ALPINE SHIRE COUNCIL

COUNCIL DOCUMENT

Alpine Shire Land Development Strategy

Technical Background

July 2024

Appendix A: Planning policy

Alpine Shire Council

Land Development Strategy

July 2024

ALPINE SHIRE COUNCIL

SGS Economics & Planning

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Contents

1. State and regional planning policy and strategy

The Planning Policy Framework (PPF) sets out principles for land use, management and development, key locations for infrastructure investment and a settlement hierarchy at the state, regional and local levels. All these elements are to be considered when approaching local planning projects.

1.1 Planning Policy Framework (PFF)

The PPF outlines state strategy and policy directions for land use planning which are applied to the *Alpine Planning Scheme*. These planning policies express state expectations for areas and land uses and provide a clear framework within which decisions about land use and development can be made including clauses:

- 11.01 Settlement
- 11.02 Managing growth
- 11.03 Planning for places
- 12.01 Biodiversity
- 12.03 Water bodies and wetlands
- 12.04 Alpine areas
- 12.05 Significant environments and landscapes
- 13.01 Climate change impacts
- 13.02 Bushfire
- 13.03 Floodplains
- 13.04 Soil degradation
- 13.05 Noise
- 13.06 Air quality
- 13.07 Amenity, human health and safety
- 14.01 Agriculture
- 14.02 Water
- 14.03 Earth and energy resources
- 15.01 Built environment
- 15.03 Heritage
- 16.01 Residential development

- 17.01 Employment
- 17.02 Commercial
- 17.03 Industry
- 17.04 Tourism
- 18.01 Land use and transport
- 18.02 Movement networks
- 19.01 Energy
- 19.02 Community infrastructure
- 19.03 Development infrastructure

Key policies, objectives and strategies relevant to the Alpine Shire LDS include:

11.01-1S Settlement – Hume

The objective of this policy is to promote the sustainable growth and development of Victoria. Hume is identified as a key region to facilitate growth and development, specifically the regional cities of Shepparton, Wangaratta, Wodonga and Benalla.

Key strategies relevant to the LDS include ensuring that the future supply of zoned land contributes to the economic, social and environmental sustainability of the Shire, and that new settlement provides easy access to jobs and services by all members of the community.

Clause 11 provides a key policy framework for planning sustainable communities, and its objectives and strategies have been integral to preparing the LDS. 11.02-1S Supply of urban land

The objective of this policy is to ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses. To ensure that sufficient land is available to meet forecast demand, areas should plan to accommodate projected population growth over at least a 15 year period. For Alpine, the requirement to plan for 15 years of growth has been a key driver for preparing the LDS.

11.03-2S Growth areas

The objective of this policy is to locate urban growth close to transport corridors and services and provide efficient and effective infrastructure. A key strategy of this policy is to encourage average overall residential densities in the growth areas of a minimum of 15 dwellings per net developable hectare, and over time, seek an overall increase in residential densities to more than 20 dwellings per net developable hectare.

This policy has informed the selection of potential areas for rezoning, in terms of their accessibility and potential to provide more diverse housing types (including at higher density).

12.04-1S Sustainable development in Alpine areas

The objective of this policy is to facilitate sustainable use and development of Alpine areas for year-round use and activity. Active recreation development should be promoted at Falls Creek, Mt Hotham and other alpine resorts. The strategy supports intensive residential and commercial development at Falls Creek, and Mt Hotham.

While these resorts are not part of Alpine Shire, they provide an important economic contribution and as such their ongoing development and success is relevant to planning population growth and economic activity in Alpine Shire.

13.01-1S Natural hazards and climate change

The objective of this policy is to minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning. A key strategy relevant to the Alpine Shire LDS is to direct population growth and development to low-risk locations. For Alpine, key risks to settlement include bush fire and flooding (see below).

13.02-1S Bushfire planning

This policy must be applied to land classified under the *Planning and Environment Act 1987* as a designated bushfire prone area, subject to a BMO, or a potential to create a bushfire hazard. It aims to strengthen the resilience of communities to bushfires through risk-based planning. Therefore, population growth and development must be directed to low-risk locations.

The Alpine LDS has been prepared with consideration for bush fire risk, noting that while most areas of the Shire are classified as high risk, in reality there are areas with relatively lower risk. It is acknowledged that further detailed bush fire analysis work will be required to support rezoning in most parts of the Shire.

A Bushfire Planning Study has been completed following a lack of support on the November 2023 draft LDS. The Final LDS now considers findings of the BPS in future growth areas.

13.03-1S Floodplain management

This policy aims to reduce flood hazards and protect the natural flood protection capacity of rivers, streams, floodplains, and waterways. A key strategy is to avoid development in flood risk zones and minimise disruption to waterways and floodplains. This policy has informed areas for potential development and rezoning in the LDS.

14.01 Agriculture

The objective of this policy is to protect the state's agricultural base by preserving productive farmland, preventing inappropriately dispersed urban activities in rural areas and limiting new housing development in rural areas. Strategies include directing housing growth into existing settlements, discouraging the development of isolated small lots in the rural zones from use for dwellings, and encouraging consolidation of existing isolated small lots in rural zones.

While the LDS is not focussed on agricultural land, this policy is relevant to the LDS as expanding existing communities can impact on agricultural uses.

16.01-3S Rural residential development

This policy aims to identify land suitable for rural residential development while protecting agriculture. A key strategy relevant to the Alpine Shire LDS is to encourage the consolidation of new housing in existing settlements where investment in physical and community infrastructure and services has already been made.

1.2 Plan Melbourne 2017-2050

Plan Melbourne is a metropolitan planning strategy that defines the future shape of the city and state over the next 35 years.

Integrating long-term land use, infrastructure and transport planning, Plan Melbourne sets out the strategy for supporting jobs and growth, while building on the State's legacy of distinctiveness, liveability and sustainability.

The plan includes principles, directions, policies and outcomes that relate to Melbourne and regional Victoria.

Outcome 7 of Plan Melbourne relates to strategic planning for regional areas with a vision that "Regioanl Victoria is productive, sustainable and supports jobs and economic growth". Under this outcome, it is noted that the population of regional Victoria will continue to grow, with the key population centres of Greater Geelong, Greater Bendigo and Ballarat projected to account for 50 per cent of population growth outside Melbourne.

The Plan notes that, overall, regional Victoria is growing but not as fast as Melbourne and projects that if 'business as usual' trends continue, the proportion of Victorians living outside of Melbourne will decline. Plan Melbourne therefore outlines a suite of policies that aim to share in the benefits of the forecast population boom and redirect a greater proportion of residential and jobs growth to regional areas by planning for better connections to infrastructure and services. The Plan states that planning for growth in regional Victoria must be led locally and acknowledge the diverse range of opportunities and challenges that exist in different locations.

The government has identified priority industry sectors with potential for remarkable growth. These are:

- Medical technology and pharmaceuticals
- New energy technologies
- Food and fibre
- Transport technologies
- Defence technologies
- Construction technologies
- International education
- Professional services.

Regional Victoria is well positioned to take advantage of the significant job opportunities expected to emerge in the new energy industries tourism and the population services sector as a result of Victoria's ageing population.

The Plan emphasises Victoria's 10 regional cities—Greater Geelong, Greater Bendigo, Ballarat, Greater Shepparton, Latrobe City, Wodonga, Warrnambool, Mildura, Wangaratta and Horsham—as important urban settlements that will operate as service hubs for many smaller communities. Wangaratta and Wodonga are the main Regional Cities providing essential employment and services to the residents of Alpine Shire.

It is states that further development of individual cities and towns should be in keeping with their character and balanced with the protection of the productive land, economic resources and biodiversity assets that are critical to the state's economic and environmental sustainability.

Outcome 7 is supported by Directions and four Policies, of which the following is most relevant to the development of the LDS.

- Direction 7.2 Improve connections between cities and regions:
  - Policy 7.2.1 Improve transport and digital connectivity for regional Victoria.

    Relevant statements under this policy include promoting improvements to public transport that enable a more integrated labour market and reduce inequity of access between regions, especially the regions that are more remote from Melbourne.

    Likewise, improvements to digital connectivity will continue to be sought to leverage expansion of the digital economy to increase regional economic and population growth, working closely with the Federal Government.

1.3 Hume Regional Growth Plan (2014)

The *Hume Regional Growth Plan* applies to the twelve local government areas in North East Victoria (the Hume region), including Alpine Shire. The plan provides a regional approach to land use planning within a 30-year timeframe and identifies where development can be supported at a regional scale and priority areas for future infrastructure to support growth. It sets out the key strategic directions for this region, which are reflected in the PPF.

Within the Central Hume sub-region, focus areas for growth are Wangaratta and Benalla. The implication of such a designation means those two cities are the focus for services and employment access planning and investment. Growth is also projected for the surrounding towns that have good access to Wangaratta and Benalla, including the communities of the Ovens (part of Alpine Shire), King and Broken River Valleys. In Alpine Shire, Myrtleford and Bright are identified as locations where increased tourism development (currently a major drive of the Hume Region's economy) and lifestyle opportunities may be concentrated. Myrtleford has the closest proximity to Wangaratta (40km west), with the next closest city being Wodonga (65km north). In the Kiewa Valley, Mount Beauty and Tawonga South are strongly linked to Albury-Wodonga, located in the Upper Hume sub-region.

The following settlement hierarchy is identified for the Central Hume sub-region (towns/settlements in Alpine Shire highlighted in bold text):

- Regional city – Major growth location: Wangaratta
- Medium to high growth location: Benalla
- Key sub-regional settlements – Moderate growth locations: **Myrtleford**, **Bright** (incorporating **Porepunkah**) and Mansfield.

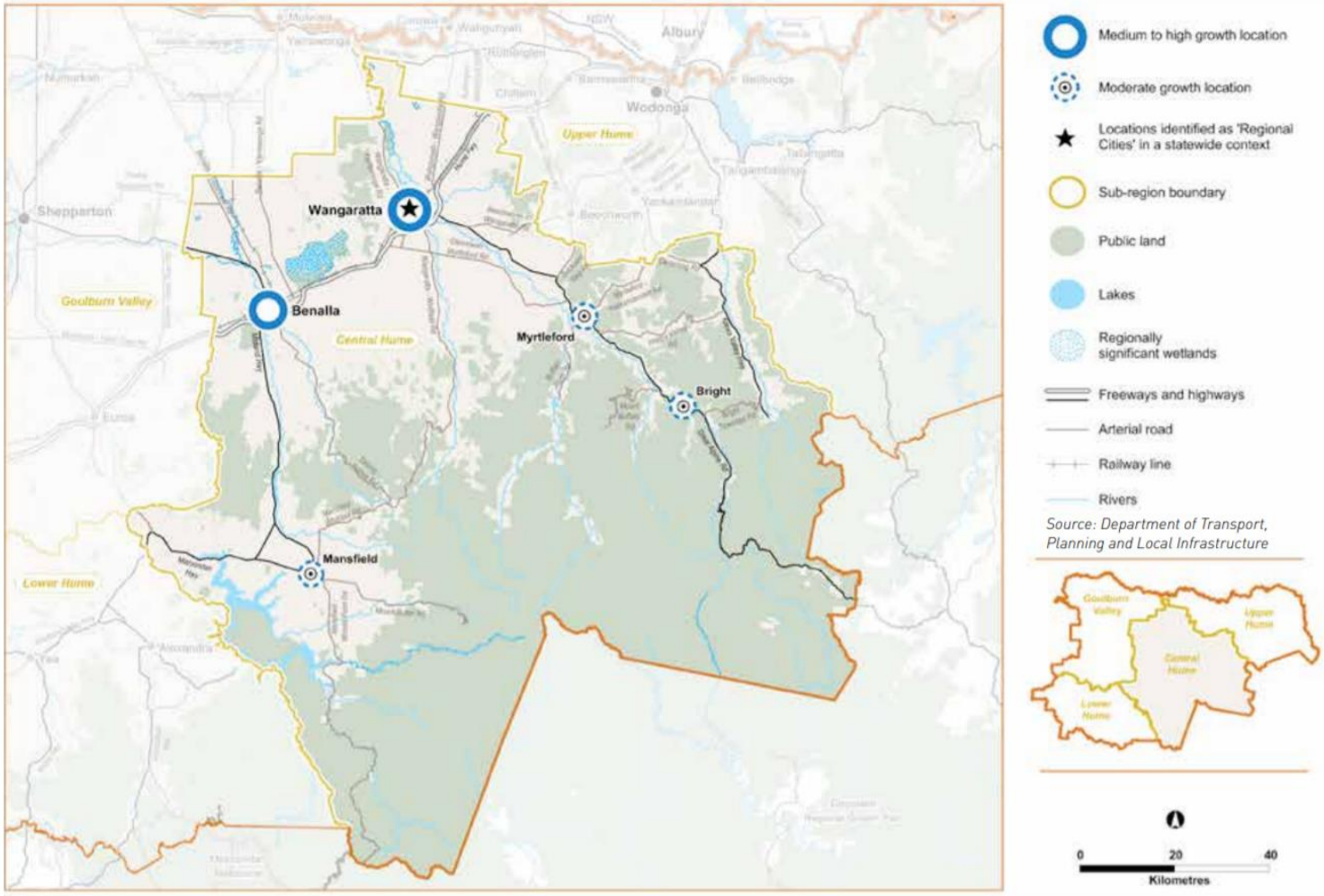
The Plan highlights key regional challenges, including existing skills shortages and the need for additional employment opportunities to support the projected regional population growth.

It sets out a framework to support the future growth (Figure 1), according to the following strategies:

- Focus growth and development specifically in the regional cities of Shepparton, Wangaratta, and Wodonga, and in Benalla.
- Encourage residential growth in areas where there are supporting employment, transport services and commercial activities. Urban growth frameworks included in this plan broadly identify these areas for Shepparton, Wodonga, Wangaratta and Benalla.
- In areas identified as strategic agricultural land (national/state, regional or sub-regional), avoid encroachment from rural residential settlement and other land uses that are non-complementary to agriculture.
- Support the development of a more diverse regional economy while managing and enhancing key regional economic assets (where the economy currently highly relies on manufacturing and agriculture).
- Agricultural production and associated food processing will continue to be an important contributor to the region's economy.
- The tourism industry will continue to generate regional wealth and interest from investors, including Alpine resorts which have the potential to offer a range of tourism activities year-round.

The directions of this policy are translated into the regional policy of the Alpine Planning Scheme. It is noted that the Hume Regional Plan is generally silent on the settlements in the Kiewa Valley (Mount Beauty – Tawonga South and Tawonga) and their relationship with Albury-Wodonga for higher order jobs and services.

FIGURE 1: CENTRAL HUME SUB-REGION – FUTURE URBAN GROWTH



Source: Hume Regional Growth Plan, 2014.

1.4 Homes for Victorians Housing Strategy

Homes for Victorians is the principal state-level strategic document that establishing a coordinated approach to making housing more affordable and accessible. The plan is targeted to addressing the housing crisis in Victoria. Its purpose is to increase the supply of affordable and stable housing options for people from all walks of life. The primary goal of the strategy is to ensure that all Victorians have a safe and secure place to call home.

The plan address five topics:

1. Supporting people to buy their own home
2. Increasing the supply of housing through faster planning
3. Promote stability and affordability for renters
4. Increasing and renewing social housing stock
5. Improving housing services for Victorians in need

Key actions of the strategy include allocation of funding for the construction of new social housing, increased support for private renters, and the implementation of targeted measures to help vulnerable groups such as Indigenous Australians, people with disabilities, and victims of family violence. The strategy also seeks to improve the quality and sustainability of existing housing stock through government initiatives and partnerships with community housing providers.

The plan acknowledges that local government has an important role in the implementation of the strategy. Some of the key actions relevant to local government include:

- Identifying and unlocking suitable land for new housing developments.
- Supporting and encouraging the development of diverse housing options, including social housing, affordable rental housing, and community housing.
- Ensuring that planning processes are streamlined and efficient, to enable timely and cost-effective development of new housing.
- Working with community housing providers and other stakeholders to identify and address local housing needs, and to provide support and services to residents.

Supporting initiatives to improve the sustainability and quality of existing housing stock, through programs such as retrofitting and energy efficiency upgrades.

1.5 Planning Practice Note 90: Planning for housing,

PPN90 provides information and guidance about how to plan for housing growth and protect neighbourhood character to ensure a balanced approach to managing residential development in planning schemes.

It acknowledges that many of the changes occurring to the Victorian housing market are due to population changes, for example, whether the population is ageing, having fewer children, forming

smaller households and preferring different lifestyles. These are the drivers that impact housing demand, type and location.

The Practice Note states that one of the key actions associated with developing a residential development framework is the identification of housing change areas of minimal, incremental and substantial change. Identifying housing change areas provides a means for prioritising competing housing and neighbourhood character objectives arising out of local strategic work. It also provides the basis for the application of requirements through zones and overlays to give effect to desired planning outcomes.

These housing change areas have been nominated in the framework plans of the LDS, including where further work and structure planning is required to further understand granularity of how to manage residential development whilst protecting the unique character of the area.

1.6 Planning Practice Note 91: Applying the residential zones.

Responding to reforms of residential zones, PPN90 provides information and guidance about how to:

- use the residential zones to implement strategic work
- use local policies and overlays with the residential zones
- make use of the key features of the residential zones.

Importantly PPN91 outlines the following Principles underpinning the application of the suite of residential zones:

- Housing and neighbourhood character plans need to be consistent and align with one another when specifying preferred future housing and neighbourhood character outcomes for an area.
- All residential zones support and allow increased housing, unless special neighbourhood character, heritage, environmental or landscape attributes, or other constraints and hazards exist.
- The Residential Growth Zone promotes housing intensification in locations close to jobs, services and facilities serviced by public transport including activity centres.
- The General Residential Zone is a three-storey zone with a maximum building height of 11 metres.
- The density or number of dwellings on a lot cannot be restricted in the Neighbourhood Residential Zone unless special neighbourhood character, heritage, environmental or landscape attributes, or other constraints and hazards exist.

A general guide for applying residential zones based on level of future housing change is shown in Figure 2. A guide for matching preferred or mandatory building heights with the appropriate residential zone is shown in Figure 3.

FIGURE 2: ALIGNING THE HOUSING CHANGE AREAS AND THE RESIDENTIAL ZONES

Zone	Special or constrained	Minimal	Incremental	Substantial
Low Density Residential Zone	✓	✓		
Mixed Use Zone			✓	✓
Township Zone		✓	✓	
Residential Growth Zone			✓	✓
General Residential Zone			✓	✓
Neighbourhood Residential Zone	✓	✓	✓	

Source: Victorian Government (2019) Planning Practice Note 91 'Using the residential zones'

FIGURE 3: MAXIMUM BUILDING HEIGHT MATRIX AND RECOMMENDED RESIDENTIAL ZONES

Table 3: *Maximum building height matrix*

Maximum building height	Best zone	Best height tool	Rationale
Less than 9m or 2 storeys	NRZ	Overlay	A maximum building height lower than the NRZ cannot be specified in a zone schedule. An overlay is required to recognise the special characteristics.
9m (2 storeys)	NRZ	NRZ	The zone mandates this maximum building height and storey control.
Greater than 9m (retain 2 storeys)	NRZ	NRZ schedule	The schedule to the zone enables a greater maximum building height to be specified while maintaining the 2-storey requirement.
11m (3 storeys)	GRZ	GRZ	The zone mandates this maximum building height and storey control.
Greater than 11m (retain 3 storeys)	GRZ	GRZ schedule	The schedule to the zone enables a greater maximum building height to be specified while maintaining the 3-storey requirement.
13.5m (4 storeys)	RGZ	RGZ schedule	The schedule to the zone forces the discretionary maximum building height to be mandatory.
Greater than 13.5m and greater than 4 storeys	RGZ	Overlay	Maximum building height requirements along with other specific design and built form requirements should be in included in an overlay so all built form requirements are included in the one provision.

Source: Victorian Government (2019) Planning Practice Note 91 'Using the residential zones'

1.7 Hume Regional Adaptation Snapshot (2018)

This policy reviews the regional impacts of climate change and existing adaptation projects and strategies, to identify any gaps in climate change adaptation projects. It acknowledges that there will be climate change impacts across different sectors: built environment, natural environment, health and human services, transport, primary production, and water. The analysis includes a stocktake of the climate change adaptation projects in the Hume region as well as the results of community consultation.

Consultation undertaken revealed that people value the region for its environment: its climate, waterways, wildlife, and landscapes. People are also concerned that those are the places most vulnerable to climate change. Residents also value health and wellbeing, good communications systems and utilities, and a strong agricultural sector. On climate change, they believe there is a lack of leadership across all levels of government, which results in uncoordinated responses and plans that don't turn into action.

The analysis identified over 160 climate action projects currently or recently implemented in Hume (although there are many more), to be implemented by State government agencies, water authorities and catchment management authorities, local councils and shires, and community groups. Most actions were focused on renewable energy, such as community renewables and micro-grids, as well as projects to build community resilience and improve climate modelling and risk assessments, water cycle management, biodiversity, and agriculture, and improving emergency management and preparedness.

This has been considered in the strategies adopted in the LDS with regard to addressing flooding, bushfire risk and innovative and sustainable employment opportunities.

1.8 Climate-Ready Hume (2015)

This document assesses the potential impacts of climate change across the Hume region, noting that the region has already started to experience the impacts of climate change through warmer and drier weather trends which are projected to continue into the future, leading to fewer frosts, more frequent and intense downpours leading to flooding, overall less rainfall especially in spring and winter, and more hot days accompanied by the increase in frequency of high and extreme fire danger days. As the climate highly varies across the Hume region, the long-term effects and local strategies in tackling climate change will be wide-ranging.

Climate change will affect the Hume region's primary production, infrastructure, and tourism industries, as well as broader health and community, and environment. In particular, within the Alpine Shire area, the tourism industry especially snow sports will face significant challenges as a result of the warming climate. Transport and agricultural infrastructure will be increasingly exposed to periodic flooding and increased heat loading, for example, food and fruit processing facilities, irrigation infrastructure and bioenergy plants in Puckapunyal. In relation to the environment, biodiversity in flora and fauna face degradation, for example, the Mountain Pygmy Possum, a species limited to high mountain habitats.

This strategy (and climate change in general) has informed the preparation of the LDS as a key risk to overall growth, as well as in more detailed ways through the identification of constraints (e.g., fire and flooding).

1.9 Hume Bushfire Management Strategy (2020)

This strategy assesses the fuel and bushfire management for the Hume Region and provides useful background detail on bushfire risk. This strategy also looks at areas of high risk, implications of slope and review of reducing social effects of bushfires on community. This document was a key reference for the bush fire risk study that was prepared to inform the LDS constraint mapping process.

1.10 Plan for Victoria (2024)

The Plan for Victoria has launched housing targets for each municipality across the state to help meet the need for additional housing to 2050. The Plan for Victoria has released a target for Alpine Shire of 1,700 new homes. The preliminary round of consultation commenced in February 2024 with figures released in June 2024. It is not clear the directions or implementation of the Plan for Victoria or how these targets may be realised or enforced. Council willl continue to liaise with the state government via consultation on the draft targets and future draft plan.

2. Local plans and strategies

Local plans and strategies have been reviewed to understand key elements of Alpine Shire's local economy, settlement hierarchy and other key planning directions that are relevant to planning for urban land in the Shire.

2.1 Economic Development Strategy (2021)

The *Economic Development Strategy* was prepared in the context of the need to assist economic recovery from the COVID-19 pandemic and 2020 bushfires. It identifies several key towns and population nodes within the region that drive residential, employment and economic growth, including Bright (administrative centre), Mount Beauty, Myrtleford and Dinner Plain (service centres).

Key industries in Alpine Shire include tourism and the visitor economy – thanks to the region's significant natural assets, most notably Alpine National Park and Mount Buffalo National Park – which has consistently increased over the past ten years.

The following key issues for Alpine Shire's local economy were identified in the Strategy:

- Housing availability and affordability within Alpine Shire – reflected by the low rates of dwelling growth, low density stock, low rates of permanent occupancy and higher than average property prices.
- Industry – the Alpine Shire economy is reliant on a few key industries, including Tourism (e.g., Accommodation and Food Services, Retail Trade), Agriculture and Forestry, as well as Manufacturing. The forestry sector was significantly impacted by the 2020 bushfires.
- Tourism – impacted by the COVID-19 pandemic and 2020 bushfires.
- Business – most businesses in Alpine Shire (98%) are non-employing or classified as SMEs (i.e., fewer than 20 employees). A high proportion of businesses have been significantly impacted by the COVID-19 pandemic.

The Economic Development Framework for Alpine Shire consists of five key themes and 14 strategies that respond to the key issues outlined above:

- A Sustainable Visitor Economy
  - 1.1 - Create a sustainable tourism industry in Alpine Shire
  - 1.2 - Increase geographic and seasonal visitor dispersal
- Growing and Diversifying Agriculture
  - 2.1 - Increase the value of agricultural production 2.2 - Future proof and protect the agricultural and forestry sector 2.3 - Maintain and grow jobs in agriculture 2.4 - Support food and beverage manufacturing
- Enhanced Liveability and Resident Attraction
  - 3.1 - Maintain and improve the amenity of Alpine Shire

- 3.2 - Increase the population growth rate across Alpine Shire
- 3.3 - Support for an ageing population

- Attracting New Industry and Investment
  - 4.1 - Increase industry diversification and expand the jobs base
  - 4.2 - Strategic investment in public sector infrastructure projects
- Supporting Businesses
  - 5.1 - Upskill the workforce to meet industry needs
  - 5.2 - Create a connected and well-informed business base
  - 5.3 - Promote business resilience (disaster recovery assistance).

The above has been considered in some of the key strategic directions of the document, including the need to attract sustainable, innovative employment opportunities, the need to consider a more sustainable approach to tourism given impact to infrastructure. The LDS also highlights future growth areas for industrial land that will allow for attraction of new industry.

2.2 Rural Land Strategy (2015)

The *Rural Land Strategy* provides guidance for the future use and development of agricultural and rural land in Alpine Shire. It approaches this with a strong support for an ongoing and diversified agricultural sector. Together with the *Land Development Strategy* (this project, covering urban land), the *Rural Land Strategy* will ensure there are clear directions for land management across the whole Shire.

The key attributes identified across the agricultural sector and that are continually growing include:

- Agri-business, which supports the local economy and rural employment.
- Rural tourism, supported by the region's landscape and environmental assets.
- Dairy industry.
- A diversifying beef industry.
- Smaller 'niche' agricultural industries on top of traditional commercial farming.

Key issues faced by the agricultural sector include:

- Encroachment of farming land by residential subdivision.
- Fragmentation of rural land.
- Structural change in agricultural industries.
- Environmental protection.
- Tourism opportunities conflicting with landscape amenity and agricultural land.

The RLS was founded on the following pillars which have been respected in the development of this strategy:

- Protection of agricultural land.

- Protection of rural amenity/ landscape values.
- Facilitating rural based tourism including agri-tourism.
- Providing limited opportunities for rural lifestyle with limited development potential in remote and other rural areas.
- Protection of environmental assets located in rural areas.

The Rural Land Strategy also contained number of recommendations that have been addressed as part of the Land Development Strategy:

- Investigate land to the north of Porepunkah Township for urban growth.
- Investigate the rezoning of a specified area of land at Wandiligong.
- Maintain agriculture as the predominant land use between Bright and Wandiligong.
- Protect land on the western side of Barwidgee Creek for future urban growth at Myrtleford.
- Investigate expansion of industrial land northeast of Carter Holt Harvey to capture future rural industry development that is not associated with the rural use of the land.
- Investigate a buffer around Carter Holt Harvey.
- Recognise Dederang has a role and potential to expand to support agricultural production.
- Protect Landscape values along the Kiewa Valley Highway.
- Recognise the need for buffers around the Mount Beauty Aerodrome.

The policy in relation to agricultural land, rural based tourism, transport and infrastructure, rural subdivision, dwellings and lifestyle is translated into the Local Planning Policy Framework of the Alpine Planning Scheme. Land use planning directions are also implemented for each rural precinct.

2.3 Recreation and Open Space Plan (2013)

This Plan forms an analysis of recreation and open space provision across Alpine Shire. It identifies that there is sufficient land and facilities to cater for resident and visitor demand and places value on outdoor recreation and healthy living as key features of the lifestyle in Alpine Shire.

Priority areas for improvement include improved provision of infrastructure for walking and cycling, increased opportunities for informal and casual recreation activities, and upgrades to existing facilities.

The areas nominated for investigation in the LDS consider 25% of the land to be taken up by Infrastructure which includes development infrastructure, community infrastructure and public open space. Structure Planning will provide clearer indication of the necessity for public space in new growth areas.

2.4 Alpine Planning Scheme Review (2023)

The Alpine Planning Scheme Review was received and noted by Council at the Ordinary Council Meeting held in April 2023. The Review is an overall health check of the Alpine Planning Scheme and focuses on:

- The effectiveness and efficiency of the planning scheme in achieving the objectives of planning and the planning framework in Victoria.
- Aligning the planning scheme with the Ministerial Direction on the Form and Content of Planning Schemes.
- Ensuring the planning scheme contains a clear narrative about the way in which the use and development of land will be managed to achieve the planning vision or objectives of the area.

The Review found that the Alpine Planning Scheme contains many policy gaps and is not effectively guiding decision-making in Alpine Shire. There are significant gaps and the planning scheme is out-of-date. This is leading to inconsistent decision-making and lost opportunities for the most efficient use of land, adaptation to climate change and protection of values, such as landscapes and heritage, for the benefit of the community.

The statutory planning function of Council is confronted with both legislative requirements and community expectations.

The process to address the underlying issues that led to this situation to improve the performance of the planning function at Council are underway, but they will take time to see results. In the interim, the Review states that it is critical that Council remains focused on the strategic planning projects that will make the most difference to the wider community, and to building the capacity and confidence of the statutory planning team.

Among other things, the *Alpine Shire Land Development Strategy* will be implemented via an amendment to the Alpine Planning Scheme to ensure the Municipal Planning Strategy and the local policies of the Planning Policy Framework (PPF) are up-to-date and can assist in decision-making.

3. Alpine Planning Scheme

The Alpine Planning Scheme is made up of State, regional and local policies, which set high-level directions, and highlight opportunities and challenges facing the Shire, that can be managed through planning controls (zones and overlays).

The planning scheme is arranged into several sections, beginning with state policies (set by planning strategies such as the *Hume Regional Growth Plan*) that set a high-level direction for land use, development, and environmental management. The Planning Policy Framework (PPF) contains planning objectives and strategies according to several themes:

- Settlement
- Environment and landscape values
- Environmental risks and amenity
- Natural resource management
- Built environment and heritage
- Housing
- Economic development
- Transport
- Infrastructure.

3.1 Municipal Planning Strategy

The Municipal Planning Strategy (MPS) outlines the strategic planning, land use and development objectives of the municipality and the strategies for achieving them. The MPS contains the following information and policies:

- Clause 02.01: Context
- Clause 02.02: Vision
- Clause 02.03-1 Settlement
- Clause 02.03: Strategic Directions
- Clause 02.03-2: Environmental and landscape values
- Clause 02.03-3: Environmental risks and amenity
- Clause 02.03-4: Natural resource management
- Clause 02.03-5: Built Environment and heritage
- Clause 02.03-6: Housing
- Clause 02.02-7: Economic Development
- Clause 02.03-8: Transport
- Clause 02.03-9: Infrastructure
- Clause 02.04: Strategic Framework Plan

The MPS identifies several key issues, which are managed by policies in the Planning Scheme:

Settlement and Housing:

- Accommodating future residential growth.
- The need to manage town boundaries.
- Encouraging diversity and choice in housing options.
- High levels of absentee landownership.
- Accessibility and service delivery.
- Encouraging infill housing developments sympathetic to neighbourhood character.
- Pressure for rural living and supply of agricultural land.

Infrastructure:

- Management and provision of public infrastructure.
- Water quality and quantity issues
- Wastewater management and asset protection
- Rail Trail expansion and maintenance.
- Stormwater and drainage.'[1]

Economic Development

- Agriculture / horticulture operating from a relatively small resource base.
- Emerging agricultural business and infrastructure.
- Legacy issues of former tobacco industry including irrigation infrastructure.
- Encroachment of tourism in rural landscape.
- Support for value adding industries within the Shire
- Maintaining active and attractive retail hubs.
- Diversity – emerging shifts in economic activity (e.g., water extraction).
- Climate change impacts on Alpine areas, industries and businesses.
- Limited employment opportunities for people moving to the municipality for lifestyle reasons.
- Protection of agricultural land resources.
- Mining and extractive industries.
- Plantations.

Environmental and landscape values

- Conservation of environmentally significant areas and biodiversity.
- Protection of endangered species.
- Significant opportunities for nature-based tourism activities.
- The need to achieve a balance between development and conservation outcomes.
- Responding to climate change.
- Private land management.
- Natural disasters.
- Management of old dredge sites.
- Protecting significant landscapes.
- Contaminated land issues.
- Waste management.
- Special Water Supply Catchment issues.

The current MPS for Alpine Shire reflects the objectives of the *Hume Regional Growth Plan 2014* and the *Community 2030 Vision*. Key factors affecting planning with relevance to the Land Development Strategy project are:

- Urban pressures on township edges and rural hinterland areas.

[1] Alpine Planning Scheme at: https://planning-schemes.app.planning.vic.gov.au/Alpine/ordinance/00

- The protection and sustainable use of agricultural land.
- The ability of the local economy to offer (on going) employment opportunities.
- Township character and identity issues.
- High levels of tourism.
- Infrastructure limitations due to environmental constraints such as bushfires, flooding and topography along with sparsely populated communities spread geographically.
- Built environment and heritage.
- Protection and maintenance of environmentally significant areas and the natural resource base.
- Tobacco industry legacy (land use changes as well as contaminated land issues).
- Ageing population base and low population growth.
- Environmental risk (flood prone land and bush fire).
- Balancing the public / private land interface.
- Mining legacy (small lots) and mining potential.
- Managing the relationship between the Alpine Resorts and alpine areas.
- Extensive areas of plantations.
- Reliance on climate dependent industries (e.g. forestry, agriculture and snow-based tourism).
- Water availability for both agriculture and urban areas.

Clause 02.03-1 Settlement

The average annual population growth in Alpine Shire for the period 2005-2010 was 0.5% reversing the negative growth trend over the preceding 5 year period. Supply of land for residential growth and development over 15 years has been in the urban centres of Porepunkah, Mount Beauty/Tawonga South and Myrtleford. Bright also has 3 years supply of land for residential growth and development.

Ribbon development and development that conflicts with existing urban form has been identified as major factors that erode township character.

Despite low population growth and high levels of absentee house there is continued demand for new housing. Objectives of the Clause include directing the majority of urban growth in the Shire to Bright, Porepunkah, Myrtleford and Mount Beauty/Tawonga South. There is a need to encourage redevelopment and intensification of existing urban areas and commercial cores by providing for higher density development and mixed uses.

Strategies include ensuring the provision of at least fifteen years supply of residential land within each of the township identified for urban growth. Providing for a range of housing choice that is affordable, accessible and meets community needs, and encouraging new residential development that demonstrates sustainability outcomes are also strategies identified. Application of zones and overlays include:

- Apply the General Residential Zone in the township of Porepunkah to encourage residential development.

- Apply the Mixed-Use Zone to Porepunkah.
- Apply the Development Plan Overlay to undeveloped land at Myrtleford and Porepunkah.

Once the next phase of the *Land Development Strategy* has been completed (residential land supply, demand, and capacity analysis), the recommended zoning for Alpine Shire's towns and settlements may be reviewed.

Clause 02.03-7 Economic Development

There are significant warehouse and processing plant opportunities available in Myrtleford. Mount Beauty Airfield and surrounds are seen as providing an important opportunity for light industrial and air-park development.

Constraints to further commercial and industrial development in the Shire include interface/land use conflict issues, in locations where residential uses are situated nearby. There are also industrial and employment uncertainties in key business sectors and natural disasters can be significant on the local economy.

Strategies include avoiding inappropriate commercial and industrial land use and development that could impair the unique and highly significant tourism attributes of the Shire. Application of zones and overlays include:

- Apply the Mixed Use Zone in Porepunkah
- Apply the Special Use Zone to the airfields in Porepunkah and Mount Hotham
- Apply the Significant Landscape Overlay to Alpine areas and significant landscapes to protect natural tourism assets identified in the Alpine Shire Rural Land Strategy 2015.

As highlighted above for residential land, once the next phase of the *Land Development Strategy* has been completed (commercial and industrial land supply, demand, and capacity analysis), the recommended zoning for Alpine Shire's towns and settlements may be reviewed.

Clause 02.03-4 Natural Resource Management (Agriculture/Forestry)

The policy in this Clause is based on findings from the Rural Land Use Strategy (2015). The study found that the total area available for agriculture in Alpine Shire is around 70.7 sq km and in 2006 generated around $47.4 million.

There are opportunities for growth and replacement activities for the Tobacco industry including green tea, capsicum, grapes, and berries. Areas of high agricultural capability are evident in the Kiewa Valley, the Happy Valley, Mudgegonga and Rosewhite areas as well as around Myrtleford and the Buckland Valley.

A key constraint to the scale of the agricultural industry is the area available for agriculture, constrained to the narrow valleys between steep mountain ranges. There is a continuing shift towards more intensive agricultural industries and boutique, lifestyle, or part time farming, which is changing the rural landscape of the Shire. Issues include:

- Inappropriate development and subdivision which can remove land from productive rural use, create conflict, fragment land holdings, and create pressure for dwellings.

- Remote rural areas of the Shire are also generally located in areas of high conservation significance and include land holdings aligned within significant landscapes and touring routes. These areas are under increasing development pressure.

Strategies to enhance and protect agricultural productivity include:

- Supporting the use and development of land for rural dependent enterprises providing an opportunity to explore new developments in the agricultural and associated industries and provide employment opportunities.
- Protecting agricultural land from inappropriate use and development and minimising the loss of broad acre commercial farming units through subdivision for inappropriate land uses.

Clause 02.03-9 Infrastructure

Residential development in many parts of the Shire is restricted by various infrastructure limitations. Development is also limited by the environmental capacity of the surrounding land.

Objectives include supporting consolidation of the Shire's population in main towns and villages to effectively use existing infrastructure. There is also a desire to limit the need for new infrastructure and reduce the loss of agricultural land for the purposes of urban/residential development.

Strategies include maximising the use of existing infrastructure and limiting the need for new infrastructure by consolidating growth in towns and encouraging higher density development. Also, ensuring development in isolated or inadequately serviced areas does not impose unnecessary costs on the general community for service provision.

Clause 02.02-1 Settlements and rural localities

This policy applies to all land in the Low Density Residential Zone and Rural Living Zone. Objectives that relate to residential, commercial, and industrial development are:

- Direct rural residential use and development to protect agricultural areas from urban sprawl and conflicting land uses.
- Ensure that rural residential living is compatible with the environmental characteristics of the area; and any existing or surrounding agricultural land uses.
- Limit development in sparsely populated communities and remote areas with limited accessibility and services

It is local policy to ensure rural residential development is not located on land:

- Considered a bushfire risk environment where residential development and use of land will intensify the risk.
- That is flood prone.
- With a slope greater than 20% (1 in 5).
- That is susceptible to landslip.
- That is contaminated (previously contaminated land must have an EPA audit clearance).

Clause 02.03-2 Environmental and landscape values

This policy applies to all land in Alpine Shire. Objectives that relate to residential, commercial and industrial development include:

- Avoid inappropriate development in or near areas of high value native vegetation, habitat for threatened species or other areas of high environmental values.

It is local policy that:

- Buildings and works need to be sited and designed to avoid and minimise the requirement for native vegetation removal or any detrimental impacts on retained native vegetation.
- High value remnant vegetation of an Ecological Vegetation Class with a conservation status of depleted, rare or endangered; or that is identified as habitat for rare and threatened species; or that is considered an area of significant local value, should not be removed.

Clause 02.03-2 Sustainable Development in Alpine Areas

This policy applies to all land located above 1100m Australian Height Datum across Alpine Shire where snowfall may persist as ground cover for long periods over the winter months. Objectives that relate to residential, commercial and industrial development are:

- Encourage sensitively designed development in designated areas within the alpine areas including the periphery of Dinner Plain village and land adjacent to Mount Hotham Airport.
- Recognise that the approaches to Falls Creek, Mount Hotham and Mount Buffalo warrant special attention in the context of planning and development to maintain a high visual amenity.
- Ensure that development is sited and designed to minimise any adverse visual and environmental impact.

It is local policy that:

- Buildings and works should be sited and designed to minimise any potential to destroy or threaten native flora and fauna habitats.
- Any buildings and works be sited to minimise their visibility from public places.
- Any development within alpine areas or sub-alpine areas does not dominate the visual landscape and is compatible with the local cultural character.

Clause 02.03-2 Landscapes

This policy applies to all applications for buildings and works within significant landscapes. Objectives that relate to residential, commercial and industrial development are:

- Limit development on prominent ridges and hilltops.
- Maintain and protect areas of environmental and visual significance from inappropriate development.
- Ensure that all structures blend in with the surrounding environment.

It is policy that:

- Views should be protected along Kiewa, Ovens and Buffalo Rivers to spectacular mountain ranges.

- Mature vegetation which provides a backdrop for any development must not be removed or lopped.
- Developments must be sited to ensure that rooflines do not protrude above ridgelines when viewed from any road or public land.

Clause 02.03-7 Industry

This policy applies to all land in the Industrial Zones, the Mixed Use Zone and other areas identified for industrial use. Objectives that relate to residential, commercial, and industrial development are:

- Ensure that the use and development and redevelopment of sites within the industrial precincts are for industrial uses.
- Ensure that new development and redevelopment within the industrial precincts positively contributes to the visual amenity of the area.

It is policy that:

- Industrial uses be discouraged from the Mixed Use Zone particularly where there is conflict with other land uses.
- Non-industrial uses, not appurtenant to an industrial use will be strongly discouraged in the industrial precincts.
- Landscaping should be provided along common property boundaries and within frontage setbacks and areas.
- Building heights, setbacks and form should have regard to and seek to be compatible with the surrounding development and the character of the locality in which the development is situated.

4. Land use planning zones

Zones are the primary tool for guiding the fair and orderly use and development of land. A zone sets expectations about what land use and development activity is or may be acceptable in the location to which it applies. Each zone broadly deals with a particular predominant land use theme, such as residential, commercial, industrial or public land uses.

Zones are applied spatially, and all land must be included in a zone, except Commonwealth land. The zone selected for any land is determined by the historic land use and the planning strategies set out in the planning scheme.

Each zone contains purposes that describe the planning outcome sought by the zone. These purposes are achieved through the application of the controls on use and development in the zone.

The use of land is controlled by a 'Table of uses' in the zone. This table places particular land uses in one of three categories:

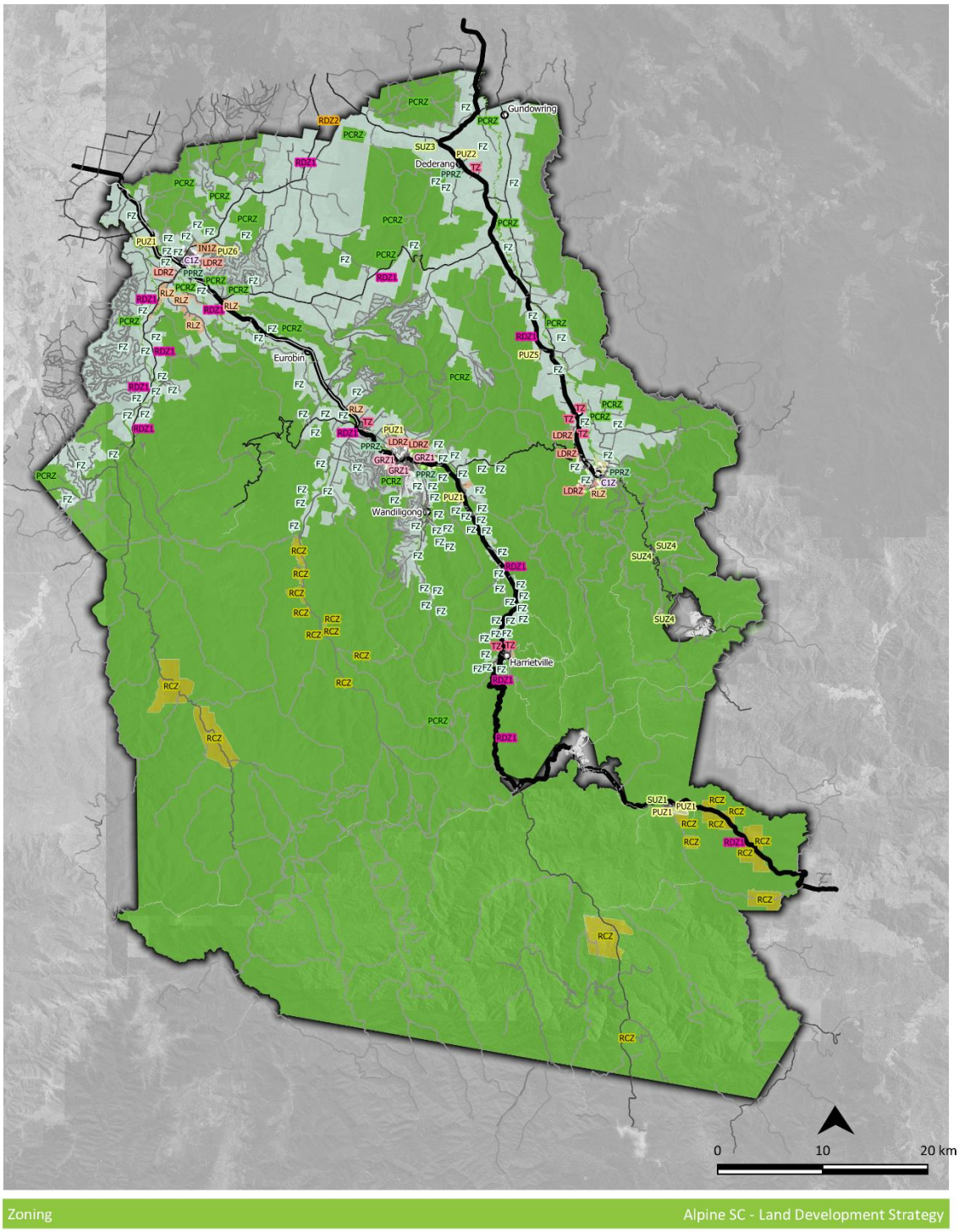
- Section 1 – Permit not required
- Section 2 – Permit required
- Section 3 – Prohibited

The table may include a condition next to a land use that must be met. If the condition is not met, a more restrictive land use category will apply to the use.

The zone also controls development by requiring a planning permit for specified types of development. Some zones seek to promote a specific outcome by exempting a preferred form of development from the need for a permit. Some zones may include mandatory requirements, such as a maximum building height.

Figure 4 sets out the range of zones that currently apply in Alpine Shire's urban areas and can contain residential, commercial, or industrial land use activities. It examines key parameters that would affect capacity for residential, commercial and industrial land use and development of relevance to the Land Development Strategy.

FIGURE 4: ZONING IN THE ALPINE LGA



Source: SGS Economics and Planning, based on the Alpine Planning Scheme, 2021.

TABLE 1: ZONES IN ALPINE SHIRE'S URBAN AREAS

Clause	Purpose	Location	Capacity/development considerations	Implications for the LDS
Residential Zones				
32.03 Low Density Residential Zone (LDRZ)	To provide for low-density residential development on lots which, in the absence of reticulated sewerage, can treat and retain all wastewater	Myrtleford, Wandiligong, Bright, Porepunkah, Mount Beauty	The schedule to the LDRZ does not vary the standard subdivision and outbuilding permit requirements. The LDRZ sets a minimum subdivision size as follows: – 0.4 hectare for each lot where reticulated sewerage is not connected. If no area is specified each lot must be at least 0.4 hectare. – 0.2 hectare for each lot with connected reticulated sewerage. If no area is specified each lot must be at least 0.2 hectare. – A permit may be granted to create lots smaller than 0.4 hectare if the subdivision: – Excises land which is required for a road or a utility installation. – Provides for the re-subdivision of existing lots and the number of lots is not increased.	The zone schedule does not specify any additional requirements. The minimum subdivision size limits the number of lots that can be created as ensures lots remain a large size and the number of lots does not increase.
32.04 Mixed Use Zone (MUZ)	To provide for a range of residential, commercial, industrial and other uses which complement the	Myrtleford, Mount Beauty	The schedule to the MUZ does not vary the standard building height, subdivision or design requirements of Clause 54, 55 and 56. The MUZ does not set a maximum building height. If the land is in a Special Building Overlay, Land Subject to Inundation Overlay or land liable to inundation the maximum building	The zone schedule does not specify any additional requirements. There are some controls around gross floor area requirements in the permit not required uses, which limits development potential.

Clause	Purpose	Location	Capacity/development considerations	Implications for the LDS
	mixed-use function of the locality.		height specified is the vertical distance from the minimum floor level determined by the relevant drainage authority or floodplain management authority to the roof or parapet at any point. A permit is required to construct or extend one dwelling on a lot of less than 300 square metres	There is some flexibility around building height for different lands.
32.05 Township Zone (TZ)	To provide for residential development and a range of community serving uses in small towns.	Harrietville, Porepunkah, Tawonga, Dederang	The schedule to the TZ does not vary the standard building height of Clause 54 or 55, and subdivision of Clause 56. However, if the land is in a Special Building Overlay, Land Subject to Inundation Overlay or is land liable to inundation the maximum building height is the vertical distance from the minimum floor level determined by the relevant drainage authority or floodplain management authority to the roof or parapet at any point. A permit is required to construct or extend one dwelling on a lot of less than 300 square metres.	The zone schedule does not specify any additional requirements. There are some controls around gross floor area requirements in the permit not required uses, which limits development potential. There is some flexibility around building height for different lands.
32.08 General Residential Zone (GRZ)	To provide housing diversity that respects the neighbourhood character of an	Bright, Mount Beauty, Myrtleford	The GRZ sets a maximum building height for a dwelling or residential building of 11 metres and 3 storeys at any point.	The zone schedule does not specify any additional requirements. The constraints in this zone limit the development capacity of the lots. Maximum

Clause	Purpose	Location	Capacity/development considerations	Implications for the LDS
	area, particularly in locations with good access to services and transport as well as supporting specified community serving uses.		If the land is in a Special Building Overlay, Land Subject to Inundation Overlay or is land liable to inundation the maximum building height is the vertical distance from the minimum floor level determined by the relevant drainage authority or floodplain management authority to the roof or parapet at any point. The GRZ sets a minimum subdivision size as follows: – A vacant subdivided lot less than 400 square metres capable of development for a dwelling or residential building, must contain at least 25 percent as garden area. This does not apply to a lot created by an application to subdivide land where that lot is created in accordance with an approved precinct structure plan or an incorporated plan or approved development plan – An application to subdivide land, other than an application to subdivide land into lots each containing an existing dwelling or car parking space, must meet the requirements of Clause 56 Minimum garden area requirement: – Lot size 400-500 sqm- 25% – Above 500-650 sqm- 30% – Above 650 sqm- 35% This does not apply if the lot is designated as a medium density housing site in an approved precinct structure plan or an approved	building height and garden area requirements ensure that the lot is not heavily occupied by a dwelling.

Clause	Purpose	Location	Capacity/development considerations	Implications for the LDS
			equivalent strategic plan, or if the lot is designated as a medium density housing site in an incorporated plan or approved development plan	
Industrial Zones				
33.01 Industrial 1 Zone (IN1Z)	To provide for manufacturing industry, the storage and distribution of goods and associated uses in a manner which does not affect the safety and amenity of local communities.	Bright, Mount Beauty, Myrtleford	Permitted uses in the IN1Z include businesses, warehouses, storage, railway and industry other than materials recycling. Some of these uses contain conditions such as buffer requirements	As several permitted uses require a buffer zone, this reduces the amount of development that can occur on a lot.
33.02 Industrial 2 Zone (IN2Z)	To promote manufacturing industries and storage facilities that require a substantial threshold distance within the core of the zone.	North of Myrtleford (Sawmill site)	Permitted uses in the IN2Z include railway, informal outdoor recreation, businesses and crop and animal production. Some uses where a permit is required contain a buffer zone which limits development potential.	The buffer zones for particular uses limit the development potential and capacity of lots.

Clause	Purpose	Location	Capacity/development considerations	Implications for the LDS
Commercial Zones				
34.01 Commercial 1 Zone (C1Z)	Commercial Zone 1 seeks to create vibrant mixed-use commercial centres for retail, office, business, entertainment and community uses, with residential uses at complementary densities.	Bright, Myrtleford, Mount Beauty	The zone specifies some restrictions on gross floor area and frontages. The use of land must not detrimentally affect the amenity of the neighbourhood including its appearance.	Permitted uses in the C1Z include accommodation, mixed businesses and retail, which enables a wide variety of employment opportunities. The zone also provides flexibility around residential uses.

