

BAL Assessments

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Level 12, 99 William Street,
Melbourne VIC 3000
Att: Matthew Knox
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2 April 2024

Dear Matthew

Bushfire Risk Assessment: Bena Rd 99, Korumburra

This report has been prepared as a bushfire risk assessment to guide the development plan stages for a planned subdivision on an existing lot in Korumburra, Shire of South Gippsland.

The lot covered by this assessment (the site) is:

- 1\PS321371

We inspected the site on 27 August 2023

This report updated our report dated 13 February 2024 in accordance with council's letter dated 8 March 2024.

The Planning scheme has a fundamental provision at [Planning Policy Framework \(PPF\) clause 13.02](#) that simply put says that bushfire and life safety must be fundamental to every planning decision.

We believe that the subject properties can be developed in a way that successfully meets the policies as detailed in the Planning Policy Framework (PPF) clause 13.02. The bushfire risk to this site is low and is far less than large parts of Victoria. With the required measures in place development is appropriate.

Under the Planning Policy Framework clause 13.02, land within a designated Bushfire Prone Area (BPA); subject to a Bushfire Management Overlay (BMO); or "*proposed to be used or developed in a way that may create a bushfire hazard*" have to be able "*To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life.*" Furthermore the [Operation of the Planning Policy Framework clause 71.02-3](#) states in part "*..... However, in bushfire affected areas, planning authorities and responsible authorities must prioritise the protection of human life over all other policy considerations.*"

The subject property is in a designated Bushfire Prone Area. The subject property is not in a Bushfire Management Overlay Area. The subject property will not be subject to development that may create a bushfire hazard ie such as would a tree harvesting plantation.

Proposals at the "settlement" scale have to be able to achieve defendable space for a BAL-12.5 (viz. less than 12.5 kilowatts/square metre of radiant heat flux (RHF)) under AS3959 *Construction of Buildings in Bushfire-prone Areas* (Standards Australia, 2018) for all subsequently created building envelopes. In accordance with [Planning Advisory Note 68 \(March 2018\)](#) the application that is the subject of this review is not of a "Settlement Planning" nature where BAL-12.5 is required to be achieved. The land is currently zoned General Residential Zone.

Bushfire Risk Assessment: Bena Rd 99, Korumburra

For proposals other than at the settlement scale ie where the buildings have to be able to achieve defendable space for a BAL-12.5 (viz. less than 12.5 kilowatts/square metre of radiant heat flux), then a range of defendable space distances/BAL ratings are available. Using AS3959-2018 *Construction of Buildings in Bushfire-prone Areas* (Standards Australia, 2018) we have accede to council's request and provided the required defendable space for BAL-12.5 only at this time.

The methodology used for this report was to assess the perimeter of the proposed development both by physical on the ground inspection, drone survey, review of subscription service high resolution and generally up to date aerial photos, publicly available topographical and ecological maps and other information then assign, in accordance with AS3959-2018, to discrete sections, the relevant vegetation classification and topography under the classifiable vegetation for vegetation **off** the site but within the 100m assessment zone. We then have assigned to these sections the required defendable space, in accordance with AS3959, by which any dwelling building envelope must be setback from the perimeter of the development to achieve a range of BAL construction rating and no more than the allowable radiant heat flux. The reason the setback is from the perimeter of the development is that the current and subsequent owners of the subject site(s) have no control as to the management of the vegetation outside the property boundaries. This "defendable space" is in effect a **Building Exclusion Zone** and can be made up of perimeter roads, common areas such as maintained sports ground/playgrounds and building setbacks on individual lots as well as maintained buffer zones (if required). Defendable space is a fuel reduced zone with restrictions on surface & elevated fuels ie vegetation as well as canopy cover.

Areas such as this in newly opened up farming areas need to be carefully planned at the perimeter of the development **if** this development is the first to be constructed. The reason being that while the pastureland currently bordering the development is relatively benign from a fire perspective it still has to be classified under AS3959 as unmaintained Grassland (Grassland is an area where the grass is or has the potential to be greater than 100mm high for more that short periods) and the applicable defendable space applied. This defendable space would then become un-necessary once the adjoining development is constructed however the yield to the subject site has already been lost.

In an effort to solve this dilemma the developer can i) have a higher BAL rating assigned to the lot and have less setback distance or ii) nominate a lower BAL rating with a greater setback and have a Staging Plan that does not allow these lots to be developed until the adjoining lots have been developed at which time no setback would be required.

As unmaintained Grassland is a classifiable vegetation hazard under AS3959 it is important if staged development of the project is planned that the grass on the underdeveloped section(s) of the site is managed to the defendable space standards set out in this. If not, any remaining vegetation could be a hazard to the early stages of development and prevent the principles of PPF 13.02 being obtained. This would also apply to areas of grass that may grow after initial clearing.

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We would note that under VPP 52.47-2.4 AM 5.3 “An application to subdivide land to create 10 or more lots provides a perimeter road adjoining the hazardous vegetation to support fire fighting.” While this land is not in a BMO and therefore technically not subject to cl.52.47 it is a guide to good practice. We believe this clause was mainly aimed at canopied vegetation hazards such as Forest or Woodland however on this site the off-site vegetation hazard is substantially a mixture of Low Threat and Grassland.

While this site is not in a Bushfire Management Overlay (BMO), which is reserved for high-risk areas, the BMO conditions and requirements can be used for good first principles decision guidelines. A Bushfire Hazard Landscape Assessment, in accordance with the [DELWP Technical Guide](#) (Planning Permit Applications Bushfire Management Overlay) has been undertaken and enclosed herewith. Using this guide, we have rated the site as a Landscape Type 1. If we apply the Approved Measures of the Victorian Planning Provisions clause 53.02-4 then it should mitigate the risk from the wider landscape to an acceptable level.

Compliance with AS3959, as required by PPF 13.02, shows the risk has been reduced to an acceptable level on a local scale.

As we have shown later in this report this application can successfully meet the approved measures of the BMO VPP clause 53.02-4 and therefore, we believe the risk is reduced both on a landscape scale and a local scale to an acceptable level.

Construction Bushfire Management Plan

A Construction Bushfire Management Plan must specify, amongst other things:

- Measures to reduce the risk from the fire within the surrounding rural landscape and protect residents from the threat of fire.
- A separation buffer, consistent with the separation distances specified in AS3959, between the edge of development and non-urban areas.
- What adequate opportunities for access and egress will be provided for early residents, construction workers and emergency vehicles.

This report fulfils all of these requirements however for clarity we will summarise the responses here:

- It is considered that the fire risk from the wider landscape is no greater than that assumed by AS3959 and therefore adequately dealt with by the AS3959/VPP defensible space tables and building construction controls. For further detail refer to the individual Bushfire Hazard Site Assessments

Bushfire Risk Assessment: Bena Rd 99, Korumburra

Construction Bushfire Management Plan (con't)

- This report and in particular the Bushfire Hazard Site Assessments have addressed the issue of defensible space calculated in accordance with VPP53.04 table 2 which is based on AS3959 addresses this issue and sufficient defensible space is provided so that the majority of the resulting building areas of the site can achieve a BAL-12.5 rating. Some of the perimeter lots may result in the building area being rated at BAL-29 (<29kW/m²) which is allowed under the BMO clause 52.03 AltM 5.5
- This report and in particular the Bushfire Hazard Landscape Assessment has addressed the issue of access and egress to suitable BAL-Low and Shelter-in-Place areas.

Staging

Intra-stage construction management bushfire protection shall be provided by way slashing breaks a minimum of 20m in width which shall be maintained during the declared fire danger period with grass less than 100mm high.

Included in this report are all the industry standard bushfire risk assessments:

- A Bushfire Hazard Site Assessment
- A Bushfire Hazard Landscape Assessment
- A Bushfire Management Statement
- An assessment against PPF13.02.

With regard to council's letter of **8 March 2024** our report of 13 February dealt with all the issues raised however for clarity we will summarise the responses here:

B. Bushfire assessment detailed

Planning Scheme Reference: Clause 13.02-1S Bushfire planning

- *A bushfire risk assessment of the bushfire hazard and likely fire behaviour at the landscape and local scale be undertaken. This will help you understand the fire context and whether the policy objectives of Clause 13.02-1S have been achieved. A localised bushfire hazard site assessment should identify bushfire hazards, including vegetation classification and relative slopes located within proximity of the site.*

Beyond the whole of the report in general, Bushfire Hazard Site Assessments (BHSA) have been done for each aspect – refer pages 13-18.

A Bushfire Hazard Landscape Assessment has been carried out for the project, refer pages 10-12

- *Information on alternative locations for development and justification as to why the site and surrounds is appropriate to encourage an increase in residential population given the bushfire risk.*

Given the Low-Risk nature of the site it was not deemed necessary to assess alternative areas.

- *Details on the availability of safer areas and evacuation options in the event of an emergency.*

This subject is dealt with within the Bushfire Hazard Landscape Assessment on page 12

Bushfire Risk Assessment: Bena Rd 99, Korumburra

- *Details on the ability of the proposal to achieve radiant heat exposure benchmarks. Bushfire policy seeks that radiant heat exposure no greater than 12.5kW/m² is achieved.*
13.02 specifically allows for BAL ratings higher than BAL-12.5
However, at this time we have limited our assessment to providing defensible space for BAL-12.5 ie a radiant heat exposure no greater than 12.5kW/m², refer the Bushfire Hazard Site Assessment pages 13-18
- *Details of the road networks and access and egress opportunities to and from the site.*
At Development Plan state a subdivision layout is far from fully developed however the basic working model has been included in this report.
Egress to safer areas is dealt with within the Bushfire Hazard Landscape Assessment on page 12
- *Details of any proposed bushfire protection measures to reduce bushfire risk that will form part of the proposal.*
Defensible space is by far the biggest part of the bushfire plan and this can suitably be dealt with on this site.
- *The consideration of vulnerable uses, such as aged care from a bushfire perspective and whether they are appropriately from a bushfire perspective.*
Once the subdivision is developed the Bushfire (Grassfire) risk for all surrounding properties including the aged care will be reduced. The area of the subdivision will be Low Threat and require no defensible space or building setbacks for surrounding properties.
- *Demonstration that the development plan can achieve the provision of hydrants and road standards as per CFA requirements and identifies land that will require defensible space controls (vegetation requirements, building envelopes, fencing requirements etc.).*
Hydrant and road standards are an engineering matter and one for detailed design not a Development Plan. They are normally conditions on a Planning Permit
Bushfire Hazard Site Assessments (BHSA) have been done for each aspect – refer pages 13-18 and these detail the defensible space requirements and building envelopes, if required.

