



Bushfire Assessment

**Fairfield Showground
Community & Events Centre**

**430-482 Smithfield Road,
Prairiewood**

Fairfield City Council

10 July 2025

(Ref: 24039)

report by
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1 Introduction

Street or property name:	430 Smithfield Road		
Suburb, town or locality:	Prairiewood	Postcode:	2176
Lot/DP no:	Lot 1 DP 1251493		
Local Government Area:	Fairfield City Council		

1.1 Introduction

This Bushfire Assessment Report accompanies an Environmental Impact Statement (EIS) pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), in respect of a State Significant Development Application (SSDA) for the construction and operation of Fairfield Showground Community and Events Centre. This report addresses the relevant Secretary's Environmental Assessment Requirements (SEARs) issued for the project, notably:

Table 1: Summary of relevant SEARs and response

SEAR	Requirement	Response	Report section
23	<i>If the development is on mapped bush fire prone land, or a bush fire threat is identified on or adjoining the site, provide a bush fire assessment that details proposed bush fire protection measures and demonstrates compliance with Planning for Bush Fire Protection.</i>	The development is on mapped bushfire prone land therefore compliance with 'Planning for Bush Fire Protection 2019' is required. The proposal has been designed to comply.	Section 3 details the bushfire protection measures

1.2 Project site description

The project site is located within the Fairfield Local Government Area (LGA), at 430-482 Smithfield Road, Prairiewood, legally identified as Lot 1 DP 1251493 (30.1 hectares) and known as Fairfield Showground.

Fairfield Showground currently comprises a number of different uses including Fairfield Markets, outdoor sports fields, grandstands incorporating function centres, at-grade parking in multiple locations throughout the site and a range of other community and recreational uses.

The project site is located to the west of the existing market awning as shown in Figure 1.



Figure 1: Project site (Source: DFP/Nearmap)

The regional context of the project site is shown in Figure 2 and includes the following:

- **Fairfield Hospital:** Located approximately 250 m to the north of the Fairfield Showground Precinct are Braeside and Fairfield Hospital.
- **Fairfield City Golf Club:** Also located to the north of the site, the Fairfield City Golf Club is an 18-hole golf course, inclusive of a driving range and associated club house.
- **Wetherill Park Shopping Centre:** Located approximately 600 m to the north-east of the site is the Stockland Wetherill Park Shopping Centre.
- **Mackillop Catholic College:** To the east of the site is Mackillop Catholic College, being an independent Catholic school for girls.
- **Deerbush Park:** To the site of the site is Deerbush Park. In the broader context of land to the south of the site are a range of low-medium density residential developments.
- **Transport Corridors:** The key regional transport corridors in proximity to the project site are:
 - Smithfield Road – Smithfield Road adjoins the eastern side of the site. A number of bus services travel along Smithfield Road, notably from Parramatta Station (Stand B2).
 - Cumberland Highway – The Cumberland Highway is located approximately 1.5km to the east of the site.



Figure 2: Regional context (Source: DFP/Nearmap)

1.3 Project description

The project forms part of a masterplan located on the Fairfield Showground site which will comprise works to be carried out under multiple planning pathways.

Under *State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP TI)*, certain works can be undertaken as development permitted without consent (Part 5 approval). Accordingly, these works do not form part of the scope of physical works proposed under this State Significant Development Application (SSDA).

The proposed extent of works to be carried out under the development permitted without consent (Part 5/REF) planning pathway as part of the masterplan includes:

- Demolition of six small ancillary buildings and construction of a new amenities block;
- Road and car parking upgrades and new car parking area;
- New kiosk/substation; and
- Associated civil and landscape works.

The proposed extent of works to be carried out under this SSDA as part of the masterplan includes:

- Construction and use of a one-storey multi-purpose building; and
- Associated civil and landscape works.

Figure 3 details the masterplan and the delineation between the Part 5 and SSDA extent of physical works.

