Managed Growth Strategy

October 2024

CITY OF GREATER BENDIGO

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Executive summary

Greater Bendigo is on the lands of the Dja Dja Wurrung and Taungurung peoples. The MGS recognises the need to heal and protect Country, with decisions around the development of land in Greater Bendigo requiring consideration of the remediation of key sites, protection of waterways and the incorporation of indigenous plantings.

The MGS builds on and implements key recommendations of various State, Regional and Local planning strategies and policies by planning for the long-term growth of Greater Bendigo, Victoria's second most populated regional municipality. The MGS helps to demonstrate the role that Greater Bendigo can play in the region to support state and federal investment.

The MGS directs residential development to locations that are well serviced and will be able to better support population and economic growth. The MGS, along with background documents including the Housing and Neighbourhood Character Strategy (HNCS), provide the strategic basis to introduce planning tools to enable the delivery of more housing in established areas with existing infrastructure, transport, and facilities.

Greater Bendigo benefits from having an Urban Growth Boundary (UGB) in the Greater Bendigo Planning Scheme. This is in place to discourage further outward expansion given the environmental and social impacts, and greater financial costs in delivering infrastructure in un-serviced areas. While the implementation of the MGS will introduce strong policy to deliver more housing in existing areas, it also provides direction for some expansions to areas contiguous with the existing UGB in Huntly and Strathfieldsaye where natural hazards and other constraints can be managed. This will be needed over the medium term to address market demand and housing affordability challenges. Importantly, however, it is not a long-term solution to continually expand the UGB, and further actions will be needed to ensure additional and diverse housing is delivered in existing areas to meet changing household needs.

Based on the proposed changes to the UGB, Greater Bendigo has capacity to cater for planned population growth under a variety of scenarios.

Like all long-term strategies, the MGS faces the fundamental challenge that the future is uncertain. The MGS therefore should be reviewed every five years so it can respond to future needs and adjust to unexpected events.

The MGS has been divided into five parts which consider the housing needs, constraints, and opportunities to inform the preparation of the residential framework plan. This is then followed by a section on implementation to provide direction on how to deliver on the recommendations within the MGS. The five parts of the MGS are as follows:

- Part 1 – Setting the framework for managing housing growth.
- Part 2 – Issues impacting on managing growth.
- Part 3 – Creating a sustainable housing market.
- Part 4 – Developing the residential framework plan.
- Part 5 – Implementation.

Key findings to deliver long term housing growth in Greater Bendigo

- Greater Bendigo has capacity to cater for substantial population growth in a manner that maximises use of existing services and infrastructure while also protecting the forests and woodlands and productive agricultural land that surrounds the urban area.
- Currently, over half of new homes built in urban Bendigo are constructed in greenfield areas, that is, on land that was previously undeveloped. This figure has remained relatively unchanged over the last 10 years despite an adopted policy position encouraging growth in established areas.
- If this trend continues based on current development patterns, this could mean over 400 hectares of additional greenfield land over and above what is identified in the Urban Development Program 2022 (section 2.2.2) is needed by 2056 for residential development.
- The MGS establishes a range of growth scenarios. Under each scenario there is sufficient land for infill and rural development but an insufficient pipeline of land for greenfield development over the longer term within the current UGB. This is primarily due to the current market dynamics, housing affordability, and resident interest in building in greenfield locations.
- This does not mean it is practical or desirable to expand the UGB as greenfield development drives up costs in servicing new areas, compromises our natural environment, and exposes residents to increased risk from future floods and bushfires.
- Increasing the proportion of infill development particularly near shops, services and employment will help to reduce create more vibrant neighbourhoods, as well as reducing car dependency as the population grows. It will also take the pressure off developing in more environmentally sensitive and less accessible locations.

Policy required to deliver on the MGS

- 70 per cent of urban residential growth to be directed to infill areas. New homes are preferred in areas that already have a range of shops, services, existing facilities and open space to improve urban amenity, walkability, health outcomes, climate change mitigation and housing affordability.
- *Minimal*, *incremental*, and *substantial* change areas are identified to support a gradual transition to greater levels of infill development, and more diversity in housing types within a framework of preferred neighbourhood character.
- Key development sites within Greater Bendigo's UGB are identified with considerations as to how to facilitate development to maximise the use of well-serviced land for residential development.
- The UGB is proposed to be expanded in Huntly and Strathfieldsaye to help manage immediate to medium-term housing needs. Rezonings in these locations will need to be the subject of separate and future detailed strategic assessments.
- To identify Ravenswood as an investigation area noting that the planning of identified potential growth areas will be prioritised.
- A minimum of 15 lots per net developable hectare in greenfield areas is expected. This would allow for a variety of densities with more medium density and smaller lots close to commercial centres and lower densities on constrained land, land not located near services, or at the interface with non-urban land.
- More targeted investment in infrastructure aligned with forecast population growth in infill areas and the delivery of Developer Contributions Frameworks in growth areas to ensure the correct apportionment of infrastructure costs is required.

Recommendations

The MGS identifies the following key objectives for future growth and proposes 34 supporting actions to deliver them:

- Heal and protect Country.
- Ensure there is an adequate supply of residential development in Greater Bendigo.
- Increase the amount of social and affordable housing.
- Increase the proportion of medium density development.
- Direct growth to, in and around activity centres, transport corridors and train stations.
- Ensure development areas have regard to environmental constraints by including directing growth to areas that are of a lower bushfire risk or flood risk and managing residential interfaces with industrial and extractive industries.
- Ensure residential growth is supported by equitable, efficient and fit for purpose community, development, and open space infrastructure.
- Encourage residential growth in well-serviced locations to increase sustainable and active transport.
- Facilitate the delivery of commercial land in suitable locations to meet the needs of a growing population.
- Direct limited infill growth to townships through the delivery of structure and township plans.
- Develop growth area precincts to a minimum density of 15 lots per hectare.

Goals to deliver the MGS

The draft MGS outlines a series of goals to implement these objectives. These goals aim to:

- Give priority to the protection of human life (in accordance with Clause 13.02-1S of the Greater Bendigo Planning Scheme).
- Improve planning tools and guidance available to protect areas with valued landscape or environmental values.
- Reduce the environmental impact of new development on existing landscapes.
- Ensure development better responds to environmental constraints and climate change.
- Increase the proportion of infill residential development in urban areas by 2056 from 47 to 70 per cent.
- Increase the proportion of residential medium density development from 8 to 15 per cent over the next 15 years.
- Ensure there is adequate planned supply of residential land in Greater Bendigo to 2056.
- Ensure the equitable provision of infrastructure to meet changing community needs.

An implementation plan is provided in part five, outlining a series of proposed actions to implement each of these goals, estimated costs and indicative timeframes for delivery.

Monitoring and review

The MGS is proposed to be reviewed every five years with an annual report prepared providing an evaluation and status of the actions identified within the implementation plan.

Glossary

Key terms

Building approvals – Number of building permits issued. The actual number of dwellings is counted in this approval, for example, in a ten unit development, ten dwellings would be counted.

Community infrastructure – Facilities that are delivered for resident benefit. This can include open space and sporting reserves, community centres and education facilities.

Diffuse pollution – Pollution that can occur from nutrients, pesticides, and bacteria from water runoff or via noise or dust emitted from industry.

Dwelling – A self-contained residence. This could be a house, apartment, unit or townhouse.

Established areas – Existing neighbourhoods where there is already housing and associated services and facilities.

Estimated residential population – Official count of population based on an estimate of usual residents. Compiled at June 30 each year.

Development contribution scheme – A development contributions scheme is put in place where new development demonstrates a need for new infrastructure and community facilities to meet the growing needs of the area. It is a charge that is applied to new development and is introduced through either an agreement with Council under Section 173 of the *Planning and Environment Act* 1987 or via a Development Contributions Plans (DCP) that is implemented through the Planning Scheme and a Development Contributions Plan Overlay (DCPO).

El Nino – A weather event that typically means a greater chance of dry conditions, particularly in eastern Australia.

High density dwellings – For this project high density refers to apartments or multi-dwelling development of over three storeys in height.

Household – Those who usually reside in the same dwelling.

Forecast id. – Projections of population and households prepared by id. consultants on behalf of the City.

Infill development – The development of land within established areas. This includes land around existing commercial centres in growth areas such as Huntly, Strathfieldsaye and Maiden Gully.

Greenfield – Previously undeveloped rural land on the outskirts of the urban area identified for new development. This includes Huntly, Strathfieldsaye, Marong and Maiden Gully township or structure plan areas.

Housing capacity – Estimate of housing which could be accommodated in an area.

Housing supply – Estimate of housing which will be available to the market.

La Nina – A weather event that typically means a greater chance of wetter conditions, particularly in eastern and northern Australia.

Medium density dwellings – For the purpose of this project medium density refers to all semi-detached, townhouses and villa units, plus apartments of three storeys or less.

Municipal Planning Strategy – The overarching strategic policy directions of the municipality at clause 02 of the planning scheme.

Neighbourhood character – Considers that attributes which make up a sense of place including, but not limited to, landscaping, public realm, look and height of buildings, spacing between buildings and fencing.

Net developable area – Total land available for development without encumbered land and land set aside for facilities, open space and arterial roads.

Planning Policy Framework – The planning policy content of a planning scheme at clauses 10 to19. This contains statewide, regional and local planning policies which articulate the land use and development outcomes sought by the planning scheme.

Remediate – Reverse or control and prevent further environmental damage, often by removing pollutants from land or water.

Residential development framework – A framework or plan that identifies housing change areas across the municipality and are generally categorised as minimal, incremental or substantial change areas.

Urban Bendigo – In the context of the MGS, urban Bendigo refers to the area within the Urban Growth Boundary.

Victoria in Future – Official State Government projections of population and households in Victoria.

Abbreviations

BMO – Bushfire Management Overlay. Applies to land where there is a risk to life and property through bushfire, with this overlay ensuring development is only permitted where this risk can be reduced to an acceptable level.

C1Z – Commercial 1 Zone. Applies to land where the desire is to create a mix of commercial uses such as retail, office and community uses that will create vibrant centres.

CFA – Country Fire Authority.

DDO – Design and Development Overlay. Applies to land to specify requirements over and above what is covered in other areas in relation to design or built form.

DPO –Development Plan Overlay. Applies to land to ensures that future use and development is coordinated by an overarching development plan, prior to a planning permit being granted to use or develop land.

DTP – Department of Transport and Planning.

HO – Heritage Overlay. Applies to areas which are significant as assessed against specific criteria (eg. historical, aesthetic or scientific) and with reference to the Burra Charter.

GRZ – General Residential Zone. Applies to areas where there is good access to services and transport and where there are limited other controls in place to minimise development. Applies a maximum building height of three storeys.

KWh – Kilowatt Hour. Used to calculate the amount of energy used the time it is used for. The following formula applies kWh = Power (Watts) x Time (hours) / 1000.

LDRZ – Low Density Residential Zone. Applies to areas to ensure lots remain large enough to treat and retain all wastewater.

LSIO – Land Subject to Inundation Overlay. Applies to areas that are affected by the 1 in 100 year flood or determined by the floodplain management authority and ensures that development will not impact on flood levels.

MGS – Managed Growth Strategy (this document).

NCO – Neighbourhood Character Overlay. Applies to discrete areas that have particularly strong or unique character elements that need to be retained.

NRZ – Neighbourhood Residential Zone. Applies to areas where there is limited access to services, employment and transport and where there are environmental, infrastructure or built form constraints that limit development. Applies a maximum height limit of two storeys.

RFP – Residential Framework Plan. A tool that shows the level of housing change that is expected in residential areas in the municipality over time.

RGZ – Residential Growth Zone. Applies to areas where there is good access to services, employment and transport and where greater densities of residential development are appropriate. Applies a maximum building height of four storeys.

SLO – Significant Landscape Overlay. Applies to areas which have identified significant landscape values to protect and conserve these landscapes.

UGB – Urban Growth Boundary. Identifies where to direct urban growth based on areas best able to be supplied with appropriate infrastructure and services while protecting valuable agricultural land or land with important environmental values.

UDP – Urban Development Program. Figures provided by DTP which provide an assessment of estimated retail lot supply for greenfield and major infill on lots of greater than one hectare.

VHS – Victorian Housing Statement.

WSUD – Water Sensitive Urban Design. The design of the built environment to minimise the impact on the surrounding environment and waterways.

PART ONE: Setting the framework for managing housing growth

1. Introduction

The purpose of the Managed Growth Strategy (MGS) is to establish a new residential framework plan which will ultimately replace the urban strategic framework plan at Clause 02.04 of the Greater Bendigo Planning Scheme. Implementation of the MGS will include making relevant changes to local planning policy to cater for long term population growth including better encouraging a greater diversity of housing particularly in well serviced locations.

The preparation of the MGS was a key recommendation of the *Greater Bendigo Planning Scheme Review 2019*, the *Economic Development Strategy 2020-2030 (A Stronger Greater Bendigo – where all people can thrive)* and the *Connecting Greater Bendigo Integrated Transport and Land Use Strategy* (ITLUS). The following needs were identified:

- Clear suburb/area specific guidance on growth.
- An improved understanding of environmental risks, such as bushfires and flooding, particularly changes resulting from climate change.
- A long-term residential land supply to accommodate population growth over at least a 15-year period as per Clause 11.02-1S (Supply of urban land) in the Greater Bendigo Planning Scheme.
- The importance of community, education and transport (including active) infrastructure to be delivered concurrently with residential growth.

The MGS will replace the *Greater Bendigo Residential Strategy* adopted in 2014 *(Amended 2016)*. The *Housing and Neighbourhood Character Strategy* (HNCS, an input into the MGS) will replace the adopted *Greater Bendigo Housing Strategy (Amended 2018)*. While the *Greater Bendigo Housing Strategy* is only five years old, the new strategy has been undertaken to align with the Department of Transport and Planning (DTP) *Practice Note 90* (Planning for Housing) and *Practice Note 91* (Using the Residential Zones) introduced in December 2019.

The MGS builds on the significant work completed in recent years to deliver several municipal based strategies. A summary of these strategies and relationship to the MGS is shown in Figure 1.

Figure 1: Relationship between existing strategic documents and the Managed Growth Strategy

The MGS has been informed by the following background documents:

- Housing and Neighbourhood Character Strategy 2024
- Housing Capacity and Supply Analysis
- Agricultural Land Use Assessment
- Bushfire and Vegetation assessment

While the MGS touches on rural areas, it is primarily focused on growth in the urban area of the municipality and townships where there is the capacity for growth. Given the different issues around development faced in rural areas, this will be the subject of a separate strategy which is currently being prepared. Ultimately the MGS informed by the HNCS, combined with the future Rural Areas Strategy, will provide a long-term residential framework for how the municipality can be expected to grow to meet the needs of a diverse and changing population.

Figure 2 provides an overview the high-level residential planning framework in Greater Bendigo.

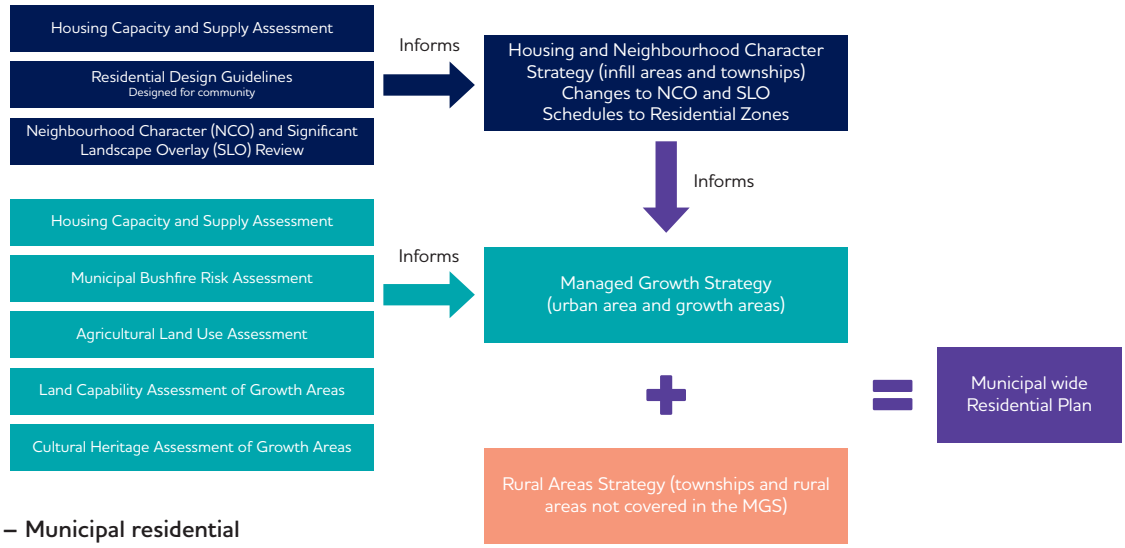

Figure 2 – Municipal residential planning framework

1.1 About Greater Bendigo

Greater Bendigo is located on the lands of the Dja Dja Wurrung and Taungurung peoples who are the traditional owners of the land and have been living in the region for tens of thousands of years before European colonisation and the discovery of gold by European settlers in 1851.

Greater Bendigo is a creative and culturally diverse municipality offering a broad range of economic opportunities, services and facilities which cater for a large regional catchment. The municipality is centrally located in the heart of Victoria, at the intersection of major highways and less than 150 kilometres from Melbourne. The municipality covers over 3,000 square kilometres and contains not only the major regional city of Bendigo but the district towns of Heathcote and Elmore and smaller towns such as Goornong, Raywood, and Axedale, as well as a variety of agricultural activities such as livestock and cropping.

The population of Greater Bendigo has been steadily growing over the last decade, to over to 124,000 in 2023.[1] With a strong economy and the lifestyle opportunities on offer this growth is expected to continue. Inward migration of new residents, increasing life expectancy among existing residents, and local births will all contribute to around 87,000 new residents calling Greater Bendigo home by 2056.

- Over 124,000 residents (ERP, 2023)
- 54,000 dwellings (based on 2.3 people per dwelling)
- Estimated additional population 2056 (growth at 1.6%): 87,000
- Estimated additional dwellings 2056 (growth at 1.6%): 38,000

As the population grows, the City aims to ensure it is possible for residents to travel around the urban area quickly and easily. Managing growth, while maintaining ease of movement, will require greater levels of public and active transport, supported by safe pedestrian routes, better off-road cycling infrastructure, and more frequent, timely and accessible public transport. Giving more residents the opportunity to work closer to home is important for improved sustainability outcomes. Council has endorsed the 10-minute neighbourhood concept, with the aim of urban consolidation in locations where every day needs can be met. This aligns with the adopted *Climate Change and Environment Strategy 2021-2026* which establishes a goal to reduce car use to one third of trips, with the rest by walking, cycling and public transport. This will require a focus on integrated transport planning consistent with the adopted *Connecting Greater Bendigo: Integrated Transport and Land Use Strategy 2015*. Despite these shifts, it is recognised there will continue to be a role for private vehicles, and the transition to greater use of electric vehicles should be supported.

While Greater Bendigo has always been known for its warm-summer temperate climate, the impacts of climate change will increase average temperatures, and more frequent and severe extreme weather events are likely to be acutely felt. Housing and infrastructure must be designed to be resilient to the changing climate, including not developing in areas which are more likely to be impacted by these weather events.

As the population of Greater Bendigo has grown, it has often been the preferred solution to rezone land for housing on the outskirts of urban Bendigo to accommodate this growth. Houses delivered in these areas are currently nearly all detached dwellings of three or more bedrooms. This form of housing has met (and will continue to meet in the short to medium term) market demand but it is not a sustainable long-term approach. Instead, there is a need to use existing infrastructure and services more efficiently by directing more diverse housing within the established suburbs of Greater Bendigo.

Providing a diversity of housing in well located areas will help to address the growing need for smaller dwellings, with an increasing number of residents living in dwellings of three or more bedrooms occupied by only one or two people. While not the solution for all households, increasing the diversity and amount of housing in well located areas will help to reduce environmental and financial costs, improve liveability and enable better access to services and facilities.

The MGS sets a context and direction to guide the growth of Greater Bendigo until 2056. The MGS has assumed a growth rate of 1.6 per cent in Greater Bendigo per annum over this period which will mean approximately 38,000 additional dwellings, with approximately 32,000 of these located in urban Bendigo. However, while historic trends provide a guide to future growth, many factors influence the municipalities growth rate, and it is difficult to project growth accurately over the longer term. The MGS has therefore forecast a variety of population scenarios using both the Forecast id. (the City's projections) and Victoria in Future (State Government) projections as the basis for the longer-term calculations.

The MGS has been prepared so that the delivery of actions can be expedited or postponed as required. The MGS has a five-year review timeframe to ensure that the document remains current and continues to meet community needs and expectations.

1 *Source: Estimated Residential Population, id.com.au/bendigo*

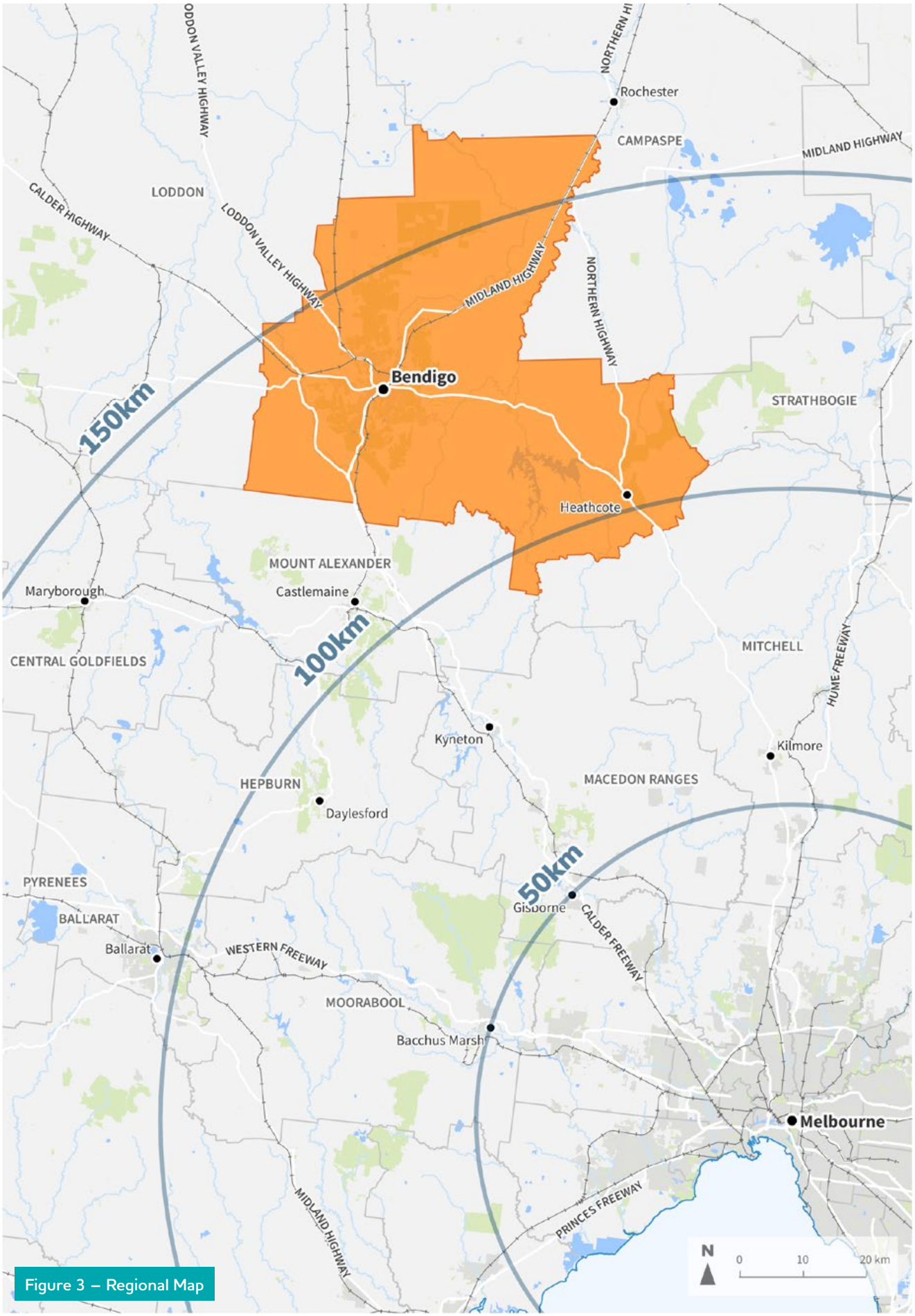

Figure 3 – Regional Map

1.2 Policy context

1.2.1 State, Regional and Local Strategies

There are a significant number of State, Regional and Local strategies that have informed the MGS. These include:

- Plan Melbourne 2017-2050
- Victoria's 30 Year Infrastructure Strategy 2021-2051
- Guidelines for the removal, destruction or lopping of native vegetation 2017 (DELWP)
- Department of Transport Strategic Plan 2021-2025
- Victorian Cycling Strategy 2018-2028
- Loddon Mallee South Regional Growth Plan
- Loddon Campaspe Integrated Transport Strategy
- Loddon Campaspe Regional Digital Plan
- Bendigo Education Plan 2018
- Dja Dja Wurrung Land Use Activity Agreement
- Taungurung Land Use Activity Agreement
- Coliban Water Strategy 2030
- Dhelkunya Dja, Dja Dja Wurrung Country Plan 2014-2034
- Council Plan (Mir wimbul) 2021-2025
- Healthy Greater Bendigo (Municipal Health and Wellbeing Plan) 2021-2025
- Climate Change and Environment Strategy 2021-2026
- Greater Bendigo Housing Strategy (GBHS) (2017)
- Connecting Greater Bendigo – Integrated Transport and Land Use Strategy (ITLUS) (2015)
- Commercial Land and Activity Centre Strategy (CLACS) (2015)
- Greater Bendigo Residential Strategy (2014)
- Plan Greater Bendigo (2017)
- Affordable Housing Action Plan (2020)
- Greater Bendigo Public Space Plan (2019)
- Greater Bendigo Planning Scheme Review (2019)
- Greater Bendigo Industrial Land Development Strategy (GBILDS) (2020)
- A Stronger Greater Bendigo - where all people can thrive (Economic Development Strategy) (2020)
- Greening Greater Bendigo (2020)
- Cultural Diversity and Inclusion Plan 2021-2025

In addition to these strategies, there are also a number of area specific strategies which provide direction for the growth and change in the municipality.

1.2.2 Planning Policy

There are a number of Clauses within the Greater Bendigo Planning Scheme that help to guide short and long term development outcomes. These include:

- 02.03 (Strategic directions)
- 02.04 (Strategic framework plans)
- 11.01-S (Settlement)
- 11.01-R (Settlement Loddon Mallee South)
- 11.01-2 (Supply of Urban Land)
- 11.02-2 (Structure Planning)
- 11.02-3 (Sequencing of Development)
- 11.03-1S (Activity Centres)
- 11.03-2S (Growth Areas)
- 11.03-6S (Regional and Local Spaces)
- 12.01-1S (Protection of Biodiversity)
- 12.01-2S (Native Vegetation Management)
- 13.01-1S (Natural Hazards and climate change)
- 13.02-1S (Bushfire Planning)
- 13.03-1S (Floodplain management)
- 13.04-1S (Contaminated and potentially contaminated land)
- 13.04-3S (Salinity)
- 13.06-1S (Air Quality Management)
- 13.07-1S (Land Use Capability)
- 14.01-1S (Protection of Agricultural Land)
- 14.02-1S (Catchment planning and management)
- 14.03-1S (Resource exploration and extraction)
- 15.01-1S (Urban design)
- 15.01-3S (Subdivision design)
- 15.01-5S (Neighbourhood character)
- 15.01-6S (Design for rural areas)
- 15.02-1S (Energy and resource efficiency)
- 15.03-1S (Heritage conservation)
- 15.03-2S (Aboriginal cultural heritage)
- 16.01-1S (Housing supply)
- 16.01-2S (Housing affordability)
- 16.01-3S (Rural residential development)
- 17 - Economic Development
- 18.01-1S (Land use and transport planning)
- 18.02-1S (Sustainable personal transport)
- 18.02-1S (Public transport)
- 18.05-1R (Freight links – Loddon Mallee South)
- 19 - Infrastructure

Further detail as to how each of these clauses is relevant to the MGS is provided on pages 18-20 of the *Managed Growth Strategy draft Issues and Opportunities Paper*.

Of particular relevance, Clause 11.02-1S (Supply of Urban Land) of the Planning Scheme establishes a strategy to *'plan to accommodate projected population growth over at least a 15 year period and provide clear direction on locations where growth should occur.'* This strategy needs to be considered in the context of balancing the sometimes competing objectives of managing bushfire risk and retaining native vegetation, although ultimately the protection of human life in bushfire affected areas must be prioritised above all other policy considerations.

Other key objectives identified through these strategies include the need to increase housing in well serviced locations to leverage value from existing infrastructure, minimise environmental impacts and maximise economic and social benefits.

There has been an Urban Growth Boundary (UGB) in place since March 2, 2006 (introduced via Planning Scheme Amendment C60gben) that sets out the limits to the outward growth of Bendigo. The UGB is well established and has been supported and reiterated through recent planning scheme amendments including the implementation of the *Residential Strategy 2014* (Planning Scheme Amendment C215gben) and the implementation of the *Strathfieldsaye Urban Design Framework 2017* (Planning Scheme Amendment C232gben).

The Planning Scheme Review 2019 identified a *'lack of a settlement network and hierarchy to appropriately guide future development in a coordinated and efficient way'* as a key policy gap. It also provided the following recommendations of relevance to this project:

- The need to apply the new residential zones.
- The need for suburb specific guidance to sufficiently guide development in a strategic and coordinated way.
- The need to revise outdated residential character policies.
- The need to review of Neighbourhood Character Overlays.

An analysis of recent Victorian Civil and Administrative Tribunal (VCAT) decisions undertaken as part of the most recent Planning Scheme Review 2022 highlighted the importance of introducing the suite of residential zones to reduce any inconsistency in decision making and set expectations for the degree of change in different areas.

1.3 State and Regional Growth Policy relevant to the MGS

1.3.1 Victoria's Housing Statement: The decade ahead 2024-2034 (VHS)

In September 2023 the State Government released the VHS. The VHS establishes a bold housing target of 800,000 homes to be delivered across Victoria over the next 10 years.

The VHS also identifies that there will be an additional 426,000 homes expected in regional Victoria to 2051. With Greater Bendigo being the second largest regional municipality in terms of population, it will form a key role in the delivery of these additional homes.

1.3.2 A new plan for Victoria

The State Government has commenced the process to update *Plan Melbourne 2017-2050*, the current metropolitan planning strategy. This will now be expanded to a new plan for Victoria to encompass all of Victoria.

The new plan for Victoria will seek to increase the proportion of dwelling additions in infill areas. This is consistent with what is proposed by the MGS. At the time of writing, the State has released draft housing targets for each municipality across Victoria to identify where 2.24 million new homes could be built by 2051. The draft housing target for Greater Bendigo is 37,500 by 2051.

Consultation on the new plan for Victoria is taking place in 2024.

1.3.3 Plan Melbourne 2017-2050

Outcome 7 of Plan Melbourne 2017-2050 supports regional Victoria to be productive and sustainable including by investing in economic and housing growth.

1.3.4 Loddon Mallee South Regional Growth Plan

The Loddon Mallee South Regional Growth Plan provides a framework to achieve sustainable growth across the region and looks at unlocking the growth potential of settlements in the regions and improving connections between centres. Bendigo is identified as a hub for employment, education and service provision.

1.3.5 Planning Practice Note 90 (PPN90) and 91 (PPN91)

PPN90 (Planning for housing) and PPN91 (Using the residential zones) provide guidance to deliver a balanced approach to housing provision. This includes directing housing to the most suitable and serviced areas while also supporting development that respects or contributes to an existing or preferred neighbourhood character. PPN90 provides direction on how neighbourhood character should inform a housing strategy that identifies minimal, incremental and substantial change areas. How these are of relevance to Greater Bendigo is outlined in more detail later in the MGS and within the Housing and Neighbourhood Character Strategy which accompanies the MGS. PPN91 provides the direction as to how to apply the residential zones based on these change areas.

Of relevance in Greater Bendigo where there are several instances where both the HO and NCO apply to the same property, PPN91 highlights that these overlays should not be applied in the same areas. Therefore, the City has been and will continue to remove the NCO in relevant Planning Scheme Amendments where the HO currently applies or is proposed to be applied.

Where information is available the MGS has sought to align with the relevant State Government and Regional Strategies. This includes directing population growth well-serviced locations and increasing the proportion of residential development in infill areas. At the same time, it will be essential to continue to build partnerships and connection with government at all levels to ensure the delivery of transport, health and education aligned with population growth.

1.4 Relevant current planning policy and controls in the Greater Bendigo Planning Scheme

1.4.1 Municipal Planning Strategy (MPS)

The MPS provides direction around settlement planning and the built environment including encouraging good design and considering heritage.

It identifies a clear settlement structure based around a hierarchy of activity centres within the urban area and identified townships. New housing in bushfire and flood prone areas should be avoided and agricultural land protected.

The MPS further outlines the need to balance neighbourhood character and the need for housing diversity and affordability.

Further detail is provided in the Policy and Statutory Context section of the HNCS (page 35).

1.4.2 Residential zones

The following residential zones have been considered in the preparation of this strategy and the HNCS:

- Clause 32.03 - Low Density Residential Zone (LDRZ)
- Clause 32.04 - Mixed Use Zone (MUZ)
- Clause 32.05 - Township Zone (TZ)
- Clause 32.07 - Residential Growth Zone (RGZ)
- Clause 32.08 - General Residential Zone (GRZ)
- Clause 32.09 - Neighbourhood Residential Zone (NRZ)

The other zones (not including rural zones) allowing for residential development including Clause 32.04 - Mixed Use Zone (MUZ), Clause 34.01 - Commercial 1 Zone (C1Z) and Clause 37.08 - Activity Centre Zone (ACZ) have not been investigated through this work. This is because they are being considered in other strategic work including a review underway of the Mixed Use Zone (MUZ); the Commercial 1 Zone (C1Z) being considered through an updated review to the *Commercial Land and the Activity Centre Strategy 2015*; and the Activity Centre Zone (ACZ) is proposed to be introduced via Amendment C279 to implement the *Bendigo City Centre Plan (May 2020)*. Land within the C1Z and land within the identified area of the *Bendigo City Centre Plan* have been considered as substantial change areas. The City Centre is expected to continue to grow and change and has the potential to provide a substantial contribution to infill housing development in urban Bendigo.

Currently most residentially zoned land in the urban area of Bendigo is within the General Residential Zone (GRZ), which allows for development up to three storeys. There is a small amount of Residential Growth Zone (allowing four storey development), Low Density Residential Zone in areas particularly with limited sewer access, and Township Zones in some smaller townships. The Neighbourhood Residential Zone (allowing two storey development) was introduced for the first time for two sites in Strathdale via Amendment C269gben. It has been applied to areas around the Bendigo Landfill via Amendment C242gben and is proposed to be applied to Marong via Amendment C263gben and other privately led amendments for site specific rezonings.

1.4.3 Planning Overlays

There are various planning overlays which are of relevance to the MGS and HNCS (see page 37 HNCS). These include:

- Clause 42.01 - Environmental Significance Overlay (ESO) - Schedules 1 to 3 and 5
- Clause 42.03 - Significant Landscape Overlay (SLO) - Schedule 1
- Clause 43.01 - Heritage Overlay (HO)
- Clause 43.02 - Design and Development Overlay (DDO) - Schedules 1,6,7,9,10,16,17,22,23,24,25,29 and 30
- Clause 43.04 - Development Plan Overlay (DPO) - Schedules 4 and 30
- Clause 43.05 - Neighbourhood Character Overlay (NCO) - Schedules 1 and 2
- Clause 44.04 - Land Subject to Inundation Overlay (LSIO)
- Clause 44.05 - Special Building Overlay (SBO)
- Clause 44.06 - Bushfire Management Overlay (BMO)

These planning overlays are of particular relevance to the MGS as they impact on the delivery of housing and can constrain development.

1.4.4 Planning Strategy

The City has a program of delivering Structure Plans to guide the growth and development of areas located around established and identified larger activity centres. Where these haven't been delivered the staging for the delivery of these Structure Plans is identified in Part 5 – Implementation within this MGS.

1.5 Directions, principles and themes

1.5.1 Directions

To achieve a greater proportion of housing in established areas (areas outside of the growth areas of Marong, Maiden Gully, Huntly and Strathfieldsaye) to shift the balance of development, the MGS establishes a long-term policy position that 70 per cent of urban development should occur in the established areas.

This is an ambitious policy position however it is consistent with State Planning Policy to encourage infill development. The continued expansion of the UGB is unsustainable due to the environmental, agricultural and economic costs including infrastructure capital and maintenance costs. Therefore, the MGS provides strong directions around

the required levels of housing change in the urban area of Bendigo. This is to provide greater clarity to the community, development industry and the City's planners. It identifies areas for *substantial*, *incremental*, and *minimal change*.

In establishing this policy position in the MGS, it is important to recognise that the City only has some levers available to manage development. The City is not a direct developer of housing, and it does not determine where people want to live. In the current market in Greater Bendigo there is a need for both greenfield and infill urban development. This not only based on current market dynamics and some household preferences but in order to ensure that affordable housing product is delivered. Without greenfield supply in the short to medium term at least there would be insufficient housing supply delivered to meet population growth needs due to the current cost feasibility challenges of infill development. To ensure a sufficient housing supply pipeline there are proposed to be some expansions made to the current UGB to accommodate longer-term population growth. Recognising this, the MGS proposes changes to the UGB at Huntly and Strathfieldsaye. These areas have been selected primarily due to fewer constraints (however they still have constraints including around bushfire and flooding), proximity to the existing UGB and growth corridors, and in the case of Huntly, a train station. These areas expand on existing growth fronts and are identified in the current urban residential framework at Clause 02.04 of the GBPS. While the MGS identifies these by extending the UGB, detailed studies and preparation of structure plans will need to be undertaken outside of the MGS process.

In summary:

- 70 per cent of urban housing growth will be located existing infill areas and 30 per cent of urban growth within the growth areas of Marong, Maiden Gully, Strathfieldsaye and Huntly.
- The UGB has been updated to accommodate additional residential growth at Huntly and Strathfieldsaye (subject to detailed planning).
- Residential areas will be designated for substantial, incremental and minimal change based on the values and constraints in each area, and availability of infrastructure.

1.5.2 Guiding principles

A set of guiding principles were included in the MGS Issues and Opportunities Paper which were then refined through community and stakeholder consultation in early 2022. The principles considered a range of equity and environmental issues across three overarching themes:

- **Sustainability** – Housing should be planned and designed to reduce its long-term environmental impact.
- **Safety** – Housing should be directed to areas that have fewer environmental hazards.
- **Suitability** – A diversity of housing should be delivered to meet different needs, be near services, active transport, employment, be affordable and encourage quality of life.

The detail of each Principle is show in Table 1.

Principle	Detail
Sustainability *Housing should be planned and designed to reduce its long-term environmental impact.*	Caring for country: Land should be rehabilitated and restored. Protect and enhance waterways and water resources. Habitat: Habitat and native vegetation loss should be avoided, and key areas protected. Agriculture: Valuable farming land should be protected. Efficiency: Planning should maximise water and energy efficiency as well as make the most of existing transport and community infrastructure.
Safety *Housing should be directed to areas that have fewer environmental hazards.*	Bushfire and Flood: Housing should be directed away from areas of risk. Contamination: Contaminated land should be identified and where potentially suitable for residential development remediated to allow this to happen. Heat: Consideration should be given as to how to reduce urban heat in new development through materials, orientation and tree planting.
Suitability *A diversity of housing should be delivered to meet different needs, be near services, be affordable and encourage quality of life.*	Services and Facilities: Development should occur in well serviced locations. Affordability: The market should provide a diversity of housing types with a focus on delivery of a well-designed product to meet long term housing needs at a range of price points. Liveability: Neighbourhoods should promote active and healthy lifestyles including through daily transport needs such as active travel. Employment: Employment should be located in activity centres in line with population growth.

Table 1 – Guiding principle and explanation

2. Housing need and capacity

2.1 Establishing housing need

2.1.1 Forecast population and dwelling growth

Greater Bendigo's population has increased by nearly 19,000 in the last 10 years ago. Much of this growth is driven by residents moving from surrounding shires including from Mount Alexander, Macedon Ranges and Swan Hill to access the broader range of services and facilities on offer in Bendigo. Over the period of 2015-2020 (based on figures from June 30 the year prior) the municipality was growing by around 2,000 more residents each year or close to 1.8 per cent. During the most recent years this growth has been closer to 1.2 per cent. It could be reasonably expected that population growth will increase to pre-COVID levels once again and this has been considered in establishing the long term housing need. However, it is also worth noting that policy settings can influence growth trends, and this could impact growth.

Two population datasets have informed this strategy, including those provided by .id informed decisions (forecast.id) and those provided by the Department of Transport and Planning (DTP), in the Victoria in Future (VIF projections). The population and dwelling estimates from these two projections are shown in Figure 4.

The VIF projections forecast there were 53,173 dwellings in 2021 with an expectation of 66,787 dwellings by 2036 (with a dwelling occupancy rate of 95 per cent). Id. Forecast estimates there were 53,061 dwellings in 2021 which is expected to increase to 66,261 by 2036 (with a dwelling occupancy rate of 93 per cent).

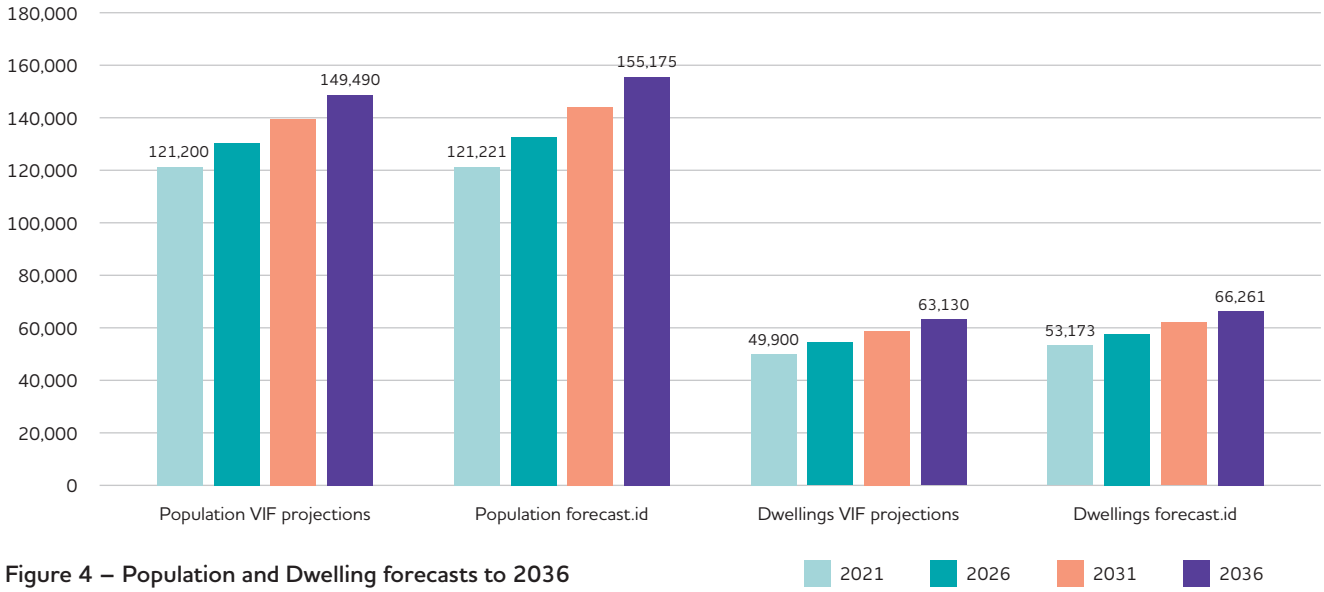

Figure 4 – Population and Dwelling forecasts to 2036

Importantly, neither source currently provides estimates beyond 2036, therefore doesn't align with the timeframe of the MGS. To create a 2056 estimate to provide greater long-term certainty, the City has extrapolated linear growth from the 2021 forecast ID estimates. The forecast ID estimates have been used over the VIF projections to take a more conservative approach, due to the higher dwelling figure. However, a range of scenarios have been included ranging from the lower growth in Greater Bendigo of the last two years of 1.2 per cent, the long term average of 1.6 per cent and two higher growth scenarios of 2.0 and 2.4 per cent (table 2).

These scenarios account for the inherent difficulties in forecasting over a longer time horizon. These estimates will be revised following each census and as new projections become available and will be considered in future reviews of the MGS.

	2021	2026	2031	2036	2041	2046	2051	2056
VIF	121,200	129,860	139,580	149,490	NA	NA	NA	NA
VIF dwellings	49,900	53,660	58,250	63,130	NA	NA	NA	NA
ID pop	121,200	133,271	144,295	155,175	NA	NA	NA	NA
ID dwellings	53,061	57,549	61,885	66,261	NA	NA	NA	NA
1.2% growth	121,200	128,649	136,555	144,947	153,855	163,311	173,348	184,001
1.2% growth dwellings	53,061	56,322	59,783	63,458	67,357	71,497	75,891	80,555
1.6% growth	121,200	131,211	142,049	153,783	166,486	180,238	195,125	211,243
1.6% growth dwellings	53,061	57,444	62,189	67,326	72,887	78,907	85,425	92,482
2.0% growth	121,200	133,815	147,742	163,119	180,097	198,841	219,537	242,387
2.0% growth dwellings	53,061	58,584	64,681	71,413	78,846	87,052	96,113	106,116
2.4% growth	121,200	136,459	153,639	172,982	194,761	219,281	246,889	277,972
2.4% growth dwellings	53,061	59,741	67,263	75,731	85,266	96,001	108,087	121,695

Table 2 – Population and dwelling growth scenarios

2.1.2 Housing Disconnect

At the 2021 Census, 64 per cent of households comprised one or two people.[2] While average household size is small, this contrasts starkly with the housing stock currently being constructed. More than three quarters of Greater Bendigo's housing has three or more bedrooms. Since 2011, there have been 588 medium-density dwellings constructed (such as units and townhouses), compared to 9,900 stand-alone houses. Medium-density construction accounts for only 8.7 per cent of total housing development in the municipality which is lower than the regional Victorian average of 9.4 per cent.[3]

Demographic changes indicate a disconnect between demographic trends and private sector inability or reluctance to respond to these trends through housing delivery. This has significant implications for providing sustainable solutions which create clear link between housing locations, employment opportunities, infrastructure delivery and creating walkable and liveable communities. Without changes in the types of housing being delivered, there will be growing impacts on housing affordability and limited opportunities for residents to move to smaller dwellings should they choose.

The scarcity of smaller houses also has implications for housing affordability. Between 2016 and 2021, the median house price rose by 56 per cent. Median household income over the same period only grew by 22 per cent.[4] Similarly, the percentage of rental properties considered affordable (defined as a suitably sized house with a rental cost at or below 30 per cent of household income) has fallen from more than four out of five rentals in the early 2000s to less than one in five rentals in 2022. Encouraging medium density development is a method of supporting both housing availability and affordability.

2, 3 *Source: Australian Bureau of Statistics, Regional Population Growth, Australia (3218.0). Compiled and presented in profile.id by .id (informed decisions).*

4 *Australian Bureau of Statistics, Census 2021*

2.2 Assessment of Housing Capacity

2.2.1 Housing Capacity Analysis

To better understand the already zoned and identified residential land supply in Greater Bendigo, the City commissioned Quantify Strategic Insights (Quantify) to prepare a *Housing Capacity and Supply Analysis for Greater Bendigo* ('Capacity Analysis').

The Capacity Analysis determined that there is a total theoretical capacity of 50,833 additional dwellings within already zoned residential land. This includes a combination of established areas (capacity for an additional 36,348 dwellings), townships (6,696 dwellings), existing infill areas within growth areas (5,898 dwellings) and greenfield development in growth areas (1,891 dwellings). Overall, this would suggest that there is sufficient housing capacity overall to accommodate long term dwelling forecasts. However, this is capacity only. It does not factor in the different markets of infill, greenfield and townships, or supply and take up of land. This will be further explained in Section 2.3 of the MGS.

As the Capacity Analysis is based on current zoned land for residential development, it does not include the land identified in Marong and Maiden Gully identified for growth but not currently zoned. The development of land in these locations (including Forest Edge estate) is expected to deliver approximately 5,800 dwellings. The Capacity Analysis also does not consider the potential for land within the Urban Growth Boundary currently zoned Low Density Residential Zone or Farming Zone that could be developed (as outlined in Appendix B) or land on key development sites that need to be rezoned to a residential zone to realise development. This has the potential to further add to infill supply.

The Capacity Analysis estimates housing capacity by identifying lots with potential to be developed and multiplying this by an estimate of the number of houses likely to be constructed on that lot. Lots identified for potential development are either vacant lots or lots over 600 square metres with a single dwelling and must be zoned Residential (GRZ, RGZ or NRZ), or Township Zone.

In preparing the assessment, a conservative approach has been taken to exclude lots subject to HO, lots where more than 10 per cent of the site is covered by a BMO or subject to a flood related overlay (eg. Land Subject to Inundation Overlay). This is not to say that development is not possible in these areas but that it may be more challenging. There is likely therefore further capacity over that identified particularly in infill areas.

The Capacity Analysis does not provide a breakdown of the expected capacity in the rural townships outside of Elmore, Heathcote, Goornong and Axedale. These smaller townships will be considered through the upcoming Rural Area Strategy. This is based on a lot size analysis and an analysis of planning controls to determine a potential capacity for housing. This is different to housing supply or dwellings available to the market. Not all lots will be developed or of lots that are developed these may be developed at a higher or lower level than considered through the capacity calculations.

2.2.2 Existing Housing Capacity in infill areas

A breakdown of the expected infill capacity of the suburbs included in the Capacity Analysis is outlined in table 3.

Suburb/Precinct	Developable lots	Housing capacity
Ascot	347	1,353
Central Bendigo	257	708*
California Gully	866	2,554
Eaglehawk & Eaglehawk North	705	2,344
East Bendigo	350	1,219
Epsom	823	2,248
Flora Hill	574	1,554
Golden Square	1,548	4,991
Huntly (infill)	114	844
Ironbark	69	212
Jackass Flat	232	598
Kangaroo Flat	1,857	4,931
Kennington	1,280	3,853
Long Gully	609	1,748
Maiden Gully (infill)	450	2,902
North Bendigo	595	1,824
Sailors Gully	26	124
Spring Gully	176	463
Strathdale	1,363	4,040
Strathfieldsaye (infill)	2,152	367
West Bendigo	27	86
White Hills	417	1,243

Table 3 – Housing Capacity Analysis by suburb

Source: Quantify Strategic Insights (Quantify) Housing Capacity and Supply Analysis

**note this does not fully include the additional development from key development sites as outlined and the potential for 800 dwellings on these sites alone. Therefore, this calculation is an underestimate of ultimate development capacity.*

2.2.3 Existing Housing Capacity in greenfield areas

A breakdown of Growth Area (greenfield) Capacity is shown in Table 4.

Growth areas (greenfield) in the context of the MGS as outlined in the Capacity Analysis refers to:

- Vacant lots which are zoned Residential or Township
- Are greater than one hectare in size
- Located within a designated growth area of Strathfieldsaye, Marong, Maiden Gully and Huntly
- Less than 10 per cent of site area is affected by a BMO or LSIO
- A yield of 10-12 dwellings per/ha has been applied (as per the Urban Development Program)

Growth area	Hectares	Lot Yield
Huntly (including Bagshot)	114	1,254
Maiden Gully	0	0
Marong	19	211
Strathfieldsaye	39	426
Total	172	1,891

Table 4 – Housing Capacity Assessment in greenfield areas

Source: Quantify Strategic Insights (Quantify) Housing Capacity and Supply Analysis

2.2.4 Urban Development Program (UDP)

As well as the Capacity Analysis, the State Government publishes its own data on greenfield land capacity as well as large infill sites of over one hectare.

The UDP 2022 data suggests there is capacity for 6,400 residential lots (16 to 17 years supply) on zoned land and a further 4,100 residential lots (10 to 11 years supply) on land proposed to be rezoned through adopted strategic work.

A further breakdown of the expectation in terms of lot supply is provided in Table 5.

Area and type	Unzoned	Zoned	Proposed	Total supply
Huntly/Bagshot – Greenfield	477	1,491	380	2,348
Maiden Gully – Greenfield	1,200	1,936	0	3,136
Marong – Greenfield	1,948	150	80	2,178
Strathfieldsaye – Greenfield	429	1,167	285	1,881
Remainder – Greenfield	0	871	68	939
Greenfield total	**4,054**	**5,615**	**813**	**10,482**
All – Major infill	0	1,265	130	1,395
Total	**4,054**	**6,880**	**943**	**11,877**

Table 5 – Bendigo Urban Development Program Data 2022[5]

The UDP data indicates that the number of retail lots delivered was around 370 lots per annum in the three years between 2018 and 2021.

Current retail lot supply in Greater Bendigo is very low compared with other similar sized regional cities. This compared to Ballarat which averaged 1,250 retail lots per annum between 2018 and 2021.

The small take up is likely to be for a variety of reasons. Some of the challenges in Bendigo compared to the other two largest regional cities include the number of growth fronts, challenges around bushfire and vegetation in some growth areas, and substantial land fragmentation.

2.2.5 Future Capacity within infill areas

The MGS establishes a policy position of 70 per cent of urban population growth being directed to infill. If this is to be delivered it would be a big shift for Greater Bendigo with currently less than 50 per cent of urban development occurring in the infill or established areas of Bendigo. This is consistent with the the *Victorian Housing Statement 2024-2034* and a variety of adopted Council strategies which seek to support employment and business growth in commercial centres, protect the environment, improve liveability and reduce reliance on private car trips. Increasing the supply of infill development is also likely to mean a greater variety of dwelling types and price points enabling residents better housing choice.

This would mean accommodating approximately 51,000 more residents or around 22,000 dwellings (based on 2.3 people per dwelling) in infill areas to 2056. This policy position is consistent with the approach of State Government in preparing a plan for Victoria and the *Connecting Greater Bendigo: Integrated Transport and Land Use Strategy*. It is also consistent with a variety of adopted Council strategies which seek to support employment and business growth in commercial centres, protect the environment, improve liveability and reduce reliance on private car trips.

To achieve the policy target will require better facilitating development on identified key development sites, while also considering the potential to rezone land within the Urban Growth Boundary to a residential zone to allow for more development where suitable. Directions around key development sites are provided in Appendix B.

5 *Source: Urban Development Program, https://www.planning.vic.gov.au/guides-and-resources/data-and-insights/urban-development-program/greenfield-land-supply-in-regional-victoria-2022/bendigo*

The scale of development potential in infill (or established) areas is very much linked to market conditions and feasibility. Anecdotal feedback is that based on current market dynamics including land values, cost of construction and cost of infrastructure making a profit on infill development is challenging. However, given the MGS is a long term strategy, it is expected that market dynamics will change over time. These expected changes, consistent with what has happened in other regional centres, should make denser developments in certain locations such as the Bendigo City Centre more feasible.

2.2.6 Future Capacity in Growth Areas

While there are many benefits to infill development, current market conditions in Greater Bendigo suggest there will need to be a role for housing in growth (or greenfield) areas at least in the short to medium term. This is largely due to previously mentioned development feasibility constraints, affordability, and buyer preferences for larger dwellings on larger lots.[6]

Based on the provision of 30 per cent of urban development in growth areas, this would mean these locations would need to accommodate close to 22,000 more residents or 9,500 more dwellings (based on 2.3 people per dwelling).

There are currently four identified greenfield areas in Greater Bendigo. These are Marong, Huntly, Strathfieldsaye and Maiden Gully. Each of these areas has been identified for many years as residential growth areas and have featured in housing capacity calculations.

Based on the Capacity Analysis there are 172 available hectares of residentially zoned land (not including the 1,400 dwellings proposed for Forest Edge Estate in Maiden Gully due to the presence of the BMO). Based on 11 dwellings per net developable hectare, this could accommodate 1,891 dwellings at 11 dwellings or 2,580 at 15 dwellings. Current identified zoned and unzoned land is estimated to be able to deliver around 5,800 dwellings.

Over the longer term there will be insufficient greenfield land to meet growth projections which is why the MGS has identified two areas of Huntly and Strathfieldsaye for future growth. To make better use of available land future structure plans will need to start to move towards a minimum of 15 dwellings per hectare or higher, particularly for development located near commercial centres and services.

Ravenswood has been identified as an investigation area noting that the planning of identified potential growth areas will be prioritised.

2.2.7 Townships and Areas

Currently around 16 per cent of residents Greater Bendigo are located in townships and rural areas. This does not include Marong which has been identified as a future growth area and considered in the growth area calculations.

This has considered the moderate growth expected in Heathcote, Elmore and Axedale, and the limited growth expected in Goornong (with the absence of reticulated sewerage). The cost of infrastructure delivery in each of these townships combined with environmental constraints and the need to retain productive farming land means they are not suitable for significant growth More detail around the capacity for growth in each of these townships has been or is being considered through a township or structure planning process and the Rural Areas Strategy. This includes the Heathcote Township Plan 2019 which is currently being implemented via Planning Scheme Amendment C274gben.

