

Alpine Shire Bushfire Planning Assessment

Chapter 9 – Local and settlement-level assessments

Final report

11 July 2024
Version 1

Prepared for Alpine Shire Council

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About

Kevin Hazell Bushfire Planning is a town planning service that works with public and private sector clients to understand and apply planning scheme bushfire policies and requirements. It is led by Kevin Hazell who is a qualified town planner with extensive experience working on bushfire planning at State and local levels.

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Disclaimer

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About this chapter

This document forms part of the *Alpine Shire Bushfire Planning Assessment*. The content is included in this separate document to manage file size. This document should be read in conjunction with the main document.

The following sub-chapters are included:

- 9a. Myrtleford local and settlement-level assessment
- 9b. Mount Beaty and Tawonga South local and settlement-level assessment
- 9c. Bright local and settlement-level assessment
- 9d. Porepukah local and settlement-level assessment
- 9e. Dederang local and settlement-level assessment.

9a. Myrtleford local and settlement-level assessment

9a.1 Existing planning scheme directions for Myrtleford

The strategic directions for settlements at c02.03-1 includes the following (emphasis added):

***Myrtleford** is the largest town within the Shire accommodating around 21 per cent of the Shire's population. Myrtleford is well serviced and supports the Upper Ovens Valley communities with access to goods and services. The town also plays an important service role to surrounding agricultural based land uses and enterprises.*

c11..01-11-02 Myrtleford contains the current structure plan for Myrtleford. The settlement boundary mostly matches existing urban Zone land and no significant greenfield-type expansion of the settlement is contemplated. The core area of the town oriented on land around the commercial area is identified as a medium density residential opportunity. The structure plan recognises the extensive land subject to flooding south of the settlement boundary.

See: **Figure 9a-1: c11.01-11-02 Alpine Planning Scheme - Myrtleford**

9a.2 Alpine Shire Land Development Strategy (draft) November 2023

The LDS 2023 describes the town as follows (Page 19):

The General Residential Zone is concentrated to the north of the Great Alpine Road. Residential areas interface Industrial 1 Zone land to the west which accommodates timber milling and freight industry activity, and Farming Zone land to the north and south. Residential development on the western edge has views to Barwidgee Creek, while development to the south-east has views to the conservation area, comprising the historic reserve and state forest. There are pockets of public open space and other non-residential uses throughout the General Residential Zone. Many dwellings throughout the township are used for holiday accommodation and listed on Airbnb.

Housing is developed within a rectilinear grid pattern and is dominated by single detached dwellings, with both timber and brick constructions, and hip and gable roofs. Front setbacks are consistent throughout the township, of around six metres. Front fences, if present, vary in style with no uniformity.

The LDS 2023 includes strategic directions relevantly as follows (emphasis added):

Strategic direction 2 (page 47) describes emerging thinking as follows:

*Bright, **Myrtleford** and Mount Beauty-Tawonga South are classified as 'Service Towns' and Porepunkah has been classified as an emerging 'Service Town'. Service towns will accommodate the largest amount of future housing and employment growth.*

Service towns are described as follows (Table 6, Page 50) :

Service Towns are supported as the primary locations for future residential and employment growth, subject to assessment of environmental risk (bushfire, flooding, landslide) constraints.

Strategic direction 2 (page 49) includes strategies as follows:

Strategy 3.1 Direct population growth to existing and emerging Service Towns identified in the Settlement Hierarchy and the Service Town Framework Plans to support efficient and safe use of land and infrastructure and convenient access to jobs and services.

Strategic direction 4 (Page 54) includes the following commentary:

Greenfield housing

*Greenfield investigation areas have been identified in **Myrtleford**, Porepunkah and Mount Beauty-Tawonga South as shown in Framework Plans shown in Section 9.*

See: **Figure 9a-2: Myrtleford LDS 2023 directions with current Zones**

9a.3 Settlement-level contextual information

The following contextual planning information has been reviewed:

- Zones comprise the General Residential Zone applying to most of the urban area, with the Low Density Residential Zone applying to residential areas on the east of the settlement along Mummery Road. The Commercial 1 Zone applies to the core commercial area, with selected areas of Mixed Use Zone on Myrtle Street. The Industrial 1 Zone applies to land on the western periphery of the settlement.

- The Bushfire Management Overlay applies to the northern and eastern edges of the settlement generally using the 150m buffer from non-grassland hazards. BMO Schedule 1 & 2 apply to selected residential areas which streamline the approval of a single dwelling on a lot.
- The Bushfire Prone Area applies to the edges of the settlement consistent with the hazard interface. This includes grassland interfaces to the west and south.
- The Land Subject to Inundation Overlay applies to extensive areas of land south of the settlement and smaller areas to the west of the settlement, both correlating with waterways and flood plains. More recent flood mapping shows flooding affecting more land that currently include in the Land Subject to Inundation Overlay.

The following contextual bushfire information has been reviewed:

- Ecological vegetation classes (EVCs) include:
 - Dry Forests
 - Riparian Scrubs or Swampy Scrubs
 - Plains Woodlands or Forest
 - Riverine Grassy Woodlands or Forest
 - Wetlands
- The Victorian Fire Risk Register shows the north, west and south settlement interfaces as a high risk, with the eastern interface a very high risk. The central / core parts of the settlement are not identified as a risk.
- Slope in the surrounding landscape (10-20km) shows areas of steep and rugged terrain, (see Figure 3c-1 in main report) indicating that conditions for extreme behaviour in the wider landscape may arise.

See Figure 9a-3: Myrtleford Contextual information

9a.4 Landscape type assessed

Chapter 6 identified Landscape types for Myrtleford.

The core urban parts of the settlement are assessed as Landscape type 2. Landscape 2 is described by DELWP (2017) as follows:

- *The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site*
- *Bushfire can only approach from one aspect and the site is located in a suburban, township or urban area managed in a minimum fuel condition*
- *Access is readily available to a place that provides shelter from bushfire. This will often be the surrounding developed area.*

The edges of the settlements are assessed as Landscape type 3. Landscape 3 is described by DELWP (2017) as follows:

- *The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site*
- *Bushfire can approach from more than aspect*
- *The area is located in an area that is not managed in a minimal fuel condition*
- *Access to an appropriate place that provides shelter from bushfire is not certain.*

The landscape around Myrtleford is assessed as Landscape type 4. Landscape 4 is described by DELWP (2017) as follows:

- *The broader landscape presents an extreme risk*
- *Bushfires may have hours or days to grow and develop before impacting*
- *Evacuation options are limited or not available.*

See Figure 7-2 (main report): Landscape types in the Study Area

9a.5 Site based exposure at the settlement scale

Exposure to bushfire at the local and settlement scale assesses the level of radiant heat likely to arise from hazardous vegetation within and in close proximity (150m) to the settlement. Considering exposure to bushfire enables new development to be separated from hazardous vegetation so that radiant heat of less than 12.5kw/sq.m arises, as required by c13.02-1S *Bushfire Planning* for new development enabled by strategic planning or a planning scheme amendment.

The methodology for a bushfire hazard site assessment is described in *Planning Permit Applications Bushfire Management Overlay Technical Guide* (DELWP 2017) and AS3959-2018 *Construction of buildings in bushfire-prone areas* (Standards Australia) informs the assessment. Key assumptions include a Fire Danger Rating of 100 and a flame temperature of 1080°C.

Applied setbacks

Setbacks from hazardous vegetation (except grasslands) were applied based on Column A in Table 2, c53.02-3 *Bushfire Planning*. This setback provides for exposure to be no more than a radiant heat flux of 12.5 kilowatts/square metre, as required by c13.02-1S *Bushfire Planning*.

Setbacks from grasslands of 30m were applied. This simplified the assessment given the variability of slope along grassland interfaces. Applying 30m exceeds the set back specified in Column A in Table 2, *c53.02-3 Bushfire Planning* in most cases (up to a downslope of 15 degrees).

The setbacks used are derived from the assessment of hazards at the settlement scale. At the site-scale, variations may arise especially in the slope and vegetation type. However, at a settlement level the above are sufficient benchmarks based on the hazard present in and around the settlement. Any variations are not strategically significant.

See Figure 9a-4: Myrtleford local and settlement level bushfire analysis

9a.6 Availability of safe(r) areas at the settlement scale

An assessment has been made of areas that may be low hazard where human life can be better protected from the harmful effects of bushfire. Low hazard areas can provide protection at a settlement and neighbourhood scale as they are a form of passive mitigation, enabling people to move away from bushfire hazards if they need to. In a settlement setting, this usually involves moving deeper into settlement areas and away from hazard interfaces.

c13.02-1S Bushfire Planning defines such places as BAL:Low. BAL:Low places are where hazardous vegetation is more than 100m away (50m for grasslands). Hazardous vegetation for the purpose of BAL:Low is defined as vegetation that cannot be excluded under 2.2.3.2 of *Australian Standard AS3959:2018 Construction of buildings in Bushfire Prone Areas* (Standards Australia).

See Figure 9a-4: Myrtleford local and settlement level bushfire analysis (including low hazard areas)

9a.7 Design Guidelines – Settlement planning at the Bushfire Interface (DELWP 2020)

Design Guidelines: Settlement Planning at the Bushfire Interface (DELWP 2020) (the 'Design Guidelines') provide an appreciation of the bushfire threat and how bushfire may affect a settlement, supported by design advice on settlement planning set out according to three themes:

- Part 1: The form and structure of settlements;
- Part 2: The settlement interface;
- Part 3: Bushfire protection measures across a whole settlement.

The Design Guidelines provide a logical approach to considering good design in settlement planning, supporting many of the objectives and approved measures in *c53.02 Bushfire Planning* and the policy emphasis in *c13.02-1S Bushfire Planning*. The Design Guidelines are not incorporated into the planning scheme.

Is it noted that landscape bushfire risk is not considered in the Design Guidelines as such. They assume landscape risk is acceptable for development to proceed, so they are therefore focused on implementation of acceptable change. This section of the report should be read in this context and not as implying development is acceptable based on landscape, strategic or policy factors.

The factors in the Design Guidelines described in this section are those of most interest or relevance to the settlement. Not all design guidelines are included.

9a.8 Part 1: Form and structure of settlements

The bushfire hazard in directing growth

Key design considerations:

- *Settlement planning should direct growth to locations that are less exposed to a bushfire.*
- *Settlement growth should be directed to locations that avoid bushfire risk where possible, including the highest risk aspect(s) where large bushfires will occur.*
- *Settlement growth should also be directed to locations that avoid the most hazardous locations.*
- *Directing new growth to higher risk areas should be carefully considered. Consulting with the relevant fire authority as part of strategic and settlement planning is crucial.*

Myrtleford is significantly constrained to the south due to flooding. To the west the Barwidgee Creek forms the current settlement boundary. To the east is State Forest.

To the north, existing urban Zone is being developed. This adjoins forest hazards, but these are not themselves directly connected to landscape forests on a north-west aspect (i.e. there is no landscape scale forest fire run into them). To the extent existing urban Zone land will be progressively developed, and considering the alternatives, development to the north is to be expected under existing planning scheme controls.

The LDS 2023 includes an 'area for investigation – potential residential' to the west of Barwidgee Creek. This would introduce development into the highest risk aspect of Myrtleford and into an area with sub-optimal access back to the low hazard core of Myrtleford. It is likely that future investigations, including those having regard to the Design Guidelines, would not support new residential development in this area.

It may be possible to investigate whether this land has a strategic basis for non-permanently occupied development that is capable of be closed on higher risk bushfire days and where an integrated site manager is able to coordinate sheltering and/or evacuation on other days if a bushfire occurs. This could include, for example, tourism development.

The LDS 2023 includes an 'area for investigation – potential industrial' located on the northern edge of the settlement, adjoining other industry. The land has a reasonable level of separation from forests to the north-west and can satisfy the bushfire exposure benchmark. As industry is not permanently occupied, it is reasonable for future structure planning to consider this land for industry.

The consolidation of existing urban areas in Myrtleford can be considered in future structure planning. Consolidation would take advantage of the extensive low hazard land combined with the separation from long forest fire runs. Ember attack to be expected across all settlement areas (reinforcing the need to apply the Bushfire Prone Area to all land in Myrtleford as recommended in Appendix 2).

A Council owned parcel of land on (part) 1 Mummery Road Myrtleford is currently in the Public Park and Recreation Zone and has been identified by the Council as a zone anomaly. It is shown in the LDS 2023 as within the proposed settlement boundary. If this land was to be available for urban uses, including housing, its immediate connection to existing urban areas and the ability to provide bushfire setbacks enables an acceptable outcome. There would be no bushfire factor which would prevent the land being rezoned for urban purposes.

Vegetated areas within a settlement (such as parks, nature reserves and river corridors)

Key design considerations:

- *Vegetated areas can be managed so that fuels are consistent with the vegetation management requirements for bushfire. This involves either removing fuels or ensuring fuels are not introduced as part of settlement planning.*
- *Areas that will not be managed for bushfire purposes effectively have their own interface with the bushfire hazard and would require setbacks and vegetation management approaches.*

The low hazard core of Myrtleford enables a large area of BAL:Low land to arise and for the bushfire exposure benchmark to met. The low hazard areas should be maintained and protected for the strategic and life safety benefit it provides for the settlement and for people in the wider landscape who may seek shelter before, during and after a bushfire.

Bushfire hazards should be kept outside of settlement areas.

There are grassland areas around Myrtleford that afford protective benefit to the settlement as they do not comprise non-grasslands and higher risk hazards. The protective benefit of these areas should be recognised in planning schemes, to ensure they are not compromised over time by introducing new bushfire hazards that increase the risk to the settlement.

See Figure 9a.3 - Grassland areas notionally shown where new bushfire hazards should be avoided

9a.9 Part 2: The settlement interface

9a.9.1: Apply the required development setback

Key design considerations:

- *New development should be set back from the bushfire hazards. The setback is determined based on the type of vegetation and slope under the vegetation.*
- *Permanently occupied development, such as dwellings, are not permitted in the setback area.*

The assessment of bushfire exposure shows that large parts of the settlement can satisfy the bushfire exposure benchmark. Land already within an urban Zone will have a different exposure requirement under the Bushfire Management Overlay or no requirement in other locations. Land adjoining existing urban Zone land within grasslands will be capable of meeting the bushfire exposure requirement.

It is noted that the landscape risk is a more relevant factor to development proceeding than meeting the bushfire exposure requirement, which for strategic planning is a secondary consideration once the landscape risk and s13.02-1S Bushfire Planning deems a location suitable for growth in the first instance.

9a.9.2: Design the settlement interface

Key design considerations:

- *Vegetation in the setback area needs to be managed to prevent a moving bushfire front entering the settlement.*
- *Perimeter roads are the preferred design outcome on the settlement interface where a site abuts or is near a bushfire hazard. A perimeter road:*
 - *Enables a no fuel area to form part or all of the interface.*
 - *Enables development to front the bushfire hazard, orienting the rear of lots away from it. The rear of lots is often where introduced fuels create a localised bushfire hazard.*
 - *Provides an effective location from which fire authorities can establish positions to attack a bushfire and for land managers to undertake fuel management activities.*

Emerging development to the north of the settlement is not developing to provide a perimeter road. This is a significant deficiency in what will be the long-term northern settlement edge. Multiple land parcels should be better coordinated to implement a bushfire optimised settlement interface, including bushfire setbacks and hazard management that are present but also a perimeter road.

Low density residential development to the east of the settlement is relatively low hazard due to landowner management (based on field observations). However, it has not been provided with an effective settlement interfaces to the north and south and will be higher risk in perpetuity because of this. The VRFF identifies this land as the highest risks part of the settlement, reflecting the on-going management challenges when sub-optimal interfaces have arisen in past planning decisions.

9a.10 Part 3: Bushfire protection measures across a whole settlement

9a.10.1: Vegetation management

Key design considerations:

- *Ensure vegetation is managed across a settlement where there is exposure to ember attack. Proper vegetation management will help reduce the potential for localised fires from ember ignition.*

The settlement edges to the north and east are within the Bushfire Management Overlay and will require in new development bushfire vegetation management.

The core of settlement is low hazard because of lot sizes, with smaller urban lots not providing enough land for hazards to arise and/or a lack of landowner interest in introducing substantial vegetation.

Separate recommendations in this report seek to have the Bushfire Prone Area applied to all parts of Myrtleford. Permit exemptions for some dwellings to manage land for bushfire purposes arise if land is within a Bushfire Prone Area.

Given the landscape bushfire risk, ember attack is to be expected across the settlement. Currently, the settlement is well placed to maintain existing low hazard land. It will be important that planning proposals that seek to add bushfire hazards into the settlement do not arise, as the settlement is a location where low hazard outcomes across the settlement is essential.

9a.10.2: Building construction standards

Key design considerations:

- *Consider at the settlement scale how bushfire constructions standards are to be applied, including where enhanced protection from ember ignited localised fires and smaller lot sizes are proposed to protect against structure to structure fires.*

Separate recommendations in this report seek to have the Bushfire Prone Area applied to all parts of Myrtleford (see Attachment 2). This will trigger the need for bushfire construction outcomes on all land, which is consistent with the risk from ember attack across the settlement from the bushfire landscape.

9a.10.3: Fences and other localised fuel sources

Key design considerations:

- *Designing and planting for bushfire can help manage fuels being introduced around buildings.*
- *Fences can be a key source of fuels within settlements.*

The typology of standard lot sizes does not indicate a need to manage fencing. However, where lots larger than 1,200sq.m are proposed, non-combustible fencing should be considered given the potential for these larger lots to carry more bushfire hazards.

Figure 9a-1: c11.01-1L-02 Alpine Planning Scheme - Myrtleford

ALPINE PLANNING SCHEME

11.01-1L-03 Myrtleford
26/05/2022
C82alpi

Policy application

This policy applies to the township of Myrtleford as shown on the Myrtleford Structure Plan that forms part of this clause.

Objective

To maintain and enhance Myrtleford's access to a diverse range of lifestyle opportunities and quality visitor experience supported by local trade and industry and recognise the rich cultural, heritage and natural resources of the town.

Strategies

Discourage new residential development and especially increased residential densities in areas affected by flooding.

Locate development to minimise the obstruction of flood waters.

Encourage high quality building design to provide visual cohesion within the town centre.

Encourage commercial and retail development around Clyde and Myrtle Streets between Standish Street and Elgin Street.

Ensure that redevelopment of land between Clyde Street and the Great Alpine Road addresses both streets but maintains the key retail focus in Clyde Street.

Support lower density retail and commercial activities that address the Great Alpine Road to the east and west of the within existing business zoned land.

Maintain a visually and physically continuous facade of buildings in the primarily commercial area.

Ensure all new development provides an active street frontage.

Ensure minimum lots sizes for residential subdivision are appropriate to the area and have regard to the existing lot size and density of development in the neighbourhood.

Promote large, heavy, offensive or dangerous industrial development to the north of the township on the Industrial 2 Zone land.

Encourage light industrial development in the McGeehan Crescent industrial estate with application of appropriate buffers to surrounding properties.

Policy documents

Consider as relevant:

- *Alpine Shire Rural Land Strategy* (Alpine Shire Council, 2015)
- *Alpine Shire Town Framework Plan - Myrtleford* (Inspiring Place Pty Ltd, 2009)
- *Myrtleford Master Plan Study* (Gillespies, 2001)

ALPINE PLANNING SCHEME

Myrtleford Structure Plan

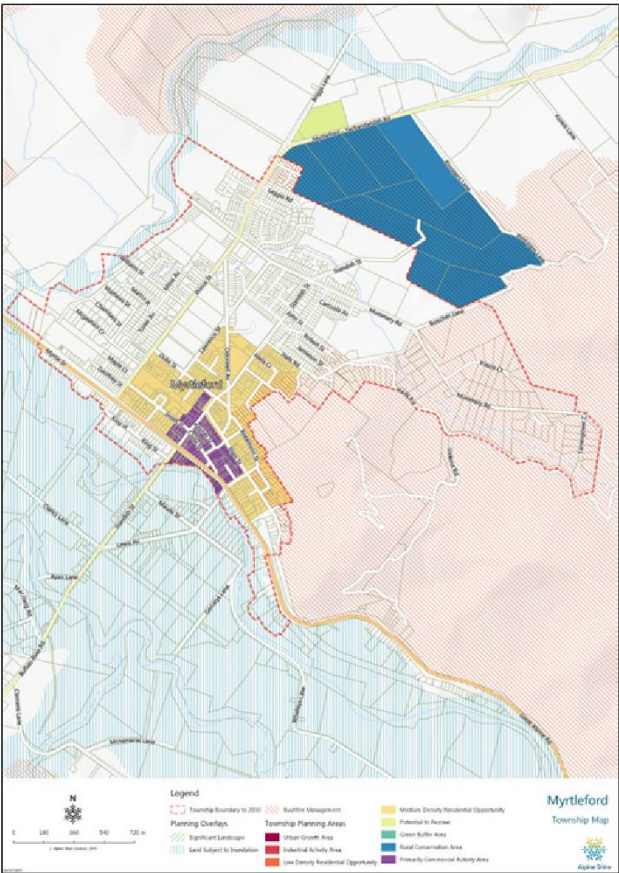


Figure 9a-2: Myrtleford LDS 2023 directions with current Zones

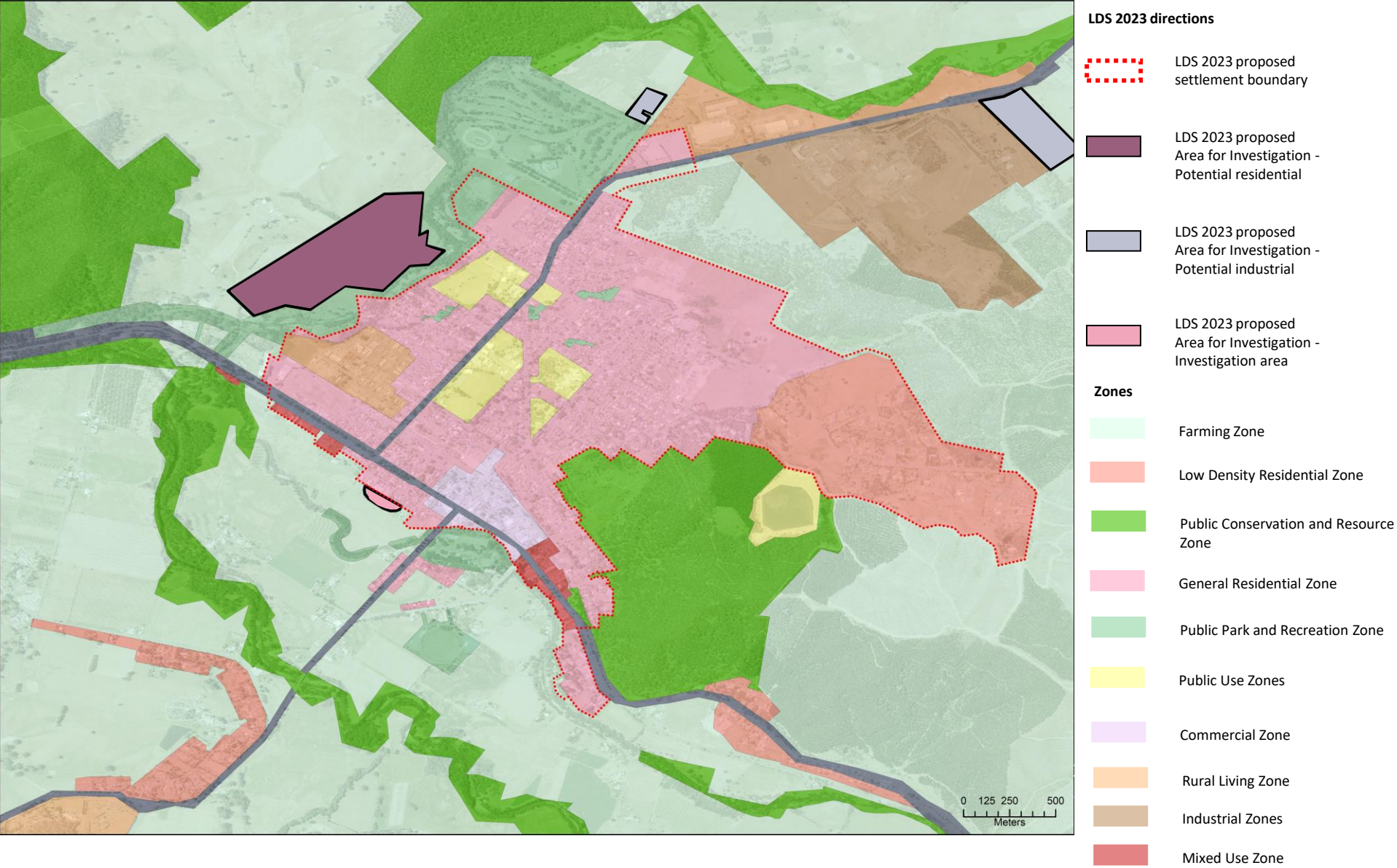
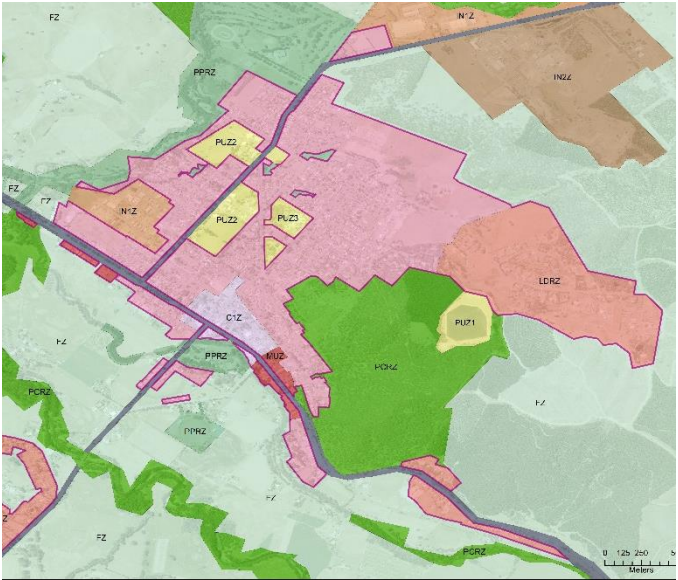


