

OFFICIAL

Planning Delegated Committee Meeting

Agenda

14 August 2024 at 6:30pm

**Council Chamber, Town Hall, Sturt Street,
Ballarat**



PUBLIC SUBMISSIONS

- Public representations may be made on any items listed on the agenda in a Planning Meeting apart from those listed in the confidential section.
- If you do wish to attend the meeting in person to make a submission, please fill out the [form on our website](#).
- Members of the public who wish to make a submission on an agenda item but who are unable to attend the meeting in person may make a submission in writing:
 - Submissions must be submitted in writing via the [form on our website](#) by no later than 2:00pm on the day of Planning meeting; and
 - limited to no more than 200 words that will be read out by the Chief Executive Officer or nominated delegate at the meeting prior to the matter being considered.

ORDER OF BUSINESS:

1. Acknowledgement Of Country	4
2. Apologies For Absence.....	4
3. Declaration Of Conflict Of Interests.....	4
4. Confirmation Of Minutes.....	4
5. Officer Briefing.....	4
6. Planning Delegated Committee Reports	5
6.1. Growth Areas Framework Plan.....	5
6.2. Housing Strategy	545
6.3. Planning Scheme Amendment C254ball: Housing Strategy and Growth Areas Framework Plan Implementation	944
6.4. Bridge Mall Amendment C243ball	1037
6.5. Plan for Victoria - City of Ballarat Submission	1232
6.6. Heritage Victoria Permit Application P39923 - Ballarat Railway Complex, City of Ballarat Written Submission.....	1246
7. General Business - Matters Arising From The Agenda	1254
8. Close	1254

1. ACKNOWLEDGEMENT OF COUNTRY



The City of Ballarat acknowledges the Traditional Custodians of the land we live and work on, the Wadawurrung and Dja Dja Wurrung People, and recognises their continuing connection to the land and waterways. We pay our respects to their Elders past, present and emerging and extend this to all Aboriginal and Torres Strait Islander People.

2. APOLOGIES FOR ABSENCE

3. DECLARATION OF CONFLICT OF INTERESTS

4. CONFIRMATION OF MINUTES

5. OFFICER BRIEFING

6. PLANNING DELEGATED COMMITTEE REPORTS

6.1. GROWTH AREAS FRAMEWORK PLAN

Division: Development and Growth
Director: Natalie Robertson
Author/Position: Fiona Koutsivos, Principal Planner Sustainable Growth

PURPOSE

1. The purpose of the report is to:
 - a. Provide an update on the consultation process undertaken for the draft Growth Areas Framework Plan.
 - b. Outline the relevant changes made to the revised Growth Areas Framework Plan in response to the consultation process.
 - c. Outline the next steps to implement the recommendations of the Growth Areas Framework Plan.
 - d. Seek Council adoption of the revised Growth Areas Framework Plan.

BACKGROUND

2. At the Planning Delegated Committee Meeting on 8 May 2024, the Planning Delegated Committee approved community consultation on the draft Growth Areas Framework Plan (PDC13/24). The document seeks to establish a sequence for Ballarat's future growth areas.
3. The consultation took place in May 2024. It was supported by a communications plan comprising:
 - a. Advertising on Council's social medial channels.
 - b. 2 drop in sessions with landowners.
 - c. 1 drop in session with community members.
 - d. 2 workshop sessions with the development industry.
 - e. Individual meetings with interested parties.
4. 28 individual submissions were received from:
 - a. The development industry, planning and engineering consultancies (9 submissions).
 - b. Community members (7 submissions).
 - c. Government agencies (12 submissions).
5. A further 14 responses to the online survey were made, with the majority coming from members of the public.
6. Council officers have analysed the submissions and survey responses and have prepared a report outlining key themes with recommendations for updates to the Growth Areas Framework Plan (see Attachment).

KEY MATTERS

Feasibility Assessment

7. To address submissions received through the consultation process and better inform the future roll out of growth in the west, Council officers sought to better understand the overall cost of both growth areas. This included how the Development Contribution Plan (DCP) funding could be used to ensure that future communities are provided with facilities and infrastructure in the early stages of development, in addition to reducing the impact of growth on existing infrastructure and facilities. It was also sought to understand an indicative DCP rate from the infrastructure required.
8. To inform this, Council officers engaged SGS Consultants to undertake a feasibility assessment by preparing a high-level DCP for both growth areas to understand possible infrastructure costs for Council.
9. The assessment considered two scenarios based on the share of external demand assumptions and identified potential funding gaps based on each scenario.
10. In the higher external demand scenario, there is expected to be a funding gap of \$177 million for the Western Growth Area and \$208 million for the North Western Growth Area.
11. In the lower external demand scenario, there is expected to be a funding gap of \$13 - \$52 million for the Western Growth Area and \$18 - \$42 million for the North Western Growth Area.
12. Indicative DCP rates were prepared as part of this assessment. It is expected that DCP rates will range from \$520,913 - \$710,494 for the Western Growth Area and \$490,288 - \$882,800 for the North Western Growth Area.

Consultation

13. The key issues raised as part of submissions are discussed below.

Housing and land supply

14. Submitters disagreed with the existing and future land supply numbers stated in the draft Growth Areas Framework Plan and expressed that the numbers were an overestimation of land supply.
15. Submitters did not agree that land supply should include perceived undevelopable areas in the Ballarat West Precinct Structure Plan (PSP) and the Northern Growth Area, as a PSP has not been completed.
16. Submitters were concerned that the land supply numbers relied upon increased densities which were considered unrealistic.
17. Submitters were concerned that the demand rate was based on the Housing Strategy and is not representative of future demand.
18. State government agencies questioned whether the Urban Development Program (UDP) data was used to assess the supply of greenfield land supply.

19. In response to these items, the land supply numbers will be removed from the Growth Areas Framework Plan, as the recommendations of the Growth Areas Framework Plan are separate from land supply. Following the adoption of the Growth Areas Framework Plan, Council officers will look to engage an independent consultant to undertake a greenfield land supply analysis.

Timing of Western Growth Area

20. Submitters were unsupportive of the medium-term timing of the Western Growth Area and requested that the rezoning and PSP preparation should be brought forward to the short term in line with the Council resolution made on 23 February 2022 (R14/22).
21. In response to these items, the timing references will be removed from the Growth Areas Framework Plan, as the recommendations of the Growth Areas Framework Plan are separate from PSP timing.
22. Council officers will bring forward some of the technical work that would normally occur as part of the PSP, to reduce PSP preparation timeframes.
23. Council officers will continue to monitor land supply to determine when to commence PSP preparation of the Western Growth Area.

Staging

24. Some submitters were supportive of the sequencing of the Western Growth Area being developed as the next Growth Area.
25. Some submitters were unsupportive of the sub-precinct staging of the Western Growth Area and requested that some stages should be consolidated.
26. One submitter requested that a section of the Western Growth Area should be brought forward in the short term as an individual precinct.
27. In response to these items, Council officers note that the proposed sub-precinct staging is indicative only and will be determined as part of future PSP preparation once precinct level investigations are undertaken.
28. Council officers are unsupportive of separating the Western Growth Area as the provision of infrastructure will be more viable should the Western Growth Area remain a single entity.

Density

29. Submitters were concerned about the 20 dwellings per hectare assumption within the Growth Areas Framework Plan. They cited that higher densities were unsuccessful in new growth areas.
30. 15 - 17 dwellings per hectare was considered more reasonable.
31. Dwelling supply numbers for the future growth areas have been updated to reflect a desire to facilitate an average of 20 dwellings per hectare, acknowledging that some areas will accommodate lower densities and final densities will be determined as part of the future PSPs.

Ballarat West PSP

32. Submitters highlighted that it is difficult to develop in the Bonshaw area due to land fragmentation, expensive high quality lifestyle properties, and servicing constraints.
33. One submitter also raised that the increased DCP rate as part of the Ballarat West PSP and DCP review will affect the development feasibility.
34. City of Ballarat's priority is to ensure that the Ballarat West PSP is developed to its full capacity.
35. Council officers have seen recent development interest in the Bonshaw area.
36. It is noted that the Ballarat Southern Trunk Sewer Project is in progress and will help to alleviate some of the servicing constraints in the area.

Multiple growth fronts

37. Submitters were concerned that the Growth Areas Framework Plan would limit multiple growth areas existing at once and that this would have an impact on housing choice, affordability and supply.
38. To clarify, the Growth Areas Framework Plan is unsupportive of multiple PSPs being prepared at once, and the Growth Areas Framework Plan will be updated to reflect this.

Infill development

39. Submitters were concerned with the City of Ballarat's infill aspiration and doubted how realistic infill development was in the short to medium term.
40. Concerns were raised around costs, transport, planning approval times, heritage, and environmental factors.
41. In response to these items, City of Ballarat's priority is to promote infill development, in conjunction with greenfield development. State government policy is also moving towards favouring infill development.

Northern Growth Area

42. Submitters were concerned with the reliance on the Northern Growth Area for short to medium term land supply. Specifically, because the adjacent Western Highway would limit access to surrounding services in the initial stages of development.
43. There were concerns raised that the two major landowners within the Northern Growth Area would control the choice and price of greenfield land supply.
44. A State government agency requested that the Staging Plan include and prioritise the Ballarat North expanded area as well as including additional information on the infrastructure required to develop this area.
45. In response to these items, the Council resolution made on 23 February 2022 (R14/22) nominated the Northern Growth Area as the next growth area and resolved to prepare the PSP. City of Ballarat's priority is to ensure that this PSP is completed to provide additional land supply in line with the resolution.

46. It also noted that whilst not being included in the Staging Plan, the Growth Areas Framework Plan highlights that the Northern Growth Expanded Area is City of Ballarat's priority. The Staging Plan and Growth Areas Framework Plan cannot be updated to include detail on the Northern Growth Expanded Area as this level of detail has not been undertaken by Council officers and no formal decision has been made on whether the area will be included in the Northern PSP.

Cambrian Hill

47. Golden Plains Shire Council provided a submission requesting that the Cambrian Hill development be included in the Growth Areas Framework Plan sequencing.
48. In response to this item, Cambrian Hill was considered as part of the technical investigations but, being outside of the municipality, City of Ballarat has limited control over the development.
49. City of Ballarat and Golden Plains Shire Council should continue to work closely to ensure growth area alignment across both municipalities.

Road Upgrades

50. State government agencies were concerned with the extent of road infrastructure upgrades that were required because of both growth areas.
51. Submitters were concerned about the feasibility of the Remembrance Drive upgrades.
52. Submitters were concerned about the wording around the Link Road and Ballarat-Carngham Road projects which are not committed and do not have funding.
53. Submitters were concerned about the traffic volume forecasts on the arterial road network used in the One Mile Grid Traffic and Transport Assessment.
54. In response to this item, Council officers will continue to work through the issues regarding the road upgrades including updating some wording in the Growth Areas Framework Plan to clarify concerns and bring forward some of the technical work.

Technical Work

55. A State government agency was concerned that an area of the Western Growth Area had not had the same investigations undertaken as it was not included in the Long-Term Growth Options Investigation Paper undertaken by Hansen in 2018.
56. A State government agency requested that the Growth Areas Framework Plan include investigation of the likelihood of any past uses that have caused contamination and how this will impact future residential development.
57. A State government agency requested that the Growth Areas Framework Plan include investigation of a buffer to protect surrounding agricultural and rural land uses.
58. State government agencies requested that some technical work, that was originally intended to be done as part of the PSP, is brought forward and undertaken prior to the PSP to address any potential issues early in the process. This might include studies such as Cultural Values Assessments and Biodiversity Assessments.

59. In response to these items, the Growth Areas Framework Plan will be updated to confirm that the Western Growth Area has been fully investigated as well as including actions to investigate the likelihood of contamination and an investigation of a buffer to protect surrounding agricultural and rural land uses.

Next steps

60. Council officers are aware of the need to ensure an adequate supply of greenfield land is available at all times. While land supply assumptions can vary, it is difficult to predict how the future of land development will roll out in the longer term and therefore a key update to the Growth Areas Framework Plan will be to commence the Precinct Structure Plan work, particularly some of the technical work which can take time to develop. If this work is completed earlier, then it would fast track the Precinct Structure Plan should it be required to come online earlier than expected.
61. Background work will also commence on technical work to address some of the concerns raised by government agencies.
62. Council officers will continue to track land take-up in Ballarat West PSP annually, to understand the rate at which the currently zoned land is being developed.
63. Council officers will continue to work collaboratively with the Victorian Planning Authority to progress the Northern Growth Area Precinct Structure Plan as quickly as possible.

CONCLUSION

64. In summary, updates have been made to the Growth Areas Framework Plan in line with the submissions received, as outlined above. Further detail is outlined in the attachment as to where changes have not been incorporated following feedback, and how Council officers have addressed these concerns raised.

OFFICER RECOMMENDATION

- 65. That the Planning Delegated Committee:**
- 65.1 Adopt the attached Growth Areas Framework Plan (revised July 2024).**
- 65.2 Authorise Council officers to engage with State Government authorities to progress implementation of the Growth Areas Framework Plan, including actions listed within the Implementation Plan such as early background technical reports to support a future Precinct Structure Plan for the Western Growth Area.**
- 65.3 Note that consideration of a policy amendment to implement the Growth Areas Framework Plan into the Ballarat Planning Scheme will be the subject of a separate report and recommendations to Council.**

ATTACHMENTS

1. Governance Review [6.1.1 - 2 pages]
2. Growth Areas Framework Plan [6.1.2 - 54 pages]
3. Macroplan - Retail Assessment - April 2024 [6.1.3 - 27 pages]
4. Taylors for City of Ballarat (2024) Engineering Servicing Strategy [6.1.4 - 291 pages]
5. Growth Areas Framework Plan Consultation Summary Report [6.1.5 - 10 pages]
6. SGS for City of Ballarat (2024) Ballarat Growth Area Framework Plan Development Contributions and Infrastructure Funding Assessment [6.1.6 - 44 pages]
7. ASR Research for City of Ballarat (2023) Ballarat Western & North Western Growth Areas Framework Plan Community Infrastructure Assessment [6.1.7 - 105 pages]

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ALIGNMENT WITH COUNCIL VISION, COUNCIL PLAN, STRATEGIES AND POLICIES

1. This report aligns with Council's Vision, Council Plan, Strategies and Policies.

COMMUNITY IMPACT

2. Consultation with the community on the Growth Areas Framework Plan demonstrates positive social and community impacts by seeking to involve the community in land use and planning and the future blueprint of Ballarat's growth areas.

CLIMATE EMERGENCY AND ENVIRONMENTAL SUSTAINABILITY IMPLICATIONS

3. The Growth Areas Framework Plan focuses on positive environmental and sustainable development outcomes for Ballarat's growth areas. In general, the Plan does not raise any direct climate emergency issues or environmental sustainability implications

ECONOMIC SUSTAINABILITY IMPLICATIONS

4. There are no economic sustainability implications identified for the subject of this report.

FINANCIAL IMPLICATIONS

5. Implementation of the Growth Areas Framework Plan through a planning scheme amendment process will not have any significant financial implications to Council beyond expected costs associated with the planning scheme amendment process.
6. As the proponent is the Planning Authority, the City of Ballarat will be responsible for all amendment related costs including notification of landowners and gazettal of the amendment.

LEGAL AND RISK CONSIDERATIONS

7. The amendment does not raise any legal risks or concerns of note.
8. Section 9(1) of the *Local Government Act 2020* states that a Council must - in the performance of its role - give effect to the overarching governance principles of the Act. Section 9(2) describes the following relevant overarching governance principles—
 - (c) the economic, social, and environmental sustainability of the municipal district, including mitigation and planning for climate change risks, is to be promoted,
 - (d) the municipal community is to be engaged in strategic planning and strategic decision making,
 - (f) collaboration with other Councils and Governments and statutory bodies is to be sought' and,
 - (g) the ongoing financial viability of the Council is to be ensured.
 - (h) regional, state and national plans and policies are to be taken into account in strategic planning and decision making
 - (i) the transparency of Council decisions, actions and information is to be ensured.

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And section 9(3) of the *Local Government Act 2020* states that in giving effect to the overarching governance principles, a Council must take into account the following supporting principles—

- (a) the community engagement principles;
- (c) the strategic planning principles;

9. The *Planning and Environment Act 1987* sets out the framework for the use, development, and protection of land in Victoria in the present and long-term interests of all Victorians. The Growth Areas Framework Plan will provide long-term planning and guidance for the City of Ballarat's greenfield areas.

HUMAN RIGHTS CONSIDERATIONS

10. It is considered that the report does not impact on any human rights identified in the *Charter of Human Rights and Responsibilities Act 2006*.

COMMUNITY CONSULTATION AND ENGAGEMENT

11. Public consultation on the Growth Areas Framework has provided an opportunity to inform the community of the future blueprint of Ballarat's growth areas. It provided the community with the opportunity to review the data and work that underlies this first draft of the Growth Areas Framework Plan and enable the community to identify any key issues and provide input.

GENDER EQUALITY ACT 2020

12. There are no gender equality implications identified for the subject of this report.

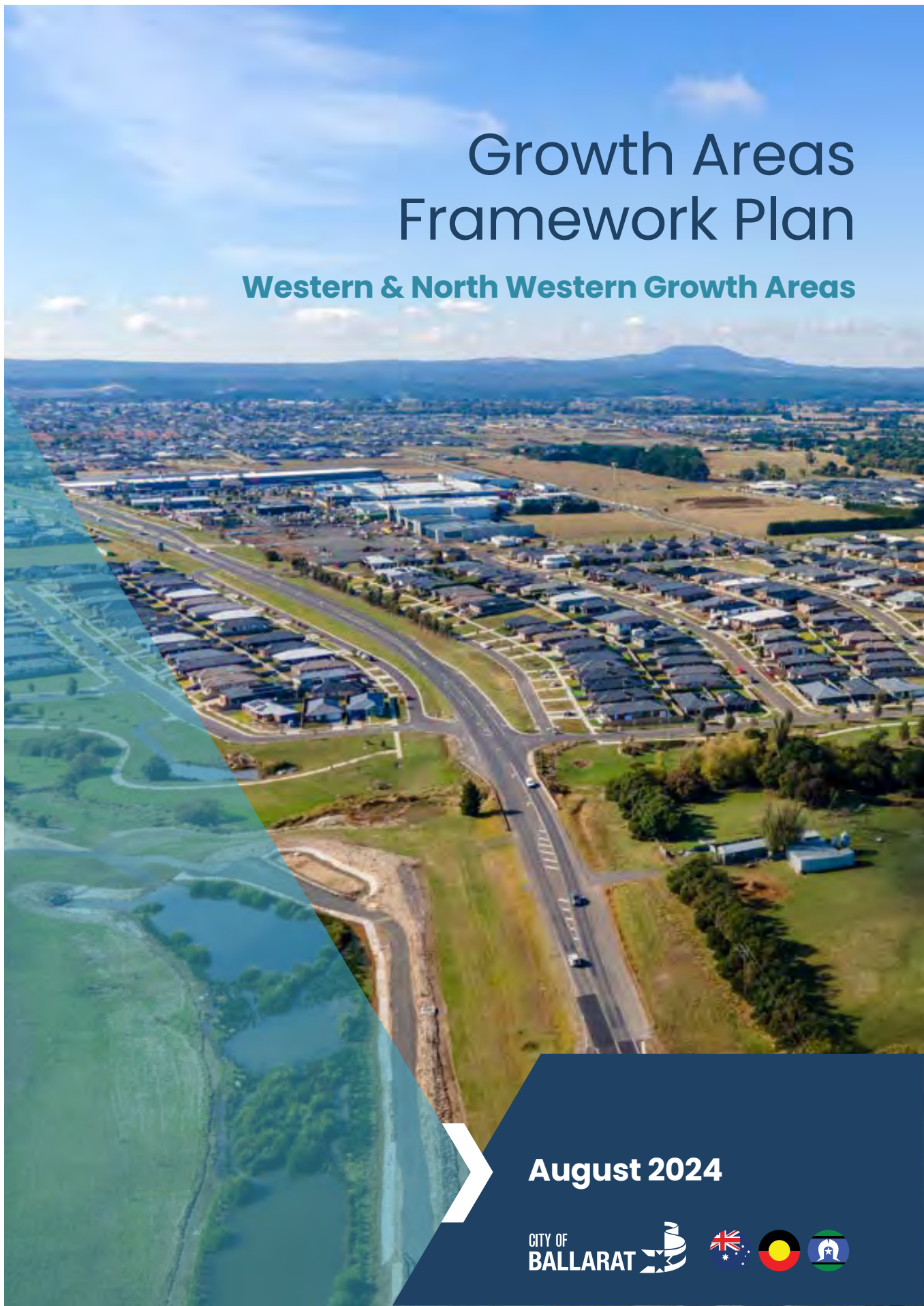
CONFLICTS OF INTEREST THAT HAVE ARISEN IN PREPARATION OF THE REPORT

13. Council officers affirm that no general or material conflicts need to be declared in relation to the matter of this report.

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Growth Areas Framework Plan

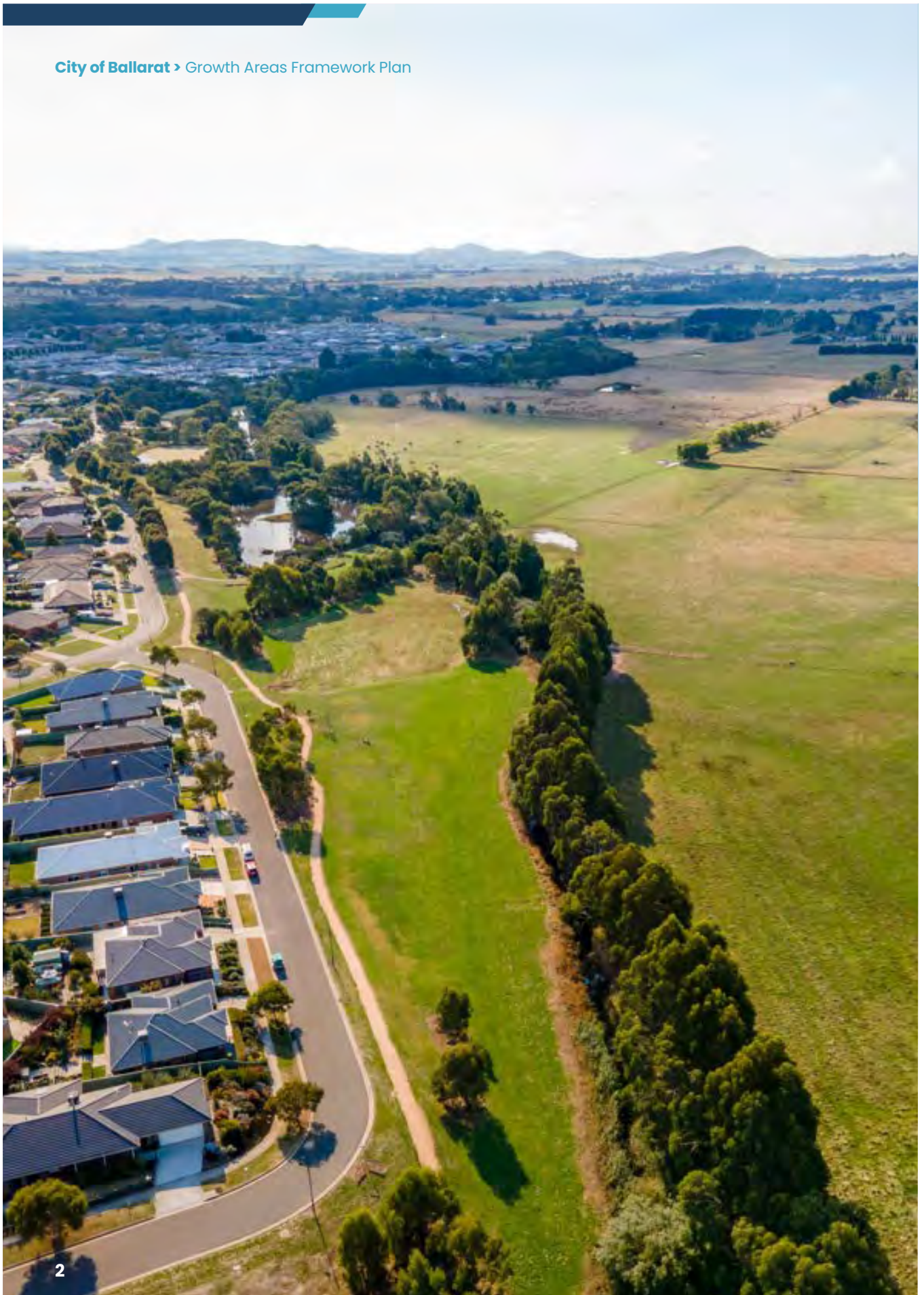
Western & North Western Growth Areas



August 2024



City of Ballarat > Growth Areas Framework Plan



Contents

Introduction	5
Planning Context	9
Growth Context	11
Concurrent City of Ballarat Work	13
Existing Context	14
Precinct Features	24
Urban Development Objectives	32
Future Growth Areas	35
Key Growth Actions	44
Development Sequencing	49
References	53

City of Ballarat > Growth Areas Framework Plan



Introduction

The future Western and North Western Growth areas represent an essential part of the City of Ballarat's long-term growth strategy.

As Victoria's third largest city, Ballarat will continue to play an important role in the State's economic and cultural growth, contributing significant investment and vibrancy to the region.

Ballarat is growing rapidly due to its proximity to Melbourne and the many economic, social and cultural opportunities that the area presents. This is expected to continue into the future.

The Growth Areas Framework Plan (the Framework Plan) is a key document which will address the future long-term greenfield growth of the city. It will be a blueprint for how the city should plan for the roll out of its growth areas, building on the key physical and infrastructure

implications for an expanded urban area. In combination with the *Ballarat Housing Strategy 2041* and the *Ballarat Strategy 2040: Today, Tomorrow, Together*, the three documents provide a clear understanding of how growth should occur across the city.

The Growth Areas Framework Plan includes implementable actions to ensure that housing, employment, road networks, rail corridors, local services, open space and other opportunities are provided for future residents. Ultimately, strategic implementation of the Growth Areas Framework Plan will ensure that development is facilitated in a sequenced and orderly manner, with a focus on maximising the community benefits of urban growth.

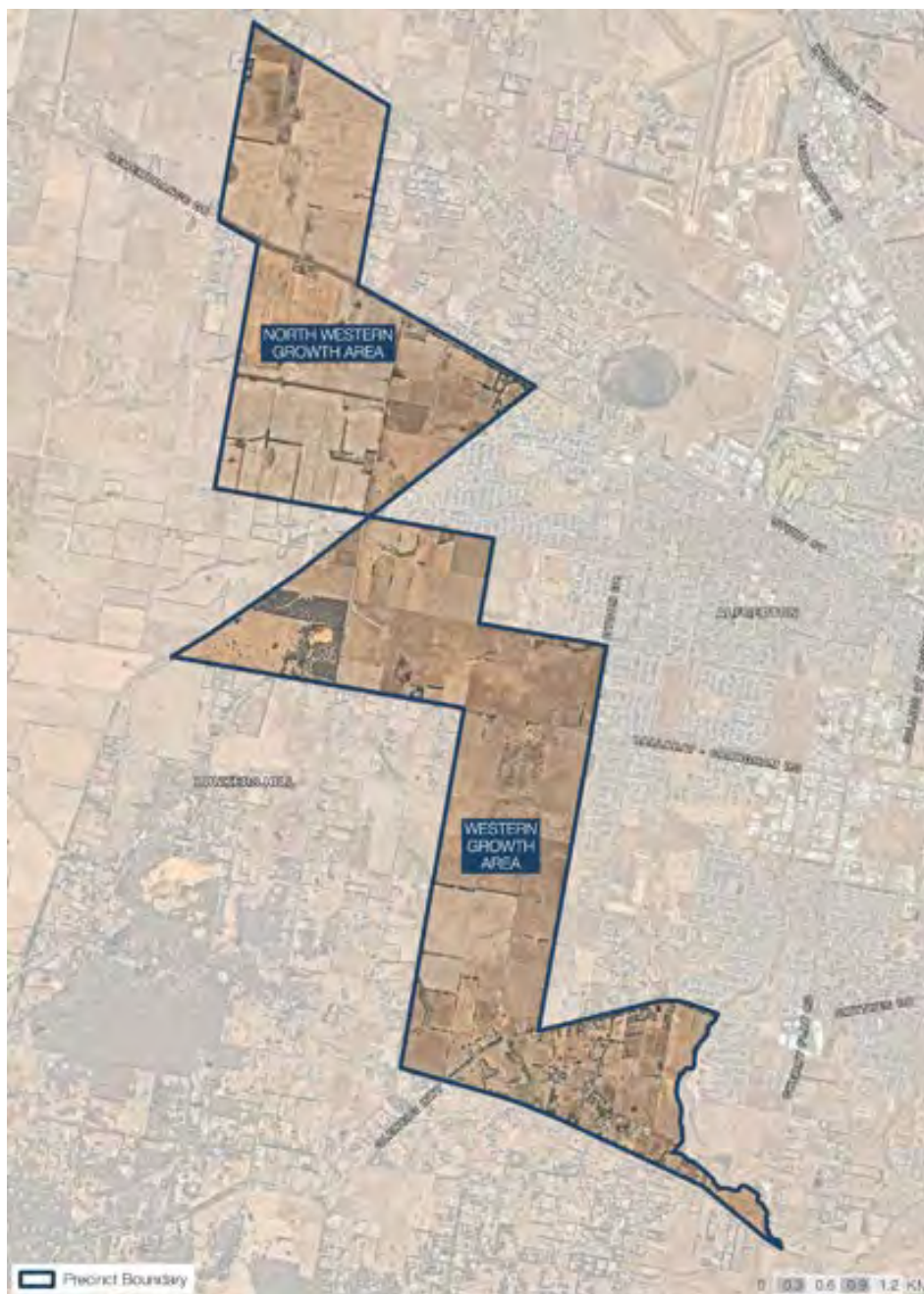
The Growth Areas Framework Plan will ensure that Ballarat remains a regional settlement with its own unique identity.

Role of the Framework Plan

The Ballarat Growth Areas Framework Plan is a high-level strategic document that guides the long term growth of Ballarat's future growth areas. The areas

identified for future growth are geographically described as the Western and North Western growth areas.

Map 1 Growth Areas Framework Plan Areas



The Framework Plan describes the existing context of the growth areas and outlines the future vision and development objectives. The Framework Plan will guide greenfield urban growth which supports the community's shared vision outlined in the Ballarat Strategy 2040 and meets the aspirations of the city and the broader region. The future growth provides opportunities for Ballarat's long term greenfield land supply and forms a logical extension of the existing Ballarat West Growth Area. Ultimately, the Framework Plan establishes the following key themes:

Enable a logical and sequenced roll-out of future greenfield land and support orderly planning

Provide a logical sequence of development that will support a more sustainable and equitable approach to urban development, ensuring cost efficiency and delivery of services are provided in a timely manner for future residents.

Support a continuous and diverse supply of housing

Address the need for a diversity of housing options to accommodate changing demographic groups and income levels, while ensuring affordability and accessibility is achieved.

Encourage employment opportunities and establishment of activity centres

Facilitate the creation of job opportunities and location of activity centres within walkable catchments of residential areas.

Enhance the local environment and integrate sustainable practices

Integrate sustainable practices to better support and enhance the local environment and ecosystems, preserving natural resources including protecting creek corridors and local biodiversity and their habitats, and encouraging a climate resilient community.

Support an integrated transport network which encourages walking and cycling, reduced car dependency and promotes community connectivity

Develop a connected and integrated transport network which enhances connectivity and encourages safe and useable active transport options.

Foster a Thriving Community

Deliver community infrastructure and facilities that support community cohesion and resilience.

Ensure that valued heritage is preserved

Preserve and celebrate the cultural and historic heritage and identity of the area.

Protect and enhance the landscape and visual amenity of the area

Including important visual attributes, vistas, landmarks, site features and gateways and recognising the urban and rural interface that the study area currently provides.

Provide useable and high quality open space areas

Including an integrated open space network that incorporates environmental values, cycling and walking trails.

These key themes are further explored in the Development Objectives section of the Framework Plan.

How the Framework Plan will operate

The Framework Plan includes a Development Staging Plan outlining the preferred order and direction in which Precinct Structure Plan (PSP) preparation and development should occur. PSPs are required to be prepared before the land can be developed for residential use.

The Framework Plan is largely influenced by technical investigations undertaken to determine expected infrastructure needs.

The Framework Plan builds on the work done to date on growth areas in Ballarat including the *Long Term Growth Options Investigation Paper* prepared by Hansen in 2018.

Why is a Framework Plan required?

As outlined in the Ballarat Housing Strategy, by 2041, the Ballarat municipality will have grown by 55,000 people and the city will need 29,000 more dwellings to accommodate this population growth.

The adopted Ballarat Strategy 2040 identifies a target for future dwelling supply to be split 50:50 between greenfield and infill areas. This objective is to encourage a stronger compact urban form where higher densities are encouraged to be located around existing infrastructure and within activity centres.

City of Ballarat’s responsibility as planning authority is to:

- Ensure the ongoing provision of land and supporting infrastructure to support sustainable urban development
- Ensure that sufficient land is available to meet forecast demand
- Plan to accommodate housing growth for at least a 15 year period and provide clear direction on locations where growth should occur.

The Framework Plan responds to Clause 21 of the Ballarat Planning Scheme which identifies that clarity needs to be provided on the preferred long-term direction of greenfield investigation areas following Ballarat West.

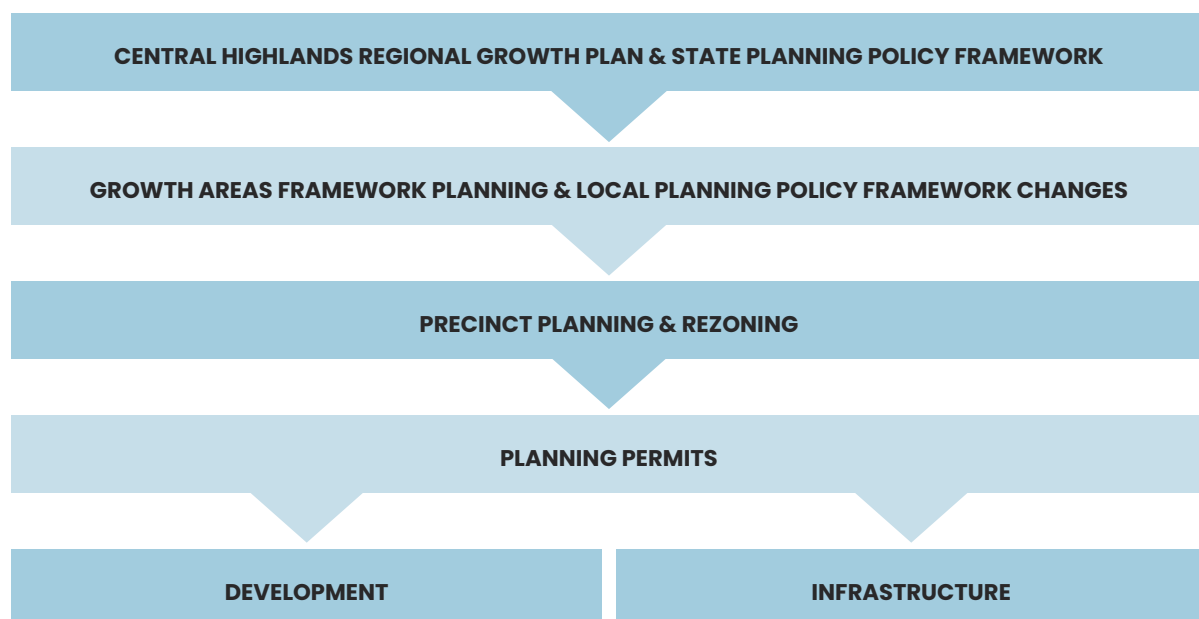
How will the Framework Plan be implemented?

The Growth Areas Framework Plan will be included as a background document in the Ballarat Planning Scheme. Clause 21 of the Local Planning Policy Framework in the Ballarat Planning Scheme will also be updated.

As outlined in Figure 1, following the sequencing of the Framework Plan, detailed planning will be undertaken to prepare PSPs and Development Contributions Plans (DCP), and rezoning of the growth areas to the Urban Growth Zone (UGZ).

Each PSP will build on the work undertaken as part of the Framework Plan, including undertaking detailed precinct scale technical investigations, determining a future urban structure plan and detailing all infrastructure requirements and costs. Future PSPs should have regard to the Growth Areas Framework Plan. Once approved, planning permits for subdivisions and development can be issued if they are generally in accordance with the PSP and DCP.

Figure 1 Growth Areas Framework Plan Delivery



Planning Context

The following State and Local Planning Policy was considered in preparing the Growth Areas Framework Plan.

› [Plan Melbourne 2017](#)

› [Central Highlands Regional Growth Plan 2014](#)

Planning Policy Framework

The State Planning Policy Framework provides key directions around settlement, housing, environment, infrastructure and transport. Relevant considerations for the Framework Plan include:

- Ensure a sufficient supply of land is available for housing, employment, recreation, open space, commercial, community facilities and infrastructure
- Focus investment and growth in major regional cities such as Ballarat
- Locate urban growth close to transport corridors and services
- Manage the sequence of development in areas of growth so that services are available from early in the life of new communities
- Protect, restore and enhance sites and features of nature conservation, biodiversity, geological or landscape value
- Minimise the impacts of natural hazards and adapt to the impacts of climate change
- Protect and enhance catchments, water bodies, groundwater and water quality
- Provide housing choice and deliver affordable housing closer to jobs, transport and services
- Support the establishment and maintenance of communities that provide functional, accessible, safe and diverse physical and social environments
- Establish and maintain a diverse and integrated network of public open space that meets the needs of the community

- Provide fair distribution and access to social and cultural infrastructure and health and education services
- Encourage the concentration of major retail, residential, commercial, entertainment and cultural developments into activity centres that are highly accessible to the community
- Create a safe and sustainable transport system by integrating land use and transport
- Sustainably manage water supply, water resources, wastewater, drainage and stormwater through an integrated water management approach
- Promote the provision of renewable energy
- Encourage average overall densities in the growth areas of a minimum of 15 dwellings per net developable hectare and overtime seek an overall increase to more than 20 dwellings per net developable hectare.