5. Land use planning overlays

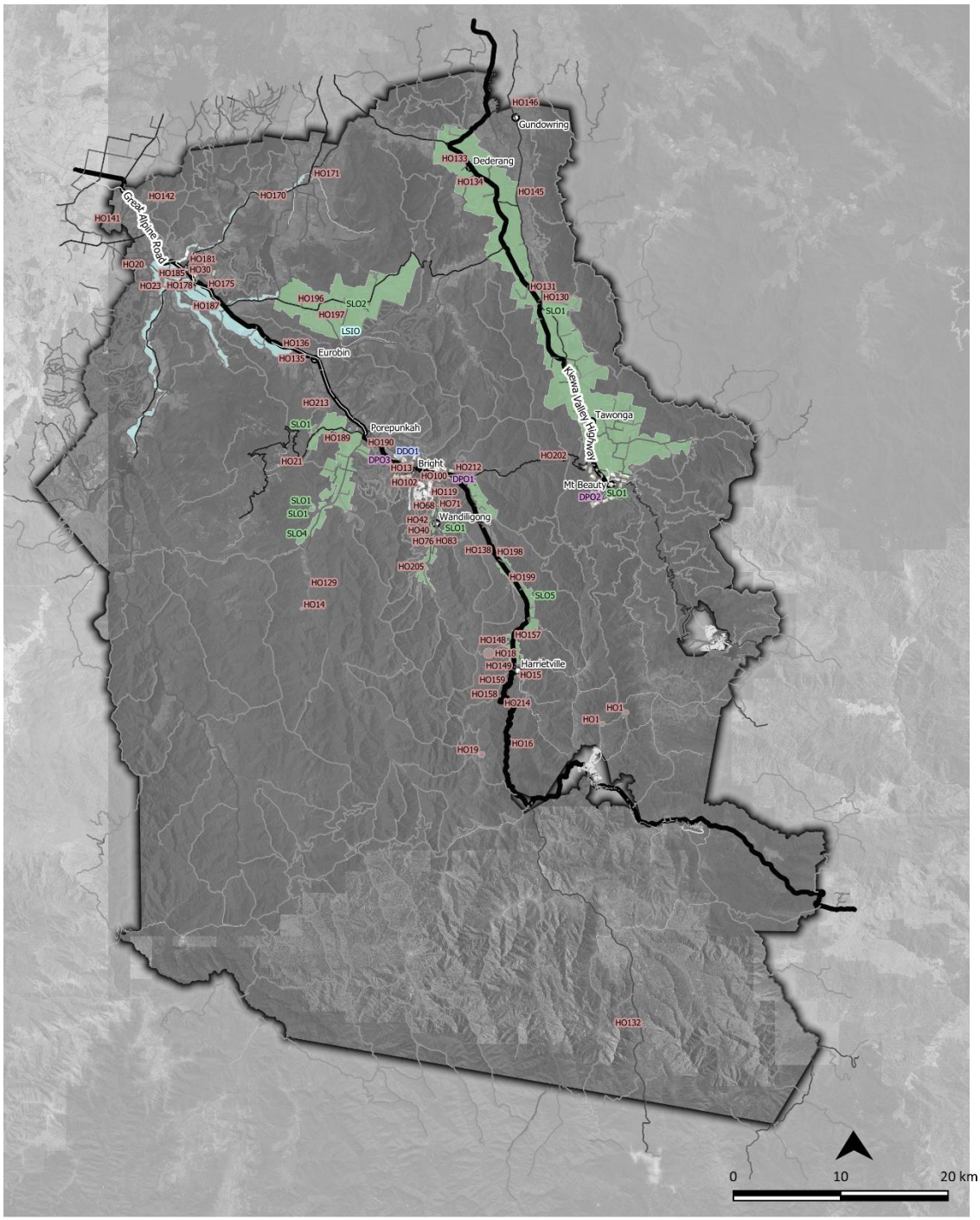
Overlays control a broad range of development matters such as the protection of significant vegetation, the protection of heritage values, the design of the built form or mitigation of flood risk. The application of an overlay may reflect a policy objective in the planning scheme or the site conditions.

While a parcel of land will always be included in a zone, it will only be affected by an overlay where a specific development outcome or issue to be addressed is sought for that land. Land can be subject to more than one overlay if multiple issues apply to the land.

As a relatively smaller regional council area, Alpine Shire has fewer overlays in place compared to other larger regional or city councils. This includes lack of currently implemented planning overlays such as the Significant Landscape, Design and Development, or Land Subject to Inundation Overlays. Overlays provide a useful planning tool for managing growth by mitigating potentially adverse impacts to amenity and other values such as heritage or neighbourhood character.

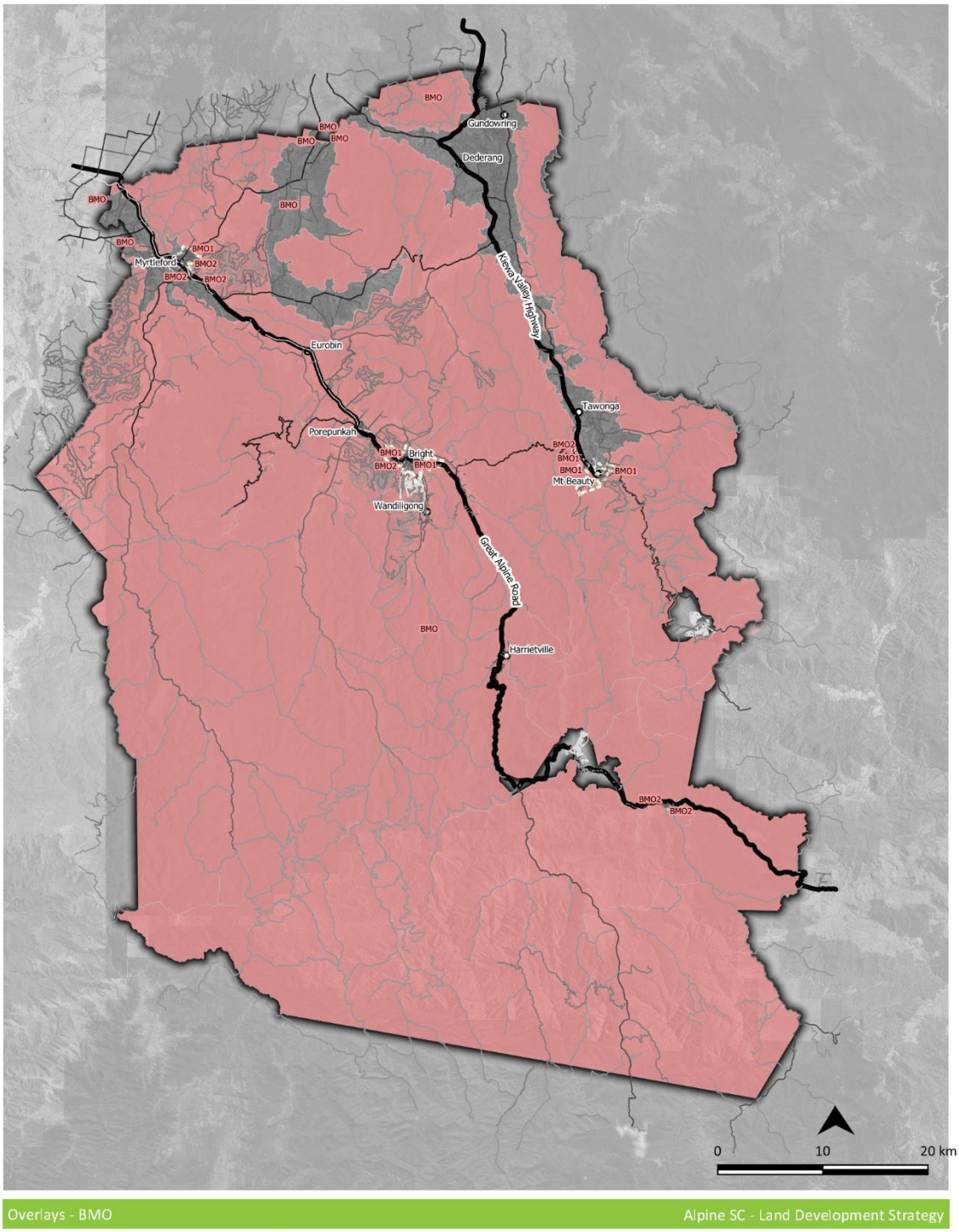
Figure 5 to Figure 9 show the spatial extent of selected overlays in Alpine Shire. Table 2 sets out the range of overlays that currently apply in Alpine Shire's urban areas. It examines key parameters that would affect capacity for residential, commercial and industrial land use and development of relevance to the Land Development Strategy.

FIGURE 5: OVERLAYS IN THE LGA (EXCLUDING BUSHFIRE MANAGEMENT OVERLAY)



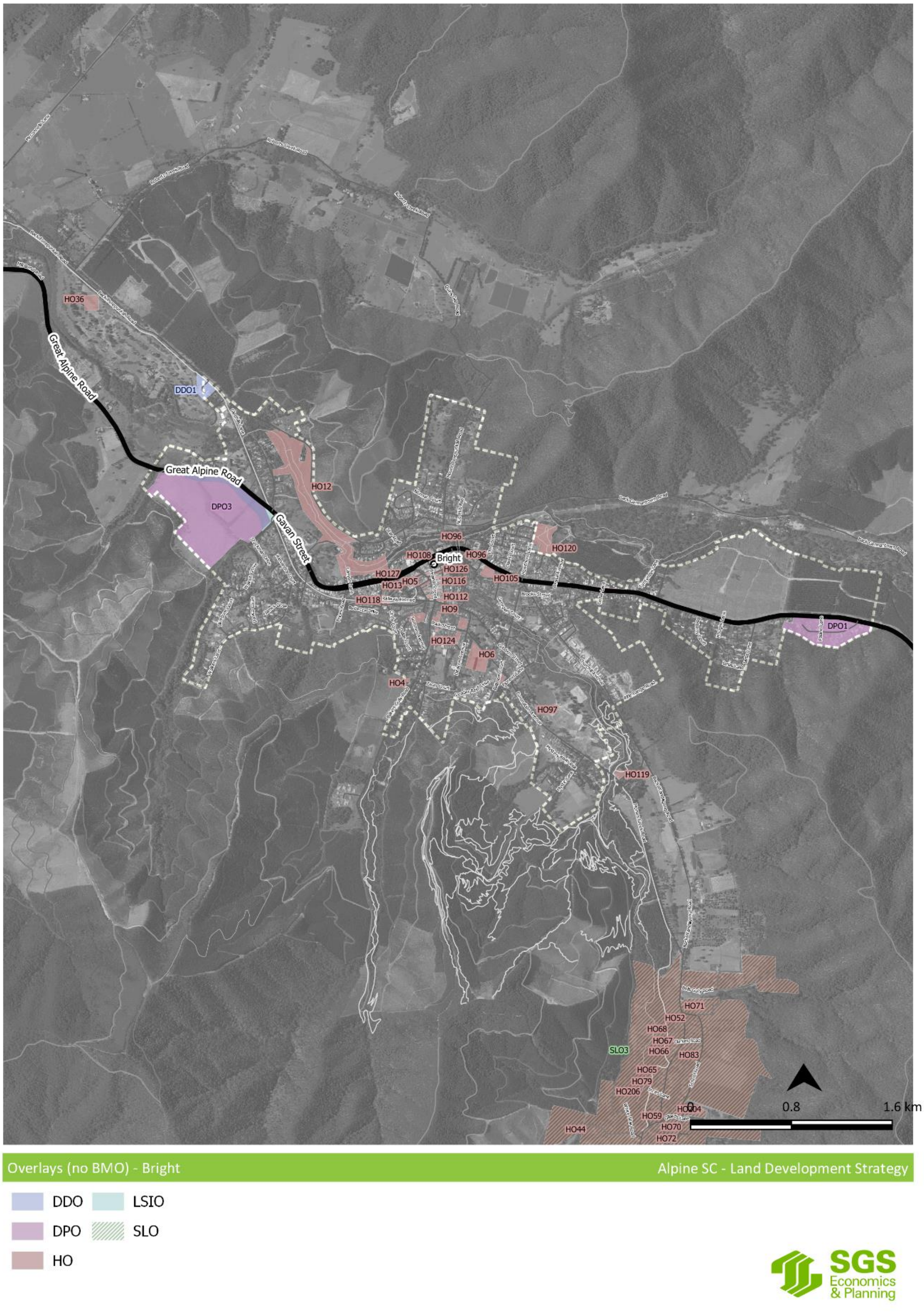
Source: SGS Economics and Planning, based on the Alpine Planning Scheme, 2021.

FIGURE 6: ALPINE BUSHFIRE MANAGEMENT OVERLAY



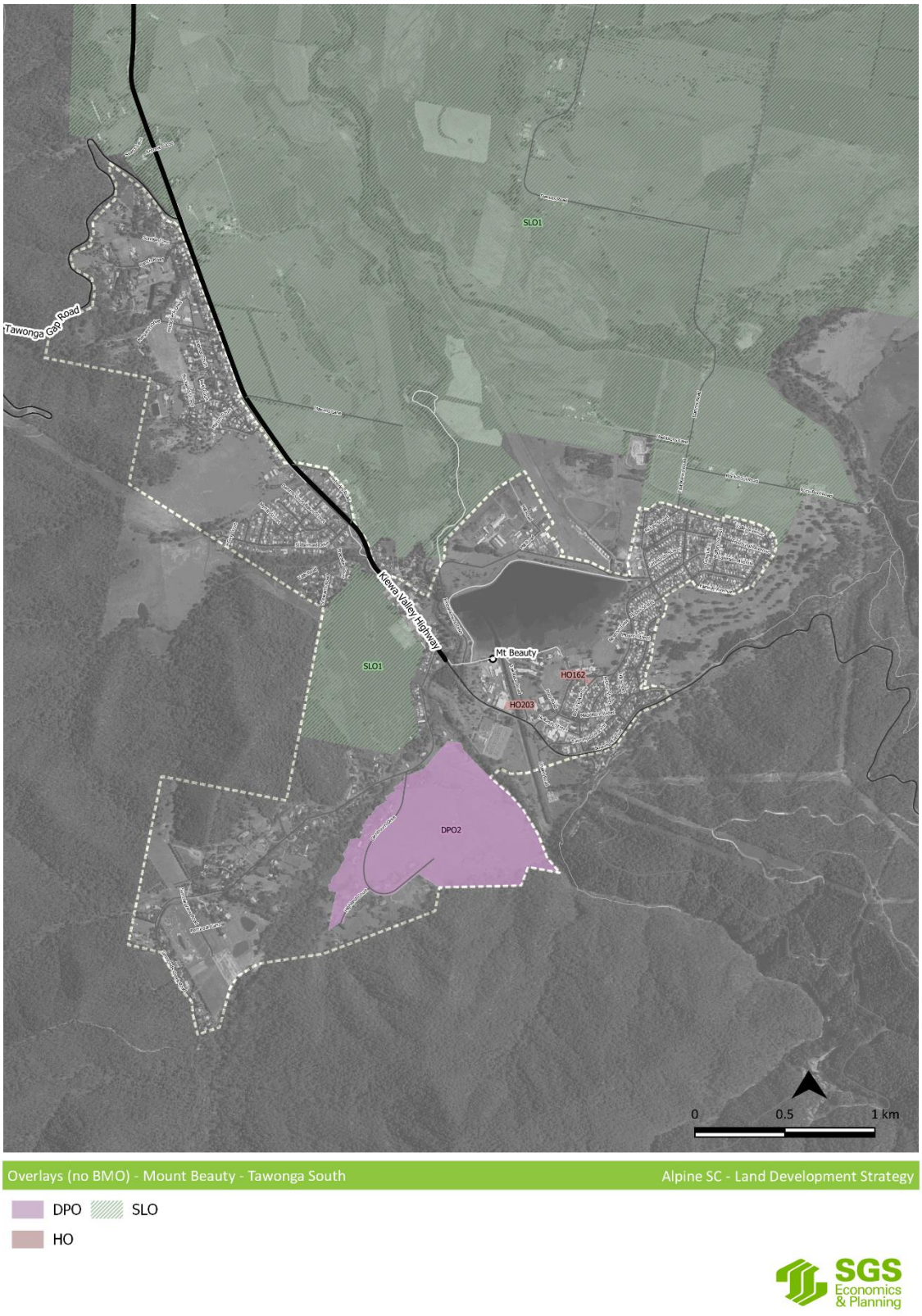
Source: SGS Economics and Planning, based on the Alpine Planning Scheme, 2021.

FIGURE 7: SELECTED OVERLAYS IN BRIGHT



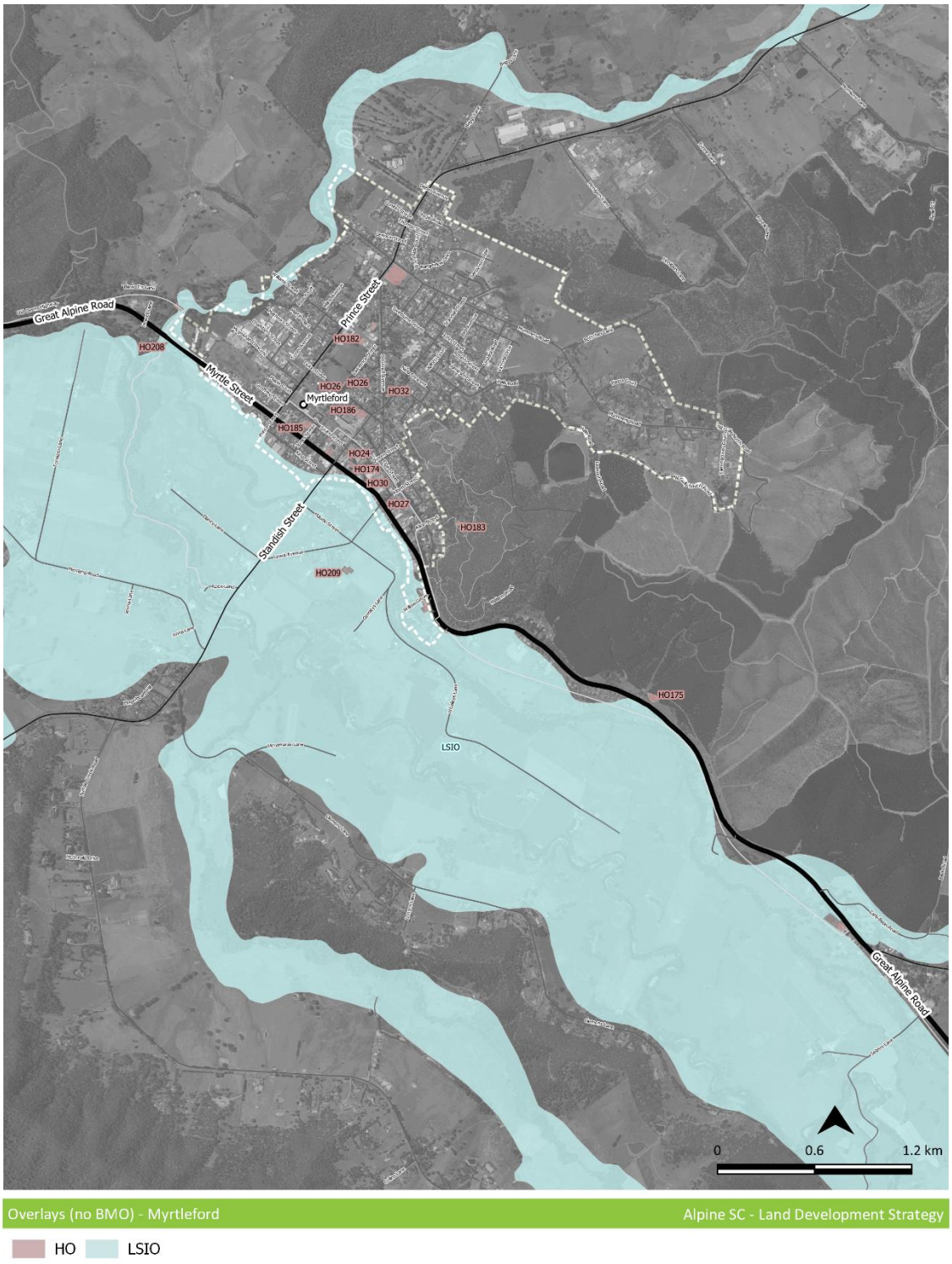
Source: SGS Economics and Planning, based on the Alpine Planning Scheme, 2021.

FIGURE 8: SELECTED OVERLAYS IN MOUNT BEAUTY-TAWONGA SOUTH



Source: SGS Economics and Planning, based on the Alpine Planning Scheme, 2021.

FIGURE 9: SELECTED OVERLAYS IN MYRTLEFORD



Source: SGS Economics and Planning, based on the Alpine Planning Scheme, 2021.

TABLE 2: OVERLAYS IN ALPINE'S URBAN AREAS

Clause	Purpose	Location	Capacity/development considerations	Implications for the LDS
Environmental and Landscape Overlays				
42.03 Significant Landscape Overlay (SLO)	The SLO identifies, conserves and enhances the character of significant landscapes.	Ovens River, Happy Valley, Porepunkah, Kiewa Valley Highway between Dederang and Mount Beauty, Wandiligong	A permit is required to construct a building or carry out works, construct a fence if specified in the schedule to the overlay, and remove, destroy or lop any vegetation specified in a schedule to this overlay. Exemptions apply to uses such as emergency works, extractive industry, fire protection, noxious weeds and traditional owners.	Aims to maintain the character, nature and key elements of significant landscapes. There are several uses which do require a permit including residential and most employment lands excluding some heavy industrial.
	Schedule 1: Upper Kiewa Valley significant landscape area		The landscape of the Upper Kiewa Valley has a distinct character. The visual boundaries are definite in this landscape not only between natural features but also the townships which are generally well contained with little urban sprawl. A key element is the views across the cleared valley floor to Mount Bogong.	Objectives to be achieved include: – Contain housing, to existing townships with definite visual boundaries. – Encourage appropriately sited development to reduce ribbon development along the Kiewa Valley Highway. – Encourage rural development of a "human" scale and form. – Maintain existing vegetation on the steeper slopes of the valley to maintain its integrity. – Maintain the contrasts in landform and land use between the valley floor and the steep vegetated valley walls. – Maintain the existing rural landscape.
	Schedule 3: Wandiligong		Objectives to be achieved include: – Maintain relationship of historic buildings with the landscape.	The main landscape considerations to be protected is the natural, historical and cultural

Clause	Purpose	Location	Capacity/development considerations	Implications for the LDS
	Valley significant landscape area		– Continue the mosaic of patterns, forms and colours of the natural and built environment – Ensure development, specifically housing and subdivision, is sympathetic to the natural and historical and cultural landscape. – Encourage rural development of a "human" scale and form. – Minimise vegetation clearance along creeks and roadsides.	landscape. This has implications as it restricts what type of built form and scale can occur.
	Schedule 4: Buckland Valley significant landscape area		Objectives to be achieved include: – Maintain the contrasts in landform and land use between the valley floor and the imposing Mt. Buffalo. – Maintain the existing pastoral landscape of the valley floor. – Maintain the view of Mt. Buffalo from the valley. – Encourage appropriately sited development to reduce ribbon development along the Buckland Valley Road and the impact on the views to Mt. Buffalo on the western side of the road. – Encourage rural development of a "human" scale and form. – Minimise vegetation clearance along the Buckland River, creeks and roadsides.	The main landscape considerations to be protected is the existing land use and views. This limits development capacity as it restricts development height and scale.

Clause	Purpose	Location	Capacity/development considerations	Implications for the LDS
	Schedule 5: Upper Ovens and Harrietville Valley significant landscape area		Objectives to be achieved include: – Contain urban development, specifically housing, to existing townships with definite visual boundaries. – Encourage appropriately sited development – Encourage rural development of a "human" scale and form. – Maintain the contrasts in landform and land use between the valley floor and the steep vegetated valley walls. – Maintain the existing pastoral landscape of the valley floor. – Minimise vegetation clearance along the Ovens River, creeks and roadsides.	Main objective is to maintain development specifically housing to existing townships. This limits development potential such as in new release areas or the clearing of bushland to accommodate housing.
Heritage and built form overlays				
43.01 Heritage Overlay (HO)	The HO identifies areas with natural or cultural significance, in order to preserve and enhance the elements which contribute to the places of heritage significance. This includes Victorian Heritage Registered elements, and	Myrtleford, Bright, Harrietville, Mudgegonga, Wandiligong	A permit is required under this overlay to subdivide a heritage place which is included in the Victorian Heritage Register. This includes the subdivision or consolidation of land including any building or airspace. Schedule to the HO specifies heritage places with external paint controls (design guidelines), tree controls and internal alterations controls.	Heritage items constrain development as design guidelines and controls apply which limit the capacity of development that can occur. Heritage listed items may not be able to be removed or altered which limits where development can occur.

Clause	Purpose	Location	Capacity/development considerations	Implications for the LDS
	places of local significance			
43.02 Design and Development Overlay (DDO)	The DDO identifies areas which are affected by specific requirements relating to the design and built form of new development.	Bright, Falls Creek	Schedule 1 to the DDO specifies: – All buildings are setback at least 10 metres from any lot boundary abutting the Back Porepunkah Road reserve and/or rail trail – The density of dwellings does not exceed one dwelling per lot – All fences are less than 1.8 metres high. Solid fences abutting the Back Porepunkah Road reserve and/or rail trail are setback at least 5 metres from the boundary – The setback area between any solid fence and the Back Porepunkah Road reserve and/or rail trail boundary is landscaped – Maintain an average lot size of 1000 square metres when subdividing	Main design considerations are density of dwellings, landscaping, height of fences and setbacks from roads and railways.
43.04 Development Plan Overlay (DPO)	The DPO identifies areas which require the form and conditions of future use and development to be shown on a development plan before a permit can be granted to use or develop the land. It also exempts an	Bright, Mount Beauty	A permit must not be granted to use or subdivide land, construct a building or construct or carry out works until a development plan has been prepared to the satisfaction of the responsible authority. This does not apply if a schedule to this overlay specifically states that a permit may be granted before a development plan has been prepared. The development plan may consist of plans or other documents. A development plan that provides for residential subdivision in the Neighbourhood Residential Zone, General Residential Zone, Residential Growth Zone,	Note the DPO in Mount Beauty (Glenbourne Drive) is recommended to be removed as part of the Planning Scheme Review, as it has no content.

Clause	Purpose	Location	Capacity/development considerations	Implications for the LDS
	application from notice and review if a development plan has been prepared to the satisfaction of the responsible authority.		Mixed Use Zone, Township Zone, Comprehensive Development Zone and Priority Development Zone must meet the requirements of Clause 56 as specified in the zone.	
	Schedule 3: Schedule 3 to clause 43.04 development plan overlay		Applies to Lots 1 & 2 ON PS613866 and lots 1, 2, 4, 5, 7 - 9 on TP859376 – Great Alpine Road. Key development requirements for the development plan include: – Provide for a 50 metres buffer distance between the Great Alpine Road and residential uses – Provide a range of lot sizes and identify potential residential densities across stages of development with lot sizes generally increasing to the south of the land with no lots for residential purposes being created further south of any perimeter road along the southern boundaries of the land adjacent to the pine plantation.	Other key requirements for the development plan include: – Need to include adequate open space in development plan – Outline how the layout and appearance of the subdivision will be in keeping with or enhance the site when viewed from the Great Alpine Road – Describe the relationship of proposed development on the land to existing and proposed developments on adjoining land. – Provide for the orderly staging of development and supply of services – Include a subdivision design that minimises the risk of house-to-house fire spread including building envelopes being separated by at least 10 metres from each other and the boundary of the lot

Clause	Purpose	Location	Capacity/development considerations	Implications for the LDS
Land management overlays				
44.04 Land Subject to Inundation Overlay (LSIO)	The LSIO identifies land areas affected by the 1 in 100 year flood and ensures that development maintains the free passage and temporary storage of floodwaters.	Bright, Myrtleford, Nug Nug, Mudgegonga	A permit is required for several building and construction works including roadworks, fences, bike paths, verandas and to subdivide land. If a local floodplain development plan has been developed for the area and has been incorporated into this scheme, an application must be consistent with the plan.	LSIO limits development potential where it applies as development may not be permissible in highly flood prone areas (such as near wetlands and rivers) or may be impacted by development constraints.
44.06 Bushfire Management Overlay (BMO)	The BMO ensures that the development of land prioritises the protection of human life and strengthens community resilience to bushfire. It ensures that development is only permitted where the risk to life and property from bushfire can be reduced to an acceptable level.	Most of the Shire, except the more open agricultural areas e.g., parts of the Kiewa Valley, lower Ovens Valley, Happy Valley	Have to provide several bushfire assessments for an application. An application must meet the requirements of Clause 53.02 unless the application meets all of the requirements specified in the schedule. A permit which creates a lot for a single dwelling on land zoned for residential or rural residential purposes must include a condition. This also applies to construct a building or construct or carry out work.	Several uses including accommodation and office requires a permit. The conditions which apply for subdivision are constraining as they contain protection measures such as defendable space and a bushfire shelter. This limits the capacity of development on a lot.

Clause	Purpose	Location	Capacity/development considerations	Implications for the LDS
	Schedule 1: Dinner Plain, Bright, Mt Beauty, Myrtleford, Porepunkah, Tawonga South Bal-12.5 Areas		The application to construct or extend one dwelling on a lot must include all the requirements set out in the schedule. Clause 53.02 applies in all other circumstances. The following requirements apply to an application to construct a single dwelling on a lot: – The dwelling must be constructed to BAL-12.5 – Defendable space is to be provided for a distance of 30 metres around the dwelling or to the property boundary, whichever is the lesser and maintained in accordance with the vegetation management requirements of Clause 53.02 with the canopy of trees separated by at least 2 metres. – A static water supply must be provided in accordance with Clause 53.02 – If these requirements are not met, the requirements of Clause 53.02 apply.	Limits development potential where it applies as it specifies setbacks and static water supplies which limit how much development can occur on a lot.
	Schedule 2: Dinner Plain, Bright, Myrtleford, Tawonga, Tawonga south BAL-29 areas		An application to construct or extend one dwelling on a lot must include all the requirements set out in the schedule. Clause 53.02 applies in all other circumstances. The following requirements apply to an application to construct a single dwelling on a lot: – The dwelling must be constructed to BAL-29	Limits development potential where it applies as it specifies setbacks and static water supplies which limit how much development can occur on a lot.

Clause	Purpose	Location	Capacity/development considerations	Implications for the LDS
			– Defendable space is to be provided for a distance of 30 metres around the dwelling or to the property boundary, whichever is the lesser and maintained in accordance with the vegetation management requirements of Clause 53.02 with the canopy of trees separated by at least 2 metres. – A static water supply must be provided in accordance with Clause 53.02 If these requirements are not met, the requirements of Clause 53.02 apply.	
Other overlays				
45.03 Environmental Audit Overlay (EAO)	This Clause ensures that potentially contaminated land is suitable for a use which could be significantly adversely affected by any contamination.	Porepunkah	Before a sensitive use (e.g., residential use, or childcare centre) commences either: – A certificate of environmental audit must be issued for the land, – An environmental auditor appointed under the Environment Protection Act 1970 must make a statement that environmental conditions of the land are suitable for the sensitive use.	Limits development potential of a site as contaminated land cannot be developed for residential, or employment lands uses.

6. Other regulations that affect land use and development

6.1 Covenants

A restrictive covenant is a private treaty or written agreement between landowners that limits the way land can be used and developed. The planning system is only activated if there is an application to remove or vary a covenant; councils and government do not create or enforce them.

A registered restrictive covenant is a restrictive covenant recorded on the certificate of title for the burdened land. There are multiple types of restrictive covenants. In the Alpine Shire LGA, they include limits on subdivision, heights, setback, and what dwellings can be used for such as not being allowed to rent out the dwelling. This *Land Development Strategy* cannot directly impact covenants; however, it is necessary for them to be considered as a burden on land which may restrict future development options in future.

7. Implications for the Land Development Strategy

- The *Hume Regional Growth Plan* identifies Myrtleford, Bright and Porepunkah as key regional settlements where moderate population growth is anticipated in future. It flags that future growth should be managed in a way that limits encroachment into productive agricultural areas.
- The *Hume Regional Adaptation Snapshot* and *Climate-Ready Hume* reports highlight that climate change will affect the Hume region's primary production, infrastructure, and tourism industries, as well as broader health and community, and environment. In particular, within the Alpine Shire area, the tourism industry especially snow sports will face significant challenges as a result of the warming climate.
- Transport and agricultural infrastructure will be increasingly exposed to periodic flooding and increased heat loading, for example, food and fruit processing facilities, irrigation infrastructure and bioenergy plants in Puckapunyal. In relation to the environment, biodiversity in flora and fauna face degradation, for example, the Mountain Pygmy Possum, a species limited to high mountain habitats.
- Local plans and strategies identify key challenges for the Shire that could be addressed in some way via the *Land Development Strategy*:
  - Housing availability and affordability within Alpine Shire - reflected by the low rates of dwelling growth, low density stock, low rates of permanent occupancy and higher than average property prices.
  - Industry - the Alpine Shire economy is reliant on a few key industries, including Tourism (e.g., Accommodation and Food Services, Retail Trade), Agriculture and Forestry, as well as Manufacturing. The forestry sector was significantly impacted by the 2020 bushfires.
  - Tourism - impacted by the COVID-19 pandemic and 2020 bushfires.
  - Encroachment of farming land by residential subdivision.
  - Fragmentation of rural land.
  - structural change in agricultural industries.
  - Environmental protection.
  - Tourism opportunities conflicting with landscape amenity and agricultural land.
  - Priority areas for improvement for open spaces and recreation include improved provision of infrastructure for walking and cycling, increased opportunities for informal and casual recreation activities, and upgrades to existing facilities.
- The MPS in the Alpine Planning Scheme identifies several issues across the themes settlement and housing, infrastructure, economic activity and environmental and natural resources, which are managed with local policies in the scheme. The key issues identified will be important

considerations if there are land supply gaps and the need for additional land to be rezoned for housing, industrial or commercial uses in the next phase of this project.

- Clause 02.03 Settlement identifies a settlement hierarchy that sees the Shire's main urban centres as Bright, Porepunkah, Mount Beauty-Tawonga South and Myrtleford. The next phase of this project will consider the implication of this settlement hierarchy when considering appropriate places where future growth may be directed (if required).
- Clause 02.03-9 Infrastructure highlights that development in many parts of the Shire is constrained due to infrastructure capacity limitations or the proximity of environmental hazards to townships. This will be an important consideration in the next phase of the project.
- There are currently several covenants that apply to private land across the Shire, preventing further subdivision and in some instances preventing landowners from renting their dwellings. These legal controls may pose limitations on the capacity of some settlements to address housing need shortages through incremental infill development and are very difficult to remove.

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ALPINE SHIRE COUNCIL

SGS Economics & Planning

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Appendix B: Population, housing and employment profile

Alpine Shire Council

Land Development Strategy

July 2024

ALPINE SHIRE COUNCIL

SGS Economics & Planning

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Contents

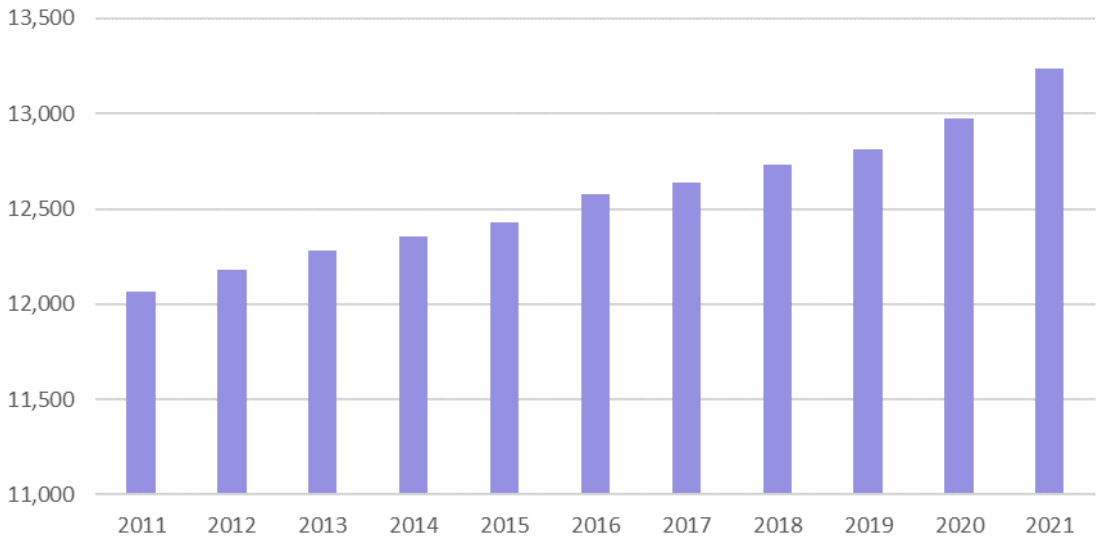
1. Population profile

1.1 Historic population change

Figure 1 shows the historic population figures in Alpine Shire in the past decade between 2011 and 2021. Population in the LGA has grown from 12,068 to 13,235 over this period. This equates to an average 117 additional persons per year: or an average annual growth rate of 0.9 per cent.

The COVID-19 pandemic has caused a surge in remote working and allowed professionally mobile workers to move away from cities to regional areas. This is reflective in the data as population in the LGA increased by a total of 423 persons after 2019, with an average annual growth rate of 1.3 per cent.

FIGURE 1: HISTORIC POPULATION CHANGE, ALPINE SHIRE, 2011-2021

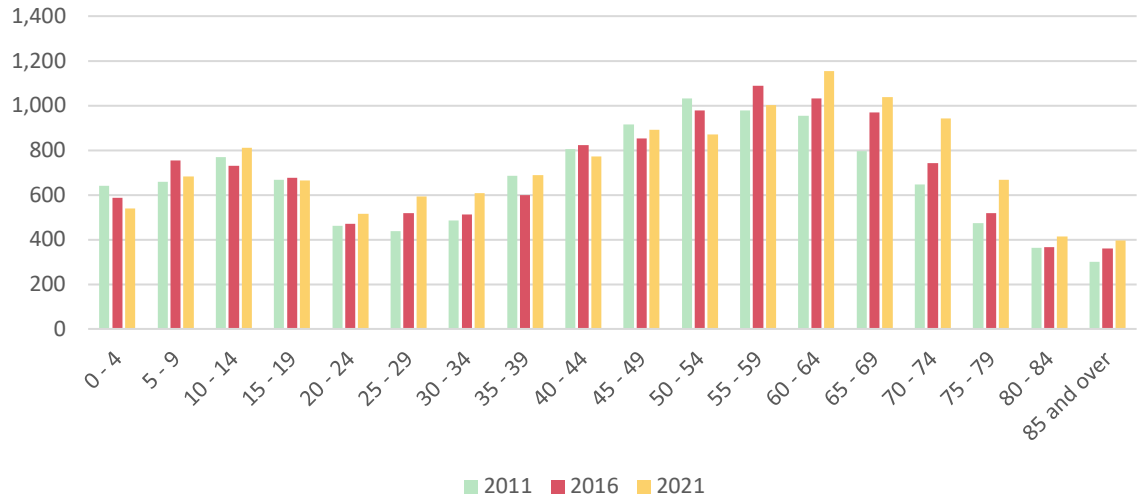


Source: SGS Economics and Planning (2022). Based on ABS Census (2011-2021).

1.2 Age profile

Alpine Shire is a popular location for retirement living, as reflected in the age profile. From 2011 to 2021, the profile shifted to have a larger proportion of people aged 60 and over. The age group between 20 to 39 have also expanded in the past 5 years.

FIGURE 2: HISTORIC POPULATION GROWTH, BY AGE GROUP, 2011-2021



Source: SGS Economics and Planning (2022). Based on ABS Census (2011-2021).

1.3 Migration

ABS Census data records whether people were living in the same location one and five years before the collection date. The 2021 data shows that 32 per cent of residents were not living in Alpine Shire five years ago, which is higher than the average for regional Victoria average (8 per cent). Within the Shire, Bright-Porepunkah has the highest proportion of new residents, with 1,397 new residents since 2016.

TABLE 1: MIGRATION – NUMBER OF RESIDENTS NOT LIVING IN THE SHIRE 1 AND 5 YEARS AGO, 2021

Area	1 year ago		5 years ago	
	No. of residents	% of LGA population	No. of residents	% of LGA population
Bright - Porepunkah	537	4%	1,397	11%
Myrtleford	373	3%	1,028	8%
Mount Beauty - Tawonga South	235	2%	592	4%
Other	445	3%	1,163	9%
LGA Total	**1,590**	**12%**	**4,180**	**32%**
	No. of residents	**% of VIC population**	**No. of residents**	**% of VIC population**
Regional Victoria	196,581	3%	526,535	8%

Source: SGS Economics and Planning (2022). Based on ABS Census (2021) – Counting persons, place of usual residence. UAI1P Usual Address One Year Ago Indicator and UAI5P Usual Address Five Years Ago Indicator.Between 2016 and 2021, 4,423 people have moved into the Shire, and 1,962 people have moved out of the Shire, resulting in a net increase of 2,461.

Table 2 and Table 4 show the origin of households who have moved into the Shire, and the destination of households who have moved out of the Shire in the 2021 Census since the 2016 Census.

Between 2016 and 2021, 4,423 people have moved into the Shire, and 1,962 people have moved out of the Shire, resulting in a net increase of 2,461.

TABLE 2: TOP TEN ORIGINS OF HOUSEHOLDS WHO MOVED TO ALPINE SHIRE BY LGA FIVE YEARS AGO, 2021

Top locations	Number of people who moved to Alpine	Per centage of total people who moved to Alpine
Overseas	276	6%
Wangaratta	105	2%
Wodonga	89	2%
Yarra Ranges	86	2%
Mornington Peninsula	68	2%
Greater Geelong	64	1%
Boroondara	63	1%
Indigo	60	1%
Port Phillip	59	1%
Albury	58	1%

Source: SGS Economics and Planning (2022). Based on ABS Census (2021) – Counting persons, place of usual residence. Local Government Areas of Usual Residence Five Years Ago.

TABLE 3: ORIGIN OF HOUSEHOLDS WHO MOVED TO ALPINE SHIRE BY BROAD REGION FIVE YEARS AGO, 2021

Region	Number of LGAs that had residents move to Alpine	% of LGAs that had residents move to Alpine
Metropolitan Melbourne	30	17%
Rest of Victoria	30	17%
Outside of Victoria	113	65%
LGA not defined	3	2%

Source: SGS Economics and Planning (2022). Based on ABS Census (2021) – Counting persons, place of usual residence. Local Government Areas of Usual Residence Five Years Ago. Per centages are rounded.

TABLE 4: TOP TEN DESTINATIONS OF HOUSEHOLDS WHO HAD MOVED FROM ALPINE SHIRE BY LGA FIVE YEARS AGO, 2021

Top locations	Number of people who left Alpine	Per centage of total people who left Alpine
Wangaratta	205	10%
Wodonga	197	10%
Indigo	105	5%
Greater Geelong	70	4%
Albury	65	3%
Melbourne	45	2%
Greater Bendigo	39	2%
Mornington Peninsula	35	2%
Whitehorse	35	2%
Brisbane	34	2%

Source: SGS Economics and Planning (2022). Based on ABS Census (2021) – Counting persons, place of usual residence. Local Government Areas of Usual Residence Five Years Ago.

TABLE 5: DESTINATION OF HOUSEHOLDS WHO MOVED FROM ALPINE SHIRE BY BROAD REGION FIVE YEARS AGO, 2021

Region	Number of LGAs that had residents left Alpine	% of LGAs that had residents left Alpine
Metropolitan Melbourne	30	25%
Rest of Victoria	30	25%
Outside of Victoria	60	51%
LGA not defined	1	1%

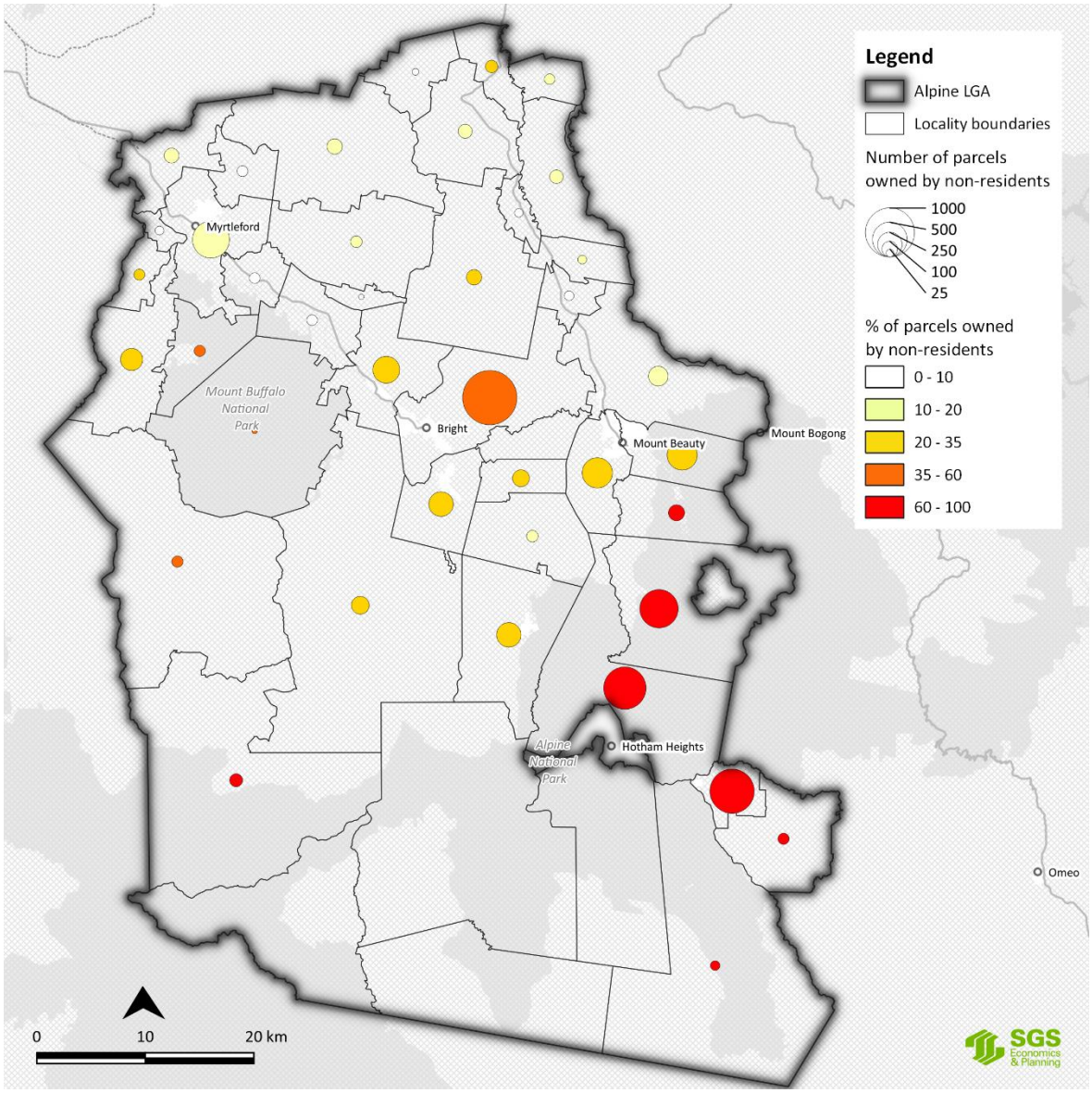
Source: SGS Economics and Planning (2022). Based on ABS Census (2021) – Counting persons, place of usual residence. Local Government Areas of Usual Residence Five Years Ago. Per centages are rounded.

1.4 Absentee landholdings

As of 2022, there were approximately 19,072 parcel lots in the Alpine Shire LGA. Of these, 31 per cent (or approximately 5,960) were owned by people who live outside of the LGA. Meanwhile 69 per cent of the properties (or approximately 13,112) were owned by Alpine residents.

Figure 3 shows the geographical spread of properties owned by ratepayers who live outside of the Alpine LGA. The map shows that majority of properties owned by non-residents are in Hotham Heights, Mount Beauty, Bright and Myrtleford. As these areas are deemed to be popular tourist destinations, one reason could be people buying properties for investment purposes (e.g., providing short-term rentals or Airbnb services) or simply owning them as holiday houses.

FIGURE 3: PROPERTIES OWNED BY NON-RESIDENTS, 2021



Source: SGS Economics and Planning (2022). Using data provided by Council.

Table 6 shows the top ten residential locations of ratepayers who own parcels of land within the Alpine LGA but live outside the municipality. Top locations are Lavington (NSW) and Wodonga, where residents from these two suburbs own approximately 2.4 per cent and 1.2 per cent of parcels in Alpine. There are also interstate ratepayers coming from Albury (NSW), Sydney (NSW) and Bundall (QLD). Lot size data was not available.

TABLE 6: TOP 10 RESIDENTIAL LOCATIONS OF RATEPAYERS WHO LIVE OUTSIDE ALPINE, 2021

Ratepayer residential suburb	No. of parcels owned in Alpine	% share of parcels in Alpine
Lavington	458	2.4%
Wodonga	219	1.1%
Tatura	106	0.6%
Albury	83	0.4%
Wangaratta	78	0.4%
Sydney	76	0.4%
Bundall	48	0.3%
Windsor	45	0.2%
Tatura	106	0.6%
Albury	83	0.4%

Source: SGS Economics and Planning (2022). Using data provided by Council.

Properties owned by absentee land holders have a range of implications for local property markets, the community and economy, including:

- Second homeowners can bring income and employment opportunities into an area from the initial purchase price of their property, spending on renovation and improvements, paying local taxes, and spending on food, leisure, and other services.
- Demand for holiday and second homes, puts pressure on the local housing market by creating direct competition for specific types of housing that otherwise could be used by permanent residents. This inflates the purchase price of housing, potentially beyond the means of residents, and contributes to the movement of locals outside of the town or municipality in search of affordable housing options. This trend has been exacerbated by the COVID-19 pandemic.
- Tensions are also apparent between the use of residential housing stock as holiday accommodation and the importance of holiday letting to the tourist industry. Offering choice in holiday accommodation is important for attracting tourists to the municipality. However, the higher rates obtained from holiday letting can result in more landlords removing housing from longer-term rentals in favour of short-term holiday accommodation. Short supply of long-term rentals can place upwards pressure on rental prices with implications for housing affordability in the Shire.
- A fundamental issue in relation to the maintenance of sustainable communities in rural areas is the extent to which the stock of residential dwellings in any community is fully occupied. Dwellings may

be empty or irregularly unoccupied for a variety of reasons, impacting the overall sense of community and other social factors. Based on the 2021 Census, 21.5 per cent of private dwellings in the Alpine Shire were unoccupied. This is higher than the Hume region average (13.9 per cent) and Victorian average (11.1 per cent), suggesting there is a higher proportion of holiday homes in the Alpine Shire LGA.

- Holiday homes let by owners who live elsewhere results in money earned from accommodation fees and rents not being retained in the local community.

1.5 Family Composition

Table 7 shows the family composition across Alpine Shire. Couple families without children (52 per cent) and couple families with children (35 per cent) make up the largest proportion of family types in Alpine Shire. In proportional terms, Mount Beauty-Tawonga South has the higher proportion of couple family without children (56 per cent) while Bright-Porepunkah has the highest proportion of couple family with children (35 per cent).

TABLE 7: FAMILY COMPOSITION, ALPINE SHIRE, 2021

Area	Couple family without children	Couple family with children	One parent family	Other family	Total
Bright-Porepunkah	517	345	117	11	990
Myrtleford	462	299	135	11	907
Mount Beauty-Tawonga South	275	157	57	6	495
Rest of LGA	640	460	114	10	1,224
LGA Total	**1,894**	**1,261**	**423**	**38**	**3,616**

Source: SGS Economics and Planning (2022). Based on ABS Census (2021) – Counting persons, place of enumeration. FMCF Family Composition.

Table 8 shows the historic shift in household composition in Alpine Shire. Overall, household composition did not change significantly between 2016 and 2021. The proportion of family households has increased by 11%, while that of group households has increased by 10%. Growth rates of family and group households are increasing faster than that of total households (8 per cent).

TABLE 8: HISTORIC SHIFT IN HOUSEHOLD COMPOSITION IN ALPINE SHIRE, 2016-2021

Household composition	2016	% share	2021	% share	Change 2016-21	Total change (%)
Family households	3,218	67%	3,567	68%	349	11%
Lone person households	1,492	31%	1,528	29%	36	2%
Group households	119	3%	131	3%	12	10%

Household composition	2016	% share	2021	% share	Change 2016-21	Total change (%)
Total	4,829	100%	5,226	100%	397	8%

Source: SGS Economics and Planning (2022). Based on ABS Census (2021) – Counting persons, place of enumeration. HHCD Household Composition.

2. Housing profile

2.1 Dwelling count

Table 9 shows the number of dwellings in Alpine Shire and its main towns across three Census years. Private dwellings[1] in the Alpine Shire LGA has increased from 6,872 in 2011 to 7,211 in 2021 (additional 339 dwellings). These new dwellings were mostly situated in Bright-Porepunkah and Mount Beauty-Tawonga South. Myrtleford and the rest of the LGA saw a decrease in total number of dwellings.

TABLE 9: DWELLINGS ALPINE SHIRE LGA AND MAIN TOWNS, 2011-2021

	2011		2016		2021			
	Total	% total dwelling stock	Total	% total dwelling stock	Total	% total dwelling stock	Change 2011-21	AAGR (2011-21)
Bright-Porepunkah	1,904	28%	1,993	28%	2,134	30%	230	1.2%
Myrtleford	1,505	22%	1,559	22%	1,612	22%	107	0.7%
Mount Beauty-Tawonga South	1,105	16%	1,084	15%	1,203	17%	98	0.9%
Rest of LGA	2,358	34%	2,552	36%	2,262	31%	-96	-0.4%
LGA total	**6,872**	**100%**	**7,188**	**100%**	**7,211**	**100%**	**339**	**0.5%**

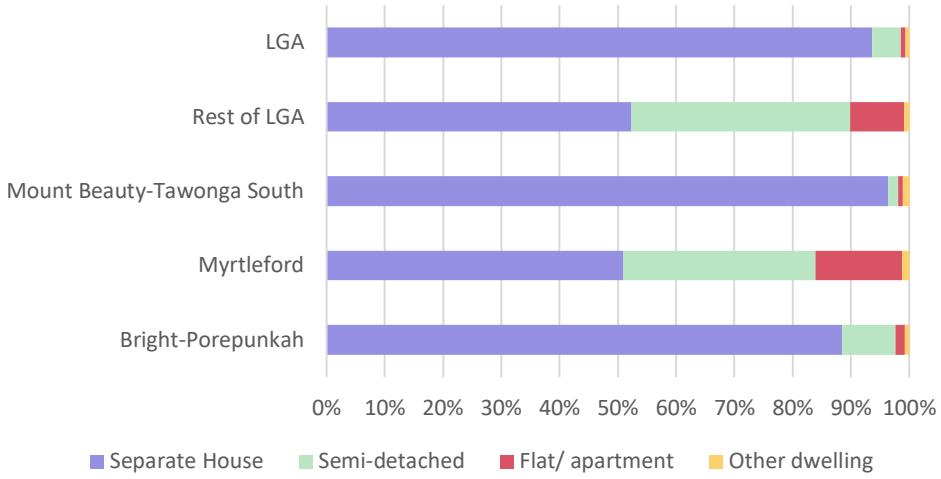
Source: SGS Economics and Planning (2022). Based on ABS Census (2011, 2016 and 2021).

