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13 September 2021

Dear [REDACTED]

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

This report has been prepared as a bushfire risk assessment to guide the design stages for a planned subdivision and development of two (2) existing lots in Kilmore, Shire of Mitchell.

The lots covered by this assessment (the site) are:

- 126\PP2318 and 127\PP2318

We inspected the site on 3 September 2020. We believe it would be appropriate for a relevant authority to rate this application for:

Butlers Rd 40, Kilmore at:

Lots 509 to 515 = Not rated

Balance of Lots = BAL-12.5

Slashing breaks a minimum 22m wide with grass >100mm high shall be maintained during the declared fire danger period around all finished and under development stages.

We believe it would be appropriate for the relevant authority to include this as a condition on any Planning Permit. Note that [Building Regulation 156](#) (2018) simply put requires the Relevant Building Surveyor to accept the BAL rating applied to the property on the Planning Permit. Therefore, a further assessment is not required for the Building Permit.

CFA commented on our original report dated 9 December 2020 and a subsequent meeting was held with Tammy Garrett, Manager Community Safety, CFA - North East Region where broad agreement was reached on the following. Perimeter roads were discussed with the developer's team view being that the longer-term precinct plans have to be considered and that one subdivision such as ours was only a part of the jigsaw with connector roads, backyard of other blocks etc to be built on adjoining properties. In this particular case to the west further subdivision will not happen as the land is under the control of the local cemeteries trust who operate the cemetery on the northern portion and maintain south southern Grassland portion. Council believed it would be sufficient to obtain written confirmation from the trust regarding maintenance of the land for it to be considered Low Threat.

This has now become a moot point as the design has now changed to include a perimeter road to the west and landscaped strip of sufficient width such that the adjoining lots are now rated and BAL-12.5

On the southern interface the longer-term plan is that an adjoining subdivision will back on to these lots negating the need for a perimeter road and our development plan is now to stage development and in fact hold these lots until construction has started on the adjoining property thus classifying them Low Threat and rating them BAL-12.5.

We have also incorporated a Construction Bushfire Management Plan in this report as per CFA's request.

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

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.

The proposed development will have a mix of lots for residential dwellings, medium density townhouses, a commercial & community hub as well as a natural green area along the waterway running through the site.

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. This application can comply with the majority of the 13.02 settlement planning requirements in any event.

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 provided the required defendable space for BAL-12.5 and BAL-29 only. As a guide we note that under the BMO, BAL-40 can only be used where there are significant siting constraints and BAL-FZ only if specific conditions are met. Neither of these two higher ratings would be recommended for new developments. We would also note that the higher the BAL rating the higher the cost to construct dwellings etc. It is therefore conceivable that lots where building envelopes could only achieve defendable space for a BAL-29 might not attract as high a sale price as those lots that could achieve defendable space for a BAL-12.5. We would recommend BAL-12.5 defendable space distances be achieved where possible.

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

The methodology used for this report was to assess the approximately 2.5km of the perimeter of the proposed development plus the transecting waterway 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 has opted to have less setback distance and staged development such that a Statement of Compliance for that stage of the subdivision shall not be issued until construction has started on the adjoining land. The subject lots should then be able to be classified as low-threat and a BAL-12.5 with no setback applied. This will apply to lots 509-515.

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 and according to the CFA guideline [Applying the Bushfire Hazard Landscape Assessment in a Bushfire Management Overlay](#) 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.

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

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.

For firefighting water supply and access requirements for new subdivisions refer to:

[CFA Requirements for Water Supplies and Access for Subdivisions in Residential Zones](#)
[CFA Preferred Requirements: Water Supplies and Access for Subdivisions in Rural Zones](#)

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
- 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.
- 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 of the subdivision roads and the transecting waterway which provide sufficient barrier between any finished lots and any areas of potential long grass. Further slashing breaks a minimum of 22m in width shall be maintained during the declared fire danger period with grass less than 100mm high around all finished and under development stages.

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

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.

Should you require further information or have any questions with regard to any of the enclosed information please contact [REDACTED] on [REDACTED]

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: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Planning and Property Information

Address: BUTLERS ROAD KILMORE 3764

Crown Description: Allot. 126 PARISH OF BYLANDS

Standard Parcel Identifier (SPI): 126\PP2318

Local Government (Council): MITCHELL **Council Property Number:** 105918

Directory Reference: Melway 615 C5

Approx. Land size: 79852 m²

Address: 40 BUTLERS ROAD KILMORE 3764

Crown Description: Por. 127 PARISH OF BYLANDS

Standard Parcel Identifier (SPI): 127\PP2318

Local Government (Council): MITCHELL **Council Property Number:** 117155

Directory Reference: Melway 615 C5

Approx. Land size: 101389 m²

Planning Zone Summary

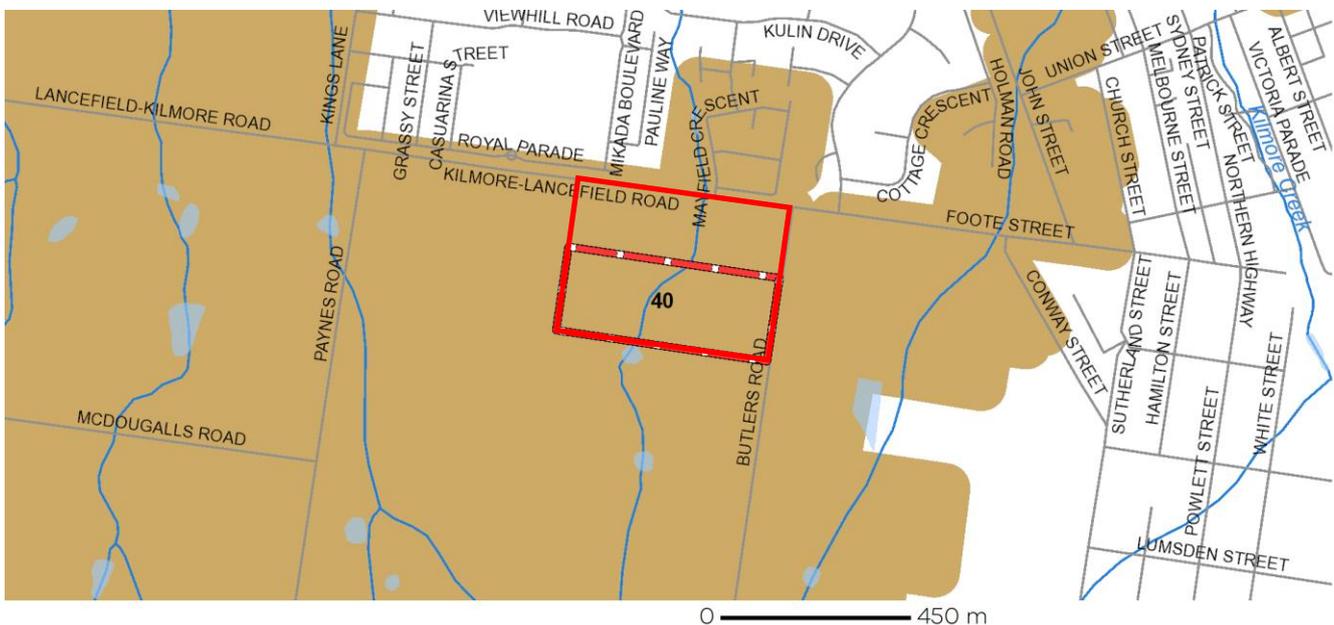
Planning Zone: GENERAL RESIDENTIAL ZONE (GRZ)

GENERAL RESIDENTIAL ZONE - SCHEDULE 1 (GRZ1)

Planning Overlay: DEVELOPMENT PLAN OVERLAY (DPO)

DEVELOPMENT PLAN OVERLAY - SCHEDULE 5 (DPO5)

Designated Bushfire Prone Area (BPA)



Overall Subdivision Master Plan



LANDSCAPE & URBAN DESIGN
date: 22.03.2021 09:35:11
please note:
This plan is based on preliminary information
provided by the client. It is not intended for
formal Council/Authority advice, detailed
site investigation and confirmation by survey.