Local Planning Policy Framework

The Local Planning Policy Framework implements the objectives and strategies of the Municipal Strategic Statement. Relevant considerations for the Framework Plan include:

Clause 21.02-1 (Urban Growth) highlights the significant population growth expected for Ballarat by 2040 and that this growth is planned to be accommodated through and infill and planned greenfield growth areas.

Clause 21.02-4 (Greenfield Investigation Areas) notes that:

- The Ballarat West Growth Area is the primary greenfield development area
- The Northern Growth Area will provide for short to medium term land supply
- Medium to long term land supply will be provided by investigation areas (North Western and Western growth areas) that are subject to detailed assessment.

City of Ballarat > Growth Areas Framework Plan

Clause 21.02-4 (Greenfield Investigation Areas) highlights that greenfield development is to be connected to the existing urban area by:

- Discouraging rezoning of additional greenfield land, which would compete with Ballarat West, until the market requires additional supply
- Ensuring that future greenfield development is focused within roughly an 8km arc from the centre of Ballarat
- Avoiding ad-hoc and unplanned greenfield development
- Discouraging disconnected or 'leap frog' development
- Minimising the impacts of development on Ballarat's historic urban landscape, the environment and Ballarat's natural resource base
- Ensure the need for buffers to protect major water and sewerage assets and treatment plants from encroachment by sensitive land uses is taken into account as part of any greenfield investigation.

Clause 21.08-3 (Development Infrastructure) ensures that new social and economic infrastructure meets the needs of the community during the forecast population growth.

> Council Plan 2021-2025

The Council Plan establishes the strategic vision for all Council activities over its period of operation. Its an expression of current community priorities and expectations.

The Council Plan includes the following community vision:

- Ballarat, Victoria's heritage city: leading the way as a sustainable, innovative and inclusive community
- In 2031, our city is a leader in sustainable living with ecologically sound neighbourhoods where people can meet their daily needs within a short walk, ride or bus trip
- We have easy access to parks and gardens, community facilities and education for all ages. Our health and community services respond to community need
- Everyone is valued and welcomed in our city. We celebrate our diversity, and everyone in our community can participate fully in life
- We approach challenges and opportunities with a creative and innovative approach to get the best result for our people
- Our people work locally in the diverse range of industries that make up our solid local economy
- We embrace our rich heritage. We continue to preserve our links to the gold rush era and recognise and celebrate our long Aboriginal history and the breadth of our cultural heritage
- We balance the need to conserve our historical places and spaces with the need and desire to progress as a modern regional city.

Growth Context

The following section outlines a brief history of growth areas within Ballarat.

Ballarat Strategy 1998

The *Ballarat Strategy* identified Ballarat West as the next logical extension to the urban fringe of the city and the primary growth front of the city. The Strategy was incorporated into the Planning Scheme including the Overall Framework Plan for the city. This ultimately directed the development of the Alfredton and Ballarat West PSPs.

Ballarat West Growth Areas Plan 2009

The *Ballarat West Growth Area Plan* was developed to give effect to the incorporated Ballarat Strategy 1998. The plan provides limited detail on urban structure but includes a staging plan for Ballarat West and Alfredton West that outlines recommended sequencing for future PSPs. It advises of alternative sequence criteria. The plan emphasises that more detailed planning would occur through the PSP process.

Alfredton West Precinct Structure Plan 2011

The *Alfredton West Precinct Structure Plan* (PSP) (Integra, June 2011) provides direction for future urban development within the Alfredton West area (Lucas). The Alfredton West PSP applies to approximately 317 hectares of land at Ballarat West.

Ballarat West Precinct Structure Plan 2012

The *Ballarat West Precinct Structure Plan* (PSP) (SMC, October 2016) provides direction for future urban development within the Ballarat West Growth Area. The Ballarat West PSP applies to approximately 1290 hectares of land. The PSP and accompanying DCP are currently being reviewed, including the future infrastructure needs.

Today, Tomorrow, Together – The Ballarat Strategy 2040

Adopted by the City of Ballarat in 2015 with a time horizon up to 2040, the *Ballarat Strategy* sets the long-term direction for growth. The *Ballarat Strategy* identifies the target for future dwelling supply to be split

50:50 between infill and greenfield locations. Relevant actions in the *Ballarat Strategy* seek the prevention of ad hoc greenfield residential development. Initiative 3.6 identifies future growth areas (North, West and East) as greenfield opportunities and investigation areas. The *Ballarat Strategy* is still a relevant document which will be updated to align with the more recent Housing Strategy and Framework Plan.

Ballarat Long Term Growth Options Investigation 2018

Prepared by Hansen, Arup and Tim Nott Economics, the study determined the suitability of the Greenfield Investigation Areas (GIA) identified in the Ballarat Strategy to accommodate Ballarat's long-term growth. The study included a high level desktop assessment of known planning considerations and investigated the Northern, Western, North-Western and Eastern GIAs. The Northern GIA was recommended as the preferred location for long term growth of Ballarat. The Western and North Western GIAs were considered to have the potential to form part of a longer-term growth corridor.

Council Resolution 16 September 2020

Council was provided with a status report of land supply within the Ballarat West Growth Area for the 2019/2020 financial year. The report demonstrated high levels of growth with high demand rates and supported the need to advance planning work for the identified growth areas. Predictions at the time estimated that the required 15 years of land supply would be diminished by 2025 when the only land available for Ballarat West would be constrained and fragmented. Council resolved to proceed with a policy related planning scheme amendment which identifies the Northern and Western Greenfield Investigation Areas as Ballarat's future greenfield growth areas, including in that same amendment the rezoning of the land to the Urban Growth Zone.

City of Ballarat > Growth Areas Framework Plan

Council Resolution 23 February 2022

Council was provided with a report that recommended a program of rezoning land and further strategic work for three new growth areas. The report also outlined that the supply of greenfield land was predicted to exhaust by 2025–2026. Council resolved to seek Ministerial authorisation to rezone the growth areas, to commence preparation of a Precinct Structure Plan for the Northern Growth Area and to prepare a Growth Areas Framework Plan to establish the most appropriate sequencing of Precinct Structure Plan preparation for the Western and North Western growth areas. The growth areas were based on the Greenfield Investigation Areas investigated as part of the Ballarat Long Term Growth Options Investigation and were expanded on to include additional land surrounding key features (including the Northern Expanded Area and triangular area adjacent to Skipton Rail Trail). These are the growth areas considered as part of the Framework Plan.

Northern Growth Area 2022

In August 2022, the then Minister for Planning, Lizzie Blandthorn, MP appointed the VPA as Planning Authority to prepare a PSP and DCP for the Northern Growth Area, and to consider whether the expanded area should be included in the PSP. The core section was also rezoned to Urban Growth Zone (UGZ). Should the expanded area not be included in the PSP, it is expected that this area would be developed in some capacity in the future. This is discussed further in the sequencing section. At the time of writing, the PSP and DCP have not been completed.

Infrastructure Growth Area Framework (IGAF)

In August 2022, the then Minister for Planning, Lizzie Blandthorn, MP requested the VPA to undertake a high level strategic review of urban renewal areas and greenfield areas to inform staging and sequencing. This review in time became the Infrastructure Growth Alignment Framework (IGAF). At the time of writing, the IGAF has not been released. .

Cambrian Hill

The proposed Cambrian Hill development is a 3,000 lot residential proposal within Golden Plains Shire, adjacent to the Ballarat West PSP. Although the Cambrian Hill development is outside of the Ballarat municipality, if the development proceeds, the future residents of the area may be reliant on the services and amenities of Ballarat for their day-to-day needs. Development of Cambrian Hill may also impact transport and community infrastructure within the existing and future growth areas. Council must periodically review the progress of the development.

Victoria's Housing Statement

The Victorian Government prepared the Housing Statement which plans to build 800,000 homes in Victoria between 2024–2034. Part of the Housing Statement includes updates to Plan Melbourne which are currently being prepared. The new plan will focus on 70 per cent of new homes to be built in established areas, while 30 per cent of new homes delivered in growth areas. Local government targets for where those homes will be built have also been prepared.

Existing Greenfield Land Supply

City of Ballarat officers have undertaken a review of existing greenfield land supply and determined that there is sufficient zoned land supply to accommodate 15 years of growth (consisting of greenfield and infill supply) as required by Victorian Government policy.

This assessment includes the assumption that the entire Ballarat West PSP, Alfredton West PSP and Northern PSP (Core Area) will be fully developed.

The City of Ballarat will continue to engage with Central Highlands Water to resolve potential servicing constraints, to ensure that the Bonshaw area of the Ballarat West PSP can be developed.

To ensure that the City of Ballarat can always provide sufficient land supply, officers will look to engage a consultant to undertake an independent land supply analysis in collaboration with the development industry.

Concurrent City of Ballarat Work

The following section outlines concurrent work being undertaken by the City of Ballarat that relates to the Growth Areas Framework Plan.

Housing Strategy

The *Ballarat Housing Strategy* will provide the city with a framework for managing population growth in line with the City of Ballarat's responsibility as planning authority to plan to accommodate housing growth for at least a 15-year period across the municipality. City of Ballarat has an aspirational target for half of these homes to be located within Greenfield Growth Areas and the other half in the existing city and townships. The *Ballarat Housing Strategy* focuses on opportunities available within infill areas.

Industrial Land Strategy

The *Industrial Land Strategy* summarises the current economic settings in the municipality and identifies opportunities for future employment land. The *HillPDA City of Ballarat Employment Lands Strategy Draft Report July 2021* outlines that Council should facilitate strategically justified rezoning of greenfield areas into industrial (employment) zoned land. Future employment land supply exploration areas are identified to the west of the North Western precinct and to the south-west of the Western precinct. At the time of this report, an updated assessment is being prepared.

Central Business District Urban Design Framework and Structure Plan

The *CBD Structure Plan* will include an Urban Design Framework (UDF) with a focus on future character and built form within the Ballarat CBD that balances the need to accommodate sustainable (residential and commercial) growth, while respecting the highly valued heritage values and character within the core of the CBD. The Structure Plan will identify areas suitable for higher density residential, commercial and mixed-use development.

Ballarat Biodiversity Strategy

The *Ballarat Biodiversity Strategy* will recommend a range of actions to identify, protect, and restore the natural environment for biodiversity gains. The Strategy will feature a review of the environmentally focused planning controls. Outcomes from this work may influence the design of future housing development.

Ballarat Link Road Business Case

The Ballarat Link Road is a 12 kilometre arterial road to connect industrial and residential growth areas in Ballarat's west with the surrounding region. Stage 1 of the project was completed in 2018 and connects the existing section of Ballarat Link Road between Learmonth Road and Remembrance Drive. Stages 2 and 3 of project include the duplication of Dyson Drive, Alfredton. The City of Ballarat is seeking funding from the State and Federal governments to fund the construction of the next stages of the project.

Ballarat Airport Strategy and Master Plan

The City of Ballarat is considering the next stages of development for the Ballarat Airport which will establish its role and activities appropriate to Ballarat's status as a large regional city.

A central focus of the Master Plan will be the usage of aviation within the operations and supply chains of Ballarat's businesses and industry, together with demand for aviation services from the Ballarat community.

The Master Plan will include a revised Australian Noise Exposure Forecast (ANEF) and number-above or 'N' contours which illustrate the average number of events per day that exceed a certain sound level. The City of Ballarat in consultation with Airservices Australia will advise whether the updated noise surveys will necessitate an extension of the Airport Environs Overlay (AEO).

The Victorian Goldfields World Heritage Bid

The Victorian Goldfield World Heritage Bid is a partnership between 15 local governments, regional organisations and the private sector on behalf of the Victorian Goldfields community. The bid seeks to achieve a World Heritage listing to celebrate the history and heritage of the Victorian Goldfields region.

Ballarat West PSP and DCP Review

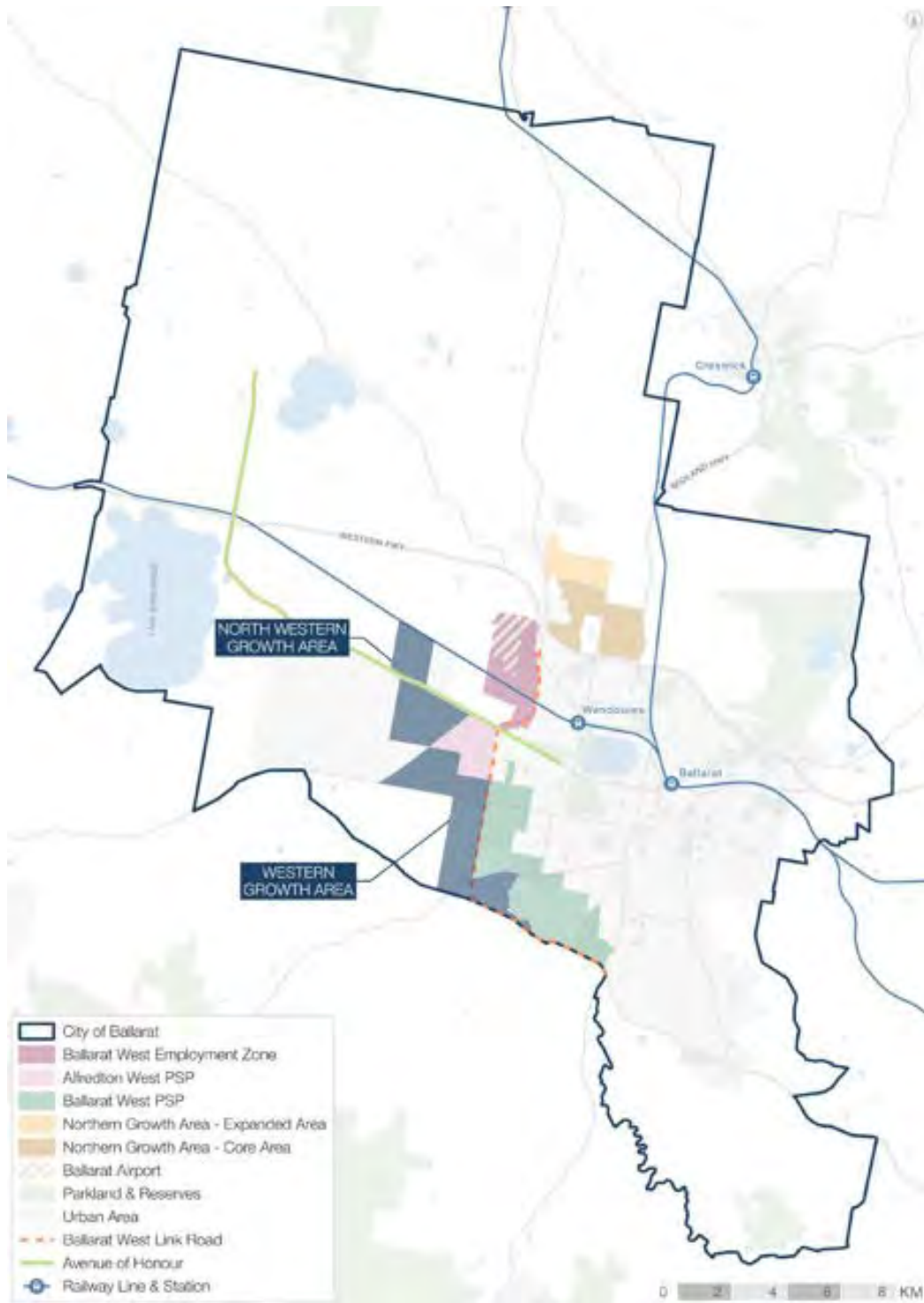
The Ballarat West PSP and DCP are currently being reviewed and updated as part of the City of Ballarat's obligation to review the documents every 5 years. It is anticipated that the updated documents will be gazetted in the Planning Scheme in 2026.

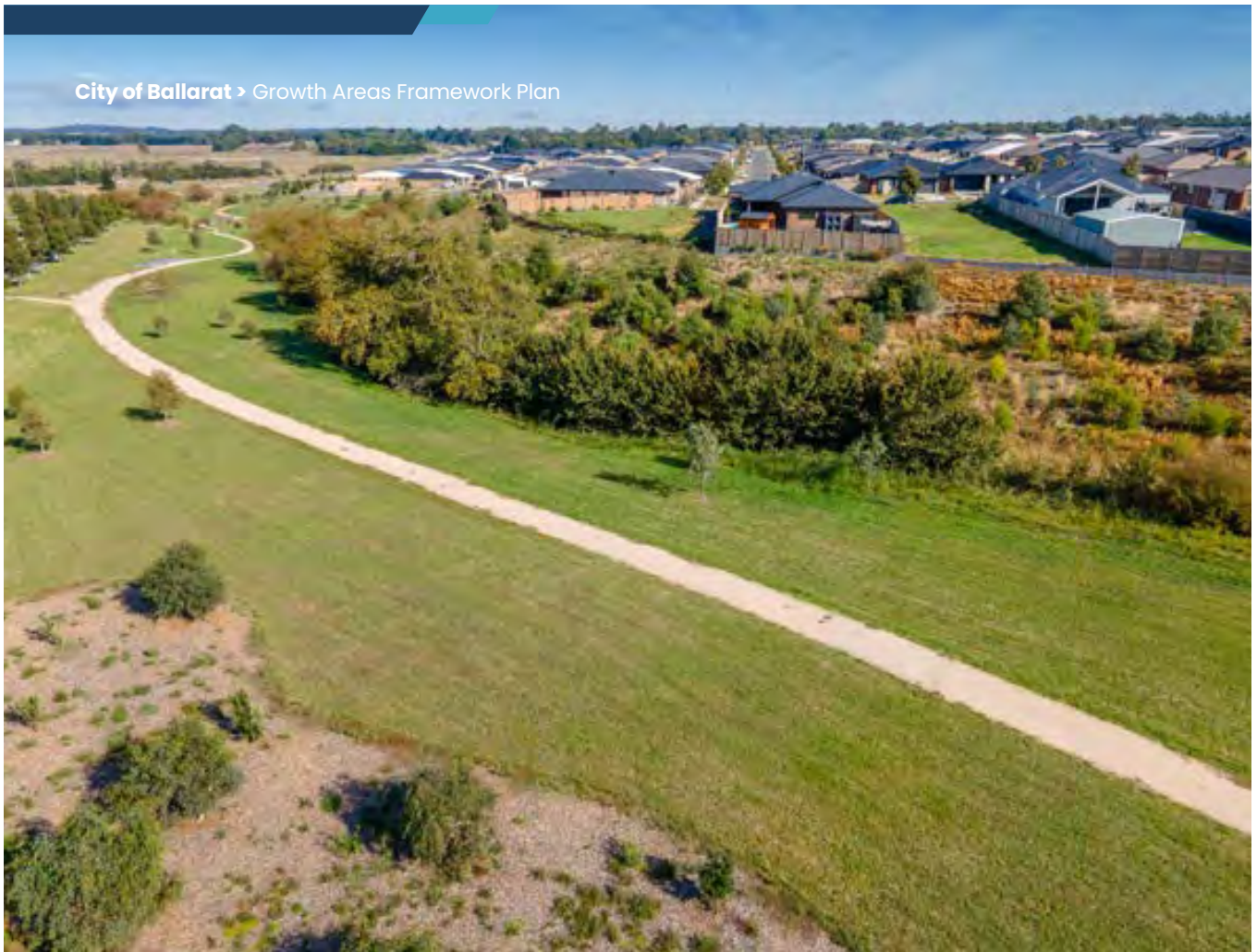
Existing Context

Map 2 Regional Context Plan



Map 3 Local Context Plan





City of Ballarat > Growth Areas Framework Plan

Regional Context

The Western and North Western Growth Areas are located to the west of Ballarat, beyond the existing urban area, extending from the north west to the south west.

Local Context

Western Growth Area

Irregular in shape, the Western Growth encompasses an area of 1,035 hectares and includes land within Cardigan, Lucas, Smythes Creek and Bunkers Hill. The area is currently zoned Farming Zone (FZ).

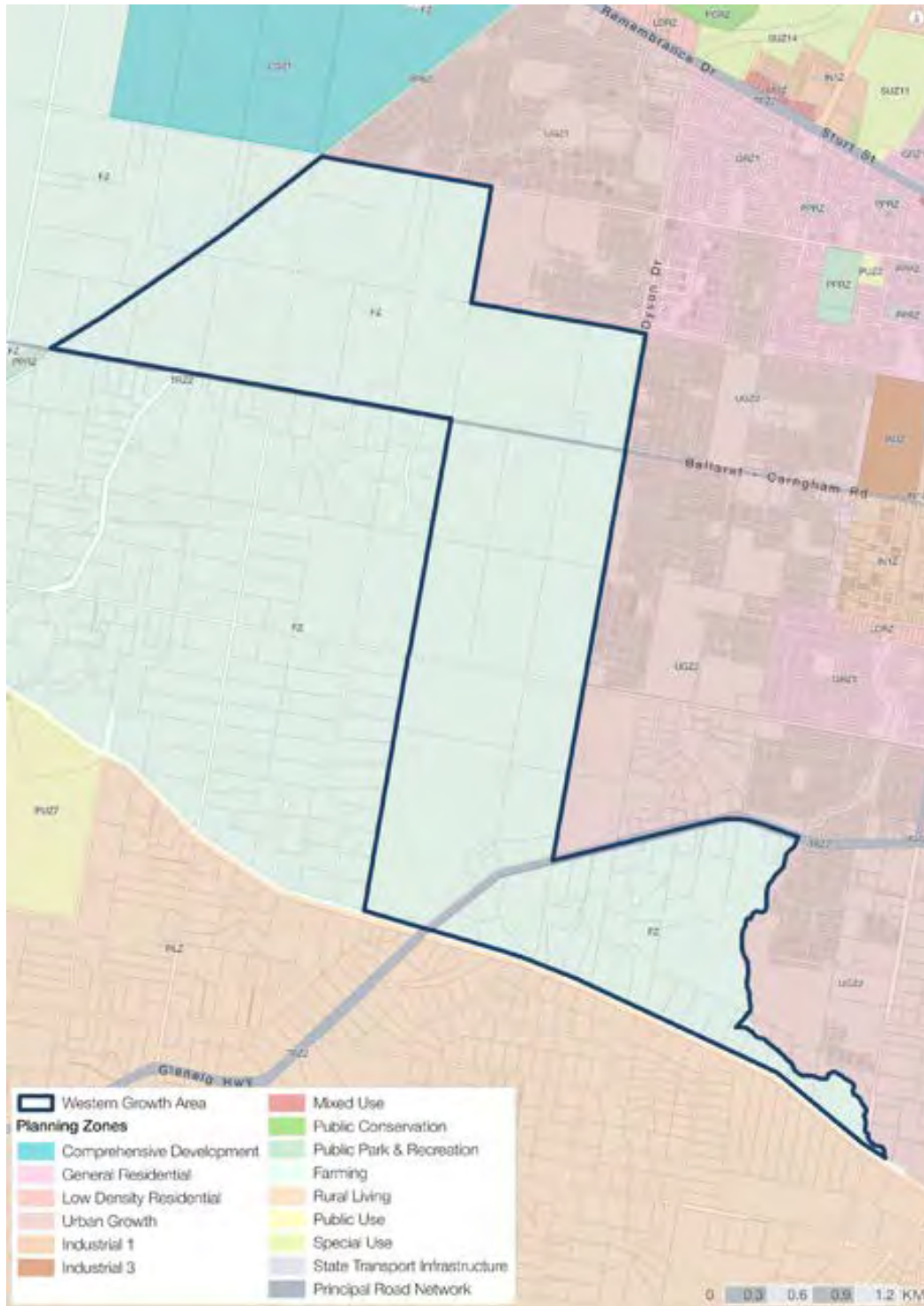
The area consists of relatively open, flat broad hectare rural land. Some large rural residential development is south. Ballarat-Carngham Road, Glenelg Highway and Greenhalghs Road intercept the precinct. The entire growth area interfaces with both the Ballarat West PSP area and Lucas. The outermost point of the Western Growth Area is 10.3km from the Ballarat Central Activity District.

Other land uses include a commercial tree plantation to the south of Ballarat-Carngham Road.

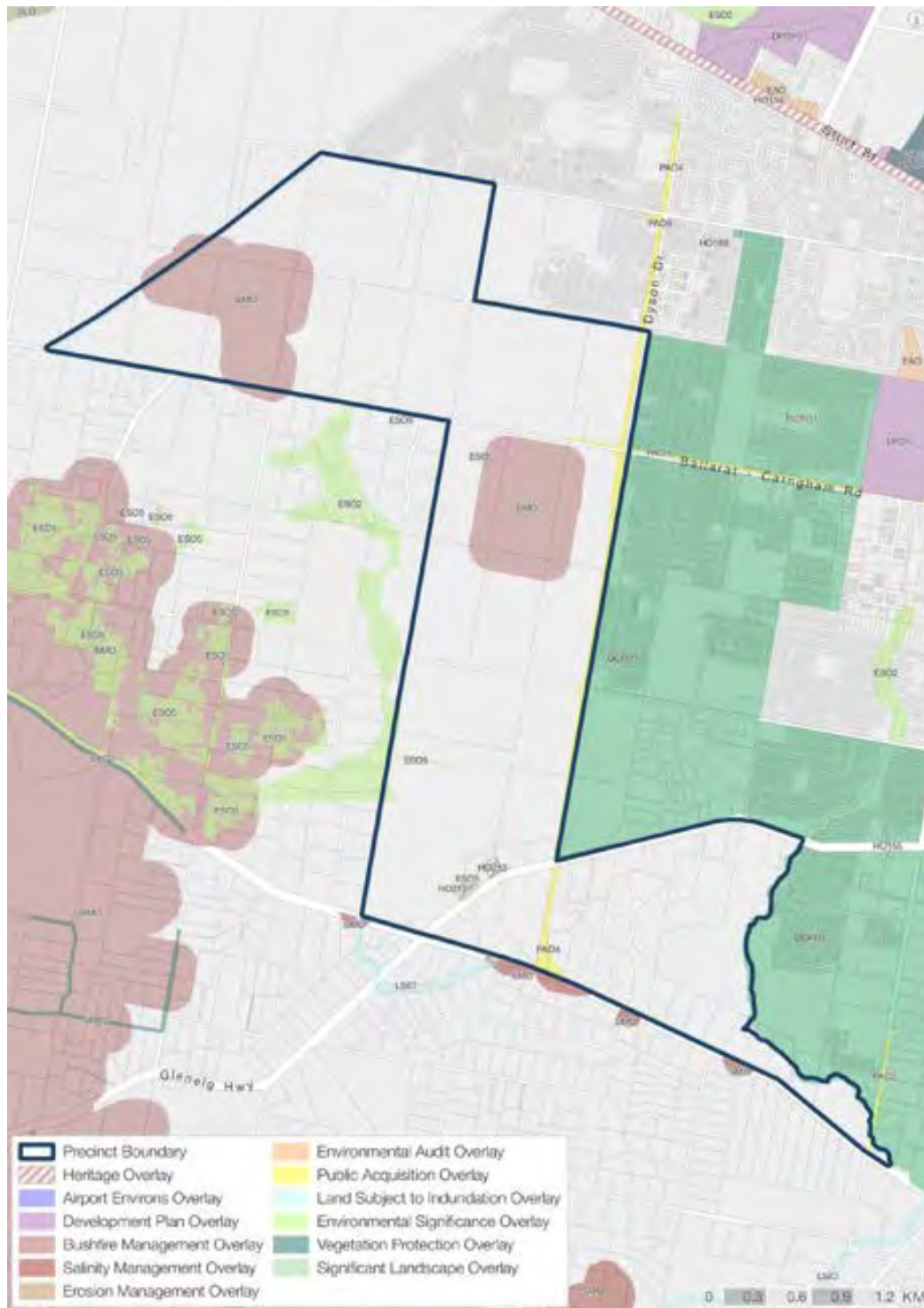
Surrounding land uses include:

- To the north is the North Western Growth Area and the existing Lucas suburb
- To the east of the study area, the Ballarat Link Road has been partially constructed. The area also adjoins the existing Ballarat West Growth Area
- To the south is Bells Road, the municipal boundary between the City of Ballarat and Golden Plains Shire. This area consists of large lot rural residential development
- To the west, open hectare rural land exists which is used for livestock grazing or is underutilised. There are also smaller clusters of rural living lots at Bunkers Hill, the Sago Hill Mine and Haddon Common Bushland Reserve.

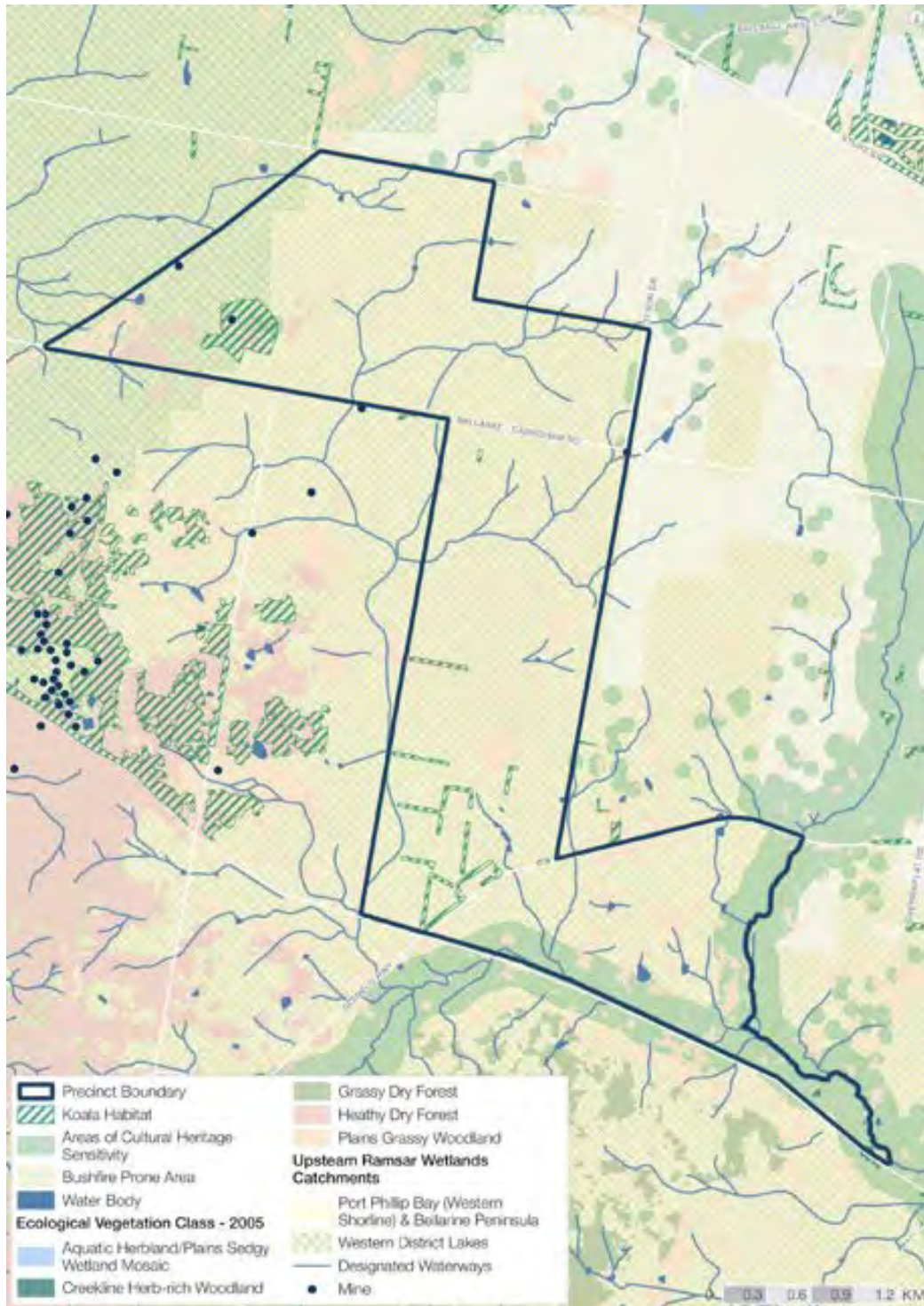
Map 4a Zoning (Western Growth Area)



Map 4b Overlays (Western Growth Area)



Map 4c Environmental Features (Western Growth Area)



City of Ballarat > Growth Areas Framework Plan

North Western Growth Area

Irregular in shape, the North Western Growth Area encompasses an area of 698 hectares and is solely located within the suburb of Cardigan.

The area is zoned Comprehensive Development Zone (CDZ1) but there is no active planning control to facilitate development. A small portion of the Farming Zone (FZ) and Special Use Zone (SUZ5) exist within the eastern section.

The area consists of relatively open, flat broad hectare rural land. The area is separated in two by Remembrance Drive which bisects the site. The road is a VicRoads controlled roadway within the Transport Zone (TRZ2) and is also affected by the Heritage Overlay (HO154) which relates to the designation of the historic Ballarat Avenue of Honour. The southern part of the precinct interfaces with the Lucas estate, whilst the northern section interfaces rural living areas. The outermost point of the North Western Growth Area is 11.4km from the Ballarat Central Activity District.

Other land uses include a commercial tree plantation within the northern section of the area.

Surrounding land uses include:

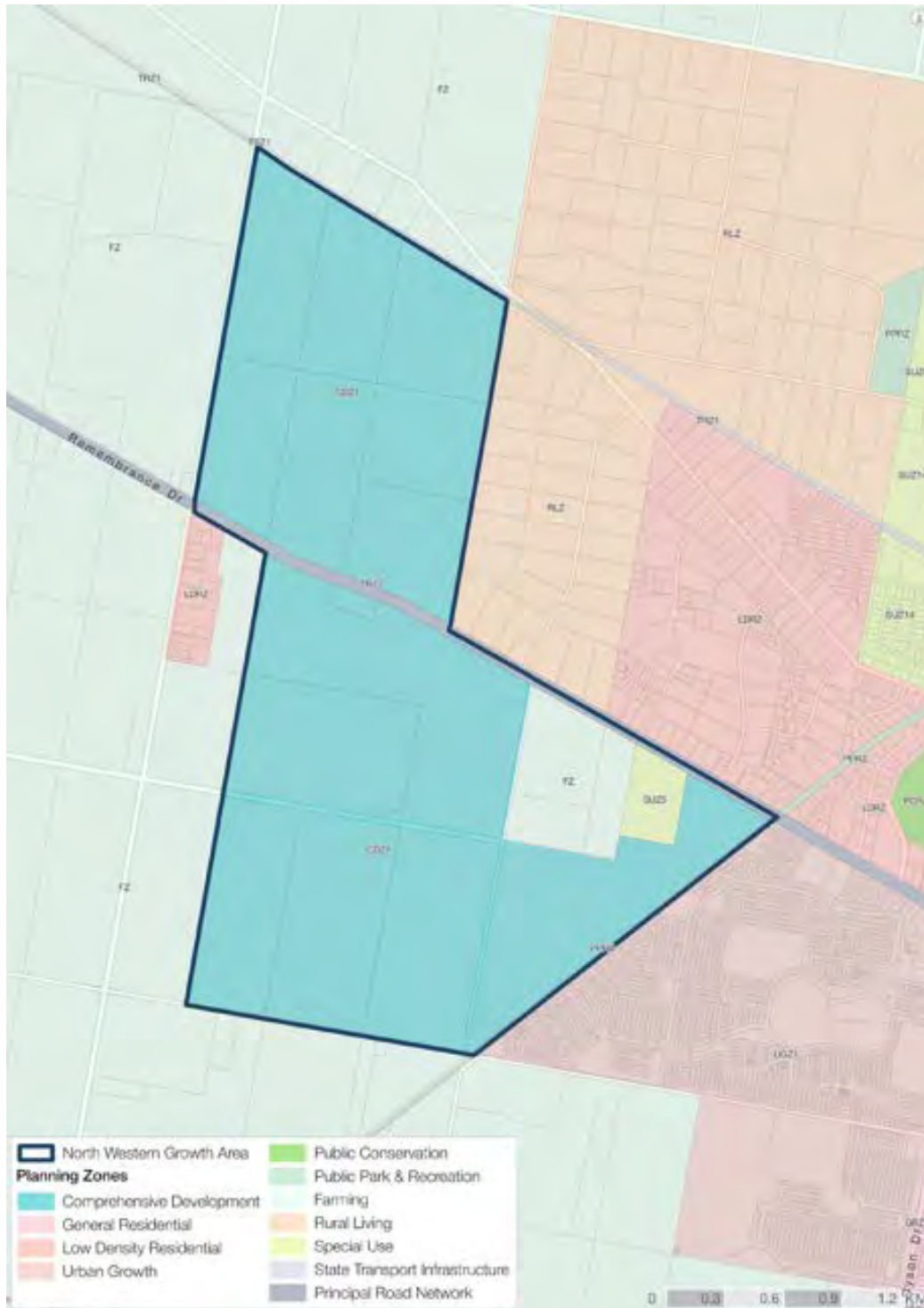
- The Maryborough–Ballarat Railway Line abuts the northern edge of the site
- Land to the west and south-west consists of broad hectare rural land. There is a small rural residential subdivision on the southeast corner of Remembrance Drive and Whites Road
- To the north east and east are large lot rural dwellings. The Ballarat Airport is further north east. Also to the east is the existing Lucas Estate
- To the south is the Western Growth Area.