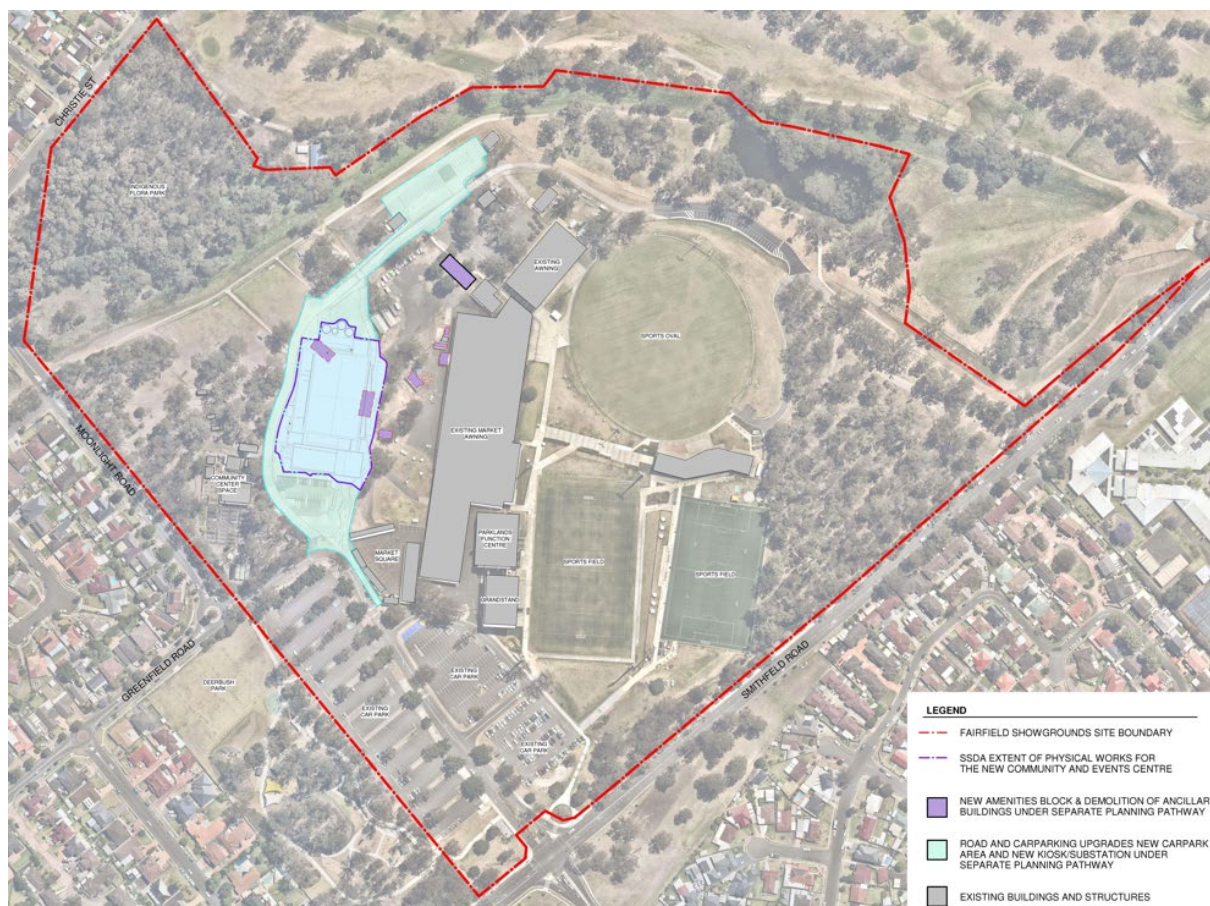


Figure 3: Masterplan (Source: NBR)

1.4 Assessment requirements

The SEARs Key issue No. 23 'Bush Fire Risk' requires the following:

"If the development is on mapped bush fire prone land, or a bush fire threat is identified on or adjoining the site, provide a bush fire assessment that details proposed bush fire protection measures and demonstrates compliance with Planning for Bush Fire Protection."

The subject land and development site is mapped as bushfire prone land as shown on Figure 4. Therefore compliance with the NSW Rural Fire Service (RFS) document 'Planning for Bush Fire Protection 2019' (referred to as 'PBP' throughout this report) is required.