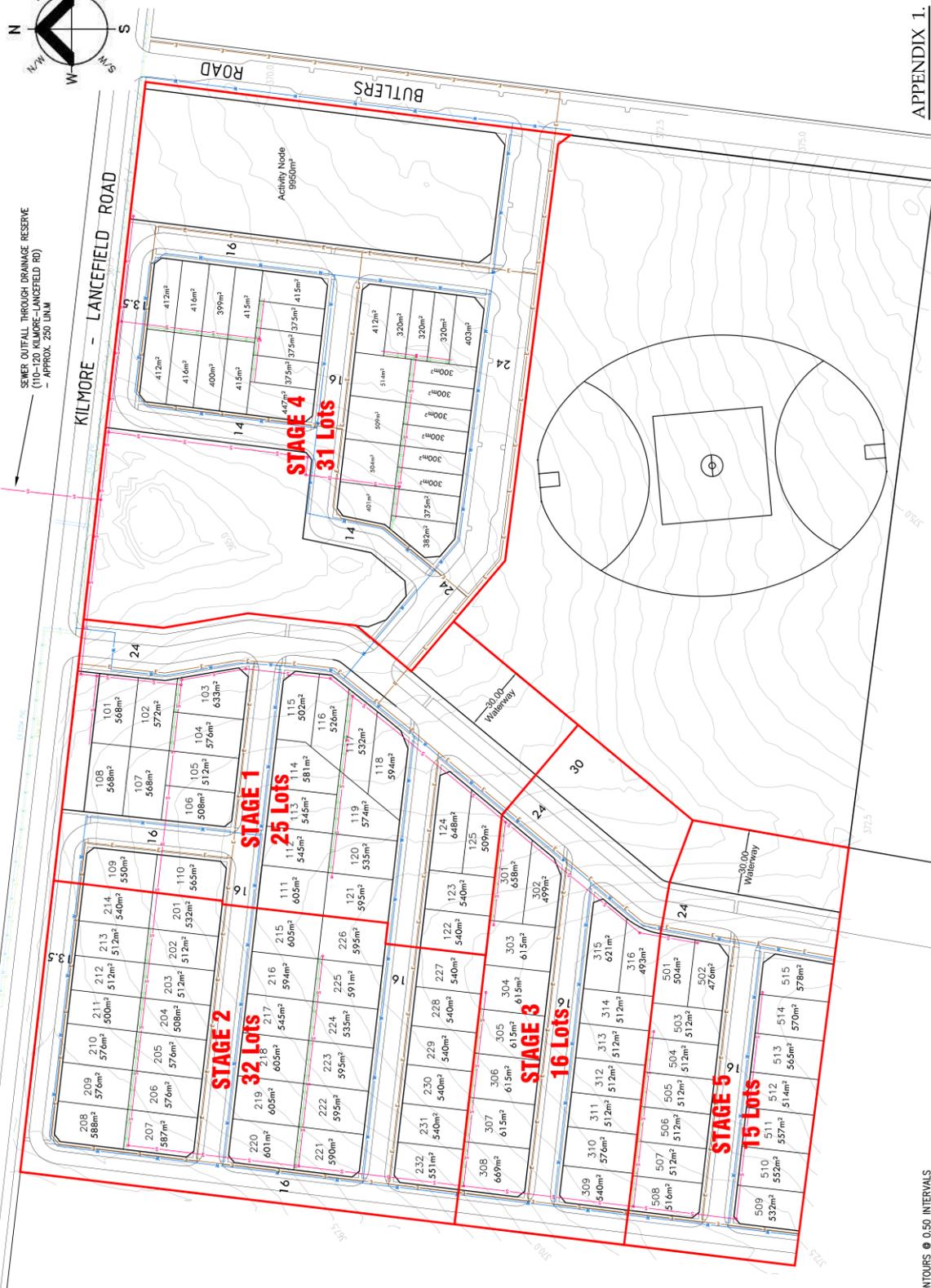
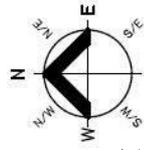


REV	DESCRIPTION	DATE	INIT
4	Add MD	FEB 21	HW
5	Revise layout	MAY 21	HW
6	Revise layout	MAY 21	HW
7	Revise layout	MAY 21	HW
8	Revise layout	JUL 21	HW
9	Revise layout	AUG 21	JW
10	Revise layout	AUG 21	JW
11	Increase density in NE quadrant	SEP 21	HW

Subdivision Concept Plan 11
40 Butlers Road, Kilmore

ref: WC202005
date: 8 Sept 2021
rev: 11
drawing no. L00
sheet no. 1 of 1
drawn: HW

Subdivision Staging Plan



SEWER OUTFALL THROUGH DRAINAGE RESERVE
 (110-120 KILMORE-LANCEFIELD RD)
 - APPROX. 250 LUM

NORTH
 MCG94 ZONE 55

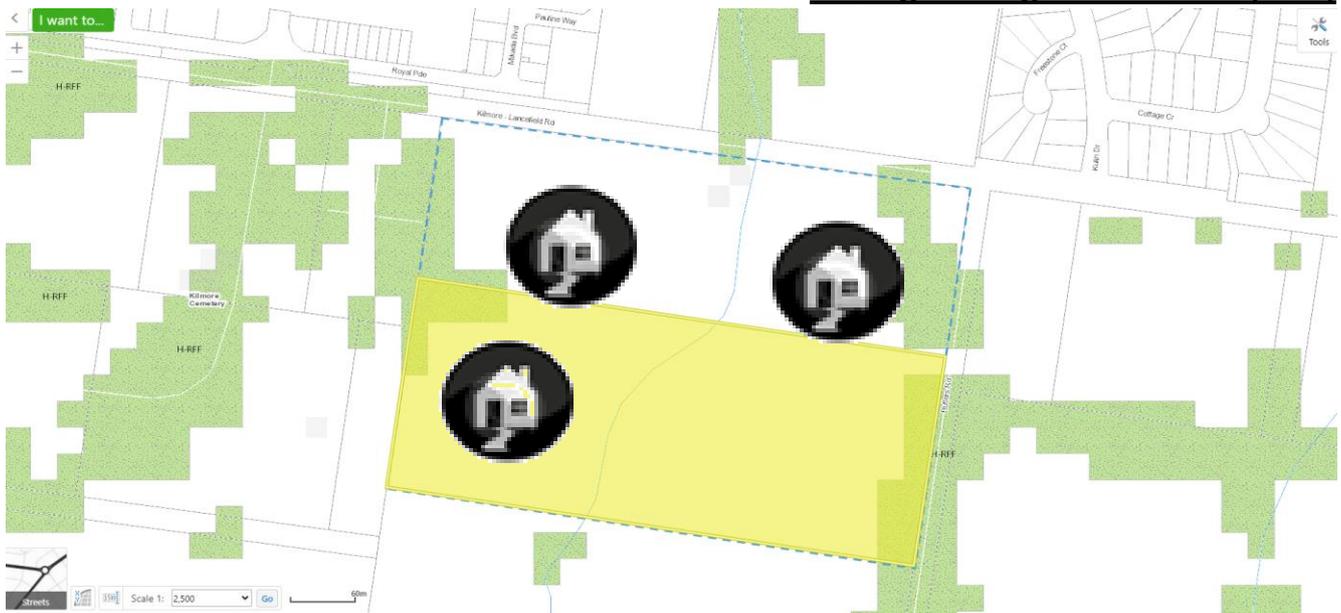
APPENDIX 1.

CHRIS BROWN & ASSOCIATES CONSULTING ENGINEERS 127 WILLS STREET (BENBONGA VICTORIA 3088) BALDWIN, AUSTRALIA AUSS 03 9400 0130 FAX 03 9400 0130		DESIGN: S.G. DRAWN: S.G. CHECKED: C.B. SCALE: AS SHOWN DATE: SEP 2021
ALLEQUIP P/L 40 BUTLERS ROAD KILMORE		PARKVIEW ESTATE - 118 LOT SUBDIVISION OVERALL SERVICES DEVELOPMENT PLAN
VERS. REVISIONS DATE		LEGEND & SYMBOLS PROPOSED TELSON MAIN PROPOSED POWER MAIN PROPOSED WATER MAIN PROPOSED SEWER MAIN PROPOSED DRAINAGE

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Site Maps

Ecological Vegetation Class (EVC)



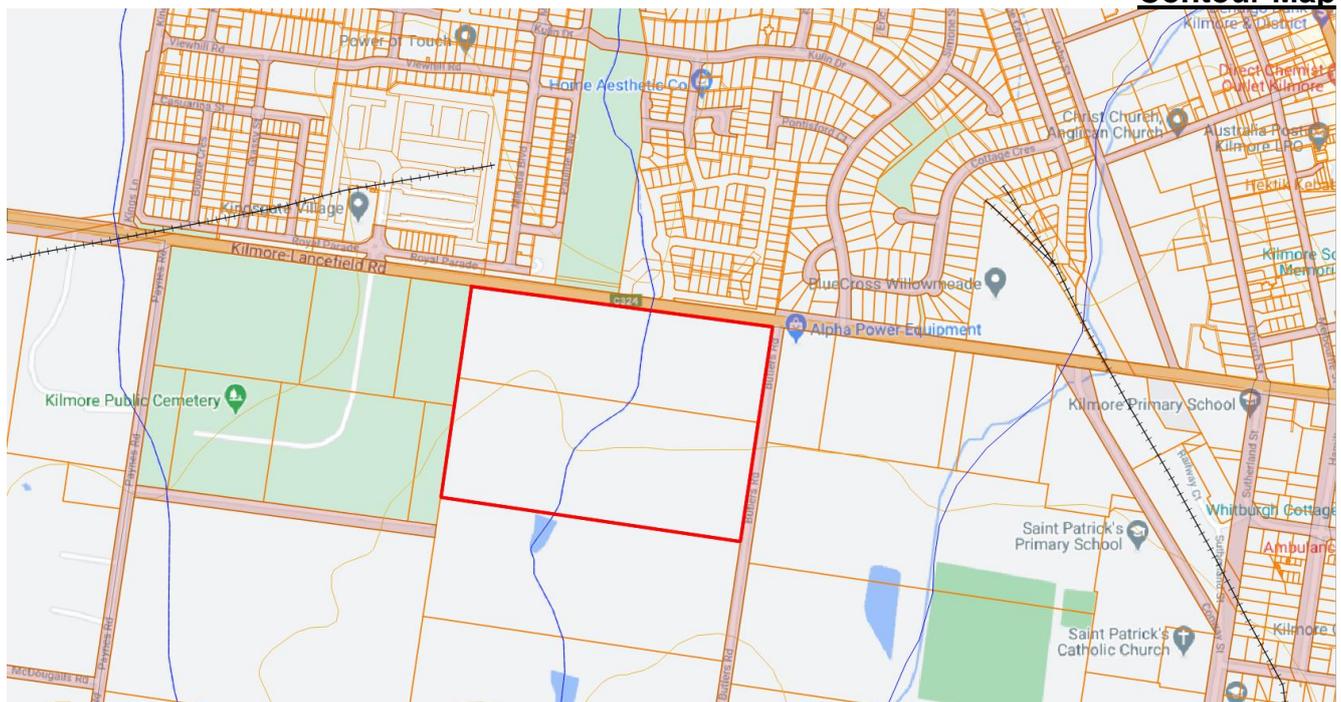
H-RFF = EVC 23, Herb-rich Foothill Forest (EVC Benchmarks: Trees to 25m ht, 40% canopy cover)