Commentary on Boundaries

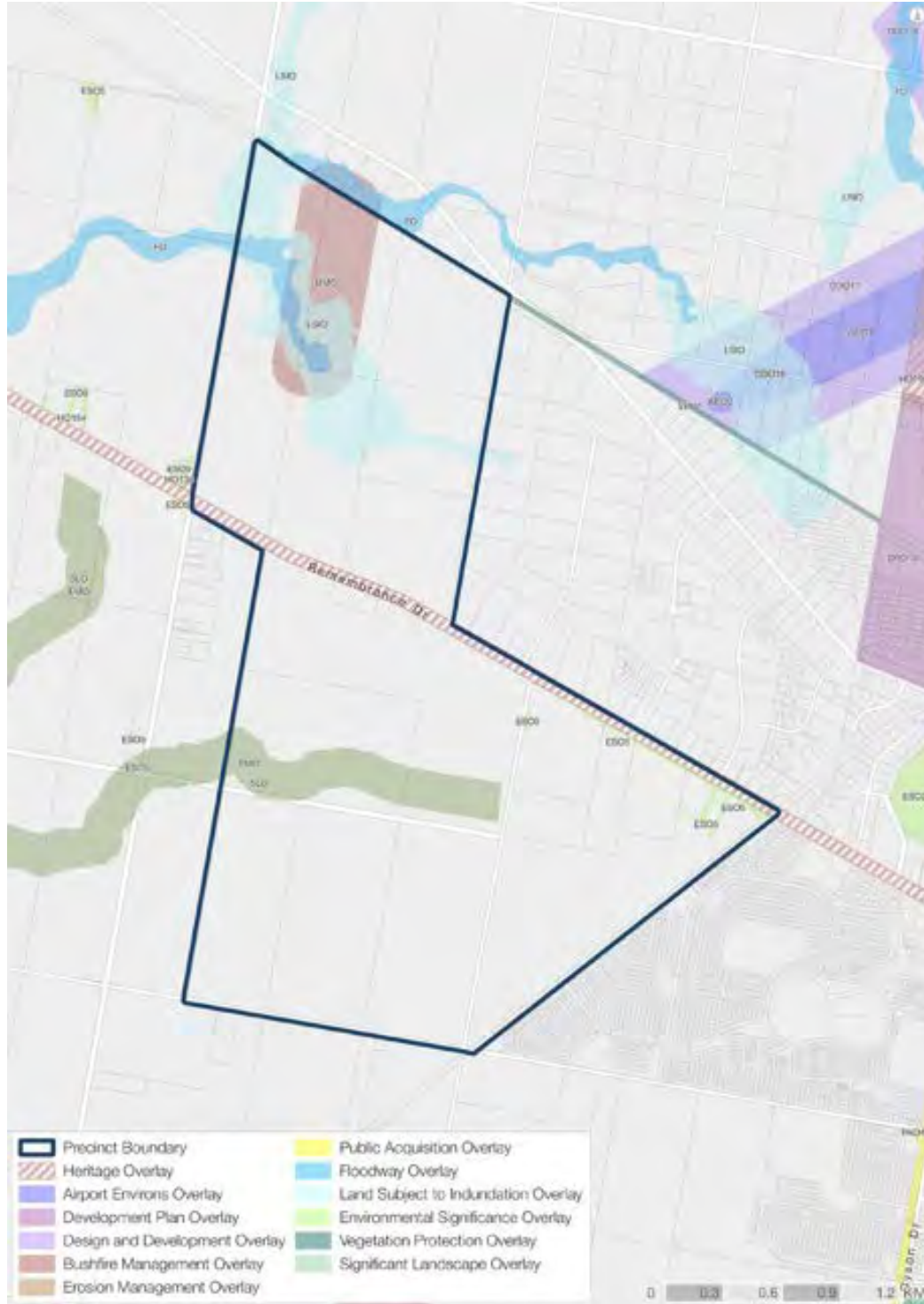
It is noted that at Council Meeting February 2022, incorrect boundaries were shown for the two Growth Areas. The triangular area bound by Remembrance Drive and the Skipton Rail Trail was shown incorrectly as being included within the Western Growth Area. The Growth Areas Framework Plan intends for this section of land to be included in the North Western Growth Area.



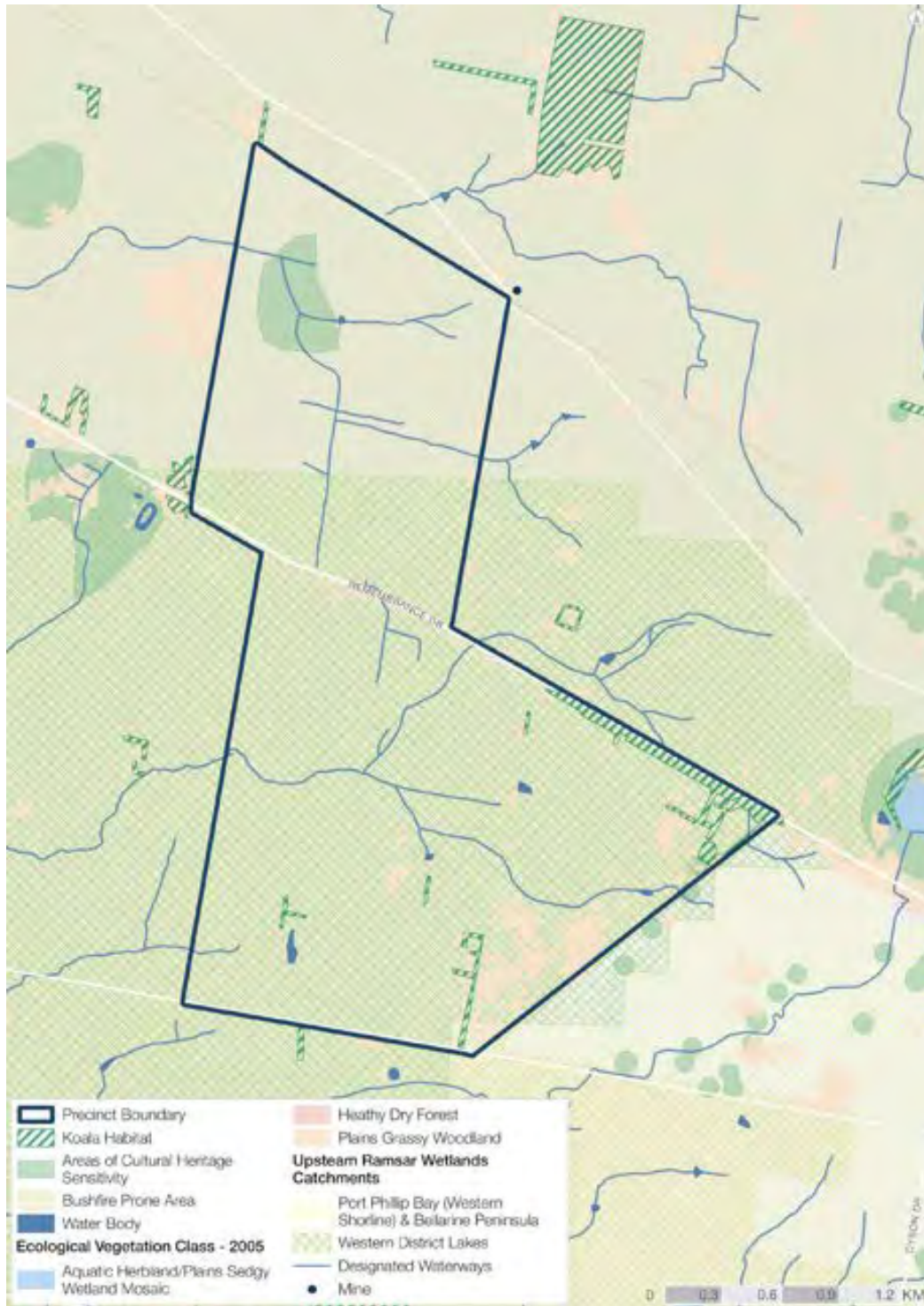
Map 5a Zoning (North Western Growth Area)



Map 5b Overlays (North Western Growth Area)



Map 5c Environmental Features (North Western Growth Area)



Precinct Features

The following section summarises the known existing conditions and capability to accommodate future development of the Growth Areas. The summary is based on the findings from the technical investigations undertaken as part of the Growth Areas Framework Plan and Long-Term Growth Options Investigation Paper. It is important to understand existing conditions to determine potential opportunities and constraints. The items discussed represent the known existing conditions and general planning considerations. Detailed analysis of these conditions will occur as part of the PSP development.

Western Growth Area

Natural Disaster Risk

- The Growth Area is affected by the Bushfire Prone Area
- The Bushfire Management Overlay has been applied to two portions of the site.

Environment

- The Environmental Significance Overlay (ESO5 Koala and Koala Habitat Protection) has been applied to some narrow strips in the north and south west of the site and a large area to the west of the precinct
- The Environmental Significance Overlay (ESO2 Streamside and Watercourse Protection) has been applied to the west of the precinct and runs along the precinct's western boundary
- Two likely primary koala habitats are identified in the precinct (either side of Ballarat-Carngham Road) with some scattered areas to the south of the precinct
- The Plains Grassy Woodland EVC is scattered throughout the growth area
- According to the Environment Protection and Biodiversity Conservation Act (EPBC) register, there are several matters of national significance known to occur within a 500 metre buffer of the growth area including wetlands of international importance, listed threatened ecological communities and listed migratory and marine species
- The Strategic Biodiversity Score for the importance of native vegetation in the precinct indicates that the area has a relatively low habitat value.

Water

- Several dams exist along waterways to the south
- Kensington Creek runs along the eastern boundary
- Winter Creek runs along the southern boundary.
- Areas in the north are identified as being potentially impacted by the 1 in 100-year flood.

Landscape and Visual Sensitivity

- The area is sparsely vegetated, relatively flat, and low lying
- Low to moderate visual sensitivity is present throughout the area, with an area of high visual sensitivity in the south west due to the prevalence in views from elevated hillsides.

Heritage

- The Heritage Overlay (HO) does not apply to any land within the boundary or within 500 metres of the site boundary
- There are areas of Aboriginal cultural sensitivity along the Winter Creek and Kensington Creek in the southern part of the precinct
- Mapping Ballarat's Historic Urban Landscape (Context, 2013) identified that the area has multiple character areas including the Burrumbeet Plains Rural Character area, Haddon Hills Rural Character Area and the Bonshaw to Scotchman's Lead Mining Landscape Rural Character Area
- The Western Growth Area does not have any sites identified on the Heritage Inventory, under the Victorian Heritage Act 1995.

Existing Buffers

- No existing buffers extend into the precinct
- The Obstacle Limitation Surface (OLS) applies to a small portion of the site in the northern and eastern sections although is generally not applicable to structures below 45 metres in height.

Noise

- The Western Growth Area is located under the Ballarat Aerodrome primary runway (18/36) circuit pattern, with the maximum event noise levels due to aircraft flyover predicted to be up to 70dB (A).
- The noise modelling study undertaken as part of the Ballarat Airport Strategy and Master Plan 2024 has provided more accurate assessments of the effects of aircraft noise at ground level. The number above or 'N' contours indicate that part of the Western Growth Area will be affected by as many as 50–99 events per day above 60dB(A), with a confined area experiencing a lesser number of events above 70dB(A).
- Road traffic noise from the surrounding roads is also prominent.

Contamination

- No potentially contaminated land has been identified by an Environmental Audit Overlay (EAO)
- Historical mining activities and expired licenses and leases have not been identified on the site.

Geotechnical

- Most of the area consists of newer volcanic material which typically consists of basaltic clay overlying basaltic rock
- The southern portion of the area is a combination of hills of the underlying Castlemaine Supergroup bedrock with overlying recent alluvium and colluvium filling valleys and gullies
- Potential for land instability is considered low. Areas of localised instability may occur, particularly adjacent to the colluvial deposits in existing creeks and waterways.

Community Infrastructure and Open Space

- There are currently no community infrastructure, recreation or open space facilities within the Western Growth Area
- The closest community centres and early years facilities are located within the Ballarat West PSP area and Lucas
- The closest passive and open space facilities are the Skipton Rail Trail, Remembrance Drive trail and open space areas within the Ballarat West PSP area and Lucas
- The closest education facilities are within the Ballarat West PSP, Siena Catholic Primary School and Lucas Primary School
- The closest recreation reserves are Alfredton Recreation Reserve and Delacombe Stadium
- The closest art and cultural functions are located within the Ballarat CBD and include the Eureka Centre, Mining Exchange, Civic Hall, Her Majesty's Theatre and the Art Gallery of Ballarat.

Gateway Entrances

- The Western Growth Area forms a significant component of the south–western area of Ballarat. It interfaces with major routes leading into central Ballarat:
 - Ballarat–Carngham Road
 - Bells Road
 - Glenelg Highway
 - Cuthberts Road
- The routes provide a visual transition between rural and urban areas into Ballarat.

Drainage

- The overall topography within the Western Growth Area falls in a southern direction with a higher elevation area in the north and low point near Bells Road where it continues to fall east
- The precinct is under management by the Corangamite Catchment Management Authority.
- There are several designated waterways that have been previously defined
- The waterways in the area are ephemeral and meandering waterways.
- The major catchments within the Western Growth Area contribute to three different major watercourses – Burrumbeet Creek, Woody Yalook River and Yarrowee River.

Activity Centres

- There are currently no activity centres within the Western Growth Area
- There are activity centres within the Ballarat West PSP area at Delacombe Town Centre and Lucas at Coltman Plaza – Lucas Shopping Centre.

Transport Network

- There are surrounding shared paths and on–road bike paths within the existing Ballarat West PSP and an off–road path along Remembrance Drive
- The Ballarat Skipton Rail Trail provides an unsealed dedicated cycleway which extends along the western interface of the site
- A Public Acquisition Overlay (PAO) affects a section of land to the west of the growth area and reserves land for the construction and widening of the road for the Ballarat Link Road.

Public Transport

- The closest point of the site is located approximately 2.5km from Wendouree Station and approximately 4.8km from Ballarat Station
- There are no existing bus services with any catchment within the site boundary
- The closest services are proposed bus routes located within the Ballarat West PSP.

City of Ballarat > Growth Areas Framework Plan



North Western Growth Area

Natural Disaster Risk

- The Bushfire Management Overlay applies to the northern part of the growth area and is associated with an existing tree plantation, where the associated fire risk would be removed once the plantation is harvested
- The Bushfire Prone Area applies to the whole site
- The Land Subject to Inundation Overlay (LSIO) and Flooding Overlay (FO) applies to a section of the site within the north and aligns with a remnant creek which has been significantly degraded due to rural activity in the area
- The Erosion Management Overlay affects a small portion of the site in the vicinity of a remnant creek, north of Smart Hill Road between Whites and Finches Road. The purpose of this overlay is to protect areas prone to erosion by minimising land disturbance
- A creek line with potential for erosion is north of Remembrance Drive.

Environment

- The Environmental Significance Overlay (ESO5 – Koala and Koala Habitat Protection) affects a section of land to the west of the Growth Area either side of Remembrance Drive, which is intended to prevent development within proximity of koala populations. There are also some small ESO5 areas in the southern portion of the precinct
- Regarding flora, a mosaic of Plains Grassy Woodland, Plains Grassland, Plains Grassy Wetlands and Aquatic Herbland Ecological Vegetation Classes (EVCs), are noted to be concentrated mainly in the southeastern part of the site, between Finch's Road and the Ballarat-Skipton Rail Trail. These vegetation types found in the Victorian Volcanic Plain Bioregion are endangered and have a threatened species rating of high or very high.

Noise

- The Western Growth Area is located under the Ballarat Aerodrome primary runway (18/36) circuit pattern, with the maximum event noise levels due to aircraft flyover predicted to be up to 70dB (A).
- The noise modelling study undertaken as part of the Ballarat Airport Strategy and Master Plan 2024 has provided more accurate assessments of the effects of aircraft noise at ground level. The number above or 'N' contours indicate that part of the North Western Growth Area will be affected by as many as 50-99 events per day above 60dB(A), with a confined area experiencing a lesser number of events above 70dB(A).
- Road traffic noise from the surrounding roads is also prominent.

Contamination

- No potentially contaminated land has been identified by an Environmental Audit Overlay (EAO) within the site
- With regard to expired mining licenses and leases, a mineshaft is located at the north east corner of the site (site ID 377047), however its current condition is unknown.

Geotechnical

- Based on topographical contours and geology, the potential for land instability over the site is generally considered to be very low. Areas of localised instability may occur, particularly adjacent to the colluvial deposits in existing creeks and waterways
- The Erosion Management Overlay (EMO) affects an area that extends beyond the growth area. This overlay aims to protect areas prone to erosion, landslip and other degradation by minimising land disturbance and inappropriate development
- The Significant Landscape Overlay (SLO) affects an area that extends beyond the growth area. This overlay aims to conserve and enhance the Yarrowee River Corridor Environs.

Community Infrastructure and Open Space

- There are currently no community infrastructure, recreation or open space facilities within the North Western Growth Area
- The closest community centres are located within the Ballarat West PSP area, Lucas and Cardigan Village
- The closest early years facilities are located within the Ballarat West PSP, Lucas and the Cardigan Village Uniting Kindergarten
- The closest passive and open space facilities are the Skipton Trail, Remembrance Drive Trail and open space areas within the Ballarat West PSP area and the suburb of Lucas
- The closest education facilities are within the Ballarat West PSP area and Siena Catholic Primary School and Lucas Primary School
- The closest recreation reserves are Alfredton Recreation Reserve and Delacombe Stadium
- The closest art and cultural functions are located within the Ballarat CBD and include the Eureka Centre, Mining Exchange, Civic Hall, Her Majesty's Theatre and the Art Gallery of Ballarat.

City of Ballarat > Growth Areas Framework Plan

Gateway Entrances

- The North Western Growth Area forms a significant component of the north-western area of Ballarat. It interfaces with two major routes leading into central Ballarat:
 - Remembrance Drive – significant tree lined street with a rural setting, transitioning from rural to urban Ballarat
 - Cuthberts Road – rural setting with a transition from rural to urban Ballarat.

Drainage

- The site generally falls in a north-western direction. The topography to the south of Remembrance Drive is separated and guided by ridge and trough lines which result in the land falling in south-western and north-western directions
- A portion of the northern section of the precinct is under management by Glenelg Hopkins CMA. The remainder of the precinct is under management by Corangamite Catchment Management Authority
- There are several designated waterways that have been previously defined
- Waterways in this area have been extensively modified by cropping activities and the presence of roads that dissect the flow paths
- The major catchments within the Western Growth Area contributes to three different major watercourses
 - Burrumbeet Creek, Woody Yaloak River and Yarrowee River.

Activity Centres

- There are currently no activity centres within the North Western Growth Area
- The activity centres are within the Ballarat West PSP area at Delacombe Town Centre and Lucas at Coltman Plaza – Lucas Shopping Centre.

Landscape & Visual Sensitivity

- The area is sparsely vegetated with a gently sloping terrain and expansive grassed grazing lands, typical of the wider Burrumbeet Plains
- Canopy vegetation is generally sparse, but where present it is typically established exotic or native windbreaks along property boundaries and roadsides
- The Ballarat Avenue of Honour runs through the centre of the study area along Remembrance Drive and forms a significant feature of mature canopy trees. The adjacent areas provide a rural character setting for the Avenue
- Visual sensitivity across the area ranges from low to high. High visual sensitivity exists within the eastern and western portion of the area due to gently sloping terrain
- Mount Beckworth and Waubra Wind Farm are clearly visible from the site in the direction of north-west.

Heritage

- Heritage Overlay 154 (HO154) applies to the full extent of the Remembrance Drive Road corridor and relates to the Ballarat Avenue of Honour
- Remembrance Drive is listed on the Victorian Heritage Register and has a Conservation Management Plan
- There are no Victorian Heritage Inventory (VHI) sites in the precinct
- Mapping Ballarat's Historic Urban Landscape (Context, 2013) identified that the area is within the Burrumbeet Plains Rural Character area
- There are also areas of Aboriginal cultural sensitivity within the North Western Growth Area including along the Ballarat Skipton Rail Trail. Four circular parcels of land, approximately 100 metres in diameter adjoin the trail. There is also a site to the north of the precinct around a waterway marked as an area of cultural sensitivity.

Public Transport

- The North Western Growth is located approximately 4.5km from Wendouree Station and approximately 8km from Ballarat Station
- There are no existing bus services with any catchment within the site boundary
- The closest services are proposed bus routes located within the Ballarat West PSP.

Walking and Cycling Networks

- There are no existing dedicated bicycle facilities between the site and the Ballarat Central Activity District
- The Ballarat Skipton Rail Trail provides an unsealed dedicated cycleway which borders the south east edge of the site
- There is also an off-road path along Remembrance Drive
- There are surrounding shared paths and on-road bike paths within the existing Ballarat West PSP that can be connected into as part of the future growth areas including along Dyson Drive.

Existing Buffers

- No existing buffers extend into the precinct
- The Obstacle Limitation Surface (OLS) applies to most of the site
- The extended centreline of Runway 05/23 of the Ballarat Airport extends directly over the Northwest Growth Area.

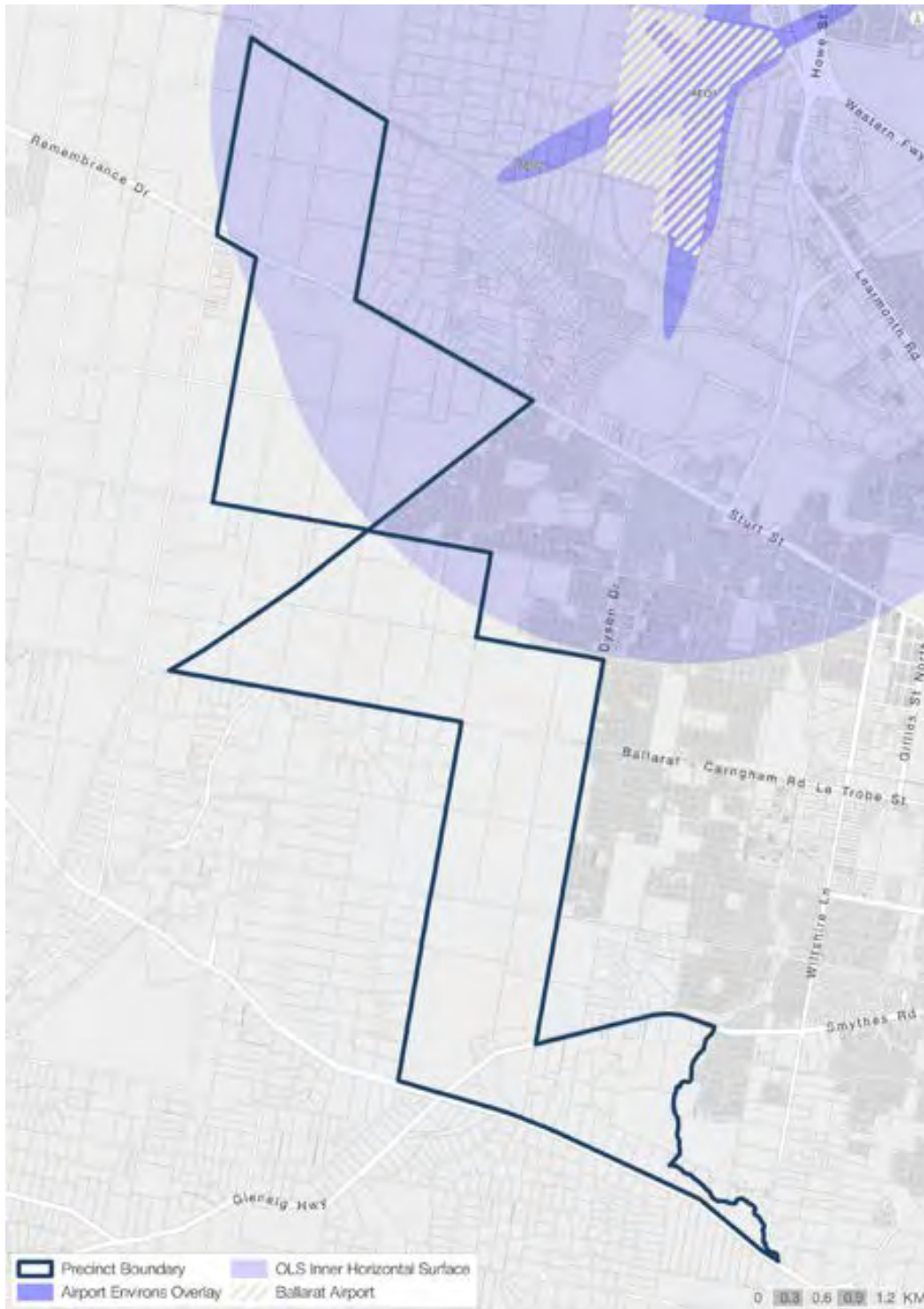
Map 6a Active Public Transport



Map 6b Community Context



Map 6c Aviation



Urban Development Objectives

The Framework Plan provides high-level guidance for the development of Ballarat's future growth areas and represents the city's aspirations for the future growth areas. Urban Development Objectives have been developed and should be followed throughout the planning of these growth areas:

Enabling a logical and sequenced roll out of future greenfields land and supporting orderly planning:

- To achieve an appropriate split of new dwellings across greenfield and infill areas in line with planning policy where new housing is encouraged in areas where there is existing infrastructure and facilities
- To plan for well-designed, well-serviced and sustainable communities
- To stage development to ensure the efficient and orderly provision of infrastructure and services
- To ensure that the urban design promotes attractive, functional and well-planned environments
- Seek to facilitate an average of 20 dwellings per hectare acknowledging that some areas will accommodate lower densities. The final densities will be determined in the PSPs.

Protecting and enhancing the landscape and visual amenity of the area:

- To protect and enhance important visual attributes and vistas, including landmarks, site features and gateways
- To protect and enhance natural assets and landscape features
- To reduce the visual impact of development within high visual sensitivity areas
- To recognise the urban/rural interface that the study area provides as the edge of Ballarat
- To manage interfaces with environmental assets, farming uses and rural living areas
- To provide a continuous development pattern in areas that are adjacent to the existing growth areas.

Providing useable and high-quality Open Space and Connectivity across the area:

- To provide an integrated open space network that incorporates environmental values, natural assets and existing landscape character
- To incorporate cycling and walking trails within the public open space network
- To connect new open space networks with existing networks.

Enhancing the local environment and integrating sustainable practices:

- To identify, enhance and protect significant flora and fauna habitats
- To ensure that flooding and stormwater management will maintain and enhance the predevelopment hydrology of the area and minimize downstream impacts
- To incorporate Kensington Creek and Winter Creek as future reserves and consider appropriate interfaces to protect and enhance biodiversity values
- To protect and rehabilitate waterway corridors and ensure their function and biodiversity values are not negatively impacted by development
- To incorporate integrated water management initiatives at the lot, street and precinct scale
- To achieve a net zero future for the precinct in line with the *City of Ballarat Net Zero Emissions Plan*
- To incorporate Environmentally Sustainable Design (ESD) principles across all future developments
- To incorporate the design of sustainable subdivision layouts and orientation which reduces energy consumption and encourages more resilient communities
- To encourage the adoption cleaner energy technologies and infrastructure across the growth area and implemented as suitable within each Precinct Structure Plan
- To achieve a 40 per cent tree canopy cover target by increasing density of planting in landscaped areas, public and active open spaces

Fostering a thriving community and social wellbeing:

- To locate community infrastructure within walkable catchments of residential areas
- To plan for community infrastructure that supports projected population demand
- To design community infrastructure that is flexible, adaptable and multi-purpose
- To locate kindergartens within all multipurpose community centres and/or Government Primary Schools
- To provide arts and cultural facilities within all multipurpose community centres.

Supporting an integrated transport network which encourages walking and cycling, reduced car dependency and promotes community connectivity:

- To develop a connected, safe and efficient transport network that provides road, walking, cycling and public transport services that connect the growth areas to the existing Ballarat urban area
- To encourage walking and cycling as the central design element of all neighbourhoods
- To limit car dependency, and provide active and public transport options and connections to surrounding areas
- To plan for well-connected growth areas that enable multimodal trips, with sustainable transport as the dominant mode
- To provide dedicated and protected bicycle paths along arterial roads, separated from pedestrian facilities
- To provide shared alternate cycling and shared path facilities along waterways and reserves
- To provide an active and safe connection with the Ballarat-Skipton Rail Trail
- To ensure that new development does not compromise the safe operation or result in unreasonable levels of congestion for existing street networks
- To ensure that any recommended road upgrades required beyond the Growth Areas can be physically accommodated.

Preserving the valued cultural heritage of the area:

- To preserve and manage important heritage assets in the region including places of significance for Aboriginal people and areas of post contact heritage significance
- To actively engage with the Wadawurrung Aboriginal Corporation as the Registered Aboriginal Party in relation to all Aboriginal cultural and heritage matters as required the Aboriginal Heritage Act 2006
- To provide visibility of aboriginal history and culture and promote suitable design features in the urban landscape
- To encourage the use of indigenous plants and traditional materials that have significance to the Aboriginal community in landscaping of public and open spaces
- To recognise the Avenue of Honour as a key valued post-contact heritage element, specifically as it sits within the rural setting of the precinct.

**Encouraging employment opportunities and establishment of accessible activity centres:**

- To locate activity centres within walkable catchments of residential areas
- To locate services and activity centres on potential public transport routes
- To provide infrastructure and facilities that enable multimodality and sustainable transport modes as the dominant mode
- To provide local employment opportunities
- To plan for retail needs that supports projected population demand
- To ensure that activity centres complement the existing activity centre network of Ballarat.

Supporting a continuous supply of housing and diversity of housing:

- To encourage medium density requirements which deliver a compact and well designed urban form
- To encourage new development which delivers a diverse mix of housing options throughout each neighbourhood
- To encourage higher density residential development in locations close to transport, infrastructure and services
- To encourage delivery of affordable and social housing as appropriate across all neighbourhoods.

Future Growth Areas

The following section outlines anticipated growth supported by a Future Urban Structure Plan and expected infrastructure requirements.

Western Growth Area

Estimated Growth

- Total growth area - 1035ha
- Total residential area - 862ha
- Anticipated dwellings - 12,900 - 17,200
- Anticipated population - 34,800 - 46,000
- Total retail floorspace - 33,853 sqm
- Potential employment (FTE) - 1,258

Infrastructure Requirements

Transport

Road upgrades are required along:

- Finchs Road
- Cuthberts Road
- Ballarat-Carngham Road
- Latrobe Street
- Wiltshire Lane
- Greenhalghs Road
- Bells Road
- Dyson Drive
- Learmouth Street

Intersection upgrades required along:

- Finchs Road and Cuthberts Road
- Finchs Road and Ballarat Carngham Road
- Ballarat Carngham Road and North-South Collector Road
- Ballarat Carngham Road and Wiltshire Lane
- Bells Road and North-South Collector Road

Local roads, bicycle lanes and bus stops are also required within the Growth Area.

Drainage

- A network of 20 wetland retarding basins with waterway corridors and associated drains.

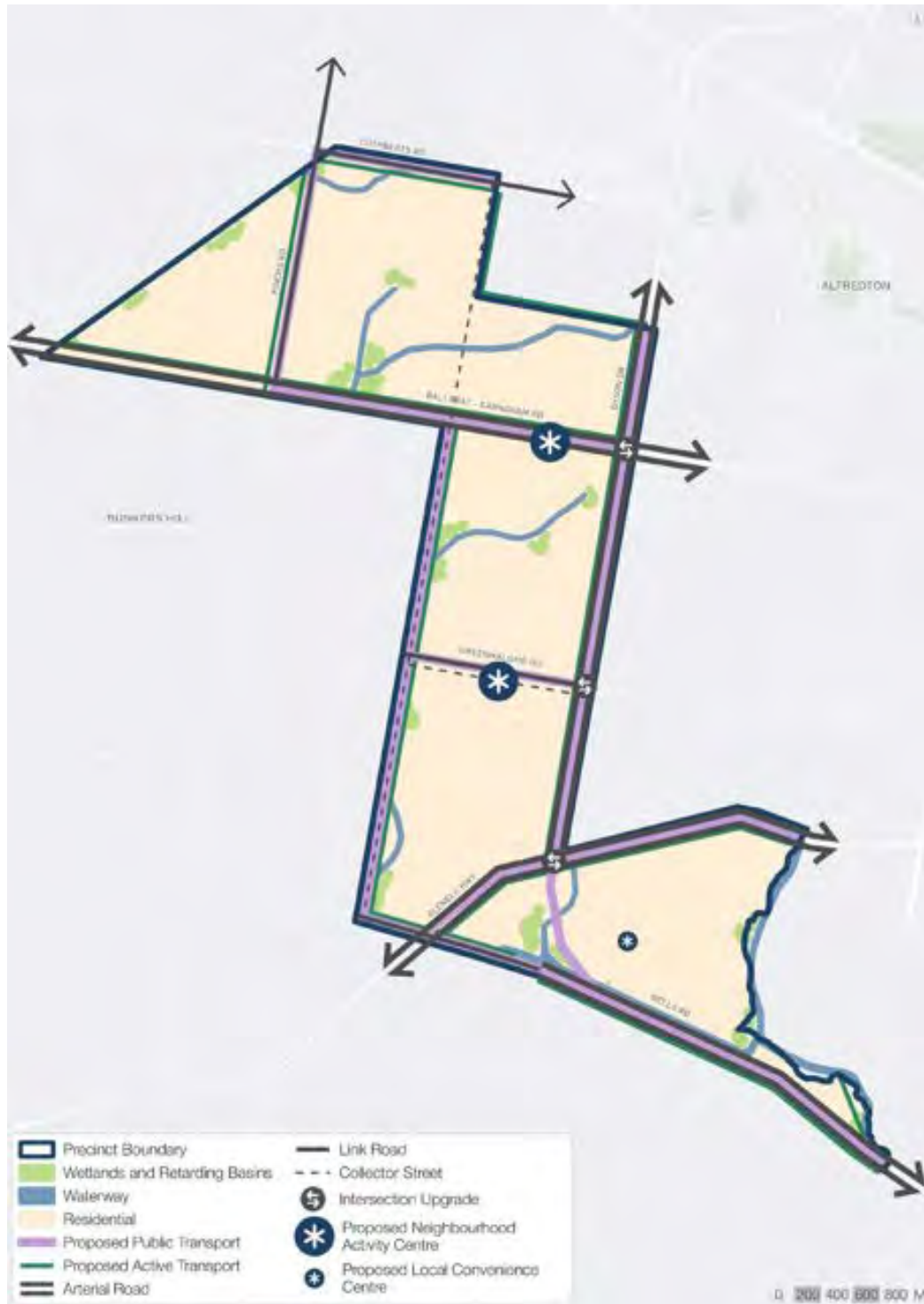
Community Infrastructure

- 2-3 (0.8 hectares each) x Level 1 Multipurpose Community Centre
- 2 (1.2 hectares each) x Level 2 Multipurpose Community Centre
- 5 (54 hectares in total) x Active Open Space
- 3 Sports Pavillions (serving 2 playing areas)
- 2 Sports Pavillions (serving 3 playing areas)
- 16-24 Sessional Kindergarten rooms
- 5.4 Maternal & Child Health rooms
- 6 Government Primary Schools
- 1.7 Government Secondary Schools

Retail

- 1 x Local Convenience Centre
- 2 x Neighbourhood Activity Centre

Map 7a Future Urban Structure Plan (Western Growth Area)



Map 7b Utilites Plan (Western Growth Area)



City of Ballarat > Growth Areas Framework Plan

North Western Growth Area

Estimated Growth

- Total growth area – 698ha
- Net developable area – 500ha
- Anticipated dwellings – 7,200 – 9,600
- Anticipated population – 19,400 – 25,900
- Total retail floorspace – 18,892 sqm
- Potential employment (FTE) – 777

Infrastructure Requirements

Transport

Road upgrades are required along:

- Draffins Road
- Dowling Road
- Railway Interface Road
- Remembrance Drive
- Finchs Road
- Cuthberts Road
- Ballarat Link Road
- Blind Creek Road
- Smarts Hill Road
- Skipton Rail Trail Interface Road

Intersection upgrades required along:

- Remembrance Drive and Ballarat Ring Road
- Remembrance Drive and Ballarat Link Road
- Sturt Street and Gillies Street
- Remembrance Drive and Skipton Rail Trail Interface Road
- Remembrance Drive and Finchs Road
- Remembrance Drive and Dowling Road
- Remembrance Drive and Draffins Road/Whites Road

Local roads, bicycle lanes and bus stops are also required within the Growth Area.

Drainage

- A network of 11 wetland retarding basins with waterway corridors and associated drains.