The population of the remaining townships in Greater Bendigo is expected to remain relatively stable. A new Rural Areas Strategy is currently being prepared to consider growth in rural areas and townships where there is limited capacity for growth.

6 *Quantify Strategic Insights – Housing Capacity & Supply Analysis*

2.3 Utilisation of existing Housing Capacity

It is important to understand take up rate to determine if there is sufficient housing capacity to meet long term housing needs.

Based on long term growth projections of 38,000 additional dwellings to 2056, there will need to be around 1,100 new dwellings constructed each year to meet the housing needs of the growing population. Without this, there will likely be growing affordability and housing availability challenges.

In preparing the MGS, the City has reviewed residential building approvals in Greater Bendigo. Over the last 10 years residential building approvals have averaged 902 per year. Following a peak of residential dwelling approvals in 2020-2021 of 1,284, there was a decline to 1,010 in 2021-2022 noting this was still higher than recent years. Over the last two years building approvals have dropped, with less than 700 annual residential dwelling approvals.

Year (ending June 30)	Total	Annual change (difference in dwellings numbers from the previous year)
2023-2024	688	+10
2022-2023	678	-332
2021-2022	1,010	-274
2020-2021	1,284	+285
2019-2020	999	+112
2018-2019	887	+25
2017-2018	862	+143
2016-2017	719	-139
2015-2016	858	-180
2014-2015	1,038	-67
2013-2014	1,105	-1

Table 6 – Annual residential building approvals

Source: Australian Bureau of Statistics, Building Approvals, Australia (8731.0). Compiled and presented in profile.id by .id (informed decisions)

2.3.1 Utilisation of housing capacity based on current building approvals

Using the long term average of 902 residential building approvals per year in Greater Bendigo. This currently consists of (Table 7):

- 16 per cent of dwellings are currently provided in townships and rural areas. Growth in the townships and rural areas is being guided by Township and Structure Plans for the larger townships and in the upcoming Rural Areas Strategy for the remainder of the rural areas and smaller townships in Greater Bendigo.
- 45 per cent of total residential development in greenfield areas (53% of development in urban Bendigo)
- 39 per cent of total residential development in infill areas (47% of development in urban Bendigo)

Under the current scenario there is sufficient zoned land supply in urban infill areas to meet long term growth needs. There is insufficient zoned land in growth areas. However, if all designated unzoned land in growth areas was able to be delivered as per the Urban Development Program (UDP) identified land, then this would address supply needs over the next 12 years for growth areas.

If the City is able to achieve its policy position of 70 per cent of urban development in infill and only 30 per cent of urban development in greenfield areas, as shown in table 7, there is sufficient capacity to meet growth needs in urban Bendigo in infill areas. There is sufficient capacity in townships and rural areas to accommodate the dwellings needed to 2056. There remains insufficient capacity in greenfield areas based on current zoned supply but if unzoned supply was able to be realised (as per the UDP) this would meet 15 year supply needs. However, there would remain a shortfall over the long term.

**Note includes Forest Edge Estate in Maiden Gully (approximately 1,400 dwellings). This is not included in the Capacity Analysis due to the Bushfire Management Overlay applying to more than 10 per cent of the site.*

***Note the capacity figure for rural areas does not include rural zoned land and only considers Heathcote and Argyle, Elmore, Axedale and Goornong*

****This includes infill development in greenfield areas of Huntly, Maiden Gully and Strathfieldsaye*

	Current percentage of development	New homes per year	Total residential capacity (zoned land)	Number of years supply
Greenfield	45 per cent of total residential development in Greater Bendigo (53% of urban development)	406	3,291*	8
Townships and Rural	16 per cent of total residential development in Greater Bendigo	145	6,696*	46
Infill	39 per cent of total residential development in Greater Bendigo (47% of urban development)	353	44,137***	125

Table 7 – Utilisation of housing capacity based on current building approvals

	MGS percentage of total development	New homes per year	Total residential capacity (zoned land)	Number of years supply
Greenfield	25 per cent of total residential development (30% of urban development)	237	3,291	14
Townships and Rural	16 per cent of total residential development	150	6,696*	45
Infill	59 per cent of total residential development (70% of urban development)	553	44,137**	80

Table 8 – Utilisation of housing capacity based on MGS policy position

2.3.2 Housing targets (utilisation based on dwelling numbers to meet forecast needs)

Current dwelling approvals are insufficient to meet long term needs. This is based on current forecast data which would require over 1,100 dwellings each year over the long term (or around 160 more dwellings being delivered than the long term average). Based on the policy in the MGS of a 70/30 per cent split of infill/greenfield urban development there remains sufficient capacity in infill areas but remains insufficient capacity in greenfield areas, as shown in table 9. There is theoretically sufficient capacity to accommodate growth in the townships and rural areas. However this will be guided through Township and Structure Plans in the larger townships and the upcoming Rural Areas Strategy in the remaining areas.

	New homes per year	Total residential capacity (zoned land)	Number of years supply
Greenfield	277	3,291	12
Townships and Rural	176	6,696	38
Infill	647	44,137	68

Table 9 – Utlisation based on dwellings numbers to meet forecast needs

Greater understanding is required as to whether the current lower dwelling numbers being delivered are due to the current economic conditions of high interest rates and high construction costs or whether this lack of supply is a longer term issue.

2.3.3 Utilisation of housing capacity based on a high growth scenario

Table 10 is based on1,900 dwellings per year, using the highest growth scenario of 2.4 per cent and based on the policy position in the MGS there continues to be sufficient capacity in infill areas. There are potential capacity issues in the townships and rural areas over the long term, noting additional work needs to be completed for these areas (which will include considering the rural zones) in the upcoming Rural Areas Strategy and as part of background work to inform township structure plans. In greenfield areas under this high growth scenario there would be very limited capacity to accommodate housing growth and a clear shortfall in the coming years of available zoned land. This will be helped as land is rezoned through privately led Planning Scheme Amendments in Marong and then other growth areas once plans area complete.

	New homes per year	Total residential capacity (zoned land)	Number of years supply
Greenfield	479	3,291	7
Townships and Rural	304	6,696	22
Infill	1,117	44,137	40

Table 10 – Utlisation based on high forecast growth scenario

2.4 Housing Capacity Analysis Implications

Theoretically there is capacity to accommodate all of the urban forecast growth over the next 30 years into the existing infill areas. However, this is not currently practical for various reasons. This includes:

- Catering for housing choice, with one of the attractions of regional Victoria is the ability to own a house and land.
- Housing affordability and the affordability of housing supply in greenfield locations.
- Market dynamics and the current challenges in building medium and higher density development in Greater Bendigo.
- Not all lots in infill areas can or will be developed. Not all land is suitable to be developed with environmental or other constraints and not all landowners will want to develop.

What the Capacity Analysis has demonstrated is that there is sufficient capacity in infill areas to accommodate 70 per cent of the urban growth of Greater Bendigo over the next 30 years. This will require better utilisation of existing land including urban renewal and key development sites through more density of development in identified areas. From a planning policy perspective, this will be supported through changes to the residential zones and planning policy in the Greater Bendigo Planning Scheme. There may also be opportunities to stimulate the market outside of planning such as advocating for funding of infrastructure upgrades, funding support for land decontamination and reducing third party appeal rights in targeted locations (such as through the use of the Activity Centre Zone).

The Capacity Analysis shows that in growth areas even moving towards 30 per cent of housing supply being in these areas will mean there is insufficient supply to meet long term housing needs. The release of additional land supply through the privately led rezoning of identified land in Marong and the progress of a residential framework plan for Maiden Gully should be prioritised. Unless there is a dramatic shift in development patterns there will need to be additional supply provided over and above Marong and Maiden Gully in the long term, noting the significant capital and maintenance costs of delivering new infrastructure to growth areas. The two identified areas to deliver this greenfield housing supply as previously outlined are Huntly and Strathfieldsaye. Of these two areas Huntly should be prioritised given the location of a train station. The progress of development in Strathfieldsaye should only be considered once it is clear this supply is needed. This would be determined through annual analysis of building occupancy data. These areas combined should meet the long term greenfield supply needs.

Ravenswood has also been identified as an investigation area noting that the planning of identified potential growth areas will be prioritised.

Overall while planning forms an important element in facilitating different forms of housing development and having a pipeline of greenfield development will help, market factors must be contributing to a lower housing supply in Greater Bendigo.

In summary:

- More housing is needed in Greater Bendigo to meet housing targets to accommodate population growth needs than is being approved annually.
- There is capacity in infill and townships to accommodate the dwellings needed to 2056.
- There is an insufficient zoned supply of land in greenfield areas to meet long term growth needs even if reducing the proportion of greenfield development as a proportion of total urban development to 30 per cent.
- There is currently low retail lot delivery in Greater Bendigo highlighting the importance of a clear pipeline of greenfield land to meet housing needs.
- As well as policy changes there is a need to identify practical opportunities where it may be possible to make infill development easier, otherwise it is likely that the pattern of development will remain unchanged.

3. Community and Stakeholder Values

The City consulted extensively on the draft MGS and associated documents from May 28, 2024 to July 12, 2024.

3.1 Engagement on the Draft Managed Growth Strategy

Engagement on the draft MGS and associated documents included various information sessions across the municipality, presentations to advisory committees, a presentation to the Youth Council, videos and advertisements in local papers. Detailed information was available via the City's Let's Talk platform including an interactive map.

Highlights of the consultation on the MGS include:

- 2,753 visitors to the Let's Talk Page
- Download of the draft MGS 549 times, the summary brochure 497 times and the draft HNCS 253 times
- 73 surveys completed
- 68 submissions received

3.1.1 MGS and HNCS Survey findings

Key findings of the survey were the high importance placed by respondents on considering environmental risks and protecting areas of environmental value. Respondents also generally strongly support the provision of infrastructure to meet changing community needs.

Over half of respondents were supportive or strongly supportive of increasing the proportion of residential development in urban areas from 47 to 70 per cent. Twenty nine per cent were not supportive of this position.

Sixty per cent of respondents supported an increase in medium density development from 8 to 15 per cent over 15 years.

The top three concerns in relation to growth include:

- Increased traffic (47%)
- Lack of affordable housing (33%)
- Loss of flora and fauna (29%)

The three most important types of improvements the community would like to see through the implementation of the MGS include:

- Better footpaths for walking and cycling (49%)
- Improved public transport services (41%)
- Improved parks and open spaces (41%)

3.1.2 MGS and HNCS Submissions

Submissions were received from a variety of stakeholders including State Agencies, developers, landowners, advisory groups and the Youth Council.

While issues varied depending on the stakeholder, there were some common themes. These included:

- 70/30 policy position – there were very mixed views on this. Some agreed with the position, some felt that it was going too far, and the Youth Council advocated for a higher percentage of infill development.
- Lack of greenfield land supply – there were a number of submissions that indicated there was insufficient greenfield supply. The City has recognised this in the MGS by identifying additional growth areas in Strathfieldsaye and Huntly.
- The inclusion of additional sites – the majority of sites within the existing Urban Growth Boundary that have not been included have not been included due to bushfire risk.

3.2 Community consultation

A key community input to the MGS is the Imagine Greater Bendigo project which informed the community vision in the *Council Plan (Mir Wimbul)*. This was a deliberative engagement process where residents were selected at random to be part of a community panel with a total of 61 residents involved, in addition to over 1,000 survey responses.

Imagine Greater Bendigo identified three top reasons that made Greater Bendigo a great place to live:

- A healthy, liveable community and natural environment.
- Country and community feel.
- History and heritage.

The MGS seeks to retain these features of Greater Bendigo into the future. When residents were asked *'What are the most important issues you think we need to consider if Greater Bendigo's population nearly doubles in size (as predicted) by 2050?'* several consistent themes emerged, principally:

- Protect the natural environment and preserve and ensure access to green space.
- Prevent urban sprawl, provide more infill development and housing density.
- Improve public transport.
- Ensure equitable and timely access to social infrastructure and services.
- Improved roads and more parking.

These themes have been considered in the preparation of the MGS and in developing the key principles.

To further inform the direction of the MGS, the City invited community comment on the *Managed Growth Issues and Opportunities Paper* and called for Expressions of Interest (EOI) from landowners with land that met

identified criteria for residential development. During the consultation for the *Managed Growth Issues and Opportunities Paper*, 67 surveys were received, eight written submissions, and 64 EOIs from landowners and developers were received. This included landowners from adjacent properties or precincts in some instances.

Key findings from the community and stakeholder survey included:

- Housing
  - Housing affordability is a key issue and will likely be an ongoing challenge.
  - Single-storey units, followed by townhouses, are preferred over apartment developments, particularly due to regional location.
  - There is a need for accessible dwellings for those with mobility issues.
- Environment
  - Environmental sustainability in housing design should be included.
  - Traffic was identified as one of the biggest concerns around more development.
- Growth
  - More development would help local business.
  - Infill development would make good use of existing infrastructure.
  - There were mixed views about the expansion of the urban growth boundary.

3.3 Engagement with Traditional Owners

The City acknowledges that Greater Bendigo is on the lands of the Dja Dja Wurrung and Tangurung. With the MGS setting a longterm residential framework plan, this needs to consider how to actively Heal Country and establish meaningful implementation actions which can then be delivered through future more detail area level planning.

As urban Bendigo is on the lands of the Dja Dja Wurrung this has included representation from Djaara on the Steering Committee for the project. It has also included early engagement on the draft of the MGS to ensure that relevant views and implementation actions have been tailored to address the aim of Healing Country.

3.4 Engagement with key stakeholders

Written feedback was received from State Agencies, advisory committees, and the development industry. This feedback included:

- Vision:
  - The need for better alignment to the objectives of adopted Council strategies such as the *Climate Change and Environment Strategy 2021-2026* and the *Council Plan (Mir Wimbul)*, and better description of the extent of expected transformational changes.
  - The need to consider whether there is an ultimate population level for Greater Bendigo and include likely growth scenarios.
  - The need to focus on a smaller number of priorities.
  - The need to actively consider growth opportunities outside of the current Urban Growth Boundary to adopt a long-term balanced approach to infill growth and greenfield growth opportunities.
- Process:
  - Recommending a linear model of urban growth, focusing on links such as Kangaroo Flat, Golden Square, White Hills, Epsom and Huntly, to preserve Bendigo as a 'city in the forest'.
  - Limitations of landowner led Expressions of Interest and whether these are strategically justified.
  - Options for facilitating future growth, including clear distinctions between potential areas and likely land for development, reducing red tape, engaging a development facilitator, and reducing additional costs for affordable housing (such as Development Contributions Plans, Windfall Gains Tax and Land Use Activity Agreements).
- Considerations:
  - Significant capital investment is required to deliver infrastructure in line with population growth and to continue to support existing levels of service.
  - Integrated Water Principles are important, as are the buffer distances between the Bendigo Water Reclamation Plant and residential development.
  - Ongoing discussions are needed on a Western Freight Corridor and on the long-term planning for transport ring roads in and around the urban area.
  - The impact of the increase in land prices and the need to prioritise growth into areas where residents want to live.
  - There is also the challenge of balancing bushfire and vegetation policies and the City obtaining a suitable solution for urban growth with these competing challenges.

There were mixed views on the retention of the UGB. This ranged from expanding the UGB through to no change. Other comments in relation to growth included the challenges with bushfire and vegetation, the impact of migration resulting from COVID, an increase in vacant land prices, and the need for larger greenfield areas to promote a master planned design response and housing diversity.

In summary:

- Housing affordability and sustainability are key issues for the community.
- Need to better facilitate housing growth.
- Challenges on balancing bushfire and the need to retain vegetation.
- Mixed views on whether the Urban Growth Boundary needs to change.

The MGS seeks to address each of these issues.

PART TWO: Issues impacting on managing housing growth

4. Environmental values and risks

4.1 Biodiversity and landscape values

In 2019, Council passed a resolution seeking urgent action to avoid the worst impacts of climate change and biodiversity breakdown. Council has an adopted *Biodiversity Strategy and Action Plan 2023-2033* which establishes a shared vision for the protection and enhancement of biodiversity across Greater Bendigo which is home to many threatened species. It also includes an action for the MGS to have minimal impact on biodiversity.

Council's adopted *Climate Change and Environment Strategy 2021-2026* identifies the need to respond to biodiversity loss, and accompanying threats to human health, by using tested approaches and exploring novel ways to regenerate landscapes.[7] Several goals relate directly to the MGS, including maintaining and increasing tree and shrub cover, reducing fragmentation of forested areas, and increasing the importance of environmental assets under the planning scheme.

There is a clear policy direction to retain native vegetation where possible. Clause 12.01-2S (Native vegetation management) of the Greater Bendigo Planning Scheme identifies the need for *'no net loss of biodiversity as a result of the removal, destruction or lopping of native vegetation'*.

These objectives impact residential development in vegetated areas.

Bendigo has one of the State's greatest concentrations of Box-Ironbark Forest, and the City recognises the challenges of managing a healthy forest, habitat corridors for native animals, and bushfire risk. Flora and fauna is further protected under the State *Flora and Fauna Guarantee (1988)* and the Commonwealth *Environment Protection and Biodiversity Conservation Act (1999)*. Some important environmental assets have formal protection under the planning scheme.

As well as protecting native flora and fauna, landscapes in certain areas of Bendigo and views to these landscapes are valued by both the community and visitors. To ensure the long term protection of these landscapes, the City is currently progressing an assessment of the landscape values of Big Hill and Mandurang Valley to determine if the there is a need to introduce Significant Landscape Overlays (or other controls) over relevant areas to preserve the landscape.

4.2 Bushfire

4.2.1 Bushfire Risk Assessment

Being a city in a forest, bushfire is a potential risk for Bendigo, ember attack and smoke exposure is a risk for the whole municipality.

Increasing bushfire risk associated with climate change, fewer opportunities for preventative fire management (due to a longer fire season), and the introduction of stricter requirements for bushfire and vegetation removal mean that areas that may historically have been considered suitable for residential development are no longer considered low risk.

The key objective in the planning scheme at clause 13.02 is *"To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life"*. This objective means that that protecting human life takes priority over all other policy considerations.

7 *Climate Change and Environment Strategy 2021-2026 https://www.bendigo.vic.gov.au/about-us/plans-strategies-and-documents/climate-change-and-environment-strategy-2021-2026*

Other important State policy considerations include:

- The availability of safe access to areas assessed as being low fuel or having a BAL-LOW rating.
- The assessment and availability of alternative low risk locations.
- The need to ensure future land use and development will not increase bushfire risk.
- That where there are areas that population growth and development might be appropriate considering the risk from bushfire, measures need to be put in place to mitigate that risk.
- That areas of future growth need to be able to achieve a radiant heat flux of less than 12.5 kilowatts per square metre (BAL 12.5).
- The City must engage with the relevant fire authority and other emergency management agencies in strategic planning projects.
- That bushfire protection measures cannot result in unacceptable biodiversity impacts.

For homes that are subject to the Bushfire Management Overlay (BMO), the requirement to meet the relevant Bushfire Attack Level (BAL) standards can increase the cost of building. Subdivisions within the BMO are subject to additional bushfire risk mitigation measures.

Diverting housing from areas of highest risk and ensuring that housing is built to the necessary BAL does not mean that areas where housing is developed are risk free, or that any home is 'bushfire proof'. There remains a need to balance the risk posed by weather and the natural environment against the degree to which that risk can be mitigated. This can be through the built environment, public realm treatments and management, and resident behaviour. It is important to note that risks associated with fire, such as extreme heat and smoke, will affect all of Greater Bendigo.

To better inform the selection of areas suitable for residential growth a bushfire risk assessment of the potential growth areas of Greater Bendigo was completed.

The overall objective of the report was to understand the varying levels of bushfire risk across 11 Potential Growth Areas (PGAs) within or adjoining the Bendigo Urban Area, or townships proximate to Bendigo, against the State policy for Bushfire in order identify where future growth and development should be directed.

Figure 6 outlines the 11 Potential Growth Areas (PGAs) that were investigated through the *Growth Area Bushfire Assessment*. The identification of 11 PGAs enables a more robust comparative assessment of the relative bushfire risk between potential growth areas consistent with State Policy.

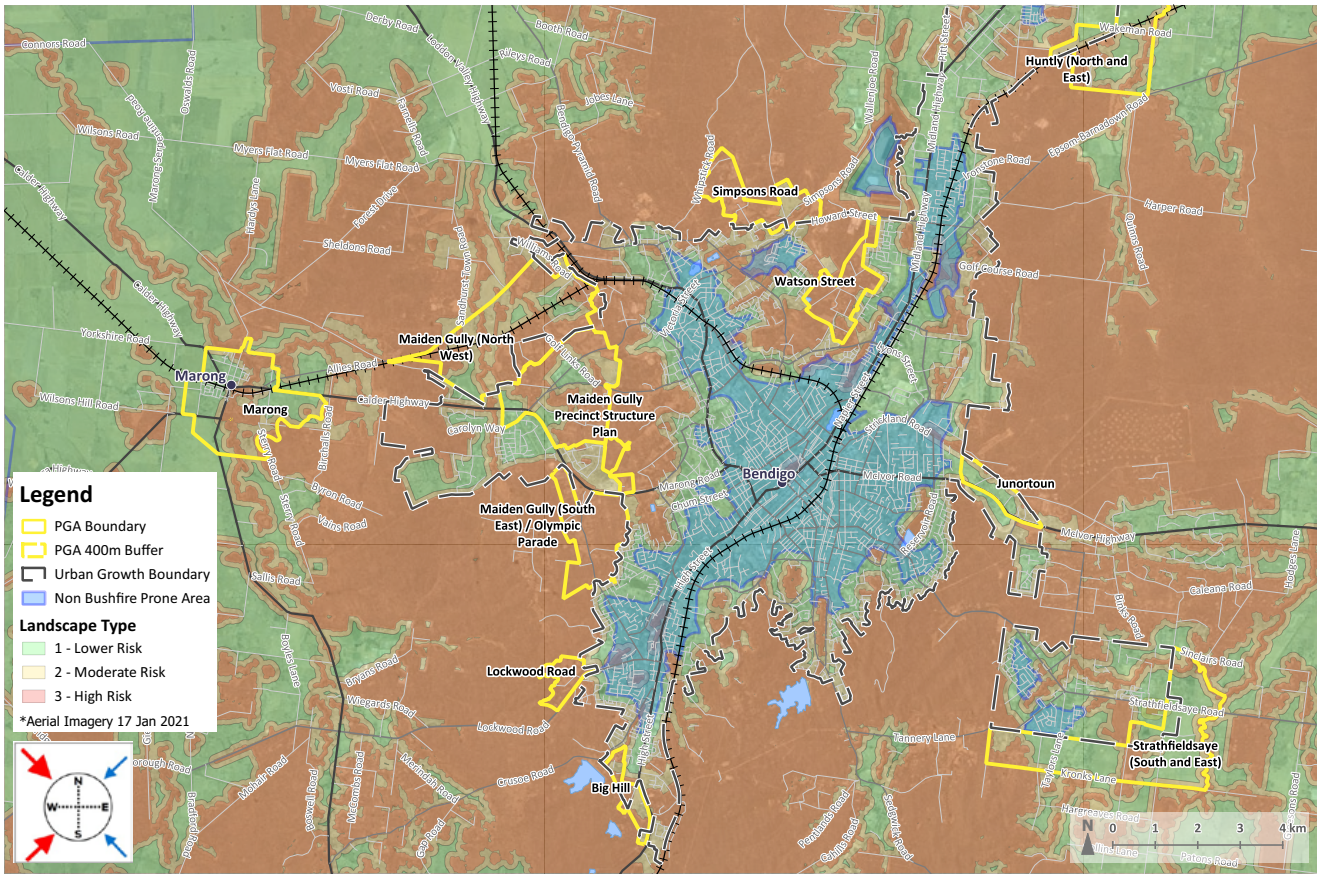

Figure 6 – Landscape Types and Potential Growth Areas

Based on a comparative bushfire risk assessment of the PGAs, Huntly and Marong are considered to be low risk overall and suitable for more residential development. Importantly any further rezonings to allow residential development in these areas would still need appropriate planning and design measures which consider and mitigate any bushfire risk.

There is potential for some residential development to be directed to areas within Strathfieldsaye and Maiden Gully by ensuring that development is not directed to heavily vegetated areas or in areas near forest. This would be subject to appropriate planning and design measures and detailed area specific investigations.

Parts of Junortoun may be suitable for development from a bushfire management perspective, but this area is more challenging due to existing land uses such as the proximity of the Bendigo Airport and the flight path, fragmented ownership patterns, the amount of public land and the rifle range.

The Potential Growth Areas (PGA) of Big Hill, Lockwood Road, Maiden Gully North-West, Maiden Gully South-East, Simpsons Road and Watson Street are inappropriate for rezoning to a residential zone which would enable more residential development. This is due to attributes such as landscape bushfire risk levels, accessibility, vegetation coverage, and topography or terrain and the existence of lower risk locations.

As part of the *Growth Areas Bushfire Assessment*, consideration was also given to biodiversity impacts, flooding, buffer requirements and incompatible land uses to consider the areas suitable for development.

As discussed in Section 4.2 and 4.3, population growth and development will be directed to low risk locations, and environmental hazards such as floods and bushfires, which also functions to direct housing away from significant concentrations of forest. However, there remains a tension between the need to provide housing for a growing population and the need to protect and regenerate the natural environment and manage bushfire risk.

4.3 Flooding

4.3.1 Flooding Risk Assessment

The most recent floods in December 2023 and January 2024 affected 29 local government areas across Victoria, including Greater Bendigo and nearby shires Campaspe, Mount Alexander, Loddon and Macedon Ranges.[8] There was significant localised flooding in some areas in Greater Bendigo with the areas most affected being Huntly, Goornong and Heathcote. The most recent floods were just over a year after the October 2022 floods affected 25 local government areas across Victoria.[9] Consistently high rainfall under a La Nina event contributed to saturated soils which, combined with several days of intense spring rainfall, led to widespread flooding, including inundation of many homes and extensive road and infrastructure damage. This event is an example of the type of event that is predicted to occur more frequently over the timespan of the MGS.

Settlement has historically been in areas close to waterways and urban Bendigo has a long history of flooding, caused typically by intense thunderstorms and relatively small upstream catchments. The Bendigo Urban Flood Study (2013), a joint project between the North Central Catchment Management Authority (NCCMA) and the City estimated that 30,000 properties were at risk of flooding. Areas that are particularly vulnerable include parts of Kangaroo Flat, central Bendigo, Epsom and Huntly.

The implementation of this study introduced two new planning overlays; the Land Subject to Inundation Overlay (LSIO) and a Special Building Overlay (SBO). Areas covered by the LSIO or SBO may require raised floor levels, for example to address flooding risk. There were two schedules introduced for both overlays depending on the extent of the flooding. The LSIO is applied to indicate areas of riverine flooding and the SBO is applied to indicate areas of land affected by local drainage network flooding. The Heathcote Flood Study updated the planning controls to approximately 320 properties. A flood study for Marong is proposed to be implemented along with the Marong Township Plan (via Amendment C263gben). Further flood studies are also required in the future for Redesdale and Lockwood.

While it may be possible to manage the flooding risk in some new developments through controls such as elevated housing, expanded drainage basins, and water sensitive urban design, these measures may not be appropriate in other areas as potential flooding risk is too significant to allow for more intensive residential development.

Current planning controls are based on a one in 100 flood event. The storm events in December 2023 and January 2024 were much more significant than a 1 per cent Annual Exceedance Probability (AEP) event in certain areas including Huntly and Goornong. Given the likely increase in flood events in the future as a result of climate change, the City will look to impose higher level controls beyond those referenced in the *Infrastructure Design Manual*. This will be particularly the case where land is proposed to be rezoned to enable residential development.

Drainage design is currently based on a 1 per cent (AEP). It may be that in certain areas it may be more appropriate to design new development areas to a higher AEP given the potential for flooding. This will need to be considered in the preparation of Structure Plans and the rezoning of residential investigation areas and key development sites.

8 *Department of Home Affairs (2023) Victorian floods and storms commencing 24 December 2023. https://www.disasterassist.gov.au/Pages/disasters/current-disasters/Victoria/victorian-floods-and-storms-commencing-24-december-2023.aspx*

9 *Department of Home Affairs (2022) Victorian Floods. https://www.disasterassist.gov.au/Pages/disasters/current-disasters/Victoria/Victoria-floods-06102022.aspx*

4.4 Significant Agricultural Land

The City commissioned the Centre for Regional and Rural Futures at Deakin University to undertake a Land Suitability Assessment within Greater Bendigo to better understand agricultural productivity. The study assessed the following crops: phalaris (a pasture grass), canola, wheat, brassicas, grapes, and viticulture (warm climate wine grapes).

The results of this assessment indicated that rural areas in Greater Bendigo is well suited for agriculture. Climate projection data indicated has decreasing rainfall and increasing temperatures are expected into the future Greater Bendigo (more detail on climate mapping is shown in Appendix C). Despite an expected moderate decline in suitability over time (under current farm management practices) Greater Bendigo will fare well compared with other areas.

The City is currently undertaking additional work around agricultural land quality as part of the background to its Rural Areas Strategy which will provide greater guidance as to the areas of higher agricultural value.

Given the land in Greater Bendigo is generally productive, more so in some locations, and likely to remain so even with the expected impacts of climate change, it becomes even more important to protect higher-value farming land from residential encroachment where possible or the further fragmentation of agricultural land. This is consistent with Clause 14.01 (Agriculture) within the Greater Bendigo Planning Scheme.

It is important to highlight there is some farming land in and surrounding both Huntly and Strathfieldsaye which have been identified for future growth. Where there are existing operating enterprises, these should be protected, and development should only occur in these areas should operations cease in the future.

4.5 Land Contamination

Due to the Greater Bendigo's gold mining history and the associated industry and environmental degradation, there are varying degrees of soil contamination in the municipality, from heavy metals such as arsenic, lead, zinc, and copper, as well as risks from unmapped mine shafts and vents. There are also sites that have other forms of contamination such as old landfills and petrol stations, and sites that should be investigated for contamination prior to the use changing, such as drycleaners, some waste recyclers, and some manufacturing and industrial sites.

Many of the contaminated sites the City is aware of are close to amenities and otherwise would be ideally suited to residential development. The presence of soil or groundwater contamination adds considerable cost to assessing and preparing sites for development, particularly for residential or other sensitive uses. In some cases, contamination can make development for sensitive uses unviable.

Where these sites are owned by State or Commonwealth Government (Crown land), continued advocacy for these sites to be remediated is recommended. This would help to deliver more housing in established areas. Where there is residual contamination that requires ongoing management, durable controls must be in place to manage residual risks and the ongoing safety of current and future residents. As soil and groundwater remediation techniques continue to develop and be commercialised, it is possible that the costs of remediation may change over the timespan of the MGS.

The State planning system can trigger an investigation of sites when the land use changes. State legislation operates under a 'polluter pays' principle, which nominally requires the polluter to bear the costs of remediation.[10] However, in the case of historical pollution, often the original polluter no longer exists or cannot be located, and the costs must be borne by another party such as the landowner or developer.

As part of the implementation of the MGS further work will be undertaken in future years to better understand and address contamination across the municipality.

4.6 Intensive Animal Industries

Issues around intensive animal production are complex. To try to improve planning processes associated with assessing planning permit applications for new, or the expansion of existing animal production enterprises Agriculture Victoria has recently consulted on draft new land use planning regulations for animal production.[11]

Intensive animal industries if not designed and sited well can impact residents living nearby through odour, noise, vehicle movements, dust, lighting, and noxious pollutants from concentrated waste. Therefore, it is important to ensure adequate separation buffers between pollution sources (such as sheds or pens) and housing, as well as best practice in design, siting, operation and management to maintain amenity.[12]

Because these industries need to import feed and export stock or products in high volumes, the requirement for good road access means that they cannot always be situated well away from residential areas.

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10 *Environment Protection Act (2017) Part 2.3 (17) Principles of Environment Protection, https://content.legistlation.vic.gov.au/sites/default/files/2021-06/17-51aa005%20authorised.pdf*

11 *Agriculture Victoria (2024) New land use planning regulations for animal production https://engage.vic.gov.au/new-land-use-planning-regulations-for-animal-production*

12 *Agriculture Victoria (2018) Victorian Code for Broiler Farms 2009 plus 2018 Amendments. https://agriculture.vic.gov.au/_data/asset/pdf_file/0005/537782/VIC-broiler-code-2009.pdf*

Harmonious co-existence of intensive animal industries and housing requires careful planning and on-going cooperation between the City, relevant regulators (such as EPA Victoria), proponents, animal industry managers and workers, and residents.

Due to the way Greater Bendigo has expanded over time, there are intensive animal operations now located relatively close to residential development particularly in Huntly and Strathfieldsaye. Any further expansion of the UGB must consider these existing operations and the importance of these operations in providing employment and contributing to the Greater Bendigo economy. Given the MGS is a long term strategy, it does provide some directions for land closer to some of these operations. However, any rezonings cannot occur while these operations continue in their existing location.

4.7 Pollution with wide-spread impacts

As the population of Greater Bendigo grows, demand for housing space is increasing. Areas that were previously considered unattractive due to local amenity concerns are becoming more highly sought after. The increased demand for residential development in areas where buffers exist to protect industry or intensive animal industry operations are coming under increasing pressure. Where housing borders existing industrial, commercial, or agricultural activities it can be complex to manage amenity impacts sufficiently.

Residents who live near industrial, commercial, extractive industry, or agricultural sites may be impacted by dust, odour, noise, and light. These diffuse forms of pollution are difficult to manage and may require treatment at both the source and the receiver, increasing costs and the need for ongoing cooperation between residents, operators, and regulators. These pollutants can reduce quality of life for residents and property values. For operators, they may require expensive mitigation measures or alterations to operations (such as limiting hours) that negatively impact on commercial viability.

The Bendigo Livestock Exchange also plays a significant role in supporting agricultural production in the region. Again, adequate buffers from residential encroachment are needed to ensure existing and future operations of the Livestock Exchange given the potential odour impacts.

When considering new residential development in areas at risk of impacts from nearby operations, there are options that can reduce impacts and can be most cost-effective when built in at the design stage. These may include siting buildings that reduce exposure of windows and garden spaces to prevailing winds, well-sealed houses that exclude dust, noise, and odour, including internal clothes-drying spaces, and including effective sound and light treatments in both the building construction and interior design. Other landscape considerations may include vegetated windbreaks and plantings to reduce dust, noise, and light infiltration, as well as increasing visual amenity, constructing sound walls to reduce noise, and locating non-sensitive areas (such as stormwater management basins) close to the pollution source.

It is important to limit residential development where known conflicts exist to reduce likely amenity impacts on new residents.

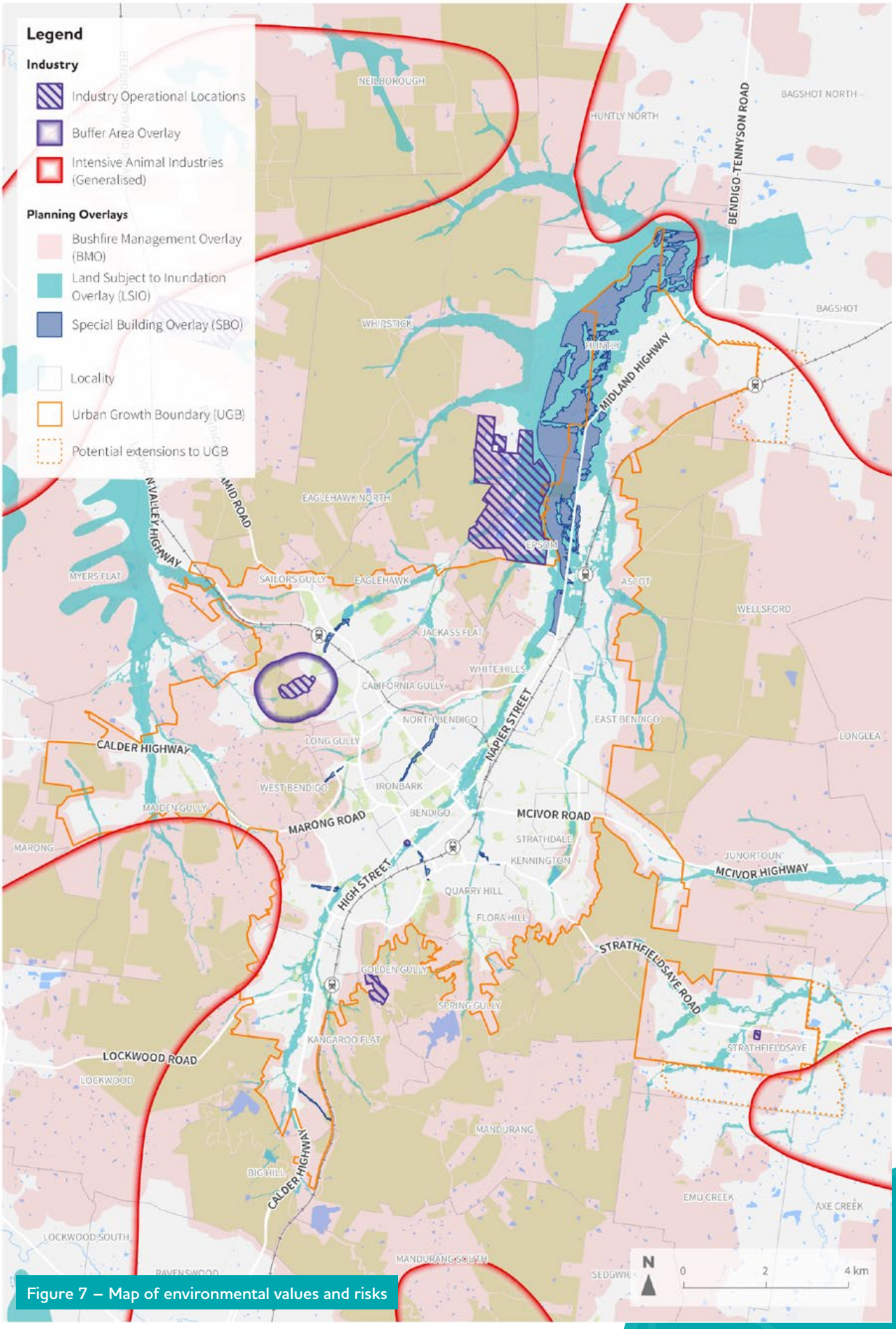


Figure 7 – Map of environmental values and risks

In summary:

- There are many environmental constraints on development across Greater Bendigo.
- Growth must be directed to areas of low bushfire risk and where flooding risks are low or can be adequately managed both on site and so they don't increase downstream impacts.
- Biodiversity and significant agricultural land must be protected.
- As the municipality grows there is more pressure on areas where there are intensive animal industry operations. These areas must be protected from residential encroachment so as to not impact on their operations or on residents in these areas through odour or other offsite amenity impacts.
- There are many land use conflicts that currently exist in Greater Bendigo. This includes proximity of industrial land, extractive industries, a wastewater treatment plant and an operating landfill near residential development. There is the potential for some of this to be managed through planning tools such as a Buffer Area Overlay which is proposed to be applied around the landfill and wastewater treatment plant. However, it is also important to not encourage more residential development in these locations to further increase the amenity impacts.

5. Built form and Character

Built environment, heritage and neighbourhood character objectives also have a key influence on growth and housing within suburbs, towns and settlements and are currently applied across Greater Bendigo through the Heritage Overlay, Neighbourhood Character Overlay and Design and Development Overlay controls.

5.1 Heritage

The buildings and places across Greater Bendigo demonstrate how the municipality has grown and changed over time. The City has a role in protecting valued heritage assets which are important to the community.

5.1.1 Victorian Heritage Register

The City has a number of State-level heritage places identified in the Victorian Heritage Register (VHR) in the Bendigo City Centre as well is in its townships. There may be additional considerations as to what is an acceptable level of development at or adjacent to a VHR building. This may include:

- Building height to ensure this does not overpower or detract from VHR places.
- Considerations of proportion, massing, quality design and materials.
- Not impacting on view lines to heritage places.

Approvals are required when working with places in the VHR.

5.1.2 Historical Archaeology and Places in the Victorian Heritage Inventory

Given the gold mining history of the Bendigo areas, as well as buildings, there is likely a number of potential historical archaeological sites which are currently unknown. Under the *Heritage Act 2017*, it is mandatory to report any historical archaeological site identified within 30 days of discovery.

Locating archaeological remains may not prevent development activities from taking place but may require a program of archaeological investigations, recording, reporting and artifact management will be required as conditions on the consent.

5.1.3 Heritage Overlay

At a local level, the Heritage Overlay (HO) can be applied to individual places or precincts that are important to protect which meet certain thresholds and criteria. There are currently 6,500 properties covered by the HO, and the City is undertaking additional heritage studies over the coming years which might lead to revised HOs.

While it is possible to develop dwellings within a HO, for example an additional building to the rear of an existing dwelling or through adaptive reuse, a HO does add additional complexity due to the need to retain the important heritage elements of buildings or properties. In Greater Bendigo, inner urban areas offer residents excellent access to services and attractive liveability, however there are also a large number of HOs.

5.2 Neighbourhood Character

5.2.1 Neighbourhood Character

Planning Practice Note 43 (Understanding Neighbourhood Character) defines Neighbourhood Character as:

"The combination of the public and private realms. Every property, public space or piece of infrastructure makes a contribution, whether great or small. It is the cumulative impact of all of these contributions that establishes neighbourhood character. The key to understanding character is being able to describe how the features of an area come together to give that area its own particular character. Breaking up character into discrete features and characteristics misses out on the relationships between these features and characteristics. Understanding how these relationships physically appear on the ground is usually the most important aspect of establishing the character of an area."

The Housing and Neighbourhood Character Strategy (HNCS, page 19) identifies various elements that define neighbourhood character including building form, scale, siting, materials, front fencing, vegetation type and density, subdivision pattern, topography and other notable neighbourhood features. It identifies ten neighbourhood character typologies to define the era of development in suburban areas as well a substantial change character. Where this character type has been applied, it can be expected that the area will undergo a greater density of development and change than other areas. In this instance the preferred character is focused on a ensuring a good design outcome.

Residential lots of over 5,000 square metres have not been allocated to a neighbourhood character precinct. The reason for this is that in these areas it can be expected that the sites will establish their own character. In these areas urban design, transport connections and subdivision/development layout are particularly important.

5.2.2 Neighbourhood Character Overlay

Neighbourhood Character Overlays (NCOs) are applied to places which have distinct or particularly unique character elements that require preservation. This may include a consistency in the design of buildings or the setting of buildings in a streetscape. Any new buildings or redevelopments in these areas need to demonstrate consistency with the elements of the surrounding preferred character.

As part of the Housing and Neighbourhood Character Strategy (HNCS), the application of the NCOs has been investigated given the current NCOs have been in place approximately 20 years. The HNCS has determined that:

- The NCO should be removed from properties with an existing HO as both overlays should not apply.
- A heritage study still needs to be undertaken prior to the removal of an NCO in some cases. Should properties be identified as having heritage value and a HO be recommended in the study, the NCO would then be removed.
- In some instances, the NCO is recommended for removal due to a change in development patterns, or the NCO may no longer be deemed appropriate.

Removal of the NCO is proposed in a number of locations as outlined at Appendix A. This will form part of a future amendment to implement the MGS and HNCS.

5.3 Design and Development Overlay

The Design and Development Overlay (DDO) is applied to areas to provide additional guidance in relation to the design or built form of development to achieve relevant objectives for a particular site or precinct. In some instances, in Greater Bendigo the DDOs set minimum lot sizes. For example, around the Bendigo Airport (DDO1) or in Maiden Gully (DDO10). This limits the development potential in these areas.

The recent *Greater Bendigo Planning Scheme Review 2023* and the previous review from 2019 identified the need to undertake a review of the DDOs given the number and age of many of these overlays. This review is currently underway.

In summary:

- The strong history of Greater Bendigo means that there are many areas where the HO applies. In well serviced areas in particular an increased density of development may still be suitable in these locations.
- The HO and NCO should not be applied to the same property. NCO's should only be applied in discrete areas of particular character value.
- The City needs to determine if all the DDOs in place or are still relevant and whether they need to be removed or changed to reduce the burden on landowners looking to develop their land.

6. City structure

6.1 Settlement Hierarchy

Greater Bendigo has an established settlement hierarchy with a range of suburbs, growth areas and townships.

Part 4 shows the urban framework plan for urban Bendigo as well as for rural Bendigo which designates the district and rural towns.

Settlement Hierarchy Designation	Locations	What this means
Regional City (significant growth)	Urban Bendigo including Marong	Urban Bendigo will accommodate the largest amount of growth. Growth is designated in combination of Structure or other Plans for growth areas and designated activity centres and for housing change areas outlined in Part 4 outside of this.
District Towns (moderate growth)	Heathcote, Elmore, Axedale	These towns are expected to accommodate some growth given their access to some services, facilities and sewer. The level of growth expected in each town is/or will be outlined in a structure or township plan considering existing opportunities and constraints.
Rural Towns (limited growth)	Goornong, Sebastian, Raywood, Lockwood, Mia Mia, Redesdale	Growth in these townships is expected to remain low. This would only change if these towns were sewered and there was an identified need for growth.

Table 10 – Settlement hierarchy

6.2 Activity Centre Hierarchy

Activity Centres are locations where residents have access to a range of opportunities to live, work, shop, access services, and use public spaces.

The Greater Bendigo Planning Scheme provides an Activity Centre Hierarchy for Greater Bendigo, detailing current and future activity centres. There are also several smaller Neighbourhood and Local Centres, Specialised Activity Centres and those in smaller townships. The Activity Centre Hierarchy is shown in Table 11.

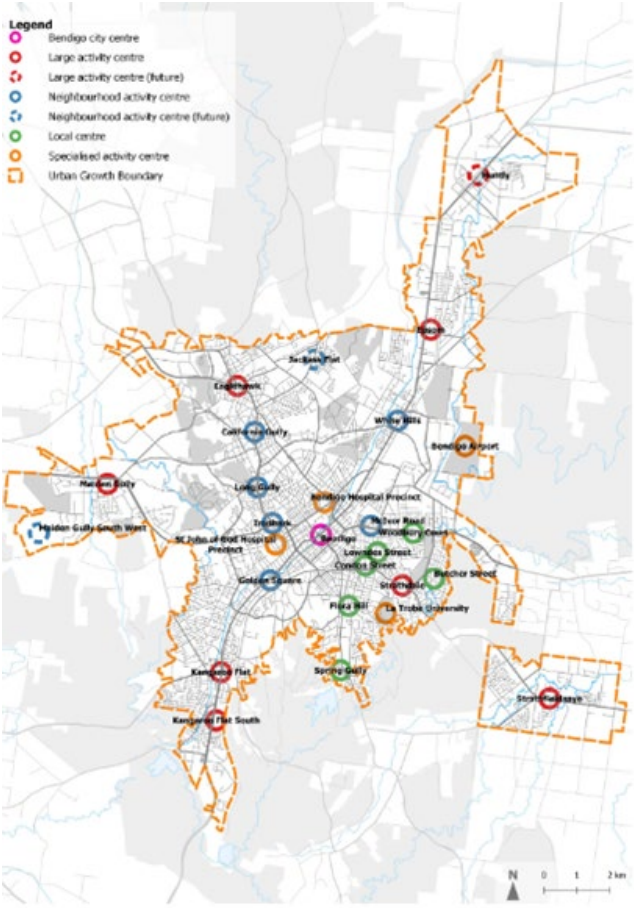


Figure 8 – Urban activity centre hierarchy framework plan

Hierarchy	Activity centre name	Strategies within the Greater Bendigo Planning Scheme
Central city	Bendigo City Centre	Promote the importance of the Bendigo City Centre as the principal retail and commercial centre for northern and central Victoria.
Large activity centre	Eaglehawk, Epsom, Heathcote, Kangaroo Flat, Kangaroo Flat South, Strathdale, Strathfieldsaye, Maiden Gully (Future), Huntly	Encourage a range of economic, social and some civic activities, together with goods and services to meet the daily and weekly needs of their suburban catchments.
Rural township	Axedale, Elmore, Goornong, Marong, Raywood, Redesdale – Mia Mia	Encourage rural townships to service a larger rural community and potentially travellers passing through.
Neighbourhood activity centre	California Gully, Maiden Gully South West (Future), Golden Square, Ironbark, Jackass Flat, Long Gully, McIvor Road, White Hills, Huntly (Future)	Encourage a mix of activities that meet common daily needs that primarily service the surrounding neighbourhood within walking distance.
Local centre	Butcher Street, Condon Street, Lowndes Street, Flora Hill, Woodbury Court, Spring Gully	Enable local centres to evolve but not expand.
Specialised activity centre	St John of God Hospital Precinct, Bendigo Airport, Bendigo Hospital Precinct, La Trobe University	Encourage specialised activity centres to provide complementary businesses and uses required to support them.

Table 11 – Activity Centre Hierarchy

These Activity Centres are the focus for commercial growth now and this will remain into the future particularly in the Bendigo City Centre and the large Activity Centres across the municipality. Activity Centres provide employment opportunities, as well as meeting resident's needs.

Outside of these centres new commercial development is generally not supported. However, it is noted that some commercial development occurs within other zones for example the Industrial 3 Zone.

The City recently commissioned SGS consulting to update its estimates of demand for retail and commercial floorspace. New estimates are updated for changes in population size, distribution, and per capita expenditure. In 2022, the largest unknown in retailing is the impact of COVID19 restrictions on usual shopping practices, particularly the degree to which online shopping and click-and-collect services will persist over the longer term.[13]

Nationally, online retailing has fallen from the peaks observed during the peak of the COVID pandemic but remain well above pre-COVID levels.[14] Alongside the shift to online retailing, supermarkets have diversified their offering to include new formats (such as click-and-collect). These changes have the potential to disrupt the current model of supermarkets acting as anchor stores in shopping centres, driving foot traffic past specialist retailers.[15] The broader effects of economic growth, changes in the cost of living, and wage growth on retail activity will also affect the future demand for retail space.

There is currently 464,495 square metres of commercial floor space within Greater Bendigo, 277,879 square metres is in the Bendigo City Centre, with a further 20,387 square metres located in Eaglehawk. It is expected that by 2056 there will need to be an additional 190,105 square metres of commercial floor space added, with half of this in the Bendigo City Centre. Commercial areas are structured in a hierarchy reflecting the number of people who access them, with the City Centre at the top, followed by the large activity centres and then the neighbourhood centres. If there are sustained changes in working practices, particularly for office-based workers, there will be flow on effects for City Centre retailers and hospitality venues.

13, 15 *SGS Economics and Planning (2022) Update of the Bendigo CLACS Floorspace Projections*

14 *ABS (2022) Retail Trade Australia, https://www.abs.gov.au/statistics/industry/retail-and-wholesale-trade/retail-trade-australia/sep-2022#key-statistics*

6.3 Growth areas

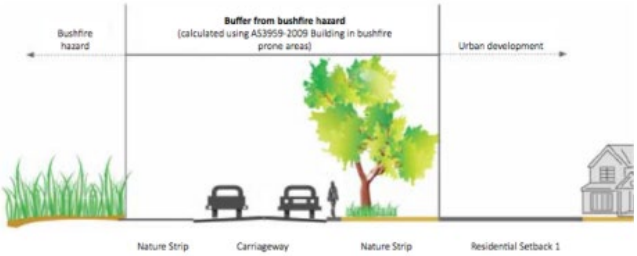
6.3.1 Marong

Marong has long been identified as a satellite township of Bendigo.

The factors that make Marong a suitable location for growth include its relatively flat topography, large land parcels with the ability to develop many of these sites without the requirement to remove substantial amounts of vegetation. Further, the Bendigo Regional Employment Precinct has the potential to deliver over the long term for 6,000 direct and indirect jobs, aligning with State and Local Planning policy of providing employment opportunities close to residential development.

The Marong Township Structure Plan was adopted in 2020 and sets out how growth can be achieved. It is currently being implemented in the GBPS via Amendment C263gben. There are 215 hectares of land in Marong that is designated as suitable for residential growth, which is estimated to deliver a total of 2,400 dwellings at 11 dwellings per net developable hectare. Land in these areas will need to be rezoned from a farming to residential zone through privately led rezoning requests.

Using perimeter roads to deliver bushfire protection in new subdivisions



Note 1: Where the required buffer is greater than the road reserve, the buffer may comprise the front setback in conjunction with vegetation management.

Figure 9 – Illustration of a perimeter road to provide required development setbacks (DELWP, 2015)

Overall considerations for progressing residential development in Marong:

- Ensure that growth is in accordance with the Marong Township Structure Plan (2020), or any subsequent updated version.
- Facilitate developer led planning scheme amendments to implement the future residential precincts identified in the Marong Township Structure Plan.
- Not support residential rezoning of land outside of areas identified in the Marong Township Structure Plan and Amendment C263gben but to continue to monitor land supply and take up.
- Ensure delivery of infrastructure is delivered is funded through a developer contributions scheme.
- Determine in working with Department of Transport and Planning and the Victorian Planning Authority the location of a future freight corridor to support the development of the Bendigo Regional Employment Precinct and to reduce freight movements through the town centre and identified residential growth locations.
- Support conventional dwelling densities of between 8-15 dwellings per hectare (lots ranging from 500-1000 square metres), with an average density of 11 dwellings per net developable hectare throughout the Township Structure Plan area.
- Support medium density housing of generally 15-25 dwellings per hectare (lots ranging from 200-500 square metres) in residential areas in the Mixed Use Zone and town centre, consistent with the Marong Township Structure Plan.

Planning requirements to address bushfire risk:

- Apply a Design and Development Overlay through Amendment C263gben which specifies buffer distances from vegetated areas. This applies to existing areas being rezoned from township zone to neighbourhood residential zone.
- Apply a Design and Development Overlay or a Development Plan Overlay to identified future residential precincts as part of any rezoning from farming to a residential zone to specify buffer distances from vegetated areas where required.
- Apply a Development Plan Overlay to the identified future residential precincts currently zoned farming prior to residential development which includes the following requirements for development plans:
  - The need for good urban design for new development with hard non-vegetated edges, including a perimeter road along the western, north-western and south-western interfaces of the growth area and avoiding vulnerable uses in the interface areas.
  - The provision of lot sizes of between 800-1,200 square metres in locations directly adjacent to a bushfire hazard, in accordance with DTP guidelines for settlement planning on the bushfire interface.

6.3.2 Maiden Gully

Residential development in Maiden Gully is challenging due to the inherent requirements of retaining native vegetation or obtaining offsets, and protecting life from bushfire risk which is the priority policy consideration. Despite this Maiden Gully has long been identified as a growth area in Greater Bendigo being within the urban growth boundary, with the *Maiden Gully Precinct Structure Plan* was adopted in May 2020.

Maiden Gully will continue to and is needed to form a role in the residential growth of urban Bendigo and is needed to meet long term growth needs, this includes the delivery of 1,400 dwellings at the Forest Edge Estate. A reduced growth area will enable a reduction of the bushfire risk to existing and future residents. Certain areas will see vegetation removed or offset where appropriate and buffers introduced, while other areas will be more suitable for lower density residential development than originally intended.

The next step to progress Maiden Gully is the preparation of a framework plan which directs growth to more accessible areas and where less vegetation is required to be removed. Given the delays in planning for residential development in Maiden Gully, the delivery of housing in this location should be seen as a priority. The preparation and implementation of a framework plan for this area should be set as a shortterm initiative.

Overall considerations for progressing residential development in Maiden Gully:

- Note the background context and direction within the Maiden Gully Precinct Structure Plan (2020). The adopted version doesn't adequately consider strengthening of bushfire risk in the planning scheme at Clause 13.02 or the Guidelines for the removal, destruction or lopping of native vegetation 2017.
- Prepare a new Maiden Gully Framework Plan to address the conflicting issues of bushfire risk and vegetation protection. This will need to identify areas unsuitable for residential development due to bushfire risk.
- Prepare a new development contributions scheme to fund the delivery of infrastructure for any proposed residential growth.

Planning requirements to address bushfire risk:

- The Maiden Gully Framework Plan must clearly specify uses within the precinct.
- Apply a Design and Development Overlay, where there is a forest interface to ensure there is an adequate buffer from vegetation to new development.
- Apply a Development Plan Overlay, having regard to detailed bushfire and vegetation assessments, to areas as part of any rezoning to enable development which includes the following requirements for Development Plans:
  - The identification of vegetated areas to be permanently retained, including tree species and densities.
  - The incorporation of perimeter roads along the boundaries of growth areas and any patches of hazardous vegetation.
  - The identification of appropriate access/egress for emergency vehicles and residents.
  - Carefully located land uses, to ensure that any risk to vulnerable community members (for example those in an aged care facility) can be minimised.
  - All new roads should comply with CFA's Design Requirements, Vehicle Access and Water Supply Requirements in Residential Developments.
  - The road layout of any new growth areas should provide at least two access and egress routes to existing or future BAL-LOW areas.
  - The provision of lot sizes between 800-1,200 square metres in locations directly adjacent to a bushfire hazard, in accordance with DTP guidelines for settlement planning on the bushfire interface.
  - The preparation of a landscape design and plant selection and plant selection in open spaces and in residential development that ensures a low risk of bushfire.
  - To prohibit the use of combustible fences such as brush or non-bushfire resistant timber in new development.
  - Avoiding vulnerable uses at the bushfire interface.