As defined by Section 8.3.11 of PBP, the proposal constitutes a 'public assembly building' with a floor space area greater than 500 m² and is therefore to be assessed against the provisions of Special Fire Protection Purpose (SFPP) development. Section 8.3.11 of PBP reads as follows:

“8.3.11 Public assembly buildings

Public assembly buildings are not defined as SFPP by the RF Reg but require referral under EP&A Act s.4.14 to the NSW RFS. Buildings used for public assembly with a floor space area of greater than 500m² are required to consider bush fire. These developments will be treated technically as SFPP due to the evacuation challenges presented by large numbers of occupants.

Assembly buildings can accommodate large numbers of persons of various physical capabilities. Emergency management planning for these developments must account for the total number of occupants and be commensurate with the level of risk. These developments must not experience radiant heat levels of greater than 10kW/m² on any part of the building. Assembly buildings include places of public worship.

Due to the variation in risk associated with the occupants of assembly buildings, a variety of bush fire safety solutions may apply based on the merits of the situation.”

Chapter 6 of PBP specifies the assessment methodology and bushfire protection measures for SFPP development. Although not defined as SFPP development, the proposal has been designed to comply with PBP Chapter 6 specifications as listed below:

- 6.8.1: Asset Protection Zones (APZ) and building construction requirements (Bushfire Attack Levels – BAL)
- 6.8.2: Access
- 6.8.3: Services – Water, gas and electricity
- 6.8.4: Emergency management planning



Legend

-  Watercourse
-  Subject Land
-  Cadastral
-  Vegetation Category 1
-  Vegetation Category 2
-  Vegetation Category 3

Bushfire Prone Land

-  Vegetation Buffer

Figure 4: Bushfire Prone Land



Date: 30/04/2025

0 125 250 500
Metres

Coordinate System: GDA2020 MGA Zone 56

Imagery: © Nearmap

2 Bushfire hazard

An assessment of the bushfire hazard is necessary to determine the application of bushfire protection measures. This section provides an account of the vegetation communities (bushfire fuels) and the topography (slope) that combine to create the bushfire hazard that may affect bushfire behaviour. The hazard assessment was undertaken in accordance with PBP site assessment methodology.

The development site and bushfire hazard were inspected on 13th May 2024. Photographs are included at Appendix A.

