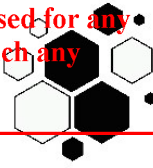
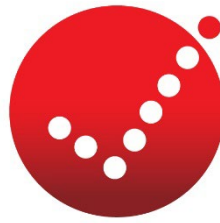


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Level 3



Bushfire Planning Considerations Report

Kongwak Butter and Cheese Factories and Group Accommodation

Multiple Parcels

1486-1488 Korumburra Wonthaggi Road Kongwak 3951

Traditionally the land of the Bunurong People

July 31st, 2023.

Version 3.0

Euca Planning Pty Ltd

PO Box 570, Warragul 3820.

Phone: 0418 597 662 Email: info@eucaplanning.com.au

Director & Principal Consultant: Deanne Smith

Qualifications/Accreditations:

- Masters of Planning (Professional) – Deakin University
- Postgraduate Certificate in Bushfire Planning and Management – The University of Melbourne (2013)
- Graduate Diploma of Applied Science (Agricultural Studies) – Charles Sturt University
 - Graduate Certificate in Public Sector Management – Flinders University
 - Bachelor of Science – University of Melbourne (1996)

Memberships

- Member of Planning Institute of Australia (MPIA)
- Corporate Bronze Member of Fire Protection Association of Australia

Acknowledgement of Country

Euca Planning would like to acknowledge the Bunurong people as the Traditional owners of the unceded land that we conduct our business on. We pay our Respects to their Elders past, present, and future.

Disclaimer

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Requirements detailed in this document do not guarantee survival of the buildings or the occupants. The client is strongly encouraged to develop and practice a bushfire survival plan.

Information and assistance including a template for a Bushfire Survival Plan is provided as part of the 'Fire Ready Kit' available through the CFA website at www.cfa.vic.gov.au or through your local CFA Regional office.

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Version Control

	Name	Date Completed	Comments
Field Assessment	Katelyn Balfour	11 May 2023	
Mapping	Jeff Marriott	20 May 2023	
Report	Jeff Marriott	26 May 2023	
Report Approved	Deanne Smith	26 May 2023	
Revision 1	Jeff Marriott	31 July 2023	Revegetation
Report Approved	Deanne Smith	2 August 2023	

Executive Summary

This Report has been prepared to respond to a request from Wardle Studio for the consideration of Clause 13.02-1S of the South Gippsland Planning Scheme as part of the planning permit application for redevelopment of the Kongwak Butter and Cheese Factory areas at 1486-1488 Korumburra-Wonthaggi Road, Kongwak.

The study area and locality

The subject site is 1486-1488 Korumburra-Wonthaggi Road, Kongwak, more particularly described as:

- Lot 3 PS331420 - The site is in the Farming Zone and part Township Zone
- Lot 1 PS716625 – Township Zone
- Lot 2 PS716625 – Township Zone
- Lot 11 LP4610 – Township Zone

Landscape bushfire considerations

The primary bushfire risk to the study area is from grassfire. There is no potential for extreme fire behaviour due to the lack of rugged, forested terrain. Close to the site, revegetated riparian corridors are considered to be forest in their future-state.

The methodology for a bushfire hazard landscape assessment set out in Planning Permit Applications Bushfire Management Overlay Technical Guide (DELWP,2017) identifies four landscape typologies to provide a framework for identifying landscape risk consistently across Victoria. This methodology can be used in areas that are not contained in the Bushfire Management Overlay. Landscape Type Two most closely aligns with the landscape around the study area given the grassland with riparian forest corridors to be established. That being said, this is one of the lowest bushfire hazard locations for rural interface development.

Site based exposure

An assessment of site-based exposure has been prepared as part of this report (Section 4.5) to consider the site-based exposure elements of Clause 13.02-1S. After the initial assessment, further work has been undertaken to assess the 'future state' of revegetated riparian corridors with additional bushfire hazard site assessment being considered and integrated into a Bushfire Mitigation Plan. It is recommended that the provided Bushfire Mitigation Plan be endorsed to ensure that these selected group accommodation unit site based exposure remains less than 29kW/m² for three units, and less than 12.5kW/m² for the other developments.

Compliance with Clause 13.02-1S Bushfire

In addition to landscape and site-based considerations, the proposal is also consistent with the bushfire policies and directions contained in the planning scheme. There is no planning scheme bushfire factor that would warrant the proposal not proceeding.

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1.0 Introduction

This Report has been prepared to respond to a request from South Gippsland Shire Council for the consideration of Clause 13.02-1S of the South Gippsland Planning Scheme as part of the planning permit application for construction of Places of Assembly and Group Accommodation at Lot 1 & Lot 2 PS716625 and Lots 1,2 and 3 PS331420 Korumburra-Wonthaggi Road, Kongwak. This report has been prepared at the request of the applicant.

The report has been presented consistent with the content of the South Gippsland Planning Scheme, in particular Clause 13.02. The report establishes the context by providing information which is important when considering the way bushfire considerations may impact on the future use of the land. A structured approach to risk identification and management follows which can be used to provide decision makers with information to explain the bushfire risk and inform future design response to that risk.

2.0 Locality and Site Description

The subject site is Lot 1 & Lot 2 PS716625 and Lots 1,2 and 3 PS331420 Korumburra-Wonthaggi Road, Kongwak. The site is in the Township Zone with Lot 3 PS331420 being predominantly Farming Zone.

The application relates to the south boundary part of the lands which borders the Korumburra-Wonthaggi Road. The northern boundary borders farmland and the west and east boundaries border dwellings within the Township Zone. Foster Creek forms part of the boundary between Lot 1 and Lot 2 PS716625 and Lot 3 PS331420. Lot 3 PS331420 is the largest of all parcels that extends further north than all other Lots. The total land is bounded by farming zone to the north mostly comprising grazing grassland and township zone in all other directions. The sites comprise existing buildings (Lot 1/Lot 2 PS716625 and grazing grassland (Lots 1,2 and 3 PS331420). A dam and access tracks and revegetated creeklines exist on Lots 1, 2 and 3 PS331420. No dwellings or outbuildings are on the second site.

The subject land comprises is depicted in **Figure 1** below.

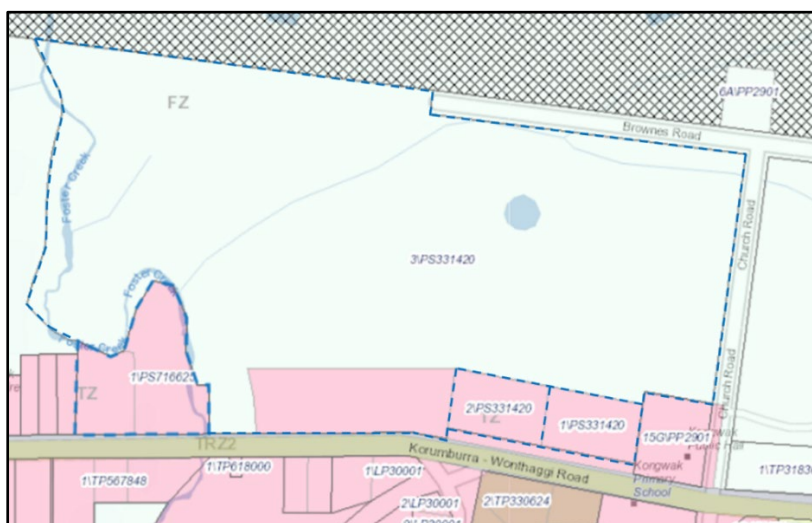


Figure 1 Site Context Plan

Kongwak is a small town with a strong local heritage, and this proposal is within the northern aspect of the town, as depicted in **Figure 2** below.



Figure 2 Location of site with reference to Kongwak (Google Earth, 2023)

3.0 Planning Policy

3.1 State Planning Policy Overview

The planning assessment and response provided for the proposal needs to be considered against the State Planning Policy Framework in relation to bushfire. This consideration is provided below.

Clause 71.02-3 (integrated decision making) of the Planning Scheme was introduced through Amendment VC140 in December 2017 and reflects the policy settings that were recommended in 2011 by the *2009 Victorian Bushfire Royal Commission*, specifically amended and provides that:

Planning authorities and responsible authorities should endeavour to integrate the range of policies relevant to the issues to be determined and balance conflicting objectives in favour of net community benefit and sustainable development for the benefit of present and future generations. However, in bushfire affected areas, planning authorities and responsible authorities must prioritise the protection of human life over all other policy considerations.

Clause 13.02 (Bushfire) of the Planning Scheme applies to all decision making and seeks to:

*To strengthen the resilience of settlements and communities to bushfire through **risk-based planning** that prioritises the protection of human life.*

[Emphasis added]

Clause 13.02-1S includes a number of strategies to achieve that objective. Broadly these

strategies include:

- prioritising the protection of human life;
- requiring a robust assessment of the bushfire hazard and risk assessment before any strategic or statutory decision is made; and
- directing population growth and new settlements to low-risk locations.