Requirements detailed in this document do not guarantee survival of the buildings or the occupants in a bushfire event for reasons including, as detailed in the foreword to AS 3959-2018 *Construction of Buildings in Bushfire-prone Areas*, the degree of (future) vegetation management, the unpredictable nature and behaviour of fire, and extreme weather conditions. The occupants are strongly encouraged to develop and practice a bushfire survival plan and in accordance with CFA advice a policy of “leave early” is always recommended

As far as practical, could you please check the basic information upon which this report is based and notify us if you find any discrepancies.

Bushfire Risk Assessment: Bena Rd 99, Korumburra

Should you require further information or have any questions with regard to any of the enclosed information please contact John on 0417 885 747.

Yours Sincerely

John Burke

John Burke

BAL Assessments

Enclosed: Planning and Property Information / Subdivision Master Plan / Site Maps / Bushfire Hazard Landscape Assessment / Bushfire Hazard Site Assessments / Defendable Space Vegetation Management requirements / Site Photos / Bushfire Management Statement / Analysis of PPF 71.02-3 and 13.02

For more information regarding our methodology please visit www.BAL.net.au

We work all over Victoria and specialize in:

*Simplified Procedure for determining the **BAL - Method 1 and Detailed Method Method 2** (Appendix B)*

*Bushfire Management Overlay (**BMO**) – Site, Vegetation and Hazard assessments*

*Bushfire Risk Assessments under **PPF 13.02***

***Experts' reports** for VCAT, the Building Appeals Board and Panel Hearings*

Bushfire Risk Assessment: Bena Rd 99, Korumburra

Planning and Property Information

PROPERTY DETAILS

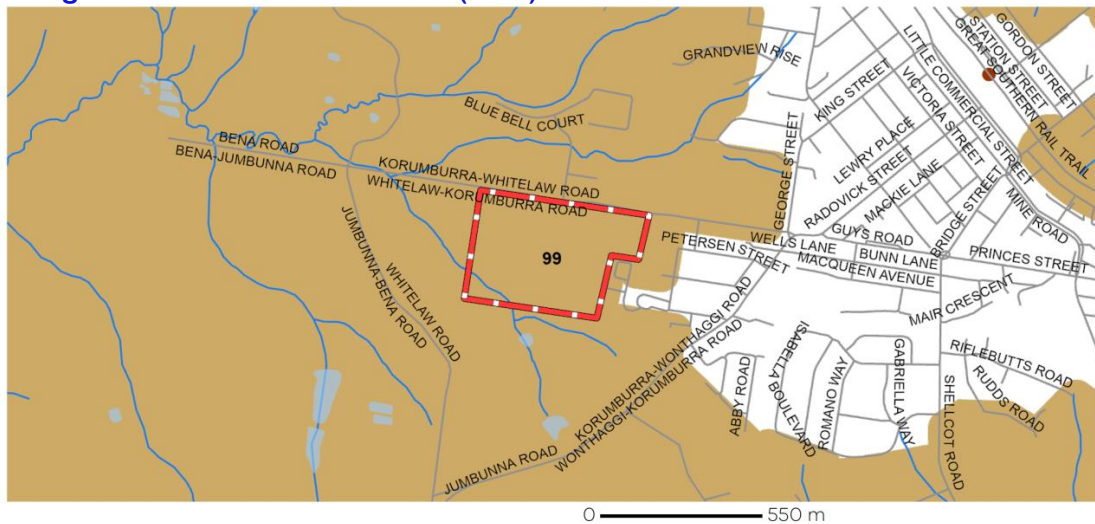
Address: **99 BENA ROAD KORUMBURRA 3950**
 Lot and Plan Number: **Lot 1 PS321371**
 Standard Parcel Identifier (SPI): **1\PS321371**
 Local Government Area (Council): **SOUTH GIPPSLAND**
 Council Property Number: **194821**
 Directory Reference: **Vicroads 96 E8**

www.southgippsland.vic.gov.au

ZONES AND OVERLAYS

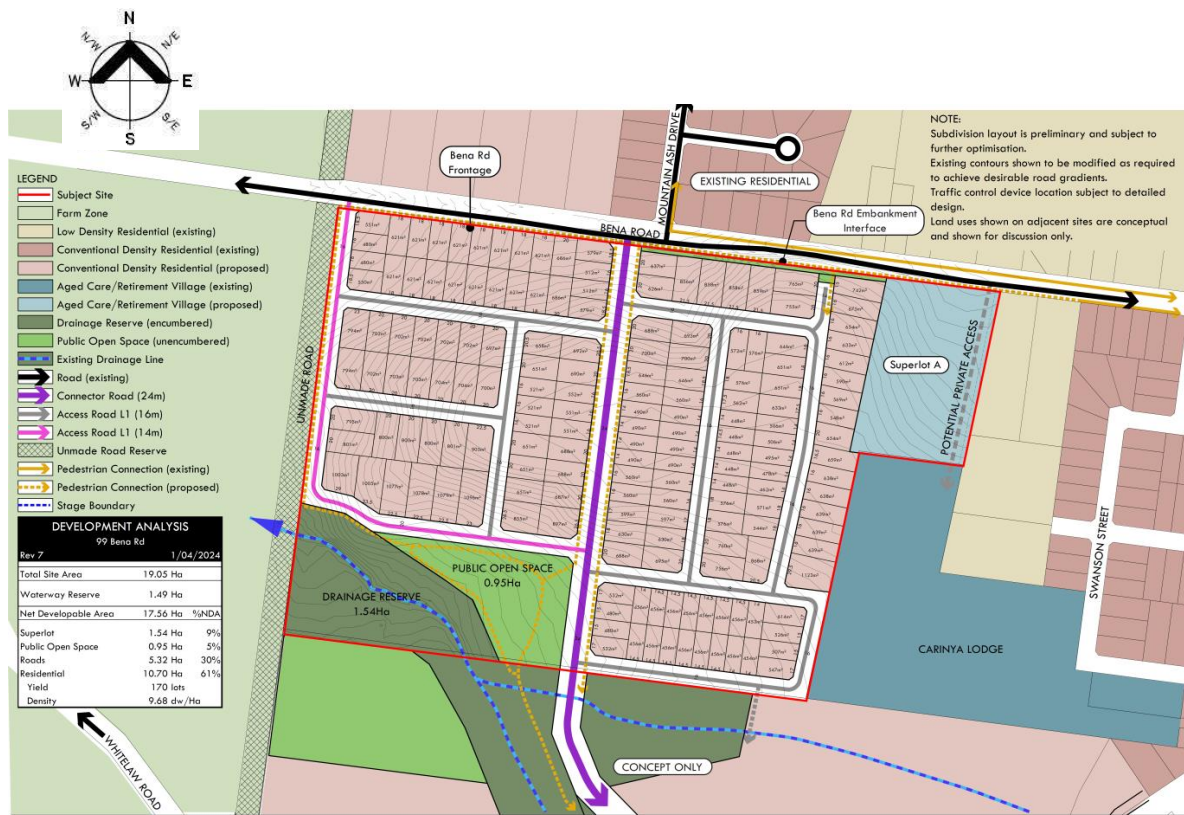
Zone: **GENERAL RESIDENTIAL ZONE (GRZ)
 GENERAL RESIDENTIAL ZONE - SCHEDULE 1 (GRZ1)**
 Overlays: **DEVELOPMENT PLAN OVERLAY (DPO)
 DEVELOPMENT PLAN OVERLAY - SCHEDULE 6 (DPO6)**

Designated Bushfire Prone Area (BPA)