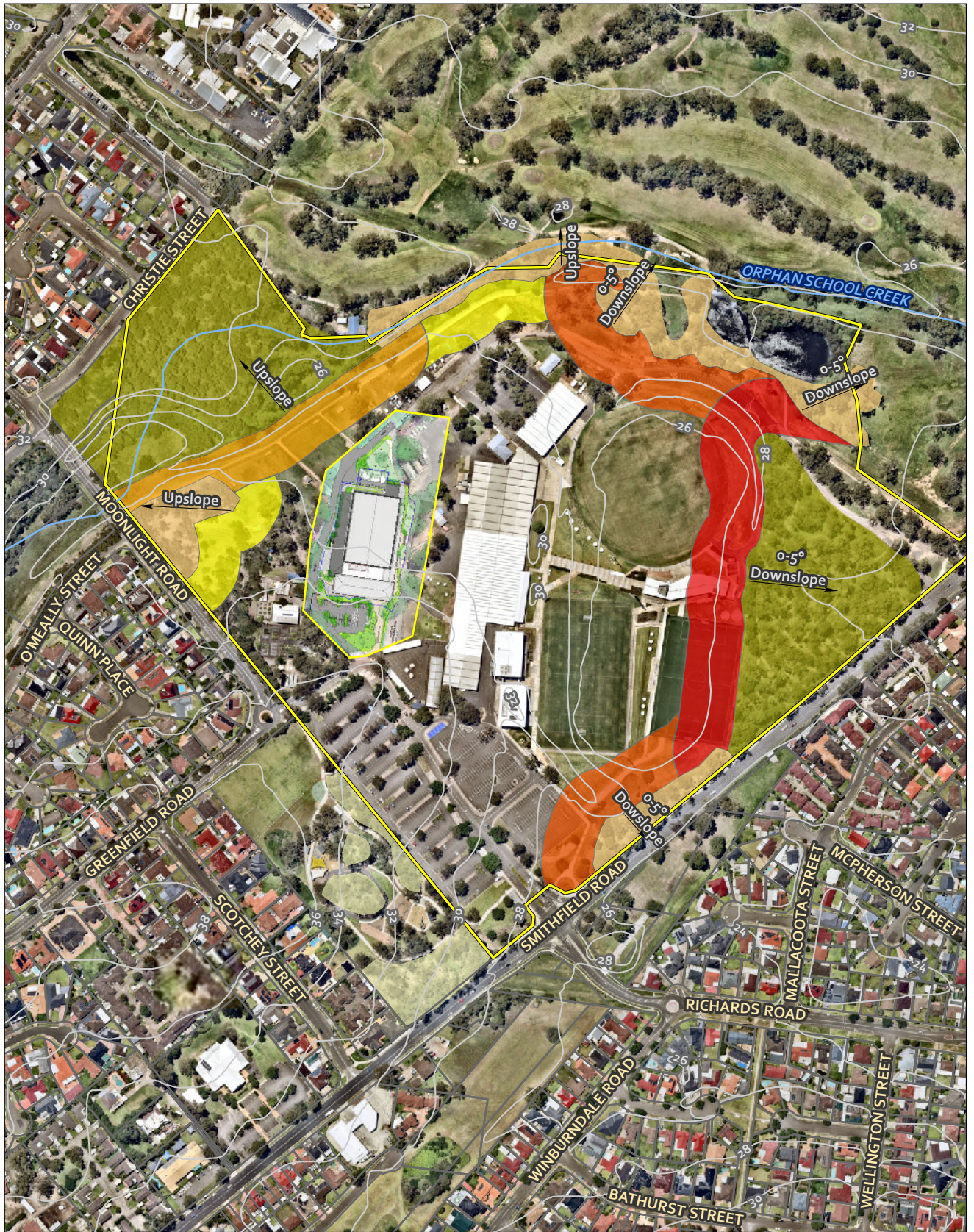
2.1 Predominant vegetation

The bushfire hazard has been assessed to allow the determination of APZ location and dimension as well as other bushfire protection measures. The hazard assessment was undertaken in accordance with PBP site assessment methodology.






The bushfire hazards surrounding the project site consist of woodland to the north-west within Fairfield Indigenous Flora Park, low hazard riparian corridor along Orphan School Creek to the north, and woodland to the east adjacent Smithfield Road. The bushfire hazards are mapped on Figure 5.

2.2 Effective slope




The effective slope underneath the hazard is either 'upslope/flat' or 'downslope 0-5 degrees'. The effective slope was determined using a contour layer with 2 m intervals and the slope classes are indicated on Figure 5.



Legend

-  Contour - 2m
-  Watercourse
-  Subject Land
-  Project Area
-  Cadastre

Vegetation Formation

-  Woodland
-  Low Hazard
-  Low Threat

Asset Protection Zone (SFPP)

-  Asset Protection Zone - 38m
-  Asset Protection Zone - 42m
-  Asset Protection Zone - 47m
-  Asset Protection Zone - 50m



Date: 30/04/2025

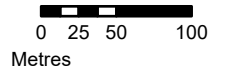


Figure 5: Bushfire Hazard Analysis and Asset Protection Zone (APZ) Coordinate System: GDA2020 MGA Zone 56

Imagery: © Nearmap

3 Bushfire protection measures

PBP requires the assessment of a suite of bushfire protection measures that in total provide an adequate level of protection for development of bushfire prone land. The measures required to be assessed for the development proposal are listed in Table 2 below and are discussed in detail in the remainder of this section.

Table 2: PBP bushfire protection measures

PBP Section	Measure	Specifics	Section in report
6.8.1	Asset Protection Zone (APZ) & construction standards (Bushfire Attack Level – BAL)	Assembly building to have APZ and BAL.	3.1, 3.2 & 3.3
		Appropriate vegetation management and landscaping within APZ and across site.	
6.8.2	Access	Access to comply with PBP Table 6.8b.	3.4
6.8.3	Services – Water, electricity & gas	Services to assembly building comply with PBP Table 6.8c.	3.6
6.8.4	Emergency management planning	Bushfire Emergency Management and Evacuation Plan required.	3.5

3.1 Asset Protection Zones (APZ)

The required APZ building setback distances have been determined for the proposed building in accordance with PBP Table A1.12.1. The APZ determination is listed in Table 3 below and mapped on Figure 5. The building will have an APZ that greatly exceeds the requirements.