Importantly in relation to settlement planning, clause 13.02-1S includes the following requirements:

- *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 metres under AS 3959-2018 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2018).*
- *Ensuring the availability of, and safe access to, areas assessed as a BAL-LOW rating under AS 3959-2018 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2018) where human life can be better protected from the effects of bushfire.*
- *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 reduce 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, neighborhood and site scale, including the potential for neighborhood-scale destruction.*
- *Assessing alternative low-risk locations for settlement growth on a regional, municipal, settlement, local and neighborhood 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 3959-2018.*

When these strategies are read together it is clear that the fire risk is a consideration for development. The purpose of this report is to undertake such an assessment for the proposal, including an assessment of the likely fire behaviour and the risk to future occupants.

In the context of planning decisions, these strategies need to be read as on balance and consider the 'net increase in risk to existing and future residents'. As it relates to the objectives within Clause 13.02 of the Planning Scheme, it is necessary to ensure that the protection of human life is prioritised when decisions are made. However, the strategies listed at Clause 13.02-1S in the Planning Scheme are not 'mandatory requirements' and it is not necessary to 'tick every box'. It is more important to ensure that decisions are consistent with the State policy objectives and build resilient communities.

3.2 State Planning Policy Assessment

3.2.1 Objective

Clause 13.02-1S seeks to 'strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life'.

3.2.2 Application

The policy must be applied to all planning and decision making under the Planning and Environment Act 1987 relating to land which is within a designated bushfire prone area; or subject to a Bushfire Management Overlay.

Bushfire Prone Area

The planning proposal area is included in the Bushfire Prone Area (BPA) as depicted in Figure 3. As described in Planning Advisory Note 46 (2013), the BPA is a building regulation tool that identifies where moderate bushfire hazard can be expected. It applies to areas subject to the BMO, and to areas that experience a lower head fire intensity modelled to be between 4,000kW/m and 30,000kW/m. This level of hazard informs areas declared as bushfire prone in the building system. Areas at the upper end of the bushfire intensity range (that is 28,000kW/m and above and referred to as BHL1b) are considered, where appropriate, for applying the BMO based on the advice of the relevant fire authority.

The entire planning proposal site is subject to the BPA. The greater area is also in the BPA reflecting the moderate bushfire hazard that can be expected from the grassland.

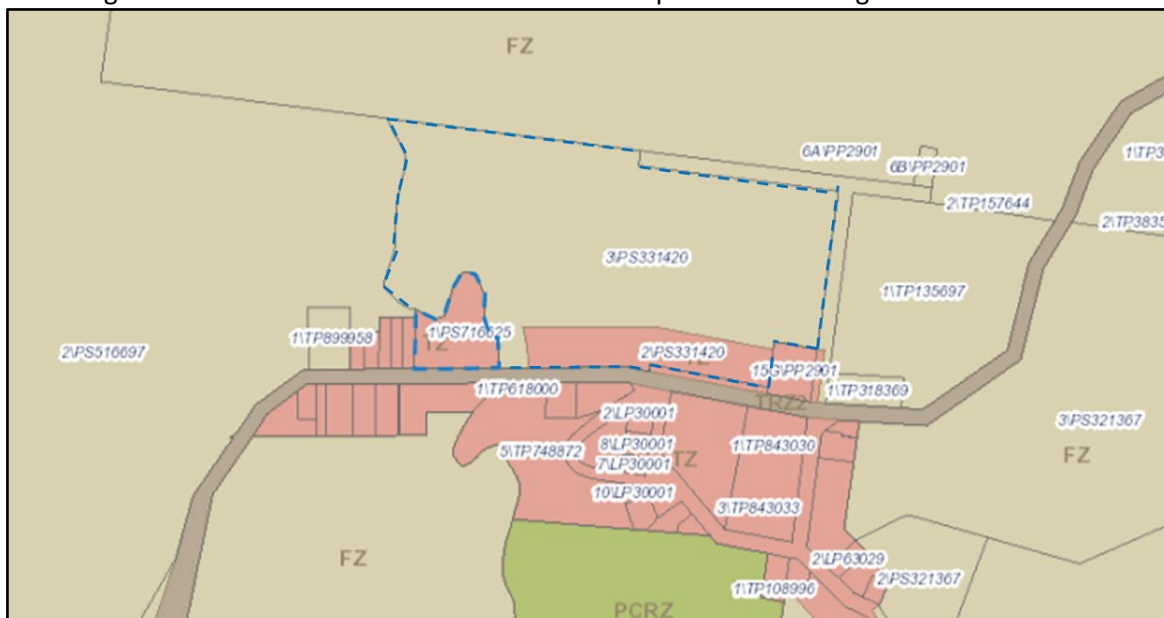


Figure 3 Extent of the Bushfire Prone Area across the site and in the vicinity. BPA indicated by areas with gray shading (Planning Maps Online, DELWP, 2023).

In December 2018, Clause 13.02-1S of the South Gippsland Planning Scheme was amended to specifically refer to Bushfire Prone Areas and to strengthen the consideration of bushfire risk in all planning decisions. As the site is fully contained within the Bushfire Prone Area, the minimum

level of construction for all future dwellings is BAL 12.5, and this bushfire risk must be considered.

Bushfire Management Overlay

There is no Bushfire Management Overlay on the site but there is some in the local area as depicted in **Figure 4**, being south of the site.

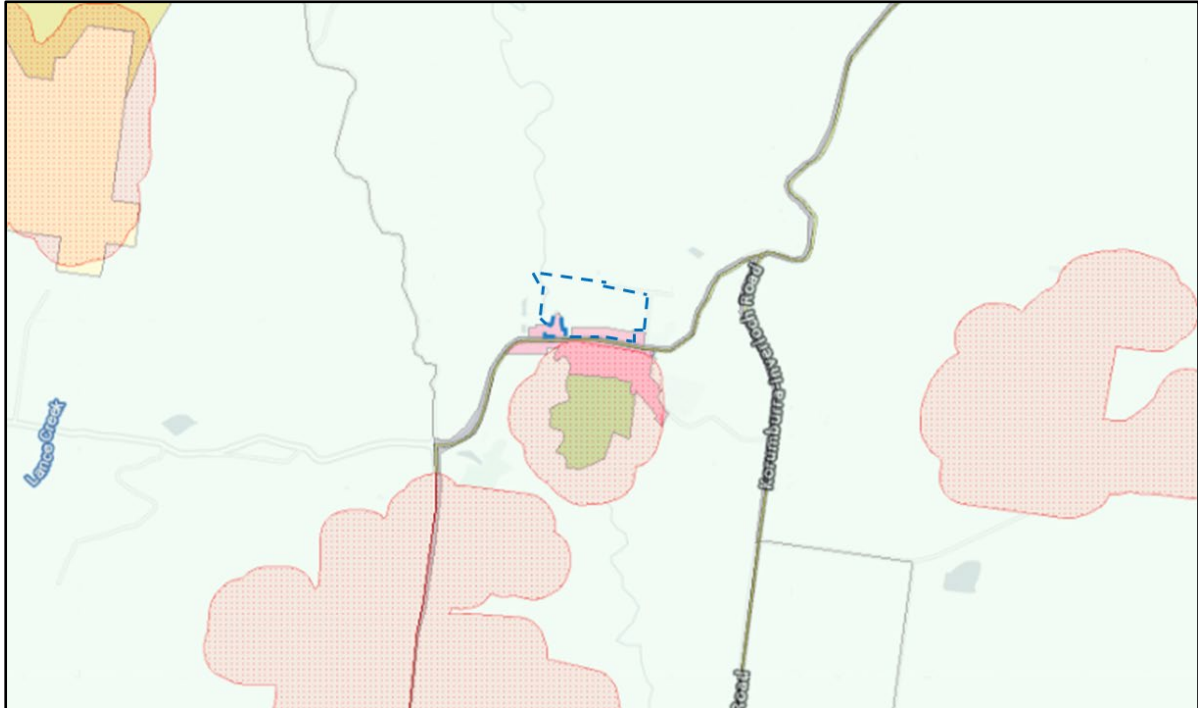


Figure 4 Current extent of Bushfire Management Overlay nearby (VicPlan, DELWP, 2023).

As described in Planning Advisory Note 46 (2013), the BMO is a planning scheme provision used to guide the development of land in areas of high bushfire hazard. The location, design and construction of development and the implementation of bushfire protection measures must be considered under a BMO. The BMO applies to areas where there is potential for extreme bushfire behaviour, such as a crown fire and extreme ember attack and radiant heat.