Figure 9a-3: Myrtleford bushfire contextual information

Zones



Bushfire Management Overlay



Schedules to the Bushfire Management Overlay



Bushfire Prone Areas



Date: 11/03/2024

Figure 9a-3: Myrtleford contextual information (continued)

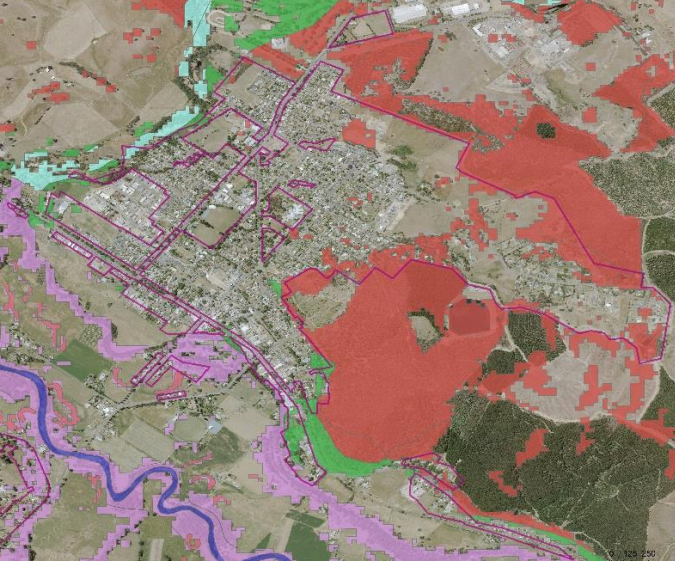
Land Subject to Inundation Overlay



Myrtleford Flood Study (DEECA 2021)

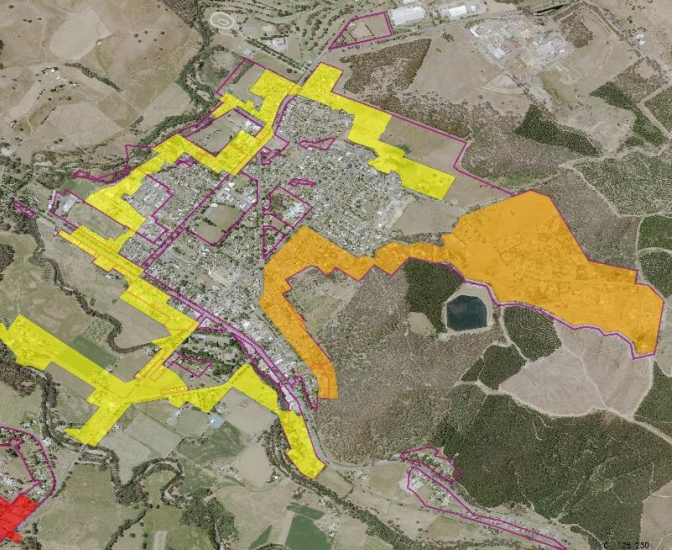


Ecological Vegetation Classes



- Dry Forests
- Riparian Scrubs or Swampy Scrubs
- Plains Woodlands or Forest
- Riverine Grassy Woodlands or Forests
- Wetlands

Victorian Fire Risk Register

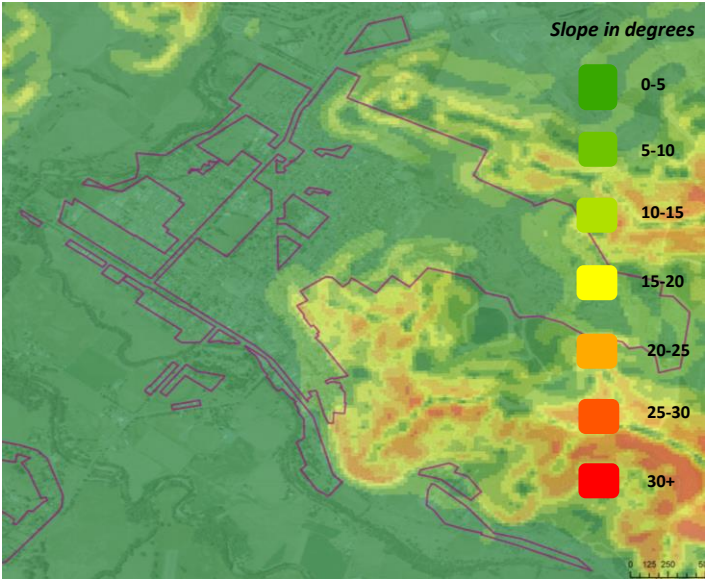


- Extreme
- Very High
- High

Date: 11/03/2024

Figure 9a-3: Myrtleford contextual information (continued)

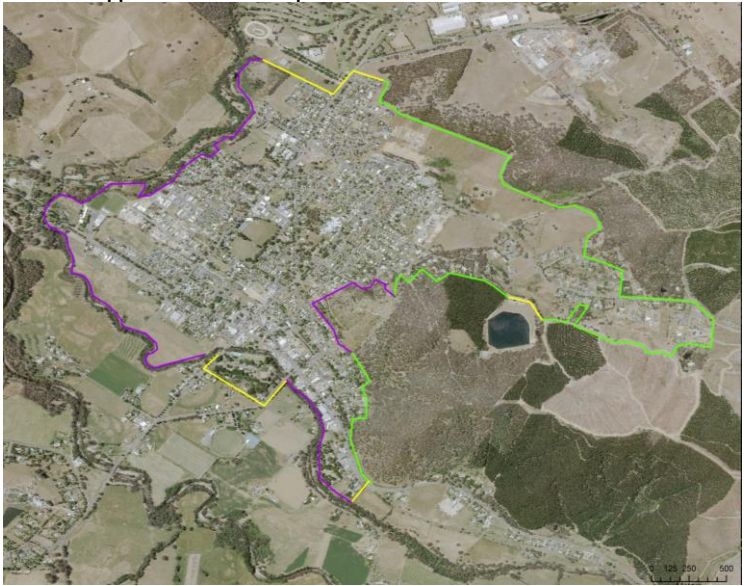
Slope based on 10m contour



Grassland areas notionally shown where new bushfire hazards should be avoided



Setbacks applied for bushfire exposure assessment



- Forest, flat/upslope
Column A = 48m
- Woodland, flat/upslope
Column A = 33m
- Grasslands, flat/upslope
Column A = 30m

Date: 11/03/2024

Figure 9a-4: Myrtleford local and settlement level bushfire analysis

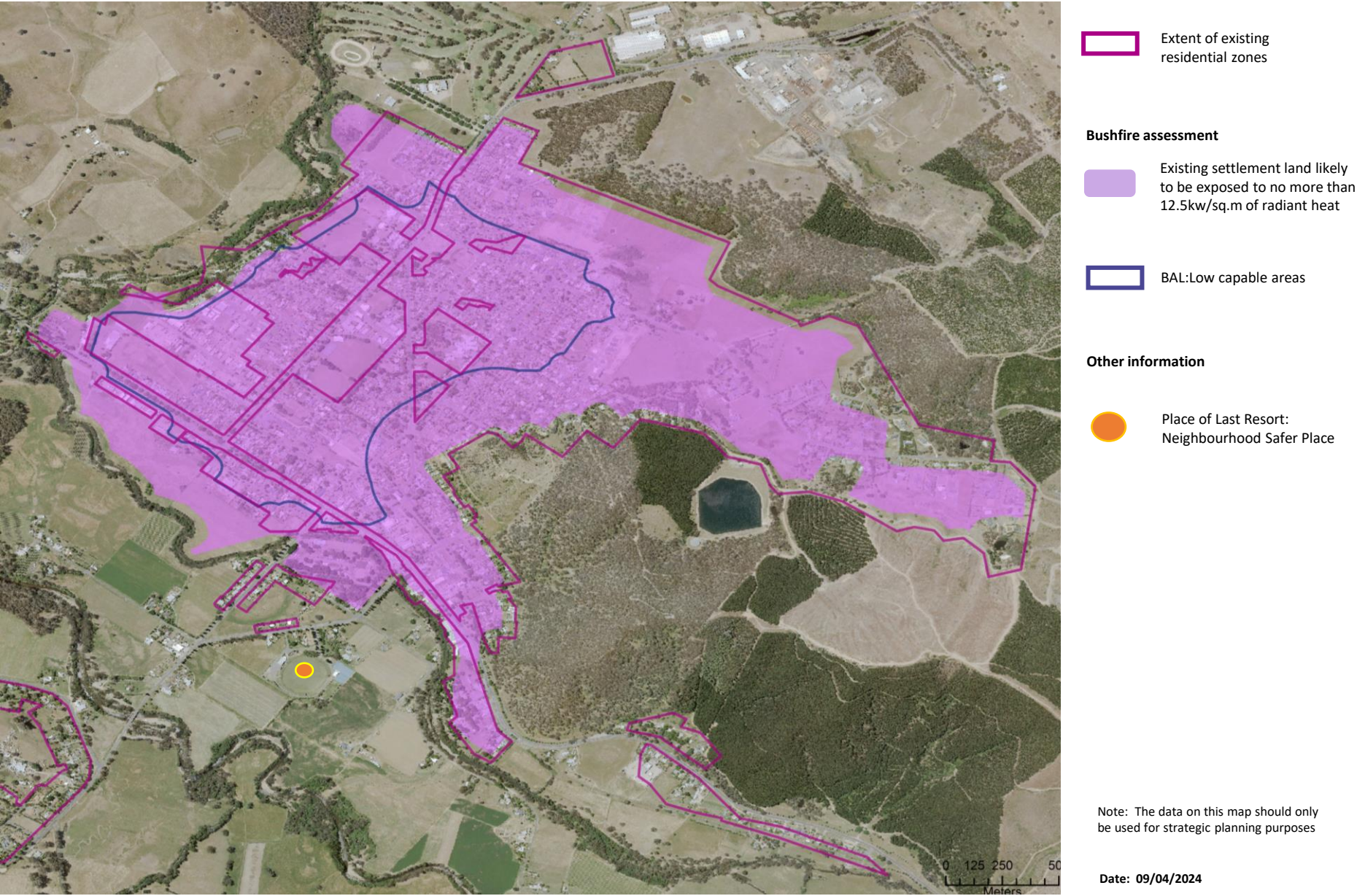
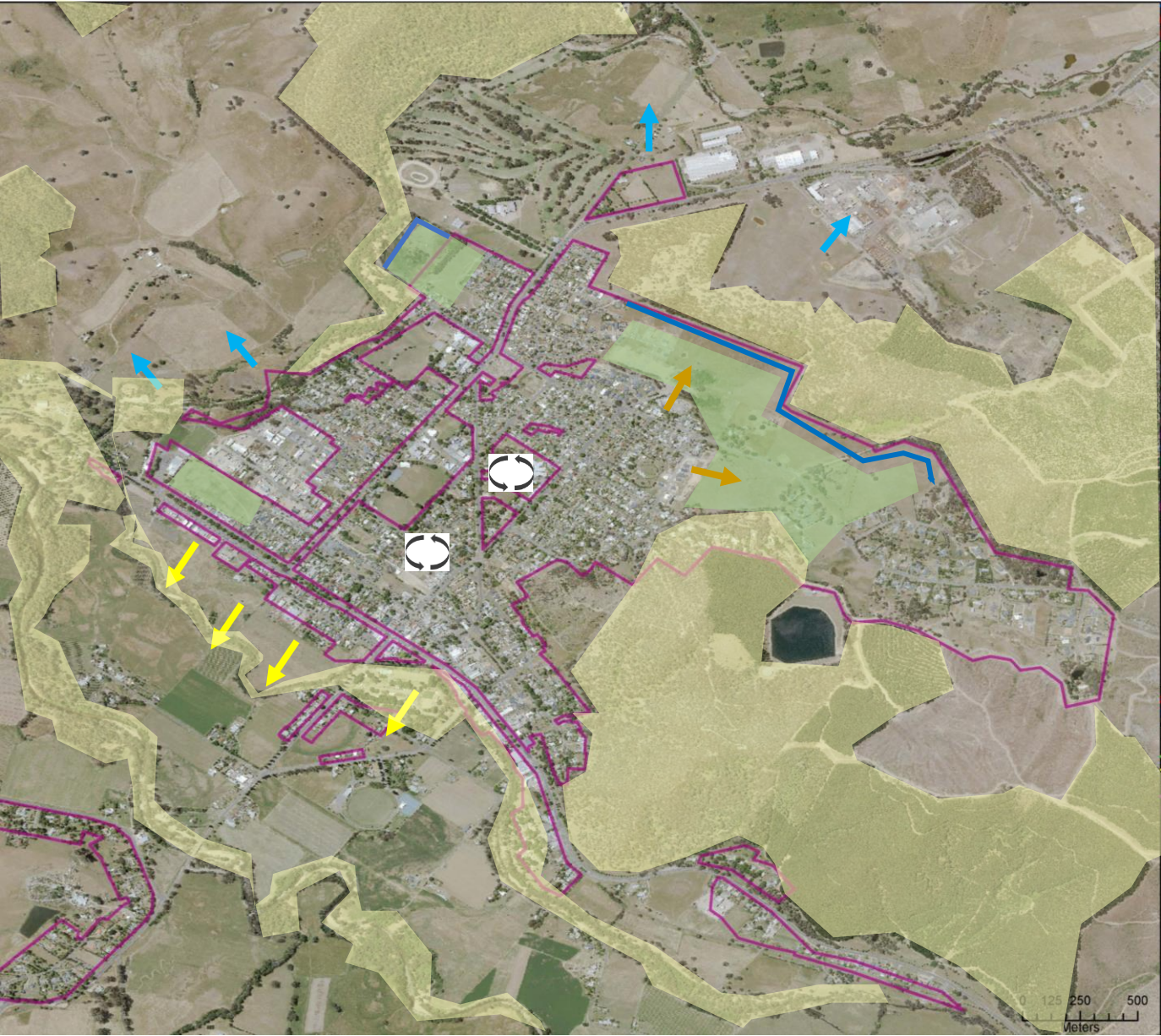




Figure 9a-5: Myrtleford settlement-scale design response for bushfire









Context

-  Extent of existing residential zones
-  Bushfire hazards other than grasslands

Bushfire setbacks and exposure requirement

- ✓ Can likely be met through grassland hazard removal and setbacks in conjunction with new development
- ✓ Apply bushfire vegetation management for land within the Bushfire Management Overlay (focused on settlement edges)
- ✓ Do not proceed with proposals which may introduce bushfire hazards

Design response inputs to future planning
(settlement factors only, landscape and policy considerations will also affect acceptable outcomes)

-  Preferred directions for growth but constrained by non-bushfire factors
-  Growth that will be assessed under existing Zones
-  Priority for creating new bushfire optimised interfaces with bushfire hazards
-  Acceptable to consolidate existing areas (land not currently in the Bushfire Prone Area)
-  Develop vacant sites to remove hazards
-  Non-preferred directions for housing growth, can be considered and assessed in future structure planning for non-permanently occupied uses

9b. Mount Beauty - Tawonga South local and settlement-level assessment

9b.1 Existing planning scheme directions for Mount Beauty – Tawonga South

The strategic directions for settlements at c02.03-1 includes the following (emphasis added):

***Mount Beauty – Tawonga South** is located 90 kilometres to the south of Albury / Wodonga. Although distinct townships, Mount Beauty and Tawonga South are physically and economically linked and considered as a large township for planning purposes. They support the agriculture, tourism and power generation industries of the Upper Kiewa Valley, the surrounding rural communities and the small township of Tawonga and Falls Creek Alpine Resort.*

c11..01-1L-04 Mount Beauty and Tawonga South contains the current structure plan for Mount Beauty and Tawonga South. The current structure plan seeks to direct urban growth to land in Tawonga South currently within the Farming Zone and identifies low density residential opportunity generally located to the west of the Kiewa Valley Highway. The core commercial area of Mount Beauty is identified as a primary commercial activity area. Land to the north Mount Beauty is shown as a significant landscape.

See: **Figure 9b-1: c11.01-1L-02 Alpine Planning Scheme – Mount Beauty – Tawonga South**

9b.2 Alpine Shire Land Development Strategy (draft) November 2023

The LDS 2023 describes the town as follows (Page 19):

Areas zoned General Residential Zone are concentrated to the east of the commercial core in Mount Beauty, and along Kiewa Valley Highway in Mount Beauty and Tawonga South. Housing in this area is generally comprised of one and two storey, detached dwellings with predominantly timber construction with gabled iron roofs.

Residential lots are medium to large and include vegetated front setbacks. Residential streets feature few footpaths and road verges are planted with established trees of varying species.

The LDS 2023 includes strategic directions relevantly as follows (emphasis added):

Strategic direction 2 (page 47) describes emerging thinking as follows:

*Bright, Myrtleford and **Mount Beauty-Tawonga South** are classified as ‘Service Towns’ and Porepunkah has been classified as an emerging ‘Service Town’. Service towns will accommodate the largest amount of future housing and employment growth.*

Service towns are described as follows (Table 6, Page 50) :

Service Towns are supported as the primary locations for future residential and employment growth, subject to assessment of environmental risk (bushfire, flooding, landslip) constraints.

Strategic direction 2 (page 49) includes strategies as follows:

Strategy 3.1 Direct population growth to existing and emerging Service Towns identified in the Settlement Hierarchy and the Service Town Framework Plans to support efficient and safe use of land and infrastructure and convenient access to jobs and services.

Strategic direction 4 (Page 54) includes the following commentary (emphasis added):

Greenfield housing

*Greenfield investigation areas have been identified in Myrtleford, Porepunkah and **Mount Beauty-Tawonga South** as shown in Framework Plans shown in Section 9.*

See: **Figure 9b-2: Mount Beauty – Tawonga South LDS 2023 directions with current Zones**

9b.3 Settlement-level contextual information

The following contextual planning information has been reviewed:

- Zones applied primarily comprises land in the General Residential Zone and the Low Density Residential Zone.
- The Bushfire Management Overlay applies to all land within settlement areas based on a combination of buffering off hazard interfaces as well as manual application to existing developed areas. BMO Schedule 1 & 2 apply to selected residential areas which streamline the approval of a single dwelling on a lot.
- The Bushfire Prone Area applies to all land.
- The Development Plan Overlay 2 applies to land within the Low Density Residential Zone to the south-west of Mount Beauty.
- The Significant Landscape Overlay applies to large areas in the Kiewa Valley.

The following contextual bushfire information has been reviewed:

- Ecological vegetation classes (EVCs) include:
 - Dry Forests
 - Riparian Scrubs or Swampy Scrubs
 - Wet or Damp Forests.
- The Victorian Fire Risk Register shows settlement land generally west of the Kiewa Valley Highway and in the south of the urban part of Mount Beauty as an extreme risk. The balance of the urban part of Mount Beauty is a very high risk.
- Slope in the surrounding landscape (10-20km) to the south and south-west shows areas of steep and rugged terrain (see Figure 3c-1 in main report) indicating that conditions for extreme behaviour in the wider landscape may arise.

See Figure 9b-3: Mount Beauty – Tawonga South Contextual information

9b.4 Landscape type assessed

Chapter 7 identified Landscape types for Mount Beauty – Tawonga South.

The core urban parts of Mount Beauty are assessed as Landscape type 2. Landscape 2 is described by DELWP (2017) as follows:

- *The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site*
- *Bushfire can only approach from one aspect and the site is located in a suburban, township or urban area managed in a minimum fuel condition*
- *Access is readily available to a place that provides shelter from bushfire. This will often be the surrounding developed area.*

Some areas, including the urban parts of Tawonga South, are assessed as Landscape type 3. Landscape 3 is described by DELWP (2017) as follows:

- *The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site*
- *Bushfire can approach from more than aspect*
- *The area is located in an area that is not managed in a minimal fuel condition*
- *Access to an appropriate place that provides shelter from bushfire is not certain.*

The balance of settlement areas including land within the Low Density Residential Zone is assessed as Landscape type 4. Landscape 4 is described by DELWP (2017) as follows:

- The broader landscape presents an extreme risk
- Bushfires may have hours or days to grow and develop before impacting
- Evacuation options are limited or not available.

See Figure 7-2 (main report): Landscape types in the Study Area

9b.5 Site based exposure at the settlement scale

Exposure to bushfire at the local and settlement scale assesses the level of radiant heat likely to arise from hazardous vegetation within and in close proximity (150m) to the settlement. Considering exposure to bushfire enables new development to be separated from hazardous vegetation so that radiant heat of less than 12.5kw/sq.m arises, as required by c13.02-1S *Bushfire Planning* for new development enabled by strategic planning or a planning scheme amendment.

The methodology for a bushfire hazard site assessment as described in *Planning Permit Applications Bushfire Management Overlay Technical Guide* (DELWP 2017) and *AS3959-2018 Construction of buildings in bushfire-prone areas* (Standards Australia) informs the assessment. Key assumptions include a Fire Danger Rating of 100 and a flame temperature of 1080°C.

