Strategic Bushfire Study Report

Planning Proposal - Residential Development

Lot 1 DP 1007355 and Lots 2, 3 and Lot 4 DP 1185025

Cusak Place YASS

Prepared for

Karoo Rezoning Pty Ltd

c/- Catalyze Property Consulting Pty Ltd

2 June 2022

Version V0.1

BPAD Bushfire Planning & Design Accredited Practitioner Level 3

Project Details

Project Name:	J043 – Karoo Rezoning Bushfire Planning
Client Details:	Karoo Rezoning Pty Ltd C/- Catalyze Property Consulting Pty Ltd
Project Address	Lot 1 DP 1007355 and Lots 2, 3 and 4 DP 1185025 Wee Jasper Road / Cusak Place, YASS
Local Government Area	Yass Valley Council
Zoning (LEP)	R5 – Large Lot Residential R(2) – Low Density Residential
Bushfire Prone Land	Category 3 bush fire prone land
Proposed Development	Residential
Approval Path	Rezoning - Planning Constraints Only

Document Control

Version	Primary Author(s)	Description	Date Completed
V1.0	Dan Pedersen BPAD16293	Draft	9 June 2021
V1.0	Dan Pedersen	Final V2	2 June 2022

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Contents

1. Introduction

Cool Burn Pty Ltd (Cool Burn) have been commissioned to conduct a preliminary Strategic Bushfire Study to inform the rezoning (residential) development potential for the property 16-18 and 21 Cusak Place (Lot 1 DP 1007355 and Lots 2, 3 and 4 DP 1185025).

The site is within the Yass Valley Council Local Government Area (LGA).

To identify bushfire risk and protection requirements, Cool Burn have reviewed and applied the following guidelines and standards:

- Planning for Bushfire Protection 2019 (PBP 2019)

This assessment takes into account various factors such as the bushfire prone nature of the land and surrounding vegetation (bushfire risk), environmental constraints and the proposed future land use.

This assessment has been prepared by a suitably qualified bushfire practitioner, Dan Pedersen (BPAD Level 3 BPAD 16293).

2. Legislative Framework

The NSW Environmental Planning and Assessment Act 1979 (EP&A Act) is the principal planning legislation for the state and provides a framework for the overall environmental planning and assessment of development proposals, including rezoning.

When preparing a planning proposal, local councils are required to apply the EP&A Act s.9.1(2) (Direction 4.4 Planning for Bushfire Protection), which requires: *all planning proposals that affect, or are in close proximity to, land mapped as bushfire prone to have regard to the revised Planning for Bush Fire Protection (2019)*. Under these directions, draft proposals should follow the objectives:

i. to protect life, property and the environment from bush fire, by discouraging the establishment of incompatible land uses in bush fire prone areas; and

ii. to encourage sound management of bush fire prone areas.

Under Direction 4.4, a relevant authority must consult with the Commissioner of the NSW RFS during the preparation of a draft LEP and take into account any comments made. As part of the consultation process with the NSW RFS, a bush fire assessment is required to be submitted to demonstrate compliance with the s9.1(2) Directions and PBP. Where the proposal is of a strategic nature, this could take the form of a Strategic Bush Fire Study.

The objective for the strategic planning study is to identify whether development is appropriate at the location, commensurate with the identified bush fire risk on a landscape scale. The broad principles which apply to a bushfire strategic study are:

- ensuring land is suitable for development in the context of bush fire risk;
- ensuring new development on bushfire prone land will comply with PBP;
- minimising reliance on performance-based solutions;
- providing adequate infrastructure associated with emergency evacuation and firefighting operations; and
- facilitating appropriate ongoing land management practices.

Strategic bushfire studies inform planning that ensure that future land uses are in appropriate locations to minimise the risk to life and property from bush fire attack. Strategic bush fire

planning will ensure that future compliance with the s9.1(2) Directions Planning for Bushfire Protection 2019 (PBP 2019) is achievable. The expectation will be that the development will be able to comply with PBP at the DA stage.

2.1.Strategic Bushfire Study Methodology

Chapter 4.2 of the PBP 2019 provides a methodology to assess a development proposal and commensurate BPMs that may be required to offset possible bushfire attack. The assessment includes the classification of potential hazardous landscape that may affect the site (the vegetation and effective slope).