Note: these EVC would be classed as Woodland under AS3959

Location of Hydrants



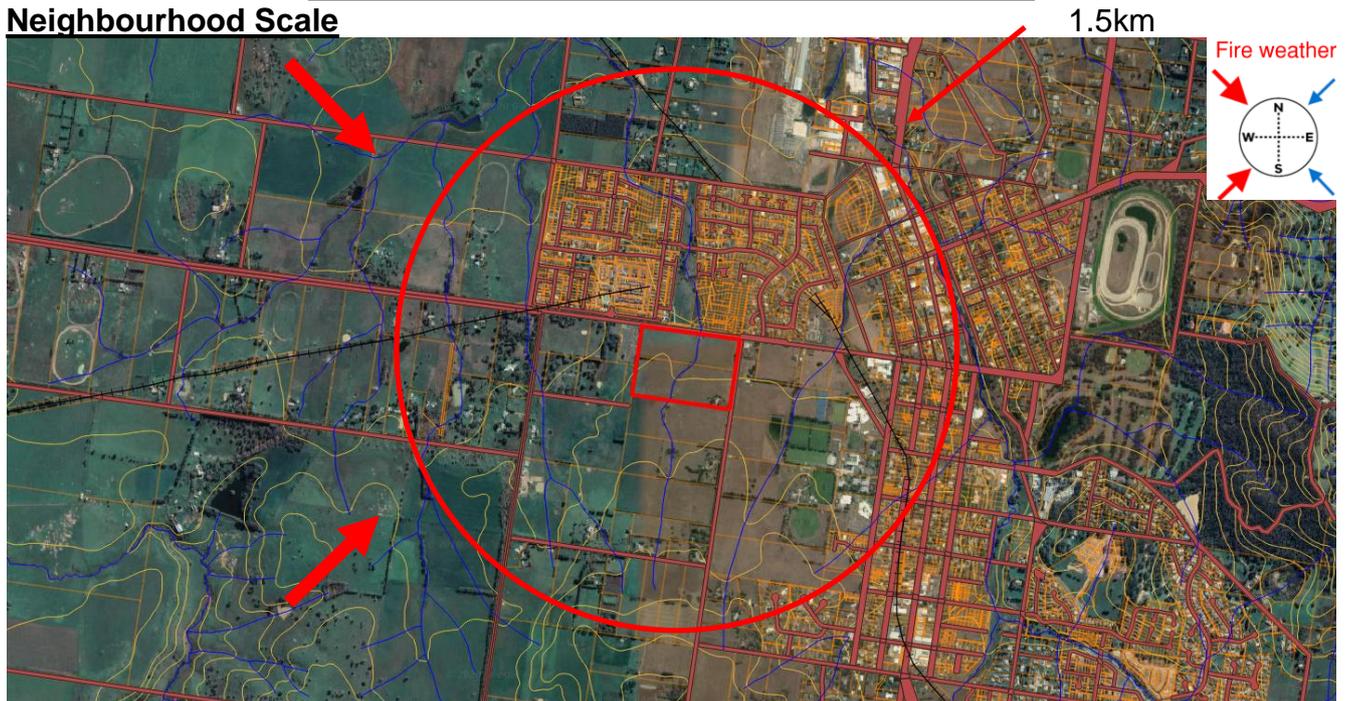
Contour Map



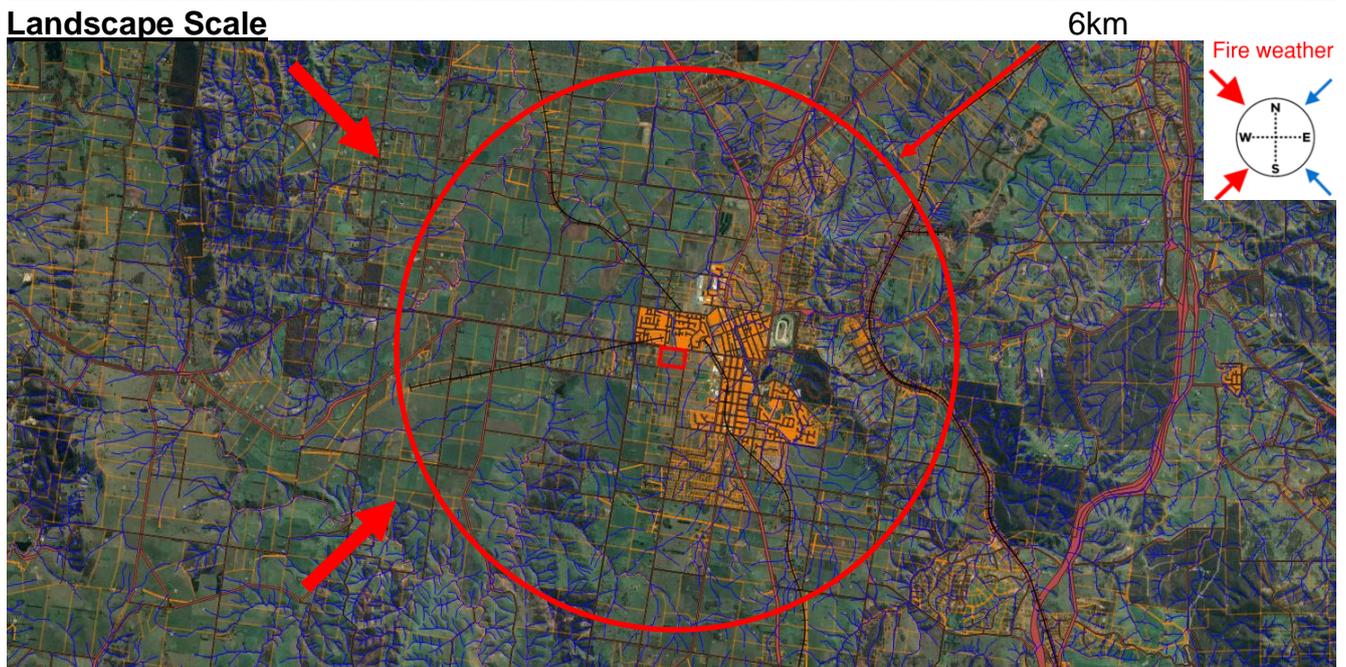
Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

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 defendable 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*). The existing settlements to the North-West provide significant shielding enough to ameliorate any landscape fire and there is sufficient distance of modified vegetation to the South-West to ameliorate any landscape fire any risk can be credibly dealt with by the AS3959/VPP defendable space and building construction controls.

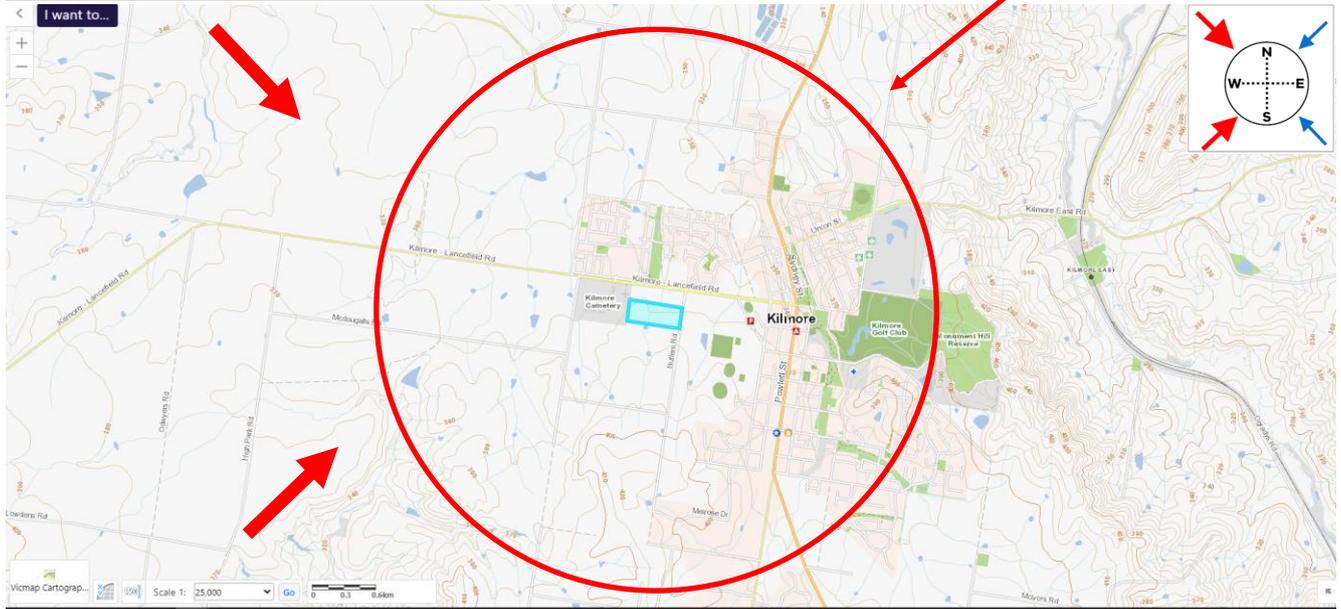
In accordance with the DELWP Technical Guide ([Planning Permit Applications Bushfire Management Overlay, September 2017](#)) we believe this site is situated in a "Broader Landscape Type 1" area. The bushfire risk to this site is low and less than large parts of Victoria. With the required measures in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