Applied setbacks

Setbacks from hazardous vegetation (except grasslands) were applied based on Column A in Table 2, c53.02-3 *Bushfire Planning*. This setback provides for exposure to be no more than a radiant heat flux of 12.5 kilowatts/square metre, as required by c13.02-1S *Bushfire Planning*.

Setbacks from grasslands of 30m were applied. This simplified the assessment given the variability of slope along grassland interfaces. Applying 30m exceeds the setback specified in Column A in Table 2, c53.02-3 *Bushfire Planning* in most cases (up to a downslope of 15 degrees).

The setbacks used are derived from the assessment of hazards at the settlement scale. At the site-scale, variations may arise especially in the slope and vegetation type. However, at a settlement level the above are sufficient benchmarks based on the hazard present in and around the settlement. Any variations are not strategically significant.

See Figure 9b-4: Mount Beauty – Tawonga South local and settlement level bushfire analysis

9b.6 Availability of safe(r) areas at the settlement scale

An assessment has been made of areas that may be low hazard where human life can be better protected from the harmful effects of bushfire. Low hazard areas can provide protection at a settlement and neighbourhood scale as they are a form of passive mitigation, enabling people to move away from bushfire hazards if they need to. In a settlement setting, this usually involves moving deeper into settlement areas and away from hazard interfaces.

c13.02-1S Bushfire Planning defines such places as BAL:Low. BAL:Low places are where hazardous vegetation is more than 100m away (50m for grasslands). Hazardous vegetation for the purpose of BAL:Low is defined as vegetation that cannot be excluded under 2.2.3.2 of *Australian Standard AS3959:2018 Construction of buildings in Bushfire Prone Areas* (Standards Australia).

See **Figure 9b-4: Mount Beauty – Tawonga South local and settlement level bushfire analysis (including low hazard areas)**

9b.7 Design Guidelines – Settlement planning at the Bushfire Interface (DELWP 2020)

Design Guidelines: Settlement Planning at the Bushfire Interface (DELWP 2020) (the ‘Design Guidelines’) provide an appreciation of the bushfire threat and how bushfire may affect a settlement, supported by design advice on settlement planning set out according to three themes:

- Part 1: The form and structure of settlements;
- Part 2: The settlement interface;
- Part 3: Bushfire protection measures across a whole settlement.

The Design Guidelines provide a logical approach to considering good design in settlement planning, supporting many of the objectives and approved measures in *c53.02 Bushfire Planning* and the policy emphasis in *c13.02-1S Bushfire Planning*. The Design Guidelines are not incorporated into the planning scheme.

Is it noted that landscape bushfire risk is not considered in the Design Guidelines as such. They assume landscape risk is acceptable for development to proceed, so they are therefore focused on implementation of acceptable change. This section of the report should be read in this context and not as implying development is acceptable based on landscape, strategic or policy factors.

The factors in the Design Guidelines described in this section are those of most interest or relevance to the settlement. Not all design guidelines are included.

9b.8 Part 1: Form and structure of settlements

The bushfire hazard in directing growth

Key design considerations:

- *Settlement planning should direct growth to locations that are less exposed to a bushfire.*
- *Settlement growth should be directed to locations that avoid bushfire risk where possible, including the highest risk aspect(s) where large bushfires will occur.*
- *Settlement growth should also be directed to locations that avoid the most hazardous locations.*
- *Directing new growth to higher risk areas should be carefully considered. Consulting with the relevant fire authority as part of strategic and settlement planning is crucial.*

Tawonga South is at the interface of long forest fires. Extreme bushfire behaviour is to be expected at this interface. Directing growth to land west of the Kiewa Valley Highway is the highest risk aspect and should be avoided. Consolidation of these areas as a matter of planning policy (for example, in a structure plan) is not likely to be acceptable.

Other parts of this report recognise that existing urban Zone land may be subject to planning applications to subdivide land and would be assessed under the current planning scheme. Responsible authorities and relevant fire authorities seek to respect existing urban Zone land to enable development. In the case of Tawonga South, the risk is sufficiently high where there is no certainty a planning application to subdivide the land for urban purposes can satisfy the requirements of the Bushfire Management Overlay. It may be prudent that the vacant General Residential Zone land in Tawonga South not be considered as a source of housing land supply unless a planning permit has been issued.

Mount Beauty is relatively lower risk than Tawonga South and due to aspect, can avoid a significant direct interface to the south-west fire run in most parts. This is especially the case in the northern parts of the settlements where a strategically significant level of separation is provided to landscape forest fire runs (up to 2kms). Directing growth to this lower risk part of Mount Beauty would therefore avoid the most hazardous locations.

The consolidation of existing urban areas in Mount Beauty can be considered in future structure planning. Consolidation would take advantage of the extensive low hazard land combined with the separation from long forest fire runs. Ember attack to be expected across Mount Beauty, so there is a need to consider whether a Bushfire Management Overlay Schedule 2 (BAL29) would be a necessary risk management response to consolidation. This would provide enhanced ember protection and better radiant heat protection from other structures being on fire. This can be considered in future structure planning.

Vegetated areas within a settlement (such as parks, nature reserves and river corridors)

Key design considerations:

- *Vegetated areas can be managed so that fuels are consistent with the vegetation management requirements for bushfire. This involves either removing fuels or ensuring fuels are not introduced as part of settlement planning.*
- *Areas that will not be managed for bushfire purposes effectively have their own interface with the bushfire hazard and would require setbacks and vegetation management approaches.*

No and low hazard land in Tawonga South and Mount Beauty has enabled a large area of BAL:Low land to arise and for the bushfire exposure benchmark to met in large areas. These should be maintained and protected for the strategic and life safety benefit it provides for the settlement and, for Mount Beauty, for people in the wider landscape who may seek shelter before, during and after a bushfire.

Bushfire hazards should be kept outside of settlement areas.

9b.9 Part 2: The settlement interface

9b.9.1: Apply the required development setback

Key design considerations:

- *New development should be set back from the bushfire hazards. The setback is determined based on the type of vegetation and slope under the vegetation.*
- *Permanently occupied development, such as dwellings, are not permitted in the setback area.*

The assessment of bushfire exposure shows that large parts of the settlements can satisfy the bushfire exposure benchmark. Land already within an urban Zone will have a different exposure requirement under the Bushfire Management Overlay. Land adjoining existing urban Zone land within grasslands will be capable of meeting the bushfire exposure requirement.

It is noted that the landscape risk is a more relevant factor to development proceeding than meeting the bushfire exposure requirement, which for strategic planning is a secondary consideration once the landscape risk and s13.02-15 *Bushfire Planning* deems a location suitable for growth in the first instance.

9b.9.2: Design the settlement interface

Key design considerations:

- *Vegetation in the setback area needs to be managed to prevent a moving bushfire front entering the settlement.*
- *Perimeter roads are the preferred design outcome on the settlement interface where a site abuts or is near a bushfire hazard. A perimeter road:*
 - *Enables a no fuel area to form part or all of the interface.*
 - *Enables development to front the bushfire hazard, orienting the rear of lots away from it. The rear of lots is often where introduced fuels create a localised bushfire hazard.*
 - *Provides an effective location from which fire authorities can establish positions to attack a bushfire and for land managers to undertake fuel management activities.*

New development on a settlement interface that creates a new settlement edge will need to provide a fully bushfire compliant interface. To the north of Mount Beauty, this is achievable.

Low density residential development on the settlement interface in Tawonga South (northern and southern parts) are not low hazard and have a deficient interface based on historical planning decisions. The VFRR identifies these areas as an extreme risk, reflecting the on-going management challenges when sub-optimal interfaces have arisen in past planning decisions.

9b.10 Part 3: Bushfire protection measures across a whole settlement

9b.10.1: Vegetation management

Key design considerations:

- *Ensure vegetation is managed across a settlement where there is exposure to ember attack. Proper vegetation management will help reduce the potential for localised fires from ember ignition.*

The low hazard core of Mount Beauty and the low hazard urban land in parts of Tawonga South enables a large area of BAL:Low land to arise and for the bushfire exposure to met. This should be maintained and protected for the strategic and life safety benefit it provides for the settlement. The Bushfire Management Overlay applying to all settlement areas ensures bushfire hazards will not accompany new development.

Bushfire hazards should be kept outside of settlement areas.

9b.10.2: Building construction standards

Key design considerations:

- *Consider at the settlement scale how bushfire constructions standards are to be applied, including where enhanced protection from ember ignited localised fires and smaller lot sizes are proposed to protect against structure to structure fires.*

The Bushfire Management Overlay applying to all settlement areas ensures bushfire construction requirements will apply to new development.

It is noted that Attachment 2 provides recommendations to change BMO Schedule 1 (BAL12.5) to BMO Schedule 2 (BAL29) in Tawonga South (west of the Kiewa Valley Highway). This would ensure existing development better responds to the landscape risks and being on the interface of forests.

Proposals that may seek to consolidate existing parts of Mount Beauty through structure planning would need to consider whether a Bushfire Management Overlay Schedule 2 (BAL29) would be a necessary risk management response to consolidation. This would provide enhanced ember protection and better radiant heat protection from other structures being on fire. This can be considered in future structure planning.

9b.10.3: Fences and other localised fuel sources

Key design considerations:

- *Designing and planting for bushfire can help manage fuels being introduced around buildings.*
- *Fences can be a key source of fuels within settlements.*

The typology of standard lot sizes does not indicate a need to manage fencing. However, where lots larger than 1,200sq.m are proposed, non-combustible fencing should be considered given the potential for these larger lots to carry more bushfire hazards.

Figure 9b-1: c11.01-1L-02 Alpine Planning Scheme - Mount-Beauty – Tawonga South

ALPINE PLANNING SCHEME

11.01-1L-04 Mount Beauty – Tawonga South

20/09/2022
C62a1p1

Policy application

This policy applies to the township of Mount Beauty – Tawonga South as shown on the Mount Beauty – Tawonga South Structure Plan that forms part of this clause.

Objective

To maintain and enhance the significant environmental, heritage, landscape and recreational qualities of the township and protect the operations of the Mount Beauty Airport.

Strategies

Maintain the rural land use and development pattern on the eastern (river) side of the Kiewa Valley Highway between Mount Beauty and Tawonga South.

Prevent ribbon development along the Kiewa Valley Highway.

Protect the significant sightlines from the Kiewa Valley Highway to Mount Bogong across the valley.

Ensure minimum lots sizes for residential subdivision are appropriate to the area and have regard to the existing lot size and density of development in the neighbourhood.

Improve pedestrian and cycle access within and between Mount Beauty and Tawonga South to encourage more people to walk and cycle more often.

Focus new development in identified growth areas, subject to the necessary site capability investigations.

Integrate development with the open space network.

Facilitate public riverside access along a network of paths and trails.

Facilitate the runway extension and development of the Mount Beauty Aerodrome.

Policy documents

Consider as relevant:

- Alpine Shire Rural Land Strategy (Alpine Shire Council, 2015)
- Alpine Shire Town Framework Plan – Mt Beauty and Tawonga South (Inspiring Place Pty Ltd, 2009)
- Mount Beauty Master Plan 2003 (Alpine Shire Council, 2003)
- Mount Beauty Aerodrome Master Plan (EDM, 2011)

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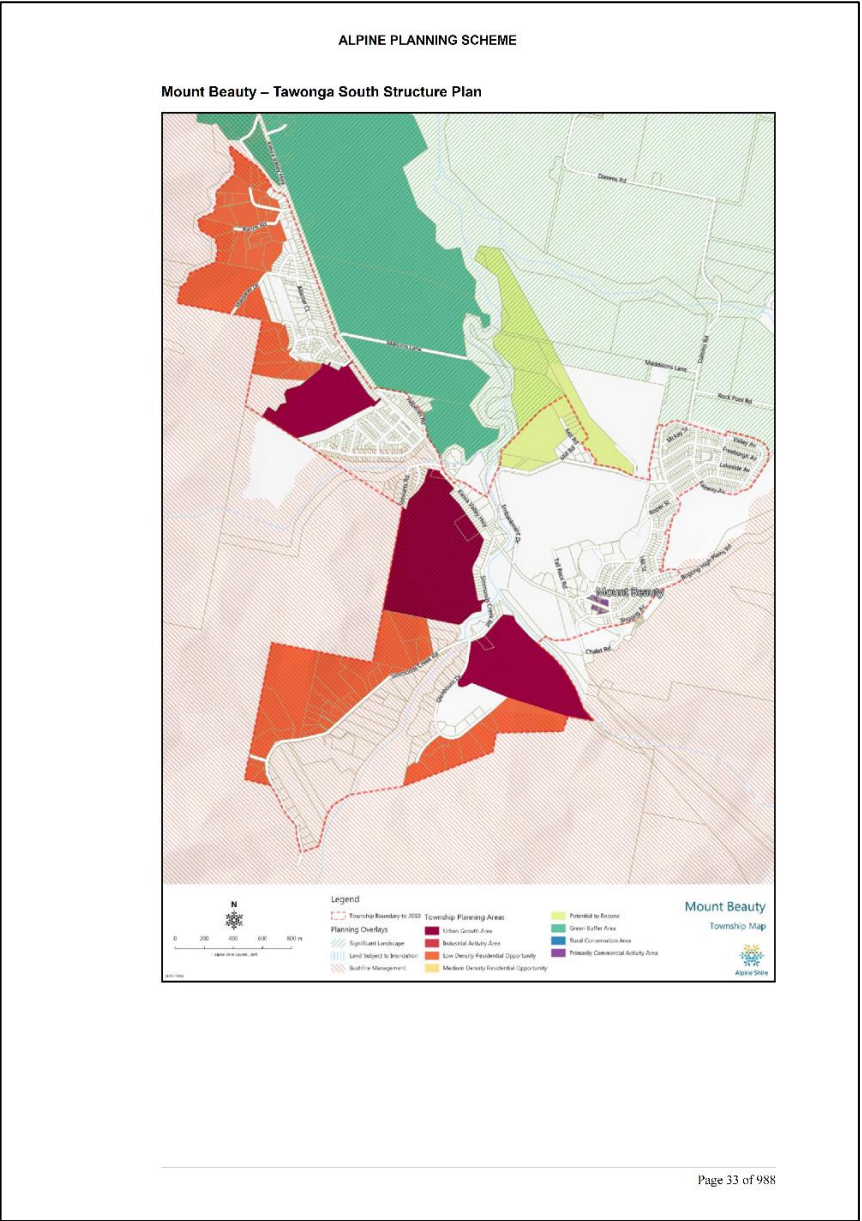


Figure 9b-2: Mount Beauty-Tawonga South LDS 2023 directions with current Zones

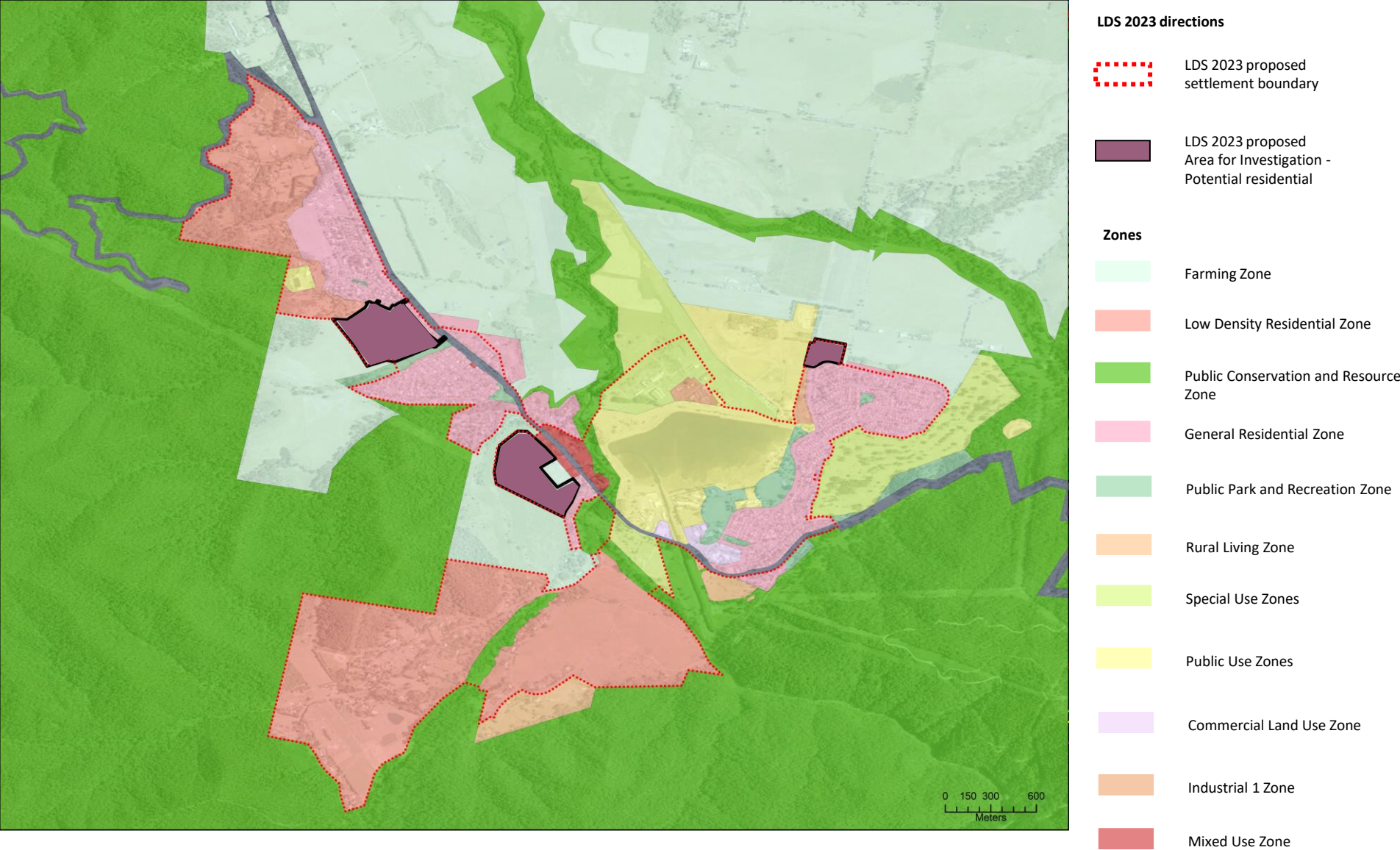
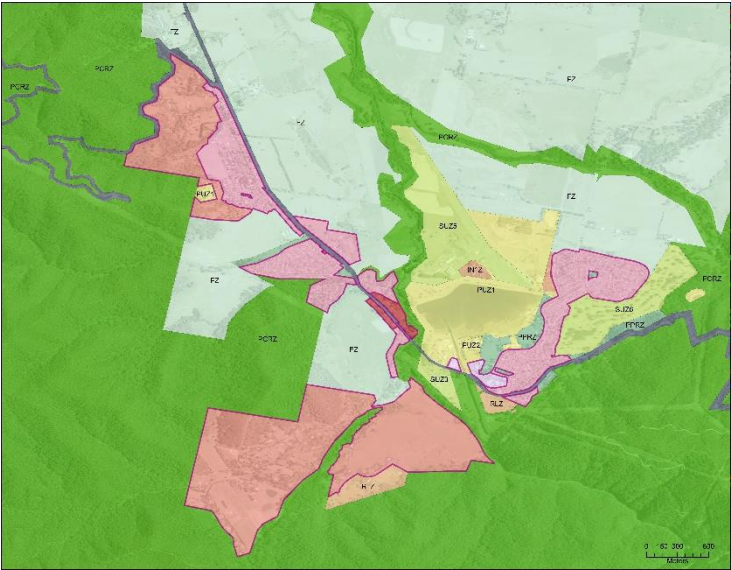


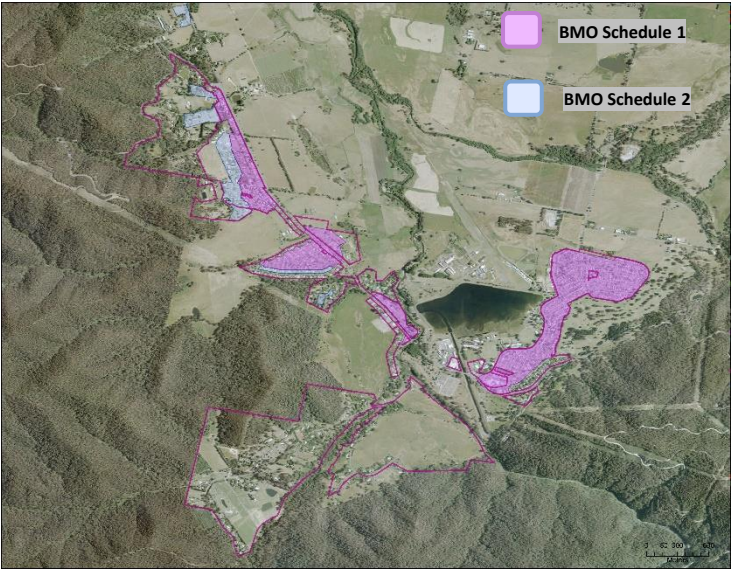
Figure 9b-3: Mount-Beauty – Tawonga South bushfire contextual information
Zones



Bushfire Management Overlay



Schedules to the Bushfire Management Overlay



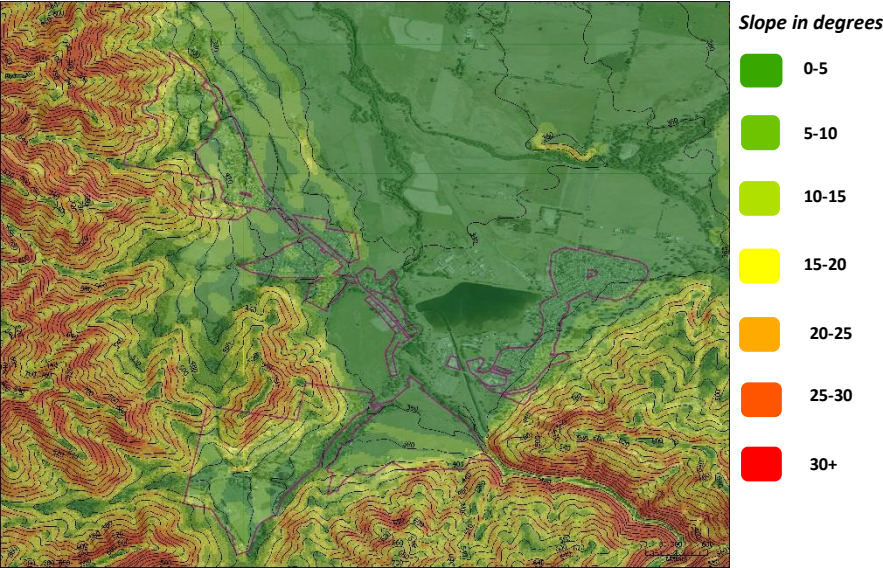
Bushfire Prone Areas



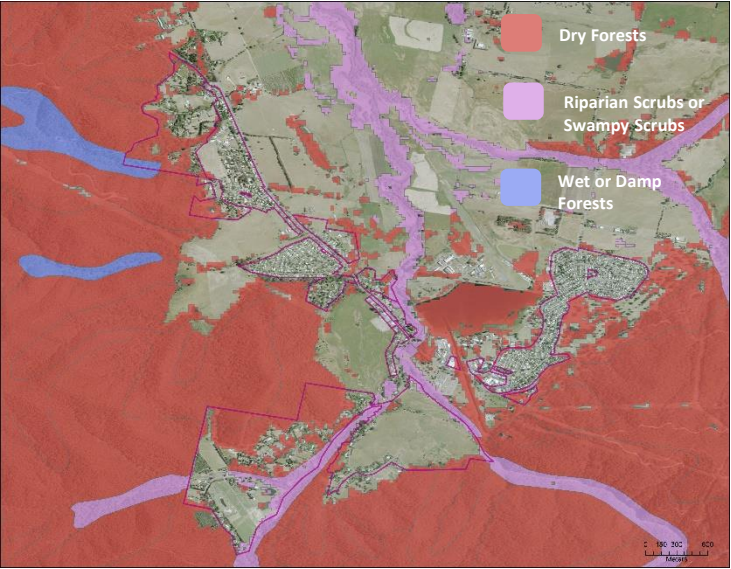
Date: 11/03/2024

Figure 9b-3: Mount-Beauty – Tawonga South contextual information (continued)