The following assessment is in accordance with PBP 2019 method. This assessment is based on detailed GIS mapping and desktop assessment of the site utilising the following resources:

- Council Bushfire Prone Land Map (NSW RFS online tool: Check if you're in bush fire prone land - NSW Rural Fire Service)
- Planning for Bush Fire Protection (NSW RFS, 2019)
- Aerial mapping
- Vegetation mapping
- Development maps
- Detailed GIS analysis.

3. Bush Fire Strategic Study

This Study address the requirements for a strategic bushfire study, as listed in Table 4.2.1 of PBP 2019.

3.1.Bushfire Landscape Assessment

A bushfire landscape assessment considers the likelihood of a bush fire, its potential severity and intensity and the potential impact on life and property in the context of the broader (macro) surrounding landscape.

The bush fire risk considers the amount of development interfacing vegetation, fire runs, steep slopes and any areas of isolation. Although there is no immediate concept design, this study aims to identify any reasonable constraints.

Weather

Taken from the Southern Tablelands Bushfire Risk Management Plan: The typical / average climate in the Southern Tablelands BFMC area is temperate to cool characterised by warm to hot summers and cool winters, with peak rainfall generally occurring during winter and spring. The area experiences yearly temperatures from about -5 degrees Celsius (in the winter months of June, July and August) to 35-37 degrees Celsius in the summer months (December, January and February) although colder and higher temperatures are not uncommon. As the area is both large and diverse, rainfall varies considerably. Some areas experience average rainfall of approximately 800mm to 1000mm per year, whereas some areas experience a lower average annual rainfall (e.g. 600mm in the north of the Upper Lachlan Shire towards the Abercrombie River). Generally it can be stated that rainfall is both unreliable and at its lowest during summer months, resulting in substantial curing of pastoral and grazing land which covers a large proportion of the area. Prevailing weather conditions associated with the bush fire season in the Southern Tablelands BFMC area are north/north westerly winds, although in late afternoons southerly and easterly winds may occur for short periods. Lightning strikes during storms occur frequently in the bush fire season. The bush fire season generally runs from October to March/April.

The Southern Tablelands has an accepted fire danger rating FDI100.

Bushfire Prone Land

Bushfire prone land (BFPL) is land that can support a bushfire or is subject to bushfire attack. Bushfire prone land maps provide a trigger for the development assessment provisions. Any land parcels affected by BFPL must apply the legislative requirements for developing and building on bushfire prone lands.

BFPL is identified by Council and mapping prepared, which is certified by the Commissioner of the RFS, for the purposes of Section 10.3 of the EP&A Act.

I have conducted a search of the NSW RFS online bush fire prone land tool, the land selected is identified as Category 3 (grassland) bush fire prone vegetation.

Fire History

There is no identified fire history for the site.

Vegetation Assessment

The potential bushfire prone vegetation that surrounds the site is grassland within R5 Large Lot Residential land zoning and agricultural landscape management in the locality.

Slopes Influencing Bushfire Behaviour

The bushfire behavior assessment methodology assesses the slope of the land which supports the bushfire prone vegetation.

This high-level study assesses grasslands on generally flat to 0-5 degree slopes.

Fire Runs

Managed rural grasslands extend for extensive distances in all directions.

Fire Behaviour

Grassland fire behaviour potential (although likely to be a rural or rural residential managed landscape).

Fire Access

The study areas is surrounded by accessible infrastructure:

- Wee Jasper Road (west)
- Cusak Place (South)

- New Road – Nicholl's Drive/Clayton Street (North)

Future development has potential to facilitate suitable access infrastructure to provide a high level of emergency management and mitigation values to the locality.

3.2.Land Use Assessment

The land use assessment identifies the most appropriate locations within a masterplan area or site layout for the proposed land uses:

- The risk profile of different areas of the development layout based on the landscape study;
- The proposed land use zones and permitted uses;
- The most appropriate siting of different land uses based on risk profiles within the site (i.e. not locating development on ridge tops, SFPP development to be located in lower risk areas of the site);
- The impact of the siting any APZ provision.

At this stage the development and concept designs are not confirmed.