Bushfire Risk Assessment: Bena Rd 99, Korumburra

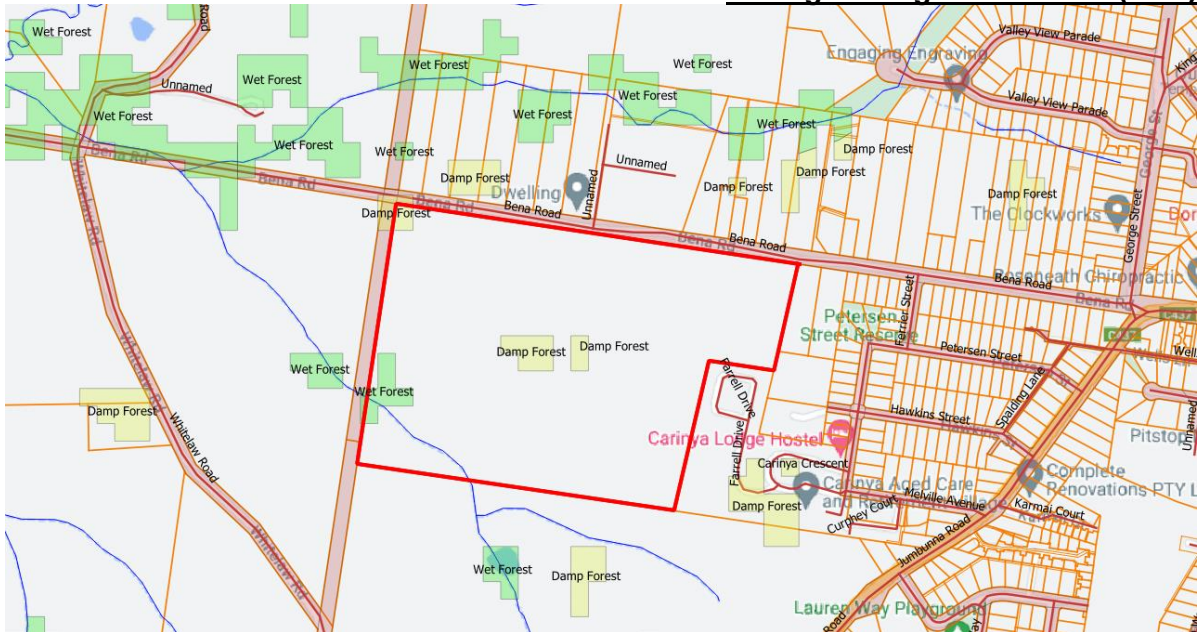
Overall Subdivision Master Plan



Bushfire Risk Assessment: Bena Rd 99, Korumburra

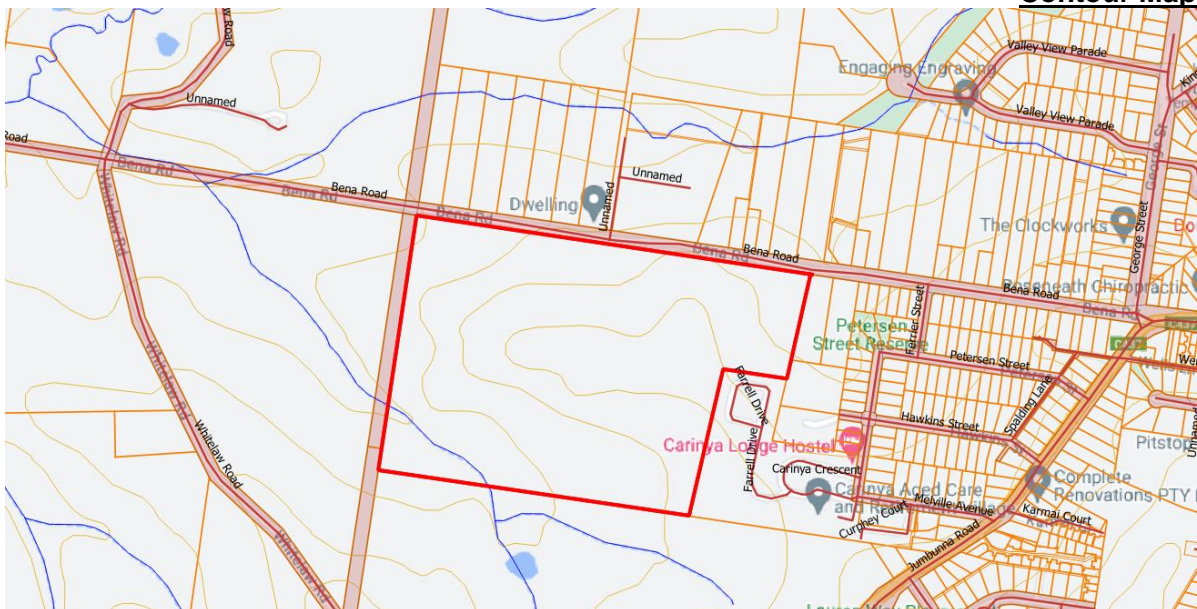
Site Maps

Ecological Vegetation Class (EVC)



Note: There is no natural EVC within 100m of the site. There are patches of canopy trees following some of the waterways however they are all grazed under.

Contour Map



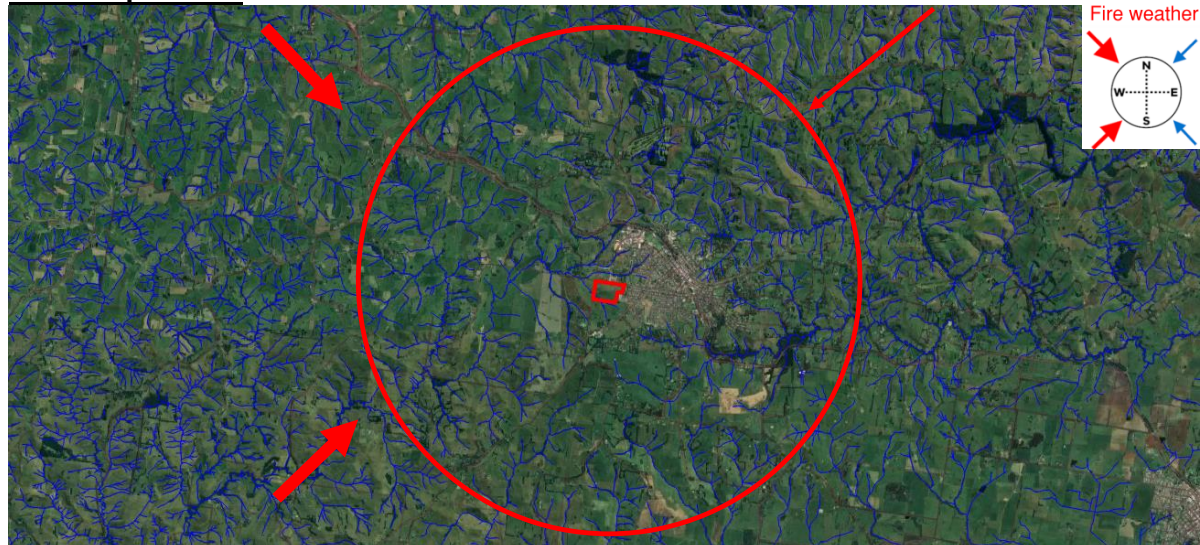
Bushfire Risk Assessment: Bena Rd 99, Korumburra

Bushfire Hazard Landscape Assessment

Neighbourhood Scale



Landscape Scale



It is considered that the fire risk from the wider landscape is no greater than that assumed by AS3959 and therefore adequately dealt with by the AS3959/VPP defensible space tables and building construction controls.

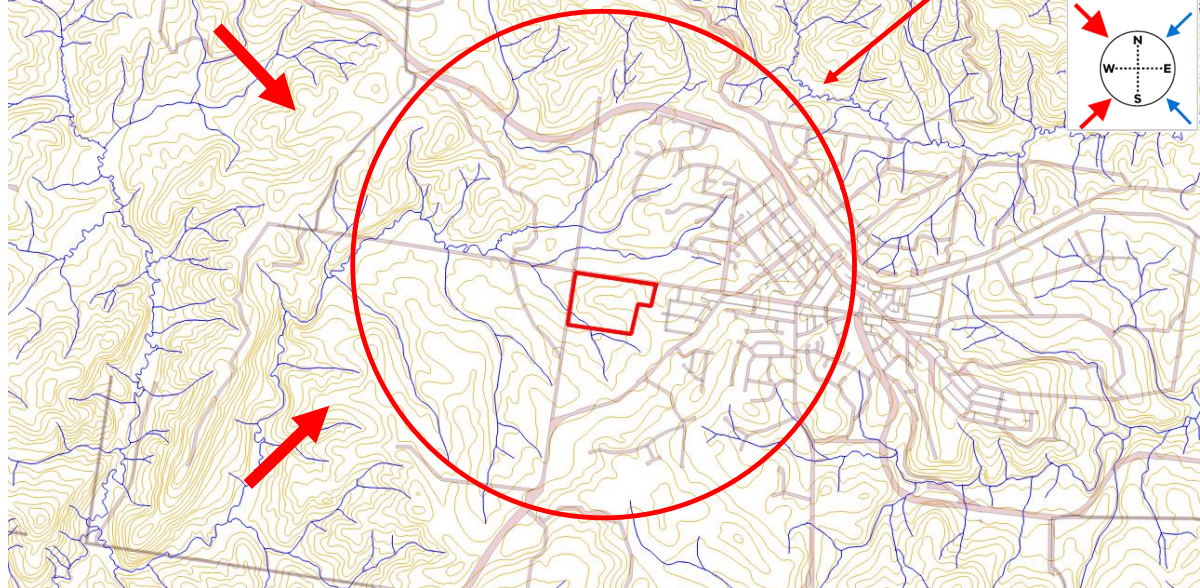
The main fire weather comes from the North-West followed by the South-West (*Long, M (2006) A climatology of extreme fire weather days in Victoria*). There is sufficient distance of modified vegetation in the way of intensively grazed pasture, in these directions to ameliorate any landscape fire and any risk can be credibly dealt with by the AS3959/VPP defensible space and building construction controls.

In accordance with the DELWP Technical Guide ([Planning Permit Applications Bushfire Management Overlay, September 2017](#)), we believe this site is situated in a “Broader Landscape Type 1” area. The landscape risk to this site is low is less than large parts of Victoria. With the required measures in place development is appropriate.