6.3.3 Huntly

The adopted *Huntly Township Plan 2009* identified residential land that was rezoned in 2011 to enable residential development and included approximately 46 hectares of a future growth area currently in an Urban Growth Zone. This land has been included as part of the identified land supply.

In 2020 the Huntly Development Contributions Overlay was applied to the 2011 residentially zoned areas and remains current. Given the time which has elapsed since the *Huntly Township Plan 2009* was adopted, and the construction of a new Huntly Train Station in 2022, it is important to review this plan and consider growth opportunities around the train station. This is also aligned with *Plan Melbourne 2017-2050* and the importance of delivering housing around regional train stations. Outside of identified areas, particularly around the train station, Huntly is also a low risk location (in much for the proposed growth area) from a bushfire perspective.

Through the implementation of the MGS there is proposed to be an expansion to the urban growth boundary in Huntly as highlighted in figure 10. This is required to meet long term housing growth needs.

A new structure plan is being prepared for Huntly which considers the existing Huntly township. This structure plan will need to also consider the additional growth location identified in the MGS. The structure plan will need to consider commercial and retail offerings as well as infrastructure needs to meet the needs of a larger Huntly population and its regional role to the rural townships north of Bendigo.

There are constraints to future development in Huntly which will need to be managed. These include the potential flooding around Sandy Creek, some areas of bushfire risk which will need to be managed through suitable planning tools, and the location of an intensive animal industries enterprise to the north of the precinct.

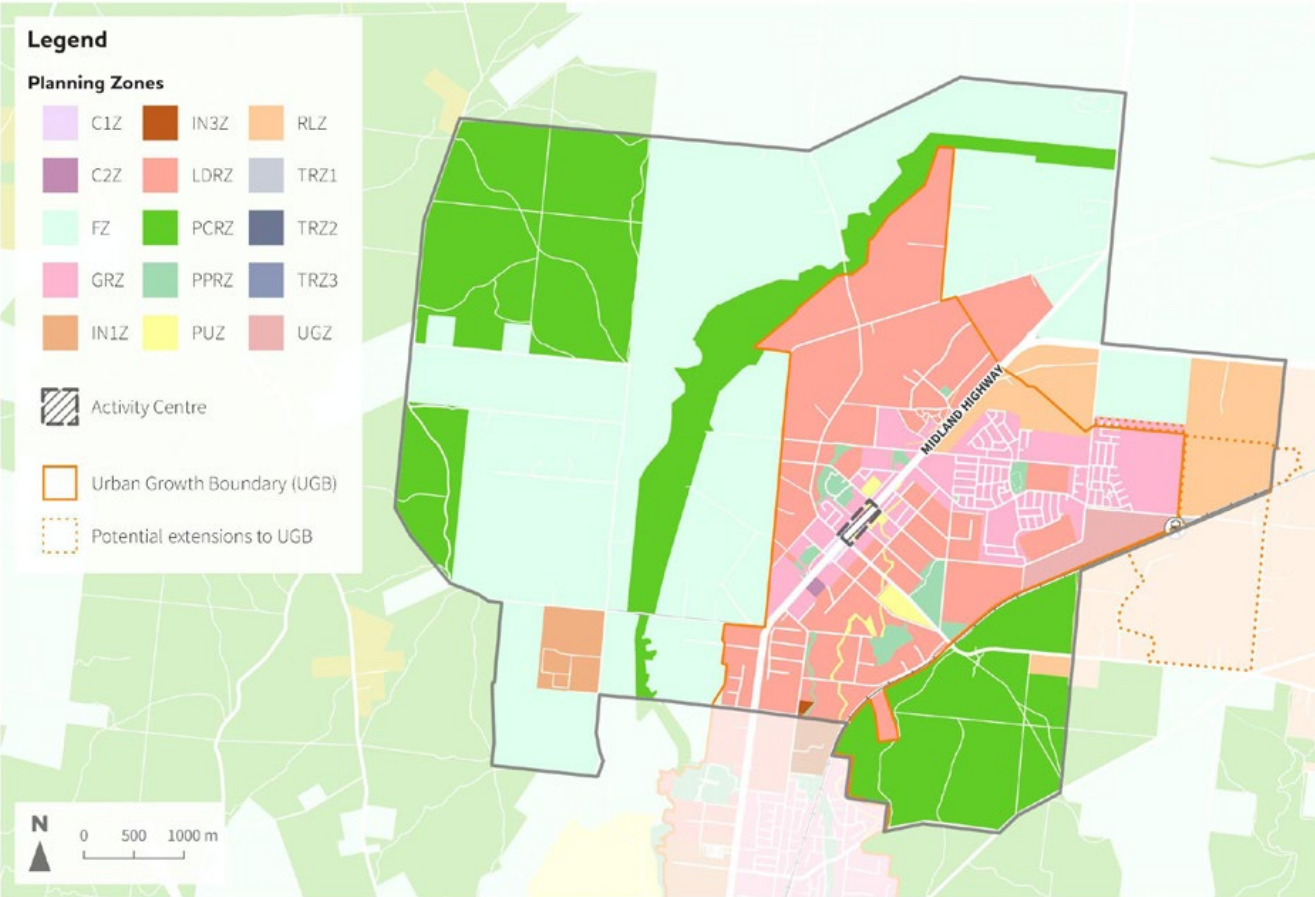


Figure 10 – Proposed Huntly expansion of the Urban Growth Boundary

Overall considerations for progressing residential development in Huntly:

- Prepare a Huntly drainage strategy to inform the long-term growth of Huntly and to assist with reducing any future flood impacts.
- Repair and/or replace critical sections of the earthen flood levee along Bendigo Creek south of Leans Road.
- Limit further access points along the Midland Highway to help create a walkable activity centre.
- Avoid and minimise harm to Aboriginal heritage values by ensuring the assessment and completion of Cultural Heritage Values Assessments in identified locations.
- Prepare a structure plan for any area identified for residential growth expansion, ensuring that the following is considered:
  - The integration of the existing township with the future expansion area.
  - The relationship between residential growth and bushfire risk, particularly in the south-west corner (east of Cruikshank Drive).
  - The protection of existing agricultural and industrial development from residential encroachment.
  - The determination of the most appropriate location for future commercial development.
- Complete a review to determine the appropriate buffer from Specialised Breeders Australia, located north of the Midland Highway. Once this is complete consider if there needs to be any changes to the Urban Growth Boundary south of the Midland Highway which should be considered through the Huntly Structure Plan.
- Continue to monitor land supply and take up of residential land within Huntly. Future residential development areas to the north of the existing Urban Growth Boundary in Huntly will be considered if required through the review of the MGS. This would only be on the basis that Specialised Breeders Australia relocates from their current facility and it is no longer used for the purposes of intensive animal industries. This would be the subject of future strategic work.

Planning requirements to address bushfire risk:

- Apply a Design and Development Overlay, where there is a forest interface to ensure there is an adequate buffer from vegetation to new development.
- Apply a Development Plan Overlay to areas as part of any rezoning to enable residential development which includes the following requirements for Development Plans:
  - The identification of vegetated areas to be permanently retained, including tree species and densities.
  - The incorporation of perimeter roads along the boundaries of growth areas and any patches of hazardous vegetation.
  - The identification of appropriate access/egress for emergency vehicles and residents.
  - Carefully located land uses, to ensure that any risk to vulnerable community members (for example those in an aged care facility) can be minimised.
  - All new roads should comply with CFA's Design Requirements, Vehicle Access and Water Supply Requirements in Residential Developments.
  - The road layout of any new growth areas should provide at least two access and egress routes to existing or future BAL-LOW areas.
  - The provision of lot sizes between 800-1,200 square metres in locations directly adjacent to a bushfire hazard, in accordance with DTP guidelines for settlement planning on the bushfire interface.
  - The preparation of a landscape design and plant selection and plant selection in open spaces and in residential development that ensures a low risk of bushfire.
  - To prohibit the use of combustible fences such as brush or non-bushfire resistant timber in new development.
  - Avoiding vulnerable uses at the bushfire interface.

6.3.4 Strathfieldsaye

The *Strathfieldsaye Township Plan* was adopted in 2010. Since this time over 200 new residents and around 80 more dwellings have been added each year, with a higher rate of growth between 2016 and 2021.[16]

Much of the land within the *Strathfieldsaye Township Plan 2010* has now been rezoned for residential development. The development areas which have not been rezoned or developed to date are more challenging for various reasons. This includes waterways traversing the township, environmental and vegetation protection tools limiting development in some areas, and the distance to the Bendigo Water Reclamation Plant adding additional costs in servicing the land. There are also operating farming and intensive animal industry enterprises to the east and south-east respectively meaning it would be inappropriate to develop these areas while these operations continue.

The *Strathfieldsaye Urban Design Framework* was adopted in 2017 and implemented via Amendment C232gben. This has provided clear development outcomes for the Strathfieldsaye Town Centre. Since this was implemented, there has been interest from developers for more commercial and mixed-use developments within the town centre aligned with the Framework.

In the short to medium term within the area identified in the *Strathfieldsaye Township Plan 2010*, there is unlikely to be large amounts of growth outside of the areas already zoned general residential due to the challenges identified above.

There is however the potential over the medium to longer term for growth to the south and east of the existing growth area, as shown in figure 11. This area should be investigated further through a future Structure Planning process. Development constraints in include vegetation, bushfire, flooding, intensive animal industries and productive farming enterprises.

16 *ID consulting, https://profile.id.com.au/bendigo*

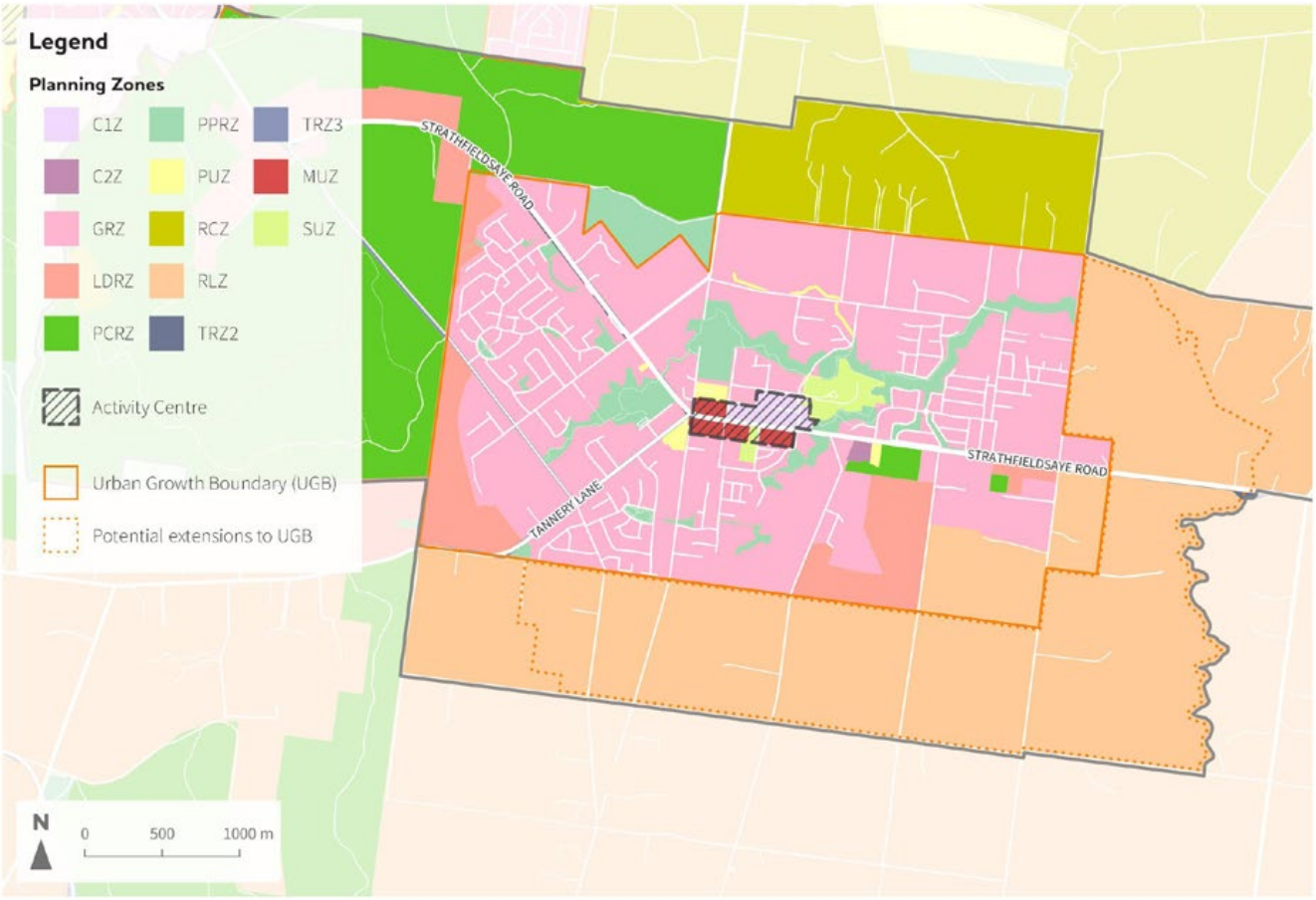


Figure 11 – Proposed Strathfieldsaye expansion of the Urban Growth Boundary

Overall considerations for progressing residential development in Strathfieldsaye:

- Encourage medium density development proximate to the existing commercial core.
- Protect existing agricultural development from residential encroachment.
- Avoid and minimise harm to Aboriginal heritage values by ensuring the assessment and completion of Cultural Heritage Values Assessments in identified locations.
- Prepare a plan for any area identified for residential growth expansion, ensuring that the following is considered:
  - Limiting additional residential development in the south-east corner of the potential growth area (to the west of Tannery Lane, James Cook Drive, Schilling Lane) and other areas with high vegetation coverage and bushfire risk.
  - A rapid risk assessment of flooding, with detailed recommendations for more detailed modelling and mapping and mitigation measures.
  - Integrating the existing township with the new growth area.

Planning requirements to address bushfire risk:

- Apply a Design and Development Overlay, where there is a forest interface to ensure there is an adequate buffer from vegetation to new development.
- Apply a Development Plan Overlay to areas as part of any rezoning to enable residential development which includes the following requirements for Development Plans:
  - The identification of vegetated areas to be permanently retained, including tree species and densities.
  - The incorporation of perimeter roads along the boundaries of growth areas and any patches of hazardous vegetation.
  - The identification of appropriate access/egress for emergency vehicles and residents.
  - Carefully located land uses, to ensure that any risk to vulnerable community members (for example those in an aged care facility) can be minimised.
  - All new roads should comply with CFA's Design Requirements, Vehicle Access and Water Supply Requirements in Residential Developments.
  - The road layout of any new growth areas should provide at least two access and egress routes to existing or future BAL-LOW areas.
  - The provision of lot sizes between 800-1,200 square metres in locations directly adjacent to a bushfire hazard, in accordance with DTP guidelines for settlement planning on the bushfire interface.
  - The preparation of a landscape design and plant selection and plant selection in open spaces and in residential development that ensures a low risk of bushfire.
  - To prohibit the use of combustible fences such as brush or non-bushfire resistant timber in new development.
  - Avoiding vulnerable uses at the bushfire interface.
  - Restrict or prohibit the use of combustible fences such as brush or non-bushfire resistant timber.

6.4 Key Development Sites

Urban Bendigo has several previously identified key development sites which are mapped in Clause 02.04 (Urban Strategic Framework Plan) in the Greater Bendigo Planning Scheme. The MGS expands on this list and considers other sites which may be suitable for residential development within the existing UGB. The development of these sites is important to increase the supply of housing for a growing population. Many of these areas are well located and close to facilities, services and transport, therefore suitable for denser forms of development.

The current infill projections as outlined in the Capacity Analysis do not consider the market dynamics of land development. Most of these key development sites have challenges that have prevented them being brought to market previously.

A summary of these sites, existing challenges to development and recommendations is provided in Appendix B.

The greatest potential for infill development exists within the City Centre. The City, through Amendment C279gben is looking to introduce the Activity Centre Zone to provide more clarity as to preferred design outcomes and to help make the planning process easier for all parties. A summary of Strategic Sites in the Bendigo City Centre is shown in Figure 12. This has the potential to deliver over 800 dwellings out of a total potential of around 1,300. As the main employment and transport hub for the broader region there is significant capacity to deliver a diversity of housing which is likely to be attractive to residents who want to be able to access retail, hospitality and services in walking distance.

Figure 12 – Key development site in the Bendigo City Centre[17]

Other infill opportunities include former mine sites (acknowledging that there are contamination issues that would need to be resolved), other unused government land such as around train stations, and large privately owned sites which may need to be rezoned to enable residential development.

6.5 Employment nodes

Greater Bendigo is the key economic hub for the Loddon Campaspe region, with 53 per cent of jobs in the region located in the municipality.[18]

There are 55,000 jobs in Greater Bendigo,[19] and the municipality benefits from having a largely self-contained workforce, with 84 per cent of employed residents also working in the municipality.[20]

There are a number of employment nodes in Greater Bendigo. The biggest of these is the Bendigo City Centre including the Bendigo Hospital, the largest employer in Greater Bendigo. Currently there are over 11,500 workers employed in Health Care and Social Assistance.[21] With a growing and ageing population there will likely be strong growth in this sector.

Manufacturing and construction are also strong in Bendigo and there are 23 industrial precincts in Greater Bendigo, the largest of these being in East Bendigo with 964 hectares. There is currently a significant shortage of industrial land in Greater Bendigo with less than 100 hectares remaining. Planning for a new large employment precinct to the south of Marong is planned. The Bendigo Regional Employment precinct could provide 6,000 direct and indirect jobs once fully developed. This will be important in providing employment in the municipality and surrounding areas but in particular to the west of Bendigo.

Greater Bendigo benefits from having LaTrobe university. Located in Flora Hill only three kilometres from the Bendigo City Centre, the campus employs 400, and having more than 4,000 students.[22]

17 *Source: Draft Urban Design Framework Bendigo City Centre*

18 *REMPLAN Greater Bendigo Economic Profile*

19, 21 *REMPLAN, Greater Bendigo Economy*

20 *Source: Australian Bureau of Statistics, Census of Population and Housing 2021. Compiled and presented in profile.id by .id (informed decisions).*

22 *LaTrobe University, About the Bendigo Campus, https://www.latrobe.edu.au/bendigo/about*

Overall, the municipality is well placed to provide employment opportunities in line with a growing population. Opportunities must be well serviced to minimise the need for employees to drive to work.

6.6 Transport Networks

Access to transport is a key consideration in determining where growth should occur, particularly where there is a regular and reliable passenger train service or locating development along key transport corridors.

In 2015, Council adopted the *Connected Greater Bendigo: Integrated Transport and Land Use Strategy* (ITLUS). The objectives of this strategy include:

- Reduce short trips made by car within urban Bendigo
- Use innovative city design to support greater levels of walking, cycling and better public transport to better connect people and places
- Further strengthen existing innovative partnerships between the City and key organisations.

The delivery of ITLUS will deliver health, economic and environmental benefits. It is estimated that the transport sector accounts for 22 per cent of Greater Bendigo's emissions, with 21 per cent from road emissions and only one per cent generated by rail.[23] Car ownership also represents a considerable cost to households.[24]

The City and Victorian State Government have invested heavily in recent years in the provision of infrastructure to meet growing community needs. This includes adding train stations at Goornong, Raywood and Huntly in 2022, and the addition and improvement to on-road and off-road cycle paths. Despite this investment, residents are choosing to own private vehicle in greater numbers, with most Bendigo households in 2021 owning two or more cars. There has also been a decline in the percentage of people walking and cycling to work between the 2016 and 2017 census.[25]

In planning for population growth, it is important to consider how over the long term to facilitate fundamental shifts in transport behaviour. This will become increasingly necessary to reduce the cost burden of delivering additional and upgraded road infrastructure, and to reduce the environmental and amenity impacts of existing areas and new developments.

When planning for residential development new development must integrate with existing active and public transport infrastructure. It is especially important to provide infrastructure connections, for example walking pathways to train stations and cycling connections to off-road cycle paths.

Council has adopted the *Greater Bendigo 2030 Zero Emissions Roadmap*. Transport actions of relevance to the MGS include to improve walking and cycling infrastructure, advocating for improvements to public transport and the installation of electric charging stations in strategic locations.[26]

23 *Snapshot Greater Bendigo. 2021-2022, Municipal Emissions Snapshot, https://snapashotclimate.com.au/locality/municipality/australia/victoria/greater-bendigo*

24 *RACV (2021) Car running costs 2021, https://www.racv.com.au/royalauto/transport/cars/victoria-cheapest-expensive-cars-2021.html*

25 *Australian Bureau of Statistics, Census of Population and Housing 2016 and 2021. Compiled and presented by id (informed decisions)*

26 *Greater Bendigo 2030 Zero Emissions Roadmap, https://www.bendigo.vic.gov.au/sites/default/files/2023-09/Greater-Bendigo-2030-Zero-Emissions-Roadmap.pdf*

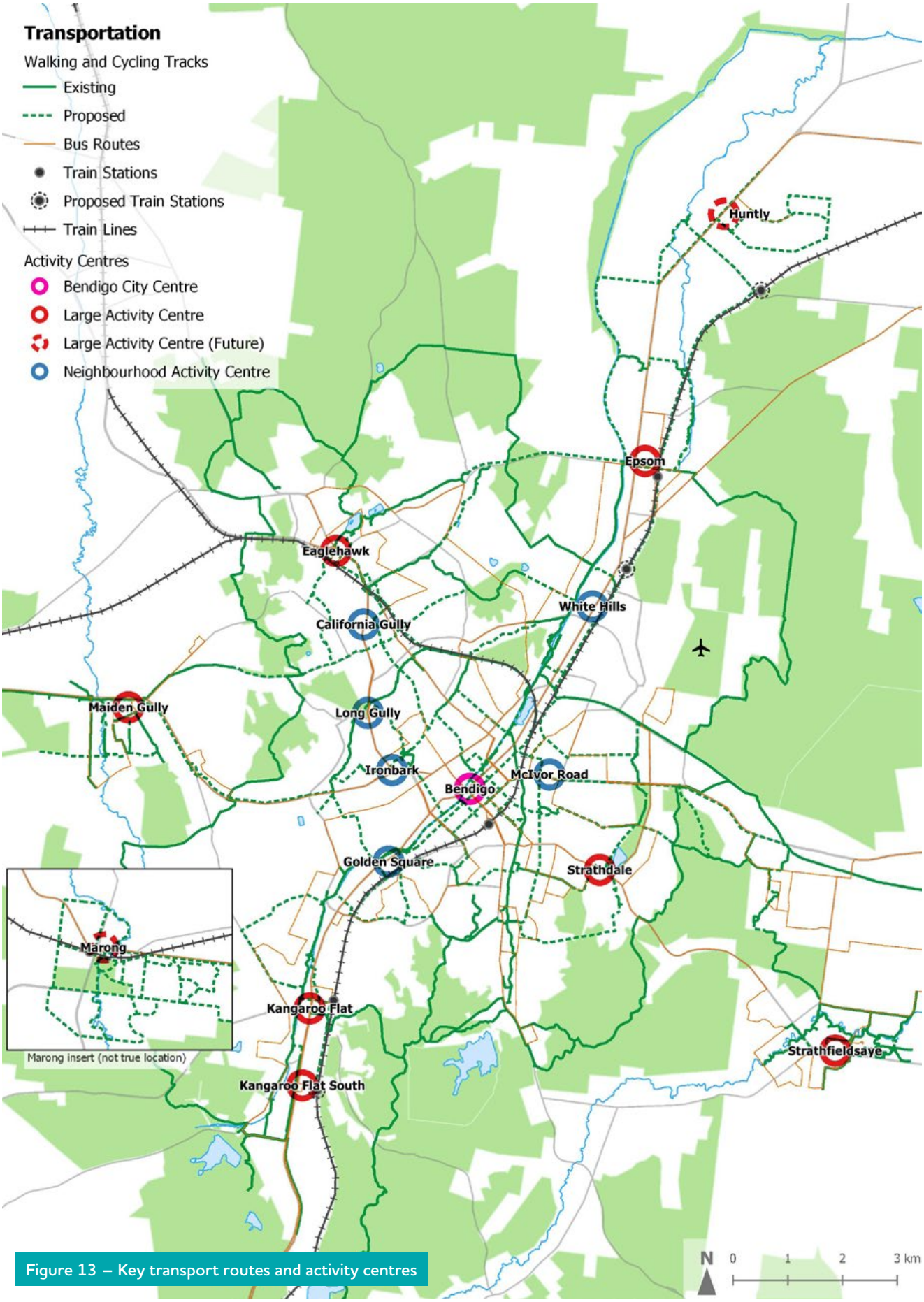


Figure 13 – Key transport routes and activity centres

6.6.1 Walking and Cycling

The adopted *Walk, Cycle Greater Bendigo Strategy* (2019) identifies that there are over 700km of footpaths, 165km of trails and 12 road underpasses across Greater Bendigo but these are not evenly distributed and may not meet future need.

A connected cycling network separated from motorised traffic would help to encourage greater take up, and safer travel by bike.

This infrastructure, combined with support to build a stronger culture of active travel, will help to engender a shift in travel behaviour away from private motor vehicles.

Given the health and wellbeing benefits of having access to safe and separated walking and cycling connections, it is essential these are considered through the (precinct) structure planning process. Public space lighting is a major contributor to pedestrians' sense of safety and should be designed to optimise both available light and energy efficiency. Planting appropriate tree species in the public areas of new developments also increases comfort when walking and cycling, particularly as future daytime temperatures rise.

6.6.2 Public Transport

There are now eight railway stations within Greater Bendigo: Bendigo, Eaglehawk, Elmore, Epsom, Goornong, Huntly, Kangaroo Flat, and Raywood. The recent construction of the Huntly station combined with the relatively large lot sites, creates substantial opportunities for growth around that station.

In addition to the recently funded stations, the City is advocating for the reopening of decommissioned train stations identified in the ITLUS. The highest priority is Golden Square station, as identified in the adopted *Golden Square Structure Plan 2022*.

As well as the train network, Greater Bendigo is serviced by a local bus network that provides a reasonable level of coverage across the Bendigo urban area, and a school bus network. There are opportunities to improve the frequency and coverage of these services, particularly as the population grows.

6.6.3 Private vehicle use

Across Greater Bendigo private car ownership continues to grow. Car ownership has increased since 2016, with households with three or more vehicles reporting the largest percentage increase (up 2.1 per cent).[27] Less than five per cent of Greater Bendigo households do not have use of a car.

Continued reliance on car travel, particularly for short trips, is problematic for a growing city. It will start to have adverse impacts on amenity through greater traffic volumes, will require considerable investment in road and parking infrastructure, and will limit mobility options for people who cannot or choose not to drive, particularly as the population ages.

Despite the aspirations through various strategies to move away from car travel, particularly for short distances, evidence suggests people are predominately choosing to drive. For example, despite over 90 per cent of employed residents both living and working in Greater Bendigo, seven in 10 are commuting to work by car.[28] More attractive, accessible, and practical transport options will need to be provided to support a transition away from private vehicle use.

6.6.4 Electric Vehicles

The *Climate Change and Environment Strategy 2021-2026* sets an aspiration that 20 per cent passenger vehicles sold in Greater Bendigo by 2026 will be electric vehicles (including battery electric vehicles, plug-in hybrid electric vehicles, fuel cell electric vehicles and non-plug-in hybrid electric vehicles), with that goal rising to 95 per cent by 2036.

Currently across Australia, the take-up of electric vehicles is about 0.7 per cent of new vehicles sold.[29] However, rising petrol prices and falling costs of electric vehicles will likely continue to drive consumer uptake,[30] particularly as current barriers to supply are resolved. While the City does not have control over the price and availability of electric vehicles in Australia, it does have a role in encouraging the installation of charging stations to support uptake.[31]

The installation of charging stations should be considered in new housing and commercial developments.

6.6.6 Freight

Efficient freight services that connect urban Bendigo to other markets provides a foundation for a healthy and productive economy, but also raises challenges in terms of safety (including air quality), impacts to amenity and environmental sustainability.

The municipality contains several major freight routes including the Calder Freeway/Highway (M79/A79), Northern Highway (B75), Wimmera Highway (B240) and Midland Highway (A300), airfreight via Bendigo Airport, and rail freight via the Bendigo line. Freight is also a major employer, with over 1,600 people employed in transport, postal services and warehousing in 2021 along with over 1,000 people in supporting industries, such as transport equipment manufacturing and fuel and vehicle parts retailing.[32]

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27 *Australian Bureau of Statistics, Census of Population and Housing, 2016 and 2021 (Enumerated data). Compiled and presented in profile id by id consulting*

28 *Australian Bureau of Statistics, Census of Population and Housing, 2016 and 2021, Compiled and presented by profile id by id consulting*

29 *Institute for Sensible Transport, Understanding where electric vehicle ownership is highest in Australia*

30 *Australian Renewable Energy Agency (2022) Electric vehicles, https://arena.gov.au/renewable-energy/electric-vehicles/*

31 *Energia, Australian Renewable Energy Agency & Clean Energy Finance Corp (2018), Australian Market Study, https://arena.gov.au/assets/2018/06/australian-ev-market.study-report.pdf*

32 *Australian Bureau of Statistics (2022), Census Population and Housing, Working Population Profile*

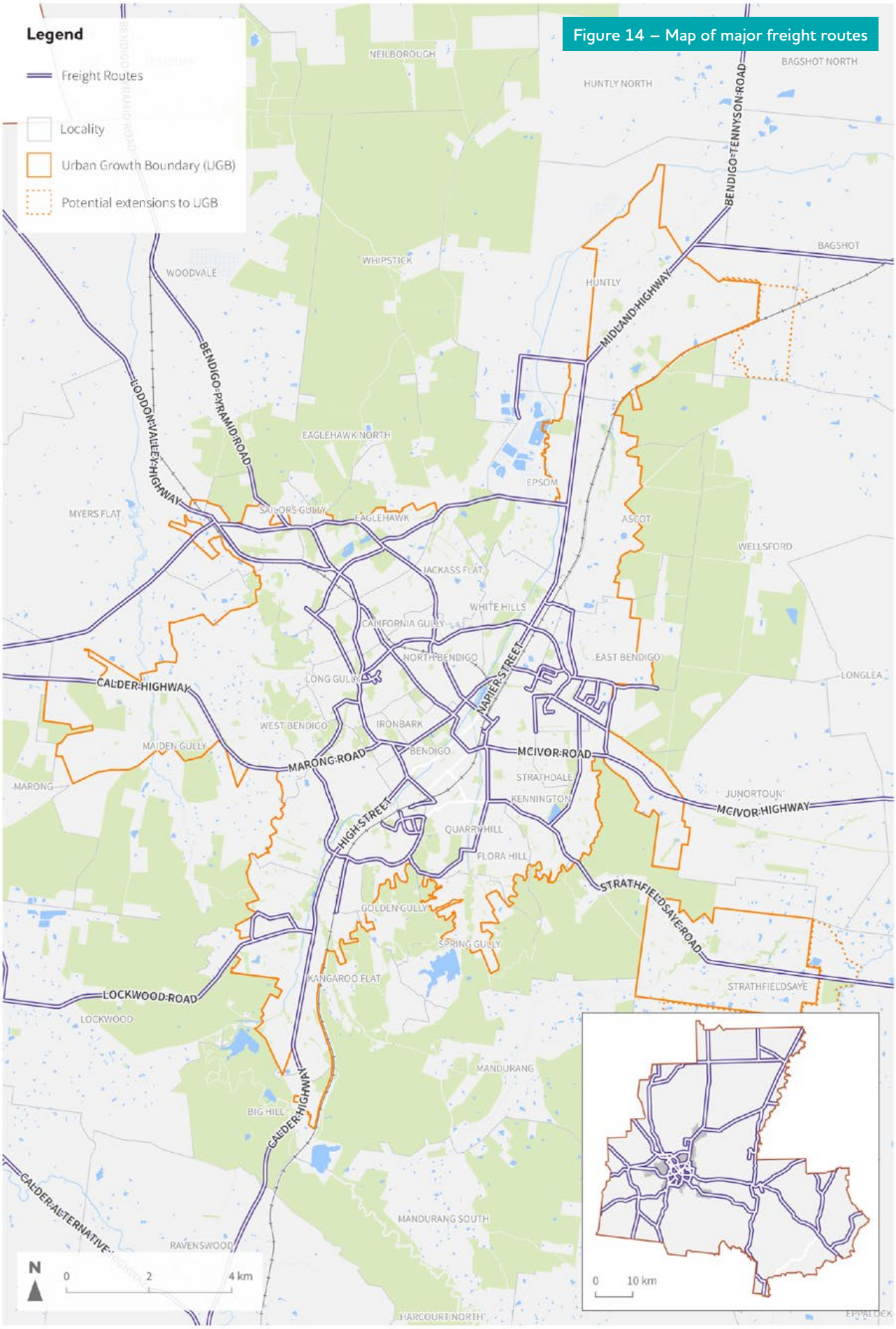

Figure 14 – Map of major freight routes

A significant issue identified through the Bendigo Freight Study is the encroachment of residential development affecting freight routes. This includes all types of freight movements including by road and by rail.

A growing population will not only impact on the efficiency of freight movement but there is the increased likelihood of conflicts between heavy vehicles and cars or cyclists. There are also the potential growing amenity impacts in terms of air quality and noise for residents living nearby road and rail freight routes.

Given the central regional location of Bendigo, there are two distinct types of freight movements. These include those with the origin and destination in Greater Bendigo and those that are using the highways to travel through Bendigo to an alternative location. With the growth expected in Marong and to the north of Bendigo in Epsom and Huntly as well as expected increased freight movements over time, the City should continue to advocate for the delivery of a Western Freight Corridor to bypass Marong, and in the longer term a Northern Freight Corridor.

6.7 Public Space and Recreation

Over 23 per cent of Greater Bendigo (over 71,000 hectares) is made up of some form of public space. This ranges from streets, urban places through to active reserves, parks and areas of public land. This includes 18 public gardens, 139 play spaces, ten BMX tracks, six skate parks and 14 natural reserves.[34]

The delivery of appropriately sized and well-designed public space is an important consideration in growth area planning. Where additional growth areas have been identified through this strategy, the adequate provision of public space could also be identified and funded through the collection of development contributions to ensure its delivery.

There is a significant cost in the ongoing maintenance of public space. Therefore, in most instances unless there is an identified deficiency in open space in an area, the provision of additional land as an open space contribution is discouraged. Where the contribution of land is supported, it must be unencumbered.

6.8 Rural areas

Around 16 per cent of all dwellings in Greater Bendigo are in townships and rural areas. The *Rural Areas Strategy 2009* identified the diverse range of enterprises which operate in Greater Bendigo including poultry and egg farming, piggeries, vineyards, olive production, broad-acre cropping and grazing.

Living in these areas are becoming increasingly attractive for a variety of reasons including lifestyle and farming - both hobby and commercial – with some areas showing growth well above the municipality average.[35]

There are a number of smaller properties currently zoned farming. It would be difficult to be able to farm some of these smaller lots without land consolidation or intensive high-value cropping. The upcoming Rural Areas Strategy should consider whether this is the most appropriate zone in these locations.

Compared to urban Bendigo, rural areas in the municipality have fewer young adults and a larger number of middle-aged to older residents. Rural and urban areas have a roughly equal proportion of children. Consistent with a population of older people, around a third of rural residents are not in the workforce but almost one in five people volunteer (despite a drop in volunteering in 2021, likely related to COVID-19 restrictions).[36]

These areas are also generally car dependent resulting in environmental, economic and social costs. Just 0.1 per cent of people in rural Bendigo commuted to work using public transport, with a further 1.8 per cent walking or cycling in 2021.[37] Providing adequate transport services to dispersed rural populations (especially as they age) has substantial costs and complexities.

Rural residential properties have features that can elevate their natural bushfire risks. Widely spaced and distant properties are less able to be accessed and protected by emergency services and may have higher landscape risk. Following the 2009 Black Saturday bushfire and the Royal Commission's recommendations[38] there is considerable onus on rural homeowners to either invest significantly in defence or accept the disruption of relocating on days of catastrophic fire danger.

The 2009 Victorian Bushfire Royal Commission (the Royal Commission) also found that nearly half the Black Saturday fatalities were people aged under 12 years, over 70 years or who had an illness or disability.[39]

For the reasons outlined above, population growth in rural areas should be limited. As part of the upcoming Rural Areas Strategy an investigation into the amount of land zoned Rural Living should be a priority. This should provide directions around whether this is the most appropriate zone for different areas considering natural hazards, land productivity and proximity to infrastructure and services.

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33 *Greater Bendigo Freight Study (2017)*

34 *City of Greater Bendigo (2022) Things to do, https://www.bendigo.vic.gov.au/Things-To-Do*

35 *Australian Bureau of Statistics, Regional Population Growth, Australia (3218.0). Compiled and presented in profile id.*

36, 37 *Australian Bureau of Statistics, Census of Population and Housing 2016 and 2021. Compiled and presented by id consulting.*

38, 39 *Teague, B, McLeod, R & Pascoe, S (2010), 2009 Victorian Bushfires Royal Commission: Final Report Summary, Parliament of Victoria, http://royalcommission.vic.gov.au/finaldocuments/summary/PF/VBRC_Summary_PF.pdf*

6.9 Townships

The townships of Elmore, Heathcote and Axedale are expected to experience moderate growth over the coming years. These district townships have existing or planned township or structure plans, are sewered and have infrastructure and services to accommodate some growth (Axedale to lesser extent). However, it is worth highlighting there are constraints around growth in much of Heathcote due to bushfire risk.

While the growth in these townships will be at a much smaller scale than urban Bendigo, even the expected moderate levels of growth particularly in smaller lots would lead to changes in the character of these townships over time.

A lack of infrastructure in the remaining townships particularly sewer means that growth in these areas will be relatively limited. This includes Goornong although a structure plan is currently being prepared for the township given its access to a train station.

6.9.1 Heathcote – District town

The largest township in the municipality is Heathcote with around 1,500 people living in the township and a further 2,700 living in the district in 2021. Heathcote is an ageing township with 40 per cent of the population aged 65 years and over.[40] The *Heathcote Township Plan* was adopted in 2019 and, through a community engagement process, sets a vision for Heathcote as *'a vibrant progressive and inclusive town that embraces its natural setting and has the facilities and services allowing residents of all ages to be healthy, happy, connected and proud'*. Key recommendations included various improvements to amenity, identifying a future industrial area and making Heathcote a dementia friendly town (for example, by supporting dementia awareness and improving accessibility and wayfinding[41]). More recently, Heathcote saw an increase in population with Heathcote's growth rate going from 1.5 per cent in 2019 to 2.4 per cent in 2021.[42] The *Heathcote Township Plan 2019* is proposed to be implemented via Amendment C274gben which is currently underway.

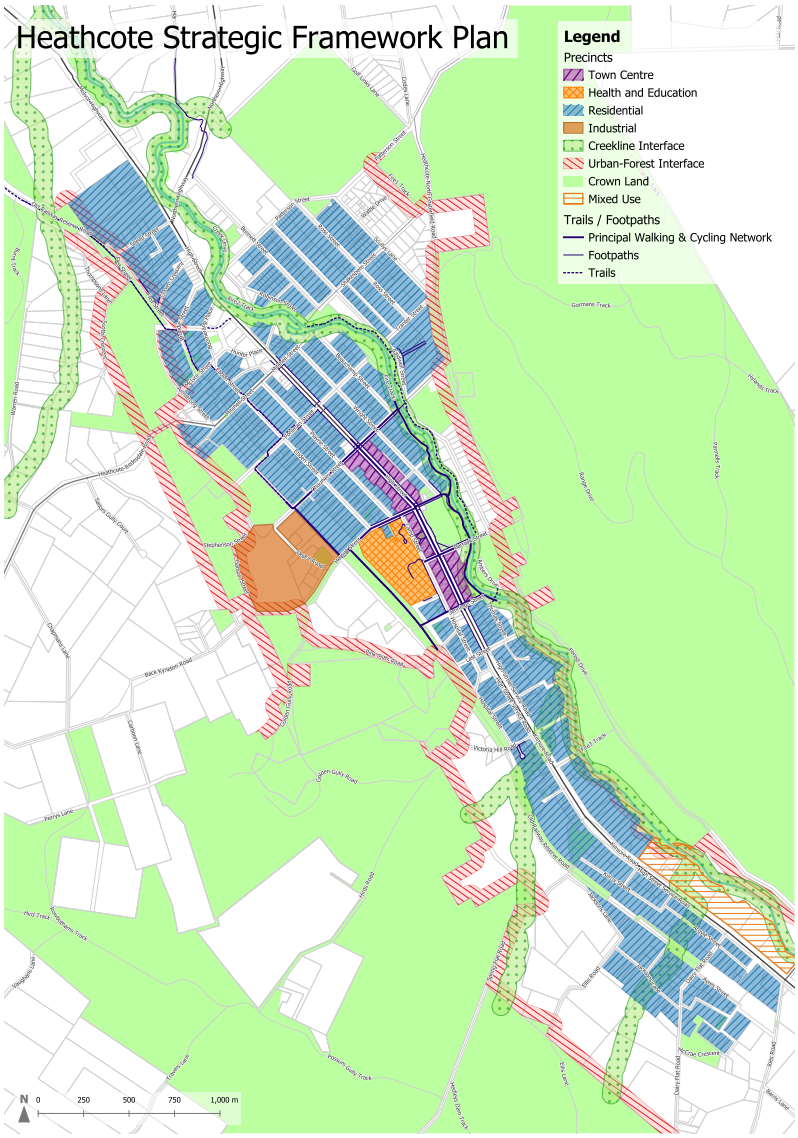

Figure 15 – Heathcote Strategic Framework Plan

40 *ABS Census, https://www.abs.gov.au/census*

41 *Heathcote Township Plan 2019*

42 *Forecast id, http://forecastid.com.au*

6.9.2 Elmore – District Town

Elmore is the northernmost town in municipality and has a population of 847 people, with 753 of these people living within the urban township. Over a half of the Elmore population is aged 50 years or older. The City is currently developing a Structure Plan for Elmore and has consulted on an Elmore: Issues and Opportunities Paper. Improving and defining the town centre has emerged as a theme in consultation, along with improving walking and cycling infrastructure around the town, supporting tourism, and creating welcoming activities and spaces for residents of all ages. Given the existing infrastructure, facilities and extent of land supply available, moderate growth in Elmore is expected to be contained within the existing township boundaries. Any potential growth will be assessed through the Structure Plan, taking into account environmental constraints such as flooding.

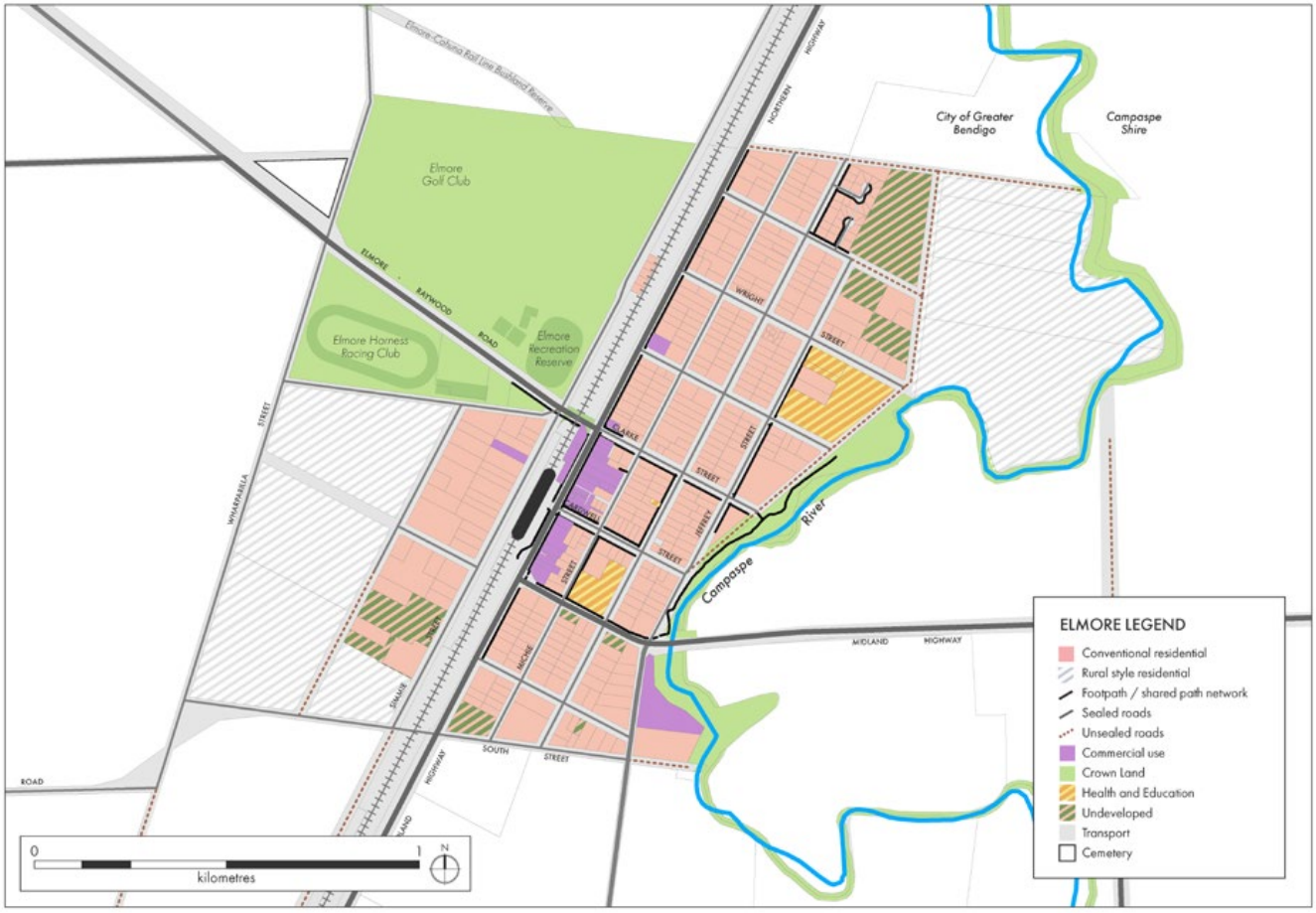

Figure 15 – Map of existing Elmore township

6.9.3 Goornong – Rural Town

Goornong has 326 residents living within the urban township with a further 392 in the surrounding rural area. Goornong has a young population, with more than a quarter of residents under 18 years (27 per cent) and only around 12 per cent of the population is over 65 years. Many residents have moved to Goornong recently seeking affordable lifestyles with proximity to Bendigo.

The City is currently developing a Structure Plan and has consulted on a Goornong: Issues and Opportunities Paper. During the consultation, themes emerged around the need and cost of providing a sewerage network and increasing the amenity of the town, including greater retail activity and streetscape improvements. Although development within the town is expected to remain low, sewerage infrastructure would potentially enable greater growth in Goornong. There would need to be an assessment of the costs and benefits and what the long-term financial and asset management impacts would be on Coliban Water. For sewerage to be viable for Goornong it would require assistance and funding through State Government. The City is currently funding a study to identify potential wastewater management options for Goornong.

6.9.4 Axedale – District Town

Axedale has a young population. In 2021, around 340 people were living in Axedale with 630 people living in the surrounding area. Just under a third of Axedale residents are children under 18 years (29 per cent), with fewer than one in five residents (17 per cent) aged 65 years and over. The *Axedale Township Structure Plan* was adopted in 2009 and supports the vision to *'Foster and promote land development in keeping with a semi-rural lifestyle'*

While the population of Axedale is small, its proximity to Bendigo and Melbourne and the GRZ over part of the township has meant that it has been attractive for some smaller residential subdivisions in recent years, which is expected to continue. Given the Township Plan is now more than 13 years old it would be worth reviewing this plan over the coming years to adapt to the growing interest in the township and to ensure that it remains current.

6.9.5 Other townships and common issues

The municipality has several other smaller townships, such as Mia Mia, Redesdale, and Raywood. As the population of the municipality continues to grow, and buyers continue to express a preference for small communities providing affordable housing, these areas are also likely to grow and diversify.

A theme common to the communities in engaging with the City around growth is interest in increasing the diversity of local services, retail and employment offerings - creating towns where locals are able to access what they need locally. As populations age (particularly in those towns with markedly older populations, such as Heathcote), petrol prices increase, and the uptake of alternate fuel vehicles lags, there may be a growing demand for towns that do not necessitate that residents commute out of town frequently for access to work, education or goods and services. These issues are discussed in more detail in Section seven.

The October 2022 floods also highlighted the need for satellite communities to have some capacity for self-sufficiency. For example, the McIvor Highway was badly damaged by the flooding affecting access between Bendigo, Axedale and Heathcote.[43]

Resilience to natural hazards emerged as a theme in many community consultations, particularly the risks of bushfire and flood. As described in Section four of this strategy, the City is mindful of the need to ensure that new developments are built in comparatively safer areas and that approaches to development and growth both protect residences and decrease the long-term environmental impact of housing.

In summary:

- Where possible development should be directed to locations well serviced by public transport, services and facilities.
- There needs to be a focus on rezoning of land in existing growth areas. There will need to be some changes to the Urban Growth Boundary in Huntly and Strathfieldsaye to meet long term growth needs.
- It is important to encourage growth near existing and planned employment centres.
- Public space is important for communities but there are ongoing and growing maintenance costs for the City.
- Townships and rural communities form an important component to the municipality and provide an alternative housing and lifestyle option. There will be limited growth in these communities due to lack of infrastructure and environmental risks.

43 *City of Greater Bendigo (2022) Flood update, https://www.bendigo.vic.gov.au/about/media-releases/flood-update-city -greater-bendigo*

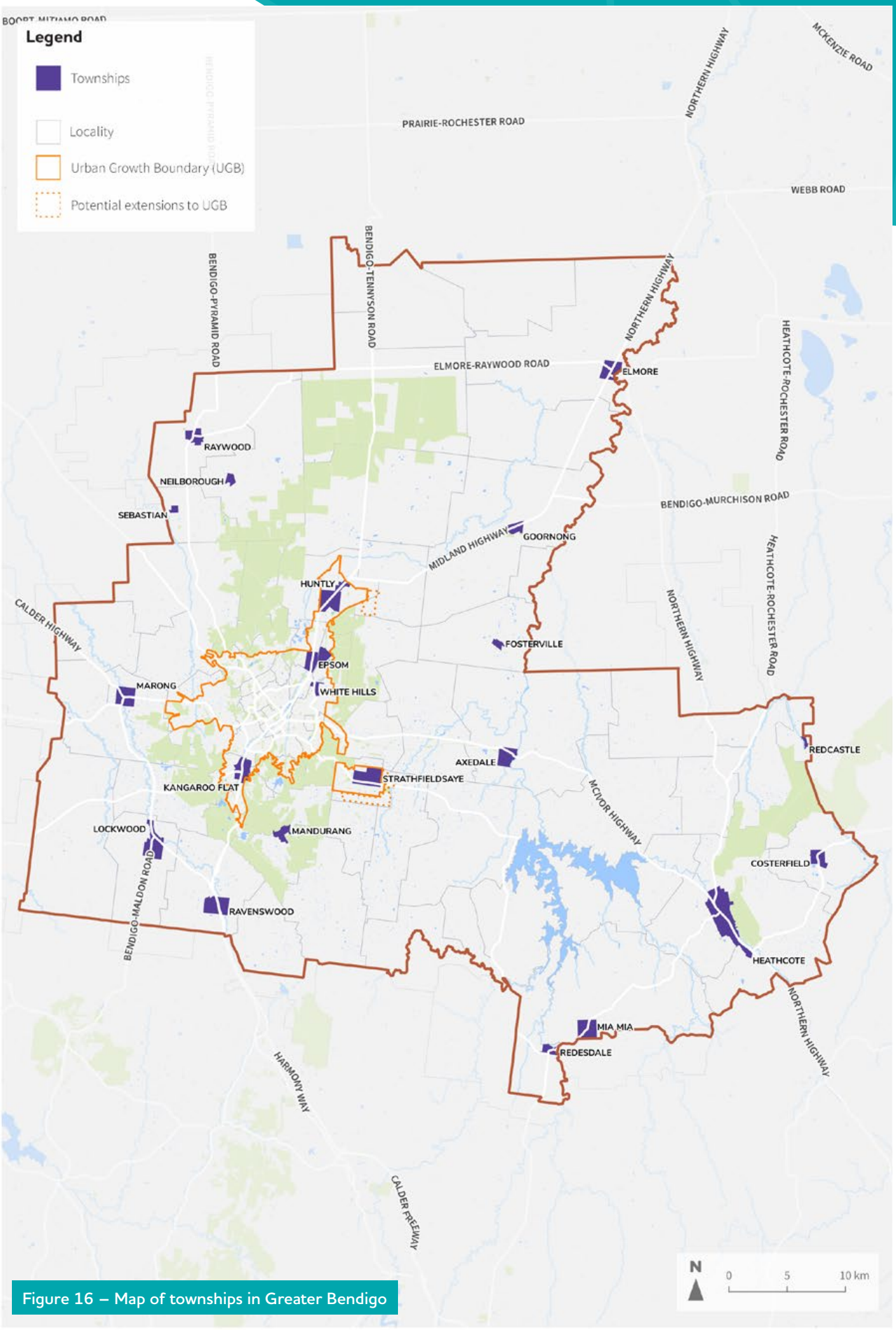

Figure 16 – Map of townships in Greater Bendigo

PART THREE:
Creating a sustainable housing market

7. Suitable and sustainable housing

7.1 Housing affordability

The *Greater Bendigo Affordable Housing Action Plan 2020* (AHAP) identifies that there is a growing need for more social and affordable housing in Greater Bendigo. There are currently over 3,300 applicants on the social housing waiting list.[44] This is an increase of 384 since May 2021. Estimates of homelessness in Greater Bendigo almost doubled between 2016 and 2021.[45]

Through the State Government's $5.3 billion Big Housing Build initiative, Greater Bendigo was allocated a minimum $85 million investment. While this initiative is welcome, the City will continue to advocate for more social and community housing to meet the need. This could include the utilisation of Council owned land, advocating for the utilisation of surplus Crown land, redevelopment of sites, and advocating for inclusionary zoning (where a proportion of housing in larger developments is set aside for social housing), or a similar form of mandatory contribution to social housing.

Clause 16.01-2S of the Greater Bendigo Planning Scheme establishes an objective *'to deliver more affordable housing close to jobs, transport and services.'* Relevant strategies for the MGS to deliver on this objective include by ensuring adequate land supply, diversifying the housing stock available in the municipality particularly around activity centres and train stations, and transport corridors, and the inclusion of affordable housing in new development.

It is anticipated that offering a greater choice of smaller dwellings will assist in reducing the cost of buying a home, as well as the longer-term running costs and environmental impact of that home.

7.2 Housing Diversity

Housing diversity or having a range of housing types for different household types and needs is important for a variety of reasons including liveability, affordability and a reduced reliance on the need to drive to access all services and daily shopping needs.

Currently in Greater Bendigo based on the 2021 census, 91 per cent of all dwellings are classified as detached, an increase of close to 5,000 on 2016 figures.[46] The greatest increase over this period was in four bedroom dwellings with more than 3,000 added. This was particularly noticeable in the growth areas of Bendigo. Strathfieldsaye alone had over 400 four bedroom dwellings added, with only 50 more three bedroom dwellings. This contrasts with the suburb of Bendigo where 140 more three bedroom dwellings were added compared with 35 four bedroom dwellings.

With a growing proportion of smaller households of only one or two occupants, there will be a need to continue to diversify the housing stock in all areas. This includes building different types of dwellings to meet changing household needs. This will enable residents to be able to stay in local areas as their housing needs change. Housing should be available for all housing types including those moving out of the family home for the first time through to enabling residents to age in place and everything in between.

As well as promoting a range of different housing sizes and typologies, it is also important that at least some of this housing has been designed to be accessible. This may include considerations such as having a bedroom on the ground floor, reinforced walls in bathrooms for the installation of grab rails and wider spaces to be able to manoeuvrer a wheelchair.[47]

7.3 Environmentally Sustainable Design

In October 2018, Amendment GC110 was gazetted and introduced a new local Environmentally Sustainable Development (ESD) provision into the Greater Bendigo Planning Scheme. The Amendment also introduced the need for a Sustainable Design Assessment for commercial and industrial development, as well as medium- to large-scale residential development.

Council resolved in mid 2022 to seek authorisation, along with 23 other councils to introduce further ESD requirements relating to solar, electric vehicle charging and cross ventilation.

Considering ESD early in the building process is effective and delivers better outcomes. Common design changes include using lighter-coloured roofing, improving building orientation, using energy efficient design and materials, and using water saving appliances.

Through the *Climate Change and Environment Strategy 2021-2026*, Council has endorsed the following goals:

- 40 per cent of households and businesses will have solar systems installed.
- No new gas connections in new subdivisions*.