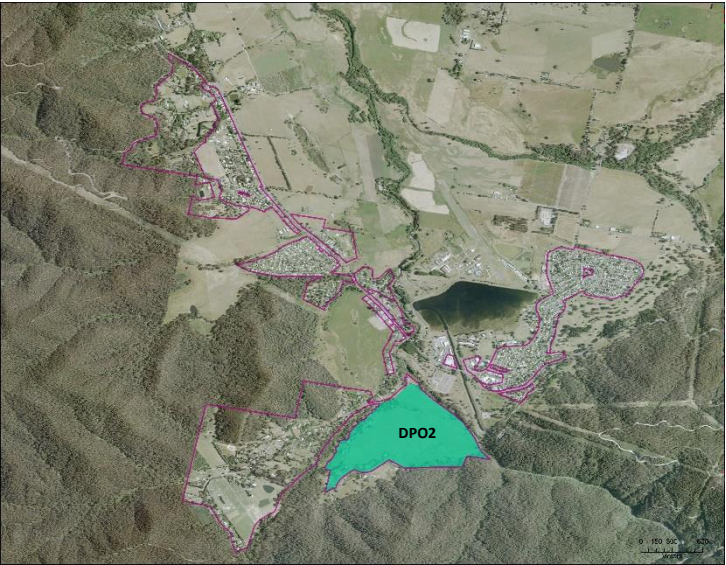
Slope based on 10m contour



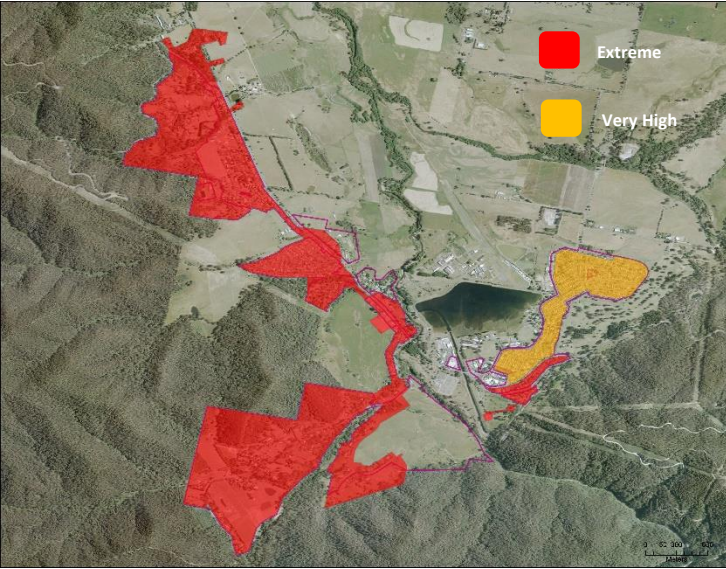
Ecological Vegetation Classes



Development Plan Overlay



Victorian Fire Risk Register



Date: 11/03/2024

Figure 9b-3: Mount-Beauty – Tawonga South contextual information (continued)

Significant Landscape Overlay Schedule 1



Bushfire setbacks applied for exposure assessment



- Forest, flat/upslope
Column A = 48m
- Grasslands, flat/upslope
Column A = 30m
- Low-threat = 0m

Figure 9b-4: Mount-Beauty – Tawonga South local and settlement level bushfire analysis

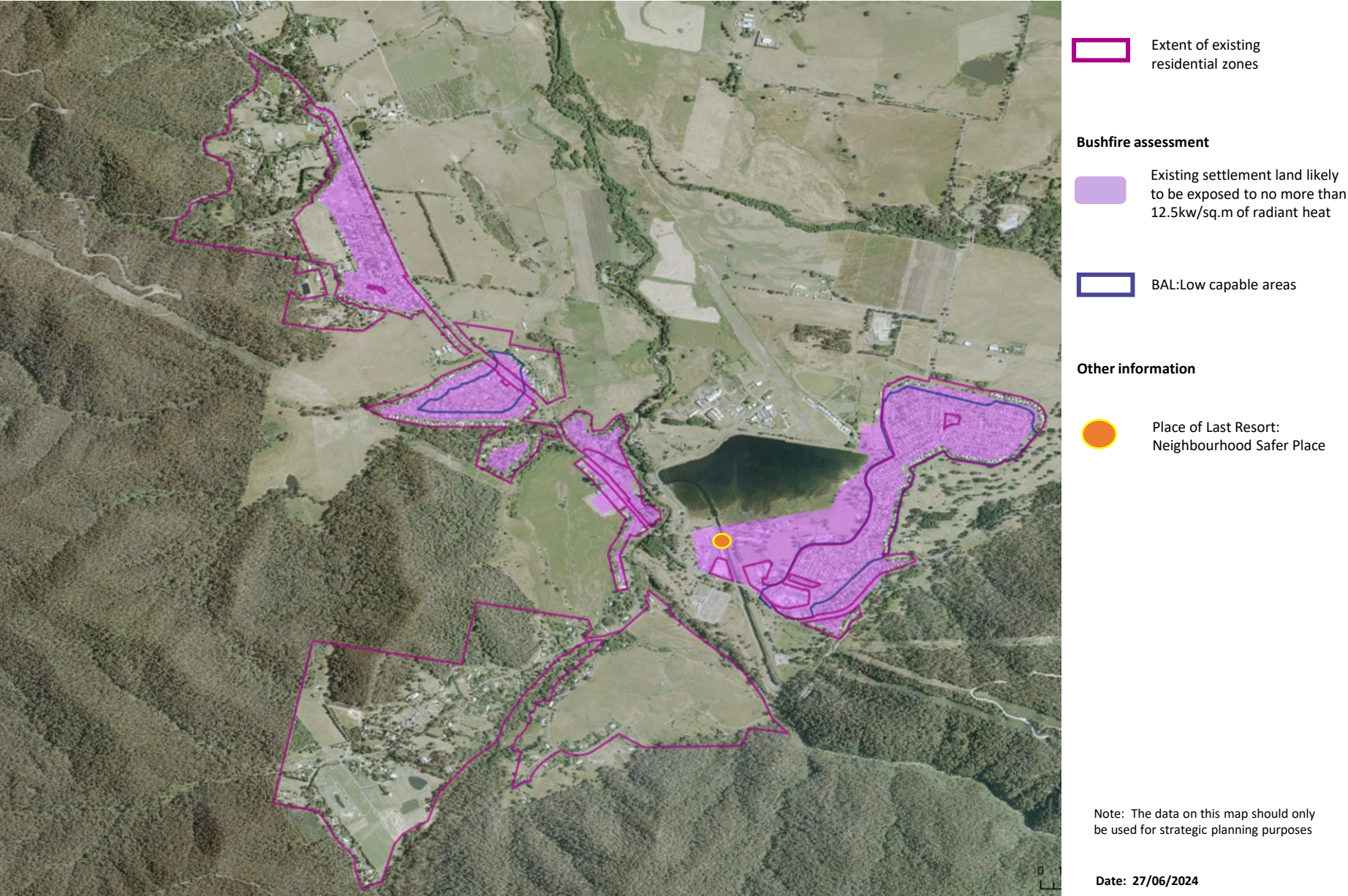
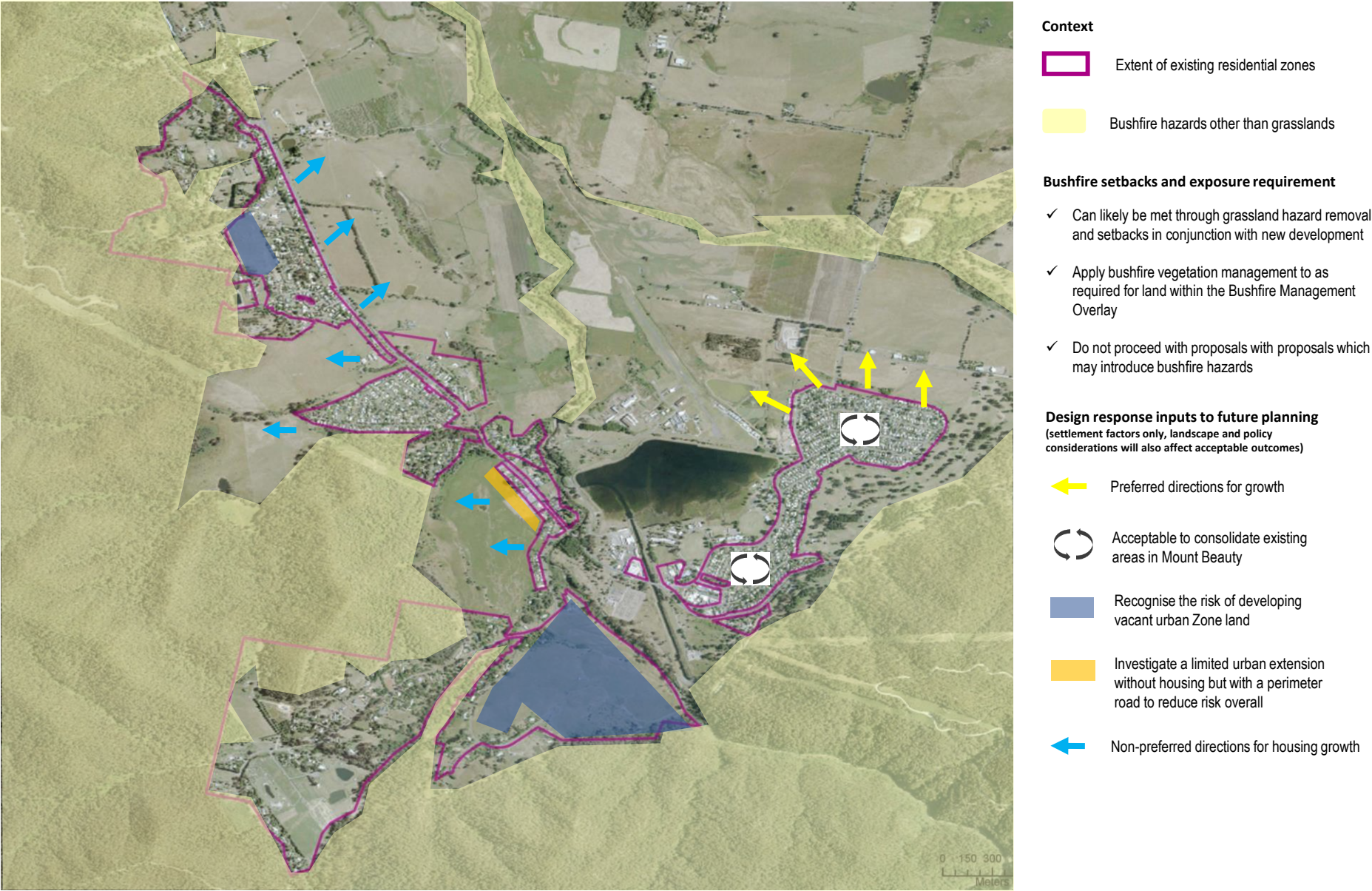


Figure 9b-5: Mount-Beauty – Tawonga South settlement-scale design response for bushfire



9c Bright local and settlement-level assessment

9c.1 Existing planning scheme directions for Bright

The strategic directions for settlements at c02.03-1 includes the following (emphasis added):

***Bright** is located at the upper end of the Ovens Valley. The valley in this location is narrow and the surrounding hills, with their pine plantations, enclose the town including Apex Hill to the north and Mystic Hill to the south.*

Bright has the second largest population in the Shire. The main industry is tourism and over 30 per cent of the town's employees work in this industry.

Bright services the surrounding small townships, settlements and rural localities in the Upper Ovens Valley including Harrietteville, Smoko, Freeburgh, Germantown, Porepunkah and Wandiligong. Residents and visitors to Dinner Plain and Mount Hotham Alpine Resort also rely on Bright for services.

c11..01-1L-02 Bright contains the current structure plan for Bright. The settlement boundary mostly matches existing urban Zone land but there are several urban growth areas identified for greenfield-type expansion. The core commercial area is identified as a primary commercial activity area. Land around the commercial area is identified as a medium density residential opportunity. A large parcel of land at the western edge of the settlement is greenfield land within a residential Zone.

See: **Figure 9c-1: c11.01-1L-02 Alpine Planning Scheme - Bright**

9c.2 Alpine Shire Land Development Strategy (draft) November 2023

The LDS 2023 describes the town as follows (Page 18):

The General Residential Zone consists of mostly single detached dwellings, developed on residential blocks with a rectilinear subdivision pattern. Housing development is low scale with mostly pitched roof styles and a variety of timber and brick constructions varying between one and two storeys. Housing development is characterised by generous front and rear setbacks, except where dwellings are located on steep lots in the foothills, such as to the south of the town between Lewis Close and Hargreaves Street. Front fences on residential lots are generally low in height and permeable or otherwise absent. Vehicle crossings connected to driveways and on-site car parking is commonplace. Most streets are without footpaths.

The LDS 2023 includes strategic directions relevantly as follows (emphasis added):

***Bright, Myrtleford and Mount Beauty-Tawonga South** are classified as 'Service Towns' and Porepunkah has been classified as an emerging 'Service Town'. Service towns will accommodate the largest amount of future housing and employment growth.*

Service towns are described as follows (Table 6, Page 50) :

Service Towns are supported as the primary locations for future residential and employment growth, subject to assessment of environmental risk (bushfire, flooding, landslide) constraints.

Strategic direction 2 (page 49) includes strategies as follows:

Strategy 3.1 Direct population growth to existing and emerging Service Towns identified in the Settlement Hierarchy and the Service Town Framework Plans to support efficient and safe use of land and infrastructure and convenient access to jobs and services.

See: **Figure 9c-2: Bright LDS 2023 direction with current Zones**

9c.3 Settlement-level contextual information

The following contextual planning information has been reviewed:

- Zones applied primarily comprises land in the General Residential Zone and the Low Density Residential Zone.
- The Bushfire Management Overlay applies to all land within settlement areas and all surrounding land based on a combination of buffering off hazard interfaces as well as the extreme fire behaviour criteria. BMO Schedule 1 & 2 apply to selected residential areas which streamline the approval of a single dwelling on a lot.
- The Bushfire Prone Area applies to all land.
- The Development Plan Overlay applies to parcels of undeveloped land at the western and eastern edge of the settlement.

The following contextual bushfire information has been reviewed:

- Ecological vegetation classes (EVCs) include:
 - Dry Forests
 - Riparian Scrubs or Swampy Scrubs.
- The Victorian Fire Risk Register shows the developed edges of the settlement as a very high risk and the core of the settlement as low risk.
 - Very High
 - Low (whilst it is beyond the scope of this report, it is considered that the designation of any land in Bright as 'low' risk under the VFRR is anomalous. The CFA and Council could consider the suitability of this through regular processes around the VRFF).
- Slope in the surrounding landscape (10-20km) shows areas of steep and rugged terrain (see Figure 9c-1 in main report) indicating that conditions for extreme behaviour in the wider landscape may arise.

See Figure 9c-3: Bright Contextual information

9c.4 Landscape type assessed

Chapter 6 identified Landscape types for Bright.

The more urban parts of the settlement are assessed as Landscape type 3. Landscape 3 is described by DELWP (2017) as follows:

- *The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site*
- *Bushfire can approach from more than aspect*
- *The area is located in an area that is not managed in a minimal fuel condition*
- *Access to an appropriate place that provides shelter from bushfire is not certain.*

The edges of the settlement and the landscape around Bright is assessed as Landscape type 4. Landscape 4 is described by DELWP (2017) as follows:

- The broader landscape presents an extreme risk
- Bushfires may have hours or days to grow and develop before impacting¹
- Evacuation options are limited or not available

See Figure 7-2 (main report): Landscape types in the Study Area

9c.5 Site based exposure at the settlement scale

Exposure to bushfire at the local and settlement scale assesses the level of radiant heat likely to arise from hazardous vegetation within and in close proximity (150m) to the settlement. Considering exposure to bushfire enables new development to be separated from hazardous vegetation so that radiant heat of less than 12.5kw/sq.m arises, as required by *c13.02-1S Bushfire Planning* for new development enabled by strategic planning or a planning scheme amendment.

The methodology for a bushfire hazard site assessment as described in *Planning Permit Applications Bushfire Management Overlay Technical Guide* (DELWP 2017) and *AS3959-2018 Construction of buildings in bushfire-prone areas* (Standards Australia) informs the assessment. Key assumptions include a Fire Danger Rating of 100 and a flame temperature of 1080°C.

Applied setbacks

BMO Schedule 1 provides for a BAL12.5 construction standard. The schedule was developed by the CFA to reflect land where exposure to bushfire is no more than 12.5kw/sq.m of radiant heat. This corresponds to the exposure benchmark required by *c13.02-1S Bushfire Planning*. The BMO Schedule 1 land has therefore been adopted in this report as the extent of land where the bushfire exposure requirement can be met.

See Figure 9c-4: Bright local and settlement level bushfire analysis

9c.6 Availability of safe(r) areas at the settlement scale

An assessment has been made of areas that may be low hazard where human life can be better protected from the harmful effects of bushfire. Low hazard areas can provide protection at a settlement and neighbourhood scale as they are a form of passive mitigation, enabling people to move away from bushfire hazards if they need to. In a settlement setting, this usually involves moving deeper into settlement areas and away from hazard interfaces.

c13.02-1S Bushfire Planning defines such places as BAL:Low. BAL:Low places are where hazardous vegetation is more than 100m away (50m for grasslands). Hazardous vegetation for the purpose of BAL:Low is defined as vegetation that cannot be excluded under 2.2.3.2 of *Australian Standard AS3959:2018 Construction of buildings in Bushfire Prone Areas* (Standards Australia).

See Figure 9c-4: Bright local and settlement level bushfire analysis

9c.7 Design Guidelines – Settlement planning at the Bushfire Interface (DELWP 2020)

Design Guidelines: Settlement Planning at the Bushfire Interface (DELWP 2020) (the 'Design Guidelines') provide an appreciation of the bushfire threat and how bushfire may affect a settlement, supported by design advice on settlement planning set out according to three themes:

- Part 1: The form and structure of settlements;
- Part 2: The settlement interface;
- Part 3: Bushfire protection measures across a whole settlement.

The Design Guidelines provide a logical approach to considering good design in settlement planning, supporting many of the objectives and approved measures in *c53.02 Bushfire Planning* and the policy emphasis in *c13.02-1S Bushfire Planning*. The Design Guidelines are not incorporated into the planning scheme.

It is noted that landscape bushfire risk is not considered in the Design Guidelines as such. They assume landscape risk is acceptable for development to proceed, so they are therefore focused on implementation of acceptable change. This section of the report should be read in this context and not as implying development of any sort is acceptable based on landscape, strategic or policy factors.

The factors in the Design Guidelines described in this section are those of most interest or relevance to the settlement. Not all design guidelines are included.

9c.8 Part 1: Form and structure of settlements

The bushfire hazard in directing growth

Key design considerations:

- *Settlement planning should direct growth to locations that are less exposed to a bushfire.*
- *Settlement growth should be directed to locations that avoid bushfire risk where possible, including the highest risk aspect(s) where large bushfires will occur.*
- *Settlement growth should also be directed to locations that avoid the most hazardous locations.*
- *Directing new growth to higher risk areas should be carefully considered. Consulting with the relevant fire authority as part of strategic and settlement planning is crucial.*

Bright is constrained by forests on all sides. The linear spread of the settlement means there is no interface less exposed to bushfire that would warrant a strategic response to promote growth in any specific location. When combined with the landscape bushfire risk, the outward growth of Bright is not reasonably contemplated in future structure planning.

Other parts of this report recognise that existing urban Zone land may be subject to planning applications to subdivide land and would be assessed under the current planning scheme. Responsible authorities and relevant fire authorities seek to respect existing urban Zone land to enable development. In the case of Bright, the risk is sufficiently high where this may not be possible. It may be prudent that the vacant General Residential Zone land not be considered as a source of housing land supply unless a planning permit has been issued.

The consolidation of existing urban areas in Bright is difficult given the extensive interfaces with forests, the linear nature of the settlement, and the splitting of the BAL:Low land into three distinct areas. Consolidation in Bright considered as part of future structure planning would likely to be limited to the low hazard core orientated around the Commercial 1 Zone.

It will be necessary in considering consolidation to emphasise non-permanently occupied development that is capable of being closed on higher risk bushfire days and where an integrated site manager is able to coordinate sheltering and/or evacuation on other days if a bushfire occurs.

The bushfire hazard in directing growth

Key design considerations:

- *Development that may be occupied by vulnerable people should be located away from the settlement interface and in some locations may not be suitable at all.*

Due to the close proximity of forest interfaces on all sides of Bright and the more limited areas of low hazard land, especially vulnerable people in permanently occupied development should not be promoted in future structure planning.

Vegetated areas within a settlement (such as parks, nature reserves and river corridors)

Key design considerations:

- *Vegetated areas can be managed so that fuels are consistent with the vegetation management requirements for bushfire. This involves either removing fuels or ensuring fuels are not introduced as part of settlement planning.*
- *Areas that will not be managed for bushfire purposes effectively have their own interface with the bushfire hazard and would require setbacks and vegetation management approaches.*

The Bushfire Management Overlay applying to all settlement areas ensures bushfire hazards will not accompany new development.

The low hazard core and land assessed as BAL:Low is in three different areas with bushfire hazards separating them. This reduces to some extent the utility of these areas at the settlement scale and makes each element smaller than might otherwise be desirable in a high risk settlement. These low hazard areas should be maintained and protected for the strategic and life safety benefit it provides for the settlement.

Further reducing hazards within the settlement is a priority and new bushfire hazards should be kept outside of settlement areas.

There are plantations immediately adjoining urban areas in Bright, including (for example) north of Delany Avenue. Efforts over time to remove plantation / settlement interfaces should be encouraged. Whilst plantations are beyond the Council's ability to regulate as a responsible authority under the planning scheme, there is opportunity to work with the Victorian Government and plantation managers to consider the medium to long term existence of selected plantation areas.

Key elements of this consideration could include:

- Enhanced recognition at a whole of Victorian Government level, including fire authorities and Crown land managers, that plantations near settlement areas are risks which affect life safety in Bright. Council advocacy can support this occurring.
- Expectations around leasing of land and harvesting, and when the 'next' harvest may arise providing a window of opportunity to consider strategically plantations close to settlements.
- Considering whether alternative uses could be deployed to utilise the land in a lower risk way, working with Crown land managers and private plantation owners. This could involve alternative development for settlement purposes where this formed part of an integrated strategy which delivered an overall risk reduction to Bright, as sought by *c13.02-15 Bushfire Planning*, because of selected plantation uses ceasing.