The most significant bushfire hazard where head fire intensity is modelled to be 30,000kW/m or more informed where the BMO should apply. Inputs to this calculation included physical characteristics including vegetation, topography and separate fire behaviour models appropriate to the vegetation classification. Whilst areas of contiguous vegetation of less than 4Ha were excluded, buffers within 150 metres of vegetation were included in recognition of research that 92% of house loss occurs within this distance (Blanchi, Lucas, Leonard, & Finkele, 2010).

Initiated by a recommendation of the 2009 Victorian Bushfires Royal Commission, the BMO was mapped using hazard data developed by the Department of Environment and Primary Industries (DEPI). Revised mapping was verified by State Councils during 2016 and 2017 and then gazetted on October 3rd, 2017. As a result, the consideration of bushfire risk has informed this proposal.

3.2.3 Strategies

Strategic considerations: Protection of human life

<i>Give priority to the protection of human life by:</i>	<i>Response</i>
Prioritising the protection of human life over all other policy considerations	<ul style="list-style-type: none"> • The PS716625 parcels have existing buildings. • The PS331420 parcels are void of dwellings or outbuildings. • The proposed use is for the redevelopment of existing buildings into places of assembly and for new group accommodation in a rural area that is of lowest risk (grassland) and riparian forest.
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.	<ul style="list-style-type: none"> • The surrounding landscape is characterized by a combination of farming and township zones. The farming zone is separated by the Foster Creek and the Korumburra-Wonthaggi Road traversing the southern boundary and the local Church and Brownes Roads traversing the east and northeast boundary. Township Zoning exists to the south and western aspect of Lots PS716625. • The subject land is contained in the bushfire prone area with grassland as the vegetation which has the lowest area of rural risk.
Reducing the vulnerability of communities to bushfire through the consideration of bushfire risk in decision-making at all stages of the planning process.	<ul style="list-style-type: none"> • The proposed development has interface to low threat vegetation or grassland that has Column A separation in most directions. The site has direct access to areas of low hazard within the settlement of Kongwak, and further afield at Inverloch and Wonthaggi. Riparian revegetation is proposed to be undertaken and the proposal responds to that future hazard.

Landscape considerations: Bushfire hazard identification and assessment

<i>Identify bushfire hazard and undertake appropriate risk assessment by:</i>	<i>Response</i>
Applying the best available science to identify vegetation, topographic and climatic conditions that create a bushfire hazard.	The South Gippsland Planning Scheme requires the proposal to respond to bushfire based on current assessment methods. Clauses 13.02, and 53.02 are considered for

	the land with the importance of bushfire planning being strengthened by Clause 71.02-3 <i>Integrated Decision Making</i> . The assessment method aligns with AS3959-2018 and is provided in this report (see Section 4).
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.	Consistent with the revised Clause 13.02, the proposal must respond to the Bushfire Prone Area. A compliant BAL has been undertaken in addition to mapping the local and neighbourhood area to assist with hazard analysis.
Applying the Bushfire Management Overlay in planning schemes to areas where the extent of vegetation can create an extreme bushfire hazard	It is demonstrated that the land is 'Landscape Type Two' having vegetation influence in the form of grassland and riparian forest; whilst also having interface to developed and maintained rural living lots that reinforce why the land does not meet the criteria for application of the Bushfire Management Overlay.
Considering and assessing the bushfire hazard on the basis of: <ul style="list-style-type: none"> • Landscape conditions - meaning the conditions in the landscape within 20 kilometres and potentially up to 75 kilometres from a site; • Local conditions - meaning conditions in the area within approximately 1 kilometre from a site; • Neighbourhood conditions - meaning conditions in the area within 400 metres of a site; and, • The site for the development 	An assessment is provided in Section 4.0 of this report. Three scales of consideration are applied - Landscape conditions at 20km, Local conditions at 10 km, and Neighbourhood conditions at 1km. The site conditions are considered through the Bushfire Hazard Site Assessment.
Consulting with emergency management agencies and the relevant fire authority early in the process to receive their recommendations and implement appropriate bushfire protection measures.	This has not occurred, and not considered to be required.
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	The content of this report provides a solid foundation for the proposal to proceed.
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.	This element of the revised Clause 13.02 is the most important element and empowers the Responsible Authority to not approve a permit application until it is satisfied with the bushfire protection measures being implemented.

Site based exposure: Settlement Planning

<i>Plan to strengthen the resilience of settlements and communities and prioritise protection of human life by:</i>	<i>Response</i>
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 metres under AS 3959-2018 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2018).	This location is primarily grassland with a riparian corridor to be revegetated and is not in the BMO which makes it one of the lower risk areas. The site comprises either low threat vegetation and managed grassland that meets Column A separation. The heat flux for the entire development is an exposure to radiant heat of 12.5 kW/m ² or less with grassland management. Once the future hazard of the riparian forest is considered there is a small encroachment in the north setback of the place of assembly buildings (existing buildings to be redeveloped).
Ensuring the availability of, and safe access to, areas assessed as a BAL-LOW rating under AS 3959-2018 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2018) where human life can be better protected from the effects of bushfire	The parcels are located directly within the Kongwak Township and one within the farming zone. The surrounding area comprises farmland (north) and developed lots to the east, west and south. The greater area significant areas that are utilised for intensive grazing
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.	Application of AS3959 will address the bushfire risk to the buildings. The nearby dwellings within the township of Kongwak will have an increase in their level of resilience due to enhanced development of this land. The development will increase the need for vegetation management on the land, thus creating a safer environment for all.
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 reduce bushfire risk overall.	There is an increase in risk by placing accommodation in a rural location. However, the risk is commensurate with the mitigation measures taken including BAL, access and water supply and responds to the revegetation.
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	In light of the recent changes to Clause 13.02 and the addition of this assessment requirement, an assessment is provided in Section 4.0 of this report. Three scales of consideration are applied- Landscape conditions at 20km, Local conditions at 10 km, and Neighbourhood conditions at 1km. The site conditions are considered through the Bushfire Hazard Site Assessment.
Assessing alternative low-risk locations for settlement growth on a regional, municipal,	This northern part of Kongwak is considered as a lower threat location based on the

settlement, local and neighbourhood basis.	surrounding vegetation and has two areas in the greater area to the north and southeast identified for future development.
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 3959-2018.	There is no strategic planning work to be implemented.

Areas of high 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 of high biodiversity conservation value.

Response: The site is very clear of vegetation apart from areas of grassland areas and the nearby Foster Creek. The streamside corridor of Foster Creek has some narrow revegetation within the north and western aspect of the subject land. The bushfire hazard site assessment has been undertaken based on the state of that vegetation. A subsequent bushfire hazard site assessment has occurred considering the future hazard in conjunction of the work of the landscape architect. This response is to enhance the waterways (as required by WGCMA) yet respond with the future built environment.

Use and development control in a Bushfire Prone Area

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 accommodation.

Response: The greatest separation has been provided to ensure a radiant heat flux does not exceed 12.5kW/m².

When assessing a planning permit application for the above uses and development:	Response
Consider the risk of bushfire to people, property and community infrastructure.	This report provides the consideration.
Require the implementation of appropriate bushfire protection measures to address the identified bushfire risk.	This report provides the consideration.
Ensure new development can implement bushfire protection measures without unacceptable biodiversity impacts.	This report provides the consideration.

3.2.4 Policy guidelines

Planning must consider as relevant:	Response
Any relevant approved State, regional and municipal fire prevention plan.	This has been considered in this report which can be used to inform future planning permit application assessments.

AS 3959-2018 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2018).	This is relevant through the derivation of Bushfire Attack Levels and is considered when referring to the Bushfire Attack Level.
Building in bushfire-prone areas - CSIRO & Standards Australia (SAA HB36-1993, May 1993).	This is the handbook to AS3959-2018 and does not need to be considered directly by the proposal.
Any Bushfire Prone Area map prepared under the Building Act 1993 or regulations made under that Act.	The updated Bushfire Prone Area map has been considered in this report.

4.0 Bushfire Risk

An assessment on bushfire risk consistent with Clause 13.02 is provided. Three scales of consideration are applied - Landscape conditions at 20km, Local conditions at 10 km, and Neighbourhood conditions at 1km. The site conditions are considered through the Bushfire Hazard Site Assessment.