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Bushfire Hazard Landscape Assessment

Neighbourhood Scale Contours (1:25,000)

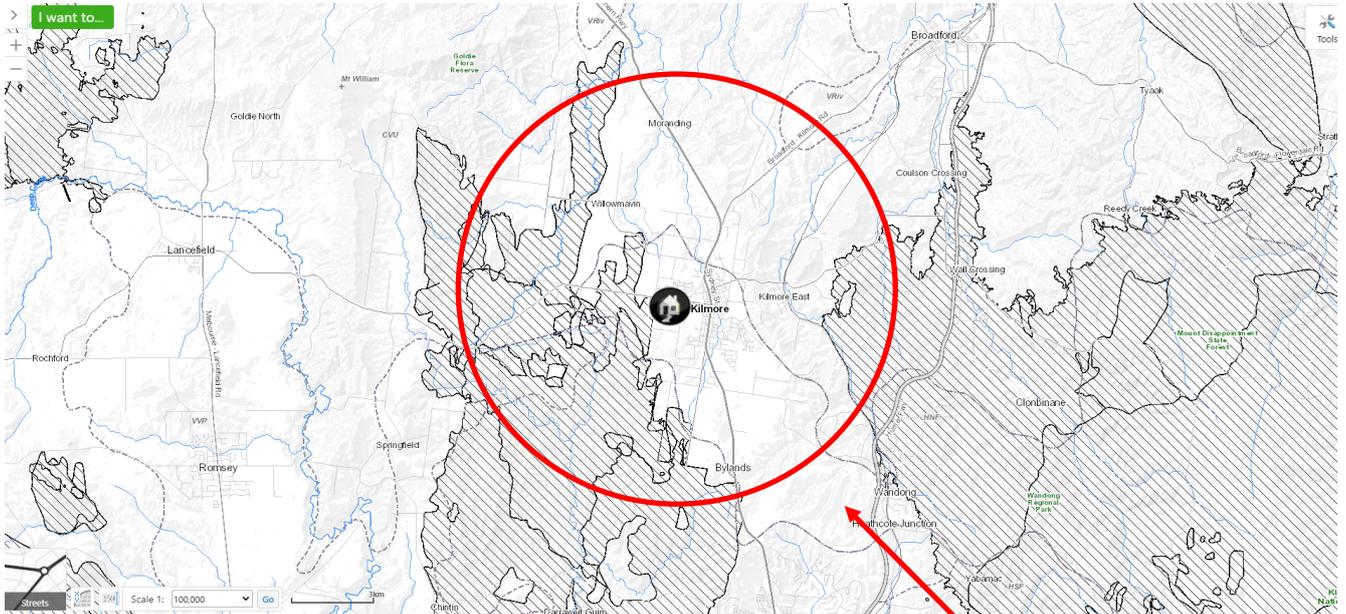
2km radius circle



Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

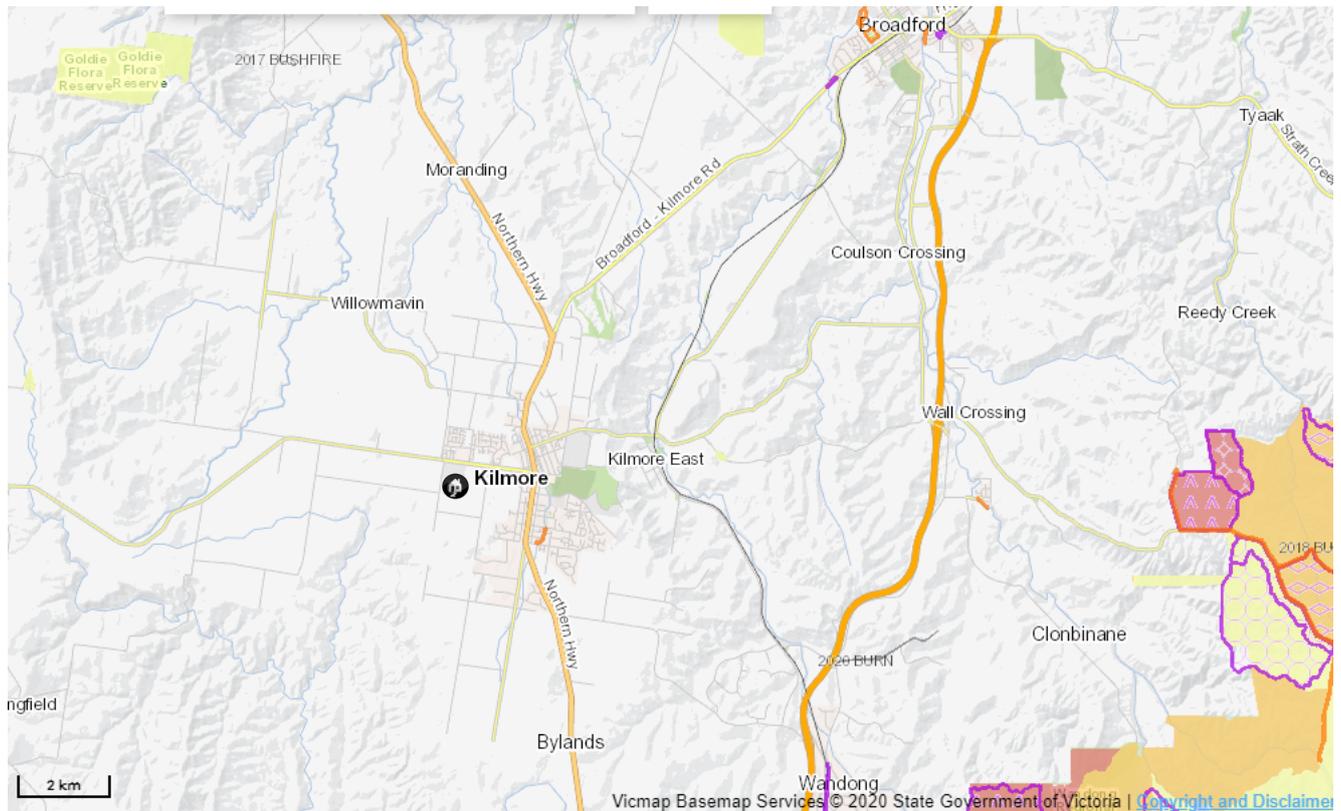
Bushfire Hazard Landscape Assessment

NatureKit Map – Fire disturbances  = Bushfire 1970-present



5km radius

DELWP Joint Fuel Management Program (JFMP)



Joint Fuel Management Program

Burn Year



Fire Management Zones



Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Bushfire Hazard Landscape Assessment

Bushfire Place of Last Resort

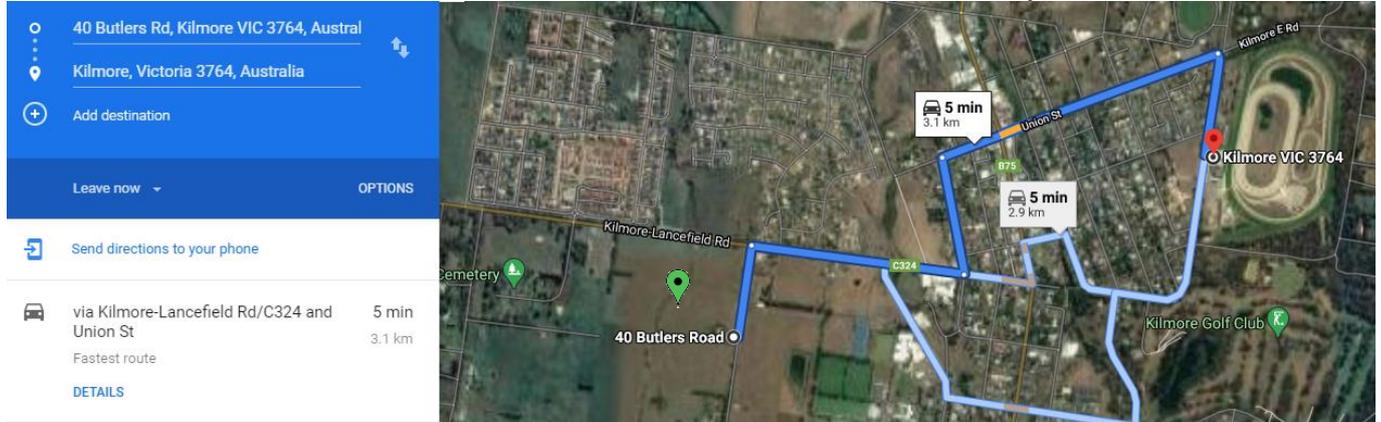
A 'Neighbourhood Safer Place' also known as a 'Bushfire Place of Last Resort' (NSP-BPLR) is a place of last resort when all other bushfire plans have failed.