Community Infrastructure

- 1 (0.8 hectares each) x Level 1 Multipurpose Community Centre
- 1 (1.2 hectares each) x Level 2 Multipurpose Community Centre
- 1 (1.5 hectares each) x Level 3 Multipurpose Community Centre
- 3 (30 hectares in total) x Active Open Space
- 2 Sports Pavillions (serving 2 playing areas)
- 1 Sports Pavillion (serving 3 playing areas)
- 9-14 Sessional Kindergarten rooms
- 3.0 Maternal & Child Health rooms
- 3 Government Primary Schools
- 1 Government Secondary School

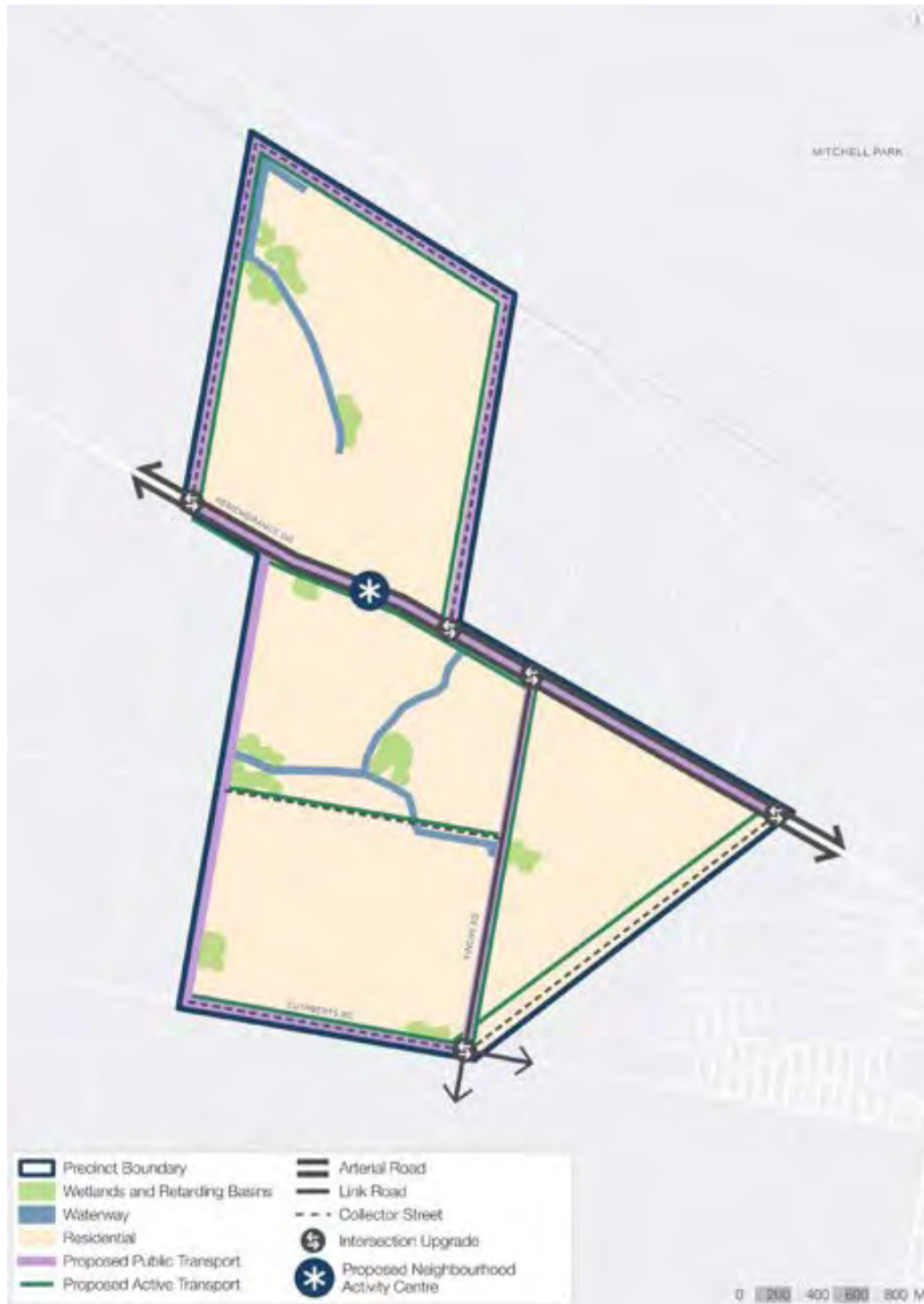
Retail

- 1 x Neighbourhood Activity Centre

Other Infrastructure Requirements

- 2 Non-Government Primary Schools and 1 Secondary School are also required for both growth areas
- A Regional Active Open Space of 30 hectares (for both growth areas) is required to be investigated
- An Indoor Recreation Centre (capable of catering for up to 8 courts under a high development scenario) may be required for both growth areas and should be in the North Western Growth Area
- Recommendations in this section should be largely followed throughout the planning process and should be further explored through technical work at a precinct level as part of the PSP preparation
- High level infrastructure costings in 23/24 dollars are provided in the accompanying technical reports
- Both growth areas can be serviced with electricity, water, sewer and telecommunication utilities through upgrades into the precincts
- The Growth Areas Framework Plan has assumed the construction of the duplication of Dyson Drive/Link Road in determining road upgrades. It is noted that the project is proposed and subject to funding.

Map 8a Future Urban Structure Plan (North Western Growth Area)



Map 8b Utilities Plan (North Western Growth Area)



Map 9a Future Government Schools



Map 9b Future Community Centres



Map 9c Future Active Open Space



Key Growth Actions

The Key Growth Actions have been developed in response to the findings from the technical studies undertaken for the Growth Areas Framework Plan and Long-Term Growth Options Investigation. The actions represent known opportunities and issues that will need to be resolved as part of the PSP preparation. Subject to further investigation and agreement by DTP, some actions will be undertaken prior to PSP preparation. This will be done to resolve known issues and reduce PSP preparation timeframes.

Number	Action	Growth Area
HERITAGE		
1	Undertake Cultural Values Assessment of the growth areas prior to PSP preparation	W/NW
2	Undertake heritage technical investigations to identify sites of potential heritage significance including consideration of any future State or World Heritage management requirements	W/NW
3	Review and update the Conservation Management Plan - Ballarat Avenue of Honour and Arch of Victory, and the Ballarat West Growth Area - Avenue of Honour Urban Design Guidelines (2010) as referenced in the Alfredton West Precinct Structure Plan, which reflect the heritage significance of the Avenue of Honour. These updated documents will inform any relevant future Precinct Structure Plan	W/NW
4	Ensure that any relevant development along the Avenue of Honour respects the existing urban interface character area in accordance with the updated 'Conservation Management Plan - Ballarat Avenue of Honour' and 'Arch of Victory, and the Ballarat West Growth Area - Avenue of Honour Urban Design Guidelines 2010' as currently referenced in the Alfredton West Precinct Structure Plan	W/NW
5	Undertake heritage technical investigations that investigate potential areas of Aboriginal Cultural Heritage Sensitivity within the Growth Areas	W/NW
6	Undertake heritage technical investigations that investigate historical mining, mining licenses and leases in the area	W/NW
7	Ensure that any relevant development along Remembrance Drive respects the existing urban interface character area	NW
LAND CAPABILITY		
8	Undertake land capability investigations to determine whether mining occurred in the growth areas and what management is required of any potential hazards	W/NW
9	Investigate the potential for land contamination in accordance with EPA Victoria guidelines and local policy	W/NW
10	Investigate requirements for development proposed on basaltic clay	W
11	Investigate the inclusion of a buffer to protect surrounding agricultural and rural living areas	W/NW
LANDSCAPE & VISUAL SENSITIVITY		
12	Investigate low density residential zoning in parts of sub precinct 2 to limit visual impact of development	NW
13	Investigate low density residential zoning in parts of the southern and western areas to limit visual impact of development	W

Number	Action	Growth Area
LANDSCAPE & VISUAL SENSITIVITY		
14	Undertake a design and planning study to manage the interface of urban and rural land uses	W/NW
BUSHFIRE		
15	Investigate bushfire risk by undertaking a detailed bushfire assessment in accordance with State Planning Policy Framework	W/NW
16	Investigate whether the existing Bushfire Management Overlays still apply based on the existing conditions of the site	W/NW
FLOOD RISK & MITIGATION		
17	Determine a flood risk and mitigation solution, building on the Alluvium Surface and Stormwater Management Strategy 2024	W/NW
18	As per the recommendation in the <i>Alluvium Surface and Stormwater Management Strategy 2024</i> , consider whether the Western Growth Area boundary should be extended to incorporate the entire waterway reach	W
BIODIVERSITY		
19	Investigate any potential impacts on the biodiversity value of the Haddon Common Bushland Reserve	W
20	If Growling Grass Frogs are identified in the area, habitat wetland areas are to be provided within drainage reserves to accommodate growling grass frog habitat. Consider using a PAO or other mechanism to acquire land and funding early to ensure a coordinated and effective habitat delivery	W/NW
WATERWAYS		
21	In lieu of any local waterway corridor guidelines, use Melbourne Water's Waterway Corridor Guidelines to determine appropriate waterway corridor widths	W/NW
ADVERSE AMENITY		
22	Investigate the amenity impact (noise and odour) and health risks of residential development located adjacent to rail corridors, major roads, rural living and farming areas	W/NW
23	Consider the outcomes of the new Ballarat Airport Strategy and Master Plan and associated number-above or 'N' contours	W/NW
24	Investigate how the commercial tree plantations may impact development	W/NW
25	Determine whether the Employment Lands Strategy identifies future employment land supply near the growth areas and investigate its impact on potential development	W/NW
TRANSPORT		
26	Undertake a traffic and transport assessment (including alternative traffic volumes) building on the One Mile Grid Traffic and Transport Assessment 2024	W/NW
27	Undertake investigations to determine an alternative transport solution to Remembrance Drive upgrades including further modelling on Cuthberts Road and Wiggins Road/Airport Road	NW

City of Ballarat > Growth Areas Framework Plan

Number	Action	Growth Area
TRANSPORT		
28	Facilitate multimodality (considering private and shared modes available) and incorporate mobility hubs in the transport network	W/NW
29	Work with Department of Transport (DTP) and relevant Government agencies to confirm the alignment, funding, delivery and construction of the Ballarat Link Road	W/NW
30	Work with DTP and relevant state agencies to investigate the potential opportunity for a railway station at the northern boundary of the North West precinct	NW
31	Work with DTP to determine a future public transport network that connects with the existing Ballarat bus network and includes: <ul style="list-style-type: none"> High frequency routes along Ballarat-Carngham Road, Glenelg Highway, Remembrance Drive and the Link Road Secondary bus routes along adjacent major roads to achieve increase coverage Provision for bus head start infrastructure at all signalised intersection 	W/NW
32	Work with Department of Transport (DTP) and relevant Government agencies to confirm the alignment, funding, delivery and construction of the Ballarat Carngham-Road duplication	W/NW
OPEN SPACE		
33	Investigate the feasibility of a 30-hectare regional active open space reserve within one of the growth areas	W/NW
34	Investigate the merits of a smaller regional open space and/or land classified as encumbered open space within one of the growth areas	W/NW
35	Identify the hierarchy of open spaces proposed for the Ballarat West PSP in line with the hierarchy outlined by the Ballarat Open Space Strategy (BOSS) and clearly distinguish between Neighbourhood, District and Regional open spaces	W/NW
36	Determine what informal recreational opportunities exist as part of the development of encumbered open spaces	W/NW
37	Work with Department of Education to explore the potential to secure joint school and community active open space	W/NW
38	Investigate open space and active transport connections to basins along Cuthbert Road, Fawcett Road, Kensington Creek and Winter Valley Rise Playground	W
INTEGRATED WATER MANAGEMENT		
39	Investigate sustainable water management building on the recommendations of the <i>Alluvium Integrated Water Management Strategy 2024</i>	W/NW
40	Work with the traditional owners of the land, the Wadawurrung People to better understand the cultural and environmental values identified in the <i>Alluvium Integrated Water Management Strategy 2024</i>	W/NW
41	Determine whether an ecohydrology assessment of the Mulawallah Wetland (Winter Swamp) is required to understand the impact of development on cultural and environmental values	W/NW

Number	Action	Growth Area
	COMMUNITY INFRASTRUCTURE	
42	Investigate community and recreation infrastructure needs building on the ASR <i>Community Infrastructure Assessment 2024</i>	W/NW
43	Work with Department of Education to develop kindergarten provision strategy a shared approach to the delivery and funding of kindergarten facilities, co-location of facilities within schools and a kindergarten infrastructure services plan	W/NW
44	Identify one of the future community facilities to provide a youth service function	W/NW
45	Work with Department of Education to confirm provision strategy for Primary, Secondary and Government Specialist Schools	W/NW
46	Work with the Diocese of Ballarat Catholic Education Limited (DOBCEL) and other local independent schools to confirm provision needs	W/NW
47	Work with Department of Education, Federation University and Australian Catholic University to confirm provision needs for higher education	W/NW
48	Determine the need for a library facility (as part of a Level 3 Community Centre) depending on expected population assumptions and travel times	NW
49	City of Ballarat to investigate the feasibility of an independent and dedicated arts and cultural facility within one of the growth areas	W/NW
50	Investigate the capacity of the existing aquatic facility to accommodate the increased population and identify if any facility expansion or redevelopment is required.	W/NW
51	City of Ballarat to investigate the need for a splash park	W/NW
52	Work with the Department of Health and Grampians Health Services to determine health facility community health needs	W/NW
53	Work with Police Victoria to determine if a new Police Station is needed within the Growth Areas	W/NW
54	Work with Ambulance Victoria to determine if a new Ambulance Station is needed within the Growth Areas	W/NW
55	Work with CFA to determine if a new Fire Station is needed within the Growth Areas	W/NW
56	Work with Department of Justice and Community Safety (DJCS) to determine whether an additional SES facility is required within the Ballarat West PSP, Western or North Western Growth Areas	W/NW
57	Determine the need to expand or redevelop the existing Ballarat Magistrates Court and increase its operational resources	W/NW

City of Ballarat > Growth Areas Framework Plan

Number	Action	Growth Area
UTILITIES		
58	Undertake a servicing assessment building on the <i>Taylor's Infrastructure Servicing Strategy</i>	W/NW
59	Work with Central Highlands Water to determine projects and costs to deliver upgrades for potable water supply and the sewer network including the location and staging of delivery	W/NW
60	Work with Powercor to determine projects and costs to deliver electricity supply	W/NW
61	Work with NBN to determine projects and costs to extend current infrastructure	W/NW
62	Investigate the need for gas supply for commercial and industrial uses based on current day policy	W/NW
RETAIL		
63	Undertake retail and economic technical investigation to determine a retail hierarchy for the Growth Areas based on Council's Retail Strategy, <i>Macroplan Retail Analysis 2024</i> and walkable catchments	W/NW
OTHER		
64	Undertake required technical work as part of PSP preparation (including but not limited to Land Capability Assessment, Landscape and Visual Assessment, Adverse Amenity Assessment, Biodiversity Assessment, Post Contact Heritage Assessment, Bushfire Assessment, Utilities and Servicing Assessment, Flooding and Drainage Assessment, Community Infrastructure Needs Assessment, Cultural Values Assessment, Affordable Housing Needs Assessment, Economic and Retail Assessment, Arboricultural Assessment, Native Vegetation Precinct Plan, Integrated Transport Assessment, Infrastructure Costings)	W/NW
65	Future PSP's should incorporate innovation pathway initiatives as per the Ballarat North PSP or best practice equivalent at the time	W/NW
66	Future PSP's must include a Staging Plan showing the preferred order of development and include out of sequence criteria for the City of Ballarat to consider subdivision applications outside of the preferred order	W/NW
67	In preparing a staging plan, consider the willingness of landowners to develop or sell individual land parcels	W/NW
68	City of Ballarat to explore private sector investment and contributions toward early infrastructure provision to support the early stages of Ballarat's new neighbourhoods	W/NW
69	City of Ballarat to engage a consultant to undertake an independent land supply analysis in collaboration with the development industry	W/NW
70	City of Ballarat to include the Growth Areas Framework Plan as a background document in the Ballarat Planning Scheme and make relevant changes to Clause 21 of the Local Planning Policy Framework	W/NW

Development Staging

Map 10 Development Staging



Context

The development of new residential neighbourhoods requires the delivery of infrastructure and services.

City of Ballarat is responsible for enabling infrastructure in new neighbourhoods in partnership with the Victorian Government, agencies and land developers.

Commencing residential development in proximity to existing neighbourhoods is preferred as it allows for nearby access to services prior to the delivery of local infrastructure.

Ballarat's growth areas will be planned and developed in an orderly staging of precincts.

Staging of residential development is required to ensure success in Ballarat's new neighbourhoods. It also benefits the city's broader community and economy.

Recommended Staging

A Development Staging Plan has been prepared to represent the City of Ballarat's preferred direction for future growth through the development of PSPs and sub precinct staging. The Development Staging Plan is based on:

- Victorian Government and City of Ballarat policy direction
- Infrastructure needs
- Estimated infrastructure project costs
- Infrastructure project complexity
- Infrastructure project benefit to the wider Ballarat community
- Estimated yield
- Estimated cost per ha
- Advice from Service Authorities on the likely sequencing of infrastructure.

The commencement of PSPs in Ballarat will be undertaken in the following sequence:

- Western Growth Area PSP
- North Western Growth Area PSP

Staging Directions

The commencement of any PSP (and rezoning to Urban Growth Zone) will be initiated by City of Ballarat based on:

- Current and emerging State Government planning policy including
 - The Housing Statement
 - Plan for Victoria
 - IGAF
- The Ballarat Strategy 2040;
- Ballarat Housing Strategy 2024;
- Growth Areas Framework Plan;
- Supply of greenfield land;
- Execution of third party funding agreements with land developers;
- Whether or not a precinct is subject to major constraints or uncertainties that is likely to delay development;
- Whether or not the precinct is of a size that is likely to result in a substantial and predictable development yield;
- The pattern of land ownership and the potential for multiple landowners to coordinate the planning and development of the precinct;
- Whether a precinct's development will support the effective and early development of infrastructure
- The impacts on Council's resourcing and administrative costs.

The Northern Growth Area is Council's priority growth area as documented through the Council resolution of February 2022. In the event that the Expanded Area of the Northern Growth Area is not included in the Northern PSP, this area should be investigated as the next growth front prior to the Western and North Western Growth Areas. It is acknowledged that the Growth Areas Framework Plan has not undertaken technical investigation on the Expanded Area and that there may be constraints or uncertainties that affect the Expanded Area development potential.

Simultaneous preparation of multiple PSPs will not be supported unless necessitated by strategic policy.

PSPs (or alternative planning tools) will be prepared by City of Ballarat or Victorian Government (unless otherwise agreed to).

City of Ballarat to review and monitor land supply of greenfield areas annually.



Out of Sequence Development

The commencement of PSPs outside of the Development Staging Plan (Figure 10), will be considered based on the following criteria:

- The proposal is of a size and scale to be considered a significant growth front for Ballarat's future. The site must be located within an identified growth area. The proponent must clearly demonstrate that there is a short-term need for additional land supply
- The developer or consortium represents most of the developable land area in that precinct (e.g. at least 70 per cent unless otherwise agreed by the planning authority)
- The proponent agrees to fund all necessary feasibility assessments to the satisfaction of the planning authority
- The proponent agrees to master-plan, involving a precinct structure plan or similar for the entire precinct, including areas beyond its ownership to the satisfaction of the planning authority
- The proposal is connected to the existing urban area.
- The location minimises impacts on Ballarat's historic urban land landscape, the environment and Ballarat's natural resource base to the satisfaction of the planning authority
- The proposal must provide an integrated transport strategy including an implementation plan showing how the proposal would contribute towards the delivery of alternative transport modes that reduces motor vehicle use to the satisfaction of the planning authority
- The proposal must demonstrate provision for social and affordable housing (as defined in the Planning and Environment Act 1987) as agreed with the planning authority
- If the proposed development represents a smaller portion of a larger precinct, the proposal must provide an infrastructure contributions assessment that considers impacts on, and demand for, infrastructure beyond the site boundary. Where the site is in an area already identified for growth, this assessment must have regard to the demand for infrastructure at a precinct scale. The infrastructure contributions assessment may need to make provisions for a "top-up" cash contribution for infrastructure external to the site to minimise any funding gap in a future precinct scale contributions plan
- If the proposed development requires upgrades and augmentation of infrastructure outside its boundaries, the proponent must demonstrate that its development will not create additional cost to City of Ballarat or Victorian Government or can demonstrate that the relevant authorities are ready to fund the augmentation. Interim measures may also be considered
- The proponent must demonstrate consistency with relevant targets in the PSP 2.0 Guidelines or as otherwise agreed to with the planning authority
- The proponent must demonstrate that the Key Growth Actions identified in the Framework Plan can be resolved as part of the PSP process
- Proponents must provide a response to these criteria to the satisfaction of the City of Ballarat, Department of Transport and Planning and Central Highlands Water.

Flexibility

The Growth Areas Framework Plan and Development Staging Plan must be reviewed every 5 years and should be supported by an assessment of land supply, additional infrastructure needs and any consultation undertaken with the public or key agencies.

The plan should function as a City of Ballarat policy direction and guideline for strategic planning and should be read in this manner.

The plan provides a basis for long term infrastructure planning which may be modified as time progresses.

The plan allows for changes to PSP boundaries and sub precinct boundaries and staging as part of PSP preparation.

References

The Growth Areas Framework Plan has been prepared with reference to the following documents:

- Alluvium for City of Ballarat (2023) Ballarat West and North West Growth Areas Integrated Water Management Strategy
- Alluvium for City of Ballarat (2023) Surface and Stormwater Management Strategy
- ASR Research for City of Ballarat (2023) Ballarat Western & North Western Growth Areas Framework Plan Community Infrastructure Assessment
- City of Ballarat (2024) Ballarat Airport Strategy and Master Plan
- City of Ballarat (2022) Ballarat Net Zero Emissions Plan
- City of Ballarat (2008) Ballarat Open Space Strategy
- City of Ballarat (2024) Ballarat Planning Scheme
- City of Ballarat (1998) Ballarat Strategy Plan
- City of Ballarat (2020) Ballarat West Growth Areas Update, Greenfield Growth Areas Council Meeting Agenda 16.09.2022
- City of Ballarat (2016) Ballarat West Precinct Structure Plan
- City of Ballarat (2019) Carbon Neutrality and 100% Renewables Action Plan 2019-2025
- City of Ballarat (2021) Council Plan 2021 - 2025
- City of Ballarat (2022) Growth Areas – Boundary Definition Council Meeting Agenda 23.02.2022
- City of Ballarat (2023) Housing Strategy 2023 – 2041
- City of Ballarat (2019) Urban Forest Action Plan
- City of Ballarat (2015) Today Tomorrow Together: The Ballarat Strategy
- Context Pty Ltd (2013) Mapping Ballarat's Historic Urban Landscape Stage 1 Final Report
- Golden Plains Shire Council (2019) Northern Settlement Strategy
- Hansen Partnership, Arup & Tim Nott (2018) Ballarat Long Term Growth Options Investigation
- Hansen Partnership for Ballarat City Council (2010) Ballarat West Growth Area – Avenue of Honour Urban Design Guidelines
- HillPDA Consulting & Hansen Partnership for the City of Ballarat (2012) Ballarat Activity Centres Strategy
- HillPDA Consulting for the City of Ballarat (2021) Draft City of Ballarat Employment Lands Strategy
- Integra Group (2011) Alfredton West Precinct Structure Plan
- Kevin Hazell for the City of Ballarat (2020) Strategic Planning for Bushfire in the City of Ballarat
- Kneebush Planning Pty Ltd (2010) Ballarat Aerodrome Noise Modelling Study & Assessment of Impact on the Ballarat West Growth Area
- Kneebush Planning Pty Ltd and Airports Plus Pty Ltd (2013) Ballarat Airport Master Plan 2013 – 2033
- Macroplan for City of Ballarat (2024) Growth Areas Framework Plan Retail Assessment
- One Mile Grid for City of Ballarat (2023) Ballarat Western & North Western Growth Areas Infrastructure Servicing Strategy – Traffic & Transport
- Schlagloth R & Thomson H (2006) Comprehensive Koala Plan of Management, Ballarat: City of Ballarat and Australian Koala Foundation
- SGS for City of Ballarat (2023) Ballarat's Future Housing Needs 2021 - 2041
- Taylor's for City of Ballarat (2024) Engineering Servicing Strategy
- United Nations (2015) Transforming our World: the 2030 Agenda for Sustainable Development
- Urban Enterprise for the City of Ballarat (2014) Ballarat West Development Contributions Plan
- Victorian Planning Authority (2021) Precinct Structure Planning Guidelines: New Communities in Victoria
- Victoria Planning Authority (2023) Ballarat Infrastructure & Growth Alignment Framework (IGAF)
- Victorian State Government (2014) Central Highlands Regional Growth Plan
- Victorian State Government (2017) Plan Melbourne 2017-2050



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August 2024

Growth Areas Framework Plan

Retail assessment

PREPARED FOR City of Ballarat

April 2024

macroplan

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Table of contents

Executive summary.....	2
Introduction & context	3
Section 1: City of Ballarat.....	5
1.1 Policy & strategy context.....	5
1.2 Population & households.....	8
1.3 Socio-demographics.....	9
1.4 Employment	11
1.5 Retail expenditure	12
1.6 Population projections	15
1.7 Activity centres	15
Section 2: Western/North Western Growth Areas.....	17
2.1 Catchments dwelling/population projections.....	17
2.2 Supermarket and activity centre requirements	18
2.3 Staging considerations	20
2.4 Recommended centres, locations and hierarchy.....	21
2.5 Potential employment.....	23
2.6 Summary of recommendations.....	24

Executive summary

- The City of Ballarat is preparing a Growth Area Framework Plan for the future Western and North Western Growth Areas. As part of this process, an assessment of activity centre needs is required.
- E-Commerce has seen significant growth in recent years. For retailers that have both a physical store and online presence, customer satisfaction and experience has given rise to the need for combining existing stores with warehouses to fulfil orders, and helps to increase network efficiency and provides an opportunity to bring customers back in store.
- While e-commerce has and will continue to grow it is likely to have a smaller impact on regional centres such as Ballarat where physical stores are more deeply integrated into the community and have more focus on fresh food, produce, and convenience.
- According to the Australia Bureau of Statistics, the City of Ballarat population was 93,501 in 2011, 101,686 in 2016, 113,504 in 2021, and is estimated at 116,145 in 2022. The population is projected to grow to between 142,624 (forecast.id) and 144,783 (VIF) by 2036.
- The City of Ballarat population is generally characterised by younger, Australian born families.
- 55% of workers are employed full-time and 38% part-time.
- The largest age cohort for full-time workers is 25 – 29 years. For part-time workers, 15-19 and 20-24 are the largest cohorts.
- 87% of workers declared as employees, 6% as owner – incorporated and 5% as owner – not incorporated.
- Total retail expenditure per person, estimated at \$15,682 per annum, is 1.0% above the non-metropolitan Victoria average. Within this, spend on food and non-food are 0.2% and 2.2% above the respective non-metropolitan Victoria averages.
- Key findings are summarised below:

City of Ballarat growth areas - summary of findings					
Metric		Western Growth Area		North Western Growth Area	
		15 dwelling/ha	20 dwelling/ha	15 dwelling/ha	20 dwelling/ha
Supermarket floorspace	sq.m	12,541 – 14,979	16,721- 19,973	6,996 – 8,359	9,331 - 11,146
Total floorspace*	sq.m	21,256 – 25,388	28,341 – 33,853	11,861 – 14,168	15,815 – 18,892
Potential employment	FTE	849 – 1,036	1,031 – 1,258	424 – 518	637 – 777
Activity centres	(no.)	1 x Local Convenience Centre 2 x Neighbourhood Activity Centre		1 x Neighbourhood Activity Centre	
Staging priority**		Central sector, between Ballarat Carngham Rd and Gleneig Hwy		Southern sector, south of Remembrance Dr	

*excl. external/other commercial
**residential/activity centre

Introduction & context

The City of Ballarat is preparing a Growth Area Framework Plan for the future Western and North Western Growth Areas. As part of this process, an assessment of activity centre needs is required.

This report presents an independent assessment of the Western and North Western Growth Areas, has been prepared in accordance with instructions received from the City of Ballarat, and is presented in four sections as follows:

- **Section 1** provides regional context regarding the City of Ballarat, including key policies and strategies relevant to this assessment, activity centre landscape and the current and projected profile of residents.
- **Section 2** provides a detailed analysis of the Western and North Western Growth Areas, with concluding recommendations.

The following context, provided by the City of Ballarat, guides this assessment:

- DELWP Planning Practice Note 90 requires that Local Authorities plan to accommodate projected population growth over at least a 15-year period and provide clear direction on locations where growth should occur.
- On 23 February 2022, Council resolved to prepare a Growth Area Framework Plan for the Western and North-western Growth Areas to guide the future urban development of these areas.
- The purpose of preparing a Growth Area Framework Plan is to identify high level infrastructure requirements, and to determine a logical sequence for future Precinct Structure Plan preparation in both the Western and North-western Growth Areas.
- Clause 11.02-15 of the Ballarat Planning Scheme requires that planning authorities ensure sufficient land is available to meet forecast demand and population growth over a 15-year period, including locations of growth.
- Clause 11.02-2S relating to Structure Planning requires planning authorities to prioritise creating communities that are sustainable, high quality and safe, with local and regional public transport. They are also responsible for preparation of structure plans/precinct structure plans.

Online retailing context

E-Commerce has seen significant growth in recent years, with data from Australia Post estimating 7.5 million Australian households shopped online in 2023, representing growth of 4.3% over 2022. Notably, Victoria saw no change in year-on-year online shopping, and Western Australia saw the largest growth (+8.0%). The most popular segments for online shopping included women's fashion, marketplaces & online discount stores and athleisure. Despite the rise of online retailing, bricks and mortar stores still remain important for consumers, facilitating order fulfilment, including click & collect, delivery, price matching and product research.

As consumers become more socially aware, Australia Post research estimates that 40% of consumers will spend more on sustainable products in 2024-25. This places focus on sustainable products and materials, carbon

Introduction & context

neutral delivery options and develop communication and marketing strategies to show customers they are socially responsible and taking steps to reduce carbon and waste.

The Australian Retailers Association believes that 1 in every 3 dollars spent on retail shopping in 2032 will be online. For retailers that have both a physical store and online presence, customer satisfaction and experience has given rise to the need for combining existing stores with warehouses to fulfil orders, and helps to increase network efficiency and provides an opportunity to bring customers back in store.

It is important to note that while e-commerce has and will continue to grow it is likely to have a smaller impact on regional centres such as Ballarat where physical stores are more deeply integrated into the community and have more focus on fresh food, produce, and convenience.

Section 1: City of Ballarat

The City of Ballarat is located 115 km west of the Melbourne Central Business District, connected via the M8 freeway (refer Map 1.1). Ballarat is a major regional centre, with key industry sectors including healthcare and social assistance, construction and retail trade. The population of Ballarat is projected to reach 170,000 people by 2040/41. This increase represents an increase of 50%, or an additional 57,000 people, and is expected to drive demand for an additional 29,000 dwellings.

1.1 Policy & strategy context

Key policies and strategies impacting the City of Ballarat and the Western/North Western Growth Areas as summarised below:

Ballarat Strategy 2040 – This is a long-term strategic planning document which identifies the 10-minute City as a key platform to guide growth and change. Key strategies that are relevant to this include encouraging a compact city form and developing a network of complete local neighbourhoods characterised by safe and convenient access to goods and services. The strategy also supports the implementation of the Ballarat Activity Centre Strategy and prioritises housing development within walking distance of local activity centres.

Ballarat Activity Centre Strategy 2012 – lays out the strategic guidelines for development centres across Ballarat and is a key document that's has been incorporated into other municipal strategic polies such as the Ballarat Strategy 2040. The Activity centre Strategy sets out the vision and principles for future Activity Centre Planning, including.

- Allowing Flexibility for centres to change over time to accommodate the changing needs of the community.
- Reinforcing the defined hierarchy in Ballarat.
- Consolidating retail and commercial activities in existing and planned centres

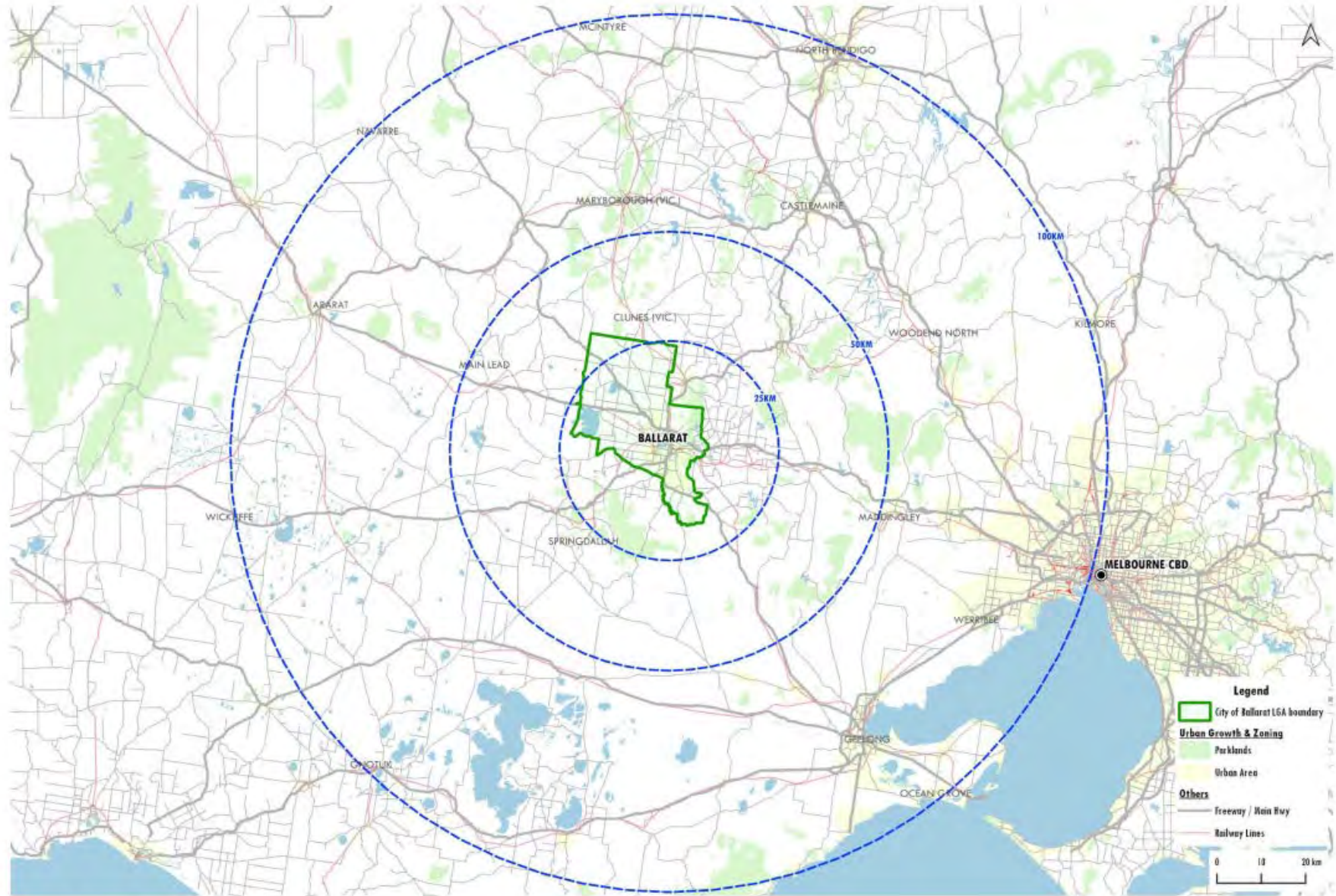
Draft Ballarat Employment Lands Strategy – This is a comprehensive audit of both existing and future supply capacity of employment land within Ballarat. It identifies a total of 370 hectares , equivalent to between 21 and 41 years of supply depending on the methodologies used to assess demand. The strategy also identifies a further 437 hectares of proposed industrial land and 39 hectares of land to be used for activity centre development.

Precinct Structure Plan Guidelines – Referred to as PSP 2.0, these guidelines provide the overarching principles for Greenfields developments across Victoria and specifically references the concept of 20-minute neighbourhoods along with other guidelines which are relevant to Activity Centre and employment land planning, including:

- Encourage dwelling density of 30 dwellings per net development within a 400 metre radius.
- Target minimum job density of one job per dwelling with a wider growth corridor, with 20% of new job to be supported by activity centres.
- Target 80% to 90% of dwellings to be within 800 metres of an activity centre.

Section 1: City of Ballarat

Ballarat Long Term Growth Options Investigations – These are a series of documents designed to guide future growth opportunities across Ballarat. The Northern growth area has been identified as a preferred location for the future of long-term growth in Ballarat. The growth area has been identified as to have good access to major activity centres, strong access to NAC's and access to the Ballarat CBD within a 20-minute drive.



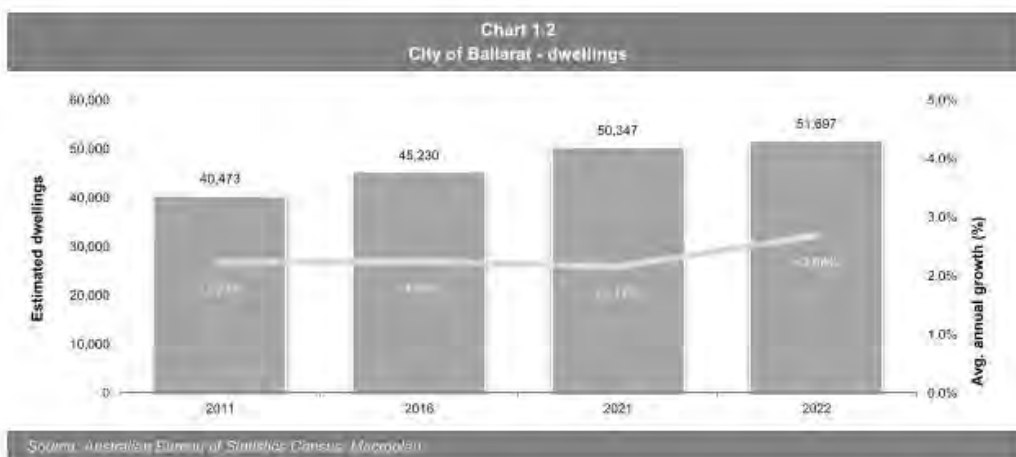
**Map 1.1: City of Ballarat
Regional context**

macroplan

1.2 Population & households

For the City of Ballarat, Chart 1.1 estimates the resident population growth profile to 2022, while Chart 1.2 estimates the number of dwellings.