2.2 Dwelling structure

Figure 4 shows the dwelling structure split in Alpine Shire in 2021. The profile of dwelling types differs by townships across the LGA. Mount Beauty-Tawonga South and Bright-Porepunkah regions have the highest proportion of separate houses (96 per cent and 88 per cent respectively). Meanwhile Myrtleford has a higher proportion of semi-detached dwellings (33 per cent) and flats or apartments (15 per cent) when compared to wider LGA and other main towns.

[1] Private dwellings include dwellings with 'visitor only and other non-classifiable households'.

FIGURE 4: DWELLING STRUCTURE ALPINE SHIRE LGA AND MAIN TOWNS, 2021

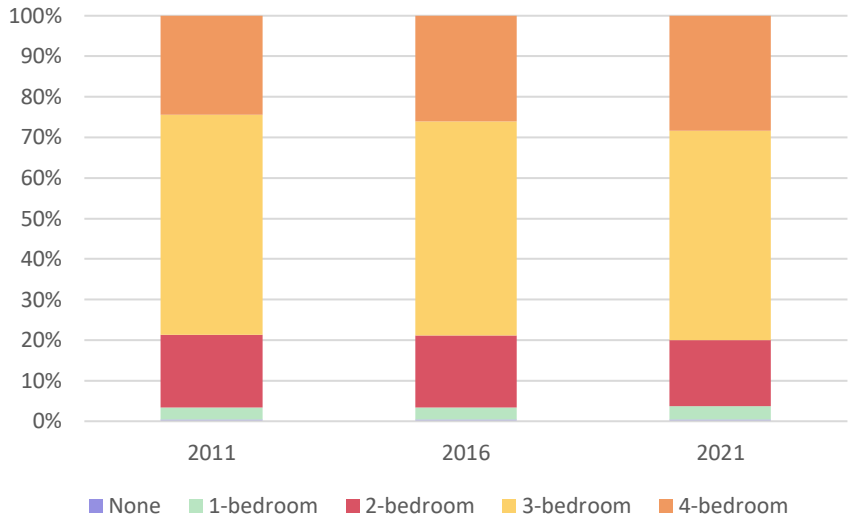


Source: SGS Economics and Planning (2022). Based on ABS Census (2021) – Counting dwellings, place of enumeration. Dwelling structure (STRD).

2.3 Dwelling size

The size of dwellings in the Alpine Shire LGA can be considered through the proxy measure of how many bedrooms they contain. Figure 5 shows the change in dwelling size in the LGA across Census years. There is no great variation in dwelling size across the LGA over the past decade - most houses in Alpine Shire have 3 or more bedrooms.

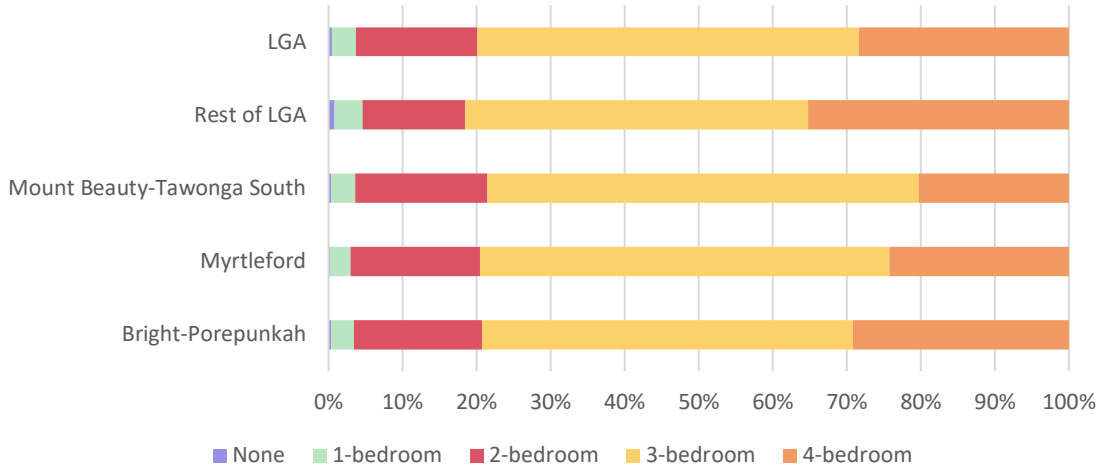
FIGURE 5: DWELLING SIZE, ALPINE SHIRE, 2011-2021



Source: SGS Economics and Planning (2022). Based on ABS Census (2011, 2016 and 2021) – Counting dwellings, place of enumeration. Number of bedrooms in a private dwelling (BEDD). Excluding 'not stated' option.

Figure 6 shows the dwelling size in Alpine Shire and the main towns in 2021. Again, there is no significant variation in dwelling size across the towns.

FIGURE 6: DWELLING SIZE, ALPINE SHIRE AND MAIN TOWNS, 2021

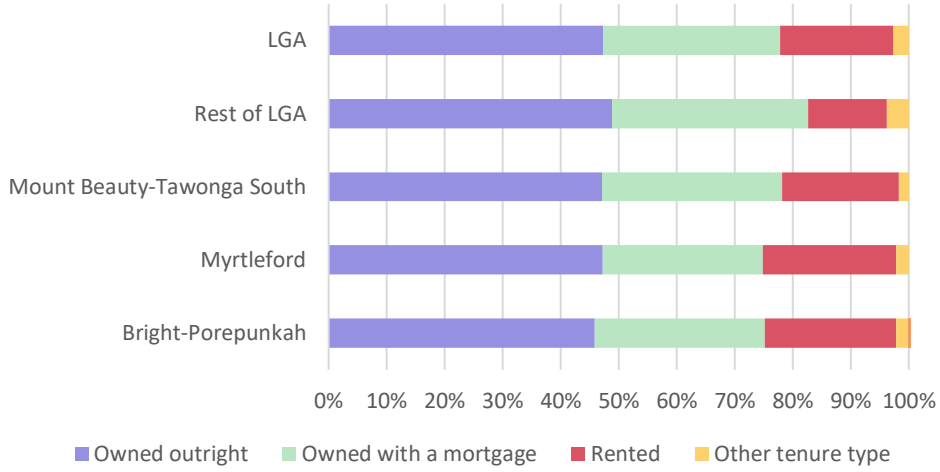


Source: SGS Economics and Planning (2022). Based on ABS Census (2021) – Counting dwellings, place of enumeration. Number of bedrooms in a private dwelling (BEDD). Excluding 'not stated' option.

2.4 Dwelling tenure

Figure 7 shows the tenure type split in Alpine Shire and the main towns in 2021. Across the LGA, majority of dwellings (78 per cent) are owned outright or owned with a mortgage. There is no significant difference in tenure type among the main towns.

FIGURE 7: TENURE TYPE, ALPINE SHIRE AND MAIN TOWNS, 2021

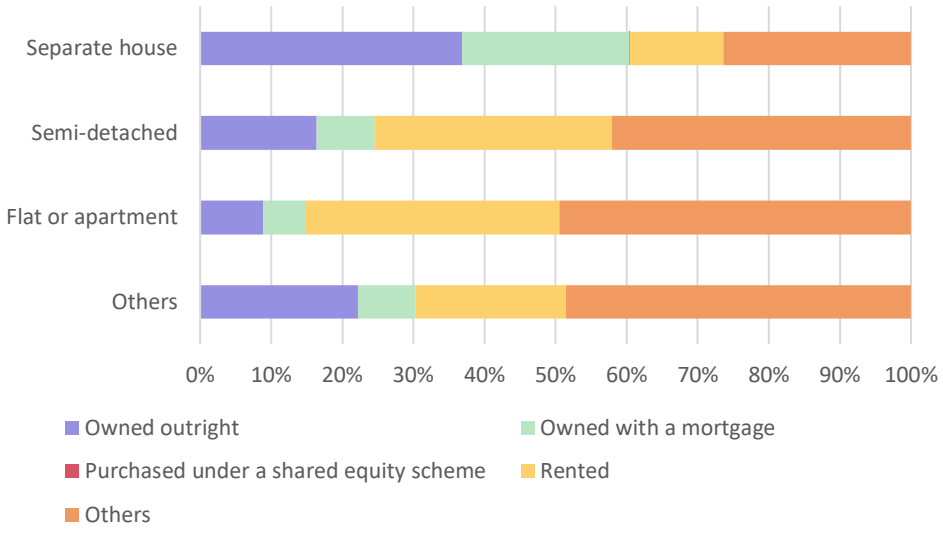


Source: SGS Economics and Planning (2022). Based on ABS Census (2021) – Counting dwellings, place of enumeration. TEND Tenure Type. Excluding 'not stated' option.

2.5 Dwelling structure by tenure type

Figure 8 shows the dwelling structure by tenure type of dwellings across the Shire in 2021. For separate houses - the most common dwelling structure in the Shire, 37% are owned outright, 23% are owned with a mortgage.

FIGURE 8: DWELLING STRUCTURE BY TENURE TYPE, ALPINE SHIRE, 2021



Source: SGS Economics and Planning (2022). Based on ABS Census (2021) – Counting dwellings, place of enumeration. STRD Dwelling Structure by TEND Tenure Type.

2.6 Dwelling occupancy

Based on the 2021 Census, 22 per cent of private dwellings in the Alpine Shire are unoccupied. This is higher than Hume average (14 per cent) and Victorian average (11 per cent). ABS defines unoccupied dwellings as

> *"structures built specifically for living purposes which are habitable, but unoccupied on Census night. Vacant houses, holiday homes, huts and cabins (other than seasonal workers' quarters) are counted as unoccupied private dwellings. Also included are newly completed dwellings not yet occupied, dwellings which are vacant because they are due for demolition or repair, and dwellings to let. Unoccupied private dwellings in caravan/residential parks, marinas and manufactured home estates are not counted in the Census."* [2]

It is not possible to determine from Census data the extent to which holiday homes and short term lettings comprise total unoccupied dwellings. However, it is reasonable to assume, given the designation of the LGA as a tourist destination and the distribution of unoccupied dwellings across towns in the Shire, that a considerable proportion of unoccupied dwelling stock is likely to be used for these purposes.

[2] Australian Bureau of Statistics (2023), Census dictionary.

The main towns had the following proportion of unoccupied private dwellings:

- Bright-Porepunkah: 27 per cent
- Myrtleford: 12 per cent
- Mount-Beauty-Tawonga South: 27 per cent

The above highlights the relative popularity of destinations like Bright and Mount Beauty for tourism.

Between 2016 and 2021, the number of unoccupied private dwellings across the Shire decreased by 199. This could suggest that more people were permanently living in the Shire in 2016, however it may also indicate that more holiday homes were occupied on Census night, signalling tourism is becoming less seasonal.

TABLE 10: DWELLING TYPE IN ALPINE SHIRE, 2021

	Occupied private dwellings		Unoccupied private dwellings		Total private dwellings
Area	Count	Share	Count	Share	Count
Bright-Porepunkah	1,423	73%	538	27%	1,961
Myrtleford	1,362	88%	181	12%	1,543
Mount Beauty - Tawonga South	812	73%	298	27%	1,110
Rest of LGA	1,625	80%	417	20%	2,042
LGA Total	**5,222**	**78%**	**1,434**	**22%**	**6,656**

Source: SGS Economics and Planning (2022). Based on ABS Census (2021) – Counting dwellings, place of enumeration.

2.7 Dwelling suitability[3]

Dwelling suitability is a measure of how suitable a dwelling's size is for its occupants. This is an indication of relative housing affordability as well as of the availability of appropriately sized housing. It is calculated by the ABS based on the usual residents and the number of bedrooms in each dwelling with the following rules:

- One bedroom is needed for each couple or single adult in a household
- Up to two children of the same sex under 18 can share a bedroom
- Children of different sexes under five can share a bedroom.

A designation of a bedroom as spare does not mean that is not used, only that the household may be able to live in a smaller dwelling.

[3] 2021 Census data for dwelling suitability is not available until October 2022.

Across the LGA, 55 per cent of all dwellings have two or more bedrooms spare. This suggests that there are several households and families living in large dwellings and may fit the profile that many retired households are occupying three- and four-bedroom dwellings with one or two spare bedrooms. This suggests there is a potential market for households to downsize, although some small households with spare bedrooms may intend to have children in future or continue to live in a relatively large dwelling. A very small proportion (1.5 per cent) of all households would need an additional bedroom to house their occupants appropriately.

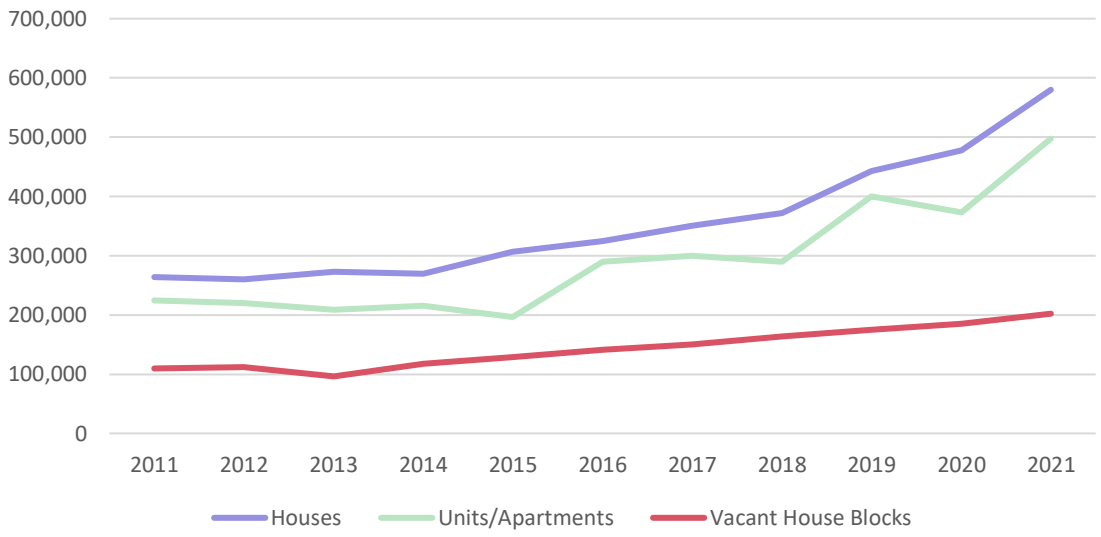
2.8 House and rental prices

Alpine Shire LGA

Figure 9 shows the change in median price for houses, units/apartments, and vacant house blocks in Alpine Shire in the past decade. In numerical terms, houses experienced the strongest growth, with an annual increase of $31,650 in the past decade. This is followed by units/apartments, with an annual increase of $27,250. In proportional terms, units/apartments have the highest average annual growth rate (10 per cent), followed by houses (8 per cent). Vacant house blocks have the least growth in median price compared to the others in both numerical and proportional terms.

The COVID-19 pandemic has caused a significant upswing in property prices across the state, and Alpine Shire is no exception. From 2020 to 2021, price for units/apartments in the LGA has increased by 34 per cent ($125,000 in numerical terms), while price for houses has increased by 21 per cent ($102,000 in numerical terms).

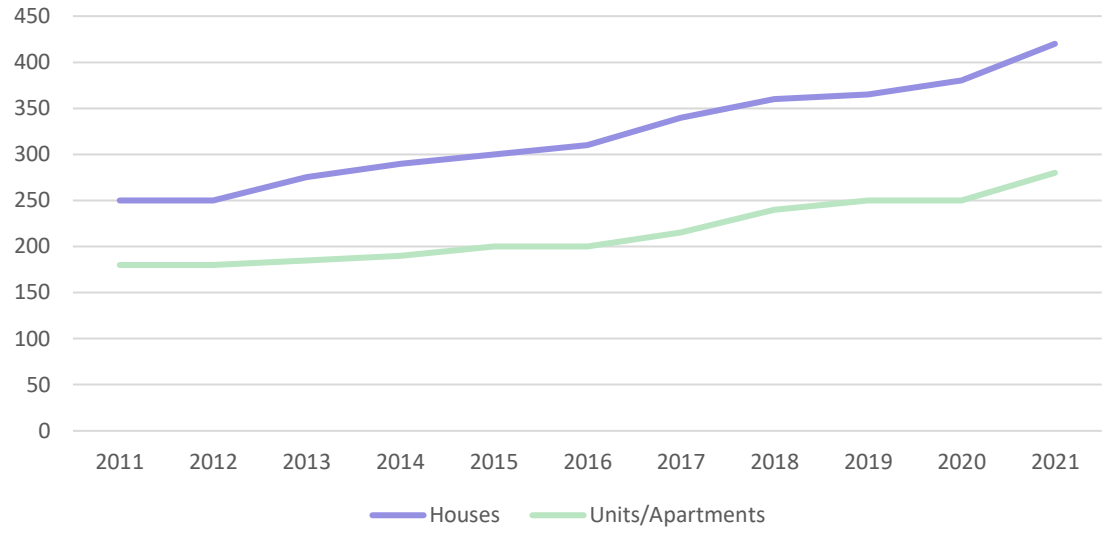
FIGURE 9: MEDIAN PROPERTY PRICES, ALPINE SHIRE, 2011-2021



Source: SGS Economics and Planning (2022). Based on Valuer-General Victoria (2021).

Figure 10 shows the change in median weekly rent for houses and units/apartments in Alpine Shire from 2011 to 2021. In the past decade, weekly rent for houses have increased from $250 to $420 (annual growth of 5 per cent) while weekly rent for units/apartments have increased from $180 to $250 (annual growth of 5 per cent).

FIGURE 10: MEDIAN WEEKLY RENT, ALPINE SHIRE, 2011-2021

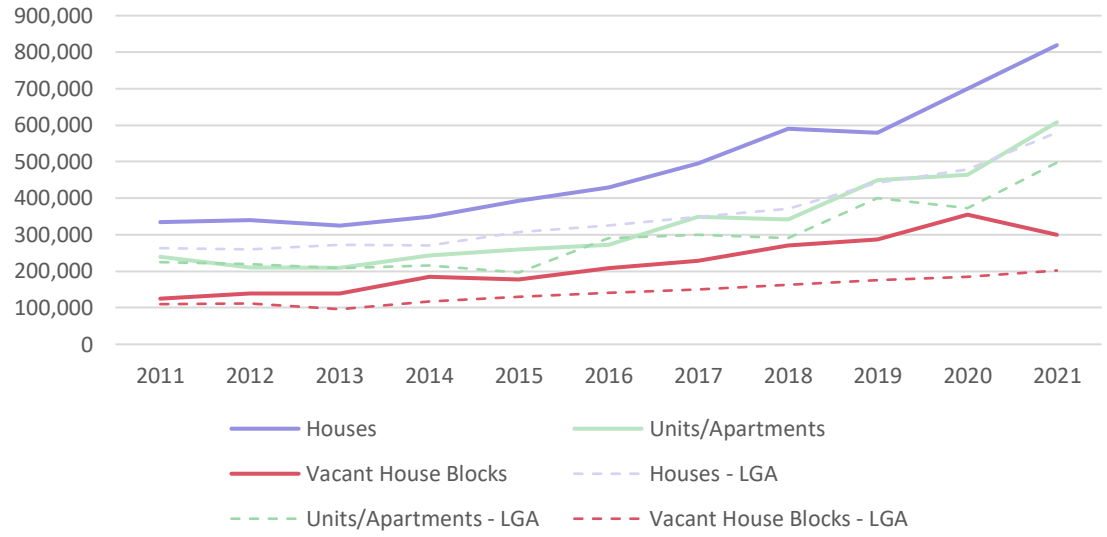


Source: SGS Economics and Planning (2022). Based on Valuer-General Victoria (2021). Rental properties with 0-2 bedrooms are categorised as 'units/apartments' while properties with 3 or more bedrooms are categorised as 'houses'.

Bright

Figure 11 shows the change in median price for houses, units/apartments, and vacant house blocks in Bright, compared to Alpine Shire in the past decade. All property types in Bright were more expensive compared to the wider LGA. Houses experienced the strongest growth in price, with an average annual increase of $48,400 in the past decade. This is higher than the LGA median ($31,650). Units/apartments were also more expensive in Bright compared to the LGA, with an annual increase of $38,800 when compared to the LGA ($27,250).

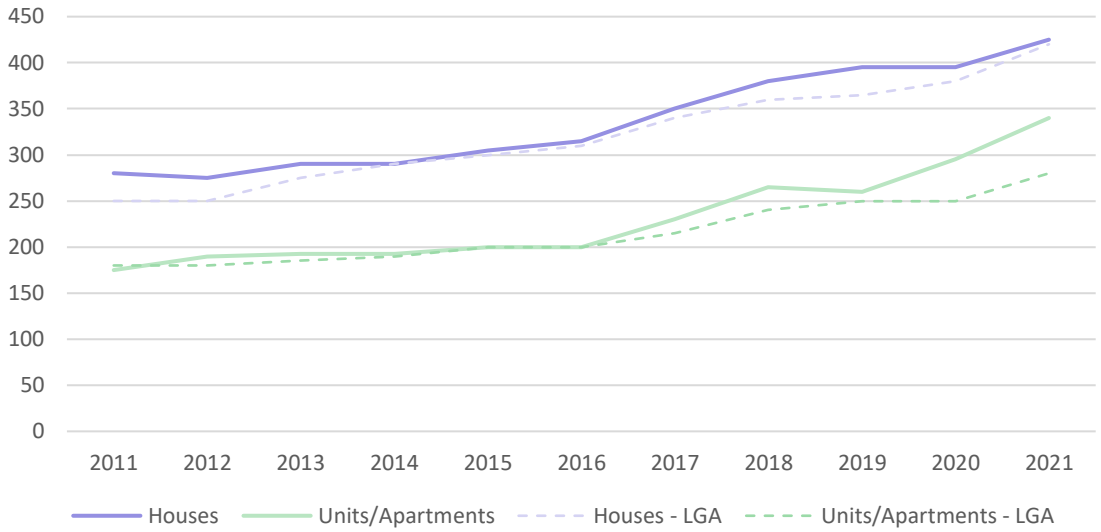
FIGURE 11: MEDIAN PROPERTY PRICES, BRIGHT AND ALPINE SHIRE, 2011-2021



Source: SGS Economics and Planning (2022). Based on Valuer-General Victoria (2021).

Figure 12Figure 12 shows the change in median weekly rent for houses and units/apartments in Bright, compared to Alpine Shire from 2011 to 2021. In the past decade, weekly rent for both houses and units/apartments in Bright were slightly higher than the LGA median. In 2021, weekly rent for units/apartments in Bright surged to $340 after COVID-19, which was significantly higher than the LGA ($280).

FIGURE 12: MEDIAN WEEKLY RENT, BRIGHT AND ALPINE SHIRE, 2011-2021

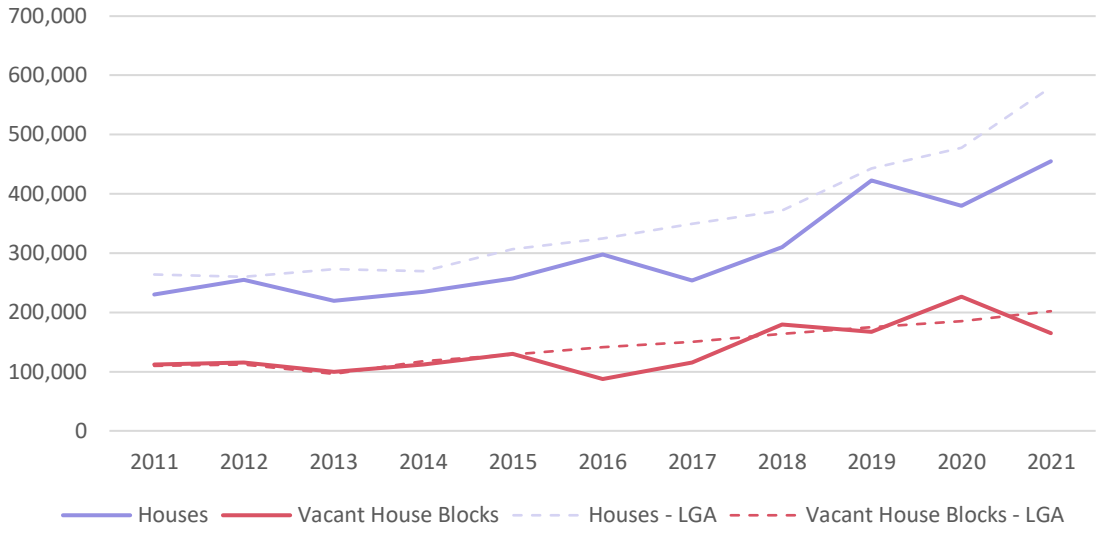


Source: SGS Economics and Planning (2022). Based on Valuer-General Victoria (2021). Rental properties with 0-2 bedrooms are categorised as 'units/apartments' while properties with 3 or more bedrooms are categorised as 'houses'.

Tawonga South

Figure 13 shows the change in median price for houses, units/apartments, and vacant house blocks in Tawonga South, compared to Alpine Shire in the past decade. There had been some volatility in the property market in Tawonga South, especially after 2015. Price for houses was historically lower than the LGA median, with an average annual growth of $22,500.

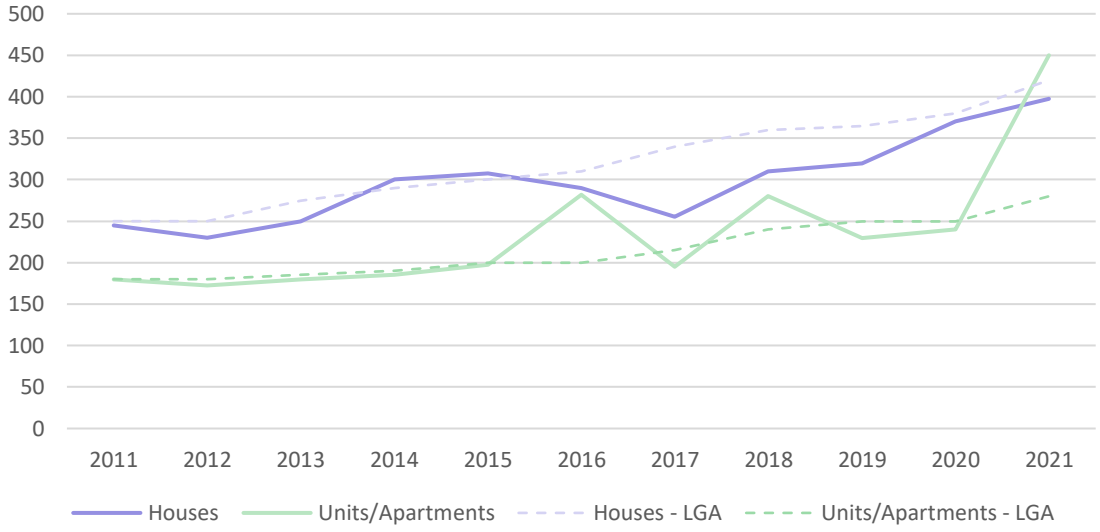
FIGURE 13: MEDIAN PROPERTY PRICES, TAWONGA SOUTH AND ALPINE SHIRE, 2011-2021



Source: SGS Economics and Planning (2022). Based on Valuer-General Victoria (2021). No data available on units/apartments.

Figure 14 shows the change in median weekly rent for houses and units/apartments in Tawonga South, compared to Alpine Shire from 2011 to 2021. The rental market in Tawonga South has been volatile in the past decade, particularly for units/apartments where rents fluctuated wildly after 2015. Weekly rent for units/apartments has increased by 2.5-fold to $450 in 2021, which is significantly higher than the LGA median ($280).

FIGURE 14: MEDIAN WEEKLY RENT, TAWONGA SOUTH AND ALPINE SHIRE, 2011-2021

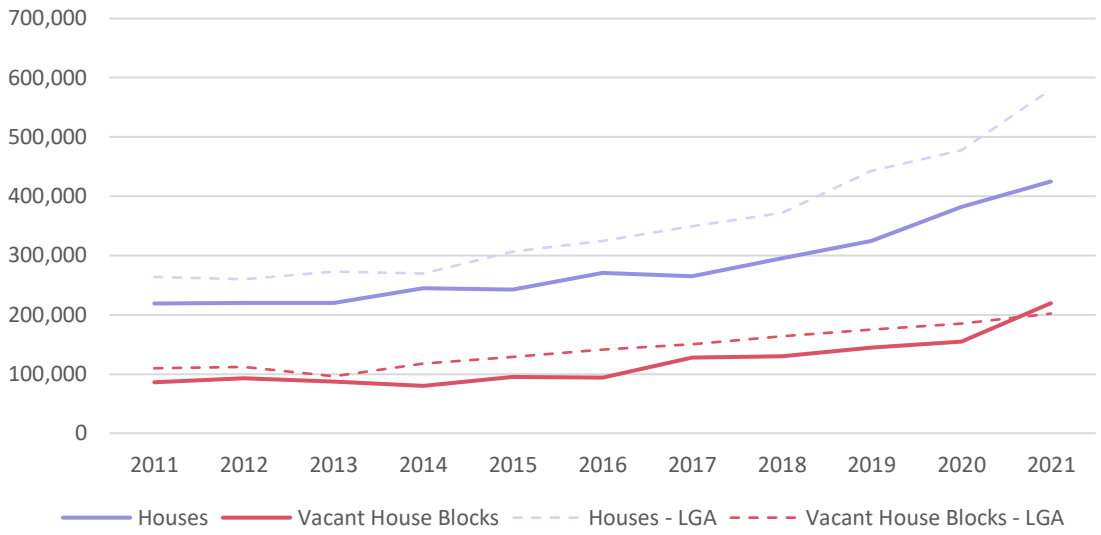


Source: SGS Economics and Planning (2022). Based on Valuer-General Victoria (2021). Rental properties with 0-2 bedrooms are categorised as 'units/apartments' while properties with 3 or more bedrooms are categorised as 'houses'.

Myrtleford

Figure 15 shows the change in median price for houses, units/apartments, and vacant house blocks in Myrtleford, compared to Alpine Shire in the past decade. Houses in Myrtleford were historically cheaper compared to the wider LGA. The price of houses in Myrtleford was growing at $20,600 per annum, which was lower than the LGA ($31,650 per annum). Meanwhile price of vacant houses in Myrtleford closely followed the LGA trend and has slightly surpassed the LGA median in 2020.

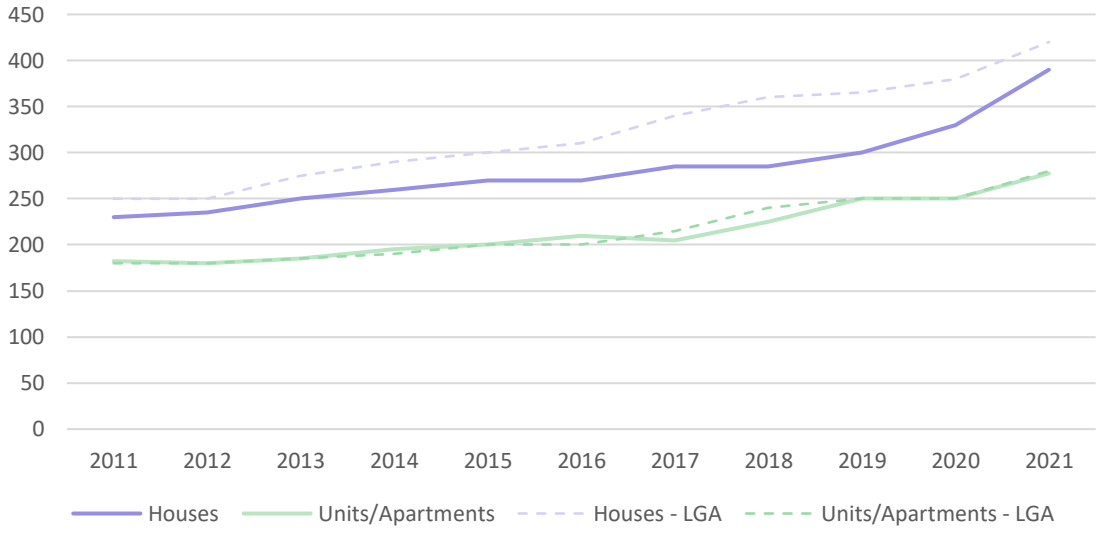
FIGURE 15: MEDIAN PROPERTY PRICES, MYRTLEFORD AND ALPINE SHIRE, 2011-2021



Source: SGS Economics and Planning (2022). Based on Valuer-General Victoria (2021). No data available on units/apartments.

Figure 16 shows the change in median weekly rent for houses and units/apartments in Myrtleford, compared to Alpine Shire from 2011 to 2021. Weekly rent for houses in Myrtleford was historically lower than the LGA median, meanwhile weekly rent for units/apartments was like the wider LGA.

FIGURE 16: MEDIAN WEEKLY RENT, MYRTLEFORD AND ALPINE SHIRE, 2011-2021



Source: SGS Economics and Planning (2022). Based on Valuer-General Victoria (2021).

2.9 Recent development

Table 11 shows new dwellings based on building permit approvals (construction completions) in Alpine Shire between 2016 and 2021.

TABLE 11: YEARLY NUMBER OF DWELLINGS CONSTRUCTED IN ALPINE SHIRE BY SUB-REGION, 2016-2021

Location	2016	2017	2018	2019	2020	2021 YTD	Total	Yearly average
LGA total	66	73	91	99	78	65	472	**79**

Source: SGS Economics and Planning (2022). Based on Council's building permit completions data.

Table 12 shows the number of dwelling constructions by town. For the whole Shire, 40 per cent of dwelling constructions occurred in Bright between 2016-2021, while 19 per cent of construction completions occurred in Myrtleford, 9 per cent in Tawonga South, 3 per cent Tawonga and 2 per cent in Mount Beauty.

Table 13 shows the distribution of dwelling construction permits by zone, with the largest share occurring in the General Residential Zone (54 per cent) and the Low Density Residential Zone (15 per cent). 472 dwellings were constructed in the urban areas of Alpine (or 79 dwellings per year on average).

TABLE 12: YEARLY NUMBER OF DWELLINGS CONSTRUCTED IN ALPINE SHIRE BY TOWN, 2016-2021

Town	Total 2016-2021	% share
Bright	189	40.0%
Myrtleford	91	19.3%
Porepunkah	46	9.7%
Tawonga South	41	8.7%
Wandiligong	20	4.2%
Harrietville	17	3.6%
Tawonga	13	2.8%
Mount Beauty	10	2.1%
Dinner Plain	10	2.1%
Buffalo River	6	1.3%
Mudgegonga	4	0.8%
Dederang	3	0.6%

Town	Total 2016-2021	% share
Eurobin	3	0.6%
Freeburgh	3	0.6%
Smoko	2	0.4%
Buckland (Vic.)	2	0.4%
Gapsted	2	0.4%
Barwidgee	2	0.4%
Nug Nug	1	0.2%
Merriang	1	0.2%
Coral Bank	1	0.2%
Ovens	1	0.2%
Upper Gundowring	1	0.2%
Mongans Bridge	1	0.2%
Kancoona	1	0.2%
Kergunyah South	1	0.2%
Total	**472**	**100.0%**

Source: SGS Economics and Planning (2022). Based on Council's building permit completions data.

TABLE 13: YEARLY NUMBER OF DWELLINGS CONSTRUCTED IN ALPINE SHIRE BY ZONE, 2016-2021

Zone	Total 2016-2021	% share
GRZ1	256	54.2%
LDRZ	71	15.0%
TZ	62	13.1%
FZ	48	10.2%
SUZ1	10	2.1%
RLZ	9	1.9%
RDZ1	8	1.7%
C1Z	4	0.8%
PCRZ	4	0.8%

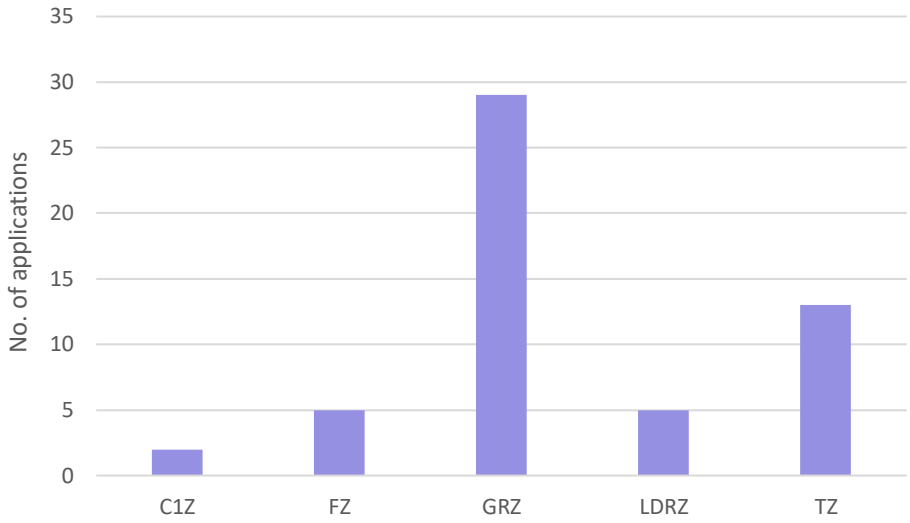
Zone	Total 2016-2021	% share
Total	472	100%

Source: SGS Economics and Planning (2022). Based on Council's building permit completions data.

2.10 Recent subdivisions

Figure 17 shows the number of subdivision applications by residential zones from 2017 to 2020. More than half of the applications were on General Residential Zone, followed by Township Zone.

FIGURE 17: SUBDIVISIONS BY RESIDENTIAL ZONE, 2017-2020



Source: SGS Economics and Planning (2022). Based on Council's residential subdivisions data.

Table 14 shows the average number of lots resulting from subdivision by residential zone from 2017 to 2020. Overall, applications on General Residential Zone (GRZ) have the highest average number of lots (4.8), followed by Township Zone (TZ) (4.0).

TABLE 14: AVERAGE NO. OF LOTS BY RESIDENTIAL ZONE, 2017-2020

Residential Zone	Average no. of lots
C1Z	4.5
FZ	2.2
GRZ	4.8
LDRZ	3.8
TZ	4.0

Source: SGS Economics and Planning (2022). Based on Council's residential subdivisions data.

3. Employment profile

3.1 Employment profile

As set out in the *Alpine Shire Economic Development Strategy* (2021), of 2019, the Alpine Shire generated total economic output of $1.5 million, regional export value of $379 million and total value-add of $683 million.[4] The Alpine Shire economy, in terms of economic output, is driven by the following five industry sectors:

- Manufacturing ($222m or 15 per cent).
- Agriculture, Forestry and Fishing ($200m or 14 per cent), which is driven by both the agricultural (Nuts,, Grains, Beef & Dairy Cattle) – $83m or 6 per cent– and Forestry and Logging ($48m or 3 per cent) sub-sectors.
- Rental, Hiring and Real Estate Services ($189m or 13 per cent).
- Construction ($181m or 12 per cent).
- Accommodation and Food Services ($128m or 9 per cent).

These key sectors have potential for growth over the long-term, particularly if population and visitation growth continues within Alpine Shire. In addition, continued diversification, innovation, and productivity within the agricultural sector – through the production of raw materials – is linked to the growth of the manufacturing sub-sectors, including timber-related production and food and beverage processing. This presents the opportunity to expand the Shire's key industries and consolidate areas of strength.

In 2019, there were 1,568 businesses registered in the Alpine Shire. The majority of businesses are non-employing (61 per cent) or small businesses (37 per cent). Businesses are primarily in the Agricultural sector (24 per cent), followed by Construction (16 per cent) and Accommodation and Food Services (10 per cent).[5]

While the total number of jobs in the Shire decreased by around 150 between 2006 and 2016, jobs have since increased overall in 2021 with 565 more jobs than recorded in 2006.The industries that have experienced the largest rate of job loss are Retail Trade (-96), Public Administration and Safety (-53) and Accommodation & Food Services (-42).

Conversely, Administrative and Support Services (+45), Professional, Scientific and Technical Services (+30) and Health Care & Social Assistance (+26) are the largest growing employment sectors.

As of 2019, the Alpine Shire supported 4,743 jobs, with the five largest employing sectors as follows:

- Accommodation and Food Services (691 jobs or 15 per cent).
- Retail Trade (552 jobs or 12 per cent).
- Health Care & Social Assistance (516 jobs or 11 per cent).

[4] Urban Enterprise for Alpine Shire Council, *Alpine Shire Economic Development Strategy*, 2021, p. 10.
[5] Urban Enterprise for Alpine Shire Council, *Alpine Shire Economic Development Strategy*, 2021, p. 10.

- Agriculture, Forestry & Fishing (510 jobs or 11 per cent).
- Manufacturing (466 jobs or 10 per cent).

These are also the largest sectors by employment in the Hume Region. However, Accommodation and Food Services generates a significantly larger proportion of jobs in Alpine Shire (15 per cent) compared to the Hume Region (8 per cent). This is attributed to the size of the Shire's tourism industry.

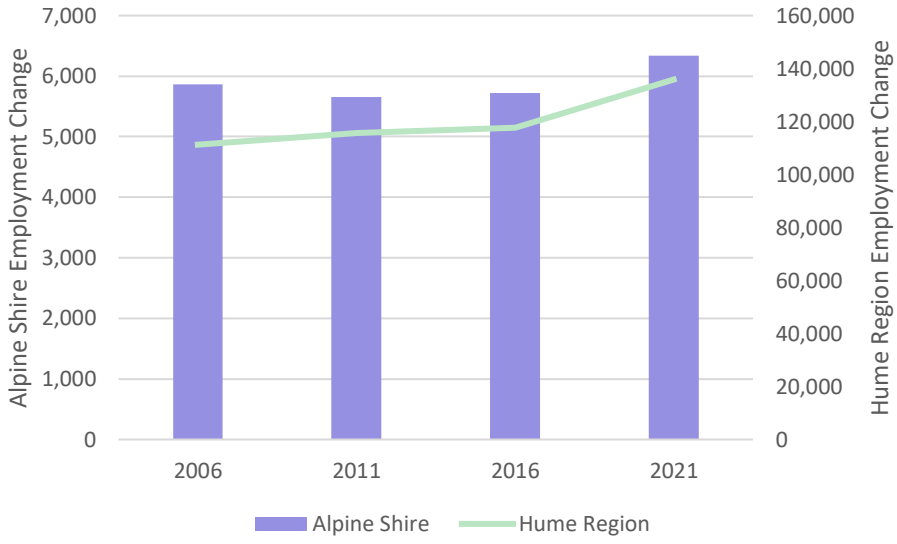
The job containment rate in the Shire (people who both live and work in the area) is relatively high at 88 per cent. The economic profile reinforces the important role of the visitor economy in Alpine Shire, with 15 per cent of jobs being recorded in Accommodation and Food services. Retail trade is also likely to be impacted by the strength of the tourism industry with 12 per cent of jobs. Primary industry remains an important contributor to jobs as well as total output to Alpine Shire.

3.2 Historic employment growth

Table 15 compares the industries of employment for Alpine Shire and the Hume region and notes which sectors have grown or reduced in size over the period 2016 to 2021. The Alpine Shire's average annual employment growth was around 2 per cent, slightly lower than that of the Hume Region (3 per cent).

Figure 18 shows the historic employment growth in Alpine Shire, compared to the Hume region. It shows that the growth trajectory for employment overall in both Alpine Shire and the Hume region is relatively similar.

FIGURE 18: HISTORIC EMPLOYMENT GROWTH IN ALPINE SHIRE AND THE HUME REGION, 2006-2021



Source: SGS Economics and Planning (2022). Based on ABS Census (2006-2021) - Counting persons, place of enumeration. 1-digit level INDP Industry of Employment by LGA. Excluding 'Inadequately described', 'Not stated', 'Not applicable' and 'Overseas visitor' options.

TABLE 15: HISTORIC CHANGE IN KEY INDUSTRIES OF EMPLOYMENT IN ALPINE SHIRE AND THE HUME REGION, 2016-2021

Industry of employment	Alpine LGA				Hume Region			
	2021	% share	Change 2016-2021	AAGR	2021	% share	Change 2016-2021	AAGR %
Agriculture, Forestry and Fishing	521	8%	39	1%	10,874	8%	1,154	2%
Mining	29	0%	-4	-3%	480	0%	104	4%
Manufacturing	503	8%	14	1%	12,651	9%	772	1%
Electricity, Gas, Water and Waste Services	95	1%	1	0%	1,728	1%	43	0%
Construction	545	9%	74	3%	14,891	11%	3,881	5%
Wholesale Trade	105	2%	18	3%	3,034	2%	194	1%
Retail Trade	576	9%	14	0%	12,870	9%	632	1%
Accommodation and Food Services	864	14%	100	2%	9,374	7%	930	2%
Transport, Postal and Warehousing	216	3%	22	2%	6,285	5%	586	2%
Information Media and Telecommunications	35	1%	1	1%	891	1%	-88	-2%
Financial and Insurance Services	121	2%	30	5%	2,060	2%	264	3%
Rental, Hiring and Real Estate Services	119	2%	-1	0%	1,353	1%	18	0%
Professional, Scientific and Technical Services	363	6%	91	5%	5,460	4%	963	4%
Administrative and Support Services	192	3%	-24	-3%	4,033	3%	267	1%

Industry of employment	Alpine LGA				Hume Region			
	2021	% share	Change 2016-2021	AAGR	2021	% share	Change 2016-2021	AAGR %
Public Administration and Safety	377	6%	38	2%	10,100	7%	1,060	2%
Education and Training	544	9%	74	3%	11,593	9%	1,900	3%
Health Care and Social Assistance	805	13%	109	3%	21,155	16%	4,751	4%
Arts and Recreation Services	159	3%	52	7%	1,669	1%	172	2%
Other Services	180	3%	8	1%	5,358	4%	708	3%
Total	**6,349**	**100%**	**656**	**2%**	**135,859**	**100%**	**18,311**	**3%**

Source: SGS Economics and Planning (2022). Based on ABS Census (2016, 2021) - Counting persons, place of enumeration. 1-digit level INDP Industry of Employment by LGA. Excluding 'Inadequately described', 'Not stated', 'Not applicable' and 'Overseas visitor' options.

3.3 Visitor economy [6]

In 2019, Alpine Shire received 852,063 visitors, driven by domestic overnight (60 per cent) and daytrip (39 per cent) visitors. This represents 16 per cent of total visitation to the High Country. Due to the small proportion of international visitation, the Shire is less impacted by the decline of international tourism – due to COVID-19 – and domestic tourism will, therefore, be the primary focus for the industry in the short to medium term.

Between 2010-19, visitation to the Shire grew by 344,123 visitors (6 per cent per annum). The visitor economy generated $379 million in direct expenditure for 2019, driven by domestic overnight visitors (81 per cent). This represents 22 per cent of total visitor expenditure in the High Country.

The Shire attracts a large proportion of 'holiday/leisure' visitors for daytrip (72 per cent) and domestic overnight (75 per cent) markets, compared to the regional average of around 50 per cent. This is a strength for Alpine Shire as holiday visitors are more desirable as they have a higher propensity to engage in leisure and entertainment activities and generate higher yield.

[6] Ibid.

4. Implications for the Land Development Strategy

4.1 Population profile

- The COVID-19 pandemic has caused a surge in remote working and allowed professionally mobile workers to move away from cities to regional areas. This is reflective in the data as population in the LGA increased by 423 persons after 2019. Major urban employers have signalled that enhanced working from home arrangements will stay in place post COVID-19. [7]
- As the population grows, the proportion of older adults in the Shire as a share of total population will increase (reflecting national trends), and the share of adults aged between 20 and 39 may also grow marginally. Growth in the proportion of older adults and elders has implications for infrastructure and service planning in the Shire, as well as highlighting the need for some housing diversity to offer downsizing and assisted living opportunities.
- The largest share of recent movers to Alpine Shire originated from other major regional cities, including Wangaratta and Wodonga. Many also moved from outer metropolitan areas of Melbourne, such as Mornington Peninsula and Yarra Ranges.
- 31 per cent of properties in Alpine Shire are owned by people who live outside of the LGA. People may own second (or subsequent properties) for a range of reasons (for instance, as an investment or holiday home). Non-resident ratepayers have implications for local housing markets, including creating additional demand for housing, and placing upwards pressure on the purchase and rental price of housing.
- Seasonal fluctuations in population due to tourism have servicing and infrastructure implications for the Shire. This becoming a larger challenge as tourism appears to be decoupling from strict peak seasons, and more local tourists visiting the Shire for weekend trips—meaning the population in towns like Bright often swells to many times its usual size, on a weekly or monthly basis.

4.2 Housing profile

- In 2021 there were 7,211 dwellings in Alpine Shire, 78 per cent of which were occupied and 21 per cent were unoccupied. Most housing in the Shire is separate dwellings, with the most common dwelling size being 3-bedroom and 4-bedroom houses. Majority of dwellings are in Bright-Porepunkah (30 per cent of total dwellings) and Myrtleford (22 per cent of total dwellings).
- Most dwellings in the Shire have one or two spare bedrooms, suggesting many dwellings are being occupied by families that are smaller than the average household size. This suggests there is a potential market for households to downsize, although some small households with spare bedrooms may intend to have children in future or continue to live in a relatively large dwelling. A

[7] https://population.gov.au/sites/population.gov.au/files/2021-09/the-impacts-of-covid-on-migration-between-cities-and-regions.pdf

very small proportion of all households would need an additional bedroom to house their occupants appropriately (1.5 per cent).

- House prices across the Shire have steadily increased across the Shire over the past decade. As with many parts of Australia, house prices increased rapidly during the COVID-19 pandemic. Between 2020 and 2021, the price for units/apartments in the LGA has increased by 34 per cent ($125,000 in numerical terms), while price for houses has increased by 21 per cent ($102,000 in numerical terms). House and rental price growth were strongest in Bright.
- Between 2011 and 2021, most development activity occurred in Bright and Myrtleford.. The area around Bright and Myrtleford have been the focus of more than 59 per cent of new dwellings constructed since 2016. Other popular locations are Porepunkah and Tawonga South (relative to other smaller townships), the main towns that have had capacity to accommodate additional housing in recent years.
- The Shire has a high proportion of homes being used for short-term accommodation), especially in towns like Bright and Mount Beauty-Tawonga South that are popular holiday destinations. This has implications when planning for the supply of additional residential land in future, as there are already shortages of affordable and available long-term rentals and houses available for sale in the Shire. Without sufficient housing for all segments of the local population, including key workers, the local economy may suffer from staff and skill shortages in future.

4.3 Economic profile

- As of 2019, the Alpine Shire supported 4,743 jobs, with the five largest employing sectors as follows:
  - Accommodation and Food Services (691 jobs or 15 per cent).
  - Retail Trade (552 jobs or 12 per cent).
  - Health Care & Social Assistance (516 jobs or 11 per cent).
  - Agriculture, Forestry & Fishing (510 jobs or 11 per cent).
  - Manufacturing (466 jobs or 10 per cent).
- These are also the largest sectors by employment in the Hume Region. However, Accommodation and Food Services generates a significantly larger proportion of jobs in Alpine Shire (14 per cent) compared to the Hume Region (7 per cent). This is attributed to the size of the Shire's tourism industry.
- The job containment rate in the Shire (people who both live and work in the area) is relatively high at 88 per cent. The economic profile reinforces the important role of the visitor economy in Alpine Shire, with 14 per cent of jobs being recorded in Accommodation and Food services. Retail trade is also likely to be impacted by the strength of the tourism industry with 9 per cent of jobs. Primary industry remains an important contributor to jobs as well as total output to Alpine Shire.
- In 2019, Alpine Shire received 852,063 visitors, driven by domestic overnight (60 per cent) and daytrip (39 per cent) visitors. This represents 16 per cent of total visitation to the High Country. Due to the small proportion of international visitation, the Shire is less impacted by the decline of

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- The Shire attracts a large proportion of 'holiday/leisure' visitors for daytrip (72 per cent) and domestic overnight (75 per cent) markets, compared to the regional average of around 50 per cent. This is a strength for Alpine Shire as holiday visitors are more desirable as they have a higher propensity to engage in leisure and entertainment activities and generate higher yield. However, this is also linked to the economic challenge that owning housing for short-term holiday rentals is impacting the long-term rental and housing market for key workers in the Shire.

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ALPINE SHIRE COUNCIL

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Appendix C: Housing demand and capacity

Alpine Shire Council

Land Development Strategy

July 2024

ALPINE SHIRE COUNCIL

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Contents

1. Population forecast scenarios

The key driver of housing demand in Alpine Shire is population growth, in combination with factors such as broader demographic shifts and local housing market dynamics. The following section presents three population growth scenarios: a base case scenario using official state government population projects, as well as two alternative population scenarios which account for the impacts of and recovery from COVID to varying degrees.

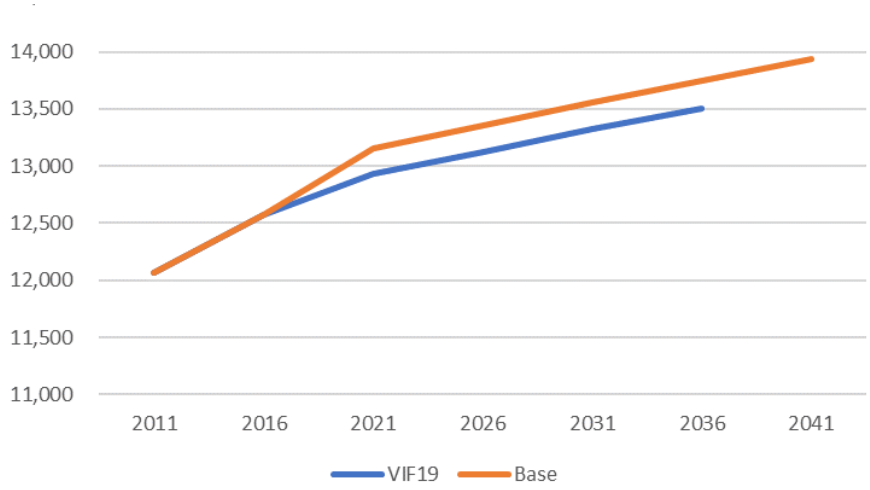
1.1 'Base case' population forecast

The Victoria in Future (VIF) forecast is produced by the Victorian Government and provides planning assumptions with a common approach across the State to the year 2036. The VIF projects the total estimated residential population (ERP) in the LGA. ERP is a population estimate created by the ABS, and historical ERP is the best available estimate of the overall population. In creating ERP estimates, the ABS corrects for undercounts in the ABS census, residents temporarily overseas and other small corrections, and so ERP figures are higher than census counts.