<http://www.saferplaces.cfa.vic.gov.au/cfa/search/default.htm>

These NSP-BPLRs have been formally designated by Council.

<i>Neighbourhood Safer Place - Bushfire Place of Last Resort within Kilmore</i>		
Township	Location	Address
KILMORE	Bitumen car park Adjacent to Trackside Function Centre, Kilmore Racecourse	East Street (opposite Gipps Street) Kilmore 3764.

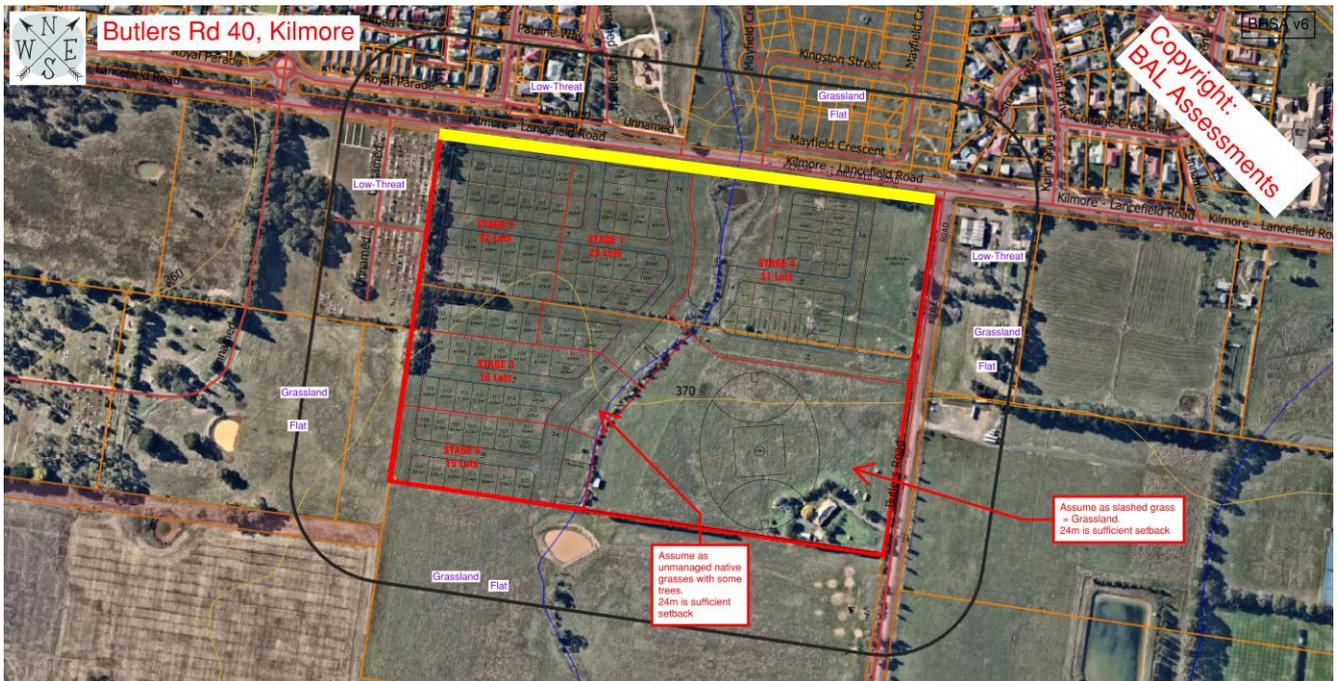
NSP-BPLR =  Subject Site = 



The screenshot shows a Google Maps interface with a search bar containing '40 Butlers Rd, Kilmore VIC 3764, Austral'. Below the search bar, there are options to 'Add destination', 'Leave now', and 'OPTIONS'. A route is displayed on the map, starting from '40 Butlers Road' and ending at 'Kilmore VIC 3764'. The route is marked with a blue line and includes a car icon with '5 min' and '3.1 km'. Other landmarks visible on the map include 'Kilmore-Lancefield Rd', 'Cemetery', 'Kilmore Golf Club', and 'Kilmore E Rd'.

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Bushfire Hazard Site Assessment - NORTH



This section is bordered by Kilmore-Lancefield Road and mixture of managed Low-Threat residential properties next to Grassland on Flat land.

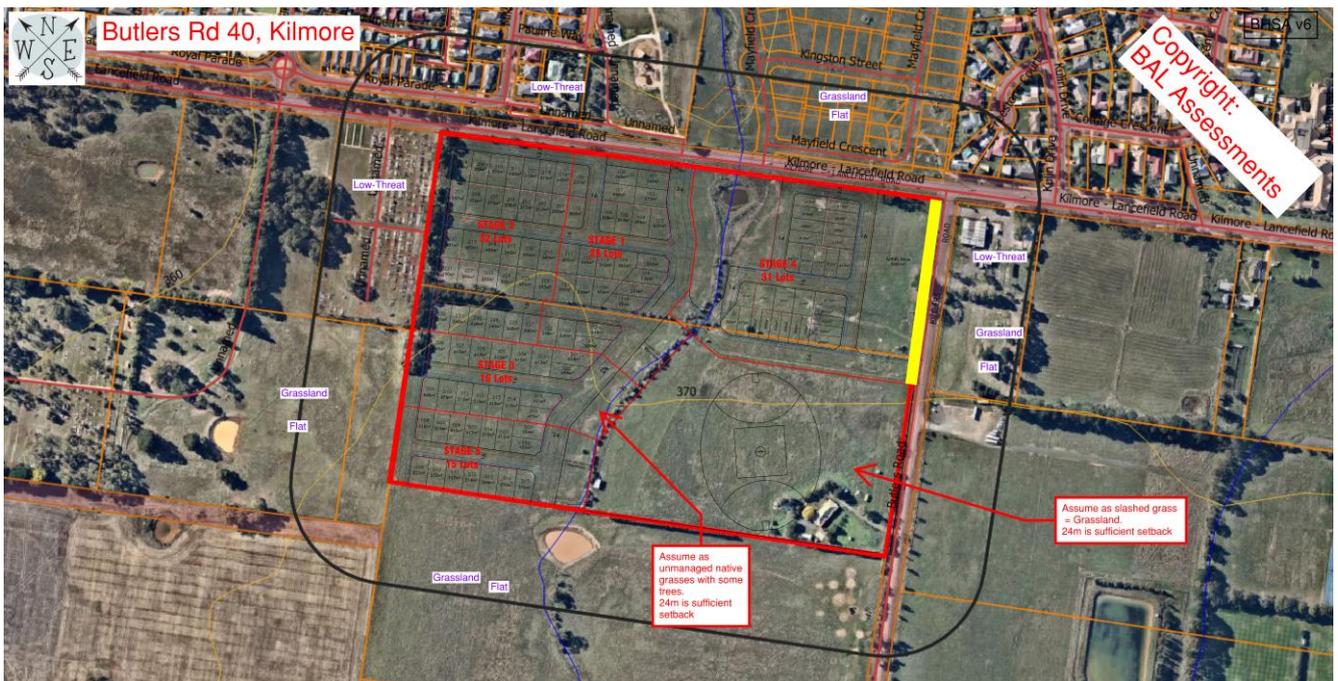
The road provides sufficient defensible space and no set back is required.

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

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

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Bushfire Hazard Site Assessment – EAST



This section is bordered by Butlers Road and mixture of managed a Low-Threat commercial property next to Grassland on Flat land.