Table 3: APZ and BAL determination

Direction ¹	Vegetation ²	Slope ³	Required APZ ⁴	APZ provided ⁵	BAL ⁶
North	Low hazard	Upslope/ Flat	38 m	>100 m	BAL-LOW
North-east	Low hazard	Downslope 0-5°	47 m	>100 m	BAL-LOW
East	Woodland	Downslope 0-5°	50 m	>100 m	BAL-LOW
South-east	Low hazard	Downslope 0-5°	47 m	>100 m	BAL-LOW
South	Low threat	Not required	Not required	100 m	BAL-LOW
West	Low hazard	Upslope/ Flat	38 m	>100 m	BAL-LOW
North-west	Woodland	Upslope/ Flat	38 m	>90 m	BAL-12.5

¹ Direction of assessment from proposed building.

² Predominant vegetation classification over 140 m from proposal.

³ Effective slope over 100 m from proposal.

⁴ Asset Protection Zone (APZ) required by 'Planning for Bush Fire Protection 2019' Table A1.12.1.

⁵ Asset Protection Zone (APZ) provided by existing management arrangements.

⁶ Bushfire Attack Level (BAL) required by 'Planning for Bush Fire Protection 2019' Table A1.12.5.

3.2 Vegetation management and landscaping

The available APZ indicated on Figure 5 is currently maintained and achieves the performance of an Inner Protection Area (IPA) as described by PBP (Section A4.1.1). Additional maintenance or vegetation/tree removal is not required.

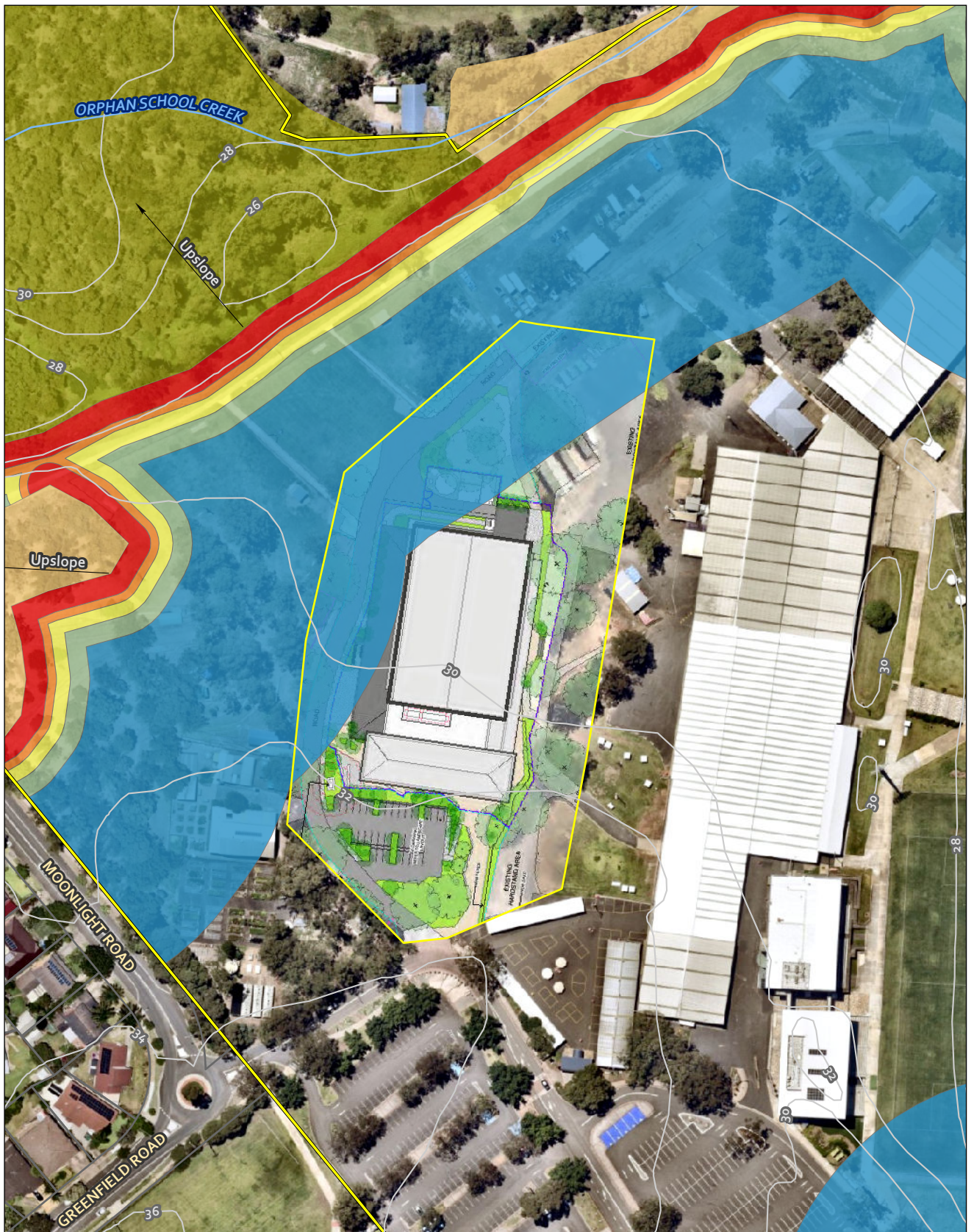
Any proposed landscaping is to also achieve the performance of an IPA standard. The landscaping specifications listed below have been designed to achieve this for the site. The landscape plan prepared by NBRIS has been reviewed and found to conform to these specifications.