**State Government has recently introduced a requirement that no new residential developments from 2024 onwards are connected to gas.*

44 *Homes Victoria Public Housing Wait List https://www.dffh.vic.gov.au/publications/public-housing-waiting-and-transfer-list*

45 *ABS Census, https://www.abs.gov.au/census*

46 *https://profile.id.com.au/bendigo/dwellings*

47 *Liveable Housing Australia, https://livablehousingaustralia.org.au/*

8. Servicing housing and communities

Liveability is dependent on the provision of essential services; safe ways to get to and from the home; access to community connections; and access to goods, services, open space, education, and employment. These are most efficiently supplied when access can be leveraged from existing road, sewerage, power and gas, and service networks. Directing residential growth to areas with existing services reduces costs to purchases and minimises environmental impacts. Estimates suggest that the delivery of infrastructure in growth areas is between two and four times higher than in established areas.[48]

Where housing cannot be centred around existing infrastructure, this provides an opportunity to design and implement sustainable infrastructure.

8.1 Water and Sewer

In 2022, Coliban Water (the water and sewerage authority for the region) adopted an Urban Water Strategy which provides a 50-year outlook on the long-term future of water security in Greater Bendigo and across the region. This includes ensuring that water mains are appropriately sized to meet expected population growth while also considering value for money.

Coliban Water provides advice to the City and developers around the servicing of new developments. The *Coliban Water Urban Water Strategy 2022* is focused on water security for Bendigo into the future. Coliban Water will need to secure additional water supplies over the longer term to serve a much larger urban Bendigo. Coliban Water and the City will also need to work together to collaboratively drive alternative water supplies.

Currently, Greater Bendigo has an urban reclamation treatment plant located at Epsom (with a smaller plant also located at Elmore) which treats around 20 megalitres per day and is approaching its current capacity.[49] A major upgrade to the Bendigo Water Reclamation Plant is currently in design which will help accommodate development in the region. Coliban Water will also be investigating the potential for a second reclamation plant for urban Bendigo to ensure the long-term requirements for the sewerage system are met.

Due to the substantial cost involved in providing sewer services to areas not already serviced this can have a significant impact on the development potential of different areas. In areas which have been identified as being able to accommodate Substantial Change as identified through the *Housing and Neighbourhood Character Strategy* in some instances, particularly at locally high elevations, there may be challenges with low water pressure for upper levels of development without infrastructure upgrades. Coliban Water and the City have worked closely to assess the impacts for the proposed Substantial Change Areas, including utilising existing pressure information to minimise this risk. However, in some instances discussions will need to be held with developers through the development process about utilising booster pumps on the customer site of the meter. This would represent an additional cost to development.

There are also ongoing investigations into the need for a buffer around the Bendigo Water Reclamation Plant to protect the ongoing operations of the plant as well as to minimise any negative impacts on the residential amenity of residents who live nearby.

8.2 Recycling and Waste Infrastructure

As the population grows, so does the need for recycling and waste infrastructure. The City has a strong focus on circular economy, recycling, and waste diversion and avoidance, including:

- Building waste avoidance and reduction measures into City contracts.
- Extensive waste education programs.
- Support of the elimination of single use plastics
- Bin auditing programs[50]

In 2019-20, the City's kerbside diversion rate was 46.8 per cent, meaning almost half of household waste was not sent to landfill. Nevertheless, the City collects around 50,000 tonnes of waste annually. Even as diversion rates improve, growing populations will require an enlargement of the existing recycling and waste management capacity.

In 2016, the City introduced a kerbside household food and organics collection system; however, there is currently no food organics processing facility within the region which limits the capacity for growth in this system. Siting and managing new waste and

48 *Infrastructure Provision in different development settings 2019, Infrastructure Victoria*

49 *Coliban Water, Bendigo*

50 *City of Greater Bendigo (2022) General waste, recycling and organics, https:www.bendigo.vic.gov.au/Services/General-Waste-Recycling-and-Organics*

recycling facilities is complex, requiring a balance between proximity to the populations being serviced and considerations of the impacts on local amenity, particularly through odour, dust, litter, noise, and truck movement. The region also faces challenges around complex or hard-to-manage waste streams, such as e-waste, hazardous waste, tyres, and soft plastics.

The City operates the Eaglehawk Landfill and Transfer Station, a waste and resource recovery hub of state significance with land use compatibility issues to be managed. Amendment C242gben applied the Buffer Area Overlay to land within 500 metres of the boundary of the landfill and transfer station site to manage the potential risk of off-site landfill gas migration and odour impacts.

8.3 Gas and Electricity Infrastructure

Ausnet manage the gas distribution network in Bendigo covering much of urban Bendigo.

Gas is being phased out in coming years. The City's *Climate Change and Environment Strategy 2021-2026* establishes a 2026 target that no gas connections are provided in new subdivisions. This has now been superseded by Victoria's Gas Substitution Roadmap which seeks to phase out gas and sets out a requirement that from January 2024 all new homes will be all electric.[51]

Powercor is the energy supplier for Greater Bendigo. There are currently 53,000 residential connections in Bendigo and over 16,000 solar connections, double the number of connections from only five years ago. Each household on average is using between 11 kwh per day in summer to up to more than 18 kwh per day in winter.[52] With energy retailers currently charging about 21 cents in Victoria per kwh,[53] this equates to around $350 just over winter for usage charges not the fixed costs.

While many new dwellings are designed to be more energy efficient, this is a greater issue with existing dwellings which may require retrofitting over time. This also further demonstrates the importance of housing diversification, so there are opportunities for residents to live in a dwelling of a size which meets their needs.

8.4 Road Infrastructure

Greater Bendigo, like most rural and suburban areas, is heavily dependent on road transport for personal mobility, supply of goods and services, and providing and maintaining essential services. Road improvements and upgrades are a major area of expenditure for the City, with $13 million allocated for the renewal and reconstruction of sealed and $3.9 million unsealed roads in the 2023/24 budget.[54]

Road infrastructure will remain important, even under a reduced carbon economy, as alternative-fuel vehicles, shared vehicles, and buses continue to require sound road infrastructure. Road infrastructure will also come under increase strain from the impact of increased frequency and severity natural hazards, as evidenced by the 2022 October flooding which substantially damaged road infrastructure across the municipality, requiring higher ongoing investment in construction, maintenance, and repair.

In growth areas the introduction of development contribution schemes will fund a proportion (not all) of new road infrastructure to meet the needs of the new population. However, with more roads to manage and new development likely to lead to the need for additional road improvements over time this will have an impact on the City's budget without a behaviour shift in using roads. There is also a closer scrutiny by state government of transport-related expenditure, particularly where nexus with sustainable development can't be demonstrated. This provides further rationale as to why housing should be encouraged close to existing transport, facilities and shops so vehicle trips can be minimised which is also consistent with a variety of adopted strategies including the *Connecting Greater Bendigo: Integrated Transport and Land Use Strategy 2015*.

8.5 Community infrastructure

Community infrastructure encompasses a large range of arts, cultural, educational, sporting, wellbeing and recreation facilities that facilitate the public and social life of the municipality. Quality, accessible and well-maintained community infrastructure supports a community that is cohesive, connected, and equitable.

Existing community infrastructure owned by the City, State Government and the community organisations includes 29 community halls, four libraries and two library agencies, more than 50 sports fields and venues, 13 pools or splash parks, more than 20 public barbeque locations, four off-leash dog parks, three community gardens and three public galleries, as well as the public recreation spaces described below.

51 *Victoria's Gas Substitution Roadmap https://www.energy.vic.gov.au/renewable-energy/victorias-gas-substitution-roadmap*

52, 53 *Powercor, Energy usage by council (2023), https://www.powercor.com.au/network-planning-and-projects/network-planning/*

54 *City of Greater Bendigo Budget 2023/24 https://www.bendigo.vic.gov.au/sites/default/files/2023-09/City-Greater-Bendigo-Budget-2023-2024.pdf*

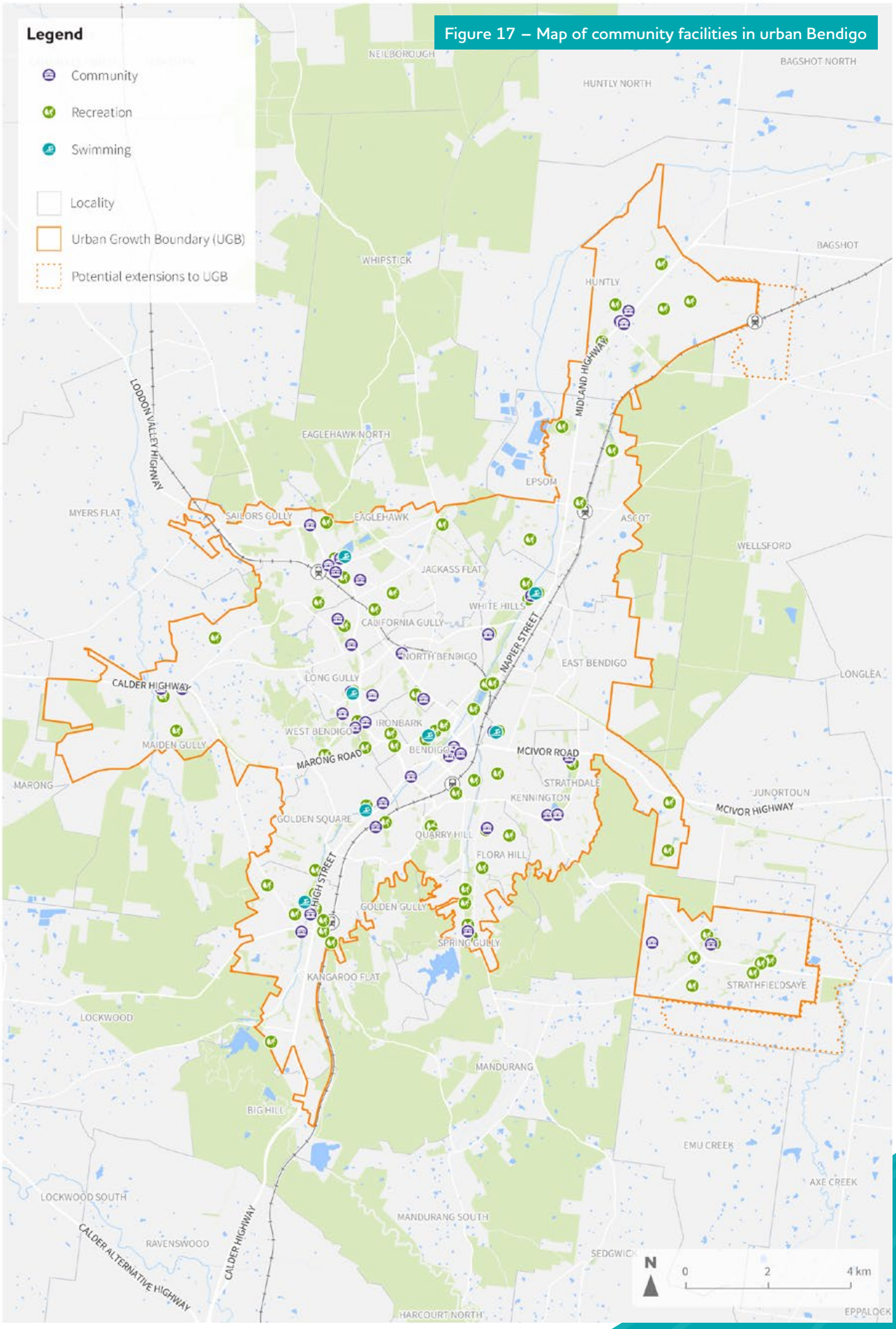

Figure 17 – Map of community facilities in urban Bendigo

Most people in the municipality will use community infrastructure at some time. For example, in the City there are over 27,000 people are caring for children, over 14,000 people providing care to people living with illnesses or disabilities, over 15,000 volunteers, and around two-thirds of residents are physically active five or more times a week.[55]

The City has a draft Community Buildings Policy that applies the principles of equity, accessibility, promote wellbeing, partnering and sustainability. The Policy also introduces a hierarchy for facilities. Based on the way that Greater Bendigo has developed it now has many facilities that need to be maintained and, often, these are no longer well located in relation to the population that needs them. This will be further reviewed over time as part of a Community Buildings Strategy. In growth areas community facilities can be included in development contribution schemes via a Community Infrastructure Levy, with careful consideration and based on growing need. New assets need to be assessed both in terms of their immediate cost and long-term maintenance costs for the City.

Some of the challenges being faced in terms of the City's existing community infrastructure includes:

- Inequities in existing service levels, sometimes accentuated by growth or decline in catchment populations.
- Some no longer being fit for purpose e.g. changes in standards, community needs or community expectations.
- Changing patterns of community volunteering impacting community building management models and use.
- Strategic land use planning and environmental sustainability considerations.

There are also identified financial challenges in maintaining / renewing so much existing community infrastructure. Without change to the current provision model the maintenance / renewal funding 'gap' will continue to grow.

8.6 Education and Early Years infrastructure

Across Greater Bendigo, there are:

- 51 standalone kindergartens and long day care centres
- 28 government primary schools
- Two schools catering for students with additional needs
- Four government junior secondary schools (years 7-10)
- One government senior secondary college (years 11-12)
- Ten Catholic primary schools
- Three independent prep to year 12 schools
- One prep to year 10 school
- Two Catholic secondary schools
- 1 independent secondary school

The 2021 Census estimated that the City has around 7,000 babies and pre-schoolers, around 11,000 primary-school aged children and about 9,000 secondary-school aged children. Population movement patterns and forecasts suggest that the City will remain a popular location for families with between 4,000 to 9,000 more primary-school-aged residents and 3,200 to 7,500 secondary-school-aged residents by 2050. The *Early Years Infrastructure Framework* guides the City's response to this need.

Access to quality education, particularly early education has been demonstrated as an effective way to support children who are at risk in some element of their development. The Australian Early Development Census suggests that there are a higher proportion of children in Greater Bendigo with a developmental vulnerability compared to Victoria or Australia as a whole.

Over recent years, State and Commonwealth reforms have driven ongoing investment in early years facilities, these include the delivery of free kinder and the increase in hours of three-year-old kinder to 15 hours by 2029, and the transition to a 'pre-prep' 30-hours per week program for four-year-olds by 2032.

Therefore, early consideration to the need for and location of future education facilities should be fundamental to future structure planning processes, particularly in growth areas that are most likely to attract family households.

55 *ABS Census, https://abs.gov.au*

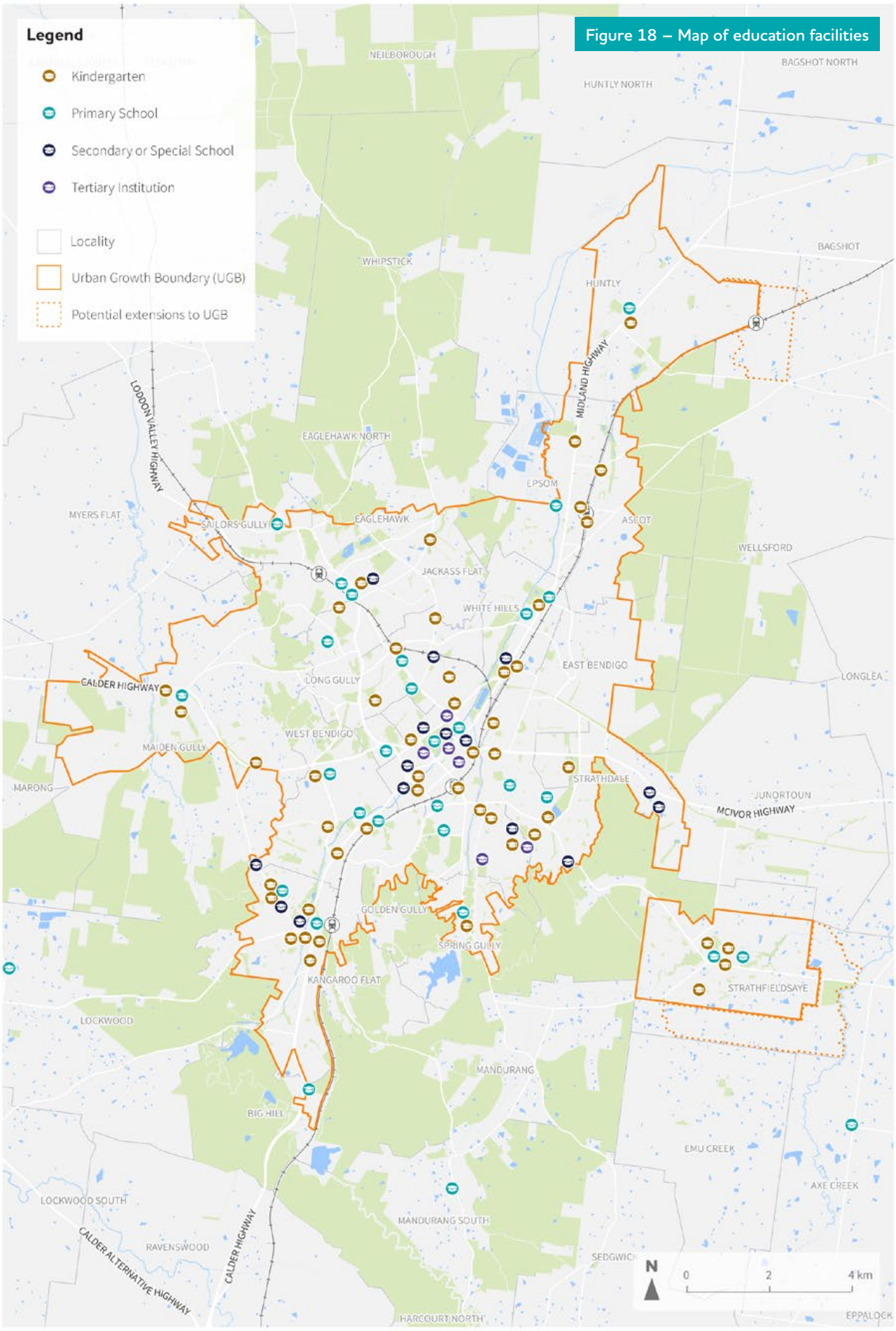

Figure 18 – Map of education facilities

8.7 Funding of infrastructure

8.7.1 Developer contributions

Alongside the preparation of Structure Plans for growth areas, the City can prepare a Development Contributions Scheme. These are guided by the City's Development Contributions Policy. These schemes assist with the funding of new or upgraded infrastructure which is needed because of new development. Development Contributions Scheme are not designed to fund infrastructure for the benefit of existing residents, and therefore part of the funding through any development contributions scheme will be apportioned by the City.

Contributions collected through a development contributions scheme are used to fund upgrades to local roads and intersections, drainage infrastructure and community facilities.

Despite the collection of funds towards infrastructure delivery, this does not cover the full cost of this delivery. It also does not cover the ongoing maintenance of this infrastructure. This is one of the significant ongoing challenges to lower density greenfield growth.

8.7.2 State funding/Commonwealth funding

State and Commonwealth governments have provided significant investment into Greater Bendigo in recent years. This includes funding of major road upgrades, investment in hospitals and schools and grant funding towards open space reserves.

This investment is welcomed, however ongoing State and Commonwealth investment is not guaranteed and cannot always be relied upon in the delivery of infrastructure but is more likely to be supported where development is of a higher density and there is more employment opportunities on offer.

Again, where this investment is to benefit City owned facilities the ongoing maintenance costs of these facilities are generally not considered.

In summary:

- It is less expensive to service areas where infrastructure is already available.
- In considering new development in growth areas the cost of pumping sewerage to the Bendigo Water Reclamation Plant must be considered and may impact on the viability of developing in some areas. The Bendigo Water Reclamation Plant must also be protected from residential encroachment which may impact on its operations.
- Infrastructure in growth areas is generally funded in part through development contributions. However, the City still funds some of this infrastructure and is responsible for the ongoing maintenance of the asset once completed. Therefore, infrastructure including roads and open space must be approved by the City.
- Active transport and links to existing walking and cycling tracks should be considered in new developments and subdivisions to encourage residents to walk or ride.
- The City can only advocate for improvements to public transport and new primary and secondary schools in certain locations it does not deliver this infrastructure.

PART FOUR: Developing the Residential Framework Plan

9.1 What a Residential Framework Plan is

A Residential Framework Plan (RFP) is a tool that shows the level of change that is expected in residential areas in the municipality over time as the population grows and circumstances change. It provides certainty by identifying areas where varying levels of housing change are anticipated considering a wide range of characteristics related to proximity to activity centres and transport, neighbourhood, heritage, physical and environmental and landscape characteristics.

Together with the preferred neighbourhood character statements it provides certainty to the community as to how housing growth will be distributed and ensures future development contributes towards the preferred future character.

9.2 How the Residential Framework Plan has been prepared

The RFP has been developed using existing residential areas with consistent character and heritage protection as a base, and further building on these layers through contextual analysis. Following the advice in Planning Practice Note 90 Planning for Housing, the Residential Framework Plan has been prepared and informed further by:

- Principles established in the Managed Growth Strategy (see following section)
- Existing planning scheme controls.
- Demographic and housing / land capacity projections over the next 15 years (and beyond).
- Strategic work including:
  - Housing Capacity and Supply Analysis.
  - Housing and Neighbourhood Character Strategy and background documents.
  - Greater Bendigo Industrial Land Development Strategy.
  - Commercial Land and Activity Centre Strategy.
  - Activity centre plans including; Golden Square Structure Plan, Bendigo City Centre Plan, Eaglehawk Structure Plan, East Bendigo Local Structure Plan, Kangaroo Flat Structure Plan, Marong Township Structure Plan, Huntly Township Plan and Strathfieldsaye Township Plan.
  - Agricultural and suitability assessment.

Assumptions

The residential housing capacity assessment indicates that the current application of zones and planning controls provide the capacity to accommodate the projected growth in Greater Bendigo and a wholesale review of the application of zones is not necessary in the preparation of the residential growth plan.

The starting point for development of the RFP is that generally the planning controls that have been applied are fit for purpose. However, it is acknowledged that further work should be undertaken in some areas that is beyond the scope of what can be achieved in this piece of work including:

- A review of areas where the Heritage Overlay has been applied as a precinct to review the extent of application. This work should focus on areas proximate to activity centres and public transport in the first instance.
- A review of Design and Development Overlays and Development Plan Overlays to ensure they are still appropriate and applied to the most suitable locations.
- Detailed assessment of housing capacity in activity centres (zones other than the residential zones) which will be undertaken as structure planning is carried out for each centre.

Principles

The following principles, established through the Managed Growth Strategy, have guided the development of the Residential Framework Plan:

- To provide certainty to landowners, residents, and developers as to additional housing to meet long term growth needs.
- To provide opportunity for a more diverse mix of housing types and lot sizes across the municipality.
- To accommodate the majority of new housing (70 per cent) in well located areas such as those close to services, transport, and shops.
- To respond to the changing demographics in Greater Bendigo including a growth in households with one or two people.
- To protect areas which have significant agricultural, environmental or landscape values from inappropriate encroachment by residential growth.
- To limit development in areas with environmental or other constraints where these can't be managed to an acceptable level of risk, such as bushfire, flooding, proximity to landfill, proximity to Bendigo Water Reclamation Plant in Epsom and the Bendigo Airport.
- To limit development where built form controls are in place that limit the capacity for growth including the Neighbourhood Character Overlay, Design and Development Overlays that include subdivision limits and the Heritage Overlay (where not applied close to activity centres).

Exclusions

Housing change areas have not been applied to Bendigo City Centre which is subject to a separate planning scheme amendment process (Amendment C279gben) to implement the Bendigo City Centre Plan. The Bendigo City Centre is expected to accommodate significant residential growth over time and provide the Bendigo community with access to more diverse housing through the development of mixed use developments and apartments.

Marong has not been included as this is subject to Amendment C263gben which seeks to implement that Marong Township Structure Plan including introducing the Neighbourhood Residential Zone.

Townships that are currently not sewered are also not included. These will be considered through other strategic work including the upcoming Rural Areas Strategy.

9.3 Housing change areas

Residentially zoned land in Greater Bendigo is categorised by the following change areas, to indicate the level of anticipated growth anticipated and encouraged in those areas:

Minimal

Incremental

Substantial

Three categories have been identified after detailed analysis of neighbourhoods within the Urban Growth Boundary and townships outside it in the context of potential for housing growth. The Housing Change Areas demonstrate the anticipated scale of housing change over the long term to 2056.

Minimal change areas are areas that have limited capacity to accommodate future residential development and growth due to constraining neighbourhood, heritage, physical and environmental and landscape characteristics, including bushfire risk. These areas represent the lowest degree of intended housing change and will predominantly be houses of one or two storeys. A designation of minimal change does not mean that no growth will occur in these areas. It recognises that the characteristics of the area limit the amount of change that will be able to be accommodated.

Incremental change areas are evolving areas that are suitable for moderate housing growth. There is capacity in these areas for housing growth and more diverse housing to occur in the context of preferred neighbourhood character. Incremental change areas encompass a large proportion of Greater Bendigo's established residential areas.

Substantial change areas are areas that have the most capacity to absorb additional growth due to their location in activity centres and services, or proximate to major transport corridors. Over time these area areas that will accommodate a larger scale or intensity of housing growth compared to other residential areas in the municipality. This includes areas in and around large activity (commercial) centres, along major road corridors and along train corridors.

Table 8 sets out a summary of how each change area has been applied and the proposed zone controls to be applied.

Change type	Summary	Summary of application	Proposed zone and maximum height
Minimal change area	Limited capacity to accommodate future residential development due to constraints (but not no change)	Applied areas subject to overlays Bushfire Management, Land Subject to Inundation, Significant Landscape, Buffer Areas, Design and Development (where minimum lot sizes apply). Heritage and Neighbourhood Character Overlay, where not within or near an Activity centres, close to railway stations or transport corridors. Areas beyond 800 metres of a Large of 400 metres of a Neighbourhood Activity Centre.	Neighbourhood Residential Zone – 2 storeys up to 9 metres
Incremental change area	Greater housing growth expected still within the context of the preferred neighbourhood character in an area.	Areas between 400 metres and 800 metres of a Large Activity Centre or 400 metres of a Neighbourhood Activity Centre. Includes Heritage Overlay and Neighbourhood Character Overlay areas in proximity of a Large or Neighbourhood Activity Centre, railway stations and major transport corridors.	General Residential Zone – 3 storeys up to 11 metres
Substantial change area	Increased densities within walking distance of Large or Specialised Activity Centres, railway stations and along main transport corridors	Within 400m Large or Specialised Activity Centre, around Railway Stations and along major transport corridors. No planning overlays which restrict development.	Residential Growth Zone – 4 storeys up to 13 metres

Table 8 – Change type and summary of application

9.4 Considerations

This section expands on the principles outlined in the previous section and provides an overview of the factors that have been taken into consideration in determining the application of housing change areas.

9.4.1 State planning policy and guidance

Clause 11 of the Planning Policy Framework requires planning authorities (in this case Greater Bendigo Council) to plan to accommodate at least 15 years of growth.

Planning Practice Notes 90 (Planning for Housing) and 91 (Applying the residential zones) set out the broad methodology that should be followed to plan for housing growth and apply appropriate planning scheme tools to achieve the planned growth.

9.4.2 Housing demand and residential land capacity

The MGS has established a housing target of around 1,100 dwellings per annum to meet projected population growth. This is a growth rate of 1.6 per cent per annum. Both Victorian government and independent data were used to establish this projection.

Residential land capacity and supply analysis undertaken by Quantify Strategic Insights indicates there is sufficient capacity within the existing planning zones and controls to accommodate the anticipated residential growth within the municipality overall. However, the capacity analysis indicates that there is a significant undersupply of greenfield land available and that this should be addressed to ensure a diversity of housing choices.

The RFP recognises that continued greenfields development as the primary means to accommodate growth is unsustainable, however it acknowledges that there is still a need to provide opportunities for greenfield growth in places that are logical in the context of the established urban growth boundary. This is to ensure that a diversity of housing choices is available to support the sustainable economic development of Greater Bendigo by ensuring potential investors do not choose alternative regional locations because of the lack of the full range of housing options.

For this reason, several areas for greenfields growth are identified in the RFP, building on strategic planning work undertaken over many years that has established these areas as suitable for growth.

9.4.3 Current application of planning zones

Currently most of the residential areas in Greater Bendigo are zoned General Residential Zone. This zone permits development of up to three storeys (which can be increased via a local schedule). Through the preparation of the RFP, the opportunity has been taken to identify areas where a higher density residential zone (Residential Growth Zone with a four storey height control) or lower density residential zone (Neighbourhood Residential Zone) is more appropriate to guide the preferred intensity and scale of residential development in different areas in accordance with the guidance set out in PPN91 (Applying the residential zones).

9.4.4 Current application of planning overlays that limit development

Several overlays have been applied that limit development.

While it is possible to develop where a Heritage Overlay or Neighbourhood Character Overlay applies, development in these locations is often more difficult. Where one of these controls applies within 400 metres of a large or specialised activity centre, a train station or a major transport corridor, the General Residential Zone is proposed to be applied. This would still enable development of up to three storeys. Outside of these areas where these overlays apply, they have been identified as minimal change areas. To highlight there are more appropriate locations where incremental and substantial change is encouraged.

Some of these have been reviewed as part of the preparation of the RFP and others will be reviewed through further work.

Neighbourhood Character Overlays
Development opportunities in areas where the Neighbourhood Character Overlay applies is often limited. Removal of the Neighbourhood Character Overlay from several precincts and properties was recommended in the Greater Bendigo Housing and Neighbourhood Character Strategy and is reflected in the RFP. Where a Neighbourhood Character Overlay applies within 400 metres of a large or specialised activity centre, a train station or a major transport corridor, the General Residential Zone is proposed to be applied. This enables development of up to three storeys. Outside Neighbourhood Character Overlay areas have been identified as minimal change areas.

Significant Landscape Overlays
Removal of the Significant Landscape Overlay from several properties was recommended in the Greater Bendigo Housing and Neighbourhood Character Strategy and is reflected in the RFP.

Heritage Overlays
Development opportunities in areas where the Heritage Overlay applies is often limited. Where a Heritage Overlay applies within 400 metres of a large or specialised activity centre, a train station or a major transport corridor, the General Residential Zone is proposed to be applied. This enables development of up to three storeys. Other Heritage Overlay areas have been identified as minimal change. The Heritage Overlay will be reviewed as part of future work undertaken by the City. The priority for review will be precincts proximate to activity centres where the blanket application of a Heritage Overlay may no longer be warranted in the context of easy access to services and transport.

Design and Development Overlays applying to townships
DDO9 Axedale Township Structure Plan, DDO10 Maiden Gully Structure Plan and DDO29 Strathfieldsaye Town Entrances which will be reviewed as structure planning for each of these activity centres and townships is undertaken.

Design and Development Overlays and Development Plan applying to residential areas
DDO24 Large Lot/Unsewered Residential Areas and DDO7 Ascot residential areas – includes a subdivision minimum of 1,500sqm which both apply to unserviced areas that are not suitable for growth unless sewerage infrastructure is provided. The City is currently reviewing the application of these DDOs and DPOs through a separate project to assess whether the lot size constraint is still appropriate and this review may identify further opportunities for growth in some these areas.

9.4.5 Neighbourhood character and heritage areas

As the existing neighbourhood character guidance applying in the planning scheme is more than 20 years old, an updated assessment of existing neighbourhood character across the municipality has been prepared. This, in conjunction with the other considerations has informed the development of preferred character statements.

9.4.6 Housing diversity and affordability

Currently more than 90 per cent of all housing is in the form of separate dwellings, with the number of larger dwellings of four bedrooms or more continuing to grow, yet only two thirds of all households are occupied by one or two people, a pattern that is expected to continue.

There is a mismatch between the size of dwellings being built, and the number of people living in each household and continuing to only deliver this form of product will create housing affordability challenges, and increased costs of infrastructure delivery which would impact all residents.

Strong market incentives to encourage the development of smaller households in infill locations is required, and the RFP is based on 70 per cent of new housing development in urban areas being built in established areas. Development of smaller houses will provide a housing pathway for smaller households that will free up existing larger houses for larger households. There are limited incentives that can be provided by the City however the development of the RFP provides a clear indication of preferred locations for growth.

Limited greenfields land is still proposed to provide opportunity for a modest pipeline of detached dwellings to ensure the Bendigo housing market remains competitive with other regional cities in Victoria.

9.4.7 Proximity to activity centres and transport

The MGS provides direction to introduce the residential growth zone in areas where there are no planning overlays, within 400 metres of a large activity centre, a specialised activity centre, train station or along main transport corridors. This will allow (subject to a planning permit) development of up to four storeys in locations where residents will be able to walk to access services and facilities and make it more attractive for new businesses to establish in these locations.

Residents would then have a greater opportunity to live in these locations should they choose.

9.4.8 Environmental values and natural resources

Greater Bendigo is well known as a 'City in a forest'. The municipality is currently home to 92 threatened plants and 67 threatened animal species. It is important this biodiversity is protected by limiting development in unsuitable locations.

There are areas of productive agricultural land in Greater Bendigo. It is important the more highly valuable agricultural land in particularly is protected from residential expansion to ensure it remains productive for not only the current but future generations. The MGS has been informed by an agricultural land assessment report. The City is currently also preparing a rural areas strategy which will consider the agricultural land capability across Greater Bendigo and further refine housing opportunities outside the urban growth boundary.

9.4.9 Environmental hazards

It is State planning policy at clause 13.02 that development must be located to areas of low bushfire risk. The Bushfire Management Overlay has been applied to identify specific sites that are at risk from bushfire.

However, the BMO does not take into account broader landscape risk that includes considerations such as the terrain, amount of vegetation around the site and accessibility to the site. The *Potential Growth Areas Final Bushfire Assessment* has been prepared by Terramatrix and identifies several areas in the municipality where the level of risk from bushfire is significant which aren't impacted by the BMO.

In the past areas these areas may have been considered suitable for development and this is no longer considered to be an appropriate level of risk. Areas that have been identified for growth (both greenfields and infill development) in the RFP all have a low bushfire risk or can be managed to reach a low bushfire risk.

The flooding which has occurred in Greater Bendigo over recent years has demonstrated the importance of ensuring development is not constructed in areas which have a high flooding risk that can't be managed, and that new development will not create negative impacts for residents downstream.

There are many instances in Greater Bendigo where there are offsite amenity impacts that may be challenging for residents in some areas. This includes the Bendigo Water Reclamation Plant, Bendigo Airport and the landfill. It is important that residential development close to these uses is minimised or that appropriate conditions on permits or controls are put in place on new developments so as to minimise the impact to surrounding residents but equally to protect the ongoing operations of these important facilities. Various planning controls (such as DDOs around the airport and the BAO for the landfill) are either in place or proposed to identify and manage these risks.

Where these environmental constraints apply, a minimal change area has been designated signaling that there are other more appropriate locations in Greater Bendigo where growth should be encouraged.

9.5 Residential Framework Plans

9.5.1 Methodology

The following methodology was followed to determine housing change areas:

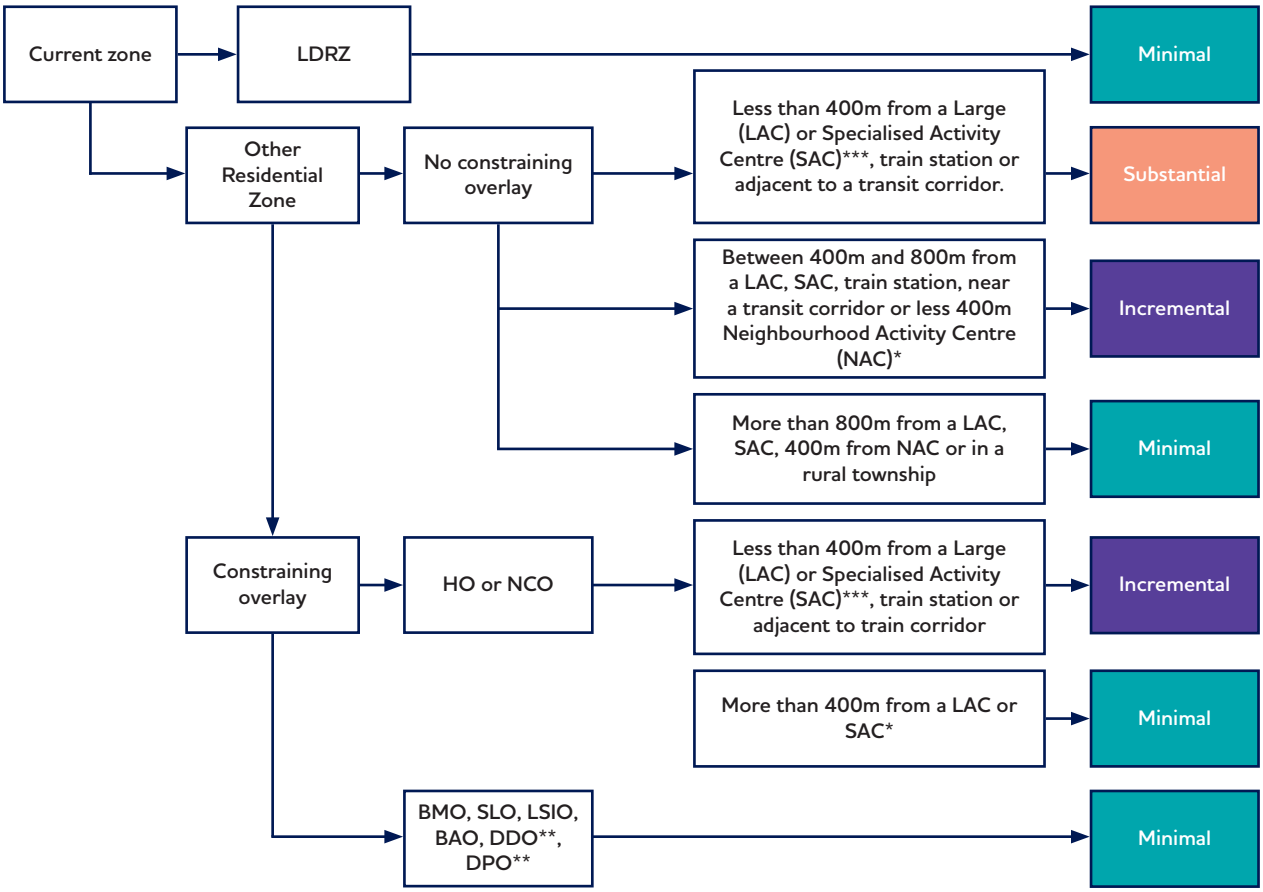

Figure 19 – Methodology to allocation of change areas

**Activity centres are defined in Clause 11.03-1L Activity Centres in the Greater Bendigo Planning Scheme.*
***DDOs and DPOs that constrain growth are being reviewed through structure planning and a DDO/DPO review process currently underway.*
****Incremental change allocated around Strathfieldsaye Large Activity Centre for consistency with Urban Design Framework*

Principles

- In some cases, streets or whole blocks have been used as logical mapping boundaries for a residential change area.
- Where a lot is affected by two change areas, the most restrictive change area has been mapped to the lot, other than in the case of where a substantial change area is the predominant change area on a lot.
- A transition from substantial change through to minimal change in most areas has been provided.
- Boundaries are along streets not back fences where possible to minimise interface issues.
- Whole blocks have been included in a single change area where possible.
- Other constraints of an area which may limit its development potential such as access to services have been considered.

9.6 Urban Area Framework Plan

The Urban Bendigo Framework Plan (figure 21) highlights the key land use patterns across the urban Bendigo area and identifies key development sites which will be a focus for redevelopment and residential investigation areas which may be suitable for development subject to more detailed investigations.

The growth areas of Marong, Maiden Gully, Huntly and Strathfieldsaye are identified to accommodate longer term growth.

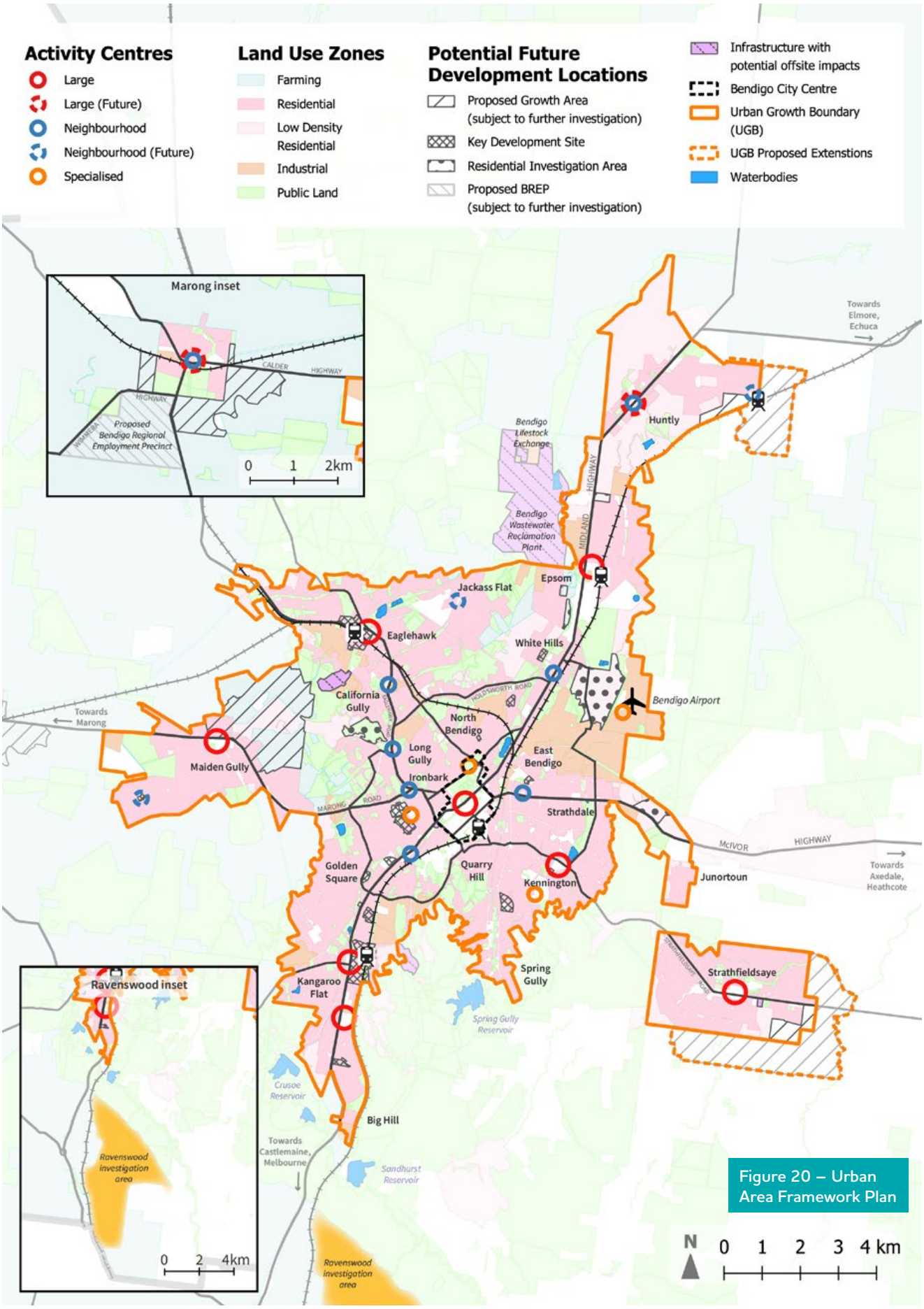

Figure 20 – Urban Area Framework Plan

9.7 Rural Area Framework Plan

The Rural Area Framework Plan demonstrates the land use pattern across the rural area (figure 22) and shows the hierarchy of rural townships in Bendigo.

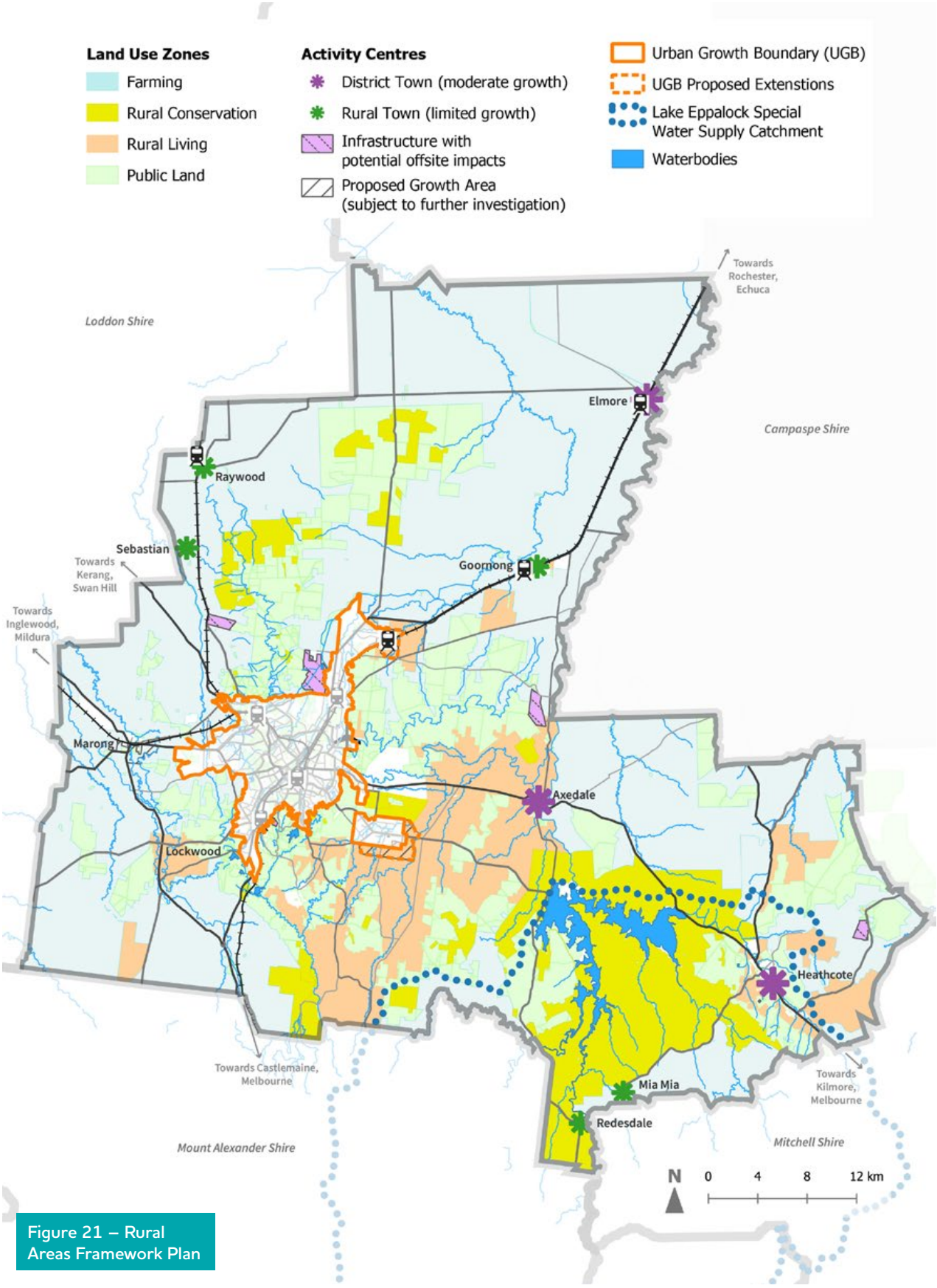

Figure 21 – Rural Areas Framework Plan

PART FIVE: Implementation

To allow the MGS to be evaluated, objectives and actions have been selected for which there are accessible measurement and monitoring methods.

For the three guiding principles of Sustainability, Safety and Suitability, a number of headline objectives have been identified (shown in bold) along with an impact indicator, which will be used to measure progress towards the objective. Where not identified in existing adopted strategies, specific actions have been identified which will assist in the delivering the objective. For each action, a process measurement is listed which will be used to determine when the action is complete.

Sustainability

Housing should be designed to reduce its long-term environmental impact.

Relevant existing strategies, studies, regulations and documents

- Barpangu – City of Greater Bendigo Reconciliation Plan 2021-2025
- Guidelines for the removal, destruction or lopping of native vegetation, DELWP 2017 (now Department of Energy, Environment and Climate Action)
- Greater Bendigo Climate Change and Environment Strategy 2021-2026
- Biodiversity Strategy and Action Plan 2023-2033
- Greening Greater Bendigo 2020-2070
- Greater Bendigo Food Systems Strategy 2020-2030
- Coliban Water Strategy 2030
- Dhelkunya Dja – Dja Dja Wurrung Country Plan 2014-2034
- Dja Dja Wurrung Land Use Activity Agreement
- Reimagining Bendigo Creek 2020

	Initiatives	Indicator	Timeframe
Give priority to the protection of human life (in accordance with Clause 13.02-1S of the Greater Bendigo Planning Scheme)	Apply the policy tools identified in Section 6.2 of the MGS in planning for growth areas.	Plans prepared in accordance with the directions in Section 6.2 of the MGS	Ongoing/$
	Update the residential framework plan at Clause 02.04 of the Greater Bendigo Planning Scheme to remove areas for further investigation that have a medium to high bushfire risk.	Clause 02.04 of the Greater Bendigo Planning Scheme Updated	Short term/$
	Facilitate the delivery of emergency services facilities to meet growth in line with population growth in greenfield areas.	Discussions held	Ongoing/$

	Initiatives	Indicator	Timeframe
Improve planning tools and guidance available to protect areas with valued landscape or environmental values	Complete an Environmental Planning Control Assessment, including a desktop assessment of existing environmental planning controls to ensure they are applied correctly.	Study complete and Amendment presented to Council to proceed to seek authorisation.	Medium term/$$$
	Undertake a further study of the Mandurang Valley significant landscape in and if appropriate, implement relevant controls into the planning scheme.	Study complete and Amendment presented to Council to proceed to seek authorisation.	Short term/$
Reduce the environmental impact of new development on existing landscapes	Require Aboriginal cultural heritage assessments (inclusive of biocultural and landscape values) to be undertaken and submitted for all new residential growth areas early in the planning process, with a description about how the findings of each assessment has informed design.	An Aboriginal heritage assessment is submitted with each privately led planning scheme amendment request for a new residential growth area.	Ongoing/$
	Encourage new development to comply with Council and the NCCMA's Waterway Development Guidelines.	Examples of relevant applications assessed under the guidelines	Ongoing/$
	Encourage new development to comply with the Sustainable Subdivisions Framework.	Examples of subdivisions assessed against the Framework.	Ongoing/$

Safety

Housing should be directed to areas that have fewer environmental hazards.

Relevant existing strategies, studies, regulations and documents

- Bendigo Urban Flood Study 2013
- Heathcote Flood Study, NCCMA 2016
- Marong Flood Study 2018
- Environment Protection Regulations, EPA 2021
- Greater Bendigo Industrial Land Development Strategy 2020

	Initiatives	Indicator	Timeframe
Ensure development better responds to environmental constraints and climate change	Work with the State Government on advancing a regional strategy for mining related contamination.	Assessment report complete with recommendations.	Short term/$$
	Facilitate a planning scheme amendment to introduce a planning control to implement a buffer between residential areas and the Bendigo Water Reclamation Plant.	Study complete and Amendment presented to Council to proceed to seek authorisation.	Short term/$$

Suitability

A diversity of housing should be delivered to meet different needs, be near services, be affordable and encourage quality of life.

Relevant existing strategies, studies, regulations and documents

- Plan Melbourne 2017-2050
- Loddon Mallee South Regional Growth Plan 2014
- Plan Greater Bendigo 2018
- Affordable Housing Action Plan 2021
- Bendigo City Centre Plan 2020
- Golden Square Structure Plan 2022
- Marong Township Structure Plan 2020
- Rural Areas Strategy 2009
- Heathcote Township Plan 2019
- East Bendigo Local Structure Plan 2006
- Kangaroo Flat South Regional Centre Structure Plan 2006
- Eaglehawk Structure Plan 2013
- Strathfieldsaye Township Plan 2010
- Strathfieldsaye Urban Design Framework 2017

	Initiatives	Indicator	Timeframe
Increase the proportion of infill residential development in urban areas from 47 to 70 per cent	Facilitate privately led rezonings of key development sites as identified in the MGS.	Number of Planning Scheme Amendments being presented to Council proceed to seek authorisation.	Ongoing/$$
	Prepare and undertake a planning scheme amendment to apply the Neighbourhood Residential Zone, General Residential Zone and Residential Growth Zone based on the directions in the HNCS.	Planning Scheme Amendment presented to Council to proceed to seek authorisation.	Short term/$$
	Make changes to the Neighbourhood Character Overlay and Significant Landscape Overlay as informed by the Housing and Neighbourhood Character Strategy and outlined in Appendix A to the Managed Growth Strategy.	Amendment presented to Council to proceed to seek authorisation.	Short term/$$
	Prepare and implement Structure Plans listed in order of priority for established activity centres in urban Bendigo: - Epsom - East Bendigo including parts of Junortoun (Review and update of the Structure Plan from 2006) - Kennington/Strathdale - Eaglehawk (Review and update of the Structure Plan from 2013) - Kangaroo Flat (Review and update of the South Regional Centre Structure Plan from 2006)	Structure Plans completed and Planning Scheme Amendments presented to Council to proceed to seek authorisation.	Short-medium term /$$$
	Ensure Structure Plans and Development Plans are informed by the latest flood modelling that takes into account the more frequent and high rainfall likely to occur under climate change.	How this has been considered in the preparation of Structure Plans and Development Plans.	Ongoing/$$
	Complete a review of the Development Plan Overlays and the Design and Development Overlays within the Greater Bendigo Planning Scheme and implement changes into the planning scheme.	Review complete.	Short term/$$
	Prepare a new Planning Delegations Policy to provide greater clarity around the assessment of planning applications.	Planning Delegations Policy complete.	Short/$
	Prepare a report which provides a breakdown of where and types of development occurring	Report prepared.	Annual/$

	Initiatives	Indicator	Timeframe
Increase the proportion of residential medium density development from 8 to 15 per cent over the next 15 years	Prepare a report which investigate options to improve development facilitation in the City Centre and in other large activity centres.	Report prepared.	Short term/$
	Meet with State Government representatives to discuss the release of identified surplus state government land sites to release for residential development purposes.	Discussions held.	Ongoing/$
	Prepare a list of State Government surplus sites and send correspondence to relevant Ministers requesting a meeting to progress their declaration.	Meetings held.	Short term/$
	Explore advocacy and funding opportunities to facilitate infrastructure upgrades in established areas that will reduce the cost of infill development.	Discussions held and funding opportunities explored	Ongoing/$

	Initiatives	Indicator	Timeframe
Ensure there is adequate planned supply of residential land in Greater Bendigo to 2056	As part of the rezoning process of growth areas and key redevelopment sites, and prior to a design being finalised, an Aboriginal Cultural Values Assessment (which might include an Aboriginal Waterways Assessment) must be prepared in consultation with Traditional Owners, with a description of how the assessment has informed the design.	Traditional owners engaged and Aboriginal Cultural Values assessment delivered.	Ongoing/$$
	Introduce the Managed Growth Strategy and a revised Residential Framework Plan (including changes to Huntly and Strathfieldsaye) into planning policy within the Greater Bendigo Planning Scheme.	Planning Scheme Amendments presented to Council to proceed to seek authorisation.	Short term/$$$
	Complete the Huntly Structure Plan including the new growth area and commence implementation into the Planning Scheme.	Structure Plan complete and Planning Scheme Amendment presented to Council to proceed to seek authorisation	Short term/$$$
	Prepare a Framework Plan for Maiden Gully to identify areas suitable for growth and commence implementation into the Planning Scheme.	Plan prepared and Planning Scheme Amendment presented to Council to proceed to seek authorisation.	Short term/$$
	Prepare a plan to guide the future growth of Strathfieldsaye including funding and delivery of infrastructure and once complete commence implementation into the Planning Scheme.	Structure Plan complete and Planning Scheme Amendment presented to Council to proceed to seek authorisation	Short-medium term/$$$
	Facilitate privately led planning scheme amendments for the future residential precincts identified within the Marong Township Structure Plan.	Planning Scheme Amendment presented to Council to proceed to seek authorisation.	Short-medium term/$$
	Complete and implement the Rural Areas Strategy (including an assessment of bushfire risk), to guide and limit growth to townships, and to guide changes to rural residential areas.	Rural Areas Strategy prepared and implementation commenced.	Short-medium term/$$$

	Initiatives	Indicator	Timeframe
Ensure the equitable provision of infrastructure to meet changing community needs	Work with relevant State Government agencies to prepare infrastructure plans in conjunction with the preparation of plans for new growth areas.	Evidence of discussions held with State Government	Ongoing/$
	Prepare and implement Development Contributions Schemes alongside the development of Structure Plans to ensure the equitable funding of infrastructure for growing communities	Development contributions schemes implemented	Ongoing/$$
	Prepare a Community Infrastructure Policy	Policy complete	Short term/$
	Complete and implement the Community Hubs Strategy	Strategy complete	Short term/$$ (Strategy complete) Long term/$$$ (Implementation)
	Support the State Government and education providers in their planning for education facilities across the municipality to ensure that it responds to population growth.	Evidence of discussions held with State Government and private education providers	Ongoing/$
	Partner with State Government to plan for early years education facilities to cater for the forecast population	Early Years Infrastructure Framework complete	Short term/$$

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Appendix A – Summary of proposed areas for NCO and SLO removal

Properties where the NCO is proposed to be removed

Location	Summary	Number of properties affected
Somerville Street Flora Hill	Variety of building styles and forms	110
North of McIvor Highway, East Bendigo	Eclectic mix of building eras including commercial, vacant lots and housing from Victorian, Interwar and more recent eras	19
Barnard Street, Ironbark	Variety of building styles and forms including several two storey developments not consistent with the preferred neighbourhood character of the area. Note: 382 Barnard Street, Ironbark recommended for HO in Amendment C275gben.	13
Rae Street, Ironbark	Significant areas of HO/NCO1 overlap. The neighbourhood character objectives for the remainder of the precinct can be achieved through the application of local planning policy.	2 (and 7 already covered by HO).
High and Panton Streets, Golden Square	376-382 High Street (adjacent to Backhaus Oval) contains a mix of building areas with and potential opportunities for increased housing.	4
Panton Street, Golden Square	Areas on south side of Panton Street (35-51 and 61A-63A Panton Street) are eclectic mix of building eras within spacious settings and includes vacant land.	9
Allingham Street, Golden Square	Remove to encourage substantial change given Golden Square train station located behind precinct	6
Panton, Cedar and High Streets, Golden Square	Areas on the south side of Panton Street are an eclectic mix of building eras and vacant land. Note: 11 Panton Street, Golden Square recommended for HO in Amendment C270gben.	6
Burn and Maple Streets, Golden Square *Rowan Street	*Properties accessing Rowan Street to be removed.	3
Thistle Street, Golden Square	Precinct mix of dwelling types and eras with multi-unit development beginning to occur Note: 141 Thistle Street, Golden Square recommended for a HO in Amendment C275gben.	23
47 Marong Road, Golden Square	Timber dwelling later interwar adjacent to Mickey Mouse Hill Bushland Reserve	1
Total properties where NCO recommended for removal		**196 (and 7 already covered by a HO)**

Properties where removal of the SLO is recommended

Location	Summary	Number of properties affected
Ellis Street (pg 68)	A visual onsite and aerial photo review highlights that the area has had little redevelopment since the application of the SLO1.	7
Kendal and Burns Streets, Spring Gully (pg 71)	A visual onsite and aerial photo review highlights that much of the area has been redeveloped in Garden Court style with vegetation removed.	110
Walker Drive, Spring Gully (pg 72)	A visual onsite and aerial photo review highlights that the bush garden qualities have been eroded by new subdivision while adjacent properties at 47 and 57 Autumn Gully Road contain significant vegetation.	93
Inglis Street, West Bendigo (pg 73)	The SLO should be removed from the precinct. Its application on the Crown land reserve contradicts Governor in Council orders.	15
St Killian and Church Streets, White Hills (pg 74)	"...exceptions are in new subdivisions in Captain Court and Ironhill Close, where properties are zoned GRZ, smaller in size and have largely cleared the vegetation from the site."	26
Golden Gully Road, Kangaroo Flat (pg 76)	Along Bath Lane and Ham Streets the character is semi-rural in nature with minimal vegetation. Properties on the west side of Bunker Street have been rezoned to GRZ and the SLO1 should be removed.	12
Furness Street and Stanley Crescent, Kangaroo Flat (pg 77)	There is minimal or no vegetation on land zoned GRZ and where there is vegetation, the existing subdivision pattern negates the retention of this vegetation.	26
Total properties where SLO recommended for removal		**289**

Appendix B – Key Development Sites/Potential residential development areas (subject to further investigation)

Address	Planning controls	Key development or residential development area (subject to further investigation)	Key considerations to facilitate development
Bendigo			
Various sites in the City Centre (as identified in Figure 10)	Currently a mix of zones including GRZ/MUZ/C1Z	Key development sites	Sites are all proposed to be rezoned to Activity Centre Zone through Amendment C279gben which is expected to be exhibited in 2024
153-155 High Street, Bendigo	C1Z, PO Precinct 1, DDO20	Key development site	Contamination, development feasibility, access 885/2021 (withdrawn) - Development of the land for a takeaway food premises (drive through coffee) and alteration of access to a Road Zone Category 1 *Approval for mixed use building has expired. The controls are appropriate to allow for a mixed use development including residential development.
39-51 Lansell Street, Bendigo	GRZ and DPO16	Key development site	Development plan and permit approved.
East Bendigo			
South of Heinz Street, East of Murphy Street, West of the Airport	LDRZ	Residential development area (subject to further investigation)	Would need to be investigated further as part of an update to the East Bendigo precinct structure plan. Part of precinct used for 'horse adjistment, likely contamination. West of the Bendigo Airport. Some of the area will be unsuitable for development due to updated Australian Noise Exposure Forecast Some areas may be suitable for development, with added noise control features. Requires rezoning.