9c.9 Part 2: The settlement interface

9c.9.1: Apply the required development setback

Key design considerations:

- *New development should be set back from the bushfire hazards. The setback is determined based on the type of vegetation and slope under the vegetation.*
- *Permanently occupied development, such as dwellings, are not permitted in the setback area.*

New development on the settlement interface that creates a new settlement edge will need to provide a full bushfire compliant interface. To the west of Bright using existing urban Zone land, this is achievable.

9c.9.2: Design the settlement interface

Key design considerations:

- *Vegetation in the setback area needs to be managed to prevent a moving bushfire front entering the settlement.*
- *Perimeter roads are the preferred design outcome on the settlement interface where a site abuts or is near a bushfire hazard. A perimeter road:*
 - *Enables a no fuel area to form part or all of the interface.*
 - *Enables development to front the bushfire hazard, orienting the rear of lots away from it. The rear of lots is often where introduced fuels create a localised bushfire hazard.*
 - *Provides an effective location from which fire authorities can establish positions to attack a bushfire and for land managers to undertake fuel management activities.*

Low density residential development on the settlement interface, linear urban and low density residential development that moves deeper into hazard areas, and nearly all the other existing settlement interfaces are sub-optimal due to the historical development patterns. The settlement edges of Bright are high risk at the site and the landscape scale. Bushfire penetration deep into settlement areas is likely.

The Bushfire Management Overlay applying to all land will support relatively better interfaces arising as each lot might be developed, primarily in the form of bushfire vegetation management being applied.

9c.10 Part 3: Bushfire protection measures across a whole settlement

9c.10.1: Vegetation management

Key design considerations:

- *Ensure vegetation is managed across a settlement where there is exposure to ember attack. Proper vegetation management will help reduce the potential for localised fires from ember ignition.*

The low hazard core of Bright enables areas of BAL:Low land to arise and for the bushfire exposure benchmark to be met. These areas should be maintained and protected for the strategic and life safety benefit they provides for the settlement. The Bushfire Management Overlay applying to all settlement areas ensures bushfire hazards will not accompany new development.

Bushfire hazards should be kept outside of settlement areas.

9c.10.2: Building construction standards

Key design considerations:

- *Consider at the settlement scale how bushfire constructions standards are to be applied, including where enhanced protection from ember ignited localised fires and smaller lot sizes are proposed to protect against structure to structure fires.*

The Bushfire Management Overlay applying to all settlement areas ensures bushfire construction requirements apply to new development.

It is noted that Attachment 2 provides recommendations to change BMO Schedule 1 (BAL12.5) to BMO Schedule 2 (BAL29) in Bright. This would ensure existing development better responds to the landscape risks and being on the interface of forests due to the linear nature of the settlement.

9b.10.3: Fences and other localised fuel sources

Key design considerations:

- *Designing and planting for bushfire can help manage fuels being introduced around buildings.*
- *Fences can be a key source of fuels within settlements.*

The typology of standard lot sizes does not indicate a need to manage fencing. However, where lots larger than 1,200sq.m are proposed, non-combustible fencing should be considered given the potential for these larger lots to carry more bushfire hazards.

Figure 9c-1: c11.01-1L-02 Alpine Planning Scheme - Bright

ALPINE PLANNING SCHEME

11.01-1L-02 Bright

26/05/2022
C62alpi

Policy application

This policy applies to the township of Bright as shown on the Bright Structure Plan that forms part of this clause.

Objective

To maintain and enhance the character of Bright as a vibrant tourist town in a rural setting that is:

- Well served by parklands and waterways surrounding the town centre.
- Predominantly pedestrian in scale.

and support development in accordance with the Bright Structure Plan that forms part of this clause.

Strategies

Recognise the township of Bright as a hub for tourist activities in the region and a vibrant place to live.

Avoid development outside the township boundary.

Ensure commercial development and accommodation is of high quality design which does not dominate the streetscape.

Direct medium density development into medium density opportunity areas shown on the plan to this clause.

Maintain the open landscape aspect and predominance of exotic vegetation between and amongst buildings.

Provide sufficient site area in new development to accommodate mature tree plantings.

Maintain view corridors from public and private places.

Ensure minimum lots sizes for residential subdivision are appropriate to the area and have regard to the existing lot size and density of development in the neighbourhood.

Maintain building separation and the rhythm of building setbacks and form in established streetscapes.

Locate development to minimise the obstruction of flood waters particularly overland flooding associated with Morses Creek, Stackey Gully Creek and Bakers Gully Creek.

Policy documents

Consider as relevant:

- Alpine Shire Rural Land Strategy (Alpine Shire Council, 2015)
- Alpine Shire Town Framework Plan - Bright (Inspiring Place Pty Ltd, 2009)
- Bright Futures Urban Design Framework (Alpine Shire Council, 2003)

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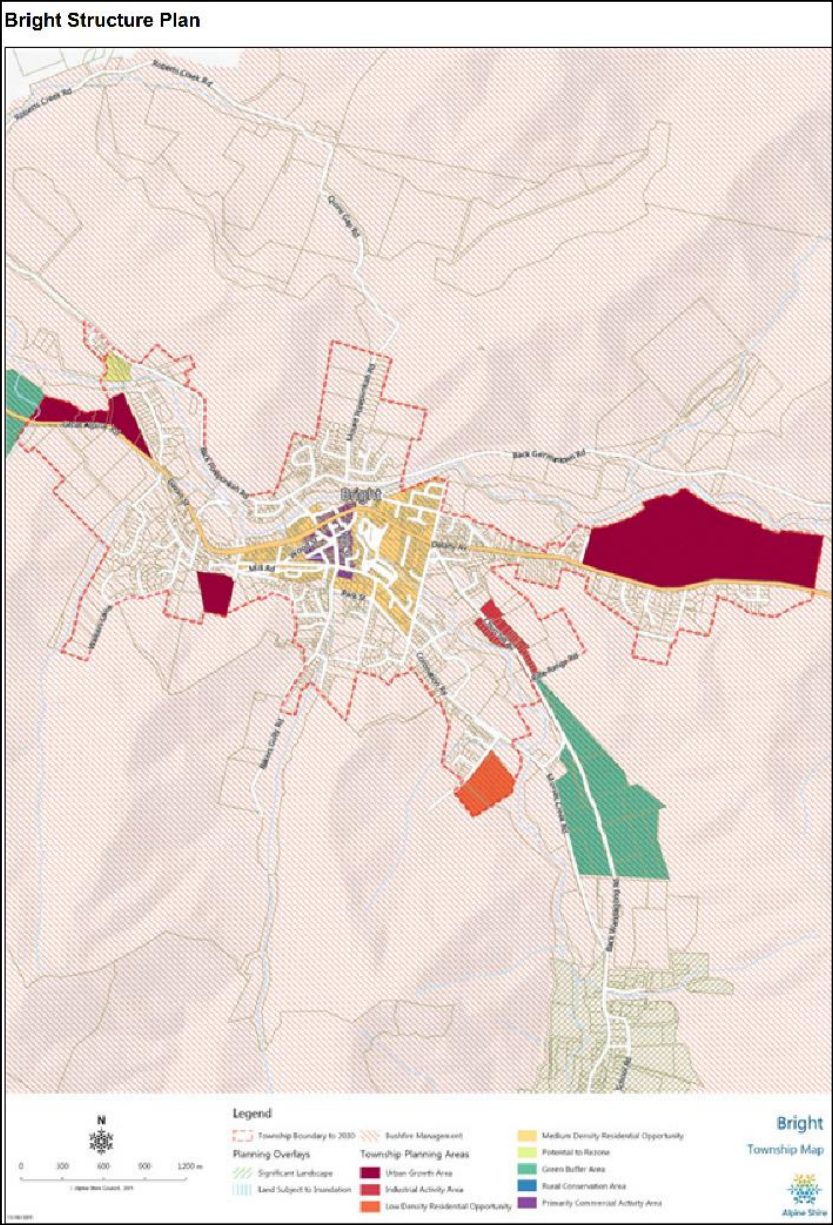


Figure 9c-2: Bright LDS 2023 directions with current Zones

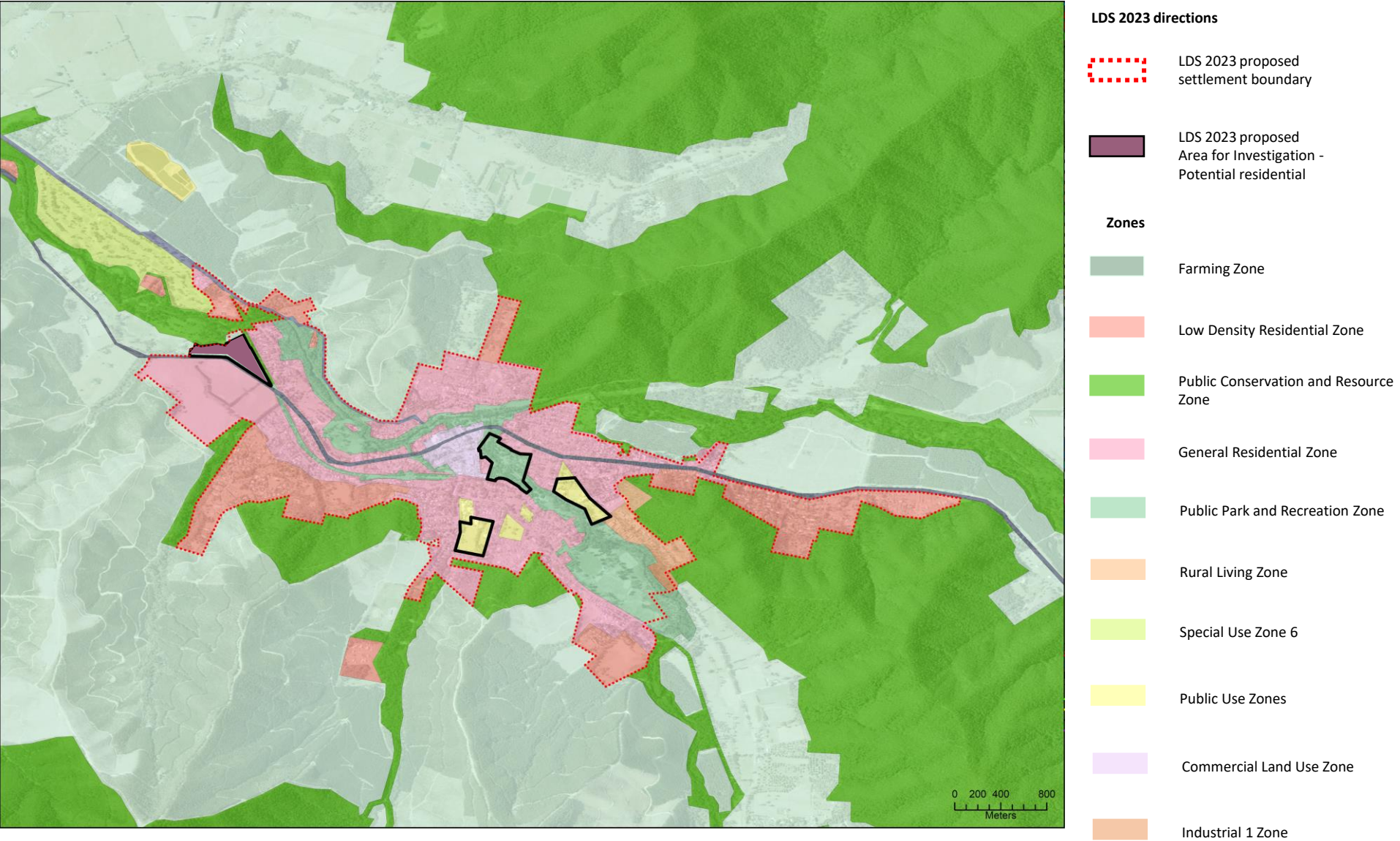
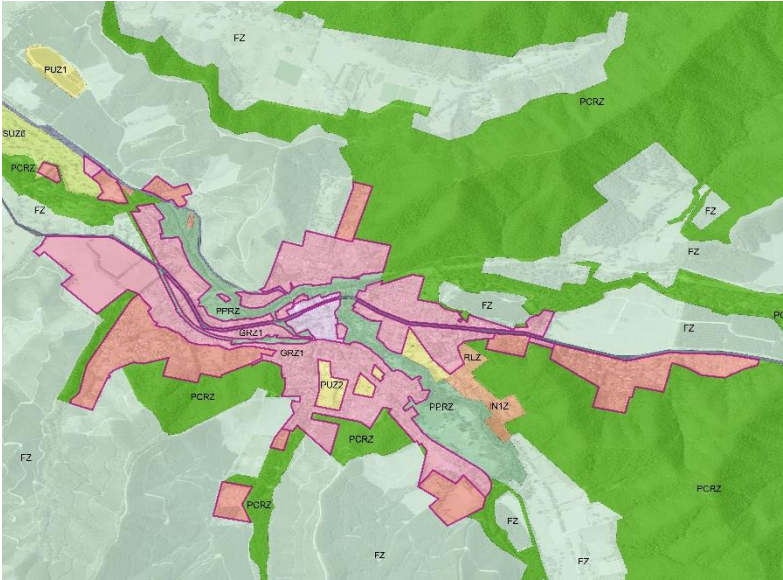
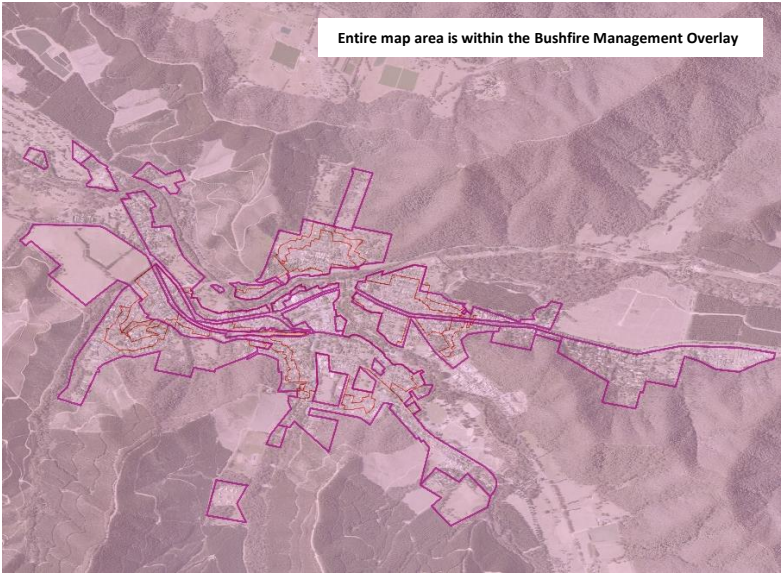


Figure 9c-3: Bright bushfire contextual information

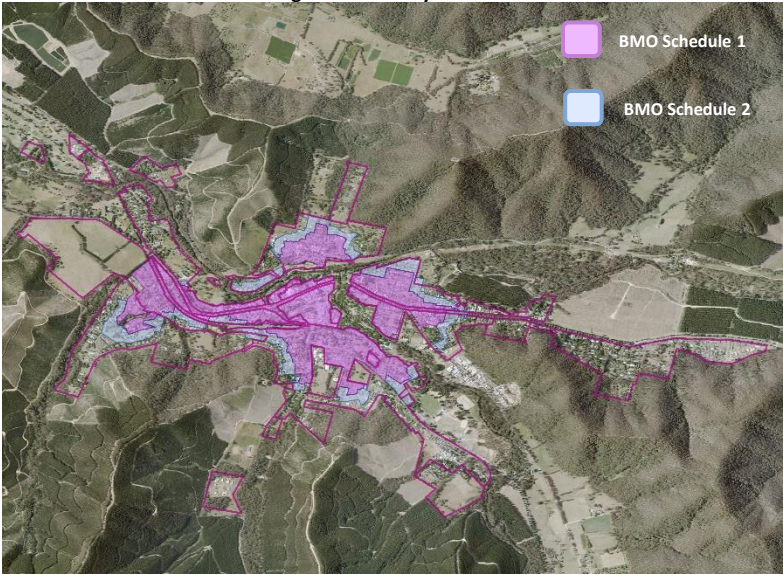
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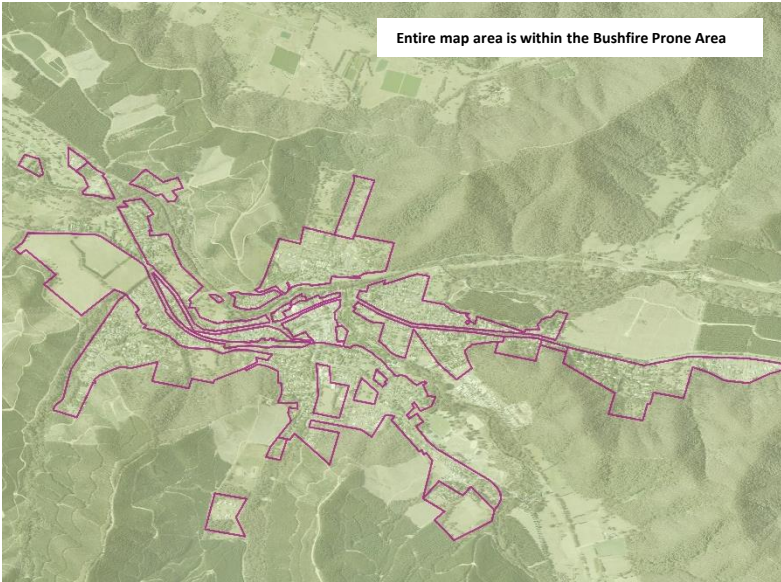
Bushfire Management Overlay



Schedules to the Bushfire Management Overlay

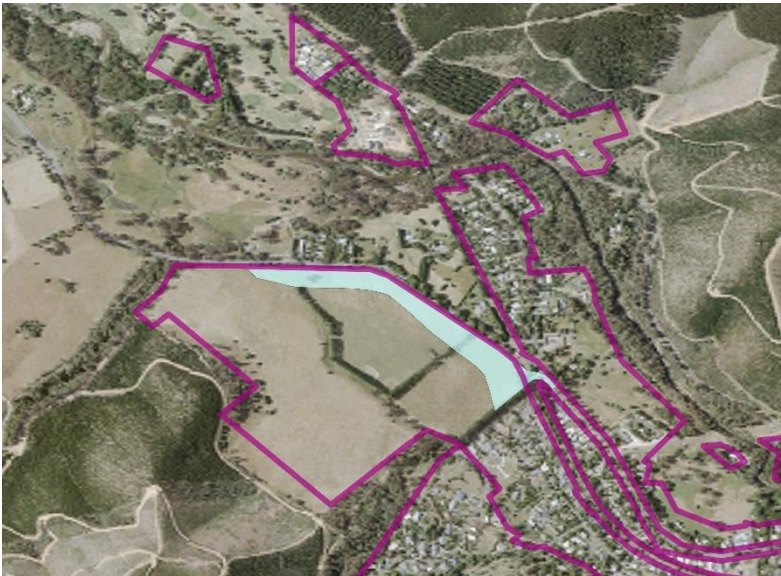


Bushfire Prone Areas

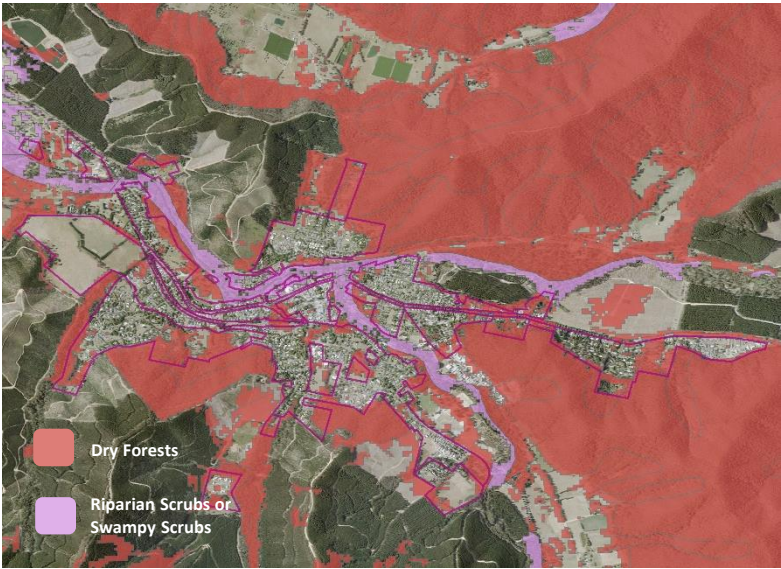


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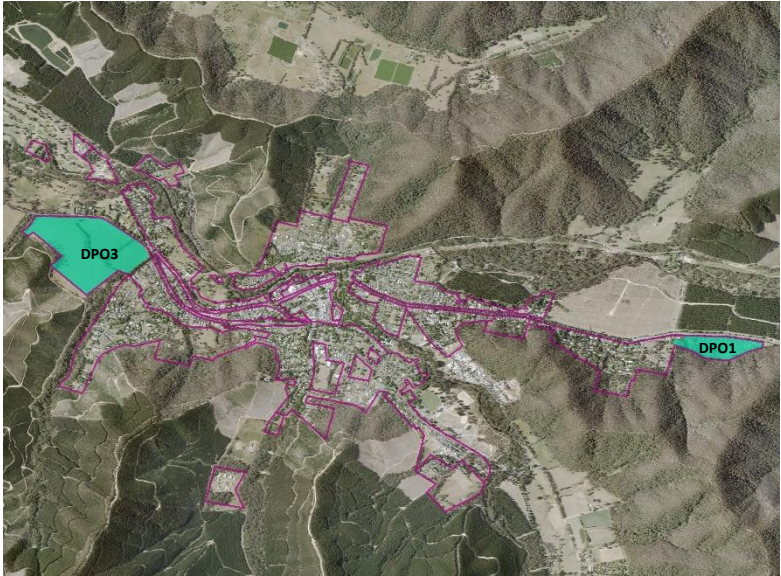
Figure 9c-3: Bright contextual information (continued)
Land Subject to Inundation Overlay