4.1 Landscape Conditions

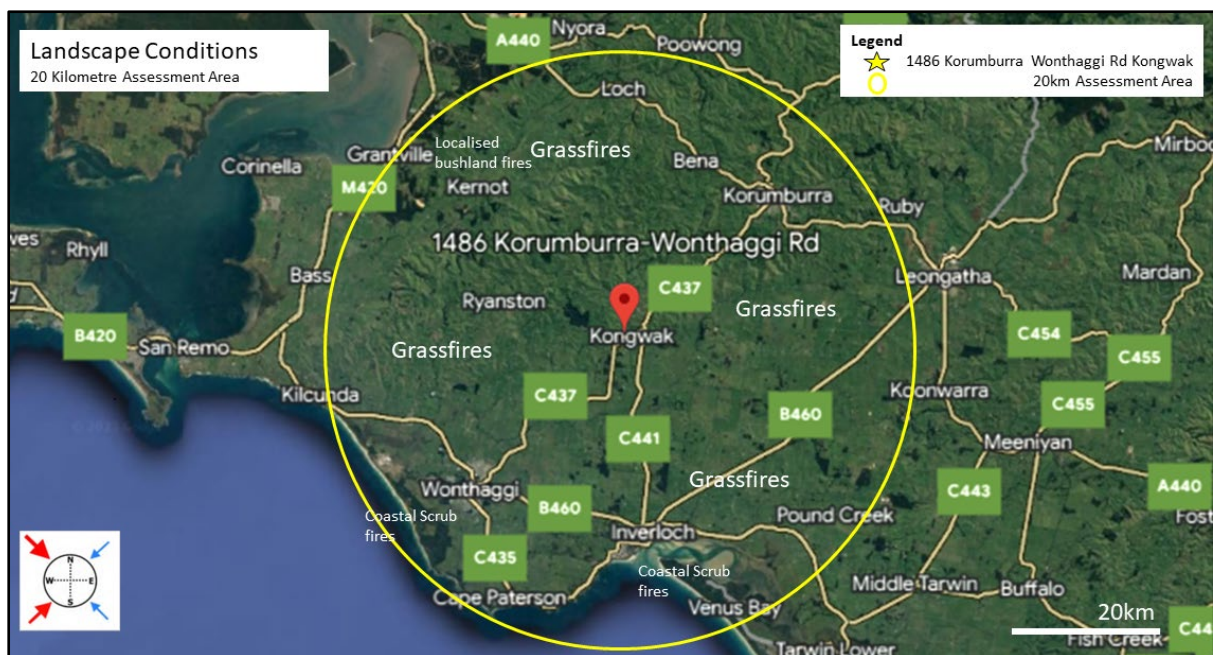


Figure 5 Location within the context of 20km radius from subject land (Google Earth, 2023)

The landscape risk of a site is an important consideration when mitigating bushfire hazards. The landscape risk is the combination of a number of elements in the surrounding landscape. These relate to the vegetation extent, the area available to a landscape bushfire, the orientation of the ridgelines and the steepness of the terrain, the accessibility to low threat areas and the quality of the road networks surrounding the site.

Within 20 kilometres of the subject land area, key features include:

- The larger townships of Korumburra, Wonthaggi and Inverloch and smaller townships of Kongwak, Loch, Venus Bay and Venus Bay.
- The presence of expansive farmland in all directions;

- Small settlements in the greater area including Ryanston, Bena, Kernot and Pound Creek.
- The coastal fringe to the south and southwest.

This site is positioned within the small township of Kongwak with one parcel being within the farming zone. The site is separated by more than 150 metres from the Pioneer Reserve (Swampy Riparian Woodland) located to the south of the township. The vegetation in the broader area of the site is predominately farming grassland areas, isolated patches of bushland and the revegetated Foster Creek corridors which are considered low threat due to low fuel loading, narrow width and moisture content. The location has a lower risk of bushfire due to the intensive farming and cropping mixed with the nearby developments. There are limited fire runs in the greater area, whereas the grassland fire runs would be dependent upon land use and wind directions.

4.2 Local Conditions



Figure 6 Location within the context of 10km radius from subject land (Google Earth, 2023)

Within 10 kilometres of the development plan area, key features include:

- The town of Kongwak and rural settlements of Lance Creek, Outtrim, Glen Alvie and Krowera.
- The Korumburra-Wonthaggi Road traversing northeast to southwest and Korumburra-Inverloch Road traversing from the northeast to the south. Other smaller local roads also contribute to the road network.;
- Extensive farming grassland.

4.3 Neighbourhood Conditions

Key features located within 1 kilometre of the subject land area include:

- The township of Kongwak
- The Korumburra-Wonthaggi Road northeast to the southwest through the town.
- Extensive grassland and development in all directions of the site;

- Pioneer Reserve Bushland Area to the south and Foster Creek Revegetation Corridor weaving from the north.



Figure 7 Location within the context of 1km radius from subject land (Google Earth, 2023)

4.4 Bushfire Scenarios

Scenario 1 – Localised grassfires

In all directions is grassland with the owner controlling the land within the northern aspect. A fire approaching from west, north and northeastern directions would present radiant heat from grassland. The topography and land use of the farmland would assist with mitigating the fire hazard.

Scenario 2 – Localised bushfires to the south

To the south a local fire run from the south which is less than 1 kilometre could occur. The vegetation within this area comprises swampy riparian woodland with the potential of having a high moisture content that could assist with a reduction of the hazard. This scenario and fire behaviour would be in accordance with BMO. The development of the township between the site and the hazard would assist in mitigating the risk to the subject land.

4.5 Bushfire Hazard Site Assessment

The vegetation within the 150-metre assessment was classified according to AS 3959:2018, Technical Guide: Planning Permit Applications Bushfire Management Overlay (DELWP, 2017) and the Overall Fuel Hazard Assessment Guide (DSE, 2010). The AS 3959:2018 approach uses a generalised description of vegetation based on the AUSLIG (Australian Natural Resources Atlas” No.7 Native Vegetation) classification system. According to this method, vegetation can be classified into seven categories. Each category indicates a particular type of fire behaviour and these categories or classifications are then used to determine bushfire intensity. An indication of the Ecological Vegetation Classes in the landscape is provided below in **Figure 8**.

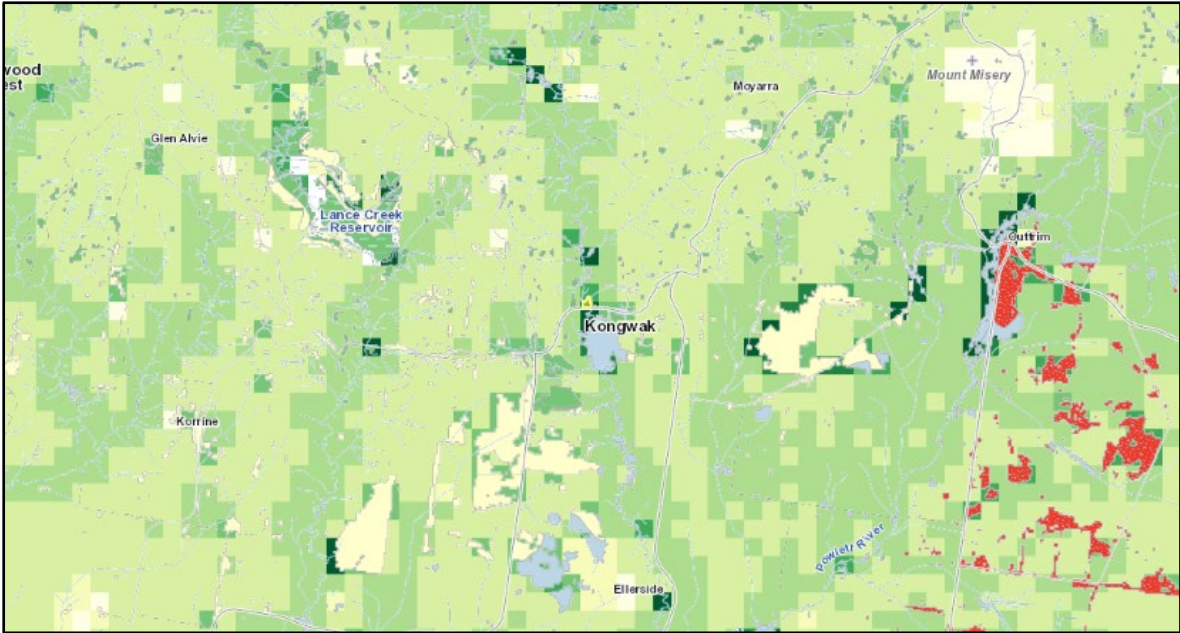


Figure 8 Vegetation in the area – Damp Forest (green), Swampy Riparian Woodland (blue), Lowland Forest (cream), Heathy Woodland (rust). The site is centrally located within the image. (Source: Naturekit, 2023)