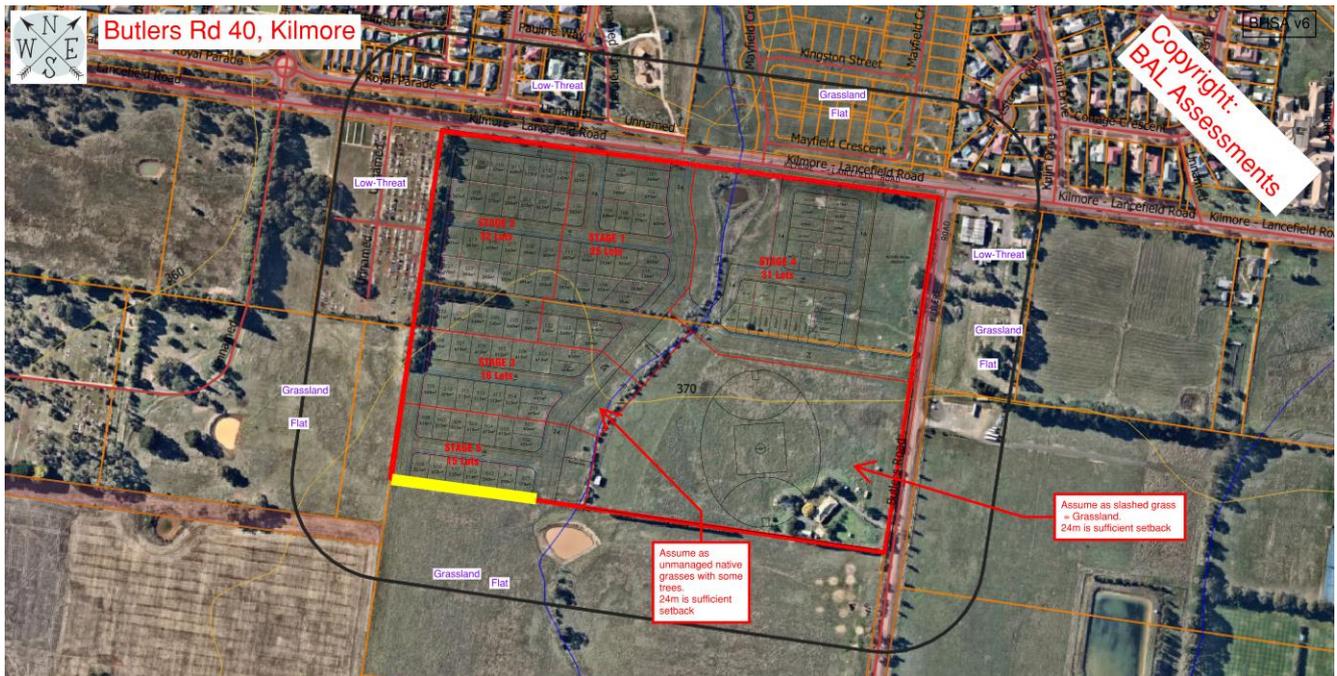
The road provides sufficient defensible space and no set back is required.

Currently there is no residential shown bordering Butlers Rd however the following defensible space from this boundary of the development would be required if this changes:

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

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Bushfire Hazard Site Assessment – SOUTH – West section



This section is bordered by Grassland on Flat land.

This Grassland is a grazed paddock. While the current risk is quite benign the area still has to be treated as Grassland which under AS3959 is a vegetation bushfire hazard.

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

BAL-29 = 9m

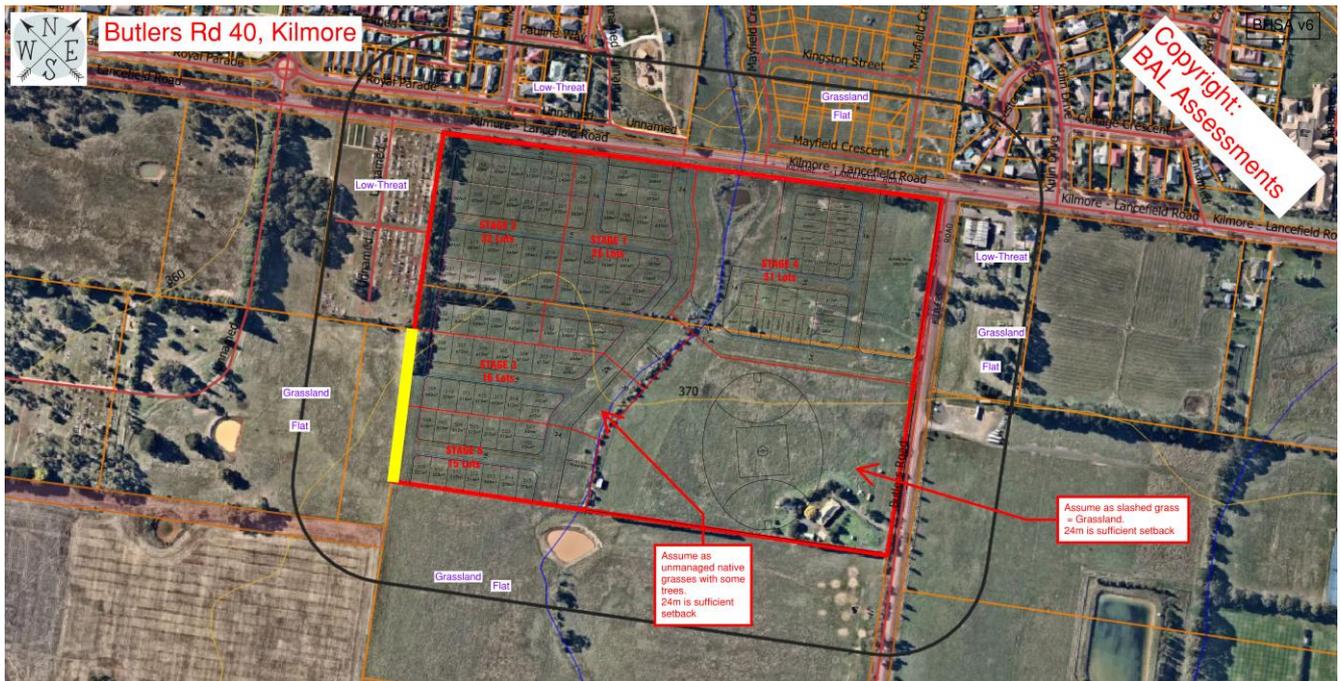
BAL-12.5 = 19m

In an effort to solve this dilemma the developer has opted to have less setback distance and staged development such that a Statement of Compliance for that stage of the subdivision shall not be issued until construction has started on the adjoining land. The subject lots should then be able to be classified as low-threat and a BAL-12.5 with no setback applied. This will apply to lots 509-515.

If by the time the Statement of Compliance is due to be issued construction has started on the adjoining land the subject lots should then be able to be classified as low-threat and a BAL-12.5 with no setback applied.

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Bushfire Hazard Site Assessment – WEST – South section



This section is Grassland bordered by on Flat land.

This Grassland is a grazed empty paddock. There are some trees on the on the fence line acting as a windbreak in this area however no more than is allowed in a Grassland classification.

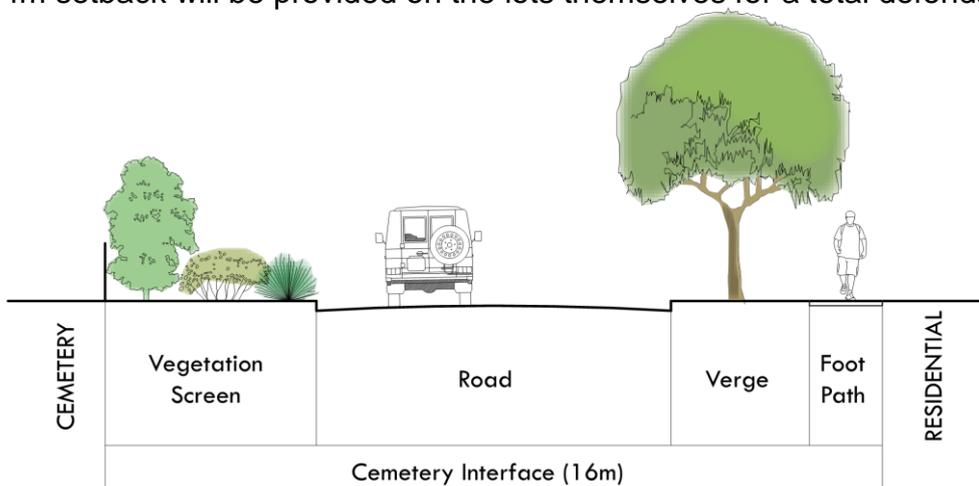
We note that in the South-West corner there is a minor depression over a distance of 40-50m. We believe it will no effect on the rate of spread of a fire.