Historical ERP statistics and the VIF projections for Alpine Shire are shown in Figure 1. Based on VIF projections, total population in the LGA is expected to reach 13,507 persons by 2036, growing by 0.3% per annum (39 persons per year in numerical terms).

A 'base case' population growth scenario has been established by utilising VIF19, with adjustments to align the forecast with the recorded ERP figure from Census 2021. The projected average annual growth rate (AAGR) recorded in VIF19 at year 2036 has also been extended a further five years to the 2041 LDS horizon. The base case scenario results in a marginally higher population change over the 20-year period compared to the VIF19 forecast (Figure 1). The base case population scenario sees a population of 13,936 in 2041, growing by 780 people from 2021.

FIGURE 1: COMPARISON OF VIF19 AND BASE CASE SCENARIO POPULATION PROJECTIONS, 2001 TO 2041



Source: Victoria in Future (2019), Population projections 2016 to 2036; SGS Economics and Planning (2023)

1.2 Alternative population scenarios

Since the release of the most recent VIF forecasts in 2019, the COVID-19 pandemic has disrupted and shifted population growth trends. According to the ABS's ERP data in the 2020-21 financial year, the population in Alpine Shire increased by 2 percent; well above the projected population growth set out in the VIF19 estimates. As such, the VIF forecasts are now out of date.

The Australian Government's Centre for Population's (CfP) 2022 Population Statement details the early impacts of the Covid-19 pandemic on Australia's population and projects its implications into the future. The '2022 Population Statement' provides growth rates for regional Victoria as a whole.

SGS Economics and Planning has prepared two alternative scenarios for population growth, building on the 'base case' scenario discussed above, accounting for COVID impacts. These scenarios take account of:

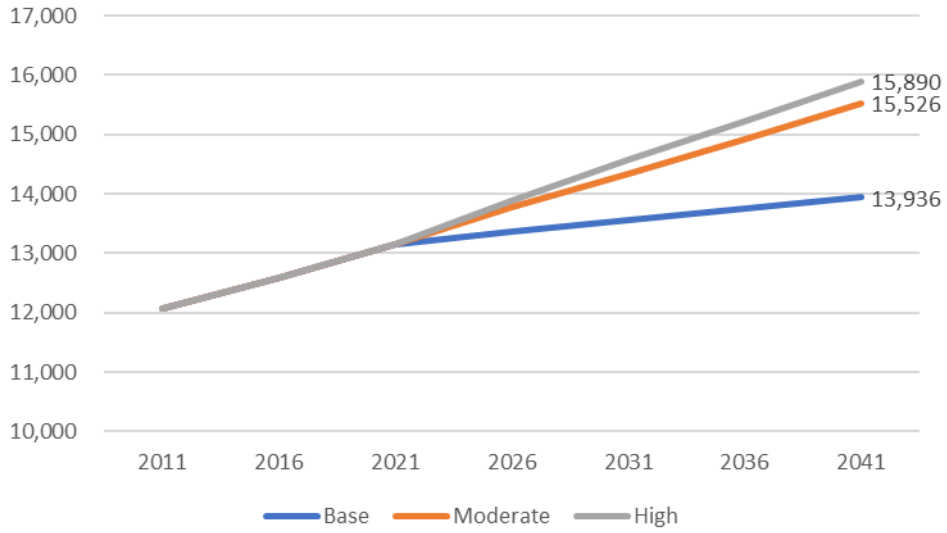
- Continuing uncertainty regarding population trends for regional areas over the long term.
- Aggregation of CfP estimates of population growth for all of regional Victoria. It is reasonable to assume that Alpine Shire might experience a longer running increase in population growth on average than other parts of the state.

These alternative population scenarios are:

- Moderate scenario: Contains a COVID-19 growth uptick based on current migration patterns, then growth rates taper to pre-COVID rates (10-year average) after a two to three-year period in line with CfP predictions
- High scenario: Contains a COVID-19 growth uptick based on current migration patterns, then growth rates taper to pre-COVID rates (10-year average) after a five year period.

The projected growth rates and ultimate population figures for each scenario are set out in Table 1.

FIGURE 2: FORECAST POPULATION GROWTH SCENARIOS COMAPRISON, 2001 TO 2041



Source: SGS Economics and Planning (2023)

TABLE 1: POPULATION GROWTH SCENARIOS – ALPINE SHIRE 2021 TO 2041

	2021	2026	2031	2036	2041	Change 2021-41	Av. Per Yr	AAGR
Base	13,156	13,357	13,555	13,744	13,936	780	39	0.3%
Moderate	13,156	13,766	14,336	14,919	15,526	2,370	118	0.8%
High	13,156	13,881	14,567	15,214	15,890	2,734	137	0.9%

Source: SGS Economics and Planning (2023)

The scenarios show population growth of around 39 (base), 118 (moderate), and 137 (high) people per year respectively.

The following sections will show how each of the population scenarios is used to estimate the composition of households in future, and subsequently, demand for housing.

2. Forecast dwelling demand

The following section presents an estimate of future dwelling demand using each of the above population scenarios, with additional consideration for impacts of short stay accommodation and holiday homes on housing demand in Alpine.

2.1 Method overview

SGS's Housing Demand Model forecasts the number of dwellings needed by type and size for the future projected population in a given area. The model synthesises population projections, local demographic trends and local trends in the revealed housing preferences for different household types (i.e. what proportion of households live in each kind of dwelling).

Forecast population by age groups is translated into family members using trends observed in the 1996 to 2021 ABS Census. This captures gradual changes in the formation of families (for example, an increase in lone person households and more complex family structures in general) and shifts in population demographics (such as an ageing population).

Family members are then translated into households by family type. Finally, households by family type are translated into underlying demand for dwellings by structure type based on trends evident in the 1996 to 2021 ABS Census. This approach captures changes in implied consumer preferences such as a shift in preference towards higher density forms as household's trade-off dwelling size for higher accessibility and amenity based on past housing consumption patterns.

It is cautioned that the SGS forecast model takes the *observed trend* in household type by dwelling type data and forecasts this into the future (within bounded limits to ensure that trends do not continue unrealistically). The observed trends are the result of housing supply (as produced by developers) and market regulation through the planning system.

There is strong evidence (from past SGS research and anecdotal evidence) in some contexts that supply is mismatched against actual (latent) demand through the under-provision of attached dwellings and apartments. And as outlined throughout this project, there is also evidence that COVID-19 and the related shifts in working-from-home practices may be influencing housing preferences in the opposite direction.

Therefore, the housing demand estimates presented below represent a base case for consideration of housing need across the Shire.

In addition, it is noted that the share of unoccupied dwellings (vacancy rate) recorded in the 2016 Census (24 per cent of all private dwellings) has been used as the benchmark for future housing projections. It seen as feasible that the lower rate of vacancy recorded at the 2021 Census (18 per cent total private dwellings) is an anomaly resulting from shifts in population and housing trends due to the impacts of the COVID-19 pandemic.

2.2 Future housing demand

SGS has forecast base case dwelling demand by drawing on the population and household forecasts in the previous section for the low, moderate and high population growth scenarios.

Over the forecast period, there is expected to be demand for between 1,021 and 2,167 additional dwellings in Alpine LGA. A comparison of total dwelling demand at 2041 for each population scenario is shown in Table 2.

TABLE 2: HOUSING DEMAND FORECAST COMPARISON, 2021 TO 2041

Scenario	Dwellings 2021	Dwellings 2041	Change	AAGR (%)
Low	7,153	8,174	1,021	0.7%
Moderate	7,153	9,106	1,953	1.2%
High	7,153	9,320	2,167	1.3%

Source: SGS Economics and Planning (2023)

Accounting for dwelling demand from non-residents

The housing demand figures discussed above are based on historic and projected ERP trends, however, demand for dwellings also comes from non-residents, such as the construction of homes for investment (for short term accommodation) and for personal holiday homes. This is a particularly relevant consideration in the Alpine Shire, where the high environmental amenity of the Shire attracts a large number of tourists and 'weekenders'.

It is difficult to distinguish between homes primarily used by their owners (and their relatives and families), those that form part of the supply (either intermittently or permanently) of tourism accommodation (such as short-term holiday lettings), or those that were made available for permanent rental housing. This is an important distinction.

The following data sources are useful in identifying an appropriate adjustment to estimates to account for housing demand from non-residents:

- Share of un-occupied (vacant) dwellings
- Share of properties owned by non-resident ratepayers
- Share of residential properties with a commercial rating status
- Past dwelling constructions activity

Based on the 2021 Census, 18 percent of private dwellings in the Alpine Shire were unoccupied. This is higher than the Hume region average (14 percent) and Victorian average (11 percent), suggesting there is a higher proportion of holiday homes in the Alpine Shire LGA. The Upper Ovens sub-region had the highest share of unoccupied dwellings (29 per cent), followed by the Kiewa Valley (25 per cent) and Lower Ovens (12 per cent).

Based on Council's rates data, there are almost 400 residential properties across the municipality (or 6 per cent) classed as operating commercially (that is, being used to generate income as short-term rentals). Within Bright alone, there are at least 250 properties classified this way.

However, this is considered an underestimate, as a search of properties available to hire listed in Airbnb in July 2021 indicated that there were 293 properties in Bright alone. This represents approximately 19 per cent of all the housing stock in Bright. It is also expected that more short-term rental accommodation may be available through other channels, and not listed on Airbnb (e.g., Stayz.com, holiday rental providers, real estate agents).

An examination of past dwelling construction activity provides further insight into the total dwellings demand across the Shire, accounting for demand from both permanent residents as well as non-resident ratepayers.

Analysis of building permits undertaken in Section 2.8 of Appendix B found that 472 dwellings were constructed between 2016 and 2021 (an average of 79 dwellings per year). Of these, 403 dwellings were built within urban zones (GRZ, LDRZ, TZ and C1Z), or 67 per year on average. Bright absorbed the largest share of growth (40.5 per cent).

This discussion suggests the following:

- An estimated 20 per cent of existing dwellings are used by non-residents as investments, holiday homes or short stay accommodation.
- Housing construction activity provides an indication of total demand for dwellings from permanent residents and other sources. Projecting forwards past trends in dwelling construction activity from 2021 to 2041 suggests demand for an additional 1,800 dwellings (largely in line with the moderate housing demand scenario shown in Table 2).

2.3 Adopting a preferred demand scenario

It is evident from the discussion above that there is currently uncertainty as to future demand for dwellings in Alpine Shire because of the COVID-10 pandemic and associated impacts on population and housing growth and change. This is a common experience across Victoria and Australia. Making an allowance for holiday and other non-permanently occupied dwellings is a related but further complication in the Alpine context.

Balancing these uncertainties, the findings of the analysis undertaken above, and the need for Council to plan for *at least* 15 years supply of residential land to ensure an efficient and well-functioning housing market, it is recommended that Council adopt the high growth scenario for dwelling demand to ensure prudent settlement planning.

The high growth scenario forecasts an approximate additional 2,167 dwellings between 2021 and 2041, with approximately 75 per cent of demand expected in the Shire's urban zoned areas (or 1,625 dwellings).

If the shares of recent construction activity by settlement location continue (assuming no policy intervention or additional limits to growth), it could be expected that 813 (or 50 per cent) of dwellings demand would occur in Bright-Porepunkah, 309 (or 19 per cent) in Myrtleford and 179 (or 11 per cent)

in Mount Beauty-Tawonga South (with the remainder in other smaller settlements in the Shire). Table 4 provides a further breakdown of demand by town and zone.

TABLE 3: POTENTIAL DISTRIBUTION OF DWELLINGS DEMAND BY TOWN, 2041

Location	% Share	Total dwellings 2041
Bright-Porepunkah	50%	813
Myrtleford	19%	309
Mount Beauty-Tawonga South	11%	179
Other	20%	325
Total	**100.0%**	**1,625**

Source: SGS Economics and Planning (2023)

TABLE 4: POTENTIAL DISTRIBUTION OF DWELLINGS DEMAND BY TOWN AND ZONE, 2041

Town	Dwelling demand %	Dwelling demand #
Bright-Porepunkah		
GRZ	34.0%	553
TZ	11.0%	179
LDRZ	5.0%	81
Subtotal	*50%*	*813*
Myrtleford		
GRZ	16.2%	262
LDRZ	2.9%	46
Subtotal	*19%*	*309*
Mount Beauty-Tawonga South		
GRZ	8.1%	132
TZ	0.1%	2
LDRZ	2.8%	45
Subtotal	11%	179
Other		
TZ	11.2%	182

Town	Dwelling demand %	Dwelling demand #
LDRZ	8.8%	143
Subtotal	20%	325
TOTAL		**1,625**

Source: SGS Economics and Planning (2023)

Based on the demand modelling separate dwellings are expected to account for 82 per cent of future total dwellings, while 17 per cent of demand relates to medium to high density (flats, units and apartments) (Table 5). Four bedroom dwellings will represent the largest share of dwellings demand to 2041 (Table 5).

TABLE 5: DWELLING TYPE, HIGH GROWTH SCENARIO, 2021 TO 2041

Scenario	Dwellings 2021	Dwellings 2041	Change	Share of growth %
Separate house	6,545	8,318	1,773	82%
Medium/high density	543	904	360	17%
Other	64	98	34	2%
Total	**7,153**	**9,320**	**2,167**	**100%**

Source: SGS Economics and Planning, 2021

TABLE 6: NUMBER OF BEDROOMS, HIGH GROWTH SCENARIO, 2021 TO 2041

Scenario	Dwellings 2021	Dwellings 2041	Change	Share of growth %
0 bedrooms	70	113	44	2%
1 bedrooms	282	482	200	9%
2 bedrooms	1,233	1,446	213	10%
3 bedrooms	3,602	4,235	633	29%
4 bedrooms	1,665	2,576	911	42%
5+ bedrooms	301	468	166	8%
Total	**7,153**	**9,320**	**2,167**	**100%**

Source: SGS Economics and Planning, 2021

However as discussed above, modelling of forecast dwelling demand is based on observed past trends and reflects choices made by households based on existing housing supply and planning regulations. As

has been shown through past SGS research, in many locations, supply may not match actual or latent demand, expressed as an under-provision of attached dwellings and apartments.

In Alpine Shire, the presence of latent demand for smaller and more diverse housing types is supported by dwelling suitability analysis which showed that almost 55 percent of all dwellings have two or more bedrooms spare. While some households may choose to live in larger separate, dwellings for lifestyle reasons (those with spare rooms to accommodate visiting family and friends, or families who intend to have children, for example), a proportion of these households with spare bedrooms may prefer smaller dwellings but are unable to find them in the local market. Evidence indicates that this is particularly relevant for older households of retirement age.

3. Housing capacity assessment

The following Section summarises the findings of the housing capacity assessment, which provides an estimate of the potential of existing residentially zoned land to accommodate future housing need.

3.1 Method overview

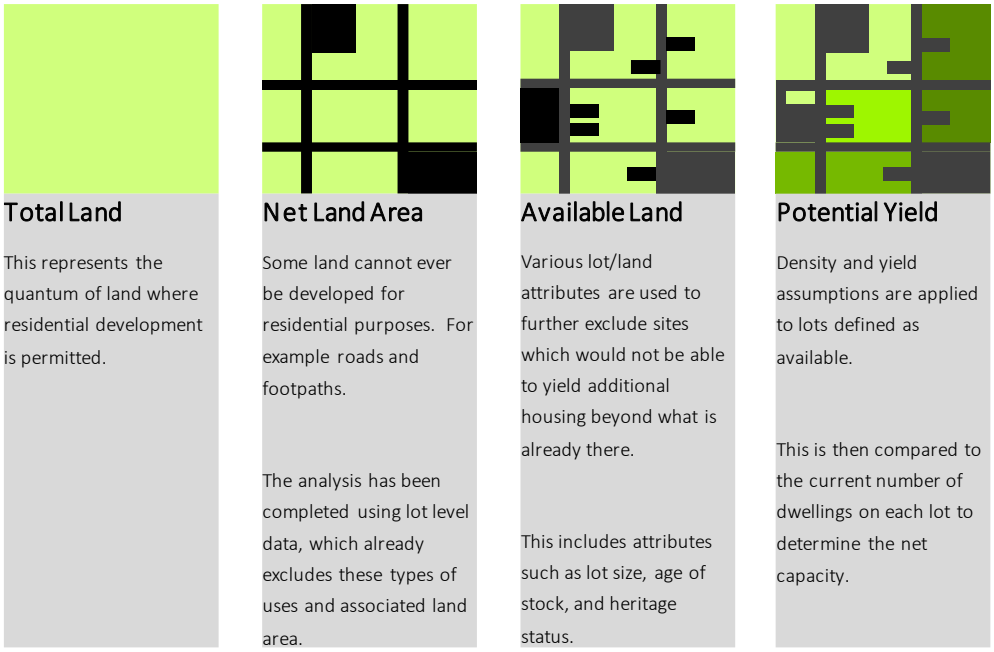
Housing capacity is an estimate of the quantum of housing that could be accommodated in an area. It is based on existing planning controls, recent housing supply trends and planned future land-release precincts. It is a theoretical assessment of the maximum number of dwellings that could be developed under current planning controls and development conditions and in future precincts. It follows from a high-level analysis and is intended to be indicative rather than absolute.

Figure 3 charts the four-step process for determining dwelling capacity. The logical flow is to firstly identify current and future residential land before filtering out all the lots which are not available for development, and then calculating the potential development yield of each lot. Each step is discussed in more detail below.

Only a small portion of available lots are likely to be developed in any one year and some lots are likely to be withheld from development. For these reasons, greater capacity than (expected) demand is required to ensure that future development is not constrained.

There are likely to be site-specific attributes which may affect the development potential of some sites, but which cannot be included in an LGA-wide capacity analysis.

FIGURE 3: HOUSING CAPACITY APPROACH OVERVIEW



Source: SGS Economics and Planning (2018).

Step 1: Net land area identification:

Net land refers to total land where residential development is permitted, minus the land that cannot be developed for residential purposes, such as roads and footpaths. The capacity calculation is conducted on a lot by lot basis, with only lots where residential development is permissible considered, and so parts of the public domain are automatically excluded.

Step 2: Available land assessment

Available land represents any land that is likely to be able to accommodate additional housing in the Alpine Shire. It is derived from the net land, from which lots unlikely to be developed are excluded.

Designation of a lot as available land does not mean that development is necessarily feasible or that property owners are ready or willing to develop these sites. Typically, only a small portion of available lots are likely to be developed in any one year. There are also likely to be site-specific attributes which may affect the development potential of some sites, but which cannot be included in an LGA-wide capacity analysis.

Land Exclusions

The following exclusions were used to determine which lots cannot or are unlikely to be developed:

- **Heritage:** Properties listed on the Victorian Heritage Register or covered by the Heritage Overlay were excluded from the analysis. While some of these properties may be able to be redeveloped, this is likely to be uncommon. Including heritage items or precincts without further study could risk over-estimating housing capacity.
- **Small lots:** Sites with small lots (<200 square meters) are generally either not allowed to develop under the planning controls or are difficult to develop. The minimum lot size for development on

each lot was assessed based on what kinds of development were permissible, and minimum lot areas and frontages for those kinds of development.

- **Land use exclusions:** Properties were manually excluded if they contain social infrastructure or other land uses which are likely to be in place over the next 20 years. These include schools, community centres, aged care facilities, private hospitals, large places of public worship and clubs.
- **Areas subject to natural hazards (bushfire, flooding, excessive slope):** Clause 13 of the Alpine Planning Scheme Planning Policy Framework addresses Environmental Risk, and at an over-arching level supports risk-based planning as a fundamental approach to planning. It places particular emphasis on bushfire, flooding risk, and climate change, but also refers to soil degradation, landslip and erosion, floodplain management, landscape protection, and environmentally sensitive areas. In line with this policy, the capacity analysis has excluded areas based on the following:
  - *Flooding (designated as the FO and LSIO):* were excluded from the analysis. FO designates areas subject to dangerous flooding, while LSIO designates areas subject to nuisance flooding. Whilst it is preferred that areas subject to all types of flooding be excluded from development, in some cases engineering works normal to a subdivision development can reduce the areas subject to nuisance flooding (LSIO).
  - *Bushfire:* this is a policy driven absolute constraint whereby the State provisions of the Planning Scheme require that no land with a Bushfire Attack Leve (BAL) rating of over 12.5 shall be developed for residential purposes.
  - *Slope:* Excessive slopes make the provision of infrastructure and construction of buildings prohibitively expensive or unfeasible. Where the slopes coincide with unstable soils development can be unsafe. Development on steep slopes can also impact on landscape values. Slopes greater than 20 percent have been excluded form capacity modelling.
  - *Environmental buffers:* There are several areas within the Shire that are subject to environmental buffers, such as around sewerage treatment plants and certain industrial operations. These areas have been excluded.

Step 3: Potential yield assessment

Potential yields were calculated for the available land using a series of yield assumptions depending upon each lot's zone, size, frontage, location, development standards and constraints. This assessment was conducted for all lots within the 48 precincts, and took into consideration the following:

- **Land use zone and lot size:** Different residential zones have differing requirements regarding minimum lot sizes and servicing requirements etc.
- **Existing development patterns:** Existing development and lot size patterns (i.e median and average lot size) were examined on a precinct scale to determine likely potential future development outcomes.
- **Land use exclusions:** Properties were excluded if they contain social infrastructure or other land uses which are likely to be in place over the next 20 years. These include schools, community centres, aged care facilities, private hospitals, large places of public worship and clubs.
- **Areas subject to natural hazards (bushfire, flooding, excessive slope):** Clause 13 of the Alpine Planning Scheme Planning Policy Framework addresses Environmental Risk. Areas subject to

flooding and bushfire risk, steep slopes (as a proxy for landslip), and within environmental buffers (i.e from the Wastewater Treatment Plant) were removed from the analysis)

The yield assessment was undertaken for defined 'housing capacity precincts'. Precinct boundaries were broadly based on location (towns and settlements), zoning (each precinct includes only one zone), neighbourhood character, and status (or otherwise) as a greenfield or other large development area.

In total, 48 precincts were defined across the Shire for each precinct, the following information was gathered:

- Total number of lots
- Number of existing dwellings
- Number of vacant lots
- Average lot frontage
- Median lot size
- Zoning category
- Applicable overlays
- Subject to flooding, large slopes, and bushfire attack level (BAL) requirements

TABLE 7: HOUSING CAPACITY PRECINCTS

Town/ settlement	No. of precincts
Bright	26
Myrtleford	4
Mount Beauty	3
Porepunkah	3
Tawonga South	3
Tawonga	2
Harrietville	2
Wandligong	1
Buffalo River	1
Dederang	1
Merriang	1
Ovens	1

Source: SGS Economics and Planning (2022)

The yield assessment was focused on the dominant typology of development in the region which is subdivision of large lots. Potential for infill development was also assessed for specific precincts in Bright and Myrtleford where further subdivision and development in established residential areas was observed.

Assumptions for each precinct differed based on development patterns and informed through consultation with Council..

Table 8 contains the assumptions utilised for precincts in regard to **Infill** and **Occupied lots with potential for further subdivision (aka large-scale subdivision)**. Not all precincts were identified to be suitable for infill development and/or subdivision.

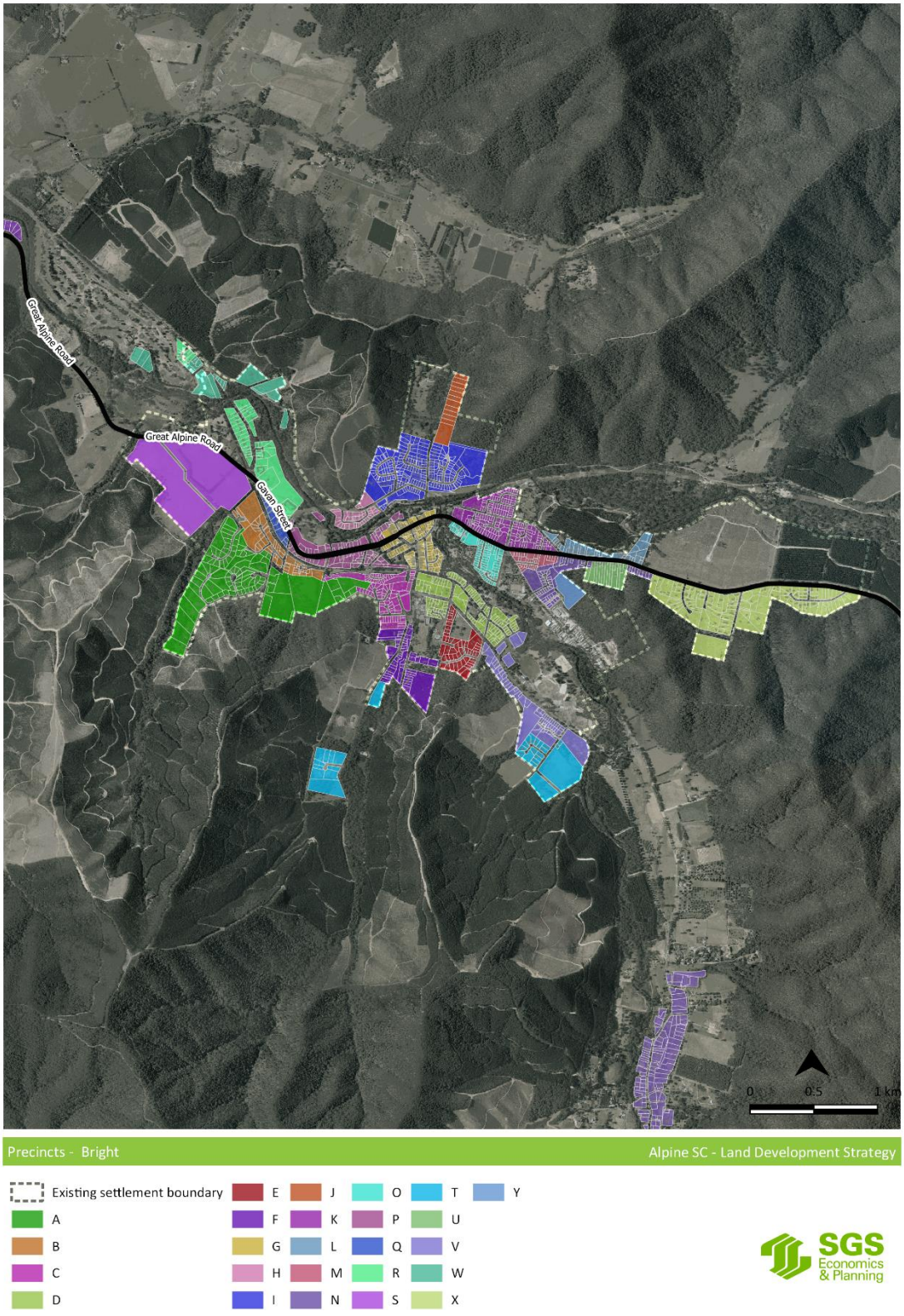
TABLE 8: YIELD ASSUMPTIONS BY PRECINCT

	Subdivision		Infill	
Precinct	Area per new lot (sqm)	Minimum original property area (m)	Maximum original property area (sqm)	Area per new lot (sqm)
Bright_A	2300	4600	N/A	N/A
Bright_B	1100	2200	1200	400
Bright_C	900	1800	1200	500
Bright_D	500	2000	2000	500
Bright_E	1400	2800	2800	600
Bright_F	1300	2600	N/A	N/A
Bright_G	N/A	N/A	10000	400
Bright_H	800	1600	1500	500
Bright_I	900	1800	1500	400
Bright_J	4000	8000	N/A	N/A
Bright_K	700	1400	1400	400
Bright_L	1700	3400	N/A	N/A
Bright_M	700	1400	N/A	N/A
Bright_N	800	1600	N/A	N/A
Bright_O	600	1800	1800	500
Bright_P	1000	2000	1500	400
Bright_Q	3500	7000	N/A	N/A

Bright_R	2500	5000	N/A	N/A
Bright_S	N/A	N/A	N/A	N/A
Bright_T	2400	4800	N/A	N/A
Bright_U	3800	7600	N/A	N/A
Bright_V	900	1800	N/A	N/A
Bright_W	1900	3800	N/A	N/A
Bright_X	3300	6600	N/A	N/A
Dederang_TZ	6100	12200	N/A	N/A
Harrietville_TZ	1900	3800	N/A	N/A
Merriang_LDRZ	5100	10200	N/A	N/A
Mount Beauty_C1Z	200	400	N/A	N/A
Mount Beauty_GRZ1	600	1200	N/A	N/A
Myrtleford_C1Z	600	1200	N/A	N/A
Myrtleford_GRZ1	800	1600	1600	600
Myrtleford_LDRZ	4000	8000	N/A	N/A
Myrtleford_MUZ	1200	2400	N/A	N/A
Porepunkah_LDRZ	4000	8000	N/A	N/A
Porepunkah_TZ	1100	2200	N/A	N/A
Tawonga South_GRZ1	700	1400	N/A	N/A
Tawonga South_LDRZ	6000	12000	N/A	N/A
Tawonga South_MUZ	1000	2000	N/A	N/A
Tawonga_LDRZ	5700	11400	N/A	N/A
Tawonga_TZ	1200	2400	N/A	N/A
Wandiligong_LDRZ	4000	8000	N/A	N/A

Source; SGS Economics and Planning, 2022

FIGURE 4: YIELD PRECINCTS – BRIGHT

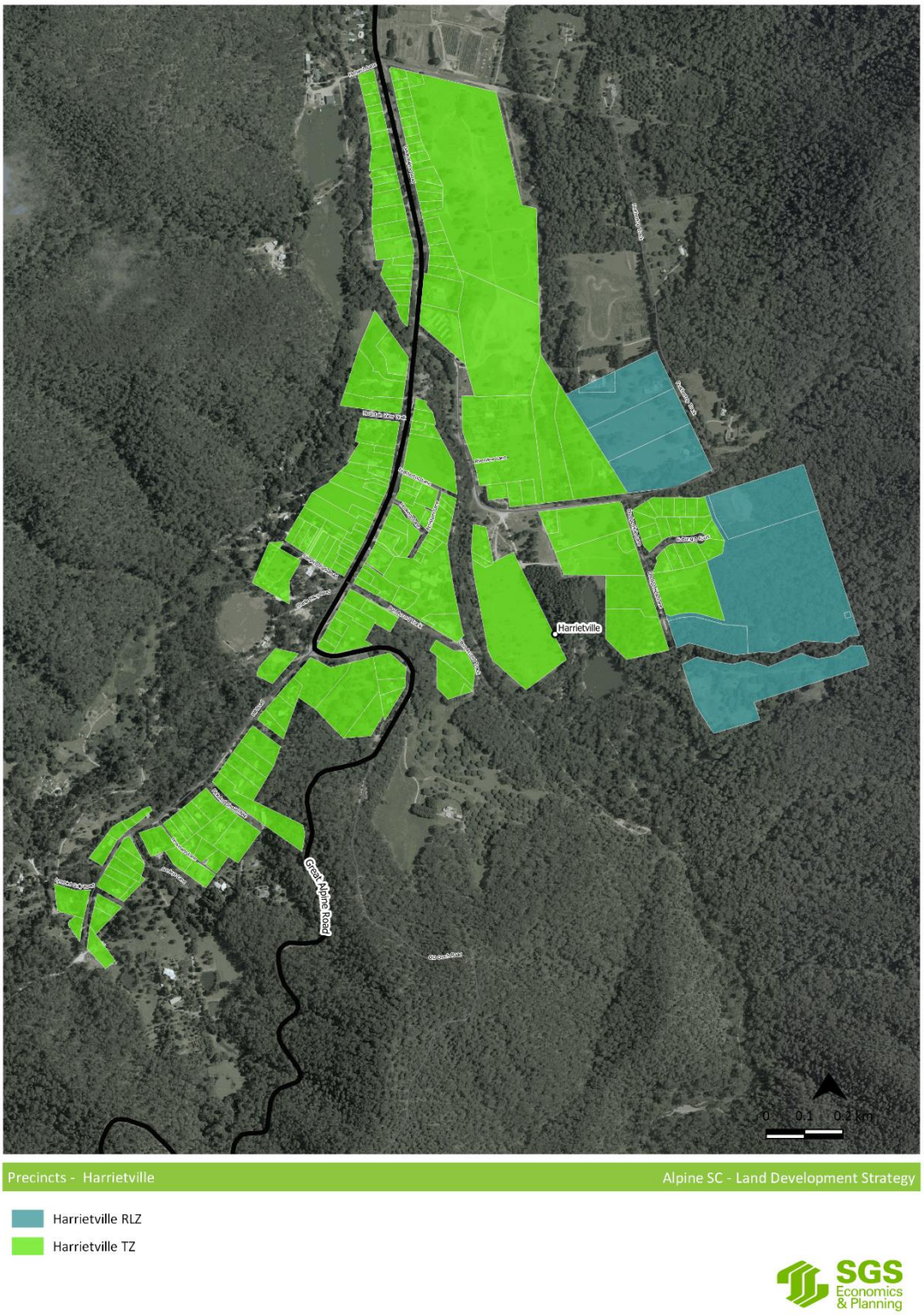


Source; SGS Economics and Planning, 2022

FIGURE 5: YIELD PRECINCTS – DEDERANG

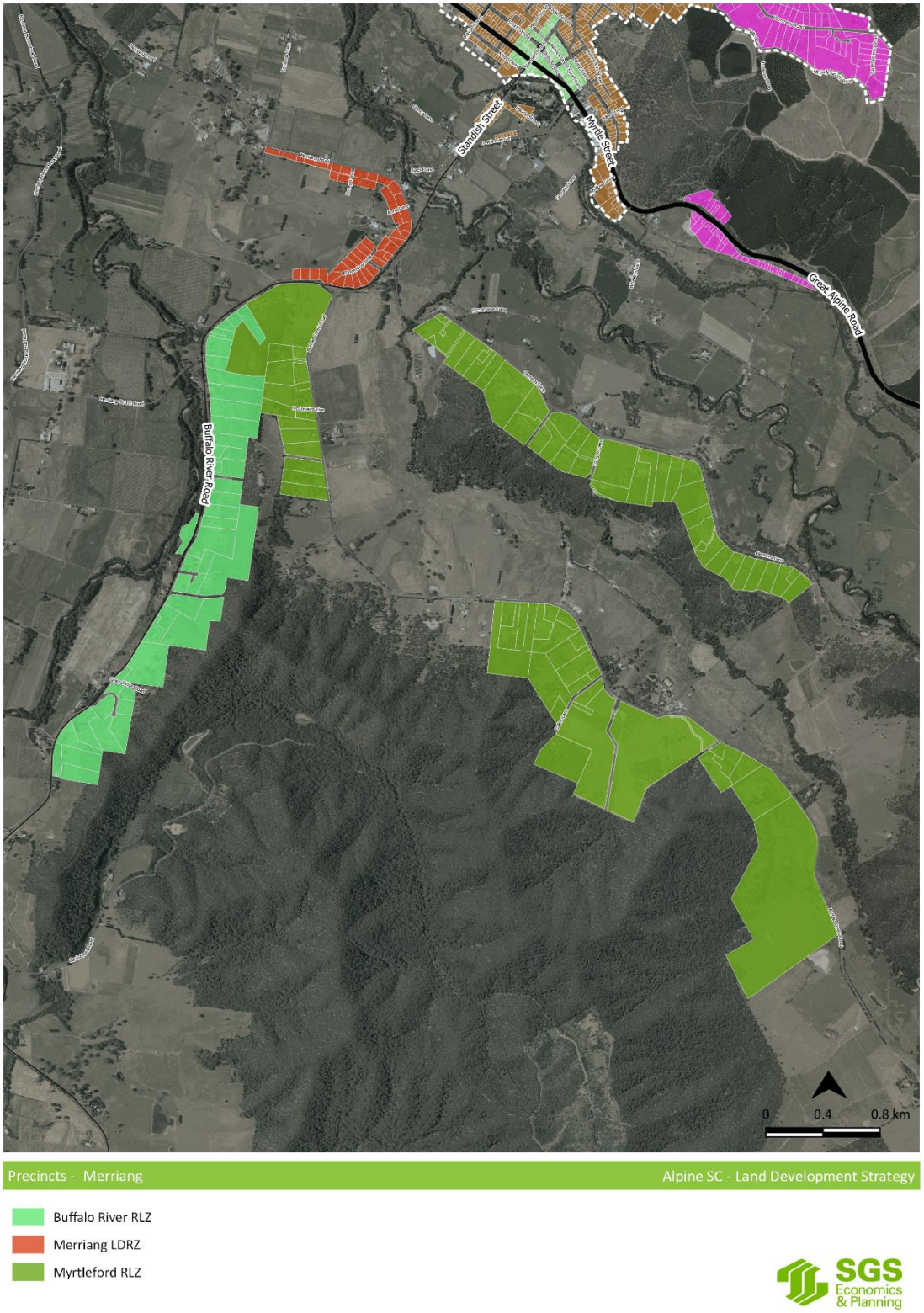
Source; SGS Economics and Planning, 2022

FIGURE 6: YIELD PRECINCTS – HARRIETVILLE



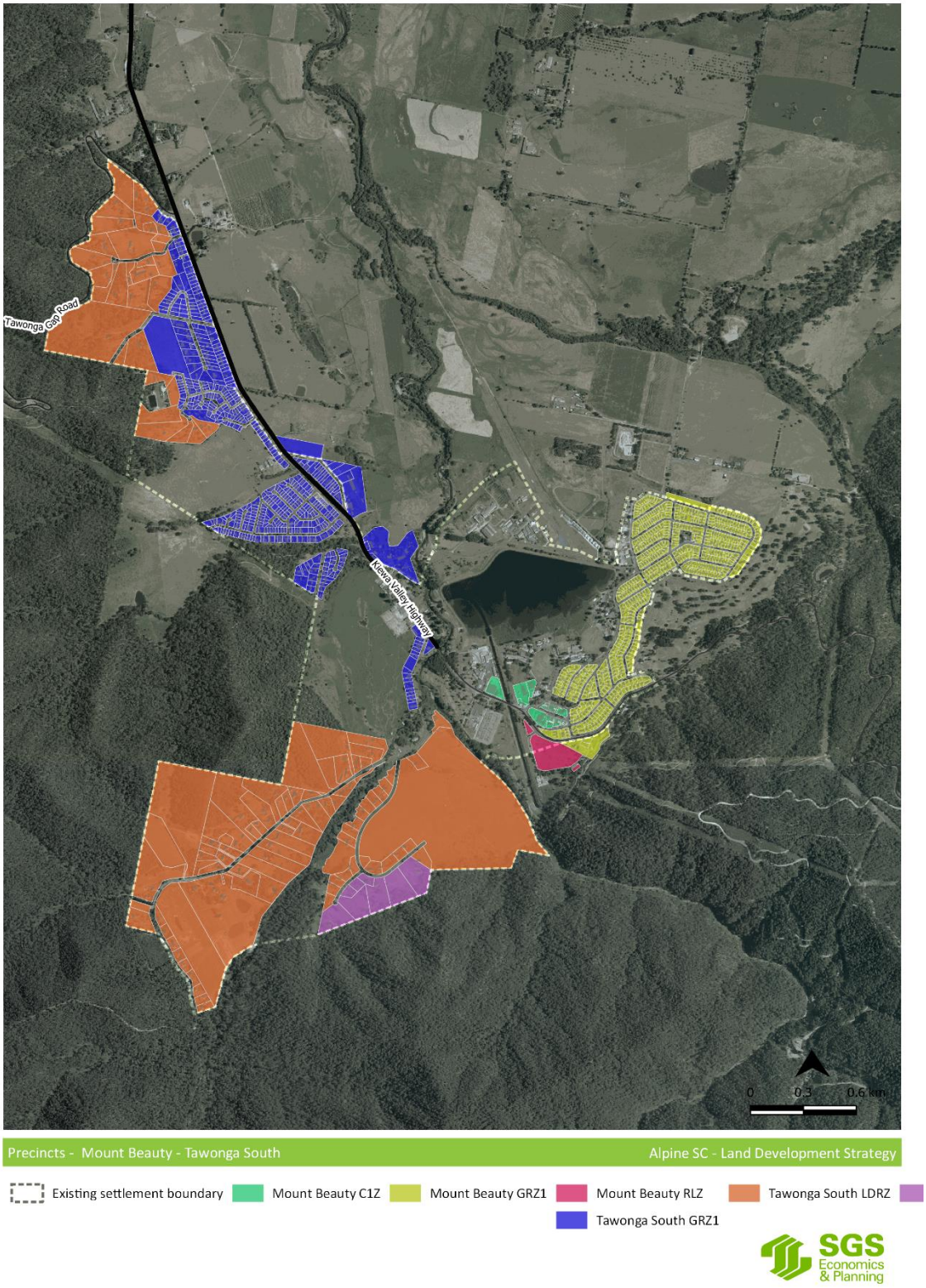
Source; SGS Economics and Planning, 2022

FIGURE 7: YIELD PRECINCTS – MERRIANG



Source; SGS Economics and Planning, 2022

FIGURE 8: YIELD PRECINCTS – MOUNT BEAUTY – TAWONGA SOUTH

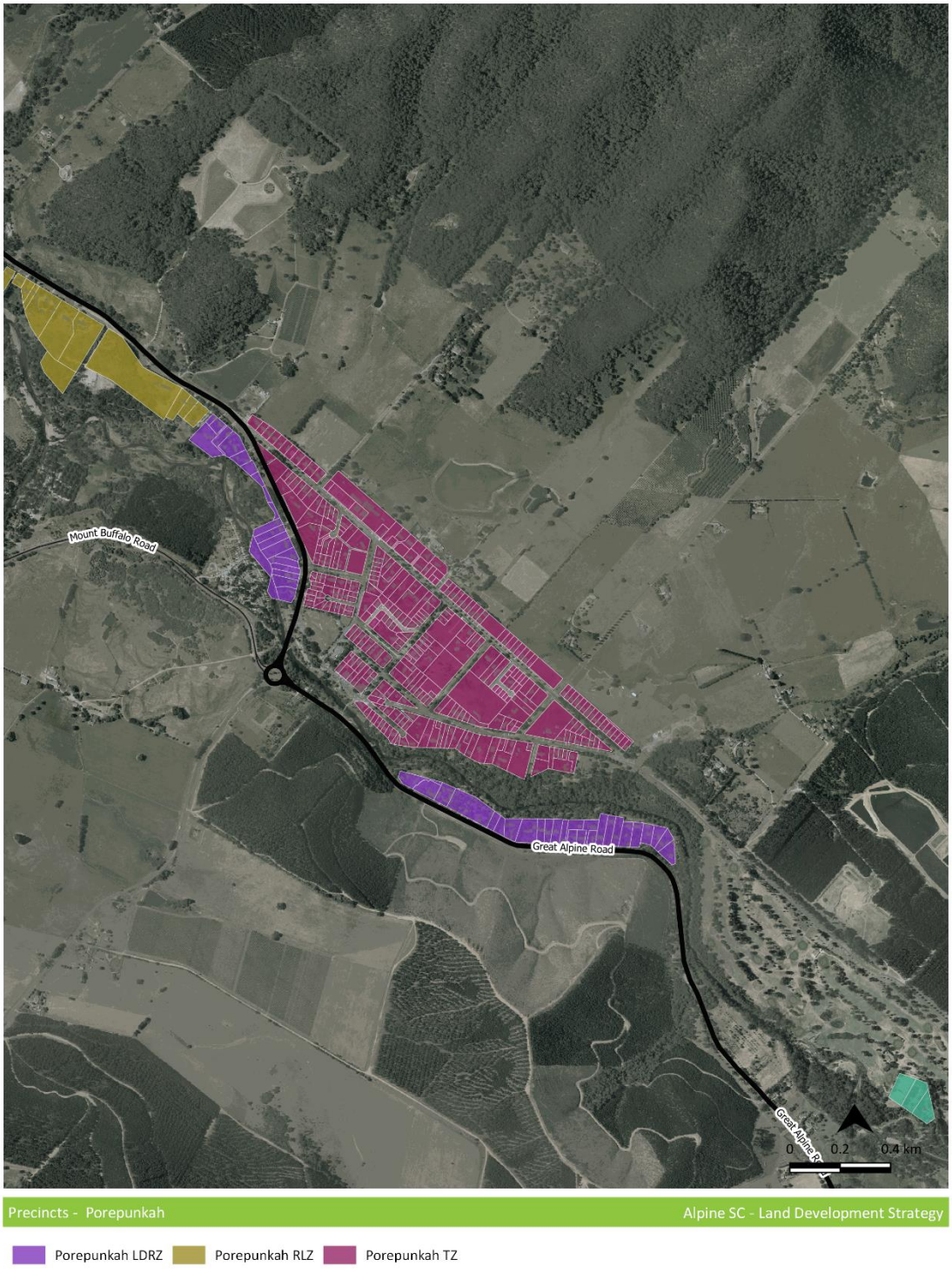


Source; SGS Economics and Planning, 2022

FIGURE 9: YIELD PRECINCTS – MYRTLEFORD

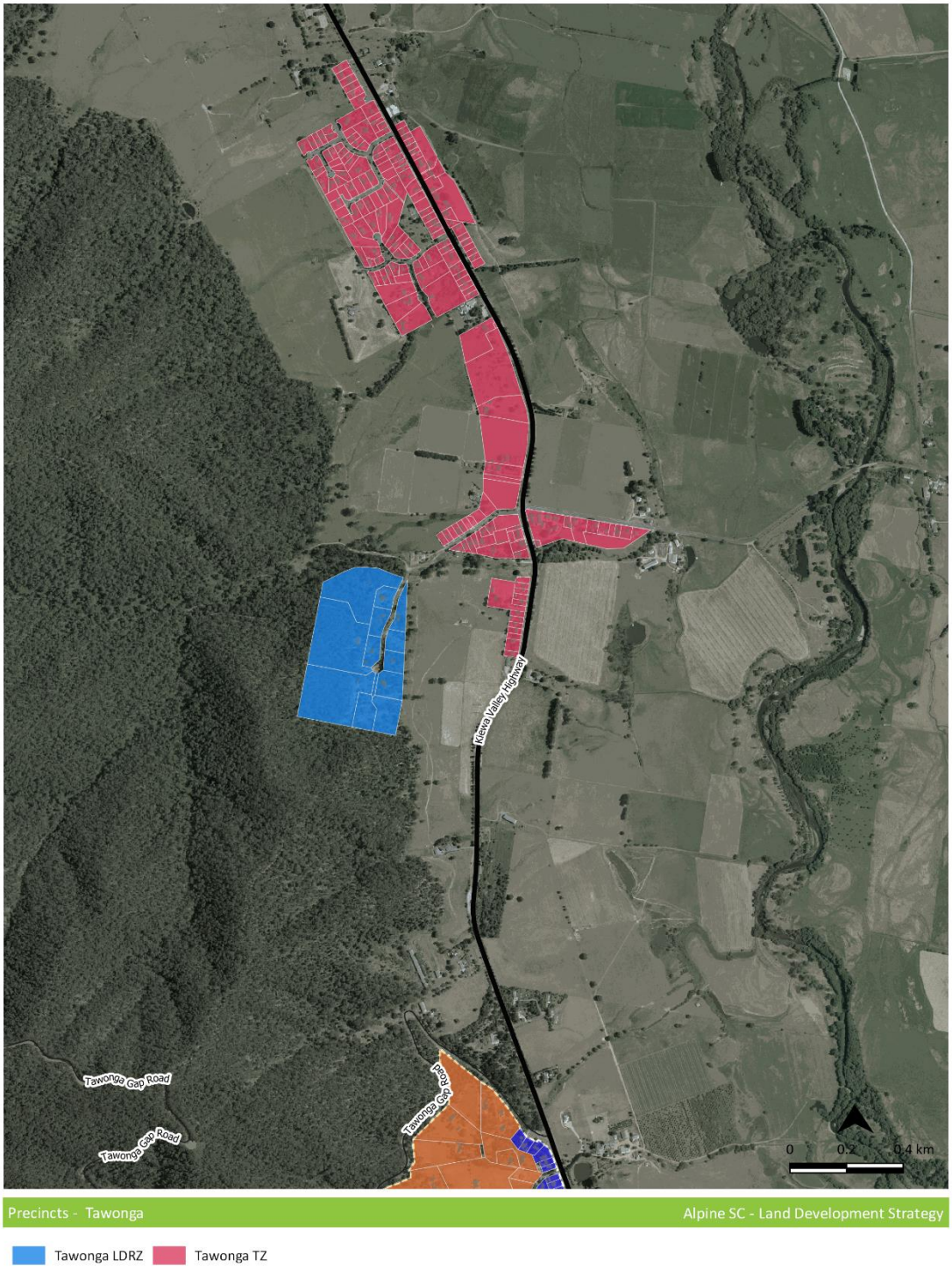
Source; SGS Economics and Planning, 2022

FIGURE 10: YIELD PRECINCTS – POREPUNKAH



Source; SGS Economics and Planning, 2022

FIGURE 11: YIELD PRECINCTS – TAWONGA



Source; SGS Economics and Planning, 2022

FIGURE 12: YIELD PRECINCTS – WANDILIGONG

Source; SGS Economics and Planning, 2022

Yield definitions

The following definitions apply to the terms used throughout the capacity analysis:

- **Vacant lots:** Vacant lots zoned for residential use that can accommodate one additional dwelling but are not large enough to present potential for subdivision.
- **Subdivision of large lots:** Large lots zoned for residential use that have potential for further subdivision in existing residential zoned areas.

  Established area infill: Lots with potential to accommodate additional higher density dwellings (small-scale apartments, villa units, townhouses) in established areas close to essential services and commercial premises based on past development trends. Established area infill has only been estimated for Bright in precincts where this development type is already occurring as determined by an aerial image sample of recent development).

Additional assumptions across all precincts include:

- 25 per cent land in areas designated for large-scale subdivision will be used for the provision of community infrastructure (i.e open space) and development infrastructure).
- 100 per cent of the site area of lots identified as having infill potential will be used for the provision of housing.

Beyond the use of capacity assumptions across precincts, there was also significant input from Alpine Shire Council. This input included the identification of parcel lot yield on a site-by-site basis based on the current development pipeline, unsuitable sites and vacant sites. Alpine Shire Council was also involved over a 6+ month period a quality assurance process reviewing the output of the capacity model and refining yields across the LGA. This process has resulted in a housing capacity with a high level of confidence in its accuracy.

3.3 Housing capacity scenarios

The housing capacity assessment explored three potential scenarios – High, Medium and Low. The assumptions differentiating each scenario relate to:

- Inclusion or exclusion of land subject to partial/ discretionary constraints.
- Propensity (or likelihood) for development to occur on designated available lots over the period to 2041.

These assumptions are shown in Table 9 and Table 10.

TABLE 9: SCENARIO LAND EXCLUSIONS ASSUMPTIONS

	Exclusions				
	HO	LSIO	Flood Overlay (proposed)	BAL	Slope 20% plus
Low scenario	1	1	1	1	1
Medium scenario	1	0	1	1	1
High scenario	0	0	0	0	0

Source; SGS Economics and Planning, 2022

Note: "1" means land subjected to constraint excluded. "0" means land subject to constraint included.

TABLE 10: SCENARIO DEVELOPMENT PROPENSITY ASSUMPTIONS

	Development propensity							
	GRZ1		LDRZ		MUZ		C1Z	
	Infill	Large-scale subdivision	Infill	Large-scale subdivision	Infill	Large-scale subdivision	Infill	Large-scale subdivision
Low scenario	30%	80%	30%	80%	30%	80%	30%	80%
Medium scenario	50%	100%	50%	100%	50%	100%	50%	100%
High scenario	100%	100%	100%	100%	100%	100%	100%	100%

Source; SGS Economics and Planning (2022)

3.4 Housing capacity assessment results

Detailed precinct capacity results are presented in Table 11 shows housing capacity results by town and zone.

The results show that there is existing theoretical capacity for between approximately 1,266 (low-capacity scenario) and 1,578 (high capacity scenario) dwellings across the Shire, including:

- 448 to 675 dwellings in Bright
- 100 to107 dwellings in Porepunkah
- 330 to 440 dwellings in Myrtleford
- 229 to 270 dwellings in Mount Beauty- Tawonga South, and
- 117 to 137 across the remainder of the Shire.

The largest share of total capacity is available through large-scale subdivision of greenfield areas in Bright and Myrtleford.