- Tree canopy cover should not exceed 40% at maturity.
- Trees at maturity should not touch or overhang the building.
- Tree canopies should be separated by minimum 2 m. Canopy separation is not required parallel to the building.
- Garden beds are defined, narrow, separated and spread out with an avoidance of large mass-planting beds within 10 m of the building.
- Plantings are separated from the building by turf, gravel or pavement.
- Planting choice within garden beds to be low-lying avoiding large grasses. Taller shrubbery is acceptable for visual screening parallel to the building providing there is adequate separation from the building.

3.3 Bushfire Attack Level (BAL)

The BAL has been determined in accordance with PBP Table A1.12.5. Figure 6 shows the BAL affecting the site. The building is rated as BAL-12.5.

As such, the building is to be designed and constructed in accordance with BAL-12.5 of Australian Standard *AS 3959-2018 Constructions of buildings in bushfire-prone areas* (AS 3959).



Legend

- Contour - 2m
- Watercourse
- Subject Land
- Project Area
- Cadastre

Vegetation Formation

- Woodland
- Low Hazard
- Low Threat

Bushfire Attack Level (BAL)

- BAL - Flame Zone
- BAL - 40
- BAL - 29
- BAL - 19
- BAL - 12.5



Date: 30/04/2025

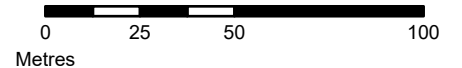


Figure 6: Bushfire Attack Level (BAL)

Coordinate System: GDA2020 MGA Zone 56

Imagery: © Nearmap

3.4 Access

3.4.1 Alternate access and egress

PBP requires an access design that enables safe evacuation whilst facilitating adequate emergency and operational response. All bushfire prone areas should have an alternate access or egress option depending on the bushfire risk, the density of the development, and the chances of the road being cut by fire for a prolonged period.

The site has access from Greenfield Road to the south-west and Smithfield Road to the south-east. The site access and adjacent streets provide a compliant level of alternate access for the purpose of evacuation and response of authorities.

3.4.2 Design of internal roads

A new internal road is proposed from the existing site entry road off Greenfield Road at the southern end of the building and will extend along the western side of the building to link up with an existing access through road. The new road will provide access to the existing carpark on the southern side of the building, the proposed carpark to the north-west (under separate REF application) and the building itself.

The new road will be 6.5 m wide and parking will not be permitted along its length. The road will comply with PBP Table 6.8b Acceptable Solutions as listed in Table 4 on the following page.