The aims and objectives of PBP 2019 are required, and future development must demonstrate how it meets the aims and objectives of PBP 2016, and the acceptable performance provisions in relation to asset protection zones and landscaping, building construction, access, water supply and services, and emergency and evacuation planning.

3.3.Access

Any new development will apply access provision in accordance with LEP requirements, and will include the through road access provisions, such that the design would comply with the intent of the PBP access provision. The site and surrounding urban development provide the foundations to fulfil the access design requirements.

3.4.Emergency Services

The development must consider the future impact of new development on emergency services.

- Consideration of the increase in demand for emergency services responding to any emergency; and
- Impact on the ability of emergency services to carry out fire suppression in an emergency.

3.5.Infrastructure

An assessment would be made of the issues associated with infrastructure and utilities.

- The ability of the reticulated water system to deal with emergency in terms of pressures, flows, and spacing of hydrants; and
- Life safety issues associated with fire and proximity to high voltage power lines, natural gas supply lines etc.

The site would be serviced by reticulated water, fire hydrant spacing, sizing and pressures complying with AS 2419.1 – 2005. The water services would be planned and designed, such that PBP acceptable solution requirements for water would be achievable.

3.6.APZ

There is a significant potential the NSW RFS could request APZ to perimeter Lots that are directly adjacent to unmanaged grassland.

At this stage of planning, it is identified that a majority of the surrounding lands are either managed or will be developed in the near future.

It is recommended that any development does not apply land management constraints or requirements on adjacent land users, and that the development is self-sufficient with respect to grassland fire management.

The adjacent landholdings that are deemed potentially as having less stringent grassland management are:

- Lot 52 DP1255194 (north west)
- Lot 1 DP1096709 (south west)
- Lot 1 DP1108816 (west)

As a general rule, future design should consider a contingency plan to allow for a 10m APZ provision to perimeter areas that interface grasslands that could constitute a bushfire risk.

Further to this, any staging should provide a 50m buffer to grasslands around each development stage (managed to APZ standards) to ensure BAL Low is achieved at future residential dwellings.

3.7.Adjoining Land

The development will consider the impact of new development on adjoining landowners and their ability to undertake bush fire management.

- Consideration of the implications of a change in land use on adjoining land including increased pressure on BPMs through the implementation of Bush Fire Management Plans.

The proposal to rezone and develop the study area will not require any bushfire management actions to be placed on adjoining lands.

4. Conclusion

The site is mapped as Category 3 bushfire prone vegetation, and has been determined. The development for residential subdivision will be referred the NSW RFS under EP&A Act s.4.15.

At this stage, there is no specific development design concept, and the economic value of the land is dependent upon development capacity and the environmental constraints, including potential bushfire planning constraints.

The proposed future land use (residential) can be a relatively bushfire resilient development and future potential bushfire constraints should be considered at the master planning stage.

The site is surrounded by a mixed use of agriculture (grasslands), powerline easements, large lot residential living and standard residential lots.

A proposed residential development concept design would have capacity to offer acceptable bushfire protection measures, which would provide for the protection of life/safety and assets and minimise the impacts on the environmental (where suitably practical):

- The location and future concept designs have potential to be managed such that the site is not considered a high bushfire risk area.
- It is likely that the bushfire protection measures (namely APZ, access and water supply) will adequately demonstrate compliance with PBP 2019.
- The overall development reduces the bushfire risk in the locality, and future development will offer acceptable planning and design that provide resilience to bushfire threat.

In summary, the broad principles which apply to a bushfire strategic study can be met:

- The site is suitable for development in the context of bush fire risk;
- New development can comply with PBP, and residential subdivision approvals;
- The planning and design would avoid performance-based (alternate) solutions and could provide a 'deemed to satisfy' (DTS) design;
- The planning and design would provide for adequate infrastructure associated with emergency management; and
- The planning and design would facilitate appropriate ongoing land management practices (vegetation management, easements).

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References

Southern Tablelands Bush Fire Risk Management Plan. Prepared by Southern Tablelands Bush Fire Management Committee Pursuant to section 52 of the Rural Fires Act 1997

NSW Rural Fire Service (2019). Planning for Bushfire Protection: A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners. Australian Government Publishing Service, Canberra

NSW Government (1979) Environmental Planning and Assessment Act 1979. NSW Government Printer