Bushfire Risk Assessment: Bena Rd 99, Korumburra

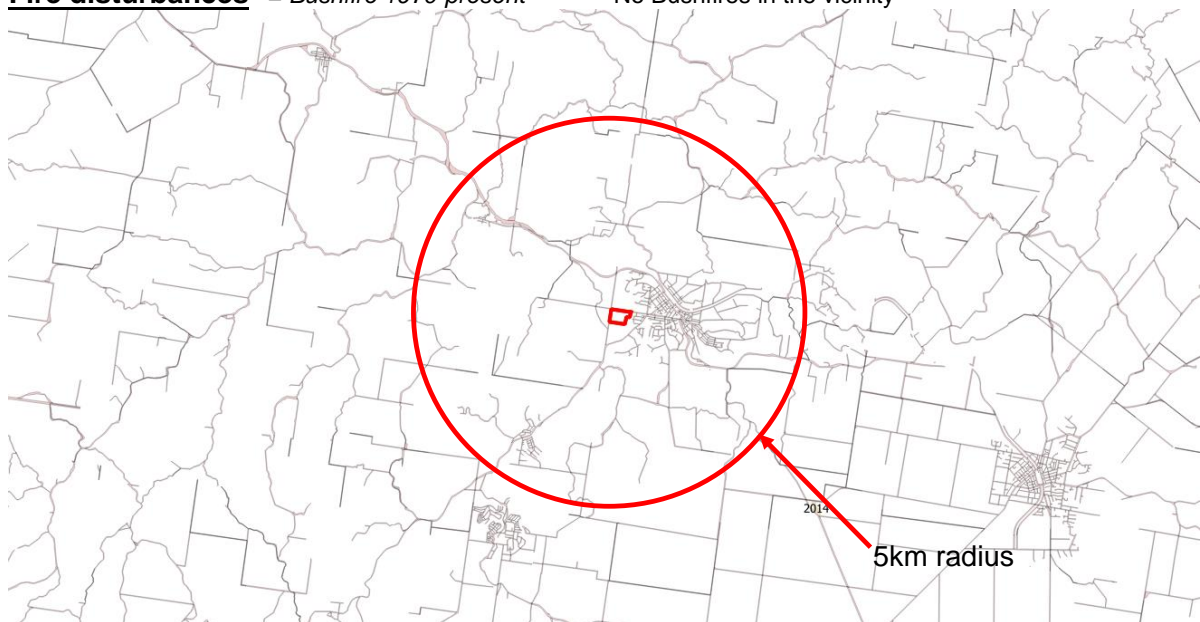
Bushfire Hazard Landscape Assessment

Neighbourhood Scale Contours (1:25,000)



Fire disturbances = *Bushfire 1970-present*

No Bushfires in the vicinity



Bushfire Risk Assessment: Bena Rd 99, Korumburra

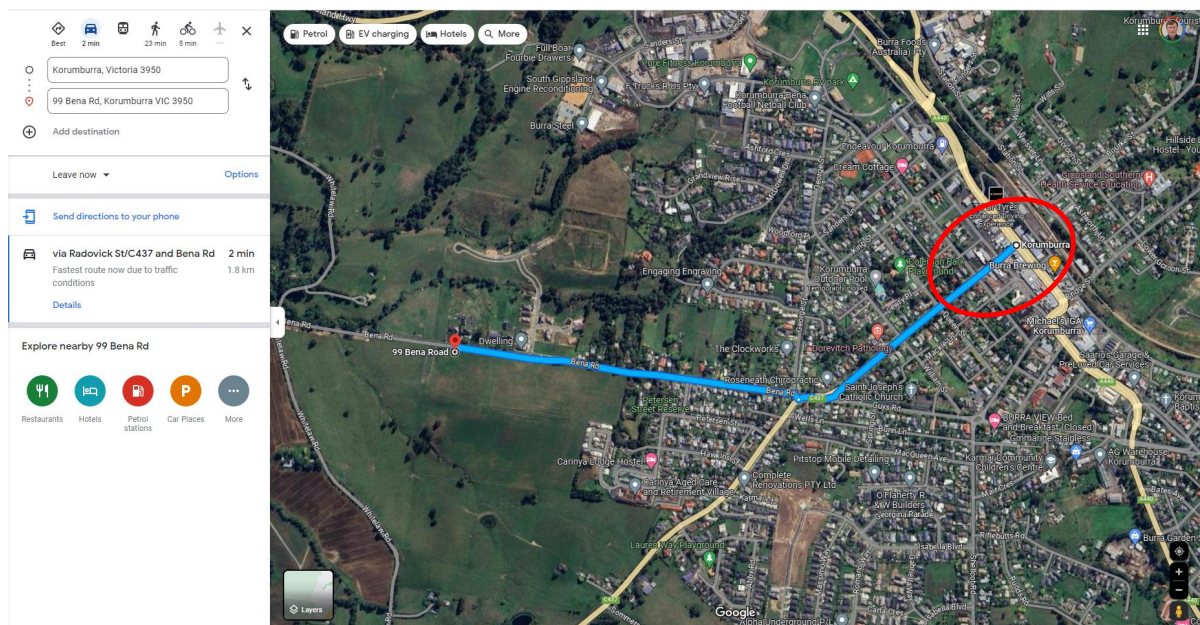
Bushfire Hazard Landscape Assessment

Shelter In Place

No designated NSP-BPLR is available in the area. A ‘Neighbourhood Safer Place’ also known as a ‘Bushfire Place of Last Resort’ (NSP-BPLR) is a place of last resort when all other bushfire plans have failed.

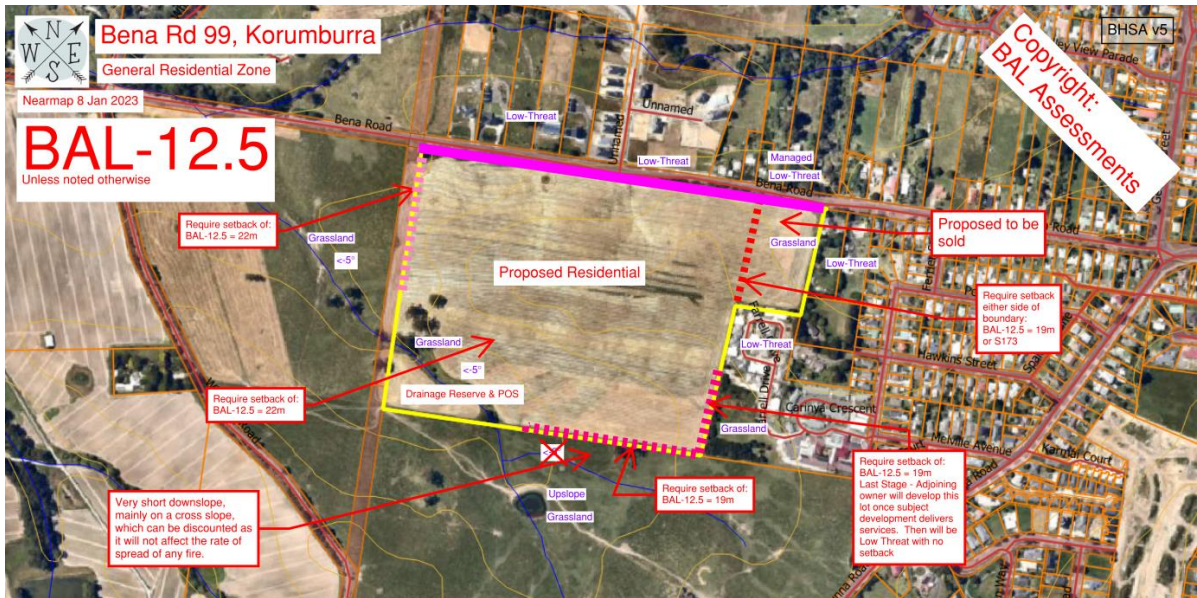
With the appropriate defendable space, the subject site should be suitable for shelter in place if all other bushfire plans have failed. However safe egress is available to suitable BAL-Low shelter in place areas within the adjacent built-up residential areas of Korumburra.

A BAL-Low area is basically an area where there is no “classifiable” bushfire hazard vegetation in accordance with AS3959 within 100m under AS3959.



Bushfire Risk Assessment: Bena Rd 99, Korumburra

Bushfire Hazard Site Assessment - NORTH

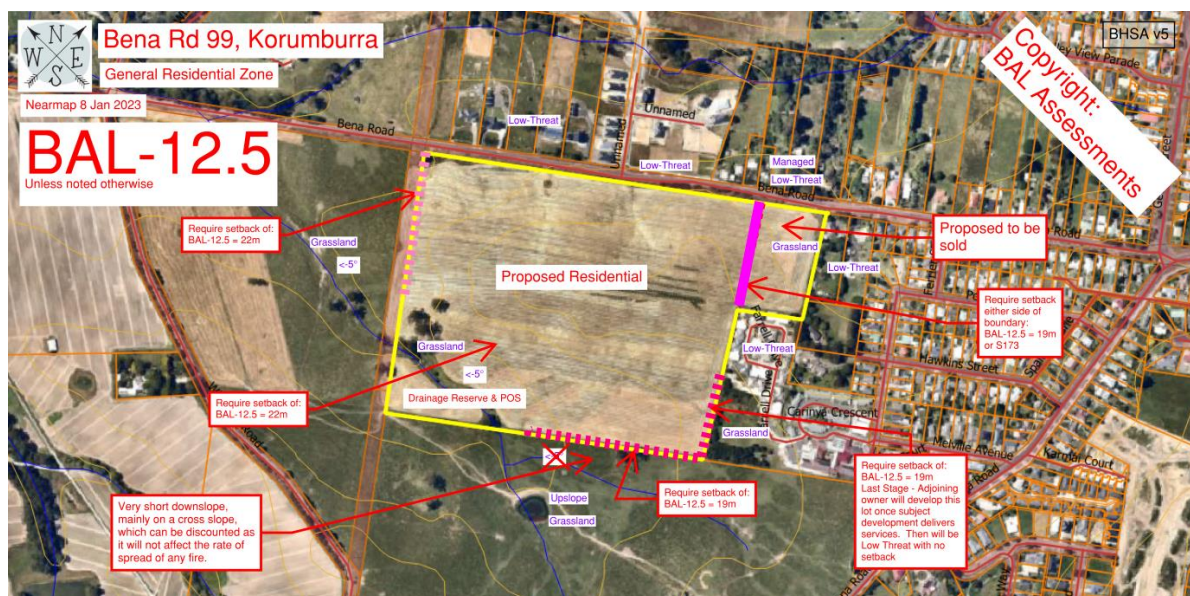


This section is bordered by a road reserve of approximately 20m width for Bena Rd.

On the far side of Bena Rd are a number of developed properties which have been classified as Low Threat.

The following defendable space from this boundary of the development would be required:

$$\text{BAL-12.5} = 0\text{m}$$

Bushfire Risk Assessment: Bena Rd 99, Korumburra**Bushfire Hazard Site Assessment – EAST – North section**

This section is bordered by a super lot which is under contract to be sold and presumably further developed as an Aged Care Facility although no control can be exercised over this.

Currently this super lot must be classified as Grassland on Flat land and defendable space applied accordingly.

This defendable space could be on either side of the boundary or on the super lot itself by way of a S173 agreement.

