBP (2019) states that the intent may be achieved where:
as Si	 Location and design of gas services will not lead to ignition of surrounding bushland or the fabric of
Ğ	buildings.
	METHOD OF MEETING THE PERFORMANCE CRITERIA:

No gas supply is to be installed at this time.

5.4 Construction Standards.

The performance requirement GP5.1 of National Construction Code states:

"A building that is constructed in a designated bushfire prone area must be designed and constructed to-

- a) reduce the risk of ignition from a design bushfire with an annual exceedance probability not more than 1:100 years, or 1:200 years for a Class 9 building; and
- b) take account of the assessed duration and intensity of the fire actions of the design bushfire; and
- c) be designed to prevent internal ignition of the building and its contents; and
- *d) maintain the structural integrity of the building for the duration of the design bushfire."* (Australian Building Codes Board, 2022)

The acceptable construction methods as per the NSW amendment to the National Construction Code is *AS3959* – *Construction of Buildings in Bushfire Prone Areas* and *NASH standard* – *Steel Framed Construction in Bushfire Prone Areas*, **except as amended by Planning for Bushfire Protection (2019) and modified by development consent under 4.14 of the EPA Act or 100B of the RF Act**.

The following table details the parameters used for assessment and the parameters for a BAL contour map of the site:

Area FD	0l 100 – Quea	nbeyan Palera	ang Regior	nal Coun	cil – Assessme	ent in accordan	ce with table A	1.12.5 of PBP	
Transect	Effective Slope	Vegetation type	Minimum APZ (A1.12.2)	BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5	10kw/m ²
T1	2.2 ⁰ upslope	Grassland	12m	<8m	8-<10m	10-<15m	15-<22m	22-<36m	36-100m
T2	0.6° flat	Grassland	12m	<8m	8-<10m	10-<15m	15-<22m	22-<36m	36-100m
Т3	0.3 [°] flat	Grassland	12m	<8m	8-<10m	10-<15m	15-<22m	22-<36m	36-100m



Figure 19: Radiant heat modelling parameters

Figure 20: BAL plan of the proposal

PERFORMANCE CRITERIA TO BE ACHIEVED:

Construction Standards

Table 7a of PBP (2019) states that the intent of measures may be achieved where:

- The proposed building can withstand bushfire attack in the form of embers, radiant heat and flame contact.
- Proposed fences and gates are designed to minimise the spread of bush fire.
- Proposed class 10a buildings are designed to minimise the spread of bushfire

METHOD OF MEETING THE PERFORMANCE CRITERIA:

Recommendations exceed the acceptable solutions of PBP (2019).

The BAL rating for this development is <u>BAL 12.5.</u> At this level, attack from burning debris is significant and radiant heat flux up to 12.5kW/m² may threaten building elements such as unscreened glass.

The building is a BCA class 9b Assembly building that is not considered SFPP and not required to comply with the bushfire specific provisions of the NCC, however compliance must be considered when meeting the aims and objectives of PBP.

BAL rated construction standards are not intended to ensure that the building will survive a bushfire in all occasions. They are only intended to reduce the risk of ignition relative to the intensity of the bushfire behaviour. Building survivability depends on a wide range of factors, including the actions of the occupants and firefighters. Early evacuation is always considered the best option for life safety.



Figure 21: BAL ratings (Image courtesy of CFA Victoria)

The proposal is a 2-storey class 9b assembly building that is required to be fire resisting type B construction under C2D2 of the NCC. In a building of type B construction, the external walls and common walls, including all components incorporated in them including the facade covering, framing and insulation are required to be non combustible under C2D10 of the NCC.

The following recommendations are made to provide an appropriate level of ember protection to the building:

- 1. All external doors are to be provided with draft seals or brushes to limit ember penetration.
- 2. Any roller doors fitted to the building are to be fitted with ember seals.

5.5 Landscaping

Landscaping

The landscaping features are essential to the integrity of the Asset Protection Zone. Where the standard of the Asset Protection Zone is compromised, the level of protection afforded in the construction standard may not be sufficient.

Landscaping should generally be designed to incorporate driveway and turning areas, paths and hard paved areas and other bushfire resistant features to enhance the level of protection.