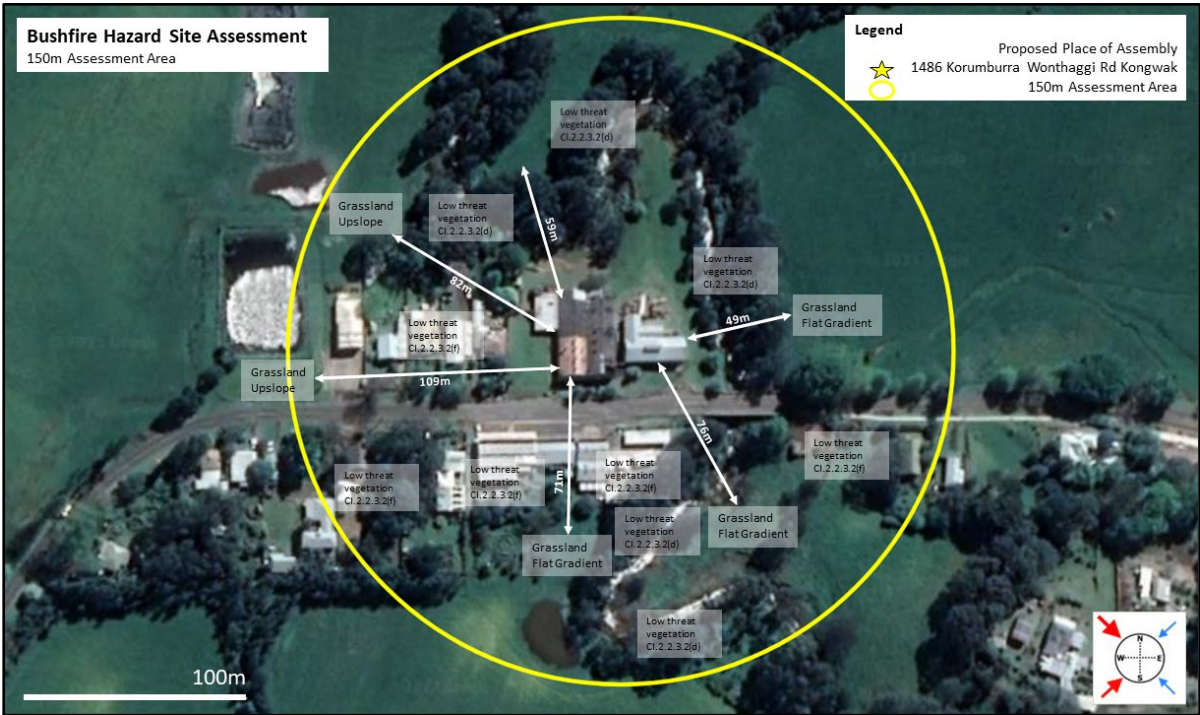


Figure 9a Bushfire Hazard Site Assessment for the subject land – assembly buildings - existing conditions

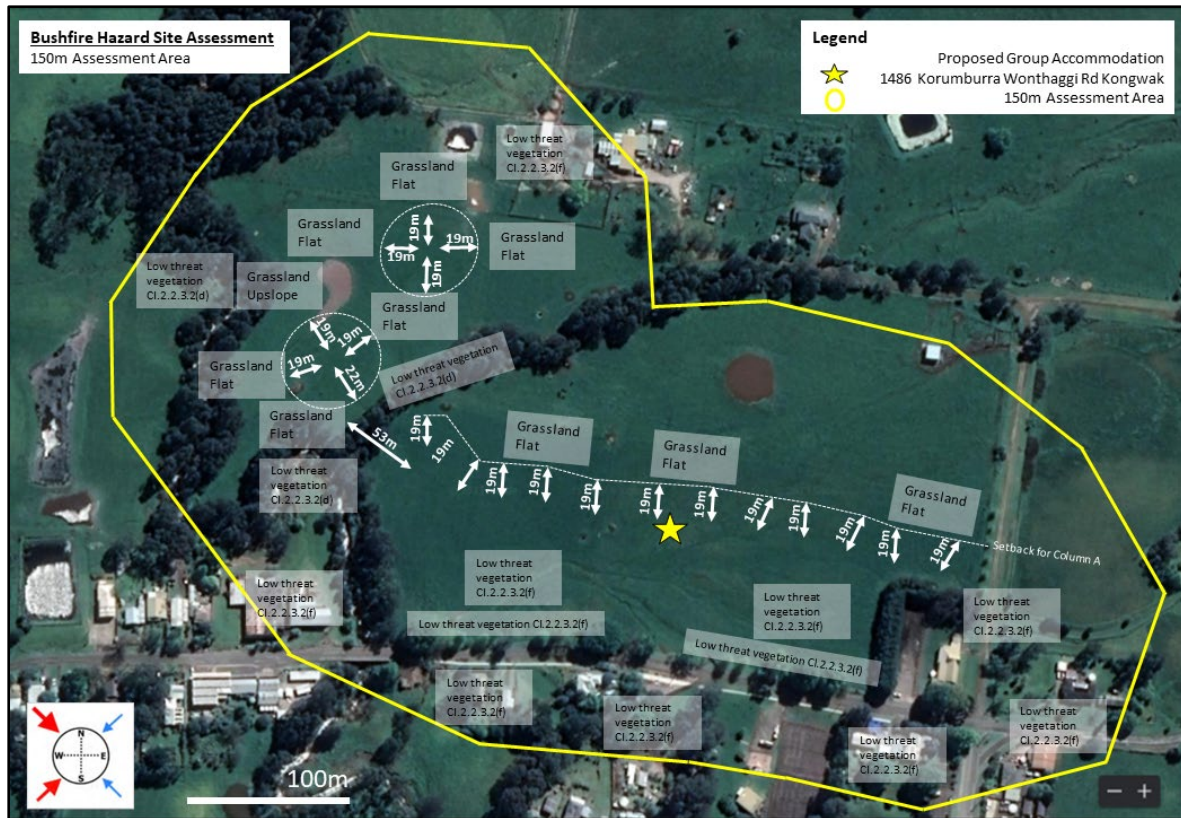


Figure 9b Bushfire Hazard Site Assessment for the subject land (Group Accommodation)- existing conditions

4.5.1 Vegetation

The AS 3959 approach uses a generalised description of vegetation based on the AUSLIG (Australian Natural Resources Atlas" No.7 Native Vegetation) classification system. According to this method, vegetation can be classified into seven categories. Each category indicates a particular type of fire behaviour and these categories or classifications are then used to determine bushfire intensity. The vegetation classifications applied are listed below and the Bushfire Hazard Site Assessment is shown in **Figure 9**.

Vegetation Classification: Grassland

AS3959:2018 Definition:

Sown pasture – All forms, including situations with shrubs and trees, if the overstorey foliage cover is less than 10%.

Site Description:

The place of assembly has grassland in the outer perimeter of the assessment area to the west, north and east but with ample separation. The proposed group accommodation has grassland predominately to the north which comprises grazing grassland that extends for many kilometers over managed farmland. The land is generally flat in the near surrounds before meeting the foothills further to the north whereby many steep slopes exist over the southwestern Strzelecki Ranges. The local area has mild slopes towards the Foster Creek corridor. With the existing grazing land to the north and the township developments to the east, south and west along the southern title it is calculated that the site would be exposed to no more than 12.5kW/m².



Images above: Typical grassland within the assessment area. Photos taken looking north and east into the location of the group accommodation units with the revegetated Foster Creek.

Excludable and Low Threat vegetation

2.2.3.2 Exclusions – Low threat vegetation and non-vegetated areas

The following vegetation shall be excluded from a BAL assessment:

- (a) Vegetation of any type that is more than 100 m from the site*
- (b) Single areas of vegetation less than 1 ha in area and not within 100 m of other areas of vegetation being classified vegetation.*
- (c) Multiple areas of vegetation less than 0.25 ha in area and not within 20 m of the site, or each other or of other areas of vegetation being classified vegetation.*
- (d) Strips of vegetation less than 20 m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20 m of the site or each other, or other areas of vegetation being classified vegetation.*
- (e) Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.*
- (f) Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition, mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and windbreaks.*

NOTES:

- 1. 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).*
- 2. A windbreak is considered a single row of trees used as a screen or to reduce the effect of wind on the leeward side of the trees.*

Site Description:

The site has low threat vegetation in the immediate surrounds of the proposed place of assembly and proposed group accommodation site. The nature strip vegetation including the Avenue of Honour; Windbreaks and the linear Foster Creek revegetation strip are all considered to be low threat vegetation.



Images above – Typical Low threat vegetation. Photo taken looking along Korumburra-Wonthaggi Road at the maintained roadside naturestrip and the non-vegetated road.

Images below – Low threat vegetation. Photos taken of the narrow Foster Creek riparian corridor and maintained areas of the site, adjacent property and roadside.



4.5.2 Topography

The Foster creek winds through the farmland from the north of the site as it travels through farmland and along the boundary between the subject Lots. The land has a mild undulating form with drainage leading to the creekline. The existing buildings proposed as places of assembly are located on maintained land with low threat vegetation in all immediate directions and grassland in the outer assessment area. The surrounding township area is well maintained and typical of the smaller townships of South Gippsland. Steeper hill country exists to the east and northern areas outside of the neighbourhood area.