It is recommended that this is one of the last stages to be developed so that the development of the super lot becomes clearer.

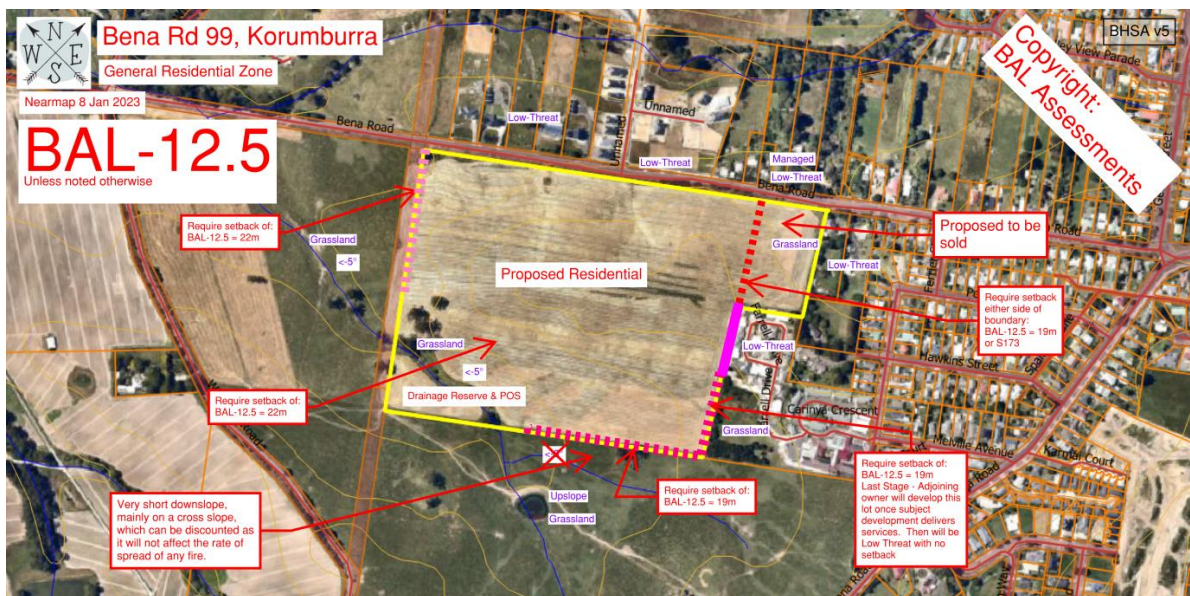
Until then the following defendable space from this boundary of the development would be required:

$$\text{BAL-12.5} = 19\text{m}$$

Once the subdivision is developed the Bushfire (Grassfire) risk for all surrounding properties including the aged care will be reduced. The area of the subdivision will be Low Threat and require no defendable space or building setbacks for surrounding properties.

Bushfire Risk Assessment: Bena Rd 99, Korumburra

Bushfire Hazard Site Assessment – EAST – Central section



This section is directly bordered by the Carinya Aged Care facility which is considered to be Low Threat.

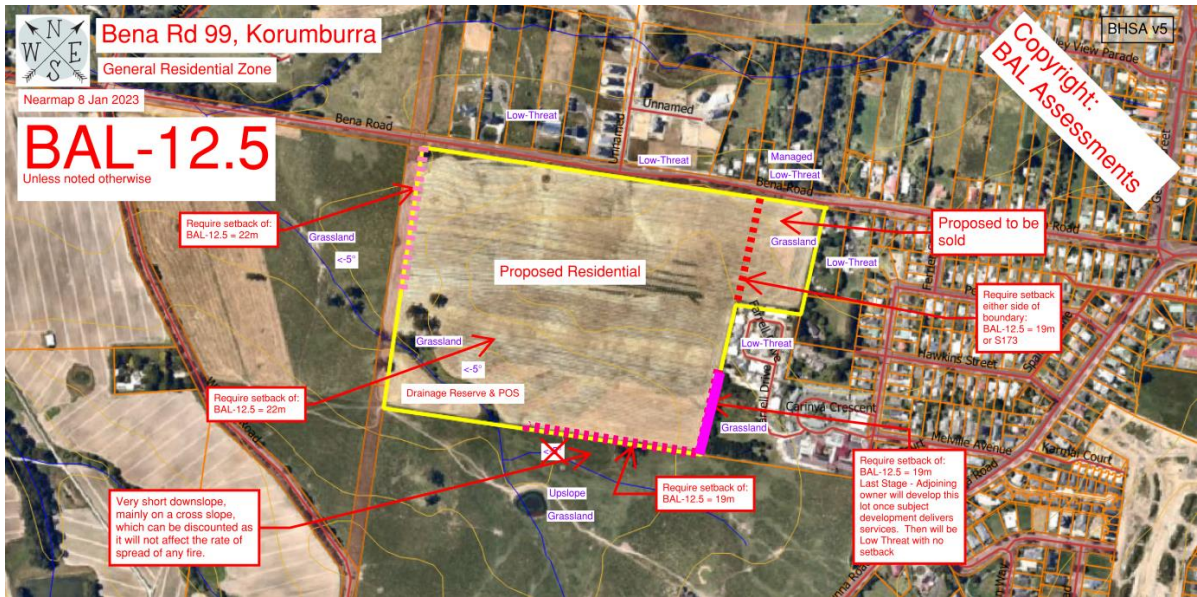
The following defendable space from this boundary of the development would be required:

BAL-12.5 = 0m

Once the subdivision is developed the Bushfire (Grassfire) risk for all surrounding properties including the aged care will be reduced. The area of the subdivision will be Low Threat and require no defendable space or building setbacks for surrounding properties.

Bushfire Risk Assessment: Bena Rd 99, Korumburra

Bushfire Hazard Site Assessment – EAST – South section



This section is directly bordered by unused land owned by the Carinya Aged Care facility which is currently is considered to be classified as Grassland on Flat land.

We are advised that the Carinya Aged Care facility is planning to develop this area when the subject development (Bena Rd 99, Korumburra) delivers services to this area.

It is recommended that this is one of the last stages to be developed so that the development of this area becomes clearer.

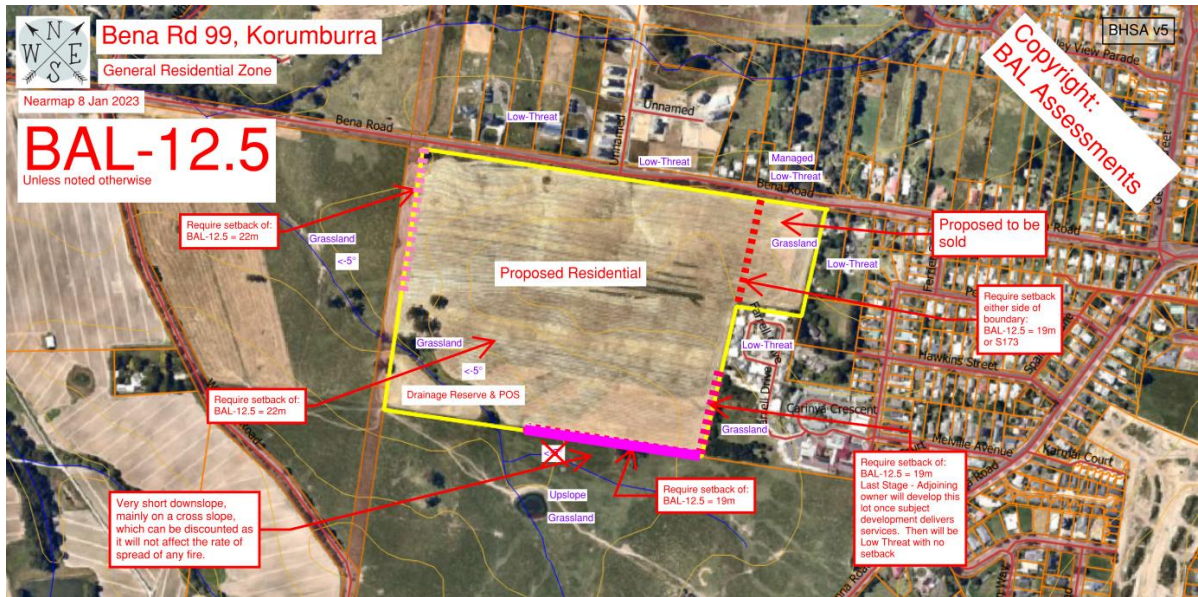
Until then the following defendable space from this boundary of the development would be required:

BAL-12.5 = 19m

Once the subdivision is developed the Bushfire (Grassfire) risk for all surrounding properties including the aged care will be reduced. The area of the subdivision will be Low Threat and require no defendable space or building setbacks for surrounding properties.

Bushfire Risk Assessment: Bena Rd 99, Korumburra

Bushfire Hazard Site Assessment – SOUTH – East section



This section is bordered by grassland to the south.

Slope: Upslope

Immediately over the boundary there is a very short downslope over no more than 20-30m, mainly on a cross slope, which can be discounted as it will not affect the rate of spread of any fire.