Address	Planning controls	Key development or residential development area (subject to further investigation)	Key considerations to facilitate development
Epsom			
1 Buckland Street, 20 Montis Lane, 18-46 Saade Street, Epsom	FZ Zone	Residential development area (subject to further investigation)	Requires rezoning. Current Amendment C248gben underway to rezone the site to NRZ.
358-372 Midland Highway and 21 and 31 Allen Street, Epsom	LDRZ Zone	Residential development area (subject to further investigation)	Would require a rezoning to NRZ. Multiple owners. Potential for flooding on the northwest of the site would need to be addressed. Confirmation of buffers from Water Treatment Plant. Ensure walk/cycle connection along Allen Street is included within any development.
74-94 Goynes Road, Epsom	LDRZ	Residential development area (subject to further investigation)	Requires a rezoning of part of the site to NRZ. Land only to the west of Saade Street appropriate for rezoning due to flooding. Address flooding issues. Confirmation of buffers from Bendigo Water Reclamation Plant from Coliban and EPA.
Flora Hill			
2 Osborne Street, Flora Hill	RGZ, DPO	Key development site	Cultural Heritage. Typography Drainage.
Golden Square			
Former Golden Square primary school – 6 Laurel Street, Golden Square	GRZ, HO	Key development site	Heritage significance as well as potential cultural heritage significance. Amendment for rezoning has been through an advisory committee process but is yet to be Gazetted. This would require disposal through process for sale of Crown Land. Previous institution.
Fortuna Villa, Golden Square	CDZ	Key development site	Currently being developed.
9-43 Chum Street, Golden Square	Part GRZ, Part PUZ	Key development site	Likely contamination and mineshafts, requiring remediation prior to any development. Impacts of the existing retention basin and any potential flooding, needs to be better understood prior to any development. Crown Land, Land Use Activity Agreement. Currently used by the community for informal open space.

Address	Planning controls	Key development or residential development area (subject to further investigation)	Key considerations to facilitate development
Southern Cross, Austereo Site, Golden Square	SUZ3	Key development site	Likely contamination. Identified in the adopted Golden Square structure plan as suitable for mixed use development including residential, short-term accommodation, aged care or medical related facilities. Will require rezoning. Apply Development Plan Overlay.
364-366, 476-480 and 482-486 High Street	C1Z and C2Z	Key development sites	Actions within the Golden Square Structure Plan for these sites are to: Rezone from Commercial 1 and Commercial 2 to a residential zone. Apply the Environmental Audit Overlay to 476-480 and 486 High Street. Consider potential contamination of land at 364-355 High Street and the need to apply the Environmental Audit Overlay.
Junortoun			
Land to the east of Markovich Road to the west of Atlas Road, and to the north of the McIvor Highway	LDRZ	Residential development area (subject to further investigation)	Cultural Heritage, Bushfire, proximity to the airport on part of the site and rifle range to the north. Will require rezoning. Ideally to be considered as one precinct with a masterplan prepared.
Kangaroo Flat			
Former Coliban Water site, Alder Street, Kangaroo Flat	GRZ / DPO & EAO	Key development site	Approved development application.
23 Phillis Street, Kangaroo Flat	GRZ/BMO	Key development site	Potential need for intersection.
Kennington			
1 Innovation Court, Kennington	C1Z proposed to be GRZ	Key development site	Requires rezoning to allow for residential development
Long Gully			
12-28 Cunneen Street, Long Gully	PUZ7, BMO, with southern portion of the site covered by LSIO2	Residential development area (subject to further investigation)	Contamination. Will require rezoning to allow for development. Currently used for informal recreation. This would require disposal through process for sale of Crown Land.

Address	Planning controls	Key development or residential development area (subject to further investigation)	Key considerations to facilitate development
North Bendigo			
61-77 Nolan Street, North Bendigo	GRZ, EAO	Key development site	Likely contamination which would need to be addressed prior to any residential development.
White Hills			
49 Hamelin Street, White Hills	GRZ, LSIO	Key development site	Potential for part of the site to be developed for housing. This would need to be consistent with the Botanic Gardens Masterplan.
32-38 Finn Street, White Hills	GRZ	Key development site	Former DHHS Facility. Currently going through process for sale of Crown Land. Land Use Activity Agreement Would need to minimise impact on industrial land to the west of the site. Close proximity to schools and the Bendigo Creek Trail
Other			
Land around the following train stations • **Bendigo** • **Golden Square** • **Eaglehawk**	A range of zones and controls	Key development sites	Contamination, development feasibility, current uses.

Appendix C – Agricultural Land Capability Analysis

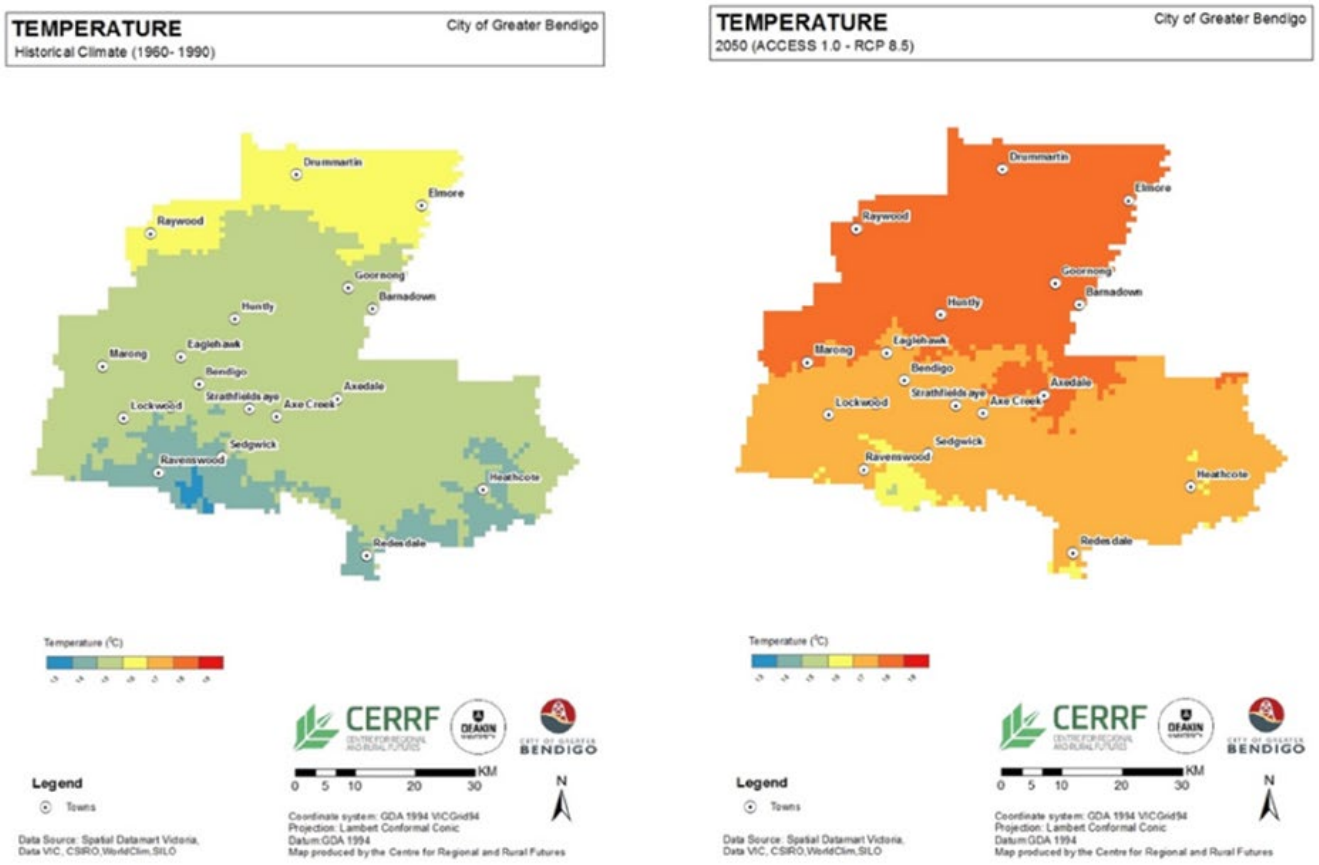

Figure: Historical and projected temperature maps for Greater Bendigo. Source: CERRF, Deakin University and the City of Greater Bendigo.

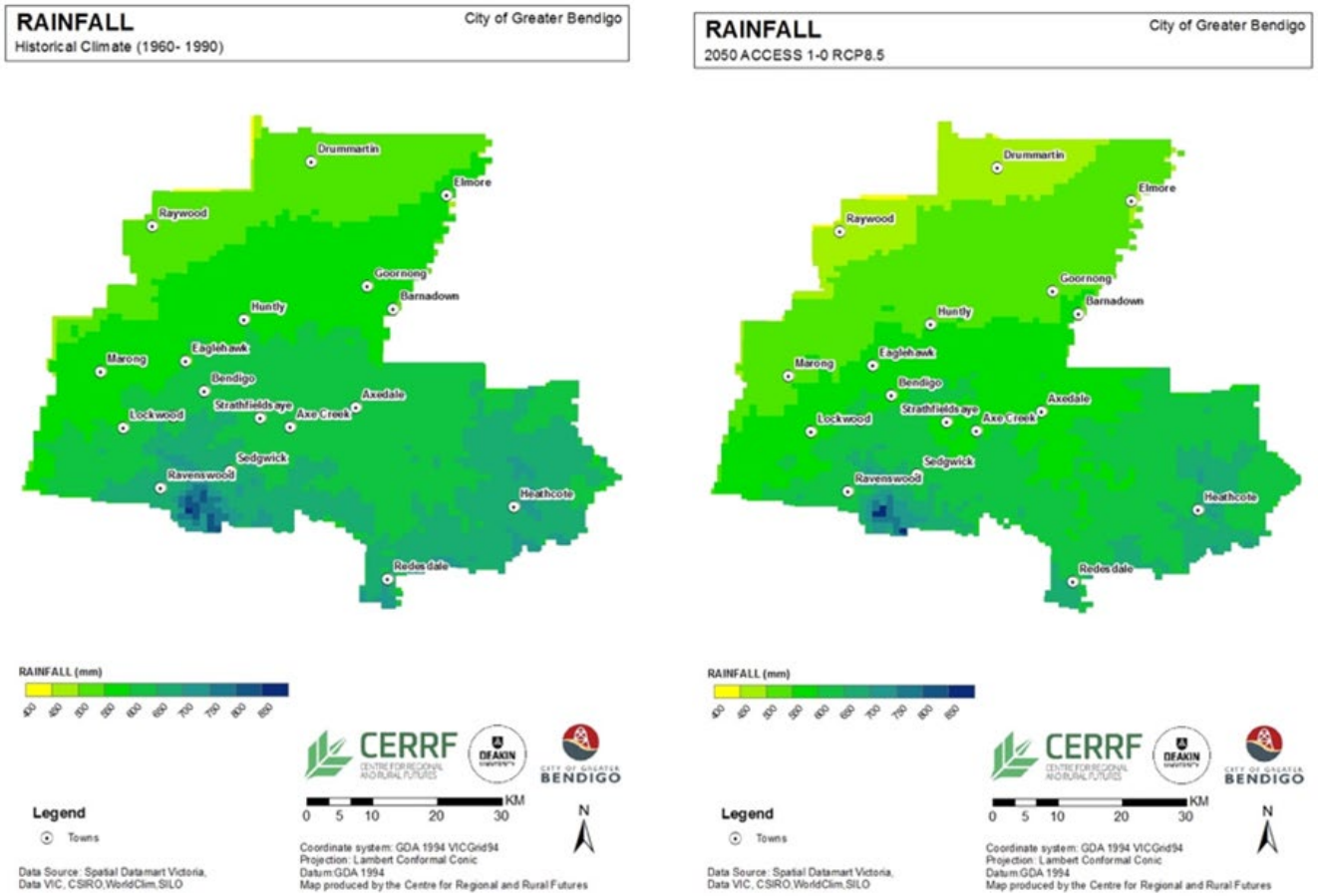

Figure: Historical and projected rainfall maps for Greater Bendigo. Source: CERRF, Deakin University and the City of Greater Bendigo.

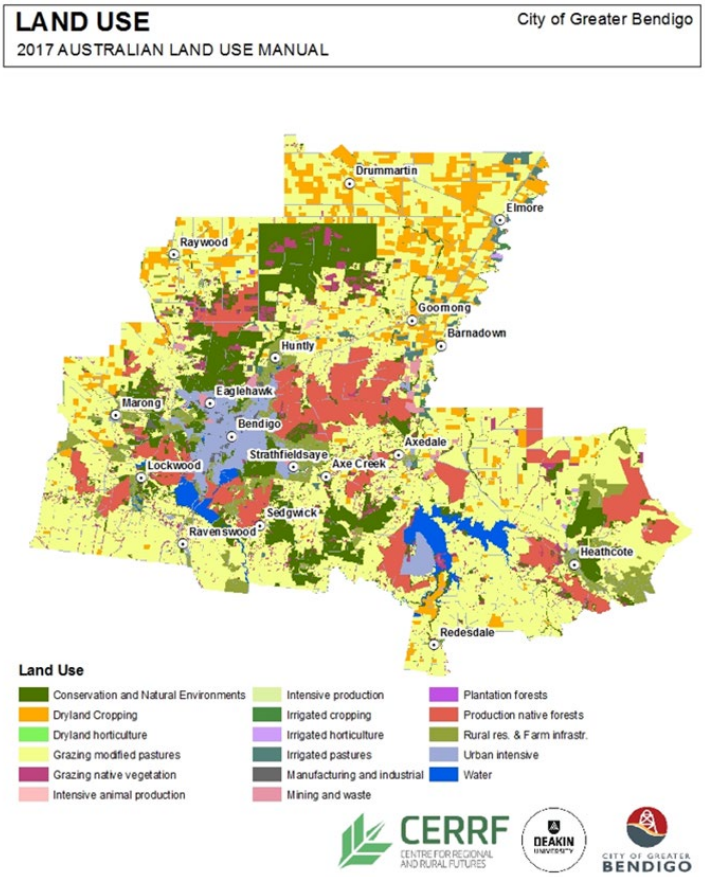

Figure: 2017 Land use map for the Greater Bendigo. Source: CERRF, Deakin University and the City of Greater Bendigo.

Appendix D – Mapping of Change areas

The following section provides an overview of the existing constraints, access to infrastructure as well as proposed neighbourhood character and change areas.