According to the Australia Bureau of Statistics, the City of Ballarat population was 93,501 in 2011, 101,686 in 2016, 113,504 in 2021, and is estimated at 116,145 in 2022 (Australian Bureau of Statistics Estimated Resident Population). This represents average annual growth of 2.22% to 2021, and 2.33% to 2022.



Section 1: City of Ballarat

1.3 Socio-demographics

Table 1.2 illustrates the socio-demographic profile of the City of Ballarat, compared with benchmarks for non-metropolitan Victoria and Australia, based on data from the 2021 ABS Census of Population and Housing. Key results include the following:

- Per capita and per household income levels of residents are 4.8% and 4.7% above the non-metropolitan Victoria averages respectively.
- The average age of residents, at 39.1 years, is below the non-metropolitan Victoria average (43.6 years).
- Home ownership levels are lower than the non-metropolitan Victoria.
- The population is 88.1% Australian born, above the non-metropolitan Victoria average (86.8%).
- Traditional families (i.e. couples with dependent children) are the most prevalent household type (36.0%).

The City of Ballarat population is generally characterised by younger, Australian born families.

Section 1: City of Ballarat

Table 1.1 City of Ballarat - socio-demographic profile, 2021			
Census item	City of Ballarat	Non-metro. VIC	Australia avg.
Per capita income	\$39,397	\$37,609	\$43,826
<i>Var. from Rest of Vic.</i>	4.8%		
Avg. household income	\$93,042	\$88,881	\$111,341
<i>Var. from Rest of Vic.</i>	4.7%		
Avg. household size	2.4	2.4	2.5
<u>Age distribution (% of population)</u>			
Aged 0-14	18.8%	17.6%	18.3%
Aged 15-19	6.1%	5.6%	5.7%
Aged 20-29	13.4%	10.9%	13.2%
Aged 30-39	12.9%	11.8%	14.5%
Aged 40-49	12.2%	11.7%	12.9%
Aged 50-59	12.0%	13.1%	12.4%
Aged 60+	24.5%	29.2%	22.8%
Average age	39.1	43.6	38.8
<u>Housing status (% of households)</u>			
Owner (total)	<u>64.7%</u>	<u>72.2%</u>	<u>65.1%</u>
• Owner (outright)	32.2%	39.1%	30.6%
• Owner (with mortgage)	32.5%	33.1%	34.5%
Renter	31.2%	23.4%	30.3%
<u>Birthplace (% of population)</u>			
Australian born	88.1%	86.8%	70.8%
Overseas born	<u>11.9%</u>	<u>13.2%</u>	<u>29.2%</u>
<u>Family type (% of population)</u>			
Couple w dep't child.	36.0%	34.6%	38.6%
Couple w non-dep't child.	15.6%	17.3%	19.3%
Couple without child.	21.6%	24.3%	20.8%
One parent w dep't child.	8.1%	6.6%	6.0%
One parent w non-dep't	5.4%	4.8%	5.0%
Lone person	12.3%	11.7%	9.4%

Source: ABS Census of Population & Housing 2021; Macroplan

Section 1 | City of Ballarat

1.4 Employment

Charts 1.3 – 1.6 summarise the employment profile of workers within the City of Ballarat at the 2021 Census, summarised as follows:

- 55% of workers are employed full-time and 38% part-time.
- The largest age cohort for full-time workers is 25 – 29 years, followed by those aged 45-49. For part-time workers, 15-19 and 20-24 are the largest cohorts.
- 87% of workers declared as employees, 6% as owner – incorporated and 5% as owner – not incorporated.

Chart 1.3
City of Ballarat - employed persons (place of work), 2021

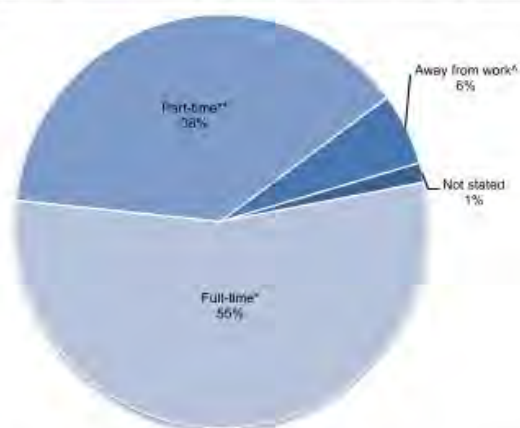
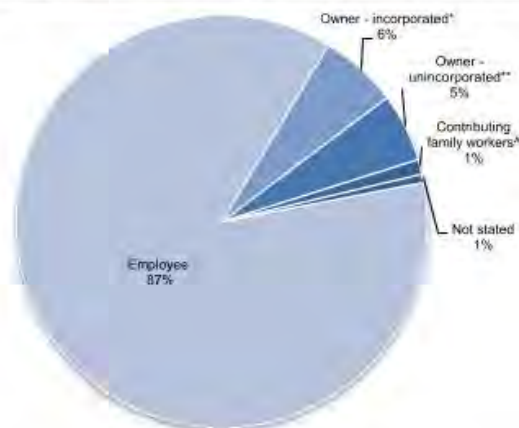


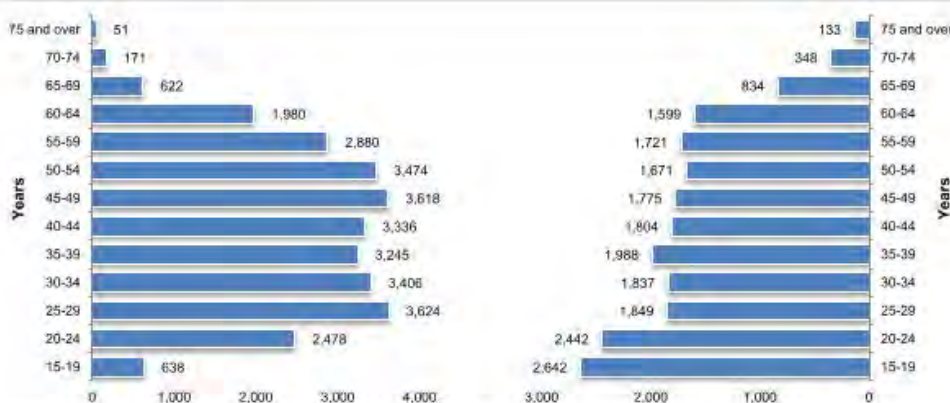
Chart 1.4
City of Ballarat - employed persons (place of work), 2021



Source: ABS Census of Population & Housing 2021, Macroplan
^{*}worked 35 hours or more during the week prior to Census night.
^{**}worked less than 35 hours during the week prior to Census night.
[^]employed persons who did not work in the week prior to Census night.

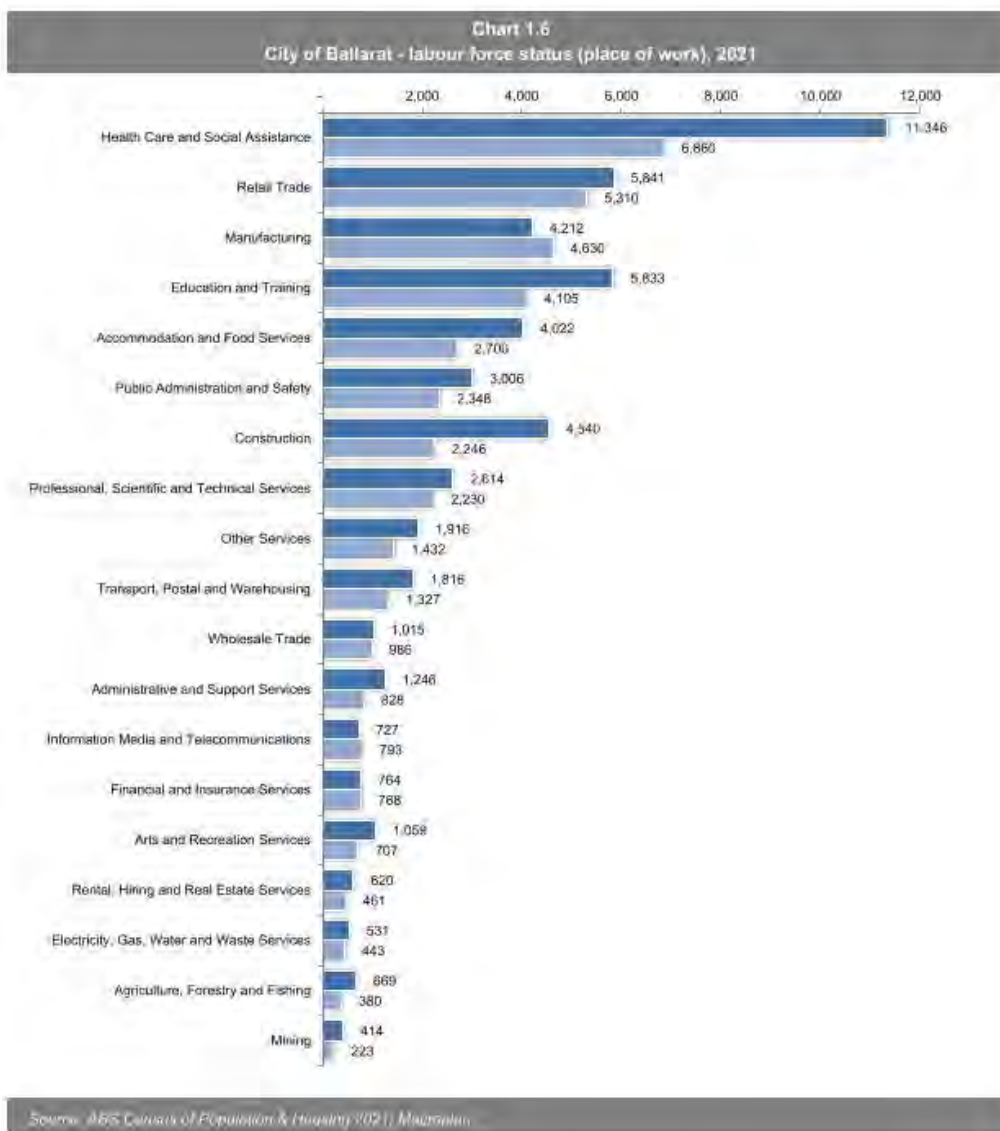
Source: ABS Census of Population & Housing 2021, Macroplan
^{*}Owner manager of incorporated enterprise with/without employees
^{**}Owner manager of unincorporated enterprise with/without employees
[^]contributing family worker is defined as a person who works without pay, in an economic enterprise operated by a relative.

Chart 1.5
City of Ballarat - employed persons (place of work), 2021



Source: Australian Bureau of Statistics Census, Macroplan

Section 1: City of Ballarat



1.5 Retail expenditure

Macroplan estimates retail expenditure capacity based on information sourced from Market Data Systems (MDS), which utilises a detailed micro simulation model of household expenditure behaviour for all residents of Australia. The model considers information from a wide variety of sources including the regular ABS Household Expenditure Surveys, national accounts data, Census data and other information. We consider MarketInfo data to be an accurate measure of available retail expenditure and it is widely relied on in the retail industry.

Total retail expenditure is detailed in several categories, as follows:

- **Take-home food and groceries** – goods typically sold in fresh food retailers.
- **Packaged liquor** – packaged beer, wine, and spirits such as those purchased at bottle-shops and liquor outlets.

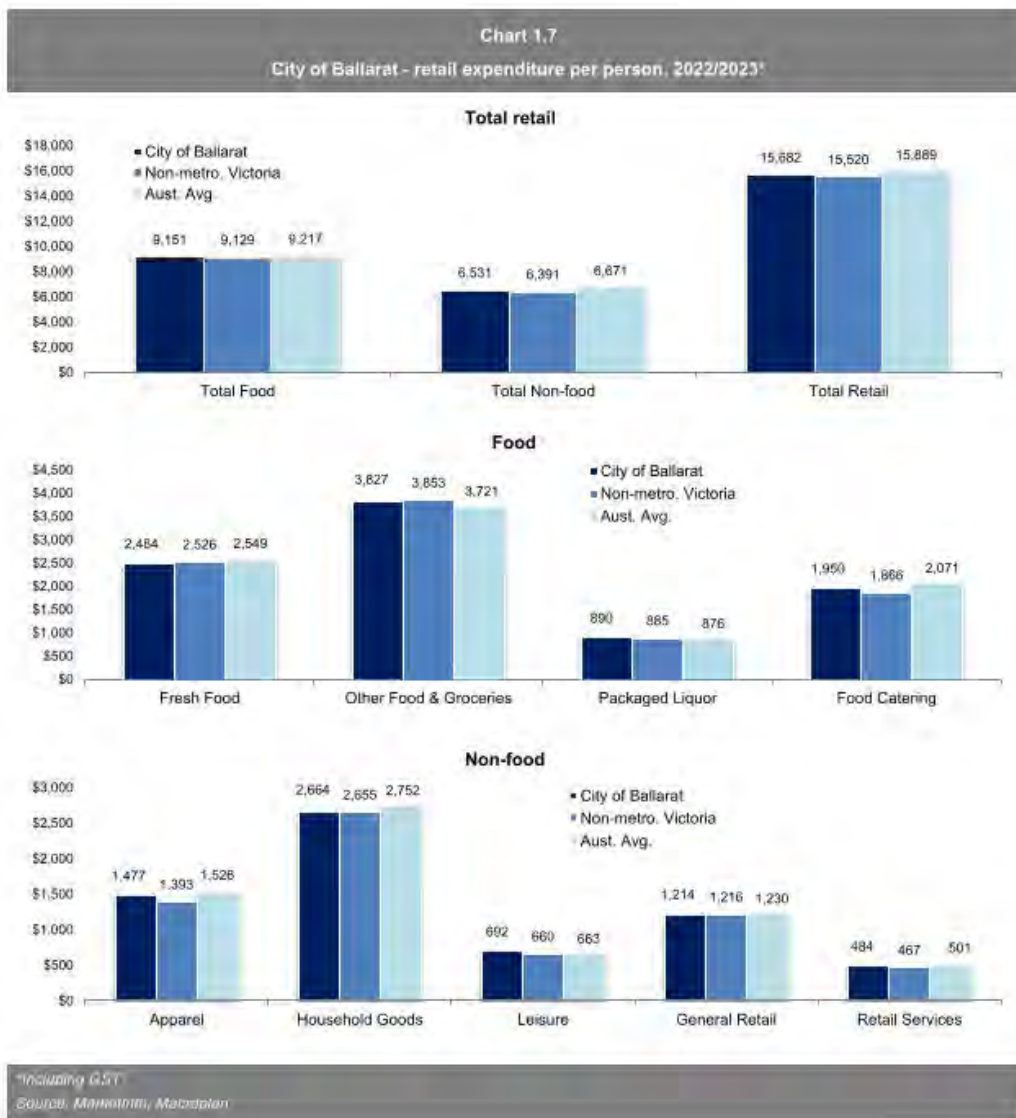
Section 1: City of Ballarat

- **Food catering** – cafes, take-away outlets, and restaurants, including liquor consumed on such premises.
- **Apparel** – clothing, footwear, fashion, and accessories.
- **Household goods** – giftware, electrical, computers, furniture, homewares, and hardware goods.
- **Leisure** – sporting goods, music, DVDs, games, books, newsagents, and film processing/photography.
- **General retail** – pharmaceutical goods, cosmetics, toys, florists, and mobile phones.
- **Retail services** – key cutting, shoe repairs, hair, and beauty.

Chart 1.7 details the estimated retail spending levels of the City of Ballarat on a per capita basis for the year 2022/23 and compares these estimates with the average for non-metropolitan Victoria and Australia. Spending estimates are presented inclusive of GST. The following points are noted:

- Total retail expenditure per person, estimated at \$15,682 per annum, is 1.0% above the non-metropolitan Victoria average. Within this, spend on food and non-food are 0.2% and 2.2% above the respective non-metropolitan Victoria averages.
- Within the food category, spend per capita on food catering is 4.6% above the non-metropolitan Victoria average, followed by packaged liquor (+0.5%), while spend on fresh food is 1.7% below benchmark.
- Within the non-food retail categories (i.e. generally considered discretionary retail), spend on apparel, leisure and retail services are 6.0%, 4.8% and 3.6% above benchmark respectively.

Section 1 | City of Ballarat



Section 1 | City of Ballarat

1.6 Population projections

Chart 1.8 outlines the projected population levels for the City of Ballarat, as estimated by Victoria In Future (VIF) and forecast.id. The population of the City of Ballarat is projected to grow to between 142,624 (forecast.id) and 144,783 (VIF) by 2036, equating to 59,485 - 68,568 dwellings, an increase of 12,236 – 16,871 from 2022.



1.7 Activity centres

The appropriate locations and hierarchy of future activity centres within the Western and North Western Growth Areas must consider alternative centres within the wider City of Ballarat. Map 1.2 provides the locations of current and future activity centres and supermarkets within the region.

Section 1: City of Ballarat



**Map 1.2: City of Ballarat
Activity centres**

Section 2: Western/North Western Growth Areas

2.1 Catchments dwelling/population projections

Two catchments have been defined by the City of Ballarat (refer Map 2.1) along with dwelling and population estimations under a high and low scenario, outlined in Table 2.1.



**Map 2.1: City of Ballarat
Western & North Western Growth Areas**

Section 3. Western & North Western Growth Areas

Table 2-1 City of Ballarat growth areas - assumptions		
	Western	North Western
NDHA (ha)	896 ha	500 ha
Non residential (ha)	36 ha	20 ha
Residential NDHA (ha)	860 ha	480 ha
Average overall household size	2.7	2.7
@ 15 dwellings per ha		
Dwelling yield	12,902	7,200
Population	34,835	19,440
@ 20 dwellings per ha		
Dwelling yield	17,203	9,600
Population	46,448	25,920

Source: City of Ballarat

2.2 Supermarket and activity centre requirements

The total supermarket floorspace required to support the above resident populations is tested against typical provision in non-metropolitan Australia, estimated between 0.36 and 0.43 sq.m per person.

Using these assumptions, Chart 2,2 estimates:

- Under the 15 dwellings per hectare scenario the supermarket floorspace required is estimated at 12,541 – 14,979 sq.m for the Western Growth Area and 6,998 – 8,359 sq.m for the North Western Growth Area.
- Under the 20 dwellings per hectare scenario the supermarket floorspace required is estimated at 16,721-19,973 sq.m for the Western Growth Area and 9,331 - 11,146 sq.m for the North Western Growth Area.



Section 3: Western & North Western Growth Areas

Chart 2.3 summarises the estimated composition of potential activity centres within the Western and North Western Growth Areas, based on typical neighbourhood and sub-regional centres and sourced from the Macroplan comprehensive database of Australian shopping centres which incorporates the Property Council of Australia database and additional research. We expect that future neighbourhood centre floorspace located (excluding external/other commercial) within the growth areas will consist of approximately 59% supermarket floorspace, 34% retail specialties & majors, and 7% non-retail specialties.



With regard to the analysis in Charts 2.2 and 2.3, Table 2.2 provides the estimated total centre (excluding external/other) floorspace requirements for the Western and North Western Growth areas. Using these assumptions, the following conclusions are drawn:

- Under the 15 dwellings per hectare scenario the total floorspace required is estimated at 21,256 – 25,388 sq.m for the Western Growth Area and 11,861 – 14,168 sq.m for the North Western Growth Area.
- Under the 20 dwellings per hectare scenario the floorspace required is estimated at 28,341 – 33,853 sq.m for the Western Growth Area and 15,815 – 18,892 sq.m for the North Western Growth Area.

Table 2.2
City of Ballarat growth areas - estimated total centre floorspace*

	Centre shares**	15 dwellings/ha		20 dwellings/ha	
		Western	North Western	Western	North Western
Supermarkets	59%	12,541 - 14,979	6,998 - 8,359	16,721 - 19,973	9,331 - 11,146
Retail specialties & majors	34%	7,227 - 8,632	4,033 - 4,817	9,636 - 11,510	5,377 - 6,423
Non-retail specialties	7%	1,488 - 1,777	830 - 992	1,984 - 2,370	1,107 - 1,322
Total	100%	21,256 - 25,388	11,861 - 14,168	28,341 - 33,853	15,815 - 18,892

*Area based on 0.36 - 0.15 sqm per person provision of supermarket floorspace. **Chart 2.3, excluding external/other.
Source: City of Ballarat, Macroplan

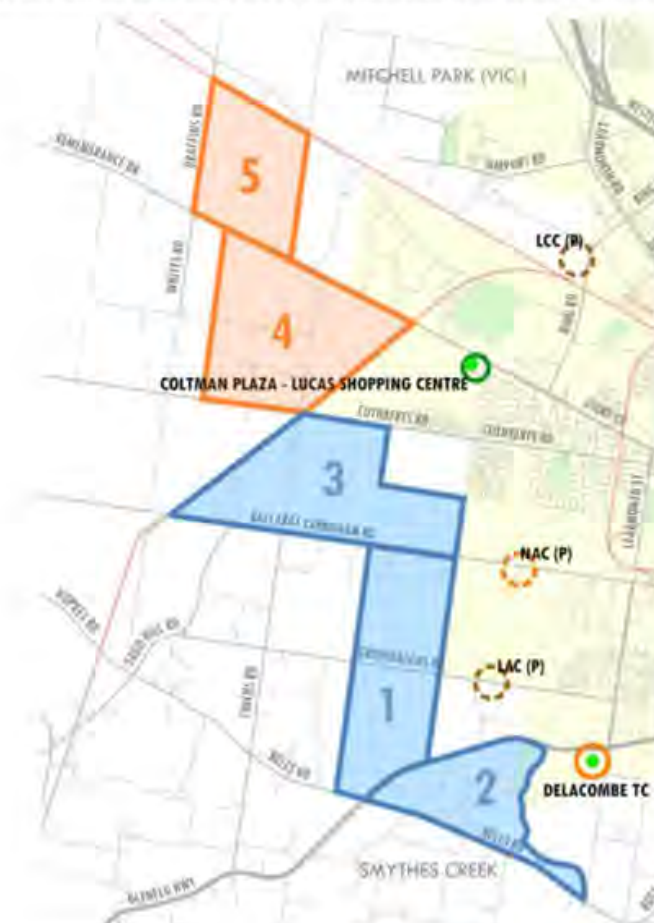
Section 3: Western & North Western Growth Areas

2.3 Staging considerations

The appropriate sequencing of activity centre development is primarily driven by the staging of residential development within the growth areas, transport infrastructure and proximity to existing residents and centres surrounding these growth areas. With regard to the information available at this stage, Map 2.2 shows a recommended staging order of development for the Growth Areas (both residential and activity centre), specifically:

Western Growth Area – Sub-precinct 1 (between Ballarat Camrgham Road and Glenelg Highway) is recommended for early development. The area is central to the wider Growth Area, borders both main road thoroughfares, and is best placed to capture demand from the Ballarat West PSP area to the east. If developed after sub-precinct 1, sub-precinct 2 and 3 will benefit from the established activity centre/s, especially relevant for the moderately isolated sub-precinct 2.

North Western Growth Area – This area is more centralised than the Western Growth Area, with both sub-precinct 4 and 5 located proximate to the proposed Neighbourhood Centre on Remembrance Drive. As a result, development staging is less critical, however sub-precinct 5 is further from the Western Growth Area and other residential development and as such, sub-precinct 4 is recommended for development first.



**Map 2.2: City of Ballarat
Recommended development staging**

Section 3: Western & North Western Growth Areas

2.4 Recommended centres, locations and hierarchy

The number of and locations for activity centres within the growth areas that best satisfy the totals in Table 2.2 have particular regard to the following considerations, some of which are known/unknown at this stage:

- The total floorspace deemed supportable in Table 2.2.
- Current and future population concentrations within growth areas sub-regions, including delivery staging.
- Current and future road networks and public transport infrastructure, along with walkability for local residents.
- The proximity and attractiveness of competitive activity centres surrounding the Western and North Western Growth Areas.
- Significant physical barriers which are difficult to negotiate and can act as delineating boundaries to the trade area served by an individual shopping centre, or retail facility.

With regards to the above, Map 2.3 presents our view of the preferred allocation of the floorspace values in Table 2.2 across each of the growth areas. These are summarised as follows:

Western Growth Area

- Neighbourhood Convenience Centre (NAC 1) – Recommended for location along Ballarat Carngham Road, this centre is the largest within the growth area, servicing the Western Growth Area population north and south of Ballarat Carngham Road and the Ballarat West PSP area to the east which is expected to be serviced by a Local Convenience Centre only. Being the major Neighbourhood Centre within the Growth Area this centre would likely feature the highest concentration of external/other tenancies such as medical centre, commercial offices and/or service station.
- Neighbourhood Convenience Centre (NAC 2) – While Glenelg Highway is the higher order route through the growth area, the presence of Delacombe Town Centre to the northeast will capture some demand from the Western Growth Area proximate to the highway, necessitating a smaller provision for NAC 2. External/other tenancies could include fitness/wellness, a small scale medical provision or pad site service station.
- Local Convenience Centre 1 (LCC 1) – While the lower concentration of estimated population south of Glenelg Highway does not necessitate a Neighbourhood Centre, its' relative isolation from the rest of the growth area warrants consideration of a Local Convenience Centre for more immediate access to daily shopping, with NAC 1 and NAC 2 remaining a key destination for these residents. Being a local centre, a limited line or independent supermarket is best placed, along with a small provision of external/other tenancies, likely a fitness studio or similar.

North Western Growth Area

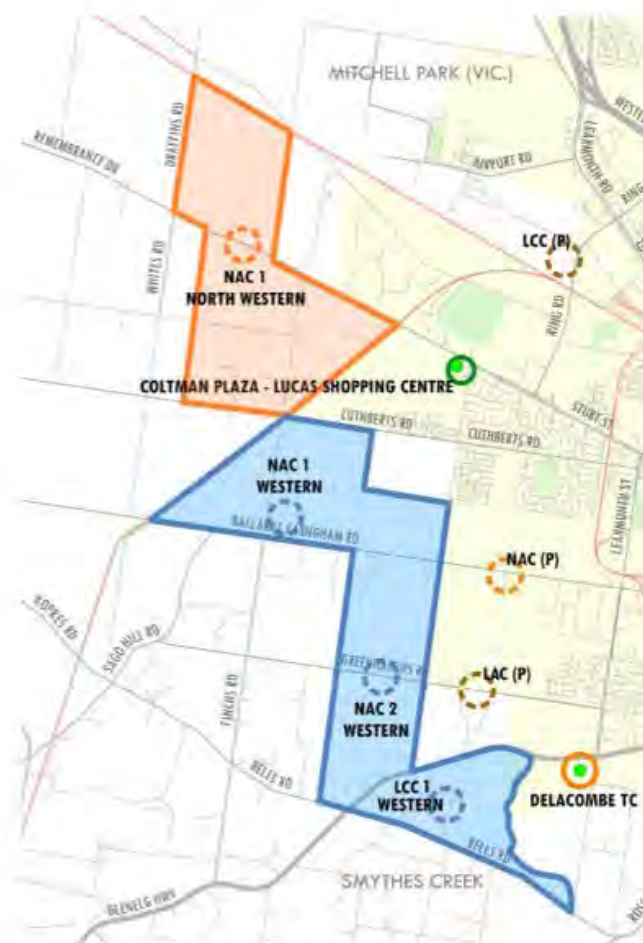
Neighbourhood Convenience Centre (NAC 1) – A single Neighbourhood Centre is estimated to be supportable within the North Western Growth Area, ideally located along Remembrance Drive as the main local thoroughfare and able to service the north and south sections of the Growth Area. External/other tenancies could include fitness/wellness, a small scale medical provision or pad site service station.

Section 3: Western & North Western Growth Areas

Table 2.3 City of Ballarat growth areas - recommended activity centres					
	Western Growth Area				North Western Growth Area NAC 1
	LCC 1	NAC 1	NAC 2	Total	
Land size (ha)	240	400	420	1,060	700
15 dwellings/ha					
Population	7,887	13,145	13,803	34,835	19,440
Supportable supermarket (sq.m)				12,541 - 14,979	6,998 - 8,359
<i>Implied sq.m/person</i>				0.36 - 0.43	0.36 - 0.43
Supermarket (sq.m)	2,000	8,000	4,000	14,000	7,000
<i>Implied sq.m/person</i>	0.25	0.61	0.29	0.40	0.36
Retail specialties & majors	1,153	4,610	2,305	8,068	4,034
Non-retail specialties	237	949	475	1,661	831
Total centre	3,390	13,559	6,780	23,729	11,864
20 dwellings/ha					
Population	10,517	17,528	18,404	46,448	25,920
Supportable supermarket (sq.m)				16,721 - 19,973	9,331 - 11,146
<i>Implied sq.m/person</i>				0.36 - 0.43	0.36 - 0.43
Supermarket (sq.m)	4,000	6,500	6,500	17,000	10,500
<i>Implied sq.m/person</i>	0.38	0.37	0.35	0.37	0.41
Retail specialties & majors	2,305	3,746	3,746	9,797	6,051
Non-retail specialties	475	771	771	2,017	1,246
Total centre	6,780	11,017	11,017	28,814	17,797

*assumes dwellings density constant

Section 3: Western & North Western Growth Areas



**Map 2.3: City of Ballarat
Recommended activity centres**

2.5 Potential employment

Table 2.4 estimates potential employment generation within the activity centres outlined in Table 2.3 based on employment per sq.m seen in typical comparable centres and industry employment densities. We note that the actual jobs created will be heavily dependent on specific tenancies and external/other commercial provision.

Table 2.4 estimates:

- Under the 15 dwellings per hectare scenario we estimate 849 – 1,036 jobs could be created across the activity centres in the Western Growth Area and 424 – 518 in the North Western Growth Area activity centre.
- Under the 20 dwellings per hectare scenario we estimate 1,031 – 1,258 jobs could be created across the activity centres in the Western Growth Area and 637 – 777 in the North Western Growth Area activity centre.

Section 3: Western & North Western Growth Areas

	Job density (sq.m/FTE)*	Western Growth Area				North Western Growth Area
		LCC 1	NAC 1	NAC 2	Total	NAC 1
15 dwellings/ha						
Supermarkets	30 - 25	67 - 80	267 - 320	133 - 160	467 - 560	233 - 280
Retail specialties & majors	25 - 20	46 - 58	184 - 231	92 - 115	323 - 403	161 - 202
Non-retail specialties	28 - 23	8 - 10	34 - 41	17 - 21	59 - 72	<u>30 - 36</u>
Total					849 - 1,036	424 - 518
20 dwellings/ha						
Supermarkets	30 - 25	133 - 160	217 - 260	217 - 260	567 - 680	350 - 420
Retail specialties & majors	25 - 20	92 - 115	150 - 187	150 - 187	392 - 490	242 - 303
Non-retail specialties	28 - 23	17 - 21	28 - 34	28 - 34	72 - 88	<u>44 - 54</u>
Total					1,031 - 1,258	637 - 777

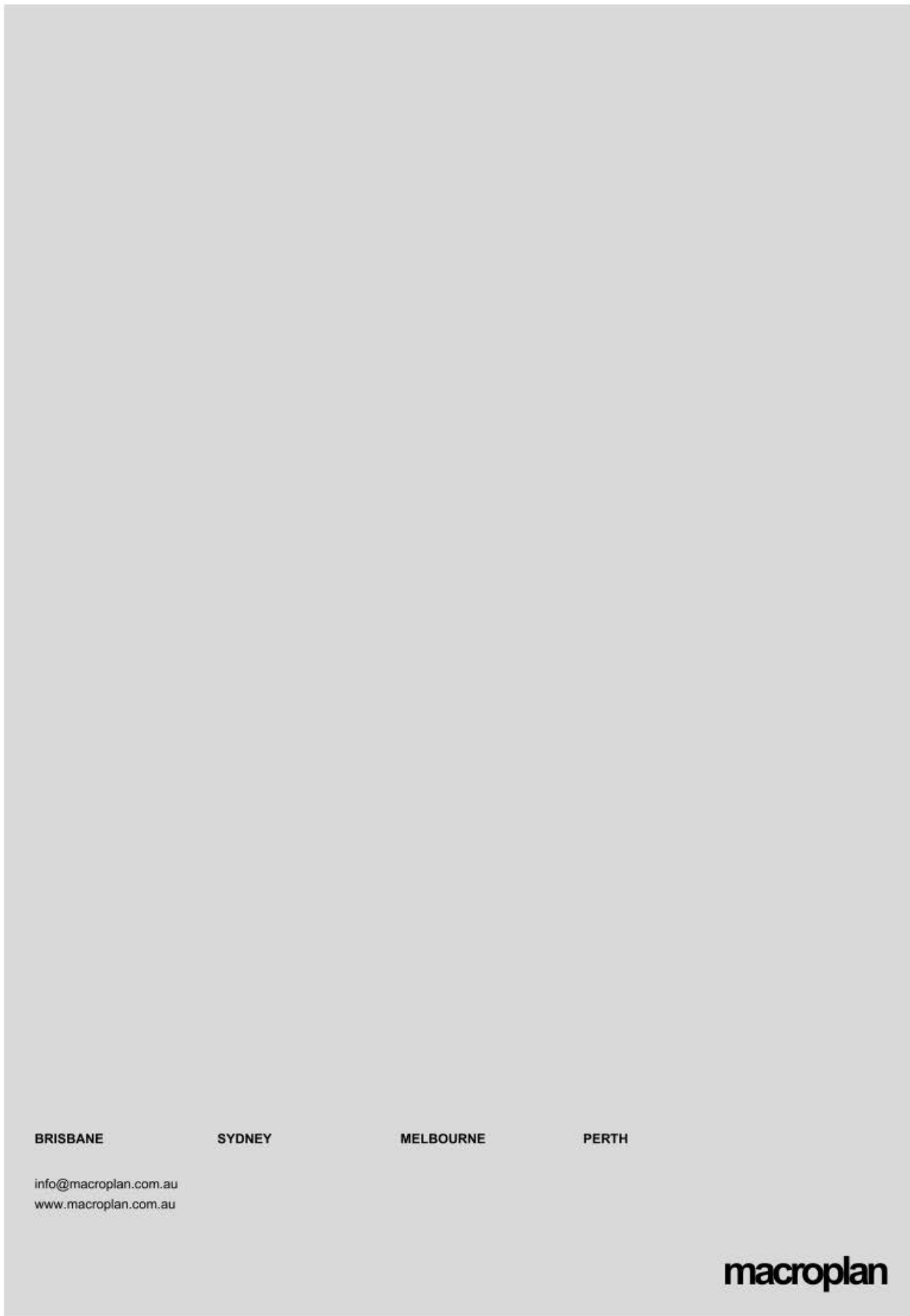
*Full-Time Equivalent
Source: Macroplan

2.6 Summary of recommendations

With regard to the above analysis, Table 2.5 summarises the key findings and recommendations.