3.4.3 Perimeter access

The proposed road will provide perimeter access between the building and the closest bushfire hazard which is located to the north-west. However, the road is strictly not categorised as a perimeter road under PBP Table 6.8b as it does not provide direct access to the hazard interface. The hazard is over 90 m away beyond parkland, carparking (under separate REF application) and perimeter shared pathway.

Table 4: Compliance with PBP SFPP access road requirements

PBP Acceptable Solutions for property access roads
<i>SFPP access roads are two-wheel drive, all weather roads.</i>
<i>Access is provided to all structures.</i>
<i>Traffic management devices are constructed to not prohibit access by emergency service vehicles.</i>
<i>Access roads must provide suitable turning areas in accordance with Appendix 3 of PBP.</i>
<i>One way only public access roads are no less than 3.5 m wide and have designated parking bays with hydrants located outside of these areas to ensure accessibility to reticulated water for fire suppression.</i>
<i>The capacity of road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); Bridges and causeways are to clearly indicate load rating.</i>
<i>Hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression.</i>
<i>Hydrants are provided in accordance with the relevant clauses of AS 2419.1:2005.</i>
<i>There is suitable access for a Category 1 fire appliance to within 4 m of the static water supply where no reticulated supply is available.</i>
<i>Perimeter roads are:</i>
<ul style="list-style-type: none"> • <i>there are two-way sealed roads;</i> • <i>minimum 8 m carriageway width kerb to kerb;</i> • <i>parking is provided outside of the carriageway width;</i> • <i>hydrants are to be located clear of parking areas;</i> • <i>there are through roads, and these are linked to the internal road system at an interval of no greater than 500 m;</i> • <i>curves of roads have a minimum inner radius of 6 m;</i> • <i>the maximum road grade is 15° and average grade of not more than 10°;</i> • <i>the road crossfall does not exceed 3°;</i> • <i>a minimum vertical clearance of 4 m to any overhanging obstruction, including tree branches, is provided.</i>
<i>Non-perimeter roads are:</i>
<ul style="list-style-type: none"> • <i>Minimum 5.5 m carriageway width kerb to kerb;</i> • <i>parking is provided outside of the carriageway width;</i> • <i>hydrants are located clear of parking areas;</i> • <i>there are through roads, and these are linked to the internal road system at an interval of no greater than 500 m;</i> • <i>curves of roads have a minimum inner radius of 6 m;</i> • <i>the maximum road grade is 15° and average grade of not more than 10°;</i> • <i>the road crossfall does not exceed 3°;</i> • <i>a minimum vertical clearance of 4 m to any overhanging obstruction, including tree branches, is provided.</i>

3.5 Emergency management planning

PBP requires a 'Bushfire Emergency Management and Evacuation Plan' be prepared in accordance with the RFS document 'A Guide to Developing a Bushfire Emergency Management and Evacuation Plan' prior to receiving Occupation Certificate.

The Bushfire Emergency Management and Evacuation Plan is to address the early relocation of occupants or the use of the building as a place of shelter on site should relocation not be possible. The following principles are to be included in the plan:

- A mechanism for the early evacuation of patrons or closure of the site when fire activity occurs in the area.
- A decision matrix to guide early off-site evacuation or shelter on site should there not be enough time to evacuate the site before the impact of bushfire.

3.6 Water supply, electricity and gas

3.6.1 Water supply

Hydrants are to be installed to comply with Australian Standard *AS 2419.1 – 2021 Fire Hydrant Installations - System Design, Installation and Commissioning* (AS 2419). Hydrants will need to be installed to ensure compliant distances (i.e. all sides of a building are within 70 m of a hydrant by lay of the hose, or 90 m if a tanker can park in-line a maximum 20 m from the hydrant). Hydrants cannot be installed within carriageways or parking reserves.

3.6.2 Electrical supply

The electrical supply to the building will be provided underground and therefore complies with PBP.

3.6.3 Gas supply

Any gas services are to be installed and maintained in accordance with *AS/NZS 1596-2014 The storage and handling of LP gas* (Standards Australia, 2014).

4 Conclusion and recommendations

4.1 Summary

Although not defined as Special Fire Protection Purpose (SFPP) development, the proposed Fairfield Showground Community and Events Centre is to be assessed as SFPP as it will be a place of 'public assembly' with a floor space exceeding 500 m². The proposal has therefore been assessed against Section 6.8 of *Planning for Bush Fire Protection 2019* (PBP).