TABLE 11: DETAILED CAPACITY RESULTS BY PRECINCT, 2022

	Low				Medium				High			
Preicnct	Vacant	Large scale subdivision	Infill	Total	Vacant	Large scale subdivision	Infill	Total	Vacant	Large scale subdivision	Infill	Total
Bright_A	5	18	0	23	5	18	0	23	5	37	0	42
Bright_B	0	0	2	2	0	0	3	3	0	0	11	11
Bright_C	4	0	1	5	4	0	2	6	4	5	3	12
Bright_D	4	12	7	23	4	13	10	28	4	13	14	31
Bright_E	2	0	4	6	2	0	6	8	2	0	18	20
Bright_F	3	2	0	5	3	3	0	6	3	11	0	14
Bright_G	0	0	7	7	0	0	11	11	0	0	30	30
Bright_H	0	4	1	4	0	4	1	5	0	4	3	7
Bright_I	11	27	17	55	11	31	27	68	11	55	42	107
Bright_J	0	1	0	1	0	1	0	1	0	1	0	1
Bright_K	0	4	7	11	0	5	12	17	0	6	18	24
Bright_L	2	2	0	4	2	2	0	4	2	2	0	4
Bright_M	0	0	0	0	0	0	0	0	0	0	0	0
Bright_N	2	3	0	5	2	3	0	5	2	5	0	7

Bright_O	3	12	1	16	3	13	2	18	3	13	3	19
Bright_P	2	8	5	15	2	10	9	21	2	13	24	39
Bright_Q	0	0	0	0	0	0	0	0	0	0	0	0
Bright_R	5	26	0	31	5	26	0	31	5	26	0	31
Bright_S	0	176	0	176	0	176	0	176	0	176	0	176
Bright_T	0	17	0	17	0	18	0	18	0	25	0	25
Bright_U	0	0	0	0	0	0	0	0	0	0	0	0
Bright_V	3	23	2	27	3	27	2	32	3	37	2	42
Bright_W	1	5	0	6	1	6	0	7	1	12	0	13
Bright_X	0	8	0	8	0	9	0	9	0	20	0	20
Dederang_TZ	1	1	0	2	1	1	0	2	1	1	0	2
Harrietville_TZ	27	53	0	80	27	56	0	83	27	72	0	99
Merriang_LDRZ	0	5	0	5	0	5	0	5	0	5	0	5
Mount Beauty_C1Z	0	0	0	0	0	0	0	0	0	0	0	0
Mount Beauty_GRZ1	1	2	0	3	1	2	0	3	1	2	0	3
Myrtleford_C1Z	2	2	1	5	2	2	1	5	2	2	1	5
Myrtleford_GRZ1	37	240	15	292	36	271	24	330	36	307	48	391
Myrtleford_LDRZ	3	29	0	32	3	33	0	36	3	40	0	43
Myrtleford_MUZ	1	0	0	1	1	0	0	1	1	0	0	1

Porepunkah_LDRZ	4	2	0	6	4	2	0	6	4	2	0	6
Porepunkah_TZ	8	84	3	94	8	89	3	99	8	91	3	101
Tawonga South_GRZ1	27	48	4	79	27	52	4	83	27	29	4	60
Tawonga South_LDRZ	4	112	0	116	4	114	0	118	4	107	0	111
Tawonga South_MUZ	0	0	0	0	0	0	0	0	0	0	0	0
Tawonga_LDRZ	1	0	0	1	1	0	0	1	1	0	0	1
Tawonga_TZ	10	61	1	72	10	66	1	76	10	44	1	54
Wandiligong_LDRZ	28	3	0	31	28	3	0	31	28	3	0	31
Total	**201**	**988**	**77**	**1,266**	**200**	**1058**	**117**	**1,374**	**200**	**1163**	**224**	**1,587**

Source: SGS Economics and Planning, 2022

TABLE 12: DETAILED CAPACITY RESULTS BY MAIN TOWN AND ZONE, 2022

		Low				Medium				High			
Town/ settlement	Zone	Large-scale subdivision	Established area Infill	Vacant	Total	Large-scale subdivision	Established area Infill	Vacant	Total	Large-scale subdivision	Established area Infill	Vacant	Total
Bright	GRZ	300	47	41	387	313	73	41	427	366	137	41	544
	TZ	49	0	6	55	52	0	6	58	95	0	6	101
	LDRZ	0	7	0	7	0	11	0	11	0	30	0	30
Porepunkah	LDRZ	2	0	4	6	2	0	4	6	2	0	4	6
	TZ	84	3	8	94	89	3	8	99	91	3	8	101
Myrtleford	GRZ	242	16	40	298	273	25	39	337	309	49	39	397
	LDRZ	29	0	3	32	33	0	3	36	40	0	3	43
Mount Beauty-Tawonga South	GRZ	49	4	28	81	54	4	28	86	31	4	28	63
	TZ	61	1	10	72	66	1	10	76	44	1	10	54
	LDRZ	112	0	5	117	114	0	5	119	107	0	5	112
Other	TZ	53	0	28	81	57	0	28	85	73	0	28	101
	LDRZ	8	0	28	36	8	0	28	36	8	0	28	36
Total		**988**	**77**	**201**	**1,266**	**1,058**	**117**	**200**	**1,374**	**1163**	**224**	**200**	**1,587**

3.6 Selecting a preferred capacity scenario

The low capacity scenario has been selected as the preferred to ensure a 'conservative' approach to planning for future land requirements (that is, being careful not to overestimate future development potential).

- Capacity results by town and zone for this scenario are shown in 448 dwellings in Bright
- 100 dwellings in Porepunkah
- 330 dwellings in Myrtleford
- 270 dwellings in the Upper Kiewa Valley (Mount Beauty, Tawonga, Tawonga South), and
- 117 across the remainder of the Shire.

Table 13. It shows capacity by town totals:

- 448 dwellings in Bright
- 100 dwellings in Porepunkah
- 330 dwellings in Myrtleford
- 270 dwellings in the Upper Kiewa Valley (Mount Beauty, Tawonga, Tawonga South), and
- 117 across the remainder of the Shire.

TABLE 13: HOUSING CAPACITY ASSESSMENT RESULTS

Town/ settlement	Zone	Large-scale subdivision	Established area infill	Vacant	Total
Bright	GRZ	300	53	41	394
	LDRZ	49	0	6	55
Porepunkah	LDRZ	2	0	4	6
	TZ	84	3	8	94
Myrtleford	GRZ	242	16	40	298
	LDRZ	29	0	3	32
Mount Beauty-Tawonga South (Upper Kiewa Valley)	GRZ	49	4	28	81
	TZ	61	1	10	72
	LDRZ	112	0	5	117

Other	TZ	53	0	28	81
	LDRZ	8	0	28	36
Total		988	77	201	1266

3.8 Comparing demand and capacity

A comparison of expected demand and current capacity for each town is shown in Table 14. It shows that:

- There is an undersupply of land for residential development in the order of 360 dwellings across Alpine Shire Council.
- Based on past development trends, it is expected that the greatest share of future housing demand (34 per cent or 553 dwellings) will be in Bright, where there is an anticipated shortfall in capacity of 104 dwellings.
- Based on past development trends, Myrtleford is expected to have a marginal oversupply of 21 and Mount Beauty-Tawonga South an excess of 92.
- There is expected to be a shortfall in capacity across other towns and settlements of 208 dwellings, however given the constraints of these towns for further development, it can be expected that this demand will be redirected to larger towns.

TABLE 14: HOUSING DEMAND VS CAPACITY BY TOWN

Town	% share of forecast development (based on past trends)	Total dwelling demand 2041	Housing capacity estimate	Difference (demand vs capacity)
Bright-Porepunkah	34%	553	448	-104
Porepunkah	16%	260	100	-160
Myrtleford	19%	309	330	21
Mount Beauty-Tawonga South (Upper Kiewa Valley)	11%	179	270	92
Other	20%	325	117	-208
Total	100%	1625	1266	-359

Source: SGS Economics and Planning (2022)

Given environmental, natural hazards and servicing constraints across the Shire these results indicate that the Land Development Strategy will need to set policy direction for dwelling demand that exceeds capacity (208 dwellings) that is expected in "Other" areas of the Shire. This demand should be absorbed in locations that support good planning outcomes, including locations that are safe, well serviced, and suitable for urban expansion.

3.9 Land requirements for new housing

Based on the analysis undertaken, estimates of how much additional greenfield land might be required to accommodate forecast growth have been made. This assumes:

- Demand exceeding capacity in 'Other' townships will be redirected to the three main township areas due to environmental constraints (i.e. bushfire and flooding risk), servicing constraints (presence of reticulated services) and state and local policy directions which prioritise the protection of human life in areas affected by natural hazards and promote urban consolidation in well-serviced locations.
- Each zone provides unique housing opportunities in the Shire's main townships meaning demand is less likely to move between zones.
- Additional land will be needed in proposed Growth Areas for provision of community and development infrastructure.
- The assumed average lot size for new housing is generally based on existing averages in each town by relevant zone, except in Porepunkah where an average lot size in the General Residential Zone in Bright has been used assuming that this is the likely a more appropriate zoning category and development density (refer Table 15).
- Two alternative land requirement scenarios have been prepared which consider the implications for reducing average lot sizes. Alternative scenario 1 assumes new development will be provided at an average of 600sqm per lot in alignment with densities in the General Residential Zone. Alternative 2 assumes land in the Township Zone will develop at General Residential Zone densities, but retains provision for larger (4,000sqm) lots in the Low Density Residential Zone.

Table 16 summarises high level land requirements for each of the main towns by scenario, noting detailed structure planning processes will be required to determine in detail appropriate zoning, lot configurations and sizes, transport accessibility and infrastructure provision. Table 17 overviews the detailed assessment process and results.

Note that land requirements for "Other" towns have been distributed across the three main towns.

TABLE 15: LOT SIZE ASSUMPTIONS FOR LAND REQUIREMENTS

Town	Zone	Assumed average lot size (sqm) – Base Case	Assumed average lot size (sqm) – Alternative Scenario 1	Assumed average lot size (sqm) – Alternative Scenario 2
Bright	GRZ	700	600	600
	LDRZ	4000	600	4000
Porepunkah	GRZ	700	600	600
Myrtleford	GRZ	800	600	600
	LDRZ	4000	600	4000
	GRZ	600	600	600

Town	Zone	Assumed average lot size (sqm) – Base Case	Assumed average lot size (sqm) – Alternative Scenario 1	Assumed average lot size (sqm) – Alternative Scenario 2
Mount Beauty-Tawonga South	LDRZ	4000	600	4000
Other	TZ	1200	600	600
	LDRZ	4000	600	4000

Source: SGS Economics and Planning (2022)Total estimated land requirements for each scenario are shown in Table 16. This shows that land requirements could range from 37 hectares to 100 hectares depending on the configuration of lot sizes determined through structure planning. It is noted, that due to bushfire constraints in Myrtleford, dwelling demand allocated to this location (and associated land requirements) will need to be accommodated in another location.

Details of the land requirements assessment for the Base Case scenario are shown in Table 17.

TABLE 16: POTENTIAL LAND REQUIREMENTS FOR NEW HOUSING BY TOWNSHIP AREAS

Town	Land requirement (hectares) – Base Case	Land requirement (hectares) – Alternative Scenario 1	Land requirement (hectares) – Alternative Scenario 2
Bright	37	13	33
Porepunkah	31	15	26
Myrtleford	20	4	19
Mount Beauty-Tawonga South	11	6	11
Total	100	37	89

Source: SGS Economics and Planning (2022)

* Surplus capacity was identified for areas of LDRZ and TZ in Mount Beauty-Tawonga South, however additional land zoned for general residential purposes is required to absorb demand expected for “Other” townships.

TABLE 17: LAND REQUIREMENTS BY ZONE, DETAILED ASSUMPTIONS

Town	% Share dwelling demand 2021-41	Total dwelling demand 2021-41	Existing capacity				Unmet capacity (Demand vs Capacity)	Unmet capacity	Lot size comparison precinct	Assumed precinct lot size	Additional land req. for infrastructure	Total additional land required (sqm)
			Large-scale subdivision	Established area nfill	Vacant	Total						
Bright												
GRZ	30.0%	488	300	53	41	394	-94	94	Bright GRZ	700	1.25	139,068
LDRZ	4.0%	65	49	0	6	55	-10	10	Porepunkah_LDRZ	4,000	1.25	105,063
Subtotal	***34%***	***553***	***348***	***53***	***47***	***448***	***-104***	***104***				***133,484***
Porepunkah												
TZ	15%	244	84	3	8	94	-149	149	Bright GRZ	700	1.25	130714
LDRZ	1%	16	2	0	4	6	-11	11	Porepunkah LDRZ	4000	1.25	53763
Subtotal	***16%***	***260***	***85***	***3***	***12***	***100***	***-160***	***160***				***184,477***
Myrtleford												
GRZ	16.2%	262	242	16	40	298	35	0	Myrtleford GRZ1	800	1.25	0
LDRZ	2.9%	46	29	0	3	32	-14	14	Myrtleford LDRZ	4,000	1.25	70,098
Subtotal	***19%***	***309***	***271***	***16***	***43***	***330***	***21***	***14***				***70,098***

Mount Beauty - Tawonga South (Upper Kiewa Valley)											
GRZ	8.1%	132	49	4	28	81	-51	51	Mount Beauty GRZ1	600	1.25	38,134
TZ	0.1%	2	61	1	10	72	70	0	Tawonga TZ	1,200	1.25	0
LDRZ	2.8%	45	112	0	5	117	72	0	Myrtleford LDRZ	4,000	1.25	0
Subtotal	**11%**	**179**	**222**	**5**	**43**	**270**	**91**	**51**				**38,134**
Other											
TZ	11.2%	182	53	0	28	81	-101	101	Tawonga TZ	1,200	1.25	150,867
LDRZ	8.8%	143	8	0	28	36	-108	108	Myrtleford LDRZ	4,000	1.25	537,610
Subtotal	***20%***	***325***	**61**	**0**	**56**	**117**	***-208***	***208***				***688,477***

4. Additional barriers to housing supply

Providing sufficient, residentially zoned land is essential to enabling sufficient housing supply and supporting the proper functioning of housing markets. However, there are other factors (some outside of the purview of local government) that are necessary to facilitate housing development.

Stimulating housing supply in regional areas is a complex problem that is currently subject to extensive investigation by several state and regional agencies. While much of this work is ongoing, the following have been identified as barriers to housing across regional Victoria:

- Provision of servicing infrastructure: It can be prohibitively expensive to service housing lots with water or sewerage infrastructure. There is a mismatch between the planned infrastructure delivery, population growth rates and the cost/revenue structure of the water authorities. This mismatch limits the ability of water authorities to bring forward or expand their capital expenditure to meet demand, noting that the timelines associated with significant infrastructure projects is itself a challenge in meeting unanticipated demand.
- Land withholding in greenfield areas: In some locations, land is not developed as there is no compelling reason for landowners to sell. Landowners may have particular price expectations and if this is not being offered, then they can continue to use the land productively, and hold it in the expectation that prices will rise in future. Land being held back from development can also be influenced by the upfront costs of infrastructure provision.

  In 2023 the Windfall Gains Tax (WGT), was implemented in Victoria. Land value uplift resulting from rezoning will be taxed at 50 per cent for windfalls above $500,000. The tax will commence with windfalls of $100,000 but will only reach its full 50 per cent rate when the gain from rezoning is $500,000 or more. Given the relatively low achievable prices for finished residential lots in greenfield areas in in rural Victoria - versus development costs including normal profit - it is unlikely that the residual value of rezoned land will greatly exceed the value prior to rezoning. If the WGT were to be payable, this would only be because the proponent can make a normal profit as well as paying a premium for the site over the use value prior to rezoning.

  However, the application of the WGT is not always well understood and is seen to lack transparency. This may impact the perceived developability of land if landowners consider their profit potential to be at risk.

  At a more basic level some landowners might not necessarily know what to do with their land (in terms of development potential) and need direction. Others may hold onto their land because they do not want to see change.
- Local geography and settlement patterns: The location, geography and settlement patterns of many rural towns and settlements creates a range of barriers to development, including:
  - Onsite wastewater management is required as some smaller towns in Alpine Shire aren't connected to trunk wastewater infrastructure. In some instances, smaller lots (particularly those zoned LDRZ or RLZ) can be left vacant because the lots are too small to meet EPA guidelines and codes of practice. The alternative (expansion of reticulated services to these

small towns) is prohibitively costly, and it is generally accepted that it is not possible (or desirable) to service all small towns.

- The timely provision of other development infrastructure, such as roads, drainage infrastructure, bicycle and footpaths, public transport and open space is also a barrier to development in some locations, particularly where a Development Contributions Plan (DCP) is not in operation.
- Poor access to NBN and unreliable telecommunications is a significant issue. Large parts of the Shire are black spots, including several spots along the Great Alpine Road and other major roads. Many people in black spots are now relying on satellite internet services. which to a large extent overcomes the problem. However, this service is currently less affordable than NBN. This was raised as an issue in Bright, and there is no internet in parts of Wandiligong and Harrietville.
- A lack of staffing and labour resources can impact delivery timeframes for the construction of infrastructure and is a major issue in the region as there not enough builders or contractors.

- Development feasibility: in some areas, the costs of developing a dwelling are greater than the potential sale price the developer or builder would receive, rendering development unfeasible. The sometimes marginal feasibility of developing medium and higher density housing is a particular problem for adding to and diversifying the housing stock in regional Victoria. There is current demand for this type of housing, from ageing and downsizing households and seasonal and essential workers, but development costs, and risks associated with approvals, site constraints, apparently limited market depth and ultimate sale values, constrains the market provision of this needed stock.
- Size and structure of the development industry: the annual demand for new housing is limited in many regional areas, sometimes counted in the mere dozens of dwellings or fewer in some smaller country towns. The modest size of housing markets in small towns and rural areas is a barrier to responsive and more innovative development. In these situations, the size of the market cannot support a sufficient body of competitive suppliers, setting up actual or near 'natural monopoly' amongst very few active developers.
- Skills and awareness of development industry: as well as the scale of the development industry, there is also a challenge regarding the diversification into new products. The expertise required to deliver medium and higher density is rarely present, and it is more straightforward to continue developing the same products, despite there being demand for alternative products.

As well as identifying suitable areas and patterns for housing growth, the Alpine Land Development Strategy will consider how council, in partnership with other relevant stakeholders and agencies, can support housing delivery.

5. Implications for the Land Development Strategy

- The global COVID-19 pandemic has created uncertainty regarding future population projections in Alpine Shire. International border closers, restrictions on domestic travel and periods of rolling lockdowns in Victoria significantly impacted population movements and also shifted individual and household preferences regarding lifestyle and housing.
- Uncertainty continues as to the impacts of the COVID-19 pandemic on long term population trends. To account for this uncertainty several populations forecast scenarios for Alpine Shire were generated to demonstrate alternative recovery scenarios. These scenarios demonstrate that the population of Alpine Shire could vary between 13,936 people and 15,890 people by 2041.
- Population growth results in additional demand for housing. By 2041 there is expected to be demand for between 1,021 (low population growth scenario) to 2,167 (high population growth scenario) additional dwellings in Alpine Shire. Across all scenarios, separate houses are expected to comprise the largest share of total growth. These projections are based on observed recent trends continuing. Alternative policy directions and settings are possible.
- Non-resident ratepayers create additional demand for housing. While it is difficult to quantify this additional demand precisely, it is expected that adopting a high growth scenario is a conservative approach and should be sufficient to accommodate additional demand created by this sub-set of the housing market. Further, review of the strategy at regular intervals (e.g. every five years) will allow the growth figures to be adjusted if necessary in future.
- Balancing the findings of the analysis undertaken above, and the need for Council to plan for at least 15 years supply of residential land to ensure an efficient and well-functioning housing market, it is recommended that Council adopt the high growth scenario for dwelling demand (2,167 additional dwellings by 2041) to ensure prudent settlement planning, with 1,625 (75 per cent) to be accommodated in urban areas.
- Based on trends in the locational shares of past dwelling construction it could be assumed that 553 (or 34 per cent) of dwelling demand would occur in the Bright, 309 (or 19 per cent) in the Myrtleford, 260 (or 16 per cent) in Porepunkah and 179 (or 11 per cent) in Mount Beauty-Tawonga South (with the remainder in other smaller and scattered locations in the Shire).
- Existing, residentially zoned areas provide capacity for between 1,266 and 1,587 dwellings, depending on the stringency of land use exclusions and development propensities applied, with the largest share of capacity available via large-scale subdivision in Bright. Based on past trends in infill development, it is expected that – without active intervention – further infill development accounts for only a small share of overall capacity.
- Broadly speaking and without policy adjustment there is an estimated undersupply of land for residential development in the order of 360 dwellings across Alpine Shire, with shortfall in land supply greatest in Bright and Porepunkah where past development trends indicate future demand will likely be greatest.

- It is broadly estimated that an additional 98 hectares could be rezoned to support future demand for housing, although unlocking infill development in existing urban-zoned areas should be prioritised (reducing the need for new greenfield land). Detailed structure planning will be required to determine exact land area requirements and associated provision of services.

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Appendix D: Employment land demand and capacity

Alpine Shire Council

Land Development Strategy

July 2024

SGS Economics & Planning

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Contents

1. Employment forecasts

This section provides an estimate of future employment by industry in Alpine Shire to 2041.

1.1 Employment forecasts method

SGS Small Area Land Use Projections Model (SALUP) Forecasts

The SGS SALUP employment forecasts are derived as follows:

- Historical and **base year employment by industry** is recalibrated to adjust for undercount in raw ABS Census data (typically around 20 per cent but this varies across industries). This is done in two steps:
  - First, SGS systematically distributes geographically unallocated/undefined categories to a spatial location. This is done for 1 digit ANZSIC industries and across six geographic levels: Travel Zones, Statistical Area 2, Statistical Area 3, Statistical Area 4, Greater Capital City Statistical Areas, and State.
  - This corrects for spatial undercount in the census and ensures that reallocations are at the most appropriate geographic level possible.
  - Next, this intermediate employment by industry estimate is further recalibrated at the state level based on the official ABS Labour Force Survey employment count.
  - This corrects for the non-spatial undercount in the census[1].
- **Victorian employment by industry** is forecast using detailed trends analysis of employment by industry from the ABS Labour Force Survey, Census Journey to Work, projected workforce and analysis of major-economic factors regarding structural changes in the broader economy drawing on state and national publications. A number of indicator series are created to understand how the employment by industry projections align with recent trends, and align with key age segments (i.e. age cohorts).
- **Employment forecasts are then disaggregated to the Statistical Area 3 level** using trend analysis and a range of indicator series to distribute employment by industry. This ensures population serving employment (i.e. retail, education, etc) is shifted to where population growth is forecast while the spatial distribution of other industries follows other locational drivers[2]. A 'new developments database' is also used to capture major renewal sites and policy interventions which shift employment from a base trend.

[1] e.g. Individuals who did not submit census forms, or inadequate industry of employment responses
[2] e.g. Accessibility and supply of land

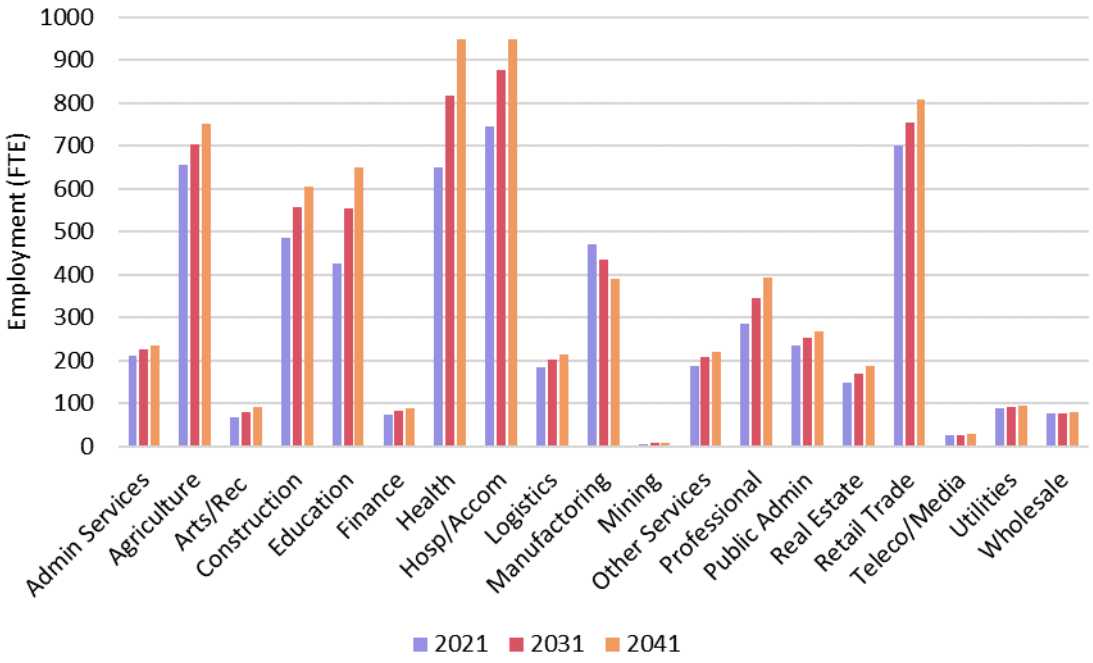
- Statistical Area 3 **employment is then further disaggregated** to SAM zones[3] based on current trends and the 'new development database' to capture key change areas.

1.2 Employment forecast results

A key driver of employment land demand in Alpine Shire is municipal-wide jobs growth. The following section presents future employment growth across the Shire and by major towns utilising SGS's Small Area Land Use Projections (SALUP) model. SALUP provides employment forecasts for across Victoria in small areas called travel zones (there are 59 Travel Zones in the Alpine Shire). The forecasts are broken down to the one-digit Industrial classifications for Australia and New Zealand (ANZSIC) used by the Australian Bureau of Statistics.

Shire-wide employment projections by industry are shown in Figure 1.

FIGURE 1: EMPLOYMENT BY ANZSIC CATEGORY, ALPINE SHIRE, 2021-2041



Source: SALUP, 2019

To determine employment growth within Alpine Shire's primary employment areas, each SALUP Travel Zone was categorised into five policy relevant Broad Land Use Categories (BLUC), with high level corrections made to account for multiple BLUCs occurring within some zones. Table 1 outlines the categories utilised and their definitions.

The BLUC categories have been created to split the Alpine LGA's future employment needs into locational categories relevant to land use planning. Council needs to ensure that there is an adequate

[3] A SAM Zone is a geographic unit created by SGS. It can be aggregated up to standard ABS geographies such as Statistical Areas 1 and Suburbs and Local Government Areas.

supply of land for industrial activity and employment within centres. Employment in other locations, particularly rural areas, is likely to be less constrained and to require less monitoring or intervention from Council.

TABLE 1: BROAD LAND USE CATEGORY AND RELEVANT ZONING, ALPINE SHIRE

Land use category	Definition
Local centre	The commercial core of larger towns, designated by the Commercial 1 Zone.
Industrial/services	Areas containing industrial activity, designated by Industrial 1 Zone, Industrial 2 Zone, and the Mixed Use Zone. While the Mixed Use zone allows a broad range of land uses (including residential), it generally supports light industrial and urban services uses in Alpine Shire.
Dispersed accommodation	Accommodation and hospitality uses in non-employment zones.
Large Town	All other urban areas outside of defined commercial and industrial zones. This category includes employment uses (other than hospitality and accommodation) such as schools, medical uses, health and recreation facilities, public administration uses etc.
Rural/other	All non-urban zoned areas.

Source: SGS Economics and Planning, 2022

Total employment by BLUC at 2021 is shown in Table 2. According to this analysis, local centres and industrial/services areas each accommodate around 30 per cent of employment in the Shire. The remainder is spread throughout other parts of the larger towns, the remaining smaller towns and rural areas of the LGA. Most of the employment in the rural areas is associated with agriculture.

Table 3 shows total employment by BLUC for each of the Shire's main towns (Myrtleford, Bright-Porepunkah, and Mount Beauty). It shows that these towns accommodated 76 per cent of the total employment in 2021.

TABLE 2: BROAD LAND USE CATEGORY EMPLOYMENT, ALPINE SHIRE, 2021

Land use category	Employment in 2021	% total employment
Local centre	1,627	30%
Industrial/services	1,623	30%
Dispersed accommodation	236	4%
Large town	748	14%
Rural/other	1,241	23%
Total	**5,476**	**100%**

Source: SGS Economics and Planning, 2022

TABLE 3: BROAD LAND USE CATEGORY EMPLOYMENT, MAIN TOWNS, 2021

	Local centre	Large town	Industrial/ services	Dispersed accomm	Rural/ other	Total	%
Myrtleford	619	388	536	-	142	1,686	30%
Bright-Porepunkah	752	291	327	203	152	1,725	30%
Mount Beauty & Tawonga South	186	173	344	19	189	911	16%
Other	191	-	471	-	676	1,337	24%
Total	1,747	852	1,679	222	1,158	5,659	100%

Source: SGS Economics and Planning, 2022

Table 4 details the total expected increase in employment across the Shire for each BLUC from 2021 to 2041. Table 5 shows the same results for each of the Shire's main towns.

TABLE 4: EMPLOYMENT GROWTH ACROSS ALPINE, 2021-2041

	2021	2041	Total change 2021-2041	% change 2021-2041	Average annual growth rate
Local centre	1,747	2,162	414	24%	1.1%
Industrial/ services	1,679	1,843	165	10%	0.5%
Dispersed accommodation	222	283	61	27%	1.2%
Large town	852	1,218	366	43%	1.8%
Rural/other	1,158	1,415	257	22%	1.0%
Total	**5,659**	**6,922**	**1,263**	**22%**	**1.0%**

Source: SALUP, 2019

TABLE 5: EMPLOYMENT GROWTH, MAIN TOWNS, 2021

	2021	2041	Total change 2021-2041	% change 2021-2041	Average annual growth rate
Myrtleford	1,686	2,329	643	38%	1.6%
Bright-Porepunkah	1,725	2,352	627	36%	1.6%

	2021	2041	Total change 2021-2041	% change 2021-2041	Average annual growth rate
Mount Beauty & Tawonga South	911	1,265	354	39%	1.7%
Other	1,337	1,550	212	16%	0.7%
Total	**5,659**	**7,496**	**1,836**	**32%**	**1.4%**

Source: SALUP, 2019

2. Employment floorspace demand

Using the jobs forecasts from the previous chapter, this section estimates expected future demand for employment floorspace in Alpine Shire. Estimates of employment floorspace demand for each of the Shire's main towns are also provided.

2.1 Employment floorspace estimates

High-level employment floorspace ratios were used to convert jobs forecasts to a gross estimate of employment floorspace (sqm) by BLUC (Table 6). These ratios are standard estimates of how densely buildings may be used for employment and are approximated based on the development patterns of existing employment uses.

TABLE 6: EMPLOYMENT-TO-FLOORSPACE RATIOS, ALPINE SHIRE

Land use category	Employment-to-floorspace ratio (sqm)
Local centre	35
Industrial/services	120
Dispersed accommodation	150
Large town	50
Rural/other	50

Source: SGS Economics and Planning, 2022

This produced a total floorspace demand for each BLUC. By comparing results for future years to results for 2021, it is possible to estimate how much additional floorspace may be required to accommodate increased employment in key BLUCs in the LGA.

Table 7 outlines the additional estimated floorspace needed per BLUC in the future. The category that is expected to have the highest floorspace demand is industrial/services due to the low density of activity typical of this BLUC. Local centres are expected to require 14,502 sqm of additional floorspace.

Large town is also expected to require a large amount of additional floorspace, but much of this would be expected to be provided in dispersed facilities like schools and hospitals meaning that this demand would not represent widespread and largescale change within towns.

Additional demand for rural/other is likely to be spread between existing smaller towns and agricultural uses, and so may represent minimal change in most rural areas and is not likely to require substantial planning work to be accommodated.

TABLE 7: FLOORSPACE DEMAND BY INDUSTRY CATEGORY, ALPINE SHIRE, 2021 TO 2041 (SQM)

	2031	2041
Local centre	+8,259	+14,502
Industrial/services	+12,118	+19,756
Dispersed accommodation	+5,918	+9,125
Large town	+10,469	+18,288
Rural/other	+7,036	+12,851
Total	**+43,801**	**+74,522**

Source: SGS Economics and Planning, 2022

TABLE 8: FLOORSPACE DEMAND CHANGE BY INDUSTRY CATEGORY, MAIN TOWNS, 2021 TO 2041 (SQM)

	Local centre	Large town	Industrial/services	Dispersed accommodation	Rural/other	Total
Myrtleford	6,271	8,827	6,871	-	1,553	23,521
Bright-Porepunkah	5,234	5,775	6,730	8,270	153	26,162
Mount Beauty & Tawonga South	879	3,686	8,278	855	1,006	14,706
Other	2,118	-12,033	-2,123	-	10,138	10,134
Total	**14,502**	**6,255**	**19,756**	**9,125**	**12,851**	**74,522**

Source: SGS Economics and Planning, 2022

3. Employment land capacity

This section assesses the capacity to accommodate forecast demand for employment land under existing planning controls.

3.1 Capacity assessment method

An assessment has been undertaken to determine the extent to which forecast demand for employment floorspace can be accommodated within existing industrial and commercial zoned areas.

The employment capacity assessment identifies land available for development or redevelopment, and how much additional floorspace could be accommodated on that land. It takes into consideration the following factors:

- **Existing development patterns:** Existing development and lot size patterns (i.e site coverage) were examined by zone and town to determine likely potential future development outcomes.
- **Land use exclusions:** Properties were excluded if they contain social infrastructure or other land uses which are likely to be in place over the next 20 years. These include schools, community centres, aged care facilities, private hospitals, large places of public worship and clubs.
- **Areas subject to natural hazards (bushfire, flooding, excessive slope):** Clause 13 of the Alpine Planning Scheme Planning Policy Framework addresses Environmental Risk. Areas subject to flooding and bushfire risk, steep slopes (as a proxy for landslip), and within environmental buffers (i.e from the Wastewater Treatment Plant) were removed from the analysis)

Total current zoned area by town is shown below, with the Industrial 2 Zone area grouped with Myrtleford and employment zones near Mount Beauty grouped with Mount Beauty.

TABLE 9: TOTAL LAND AREA (SQM) BY EMPLOYMENT ZONE AND TOWN

	Employment zone	Land area (sqm)
Bright	Commercial 1 Zone	90,524
	Industrial 1 Zone	118,1013
Myrtleford	Commercial 1 Zone	98,900
	Industrial 1 Zone	356,813
	Industrial 2 Zone	820,163
	Mixed Use Zone	60,220
Mount Beauty	Commercial 1 Zone	37,775
	Industrial 1 Zone	42,448

	Employment zone	Land area (sqm)
	Mixed Use Zone	56,422
Other	Township Zone	2,091,268
Total		3,772,546

Source: SGS Economics and Planning, 2022

3.2 Development Density Scenarios

Three alternative employment capacity scenarios were tested, showing how much additional employment generating floorspace could be accommodated under different development futures:

- Low Density scenario: Only includes currently vacant sites while excluding sites with environmental constraints.

  The low scenario assumes site coverage and development densities like current typical values across the LGA, which are relatively low density.

- Medium Density scenarios: Accounts for potential of sites with existing development but low site coverage (up to 50 per cent) to be redeveloped at a higher density because of additional demand. Sites subject to environmental constraints have been excluded.

  Under this scenario, sites would be developed at a higher intensity of use corresponding to the mid-upper range of what is currently seen in the LGA.

- High Density scenario: Assumes a high rate of redevelopment of commercial and industrial sites, only excluding those containing two or more dwellings, or with an existing site coverage greater than 80 per cent.

  Under this scenario, sites would be much more intensively used, with all development yielding near the maximum density currently seen in the LGA.

The low scenario is the most likely and status-quo of the scenarios, while the medium scenario represents an increase in development and density based on an increase in demand. The high scenario represents somewhat of a theoretical maximum of how much development could be accommodated. It is very unlikely that this level of development would be achieved.

3.3 Land available for development

The following tables show a summary of land available for development or redevelopment under each scenario based on existing zoning patterns across the Shire (Table 10) and for each of the main towns by zone (Table 10). There is limited vacant land in the Commercial 1 Zone and Industrial 1 Zone outside of Myrtleford North or in the Mixed Use Zone (shown by the low scenario). Land availability is much higher under the medium and high scenarios where some redevelopment of sites which are not vacant is expected to occur.

TABLE 10: SCENARIO COMPARISON OF LAND AVAILABLE FOR DEVELOPMENT BY ZONE, ALPINE SHIRE, 2022 (SQM)

Zone	Low Density scenario	Medium Density scenario	High Density scenario
Commercial 1 Zone	12,296	77,782	193,474
Industrial 1 Zone (excluding Myrtleford North)	22,390	98,975	153,268
Industrial 1&2 Zone & Myrtleford North Industrial 1 Zone	919,601	1,030,070	1,058,831
Mixed Use Zone	2,213	26,999	108,653
Township Zone	643,736	739,470	2,016,188
Total	**1,600,236**	**1,981,624**	**3,646,111**

Source: SGS Economics and Planning, 2022

TABLE 11: SCENARIO COMPARISON OF LAND AVAILABLE FOR DEVELOPMENT BY MAIN TOWN, ALPINE SHIRE, 2022 (SQM)

Zone	Low Density scenario	Medium Density scenario	High Density scenario
Bright	***4,280***	40,165	185,551
Commercial 1 Zone	4,280	31,836	69,854
Industrial 1 Zone	-	8,329	115,697
Mount Beauty	**8,191**	**61,964**	**131,847**
Commercial 1 Zone	398	13,221	34,537
Industrial 1 Zone	6,770	36,063	42,448
Mixed Use Zone	1,023	12,680	54,863
Myrtleford	**24,428**	**109,955**	**253,693**
Commercial 1 Zone	7,618	32,725	89,084
Industrial 1 Zone	15,621	62,912	110,820
Mixed Use Zone	1,189	14,319	53,789
Mrytleford North Industrial	**919,601**	**1,030,070**	**1,058,831**

Zone	Low Density scenario	Medium Density scenario	High Density scenario
Industrial 1 Zone	99,438	209,907	238,668
Industrial 2 Zone	820,163	820,163	820,163
Other	**643,736**	**739,470**	**2,016,188**
Township Zone	643,736	739,470	2,016,188
Total	*1,600,236*	*1,981,624*	*3,646,111*

Source: SGS Economics and Planning, 2022

3.4 Net capacity

Net capacity is the amount of additional employment floorspace capacity that could be built on available sites, after existing commercial and industrial floorspace has been accounted for. This is the amount of floorspace that could be realised to meet the additional employment demand needs by 2041. This is calculated by comparing the total employment floorspace capacity less the existing employment floorspace.

The table below shows net capacity for employment generating floorspace across the LGA. Only the low and medium scenarios are included as they are the most reasonable, and development outcomes may fall between them.

According to these results, there is net capacity of between approximately 400,000 sqm and 570,000 sqm of employment floorspace across the Shire. However, not all of this capacity is on land that would be suitable or attractive for much of the future demand.

In more detail, the results show:

- Over half of net employment capacity is available within the industrial area north of Myrtleford. However, part of this site is currently occupied by Australian Forest Industry Mills and the remainder may not be available for further industrial development in the near term.
- There is theoretically a considerable amount of capacity for employment uses within the Township Zone, however the township zone in the Alpine context is largely used for dwellings with some limited employment uses. It is unlikely to be suitable to accommodate much of the additional demand beyond that for additional activity in rural towns.
- There is very limited capacity for additional employment floorspace within areas zoned Commercial 1 without further redevelopment and densification, particularly in Mount Beauty and Myrtleford.
- There is limited capacity for additional employment floorspace in the Industrial 1 or Mixed Use Zone unless redevelopment of sites with existing development occurs.

TABLE 12: NET EMPLOYMENT FLOORSPACE CAPACITY BY TOWN AND ZONE, ALPINE SHIRE, 2022

	Employment zone	Low scenario - land area (sqm)	Medium scenario - land area (sqm)
Bright	**Total**	**2,140**	**22,378**
	Commercial 1 Zone	2,140	20,858
	Industrial 1 Zone	0	1,520
Myrtleford	**Total**	**8,019**	**34,830**
	Commercial 1 Zone	3,757	20,328
	Industrial 1 Zone	3,905	11,467
	Mixed Use Zone	357	3,035
Myrtleford North Industrial	**Total**	**229,900**	**298,864**
	Industrial 1 Zone	24,859	52,815
	Industrial 2 Zone	205,041	246,049
Mount Beauty	**Total**	**2,132**	**19,481**
	Commercial 1 Zone	199	7,595
	Industrial 1 Zone	1,625	6,618
	Mixed Use Zone	307	5,267
Other	Township Zone	157,117	192,662
Total		**399,307**	**568,215**

Source: SGS Economics and Planning, 2022

3.5 Employment floorspace gap analysis

A comparison of net employment floorspace demand and net capacity for Alpine Shire was conducted based on the Industrial/Service and Local Centre BLUCs. These categories are the focus of assessment as they align with areas zoned for industrial and commercial activity, which are most constrained for employment growth. The net capacity figures were based on the appropriate zones of MUZ and IN1Z for Industrial/service as well as C1Z for local centres.

Table 13 presents net capacity, however the IN1Z value was adjusted to exclude land in the Myrtleford North industrial area (zoned INZ2) as this site accommodates the Mill and is not available for development for other industrial uses.

Employment floorspace requirements are assessed against both the low and medium employment floorspace capacity results. The results show that under the low capacity scenario, there is expected to

be a shortfall in supply of approximately 21,968 sqm of floorspace. This includes an undersupply of around 8,400sqm for Local Centres and 13,600 for Industrial/ Services areas.

Under the medium scenario, which allows for a moderate level of re-development and intensification, there is expected to be an oversupply of employment land in the order of 43,000sqm, including an excess of around 8,200sqm in Industrial/ Service areas and 34,300sqm in Local Centres.

There is greater potential for redevelopment and intensification of use in commercial centres (in alignment with the medium capacity scenario) due to the higher value of land uses in these locations. As such, additional demand for employment is likely to be absorbed within the extent of existing Commercial 1 Zone areas without the need to rezone further land.

A modest rezoning of land for industrial uses could be supported in Myrtleford, Bright-Porepunkah and Mount Beauty-Tawonga South to accommodate the projected increase in industrial/Services floorspace.

TABLE 13: NET EMPLOYMENT FLOORSPACE DEMAND VS CAPACITY, ALPINE SHIRE - 2041

			Low employment floorspace capacity scenario			Medium employment floorspace capacity scenario		
		Demand	Net capacity	Gap (sqm of floorspace)	Gap (sqm of vacant land)	Net capacity	Gap (sqm of floorspace)	Gap (sqm of vacant land)
Myrtleford	Industrial	13,317	4,262	-9,055	-36,221	14,501	1,184	3,947
	Local centre	9,041	3,757	-5,285	-10,570	20,328	11,287	14,108
	Subtotal	*22,359*	*8,019*	*-14,340*	*-46,791*	*34,830*	*12,471*	*18,056*
Myrtleford North Industrial	**Industrial**		**229,900**	**229,900**	**919,601**	**298,864**	**298,864**	**919,601**
Bright-Porepunkah	Industrial	11,591	0	-11,591	-46,365	1,520	-10,071	-33,570
	Local centre	8,019	2,140	-5,880	-11,759	20,858	12,838	16,048
	Subtotal	*19,611*	*2,140*	*-17,471*	*-58,124*	*22,378*	*2,767*	*-17,522*
Mount Beauty—Tawonga South	Industrial	12,537	1,932	-10,605	-42,420	11,885	-652	-2,174
	Local centre	1,383	199	-1,184	-2,369	7,595	6,212	7,765
	Subtotal	*13,921*	*2,132*	*-11,789*	*-44,789*	*19,481*	*5,560*	*5,591*
Other	**All**	**17,882**	**157,117**	**139,235**	**556,940**	**192,662**	**174,780**	**582,599**

4. Implications for the Land Development Strategy

- To compare the two components the net capacity and net demand were calculated for the Broad Land Use Categories of industrial/services and local centres. These two broad categories represent employment that fits into the zones of MUZ, IN1Z and C1Z. It is important to note that land in Myrtleford North Industrial area was excluded as this land is currently occupied by Australian Forest Industry Mills and is unlikely to be made available for further industrial development in the near term.
- Two capacity scenarios were analysed against demand: low and medium. These scenarios were analysed as they represent the most realistic outcomes. The low scenario only addresses vacant sites whereas the medium scenario accounts for some potential for redevelopment and intensification – both scenarios exclude sites with environmental constraints.
- Overall, there is sufficient capacity within existing commercial zoned employment areas to accommodate forecast employment growth. A modest rezoning of land is supported to ensure sufficient land supply over the long term in Myrtleford, Bright-Porepunkah and Mount Beauty-Tawonga South to service local needs.
- Structure planning and community infrastructure planning after adoption of the LDS will more clearly define integration of employment need in these towns and address interface considerations.

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ALPINE SHIRE COUNCIL

SGS Economics & Planning

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Appendix E: Opportunities and constraints to growth

Alpine Shire Council

Land Development Strategy

July 2024

Alpine Shire Council
www.alpineshire.com.au
102 Churchill Avenue, Bright

Contents

1. Introduction

This document considers factors that restrict urban development (constraints) and those that would support suitable urban development (opportunities) in the context of Alpine Shire.

These factors can be physical in nature or based on policy, cost, environmental or cultural preferences. Evaluation of these factors is applied by aggregating and overlying the results of a multi-criteria evaluation into maps of urban suitability that can be used to inform future land development decisions.

Because most land in the Shire is at least partially constrained, trade-offs are required, such as having to choose between developing in areas with high landscape values, versus areas that might have high agricultural productivity.

This also brings into focus the importance of concentrating new development within the boundaries of existing settlements where possible (infill development).

2. Where can growth go?

2.1 A note on Indigenous agriculture

The Dhudhuroa, Gunai-Kurnai, Taungurung, Waywurru and Jaithmathang tribes are the traditional owners and custodians of the land in Alpine Shire. However, the process of colonisation and white settlement displaced these people and much of the direct knowledge of how they lived in the area has been lost. It is critical that any new development in Alpine Shire seeks to understand and mitigate any impact on the cultural heritage of First Nations people.

This overarching requirement should be seen as an opportunity rather than a constraint, and further detailed work to engage with the traditional owners and understand indigenous cultural heritage is required prior to any rezoning.

2.2 Overview of Opportunities and constraints

Overall, Alpine Shire is heavily constrained for future urban development, the major factor being the high percentage of Crown Land in the Shire. Around 92% of the Shire is public land, including the Mount Buffalo National Park, important elements of the Alpine National Park, and extensive areas of State Forest.

The remaining 8% of land is freehold and mostly occupies the valleys, parts of which are subject to constraints such as flooding, or may be fringed by steeply sloping land that is less suited to development, as well as being more vulnerable to the impacts of bushfire from adjacent forests.

The upper Ovens Valley, where much of the development pressure in the Shire is located, is particularly subject to these constraints due to its narrowness compared to the Kiewa and lower Ovens valleys.

In addition, significant areas of the Ovens Valley floor are devoted to forestry or Crown Land that was dredged during the gold rush era. This land is disturbed and of low value for agriculture but can also suffer from geotechnical constraints, caused by this ground disturbance, that can make urban development more challenging (for example dredge tailings are challenging for wastewater disposal).

In contrast, the Kiewa Valley is a much wider valley than the upper Ovens Valley and was not subject to dredging. However, it is also subject to flooding in some areas and has the highly valued vistas and views of the alpine landscape, including to Victoria's highest peaks. It also has a very high agricultural value.

The location of urban land in the Kiewa Valley has been largely determined by public policy, with the establishment of Mount Beauty itself being a government project in support of the Snowy Hydro Scheme. Planning policy for other urban land in the vicinity has been shaped by the identification of the Kiewa Valley as a National Trust Heritage Landscape and the inclusion of planning controls to protect the valley from development that may compromise views from (mainly) the western side of the valley. Hence most development has occurred on the western side of the Kiewa Valley Highway.

Urban development constraints do not just fall into the category of environmental risk, but also include the need to avoid damaging areas of cultural, scientific, historical and environmental value to society; or land that is less feasible to develop for geotechnical reasons (e.g., formerly dredged land). This is reflected in Table 1 and the constraints mapping that has been undertaken.

2.3 Planning Policy regarding Environmental Risk

Much of the approach to determining constraints is guided by Victorian Government planning policy as expressed in the Alpine Planning Scheme. The Planning Policy Framework at Clause 13 of the Alpine Planning Scheme addresses environmental risk, and at an over-arching level supports risk-based planning as a fundamental approach to planning for development. It places particular emphasis on bushfire, flooding risk, and climate change, but also refers to soil degradation, landslip and erosion, floodplain management, landscape protection, and environmentally sensitive areas.

2.4 Risk Based Planning

Clause 13.01-1S, when addressing natural hazards and climate change, has as an objective;

- the minimisation of the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning.

Strategies for achieving the objective are as follow:

- Consider the risks associated with climate change in planning and management decision making processes.
- Identify at risk areas using the best available data and climate change science.
- Integrate strategic land use planning with emergency management decision making.
- Direct population growth and development to low-risk locations.
- Develop adaptation response strategies for existing settlements in risk areas to accommodate change over time.
- Ensure planning controls allow for risk mitigation or risk adaptation strategies to be implemented.
- Site and design development to minimise risk to life, property, the natural environment, and community infrastructure from natural hazards.

Local policy addresses environmental risk at Clause 02.03-3 of the Alpine Planning Scheme by providing further local context and detail applicable to Alpine Shire. It addresses risk associated with bushfire, flood, climate change, land slip, erosion, steep slopes, land contaminated by activities associated with mining, tobacco and timber production.

The Bushfire Planning Study has now reflected clear directions for growth, lack of support for certain growth fronts and

2.5 The Constraints Mapping Process

A primary purpose of the Land Development Strategy is to identify areas of urban development potential within the Shire to support rezoning where zoned urban land supply is insufficient.

The identification of land most capable of accommodating urban development involves determining the land capable of being fully serviced (usually adjacent to existing fully serviced urban areas) and land least capable or subject to the greatest development constraints.

Urban development and land use constraints can be classed into two broad categories:

- *absolute constraints*, which are technical in nature and are unable to be remediated or removed, and

- *partial/discretionary constraints*, which impose a limitation on use or development, but which can be overcome either by appropriate engineering or policy decisions involving trading off less than perfect planning options against each other. Also, other "soft" constraints can be applied, such as visual impact evaluation, heritage values and the like.

An example of both *absolute* and *discretionary* constraints can be illustrated regarding flooding risk. Dangerous flooding risk is a policy driven *absolute* constraint whereby the state provisions of the Planning Scheme and other legislation require that land subject to *dangerous* flooding not be developed for urban purposes. However, lesser *nuisance* flooding risk can be addressed by planning for appropriate floor levels and engineering works. This is an example of a *discretionary* constraint, where there is a choice as to whether land with lesser flooding risk should be developed or not, and whilst a perfect outcome may not result, it could provide the best choice available.

Many constraints are driven by public policy, examples are:

Bushfire risk – this is a policy driven absolute constraint whereby the state provisions of the Planning Scheme require that no land with a Bushfire Attack Level (BAL) rating of over 12.5 shall be rezoned for residential purposes.

Flooding – the example quoted above.

Environmental buffers – where land is within the area potentially effected by EPA buffers (odour, noise, safety, etc.)

Contaminated land – where certain sensitive uses are prohibited because of a danger to health.

Heritage, cultural and landscape significance – where land of significance is identified and subject to protection.

2.6 A three stage constraints assessment process to identify suitable urban land

To understand the potential for rezoning of broadacre land for future urban development, the sieve mapping process is undertaken in 3 stages, two of which apply to this Land Development Strategy.

Stage 1 combined constraints and opportunities map – basic urban suitability

A Stage 1 map of Urban Suitability (see Section 4 – Urban Suitability) provides a picture of land suitably located adjacent to existing fully serviced settlements that is least subject to severe constraints. This coarse analysis identifies areas that are suitable for a more fine-grained assessment of urban suitability and combined with the urban capacity analysis in this report, allows the study to focus on the areas of higher need.

The Stage 1 analysis has been applied to the areas around the existing fully serviced settlements of Bright, Myrtleford and Mount Beauty/Tawonga South/Tawonga and Porepunkah. It yields a gross total of approximately 1240ha of potentially developable land not subject to serious constraints that could theoretically result in yield of 12,400 lots and a resultant potential population of around 30,000 additional people. This compares to the current population of the Shire of c.13,000 and is clearly much larger than is needed. Further refinement of the development options in conjunction with the capacity analysis and demand modelling provides more targeted options.

Stage 2 constraints and opportunities assessment of areas identified in stage 1

The Stage 2 assessment allows for the areas identified in Stage 1 to be further assessed against other "soft constraints" (constraints that reflect other community priorities such as visual amenity, heritage values,

planning policy, urban design priorities etcetera) and more detailed constraints, the number of potential choices for further growth is significantly reduced. These can be described as:

- The potential for high threshold infrastructure costs before development can proceed, such as the need for bridges and roads for access, expensive headworks for sewerage, water supply, local drainage. In short, factors which make the potential for development not financially feasible.
- Potential for adverse visual impact in areas of high landscape character value.
- Loss of high-quality agricultural land.
- Poor connectivity to existing urban development and services.
- Amenity buffers to existing or proposed facility with off-site amenity impacts (e.g., transfer stations, water treatment works, industry buffers).
- Areas of heritage and environmental significance.

When these constraints are assessed, by the use of multiple overlay maps, the areas that can realistically be developed are greatly reduced. This is illustrated below:

FIGURE 1 - ILLUSTRATION OF SIEVE MAPPING LAYERS

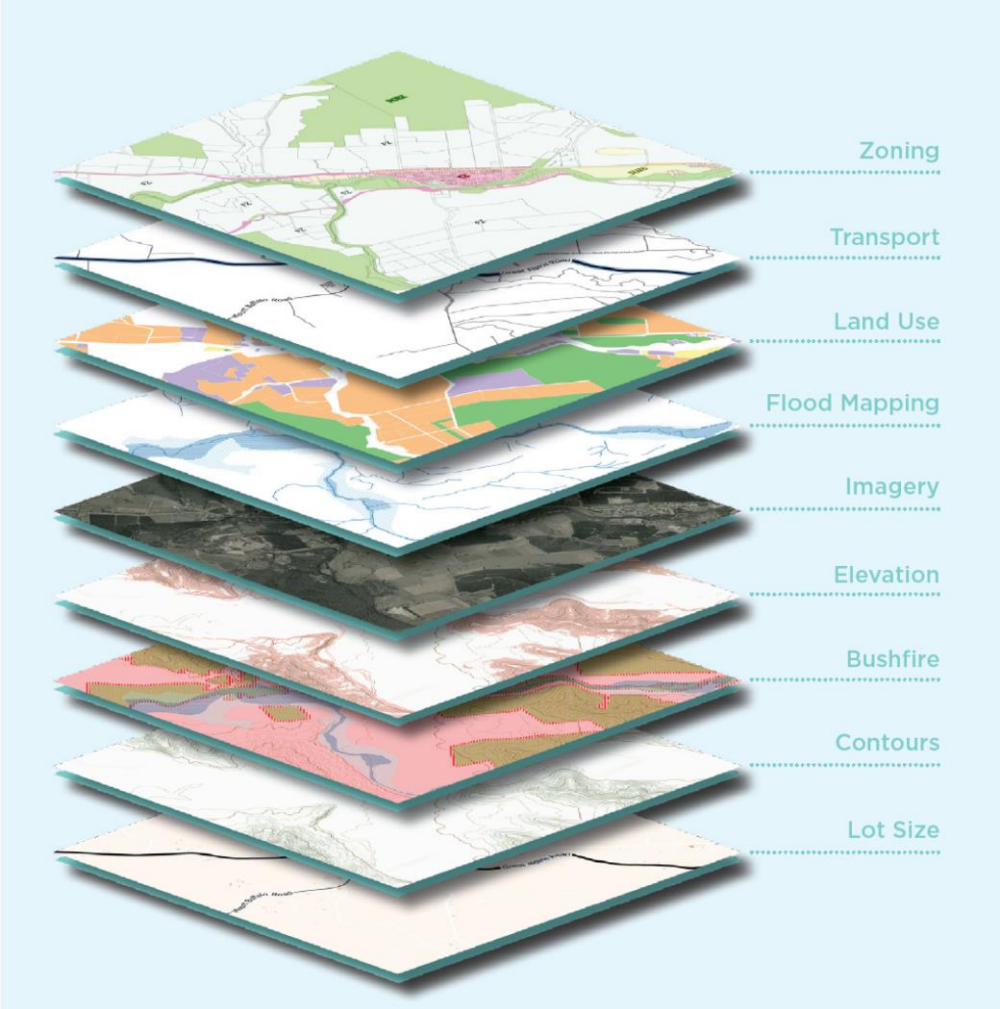


Table 1 summarises the range of constraints that can be considered in the filtering process of identifying land capable or urban development.