	Metric	Western Growth Area		North Western Growth Area	
		15 dwelling/ha	20 dwelling/ha	15 dwelling/ha	20 dwelling/ha
Supermarket floorspace	sq.m	12,541 – 14,979	16,721- 19,973	6,998 – 8,359	9,331 - 11,146
Total floorspace*	sq.m	21,256 – 25,388	28,341 – 33,853	11,861 – 14,168	15,815 – 18,892
Potential employment	FTE	849 – 1,036	1,031 – 1,258	424 – 518	637 – 777
Activity centres	(no.)	1 x Local Convenience Centre 2 x Neighbourhood Activity Centre		1 x Neighbourhood Activity Centre	
Staging priority**		Central sector, between Ballarat Camgham Rd and Glenelg Hwy		Southern sector, south of Remembrance Dr	

*excl. external/other commercial
**residential/activity centre



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Engineering Services Strategy

- Ballarat Western & North-Western Growth Areas

City of Ballarat
April 2024

Table of Contents

1	EXECUTIVE SUMMARY	5
2	INTRODUCTION	10
3	COMMISSION	11
4	SITE DESCRIPTION	12
5	PROPOSAL	14
6	INVESTIGATION:	15
7	LIMITATIONS AND ASSUMPTIONS	16
8	SERVICING STRATEGY	17
8.1	WATER SUPPLY – Potable Water	17
8.1.1	Existing Services, North-Western Growth Area	17
8.1.2	Existing Services, Western Growth Area	18
8.1.3	Future Servicing Arrangements, North-Western Growth Area	23
8.1.4	Future Servicing Arrangements, Western Growth Area	25
8.1.5	Expected Funding Arrangements	27
8.1.6	Estimated Project Costs, North-Western Growth Area	28
8.1.7	Estimated Project Costs, Western Growth Area	28
8.1.8	Summary of Outcomes	29
8.2	SEWERAGE	30
8.2.1	Existing Services, North-Western Growth Area	30
8.2.2	Existing Services, Western Growth Area	31
8.2.3	Future Servicing Arrangements, North-Western Growth Area	35
8.2.4	Future Servicing Arrangements, Western Growth Area	37
8.2.5	Expected Funding Arrangements	42
8.2.6	Estimated Project Costs, North-Western Growth Area	43
8.2.7	Estimated Project Costs, Western Growth Area	43
8.2.8	Summary of Outcomes	44
8.3	ELECTRICITY	45
8.3.1	Existing Services, North-Western Growth Area	45
8.3.2	Existing Services, Western Growth Area	46
8.3.3	Future Servicing Arrangements	47
8.3.4	Expected Funding Arrangements	48
8.3.5	Summary of Outcomes	48
8.4	TELECOMMUNICATION SERVICES	49
8.4.1	Existing Services, North-Western Growth Area	49
8.4.2	Existing Services, Western Growth Area	50
8.4.3	Future Servicing Arrangements	51
8.4.4	Expected Funding Arrangements	51
8.4.5	Summary of Outcomes	51
8.5	GAS	53
8.5.1	Existing Servicing, North-Western Growth Area	53
8.5.2	Existing Servicing, Western Growth Area	54
8.5.3	Future Servicing Arrangements	58
8.5.4	Expected Funding Arrangements	58
8.5.5	Summary of Outcomes	58
8.6	STORMWATER MANAGEMENT	59
8.6.1	Existing Services	59
8.6.2	Future Servicing Arrangements	61
8.6.3	Expected Funding Arrangements	69
8.7	INTEGRATED WATER MANAGEMENT	69
8.7.1	Existing Services	69
8.7.2	Future Servicing Arrangements	69

8.7.3	Expected Funding Arrangements.....	73
8.8	TRAFFIC & TRANSPORT.....	73
8.8.1	Executive Summary.....	73
8.8.2	Expected Funding Arrangements.....	84
9	SEQUENCING.....	86
10	SERVICING INNOVATION & SUSTAINABILITY OPPORTUNITIES.....	89
10.1	Non-Drinking Water & Urban Cooling.....	89
10.2	Carbon Storage.....	89
10.3	Resource Management.....	89
11	FURTHER INVESTIGATION.....	91
12	APPENDIX A – STORMWATER MANAGEMENT STRATEGY.....	92
13	APPENDIX B – INTEGRATED WATER MANAGEMENT.....	93
14	APPENDIX C – STORMWATER MANAGEMENT INFRASTRUCTURE LIST.....	94
15	APPENDIX D – TRAFFIC & TRANSPORT REPORT.....	97
16	APPENDIX E – TRAFFIC & TRANSPORT INFRASTRUCTURE LIST.....	98

Figures

Figure 1:	Aerial Photograph (Taylors GIS).....	12
Figure 2:	Locality Plan & Proposed Precincts.....	13
Figure 3:	North-Western Growth Area north of Remembrance Drive.....	17
Figure 4:	North-Western Growth Area south of Remembrance Drive.....	18
Figure 5:	Western Growth Area north of Cuthberts Road.....	19
Figure 6:	Western Growth Area South of Ballarat-Carngham Road.....	19
Figure 7:	Western Growth Area South of Glenelg Highway.....	20
Figure 8:	Western end of Bells Road.....	21
Figure 9:	South-Eastern end of Bells Road.....	21
Figure 10:	South of Bells Road to West of Glenelg Highway.....	22
Figure 11:	East of Karingal Park Drive.....	22
Figure 12:	Potable water network extension under investigation – North-Western Growth Area.....	23
Figure 13:	Potable water network extension under investigation – Western Growth Area.....	26
Figure 14:	North-Western Growth Area, Remembrance Drive.....	30
Figure 15:	North-Western Growth Area adjacent to the Ballarat-Skipton Rail Trail reserve.....	31
Figure 16:	Western Growth Area rear of properties fronting Fawcett Road.....	32
Figure 17:	Western Growth Area East of Dyson Road.....	33
Figure 18:	Western Growth Area East of Kensington Creek.....	34
Figure 19:	Possible sewer network extensions under investigation – North-Western Growth Area.....	36
Figure 20:	Possible sewer network extensions under investigation – Western Growth Area, Precinct 1.....	39
Figure 21:	Proposed sewer network extension – Western Growth Area, Precinct 2.....	40
Figure 22:	Proposed sewer network extension – Western Growth Area, Precinct 3.....	41
Figure 23:	Existing Powercor Network.....	45
Figure 24:	Western Growth Area South of Cuthberts Road.....	46
Figure 25:	Western Growth Area North of Cuthberts Road.....	46
Figure 26:	NBN Network – North-Western Growth Area.....	49
Figure 27:	NBN Network – Western Growth Area.....	50
Figure 28:	High Pressure Reticulation Gas Main – Remembrance Drive.....	53
Figure 29:	High Pressure Reticulation Gas Main – Remembrance Drive & Lucas.....	54
Figure 30:	High Pressure Reticulation Gas Main – Cuthbert Road & Surrounding Developments.....	55
Figure 31:	High Pressure Reticulation Gas Main – Dyson Drive & Surrounding Developments.....	56
Figure 32:	High Pressure Reticulation Gas Main – Greenhalghs Road & Surrounding Developments.....	57
Figure 33:	High Pressure Reticulation Gas Main – Glenelg Highway & Surrounding Developments.....	57
Figure 34:	Topography - North-Western Growth Area.....	59
Figure 35:	Topography - Western Growth Area.....	60

Figure 36: Retarding basin locations and modelling results - North-Western Growth Area.....	62
Figure 37: Retarding basin locations and modelling results - North section of the Western Growth Area.....	63
Figure 38: Retarding basin locations and modelling results - South section of Western Growth Area.....	64
Figure 39: Waterway Corridors - North-Western Growth Area.....	65
Figure 40: Waterway Corridors - Northern section of Western Growth Area.....	66
Figure 41: Waterway Corridors - Southern section of the Western Growth Area.....	67
Figure 42: Suggested growth area changes to provide continuity.....	68
Figure 43: Proposed Public Transport Network.....	74
Figure 44: Proposed Active Transport Network.....	75
Figure 45: Future Traffic Network - Low Yield.....	78
Figure 46: Future Traffic Network - High Yield.....	79
Figure 47: Future Traffic Network - Low Yield (No Link Road).....	82
Figure 48: Future Traffic Network - High Yield (No Link Road).....	83
Figure 49: Locality Plan & Proposed Precincts.....	87

Tables

Table 1: Western and North-Western Growth Areas Major Services Summary.....	5
Table 2: Western and North-Western Growth Areas Drainage Infrastructure Summary.....	6
Table 3: Western and North-Western Growth Areas Road and Intersection Infrastructure Summary.....	7
Table 4: Indicative Lot Yield.....	14
Table 5: North-Western Growth Area, Estimated Peak Hour Water Demand, 15 dwellings per hectare.....	24
Table 6: North-Western Growth Area, Estimated Peak Hour Water Demand, 20 dwellings per hectare.....	24
Table 7: North-Western Growth Area, Central Highlands Water Pros and Cons, Water Supply.....	24
Table 8: Western Growth Area, Estimated Peak Hour Water Demand, 15 dwellings per hectare.....	26
Table 9: Western Growth Area, Estimated Peak Hour Water Demand, 20 dwellings per hectare.....	26
Table 10: Western Growth Area, Central Highlands Water Pros and Cons, Water Supply.....	27
Table 11: North-Western Growth Area, Estimated Water Main Project Costs.....	28
Table 12: Western Growth Area, Estimated Water Main Project Costs.....	28
Table 13: North-Western Growth Area, Estimated Sewer Design Flow, 15 dwellings per hectare.....	36
Table 14: North-Western Growth Area, Estimated Sewer Design Flow, 20 dwellings per hectare.....	37
Table 15: North-Western Growth Area, Central Highlands Water Pros and Cons, Sewer Reticulation.....	37
Table 16: Western Growth Area, Estimated Sewer Design Flow, 15 dwellings per hectare.....	41
Table 17: Western Growth Area, Estimated Sewer Design Flow, 20 dwellings per hectare.....	41
Table 18: Western Growth Area, Central Highlands Water Pros and Cons, Sewer Reticulation.....	42
Table 19: North-Western Growth Area, Estimated Sewer Main Project Costs.....	43
Table 20: Western Growth Area, Estimated Sewer Main Project Costs.....	43
Table 21: IWM Plan Summary.....	70
Table 22: Future Road Network – Estimated Traffic Volumes.....	77
Table 23: Future Road Network - Estimated Traffic Volumes (Without Link Road).....	81
Table 24: Road Upgrade Thresholds.....	84
Table 25: Estimated Infrastructure Project Costs Matrix.....	86
Table 26: Infrastructure Project Complexity.....	87
Table 27: Infrastructure Project Benefit to Wider Community.....	88
Table 28: Estimated Yield (20 dwellings / ha).....	88
Table 29: Estimated Cost per ha (20 dwellings / ha).....	88
Table 30: Final Precinct Sequencing (Weighted).....	88

1 EXECUTIVE SUMMARY

The purpose of this report is to present an Infrastructure Servicing Strategy for the Western and North-Western Growth Areas of Ballarat (Growth Areas). The Infrastructure Servicing Strategy will underpin the preparation of the Growth Area Framework Plan to guide the future urban development of these areas.

Taylor's has been engaged by the City of Ballarat to undertake an investigation into the location of existing services and determine their ability to service proposed development of the Growth Areas. Accordingly, this report identifies existing infrastructure and future infrastructure servicing requirements within the Growth Areas and any associated implications that need to be considered based on the information available at this time.

Utility Services

Taylor's investigation into the availability of services to the Growth Areas included a desktop and field survey. The desktop survey comprised obtaining existing service information from The City of Ballarat and relevant authorities. The investigation has identified that existing services in the growth areas are limited and / or nearing capacity.

Upgrades will be required in all asset categories. This report outlines all key upgrades required in each asset category.

High level cost estimates have been completed based on conceptual infrastructure plans. Table 1 provides a summary of each major service and its high-level cost estimate within each growth area.

Table 1: Western and North-Western Growth Areas Major Services Summary.

Service	Level of upgrade	High-level cost estimate	Comments
Drinking Water	Significant upgrades	W \$50mil NW \$27mil	In both growth areas, the existing potable water network has capacity to service the existing community but will not be able to service the growth without significant augmentation to the supply networks.
Recycled Water	Not available	Not available	No recycled water mains are available for the Western and North-Western Growth Areas.
Sewerage	Significant upgrades	W \$59mil NW \$39mil	In both growth areas, the network has capacity to service existing customer base but will not be able to service the growth without significant augmentation to the supply networks.
Electricity	Upgrades	TBC	Upgrades will be required in both growth areas.
Telecommunications	Significant upgrades	TBC	Extension of the current infrastructure within the growth areas will be required.
Gas	Impact of policy change to be considered	TBC	Due to the Victorian Government policy change, new residential homes will not be supplied with natural gas. It is yet to be confirmed whether commercial and/or industrial uses may be provided natural gas supply via extensions to the existing distribution network.

Note: The above estimates are only indicative at this stage and subject to further design, approval and funding.

In addition, where possible, this report outlines key high-level funding of infrastructure by authorities and developers, as well as items likely to be included in a Development Contributions Plan to be developed as part of the Precinct Structure Plan.

Key trunk infrastructure and shared infrastructure for sewer and potable water assets are likely to be fully or partly funded by the relevant authority, Central Highlands Water, and recouped via a customer contributions levy on a basis approved by the Essential Services Commission. The balance of sewer and potable water reticulation systems to and within estates, any temporary reticulation works, connections and agreement to bring forward construction of trunk assets are proposed to be developer funded.

In relation to funding electricity infrastructure, the relevant authority, Powercor, is likely to fund zone substations and sub-transmission network augmentation. Out-of-sequence upgrades may incur costs to developers. Developers will need to fund other electrical infrastructure to and within their developments and may be entitled to some reimbursement for high-voltage infrastructure.

It will be the Developer’s responsibility to pay for the design and installation of telecommunications infrastructure along with connection fees. The relevant authority for telecommunications, NBN Co., confirmed they would consider significant one-off investments to accommodate future growth. Note: NBN Co and other providers will normally pass on the cost of headworks for remote or out of sequence development on to the developers.

Flood Risk, Stormwater Management and Integrated Water Management

The current drainage infrastructure within the North-Western and Western Growth Areas has been extensively modified by agriculture. This history of land use and modification means that none of the vegetation along the waterways can be considered locally rare or threatened and for this reason have low geomorphic value. The addition of stormwater flows from the development of the Growth Areas is likely to exacerbate backwater ponding upstream of the existing drainage infrastructure and has the potential to cause some deepening of the waterways. Overall, establishing appropriately designed constructed waterways, wetlands, sediment basins, culverts, drainage pipelines, and outfall works that convey the runoff from the Growth Areas is the appropriate management of the increased stormwater expected as development occurs.

As part of the Stormwater Management Strategy (SWMS), a hydrologic analysis of the Growth Areas was completed to determine the post development peak runoff flow rates for various flood events. The hydrologic analysis was used to calculate the storage requirements of proposed retarding basins required to restrict the post development peak stormwater runoff rates to equivalent predeveloped peak flowrates. The analysis also determined the stormwater treatment wetland sizes to be located within the base of each retarding basin.

The SWMS analysis considered corridor requirements for the conveyance of water. It was noted that an existing waterway traverses inside and outside of the western boundary of the Western Growth Area in a number of locations. It is recommended that consideration be given to extending the Growth Area boundary to include the meandering waterway to maximise the benefits of this stormwater asset and to provide a natural buffer between the urbanised residential area and existing rural living area.

Refer to Table 2 for a summary of the drainage infrastructure required during the development of the Western and North-Western Growth Areas, together with a high-level cost estimate.

Table 2: Western and North-Western Growth Areas Drainage Infrastructure Summary.

Service	Level of upgrade	High-level cost estimate	Comments
Drainage infrastructure	Significant upgrades	W \$162.4 mil NW \$86.7 mil	The stormwater management strategy identified the following drainage infrastructure requirements for the North-Western and Western Growth Areas - 20 waterways - 31 wetland retarding basins - 1 sediment basin - 15 road crossing culverts - 12 main drainage pipelines - 5 downstream outfall grade outworks

Stormwater infrastructure providing benefit to the Growth Areas could be funded through a number of mechanisms including:

- Subdivision construction works by developers,
- Development contributions (development infrastructure levy) and

- Capital works projects by City of Ballarat and State Government agencies.

To explore the provision of sustainable water, wastewater, and stormwater services and build system resilience, whilst enhancing urban and natural landscapes and assets, the implementation of Integrated Water Management (IWM) initiatives was also considered as part of the investigation. The IWM Plan presented proposes a series of actions to achieve outcomes such as safe, secure, and affordable water supplies, healthy and valued waterways, wetlands and water bodies, healthy and valued landscapes and community values reflected in place-based planning.

The funding for IWM measures will be spread across all stakeholders such as developers for streetscapes, authorities for waterbodies, builders for rainwater tanks and property owners for water efficient appliances. The success will also rely upon aligned values and collaboration between all stakeholders.

As part of future investigations consider the need for Growling Grass Frog (GGF) habitat and the potential to co-locate GGF habitat and treatment wetlands along the drainage reserve network.

Traffic and Transport

In the preparation of the traffic and transport strategy relevant background reports, policies and strategies were reviewed and traffic data was collected in the vicinity of the Growth Areas to establish existing traffic conditions and road network characteristics. The data was analysed, and traffic modelling completed to inform the selection of a suitable road network and intersection upgrades to cater for the traffic and transport demands for both the low and high growth scenarios.

The investigation also considered public transport requirements across the Growth Areas to ensure adequate provision for the future delivery of time competitive services to private vehicles, and that services be delivered early during subdivisions to ensure resident’s transport choices are not limited as they establish new travel patterns at their new home. The report provides a series of public transport recommendations for incorporation into the infrastructure servicing strategy, including the provision for a future railway station, high-frequency routes along the transit corridors, secondary bus routes along adjacent major roads and provision for bus head start infrastructure at all signalised intersections. The traffic and transport strategy recommends the provision of fully separated pedestrian and cycling facilities on major cycling routes to attract commuter cyclists seeking direct and fast connections.

Table 3 details the road and intersection upgrades and high-level cost estimates for the traffic and transport infrastructure required within and around the growth areas to adequately address the increase in demand.

Table 3: Western and North-Western Growth Areas Road and Intersection Infrastructure Summary.

Service	Level of upgrade	High-level cost estimate	Comments
Roads and intersections	Significant upgrades	W \$275mil NW \$234mil	North-Western Growth Area upgrades - 7 intersections projects - 15 road projects approx. 25km Western Growth Area upgrades - 5 intersections projects - 20 road projects approx. 28km

Traffic & Transport infrastructure in the Growth Areas could be funded through a number of mechanisms including:

- Subdivision construction works by developers,
- Development contributions (development infrastructure levy) and
- Capital works projects by City of Ballarat and state government agencies.

The relevant Ministerial Direction stipulates the traffic and transport infrastructure that can be funded through a Development Contributions Plan (DCP), including the acquisition of land for roads, public transport corridors; construction of roads, including bicycle and foot paths, and traffic management and control devices; and construction of public transport infrastructure, including fixed rail infrastructure, railway stations, bus stops and tram stops.

The traffic and transport strategy also provides an analysis of the development capacity and traffic impacts to the Growth Areas if a Link Road extension to Bells Road cannot be delivered. Notable observations in the missing Link Road analysis included that it would place a greater reliance on alternative north-south road connections and linking routes. The report also determined development thresholds (number of developed lots) at which point critical roads must be upgraded to provide additional mid-block capacity.

The upgrade requirements of Remembrance Drive, particularly east of the Link Road are a major challenge because of the heritage significance of the Avenue of Honour. It is recommended that in preparing the Framework Plan, traffic diversion / incentive measures are considered as alternatives.

Noting that the traffic and transport analysis and conclusions in the report are drawn from a conventional “predict and provide” approach to modelling. The development of these growth areas is a long-term prospect, and likely represents a land supply in excess of 30 years. This long-term development horizon suggests likely changes in household trip generation, and ongoing reductions in car trips. Subject to appropriate investments to achieve Council’s aspirations for increased active and public transport use, there will naturally be reduced reliance on private vehicle trips, and less requirements for supporting road infrastructure.

Additionally, there are both “push” and “pull” factors that influence travel mode choice. Introduction of improved sustainable transport services and facilities “pull” more trips by improving the relative attractiveness of these modes. “Push” factors include elements like traffic congestion or parking pricing that offer a disincentive to private vehicle trips and are an important travel demand management tool.

It should be noted that Golder Plains Shire Council is currently considering a planning application for a 3,000-lot development in Cambrian Hill. This development has the potential to impact traffic volumes within the Growth Areas, particularly on the Link Road. The potential impacts of this development were not considered in the preparation of the Traffic and Transport Report.

Sequencing

Due to the size of the Ballarat North-Western and Western Growth Areas, the two areas were divided up into five precincts. The rationale behind the precincts was to get the two Growth Areas back to a scalable size for development, with major roads being the key divider between the precincts.

Development across the five precincts will need to be rolled out in a logical order or sequence. A matrix method was used to consider and rank the anticipated sequencing of the precincts based on available estimated project costs, project complexity, benefit to the broader Community, estimated lot yield and estimated cost per lot. Advice from Authorities on the likely sequencing for their infrastructure was also considered as part of the project complexity.

The estimated infrastructure project costs, yield and cost per ha metrics are based on engineering principles. The infrastructure project complexity and benefit to the wider community, while still founded on engineering principles, cannot be confirmed until further design is undertaken. The anticipated sequencing therefore could be changed based on several factors including appropriate interim strategies, infrastructure contributions plan project funding, and landowner/developer cooperation. Refer Figure 2: Locality Plan & Proposed Precincts.

The sequencing assessment determined the following order:

1. The central portion of the Western Growth Area (Precinct 2),
2. The southern portion of the Western Growth Area (Precinct 1),
3. The northern portion of the Western Growth Area (Precinct 3),

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



4. The southern portion of the North-Western Growth Area (Precinct 4),
5. The northern portion of the North-Western Growth Area (Precinct 5).

Alternate sequencing may be considered; however it is subject to, and limited to, the developer's support of interim measures. Examples of these interim measures are:

- temporary alternate stormwater and water quality management measures, or
- limiting precinct densities so they would not trigger the requirements for major external road upgrades.

However, any interim measures that would not require external road upgrades would still be required to provide a proportional contribution for the ultimate upgrades to ensure appropriate and sustainable provisions for the new and broader community.

2 INTRODUCTION

Ballarat's population is expected to grow to 170,000 by 2041, which represents an increase of 57,947 persons requiring approximately 29,000 dwellings, or 1,450 dwellings per year across the municipality. DELWP Planning Practice Note 90 requires that Local Authorities plan to accommodate projected population growth over at least a 15-year period and provide clear direction on locations where growth should occur.

In February 2022 the City of Ballarat committed to preparing a Growth Area Framework Plan for the Western and North-Western Growth Areas. The purpose of preparing a Growth Area Framework Plan is to identify any high-level infrastructure requirements, and to determine a logical sequence for future Precinct Structure Plan preparation in the areas.

The purpose of this report is to develop an Infrastructure Servicing Strategy informed by technical investigations and consultation with Utility Service Providers. This Infrastructure Servicing Strategy will underpin the preparation of the Growth Area Framework Plan.

This report first provides details on the site and its location, the proposed growth options, and details of the Utility Service Providers whose information was sourced and analysed, along with some limitations and assumptions.

The main body of the report "Findings and Discussions" consists of eight sections providing information on the:

- Water Supply,
- Sewerage,
- Electricity,
- Telecommunications,
- Gas,
- Stormwater Management,
- Integrated Water Management, and
- Traffic and Transport.

Based on the findings and discussions on each service listed above, sections 9, 10, and 11 provide information on the potential future sequencing and servicing innovation and sustainability opportunities, concluding with recommendations on further investigations to aid in developing the Growth Area Framework Plan.

3 COMMISSION

Taylors has been engaged by the City of Ballarat to undertake an investigation into the location of existing services and determine their ability to service proposed development of the North-Western and Western Growth Areas. Accordingly, the objective of this report is to identify existing and future infrastructure servicing requirements within the precincts and to identify any associated implications that need to be considered during the preparation of the Growth Area Framework Plan.

This assessment will enable the City of Ballarat and relevant authorities to plan the future urban structure with greater certainty and identify infrastructure which will be required and should be encouraged within the study areas to serve the needs of the local community.

This report includes:

- The site description and existing conditions,
- The provision of a servicing plan,
- Identification of all current service and utility infrastructure,
- Identification of the current capacity of all service and utility infrastructure,
- Identification of key opportunities and constraints for the provision of all future service and utility infrastructure,
- Assessment of opportunities for innovative approaches to servicing, based on projected land use,
- Identification of specifications and notional routes through the PSP areas for future service and utility infrastructure,
- Investigations on the access to services and recommendations as to how provision of these services can be achieved in the short and long-term,
- Considerations on expected funding arrangements (based on the views of relevant servicing agencies and any relevant principles established by the Essential Services Commission),
- Advice on probable staging (relative to service infrastructure location and capacity),
- Provision of a plan that will identify Integrated Water Management opportunities and Water Sensitive Urban Design requirements to meet Best Practice Environmental Management (BPEM) pollution reduction requirements,
- Anticipation of location and approximate cost of trunk infrastructure,
- Considerations of the future development of the area, e.g. how much land or size of easement is required for particular items of key infrastructure,
- Recommendations to assist in the preparation of the Growth Area Framework Plan and PSP,
- Issues requiring further investigation at each stage of the development process following initialization of the Framework Plan or PSP, and
- Supporting evidence of the above investigations and advice using maps, plans and documentation, particularly regarding the location of all existing and future service and utility infrastructure and its staging.

4 SITE DESCRIPTION

The Ballarat North-Western and Western Growth Areas are estimated to have a Net Developable Area of 500 hectares and 896 hectares respectively. An aerial photograph is provided in Figure 1 and a locality plan is provided in Figure 2.

The North-Western Growth Area is bounded by the rail line to the north, Draffins Road and the rear of properties fronting Whites Road to the west, Cuthberts Road to the south, Ballarat Skipton Rail Trail / Alfredton West, Remembrance Drive halfway to the north and Dowling Road to the top east.

The Western Growth Area is bounded by Ballarat Skipton Rail Trail to the top west, Cuthberts Road / Alfredton West to the north-east, Dyson Drive / Carngham Road and Greenhalghs to the east, Bonshaw Creek to the south-east, Bells Road to the south, the rear of Hayes Drive properties to the west and Ballarat-Carngham Road mid-way.



Figure 1: Aerial Photograph (Taylors GIS).

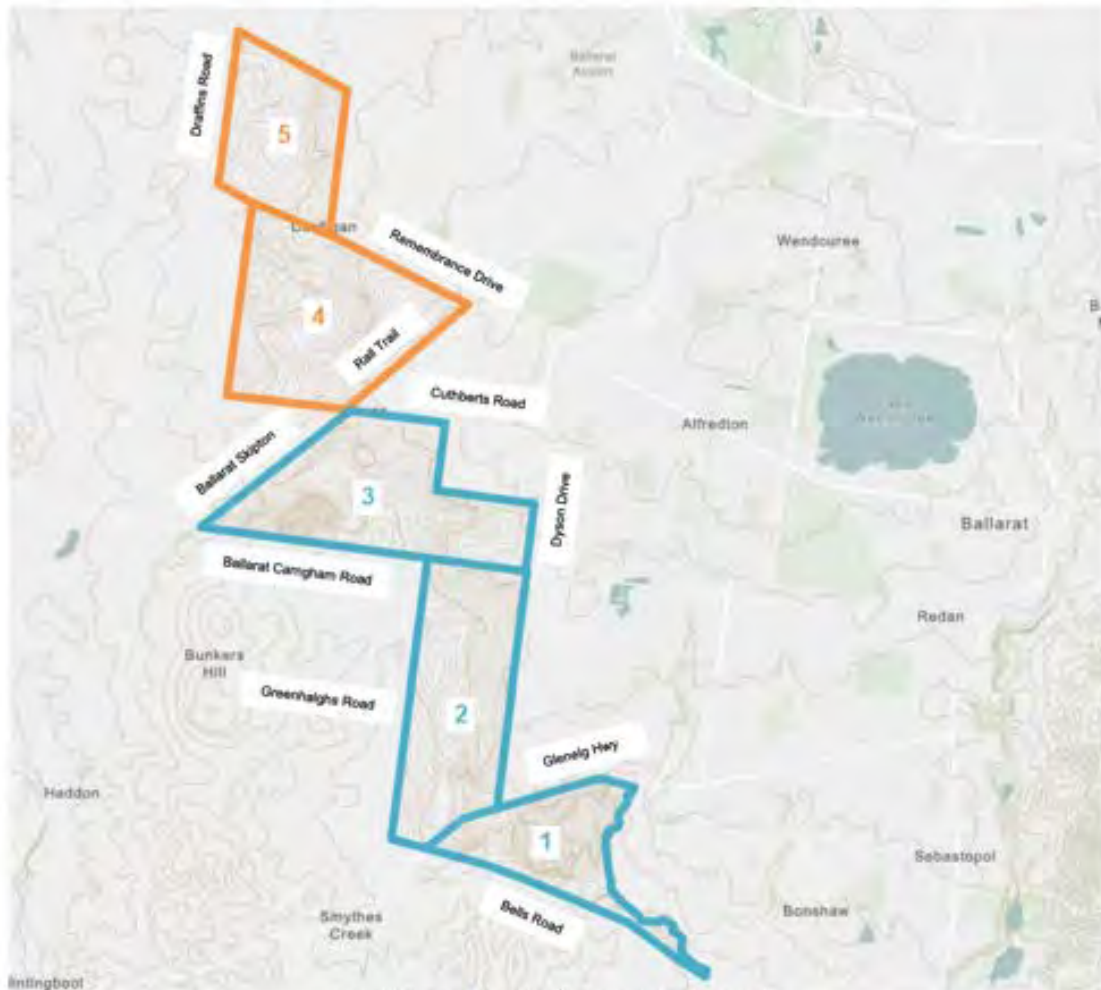


Figure 2: Locality Plan & Proposed Precincts.

5 PROPOSAL

This report has considered both a base case growth option of 15 dwellings per Net Developable Hectare (NDHA) and a higher growth option in-line with the VPA PSP Guidelines 2.0 across the Ballarat Western and North-Western Growth Areas, as specified in the project brief.

The baseline density of 15 dwellings per hectare NDA has the capacity to yield more than 20,000 lots.

The VPA PSP Guidelines 2.0 have the following density targets:

- An average of 20 dwellings or more per NDHA across the entire PSP area.
- An average of 30 dwellings or more per Net Developable Hectare (NDHA) within:
 - 400m walkable catchment of an activity centre or train station and
 - 50m of open space (both credited and encumbered open space), boulevards and major public transport routes, including but not limited to the Principal Public Transport Network (PPTN) or similar.

The exact number of dwellings achieved in the Ballarat Western and North-Western Growth Areas under the VPA PSP guidelines will not be known until the PSP is prepared, however, for the purpose of this exercise, based on targets in the VPA guidelines this report assumes a maximum of 20 dwellings per developable hectare, refer Table 4. In addition, based on Ballarat West PSP this report assumes 4% of the net developable area is for non-residential / commercial.

Table 4: Indicative Lot Yield.

Growth Area	NDHA	Non-Residential NDHA (4%)	Residential NDHA	Indicative Lot Yield 15 dwellings / ha	Indicative Lot Yield 20 dwellings / ha
North-Western	500 ha	20 ha	480 ha	7,200	9,600
Western	896 ha	36 ha	860 ha	12,902	17,203
Totals	1396 ha	56 ha	1340 ha	20,102	26,803

6 INVESTIGATION:

Our investigation into the availability of services to the above-mentioned development included a desktop and field survey. The desktop survey comprised obtaining existing service information from the following sources:

- Ballarat City Council
- Central Highlands Water Authority
- National Broadband Network Co (NBN)
- AusNet Gas Services
- Powercor
- Department of Transport
- Glenelg Hopkins Catchment Management Authority
- Corangamite Catchment Management Authority
- Stantec Australia
- NearMap.com
- Site Visit

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



7 LIMITATIONS AND ASSUMPTIONS

This investigation has been scoped and undertaken as a desktop study to provide preliminary advice on the anticipated servicing works at the proposed development site. There are limitations on the level of detail that can be given due to the nature of this review. Desktop studies such as this are reliant on information that is made available from service authorities, with an assumption that it provides an accurate representation of existing site conditions.

8 SERVICING STRATEGY

8.1 WATER SUPPLY – Potable Water

Note: Any proposed potable water infrastructure solutions or projects relevant to the growth areas that are mentioned in this report are conceptual at this stage and will be subject to further design, funding and approvals before commitment can be made. Central Highlands Water reserves the right to change and amend any solutions at its discretion.

8.1.1 Existing Services, North-Western Growth Area

The responsible authority for potable water supply to the North-Western Growth Area is Central Highlands Water. Central Highlands Water provided information on the location of existing potable water main infrastructure. The following paragraphs and figures detail the locations, size and construction material of the existing mains.

There is an existing 200mm diameter asbestos cement main on the southern side of Remembrance Drive (Ballarat-Burrumbeet Road), and a 75mm PVC / 100mm diameter asbestos cement main on the eastern side of Dowling Road, refer to Figure 3.

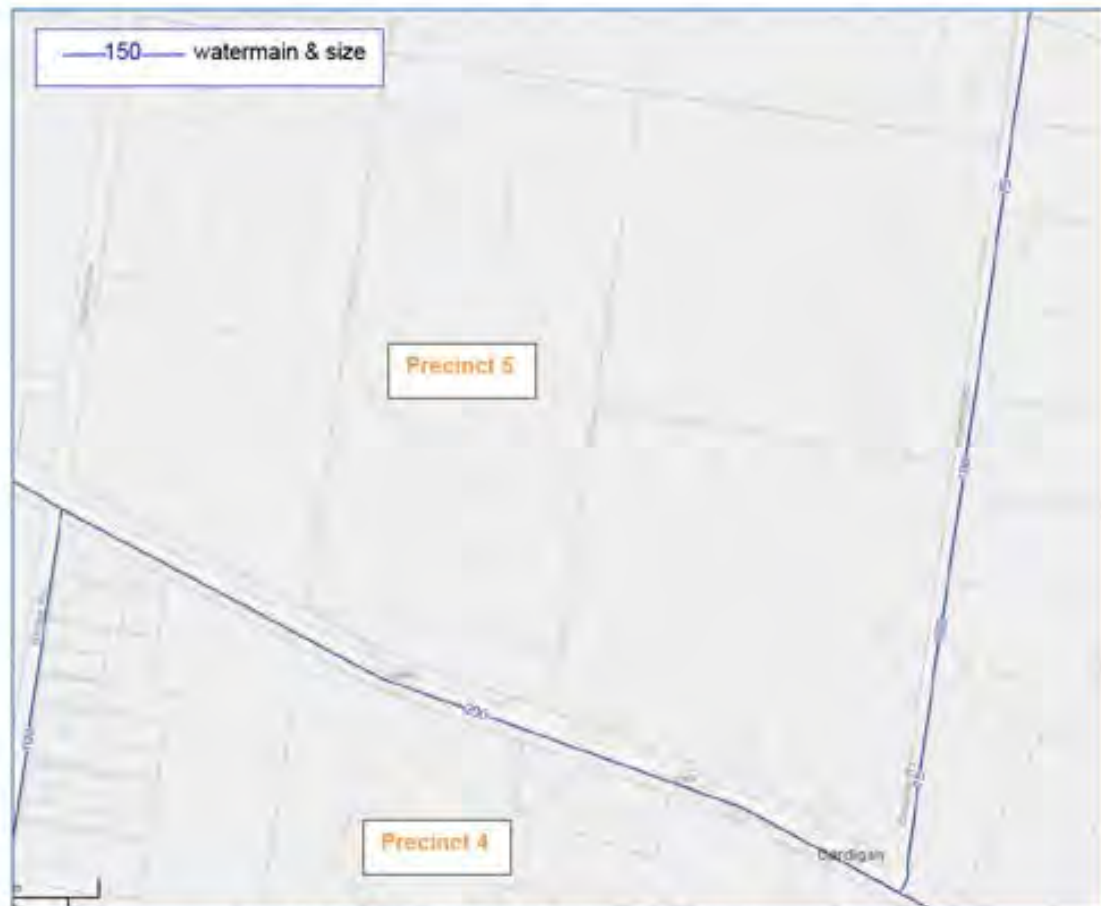


Figure 3: North-Western Growth Area north of Remembrance Drive.

Additionally, there are 100mm / 150mm diameter PVC reticulation assets within the Lucas Estate to the south-east; however, they are separated from the North-Western Growth Area by the Ballarat-Skipton Rail Trail reserve, refer to Figure 4.



Figure 4: North-Western Growth Area south of Remembrance Drive.

There are no recycled water mains available in the vicinity of the North-Western Growth Area.

Central Highlands Water has advised that their existing potable water network has capacity to service the existing community but will not be able to service the North-Western Growth Area without significant augmentation to the supply network.

8.1.2 Existing Services, Western Growth Area

The responsible authority for potable water supply to the Western Growth Area is Central Highlands Water. Central Highlands Water provided information on the location of existing potable water main infrastructure. The following paragraphs and figures detail the locations, size and construction material of the mains.

There is a 225mm diameter PVC main on the north side of Cuthberts Road in the north-east corner of the Western Growth Area and a 225mm diameter PVC main on the western side of Lakeland Drive continuing through the intersection with Cuthberts Road approximately midway along the northern boundary of the Western Growth Area, refer to Figure 5.



Figure 5: Western Growth Area north of Cuthberts Road.

There is a 225mm diameter asbestos cement main on the south side of Ballarat-Carngham Road, between Dyson Road and Sago Hill Road, and a 100mm diameter PVC main continues to the west along Ballarat-Carngham Road from Sago Hill Road for a length of approximately 500 metres. A 225mm diameter PVC main is located on the eastern side of Dyson Road along the eastern boundary of the upper Western Growth Area, refer to Figure 6.



Figure 6: Western Growth Area South of Ballarat-Carngham Road.

There is a 375mm diameter ductile iron, cement lined main and a 150mm diameter asbestos cement main on the southern side of Glenelg Highway between Kensington Creek and Bells Road, refer to Figure 7.