Central Bendigo

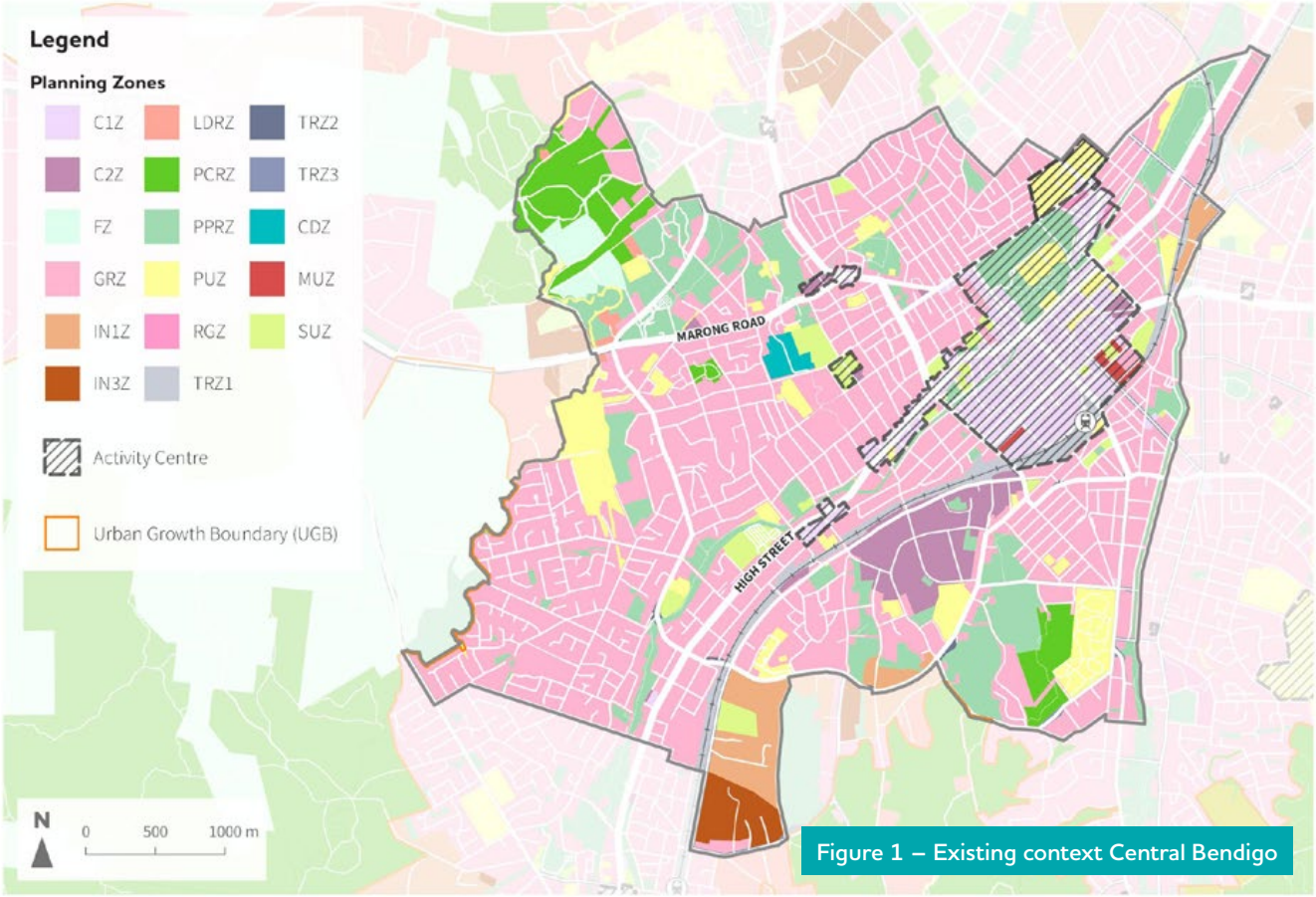

Figure 1 – Existing context Central Bendigo

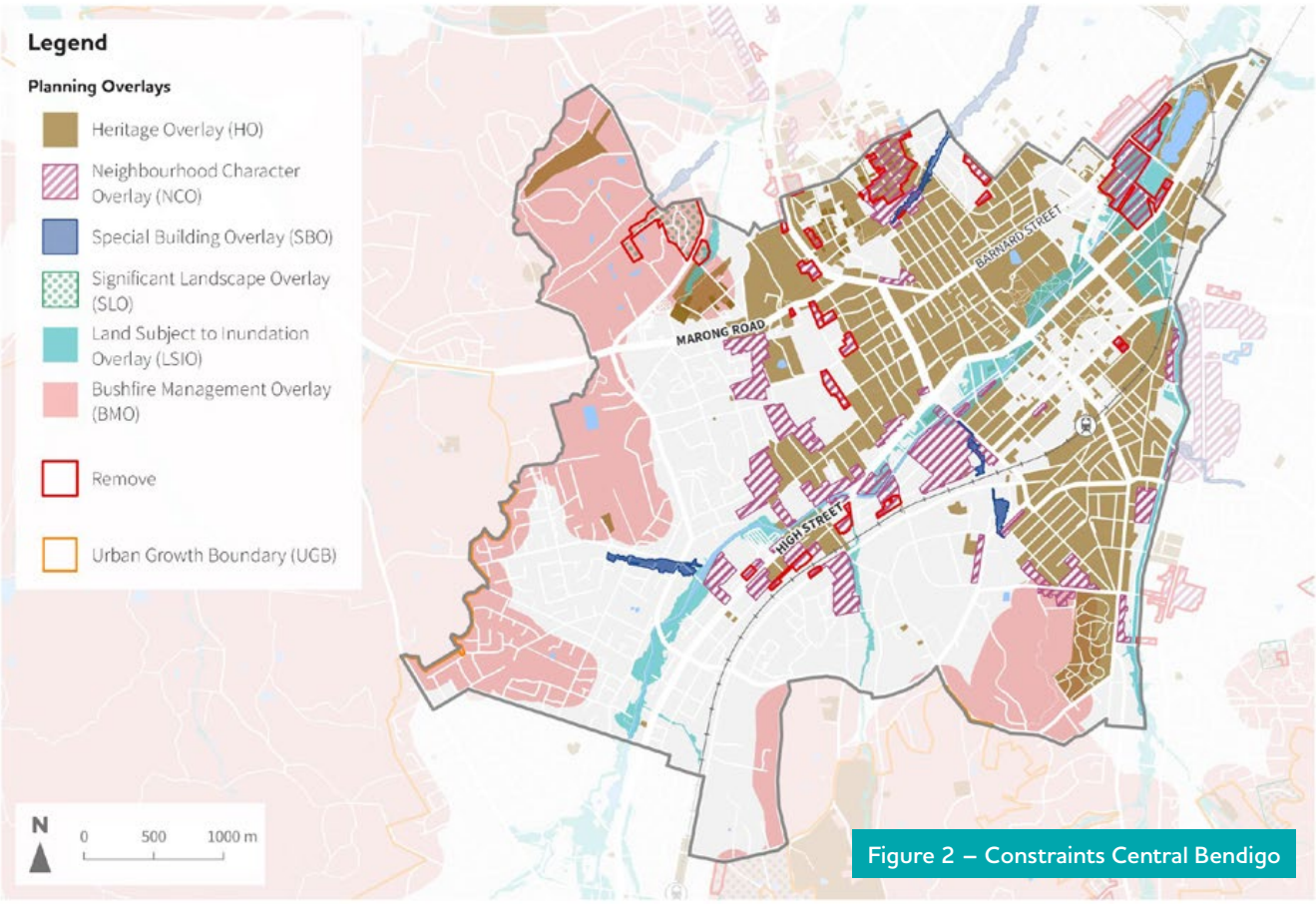

Figure 2 – Constraints Central Bendigo

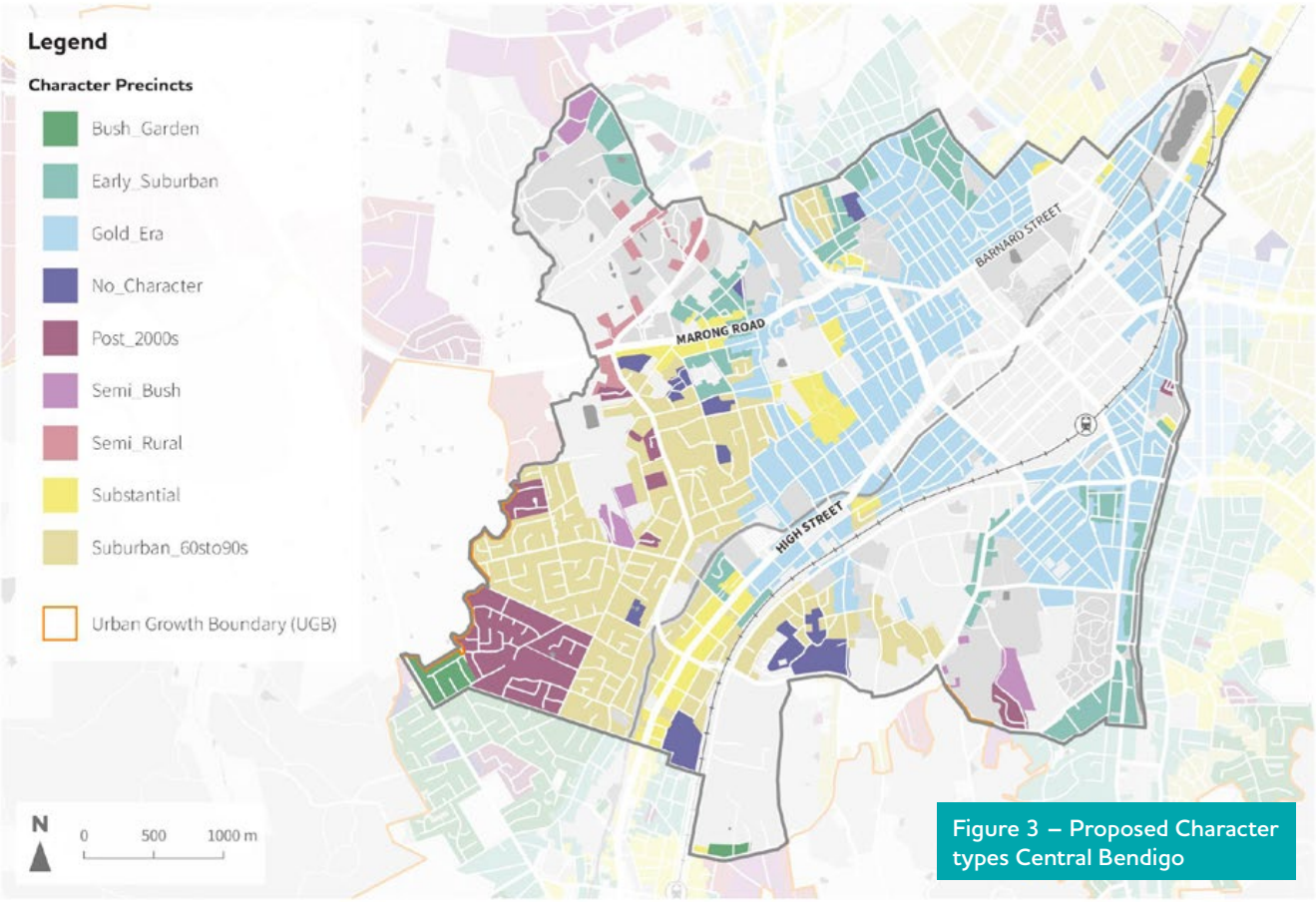

Figure 3 – Proposed Character types Central Bendigo

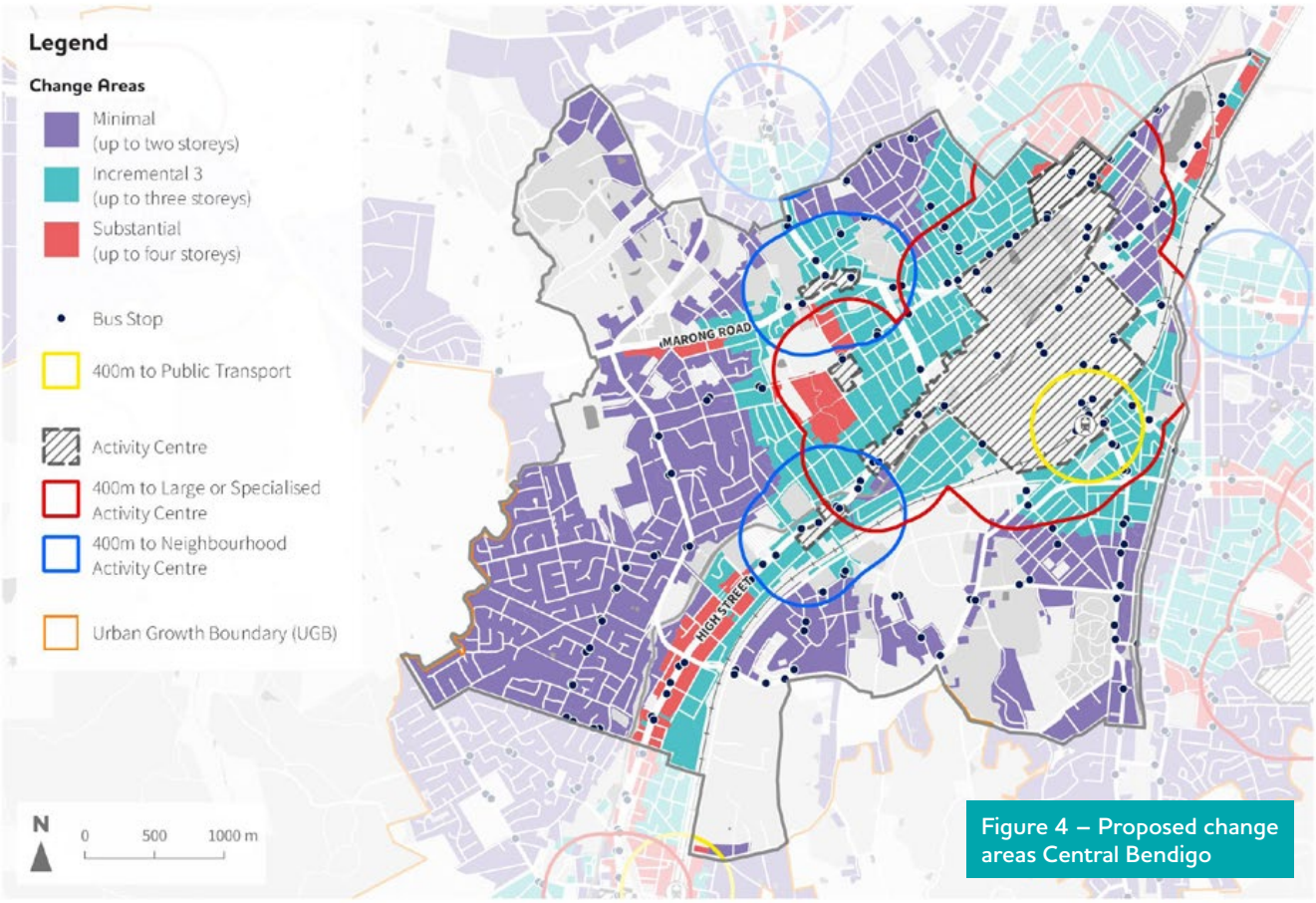

Figure 4 – Proposed change areas Central Bendigo

Big Hill and Kangaroo Flat

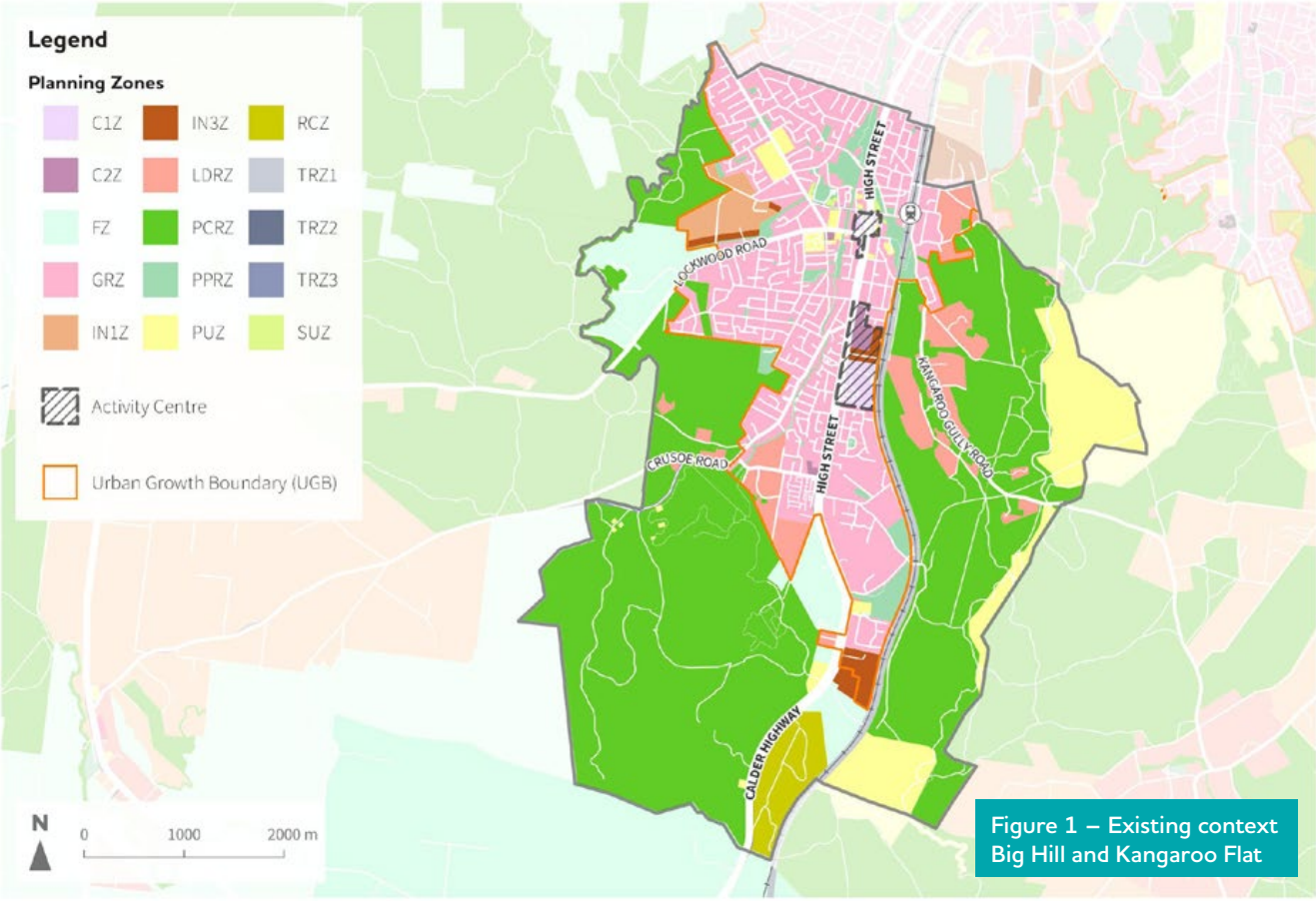

Figure 1 – Existing context
Big Hill and Kangaroo Flat

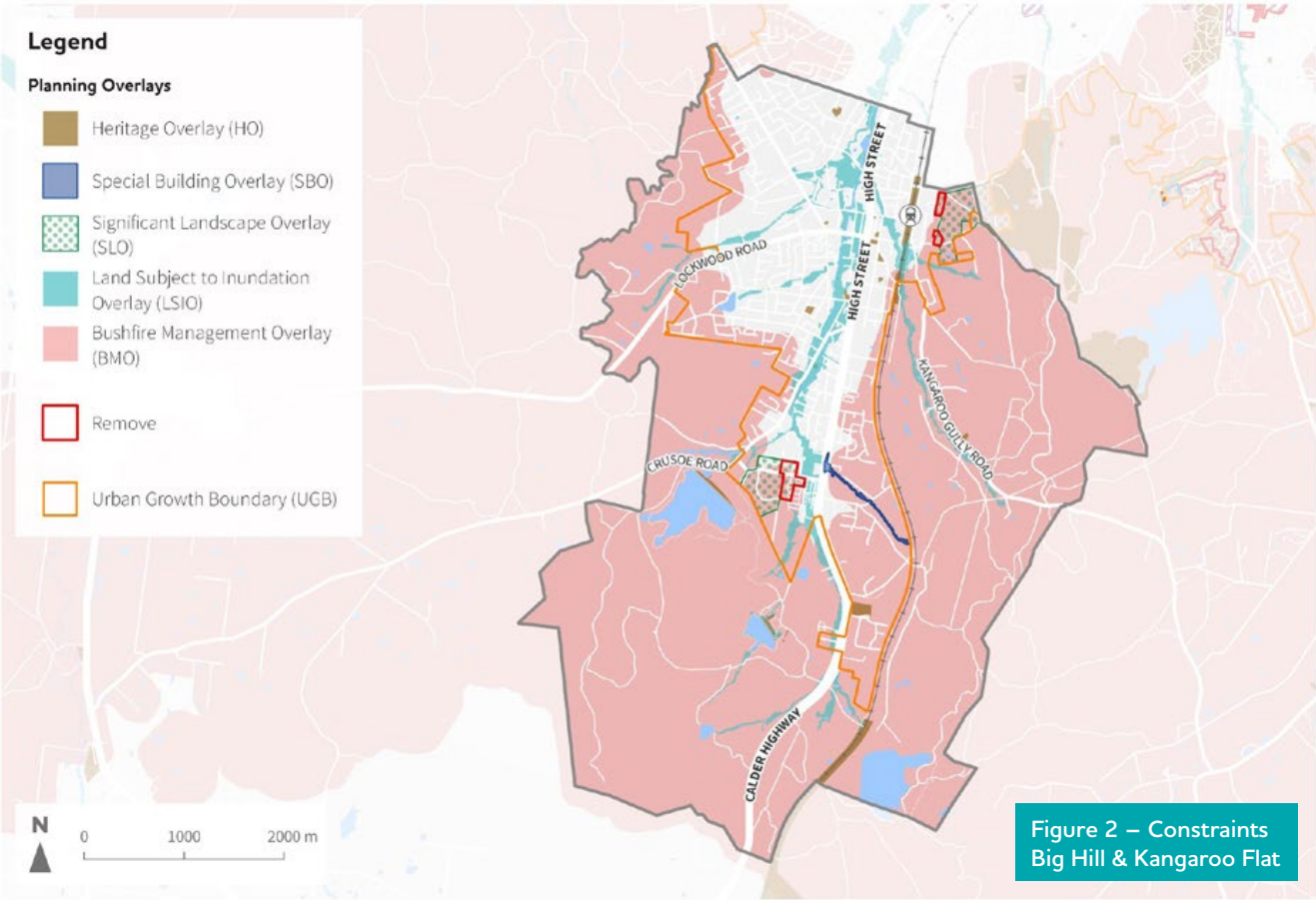

Figure 2 – Constraints
Big Hill & Kangaroo Flat

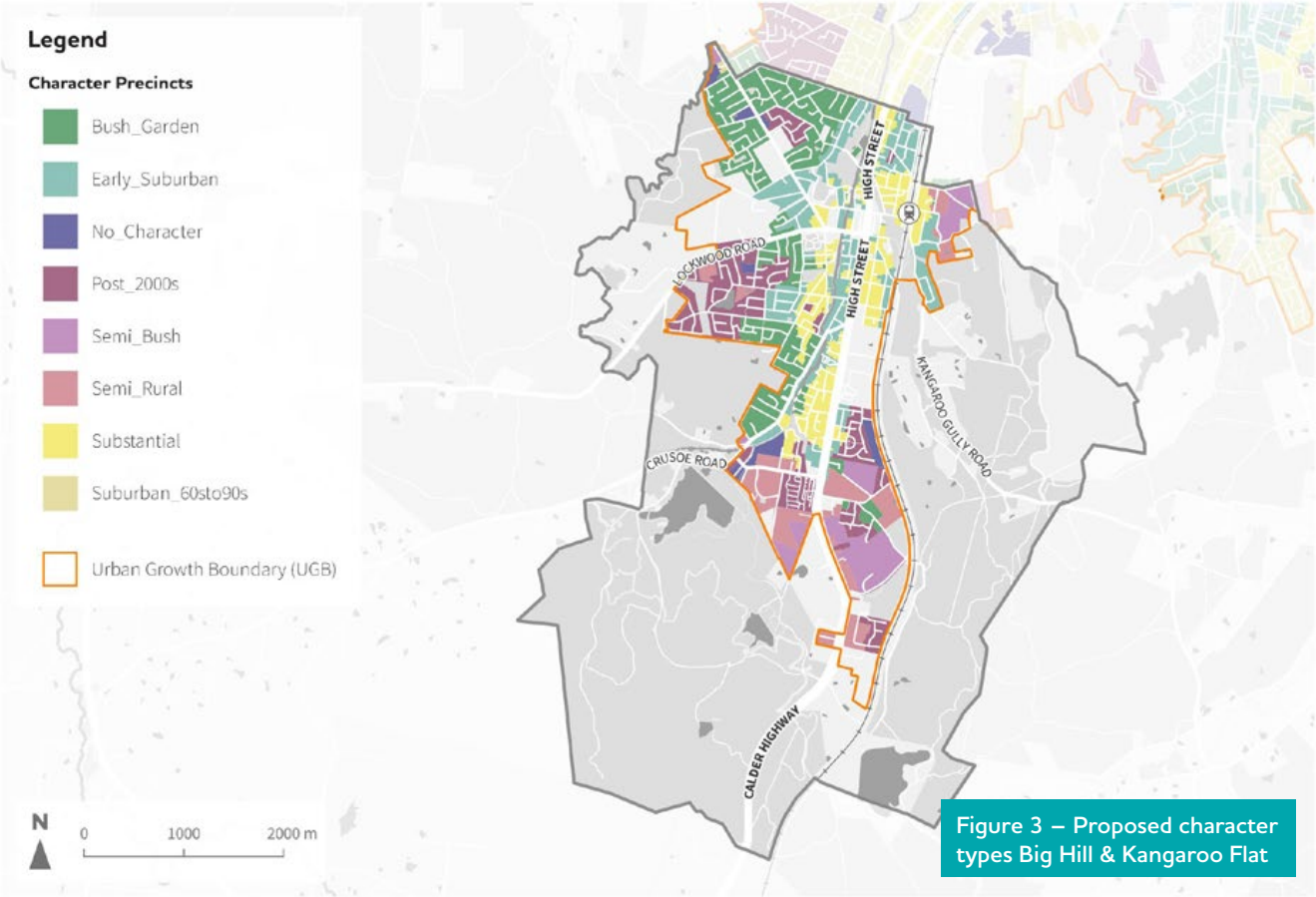

Figure 3 – Proposed character types Big Hill & Kangaroo Flat

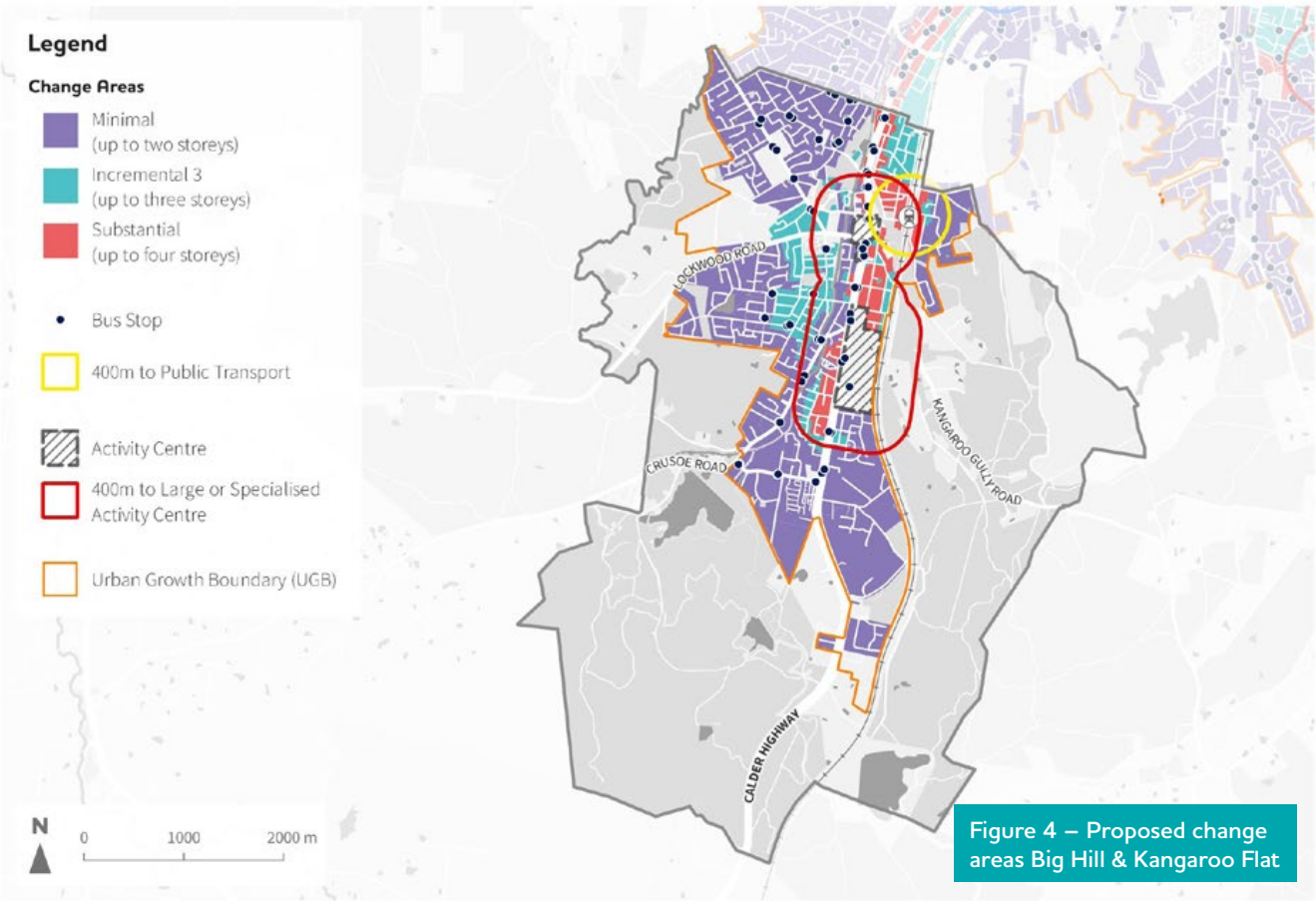

Figure 4 – Proposed change areas Big Hill & Kangaroo Flat

California Gully and Eaglehawk

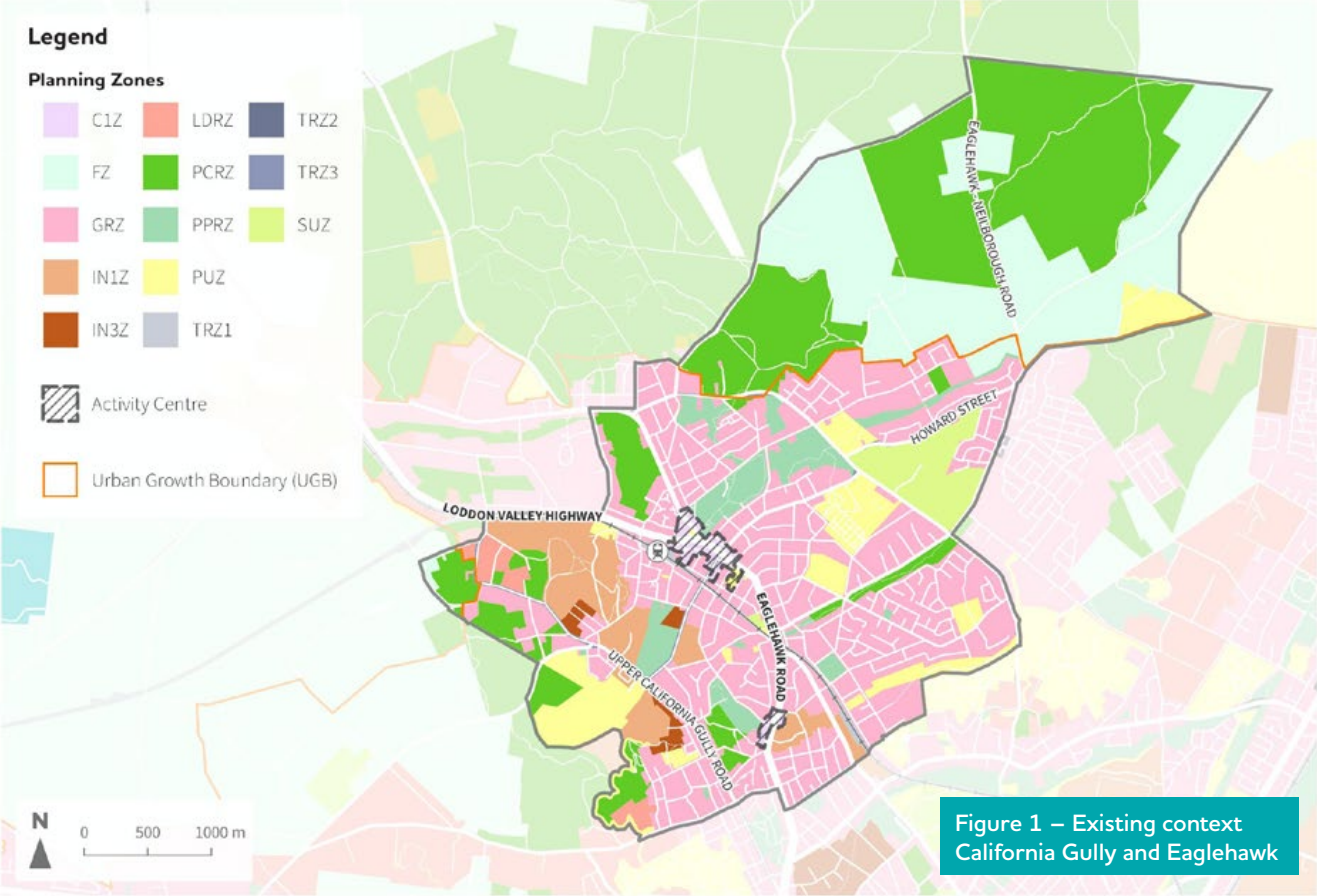

Figure 1 – Existing context California Gully and Eaglehawk

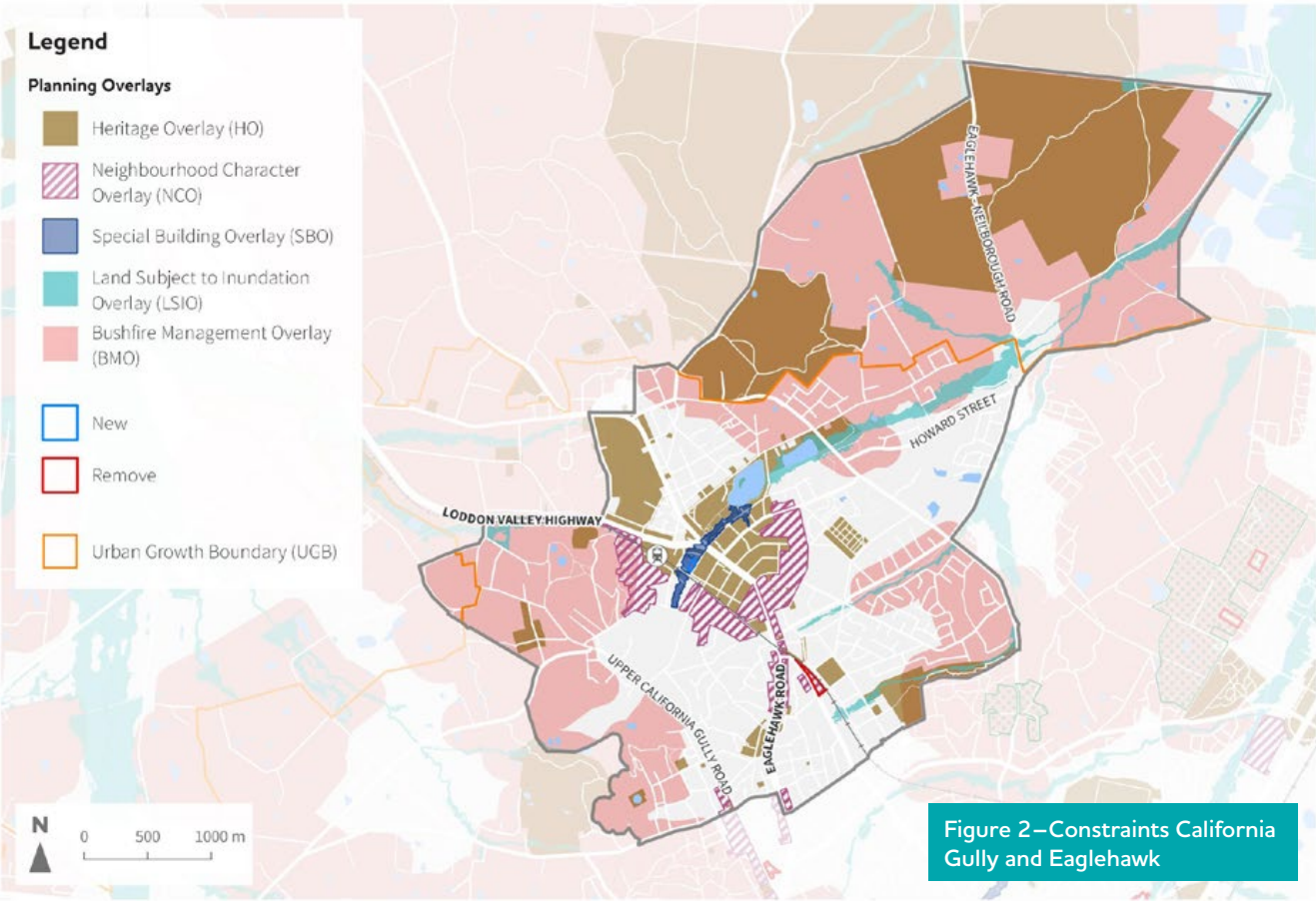

Figure 2–Constraints California Gully and Eaglehawk

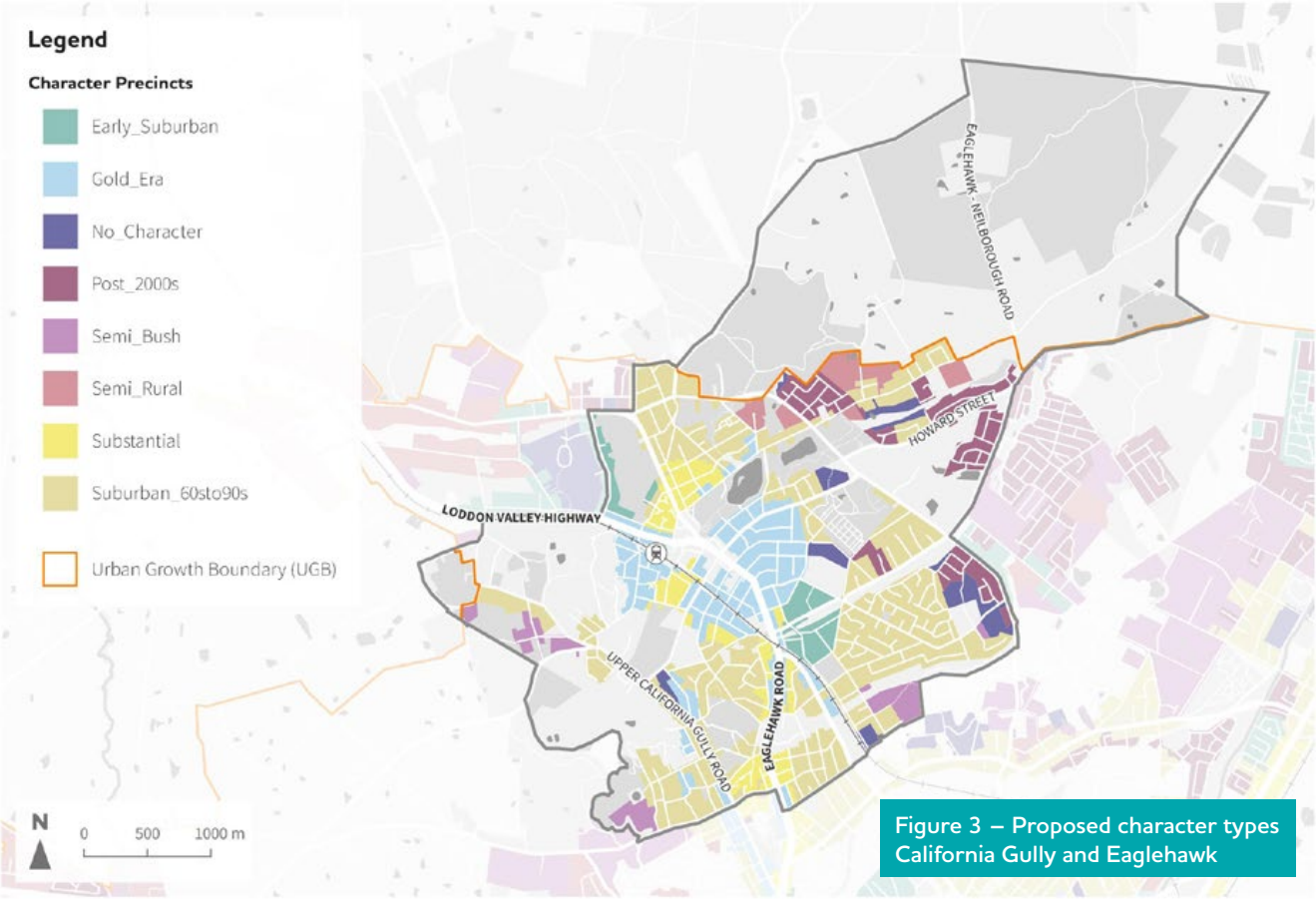

Figure 3 – Proposed character types California Gully and Eaglehawk

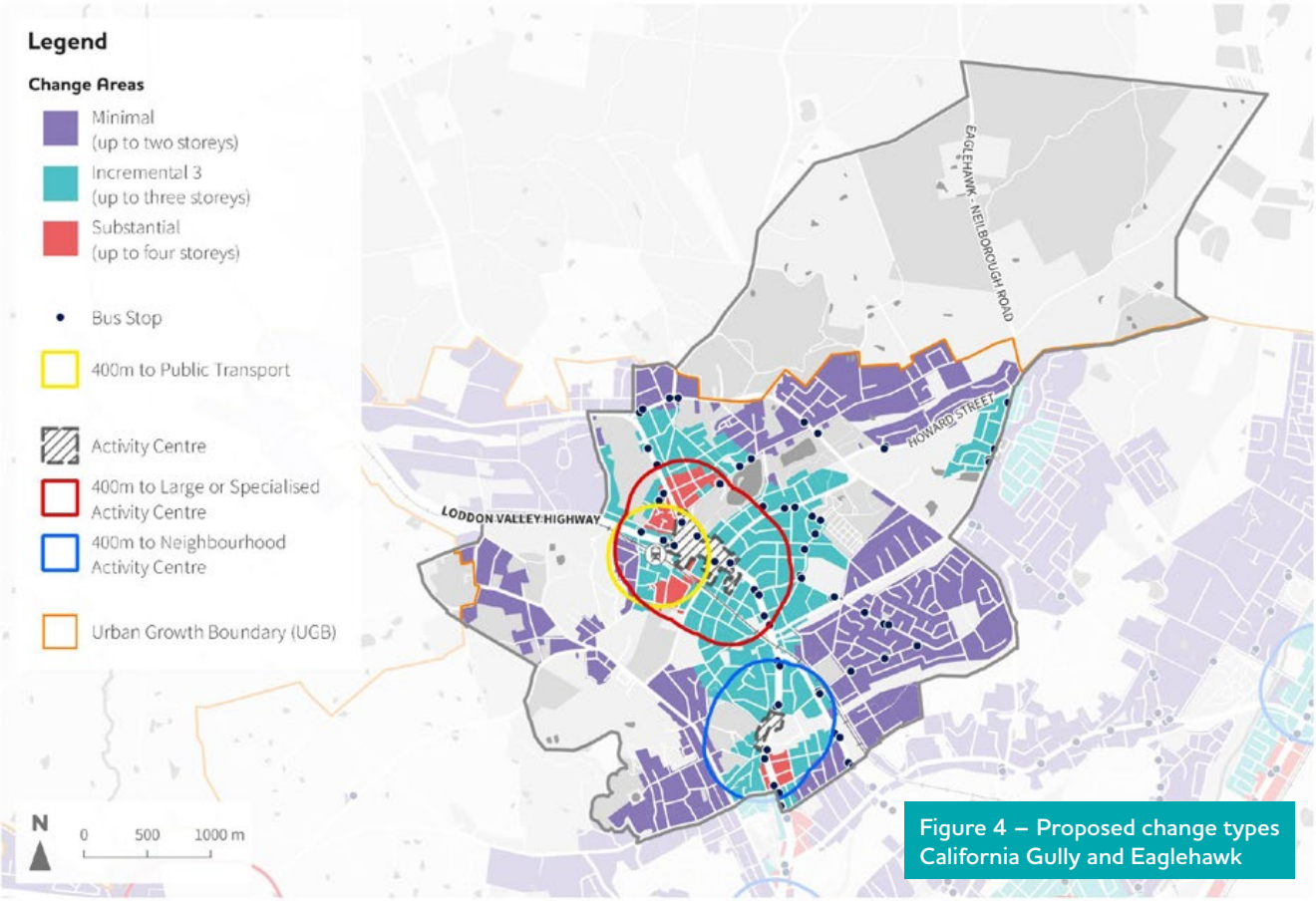

Figure 4 – Proposed change types California Gully and Eaglehawk

Epsom, Jackass Flat and White Hills

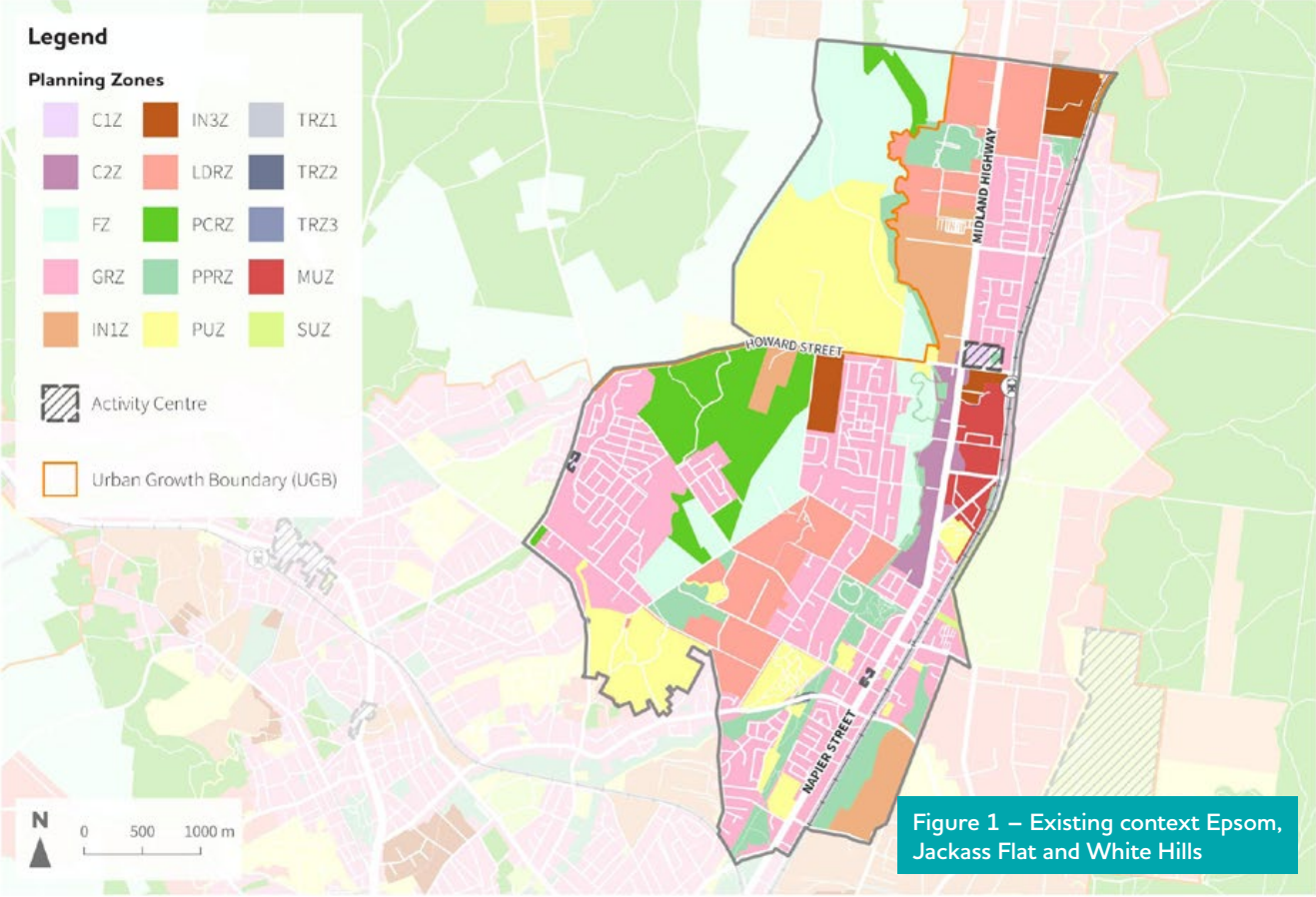

Figure 1 – Existing context Epsom, Jackass Flat and White Hills

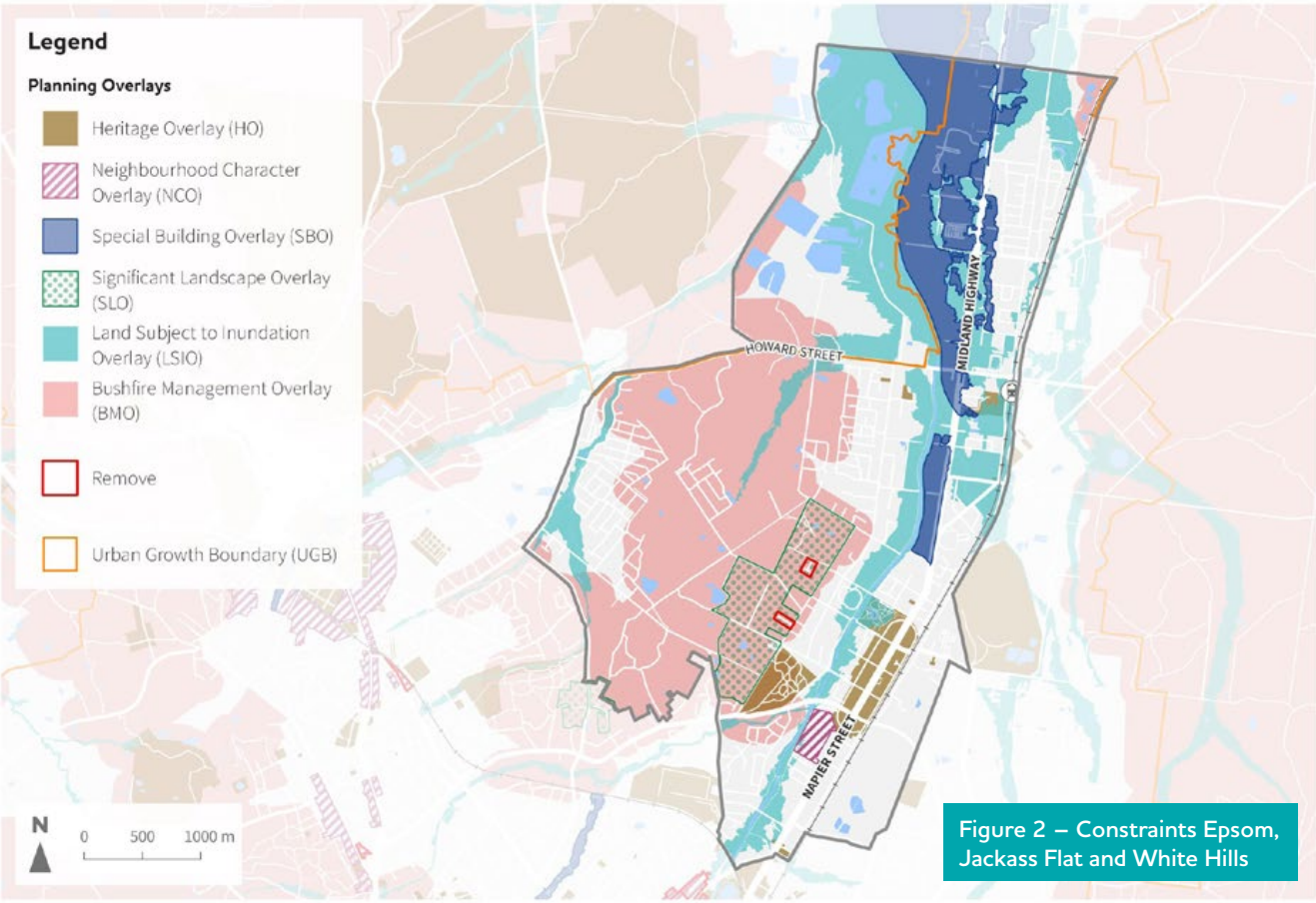

Figure 2 – Constraints Epsom, Jackass Flat and White Hills

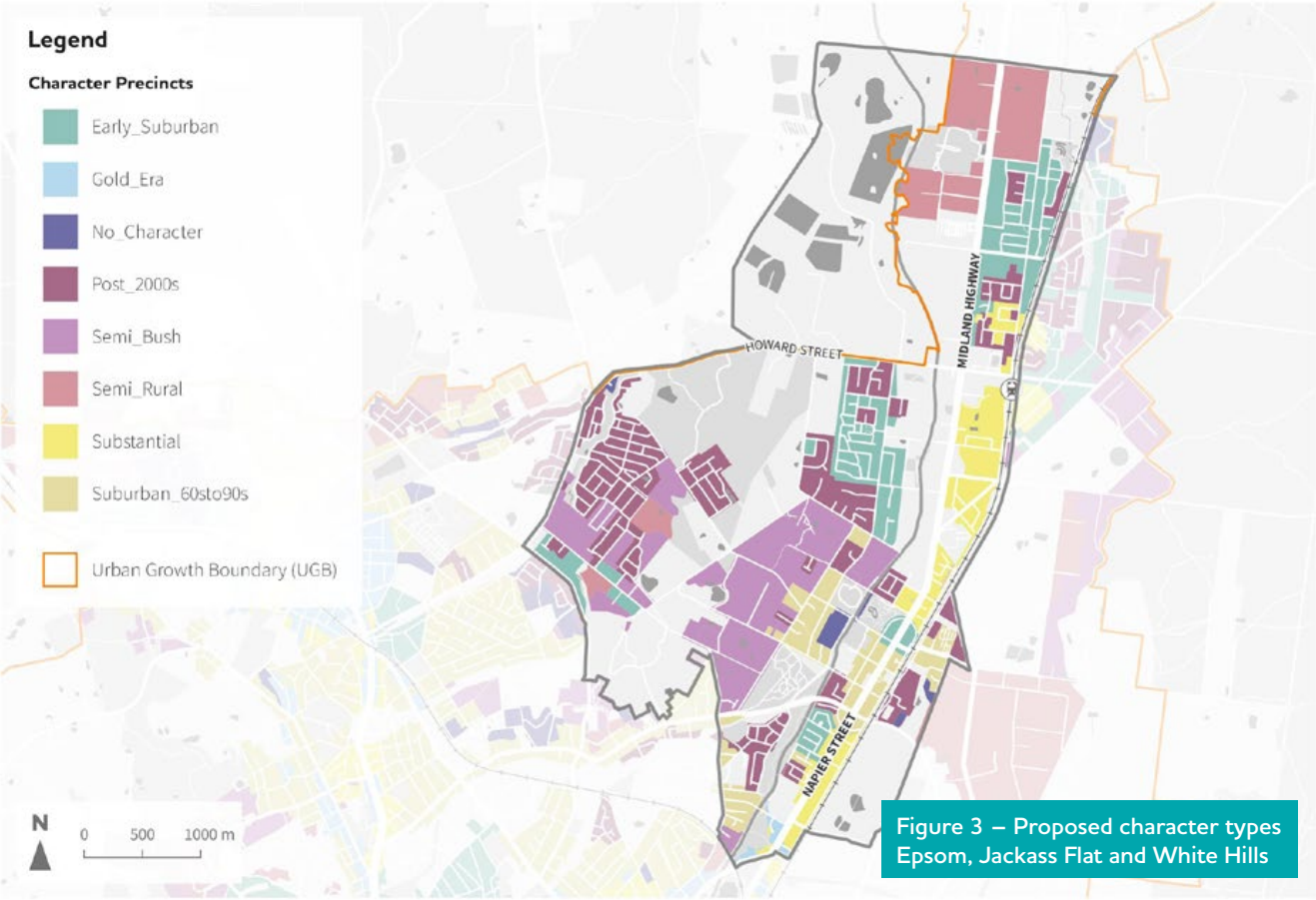

Figure 3 – Proposed character types Epsom, Jackass Flat and White Hills

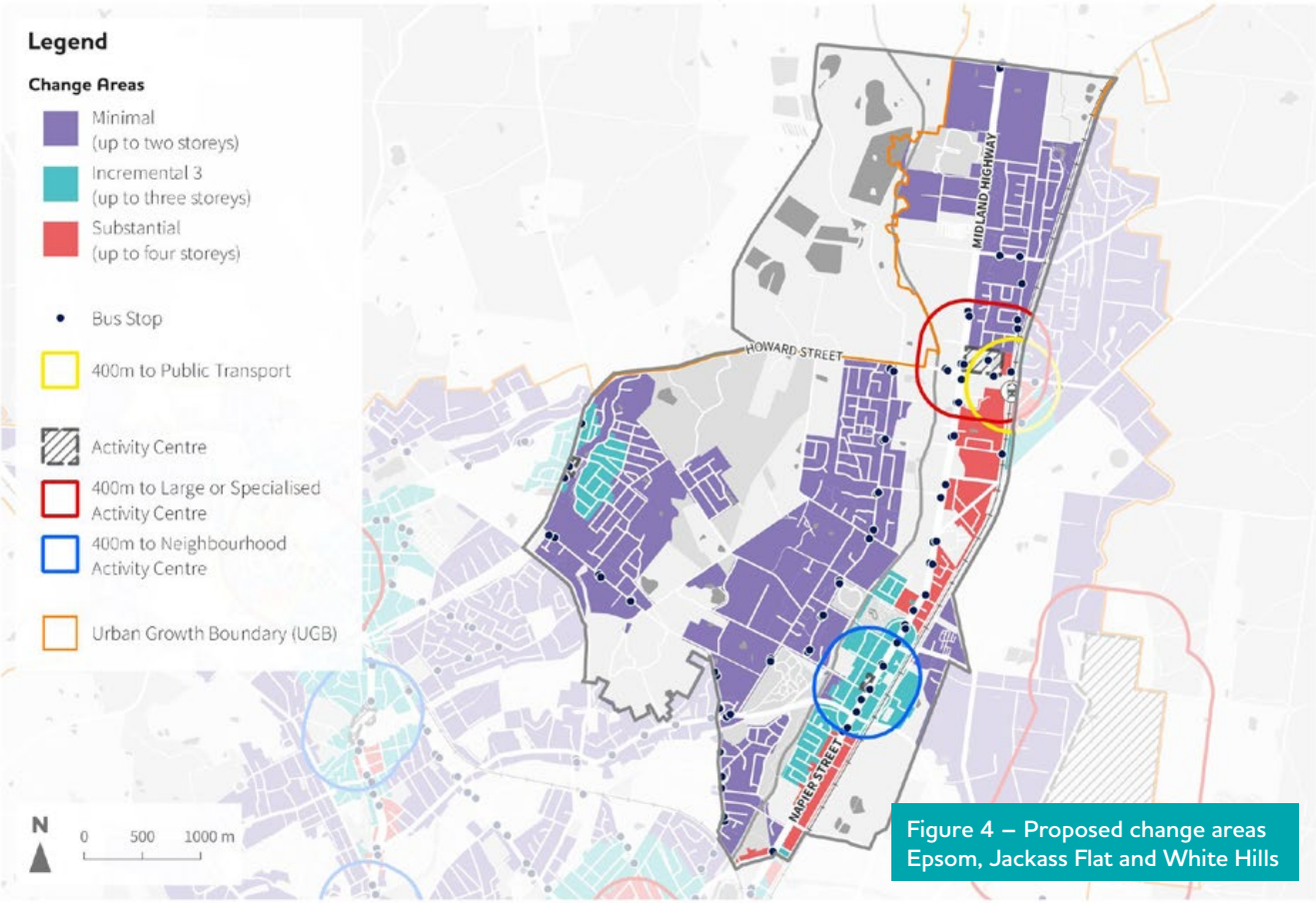

Figure 4 – Proposed change areas Epsom, Jackass Flat and White Hills

Flora Hill and Spring Gully

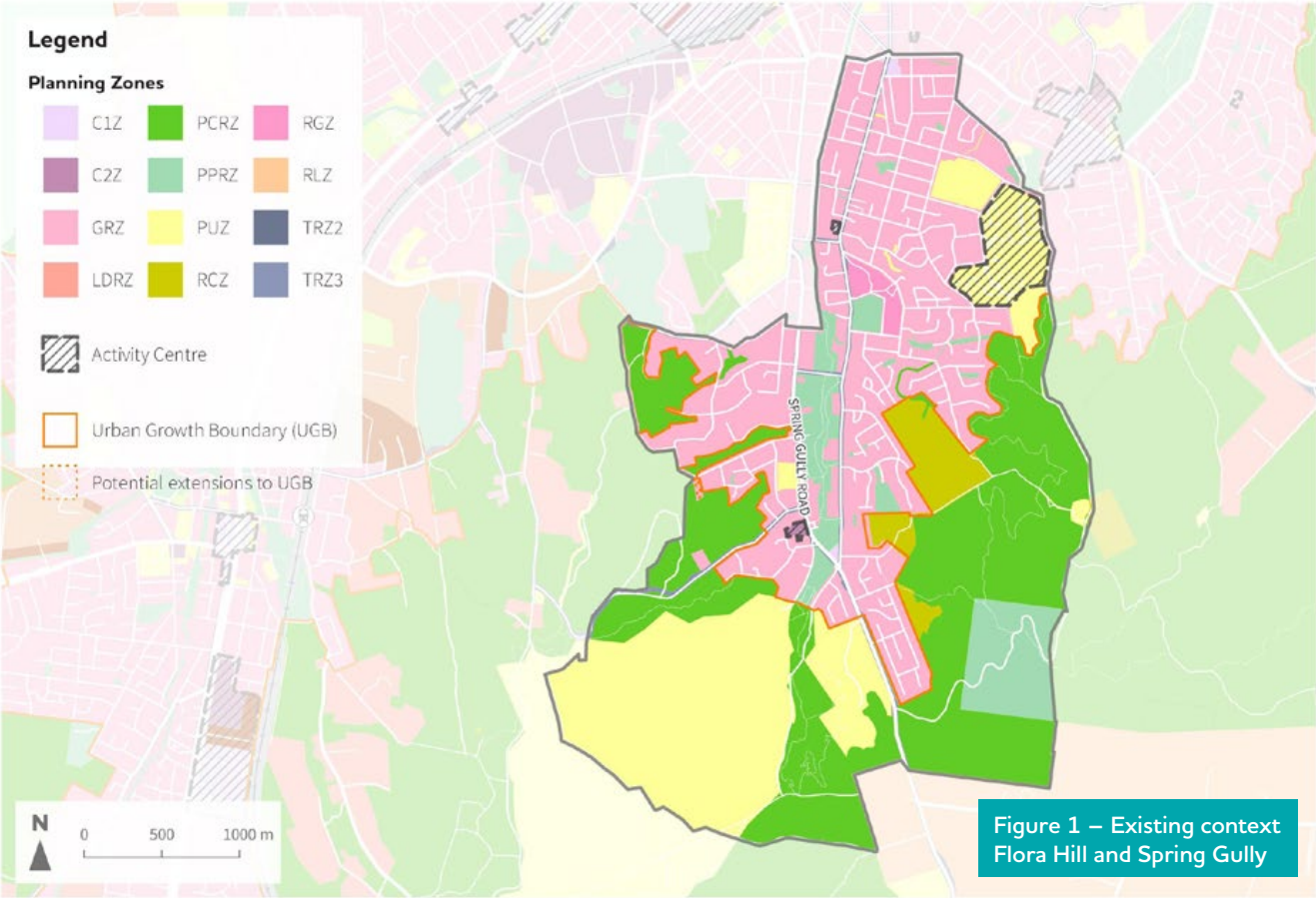

Figure 1 – Existing context
Flora Hill and Spring Gully

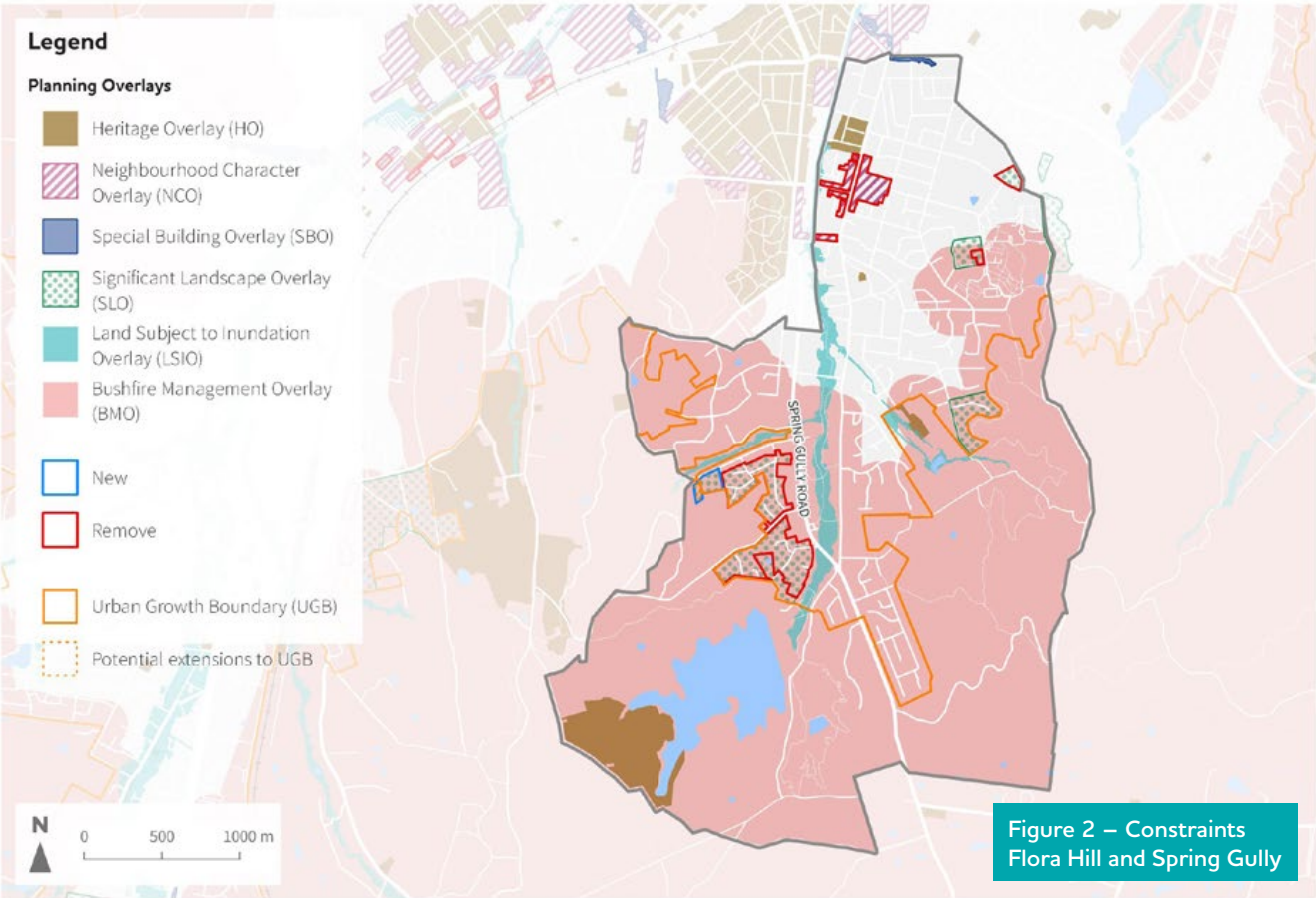