Stage 1 (Green in Table 1) – At this level land that is free from *Absolute Constraints* is identified as a "first cut" to focus on land that can be evaluated at a more fine-grained level. These constraints are technical in nature.

Stage 2 (Grey in Table 1) – At this level known "discretionary" or "soft" constraints are applied. The areas identified as not being subject to Stage 1 constraints can now be assessed for their desirability as urban development areas against planning policy and known community values. These areas can also then be evaluated in terms of staging and sequencing of release in accordance with planning policy. The results of this stage will encompass the areas that are recommended as planning policy for urban expansion. This stage can be put out for community feedback as part of the Land Development Strategy and the feedback used to arrive at suitable development areas or adoption by Council.

Stage 3 – This is the fine-grained analysis that will take place with the preparation of structure plans and development plans and rezoning amendments. It is outside the scope of the current Land Development Strategy. It will consider the full range of constraints that apply to the land in detail and allow for the detailed planning and design of future urban development areas. It will be based on more detailed study of the identified development areas using fine grained information that is not currently available and will form, part of the detailed structure planning process.

TABLE 1 - URBAN ZONING AND CONSTRAINTS

Urban Zoning Constraints					
Constraint Type	Absolute/ Mandatory	Partial/ Discretionary	Physical	Policy Driven	Land Tenure
Stage 1 Technical/Absolute Constraints					
Bushfire 12.5 BAL Clause 13.02-1S APS	*			*	
Flooding (dangerous)	*		*	*	
Flooding/drainage (nuisance)		*	*	*	
Excessive Slope	*		*	*	
Erosion risk/geotechnical	*		*	*	
Unserviceable land	*		*	*	
Crown Land	*				*
National/State Parks	*			*	*
Forest Reserves	*			*	*
Poor/unsafe/expensive transport access	*		*	*	*
Contaminated Land	*		*	*	
Environmental Buffers	*	*		*	
Stage 2 Partial/Discretionary Constraints (Community Feedback Required)					
Sufficiency of zoned land	*	*		*	
Restrictive Covenants	*	*			*
High Value Habitats/Ecological Significance	*	*		*	

Urban Zoning Constraints					
Constraint Type	Absolute/ Mandatory	Partial/ Discretionary	Physical	Policy Driven	Land Tenure
Sites of cultural, heritage and scientific significance	*	*		*	
Landscape Significance		*		*	
Potable Water Catchments	*	*		*	
Aquifer recharge areas		*			
High quality agricultural land		*		*	
Transmission & other easements	*	*			*
Excess groundwater and springs	*	*	*		

2.7 Urban opportunities

Urban constraints need to be considered together with the urban opportunities which present themselves. This process is expressed through the development of Urban Suitability Mapping, showing areas most suitable for urban development.

To a large extent, in the case of Alpine Shire, urban opportunities are presented where there is an absence, or near absence of urban development constraints. However, there are several key factors providing favourable opportunities for urban development:

- Proximity to existing services - it is a fundamental requirement of urban planning to locate new development where people can access services such as shops, employment, education and community services. This focuses new development around existing settlements.
- The ability to economically provide key urban infrastructure services such as roads, water, sewerage and power.
- The ability to develop without an undue impact on environmental, agricultural, visual amenity or heritage values.

3. Application of the urban constraints & mapping process

As a key part of the development of the Alpine Shire Land Development Strategy, studies were undertaken to map the constraints shown in Table 1. Of particular importance are:

- A Bushfire Hazard Landscape Assessment and the identification of land that has a BAL rating of higher than 12.5 and is therefore not capable of residential rezoning in recognition of State Planning Policy at Clause 13.02-1S. Further work has now been completed to better understand bushfire. The Bushfire Planning Study was completed in 2024 has now informed and discounted growth areas.
- Flood modelling and mapping for the upper Ovens River by the North East Catchment Management Authority (NECMA) to determine future flooding impacts for a 1:100-year flooding event accounting for climate change. This study distinguished between dangerous and nuisance flooding.

3.1 Bushfire Hazard Landscape Assessment

Planning Scheme Requirements

The Alpine Planning Scheme includes most of the Shire within the Bushfire Management Overlay, which governs the requirements for planning approval of proposals subject to individual planning applications.

At a broader scale, more applicable to this study, the Alpine Planning Scheme addresses bushfire hazard at Clause 13.02-1S and identifies a range of strategies to address it. The policy demands that planning give priority to the protection of human life by:

- Prioritising the protection of human life over all other policy considerations.
- Directing population growth and development to low-hazard locations and ensuring the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire.
- Reducing the vulnerability of communities to bushfire through the consideration of bushfire hazard in decision making at all stages of the planning process.

It provides for bushfire hazard to be identified and assessed for hazard by:

- Applying the best available science to identify vegetation, topographic and climatic conditions that create a bushfire hazard.
- Considering the best available information about bushfire hazard including the map of designated bushfire prone areas prepared under the *Building Act 1993* or regulations made under that Act.
- Applying the Bushfire Management Overlay to areas where the extent of vegetation can create an extreme bushfire hazard.
- Considering and assessing the bushfire hazard on the basis of:
  - Landscape conditions - meaning conditions in the landscape within 20 kilometres (and potentially up to 75 kilometres) of a site;
  - Local conditions - meaning conditions in the area within approximately 1 kilometre of a site;
  - Neighbourhood conditions - meaning conditions in the area within 400 metres of a site; and
  - The site for the development.
- Consulting with emergency management agencies and the relevant fire authority early in the process to receive their recommendations and implement appropriate bushfire protection measures.
- Ensuring that strategic planning documents, planning scheme amendments, planning permit applications and development plan approvals properly assess bushfire hazard and include appropriate bushfire protection measures.
- Not approving development where a landowner or proponent has not satisfactorily demonstrated that the relevant policies have been addressed, performance measures satisfied, or bushfire protection measures can be adequately implemented.

The application of the above has resulted in most of the Shire being placed in a Bushfire Management Overlay and all planning applications being required to be assessed accordingly.

In accordance with the second last bullet point above, this Land Development Strategy considers and assesses bushfire hazard and appropriate protection measures on a high-level strategic basis. More localised and detailed assessments will be required for individual development proposals.

Clause 13.02 also provides **strong policy guidance** regarding settlement planning as follows:

Settlement Planning

Plan to strengthen the resilience of settlements and communities and prioritise protection of human life by:

- Directing population growth and development to low-hazard locations, being those locations assessed as having a radiant heat flux of less than 12.5 kilowatts/square metre under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009).
- Ensuring the availability of, and safe access to, areas assessed as a BAL-LOW rating under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009) where human life can be better protected from the effects of bushfire.
- Ensuring the bushfire hazard to existing and future residents, property and community infrastructure will not increase as a result of future land use and development.
- Achieving no net increase in hazard to existing and future residents, property and community infrastructure, through the implementation of bushfire protection measures and where possible reducing bushfire hazard overall.
- Assessing and addressing the bushfire hazard posed to the settlement and the likely bushfire behaviour it will produce at a landscape, settlement, local, neighbourhood and site scale, including the potential for neighbourhood-scale destruction.
- Assessing alternative low hazard locations for settlement growth on a regional, municipal, settlement, local and neighbourhood basis.
- Not approving any strategic planning document, local planning policy, or planning scheme amendment that will result in the introduction or intensification of development in an area that has, or will on completion have, more than a BAL-12.5 rating under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009)."

Areas of biodiversity conservation value

Ensure settlement growth and development approvals can implement bushfire protection measures without unacceptable biodiversity impacts by discouraging settlement growth and development in bushfire affected areas that are important areas of biodiversity.

BAL 12.5 Assessment

In accordance with the above policy guidance Alpine Shire commissioned mapping of priority areas that have a Bushfire Attack Level (BAL) of BAL 12.5 or above, as part of the filtering process to eliminate from consideration, land with excessive fire hazard.

Separate assessment having regard to landscape bushfire hazard has been undertaken and documented in this report to further eliminate areas of higher bushfire hazard at the landscape scale.

Landscape type and hazard

There are four broader landscape types described in planning permit applications in the Bushfire Management Overlay Technical Guide (Placeholder1) (DELWP 2017). These represent different hazard levels, ranging from low-hazard landscapes where there is little hazardous vegetation beyond 150m of the site, to extreme hazard landscapes with few to no evacuation options.

The study area and surrounding landscape mostly corresponds with landscape type four, which is described as having the following attributes:

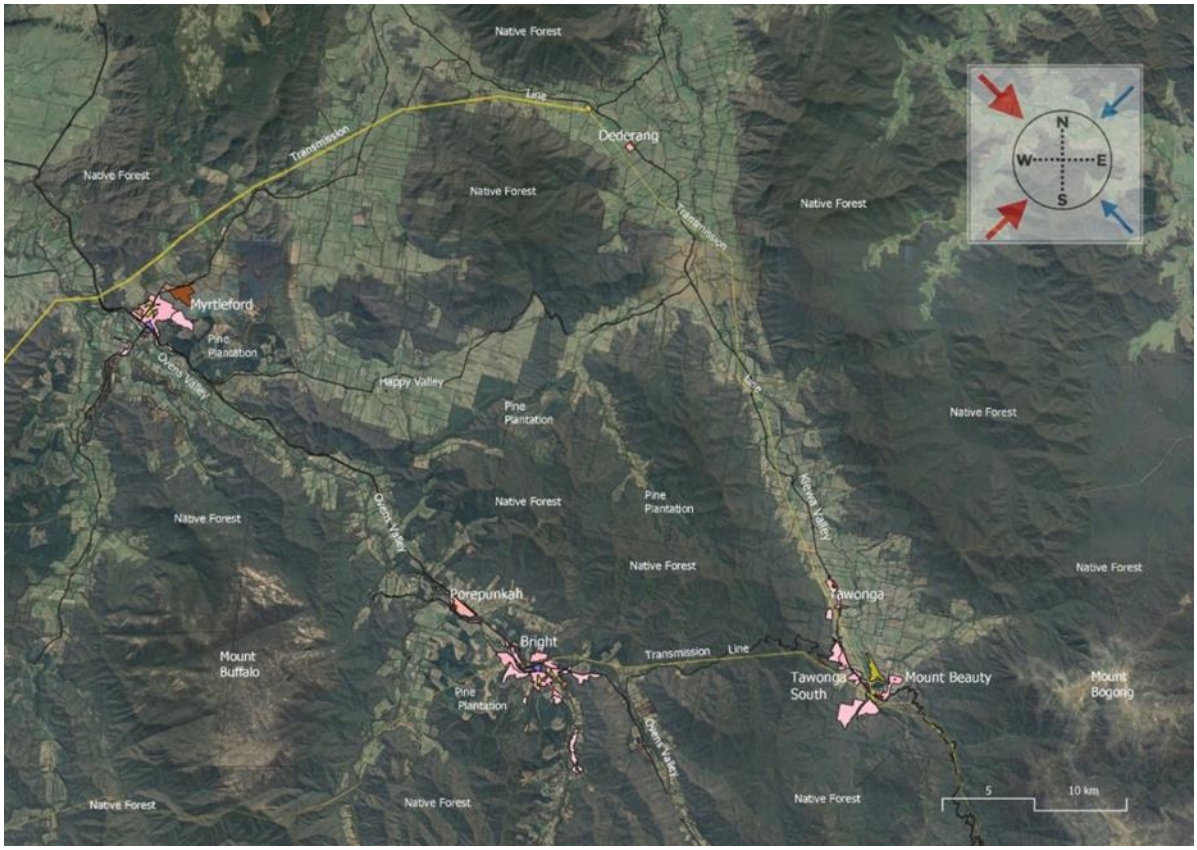
- The broader landscape presents an extreme hazard
- Fires have hours or days to grow and develop before impacting
- Evacuation options are limited or not available.

In general, urban development may not be supported in areas that are classified as landscape type four due to the attributes above. However, further analysis of potential development locations within Alpine Shire shows that there is a wide range of outcomes in terms of landscape fire risk, and that some areas are likely to be more suitable for urban development than others. For example, Harrietville and Porepunkah are both in landscape type four areas, however the landscape fire risk is extreme in Harrietville, whereas Porepunkah has a greater setback from forest areas and appears more suited to future development. Further analysis will be required on landscape bushfire risk for any area within the Shire that is proposed for rezoning to an urban type zone.

The alpine region has a range of vegetation types, including tall forests located lower in the valleys which can hold heavy fuel loads and are highly conducive to carrying fire. The vegetation extends for tens to hundreds of kilometres in all directions giving fire-fronts time and long distances to develop, and fire can approach in the landscape anywhere to the north, west and south. The mountainous topography through the area also has the potential to intensify fire behaviour on a landscape scale with large tracts of steeply sloping tall forest to promote fire development.

There are limited options for evacuation in some areas, some with single roads leading in and out. These roads can pass through landscapes of a higher fire hazard, such as tall forests, before reaching open spaces or towns, meaning evacuees would be put at a very high hazard by attempting to leave via these routes. As the dominant weather conditions in Victoria are winds from the north-west and south-west, the most hazardous bushfire scenario would be an approach of a bushfire from the south-west. The CFA recognises this, and assessment of hazard is highly related to hazard from the north western and south western approaches. This is recognised in the following aerial photo map which also indicates existing urban zoned areas in context.

FIGURE 2 - EXISTING ZONED URBAN AREAS IN THE LANDSCAPE CONTEXT

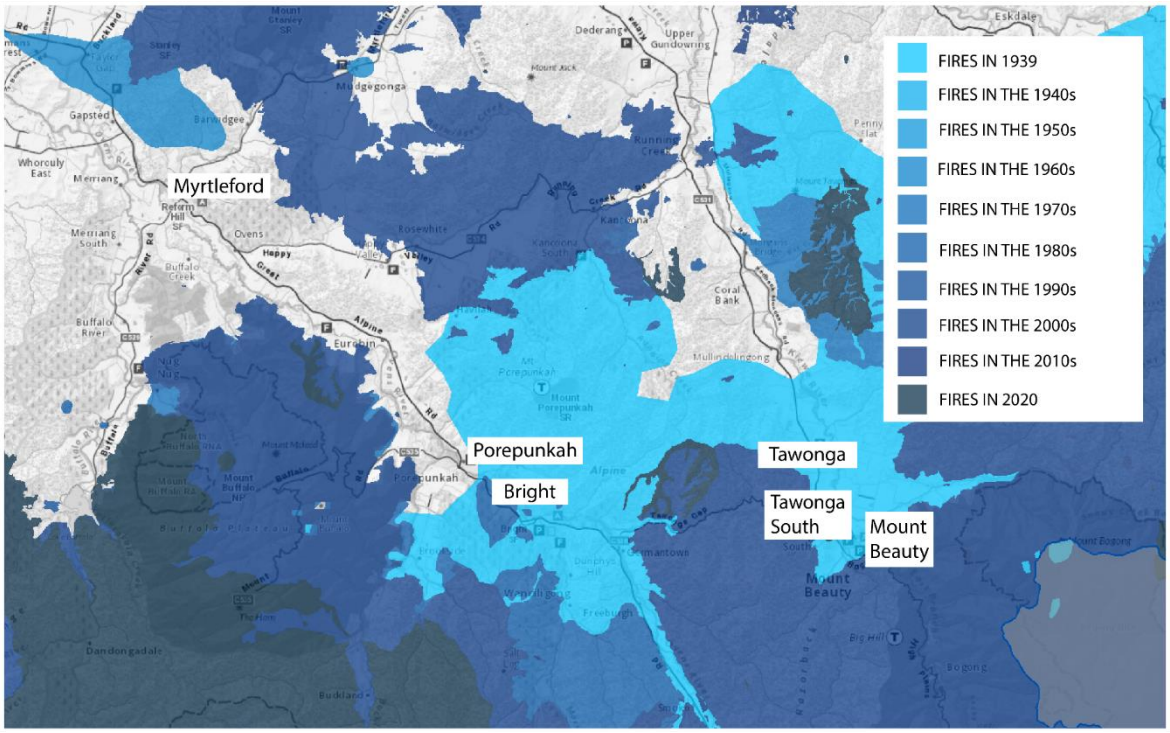


Within the category 4 landscape type, distinctions can be made regarding the relative safety of development, due to differing topography, vegetation, availability of escape routes and proximity to places of last resort. These factors are relevant considerations for an independent panel when comparing the relative landscape risk for different areas when rezoning proposals are involved.

3.2 Bushfire History

There are many parts of the Shire that have been impacted by bushfire in the past. The map on the following page illustrates this history. In general terms the Shire is subject to extreme landscape bushfire risk.

FIGURE 3 - HUME REGION BUSHFIRE STORYMAP



(Derived from: Hume Region Bushfire Planning Storymap (accessed 30 August 2022)

The Bushfire Planning Study completed in 2024 considers Landscape Bushfire Risk in more detail has provided directions to improve resilience across each township and where growth is supported and discounted due to this risk.

3.3 Flood Risk

Clause 13.03-1s of the Alpine Planning Scheme *Floodplain management* has the objective of assisting the protection of:

- *Life, property and community infrastructure from flood hazard, including coastal inundation, riverine and overland flows.*
- *The natural flood carrying capacity of rivers, streams and floodways.*
- *The flood storage function of floodplains and waterways.*
- *Floodplain areas of environmental significance or of importance to river, wetland or coastal health.*

It includes the following strategies:

- *Identify land affected by flooding, including land inundated by the 1 in 100-year flood event (1 per cent Annual Exceedance Probability) or as determined by the floodplain management authority in planning schemes.*
- *Avoid intensifying the impact of flooding through inappropriately located use and development.*
- *Plan for the cumulative impacts of use and development on flood behaviour.*
- *Locate emergency and community facilities (including hospitals, ambulance stations, police stations, fire stations, residential aged care facilities, communication facilities, transport facilities, community shelters and schools) outside the 1 in 100-year (1 per cent Annual Exceedance Probability) floodplain and, where possible, at levels above the height of the probable maximum flood.*

DTP (formerly DELWP) and the North East Catchment Management Authority (NECMA) have commissioned studies and undertaken flood modelling and mapping of the Upper Ovens River Valley in conjunction with Alpine Shire, with a view to the inclusion of flood controls into the Alpine Planning Scheme. NECMA updated the modelling having regard to climate change scenarios to 2090. The mapping of the Upper Ovens River Valley is now available to Council and identifies areas that are subject to dangerous flooding (absolute constraint) and nuisance flooding (discretionary constraint).

Whilst it is preferred that areas subject to all types of flooding be excluded from development, in some cases engineering works normal to a subdivision development can reduce the areas subject to nuisance flooding.

Flood controls already exist in the Alpine Planning Scheme for the lower part of the Ovens Valley down to Myrtleford (these flood levels in this study are currently being reviewed based on the 2090 climate change scenarios).

There is no such flood modelling available for the Kiewa Valley at present. However, flooding is a less significant issue in the Kiewa Valley due to most existing and potential urban development being established away from areas of significant flood risk. It is understood that NECMA will undertake a review of Kiewa Valley flood mapping within the next few years.

3.4 Other Constraints

There is a significant range of other constraints that apply in Alpine Shire. The following provides a summary of each. The majority of these have been previously mapped and have been incorporated as contributory layers in the overall "sieve mapping" process.

Crown Land, National & State Parks & Land Subject to Forestry Leases

These areas have been mapped as absolute constraints.

Excessive Slopes

Excessive slopes can make the provision of infrastructure and construction of buildings prohibitively expensive or unfeasible. Where the slopes coincide with unstable soils development can be unsafe. Development on steep slopes can also impact on landscape values. Excessive slopes can also make access by emergency vehicles problematic.

Steep slopes (more than 20%) have been included in constraints mapping as absolute constraints.

Restrictive Covenants

Restrictive covenants can impact on the future development of (usually existing residential) areas by limiting development to single dwellings and imposing restriction on development densities. They do not impact on the identification of greenfield development areas. They are of significance in areas in determining areas suitable for higher density development.

Erosion Risk/Land Slip

Erosion risk is associated with certain types of soils and topographies and in some cases can be overcome by special engineering and building techniques which add cost to development.

Unserviceable Land

In the context of the Land Development Strategy "unserviceable" means that the land cannot be provided with all the following urban services; reticulated sewer, water, electricity and telecommunications.

In the context of Low-Density Development, reticulated sewer may not be required where effluent can be dealt with appropriately on-site effluent disposal and treatment.

Contaminated Land

There are areas of the Shire that have been adversely affected by contaminants. These are largely areas subject to tobacco growing and the use of organochlorines. There are also areas subject to gold mining that are contaminated by arsenic and areas associated with timber processing that have been contaminated. Most of these areas are not adjacent to existing urban areas and have therefore not been required to be mapped.

Land Subject to Gold Dredging

Dredging for gold has been undertaken in extensive areas of the Upper Ovens Valley, particularly around Bright and Harrietville. Dredged land can be developed for urban purposes where the amount of geotechnical rectification work to remove boulders and rocks is not prohibitively expensive.

Land subject to dredging has been mapped to a large extent. However, the mapping may be incomplete, and there is no information as to the extent to which this would be a barrier to urban development (for instance the existence of large boulders in the dredge areas).

High Value Habitats/Ecological Significance

A desktop search of Victorian Government Databases has not revealed any areas of highly significant habitats in the vicinity of potential growth areas.

Sites of Cultural, Heritage and Scientific Significance

These areas have been broadly mapped, however there may be gaps in the available information and further detailed work will be required prior to rezoning any land.

Aboriginal Heritage

Areas of potential cultural heritage significance are mapped by the Victorian Government. These areas trigger the need for Cultural Heritage Management Plans and associated archaeological surveys for areas that are proposed to be developed. Where actual artifacts are discovered, sites can be restricted from development depending on the significance of the discovery. Areas of cultural heritage significance are rarely a major constraint in themselves but they do trigger processes that need to be taken into account in the development of land. Further detailed planning work prior to rezoning would need to address this issue.

Landscape Significance

Certain areas of the Shire are protected by Landscape Significance Overlays in acknowledgement of the extraordinary views and vistas offered by the alpine landscape. There are also areas of the Shire that have been listed as a National Trust landscapes. These areas have been mapped.

It is considered that there are other areas that have not been protected that the community may consider worthy of protection.

Potable Water Catchments

Most of the Shire is covered by potable water catchments. There are requirements regarding development of land in potable water catchments so that water quality is not compromised.

Aquifer Recharge Areas

Parts of the Shire are regarded as aquifer recharge areas and are sensitive to the type of development that occurs on them so that water quality is protected. None of these areas are known in the potential urban growth areas.

High Quality Agricultural Land

The valleys of Alpine Shire are mostly of good to high quality agricultural land with reliable rainfall.

Where possible, it is preferable to avoid consumption of such land for urban purposes. These areas have been mapped.

Environmental Buffers

There are several areas within the Shire that are subject to environmental buffers, such as around sewerage treatment plants and certain industrial operations. These tend to be within or adjacent to urban areas and must be taken into account when considering new urban development. These areas have been mapped.

Geotechnical Barriers

Geotechnical risk can be major constraint on development. Land that is subject to landslip, landslide, and erosion has been mapped.

Transport

Transport infrastructure can be vulnerable to environmental impacts that undermine safety and amenity includes roads that are subject to extreme frost, snowfall, rockfalls, landslip, flooding and high bushfire risk are factors that can impact on the suitability for urban development. Similar issues relating to walking and cycling apply. A separate transport assessment has been undertaken and is included as Appendix F to this report.

Transmission & other Easements

Easements, particularly major transmission easements, can be an important factor when assessing the suitability of land for urban development. They have been mapped as part of this project.

Excess Groundwater and Springs

The is a constraint that has not been assessed in detail at this stage. Where areas are selected for urban development it is appropriate that an assessment of the depth to water table and susceptibility to springs be undertaken.

4. Urban Suitability

The results of the constraints and opportunities analysis are mapped by town in the urban suitability maps in the following pages.

State planning policy states that the preferred areas for urban development are in or adjacent to existing serviced settlements where services can be easily extended. In practical terms, this means that planning policy options for urban growth are found in and around the settlements of Myrtleford, Porepunkah, Bright and Mount Beauty/Tawonga South.

The Multi-Criteria Assessment (MCA) that was undertaken of each of the identified greenfield sites to test the comparative suitability for development are expressed in the maps.

The major constraints of flooding and BAL 12.5 bushfire risk are shown, and the urban opportunity areas are indicated by either black stipples or dashed hatchings, as shown in the legends to the maps.

These investigation areas were subject to multiple rounds of engagement with the Bushfire Planning Study now discounting a number of previously proposed areas.

Final growth areas nominated in the LDS as highlighted in the Framework Plans and nominated below.

Bright

The small area currently nominated for investigation opposite the development known as Bright Valley Development, could provide ~8 hectares of new residential housing, however this will be subject to the below work that may affect suitability and capacity:

- Update the Upper Ovens Flood Study
- Further municipal wide investigations for structure planning

Mount Beauty

The area currently nominated for investigation could provide ~77 hectares of new residential housing. This will be subject to the below work that may substantially affect scale of this potential growth area.

- Finalisation of NECMA's Kiewa Valley Flood Study
- Completion of a detailed Odour Buffer assessment
- Review of Significant Landscapes
- Further municipal wide investigations for structure planning

Porepunkah

The area currently nominated for investigation could provide ~22 hectares of new residential and employment land. However this will be subject to the below technical investigations in determining appropriateness and scale.

- Porepunkah Drainage Study
- Updates to the Upper Ovens Flood Study with consideration for climate change
- Further municipal wide investigations for structure planning

Myrtleford

No future growth areas for residential purposes have been proposed in Myrtleford, following findings of the BPS. A small area of Industrial Zoned land and Council owned land will be investigated for suitability through Structure Planning.

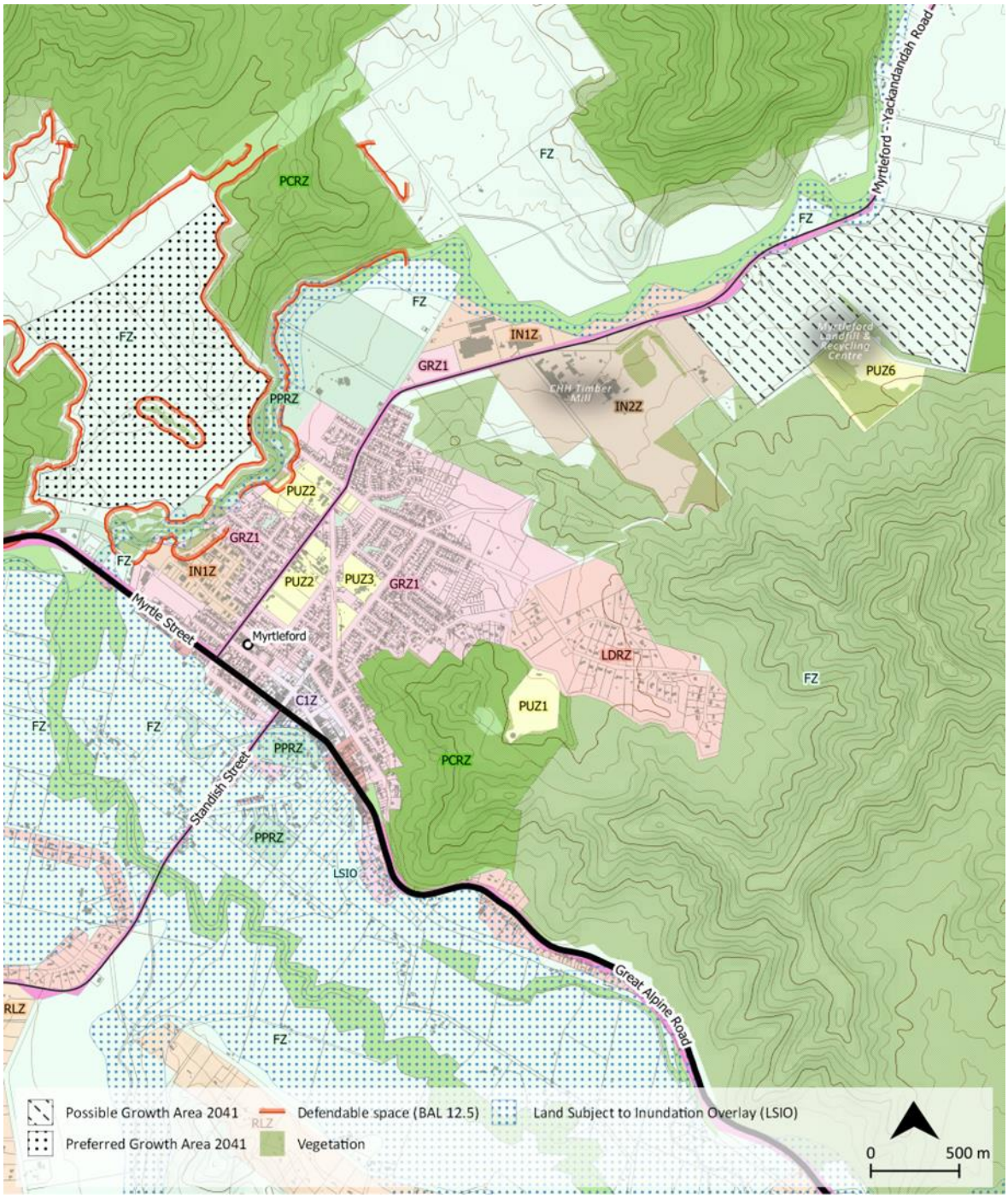
The Implementation Plan reflects detail on shire wide planning required before Structure Planning.

The Rural Directions strategy will also affirm directions associated with Dederang and Mudgegonga that have been proposed as lower risk areas in the BPS.

5. Issues & Options by Township

5.1 Myrtleford

FIGURE 4 - MYRTLEFORD ISSUES AND OPPORTUNITIES



Myrtleford West (open black stippling)

Situated on the north-western side of the town across Barwidgee Creek.

Total Area: Approx 100ha

Current land use: grazing.

Issues:

- Separation from existing Myrtleford by the Barwidgee Creek floodplain
- Much of the land, especially in the higher areas, is subject to extreme bushfire landscape risk
- No direct access from Myrtleford and only accessible via the Great Alpine Road at present.
- Outside current sewer district. High threshold costs for the construction of a bridge over Barwidgee Creek before development can proceed.

Opportunities:

- This area was identified in the Rural Land Strategy 2015 for protection for future urban growth of Myrtleford.
- A major transmission line easement covering 27Ha (approx.) forms a logical development boundary to the north as the area above the transmission easement is unlikely to be developed because of high landscape impact and bush fire risk.
- The 123Ha balance of the land appears technically be capable of development, however, total developable areas would more realistically be about 100ha after bushfire setbacks and drainage issues are addressed.
- The area has extensive potential for accommodating development in the longer term with a gross conventional density development potential of up to 1,000 dwellings and a population of up to 2,500 if fully developed.
- The Myrtleford Flood Study (currently underway) will provide information on the extent of flooding from Barwidgee Creek. This would assist in the determination of the best location for a bridge crossing as well assisting in the investigation of serviceability.
- Agricultural quality/versatility is moderate.
- The land is not required in the immediate future, however depending on whether forecast growth is realised for Myrtleford it may become needed towards the end of the 15-year time horizon of the Land Development Strategy.

Myrtleford North (dashed black hatching)

This area is situated on the southern corner of Myrtleford – Yackandandah Road and Morrisons Lane and is north of the existing INZ2 zoned land which accommodates the Myrtleford timber processing factory (Carter Holt). It wraps around the Myrtleford Cemetery and in its eastern corner is adjacent to the Council-owned quarry.

Current land use: grazing.

Issues:

- Separated by approximately 3.5km from the existing residential areas of Myrtleford by the Industrial 2 zoned area and the existing Plywood Factory.
- Subject to drainage issues.
- Subject to buffer issues from a quarry.

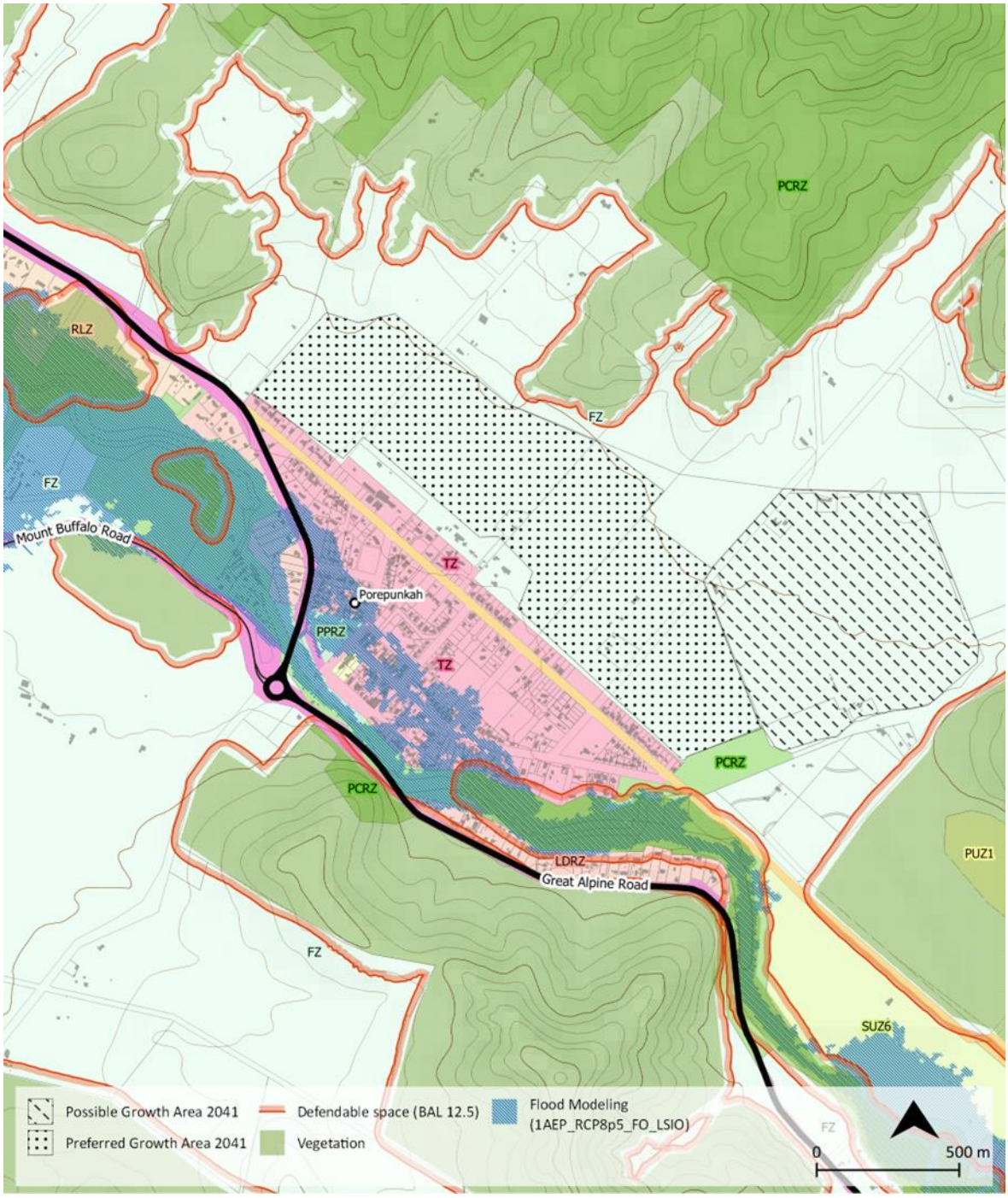
- Development of this area would constitute a very poor urban design outcome for residential development due to separation from and poor connections to the township and exposure to potential amenity impact from industry.
- Much of this land is potentially constrained by buffer issues.
- The land is traversed by two creeks and will require further assessment regarding flooding potential.
- Only part of the area is inside of both water and sewer district requiring considerable infrastructure investment to catalyse development.

Opportunities:

- In the very long term, the land may have potential for industrial use, however presently there is sufficient industrial land supply in Myrtleford for the time horizon of this study.
- This land should retain the option for potential future unanticipated significant industrial development
- The area was identified in Rural Land Strategy for 'rural industry development'.

5.2 Porepunkah

FIGURE 5 - POREPUNKAH ISSUES AND OPPORTUNITIES



Porepunkah (immediately adjacent to the town, black stippled area)

This area is situated directly to the north-east of Porepunkah. The first stage constraints analysis identifies an area of approximately 160ha that does not have major constraints and is suitable for further assessment, this has been divided into the P1 and P2 areas.

Area: 98Ha (P1)

Current land use: grazing and horticulture.

Issues

- Landscape bushfire impacts increase the further north/upslope, development extends.
- Gravity fed water supply may not be possible at higher elevations.
- Porepunkah is subject to drainage and flooding issues which will reduce its ability to accommodate increased densities.
- Investment in drainage infrastructure will be required.
- The potential growth area includes multiple landowners, which will require considered approach to structure planning and land release.
- Agricultural quality/versatility is high.

Opportunities

- The land is well sited to satisfy spill over demand from Bright as land availability in Bright reduces over time.
- Potential for up to approximately 80Ha of development when a more detailed assessment is undertaken, which may translate into up to 800 residential lots.
- Porepunkah does not have a central activity focus. There is an opportunity to create a central activity core as part of an extension to the township.
- Porepunkah provides good accessibility to key transport routes and facilities and services provided within Bright township.
- This area was recommended in the Alpine Rural Land Strategy to be investigated for rezoning.
- The area is less constrained by bushfire risk than the other sites examined in this study.
- The current water and sewer district extends approximately 340 metres north-east of Station Street.

Porepunkah (eastern section, black dashed hatchings)

This area is situated directly to the north-east of the existing Porepunkah Township. The first stage constraints analysis identifies an area of approximately 160ha that does not have major constraints and is suitable for further assessment, this has been divided into the P1 and P2 areas.

Area: 62Ha (P2)

Current land use: grazing and horticulture.

Issues:

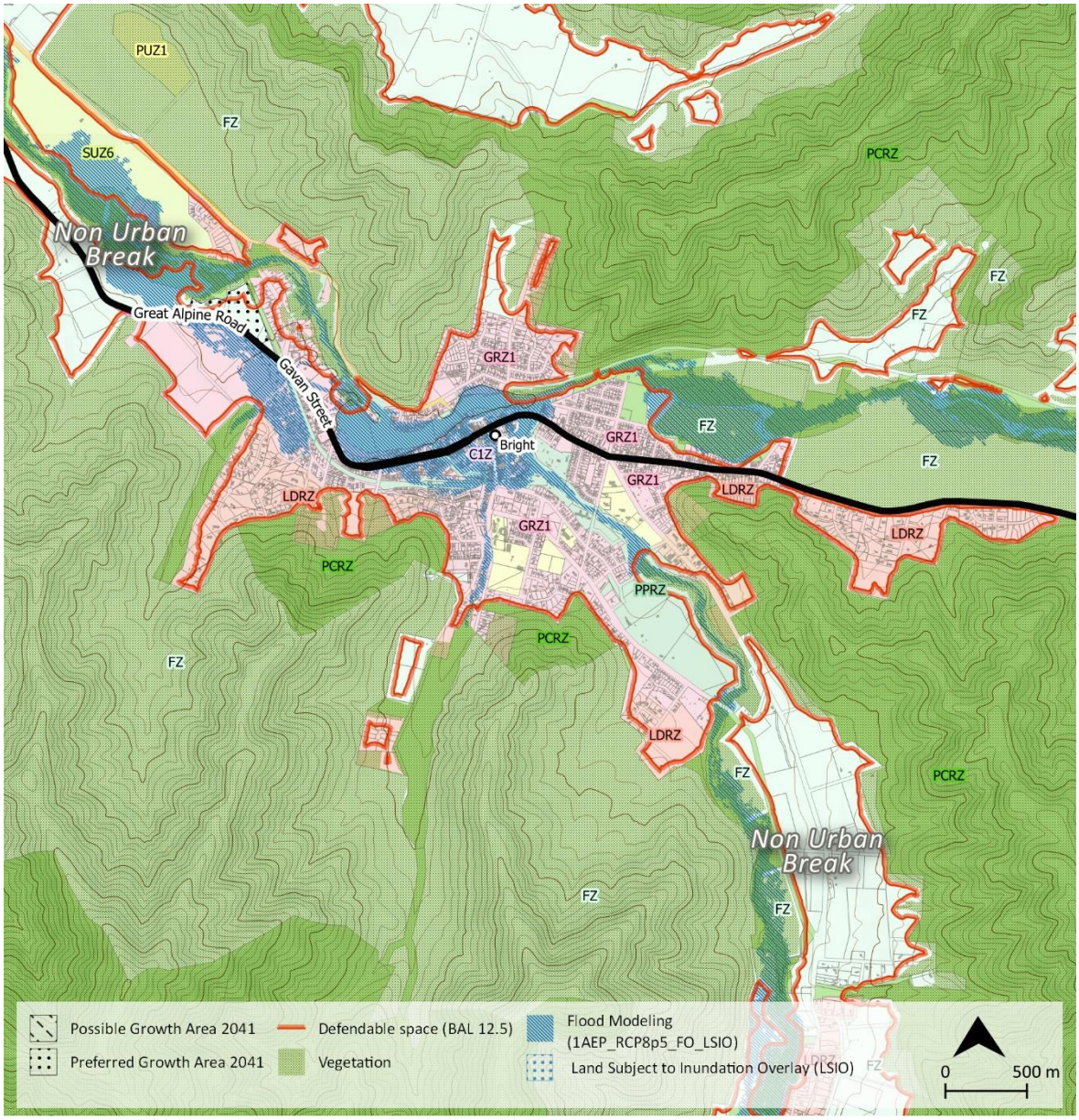
- Similar issues and opportunities to area P1 except that it is more remote from the existing town and is unlikely to be developed in the foreseeable future.
- Landscape bushfire impacts increase the further north/upslope, development extends.
- Gravity fed water supply may not be possible at higher elevations.
- The existing Porepunkah Township is subject to drainage and flooding issues which will reduce its ability to accommodate increased densities without expenditure on drainage infrastructure.
- Agricultural quality/versatility is high.

Opportunities:

- The land has the potential to provide up to 600 lots or a population of 1,500 people if capable of full development,
- Porepunkah does not have a central activity focus. There is an opportunity to create a central activity core as part of an extension to the township.
- The land is well sited to satisfy spill over demand from Bright as land availability there reduces over time.

5.3 Bright

FIGURE 6 - BRIGHT ISSUES AND OPPORTUNITIES



Bright Gateway (black stipple)

Situated on the north side of the Great Alpine Road, opposite land proposed for conventional density residential development of more than 200 lots.

Current land use: Rural Living

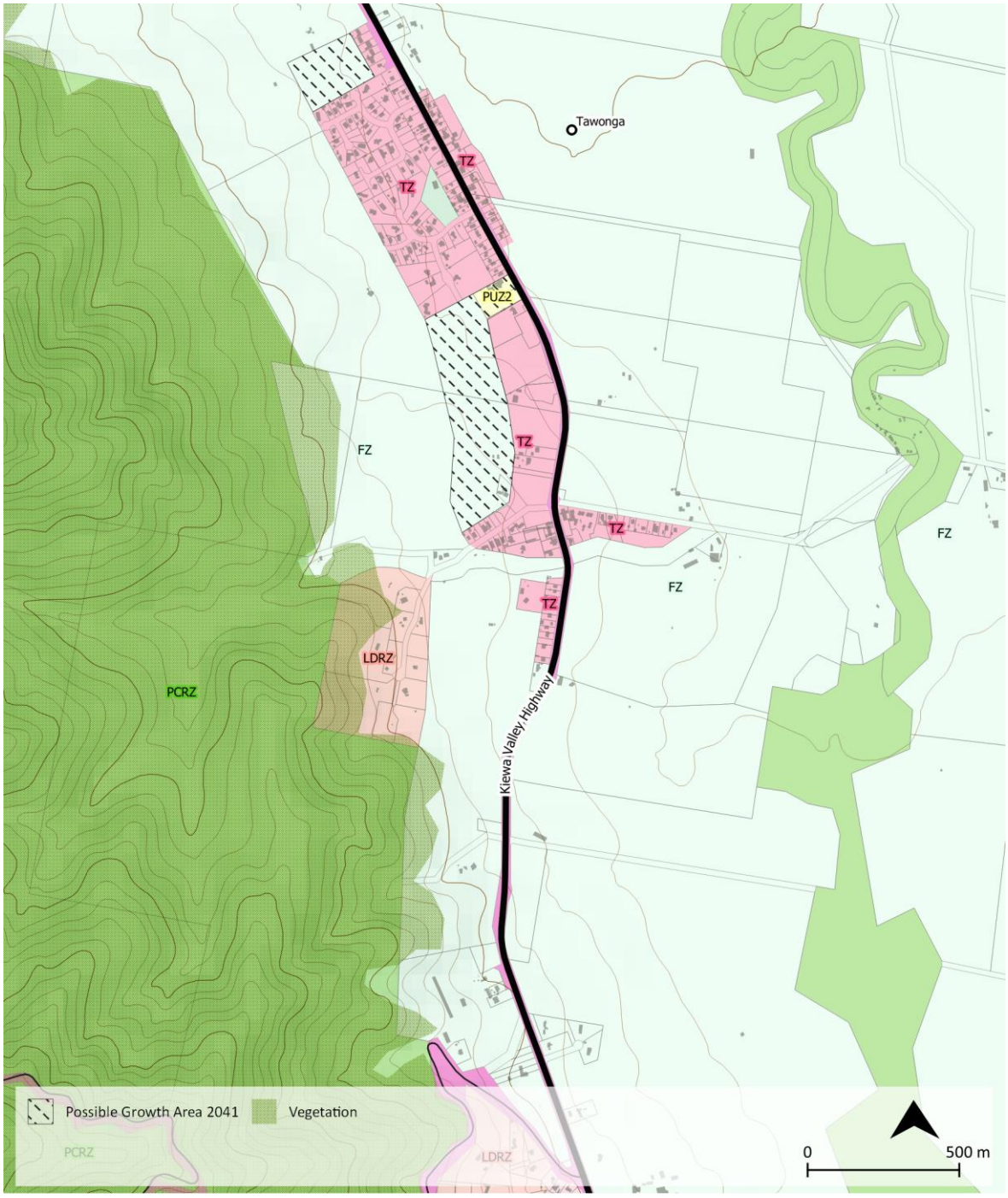
Issues/Opportunities:

- Nominated in the Bright Structure Plan (Clause 11.01-1L-02 of the Alpine Planning Scheme) as an Urban Growth Area.
- Highly significant gateway entrance to Bright with the need for the retention of landscape buffers and lower density development.
- Interfaces the south side Murray to Mountains Rail Trail.
- Subject to significant topographical and bushfire issues at the western end which render that part unsuitable for development.
- Contiguous with existing and proposed residential development.
- Potential for approximately 10 low density residential lots.
- Agricultural quality/versatility is high, however:
  - Isolated pocket of Farming Zone not actively used for agricultural purposes.
  - Redevelopment of this site, adjoining existing residential areas, supports contiguous growth of Bright.

  Best suited to low density residential development, and as such is likely to yield a limited number of dwellings.

5.4 Kiewa Valley

FIGURE 7 - KIEWA VALLEY ISSUES AND OPPORTUNITIES



North Tawonga

This area adjoins the north west of Tawonga township.

Current land use: grazing

Issues/Opportunities:

- From an urban design and community planning viewpoint the expansion of Tawonga is not recommended, as very limited services are available such that Tawonga is effectively a car dependent dormitory suburb. This presents issues for access to services for the population, with a greater impact on children and the elderly who are less likely to drive.
- Land located within SLO1 which includes an objective to: "contain urban development, specifically housing, to existing townships with definite visual boundaries." Any decision relating to land to be released will be based on the degree to which landscape impacts are acceptable.
- Reticulated sewerage is not available in this location. However, the land is within the sewer district and in the future may have sewer made available to it. This is the reason for its inclusion in this evaluation.
- Reticulated water supply exists in this location.
- Potential for up to approximately 40 dwellings if fully developed at conventional density.
- would be contiguous with existing urban zoned land.
- The land is subject to extreme bushfire landscape risk.
- Agricultural quality is generally high.
- Landscape impacts from development of the land would be significant due to its elevation.

South-West Tawonga

This area is adjoins the south-west of Tawonga township and occupies higher ground above the town.

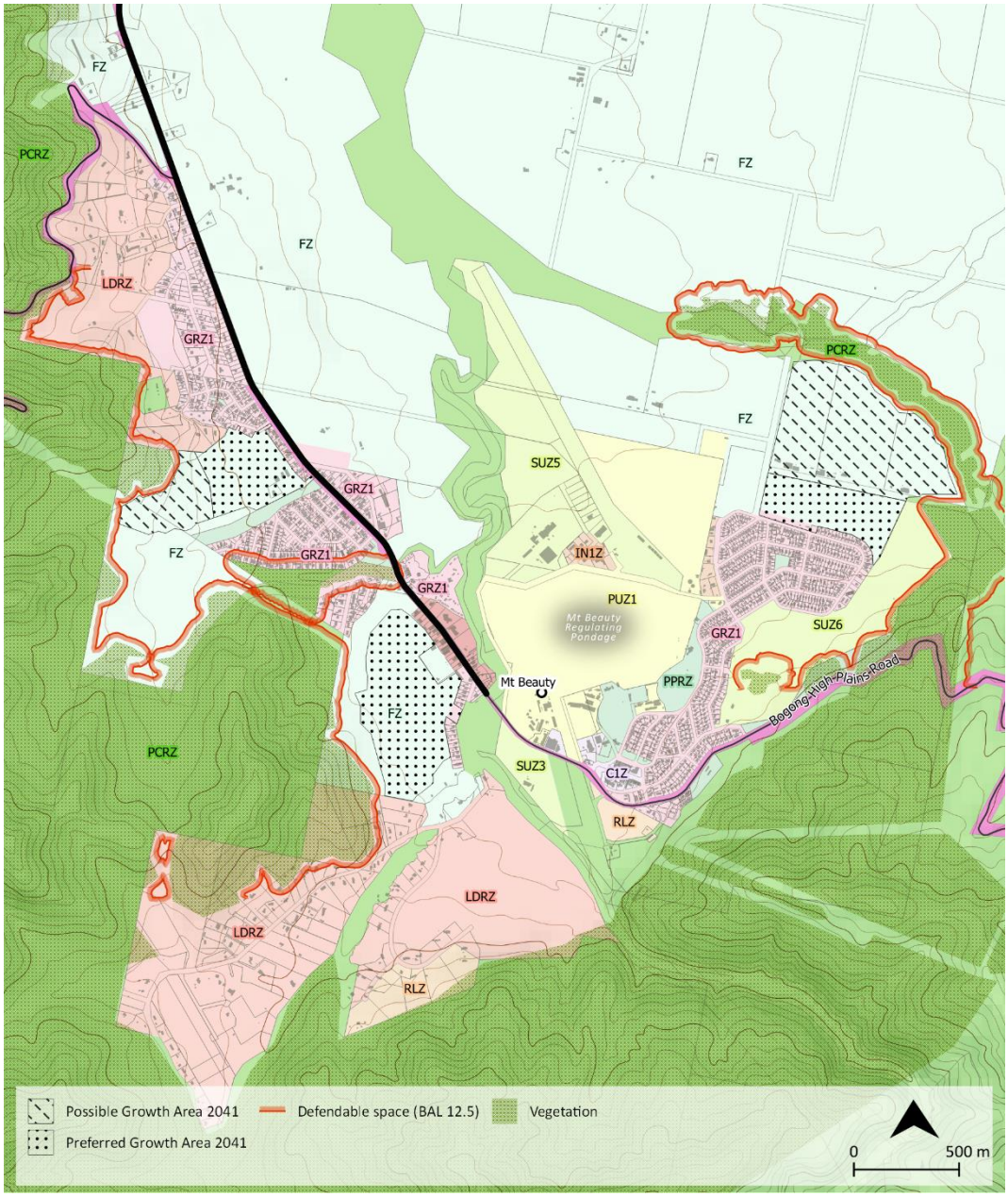
Current land use: grazing land

Issues/Opportunities:

- Similar issues and opportunities to North Tawonga

5.5 Tawonga South and Mount Beauty

FIGURE 8 - TAWONGA STH & MT BEAUTY ISSUES AND OPPORTUNITIES



Tawonga South (northern section, dashed hatch, and stipple)

Current Land Use: grazing.

Issues:

Nominated in the Tawonga South Structure Plan (Clause 11.01-1L-04 of the Alpine Planning Scheme) as an Urban Growth Area.

- Has significant landscape bushfire risk for a significant proportion of the site.
- Not situated within a Significant Landscape Overlay, however, development would have significant visual impact due to the high elevation of the land.
- Is partly affected by a major transmission line easement at its upper elevations.
- Agricultural quality/versatility is part moderate and part low.
- Site is situated further from the main services centre of Mount Beauty than other potential rezoning sites.

Opportunities:

- Subject to a current rezoning proposal of about 126 lots.
- Creates an infill between two other subdivisions and has the potential to provide improved linkages between these areas of properly designed.

TS3 – South Tawonga (southern section, stipple)

Current Land Use: grazing.

Issues:

- Bisected by a major transmission line.
- At least partially subject to drainage issues. Further investigation of this issue is required before the land could be rezoned.
- Agricultural quality/versatility is moderate to high.

Opportunities:

- Nominated in the Tawonga South Structure Plan (Clause 11.01-1L-04 of the Alpine Planning Scheme) as an Urban Growth Area.
- Within a Significant Landscape Overlay, however, the land is not elevated and relatively flat and may be able to be developed without major landscape impacts.
- Within the sewer and water supply districts.
- Due to the flatter topography and highway location of the land, it has potential for industrial and commercial development and more affordable accommodation/housing.
- Close to existing services in Mount Beauty and Tawonga South, with a good level of pedestrian and cycle accessibility.

Mt Beauty North. (southern section, stipple)

Current Land Use: grazing.