4.5.3 Separation from the hazard (existing conditions)

The bushfire attack level (BAL) is a means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat expressed in kilowatts per metre squared. The BAL is also the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire. The highest BAL determines the construction requirements for the dwelling. A reduction of one BAL level may be applied if facades of the building are shielded from the bushfire hazard. The BAL for this site has been calculated using a Forest Fire Danger Index (FFDI) of 100 and a Flame Temperature of 1090K. These parameters are in accordance with the risk parameters set in Clause 53.02, and the calculations are used as the basis to assess radiant heat exposure. An assessment of the site conditions without modification was made and informs the BAL assessment and final design.

Place of Assembly

Table 1A - Separation from the Hazard Assessment (existing conditions)

Orientation	Highest threat vegetation	Average slope under classifiable vegetation	Separation distance	Bushfire Attack Level (BAL)
North	Grassland	Flat	59 metres	BAL12.5
	Grassland	Flat	82 metres	BAL12.5
	Low threat	Not applicable	Not applicable	BAL12.5
East	Grassland	Flat	49 metres	BAL12.5
	Low threat	Not applicable	Not applicable	BAL12.5
South	Grassland	Flat	71 metres	BAL12.5
	Grassland	Flat	76 metres	BAL12.5
	Low threat	Not applicable	Not applicable	BAL12.5
West	Grassland	Flat	109 metres	BAL12.5
	Low threat	Not applicable	Not applicable	BAL12.5

This development can be undertaken at BAL12.5.

Group accommodation – Row in eastern area

Table 1B – Separation from the Hazard Assessment (existing conditions)

Orientation	Highest threat vegetation	Average slope under classifiable vegetation	Separation distance	Bushfire Attack Level (BAL)
North	Grassland	Flat	0 metres	BALFZ
East	Grassland	Flat	0 metres	BALFZ
	Low threat	Not applicable	Not applicable	BAL12.5
South	Grassland	Flat	0 metres	BALFZ
	Low threat	Not applicable	Not applicable	BAL12.5
West	Grassland	Flat	109 metres	BAL12.5
	Low threat	Not applicable	Not applicable	BAL12.5

This BAL can be moderated by management of the grassland to a distance of 19 metres, achieving BAL12.5 construction by reducing hazard. The western unit responds to the forest in the west and is BAL29 construction as 25 metres from the revegetation corridor.

Group accommodation – Northern units

Table 1C – Separation from the Hazard Assessment (existing conditions)

Orientation	Highest threat vegetation	Average slope under classifiable vegetation	Separation distance	Bushfire Attack Level (BAL)
North	Grassland	Flat	0 metres	BALFZ
East	Grassland	Flat	0 metres	BALFZ
	Low threat	Not applicable	Not applicable	BAL12.5
South	Grassland	3 degrees downslope	0 metres	BALFZ
	Low threat	Not applicable	Not applicable	BAL12.5
West	Grassland	Flat	109 metres	BAL12.5
	Low threat	Not applicable	Not applicable	BAL12.5

This BAL can be moderated by management of the grassland to a distance of 19 metres in the north, and for adapting to forest in the south, achieving BAL29 construction by reducing hazard.

4.5.3 Separation from the hazard (future conditions)

After the initial assessment of the site was undertaken, designs have progressed and the waterways are to be revegetated. This introduces 'forest' vegetation into the site. New buildings need to respond to this change in hazard. Work has been done with the landscape architect to provide a responsive site that acknowledges the vegetation classification that will be the 'future state'. As such, the hazard has been upgraded to forest, and applied to determine the management areas around the group accommodation. Three units – the two north, and the one closest in the linear row, need to be constructed to BAL29 not BAL12.5.

The plan included in Appendix Three accurately shows that bushfire mitigation measures for the future state of the land.

4.6 Other considerations in relation to bushfire

The Regional Bushfire Planning Assessment (RBPA) for the Gippsland Region (2012) provides a high level analysis of locations where the bushfire hazard may impact on planning objectives. The RBPA provides information where a range of land use planning matters intersect with a bushfire hazard to influence the level of risk to life and property from bushfire. This information is required to be used as part of strategic land use and settlement planning at the regional, municipal and local levels.

“The RBPA is not a statutory planning provision and does not directly translate into planning schemes. However, it complements planning scheme provisions such as the Bushfire Management Overlay (BMO) by providing spatial and qualitative information from a variety of sources which together can inform considerations about where bushfire should be assessed early in the strategic planning process.” RBPA – South Gippsland Region (2012).

Of particular note, neither the area of Kongwak or any nearby locality within 10 kilometres are mentioned within the Gippsland Part 2 RBPA.

4.7 Surrounding Road network

The subject area has direct access to the Korumburra-Wonthaggi Road. This is the east-west road that provides for traffic movement to and from Kongwak.

5.0 Summary and recommendations

5.1 Strategic policy assessment

An assessment of the proposal against policy contained within Clause 13.02-1S is contained in Section 3.2. It is demonstrated that the proposal meets the policy. One of the key strategies contained in Clause 13.02-1S is *“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 [text emphasis added in bold].* This proposal is for ‘development’ and is not a strategic document or plan. For rural-based tourism to occur, it will need to be based in grassland, similar to the proposal.

5.2 Landscape bushfire considerations

This land is Landscape Type 2 according to landscape typologies identified for the Bushfire Management Overlay (BMO) simply due to the presence of grassland in all directions. The land is not in the Bushfire Management Overlay and has exposure to ember attack from forest fire from a single direction (north).

The primary bushfire risk to the study area is from grassfire. There is no potential for extreme fire behaviour due to the lack of rugged, forested terrain, even with riparian forest revegetation.

The methodology for a bushfire hazard landscape assessment set out in Planning Permit

Applications Bushfire Management Overlay Technical Guide (DELWP,2017) identifies four landscape typologies to provide a framework for identifying landscape risk consistently across Victoria. This methodology can be used in areas that are not contained in the Bushfire Management Overlay. Landscape Type Two most closely aligns with the landscape around the study area given the grassland and riparian forest. That being said, this is one of the lowest bushfire hazard locations for rural tourism development with farming and township zone interface.

5.3 Site based exposure

A bushfire hazard site assessment has been prepared for the subject land. The assessment calculations are shown in **Table 1** and the associated diagram in **Figure 9**. The assessment shows that the site can achieve exposure less than 12.5kw/m² on all aspects after discussion with the owner and some changes to the revegetation works onsite. Three units will be exposed to 29 kW/m² and there is a small intrusion from the north (waterway) into the setback for the existing buildings.

5.3 Bushfire mitigation measures

The site proposal can accommodate the group accommodation for much of the year without threat of bushfire due to the climate. The proposal can easily provide for tailored bushfire mitigation measures to deal with summer fire season as detailed below:

- Construction works to comply to BAL12.5 in accordance with AS3959-2018, with the exception of the three northwestern group accommodation where construction works are to comply to BAL29 in accordance with AS3959-2018.
- Basic bushfire emergency plan that enables the development occupancy to be appropriately managed on days of increased fire danger. This should be developed by the owners using information available from CFA for businesses.
- Installation of static water supply that can be readily accessed by occupants and fire service at the group accommodation, minimum 10,000 litres to be located within 60 metres of all group accommodation (can be co-located, shared or integrated into site fire system that will service the butter and cheese factories redevelopment).
- Provision of identified passing bays every 200 metres along the access for the group accommodation site
- Management of the vegetation as defendable space responding to the grassland and revegetation as outlined on the Bushfire Mitigation Plan, and outlined in Table 6 of Clause 53.02-5.

Table 6 Vegetation management requirement

Vegetation management requirement

Defendable space 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 3 metres 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 square 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.

Unless specified in a schedule or otherwise agreed in writing to the satisfaction of the relevant fire authority.

The bushfire mitigation measures should be endorsed through the permit as part of the landscape and building plans. The Bushfire Mitigation Plan provides an integrated plan reflecting the future state of the land.

6.0 References

AN68 Bushfire State Planning Policy VC140

Blanchi, R., Lucas, C., Leonard, J., & Finkele, K. (2010). Meteorological conditions and wildfire-related house loss in Australia. *International Journal of Wildland Fire*, 19(7), 914-926.

Standards Australia (2018) *Construction of Buildings in Bushfire Prone Areas*. Standards Australia, North Sydney, NSW.

The State of Victoria Department of Environment, Land, Water and Planning (2017) *Planning Permit Applications Bushfire Management Overlay – Technical Guide*.