Figure 2 – Constraints
Flora Hill and Spring Gully

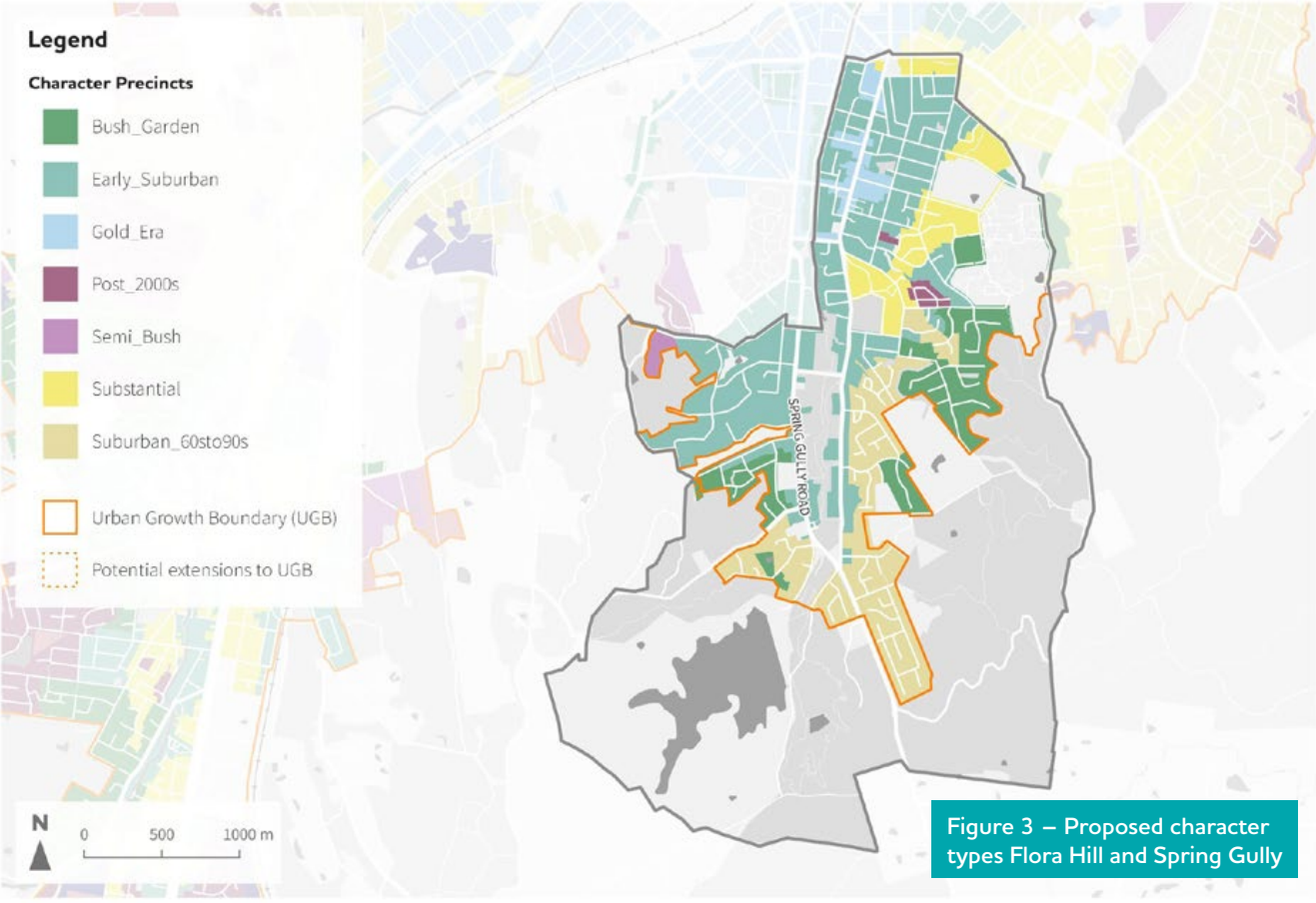

Figure 3 – Proposed character types Flora Hill and Spring Gully

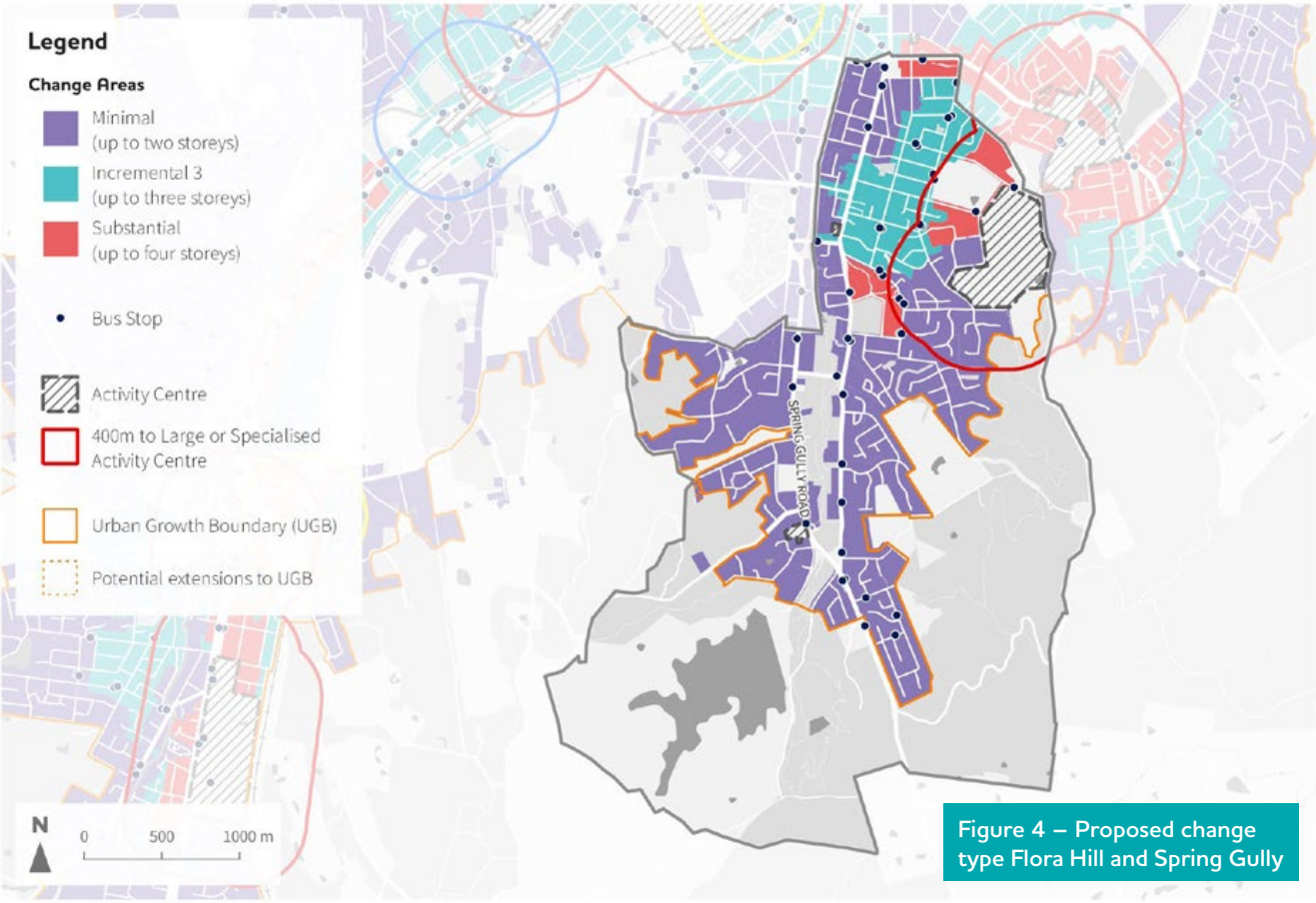

Figure 4 – Proposed change type Flora Hill and Spring Gully

Huntly

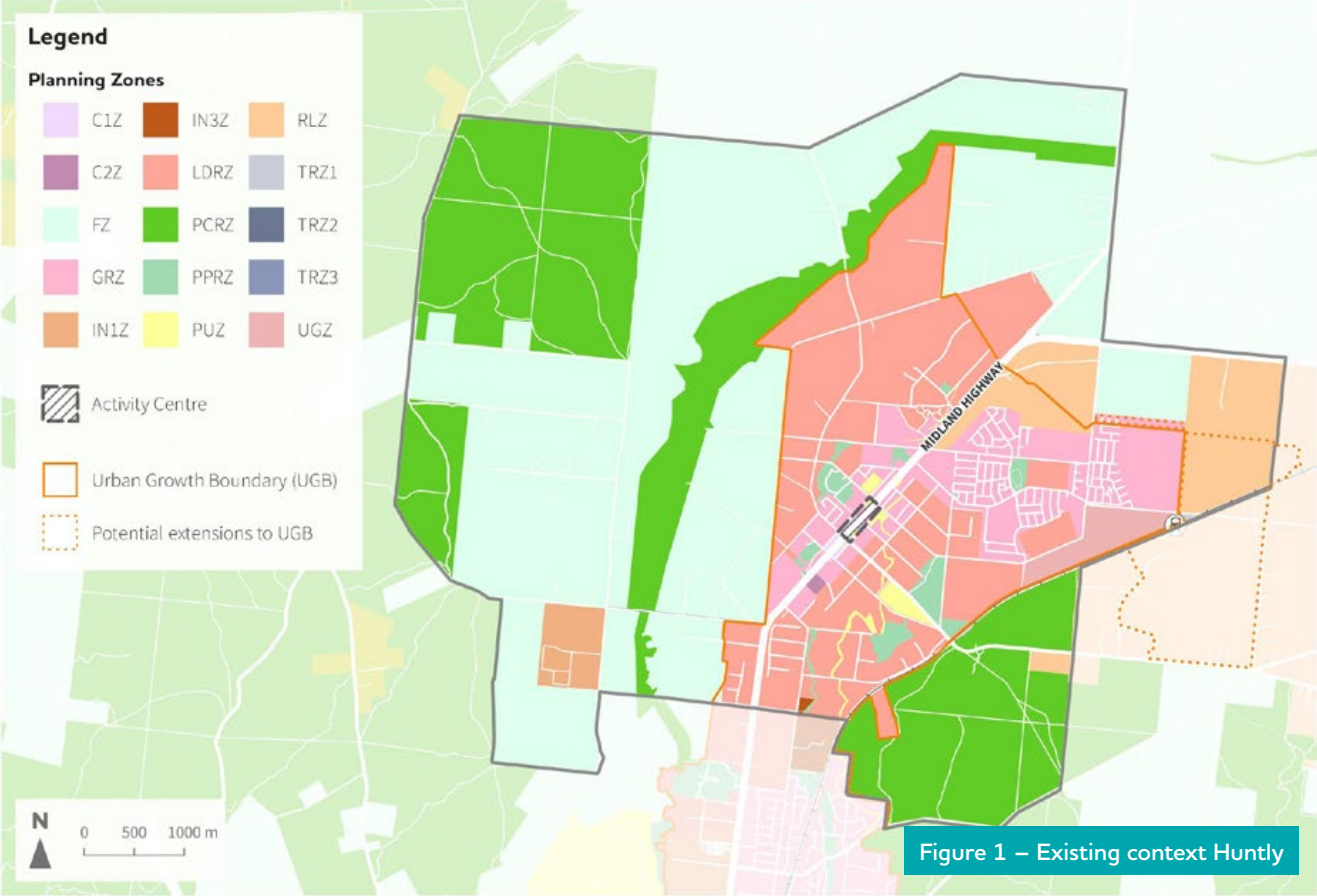

Figure 1 – Existing context Huntly

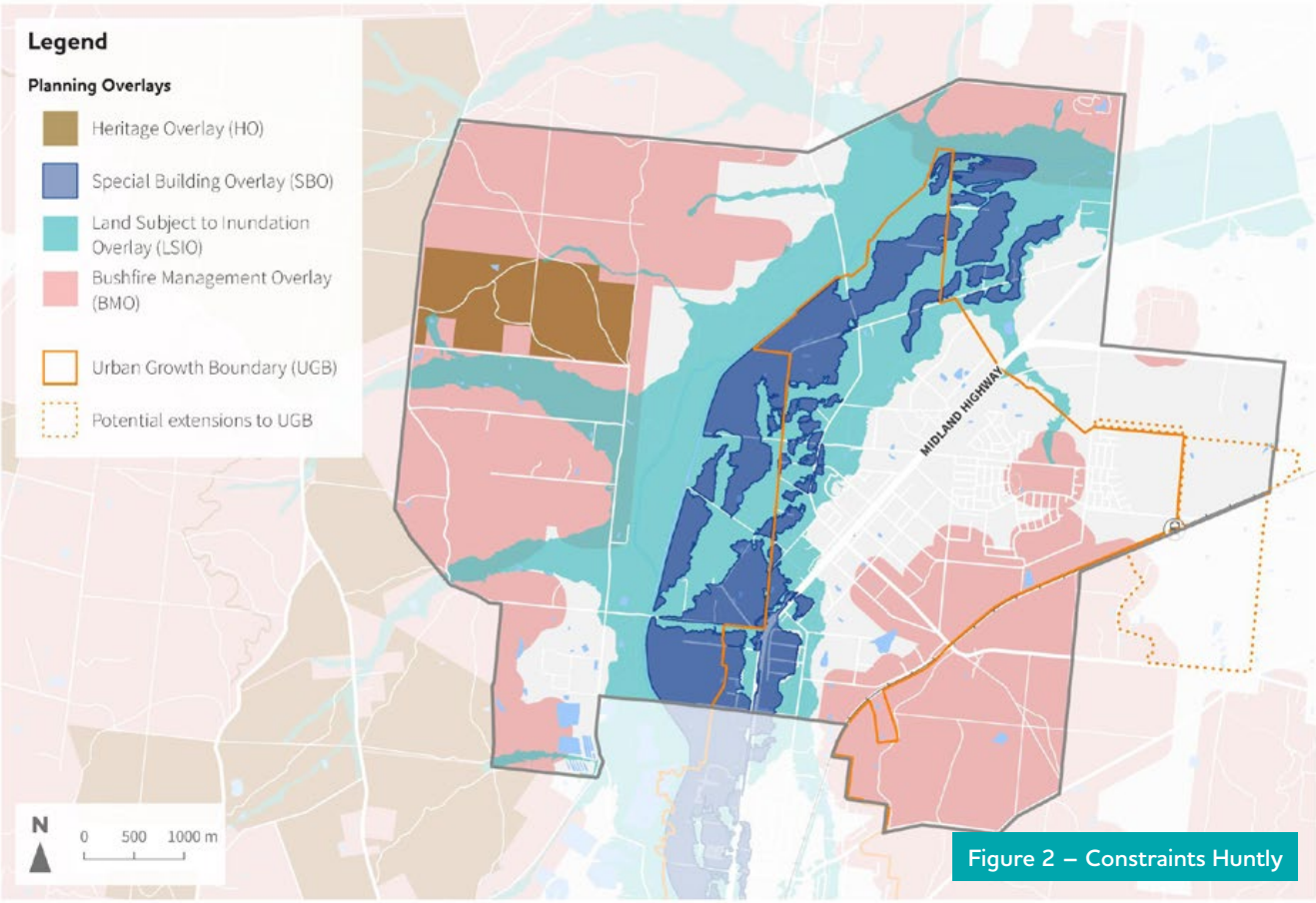

Figure 2 – Constraints Huntly

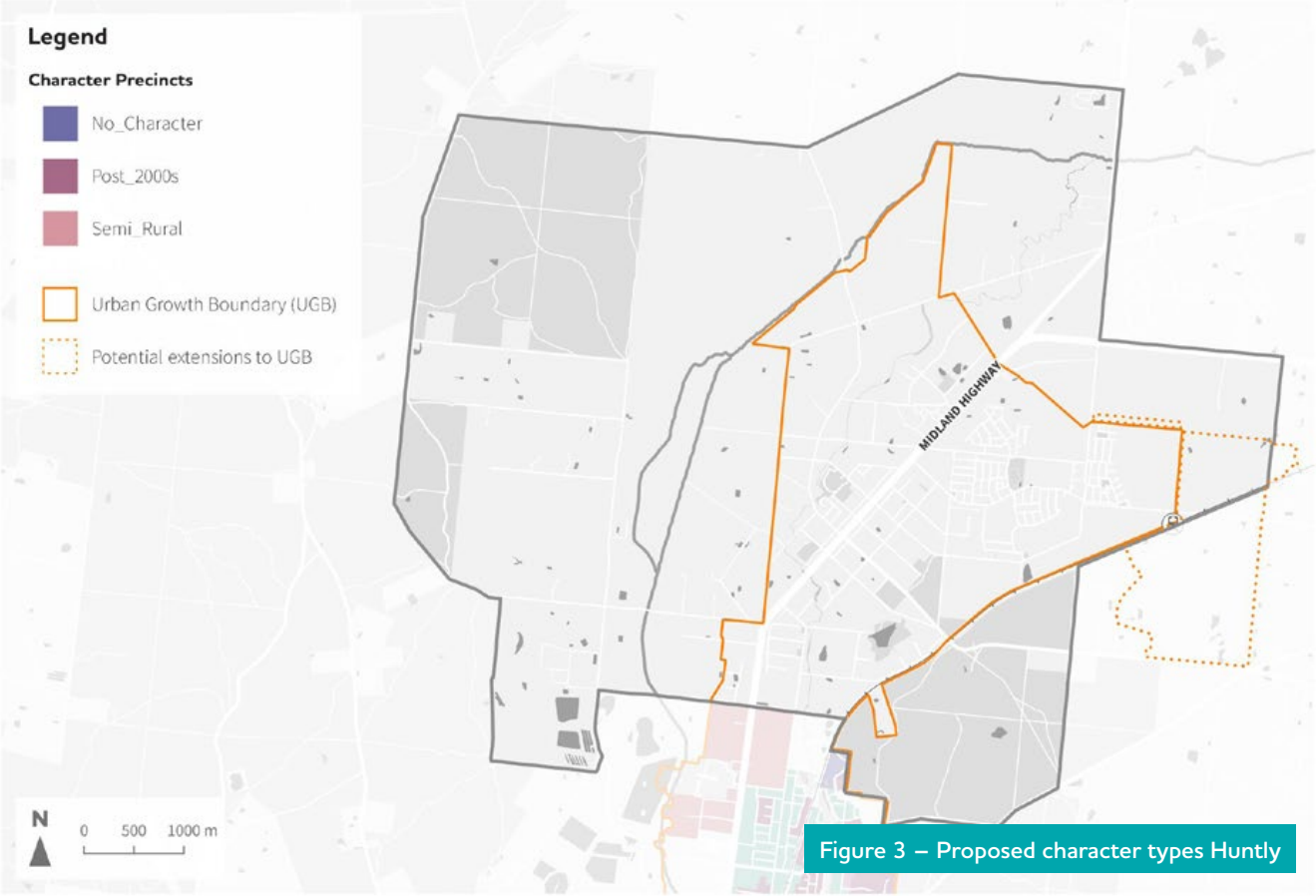

Figure 3 – Proposed character types Huntly

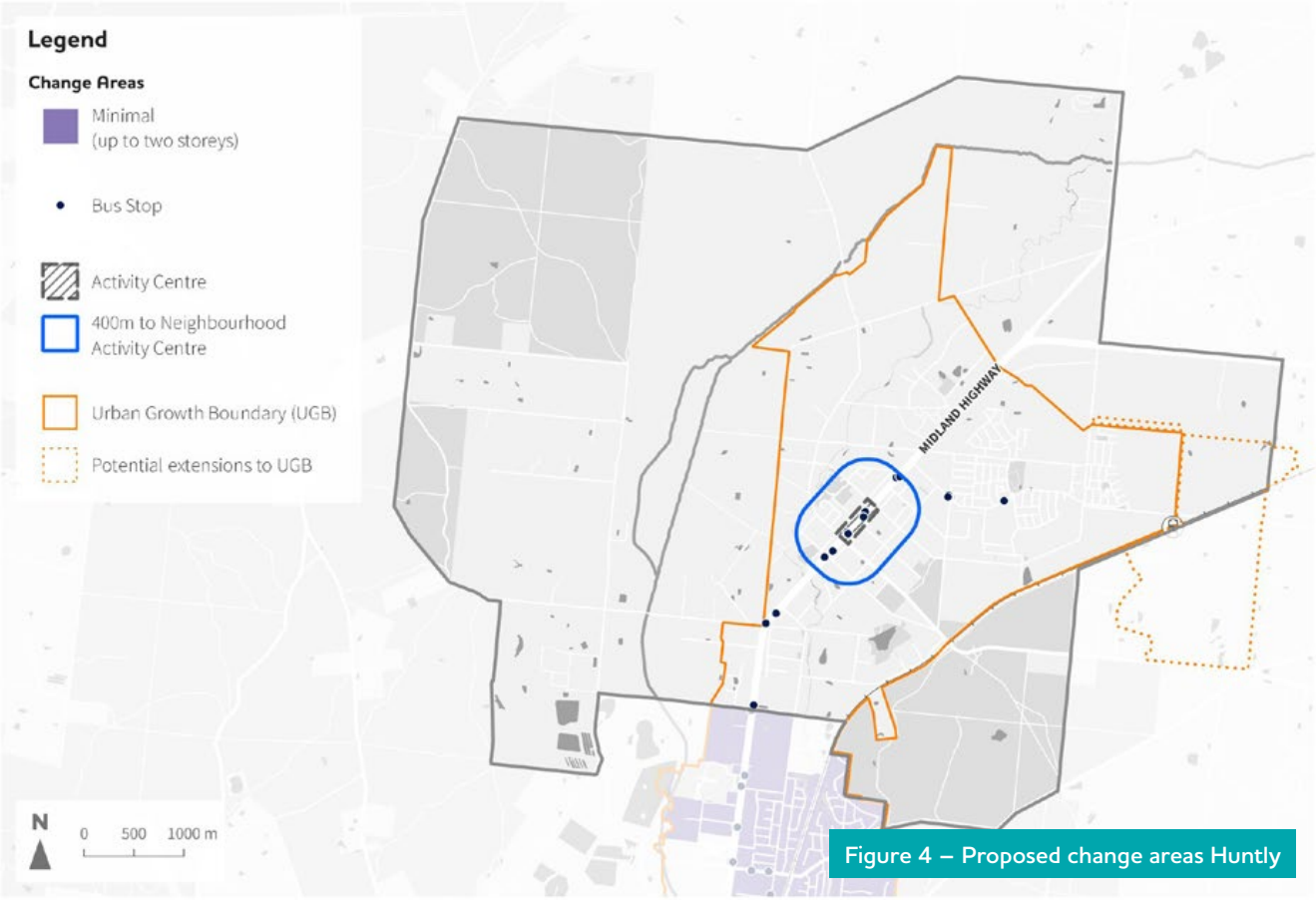

Figure 4 – Proposed change areas Huntly

Junortoun

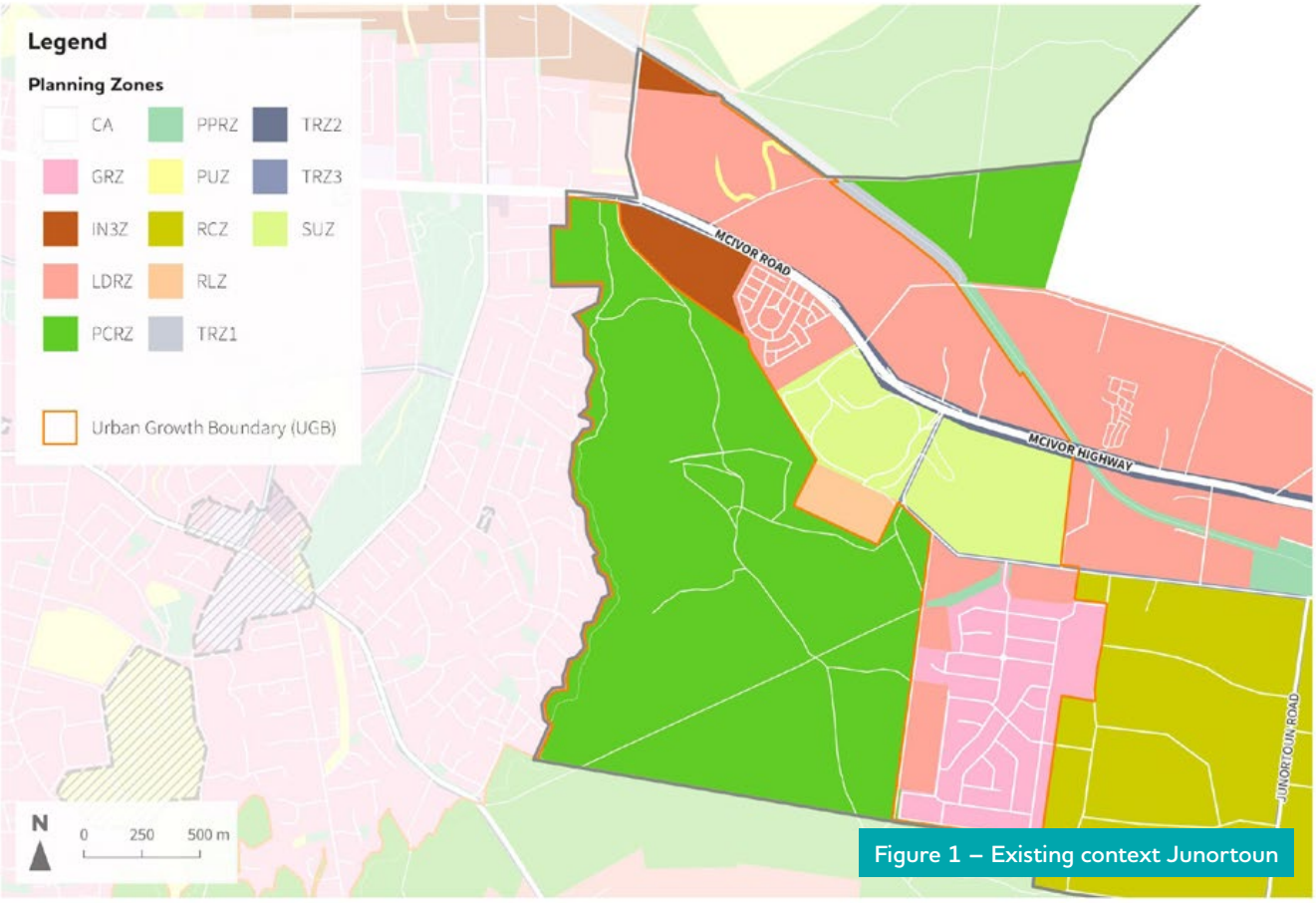

Figure 1 – Existing context Junortoun

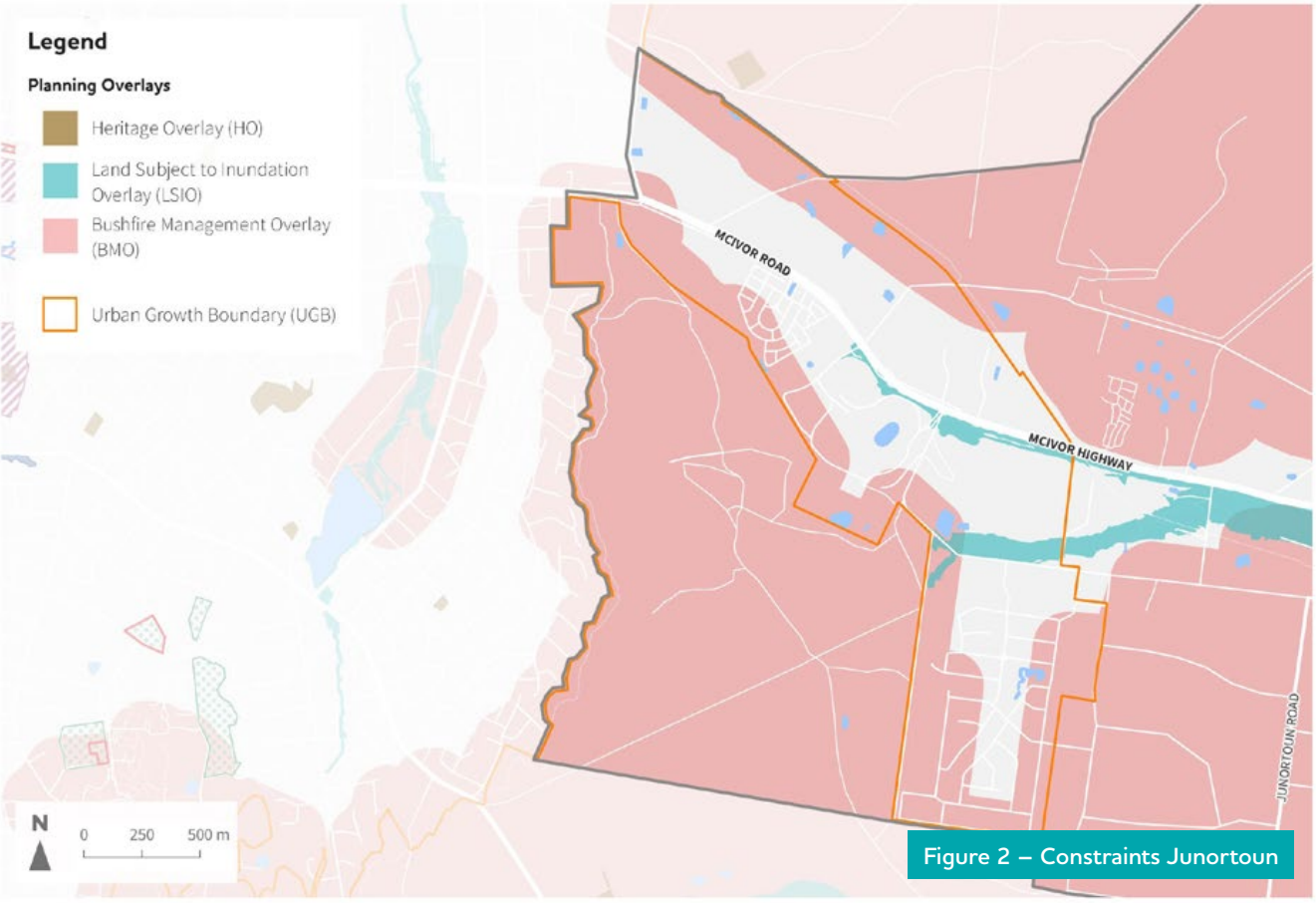

Figure 2 – Constraints Junortoun

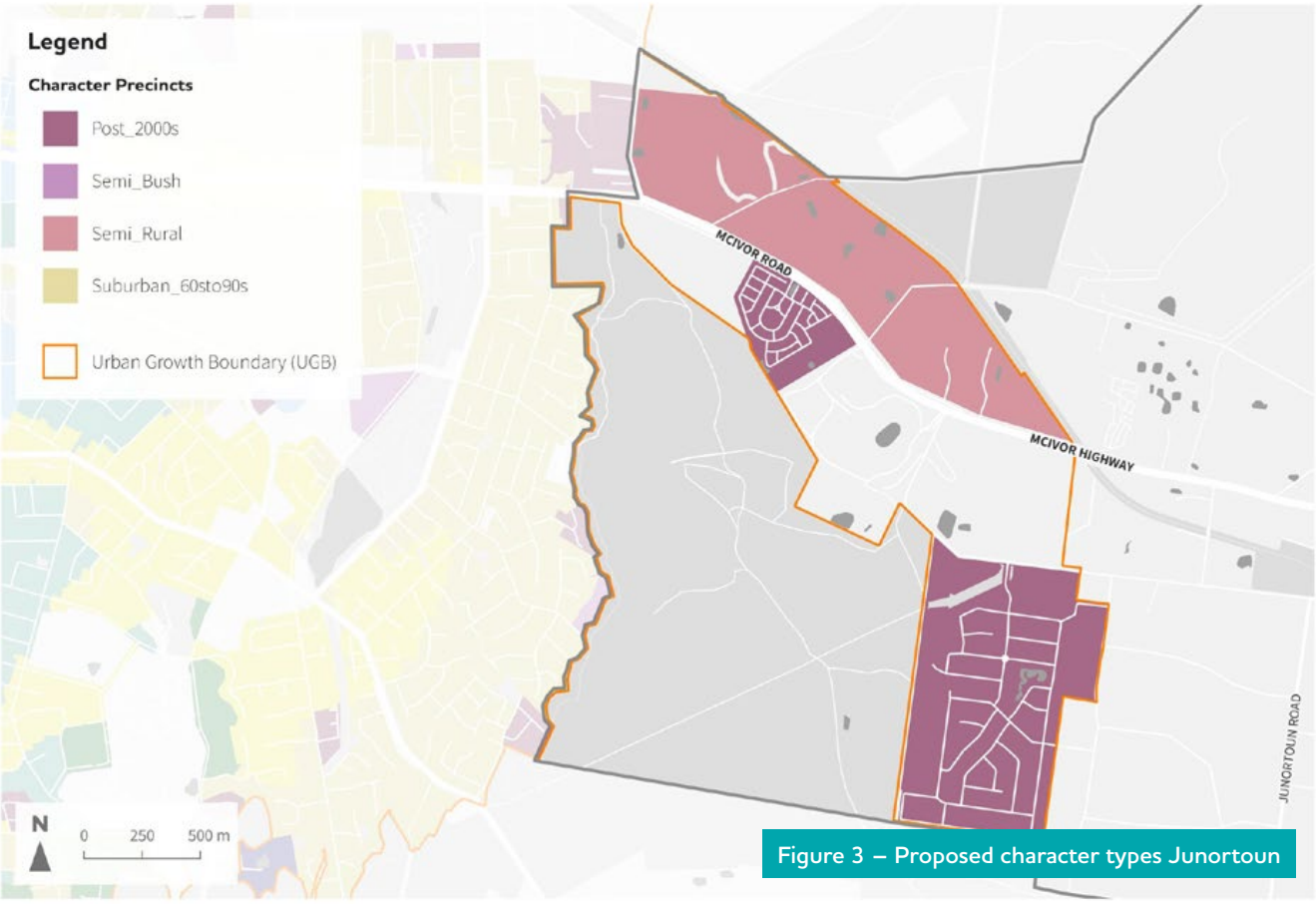

Figure 3 – Proposed character types Junortoun

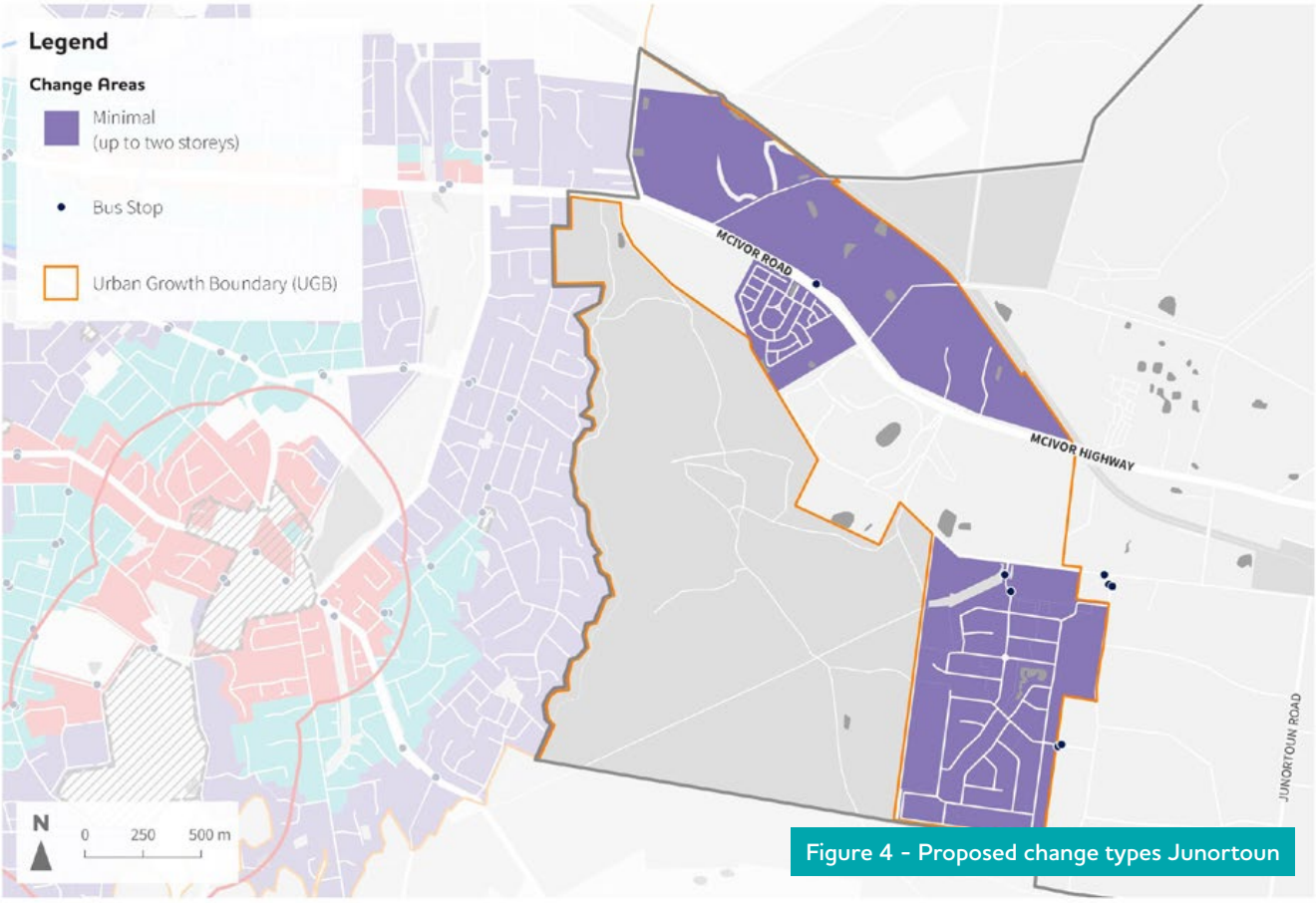

Figure 4 - Proposed change types Junortoun

Kennington and Strathdale

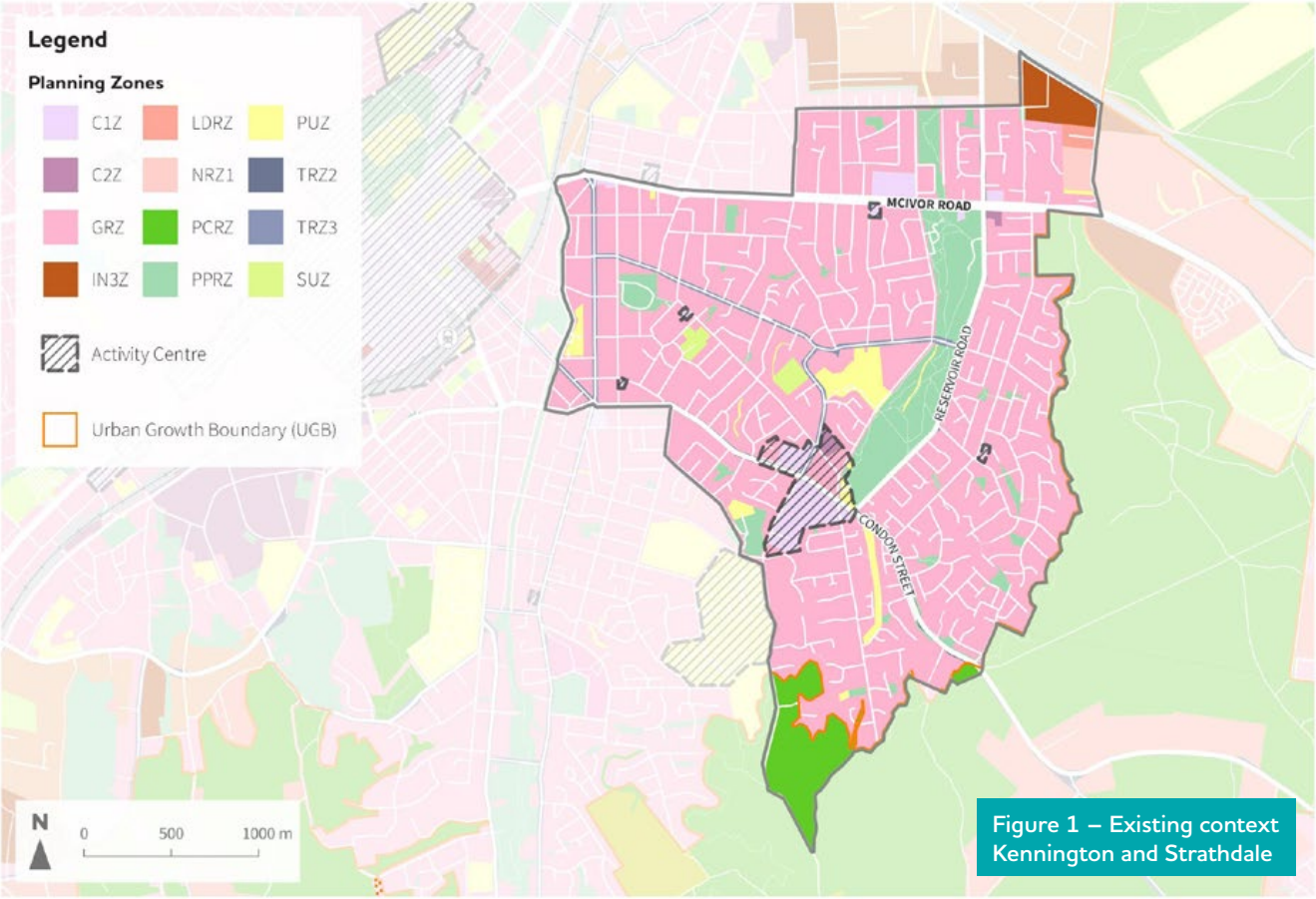

Figure 1 – Existing context Kennington and Strathdale

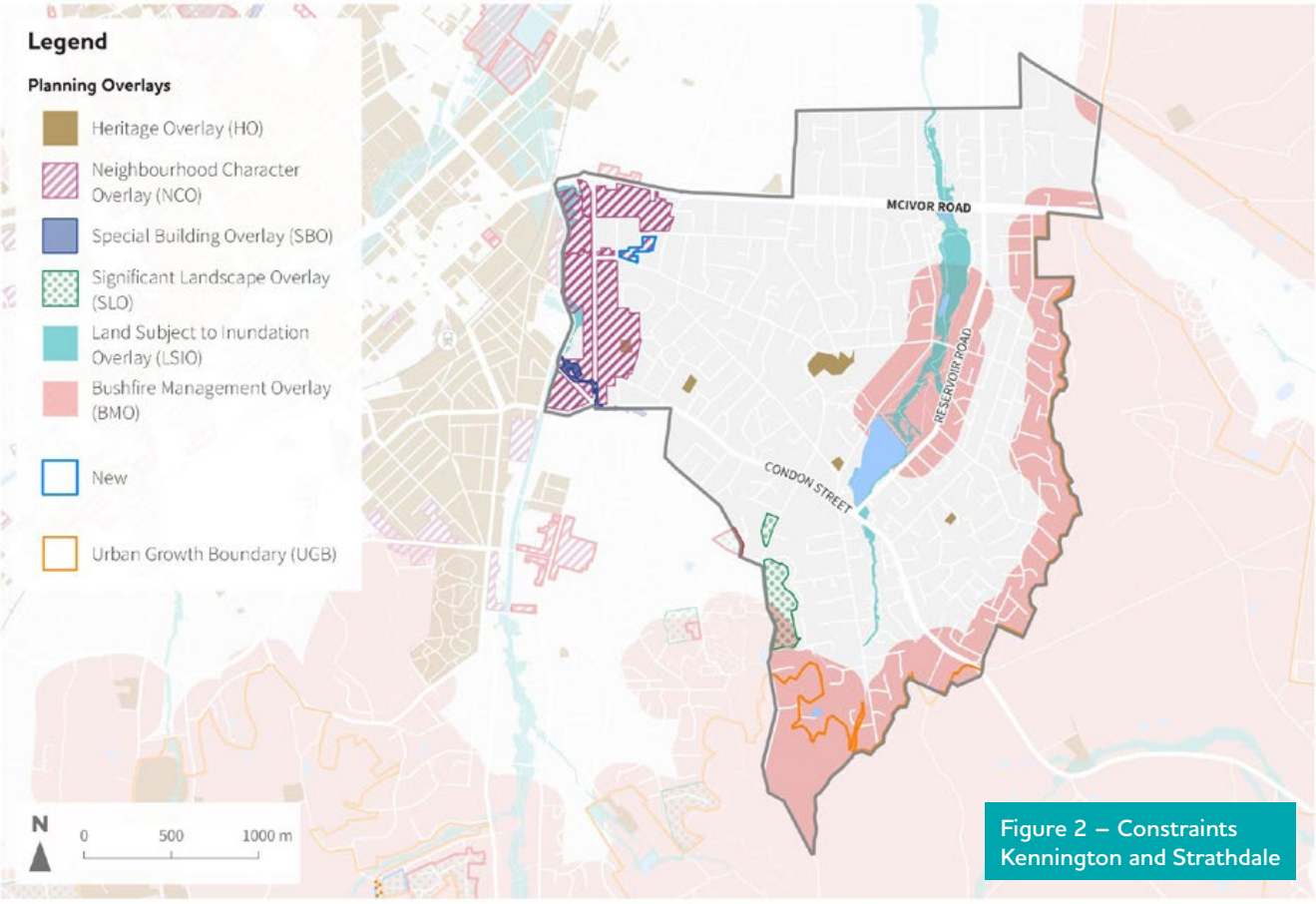

Figure 2 – Constraints Kennington and Strathdale

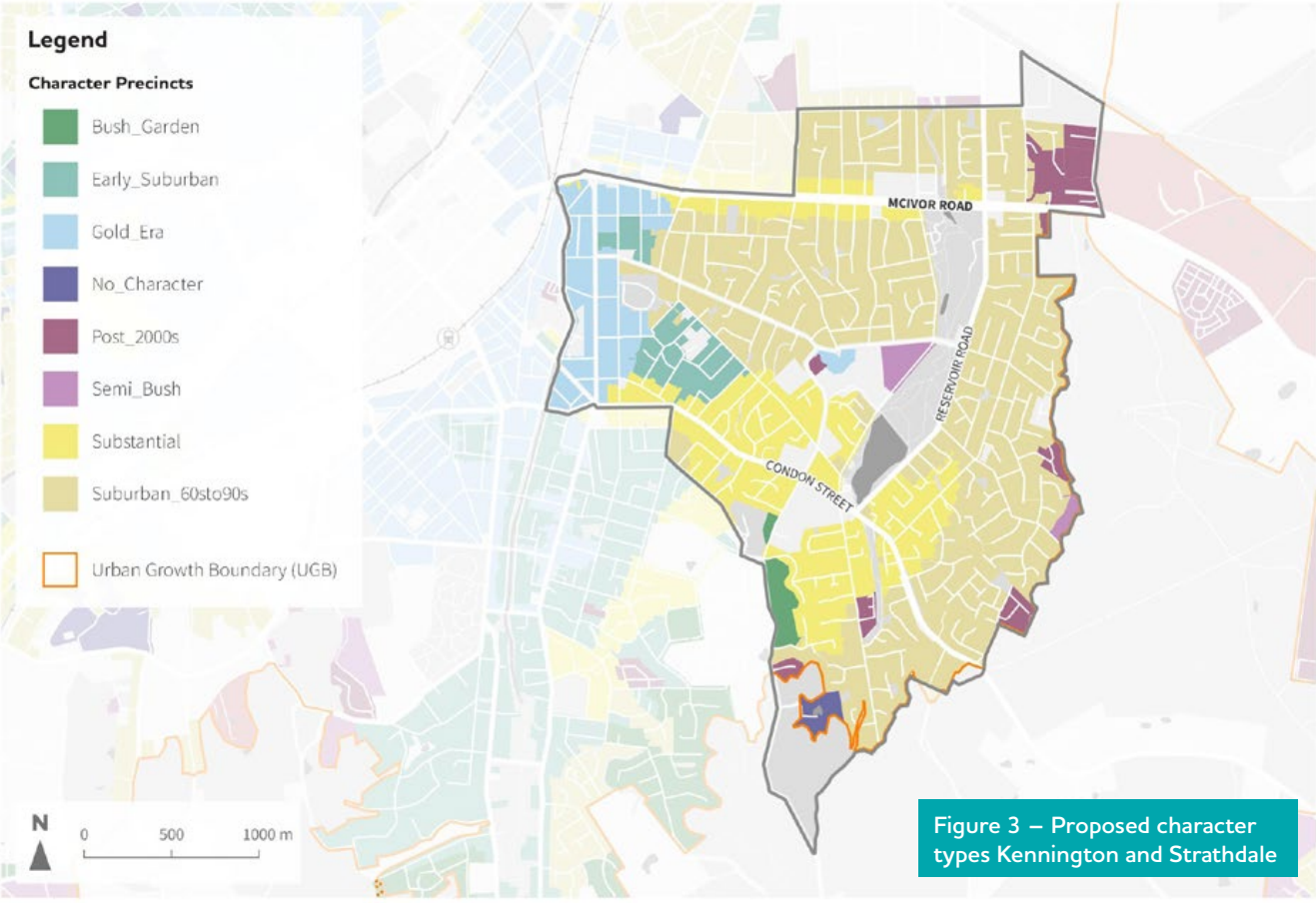

Figure 3 – Proposed character types Kennington and Strathdale

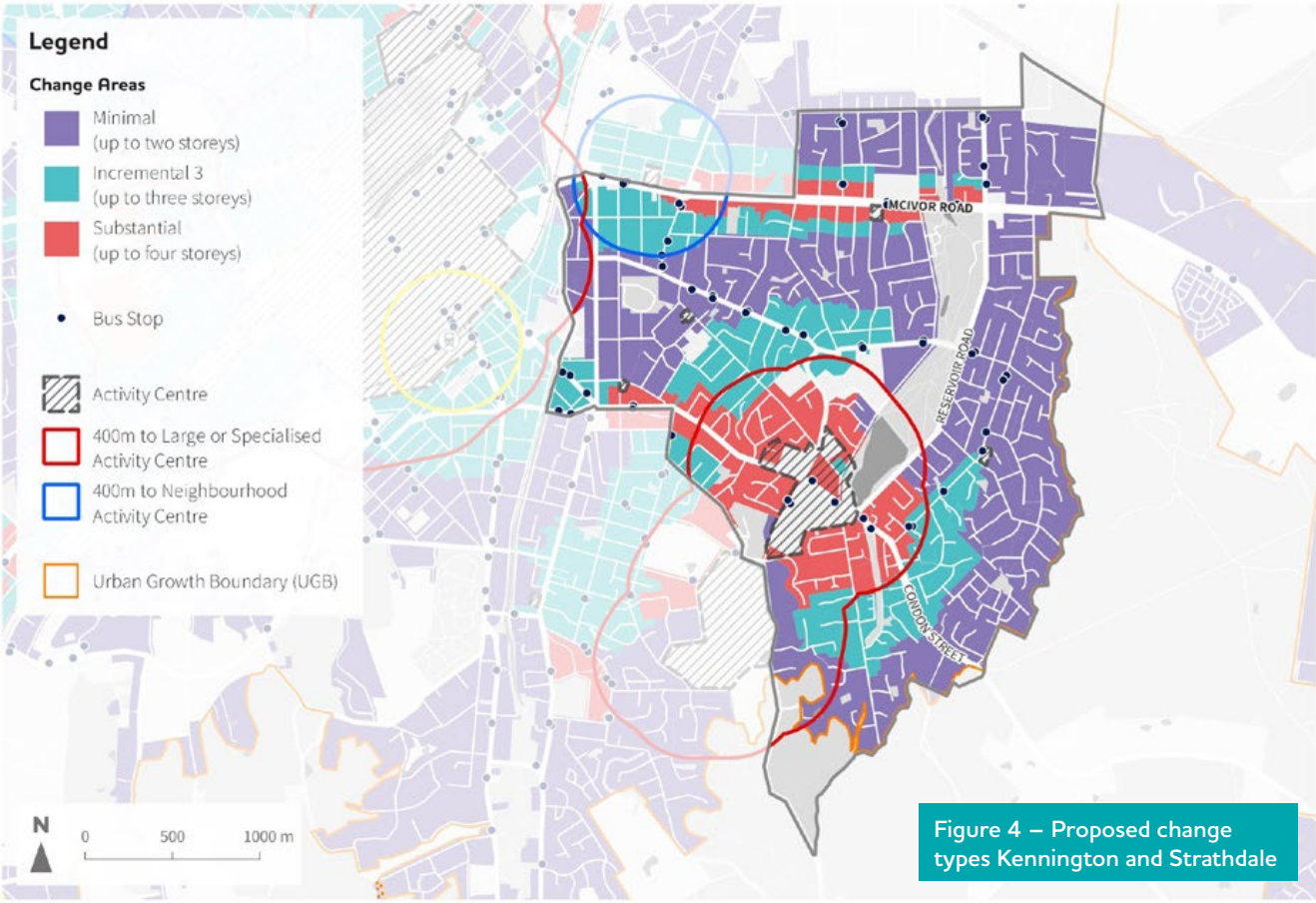

Figure 4 – Proposed change types Kennington and Strathdale

Long Gully and North Bendigo

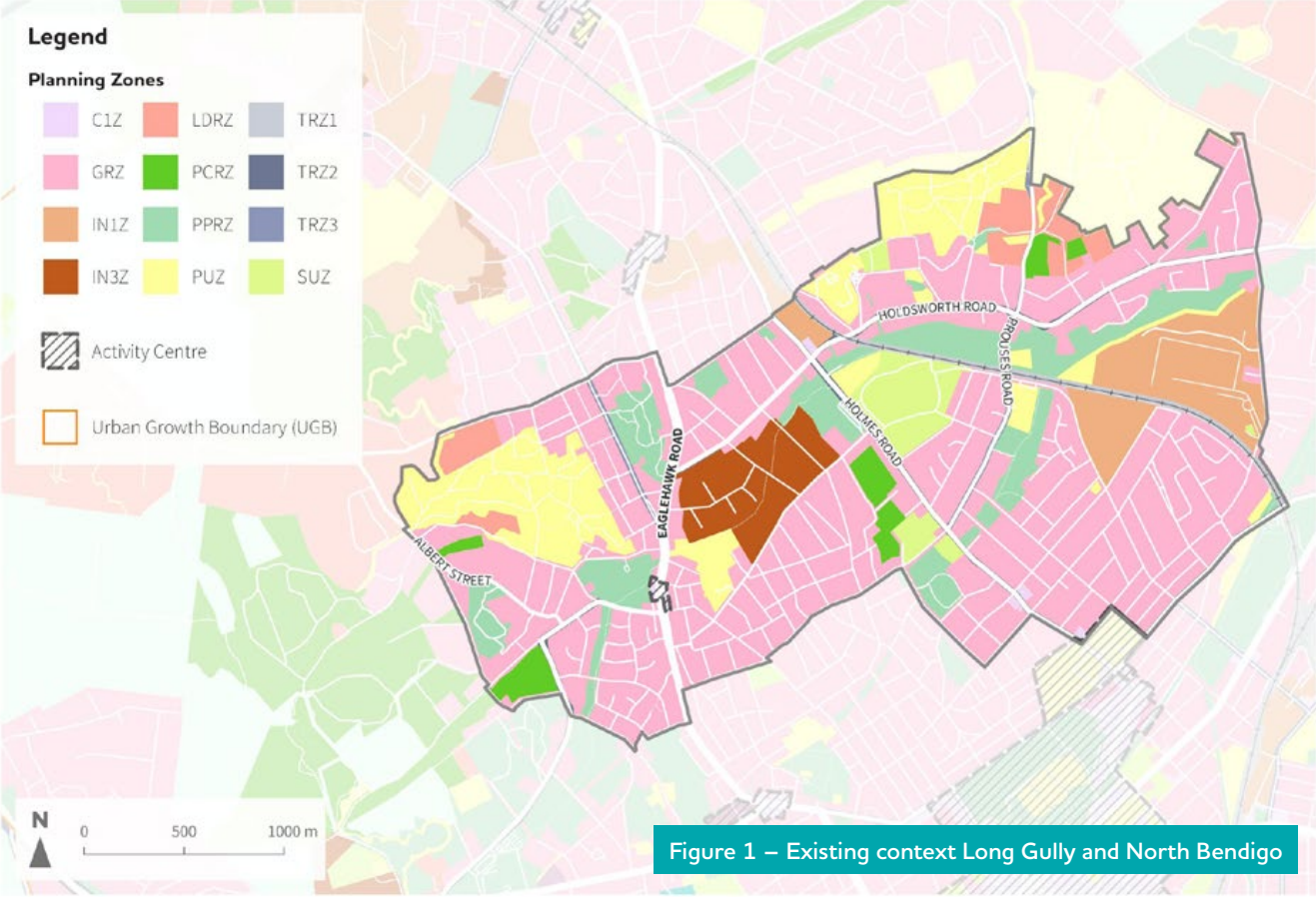

Figure 1 – Existing context Long Gully and North Bendigo

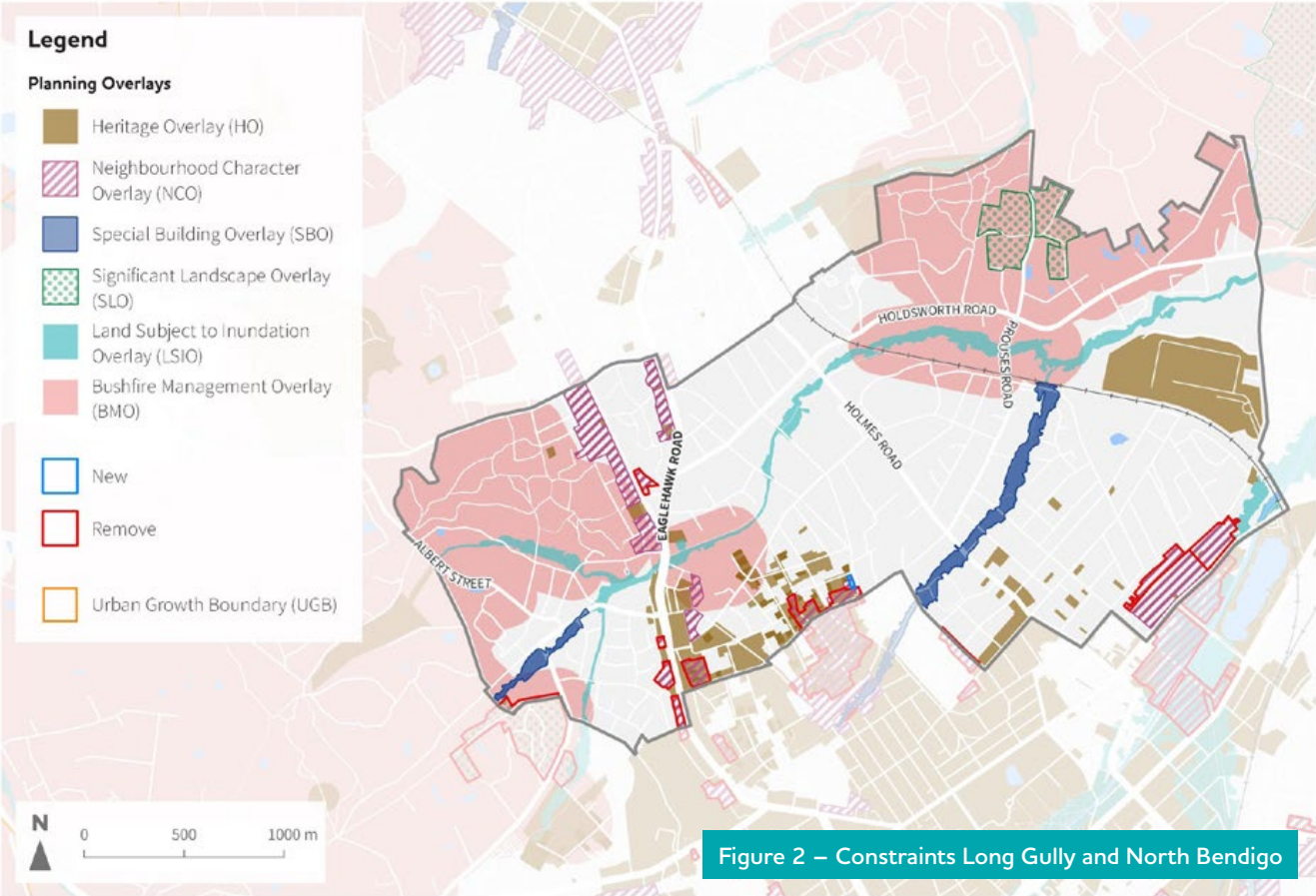

Figure 2 – Constraints Long Gully and North Bendigo

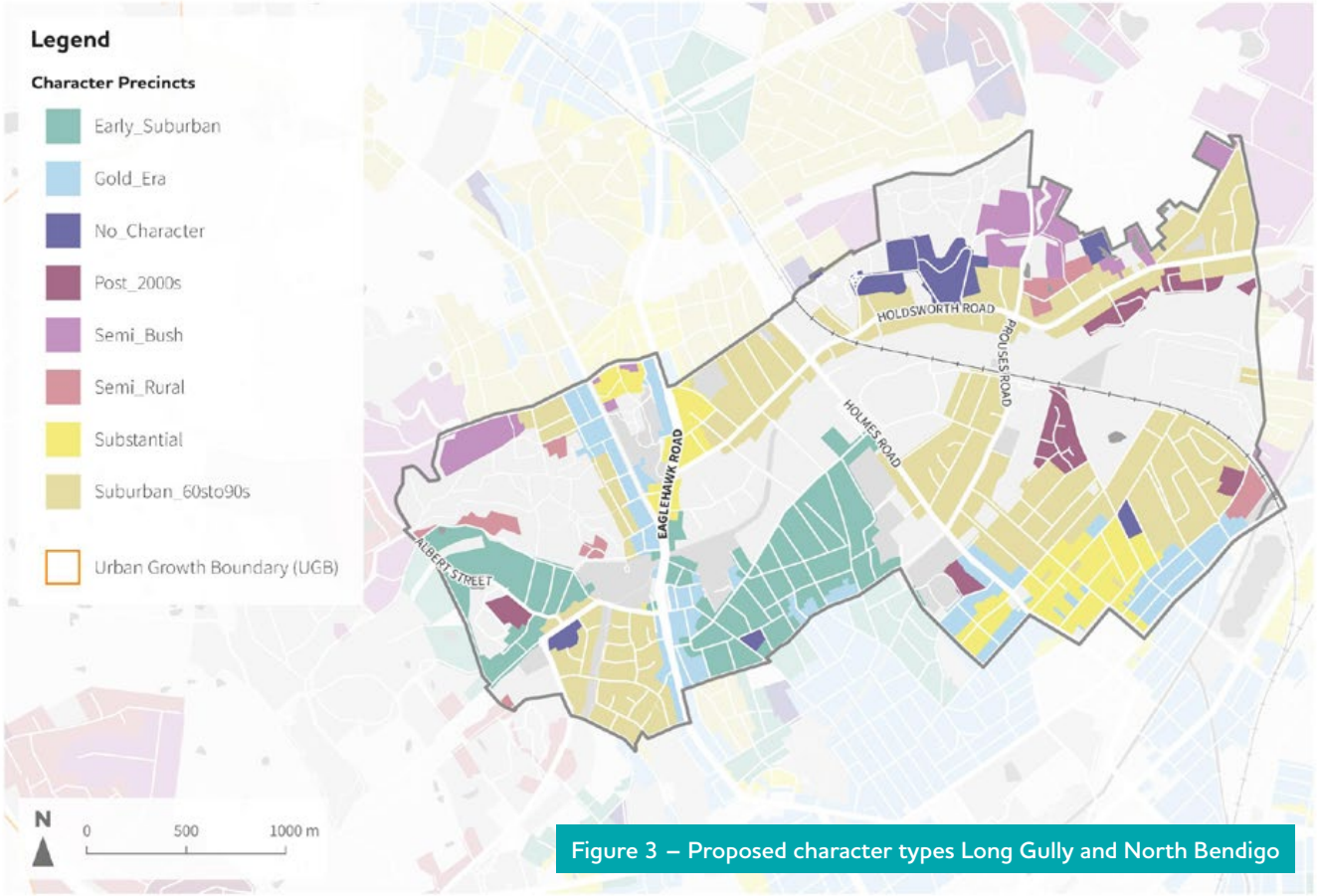

Figure 3 – Proposed character types Long Gully and North Bendigo

Figure 4 – Proposed change areas Long Gully and North Bendigo

Maiden Gully

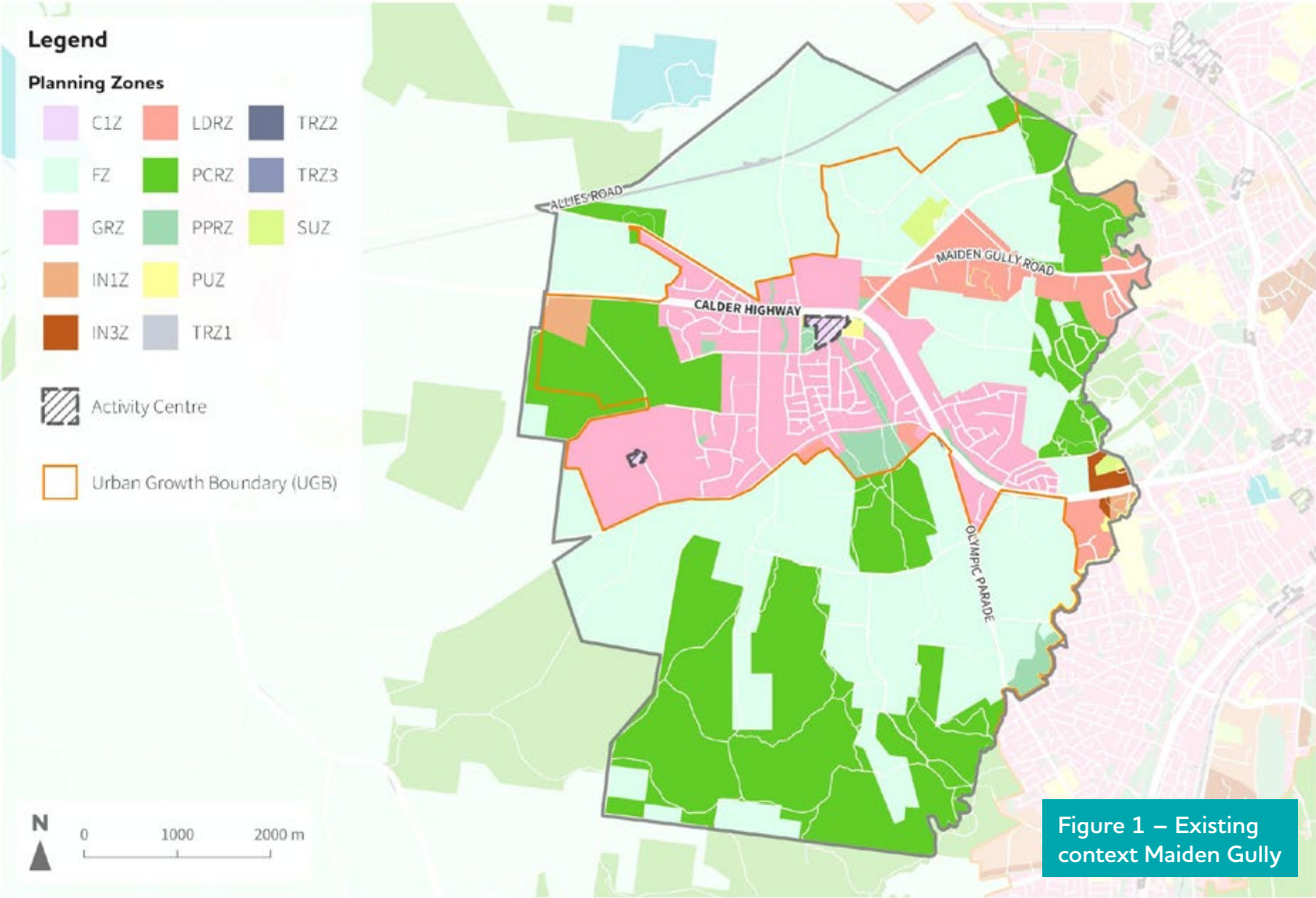

Figure 1 – Existing context Maiden Gully

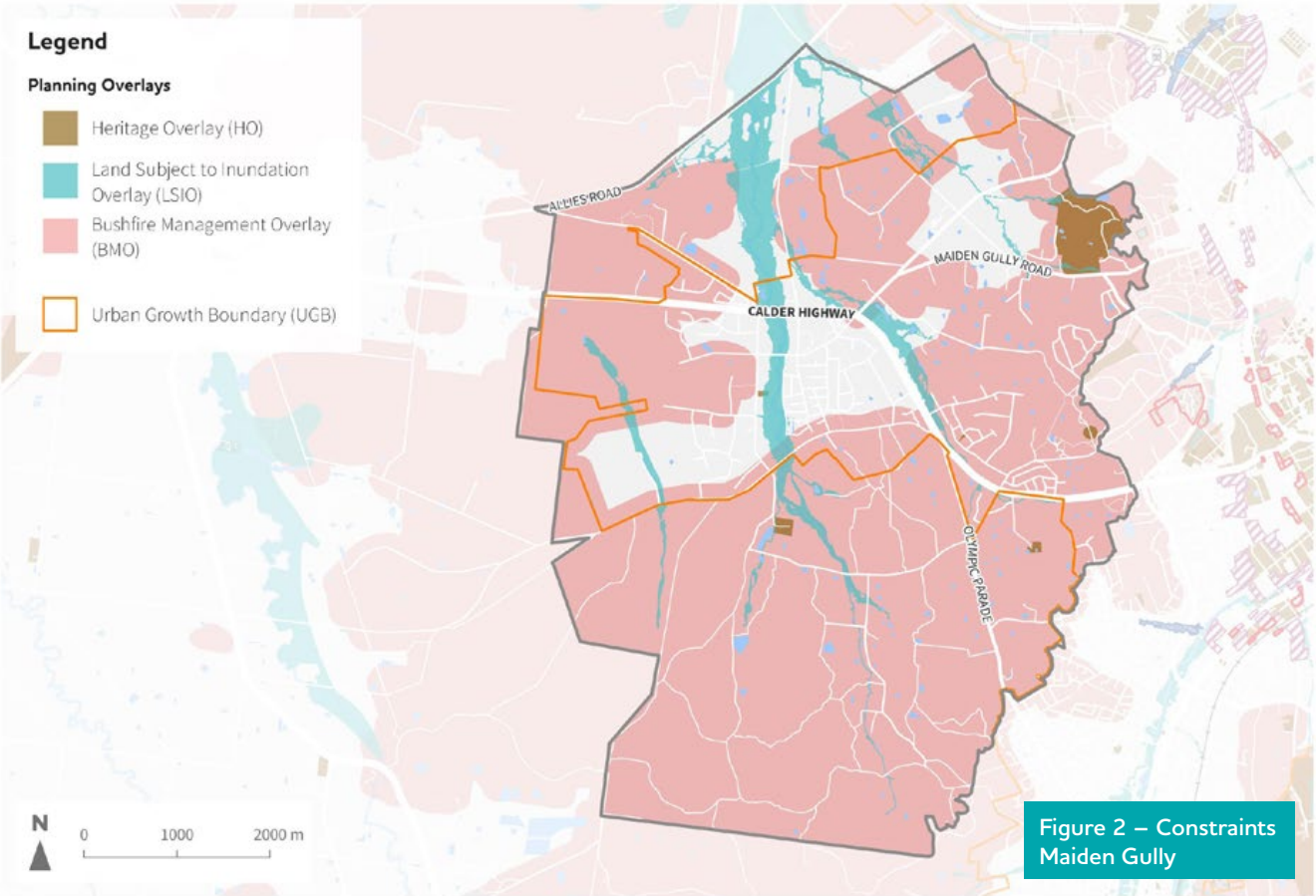