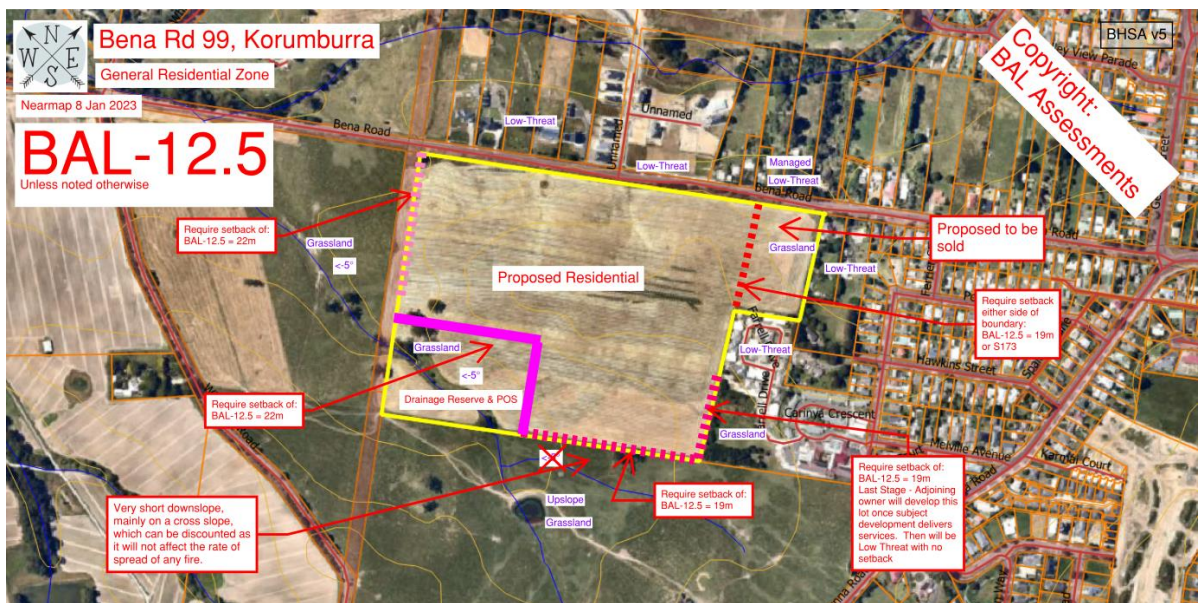
It is recommended that this is the last stage to be developed and that this stage is not developed until the property to the south is developed. At which time that property will become low threat and defendable space will no longer be needed.

Until then the following defendable space from this boundary of the development would be required:

$$\text{BAL-12.5} = 19\text{m}$$

Bushfire Risk Assessment: Bena Rd 99, Korumburra

Bushfire Hazard Site Assessment – SOUTH – West section



This section is made up of the Drainage Reserve and an area set aside for Public Open Space.

The Drainage Reserve will be planted out with native grasses and could even have scattered trees. It is classified as unmanaged Grassland.

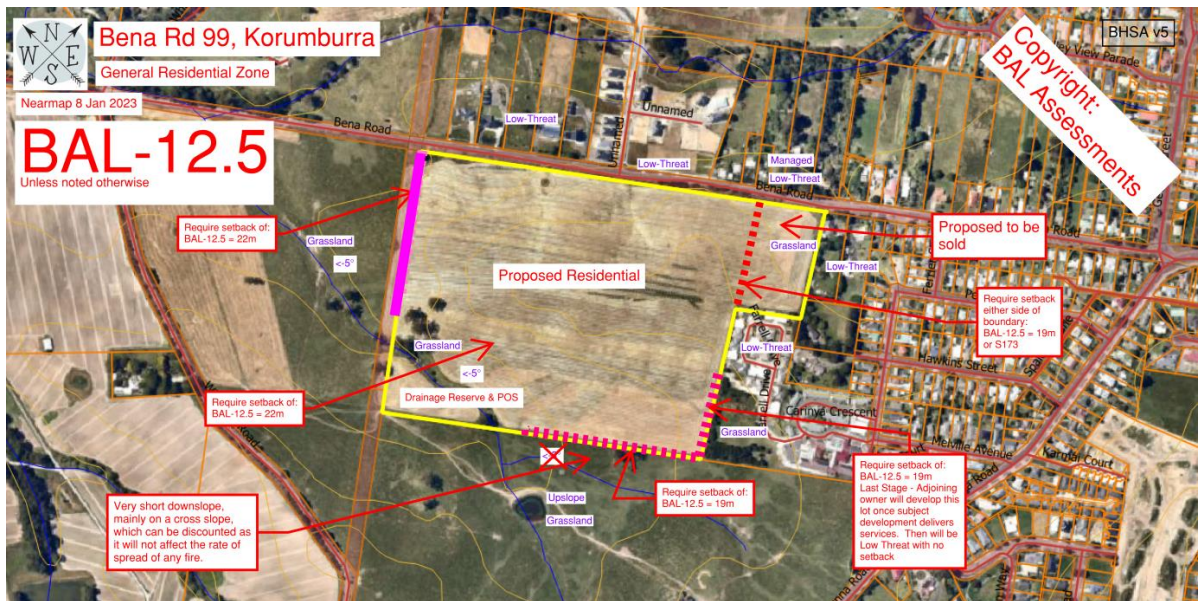
The management of the Public Open Space is unknown so to be conservative we have classified this area as Grassland and required the appropriate setback.

The setback can be partly on the public open space, it can be made up by one of the subdivisions' roads and it can include a setback on the residential lots as well.

$$\text{BAL-12.5} = 22\text{m}$$

Bushfire Risk Assessment: Bena Rd 99, Korumburra

Bushfire Hazard Site Assessment - WEST



This section borders an unmade road reserve followed by a pasture paddock both of which as classified as Grassland on a -5° slope

The setback can be made up by one of the subdivisions' roads and it can include a setback on the residential lots as well.

The following defensible space from this boundary of the development would be required:

$$\text{BAL-12.5} = 22\text{m}$$

Bushfire Risk Assessment: Bena Rd 99, Korumburra

Defendable Space

Defendable space is a fuel reduced zone with restrictions on surface & elevated fuels ie vegetation as well as canopy cover.

Below is the vegetation management standard for this fuel reduced zone.

Defendable Space

Defendable space to a distance of {Refer Bushfire Hazard Site Assessments} metres around the proposed building(s) is provided and is managed in accordance with the following requirements:

- Grass must be short cropped and maintained during the declared fire danger period.
- All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.
- Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building.
- Plants greater than 10 centimetres in height must not be placed within 3m of a window or glass feature of the building.
- Shrubs must not be located under the canopy of trees.
- Individual and clumps of shrubs must not exceed 5 sq. metres in area and must be separated by at least 5 metres.
- Trees must not overhang or touch any elements of the building.
- **The canopy of trees must be separated by at least 5 metres.**
- There must be a clearance of at least 2 metres between the lowest tree branches and ground level.

Also take into account the following from AS3959-2018 *Construction of Buildings in Bushfire-prone Areas* (Standards Australia, 2018),

NOTE: Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognizable as short-cropped grass for example, to a nominal height of 100 mm).

References:

CFA Recommendations for Defendable Space

https://www.cfa.vic.gov.au/articledocuments/400/BMO-Individual-conditions-defendable_space-Oct-2017.pdf.aspx
and

Victorian Planning Provisions clause 53.02 Table 6

<https://planning-schemes.app.planning.vic.gov.au/Victoria%20Planning%20Provisions/ordinance/53.02>

Requirements detailed in this document do not guarantee survival of the buildings or the occupants in a bushfire event for reasons including, as detailed in the foreword to AS3959 Construction of Buildings in Bushfire-prone Areas, the degree of {future} vegetation management, the unpredictable nature and behaviour of fire, and extreme weather conditions. The occupants are strongly encouraged to develop and practice a bushfire survival plan and in accordance with CFA advice a policy of "leave early" is always recommended.

Bushfire Risk Assessment: Bena Rd 99, Korumburra

Site Photographs

≈ North boundary of proposed works facing east



≈ North of proposed works



Bushfire Risk Assessment: Bena Rd 99, Korumburra

Site Photographs

≈ North-East of proposed works (Super Lot)



≈ North-East of proposed works (Super Lot)



Bushfire Risk Assessment: Bena Rd 99, Korumburra

Site Photographs

≈ East boundary of proposed works facing south



≈ East of proposed works



Bushfire Risk Assessment: Bena Rd 99, Korumburra

Site Photographs

≈ South-East of proposed works



≈ South-East of proposed works



Bushfire Risk Assessment: Bena Rd 99, Korumburra

Site Photographs

≈ South boundary of proposed works facing west



≈ South of proposed works



Bushfire Risk Assessment: Bena Rd 99, Korumburra

Site Photographs

≈ South of proposed works



≈ South-West of proposed works (future reserve)



Bushfire Risk Assessment: Bena Rd 99, Korumburra

Site Photographs

≈ West boundary of proposed works facing north



≈ West of proposed works



Bushfire Risk Assessment: Bena Rd 99, Korumburra

Bushfire Management Statement

Pursuant to the *Bushfire Management Overlay*; clause 53.02 of the Victorian Planning provisions requires that development is only permitted if the risk to life, property and community infrastructure can be reduced to an acceptable level. Clause 53.02 contains various Objectives, Approved Measure (AM), Alternative Measures (AltM) and Decisions Guidelines.

*It is noted that in relation to this assessment the relevant VPP defensible space table (Table 2) has been drawn from AS3959 and complies with AS3959.