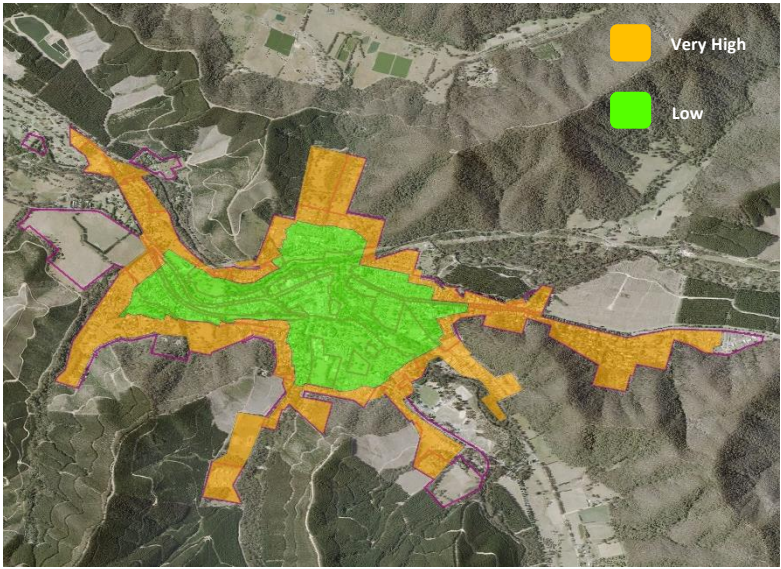
Ecological Vegetation Classes



Development Plan Overlay



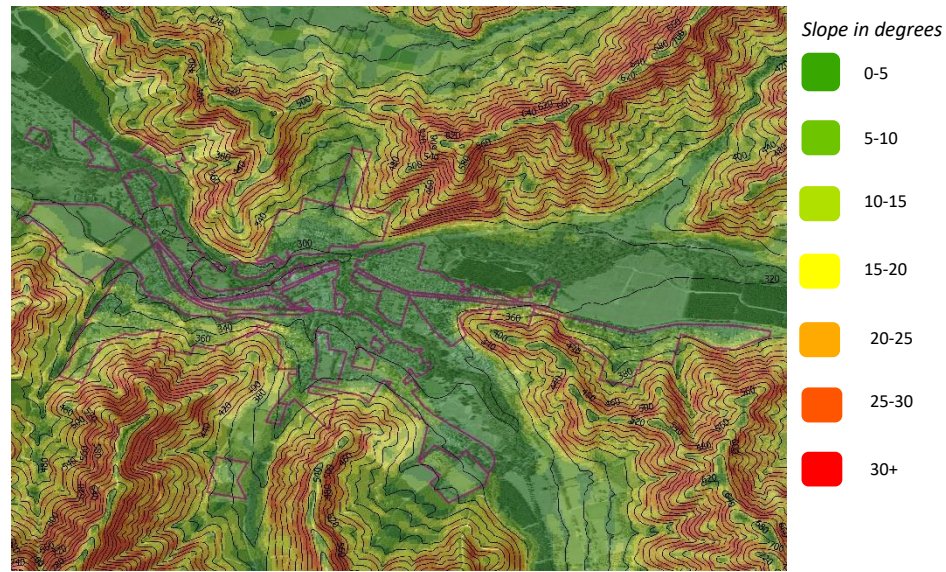
Victorian Fire Risk Register



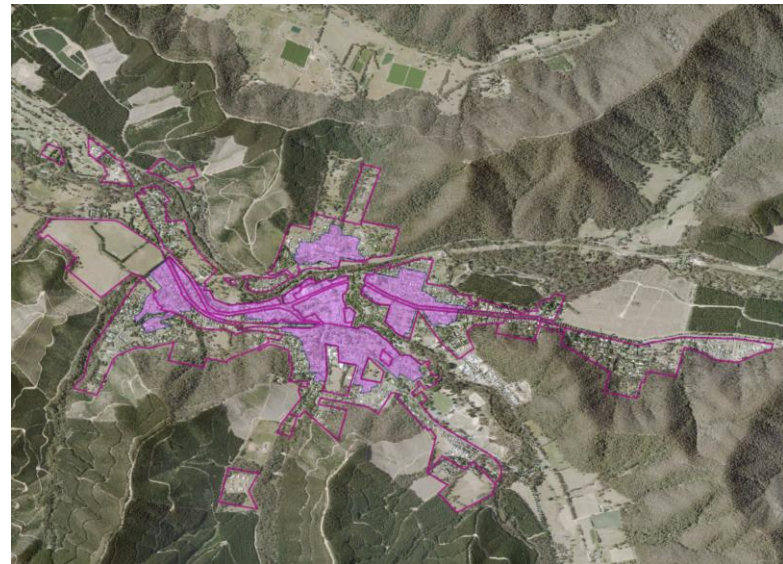
Date: 11/03/2024

Figure 9c-3: Bright contextual information (continued)

Slope based on a 10m contour



Bushfire setbacks applied for exposure assessment using BMO Schedule 1



Plantations



Figure 9c-4: Bright local and settlement level bushfire analysis

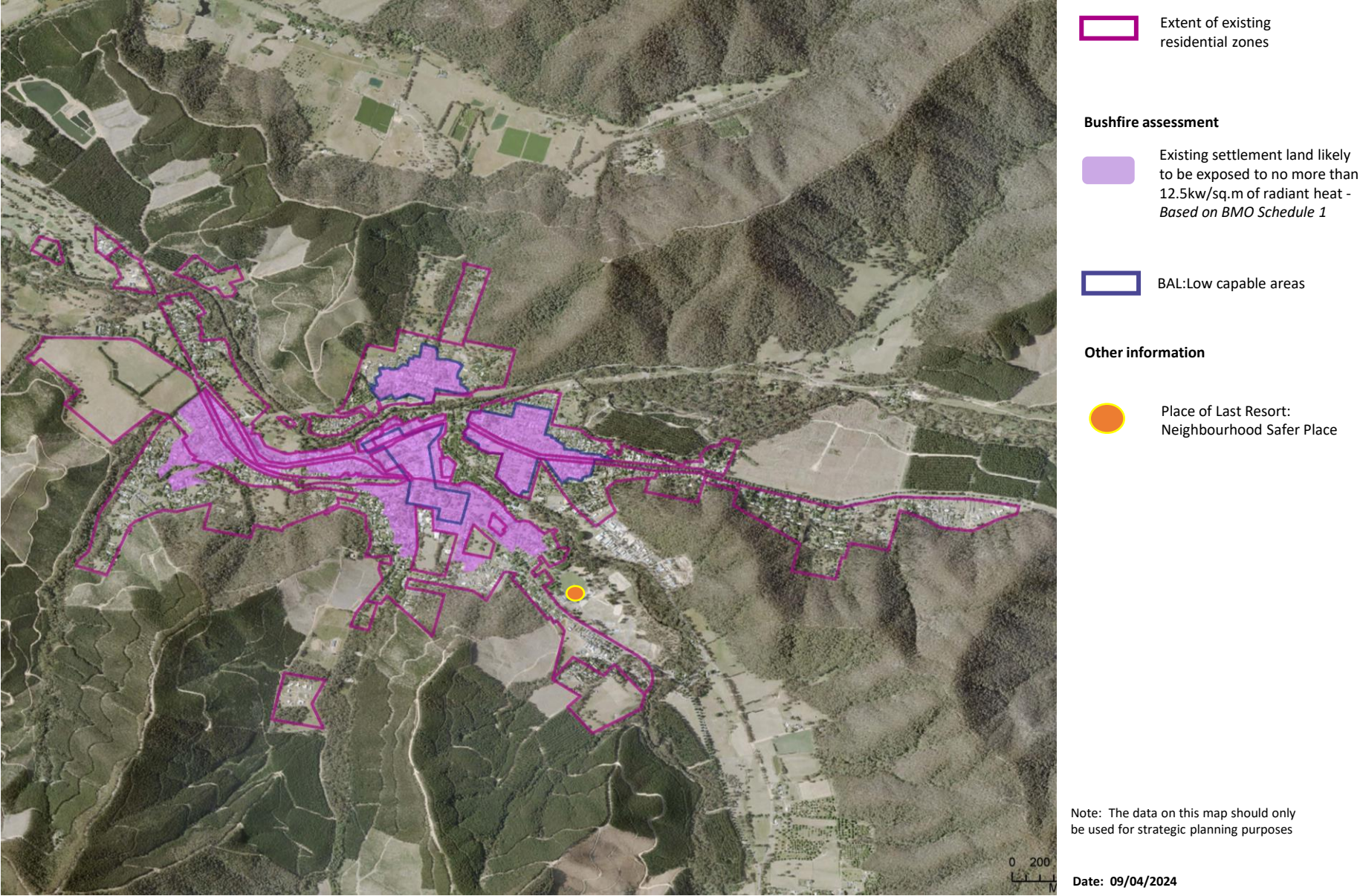
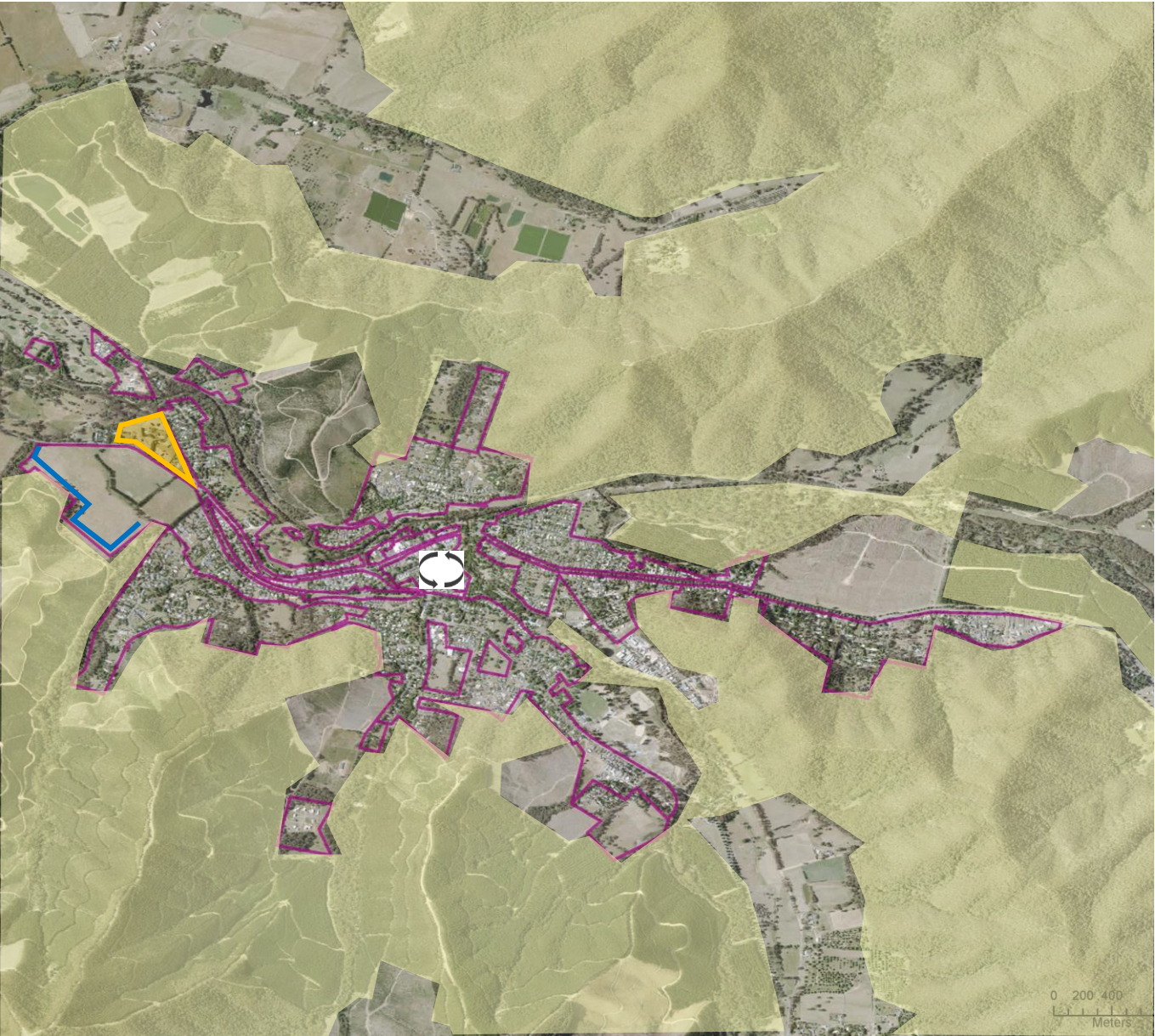




Figure 9c-5: Bright settlement-scale design response for bushfire



Context

-  Extent of existing residential zones
-  Bushfire hazards other than grasslands

Bushfire setbacks and exposure requirement

- Will be variably met, more likely away from hazard edges and less likely on the settlement edge
- ✓ Apply bushfire vegetation management to all land within the Bushfire Management Overlay
- ✓ Do not proceed with proposals which may introduce bushfire hazards

Design response inputs to future planning
(settlement factors only, landscape and policy considerations will also affect acceptable outcomes)

-  Preferred directions for growth but constrained by non-bushfire factors
-  Growth that will be completed under existing Zones
-  Priority for creating new bushfire optimised interfaces with bushfire hazards
-  Acceptable to consolidate the Commercial 1 Zone subject to future structure planning
-  Direct greenfield development only if the greenfield land to the south is granted a planning permit for urban subdivision

Non-preferred directions for housing growth – All sides of Bright

9d. Porepukah local and settlement-level assessment

9d.1 Existing planning scheme directions for Porepukah

The strategic directions for settlements at c02.03-1 includes the following (emphasis added):

***Porepukah** is a small residential town situated 5 kilometres northwest of Bright. The town is more residential in nature, compared to the more tourist focused Bright. Porepukah has a small activity centre that includes a general store and a hotel, adjacent to a recreation reserve, community hall and primary school. Minor service type industrial uses are also located in the town along Station Street.*

Porepukah has significant potential for residential expansion.

c11..01-1L-06 Porepukah contains the current structure plan for Porepukah. There is no settlement boundary shown with the structure plan matching existing urban Zone land. No greenfield-type outward expansion of the settlement is contemplated.

It is noted that c02.03-1 and c11.01-1L-06 are not entirely aligned, presumably because the municipal planning strategy is more up to date than the structure plan.

See: **Figure 9d-1: c11.01-1L-02 Alpine Planning Scheme - Porepukah**

9d.2 Alpine Shire Land Development Strategy (draft) November 2023

The LDS 2023 describes the town as follows (Page 19):

The township sits in a wide valley surrounded by the Ovens River to the south-west and surrounding farmland, with scenic views of Mount Buffalo. The township is characterised by leafy green streets with established tree planting throughout.

Residential development comprises mostly single storey dwellings and comes in a variety of housing styles including a mix of brick homes with tiled roofs and timber construction with tin roofs and vegetated setbacks. The Low Density Residential Zone on the town fringe to the north-west and south-east comprises larger lots with all lots interfacing the Ovens River on one side and the Great Alpine Road on the other side.

The LDS 2023 includes strategic directions relevantly as follows (emphasis added):

Strategic direction 2 (page 47) describes emerging thinking as follows:

*Bright, Myrtleford and Mount Beauty-Tawonga South are classified as 'Service Towns' and **Porepukah has been classified as an emerging 'Service Town'**. Service towns will accommodate the largest amount of future housing and employment growth.*

***Porepukah** has previously been identified in the Alpine Planning Scheme as a township that has significant capacity for residential and commercial growth.*

*The findings of the LDS have reiterated this given the inherent flood and bushfire risk impacting on the growth potential of other parts of the Shire, and the high demand for services currently experienced in Bright, **Porepukah** continues to represent a suitable location for urban development, community infrastructure and housing. However further work, particularly in relation to planning for bushfire, will be needed to determine if rezoning of land to support growth is appropriate in Porepukah.*

Separate to any opportunities for greenfield development in Porepukah, a review of the Township Zone is required to ensure a more structured approach to commercial, industrial and residential use, to avoid conflicts in planning, and to apply zoning that reflects the patterns of land use.

Service towns are described as follows (Table 6, Page 50) :

Service Towns are supported as the primary locations for future residential and employment growth, subject to assessment of environmental risk (bushfire, flooding, landslip) constraints.

Strategic direction 2 (page 49) includes strategies as follows:

Strategy 3.1 Direct population growth to existing and emerging Service Towns identified in the Settlement Hierarchy and the Service Town Framework Plans to support efficient and safe use of land and infrastructure and convenient access to jobs and services.

Strategic direction 4 (Page 54) includes the following commentary (emphasis added):

Greenfield housing

*Greenfield investigation areas have been identified in Myrtleford, **Porepunkah** and Mount Beauty-Tawonga South as shown in Framework Plans shown in Section 9.*

See: **Figure 9d-2: Porepunkah LDS 2023 direction with current Zones**

9d.3 Settlement-level contextual information

The following contextual planning information has been reviewed:

- Zones applied primarily comprises land in the Township Zone. Peripheral land is included in the Low Density Residential Zone to the south and the Rural Living Zone to the west.
- The Bushfire Management Overlay applies to all land within settlement areas and all surrounding land based on a combination of buffering off hazard interfaces as well as the extreme fire behaviour criteria. Schedule 1 applies to most residential areas which streamlines the approval of a single dwelling on a lot.
- The Bushfire Prone Area applies to all land.

The following contextual bushfire information has been reviewed:

- Ecological vegetation classes (EVCs) include:
 - Dry Forests
 - Riparian Scrubs or Swampy Scrubs
 - Plains Woodlands or Forests.
- The Victorian Fire Risk Register shows lower density residential development as an extreme risk, with the balance of the settlement as very high risk.
- Slope in the surrounding landscape (10-20km) shows areas of steep and rugged terrain (see Figure 3c-1 in main report) indicating that conditions for extreme behaviour in the wider landscape may arise.

See **Figure 9d-3: Porepunkah Contextual information**

9d.4 Landscape type and landscape risk

Chapter 6 identified Landscape types for Porepunkah.

The core urban parts of the settlement are assessed as Landscape type 2. Landscape 2 is described by DELWP (2017) as follows:

- *The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site*
- *Bushfire can only approach from one aspect and the site is located in a suburban, township or urban area managed in a minimum fuel condition*
- *Access is readily available to a place that provides shelter from bushfire. This will often be the surrounding developed area.*

The northern edge of the settlement is assessed as Landscape type 3. Landscape 3 is described by DELWP (2017) as follows:

- *The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site*
- *Bushfire can approach from more than aspect*
- *The area is located in an area that is not managed in a minimal fuel condition*
- *Access to an appropriate place that provides shelter from bushfire is not certain.*

The low density residential parts of the settlement and the landscape around Porepunkah is assessed as Landscape type 4. Landscape 4 is described by DELWP (2017) as follows:

- The broader landscape presents an extreme risk
- Bushfires may have hours or days to grow and develop before impacting
- Evacuation options are limited or not available.

See **Figure 7-2 (main report): Landscape types in the Study Area**

9d.5 Site based exposure at the settlement scale

Exposure to bushfire at the local and settlement scale assesses the level of radiant heat likely to arise from hazardous vegetation within and in close proximity (150m) to the settlement. Considering exposure to bushfire enables new development to be separated from hazardous vegetation so that radiant heat of less than 12.5kw/sq.m arises, as required by *c13.02-1S Bushfire Planning* for new development enabled by strategic planning or a planning scheme amendment.

The methodology for a bushfire hazard site assessment as described in *Planning Permit Applications Bushfire Management Overlay Technical Guide* (DELWP 2017) and *AS3959-2018 Construction of buildings in bushfire-prone areas* (Standards Australia) informs the assessment. Key assumptions include a Fire Danger Rating of 100 and a flame temperature of 1080°C.

Applied setbacks

Setbacks from hazardous vegetation (except grasslands) were applied based on Column A in Table 2, *c53.02-3 Bushfire Planning*. This setback provides for exposure to be no more than a radiant heat flux of 12.5 kilowatts/square metre, as required by *c13.02-1S Bushfire Planning*.

Setbacks from grasslands of 30m were applied. This simplified the assessment given the variability of slope along grassland interfaces. Applying 30m exceeds the set back specified in Column A in Table 2, *c53.02-3 Bushfire Planning* in most cases (up to a downslope of 15 degrees).

The setbacks used are derived from the assessment of hazards at the settlement scale. At the site-scale, variations may arise especially in the slope and vegetation type. However, at a settlement level the above are sufficient benchmarks based on the hazard present in and around the settlement. Any variations are not strategically significant.

See Figure 9d-4: Porepunkah local and settlement level bushfire analysis

9d.6 Availability of safe(r) areas at the settlement scale

An assessment has been made of areas that may be low hazard where human life can be better protected from the harmful effects of bushfire. Low hazard areas can provide protection at a settlement and neighbourhood scale as they are a form of passive mitigation, enabling people to move away from bushfire hazards if they need to. In a settlement setting, this usually involves moving deeper into settlement areas and away from hazard interfaces.

c13.02-1S Bushfire Planning defines such places as BAL:Low. BAL:Low places are where hazardous vegetation is more than 100m away (50m for grasslands). Hazardous vegetation for the purpose of BAL:Low is defined as vegetation that cannot be excluded under 2.2.3.2 of *Australian Standard AS3959:2018 Construction of buildings in Bushfire Prone Areas* (Standards Australia).

See Figure 9c-4: Porepunkah local and settlement level bushfire analysis

9d.7 Design Guidelines – Settlement planning at the Bushfire Interface (DELWP 2020)

Design Guidelines: Settlement Planning at the Bushfire Interface (DELWP 2020) (the 'Design Guidelines') provide an appreciation of the bushfire threat and how bushfire may affect a settlement, supported by design advice on settlement planning set out according to three themes:

- Part 1: The form and structure of settlements;
- Part 2: The settlement interface;
- Part 3: Bushfire protection measures across a whole settlement.

The Design Guidelines provide a logical approach to considering good design in settlement planning, supporting many of the objectives and approved measures in *c53.02 Bushfire Planning* and the policy emphasis in *c13.02-1S Bushfire Planning*. The Design Guidelines are not incorporated into the planning scheme.

It is noted that landscape bushfire risk is not considered in the Design Guidelines as such. They assume landscape risk is acceptable for development to proceed, so they are therefore focused on implementation of acceptable change. This section of the report should be read in this context and not as implying development of any sort is acceptable based on landscape, strategic or policy factors.

The factors in the Design Guidelines described in this section are those of most interest or relevance to the settlement. Not all design guidelines are included.

9d.8 Part 1: Form and structure of settlements

The bushfire hazard in directing growth

Key design considerations:

- *Settlement planning should direct growth to locations that are less exposed to a bushfire.*
- *Settlement growth should be directed to locations that avoid bushfire risk where possible, including the highest risk aspect(s) where large bushfires will occur.*
- *Settlement growth should also be directed to locations that avoid the most hazardous locations.*
- *Directing new growth to higher risk areas should be carefully considered. Consulting with the relevant fire authority as part of strategic and settlement planning is crucial.*

Porepunkah is within a high-risk bushfire landscape but benefits from the forest interface being separated from the settlement edge on the north-west (900m) and south-west (2km). This provides a significant protective benefit to the settlement.

Plantations and smaller patches of hazards arise closer to the south of the settlement, making development south of the Great Alpine Road sub-optimal for settlement growth. And new development to the south would likely be a separate area of development not contiguous with existing settlement land, diminishing the value of the low hazard land found in existing urban areas.

Linear development to the east and west should be avoided.

To the north, the immediate settlement interface is to grasslands. Whilst north-west fire runs into the settlement are significant, the grassland buffer provides opportunity at the settlement and site-scale to direct some new housing to this area. Two options have been identified to assist in investigating and assessing the LDS 2023 identification of this land as an 'Area for Investigation - Potential residential'.

Option A – Enable limited growth would involve one or three new rows of housing along the northern edge of the existing settlement. The reason this is one or three rows of new housing, and not two rows of housing, is that any new development will need to provide a perimeter road on what would be any new settlement interface with grasslands. As the current interface has lots backing onto grasslands:

- One new row of housing (approximately 80 new lots) and then a perimeter road can arise; or
- One new row of housing and a local road and further north again two additional rows of housing and a perimeter road can arise (approximately 240 new homes).

Option B – Create a new neighbourhood would involve more development again to the north that would extend closer to forest hazards. Unlike Option A, this option would likely involve a new neighbourhood with open spaces and a network of roads, like the grid pattern dominant in Alpine Shire settlements. It might for comparison purposes comprise an area of land of a similar size to the existing Township Zone land.

Both Option A and Option B can satisfy site-based bushfire exposure requirement and would take advantage of the low hazard land in the core of Porepunkah, enabling people to move away from settlement edges on foot.

Given hazards on other aspects, at the settlement scale development to the north is a realistic option for outward settlement growth at the site and settlement scale. Development to the north would also improve the current interface, offering a risk reduction to the existing settlement.

At the settlement and site scale acceptable outcomes can be achieved. The resolution of future outward growth in Porepunkah is essentially one determined based on the landscape risk and applying locational policies in *c13.02-1S Bushfire Planning*. These are discussed in other parts of this report.