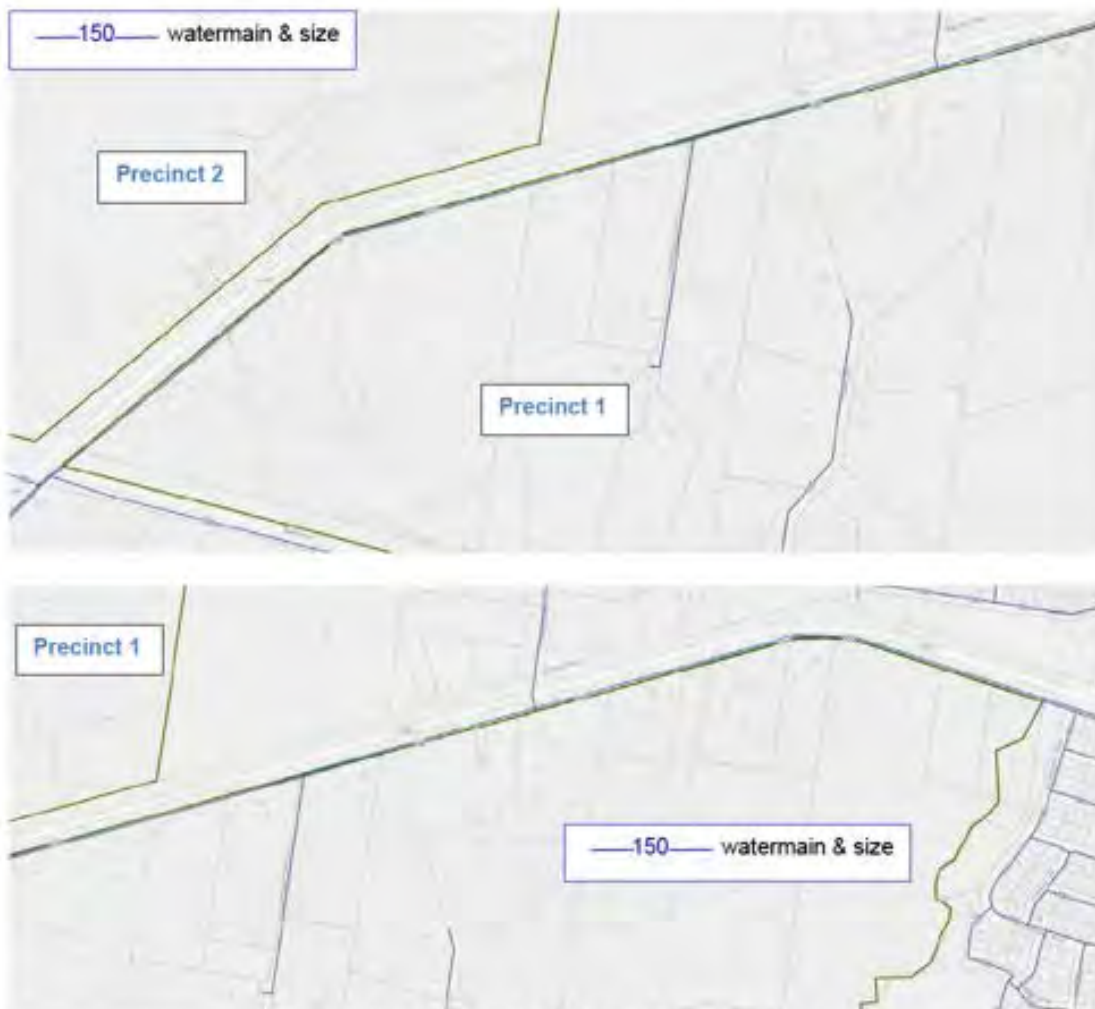


Figure 7: Western Growth Area South of Glenelg Highway.

There is a 150mm diameter asbestos cement main on the south side of Bells Road between Glenelg Highway and Westgate Road. The main reduces to a 100mm diameter asbestos cement main between Westgate Road and Doble Road and then increases back to 150mm diameter PVC main between Doble Road and Cherry Flat Road. There is a 150mm diameter asbestos cement main on the western side of Cherry Flat Road, refer to Figure 8 and Figure 9.



Figure 8: Western end of Bells Road.



Figure 9: South-Eastern end of Bells Road.

The Bells Road main continues the southern side of the road reserve to the west of Glenelg Highway, however it is only an 80mm diameter PVC main, refer to Figure 10.



Figure 10: South of Bells Road to west of Glenelg Highway.

Additionally, there is an 80mm diameter PVC main on the eastern side of Karingal Park Drive and a 125mm diameter polyethylene main on the western side of Lewis Court, refer to Figure 11.



Figure 11: East of Karingal Park Drive.

There are no recycled water mains available in the vicinity of the Western Growth Area.

Central Highlands Water has advised that their existing potable water network has capacity to service the existing community but will not be able to service the Western Growth Area without significant augmentation to the supply network.

8.1.3 Future Servicing Arrangements, North-Western Growth Area

Note: Any proposed potable water infrastructure solutions or projects relevant to the growth areas that are mentioned in this report are conceptual at this stage and will be subject to further design, funding and approvals before commitment can be made. Central Highlands Water reserves the right to change and amend any solutions at its discretion.

Central Highlands Water is currently investigating significant upgrades to the potable water supply network by augmenting and extending the existing network to and through the North-Western Growth Area. Significant upgrades to the existing network are required to provide adequate potable water supply to the Ballarat North Growth Area including a large diameter trunk main to the north of the city.

The North-Western Growth Area will also benefit from other upgrades currently being considered, including:

- A large trunk main from Ballarat North to Remembrance Drive.
- A trunk main along Remembrance Drive west of the Ballarat Ring Road extending to Crown and Sceptre Road.

The network will also require additional upgrades that are likely to be developer delivered, including:

- Potable water main in Dowling Road and Draffins Road, with interconnection via Blind Creek Rd.
- Potable water main along Cuthberts Road, Smarts Hill Road and Finchs Road.

Refer to Figure 12 for indicative locations. Noting these are conceptual in nature and will be subject to detailed design and approval.



Figure 12: Potable water network extension under investigation – North-Western Growth Area.

All water supply projects shown in Figure 12 above are conceptual and subject to change.

The smaller reticulation assets within the study area are anticipated to be delivered by the developers of these areas in a logical sequence to be determined at the time.

The potential potable water supply requirements of the growth area have been estimated, refer to Table 5 and Table 6. Noting, these estimates are indicative only and sizing and performance requirements will be confirmed through detailed design and approval process.

Table 5: North-Western Growth Area, Estimated Peak Hour Water Demand, 15 dwellings per hectare.

Precinct	Approx. NDHA	Non-Residential NDHA (4%)	Residential NDHA	Estimate Lot Yield 15 dw / ha	Estimated Peak Hour Demand
4	321 ha	13 ha	308 ha	4,620	221-265 L/s
5	179 ha	7 ha	172 ha	2,580	123-148 L/s

Table 6: North-Western Growth Area, Estimated Peak Hour Water Demand, 20 dwellings per hectare.

Precinct	Approx. NDHA	Non-Residential NDHA (4%)	Residential NDHA	Estimate Lot Yield 20 dw / ha	Estimated Peak Hour Demand
4	321 ha	13 ha	308 ha	6,160	259-311 L/s
5	179 ha	7 ha	172 ha	3,440	145-174 L/s

Central Highlands Water reviewed and commented on proposed staging precincts within the North-Western Growth Area. This growth area has been considered as two precincts divided by Remembrance Drive into roughly northern (Precinct 5) and southern (Precinct 4) halves, refer to Table 7.

Table 7: North-Western Growth Area, Central Highlands Water Pros and Cons, Water Supply.

Precinct	Potential Works	Pros	Cons
4	Complete renewal/upgrade of Sturt Remembrance Drive, Ballarat West Ring Road upgrade, works downstream of Vic Park valving, Invermay upgrade, redundancy works and Ballarat West UGZ works.	<ul style="list-style-type: none"> Small number of landowners. 	<ul style="list-style-type: none"> Requires works in the Western Growth Area. Multiple major water supply projects required. Risk of impact on existing network and customer base due to topography. Interim solution may require operational controls to manage. Potential influence from all specific existing customer and licence areas due to heavy water usage.
5	Complete renewal/upgrade of Sturt Remembrance Drive, Ballarat West Ring Road upgrade, works downstream of Vic Park valving, Invermay upgrade, redundancy works and Ballarat West UGZ works.	<ul style="list-style-type: none"> Potential alternative servicing options via Airport Road if sequenced ahead of Precinct 4. Small number of landowners. 	<ul style="list-style-type: none"> Requires works in the Western Growth Area. Multiple major water supply projects required. Risk of impact on existing network and customer base due to topography. Interim solution may require operational controls to manage. Potential influence from all specific existing customer and licence areas due to heavy water usage.

8.1.4 Future Servicing Arrangements, Western Growth Area

Note: Any proposed potable water infrastructure solutions or projects relevant to the growth areas that are mentioned in this report are conceptual at this stage and will be subject to further design, funding and approvals before commitment can be made. Central Highlands Water reserves the right to change and amend any solutions at its discretion.

Central Highlands Water is currently investigating significant upgrades of the potable water supply network by augmenting and extending the existing network to and through the Western Growth Area. Significant upgrades to the existing water supply network are required to provide adequate potable water supply to the Ballarat North Growth Area including a major trunk main between the White Swan Reservoir and Ballarat North. The Western Growth Area will benefit from these upgrades but will also require additional network upgrades.

The North area of the Western Growth Area will also benefit from other upgrades currently being considered, including:

- Large trunk main in Eyre Street between Drummond Street South and Armstrong Street South and in York Street, Larter Street and Wilsons Street between Main Road and Joseph Street.
- Trunk main in Remembrance Drive (Sturt Street) between the Ballarat Ring Road and Learmonth Street.
- Trunk main in Learmonth Street between Remembrance Drive and Whitelaw Avenue.
- Trunk mains in Latrobe Street between Learmonth Street and Pleasant Street South and Pleasant Street South to Eyre Street.
- Trunk main in Dyson Drive between Remembrance Drive and Ballarat – Carngham Road.
- Trunk main in Glenelg Highway between Tait Street and Kensington Boulevard.

The supply network will also require additional upgrades that are likely to be developer delivered, including:

- Potable water main running parallel to the Ballarat Skipton Rail Trail between Cuthberts Road and Ballarat – Carngham Road.
- Potable water main in Ballarat – Carngham Road between Dyson Drive and Sago Hill Road.
- Potable water main in Finchs Road north of Ballarat-Carngham Road with interconnecting mains along future development access roads.
- Potable water main along the western boundary of the Western Growth Area between Ballarat – Carngham Road and Bells Road.
- Potable water main along the future Dyson Road extension south of Ballarat – Carngham Road for a distance of approximately 800 metres.
- Potable water main in Glenelg Highway from Kensington Boulevard to Bells Road.
- Potable water main in Bells Road between Glenelg Highway and Cherry Flat Road.

Refer to Figure 13 for indicative locations. Noting these are conceptual in nature and will be subject to detailed design & approval.

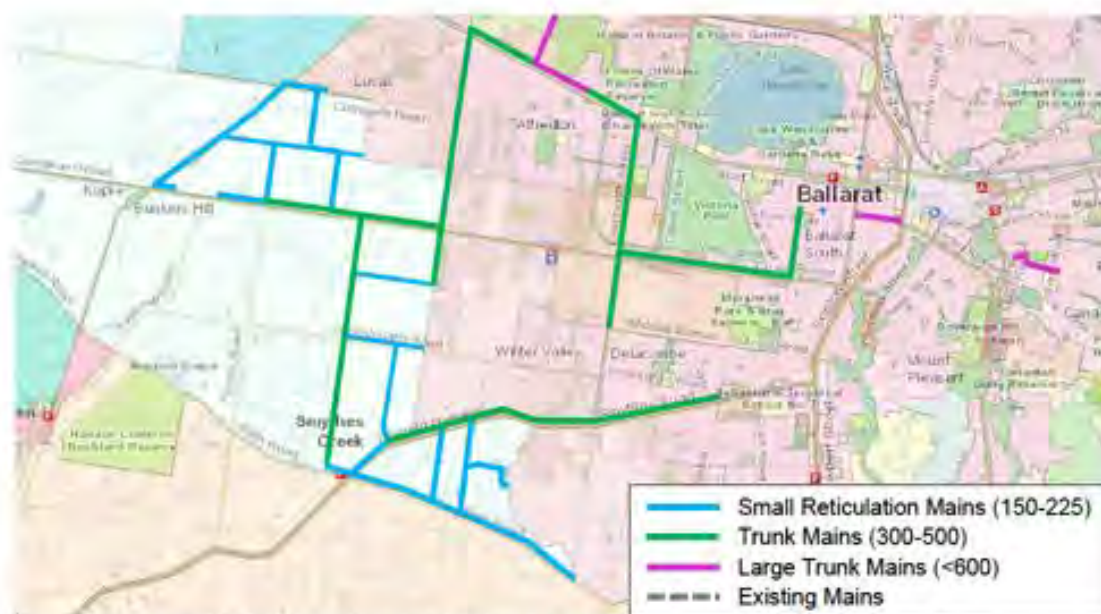


Figure 13: Potable water network extension under investigation – Western Growth Area.

All water supply projects shown in Figure 13 above are conceptual and subject to change.

The smaller reticulation assets within the study area are anticipated to be delivered by the developers of these areas in a logical sequence to be determined at the time.

The potential potable water supply requirements of the growth area have been estimated, refer to Table 8 and Table 9. Noting, these estimates are indicative only and sizing and performance requirements will be confirmed through detailed design and approval process.

Table 8: Western Growth Area, Estimated Peak Hour Water Demand, 15 dwellings per hectare.

Precinct	Approx. NDHA	Non-Residential NDHA (4%)	Residential NDHA	Estimate Lot Yield 15 dw / ha	Estimated Peak Hour Demand
1	199 ha	8 ha	191 ha	2,865	137-164 L/s
2	333 ha	13 ha	320 ha	4,800	229-275 L/s
3	364 ha	15 ha	349 ha	5,235	251-301 L/s

Table 9: Western Growth Area, Estimated Peak Hour Water Demand, 20 dwellings per hectare.

Precinct	Approx. NDHA	Non-Residential NDHA (4%)	Residential NDHA	Estimate Lot Yield 20 dw / ha	Estimated Peak Hour Demand
1	199 ha	8 ha	191 ha	3,820	160-193 L/s
2	333 ha	13 ha	320 ha	6,400	269-323 L/s
3	364 ha	15 ha	349 ha	6,980	294-353 L/s

Central Highlands Water reviewed and commented on proposed staging precincts within the North-Western Growth Area. This growth area has been considered as three precincts divided by Glenelg Highway and Ballarat-Carnham Road, refer to Table 10.

Table 10: Western Growth Area, Central Highlands Water Pros and Cons, Water Supply.

Precinct	Potential Works	Pros	Cons
1	Minor network upgrades, supporting future redundancy and Ballarat West UGZ works.	<ul style="list-style-type: none"> • Smallest Area (Lots). • South of Victoria valving flow split. • Lowest Topography. 	<ul style="list-style-type: none"> • Reduced service levels for south-west area (Smythesdale, Haddon, etc...) • Works on Glenelg Hwy. • Requires completion of Ballarat West UGZ works.
2	Minor network upgrades, supporting future redundancy and Ballarat West UGZ works.	<ul style="list-style-type: none"> • Smallest Area (Lots). • South of Victoria valving flow split. • Lowest Topography. 	<ul style="list-style-type: none"> • Reduced service levels for south-west area (Smythesdale, Haddon, etc...) • Works on Glenelg Hwy. • Requires completion of Ballarat West UGZ works. • Additional servicing requirements for northern half of precinct. • Large service area.
3	Extension of water main along Ballarat West Ring Road to Dyson Drive to protect Insignia Estate and Ballarat West UGZ works.	<ul style="list-style-type: none"> • Doesn't rely as heavily on Ring Road extension. • Uses Wilson Street / Vic Park system. • Potential initial servicing ahead of Precinct 4 & 5. 	<ul style="list-style-type: none"> • Reduced service levels for south-west area (Smythesdale, Haddon, etc...) • Requires completion of Ballarat West UGZ works. • Potentially affects existing network and customer base. • Large service area.

8.1.5 Expected Funding Arrangements

The Essential Services Commission (ESC) specifies how water businesses levy new customer contributions (NCC). Central Highlands Water applies this levy on a per lot basis. The levies collected by Central Highlands Water are utilised to fund trunk infrastructure and shared asset projects which are essential to service areas of new development. The current NCC charge for the 2022/23 financial year is \$1504.34 for each allotment.

Funding arrangements can vary depending on the nature of the work and stakeholders involved, however Central Highlands Water is typically responsible for funding trunk infrastructure and shared assets. Developers are responsible for providing reticulation assets and temporary reticulation works and the cost to connect the development to the Central Highlands Water network. Developers are also responsible for the financing costs associated with bringing forward the provision of shared assets and temporary shared works that Central Highlands Water had programmed to be constructed at a future date. The ESC guidelines determine that Central Highlands Water may levy a charge that will cover the financing costs associated with bringing forward the provision of Shared Assets. This is referred to as an Incremental Financing Cost charge.

8.1.6 Estimated Project Costs, North-Western Growth Area

High level construction costs for the water main projects identified in section 8.1.3 have been estimated by Taylors, refer to Table 11. These costs include allowance for pipe construction, contingency, survey & design, traffic management and contractor overheads.

Table 11: North-Western Growth Area, Estimated Water Main Project Costs.

Project Location	* Indicative Pipe Diameter	Pipe Length	Estimated Cost
Ballarat West Ring Road (Pre 4 & 5)	750mm	5,500m	\$16.58M
Remembrance Drive (Pre 4 & 5)	300-500mm	2,900m	\$2.35M
Finchs Road (Precinct 4)	225mm	1,950m	\$1.40M
Smarts Hill Road (Precinct 4)	225mm	1,400m	\$0.90M
Cuthberts Road (Precinct 4)	225mm	1,400m	\$1.00M
Dowling Road (Precinct 5)	225mm	1,125m	\$0.80M
Draffins Road (Precinct 5)	225mm	800m	\$0.57M
		Total	\$23.60M

Note: * Pipe diameters used here are indicative for the purpose of high-level cost estimates.

8.1.7 Estimated Project Costs, Western Growth Area

High level construction costs for the water main projects identified in section 8.1.4 have been estimated by Taylors, refer to Table 12. These costs include allowance for pipe construction, contingency, survey & design, traffic management and contractor overheads.

Table 12: Western Growth Area, Estimated Water Main Project Costs.

Project Location	* Indicative Pipe Diameter	Pipe Length	Estimated Cost
Eyre Street (Pre 1, 2 & 3)	750mm	780m	\$2.35M
York, Larter & Wilsons Street (Pre 1, 2 & 3)	750mm	870m	\$2.62M
Sturt & Learmonth Street (Pre 1, 2 & 3)	300-500-600mm	4,480m	\$8.53M
Dyson Drive (Pre 1, 2 & 3)	450-500mm	2,270m	\$5.14M
Latrobe & Pleasant Street Sth (Pre 1, 2 & 3)	450mm	3,300m	\$5.97M
Ballarat – Carngham Road (Precinct 2 & 3)	300-375mm	2,400m	\$2.98M
Gleneilg Highway (Precinct 1 & 2)	300mm	4,700m	\$5.67M
Dyson Street Extension (Precinct 2)	300mm	840m	\$0.85M
North-South Connector (Precinct 2)	300mm	3,500m	\$3.52M
Skipton Rail Trail Interface Road (Precinct 3)	225mm	2,500m	\$1.68M
Cuthberts Road (Precinct 3)	225mm	580m	\$0.45M
Finchs Road (Precinct 3)	225mm	810m	\$0.63M
Lakeland Drive Extension (Precinct 3)	225mm	825m	\$0.55M
North-South Connector (Precinct 3)	225mm	810m	\$0.54M
Bells Road (Precinct 2)	225mm	350m	\$0.27M
Bells Road (Precinct 1)	225mm	3,400m	\$2.65M
Gleneilg Highway (Precinct 1 & 2)	225mm	685m	\$0.55M
North-South Connector East (Precinct 1)	225mm	1,050m	\$0.73M
North-South Connector West (Precinct 1)	225mm	1,300m	\$0.90M
East-West Connector (Precinct 1)	225mm	1,050m	\$0.77M
East-West Connector (Precinct 3)	225mm	360m	\$0.25M
		Total	\$47.60M

Note: * Pipe diameters used here are indicative for the purpose of high-level cost estimates.

8.1.8 Summary of Outcomes

- Central Highlands Water owns and maintains a significant potable water supply network in Ballarat including existing infrastructure in the vicinity of the North-Western and Western Growth Areas.
- Central Highlands Water has advised that its existing potable water network has capacity to service the existing community but will not be able to service the North-Western and Western Growth Areas without significant augmentation to the supply network.
- Significant network upgrade projects are required to service the North-Western and Western Growth Areas, however additional works including completion of the Ballarat West PSP servicing works and Central Highlands Water network redundancy works are required.
- Central Highlands Water may reimburse Developers for construction of shared assets using funds collected from new customer contributions. Where shared assets are proposed to be constructed by Developers prior to their scheduled delivery, then Developers may be liable for incremental finance costs.
- Interim solutions will be considered and assessed by Central Highlands Water on a case-by-case basis. Central Highlands Water has already advised that the existing potable water supply network is at capacity and network upgrades are required to supply the North-Western and Western Growth Areas. Any interim solutions may still require operational controls or network augmentations to limit impact to existing customers.

8.2 SEWERAGE

Note: Any proposed sewerage infrastructure solutions or projects relevant to the growth areas that are mentioned in this report are conceptual at this stage and will be subject to further design, funding and approvals before commitment can be made. Central Highlands Water reserves the right to change and amend any solutions at its discretion.

8.2.1 Existing Services, North-Western Growth Area

The responsible authority for sewer reticulation to the North-Western Growth Area is Central Highlands Water.

Central Highlands Water has confirmed that there are no reticulation sewer assets within the North-Western Growth Area.

There are existing sewer assets surrounding the North-Western Growth Area, including a 125mm diameter polyethylene pressure sewer on the northern side of Remembrance Drive (Ballarat-Burumbeet Road) at the very eastern edge of the growth area and 150mm and 225mm diameter PVC mains have been constructed to service the Lucas Estate to the south-east however they are separated from the North-Western Growth Area by the Ballarat-Skipton Rail Trail reserve, refer to Figure 14.



Figure 14: North-Western Growth Area, Remembrance Drive.

Central Highlands Water has advised that its existing sewer network has capacity to service the existing community but will not be able to service the North-Western Growth Area without significant augmentation to the supply network.

8.2.2 Existing Services, Western Growth Area

The responsible authority for sewer reticulation to the Western Growth Area is Central Highlands Water.

Central Highlands Water has confirmed that there is a 450mm diameter PVC sewer in the north-west corner of the Western Growth Area adjacent to the Ballarat-Skipton Rail Trail reserve, and discharges into a sewer pump station. There is a 400mm diameter polyethylene rising main that follows the same alignment as the 450mm diameter gravity sewer. This infrastructure predominantly services the Lucas Estate, refer to Figure 15.



Figure 15: North-Western Growth Area adjacent to the Ballarat-Skipton Rail Trail reserve.

There are some sewer assets surrounding the Western Growth Area, including a 375mm diameter PVC sewer on the north side of Cuthberts Road and continuation of the 400mm diameter polyethylene rising main and 225mm/300mm diameter PVC sewer at the rear of properties fronting Fawcett Road adjacent to the north-east boundary of the Western Growth Area, refer to Figure 16. A sewer pump station is located at the end of Fawcett Road (Grange SPS) and sends sewerage flows east to Cuzens Road, however it is fully and solely committed to servicing this estate and has no capacity to service the Western Growth Area.



Figure 16: Western Growth Area rear of properties fronting Fawcett Road.

There are 150mm and 225mm diameter PVC sewers in Dyson Road that services the Chase Estate on the eastern side of Dyson Road. These assets continue south of Ballarat-Carnham Road and service the Conroy's Green and Winter Valley Estates, refer to Figure 17.

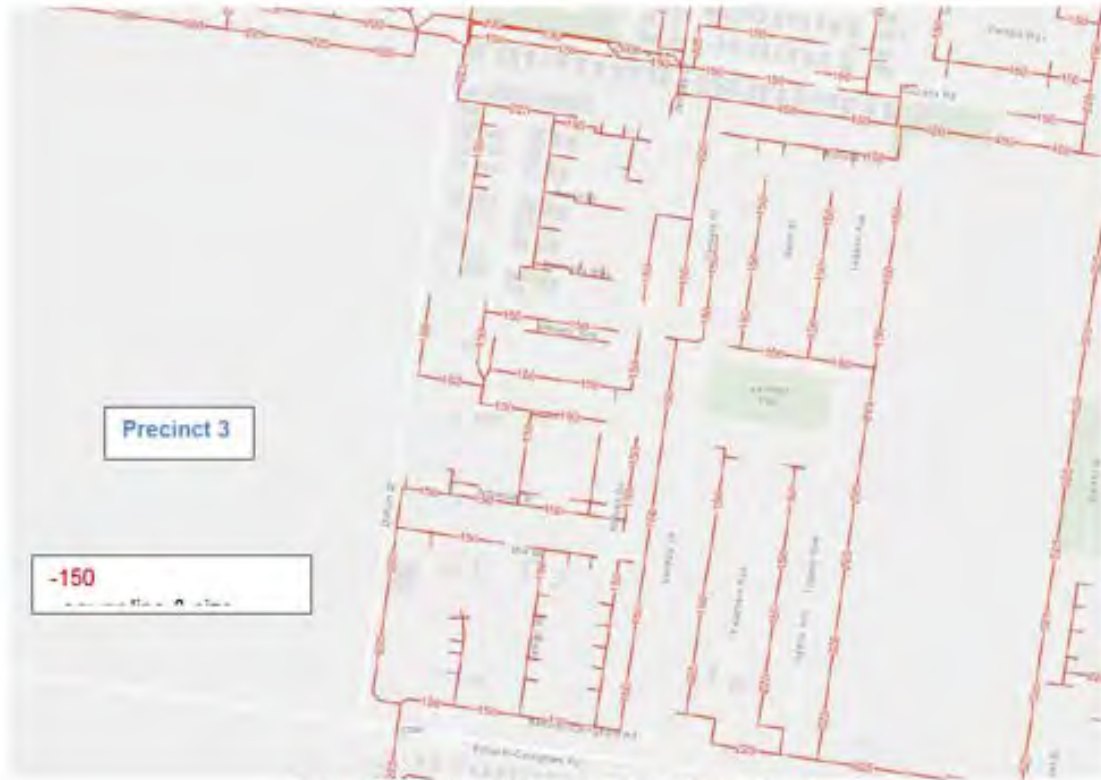


Figure 17: Western Growth Area East of Dyson Road.

There is 525mm diameter GRP sewer on the western side of Kensington Boulevard within the Pinnacle Estate on the eastern side of Kensington Creek south of Glenelg Highway and a 450mm diameter GRP sewer on the north side of Glenelg Highway, refer to Figure 18.



Figure 18: Western Growth Area East of Kensington Creek.

Central Highlands Water has advised that its existing sewer network has capacity to service the existing customer base but will not be able to service the Western Growth Area without significant augmentation to the supply network.

8.2.3 Future Servicing Arrangements, North-Western Growth Area

Central Highlands Water is currently investigating upgrades of the sewer reticulation network by augmenting and extending the existing network to and through the investigation area. Significant upgrades to the existing sewer network are required to provide adequate levels of service to the Ballarat North-Western Growth Area. Due to difficult terrain, particularly in Precinct 5 which falls towards the north-west, several sewer pump stations will be required to service the North-Western Growth Area. Ultimately, sewer flows from the North-Western Growth Area will be conveyed and treated at the Ballarat South Wastewater Treatment Plant to the south-east of the North-Western Growth Area. Several sewer projects will be required downstream of Precincts 4 & 5 outside of the North-Western Growth Area. These projects are discussed further in Section 8.2.4.

Central Highlands Water has developed a high-level sewer concept plan for servicing the North-Western Growth Area, including:

- Draffins Road SPS – Sewer pump station located in the north-west corner of Precinct 5 adjacent to Draffins Road and the Serviceton Railway line level crossing including a rising main south along Draffins Road to Smarts Hill Road.
- Smarts Hill Road SPS – Sewer pump station located along the western boundary of Precinct 4, adjacent to Smarts Hill Road and the future north-south connector road along the western precinct interface, including a rising main south to Cuthberts Road.
- Cuthberts Road SPS – Sewer pump station located in the south-west corner of Precinct 4 adjacent to the intersection of Cuthberts Road and the future north-south connector road including a rising main east along Cuthberts Road.
- Trunk Sewer – Smarts Hill Road small diameter trunk asset (375-525mm diameter) discharging to the proposed Smarts Hill Road sewer pump station.
- Trunk Sewer – Finchs Road small diameter trunk asset (375-525mm diameter) discharging to existing gravity infrastructure in Cuthberts Road, ultimately discharging to Alfredton West sewer pump station.
- Trunk Sewer – Draffins Road small diameter trunk asset (375-525mm diameter) discharging to the proposed Draffins Road sewer pump station.
- Reticulation Sewers – Reticulation assets (225-300mm diameter) to convey flows within Precincts 4 and 5 to the proposed sewer pump stations. These reticulation sewers are to be delivered by the developer as required to support development.

Refer to Figure 19 below for high level concept options currently under investigation. Noting these are purely conceptual at this stage and subject to design, approval and funding.

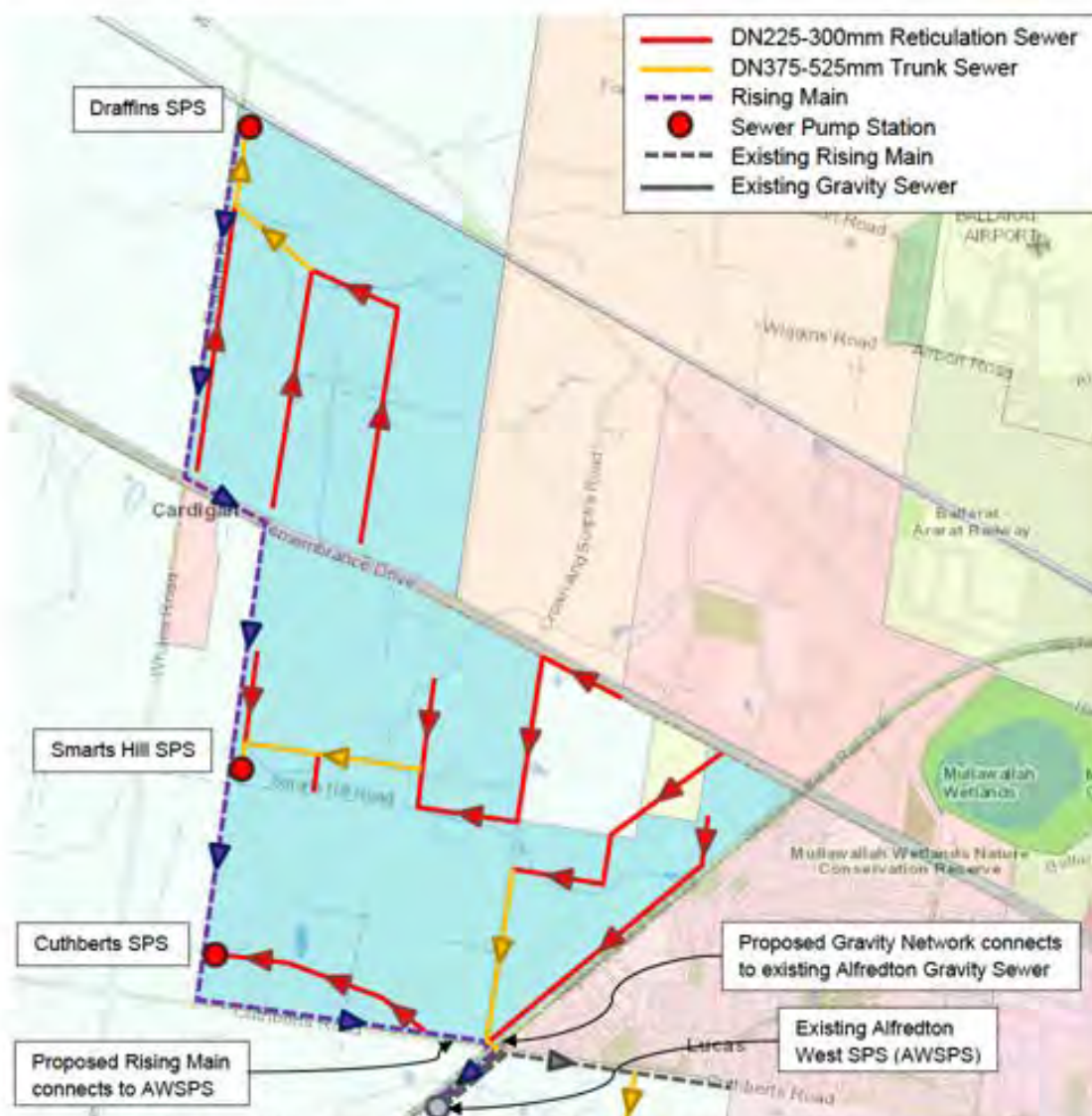


Figure 19: Possible sewer network extensions under investigation – North-Western Growth Area.

Table 13: North-Western Growth Area, Estimated Sewer Design Flow, 15 dwellings per hectare.

Precinct	Approx. NDHA	Non-Residential NDHA (4%)	Residential NDHA	Estimate Lot Yield 15 dw / ha	Estimated Design Flow
4	321 ha	13 ha	308 ha	4,620	204-245 L/s
5	179 ha	7 ha	172 ha	2,580	123-147 L/s

Table 14: North-Western Growth Area, Estimated Sewer Design Flow, 20 dwellings per hectare.

Precinct	Approx. NDHA	Non-Residential NDHA (4%)	Residential NDHA	Estimate Lot Yield 20 dw / ha	Estimated Design Flow
4	321 ha	13 ha	308 ha	6,160	236-283 L/s
5	179 ha	7 ha	172 ha	3,440	142-170 L/s

Central Highlands Water reviewed and commented on proposed staging precincts within the North-Western Growth Area. This growth area has been considered as two precincts divided by Remembrance Dr into roughly northern (Precinct 5) and southern (Precinct 4) halves.

Table 15: North-Western Growth Area, Central Highlands Water Pros and Cons, Sewer Reticulation.

Precinct	Potential Works	Pros	Cons
4	Construction of multiple sewer pump stations and rising mains. Potential Flow Management Facility (FMF) at Alfredton West sewer pump station, depending on sequencing.	<ul style="list-style-type: none"> Small catchment can initially be serviced by the Alfredton West sewer pump station (south-east corner). Small number of landowners. Potentially hydraulically independent of Precincts 1-3 (initially) through FMF. 	<ul style="list-style-type: none"> Multiple sewer pump station arrangement resulting in higher operational costs relative to other precincts in the growth areas. Difficult topography to service. Interim solutions may require operational controls for management. Ultimately requires trunk sewer through Precincts 1-3.
5	Single permanent sewer pump station and rising main.	<ul style="list-style-type: none"> Simple servicing arrangement (single SPS). Small number of landowners. Potential different discharge locations depending on timing of Precinct 4. 	<ul style="list-style-type: none"> Difficult topography to service. Interim solutions may require operational controls for management. Significant distance to discharge if timing ahead of Precinct 4. Ultimately requires trunk sewer through Precincts 1-3.

8.2.4 Future Servicing Arrangements, Western Growth Area

Central Highlands Water is currently planning upgrades of the sewer reticulation network by augmenting and extending the existing network to and through the investigation area. Significant upgrades to the existing sewer network are required to provide adequate levels of service to the Ballarat Western Growth Area. Due to some areas with difficult terrain, particularly in Precinct 3 which falls towards the west, sewer pump stations will be required to service the Western Growth Area. The outfall for the Western Growth Area relies upon the completion of network upgrades to service the Ballarat West Urban Growth Zone (UGZ), including the Winter Creek trunk sewer and Winter Creek sewer pump station and rising main. Ultimately, sewer flows from the Western Growth Area will be conveyed and treated at the Ballarat South Wastewater Treatment Plant to the south-east of the Western Growth Area.

Central Highlands Water has developed a high-level sewer concept plan for servicing the Western Growth Area. This involves trunk infrastructure that conveys flow ultimately down to the proposed Winter Creek Sewer Pump Station and at this stage includes:

- Trunk Lead Road SPS – Sewer pump station located in the south-west corner of Precinct 3 adjacent to Ballarat-Carngham Road, Trunk Lead Road and Skipton Rail Trail including a rising main east along Ballarat-Carngham Road.

- Trunk Sewer – Bells Road large diameter trunk asset (825-1050mm diameter) following the alignment of Bells Road, from Glenelg Highway and discharging into the proposed Ballarat West UGZ outfall sewer at Ross Creek Road (Precinct 1).
- Trunk Sewer – North-South Connector Road large diameter trunk asset (825-1050mm diameter) discharging to Glenelg Highway (Precinct 2).
- Trunk Sewer – North South Connector Road medium diameter trunk asset (600-750mm diameter) discharging south to the large diameter trunk sewer.
- Trunk Sewer – Conroy's Green small diameter trunk asset (375-525mm diameter) discharging west to the North South Connector Road enabling the decommissioning of the existing Conroy's Green and Winter Valley sewer pump stations.
- Trunk Sewer – Prospect Drive small diameter trunk asset (375-525mm diameter) discharging south-east to the North South Connector Road providing an outlet for Precinct 3.
- Trunk Sewer – Lakeland Drive Extension small diameter trunk asset (375-525mm diameter) discharging south to Prospect Drive and provides a gravity outlet for Lucas Estate and ultimately enables the decommissioning of Alfredton West sewer pump station.
- Trunk Sewer – Ballarat-Carngham Road West small diameter trunk asset (375-525mm diameter) discharging to Prospect Drive.
- Trunk Sewer – Ballarat-Carngham Road East small diameter trunk asset (375-525mm diameter) discharging to Prospect Drive and providing an outlet for the Trunk Lead Road sewer pump station.
- Trunk Sewer – Ballarat Skipton Rail Trail small diameter trunk asset (375-525mm diameter) discharging to the Trunk Lead sewer pump station and provides a gravity outlet for the Alfredton West Sewer Pump Station.
- Reticulation Sewers – Reticulation assets (225-300mm diameter) to convey flows within Precincts 1, 2 and 3 to the trunk sewers described above. These reticulation sewers are to be delivered by the developer as required to support development.

Refer to Figure 20, Figure 21 and Figure 22 below for high level concept options currently under investigation. Noting these are purely conceptual at this stage and subject to design, approval and funding.