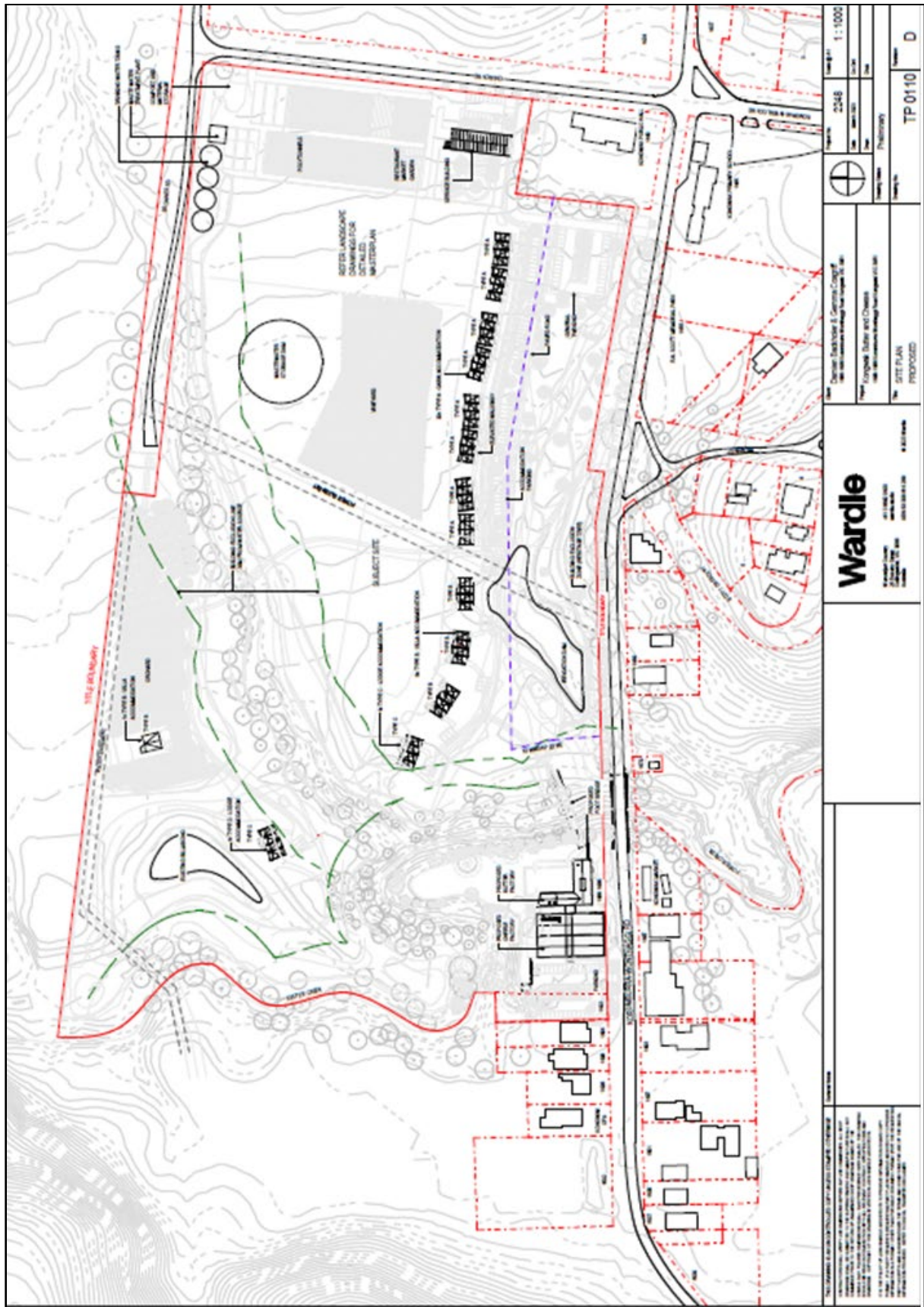
The State of Victoria Department of Environment, Land and Water and Planning (n.d) *Bushfire Prone Area Mapping Criteria*,
https://www.planning.vic.gov.au/__data/assets/pdf_file/0027/5499/BPA-Mapping-Criteria.pdf

The State of Victoria Department of Planning and Community Development (2012) *Regional Bushfire Planning Assessment – Gippsland Region*.

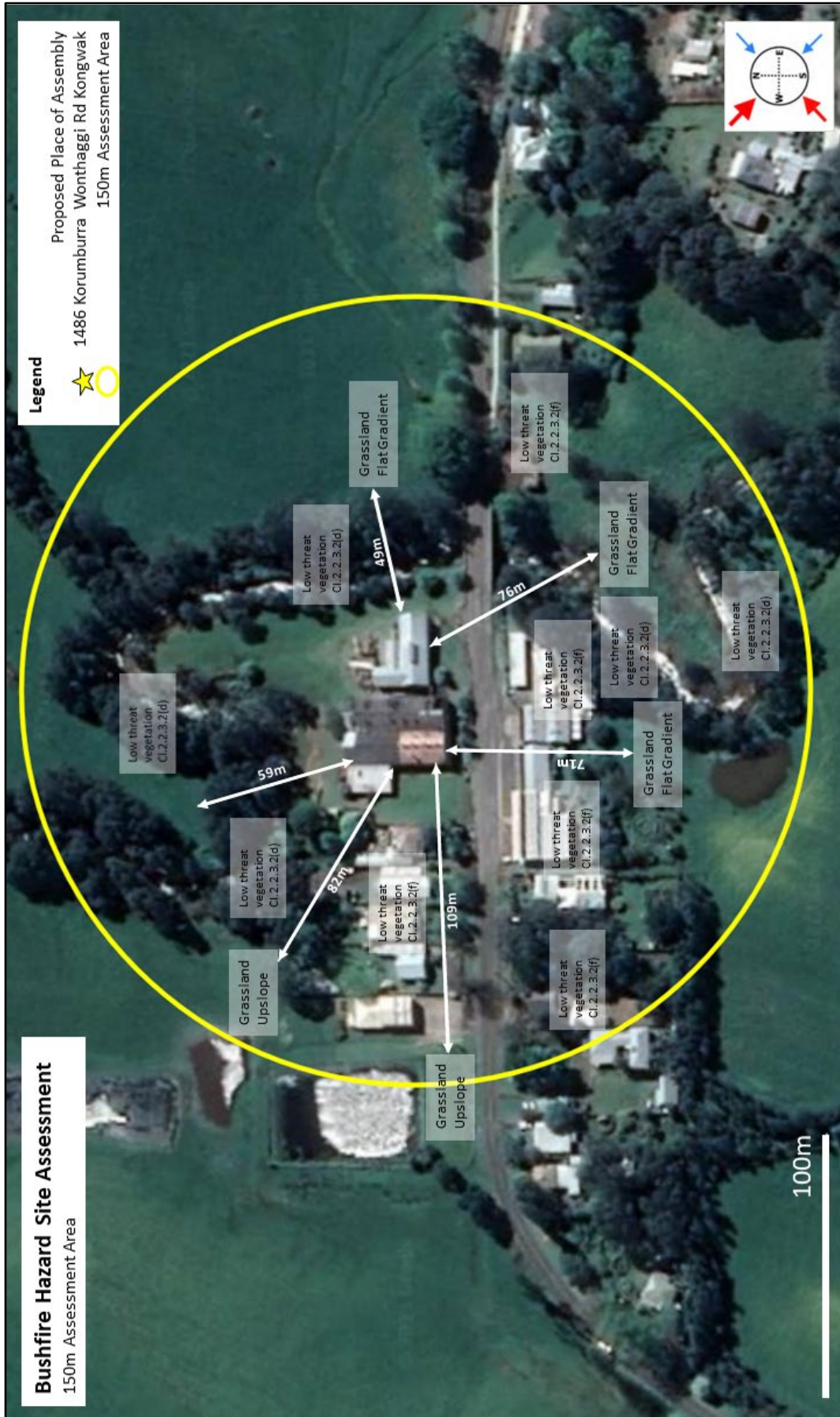
The State of Victoria Department of Transport, Planning and Local Infrastructure (2014) *Planning Practice Note 64 – Local Planning for Bushfire Protection*. Victorian Government, Melbourne.

The State of Victoria Department of Transport, Planning and Local Infrastructure (2013) *Planning Advisory Note 46: Bushfire Management Overlay Mapping Methodology and Criteria*. Victorian Government, Melbourne.