Issues

- Land located within a Significant Landscape Overlay which includes an objective to: "contain urban development, specifically housing, to existing townships with definite visual boundaries." Any decision relating to land to be released will be based on the degree to which landscape impacts are acceptable, and to what extent the land is constrained by flooding and drainage issues.
- The site is partly impacted by buffers from the Mount Beauty Transfer Station.
- Subject to unmapped drainage and flooding constraints (flood modelling yet to be undertaken).
- Agricultural quality/versatility is moderate to high.

Opportunities:

- Landscape bushfire risk is lower than most other sites.
- Inside of water district but only a small part on the southern edge is within the sewer district.
- Contiguous with urban area of Mount Beauty.
- Good accessibility to services in Mount Beauty for pedestrians / cycle access.

Mt Beauty North. (northern section, dashed hatch)

Current Land Use: grazing.

Issues:

- The land located within a Significant Landscape Overlay but extends further into the area subject to the overlay than the area to the south of it.
- Any decision relating to land to be released will be based on the degree to which landscape impacts are acceptable, and to what extent the land is constrained by flooding and drainage issues.
- Outside of water district and sewer district.
- Subject to unmapped drainage and flooding constraints (flood modelling yet to be undertaken).
- Agricultural quality/versatility is high.
- Land not required in foreseeable future given growth forecasts for Mount Beauty.

Opportunities:

- Landscape bushfire risk is lower than most other sites.

Appendix F Transport and access

Alpine Shire Council

Land Development Strategy

July 2024

ALPINE SHIRE COUNCIL

This report has been prepared by Alpine Shire Council as a supporting document for the preparation of the Alpine Shire Land Development Strategy being prepared by SGS Economics and Planning Pty Ltd.

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Contents

1. Introduction

The Alpine Shire Land Development Strategy (LDS) is being prepared to guide land use change for residential, commercial and industrial land in the Shire to 2041 and beyond. In order to plan for future growth, the LDS will undertake a holistic analysis of projected growth, constraints and opportunities for the Shire. Access to jobs, education, goods and services, recreation and social activities is a key consideration in how the municipality grows.

This advice is prepared on the basis that the expected level of growth in the Shire presents a significant opportunity for investment in the transport networks and public realm, and that a 'business as usual' approach to the transport network will result in a lost opportunity to improve social, economic and environmental outcomes for the Shire. As such, this advice assesses the nature of the transport networks and public realm required to support the likely growth scenarios in a sustainable way, and that supports Council's broader policy agenda for sustainability and liveability.

1.1. Scope

This advice provides a transport and access 'lens' through which potential growth and rezoning opportunities for the Shire should be assessed. It is based on the following approach to building a sustainable transport network to support the growth and liveability of Alpine Shire:

1. **Provide transport choice for our community.** While private vehicles will remain a dominant form of transport for many types of trips, there is a strong rationale to provide access to a range of retail, services, recreation, employment, education, and social opportunities by active transport (walking and bike riding).
2. **Ensure a high standard of road access for freight and regional movements**, noting that Alpine Shire is reliant on larger population centres and wider regional networks for access to higher order services, employment, and the movement of goods into and out of the municipality.

This advice is consistent with the 'movement and place' approach adopted by the Victorian Government (*Movement and Place in Victoria*, Department of Transport 2019).

1.2. Background

Council is preparing the LDS to guide the ongoing growth and development within the Shire. This includes consideration of a wide range of constraints and opportunities, including:

- A range of population and demographic forecasts for the Shire
- Key natural constraints such as fire and flood risk
- Planning or environmental factors such as character, significant landscapes and a settlement hierarchy

- Broader technological and societal trends such as the rise of remote working and population shifts due to the COVID-19 pandemic and other factors.

The population in this Shire is forecast to grow from 13,300 to 17,500 (high growth forecast, SGS Economics 2021). Further to population growth, there is expected to be additional accommodation built as investment properties / short term accommodation. This means that additional land may need to be rezoned to meet demand, over and above population growth.

2. Context

2.1. Summary of Key Policy Directions

The review of existing relevant policy illustrates several themes that inform the approach to land development and population growth in Alpine Shire. These include:

- All land use planning and public realm investment decisions should be informed by the Transport Integration Act and the 'movement and place' framework for Alpine Shire. The Movement and Place in Victoria policy developed by Transport for Victoria is the appropriate planning tool to determine the road user and place hierarchy across the transport network.
- Social determinants of health, including transport, have a clear impact on healthy outcomes for communities and individuals. Giving people a greater transport choice in a quality built environment improves social connections, physical health, access to employment and equity.
- Planning for new development must consider providing for and promoting sustainable and active transport modes in accordance with the movement and place framework, and have regard for key state policy directions such as the '20 minute neighbourhood' concept, to ensure people can access a wide range of everyday needs by a range of transport modes, not just cars.
- Promoting sustainable transport (walking, cycling) is important for a wide range of reasons:
  - Socially connected, liveable communities – places where people walk and cycle are likely to perform better on a range of social indicators.
  - Healthy, active communities – there is a strong link between active transport and health.
  - Transport efficiency – increased use of sustainable transport has environmental and economic benefits through reduced greenhouse emissions and reduced space required for vehicle movement and storage.
  - Access for all members of the community – a large number of people in the community do not or cannot drive, and the provision of attractive and viable alternative means of transport is a key factor in whether a community is affected by transport disadvantage.
  - Safety – Increased sustainable and active transport improves safety and perceptions of safety.
- Alpine Shire is reliant on access to larger regional centres (primarily Wangaratta and Albury-Wodonga) for a range of higher order services and employment. Due to the low population density within the Shire, it will be challenging to reduce reliance on private vehicles for travel to these key destinations. This will place ongoing limits on the levels of access and transport choice of the population within the Shire, particularly for ageing populations and those reliant on higher order services such as advanced health care.
- Alpine Shire's population is highly concentrated into the key townships of Myrtleford, Bright, Porepunkah and Mount Beauty-Tawonga South. Overall, the Shire is well placed to provide for future growth within existing town boundaries and adjacent areas. These areas are capable of being developed as sustainable and resilient communities, with a high level of accessibility to goods, services, employment, education and recreation opportunities.

2.2. Summary of existing conditions, issues and opportunities

- Alpine Shire's population is relatively concentrated in and around the three main townships of Myrtleford, Bright and Mount Beauty-Tawonga South. This includes adjacent areas such as Porepunkah, Wandiligong and Tawonga.
- The Shire's population is ageing and likely to continue to have a higher than average proportion of people aged over 65 years. As such, providing a compact urban settlement form with a range of housing types, and walking access to a range of goods, services and facilities is an important planning consideration for the LDS.
- Alpine Shire is generally reliant on private vehicles for a wide range of trips, given the existing limitations in higher order services, education and employment within the Shire. Limited public transport services, and reliance on a few key routes (e.g., Great Alpine Road and Kiewa Valley Highway) result in limited accessibility for many members of the community who don't or can't drive. This includes:
    - Lack of access to tertiary education and employment. Many young people chose to move to larger centres when they leave school to access the wider range of education and employment options which are not readily accessible living in the Shire.
    - Lack of access to higher order health care and other health services. For many older people, the ability to age in place is a key determinant on their quality of life, however the lack of accessible services for the ageing population means that many people are forced to move to larger centres when ageing. This is compounded by a lack of suitable housing in Bright, Myrtleford and Mount Beauty.
- Alpine Shire has a mature road network which provides a good level of service for freight and vehicle movements, noting that within Bright, there is some pressure on the transport network and car parking at busier times. Further work is being undertaken in Bright to manage these transport pressures and improve options for access in and around Bright. The pressures include:
    - Tourist traffic and car parking pressure over large parts of the year
    - Freight movements through Bright, including plantation harvesting vehicle routes.
    - Over-reliance on Gavan Street for movements through Bright.
    - Poor pedestrian connectivity between key destinations within Bright, leading to over reliance on private vehicles, even for short trips.
- Currently, the level of parking and traffic congestion in Bright at peak times indicates that increased focus is needed on active transport, since it is assessed that many short trips are undertaken by car due to the perceived ease of driving compared to walking. Typically, short trips under 1km (for walking) and up to 5km (for cycling) can be converted from cars to active travel, if the right infrastructure and policy conditions are in place. Increasing active transport also has benefits to the safety, activation and amenity of the centre, as it becomes less dominated by cars. It is recommended that the Bright transport investigation project investigates holistic management solutions to the current congestion, rather than focus solely on supply side interventions.
- Some transport networks in the Shire lack resilience as fire and flood events can limit access and evacuation routes. This infrastructure constraint is mainly based on the topography of the Ovens and Kiewa Valleys, which limits the potential to create a meaningful range of options for egress in

key locations such as Bright and the Upper Ovens Valley. Further work is needed to understand and mitigate issues relating to access during emergencies, however the limitations of topography mean that other management measures (e.g., providing the ability to shelter in place, or leave early) may be more appropriate than building additional road infrastructure. Any assessment of emergency egress / transport should be done in a coordinated way that considers the emergency management planning for the Shire as a whole, rather than just transport routes.

- The Shire has an established and expanding network of shared paths and trails, particularly in the Ovens Valley. These provide some accessibility options for residents (e.g., school children travelling to school) but mainly function as recreational and tourist routes.
- Within townships, the provision of pedestrian infrastructure (paths and crossing points) is inconsistent, with ongoing investment needed to provide safe, comfortable and convenient pedestrian access. Where provided, the pedestrian network lacks priority over vehicles at most locations. In addition, the existing footpaths are of varying standards and widths, and do not provide a uniform, safe, accessible network that encourages walking over other modes of travel.
- The Shire's road and freight networks operate satisfactorily, however there are some conflicts with larger vehicles travelling through town centres (e.g., Bright and Myrtleford). Work is under way in Bright to better manage the range of transport demands and existing conflicts, however it is noted that overall, the volume of freight movements in the Shire is relatively low and amenity impacts are considered to be localised.
- Public transport in the Shire consists of services from Bright to Wangaratta around 2-3 times daily and similarly from Mount Beauty to Albury. These services provide a very basic 'safety net' for those without cars, but the limited services mean they are not a viable option for access to employment or most services (e.g., healthcare). There are limited community transport options available and the overwhelming majority of travel over longer distances is by private vehicle.

3. Forward Look – Transport and access in 2050

There are a number of key changes and emerging trends in transport and access that will impact on the Shire by 2050.

They most relevant changes and trends are summarised as follows:

- **Improved internet connections**: the expansion of high quality internet to all members of the Shire's population (e.g., through satellite broadband as well as traditional infrastructure models) mean that many activities no longer require people to physically travel to higher order centres to access goods, services, employment and education. This includes:
- **Tele-health** – people no longer need to physically attend higher order health care services for many routine matters, meaning they can manage complex healthcare conditions and age in place without needing to travel to higher order medical services as often.
- **Employment** – the rise of remote working (for some types of work), particularly during COVID-19, means there is a greater acceptance of people undertaking work away from a communal work location (e.g., an office). This has freed up city-based populations and resulted in significant investment in the Shire by 'tree changers'. Over time, it is considered that most jobs will still require an element of face-to-face working, but there is likely to be significantly greater flexibility in work patterns.
- **Online shopping** – Expansion of internet shopping means that trips to larger centres to buy goods are no longer needed, as many goods can be purchased online. While sectors such as food, groceries and liquor are still mainly purchased in-store, these are typically available locally for Alpine Shire residents, whereas other goods not available locally such as clothing or manufactured goods are often purchased online.
- **Remote learning** – many education courses are now offered partly or fully online, including TAFE and university courses.
- **Move to Net Zero** – by 2050, our vehicle fleet will have changed to be largely or entirely renewable rather than fossil fuel based. This may result in lower overall vehicle ownership costs for households, as renewable vehicles are likely to be less costly to own and operate than fossil fuel-based vehicles.
- **Geopolitical disturbances and impacts on the fuel supply chain** – Geopolitical disturbances are hard to predict, however, at the time of writing fossil fuel prices are very high due to the Ukraine conflict and the associated international response. In this context, resilience to economic shocks in the transport sector will over time improve with the introduction of the electrification of the transport sector. Any sustained high fossil fuel costs are likely to accelerate the trend to electric vehicles and associated support infrastructure.
- **Personal mobility solutions** – the increase in popularity of e-bikes, mobility scooters and other electric mobility devices provides viable options for people to access a range of goods and services locally without needing to use a car. This provides a key opportunity for people to be less reliant on

cars (e.g., provides the ability to age in place for longer) but also requires consideration of infrastructure such as dedicated bicycle lanes and parking.

- Mobility as a Service (MAAS) and Autonomous vehicles – this trend is likely to impact our cities and areas with higher densities of demand, rather than rural areas. Essentially, rather than owning a private vehicle, people can share cars (e.g., 'car next door') or have access to a car when they need it, rather than needing to own one.
- The introduction of autonomous vehicles, along with the move to net zero emissions – may mean that it is feasible and cost effective to provide transport to access higher order services (e.g., health care in major centres), however the density of demand in Alpine Shire is likely to remain low, limiting the provision of shared transport services.
- Innovation in air travel – lower cost air travel through innovations such as drones and electric aircraft mean that short trips by air (e.g., to regional centres, or Melbourne, or for visitors to the Shire and alpine resorts) are more feasible, changing the way people access a range of employment, recreation and services. The extent to which this technology will complement or displace existing transport systems remains unclear, however it is likely that the Shire's airports will become more significant as transport gateways.
- Challenges to the transport network – are likely to increase due to climate change. Planning will therefore need to consider increased risk of bushfire and the provision and protection of safe ingress and egress from areas at risk from, bushfire, flooding and landslides induced by heavy rainfall. In addition, extra costs will be imposed because of damage to roads caused by excessive heat and saturated ground conditions.

> Technological changes will have meaningful impacts on our transport behaviour over the next thirty years. However, it is important to remember that despite all the changes that have occurred throughout history, a safe, attractive and accessible walking scale environment is the enduring and fundamental ingredient for making great places for people to live, work and play.

4. Travel Behaviour

The transport functions relevant to the development of the LDS include the Shire's arterial road and freight network, regional transport networks (including public transport), off road trail networks and local catchments that provide access to goods, services, employment, education and other opportunities within townships.

4.1. Alpine Shire Transport Task

Overall, the transport task in the Shire consists of three main types of movements:

- Local movements. Access to local goods, services, employment, education and recreation is concentrated within the townships and adjacent areas. This makes up a significant portion of the overall transport task, and typically these types of trips can be undertaken by private vehicle or active transport.
- Intra-shire movements. Access to employment, goods, services, education and other trips within the Shire, which typically require private vehicles (cars). This includes local freight movements, as well as trips by rural residents to access everyday services.
- Regional movements. Access to higher order services such as healthcare, shopping and education in regional centres, or freight movements into and out of the Shire. These movements are almost exclusively undertaken by private vehicle, with a very limited role for public and community transport.

The breakdown of the transport task by trip type for regional Victorian centres is indicated in Figure 1 below (source: Victorian Integrated Survey of Travel and Activity). It is expected that trips in rural areas such as Alpine Shire may have some differences from regional centres, but in broad terms they are expected to be comparable.

While work trips make up around 25% of trips and up to half of all kilometres travelled (often to destinations further afield) many other trip types tend to be local and are able to be undertaken by a range of transport modes, particularly active transport.

4.2. Journey to work

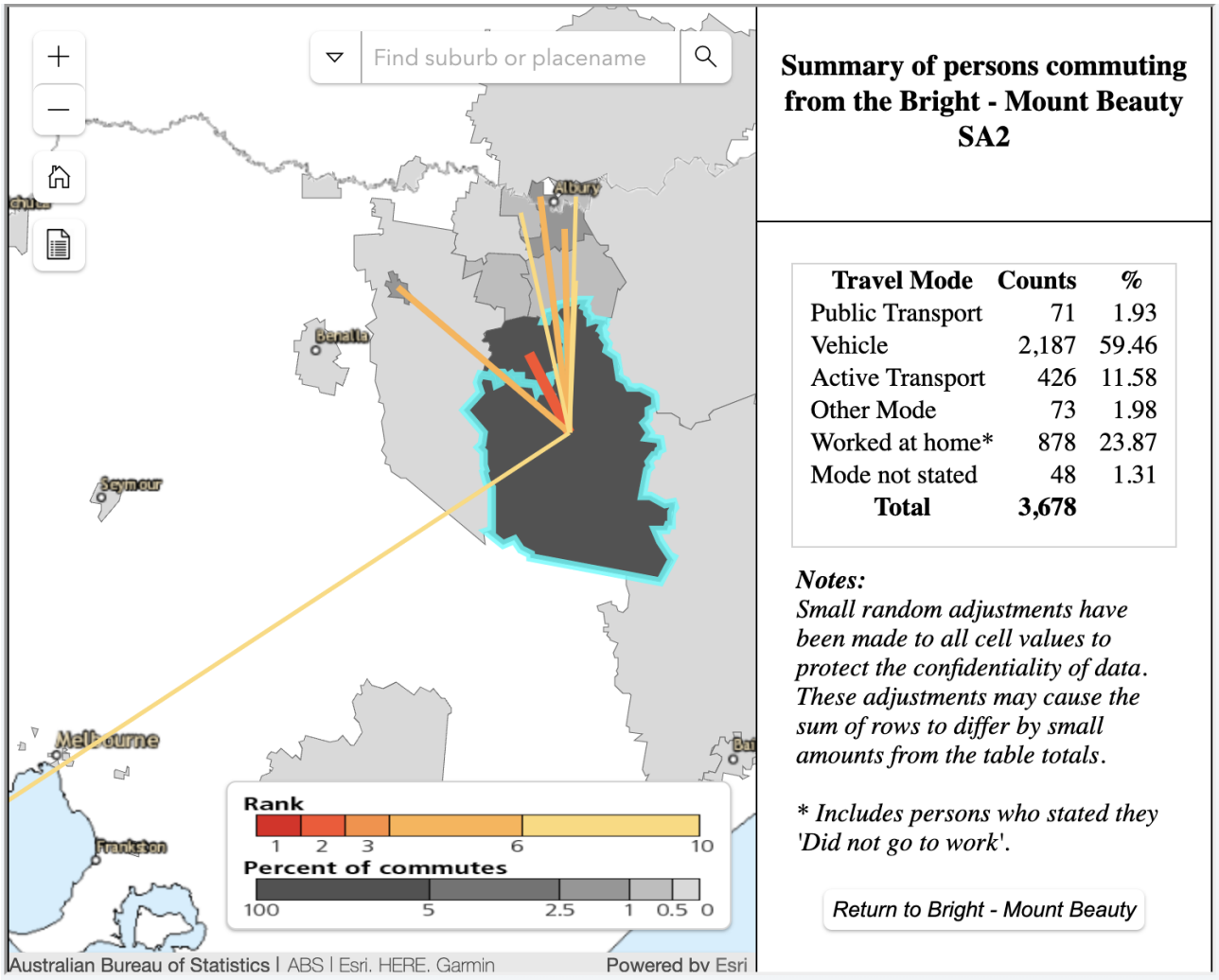
The 2016 Census of Population and Housing includes data on where people worked, and their mode of travel. Results are available for the Bright – Mount Beauty SA2 as well as the Myrtleford SA2.

As noted above, Journey to Work is not necessarily representative of all trips in terms of distance and mode of travel, however it does provide a key indication of travel behaviour.

For Bright-Mount Beauty SA2, the results show:

- Over three quarters of all work trips (76%) were undertaken within the SA2 area. This represents a very high level of employment self-containment, noting that many people whose employers are located elsewhere may have worked at home.

- The next most popular destination is Myrtleford (5.5% or 200 trips), with lower numbers commuting to Albury-Wodonga, Wangaratta and other locations
- Private vehicles make up around 60% of trips, almost a quarter of people worked from home (24%) and 11.5% used active transport to go to work (see Figure 2).



Summary of persons commuting from the Bright - Mount Beauty SA2

Travel Mode	Counts	%
Public Transport	71	1.93
Vehicle	2,187	59.46
Active Transport	426	11.58
Other Mode	73	1.98
Worked at home*	878	23.87
Mode not stated	48	1.31
Total	**3,678**	

Notes:
Small random adjustments have been made to all cell values to protect the confidentiality of data. These adjustments may cause the sum of rows to differ by small amounts from the table totals.

** Includes persons who stated they 'Did not go to work'.*

Return to Bright - Mount Beauty

For the Myrtleford SA2, the results show:

- Two thirds of all work trips (67% or 1,343 trips) were undertaken within the SA2. This represents a high level of employment self containment.
- The next highest destination is the Bright—Mount Beauty SA2, with 9% or 174 trips for work.
- Private vehicles make up around 72% of trips, with 20% working from home and only 6% using active transport to get to work.

4.3. Summary of Travel Behaviour

Overall, the travel characteristics for work are characterised by a high level of self-containment, and a high reliance on private vehicles.

The Bright-Mount Beauty SA2 displays higher levels of active travel, working from home and employment self containment than the Myrtleford SA2., and it is likely that across the Shire, non-work trips display slightly lower levels of car travel, however cars will still be the dominant mode of travel for most trips.

There is limited data on travel behaviour for visitors to the Shire, however it can be assumed that most visitors travel to the Shire by private vehicle, but when in the Shire they will benefit from safe, comfortable and accessible walking and cycling networks both for recreation as well as accessing goods and services.

5. Transport Networks

5.1. Alpine Shire Arterial Road, public transport and freight network

The arterial road network consists of the following State managed routes:

- Great Alpine Road, Kiewa Valley Highway, Bogong High Plains Road (highways)
- Bright-Tawonga Road, Happy Valley Road, Dederang Road, Myrtleford-Yackandandah Road, Glenrowan-Myrtleford Road (Snow Road), Mount Buffalo Road (secondary roads)

There are no gazetted freight routes in the Shire, which reflects the relatively low freight volumes and lack of State-significant industry. However, most arterial roads have the ability to carry freight, and are generally unrestricted (e.g., through load limited bridges), however some roads in Alpine Shire have steep grades and geometry that limits the ability of larger vehicles to travel on these roads.

Public transport is limited within Alpine Shire, with bus services providing access two to three times per day between Wangaratta and Bright, and Mount Beauty and Wodonga. Private coach services provide access to the alpine resorts during winter season.

The limited services mean that it is not feasible to use public transport to access services in Wangaratta or Wodonga by public transport for most people.

There are some limited community transport options available through Alpine Health for transport disadvantaged people needing to access medical / health services in the Shire or nearby regional centres.

The arterial road and public transport networks are shown in Appendix 1.

5.2. Shared path networks

There are a range of shared paths in the Shire that provide for local access, as well as recreation and tourism use. Some links such as the rail trail between Porepunkah and Bright provide an important transport function, for example for secondary school students. There are a number of missing links and sub-standard conditions (e.g., lack of safe crossing points) on many shared paths throughout the Shire, which limits their attractiveness (e.g., to primary school aged children).

In general, many people are prepared to walk up to one kilometre and cycle up to five kilometres to access goods, services and social opportunities, if the route is safe, convenient and attractive. The provision of shared paths, with safe crossing points at roads, is a key contributor to the overall attractiveness of a town for tourism, as well as providing greater transport choice and increasing resilience in the community.

Key missing links in the shared path network include:

- The potential for a shared path loop around Bright, generally following Railway Ave, Cobden Street, Morses Creek and the Ovens River, connecting to the Murray to Mountains Rail trail at either side of the Bright CBD.

- Potential connections in Mount Beauty / Tawonga South between the Pondage / Pebble Beach walks, Simmonds Creek Road shared path, and the main Mount Beauty-Tawonga South path, which lacks definition and safe treatments in many locations.
- Direct connections to Myrtleford CBD and key attractions such as schools, to complement the existing 'loop' walks around Myrtleford such as the Mosaic Trail.

5.3. Active Transport Catchments

Within towns, the local walking catchments are important for a wide range of users, whether or not they also have access to private vehicles. These catchments should form the focus for new development and any rezoning within or adjacent to existing settlements, to ensure that new residential development provides transport choice for residents.

The local walking catchments are shown with a core area of 400m from the town centres and 800m (around five- and ten-minutes' walk). It is noted that there may be physical barriers or missing links that prevent all parts of the catchment from accessing the town centre, however the circular catchments provide a starting point for considering what might be a viable and feasible walking distance to access local services.

Cycling catchments are shown with a 2km (approximately five minutes' ride) and 5km (approximately ten minutes' ride) catchment. Similar to the walking catchment, there are numerous physical barriers and missing links in the cycling network that mean the attractiveness or feasibility of cycling from various locations within the catchments will vary.

The active transport catchments are mapped in Appendix 2.

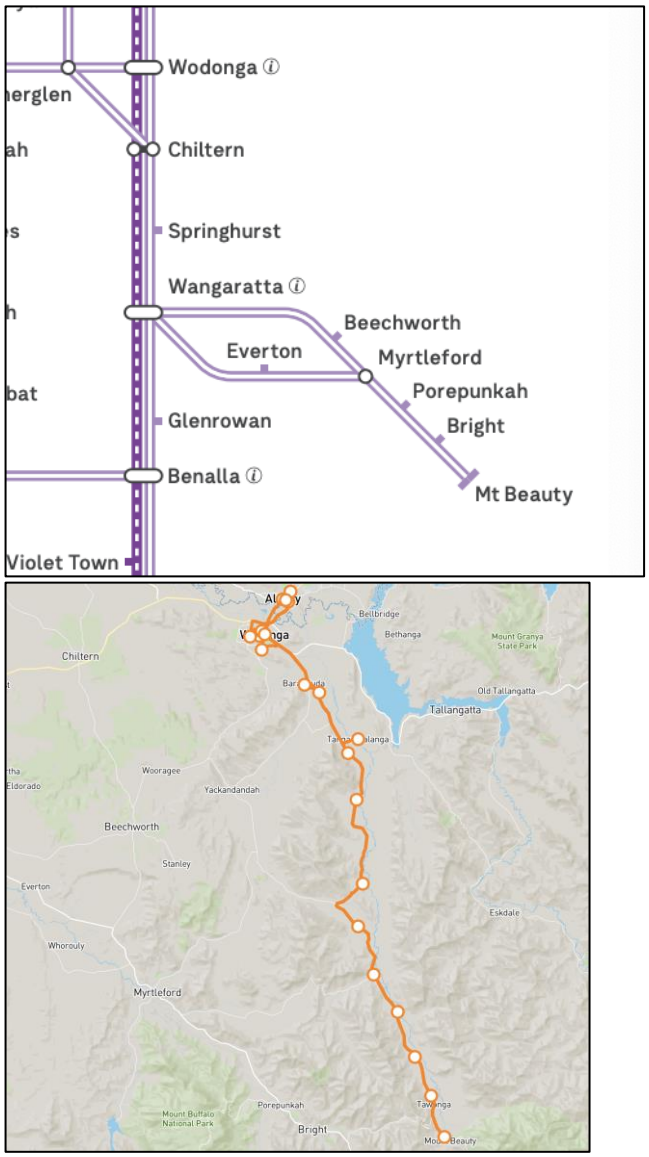
6. Summary of Key Findings

The key conclusions from the analysis of policy, existing conditions, future trends and the transport networks within the Shire have resulted in the following key directions for consideration through the Land Development Strategy:

- The Shire's road network is mature, with a high standard of freight and vehicle access available for most movements within the Shire. Further work is needed within Bright to manage congestion and conflict between modes at peak times, and the topography limits access for larger vehicles in some areas of the Shire.
- Local walking and cycling networks are not continuous, comfortable or safe in most areas of the Shire. Ongoing planning and investment are needed to ensure that both existing populations and new developments are well connected to local services by a range of transport modes, not just private vehicles. Despite the relative lack of infrastructure, there is a reasonably high level of active transport for work, education and recreation in the Shire. This can be further enhanced through ongoing investment and careful planning of new developments.
- The walkable catchment maps at Appendix 2 show that significant parts of Bright, Mount Beauty-Tawonga South and Myrtleford are outside convenient walking distance. In order to support a more resilient and inclusive community, consolidation of existing settlements around the town centres through infill housing / increased density is highly desirable, rather than significant growth on the fringes of towns or outlying settlements.
- Cycling is a relatively niche form of transport, however with the advent of e-bikes and other electric mobility solutions it is likely to grow in importance. In the context of Alpine Shire, it can provide an important element of transport choice for outlying communities. In particular, it is noted that:
  - Wandiligong and Porepunkah are (just) within the 5km cycling catchment of Bright, so it is likely that cycling will be a viable form of travel for certain types of journeys (e.g., travel to school or work, or to access services). This is supported by existing shared use trails to both townships from Bright, although there is a lack of connectivity within Bright itself.
  - Similarly, Mount Beauty and Tawonga South are within cycling distance of Mount Beauty town centre, noting that the cycling infrastructure between Mount Beauty and Tawonga South is not well defined or safe for users of all ages and abilities.
  - There are opportunities to provide improved infrastructure in Myrtleford to increase cycling as a form of transport within the urban area and low-density residential areas around the urban area (e.g., Buffalo Creek Road).
- New residential development in outlying areas should be limited, as car dependent communities tend to have lower levels of resilience and suffer from transport disadvantage (as well as a range of other inefficiencies in service provision). While there may be market demand for lower density rural living type settlements, these tend to provide poor long-term outcomes due to a range of factors, including lack of transport choice.
- There is a lack of resilience in parts of the transport network to provide access / egress during emergencies. Given the limitations imposed by topography, it is likely that solutions to this will be

largely emergency management and behaviour based, rather than providing significant new infrastructure.

Appendix 1: Transport Networks



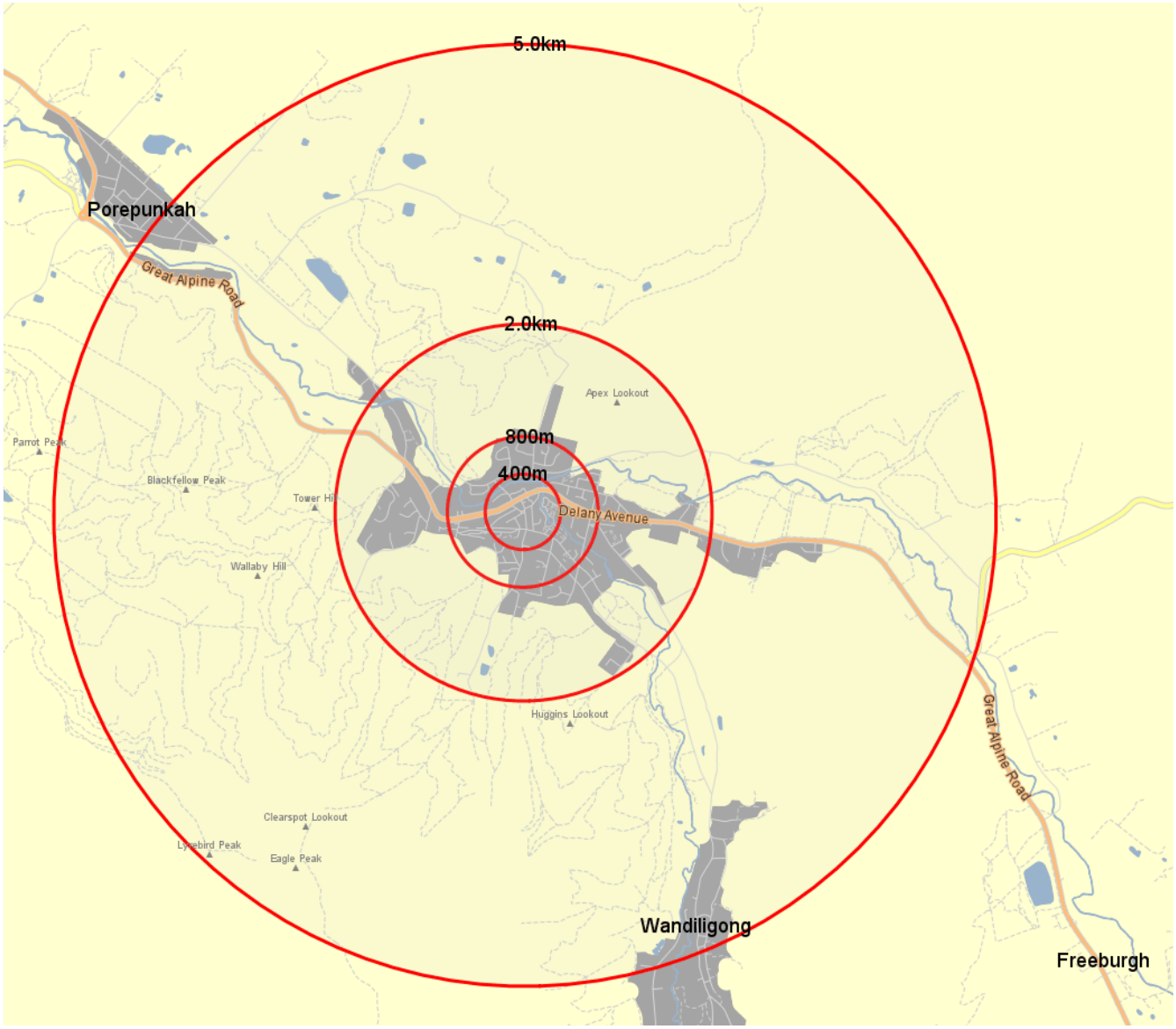
Alpine Shire Public Transport Networks (source: ptv.vic.gov.au)

Alpine Shire Arterial Road Network (source: transport.vic.gov.au)

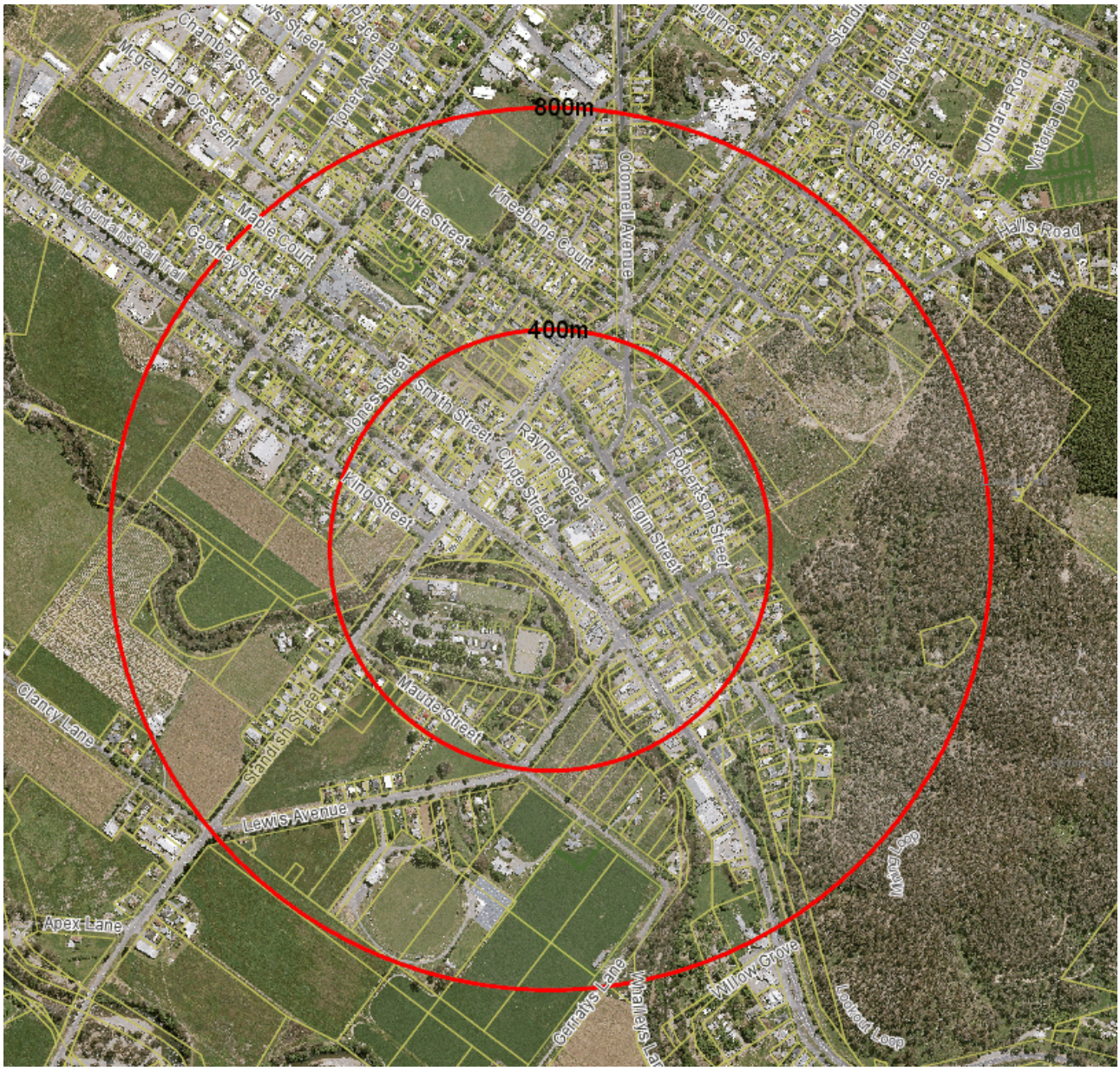
Appendix 2: Active Transport Catchments

Bright walkable catchment – 400m (5 minute walk) and 800m (10 minute walk)

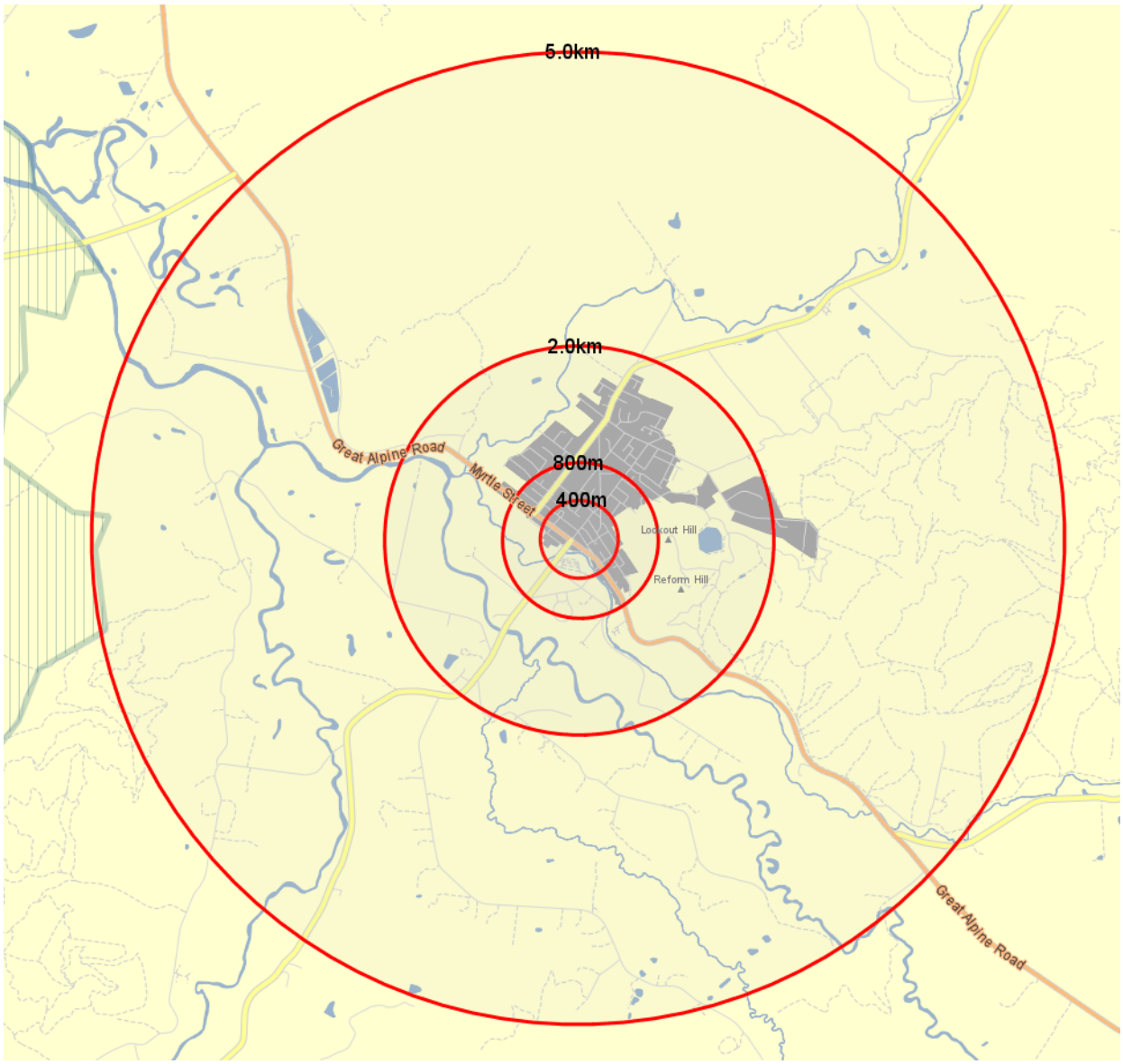
Bright cycling catchment – 2km and 5km radius



Myrtleford walkable catchment – 400m (5 minute walk) and 800m (10 minute walk)

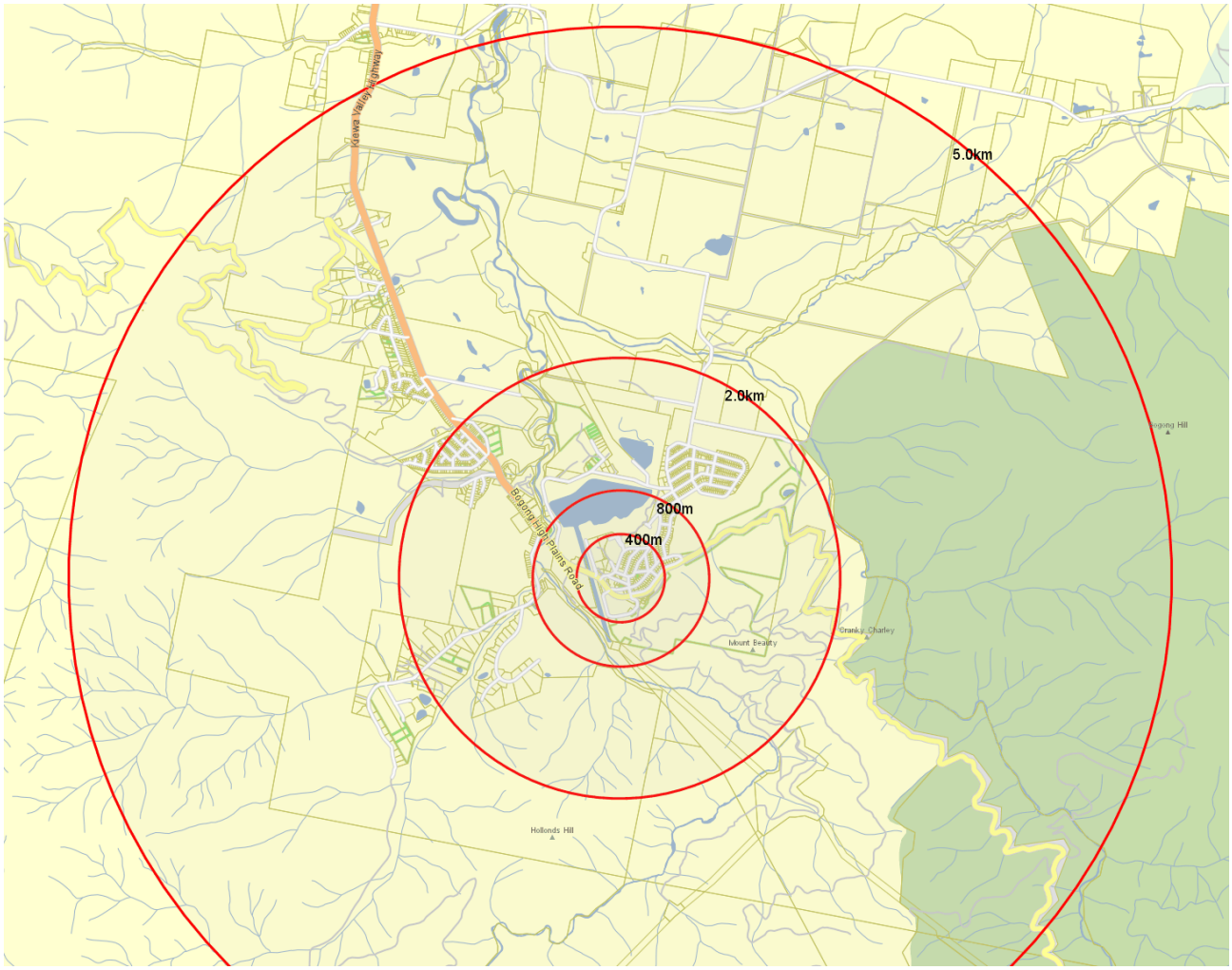


Myrtleford cycling catchment – 2km and 5km radius



Mount Beauty walkable catchment – 400m (5 minute walk) and 800m (10 minute walk)

Mount Beauty cycling catchment – 2km and 5km radius



Appendix G: Character and Landscape

Alpine Shire Council

Land Development Strategy

July 2024

ALPINE SHIRE COUNCIL

SGS Economics & Planning

Certified B Corporation

This report has been prepared by Alpine Shire Council in conjunction with SGS Economics and Planning as a supporting document for the preparation of the Alpine Shire Land Development Strategy being prepared by SGS Economics and Planning

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Cover image: SGS Economics and Planning, 2021.

Contents

1. Natural environment and landscape

This section sets out the physical considerations that may impact development capacity and future settlement patterns across the Alpine Shire LGA. It considers environmental values, landscape character, heritage, neighbourhood character.

1.1. Land Management

Alpine Shire comprises 92 percent crown land, including State and National Parks, while the remaining 8 percent of the land is freehold.[1] *The Alpine Planning Scheme* indicates that planning in the region should help to support and protect ecological systems and the biodiversity they support. Planning is required to implement environmental principles for ecologically sustainable development as established in international and national agreements. The Scheme recognises the potentially damaging impact of urban expansion and aims to avoid impacts of land use and development on important areas of biodiversity, specifically in national parks, conservation reserves, or nationally and internationally significant sites.

1.2. Biodiversity values

Alpine Shire is home to many flora and fauna species, some of which are classified as critically endangered, endangered, or vulnerable under the *Environment Protection Biodiversity Conservation Act* 1999. Strategic Biodiversity Values (SBV) provide a view of relative biodiversity importance in the landscape by combining information on areas that are of importance to threatened flora and fauna, vegetation type and condition.[2] Areas with high SBV include Mount Buffalo National Park and Alpine National Park. Much of Alpine Shire has a high SBV rating, while the valleys in the North of the LGA, which contain the main townships, have a lower SBV.

Table 1 lists an example of some of the species of flora and fauna considered critically endangered, endangered, or vulnerable.[3] On freehold land, native vegetation and biodiversity have been significantly reduced and modified since European settlement. Native vegetation can primarily be found in Crown land, which makes up over 90 percent of Alpine Shire. [4] Under Clause 52.17 of the *Alpine Planning Scheme*, a planning permit is required to remove or destroy most native vegetation. [5]

Alpine Shire has a number of significant tree avenues which contribute to the character of the Shire and its towns.[6] The tree avenues are typically made up of a single species and all trees in each avenue were planted at the same time to allow for efficient management (noting that avenues were planted at differing times). Trees are subject to a range of pests and diseases, including the Elm Leaf Beetle which

[1] Alpine Shire Council (2020), Alpine Shire Council Annual Report 2020-21
[2] DELWP (2018), Nature Print: Strategic Biodiversity Values
[3] This list is non-exhaustive, the full list can be found through the Victorian Biodiversity Atlas (DELWP).
[4] Alpine Shire Council (2020), Alpine Shire Council Annual Report 2020-21
[5] Alpine Shire Council (2015), Alpine Shire Council Rural Land Strategy
[6] Alpine Shire Council (2021), Alpine Shire Council Tree Management Plan

has the potential to cause significant damage to the Shire's large Elm tree population as has happened in the past.

TABLE 1 SUMMARY OF ENDANGERED AND VULNERABLE SPECIES

Critically endangered	Endangered	Vulnerable
• Falco Subniger – Black Falcon • Burhinus grallarius – Bush Stone-curlew • Galaxias mungadhan – Dargo Galaxias • Cyclodomorphus praealtus – Alpine She-oak Skink • Litoria spenceri – Spotted Tree Frog • Arachnocampa (Lucifera) buffaloensis - Mt Buffalo Glow-worm • Oreixenica latialis theddora – Small Alpine Xenica Butterfly • Prosthanthera monticola - Bufallo Mint-bush	• Oreoica gutturalis – Crested Bellbird • Rhinolophus megaphyllus megaphyllus – Eastern Horseshoe Bat • Burramys parvus – Mountain Pygmy-possum • Dasyurus maculatus maculatus – Spot-tailed Quoll • Maccullochella macquariensis – Trout Cod • Euastacus yanga – Variable Spiny Crayfish • Brachyscome foliosa – Mountain Daisy	• Anas rhynchotis – Australasian Shoveler • Mastacomys fuscus mordicus – Broad-toothed Rat • Canis lupus dingo – Dingo • Ornithorhynchus anatinus – Platypus • Litoria raniformis – Growling Grass Frog • Austroaeschna (Austroaeschna) flavomaculata - Alpine Darner Dragonfly • Synemon plana – Golden Sun Moth • Acacia dallachiana – Catkin Wattle

Source: DELWP, *Victorian Biodiversity Atlas*, 2022. Note: More information can be found by visiting *the Victorian Biodiversity Atlas*.

1.3. Water supply catchments

Water is a critical resource in Alpine Shire, where the headwaters of many of Victoria's rivers originate. Alpine forms part of a declared water-supply catchment that supplies water to both the North and East Gippsland regions for domestic use and ultimately contribute to the Murray Darling System. [7] Water supply catchments are used to identify a region's water resources. These resources provide people with water for domestic and industrial use and are important for cultural sites, tourism, recreation, and wildlife. Water supply catchments identified as supply water for domestic use, irrigation or other purposes in Victoria are protected under the *Catchment Land Protection Act 1994*.[8]

In Alpine Shire, management of water supply catchments is guided by the *North East Regional Catchment Strategy 2021.* The management of these catchments is significant as water security will pose an increasing challenge to the region and state due to climatic events, such as drought. In 2019-2020, the condition of water in north east Victoria has been assessed as 'Concerned' and in decline. This was largely attributed to the impact of the 2019-2020 bushfires that impacted waterways by reducing

[7] Alpine Shire Council (2015), Alpine Shire Council Rural Land Strategy

[8] Special Water Supply Catchment Areas are declared under the *Catchment and Land Protection Act, Vic., 1994.* These areas require careful planning and land use management, recognising the importance of a catchment for water supply purposes. Further information is available from URL: http://vro.agriculture.vic.gov.au/dpi/vro/vrosite.nsf/pages/landuse-water-supply-catchments.

water quality and increasing erosion.[9] Appropriate management of land use within water supply catchments is crucial to avoid degradation of water quality and quantity. [10]

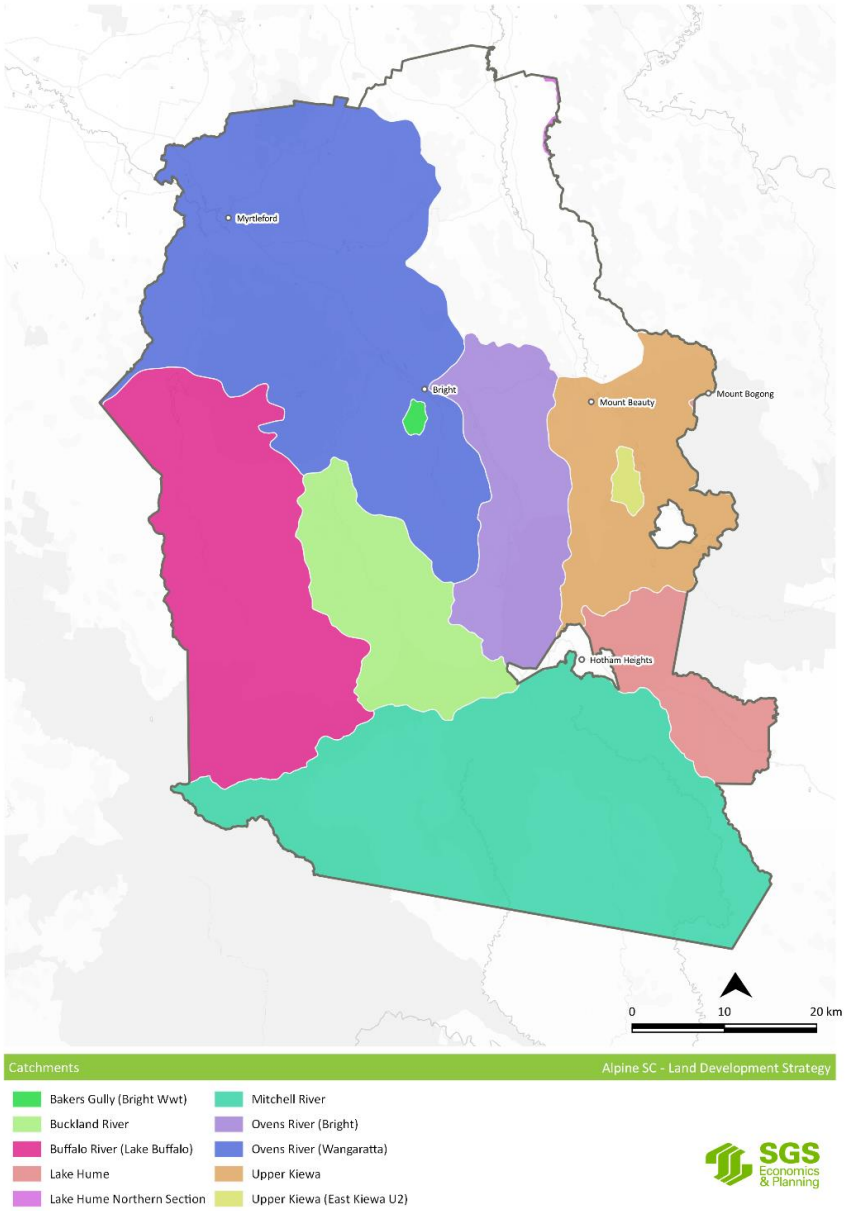
The *Alpine Planning Scheme* seeks to protect waterways and water supply catchments by ensuring that development provides a minimum 30-metre setback from wetlands and waterways and support Catchment Management Authority Works on Waterways processes. Figure 1 illustrates the ten water supply catchment areas within Alpine Shire. All of the catchment areas have been declared a Special Water Supply Catchment (SWSC) under the *Catchment and Land Protection Act 1994*. The SWSC areas have significant value as a source of water for domestic, urban and stock use and the Planning Scheme implements policies to protect them:

- Applications to use or develop land within a SWSC must demonstrate that the proposal will not adversely impact upon water quality in the catchment
- The design of all developments in rural areas will be required to ensure that stormwater flows downstream of the site and is restricted to redevelopment levels unless increased flows are approved by the relevant drainage authority and there are no detrimental downstream impacts
- The creation of new point source discharges should be avoided
- Best practice land and water management should be employed to diffuse sources of pollution
- All development in rural areas will be required to retain and treat all effluent on site. Application to build within 100 metres of a waterway that would generate effluent should include evidence that the building site is capable of containing an appropriate water treatment system.[11]

The *Alpine Planning Scheme* outlines further steps to protect water quality in aquifer recharge areas, which lie beneath and adjacent to the Ovens River and its tributaries.[12] This includes promoting vegetation retention in aquifer recharge areas and preventing the establishment of incompatible land uses in aquifer recharge areas in potable water catchments.