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

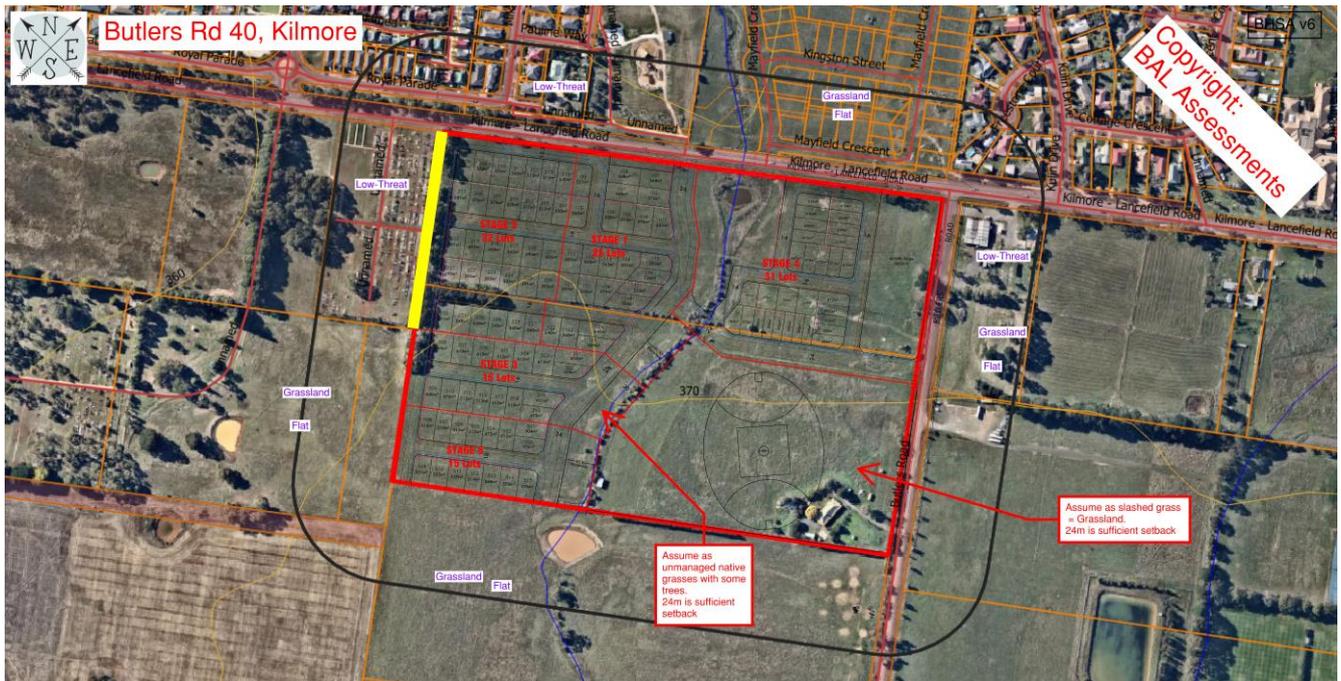
$$\text{BAL-12.5} = 19\text{m}$$

Within the subdivision we have 16m of defendable space made up of a vegetation screen, the road, verge and footpath.

A 4m setback will be provided on the lots themselves for a total defendable space of 20m.



Bushfire Hazard Site Assessment – WEST – North section



This section is bordered by Managed Low-Threat on Flat land.

This area is a cemetery with well-maintained grass.

There are some trees in this area. We assume that the row of trees along the border will be removed during the construction of the subdivision or form part of the planned vegetation screen. However, in any event they would be excluded as windbreaks and excluded under AS3959-2018 Clause 2.2.3.2.f.

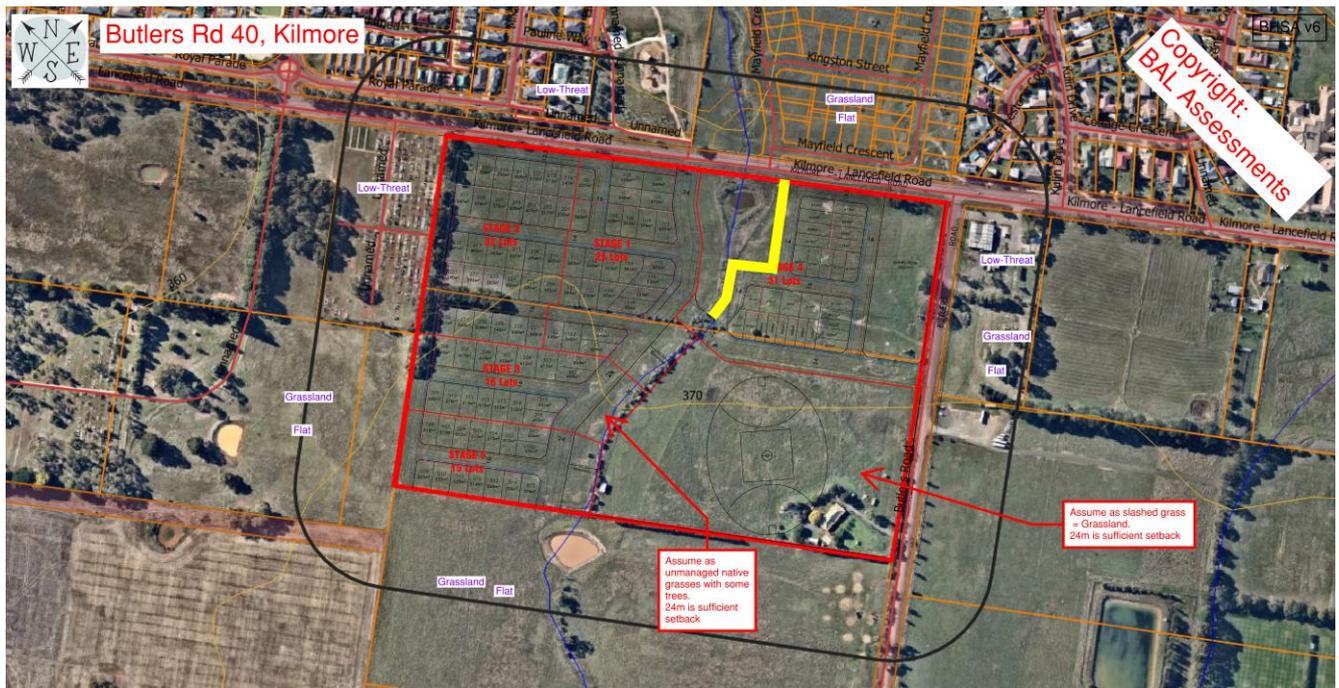
As such, no defensible space is required.

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

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

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Bushfire Hazard Site Assessment – EAST Boundary of Transecting Waterway



This section is bordered by Managed Low-Threat on Flat land.

There is currently well-maintained grass to the very edge of the water. This includes the small dam, and the watercourse, approximately 2m wide, which feeds it.

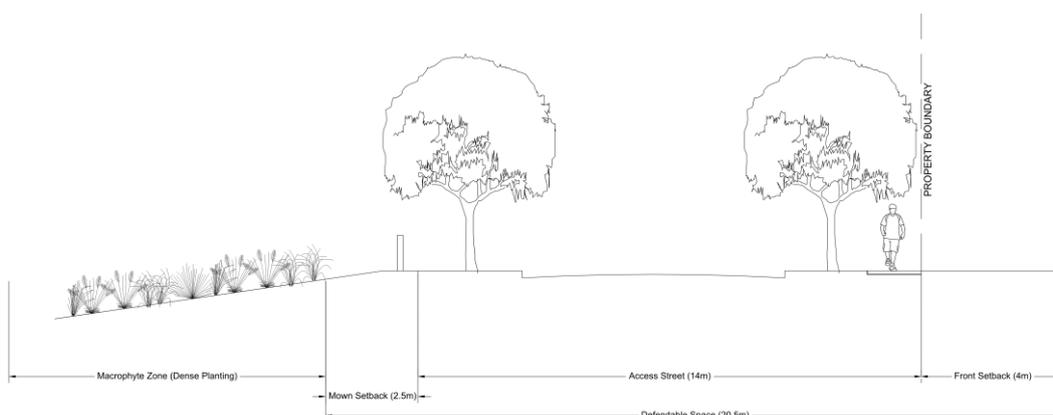
There are some trees deciduous trees along the watercourse however no more than is allowed in a Low Threat. The area as a whole would not have anywhere near the surface fuel load of a Woodland.

This area will become a natural green area, planted out with native grasses and possibly some additional trees.

Using the NSW RFS Bushfire Attack Assessor’s 3t/ha for Native grasses, the perimeter subdivision road and front boundary setback would be sufficient space for this eventuality.

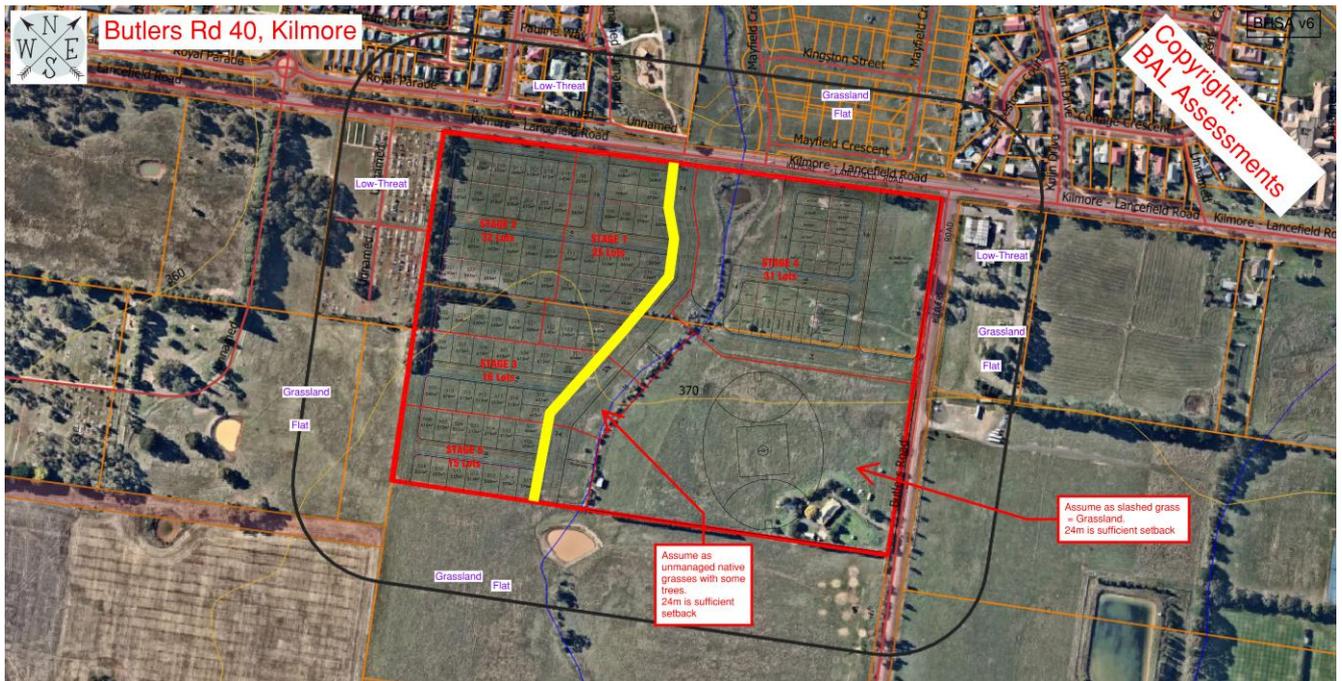
The following defendable space from this the edge of the mown setback would be required:

$$\text{BAL-12.5} = 18\text{m}$$



Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Bushfire Hazard Site Assessment - WEST Boundary of Transecting Waterway



This section is bordered by Managed Low-Threat on Flat land.

There is currently well-maintained grass to the very edge of the water. This includes the small dam, and the watercourse, approximately 2m wide, which feeds it.

There are some trees deciduous trees along the watercourse however no more than is allowed in a Low Threat. The area as a whole would not have anywhere near the surface fuel load of a Woodland.

This area will become a natural green area, planted out with native grasses and possibly some additional trees.

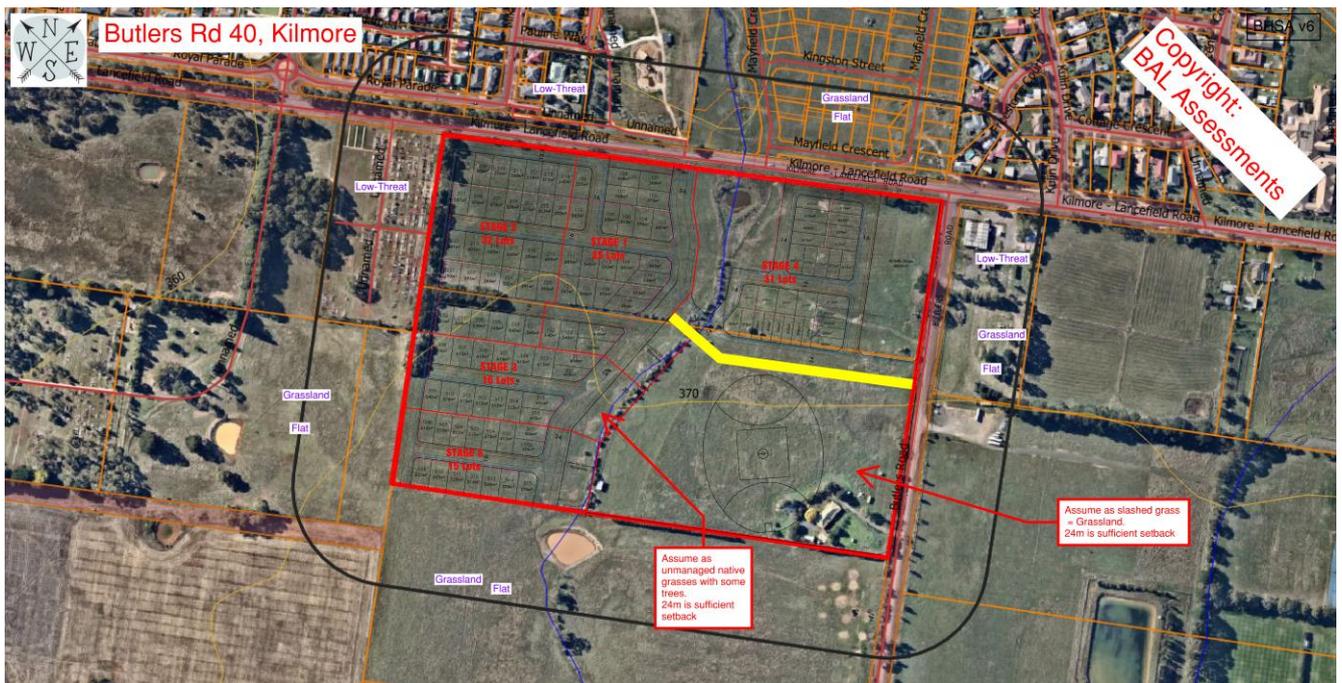
Using the NSW RFS Bushfire Attack Assessor's 3t/ha for Native grasses, the perimeter subdivision road and front boundary setback would be sufficient space for this eventuality.

The following defendable space from this the edge of the mown setback would be required:

$$\text{BAL-12.5} = 18\text{m}$$

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Bushfire Hazard Site Assessment – **NORTH** Boundary of Oval



This section is bordered by Grassland on Flat land.

The grass here will become an Aussie Rules football oval. It is assumed that this area will be regularly slashed and has thus been conservatively classified as Grassland.

The perimeter subdivision road would be sufficient space for this eventuality.

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

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

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

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/documents/20143/69511/BMO-Individual-conditions-defendable_space-Oct-2017.pdf

and

Victorian Planning Provisions clause 53.02 Table 6

http://planning-schemes.delwp.vic.gov.au/schemes/vpps/53_02.pdf

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Site Photographs

≈ North of proposed works – western section



≈ Central North Dam



≈ East of proposed works



Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Site Photographs

≈ South of proposed works



≈ South of proposed works – Western corner



≈ South of proposed works – Western corner



Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Site Photographs

≈ West of proposed works – southern section



≈ West of proposed works – northern section



≈ Transecting waterway



Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Site Photographs

≈ Southern Section of Transecting waterway



≈ Transecting waterway



≈ North Boundary of proposed oval



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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 and according to the CFA guideline Applying the Bushfire Hazard Landscape Assessment in a Bushfire Management Overlay 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 and/or Radiant Heat modelling.</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>

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Bushfire Management Statement

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 and/or Radiant Heat modelling.</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 and/or Radiant Heat modelling.</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>

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Bushfire Management Statement

<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>

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Bushfire Management Statement

53.02-4.3 Water supply and access objectives	
<p>A static water supply is provided to assist in protecting property.</p> <p>Vehicle access is designed and constructed to enhance safety in the event of a bushfire.</p>	<p><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></p>
Approved Measure 4.1	
<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:</p> <ul style="list-style-type: none"> • A static water supply for fire fighting 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 fire fighting 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:</i></p> <p>https://www.cfa.vic.gov.au/plan-prepare/subdivision</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:</i></p> <p>https://www.cfa.vic.gov.au/plan-prepare/subdivision</p>
Approved Measure 4.2	
<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 is provided with:</p> <ul style="list-style-type: none"> • A static water supply for fire fighting 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 fire fighting water supplies.</p>	<p><i>Not Applicable</i></p>
Other unspecified Alternative Measures	
	<p><i>Not Applicable</i></p>

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Analysis of PPF 13.02

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 defendable 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 	<p><i>The site is within a designated bushfire prone area</i></p> <p><i>The site is not subject to a Bushfire Management Overlay (BMO) either totally or partially</i></p> <p><i>With the site developed this will reduce the grassfire hazard in the area.</i></p>
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 defendable 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. 	<p><i>As demonstrated by the compliance with all applicable measures, principally defendable space and the BAL building construction controls, it can be shown that this development will reduce the Bushfire risk to an acceptable level.</i></p> <p><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></p> <p><i>Through the ongoing maintenance of the appropriate defendable space and building construction controls in accordance with AS3959 the subject site should be suitable for shelter in place.</i></p> <p><i>However, in accordance with CFA advice a policy of “leave early” is always recommended.</i></p> <p><i>Through the application of the appropriate defendable space and building construction controls in accordance with AS3959 the bushfire risk will be reduced to an acceptable level</i></p>

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Analysis of PPF 13.02

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.</i></p> <p><i>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</i></p> <p><i>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 outline 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>

Bushfire Risk Assessment: Butlers Rd 40, Kilmore (126\PP2318 & 127\PP2318)

Analysis of PPF 13.02

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. In any event this application can comply with the majority of these requirements.</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</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.</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 and a ‘Neighbourhood Safer Place’ also known as a ‘Bushfire Place of Last Resort’ (NSP-BPLR) is available locally however, in accordance with CFA advice, an action plan of leave early is recommended.</i></p> <p><i>Safe egress is available to suitable BAL-Low shelter in place areas within the adjacent built-up residential areas. With the site managed for defensible space this development will reduce the grassfire hazard in the area.</i></p> <p><i>With the site managed for defensible space this development will reduce the grassfire 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 grassfire 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.</i></p>

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Analysis of PPF 13.02

Policy documents	
<p>Consider as relevant:</p> <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.

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.