The following table demonstrates how the requirements have been achieved and complied with:

REQUIREMENTS	COMPLIANCE
53.02-4 Bushfire Protection objectives	
53.02-4.1 Landscape, Siting and Design objectives	
<p>Development is appropriate having regard to the nature of the bushfire risk arising from the surrounding landscape.</p> <p>Development is sited to minimise the risk from bushfire.</p> <p>Development is sited to provide safe access for vehicles, including emergency vehicles. Building design minimises vulnerability to bushfire attack.</p>	<p><i>While this area is not in a Bushfire Management Overlay (BMO), which is reserved for high-risk areas, the BMO conditions and requirements can be used for good first principles decision guidelines. A Bushfire Hazard Landscape Assessment, in accordance with the DELWP Technical Guide (Planning Permit Applications Bushfire Management Overlay) has been undertaken and enclosed herewith. Using this guide have rated the site as a Landscape Type 1. If we apply the Approved Measures of the Victorian Planning Provisions clause 53.02-4 then it should mitigate the risk from the wider landscape to an "acceptable level".</i></p> <p><i>Compliance with AS3959, as required by PPF 13.02, shows the risk has been reduced to an acceptable level on a local scale.</i></p> <p><i>This application can successfully meet the Approved and/or Alternative Measures of the BMO VPP clause 53.02-4 and therefore we believe the risk is reduced both on a landscape scale and a local scale to an acceptable level.</i></p>
Approved Measure 2.1	
The bushfire risk to the development from the landscape beyond the site can be mitigated to an acceptable level.	<i>It is considered that the fire risk from the wider landscape is no greater than that assumed by AS3959 and therefore adequately dealt with by the *VPP defensible space tables.</i>
Approved Measure 2.2	
<p>A building is sited to ensure the site best achieves the following:</p> <ul style="list-style-type: none"> The maximum separation distance between the building and the bushfire hazard. The building is in close proximity to a public road. Access can be provided to the building for emergency service vehicles. 	<p><i>The site does meet the Defensible Space setback requirements of the "BMO" when calculated with the relevant *VPP Table</i></p> <p><i>Alternative siting of the buildings would not improve fire protection.</i></p> <p><i>The buildings are all in close proximity to the subdivision roads where safe egress and access is easily available.</i></p> <p><i>This application will comply with the requirement as contained in Table 5 to Clause 53.02-5.</i></p>
Approved Measure 2.3	
A building is designed to be responsive to the landscape risk and reduce the impact of bushfire on the building.	<i>This will be dealt with at detailed design stage</i>

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53.02-4.2 Defendable space and construction objectives	
Defendable space and building construction mitigate the effect of flame contact, radiant heat and embers on buildings	<i>As demonstrated below by the compliance with all applicable Approved Measures and/or Alternative Measure it has been shown that this development will reduce the Bushfire risk to an acceptable level.</i>
Approved Measure 3.1	
<p>A building used for a dwelling (including an extension or alteration to a dwelling), a dependant person's unit, industry, office or retail premises is provided with defendable space in accordance with:</p> <ul style="list-style-type: none"> • Table 2 Columns A, B or C and Table 6 to Clause 53.02-5 wholly within the title boundaries of the land; or • If there are significant siting constraints, Table 2 Column D and Table 6 to Clause 53.02-5. <p>The building is constructed to the bushfire attack level that corresponds to the defendable space provided in accordance with Table 2 to Clause 53.02-5.</p>	<p><i>The site does meet the Defendable Space setback requirements of the "BMO" when calculated with the relevant *VPP Table 2 Columns A, B or C</i></p> <p><i>Not Applicable</i></p> <p><i>Defendable space will be provided for distances in accordance with *Table 2 Columns A, B or C and AS3959.</i></p>
Approved Measure 3.2	
<p>A building used for accommodation (other than a dwelling or dependent person's unit), a child care centre, an education centre, a hospital, leisure and recreation or a place of assembly is:</p> <ul style="list-style-type: none"> • Provided with defendable space in accordance with Table 3 and Table 6 to Clause 53.02-5 wholly within the title boundaries of the land. • Constructed to a bushfire attack level of BAL12.5. 	<i>Not Applicable</i>
Alternative Measure 3.3	
Adjoining land may be included as defendable space where there is a reasonable assurance that the land will remain or continue to be managed in that condition as part of the defendable space.	<i>Not Applicable</i>
Alternative Measure 3.4	
Defendable space and the bushfire attack level is determined using Method 2 of AS3959:2009* Construction of buildings in bushfire prone areas (Standards Australia) subject to any guidance published by the relevant fire authority. *(superseded by 2018 edition)	<i>Not Applicable</i>

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<p>Alternative Measure 3.5</p> <p>A building used for a dwelling (including an extension or alteration to a dwelling) may provide defensible space to the property boundary where it can be demonstrated that:</p> <ul style="list-style-type: none"> • The lot has access to urban, township or other areas where: <ul style="list-style-type: none"> ▪ Protection can be provided from the impact of extreme bushfire behaviour. ▪ Fuel is managed in a minimum fuel condition. ▪ There is sufficient distance or shielding to protect people from direct flame contact or harmful levels of radiant heat. • Less defensible space and a higher construction standard is appropriate having regard to the bushfire hazard landscape assessment. • The dwelling is constructed to a bushfire attack level of BAL FZ. <p>This alternative measure only applies where the requirements of AM 3.1 cannot be met.</p>	<p><i>Not Applicable</i></p>
<p>Alternative Measure 3.6</p> <p>A building used for accommodation (other than a dwelling or dependent person's unit), child care centre, education centre, hospital, leisure and recreation or place of assembly may provide defensible space in accordance with Table 2 Columns A, B or C and Table 6 to Clause 53.02-5 where it can be demonstrated that:</p> <ul style="list-style-type: none"> • An integrated approach to risk management has been adopted that considers: <ul style="list-style-type: none"> ▪ The characteristics of the likely future occupants including their age, mobility and capacity to evacuate during a bushfire emergency. ▪ The intended frequency and nature of occupation. ▪ The effectiveness of proposed emergency management arrangements, including a mechanism to secure implementation. • Less defensible space and a higher construction standard is appropriate having regard to the bushfire hazard landscape assessment. 	<p><i>Not Applicable</i></p>
<p>Other unspecified Alternative Measures</p>	<p><i>Not Applicable</i></p>

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53.02-4.3 Water supply and access objectives	
A static water supply is provided to assist in protecting property. Vehicle access is designed and constructed to enhance safety in the event of a bushfire.	<i>As demonstrated below by the compliance with all applicable Approved Measures and/or Alternative Measure it has been shown that this development will reduce the Bushfire risk to an acceptable level.</i>
Approved Measure 4.1	
A building used for a dwelling (including an extension or alteration to a dwelling), a dependant person's unit, industry, office or retail premises is provided with: <ul style="list-style-type: none"> • A static water supply for firefighting and property protection purposes specified in Table 4 to Clause 53.02-5. • Vehicle access that is designed and constructed as specified in Table 5 to Clause 53.02-5. <p>The water supply may be in the same tank as other water supplies provided that a separate outlet is reserved for firefighting water supplies.</p>	<p><i>This requirement is not required when not is a BMO and Hydrants will be provided in accordance with CFA requirements: "Vehicle Access and Water Supply Requirements in Residential Developments"</i></p> <p><i>This application will comply with the requirement as contained in Table 5 to Clause 53.02-5 to the extent relevant, refer also: "Vehicle Access and Water Supply Requirements in Residential Developments"</i></p>
Approved Measure 4.2	
A building used for accommodation (other than a dwelling or dependent person's unit), child care centre, education centre, hospital, leisure and recreation or place of assembly is provided with: <ul style="list-style-type: none"> • A static water supply for firefighting and property protection purposes of 10,000 litres per 1,500 square metres of floor space up to 40,000 litres. • Vehicle access that is designed and constructed as specified in Table 5 to Clause 53.02-5. • An integrated approach to risk management that ensures the water supply and access arrangements will be effective based on the characteristics of the likely future occupants including their age, mobility and capacity to evacuate during a bushfire emergency. <p>The water supply may be in the same tank as other water supplies provided that a separate outlet is reserved for firefighting water supplies.</p>	<i>Not Applicable</i>
Other unspecified Alternative Measures	
	<i>Not Applicable</i>

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Operation of the Planning Policy Framework (PPF) clause 71.02-3 and in more detail in PPF clause 13.02 of the Victorian Planning provisions requires that planning authorities and responsible authorities must prioritise the protection of human life over all other policy considerations

The following table demonstrates how the requirements have been achieved and complied with:

REQUIREMENTS	COMPLIANCE
71.02-3 Integrated decision making	
..... However in bushfire affected areas, planning authorities and responsible authorities must prioritise the protection of human life over all other policy considerations	<i>As demonstrated by the compliance with all applicable measures, principally defensible space, and the BAL building construction controls, it can be shown that this development will reduce the Bushfire risk to an acceptable level.</i>
13.02-1S Bushfire planning	
Policy Application	
This policy must be applied to all planning and decision making under the Planning and Environment Act 1987 relating to land that is: <ul style="list-style-type: none"> • Within a designated bushfire prone area; • Subject to a Bushfire Management Overlay; or • Proposed to be used or developed in a way that may create a bushfire hazard 	<i>The site is within a designated bushfire prone area</i> <i>The site is not subject to a Bushfire Management Overlay (BMO) either totally or partially</i> <i>With the site developed this will reduce the grassfire hazard in the area.</i>
Objective	
To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life.	<i>As demonstrated by the compliance with all applicable measures, principally defensible space, and the BAL building construction controls, it can be shown that this development will reduce the Bushfire risk to an acceptable level.</i>
Strategies	
Protection of human life	
Give priority to the protection of human life by: <ul style="list-style-type: none"> • Prioritising the protection of human life over all other policy considerations. • Directing population growth and development to low risk locations and ensuring the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire. • Reducing the vulnerability of communities to bushfire through the consideration of bushfire risk in decision-making at all stages of the planning process. 	<i>As demonstrated by the compliance with all applicable measures, principally defensible space, and the BAL building construction controls, it can be shown that this development will reduce the Bushfire risk to an acceptable level.</i> <i>The site is assessed as being safe for access and egress to BAL-Low areas, refer to the Bushfire Hazard Landscape Assessment enclosed herewith.</i> <i>Through the ongoing maintenance of the appropriate defensible space and building construction controls in accordance with AS3959 the subject site should be suitable for shelter in place.</i> <i>However, in accordance with CFA advice a policy of “leave early” is always recommended.</i> <i>Through the application of the appropriate defensible space and building construction controls in accordance with AS3959 the bushfire risk will be reduced to an acceptable level</i>