[9] Victoria State Government, *North East Regional Catchment Strategy*, Accessed March 2022 from URL: https://northeast.rcs.vic.gov.au/themes/water/.
[10] Alpine Shire Council (2015), Alpine Shire Council Rural Land Strategy
[11] Alpine Shire Council (2022), Alpine Planning Scheme
[12] Alpine Shire Council (2019), Domestic Wastewater Management Plan

FIGURE 1 WATER SUPPLY CATCHMENTS IN ALPINE SHIRE



Source: SGS Economics and Planning, based on various datasets.

1.4. Landscape character

Bioregions across Alpine Shire

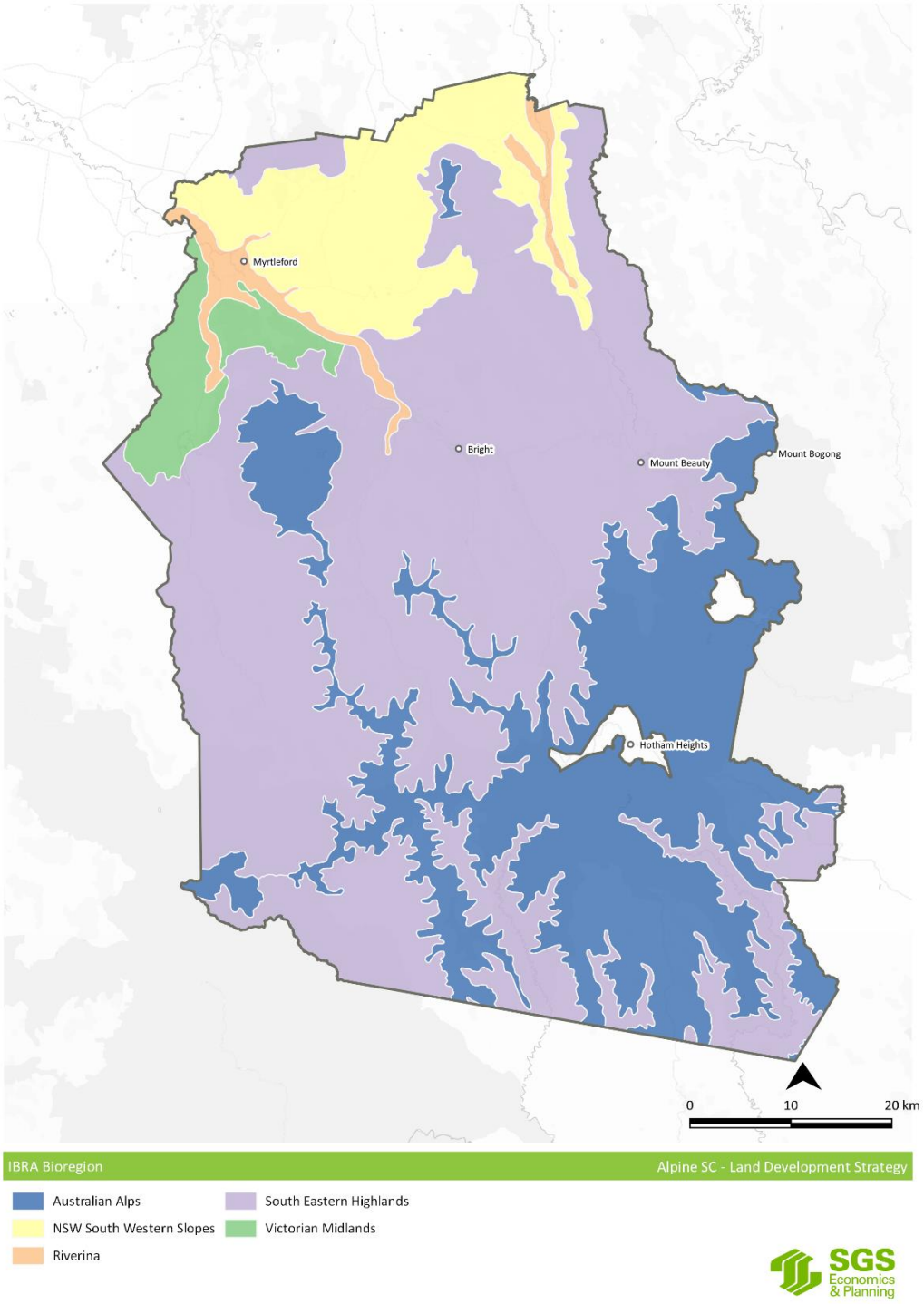
Landform and biodiversity in the Alpine Shire LGA are highly varied. Figure 2 illustrates the bioregions across Alpine Shire based on the Interim Biogeographic Regionalisation for Australia (IBRA7). The IBRA7 is a national system to classify distinct bioregions based on common climate, geology, landform, native

vegetation and fauna. There are 89 distinct bioregions in Australia.[13] In Alpine Shire, there are five subregions under the IBRA7 classification:

- South Eastern Highlands: The predominant bioregion, covering much of the LGA including Bright and Mount Beauty.
- Australian Alps: Covering much of the south of the LGA and extending into the east and small pockets in the north and central area, including Alpine National Park and Mount Bogong.
- NSW South Western Slopes: Around the northern areas of the LGA.
- Victorian Midlands: Covering a small area in the north eastern boundary of the LGA.
- Riverina: Small areas in the north east and north west, covering Myrtleford.

[13] The Interim Biogeographic Regionalisation for Australia (IBRA) is a framework for identifying land for conservation. It is a spatial mapping and information tool for vegetation communities and ecosystems. Across Australia, there are 89 large geographically distinct bioregions based on common climate, geology, landform, native vegetation and species information. Further information is available on the Australian Government Department of Agriculture, Water and Environment website: https://www.environment.gov.au/land/nrs/science/ibra.

FIGURE 2 BIOREGIONS IN ALPINE SHIRE BASED ON IBRA7



Source: SGS Economics and Planning, based on the various datasets.

Significant Landscape and Features

Containing much of Victoria's alpine country, Alpine Shire's meandering rivers and dramatic views provide a picturesque location. Public land makes up 92 percent of Alpine Shire, in areas identified as State and National Parks, State Forests and Nature Reserves, including part of the Alpine National Park and the Mount Buffalo National Park. The remaining 8 percent of land consists of towns, villages and farming land in the major river valleys: Ovens, Buffalo, Buckland and Kiewa valleys.[14]

Alpine Shire contains significant rivers including the Kiewa, Ovens, Buffalo and Buckland. The Ovens and Kiewa rivers and their tributaries are important wildlife corridors. In many areas, waterways have Crown land frontages that are often licensed to the adjoining landowners.[15]

Located in Victoria's High Country, Alpine Shire contains over 100 named mountains and boasts the highest and second-highest mountains in Victoria, Mount Bogong and Mount Feathertop, located in the Alpine National Park.[16] Alpine Shire's mountains are home to some of Victoria's major snow and ski resorts including Falls Creek and Mt Hotham. These landscape features provide a picturesque and iconic scenery that is of environmental and cultural significance to residents in Alpine Shire and the broader Victorian community. The landscape also provides economic benefits on a local and national scale.

Beyond the vast mountain ranges, the valley floor is the home to the majority of Alpine Shires' residents. Residents predominately live within the Ovens Valley and Kiewa Valley.

In the Ovens Valley are the towns of Bright, Porepunkah and Myrtleford, and settlements of Freeburgh, Ovens, Harrietville, Wandiligong, Buckland Valley and Buffalo River. From Harrietville to Bright, the Ovens Valley is narrow, flat and gently undulating. The Ovens River meanders through the valley and the sides rise sharply into the Alpine National Park to the east and the State Forest to the west. Further north along the Ovens Valley, from Bright to Myrtleford, the landscape broadens into the floodplain and valley floor and the tributaries of Roberts Creek, One Mile Creek, Porepunkah Gully Creek and Buffalo Creek. To the east, Mount Buffalo creates a dramatic skyline.[17]

On the significant landscape overlay (SLO), the Upper Ovens Valley is classified as a SLO5 due to its significant native and exotic species and historical past as a mining valley. Under the SLO5 classification, developments are contained and restricted to protect the character and biodiversity of the area. [18]

Wandiligong Valley is characterised by its narrow valley and Morses Creek. The surrounding steep hills contain pine plantations on the west and Crown Land to the east. The historic township of Wandiligong is situated along the valley, south of Bright.[19] The Wandiligong Valley is classified as a SLO3 due to its cultural and historic heritage and the unique character of the built environment. Under the SLO3 classification, new developments must maintain the existing character and patterns in the landscape.[20]

Buffalo River Valley is characterised by its narrow steep slopes near Lake Buffalo in the South of the valley. The valley broadens to a flat plain near Myrtleford where the Buffalo River meets the Ovens

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[14] Alpine Shire Council (2020), Alpine Shire Council Annual Report 2020-21
[15] Alpine Shire Council (2013), Alpine Shire Council Recreation and Open Space Plan
[16] Alpine Shire Council (2013), Alpine Shire Council Recreation and Open Space Plan
[17] Alpine Shire Council (2015), Alpine Shire Council Rural Land Strategy
[18] DELWP (2020), Alpine Planning Scheme Ordinance Schedule 5 to Clause 42.03 Significant Landscape Overlay, Accessed March 2022 from URL: https://planning-schemes.api.delwp.vic.gov.au/schemes/alpine/ordinance/42_03s05_alpi.pdf
[19] Alpine Shire Council (2015), Alpine Shire Council Rural Land Strategy
[20] DELWP (2020), Alpine Planning Scheme Ordinance Schedule 3 to Clause 42.03 Significant Landscape Overlay, Accessed March 2022 from URL: https://planning-schemes.api.delwp.vic.gov.au/schemes/alpine/ordinance/42_03s03_alpi.pdf

River. Following the valley north to the Shire boundary, the valley rises into steep undulating hills near Gapstead.[21]

Buckland Valley is a pastoral valley along the Buckland River and Mount Buffalo National Park lies to the west.[22] The Buckland Valley is classified as a SLO4 due to its unique landscape where the pastoral valley floor contrasts with the steep and rugged terrain of Mount Buffalo. The SLO4 classification aims to maintain this contrasting landscape by encouraging rural development on a human scale and form.[23]

Happy Valley contains undulating slopes with minor alluvial plains significant to the Shire for its agricultural production, primarily supporting the cattle industry.[24] The Happy Valley is classified as a SLO2 due to its steep forested ridges and fertile valley floor. The classification aims to maintain these landscape features and the view of Mt Buffalo from the eastern end of the valley.[25]

Within the Kiewa Valley is the town of Mount Beauty-Tawonga South, and settlements of Tawonga and Dederang.[26] The wide valley floor features the floodplain of the Kiewa River alongside tributaries of Mountain Creek and Running Creek. The valley is bordered by state forest to the east and west and the Alpine National Park to the South.[27] The Upper Kiewa Valley is classified as a SLO1 due to the distinct character of the contrasting landscape. Under the SLO1 classification, urban development must be contained to existing townships and maintain the rural landscape.[28]

[21] Alpine Shire Council (2015), Alpine Shire Council Rural Land Strategy
[22] Alpine Shire Council (2015), Alpine Shire Council Rural Land Strategy
[23] DELWP (2020), Alpine Planning Scheme Ordinance Schedule 4 to Clause 42.03 Significant Landscape Overlay, Accessed March 2022 from URL: https://planning-schemes.api.delwp.vic.gov.au/schemes/alpine/ordinance/42_03s04_alpi.pdf
[24] Alpine Shire Council (2015), Alpine Shire Council Rural Land Strategy
[25] DELWP (2020), Alpine Planning Scheme Ordinance Schedule 2 to Clause 42.03 Significant Landscape Overlay, Accessed March 2022 from URL: https://planning-schemes.api.delwp.vic.gov.au/schemes/alpine/ordinance/42_03s02_alpi.pdf
[26]Alpine Shire Council (2021), Economic Development Strategy
[27] Alpine Shire Council (2015), Alpine Shire Council Rural Land Strategy
[28] DELWP (2020), Alpine Planning Scheme Ordinance Schedule 1 to Clause 42.03 Significant Landscape Overlay, Accessed March 2022 from URL: https://planning-schemes.api.delwp.vic.gov.au/schemes/alpine/ordinance/42_03s01_alpi.pdf

2. Built environment and character

The character of Alpine's built environment varies across the municipality. An overview of the character in each of Alpine's main towns and settlements are summarised in this section.

2.1. Understanding neighbourhood character

Across Victoria, the term 'neighbourhood character' means the cumulative impact of every property, public place, or piece of infrastructure, whether great or small. Documenting neighbourhood character helps in forming an understanding of built form challenges and opportunities within the municipality. It is important to have a reference for the feel of a place, influenced by its buildings and street networks, to ensure that new development in Alpine feels like it belongs, reflecting local values and features.

The interplay between different features forms the basis of a place's unique character. Those features may include:

- Key roles and services
- Topography (flat, undulating, hilly, physical features like river valleys)
- Landscaping and vegetation (size, type, native/non-native, or a mix)
- Built form (buildings: height, size, setbacks, roof form, heritage, site coverage and space around houses)
- Heritage sites
- Built form (dwelling types, extent of rear gardens and private open spaces, size and spacing of lots, street widths and patterns, fences style and height)

Detailed assessment has been undertaken of the Shire's three larger townships (Bright, Myrtleford and Mount Beauty-Tawonga South) which each comprise a commercial core and surrounding residential land. This is followed by a description of the smaller settlements in Dederang, Dinner Plan, Harrietville, Porepunkah, Tawonga and Wandiligong.

2.2. Settlement character descriptions

Bright

Bright is the second largest township in the Alpine Shire, with a population of 2,620 people (ABS 2021). Bright is a tourism-oriented town, serving as a gateway to Alpine National Park, the snowfields and a myriad of recreational activities. Bright also services surrounding settlements of Harrietville, Smoko, Freeburgh, Porepunkah and Wandiligong.

The relationship between the surrounding landscape and the built environment is an important aspect of Bright's character. The town offers natural beauty with views of surrounding mountain ranges, pine plantations and natural features, including Ovens River running east-west and the connecting Morses

Creek running south of the Ovens River. The Ovens River Water Frontage provides a unique riverside setting and a key community focal point for public open space.

The trees and vegetation in the town are adapted to a sub-alpine climate. The main streets in the commercial core are lined with deciduous European alpine and avenue plantings. Vegetation is most dense around Ovens River and Morses Creek. New street plantings have been integrated among established trees in residential areas, creating a sense of privacy and green leafy streets.

The direction of the town's growth has been shaped by the surrounding topography. The town is situated in a narrow valley, with Apex Hill to the north and Mystic Hill to the south. Bright's urban structure does not follow a traditional grid street pattern, instead comprising a highly varied street layout sympathetic to local landscape conditions. The town centre's pedestrian scale is a legacy of the township's settlement in the mid 1800's.

The character of Bright is influenced by its historical legacy as a gold mining settlement and its continued role in supporting forestry, agriculture and tourism industries. The history of Bright and these past industries is evident in the street patterns, historical buildings and surrounding areas such as the Victorian Heritage Registered gold sluicing site at Frasers Lane.

Recent development in Alpine Shire has been concentrated in Bright. Between 2016 and 2021, 40.5 per cent of all dwelling constructions occurred in Bright.[29] Development in Bright has been predominantly occurring on the outer areas of the town with very little infill development occurring around the town centre. New housing comprises largely separate houses in the general residential and low-density residential zones. Lot sizes remain large with sensitive modern architectural styles.

It is noted that further detailed character work for Bright is being undertaken by Mesh Planning.

Commercial core

Bright's town centre, the commercial core, is situated to the south of Ovens River, around Gavan Street which connects to the Great Alpine Road. This commercial area is surrounded by the Ovens River Water Frontage to the north, the Morses Creek Water Frontage to the east, and caravan parks to the north, east and west.

The commercial core has an established town centre character. It provides a variety of services and community infrastructure to meet daily needs, including supermarkets, medical centres, a community centre, library, and surrounding parks. There is a diversity of restaurant, retail and entertainment offerings located throughout the commercial area, which contribute to a vibrant and tourist oriented town centre.

The mix of uses in the commercial core lends itself to a variety of development types with predominantly one and two storey typologies. Gavan Street/Delaney Avenue, Barnard Street and Ireland Street are key boulevards in the commercial core, lined with established street trees. Services and businesses front the main streets and provide built canopy cover over sealed footpaths. These commercial areas are comparatively more compact, with smaller lots and larger building footprints compared to the established residential areas.

[29] Alpine Shire Council (2021), Building permit activity.

Short stay accommodation such as hotels and Airbnbs are scattered throughout the commercial zone, occupying single detached dwellings and multi-unit developments. Single detached dwellings are concentrated within the fringes of the commercial zone area, to the east of Wills Street and along Wood Street and Burke Street.

The town's history is expressed most clearly through its extant original buildings in the commercial area, which include the Uniting Church, Oriental Guest House, former Bright Post Office and Bright Library. Other places and objects that express Bright's history within the commercial core include the Bright Memorial Clock Tower and Mafeking Square in the centre of the town.

Residential areas

Areas zoned General Residential Zone are located to the north and south of the Ovens River, and to the east and west of Morses Creek, with pockets of community-oriented land uses zoned Public Use Zone, such as a school, hospital, cemetery, bowls club and government land.

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. 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.

Short stay accommodation is scattered throughout the General Residential Zone area, integrated among the single detached dwellings. Hotels are typically single or double storey construction in either detached buildings or units. Units tend to be situated on the edges of residential, or in holiday parks or motels with purpose-built hotel accommodation.

The public realm includes both established and young street tree plantings on large grass road verges. Front setbacks are also vegetated, creating a leafy green character throughout residential areas as well as a greater sense of privacy.

Town fringe

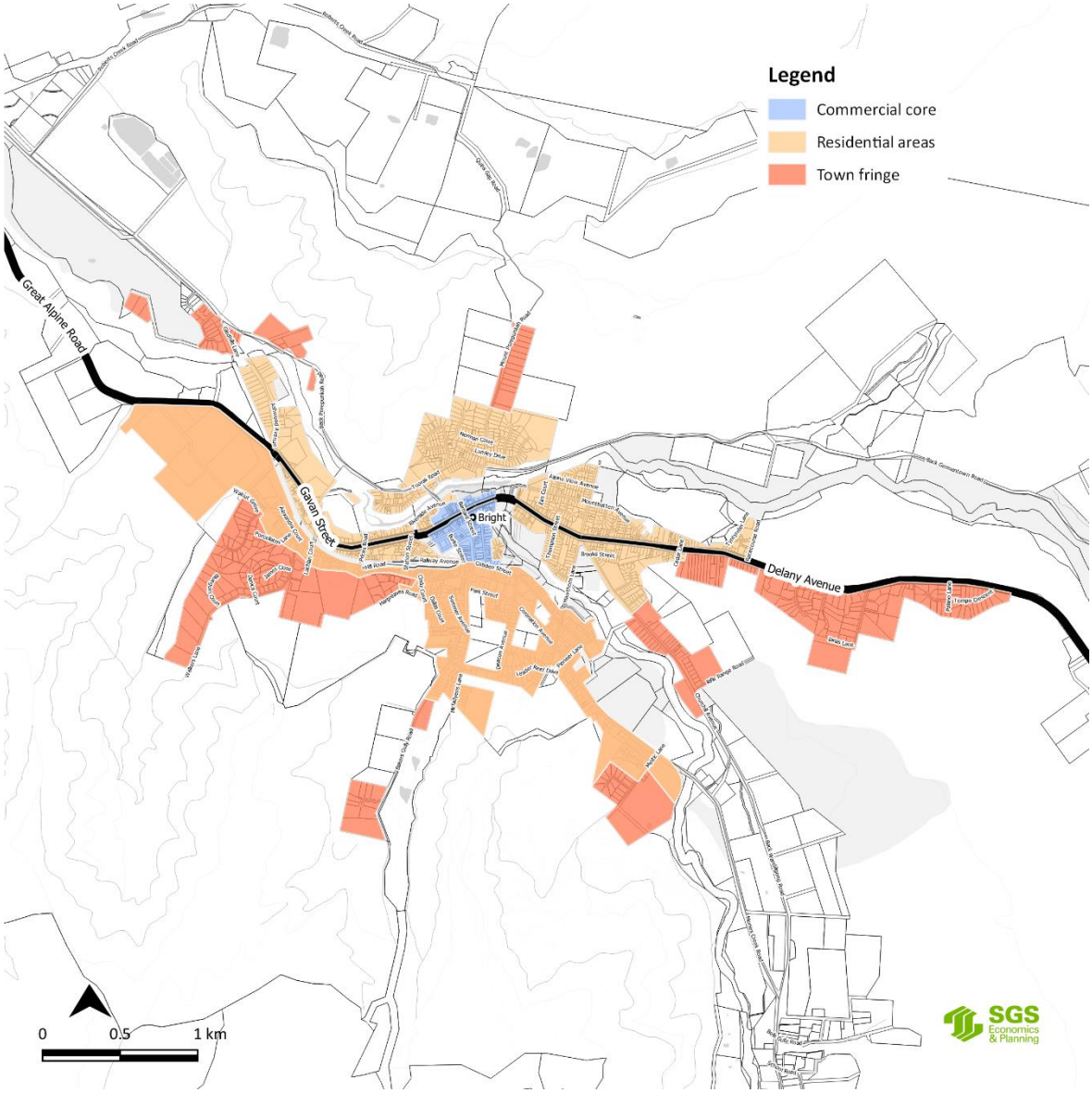
Areas of Low Density Residential Zone (LDRZ) extend outwards along the valley floor and are typically the towns fringe areas. Areas of LDRZ generally interface forested conservation areas, plantation areas in the Farming Zone and/or golf courses (to the west). Dwellings in the LDRZ are located on large lots, arranged around curvilinear streets that support country style living, with wide vegetated setbacks.

Housing is characterised by large ranch style houses with a range of both timber and brick constructions varying between one and two storeys. Some small pockets more closely resemble the regular rectilinear subdivision pattern of the General Residential Zone. Front fences on residential lots are generally low in height and permeable or otherwise absent, with some well-maintained hedges serving as front fences.

A small number of short stay accommodation options are scattered throughout the LDRZ with separate dwellings converted to hotels, and purpose-built hotel accommodation.

In the public realm, there are fewer footpaths, swale drains and wide, grassy verges.

FIGURE 3:CHARACTER AREAS OF BRIGHT TOWNSHIP



Source: SGS Economics & Planning, 2022

Mount Beauty – Tawonga South

Mount Beauty and Tawonga South are distinct settlements; however they are physically and economically linked and for the purposes of planning are considered to be one township. They are situated in the foothills of the Alpine National Park in the upper Kiewa Valley with steep hills to the south, east and west with Kiewa Valley extending to the north. Bogong High Plains Road connects Mt Beauty and Tawonga South. Together they have a population of around 1,922 (ABS, 2021). Mount Beauty-Tawonga South services nearby rural communities including Tawonga and Falls Creek. Tourism is a key focus, as the township serves as a gateway to the alpine recreation areas of Falls Creek and the Bogong High Plains.

The relationship between the surrounding landscape and the built environment is an important aspect of the town's character. The town offers scenic views of the Kiewa River and the hydro power generation regulating pond at Mt Beauty, as well as views of Alpine National Park, Mount Bogong and the agricultural fields of the Kiewa Valley.

A large central portion of Mount Beauty is government land zoned Public Use Zone and much of this area contains the North East Water pondage. Commercial areas are located in Mount Beauty and along the Kiewa Valley Highway. Residential development follows the Kiewa Valley Highway and south along the Simmonds Creek Water Frontage. A significant number of dwellings provide for holiday accommodation. A green buffer and rural areas surround the Mount Beauty and Tawonga South townships.

The Mount Beauty township is a product of the nearby hydro scheme and the township was purpose built to support the project. A Heritage Study conducted in 2007 recognises the historical importance of the designation of Mount Beauty as a hydro town and planned community. The State Electricity Commission (SEC) adopted a model town design when planning these communities and used the SEC Government Architect to design the houses originally built for staff accommodation purposes in the towns south. Development in Mt Beauty has since spread to the north with post-war style housing common throughout. Most recent development is located in the northern most areas of Mt Beauty's General Residential Zone, as well as in pockets following the highway towards Tawonga South with varying architectural styles.

Commercial core

The commercial zoned land around Hollonds Street in Mount Beauty is small, however it connects to surrounding public open space and recreation reserves, schools, community centres and library located in the Public Use Zone (government land) to the north. The commercial and public land integrate to provide for an important community focal point.

The retail strip along Hollonds Street, located in the Commercial 1 Zone, supports the local community's daily needs, and includes a community centre, hospital, supermarket, food and drink premises and other businesses. Services and businesses front Hollonds Street and provide built canopy cover over sealed footpaths. This commercial zoned area extends to the north of Lakeside Avenue, where a swimming pool and pub are located, and across the waterway to the west, with a visitor information centre and other retail offerings.

A separate retail strip is located along the Kiewa Valley Highway, between Tawonga South and Mount Beauty. Retail along this strip is diverse, and building are typically single storey but inconsistent in terms of setbacks, presentation to the street and construction materials.

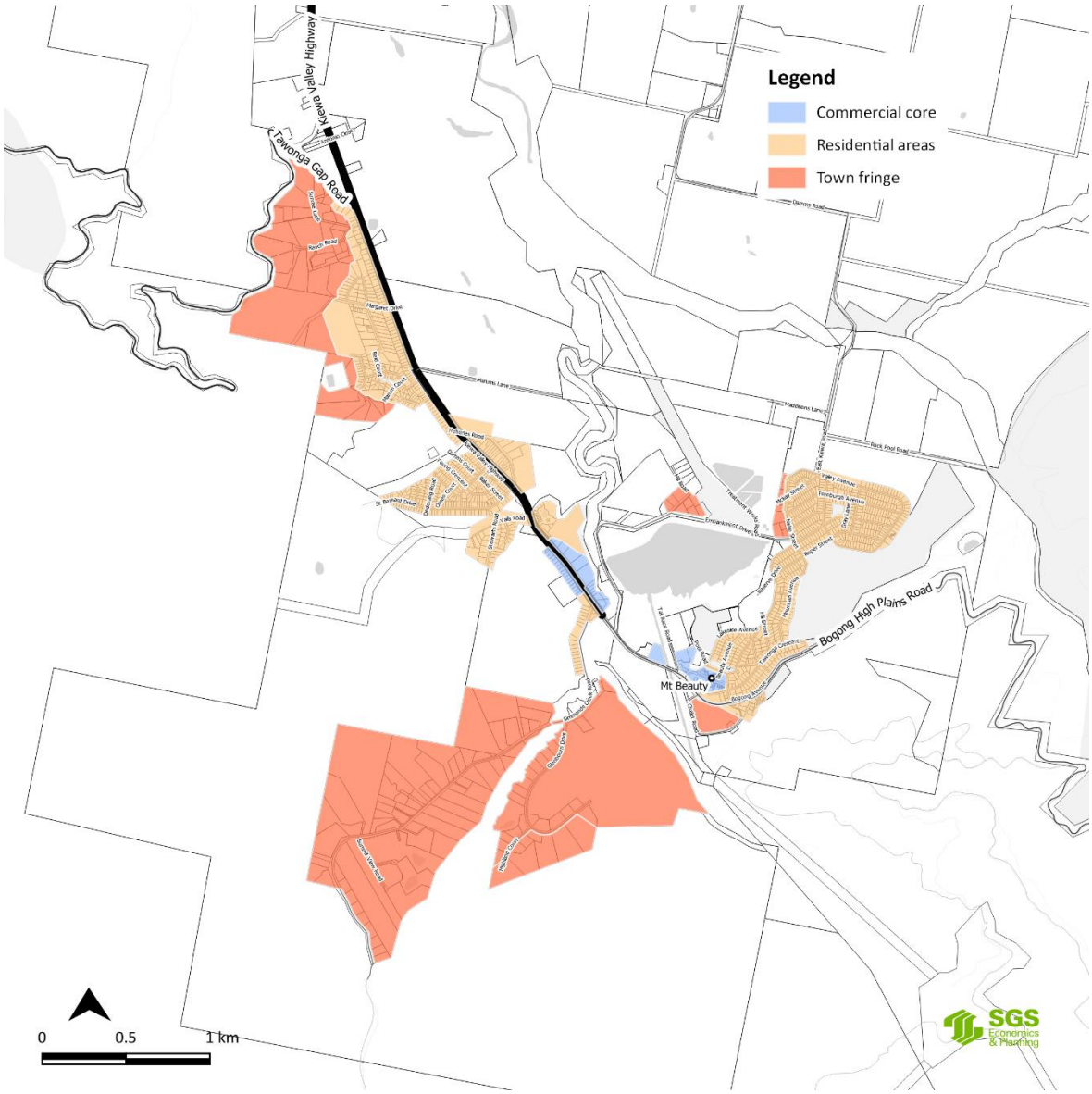
Residential area

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.

Town fringe

The residential area described above further expands to the south-west of Mount Beauty along the Simmonds Creek Water Frontage and west of Kiewa Valley Highway in Tawonga South. These residential areas are zoned LDRZ, and are characterised by larger lot sizes, a greater sense of open space, and single detached dwellings that are obscured from the roads by trees and vegetation. Housing styles vary, however hipped and gable tin roofs are predominant, and front fences are absent or otherwise low in height. Roads are mostly unsealed with no footpaths and lined with trees and/or other vegetation.

FIGURE 4: CHARACTER AREAS OF MT BEAUTY-TAWONGA SOUTH TOWNSHIP



Source: SGS Economics & Planning, 2022

Myrtleford

Myrtleford is the largest township in Alpine Shire, with a population of 3,285 people (ABS, 2021). It is predominantly residential in nature, comprising residential land in the General Residential Zone, with fringe areas located in the Low Density Residential Zone to the north-east and south-east. The primary commercial area is located to the south, adjacent to the Great Alpine Road. Further north around Odonnell Avenue and Lawrence Street is the civic centre, which includes areas of public open space, sports ovals, the local government office, Myrtleford Hospital and schools. The town also services nearby communities in the Upper Ovens Valley.

The landscape character is punctuated by the broad open Ovens Valley, and scenic views to nearby Mount Buffalo and the forested hills rising to the immediate north and east. The edges of the township are lush and green, where it is adjacent to the Ovens River, Happy Valley Creek and Barwidgee Creek floodplains. Throughout the township, established trees of various species line the streets.

Historically, Myrtleford has been an agricultural town and continues to play an important service role to surrounding agricultural based land uses and enterprises. Parts of this history of the town are evident through the legacy of the tobacco industry that was present throughout the area. A historical log Tobacco Kiln which was used for drying tobacco crops is recognised under the Heritage Overlay in the town. There are very few historical buildings within the town centre. Those that do remain are scattered throughout and include the Railway Hotel and the Former Bush Nursing Hospital. While California bungalow housing was once a popular style in Myrtleford, very few remain. More recent development to the north-east is located on smaller lot sizes with larger floorplans and smaller sized or no private rear garden space. The township is lacking in established street trees, particularly in more recent development areas.

Commercial core

The town centre is comprised of Commercial 1 Zone and Mixed Use Zone land to the north and south of Myrtle Street. This commercial area is mostly comprised of various businesses including essential services such as a supermarket and pharmacy, retail, and food and drink premises. The architectural style of buildings in the town centre are diverse and there are few historical buildings. There is no unifying or predominant architectural or design style, resulting in a lack of visual cohesion. The front and side setbacks of buildings are however consistent. Shopfront verandahs are a prominent and practical feature in Clyde and Standish Streets.

Two areas of Mixed Use Zone, to the south and to the west, presents larger format retail in a more car centric environment, with access from Myrtle Street.

Dwellings are located on the outer edges of the town centre, along Elgin Street and to the west around Myrtle Street. Residential character is distinct from the commercial area with low density residential and single detached dwellings and vegetated front setbacks.

Residential area

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-

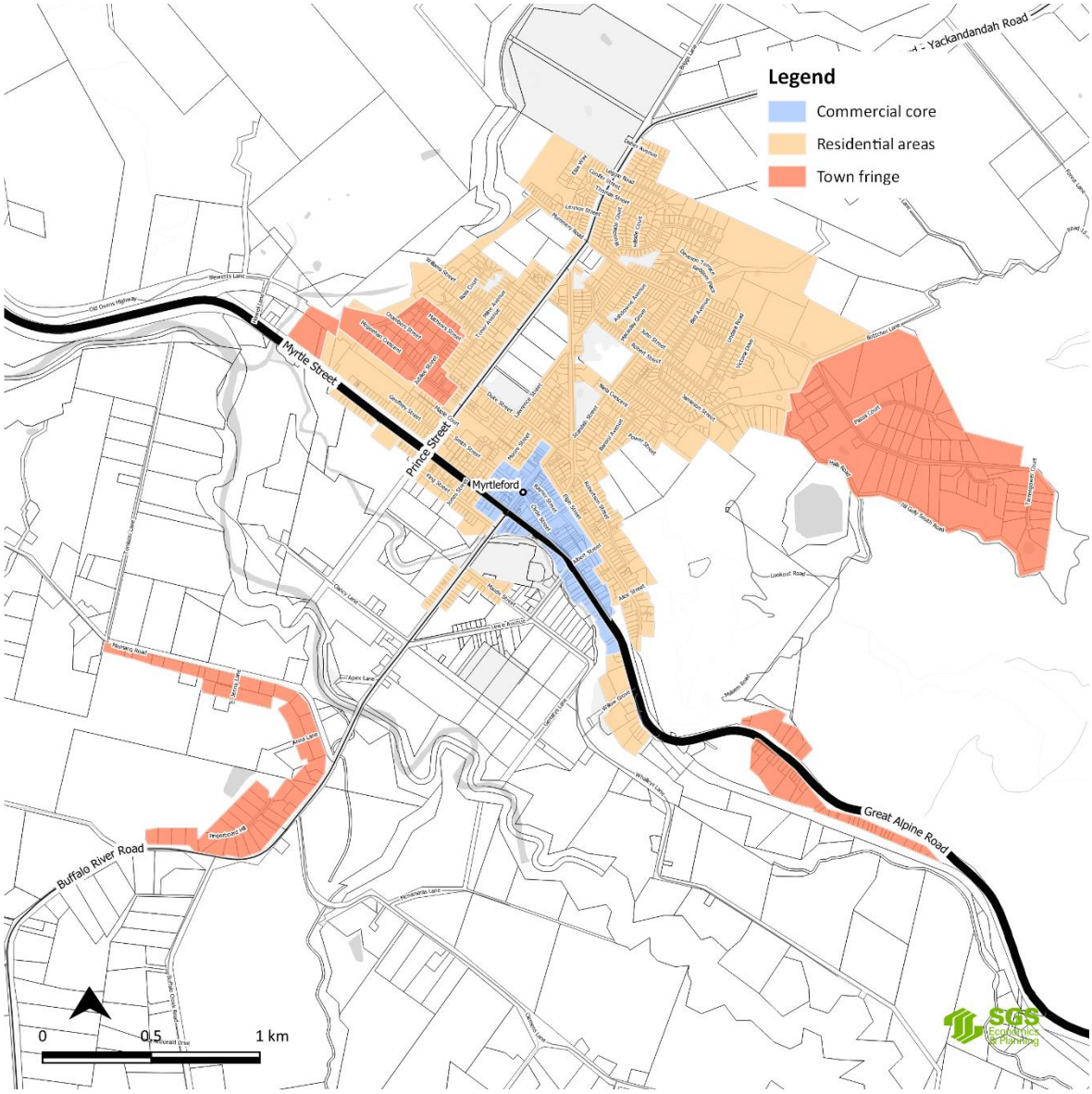
residential uses throughout the General Residential Zone. Many dwellings throughout the township are used for holiday accommodation and listed on Airbnb.

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.

Town fringe

The LDRZ is located to the north-east along Mummery Road, to the south-east along Great Alpine Road, abutting land zoned General Residential Zone and to the south of the Ovens River along Buffalo Creek Road. These residential areas are distinguished by very large lot sizes that follow wide curvilinear streets and a greater sense of open space. Housing is characterised by large country style living, with generous private open space, and low or otherwise absent front fences. Housing is situated within a leafy green forested setting.

FIGURE 5: CHARACTER AREAS OF MYRTLEFORD TOWNSHIP



Source: SGS Economics & Planning, 2022

Small townships

The remaining settlements listed below are currently defined as smaller townships. The zoning in these towns include the Township Zone, Rural Living Zone, Low Density Residential Zone, Special Use Zone and Farming Zone. Unlike the three larger towns described above, these small townships lack a commercial zoned core and compact residential subdivision and development.

Other settlements in the municipality are comprised of rural districts, which is mostly farming land, located throughout Alpine Shire's valleys. The one exception is Bogong, which is comprised of land reserved for hydroelectricity production (Special Use Zone) and conservation area (Public Conservation and Resource Zone). These areas have been omitted as part of the survey of neighbourhood character.

Dederang

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.

Dinner Plain

Dinner Plain is a freehold alpine village resort located approximately 10 km south-east of the Mount Hotham Alpine Resort and is completely surrounded by the Alpine National Park. The township's small commercial precinct, comprising food and drink premises, and surrounding residential area is zoned Special Use Zone – Schedule 1.

The winding streets, uniform subdivision pattern and architectural style, and setting within the Alpine National Park give the town an Alpine village feel. The township is accessed from the south of Great Alpine Road, which connects to looping curvilinear streets. The residential area is populated with hotel accommodation, comprising lodges, apartments and individual houses. There is a consistent architectural style, defined by timber lodges, generally three storeys with steep tin roof pitches and consistent setbacks from the road. There are few footpaths, however the village is a walkable scale with some walking trails throughout. Development is guided by specific building controls and design standards, to achieve this uniform architectural character.

Harrietville

Harrietville is a small sub-alpine village located to the south-east of Bright, nestled in between mountain ranges to the east and west, in a forested setting. Most of the area is zoned Township Zone and fringe areas are zoned Rural Living Zone and Farming Zone.

There is no defined town centre, however the township provides a small range of commercial and retail uses for tourists and alpine recreation throughout the Township Zone. Dwellings styles are varied, with single and double storey timber houses with tin hipped roofs developed on a range of lot sizes fronting Great Alpine Road and connecting curvilinear streets. The fringe areas in the Rural Living Zone feature larger lots with rural style housing. Hotel accommodation is scattered throughout the town, mostly near the Great Alpine Road.

The residential area is punctuated by large public open spaces and heritage places. The Tronoh Gold Dredging Ponds in particular, which is heritage listed, represent the town's mining history. The highway and streets are lined with established trees and provide a forested character.

Porepunkah

Porepunkah is a small residential village located to the north-west of Bright between Station Street and Oven River, with most of the town zoned Township Zone. Land use is focused on rural living with less of a tourism focus compared to Bright. 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.

Development is oriented around Ovens River, Great Alpine Road and Station Street in a rectilinear grid subdivision layout. The township includes a general store, hotel, recreation reserve, community hall, primary school and airfield. Hotel accommodation is scattered throughout the town.

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

Tawonga

Tawonga is situated to the north of Mount Beauty – Tawonga South, and is the older settlement in the upper end of the Kiewa valley, dating back to the 1850's. The town is located on the Alpine approach to Falls Creek and functions as an outlying residential area to Mount Beauty-Tawonga South. The town character is dominated by its semi-rural setting with an open space feel. To the east are significant views to Mount Bogong and north and south views along the Kiewa valley, while to the west forested hills skirt the town.

Development is dispersed along the Kiewa Valley Highway with two distinct hubs: the commercial precinct comprising a hotel, motel accommodation and restaurant at the intersection of the Kiewa Valley Highway and Mountain Creek Road (with surrounding residential development); and a predominately residential living area to the north of the town which also includes local community services such as the community hall, primary school, Country Fire Authority Brigade, general store, mechanical repairs shop and scout hall. A recreation reserve is located opposite the general store which includes tennis courts, public toilets, picnic facilities and play area.

Residential development is oriented around the Kiewa Valley Highway which runs in a north-south direction, with hills to the east and west. Housing is characterised by large single storey detached dwellings of predominantly timber construction with hipped tin roofs and generous vegetated setbacks. There is one small area of LDRZ land to the south-west where lots are much larger and developed with rural style housing.

Wandiligong

Located to the south-east of Bright and separated by a rural 'green belt' of farming land and plantations, Wandiligong is notable for its heritage and high landscape value set within a low-density residential character, with no defined commercial core. The historic town is known for its semi-rural look and feel, and sense of open space throughout the valley in which it is situated.

Wandiligong was founded in the 185O's as a mining settlement and is characterised by a dispersed collection of traditional cottages and outbuildings sitting amongst exotic trees such as willows, oaks, chestnuts, elms and poplars. Wandiligong evolved very differently to many other historic gold towns in Victoria because its long period of decline produced a sprawling mosaic of historic buildings and vacant blocks in a semi-rural landscape, rather than well-preserved nineteenth-century streetscapes.

The large irregular residential lot layouts and sizes form part of the heritage and semi-rural character of the town. Commercial and tourist services being dispersed through the village, located in the Low Density Residential Zone. Dwellings consist of historic mining cottages and low density rural style

dwellings. These dwellings are mostly obscured from roads by the highly forested and vegetated setting and large setbacks.

Wandiligong is also defined by its extensive areas of open space, particularly along the creeks running north-south. The residential area is surrounded by forested conservation areas and plantations.

Residential development is constrained by a lack of reticulated sewerage, limitations of other urban services and the constraints of the Farming Zone.

3. Heritage

This section covers Aboriginal cultural heritage and key built heritage sites of significance across the Alpine Shire. Aboriginal cultural heritage refers to the knowledge and lore, practices and people, objects and places that are valued, culturally meaningful and connected to identity and Country. Heritage in the built form is also an important aspect of local character and identity. The preservation of heritage helps to create unique and authentic places and provides a connection to the past.

3.1. Aboriginal cultural heritage

The traditional custodians in the Alpine Shire region include Dhudhuroa, Gunai-Kurnai, Taungurung, Waywurru and Jaithmathang. Since 2009, the Taungurung Land and Waters Council has been recognised by the State of Victoria as the Registered Aboriginal Party (RAP) for cultural heritage on Taungurung Country and is working to find out more about what exists on Country and how to protect identified heritage. The Taungurung RAP covers much of the west of the Alpine Shire LGA. The Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC) is the RAP for the Gunarkurnai Traditional Owners, recognised by the State of Victoria since 2006 and covers a small amount of Alpine Shire around Mount Hotham[30].

Traditional owners have not been formally recognised on the land to the north of the Ovens River, the Kiewa Valley, north of Mount Hotham and Dinner Plain and this land is not represented by a RAP at present[31].

Taungurung Land and Waters Council

Aboriginal Cultural Heritage can be found across Country as evidenced in the many Cultural Heritage Management Plans (CHMP) held on file by Taungurung Land and Waters Council. CHMPs identify and assess the potential impact of a proposed activity on Aboriginal cultural heritage. A CHMP is required when a 'high impact activity' is planned in an area of cultural heritage sensitivity' as defined in the *Aboriginal Heritage Regulations 2018*. When a CHMP is required, planning permits, licenses and work authorities can't be issued unless a CHMP has been approved for the activity.

The *Taungurung Country Plan* states that cultural mapping highlights Taungurung cultural heritage including art sites, rock art, natural resources, flora and fauna, birthing trees, scar trees, burial sites, waterholes, our rivers and waterways and post colonisation massacre sites and missions. A significant amount of Taungurung cultural heritage has been damaged, destroyed, removed or lost.

The *Taungurung Country Plan* sets out the identification and protection of cultural heritage sites, including vulnerable art sites that require immediate protection as a priority action. The *Taungurung Country Plan* identifies the need to 'establish ongoing support and investment for a major audit –

[30] Welcome Map (achris.vic.gov.au) accessed 6 June 2023
[31] Welcome Map (achris.vic.gov.au) accessed 6 June 2023

cultural mapping activity – on Taungurung Country – from the tops of our mountains to our waterways and tributaries, including tangible and intangible heritage.'

Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC)

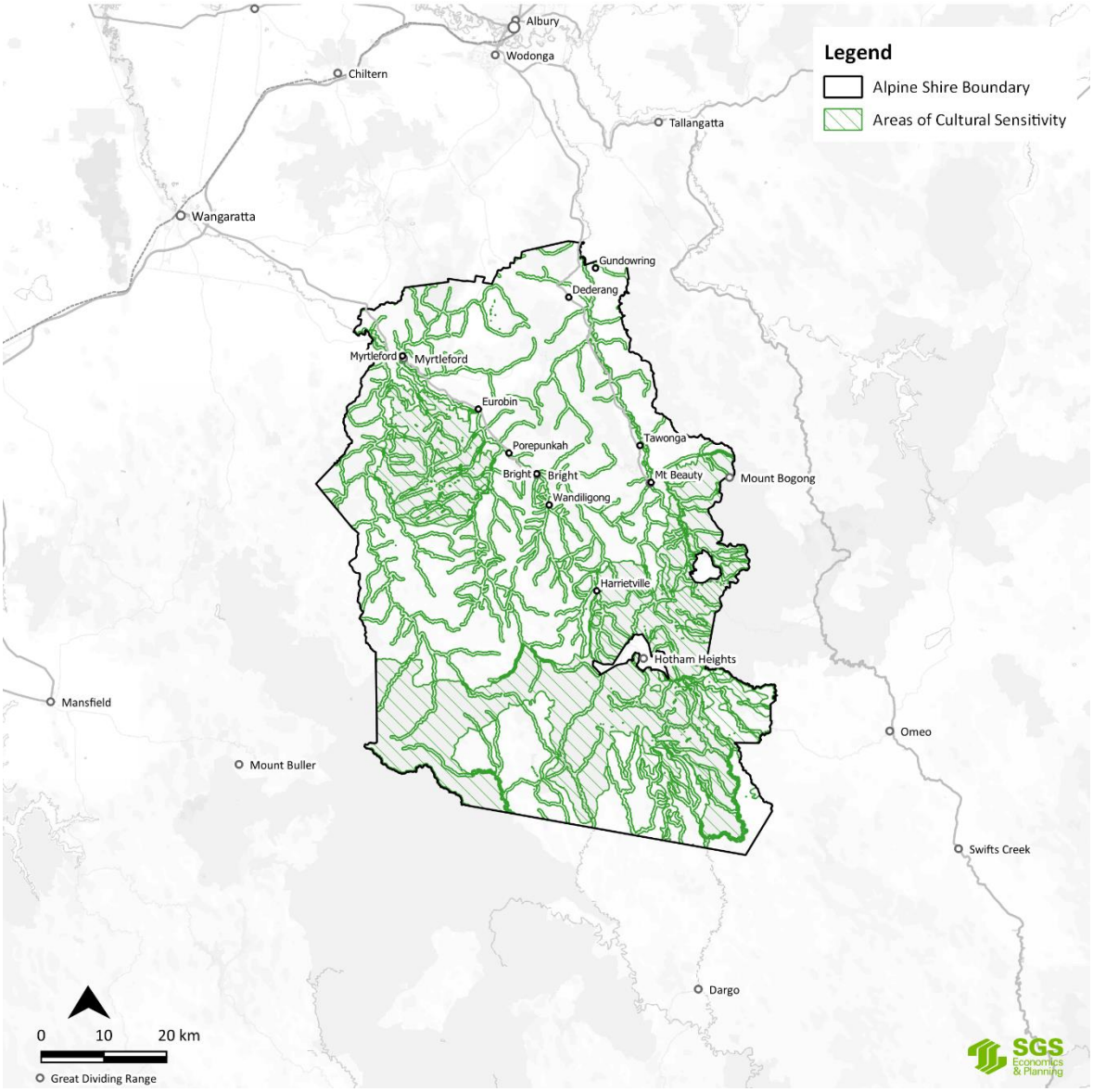
The *GLaWAC Whole of Country Plan* describes the strong heritage across the landscape and states 'Aboriginal cultural sites and artefacts can be found along our songlines, and trade routes, mountain ridges and waterways.' The Whole of Country Plan identifies the need to 'take the time to understand what natural and cultural heritage exists out on Country' and to keep filling in the gaps of cultural heritage 'to learn about ourselves and strengthen our identity.'

The GLaWAC has an ongoing partnership with Monash University and other organisations conducting cultural heritage research. GLaWAC participates in the preparation of Cultural Heritage Management Plans (CHMP) and evaluates plans prepared by its Cultural Heritage Advisors. GLaWAC consider and advise State and Local Governments on applications for Cultural Heritage Permits, negotiate and enter into Cultural Heritage Agreements and advise and negotiate the repatriation of Aboriginal cultural heritage.

Cultural Heritage Sensitivity

State planning policy supports the conservation of places of heritage significance, including Aboriginal cultural heritage significance. This is underpinned by strategies promoting the identification and protection of natural heritage sites and man-made resources; encouraging appropriate development that respects places with identified heritage values and ensuring that an appropriate setting and context for heritage places is maintained or enhanced. Areas of 'cultural heritage sensitivity' include registered Aboriginal cultural heritage places, as well as landforms and land categories that are generally regarded as more likely to contain Aboriginal cultural heritage. These include land within 200 metres of named waterways and land within 50 metres of registered Aboriginal cultural heritage places. Areas of cultural heritage sensitivity are defined for specifying when cultural heritage management plans must be prepared.

FIGURE 6: AREAS OF CULTURAL HERITAGE SENSITIVITY



Source: Source: SGS Economics & Planning, 2022 using Victorian Government (2021), Areas of Aboriginal Cultural Heritage Sensitivity.

The current arrangements regarding Aboriginal heritage are subject to dedicated legislation (the *Aboriginal Heritage Act 2006*). While this framework appropriately recognises that management of Aboriginal heritage involves unique challenges distinct from those raised by colonial heritage, it may also limit the responses able to be implemented through the planning system.

It will be important when working with Traditional Owners and RAPs to explore both implementable actions under the current framework, as well as identifying areas where the current framework is not meeting the needs of traditional custodians of the land. The latter may need to become the focus of advocacy by council to the Victorian Government.

3.2. Heritage in the built form

Many places, natural areas and buildings hold heritage significance across the Alpine Shire LGA.

The heritage significance of several places and features within the Shire have been recognised through registration on the Victorian Heritage Register (VHR) or through the application of the Heritage Overlay in the Alpine Planning Scheme.

The VHR lists and provides legal protection for heritage places and objects that are significant to the history and development of Victoria. It can include:

- Heritage place: buildings, trees, parks and gardens, streetscapes, archaeological sites, cemeteries, precincts, and structures such as bandstands.
- Heritage objects: furniture, shipwrecks, relics, archaeological artefacts, equipment, transport vehicles and everyday articles that contribute to an understanding of Victoria's history.

Places which that do not meet the criteria of state significance may be of local significance and may merit the application of the Heritage Overlay.

As well as covering places listed on the National Trust Heritage Register of the National Trust of Australia (Victoria), there are a broad range of categories for including features under the Heritage Overlay, including places or features that are of local heritage significance because of:

- Cultural or natural historical significance
- Rarity, representativeness and/or research potential
- Aesthetic or technical significance
- Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.
- Special association with the life or works of a person, or group of persons, of importance in our history.

A Heritage Overlay is applied over built form in areas of Bright, Mount Beauty, Tawonga South, Myrtleford and Wandiligong. Many original buildings within the commercial core and surrounds of Bright are subject to a Heritage Overlay. Mount Beauty, Tawonga South and Myrtleford have very few areas where the Heritage Overlay was applied. Myrtleford has a small number of historical buildings remaining but several memorials and monuments subject to a Heritage Overlay including a historical tobacco kiln.

In 2007, the Shire prepared a Heritage Study to identify, assess and document all post-contact places of cultural heritage significance within the Alpine Shire and to make recommendations for their future conservation. Stage one of the study involved the preparation of a thematic environmental history. Stage two of the study involved the actual assessment of significance of those places that have been identified in stage one. Heritage studies were prepared for the towns of Wandiligong, Mount Beauty and Bogong Village.

Due to the historical cyclical booms and declines associated with the industries across Alpine Shire, especially within the mining industry, there was little money invested into town infrastructure and buildings. Most of the money was taken elsewhere from the gold mining industry. This resulted in buildings of poorer construction that deteriorated rapidly in times of economic decline. While there

have been emerging architectural styles present in towns over the years, there are very few pockets of well preserved buildings remaining.

The township of Wandiligong is recognised as a heritage township, with a Heritage Overlay covering most of the town. The *Wandiligong Heritage Study 2007* was prepared to provide detailed analysis and assessment of the historic landscape of Wandiligong, examine and assess performance of heritage controls and assess new places of heritage significance. The heritage studies prepared for Mount Beauty and Bogong Village included heritage analysis of the areas and Planning Scheme recommendations.

The *Alpine Shire Heritage Study* (2007) provides a detailed history of the Shire's development and identified a range of significant heritage places. While Alpine Shire has a rich natural, cultural, and built heritage, there are gaps in the knowledge of the Shire's heritage assets, particularly sites of Aboriginal cultural heritage.

FIGURE 7: HERITAGE PLACES PROTECTED BY THE HERITAGE OVERLAY - BRIGHT, HARRIETVILLE, WANDILIGONG AND MYRTLEFORD

Source: SGS Economics & Planning, 2022 using VicPlan data.