The consolidation of existing urban areas in Porepunkah can be considered in future structure planning. Consolidation would take advantage of the low hazard land combined with the separation from long forest fire runs. Ember attack to be expected across Porepunkah, so there is a need to consider whether a Bushfire Management Overlay Schedule 2 (BAL29) would be a necessary risk management response to consolidation. This would provide enhanced ember protection and better radiant heat protection from other structures being on fire. This can be considered in future structure planning.

Vegetated areas within a settlement (such as parks, nature reserves and river corridors)

Key design considerations:

- *Vegetated areas can be managed so that fuels are consistent with the vegetation management requirements for bushfire. This involves either removing fuels or ensuring fuels are not introduced as part of settlement planning.*
- *Areas that will not be managed for bushfire purposes effectively have their own interface with the bushfire hazard and would require setbacks and vegetation management approaches.*

The low hazard settlement of Porepunkah has enabled a large area of BAL:Low land to arise and for the bushfire exposure benchmark to be met in large areas. These should be maintained and protected for the strategic and life safety benefit it provides for the settlement and for people in the wider landscape who may seek shelter before, during and after a bushfire.

Bushfire hazards should be kept outside of settlement areas.

There are grassland areas around Porepunkah that afford protective benefit to the settlement as they do not comprise non-grasslands and higher risk hazards. The protective benefit of these areas should be recognised in planning schemes to ensure they are not compromised over time by introducing new bushfire hazards that increase the risk to the settlement.

See **Figure 9c.3: Grassland areas notionally shown where new bushfire hazards should be avoided**

9d.9 Part 2: The settlement interface

9d.9.1: Apply the required development setback

Key design considerations:

- *New development should be set back from the bushfire hazards. The setback is determined based on the type of vegetation and slope under the vegetation.*
- *Permanently occupied development, such as dwellings, are not permitted in the setback area.*

The assessment of bushfire exposure shows that large parts of the settlements can satisfy the bushfire exposure benchmark. Land already within an urban Zone will have a different exposure requirement under the Bushfire Management Overlay. Land adjoining existing urban Zone land within grasslands will be capable of meeting the bushfire exposure requirement.

It is noted that the landscape risk is a more relevant factor to development proceeding than meeting the required setback, which for strategic planning is a secondary consideration once the landscape risk and s13.02-1S *Bushfire Planning* deems a location suitable for growth enabled by a planning scheme amendment.

9d.9.2: Design the settlement interface

Key design considerations:

- *Vegetation in the setback area needs to be managed to prevent a moving bushfire front entering the settlement.*
- *Perimeter roads are the preferred design outcome on the settlement interface where a site abuts or is near a bushfire hazard. A perimeter road:*
 - *Enables a no fuel area to form part or all of the interface.*
 - *Enables development to front the bushfire hazard, orienting the rear of lots away from it. The rear of lots is often where introduced fuels create a localised bushfire hazard.*
 - *Provides an effective location from which fire authorities can establish positions to attack a bushfire and for land managers to undertake fuel management activities.*

New development on the settlement interface that creates a new settlement edge will need to provide a bushfire compliant interface. To the north of Porepunkah, this is achievable.

9d.10 Part 3: Bushfire protection measures across a whole settlement

9d.10.1: Vegetation management

Key design considerations:

- *Ensure vegetation is managed across a settlement where there is exposure to ember attack. Proper vegetation management will help reduce the potential for localised fires from ember ignition.*

The low hazard core of Porepunkah enables a large area of BAL:Low land to arise and for the bushfire exposure benchmark to be met. It should be maintained and protected for the strategic and life safety benefit it provides for the settlement. The Bushfire Management Overlay applying to all settlement areas ensures bushfire hazards will not accompany new development.

Bushfire hazards should be kept outside of settlement areas.

9d.10.2: Building construction standards

Key design considerations:

- *Consider at the settlement scale how bushfire constructions standards are to be applied, including where enhanced protection from ember ignited localised fires and smaller lot sizes are proposed to protect against structure to structure fires.*

The Bushfire Management Overlay applying to all settlement areas ensures bushfire construction requirements apply to new development.

Proposals that may seek to consolidate existing parts of Porepunkah through structure planning would need to consider whether a Bushfire Management Overlay Schedule 2 (BAL29) would be a necessary risk management response to consolidation. This would provide enhanced ember protection and better radiant heat protection from other structures being on fire. This can be considered in future structure planning.

9d.10.3: Fences and other localised fuel sources

Key design considerations:

- *Designing and planting for bushfire can help manage fuels being introduced around buildings.*
- *Fences can be a key source of fuels within settlements.*

The typology of standard lot sizes does not indicate a need to manage fencing. However, where lots larger than 1,200sq.m are proposed, non-combustible fencing should be considered given the potential for these larger lots to carry more bushfire hazards.

Figure 9d-1: c11.01-1L-02 Alpine Planning Scheme - Porepukah

ALPINE PLANNING SCHEME

11.01-1L-06 Porepukah

26/06/2022
C62aipi

Policy application

This policy applies to the township of Porepukah as shown on the Porepukah Structure Plan that forms part of this clause.

Objectives

Ensure future development within Porepukah:

- Leads to improved levels of infrastructure within the township.
- Respects the town's rural look and feel, recreation and open space values.

Use strategies

Encourage residential development within the township boundaries.
Locate industrial development along the north east side of Station Street between Grange Road and Armstrongs Road.
Locate retail and office uses along Service Street, between Bailey and Martley Street.
Discourage retail and office uses along Station Street.

Development strategies

Encourage connectivity between developments to support walking and cycling.
Encourage development and redevelopment to reflect the existing scale and bulk of surrounding buildings.
Ensure minimum lots sizes for residential subdivision are appropriate to the area and have regard to the existing lot size and density of development in the neighbourhood.
Ensure industrial development and use is of a scale that is consistent and respectful of the surrounding residential uses.

Policy documents

Consider as relevant:

- Alpine Shire Rural Land Strategy (Alpine Shire Council, 2015)
- Alpine Shire Town Framework Plan – Porepukah (Inspiring Place Pty Ltd, 2009)

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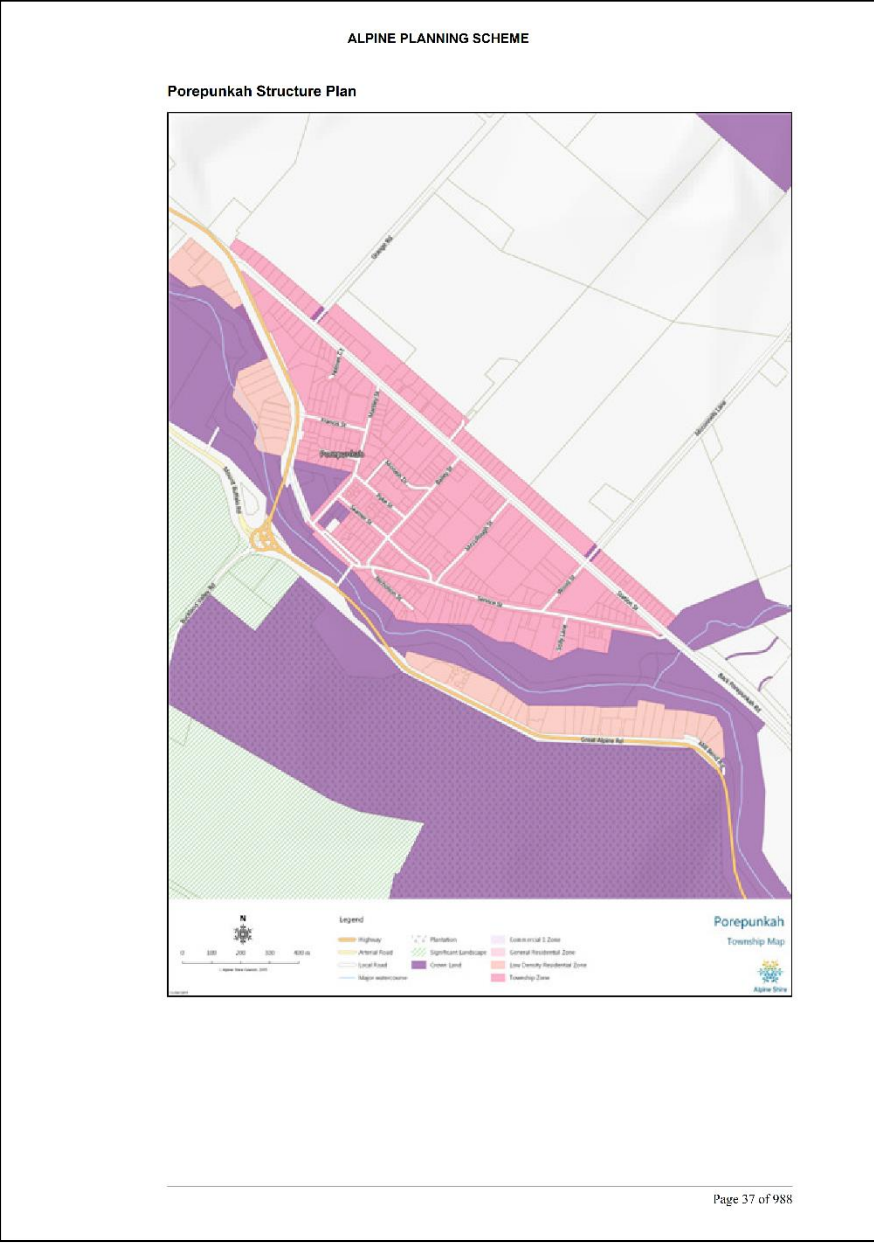


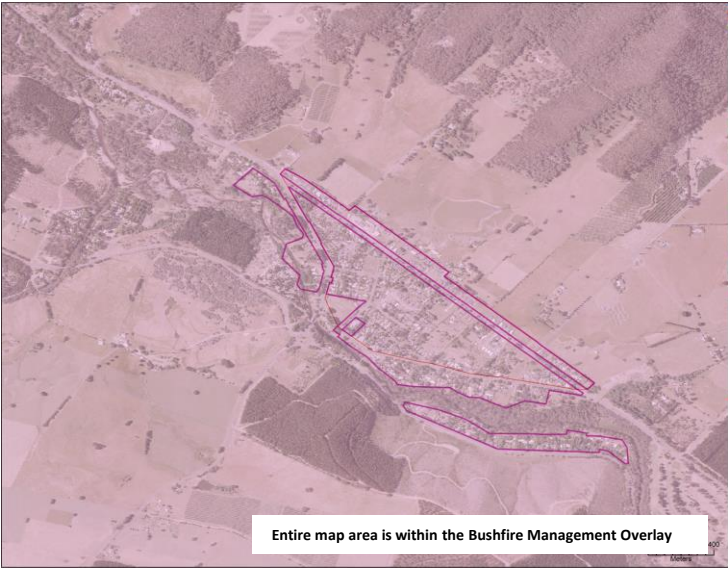
Figure 9d-2: Porepunkah LDS 2023 directions with current Zones



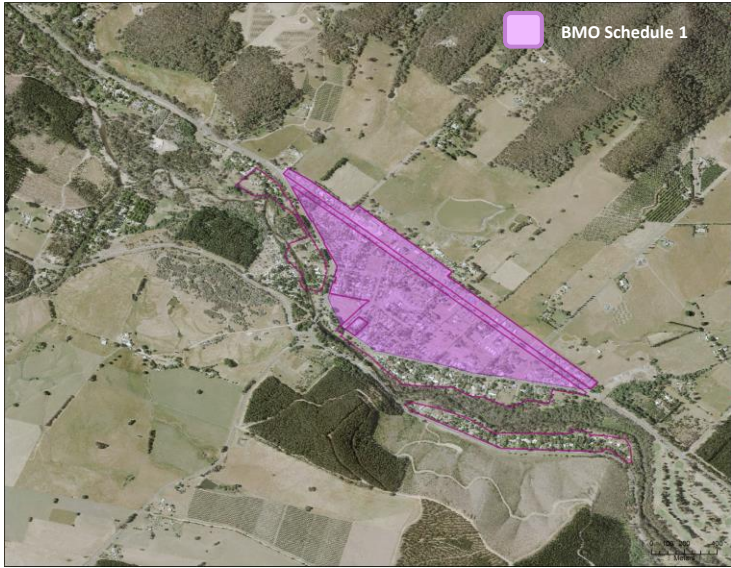
Figure 9d-3: Porepukah bushfire contextual information
Zones



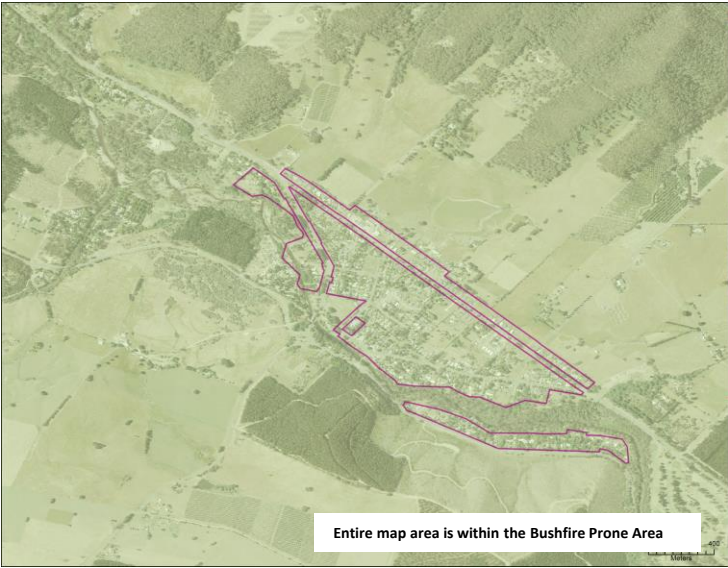
Bushfire Management Overlay



Schedules to the Bushfire Management Overlay

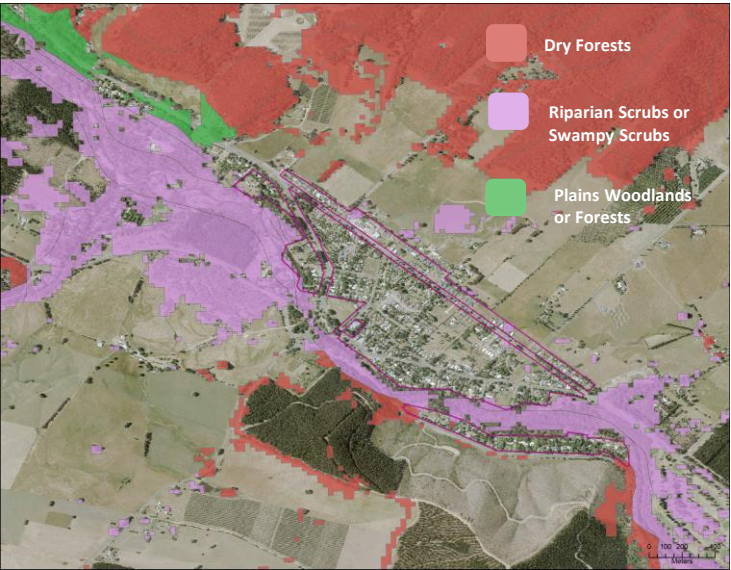


Bushfire Prone Areas

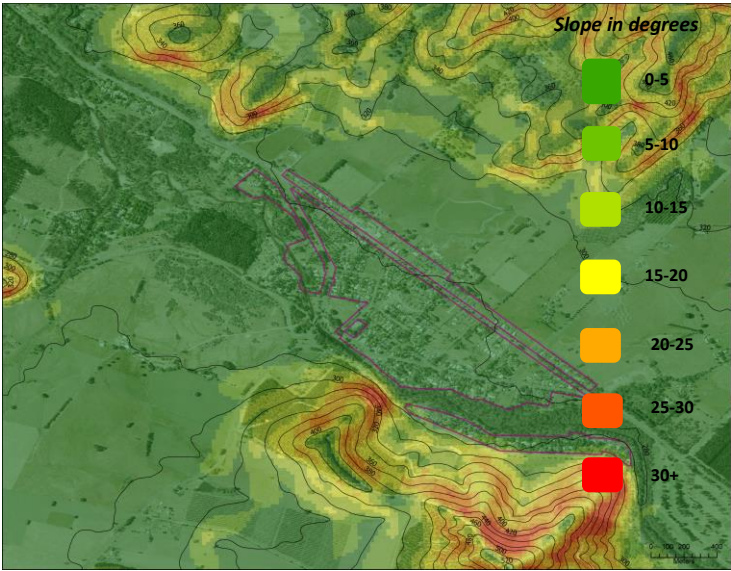


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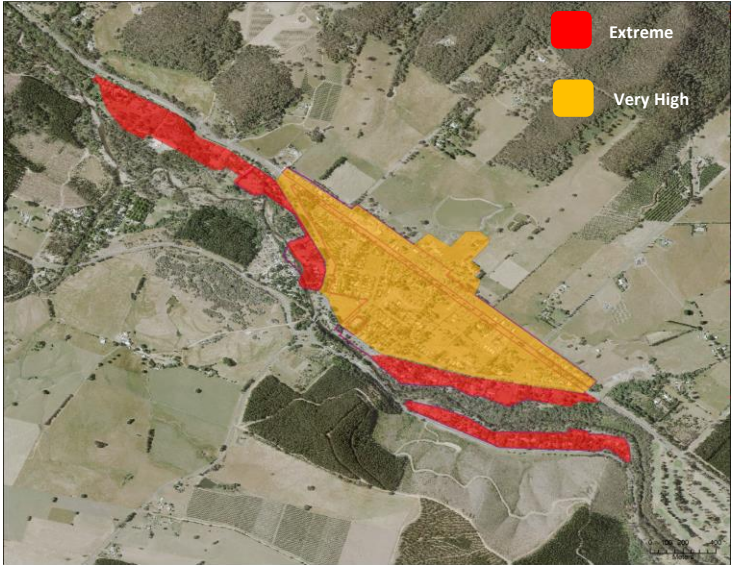
Figure 9d-3: Porepunkah contextual information (continued)
Ecological Vegetation Classes



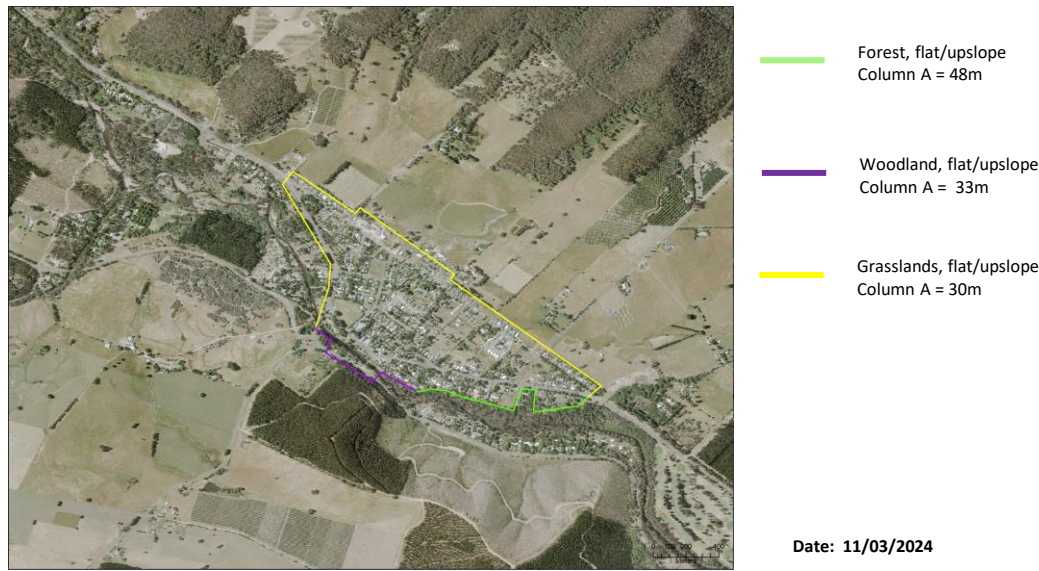
Slope based on 10m contours



Victorian Fire Risk Register



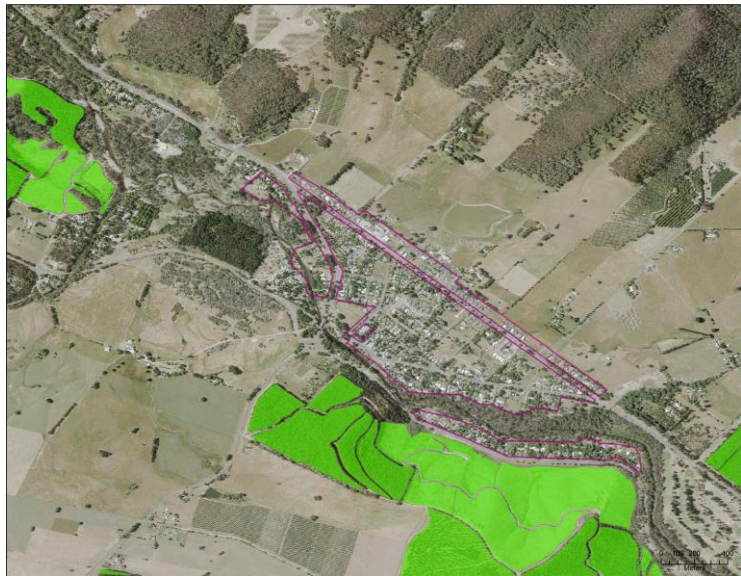
Bushfire setbacks applied for exposure assessment



Date: 11/03/2024

Figure 9d-3: Porepunkah contextual information (continued)

Plantations



Grassland areas notionally shown where new bushfire hazards should be avoided



Figure 9d-4: Porepunkah local and settlement level bushfire analysis

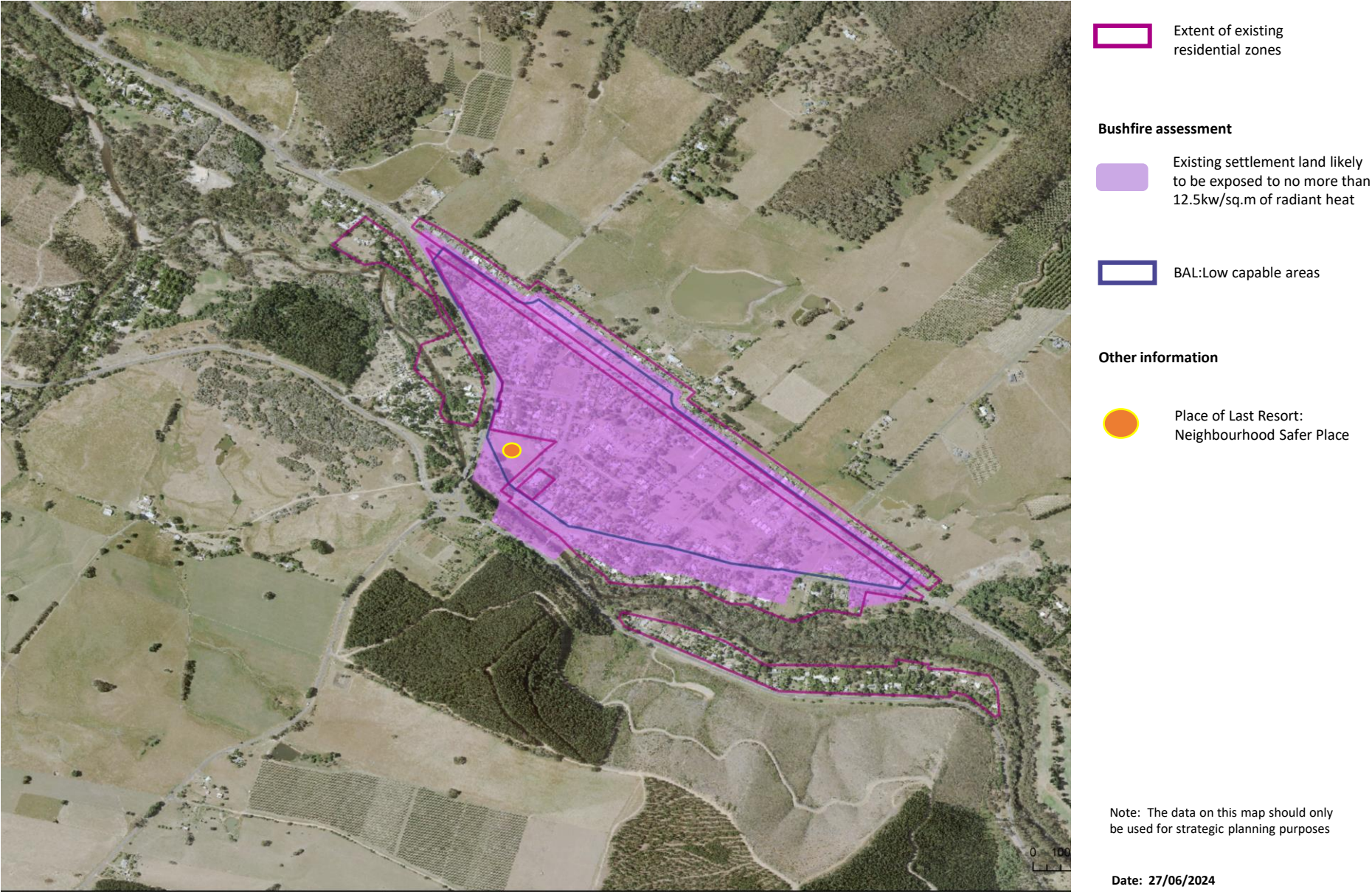


Figure 9d-5: Porepukah settlement-scale design response for bushfire



- Context**
- Extent of existing residential zones
 - Bushfire hazards other than grasslands
- Bushfire setbacks and exposure requirement**
- ✓ Can likely be met through grassland hazard removal and setbacks in conjunction with new development
 - ✓ Apply bushfire vegetation management to as required for land within the Bushfire Management Overlay (focused on settlement edges)
 - ✓ Do not proceed with proposals with proposals which may introduce bushfire hazards
- Design response inputs to future planning**
(settlement factors only, landscape and policy considerations will also affect acceptable outcomes)
- Option A – Directions for growth – One or three new rows of housing
 - Option B – Directions for growth – New neighbourhood
 - Priority for creating new bushfire optimised interfaces with bushfire hazards
 - Acceptable to consolidate existing General Residential Zone areas
 - Develop vacant sites to remove hazards
 - Non-preferred directions for housing growth, can be considered and assessed in future structure planning for non-permanently occupied uses

9e. Dederang local and settlement-level assessment

9e.1 Existing planning scheme directions for Dederang

The strategic directions for settlements at c02.03-1 includes the following (emphasis added):

Dederang is located on the Kiewa Valley Highway, some 36 kilometres north of Mount Beauty and 50 kilometres to the south of Wodonga serving rural communities of the northern part of the Shire. It is spread over 2-3 kilometres along the Kiewa Valley Highway without a defined town centre. Services include a primary school, police station, Country Fire Authority brigade, hotel, general store, churches and recreational facilities. Overall the town retains a strong rural character with farming properties extending to, and continuing within the town boundaries.