Figure 2 – Constraints Maiden Gully

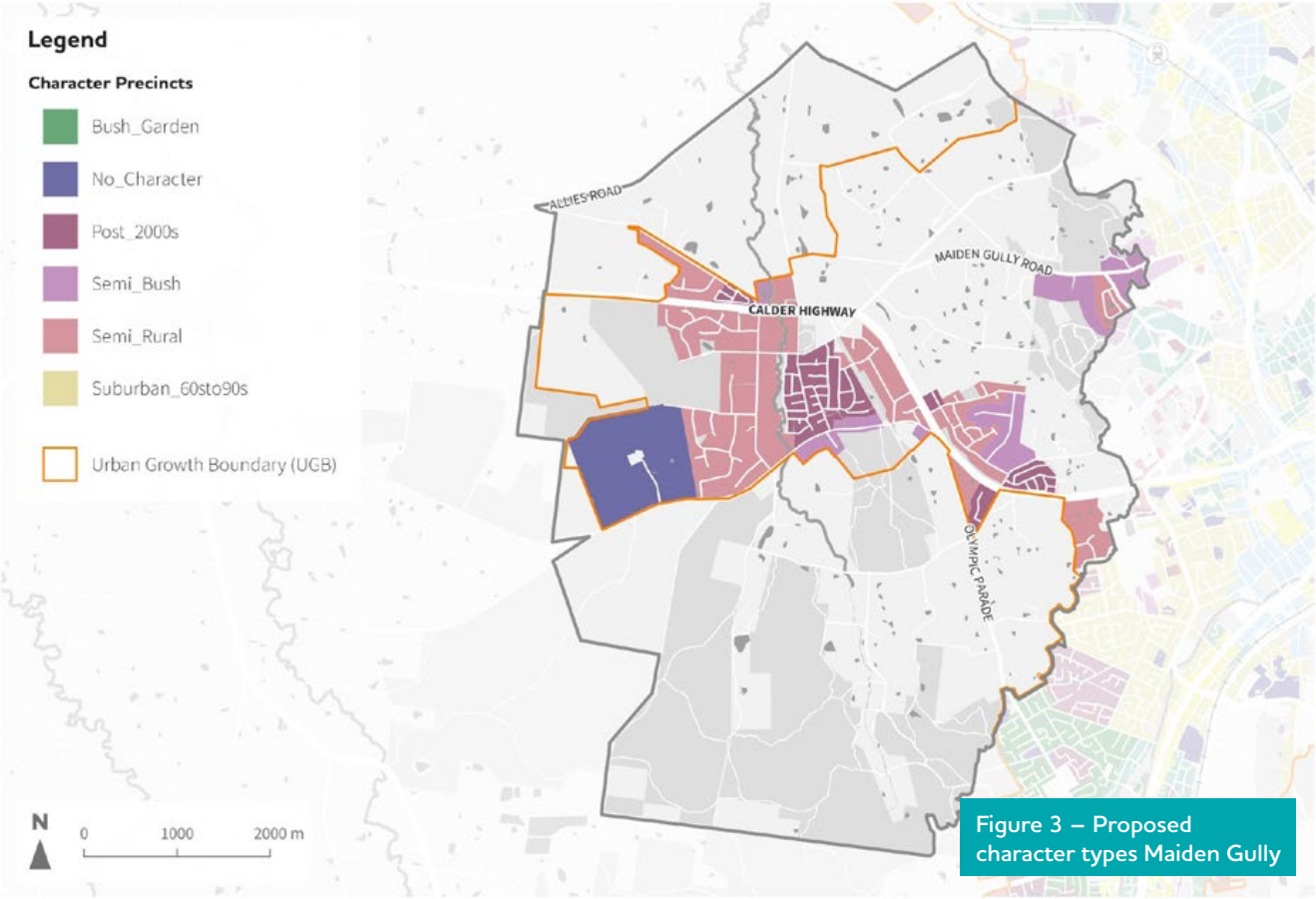

Figure 3 – Proposed character types Maiden Gully

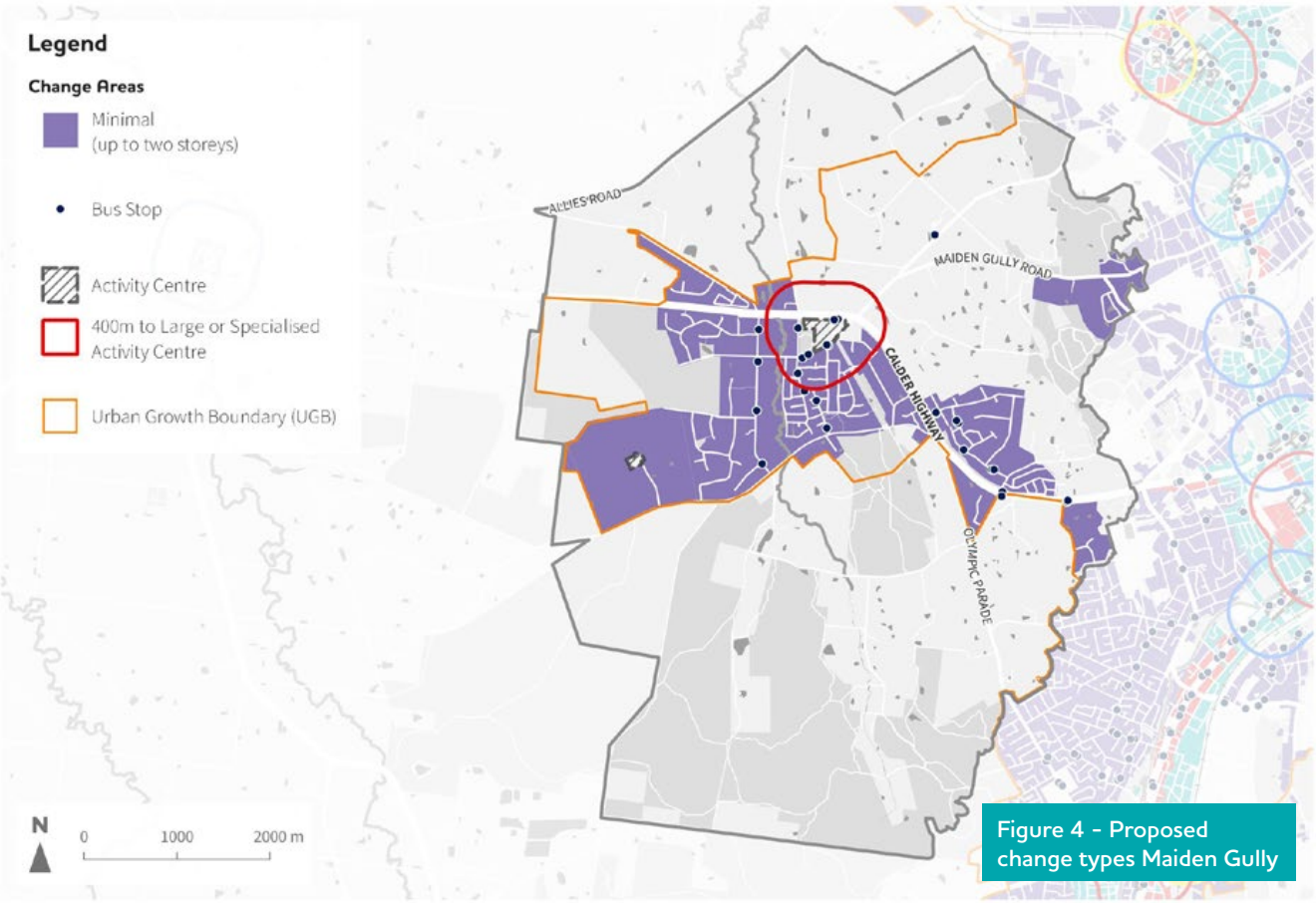

Figure 4 - Proposed change types Maiden Gully

Marong

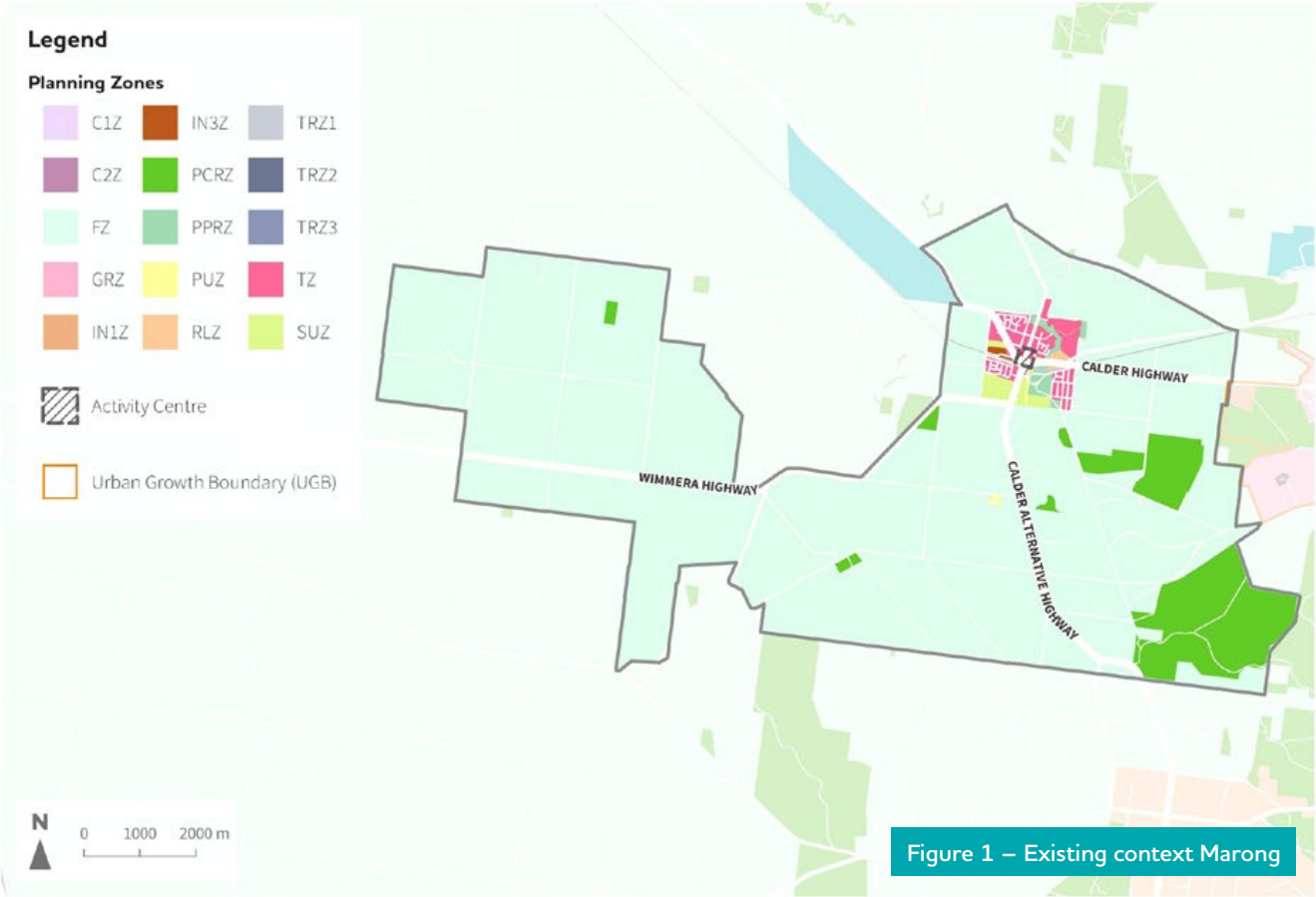

Figure 1 – Existing context Marong

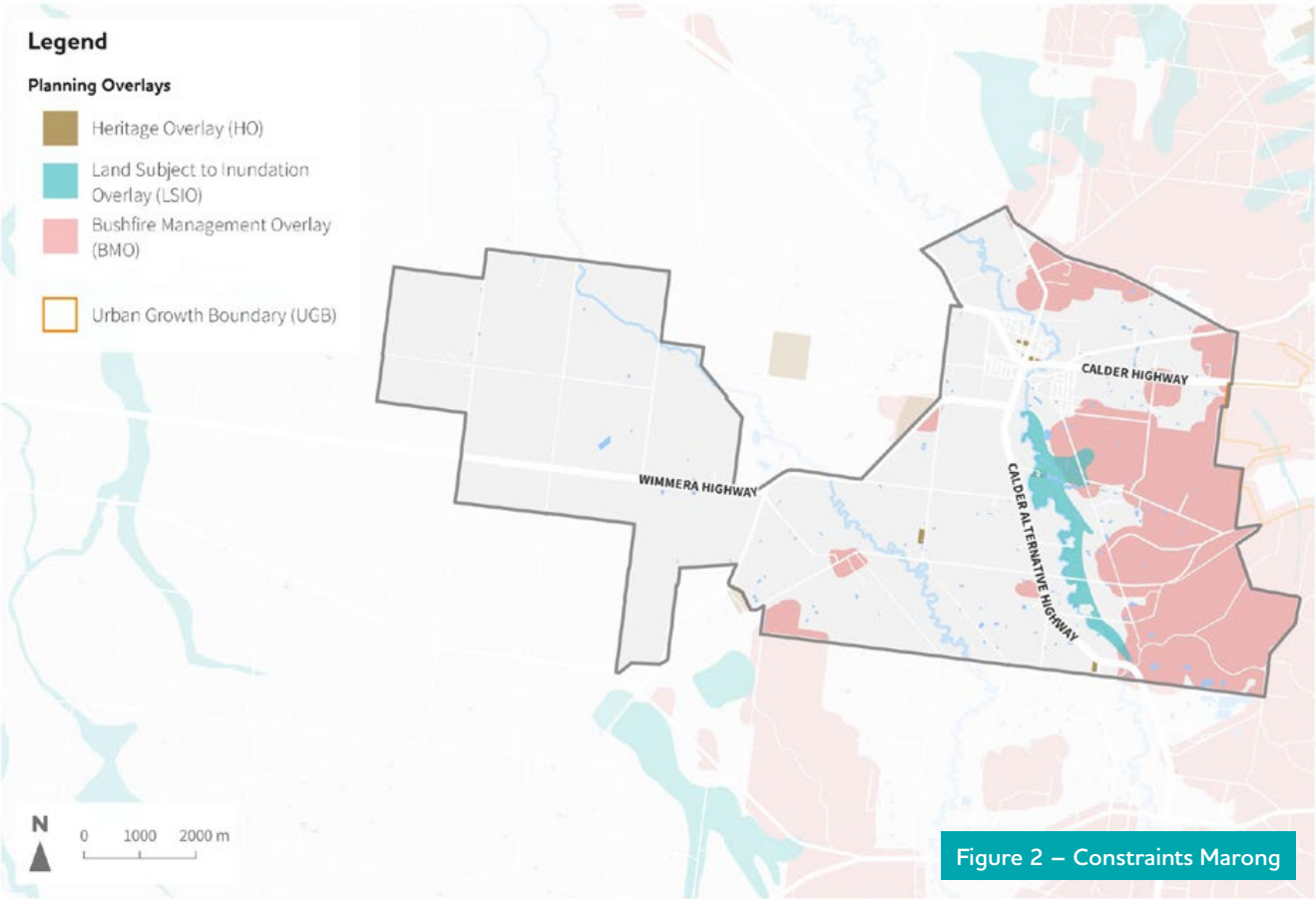

Figure 2 – Constraints Marong

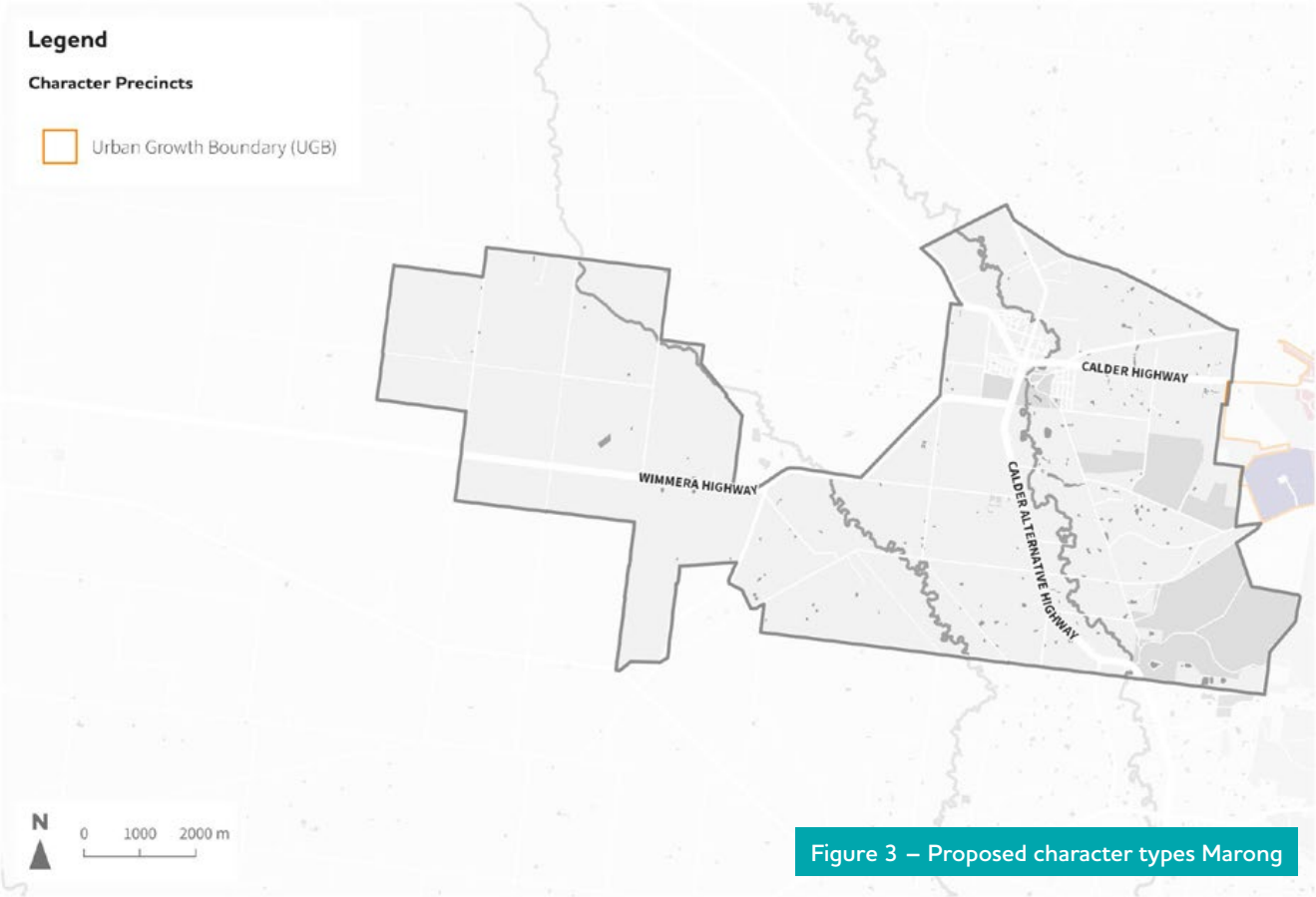

Figure 3 – Proposed character types Marong

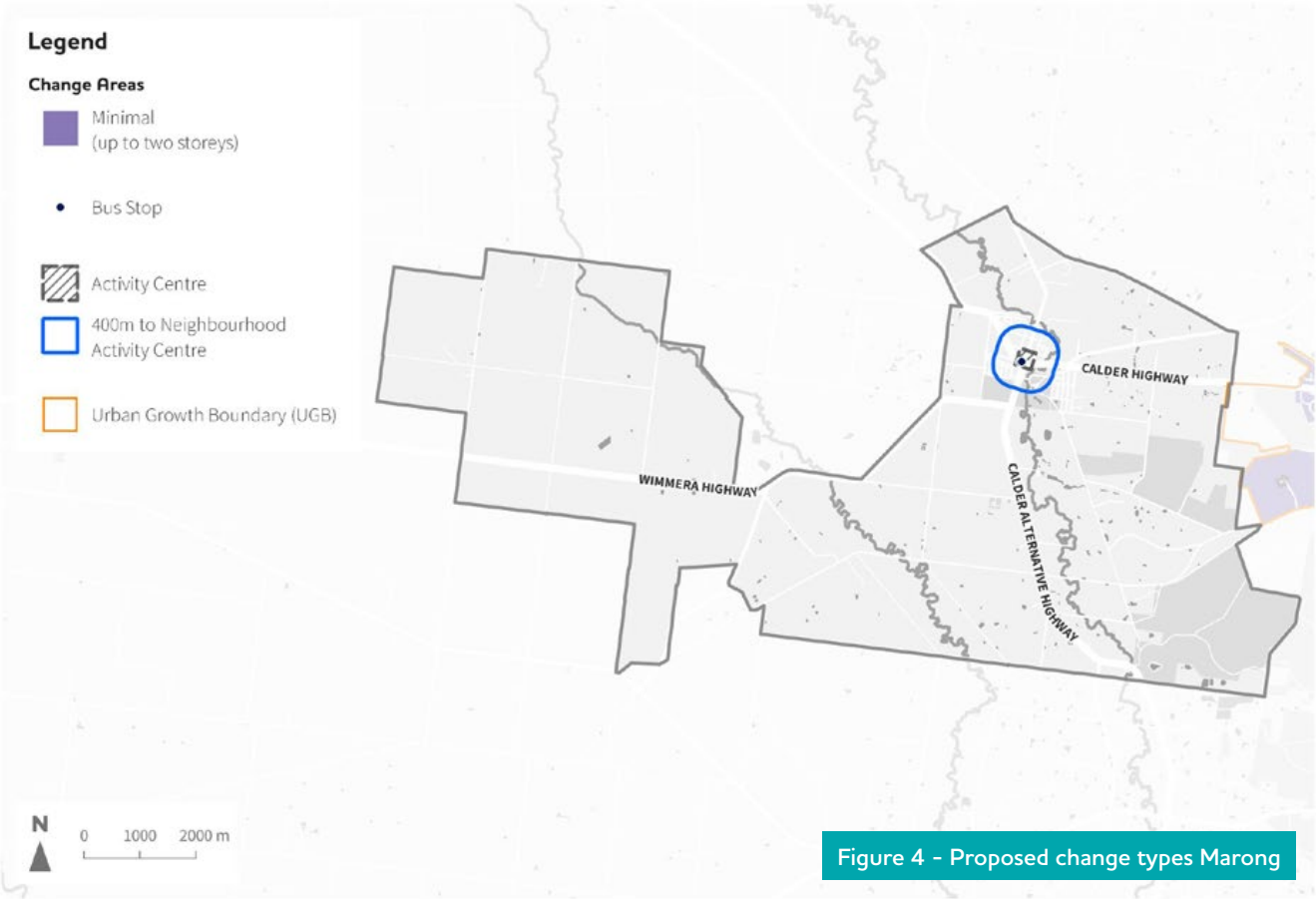

Figure 4 - Proposed change types Marong

Strathfieldsaye

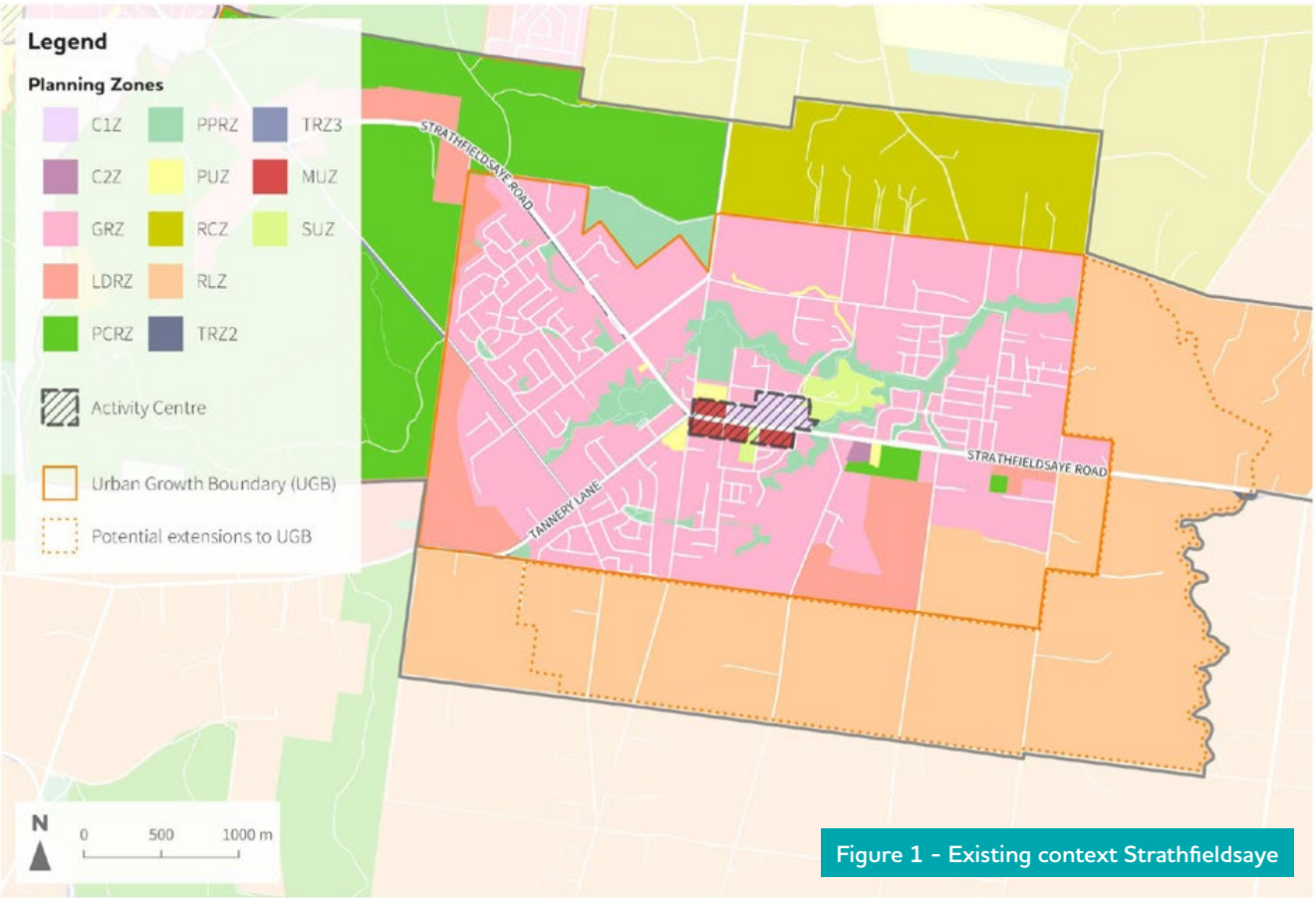

Figure 1 - Existing context Strathfieldsaye

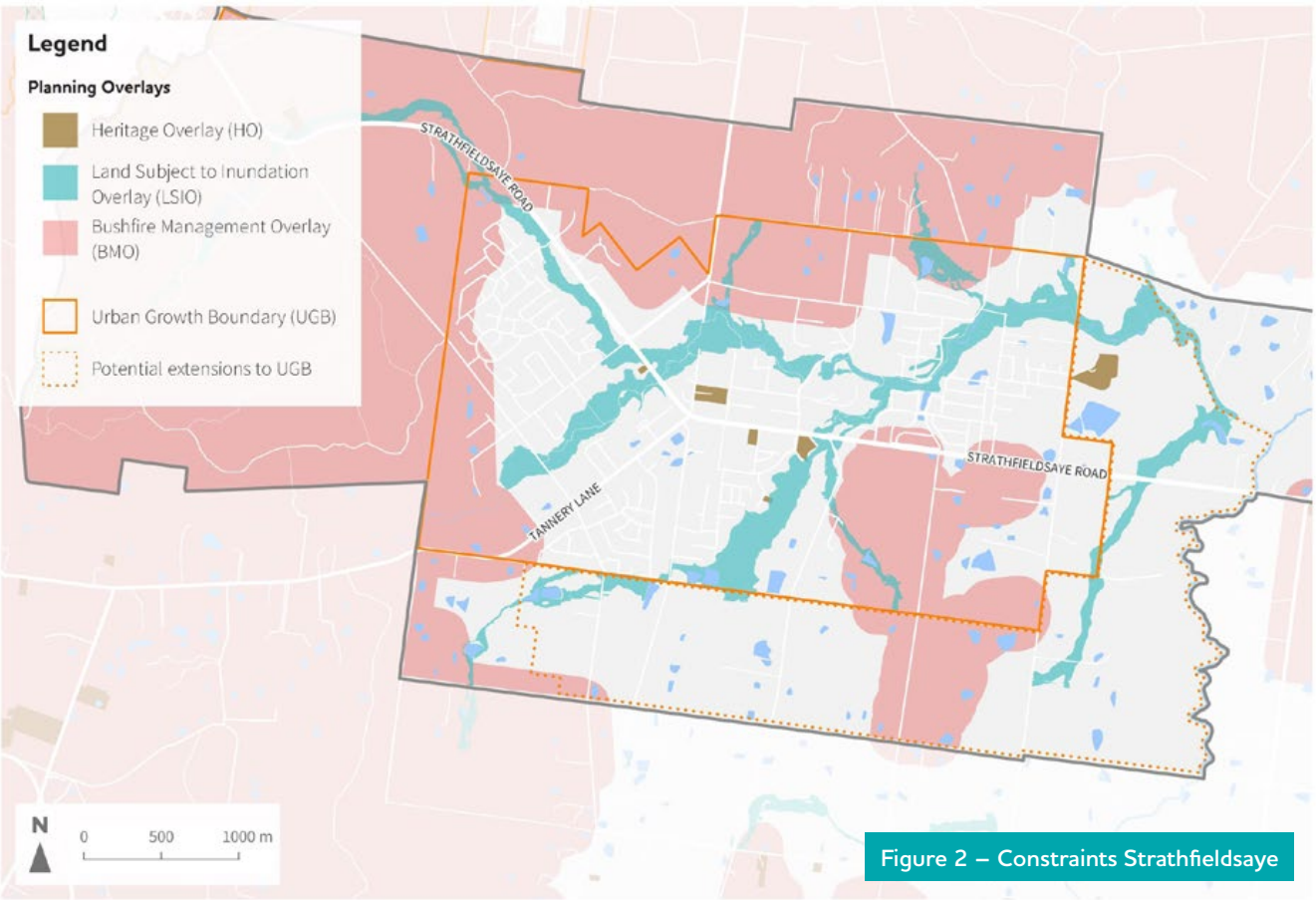

Figure 2 – Constraints Strathfieldsaye

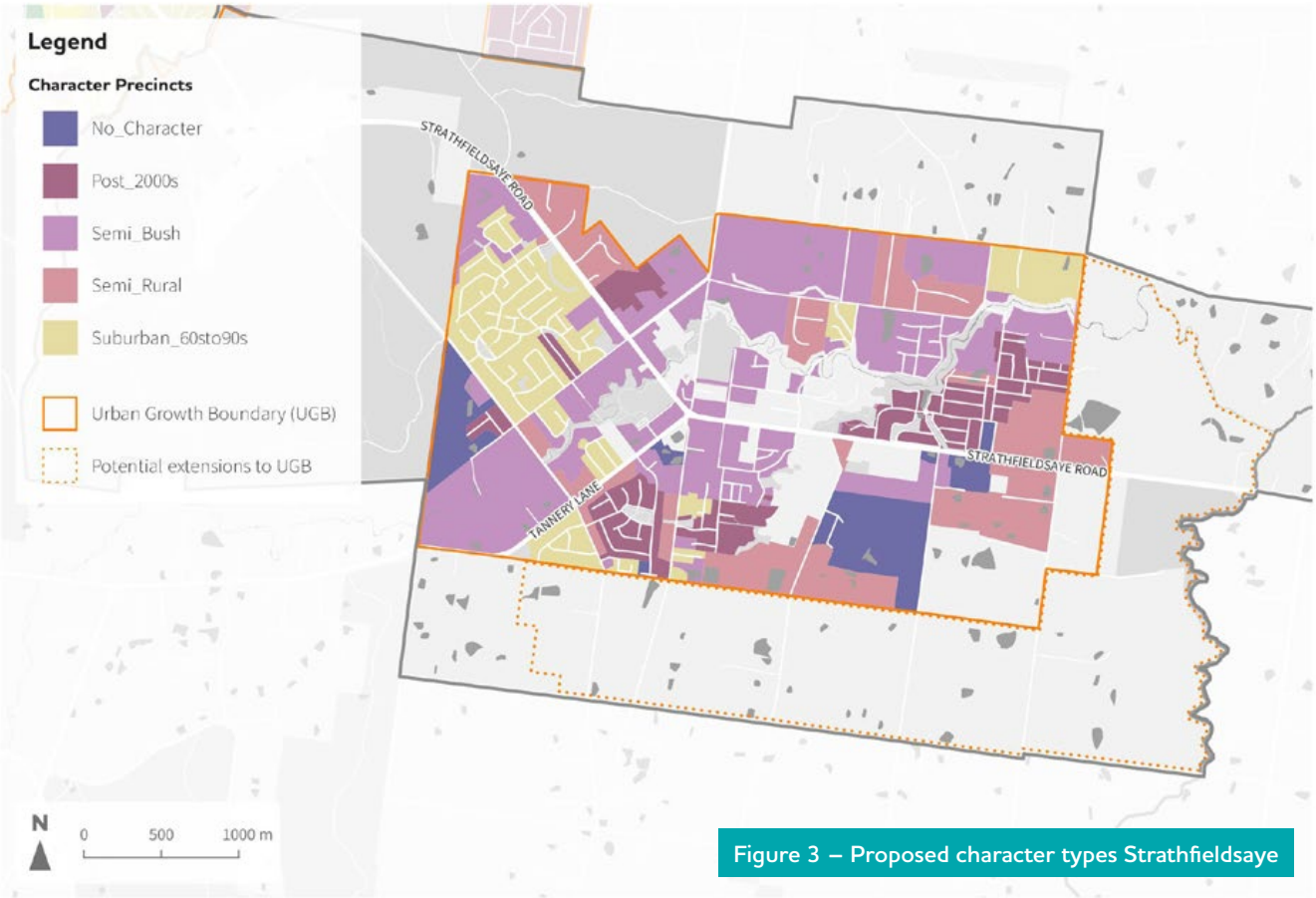

Figure 3 – Proposed character types Strathfieldsaye

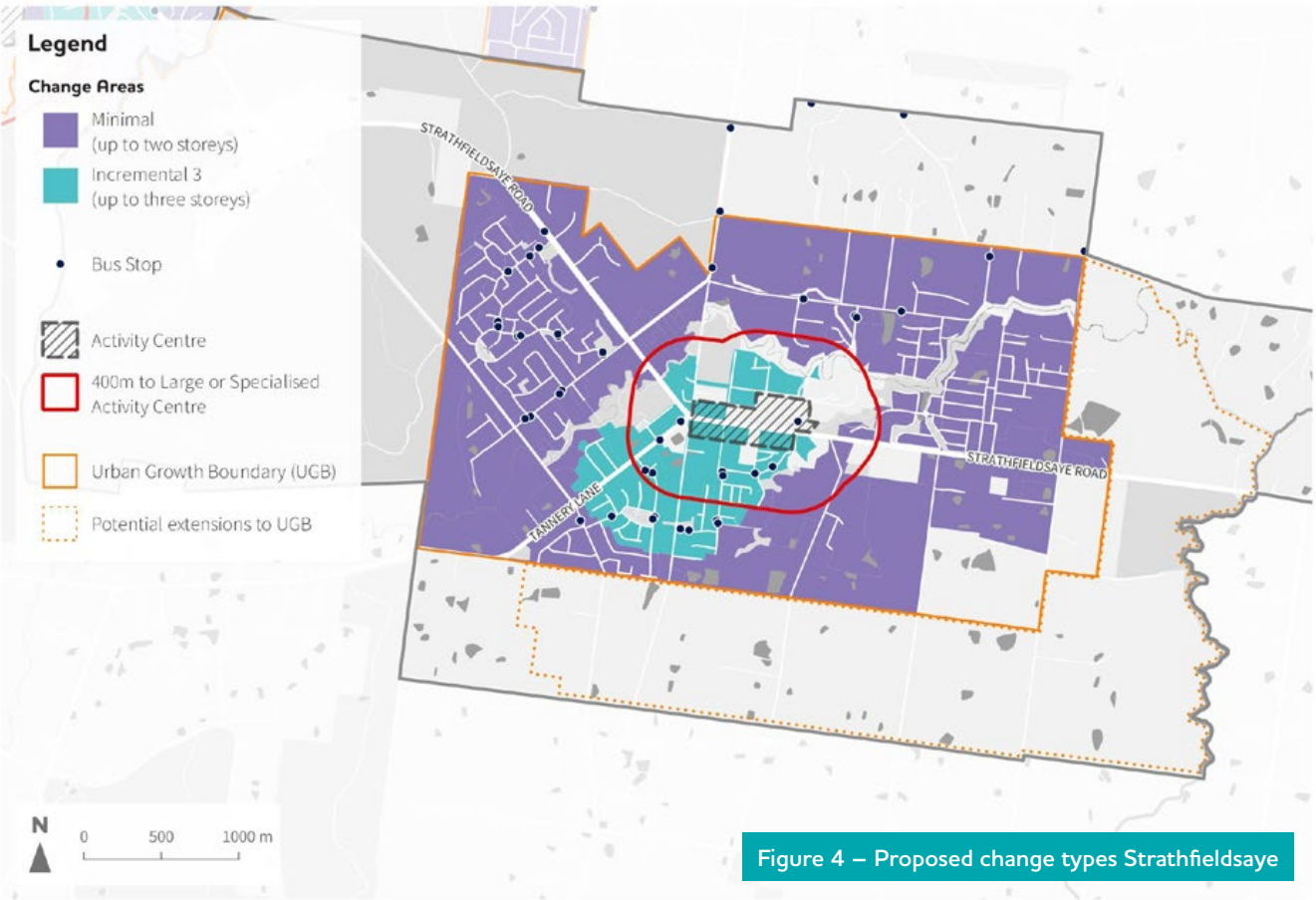

Figure 4 – Proposed change types Strathfieldsaye

Axedale

Figure 1 – Existing context Axedale

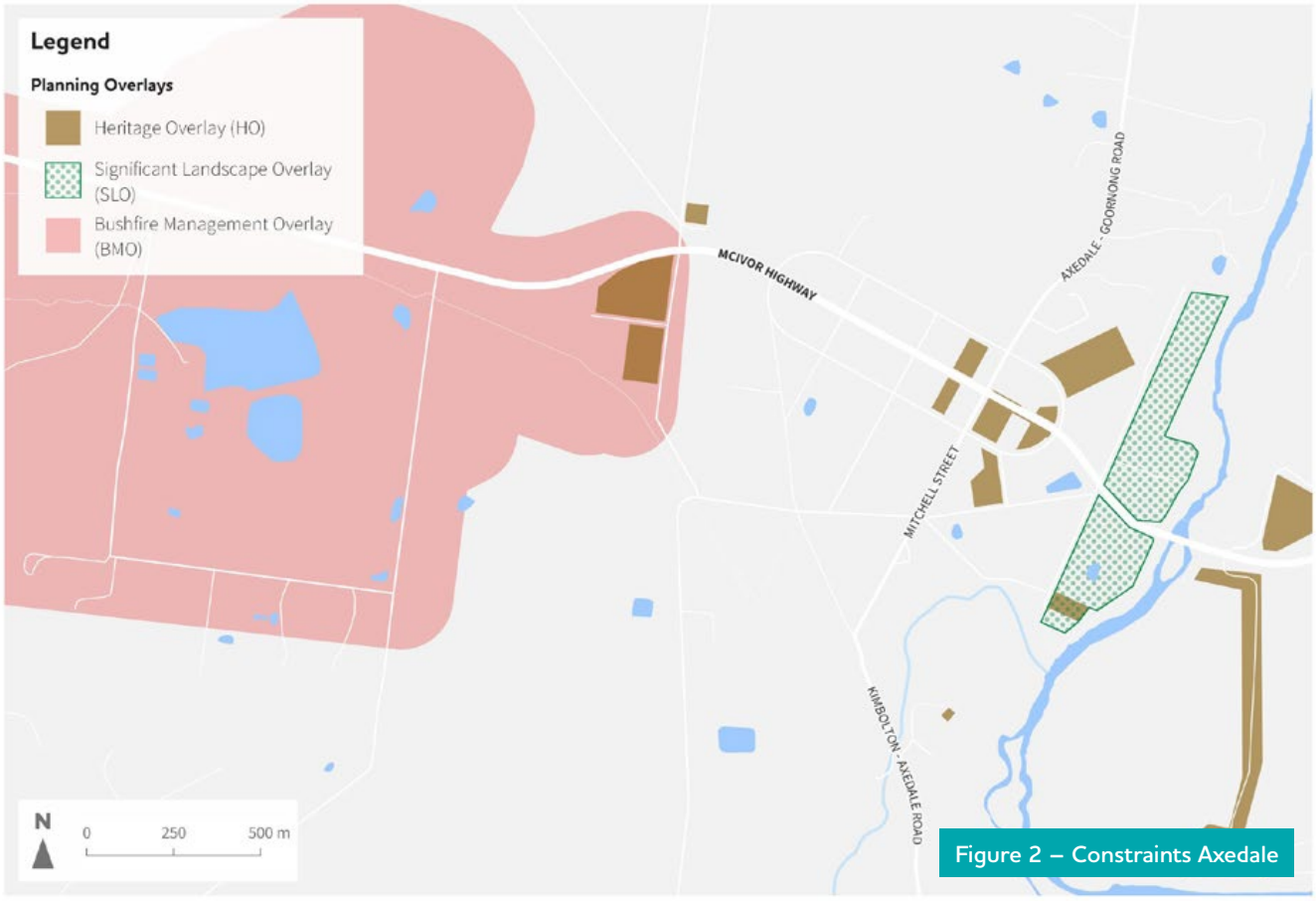

Figure 2 – Constraints Axedale

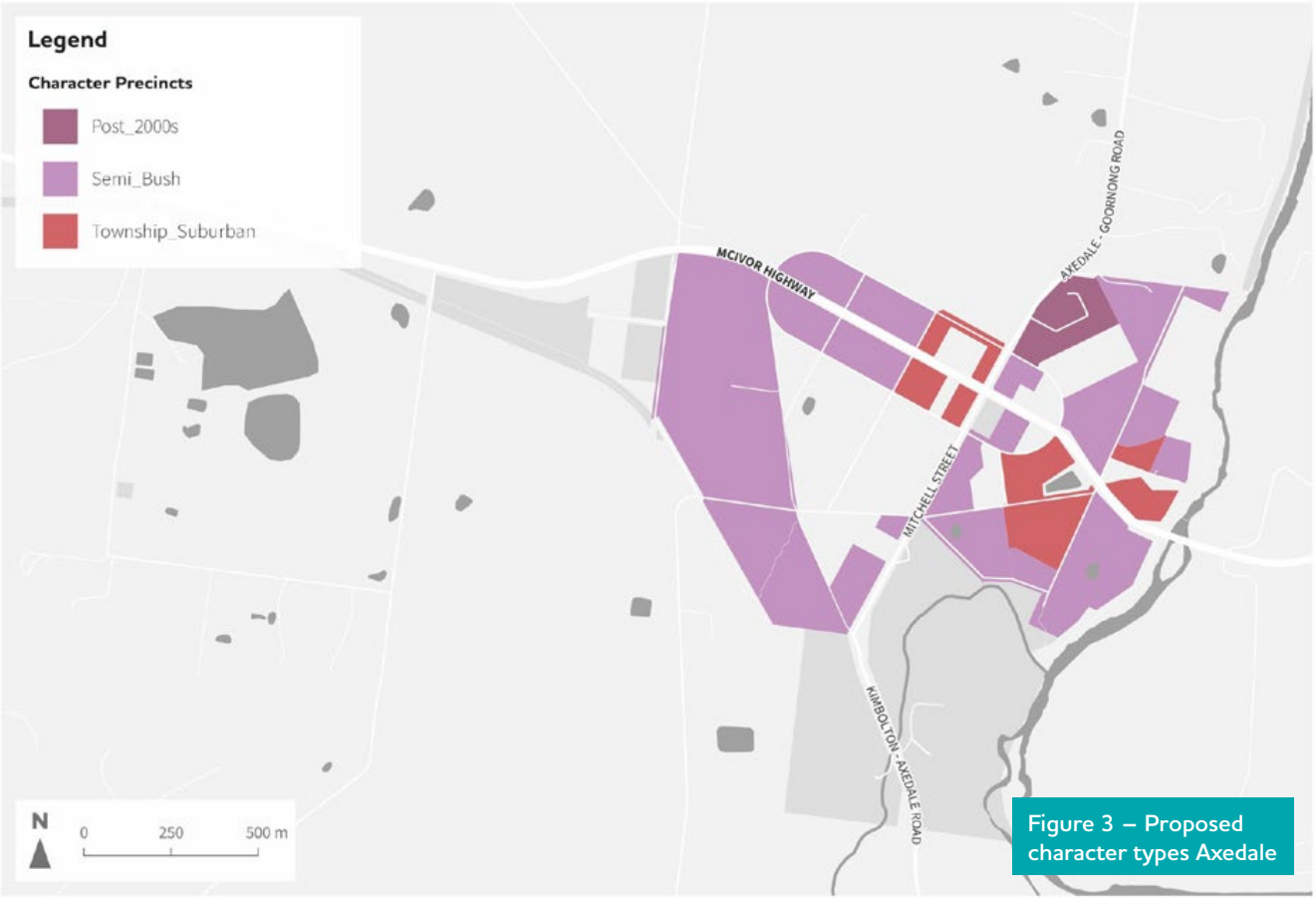

Figure 3 – Proposed character types Axedale

Figure 4 – Proposed change areas Axedale

Elmore

Figure 1 – Existing context Elmore

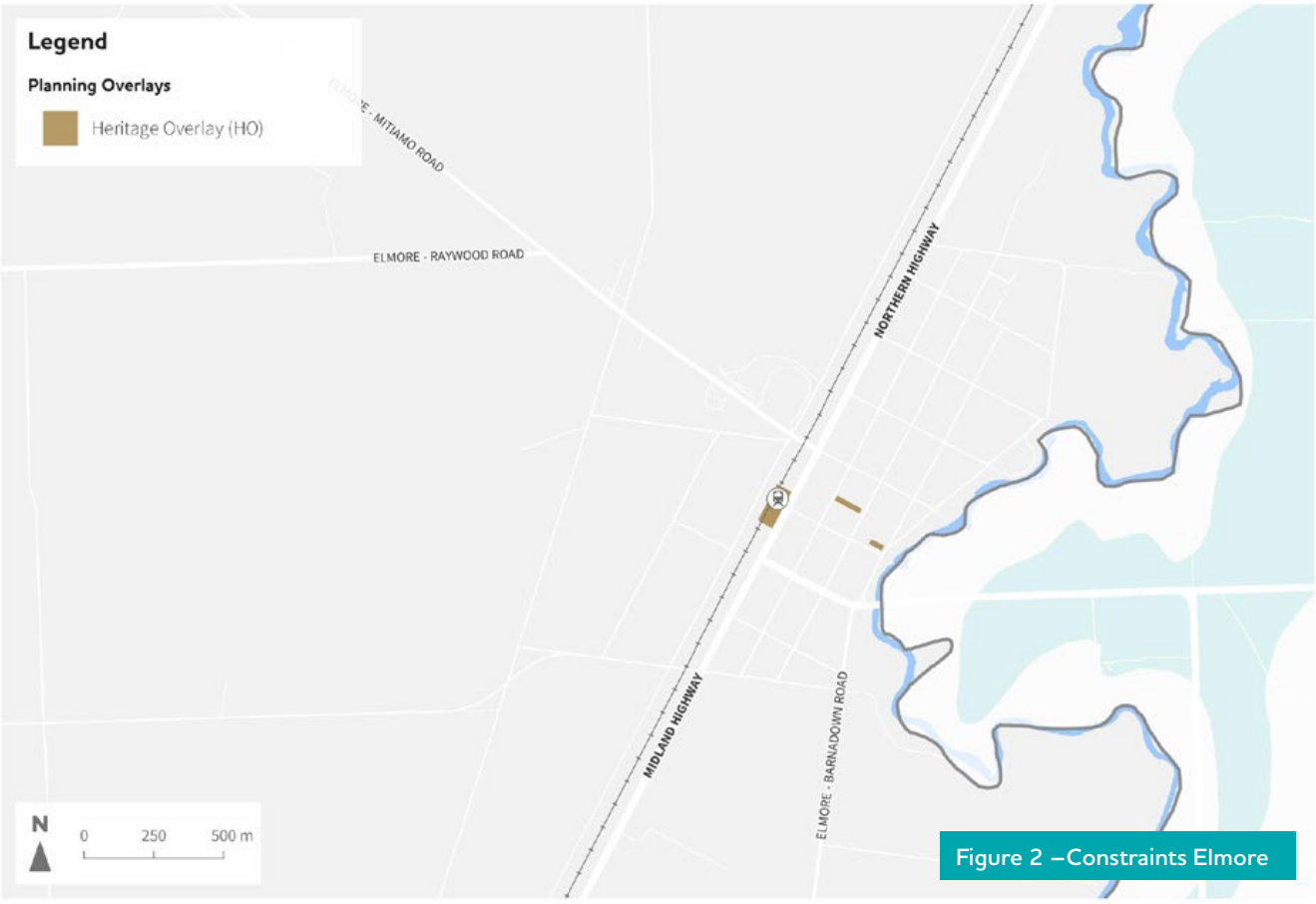

Figure 2 –Constraints Elmore

Figure 3 – Proposed character types Elmore

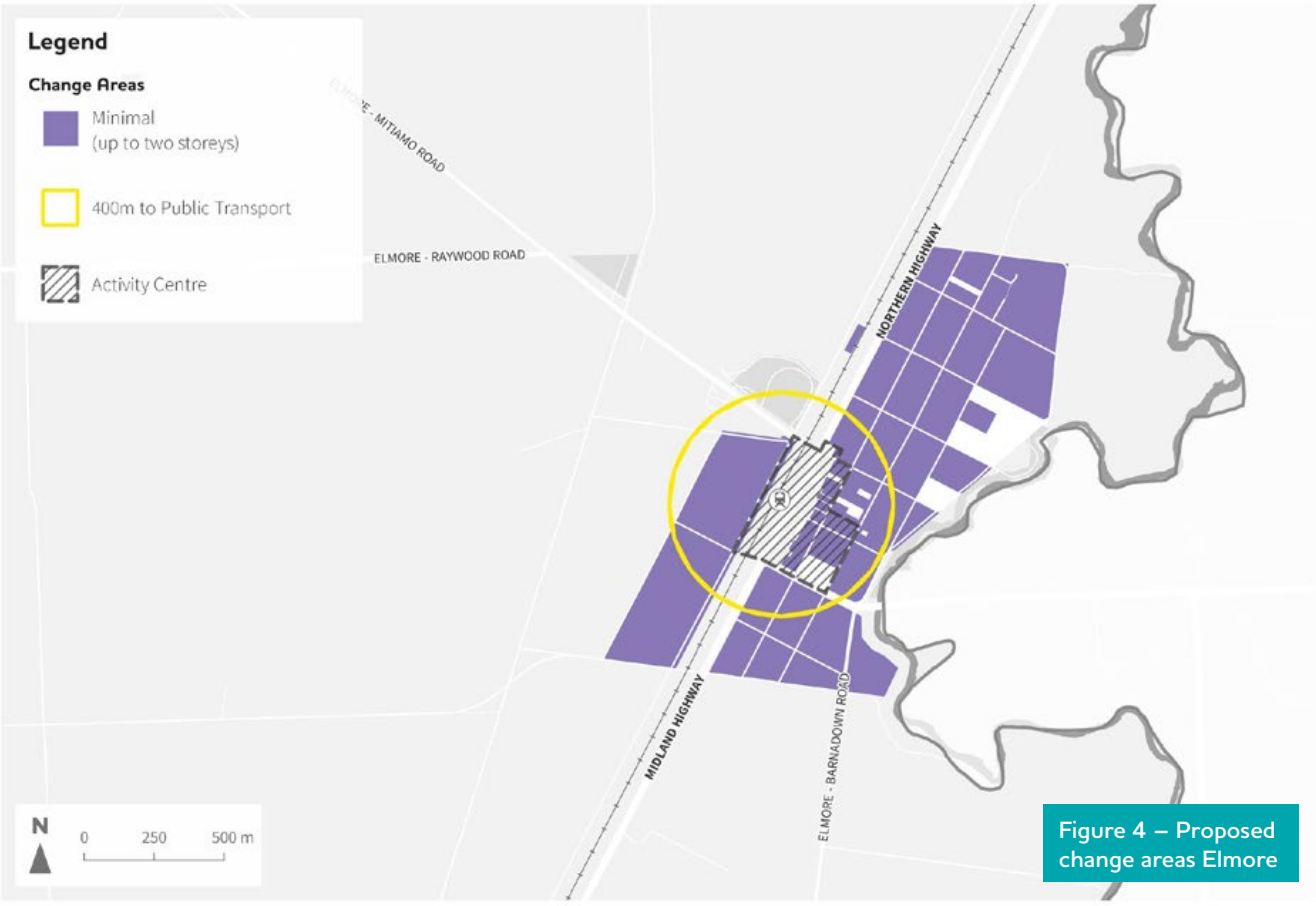

Figure 4 – Proposed change areas Elmore

Heathcote

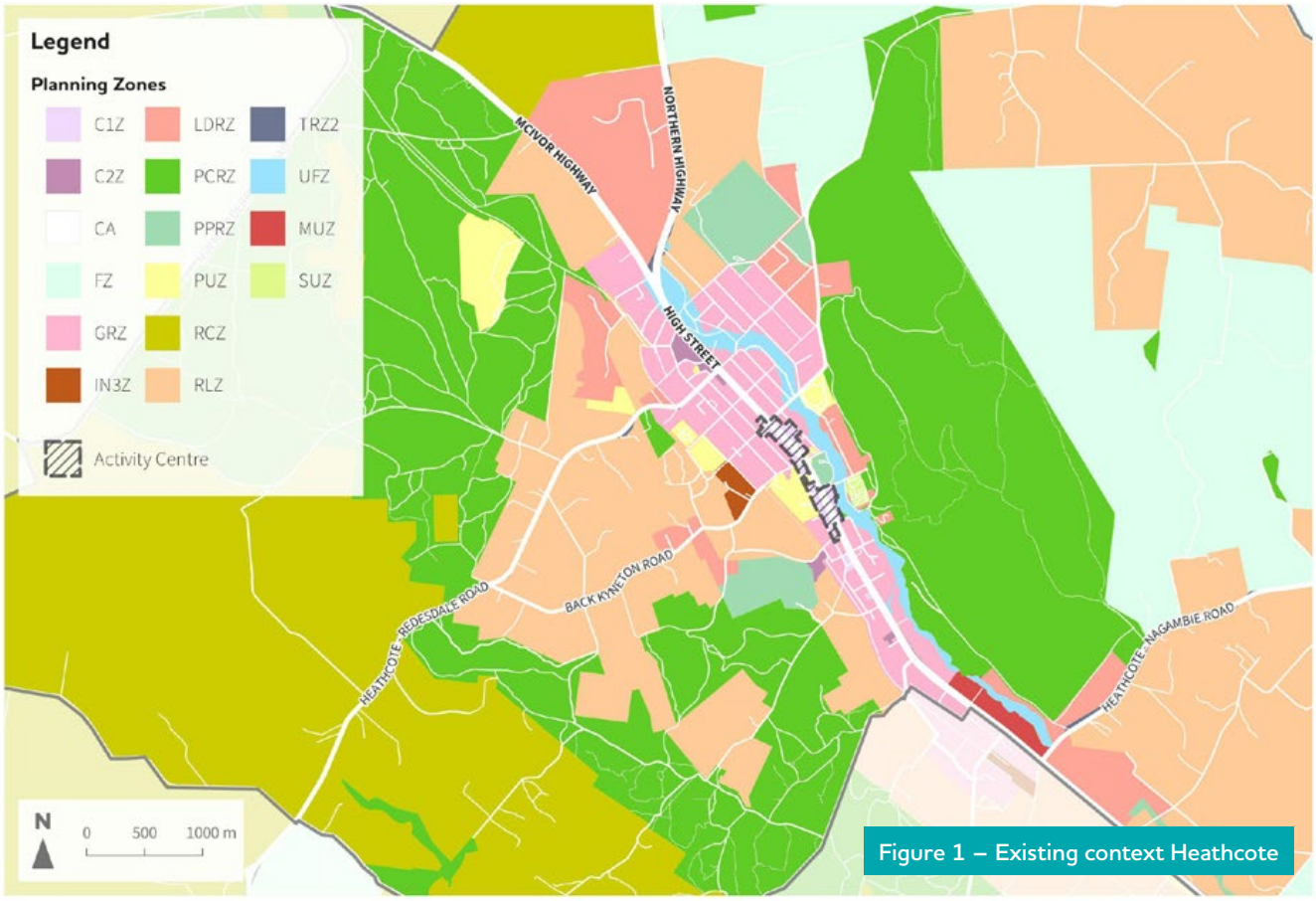

Figure 1 – Existing context Heathcote

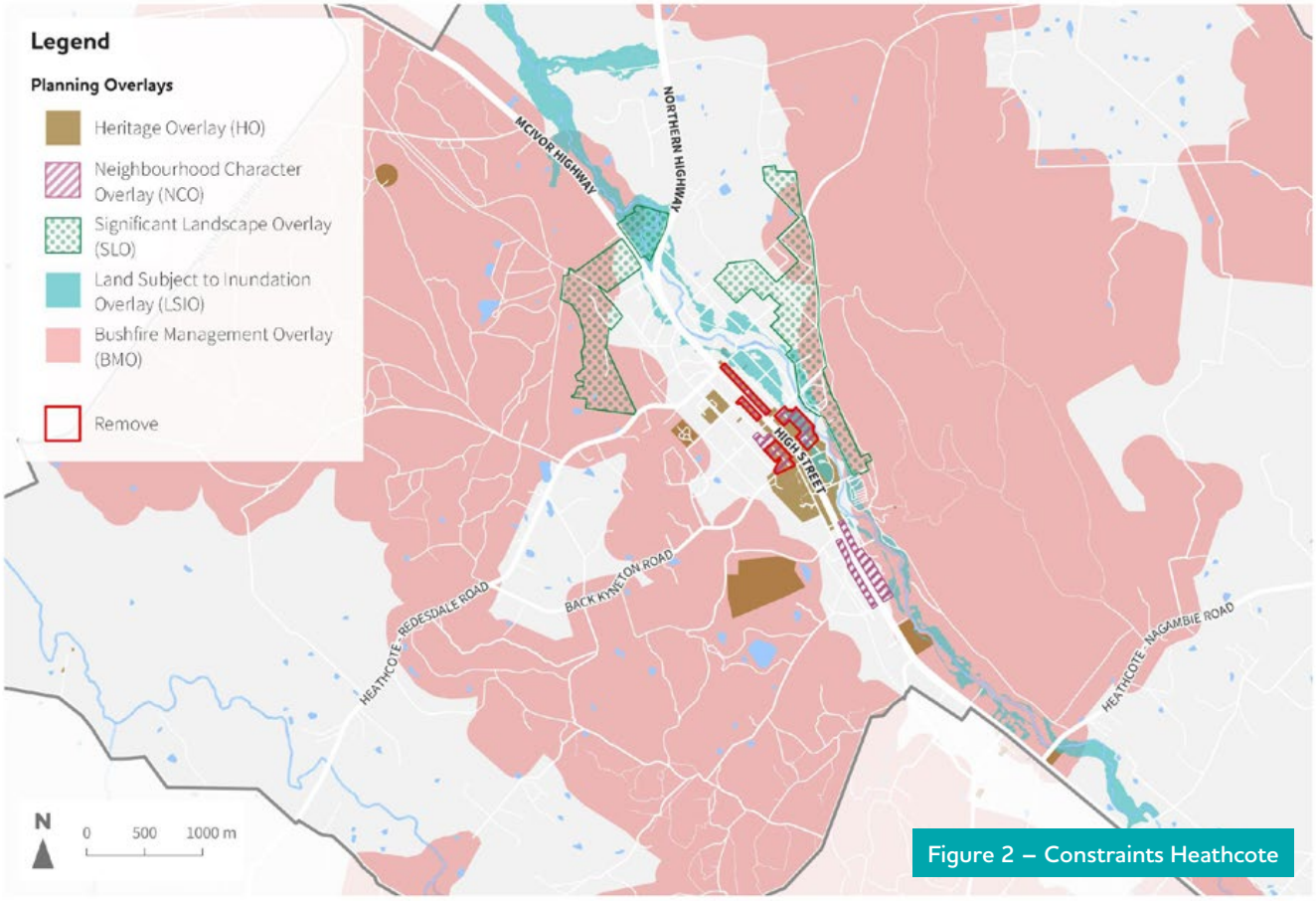

Figure 2 – Constraints Heathcote

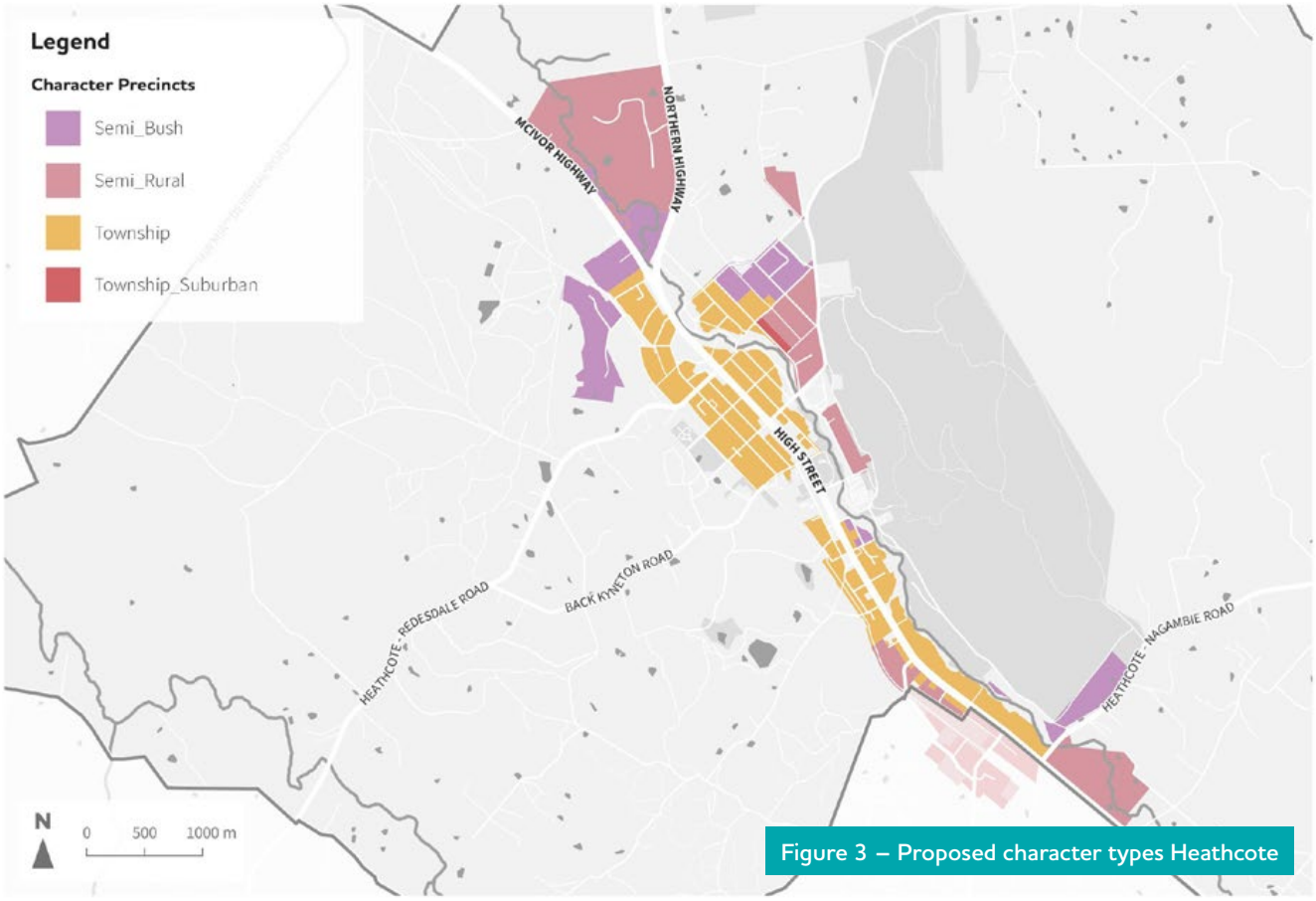

Figure 3 – Proposed character types Heathcote

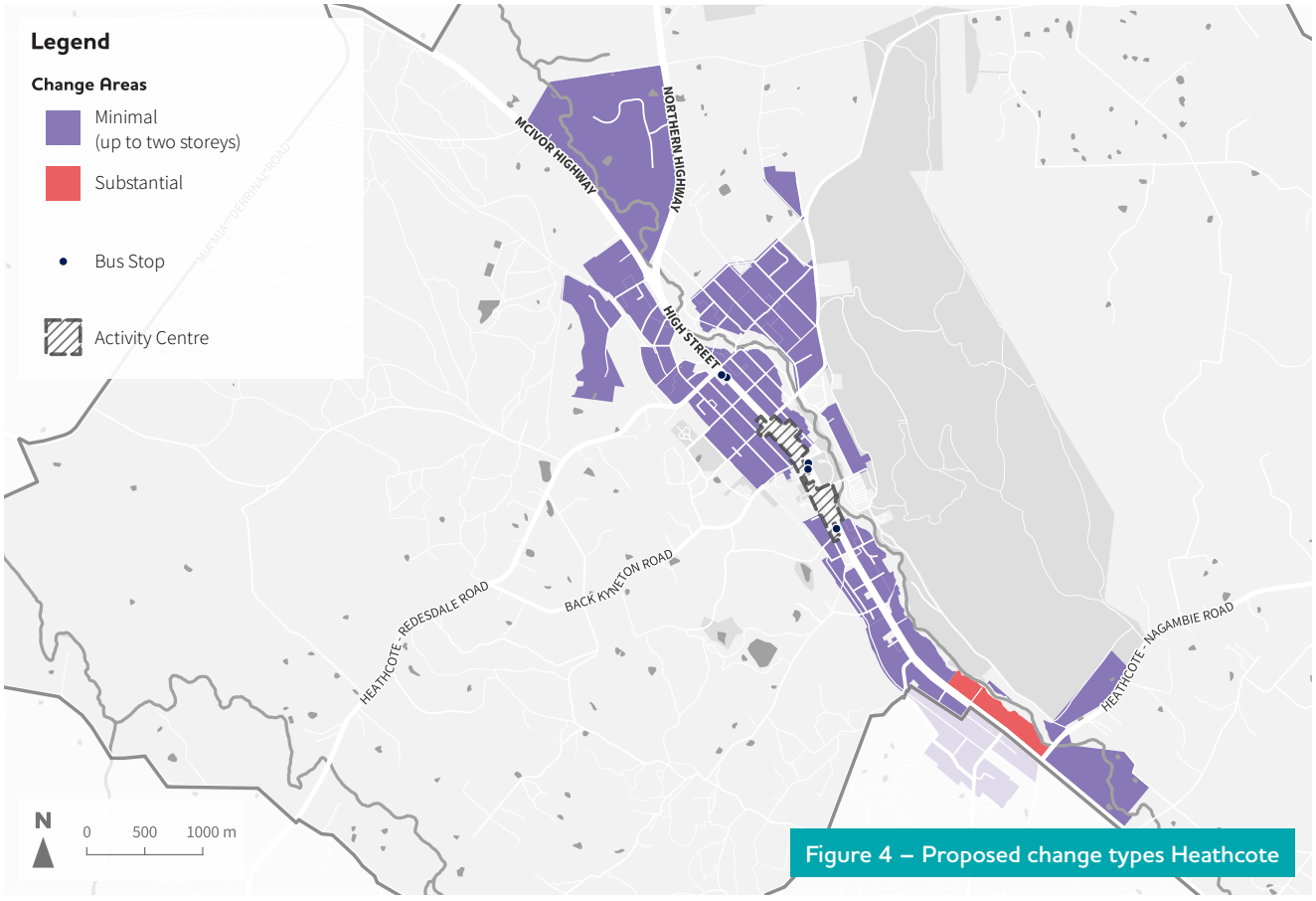

Figure 4 – Proposed change types Heathcote

Notes

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CITY OF GREATER
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