Appendix One – Development Plan

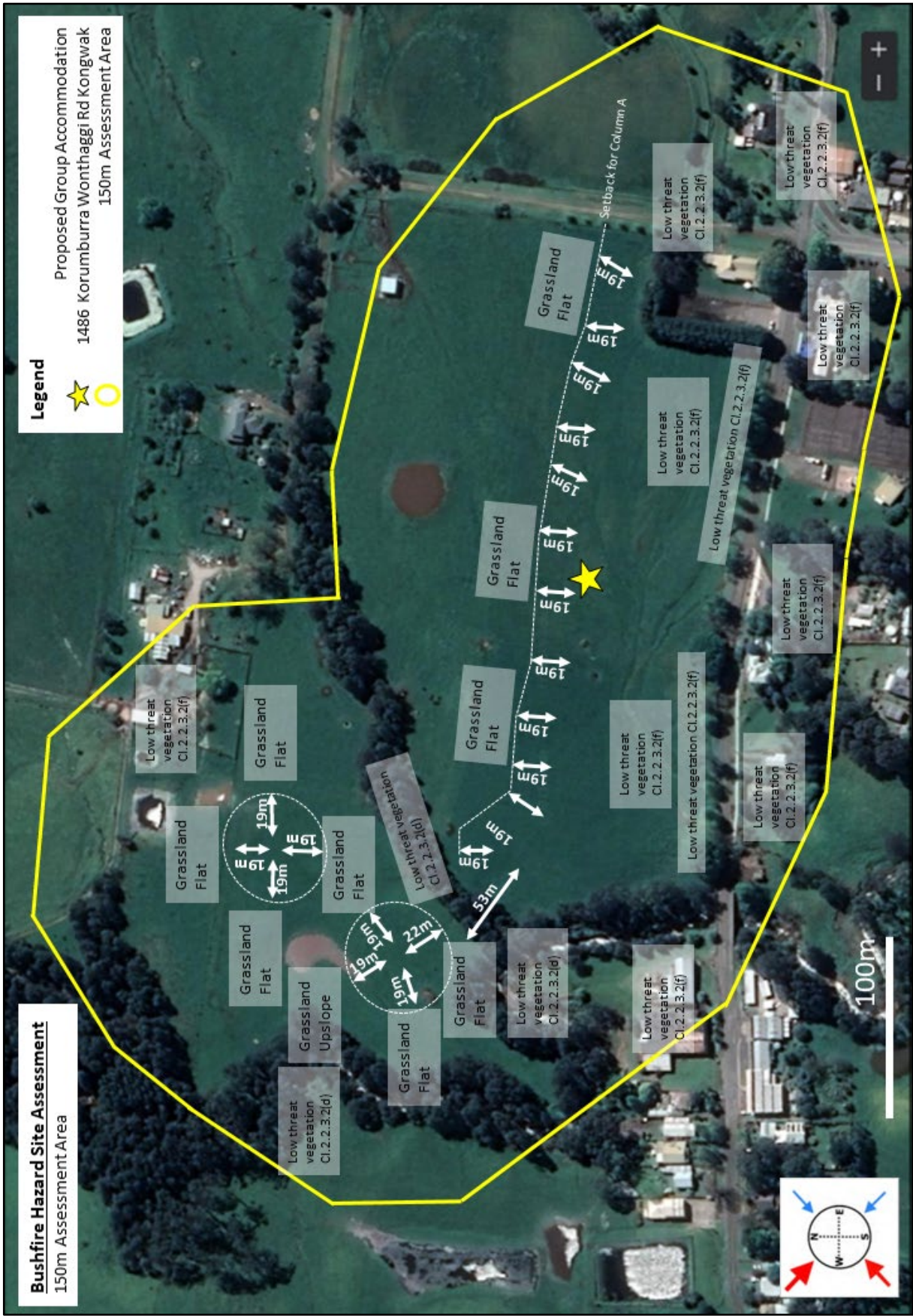


Appendix Two – Bushfire Hazard Site Assessments

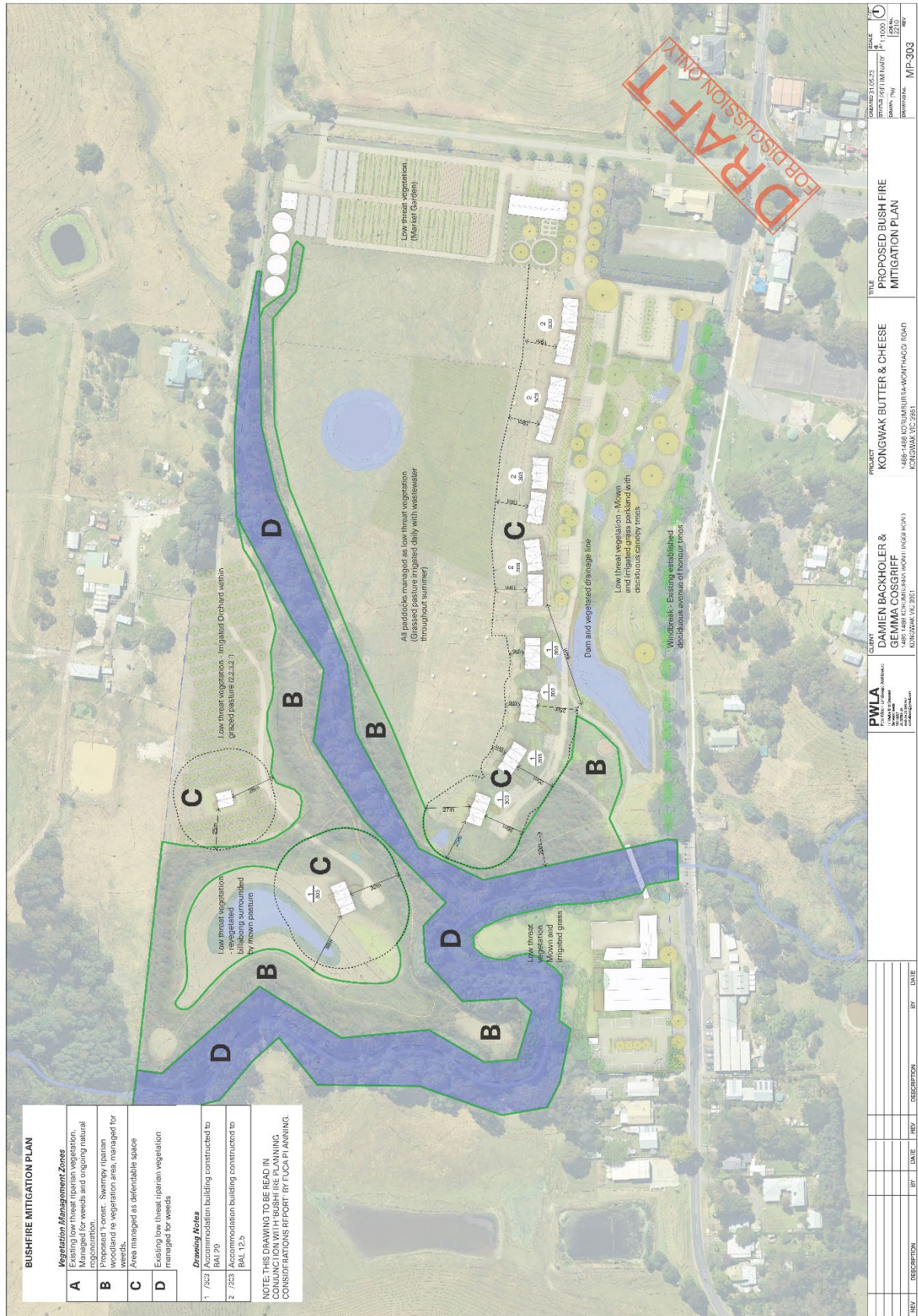


Bushfire Hazard Site Assessment
150m Assessment Area

Legend
Proposed Group Accommodation
1486 Korumburra Wonthaggi Rd Kongwak
150m Assessment Area



Appendix Three – Bushfire Mitigation Plan



BUSHFIRE MITIGATION PLAN	
Vegetation Management Zones	
A	Existing low threat riparian vegetation, managed for weeds and ongoing natural revegetation.
B	Proposed riparian woodland re-vegetation area, managed for weeds.
C	Area managed as defensible space.
D	Existing low threat riparian vegetation managed for weeds.
Drawing Notes	
1 / 223	Accommodation building constructed to B44, F9
2 / 223	Accommodation building constructed to B44, F25

NOTE: THIS DRAWING TO BE READ IN CONJUNCTION WITH BUSHFIRE PLANNING CONSIDERATIONS REPORT BY LUCA PLANNING.

REV	DESCRIPTION	BY	DATE	REV	DESCRIPTION	BY	DATE

PWLA Project Lead DAMIAN BACKHOLER 4400 1400 KONGWAK ROAD WORTHACRE VIC 3091	CLIENT DAMIAN BACKHOLER & GEMMA COSSOFF 4400 1400 KONGWAK ROAD WORTHACRE VIC 3091	PROJECT KONGWAK BUTTER & CHEESE 1400-1400 KONGWAK ROAD WORTHACRE VIC 3091	TITLE PROPOSED BUSH FIRE MITIGATION PLAN	SCALE AS SHOWN DATE 2023 DRAWN BY DAMIAN PWLA	DATE 21/05/23
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DRAFT FOR DISCUSSION ONLY

DRAWING NO: **IMP-303**