The bushfire hazard consists of small woodland and riparian remnants located around the edges of the site and completely amongst suburbia. PBP requires an APZ ranging from 38-50m and the surrounding managed grounds provides an APZ of at least 90 m, greatly exceeding the minimum requirements and resulting in BAL-12.5 construction requirement. Recommendations have been made to ensure the access, installation of utilities and landscaping complies.

4.2 Conclusion

The assessment demonstrates that the proposal, together with the recommendations (see below), complies with *Planning for Bush Fire Protection 2019* and hence the SEARs Key Issue 23 – Bush Fire Risk.

4.3 Recommendations

The following is a list of recommendations arising from the assessment, required to ensure compliance with PBP:

1. Any proposed landscaping is to also achieve the performance of an IPA standard. The landscaping specifications listed below have been designed to achieve this for the site.
 - a. Tree canopy cover should not exceed 40% at maturity.
 - b. Trees at maturity should not touch or overhang the building.
 - c. Tree canopies should be separated by minimum 2 m. Canopy separation is not required parallel to the building.
 - d. Garden beds are defined, narrow, separated and spread out with an avoidance of large mass-planting beds within 10 m of the building.
 - e. Plantings are separated from the building by turf, gravel or pavement.
 - f. Planting choice within garden beds to be low-lying avoiding large grasses. Taller shrubbery is acceptable for visual screening parallel to the building providing there is adequate separation from the building.
2. The building is to be designed and constructed in accordance with BAL-12.5 of Australian Standard AS 3959-2018 *Constructions of buildings in bushfire-prone areas* (AS 3959).

3. The proposed access road is to comply with Table 6.8b of 'Planning for Bush Fire Protection 2019' for the standard of a non-perimeter road (as repeated at Table 4 of this report).
4. A 'Bushfire Emergency Management and Evacuation Plan' is to be prepared in accordance with the RFS document 'A Guide to Developing a Bushfire Emergency Management and Evacuation Plan' prior to receiving Occupation Certificate. The plan is to address the following:
 - a. A mechanism for the early evacuation of patrons or closure of the site when fire activity occurs in the area.
 - b. A decision matrix to guide early off-site evacuation or shelter on site should there not be enough time to evacuate the site before the impact of bushfire.
5. Hydrants are to be installed to comply with Australian Standard *AS 2419.1 – 2021 Fire Hydrant Installations - System Design, Installation and Commissioning* (AS 2419). Hydrants will need to be installed to ensure compliant distances (i.e. all sides of a building are within 70 m of a hydrant by lay of the hose, or 90 m if a tanker can park in-line a maximum 20 m from the hydrant). Hydrants cannot be placed within a road carriageway or parking area.
6. Any gas services are to be installed and maintained in accordance with *AS/NZS 1596-2014 The storage and handling of LP gas* (Standards Australia, 2014).



David Peterson



References

NSW Rural Fire Service (RFS) 2014. *A Guide to Development a Bushfire Emergency Management and Evacuation Plan*.

http://www.rfs.nsw.gov.au/__data/assets/pdf_file/0020/29270/Development-planning-Guide-to-developing-a-Bush-fire-emergency-management-and-evacuation-plan.pdf

NSW Rural Fire Service (RFS). 2019. *Planning for Bush Fire Protection: A Guide for Councils, Planners, Fire Authorities and Developers*. State of New South Wales through the NSW Rural Fire Service.

Standards Australia. 2014. *The storage and handling of LP Gas*, AS/NZS 1596:2014, Standards Australia International Ltd, Sydney.

Standards Australia. 2018. *Construction of buildings in bushfire-prone areas*, AS 3959, Standards Australia International Ltd, Sydney.

Standards Australia. 2021. *Fire hydrant installations - System design, installation and commissioning*, AS2419.1, Standards Australia International Ltd, Sydney.

Appendix A - Photographs



Photograph 1: Low hazard >100 m to the west



Photograph 2: Woodland beyond perimeter shared pathway >90 m to the north-west



Photograph 3: Low hazard riparian corridor >100 m to the north