PERFORMANCE CRITERIA TO BE ACHIEVED:

Table 7.4 of PBP states that the intent of measures may be achieved where:

• Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and potential for wind driven embers to cause ignitions

METHOD OF MEETING THE PERFORMANCE CRITERIA:

Landscaping complies with acceptable solutions of PBP (2019).

The building is designed to be accessible for large numbers of patrons using the outdoor dining facilities The site is dominated with hardstand, with parking areas as show in the site plan below, some tree planting is provided in maintained garden beds to provide shading within the grounds, however the tree planting does not provide a continuous path for fire towards the building and canopy coverage is <20%.



Figure 22: Landscaping features dominated by hardstand for access and parking around the facility

5.6 Emergency Management and Planning

high level of accessibility and exposed to low risk grassland hazard.

The intent of measures for Emergency Management Planning is to provide suitable emergency and evacuation arrangements for building occupants in bushfire prone areas.

lent	Table of PBP states that the intent of measures may be achieved where:
егдепсу мападел	 A bushfire Emergency Management and Evacuation Plan is prepared.
Em	METHOD OF MEETING THE PERFORMANCE CRITERIA:
ecc	mmendations are made for emergency management to comply with acceptable solutions of PBP (2019).

As a community facility in a bushfire prone area, the following recommendation is made for emergency management

1. A bushfire emergency plan specific to the hazards, occupancy and nature of this facility be developed with evacuation/shelter in place procedures consistent with the overall AS3745 emergency plan for the facility.

6. Conclusion

The proposal is for the construction of a new club facility with on-site parking and associated landscaping in a new retail and commercial precinct. The development is in an area mapped as category 3 vegetation on the bushfire prone land map, and the bushfire hazard consists of Grassland vegetation in the reserve to the west of the development site.

The APZ provided within the site achieves <10kW/m² exposure, as a BCA class 9b assembly building with fire resisting type B construction it is recognized that the building generally exceeds the requirements of AS3959. Access is designed for large numbers of patrons and delivery of goods to the site and water supply exceeds bushfire requirements.

Recommendations are made for basic ember protection measures commensurate with the hazard. A bushfire Emergency plan is to be developed as part of the overall emergency plan for the facility.

7. Recommendations

7.1. With Regard to Construction

The following recommendations are made to provide an appropriate level of ember protection to the building:

- 1. All external doors are to be provided with draft seals or brushes to limit ember penetration.
- 2. Roller doors are to be fitted with ember seals.

7.2. With Regard to Emergency Management Planning

As a commercial facility in a bushfire prone area, the following recommendation is made for emergency management:

1. A bushfire emergency plan specific to the hazards, occupancy and nature of this facility be developed with evacuation/shelter in place procedures consistent with the overall AS3745 emergency planning for the facility.

References

Australian Building Codes Board. (2015). National Construction Code Series.

Fire Protection Association of Australia. (2017). BPAD Practice note 002- Exclusion of Low Threat Vegetation.

Google Earth. (2020, February). Google Earth. Retrieved from Google Earth.

- Keith, D. A. (2004). Ocean Shores to Desert Dunes: the Native Vegetation of New South Wales and the ACT. Department of Environment and Conservation (NSW).
- NSW Land and Property Information. (2020, February). *NSW SIX Maps*. Retrieved February 20, 2015, from https://maps.six.nsw.gov.au/
- NSW Planning and Environment. (2020, March). *NSW Planning Portal*. Retrieved from https://www.planningportal.nsw.gov.au/find-a-property/
- NSW Rural Fire Service. (1997). Rural Fires Act. NSW Rural Fire Service.
- NSW Rural Fire Service. (2002). Rural Fires Regulation.
- NSW Rural Fire Service. (2005). Standards for Asset Protection Zones.
- NSW Rural Fire Service. (2012). Bushfire Survival Plan.
- NSW Rural Fire Service. (2015). *Guide for Bushfire Prone Land Mapping: Version 5b.*
- NSW Rural Fire Service. (2019). Planning for Bushfire Protection.
- Queanbeyan City Council. (2012). Queanbeyan Local Environmental Plan. Queanbeyan: Legislation NSW.
- Ramsay, C., & Rudolph, L. (2003). Landscape and Building Design for Bushfire. CSIRO Publishing.

Standards Australia. (2009). AS 3959- Construction of Buildings in Bushfire Prone Areas.