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Bushfire hazard identification and assessment	
<p>Identify bushfire hazard and undertake appropriate risk assessment by:</p> <ul style="list-style-type: none"> • Applying the best available science to identify vegetation, topographic and climatic conditions that create a bushfire hazard. • Considering the best available information about bushfire hazard including the map of designated bushfire prone areas prepared under the Building Act 1993 or regulations made under that Act. • Applying the Bushfire Management Overlay to areas where the extent of vegetation can create an extreme bushfire hazard. • Considering and assessing the bushfire hazard on the basis of: <ul style="list-style-type: none"> ▪ Landscape conditions - meaning conditions in the landscape within 20 kilometres and potentially up to 75 kilometres of a site; ▪ Local conditions - meaning conditions in the area within approximately 1 kilometre of a site; ▪ Neighbourhood conditions - meaning conditions in the area within 400 metres of a site; and, ▪ The site for the development. • Consulting with emergency management agencies and the relevant fire authority early in the process to receive their recommendations and implement appropriate bushfire protection measures. • Ensuring that strategic planning documents, planning scheme amendments, planning permit applications and development plan approvals properly assess bushfire risk and include appropriate bushfire protection measures. • Not approving development where a landowner or proponent has not satisfactorily demonstrated that the relevant policies have been addressed, performance measures satisfied or bushfire protection measures can be adequately implemented. 	<p><i>The application of AS3959, aided by the CFA publication Vegetation-Classes-Victorian-Bushfire-Management-Overlay, onsite assessments and measurements, available vegetation and contour mapping and the application of a severe fire weather index, known as a Fire Danger Index (FDI), of 100 in accordance with AS3959 adequately satisfies this requirement.</i></p> <p><i>The site is in a designated Bushfire Prone Area which requires the application of AS3959 and this has been undertaken as described elsewhere in the Bushfire Risk Assessment, in particular in the Bushfire Hazard Site Assessments enclosed herewith.</i></p> <p><i>The site is not subject to a Bushfire Management Overlay (BMO) either totally or in part and is not subject to the threat of extreme fire behaviour that would warrant the site being included in the future.</i></p> <p><i>A Bushfire Hazard Landscape Assessment has been undertaken, and enclosed herewith, in accordance with the DELWP Technical Guide. Landscape conditions have been assessed in the Bushfire Hazard Landscape Assessment enclosed herewith.</i></p> <p><i>Local conditions have been assessed in the Bushfire Hazard Site Assessments enclosed herewith and in the Bushfire Hazard Landscape Assessment enclosed herewith.</i></p> <p><i>Neighbourhood conditions have been assessed in the Bushfire Hazard Landscape Assessment enclosed herewith.</i></p> <p><i>The site has been assessed in the Bushfire Risk Assessment. In informal discussions about a range of issues CFA advise that, if required, this discussion is to take place between council and the CFA after a consultants' report has been received.</i></p> <p><i>The bushfire risk to this site has been assessed and appropriate bushfire protection measures and building controls are outlined in the Bushfire Risk Assessment, in particular in the Bushfire Hazard Site Assessments enclosed herewith, and with the required measures, in particular the application of defensible space, in place development is appropriate.</i></p> <p><i>As demonstrated by the compliance with all applicable measures it can be shown that this development has reduced the Bushfire risk to an acceptable level. The bushfire risk to this site has been assessed and appropriate bushfire protection measures and building controls are outlined elsewhere in the Bushfire Risk Assessment, in particular in the Bushfire Hazard Site Assessments, and with the required measures in place development is appropriate.</i></p>

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Settlement planning	
<p>Plan to strengthen the resilience of settlements and communities and prioritise protection of human life by:</p> <ul style="list-style-type: none"> • Directing population growth and development to low risk locations, being those locations assessed as having a radiant heat flux of less than 12.5 kilowatts/square metre under AS 3959-2009* Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009*). .*[superseded by 2018 edition] • Ensuring the availability of, and safe access to, areas assessed as a BAL-LOW rating under AS 3959-2009* Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009*) where human life can be better protected from the effects of bushfire. .*[superseded by 2018 edition] • Ensuring the bushfire risk to existing and future residents, property and community infrastructure will not increase as a result of future land use and development. • Achieving no net increase in risk to existing and future residents, property and community infrastructure, through the implementation of bushfire protection measures and where possible reducing bushfire risk overall. • Assessing and addressing the bushfire hazard posed to the settlement and the likely bushfire behaviour it will produce at a landscape, settlement, local, neighbourhood and site scale, including the potential for neighbourhood-scale destruction. • Assessing alternative low risk locations for settlement growth on a regional, municipal, settlement, local and neighbourhood basis. • Not approving any strategic planning document, local planning policy, or planning scheme amendment that will result in the introduction or intensification of development in an area that has, or will on completion have, more than a BAL-12.5 rating under AS 3959-2009* Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009) 	<p><i>In accordance with Planning Advisory Note 68 (March 2018) the application that is the subject of this review is not of a "Settlement Planning" nature.</i></p> <p><i>Bushfire Hazard Site Assessments in accordance with AS3959 and the Bushfire Management Overlay VPP clauses 44.06 and 53.02 have been undertaken, and enclosed herewith, for this application and the majority of the resulting building areas of the site can achieve a radiant heat flux of less than 12.5 kilowatts/square metre (viz. BAL-12.5). Some of the perimeter lots will result in the building area being rated at BAL-29 (<29kW/m2) which is allowed under the BMO clause 52.03 AltM 5.5</i></p> <p><i>A BAL-Low area is basically an area where there is no "classifiable" bushfire hazard vegetation, in accordance with AS3959, within 100m under AS3959</i></p> <p><i>Suitable BAL-Low shelter in place areas will be available on this site ie areas greater than 100m from the perimeter of the development however, in accordance with CFA advice, an action plan of leave early is recommended.</i></p> <p><i>With the site managed for defendable space this development will reduce the bushfire hazard in the area.</i></p> <p><i>With the site managed for defendable space this development will reduce the bushfire hazard in the area.</i></p> <p><i>A Bushfire Hazard Landscape Assessment, in accordance with the DELWP Technical Guide, has been undertaken, and enclosed herewith, and with the required measures in place development is appropriate and will reduce the bushfire hazard in the area.</i></p> <p><i>With the required measures in place development on this site is appropriate.</i></p> <p><i>Bushfire Hazard Site Assessments in accordance with AS3959 and the Bushfire Management Overlay VPP clause 53.02-4 have been undertaken, and enclosed herewith, for this application and the majority of the resulting building areas of the site can achieve a BAL-12.5 rating. Some of the perimeter lots will result in the building area being rated at BAL-29 (<29kW/m2) which is allowed under the BMO clause 52.03 AltM 5.5</i></p>

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Areas of biodiversity conservation value	
Ensure settlement growth and development approvals can implement bushfire protection measures without unacceptable biodiversity impacts by discouraging settlement growth and development in bushfire affected areas that are important areas of biodiversity.	<i>The development can successfully implement the required bushfire protection measures however the biodiversity impacts are outside the scope of this Bushfire analysis and is to be dealt with by others if required. Although it does not take any specific expertise to see that the subject site is currently a grassed paddock.</i>
Use and development control in a Bushfire Prone Area	
<p>In a bushfire prone area designated in accordance with regulations made under the Building Act 1993, bushfire risk should be considered when assessing planning applications for the following uses and development:</p> <ul style="list-style-type: none"> • Subdivisions of more than 10 lots. • Accommodation. • Child care centre. • Education centre. • Emergency services facility. • Hospital. • Indoor recreation facility. • Major sports and recreation facility. • Place of assembly. • Any application for development that will result in people congregating in large numbers. <p>When assessing a planning permit application for the above uses and development:</p> <ul style="list-style-type: none"> • Consider the risk of bushfire to people, property and community infrastructure. • Require the implementation of appropriate bushfire protection measures to address the identified bushfire risk. • Ensure new development can implement bushfire protection measures without unacceptable biodiversity impacts. 	<p><i>As demonstrated by the compliance with all applicable measures it can be shown that this development will reduce the Bushfire risk to an acceptable level.</i></p> <p><i>This application includes one or more of the nominated triggers.</i></p> <p><i>As demonstrated by the compliance with all applicable measures it can be shown that this development will reduce the Bushfire risk to an acceptable level.</i></p> <p><i>The application of the identified defensible space and building construction controls in accordance with AS3959 and the Bushfire Management Overlay VPP clause 53.02-4 has addressed the identified bushfire risk</i></p> <p><i>The development can successfully implement the required bushfire protection measures however the biodiversity impacts are outside the scope of this Bushfire analysis and is to be dealt with by others if required. Although it does not take any specific expertise to see that the subject site is currently a grassed paddock.</i></p>
Policy guidelines	
<p>Consider as relevant:</p> <ul style="list-style-type: none"> • Any applicable approved state, regional and municipal fire prevention plan. 	<p><i>Apart from a brief reference to Fire Prevention Notices in the Municipal Emergency Management Plan no other plans of relevance to this site have been identified.</i></p>

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Policy documents	
Consider as relevant: <ul style="list-style-type: none"> • Any applicable approved state, regional and municipal fire prevention plan. • AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009). .*[superseded by 2018 edition] • Building in bushfire-prone areas - CSIRO & Standards Australia (SAA HB36- 1993, 1993). • Any bushfire prone area map prepared under the Building Act 1993 or regulations made under that Act. 	<p><i>Apart from a brief reference to Fire Prevention Notices in the Municipal Emergency Management Plan no other plans of relevance to this site have been identified.</i></p> <p><i>Bushfire Hazard Site Assessments have been conducted in accordance with AS3959 and are enclosed herewith</i></p> <p><i>This handbook is somewhat outdated since the subsequent publication of the new edition of AS3959 in 2009 and 2018 however to the extent it is relevant this application complies</i></p> <p><i>The site is in a designated Bushfire Prone Area which requires the application of AS3959 and that has been undertaken as described elsewhere in the Bushfire Risk Assessment.</i></p>

AS3959 Note:

PPF13.02 references the 2009 edition of AS3959. The 2018 edition of this standard has now been published. On 1 July 2020, National Construction Code (NCC) 2019 Amendment 1 was adopted. NCC 2019 has adopted the current 2018 edition of AS3959.

The Australian Building Codes Board (ABCB) released NCC 2022 on 1 October 2022. NCC 2022 was adopted by the states and territories on 1 May 2023.

NCC 2022 has adopted the current 2018 edition of AS3959.

We have applied the 2018 version of AS3959 but for the purposes of this Bushfire Risk Assessment there are no material differences in the assessment methods between the two editions, in particular there were no changes to the defendable space distances.