There is no structure plan in the planning scheme for Dederang.

9e.2 Alpine Shire Land Development Strategy (draft) November 2023

The LDS 2023 describes the town as follows (Page 20):

The township of Dederang is spread over two to three kilometres along the Kiewa Valley Highway, north of Mount Beauty. It presents a strong rural character. The area is predominantly zoned Farming Zone where farming properties are located, with two small areas of Township Zone land where residential development is concentrated on large narrow lots with wide setbacks and low-density rural dwelling styles. There is no defined town centre; the township is split into three nodes of activity: the area surrounding the hotel and primary school, the recreation reserve which is a community focal point for the town, and the area near the general store. The landscape is characterised by a wide open space and rural feel, with scenic views of surrounding mountain ranges. Trees tend to be clustered throughout the township, on private and public land.

Within the LDS (Table 6, Page 50), Dederang is categorised as a 'rural town'. The future growth is described as follows:

Only incremental population growth and housing and employment development is supported in Rural Towns within existing urban zoned areas. Further growth will be accommodated via infill development in established Rural Town areas, subject to assessment of environmental risk (bushfire, flooding, landslip) constraints.

9e.3 Settlement-level contextual information

The following contextual planning information has been reviewed:

- Zones applied comprises land in the Township Zone. Land surrounding this is within the Farming Zone.
- The Bushfire Management Overlay does not apply.
- The Bushfire Prone Area applies to all land in the locality.

The following contextual bushfire information has been reviewed:

- Ecological vegetation classes (EVCs) include:
 - Dry Forests
 - Plains Woodlands or Forests
 - Although neither are dominant in the land surround the settlement.
- The Victorian Fire Risk Register shows land associated with the settlement as a high risk.
- Slope includes some land with steep and rugged terrain to the south-west.

See **Figure 9e-2: Dederang Contextual information**

9e.4 Landscape type and landscape risk

Chapter 6 identified Landscape types for Dederang. The settlement is assessed partly within Landscape type 2 and partly within Landscape type 3.

Landscape 2 is described by DELWP (2017) as follows:

- *The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site*
- *Bushfire can only approach from one aspect and the site is located in a suburban, township or urban area managed in a minimum fuel condition*
- *Access is readily available to a place that provides shelter from bushfire. This will often be the surrounding developed area.*

Landscape 3 is described by DELWP (2017) as follows:

- *The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site*
- *Bushfire can approach from more than aspect*
- *The area is located in an area that is not managed in a minimal fuel condition*
- *Access to an appropriate place that provides shelter from bushfire is not certain.*

See **Figure 7-2 (main report): Landscape types in the Study Area**

9e.5 Site based exposure at the settlement scale

Exposure to bushfire at the local and settlement scale assesses the level of radiant heat likely to arise from hazardous vegetation within and in close proximity (150m) to the settlement. Considering exposure to bushfire enables new development to be separated from hazardous vegetation so that radiant heat of less than 12.5kw/sq.m arises, as required by *c13.02-1S Bushfire Planning* for new development enabled by strategic planning or a planning scheme amendment.

The methodology for a bushfire hazard site assessment as described in *Planning Permit Applications Bushfire Management Overlay Technical Guide* (DELWP 2017) and *AS3959-2018 Construction of buildings in bushfire-prone areas* (Standards Australia) informs the assessment. Key assumptions include a Fire Danger Rating of 100 and a flame temperature of 1080°C.

Applied setbacks

Setbacks from hazardous vegetation (except grasslands) were applied based on Column A in Table 2, *c53.02-3 Bushfire Planning*. This setback provides for exposure to be no more than a radiant heat flux of 12.5 kilowatts/square metre, as required by *c13.02-1S Bushfire Planning*.

Setbacks from grasslands of 30m were applied. This simplified the assessment given the variability of slope along grassland interfaces. Applying 30m exceeds the set back specified in Column A in Table 2, *c53.02-3 Bushfire Planning* in most cases (up to a downslope of 15 degrees).

The setbacks used are derived from the assessment of hazards at the settlement scale. At the site-scale, variations may arise especially in the slope and vegetation type. However, at a settlement level the above are sufficient benchmarks based on the hazard present in and around the settlement. Any variations are not strategically significant.

See **Figure 9e-3: Dederang local and settlement level bushfire analysis**

9e.6 Availability of safe(r) areas at the settlement scale

An assessment has been made of areas that may be low hazard where human life can be better protected from the harmful effects of bushfire. Low hazard areas can provide protection at a settlement and neighbourhood scale as they are a form of passive mitigation, enabling people to move away from bushfire hazards if they need to. In a settlement setting, this usually involves moving deeper into settlement areas and away from hazard interfaces.

c13.02-1S Bushfire Planning defines such places as BAL:Low. BAL:Low places are where hazardous vegetation is more than 100m away (50m for grasslands). Hazardous vegetation for the purpose of BAL:Low is defined as vegetation that cannot be excluded under 2.2.3.2 of *Australian Standard AS3959:2018 Construction of buildings in Bushfire Prone Areas* (Standards Australia).

See **Figure 9e-3: Dederang local and settlement level bushfire analysis**

9e.7 Design Guidelines – Settlement planning at the Bushfire Interface (DELWP 2020)

Design Guidelines: Settlement Planning at the Bushfire Interface (DELWP 2020) (the ‘Design Guidelines’) provide an appreciation of the bushfire threat and how bushfire may affect a settlement, supported by design advice on settlement planning set out according to three themes:

- Part 1: The form and structure of settlements;
- Part 2: The settlement interface;
- Part 3: Bushfire protection measures across a whole settlement.

The Design Guidelines provide a logical approach to considering good design in settlement planning, supporting many of the objectives and approved measures in *c53.02 Bushfire Planning* and the policy emphasis in *c13.02-1S Bushfire Planning*. The Design Guidelines are not incorporated into the planning scheme.

It is noted that landscape bushfire risk is not considered in the Design Guidelines as such. They assume landscape risk is acceptable for development to proceed, so they are therefore focused on implementation of acceptable change. This section of the report should be read in this context and not as implying development of any sort is acceptable based on landscape, strategic or policy factors.

The factors in the Design Guidelines described in this section are those of most interest or relevance to the settlement. Not all design guidelines are included.

9e.8 Part 1: Form and structure of settlements

The bushfire hazard in directing growth

Key design considerations:

- *Settlement planning should direct growth to locations that are less exposed to a bushfire.*
- *Settlement growth should be directed to locations that avoid bushfire risk where possible, including the highest risk aspect(s) where large bushfires will occur.*
- *Settlement growth should also be directed to locations that avoid the most hazardous locations.*
- *Directing new growth to higher risk areas should be carefully considered. Consulting with the relevant fire authority as part of strategic and settlement planning is crucial.*

Dederang is at the interface of a high-risk bushfire landscape but benefits from the forest being close only on one side and the separation to forests by over 900m of grasslands. There are also areas of low hazard land in the nearby Dederang Recreation Reserve. These features combined provide a significant protective benefit to the locality.

There is an opportunity to build on Dederang by introducing new development to the south and west of the existing Township Zone. Promoting new development to the south and west would create a new, contemporary bushfire settlement edge. This would include perimeter roads and hazard management (if lot sizes larger than 1,200sq.m were proposed). This new development would enable a substantially lower risk than current settlement edges. Development envisaged would not extend closer than (notionally) 500m to the forest edge.

Development in this areas would be directed to the highest risk aspect, but the risk reduction to the existing Township Zone land is significant and other broadly favourable features in the landscape would be sufficient to justify this. Given the grassland hazards closer to Dederang, the bushfire exposure benchmark can be met.

Development to enhance the resilience of the settlement overall, as part of a initial phase of change, can then provide a basis for considering Dederang (and other Landscape type 2 land in the surrounds) in the medium to long term as a strategic opportunity for growth. Such growth can satisfy the bushfire exposure benchmark and would take advantage of the low hazard land that already exists in Dederang, enabling people to have a layering of resilience available in the local areas.

The final scale of development and resolution of future outward growth in Dederang could be considered through a structure plan if there was otherwise a desire to grow the settlement. Through that process, the scale of change and the appropriate Zone would be considered in the context of the landscape risk and applying *c13.02-1S Bushfire Planning*.

Lot sizes in settlement layout

The Design Guidelines include discussion on lot sizes in settlements. These are re-produced in full below.

A key bushfire risk to many settlements is from ember attack. Ember attack may ignite fuel sources and create many smaller fires throughout the settlement. Lot sizes are an important mechanism to support the management of fires ignited from ember attack. Different lot sizes support different bushfire outcomes.

Residential lots

Smaller urban lots, for example less than 800sq.m in size, are less likely to enable fuel sources (including vegetation) due to the limited area of open space. They contribute positively to achieving lower-fuel settlements. However, smaller lots result in structures closer to together, increasing the risk of structure to structure fire.

Larger lots, for example 0.2ha- 4ha in size, have the capacity for more localised fuel sources (particularly vegetation) due to more extensive open space areas. They require more extensive management by individual landowners. They also tend not be large enough for landowners to have specialised equipment (for example, tractors) that would make management more practical. Houses, however, are separated further apart minimising the risk of structure to structure fire.

An optimum lot size of between 800sq.m-1,200sq.m provides a good balance. This minimises available open space for fuel sources while enabling a good separation between individual structures (ideally more than 10m).

Many parts of Victoria encourage the provision of low-density and rural living lots of 0.2ha and above. They are often justified in locations that do not have reticulated services or as a transitional land use from rural to urban (for example, on the edges of settlements).

These style of lots present a unique bushfire risk as they have not historically resulted in a well-planned settlement interface or an edge to the bushfire hazard. Bushfires and grassfires can penetrate larger lots and create bushfire pathways into denser residential areas. This can include a moving bushfire front entering a settlement. They may also make it more difficult for firefighting (for example, for the setting up of containment lines) and for the monitoring and enforcement of vegetation management on private land.

Where lots larger than 800sq.m - 1,200sq.m are provided, the guidance in this document should be fully considered, especially Part 2: Designing the settlement interface. This will ensure a well-planned settlement interface is created along with an edge to the bushfire hazard.

Future urban servicing in Dederang is likely uncertain, and if the opportunity to grow the settlement arose it may be possible that a low density residential format might be deployed.

Whilst urban sized lots are preferred, as indicated by the Design Guidelines, it will be important that any lots larger than 1,200sq.m have bushfire vegetation management applied to all land in a lot to ensure hazards do not remain or are introduced into new settlement areas. Even if low density development is proposed, a perimeter road will need to be on the settlement / hazard interface.

Vegetated areas within a settlement (such as parks, nature reserves and river corridors)

Key design considerations:

- *Vegetated areas can be managed so that fuels are consistent with the vegetation management requirements for bushfire. This involves either removing fuels or ensuring fuels are not introduced as part of settlement planning.*
- *Areas that will not be managed for bushfire purposes effectively have their own interface with the bushfire hazard and would require setbacks and vegetation management approaches.*

Bushfire hazards should be kept outside of existing and new settlement areas, especially in response to the landscape bushfire hazard. The Bushfire Management Overlay does not apply so this will not arise without further planning scheme content being prepared, which can be done as part of a structure plan. As it relates to vegetation management, new development enabled by a structure plan should be consistent (or equivalent) with Bushfire Management Overlay vegetation management requirements.

9e.9 Part 2: The settlement interface

9e.9.1: Apply the required development setback

Key design considerations:

- *New development should be set back from the bushfire hazards. The setback is determined based on the type of vegetation and slope under the vegetation.*
- *Permanently occupied development, such as dwellings, are not permitted in the setback area.*

The assessment of bushfire exposure shows that large parts of the settlement can satisfy the *c13.02-1S Bushfire Planning* benchmark (assuming grasslands within Township Zone lots are managed). Land already within an urban Zone will have no requirement as the Bushfire Management Overlay does not apply. However, land adjoining existing urban Zone land within grasslands will be capable of meeting the bushfire exposure requirement and this would be translated into the planning scheme to ensure the requirement is met in future development.

It is noted that the landscape risk is a more relevant factor to development proceeding than meeting the required setback, which for strategic planning is a secondary consideration once the landscape risk and *s13.02-1S Bushfire Planning* deems a location suitable for growth enabled by a planning scheme amendment.

9e.9.2: Design the settlement interface

Key design considerations:

- *Vegetation in the setback area needs to be managed to prevent a moving bushfire front entering the settlement.*
- *Perimeter roads are the preferred design outcome on the settlement interface where a site abuts or is near a bushfire hazard. A perimeter road:*
 - *Enables a no fuel area to form part or all of the interface.*
 - *Enables development to front the bushfire hazard, orienting the rear of lots away from it. The rear of lots is often where introduced fuels create a localised bushfire hazard.*
 - *Provides an effective location from which fire authorities can establish positions to attack a bushfire and for land managers to undertake fuel management activities.*

New development on the settlement interface that creates a new settlement edge will need to provide a bushfire compliant interface. On all sides of Dederang, this is achievable.

9e.10 Part 3: Bushfire protection measures across a whole settlement

9e.10.1: Vegetation management

Key design considerations:

- *Ensure vegetation is managed across a settlement where there is exposure to ember attack. Proper vegetation management will help reduce the potential for localised fires from ember ignition.*

Given the landscape risk, vegetation management across all settlement areas should be included in any future settlement or structure planning.

9e.10.2: Building construction standards

Key design considerations:

- *Consider at the settlement scale how bushfire constructions standards are to be applied, including where enhanced protection from ember ignited localised fires and smaller lot sizes are proposed to protect against structure to structure fires.*

The recommendations in this report give effect to the *c13.02-1S Bushfire Planning* requirement that development achieve radiant heat exposure requiring no more than a BAL12.5 construction standard.

9e.10.3: Fences and other localised fuel sources

Key design considerations:

- *Designing and planting for bushfire can help manage fuels being introduced around buildings.*
- *Fences can be a key source of fuels within settlements.*

The typology of standard lot sizes does not indicate a need to manage fencing. However, where lots larger than 1,200sq.m are proposed, non-combustible fencing should be considered given the potential for these larger lots to carry more bushfire hazards.

Figure 9e-1: c11.01-1L-02 Alpine Planning Scheme - Dederang

ALPINE PLANNING SCHEME

11.01-1L-09 Dederang

26/05/2022
C8260/pj

Policy application

This policy applies to the township of Dederang as shown on the Dederang Structure Plan that forms part of this clause.

Objective

To maintain and enhance Dederang's rural character by supporting its development as a rural service centre with access to high quality community facilities and services.

Strategies

Facilitate better connectivity between the separate activity nodes by improving pedestrian links.
Encourage additional commercial development to locate adjacent to existing commercial use.
Maintain the 'green belt' between activity nodes.
Protect the scenic quality of the valley.
Promote the ongoing rural use of land within the village area.

Policy documents

Consider as relevant:

- Alpine Shire Rural Land Strategy (Alpine Shire Council, 2015)
- Alpine Shire Town Framework Plan - Dederang (Inspiring Place Pty Ltd, 2009)

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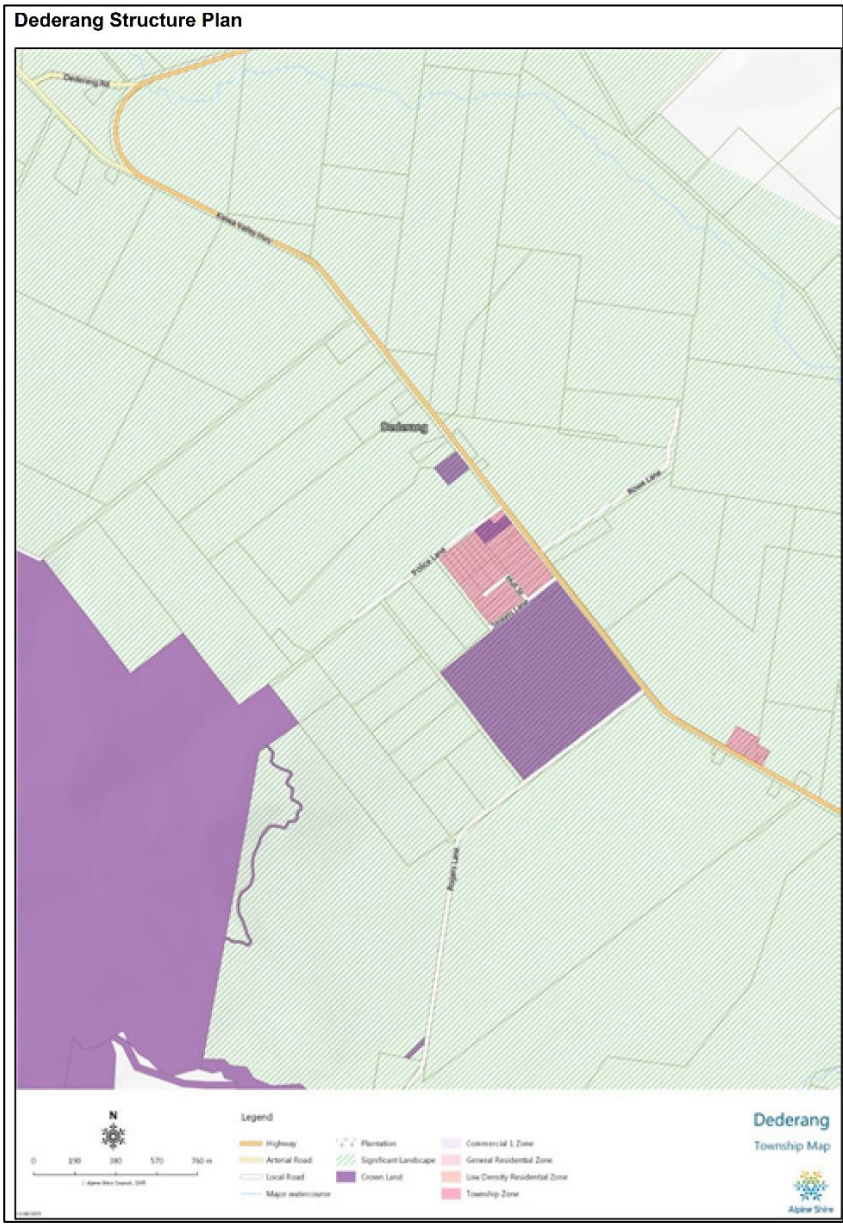


Figure 9e-2: Dederang bushfire contextual information
Zones



Bushfire Management Overlay



Bushfire Prone Areas



Ecological Vegetation Classes



Date: 11/03/2024

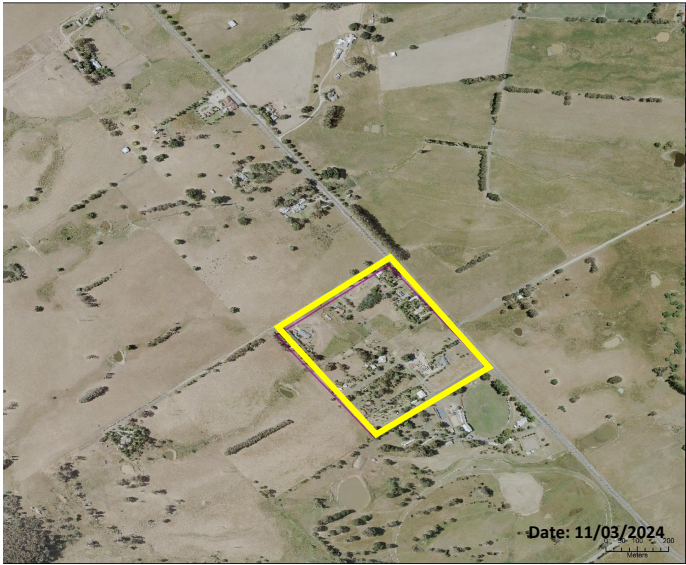
Figure 9e-2: Dederang contextual information (continued)
Victorian Fire Risk Register (High)



Slope based on a 10m contour



Bushfire setbacks applied for exposure assessment



Grasslands, flat/upslope
Column A = 30m

Figure 9e-3: Dederang local and settlement level bushfire analysis



Figure 9e-4: Dederang settlement-scale design response for bushfire