Our Ref. 24268/E
Ballarat North-Western & Western Growth Areas

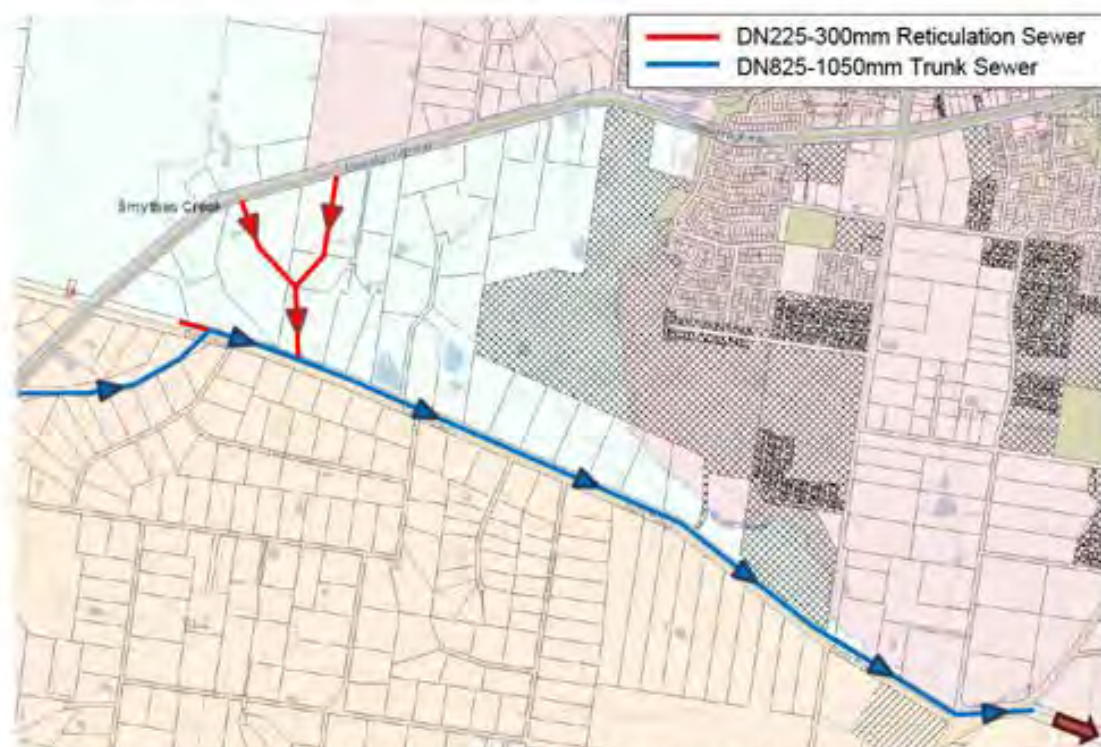


Figure 20: Possible sewer network extensions under investigation – Western Growth Area, Precinct 1.

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Ballarat North-Western & Western Growth Areas

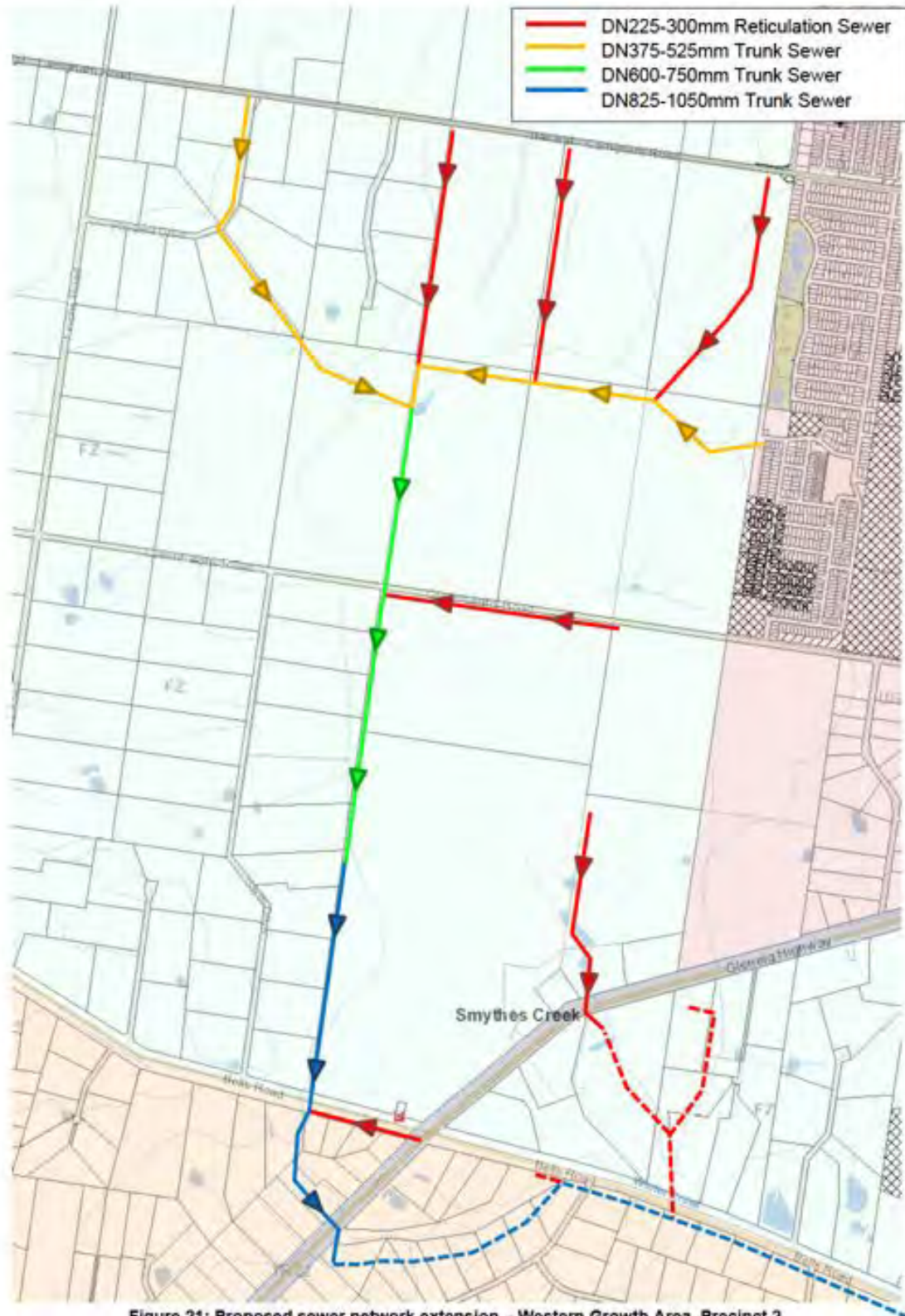


Figure 21: Proposed sewer network extension – Western Growth Area, Precinct 2.

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Ballarat North-Western & Western Growth Areas

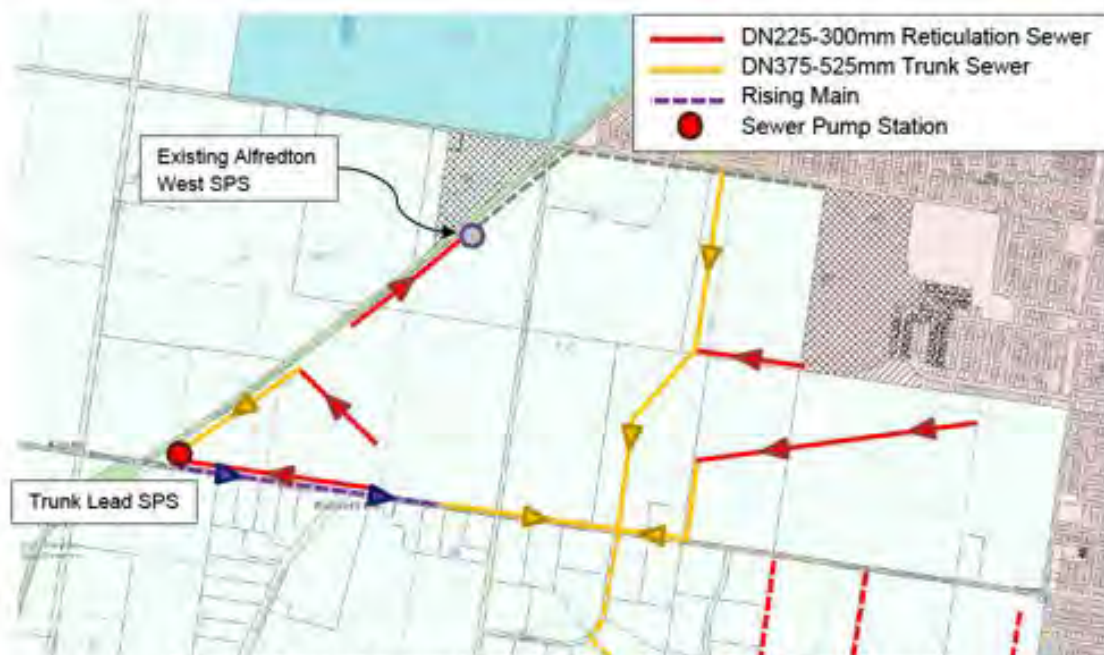


Figure 22: Proposed sewer network extension – Western Growth Area, Precinct 3.

Table 16: Western Growth Area, Estimated Sewer Design Flow, 15 dwellings per hectare.

Precinct	Approx. NDHA	Non-Residential NDHA (4%)	Residential NDHA	Estimate Lot Yield 15 dw / ha	Estimated Design Flow
1	199 ha	8 ha	191 ha	2,865	134-161 L/s
2	333 ha	13 ha	320 ha	4,800	211-253 L/s
3	364 ha	15 ha	349 ha	5,235	228-274 L/s

Table 17: Western Growth Area, Estimated Sewer Design Flow, 20 dwellings per hectare.

Precinct	Approx. NDHA	Non-Residential NDHA (4%)	Residential NDHA	Estimate Lot Yield 20 dw / ha	Estimated Design Flow
1	199 ha	8 ha	191 ha	3,820	155-186 L/s
2	333 ha	13 ha	320 ha	6,400	244-292 L/s
3	364 ha	15 ha	349 ha	6,980	263-316 L/s

Central Highlands Water reviewed and commented on proposed staging precincts within the North-Western Growth Area. This growth area has been considered as three precincts divided by Glenelg Highway and Ballarat-Camgham Road.

Table 18: Western Growth Area, Central Highlands Water Pros and Cons, Sewer Reticulation.

Precinct	Potential Works	Pros	Cons
1	Trunk sewer to connect to the Winter Creek Trunk Scheme and sewer pump station.	<ul style="list-style-type: none"> • Bottom of sewer catchment. • Road alignment for trunk sewer (Bells Road). • Consistent integration with Ballarat West UGZ. 	<ul style="list-style-type: none"> • Multiple landowners. • Risk of Winter Creek sewer pump station going ahead due to lack of capacity. • Oversized infrastructure initially.
2	Trunk sewer to link up with Precinct 1 works and rationalise sewer pump stations within adjacent catchments.	<ul style="list-style-type: none"> • Rationalise sewer pump stations at Aberdeen, Winter Valley etc.... • Large land parcels, fewer ownership issues. • Simple Topography • Simple interim solution (single SPS). 	<ul style="list-style-type: none"> • Requires trunk sewer to be constructed through Precinct 1. • Existing downstream constraints at Delacombe and Cherry Flat. • Oversized infrastructure initially.
3	Trunk sewer to link up with Precinct 2 works and rationalise sewer pump stations within adjacent catchments, sewer pump station at adjacent to Skipton Rail Trail and rising main.	<ul style="list-style-type: none"> • Partial area serviced by the existing Alfredton West sewer pump station. • Rationalise sewer pump station at Lucas Grange Estate. • Potential to accept excess flows from Cardigan Village. 	<ul style="list-style-type: none"> • Requires trunk sewer to be constructed through Precinct 1 & 2. • Requires additional sewer pump stations. • Interim solution (SPS) may have downstream restrictions at discharge point.

8.2.5 Expected Funding Arrangements

The Essential Services Commission (ESC) specifies how water businesses levy New Customer Contributions (NCC). Central Highlands Water applies a Network Connection Charge. The levies collected by Central Highlands Water are utilised to fund trunk infrastructure and shared asset projects which are essential to service areas of new development.

Central Highlands Water is responsible for funding trunk infrastructure and shared assets. Developers are responsible for providing reticulation assets and temporary reticulation works and the cost to connect the development to the Central Highlands Water network. Developers are also responsible for the financing costs associated with bringing forward the provision of shared assets and temporary shared works that Central Highlands Water had programmed to be constructed at a future date. The ESC guidelines determine that Central Highlands Water may levy a charge that will cover the financing costs associated with bringing forward the provision of Shared Assets. This is referred to as an Incremental Financing Cost charge.

8.2.6 Estimated Project Costs, North-Western Growth Area

High level construction costs for the sewer main projects identified in section 8.2.3 have been estimated by Taylors. These costs include allowance for pipe construction, contingency, survey & design, traffic management and contractor overheads, refer to Table 19.

Table 19: North-Western Growth Area, Estimated Sewer Main Project Costs.

Project Location	Project Type	Pipe Length	Estimated Cost
Smarts Hill Road (Precinct 4)	Trunk Sewer (375-525mm)	1,075m	\$1.89M
Finchs Road (Precinct 4)	Trunk Sewer (375-525mm)	1,025m	\$2.16M
Draffins Road (Precinct 5)	Trunk Sewer (375-525mm)	950m	\$1.75M
Cuthberts SPS & Rising Main (Pre 4)	SPS & Rising Main (375-525mm)	1,700m	\$6.00M
Smarts Hill SPS & Rising Main (Pre 4)	SPS & Rising Main (375-525mm)	850m	\$5.03M
Draffins SPS & Rising Main (Pre 5)	SPS & Rising Main (375-525mm)	3,350m	\$6.97M
Developer Reticulation Sewers (Pre 4)	Reticulation Sewer (225-300mm)	7,050m	\$10.25M
Developer Reticulation Sewers (Pre 5)	Reticulation Sewer (225-300mm)	3,800m	\$5.30M
	Total		\$39.35M

8.2.7 Estimated Project Costs, Western Growth Area

High level construction costs for the sewer main projects identified in section 8.2.4 have been estimated by Taylors. These costs include allowance for pipe construction, contingency, survey & design, traffic management and contractor overheads, refer to Table 20.

Table 20: Western Growth Area, Estimated Sewer Main Project Costs.

Project Location	Project Type	Pipe Length	Estimated Cost
Bells Road (Precinct 1)	Trunk Sewer (825-1050mm)	4,900m	\$18.23M
North South Sewer to Glenelg Hwy (Pre 2)	Trunk Sewer (825-1050mm)	1,400m	\$4.71M
North South Sewer (Precinct 2)	Trunk Sewer (600-750mm)	1,600m	\$3.91M
Conroy's Green Outfall Sewer (Precinct 2)	Trunk Sewer (375-525mm)	1,450m	\$2.55M
Prospect Drive (Precinct 2)	Trunk Sewer (375-525mm)	1,400m	\$2.86M
Lakeland Drive Extension (Precinct 3)	Trunk Sewer (375-525mm)	850m	\$1.55M
Ballarat Camgham Road East (Precinct 3)	Trunk Sewer (375-525mm)	700m	\$1.37M
Ballarat Camgham Road West (Precinct 3)	Trunk Sewer (375-525mm)	1,050m	\$2.20M
Ballarat Skipton Rail Trail (Precinct 3)	Trunk Sewer (375-525mm)	1,700m	\$2.99M
Trunk Lead SPS & Rising Main (Precinct 3)	SPS & Rising Main (375-525mm)	1,050m	\$5.76M

Our Ref: 24258/E
Ballarat North-Western & Western Growth Areas



Project Location	Project Type	Pipe Length	Estimated Cost
Developer Reticulation Sewers (Pre 1)	Reticulation Sewer (225-300mm)	1,325m	\$1.86M
Developer Reticulation Sewers (Pre 2)	Reticulation Sewer (225-300mm)	4,200m	\$6.10M
Developer Reticulation Sewers (Pre 3)	Reticulation Sewer (225-300mm)	3,300m	\$4.60M
		Total	\$58.69

8.2.8 Summary of Outcomes

- Central Highlands Water owns and maintains a significant reticulated sewer network in Ballarat including existing infrastructure in the vicinity of the North-Western and Western Growth Areas.
- The existing sewer network has capacity to service the existing customer base but will not be able to service the Western and North-Western Growth Areas without significant augmentation to the supply network.
- Sewer flows from the North-Western and Western Growth Areas ultimately discharge to the Ballarat South Wastewater Treatment Plant.
- A high-level concept plan for upgrades has been prepared including large diameter trunk sewer mains and sewer pump stations. Noting the concept plan is indicative at this stage and will be subject to change as design, approval and funding is obtained.
- Central Highlands Water may reimburse Developers for construction of shared assets using funds collected from new customer contributions. Where shared assets are proposed to be constructed by Developers prior to their scheduled delivery, then Developers may be liable for incremental finance costs.
- Interim solutions will be considered and assessed by Central Highlands Water on a case-by-case basis. Any interim solutions may still require operational controls or network augmentation to ensure adequate levels of service.

8.3 ELECTRICITY

Powercor is the responsible authority for the provision of electricity supply to the Ballarat North-Western and Western Growth Areas.

Powercor has two existing zone substations in Ballarat. These two zone substations are the Ballarat North (BAN) zone substation in Norman Street, Wendouree and the Ballarat South (BAS) zone substation in Sutton Street, Delacombe. Powercor's existing 22kV high voltage feeder network is coloured blue in Figure 23 below. Solid blue lines represent overhead high voltage lines and dotted blue lines represent underground high voltage cables.

8.3.1 Existing Services, North-Western Growth Area

Powercor has advised that existing high voltage overhead feeders run through the North-Western Growth Area. The existing feeder BAS24 runs along the northern side of Remembrance Drive with additional feeders on the eastern side of Dowling Road and on the eastern side of Draffins Road. Additionally, there is a two-phase overhead line on the southern side of Cuthberts Road which is fed via Whites Road, refer to Figure 23.

There are underground high voltage cables in Lucas Estate to the south-east however they are separated from the North-Western Growth Area by the Ballarat-Skipton Rail Trail reserve.

It important to note that Powercor has advised there will need to be upgrades to the existing infrastructure to accommodate ultimate development of the new growth area.

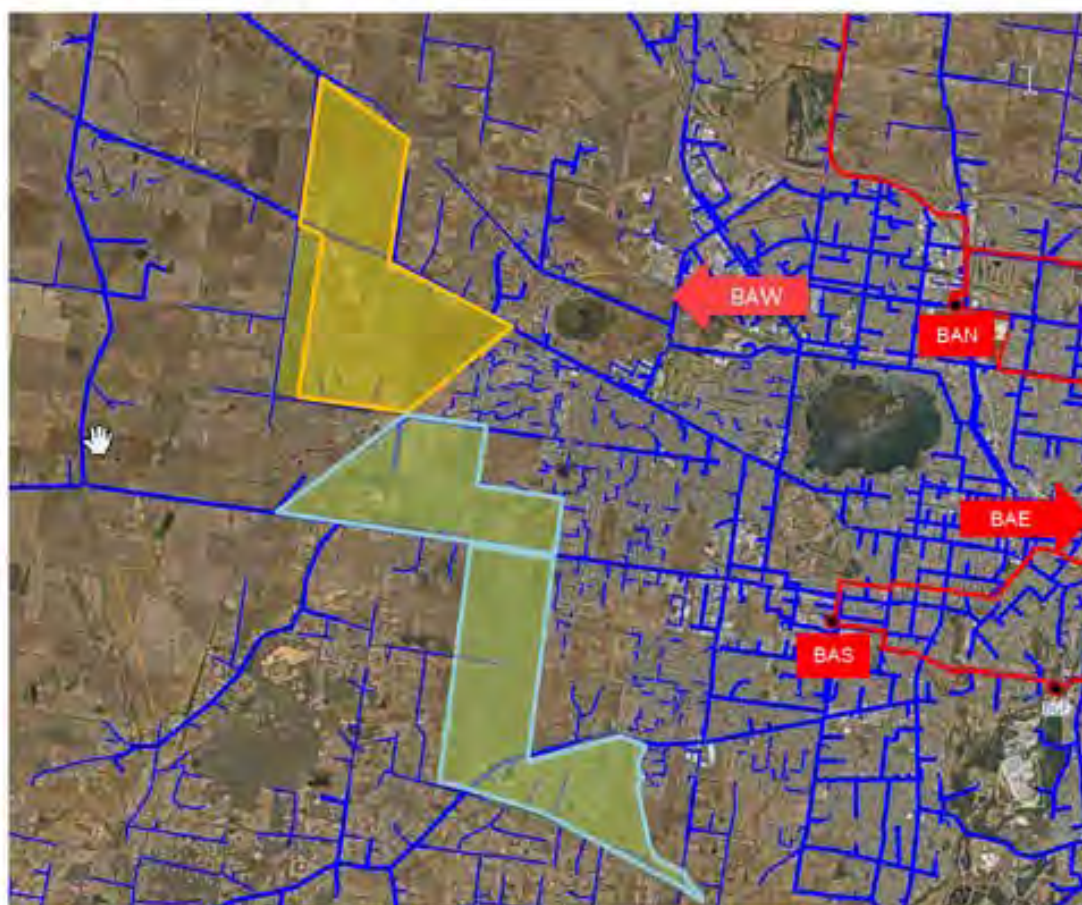


Figure 23: Existing Powercor Network.

8.3.2 Existing Services, Western Growth Area

Powercor has advised that existing high voltage overhead feeders run through the Western Growth Area. The existing BAS11 feeder runs along the northern side of Ballarat – Carngham Road and existing BAS33 feeder runs along the southern side Glenelg Highway. There are additional overhead feeders in Cuthberts Road to the east of the Ballarat-Skipton Rail Trail reserve, approximately 800 metres of overhead line along Finchs Road south of Cuthberts Road, approximately 600 metres of overhead line along Greenhalghs Road from the western boundary, and an overhead feeder on the southern side of Bells Road, refer to Figure 24.



Figure 24: Western Growth Area south of Cuthberts Road.

There are underground high voltage cables in Lucas Estate on the north side of Cuthbert Road and on the eastern side of Dyson Road servicing Chase Estate, Conroy's Green and Winter Valley Estates along the eastern boundary of the growth area, refer to Figure 25.



Figure 25: Western Growth Area North of Cuthberts Road.

It important to note that Powercor has advised that the existing electrical supply network will need to be upgraded to accommodate ultimate development of the new growth area.

8.3.3 Future Servicing Arrangements

Powercor's current infrastructure upgrade planning includes the Ballarat East (BAE) zone substation, located in York Street, Ballarat East, and is programmed for construction in 2025. Longer term planning (ten plus years) includes the construction of the Ballarat West (BAW) zone substation at Ballarat Link Road near Blind Creek Road, Cardigan. The timing of the future Ballarat West (BAW) zone substation is subject to load growth.

Powercor plans to build a new BAS31 feeder to Sebastopol and Delacombe in 2023/24 which will provide additional capacity in the Western and North-western Growth Areas. Additionally, Powercor plans to build a new high voltage feeder in Cuthberts Road in 2023 and then extend the BAN13 feeder into the Alfredton area which will also provide additional capacity in the Western and North-Western Growth Areas.

Powercor advises that Ballarat is an existing Rapid Earth Fault Current Limiter (REFCL) area. A REFCL operates like a big safety switch in the electricity network. These are used to help reduce the risk of bushfires and have been operating in some locations in Victoria since 2017.

As the name suggests, the REFCL network limits the amount of energy released when an earth fault occurs on a powerline. An earth fault happens when a powerline touches the ground, a tree falls on a powerline, or wildlife touches the pole and powerline at the same time. A REFCL can detect when a fault occurs and significantly limits the energy flow within a tenth of a second. For example, if one line out of a three-phase powerline falls to the ground, the REFCL reduces the voltage on the fallen line and at the same time increases the voltage on the remaining two lines.

This means power supply can be maintained to surrounding homes and businesses while reducing the possibility of a fire starting, or of a person or animal nearby receiving an electric shock. Without a REFCL network, these faults can cut power for several minutes or even hours, can lead to fires, or even property damage.

It is likely that REFCL isolating transformers will be required within new development areas. The location of REFCL isolating transformers within new development areas will be in the vicinity of existing feeders as noted above. The requirement for, and location of, any REFCL isolating transformers will be evaluated and communicated on a case-by-case basis for each specific development.

All future electricity infrastructure within new developments will be underground and kiosk substations will be required within new development areas. When determining supply requirements in new development areas Powercor will take into account that new dwellings may include solar, battery storage and electric vehicle charging capability (nominal After Diversity Maximum Demand of 5kVA per residential allotment).

The Victorian Government's recent announcement to ban gas connections to new homes from January 2024 will increase the demand on electricity and it is anticipated Powercor's requirement per lot will increase to 8kVA. This will increase requirements for both cables and kiosk substations.

Powercor can provide supply for new development areas adjacent to the existing high voltage feeders. More specifically:

- BAN13 to be extended into the Alfredton area
 - forecast load (summer time 50% Probability of Exceedance, with augmentation) at summer 2024/2025 will be 11.04MVA with a summer time feeder rating of 12MVA, with spare capacity of 0.96MVA.
- BAS24 northern side of Remembrance Drive
 - forecast load (summer time 50% Probability of Exceedance, with augmentation) at summer 2024/2025 will be 6.74MVA with a summer time feeder rating of 14.2MVA, with spare capacity of 7.46MVA.
- BAS11 northern side of Ballarat – Carngham Road
 - forecast load (summer time 50% Probability of Exceedance, with augmentation) at summer 2024/2025 will be 10.18MVA with a summer time feeder rating of 12MVA, with spare capacity of 1.82MVA.
- BAS31 feeder to Sebastopol and Delacombe in 2023/24
 - forecast load (summer time 50% Probability of Exceedance, with augmentation) at summer 2024/2025 will be 7.29MVA with a summer time feeder rating of 12MVA, with spare capacity of 4.71MVA.
- BAS33 southern side Glenelg Highway
 - forecast load (summer time 50% Probability of Exceedance, with augmentation) at summer 2024/2025 will be 6.99MVA with a summer time feeder rating of 12MVA, with spare capacity of 5.01MVA.

8.3.4 Expected Funding Arrangements

Zone substations and sub-transmission network augmentation will likely be funded by Powercor as part of the shared upstream network augmentation. Out of sequence upgrades to the 22kV feeder network may incur cost to the Developer, however this cannot be confirmed until an application is made.

8.3.5 Summary of Outcomes

- Existing overhead 22kV feeders currently run through the North-Western and Western Growth Areas and are supplied by the Ballarat North (BAN) and Ballarat South (BAS) Zone Substations.
- Powercor plans to construct a new Ballarat East (BAE) Zone Substation most likely in 2025 and longer term a new Ballarat West (BAW) Zone Substation to meet increased load as development continues and new high voltage feeders to service Sebastopol, Delacombe and Alfredton.
- All new developments within the North-Western and Western Growth Areas are to be provided with underground electricity infrastructure in accordance with Powercor's subdivisional guidelines. At this stage kiosk substations supply requirements are based on a nominal After Diversity Maximum Demand of 5kVA per residential allotment. As a result of the Victorian Government's recent ban on gas connections to new homes from January 2024, we are expecting Powercor's requirement per lot to increase to 8kVA. This will increase requirements for both cables and kiosk substations.
- Powercor can supply the North-Western and Western Growth Areas from within the spare capacity in the existing overhead feeders based on current forecast loads, however ultimate development of the growth areas will require upgrades to the Powercor network.
- Interim solutions will be considered and assessed by Powercor on a case-by-case basis. Out of sequence works or upgrades to the 22kV feeder network may incur costs to the Developer.

8.4 TELECOMMUNICATION SERVICES

The Australian Government's Telecommunications Infrastructure in New Developments Policy requires developers to provide telecommunications infrastructure in new residential developments. If a developer does not want to use a private telecommunications supplier National Broadband Network (NBN) Co and Telstra are the infrastructure providers of last resort (IPOLR). This means NBN Co or Telstra must provide infrastructure on commercially agreed terms if no one else is supplying it. Generally, NBN Co is the IPOLR for developments larger than 100 allotments and Telstra is the IPOLR for developments smaller than 100 allotments.

8.4.1 Existing Services, North-Western Growth Area

NBN Co. has advised that the proposed North-Western Growth Area is not currently serviced by its fixed line, fibre optic network, however some assets are available along the eastern growth area boundary particularly within the Lucas Estate, albeit separated from the growth area by the Ballarat-Skipton Rail Trail reserve. NBN Co. advises that substantial investment will need to be made to extend current infrastructure into the North-Western Growth Area however it does not foresee any constraints or issues with future infrastructure installation, but any extensions are most likely to be developer lead.

The existing rural properties within the North-Western Growth Area are currently serviced via the existing Telstra network comprising both copper and optic fibre cables. Telstra cables are located on both sides of Remembrance Drive, the eastern side of Dowling Road, the western side of Draffins Road, the western side of Finchs Road and on the northern side of Cuthberts Road, refer to Figure 26.

Optus has an optic fibre cable that runs through the southern half of the North-Western Growth Area with the cable on the southern side of Smarts Hill Road, the eastern side of Finchs Road and then continuing east along the northern side of Cuthberts Road.

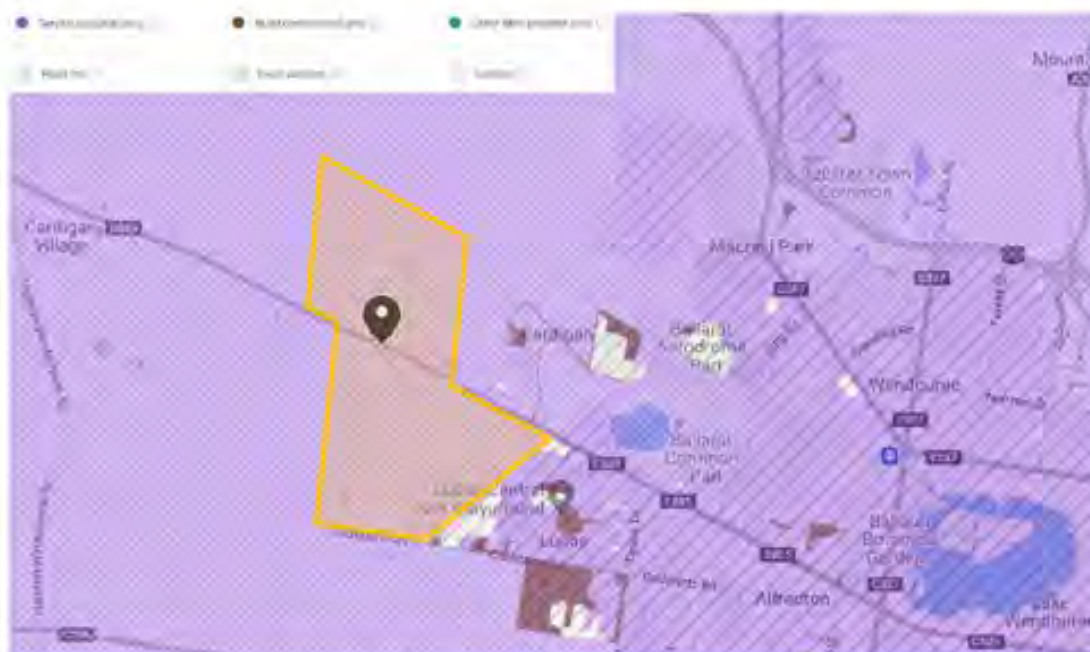


Figure 26: NBN Network – North-Western Growth Area.

8.4.2 Existing Services, Western Growth Area

NBN Co. has advised that the proposed Western Growth Area is not currently serviced by its fixed line fibre optic network, however some assets are available along the northern boundary within the Lucas Estate and along the eastern and south-eastern boundary, particularly within the Chase Estate, Conroy’s Green, Winter Valley and Pinnacle Estates. NBN Co. advises that substantial investment will need to be made to extend current infrastructure into the Western Growth Area however it does not foresee any constraints or issues with future infrastructure installation, but any extensions are most likely to be developer lead.

The existing rural properties within the Western Growth Area are currently serviced via the existing Telstra network comprising both copper and optic fibre cables. Telstra cables are located on both sides of Cuthberts Road, both sides of Finchs Road, the southern side of Ballarat-Carngham Road, the western side of Dyson Road, the southern side of Greenhalghs Road, both sides of Glenelg Highway and both sides of Bells Road. Critically, there is a cable that runs between Greenhalghs Road and Bells Road through the property at 624 Glenelg Highway and Lot 1 Greenhalghs Road, refer to Figure 27.

Optus has an optic fibre cable that runs along the northern side of Cuthberts Road along the north boundary of the Western Growth Area and also on the southern side of Greenhalghs Road.

There are two mobile phone towers within the Western Growth Area which include a tower on the eastern side of Finchs Road approximately 800 metres south of Cuthberts Road, and on the southern side of Greenhalghs Road approximately 2 kilometres east of Finchs Road. Discussion with Telstra has indicated that cost to relocate the phone towers and associated infrastructure is expected to be between \$2-4 million and where there are multiple service providers using the tower these costs can be higher. Further, relocation of the towers would not be acceptable if it resulted in a loss of network coverage or quality. It is recommended by Telstra that phone towers be retained in their current location unless there is a strong case for relocation.

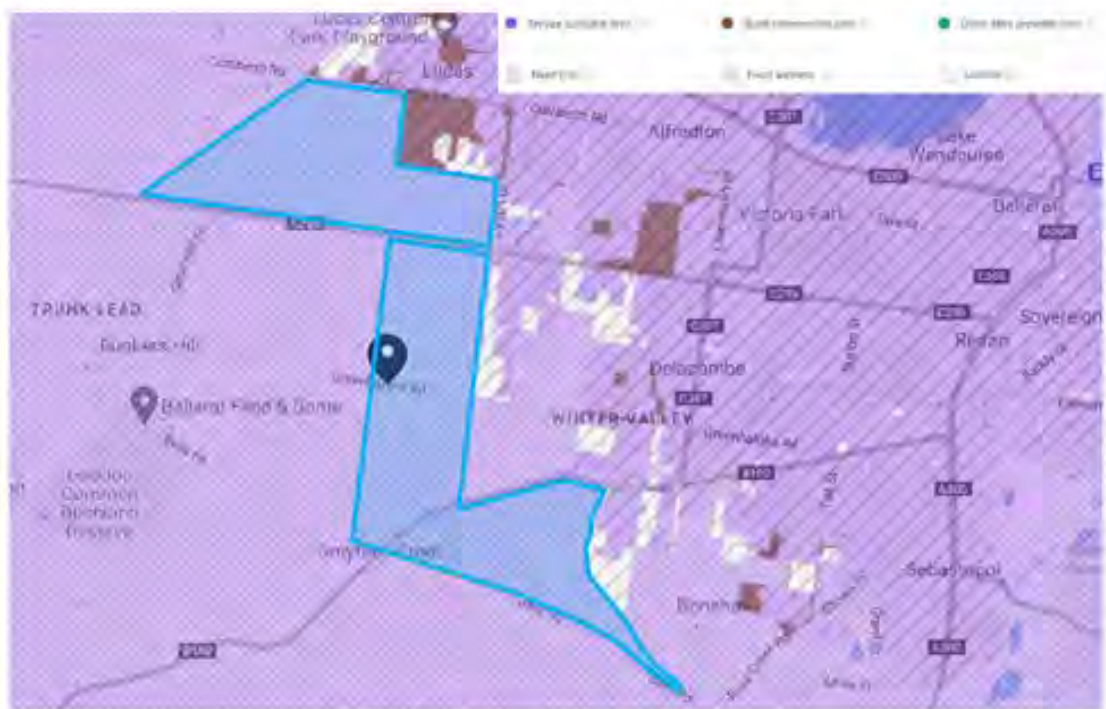


Figure 27: NBN Network – Western Growth Area.

8.4.3 Future Servicing Arrangements

NBN Co. has confirmed that due to proximity of the existing fixed line network in Lucas, Winter Valley and Delacombe, there is no foreseeable impediment to expansion of the network into the North-Western and Western Growth Areas. It is likely that fixed line service, such as Fibre to the Premises (FTTP) technology would be made available to new developments within the future growth areas.

The North-Western Growth Area will connect to the NBN Fibre Access Node (FAN) site at 1113 Howitt Street, Wendouree. NBN Co. advises that the Wendouree FAN site has capacity to service the North-Western Growth Area.

The Western Growth Area will connect to the NBN FAN site located at 904 Skipton Street, Redan. NBN Co. advises that the Redan FAN site has capacity to service the Western Growth Area.

Servicing of the North-Western and Western Growth Areas would be planned on a case-by-case basis and driven primarily by customer-initiated demand, utilising developer supplied trenching arrangements. Any new build (conduit & cable) within the growth areas would connect to the NBN network via the main road arterial routes through the growth area. Main road arterial routes are identified but not limited to Remembrance Drive, Cuthberts Road, Ballarat-Carngham Road, Greenhalghs Road and Glenelg Highway.

All NBN conduits and cabling are to be routed along existing and proposed road reserves. No dedicated easements through private property will be permitted.

8.4.4 Expected Funding Arrangements

The developer's responsibilities will include:

- Design of pit and pipe infrastructure to NBN's specifications and standards and submission to NBN for review prior to installation.
- Installation of pit and pipe infrastructure to NBN's specifications and standards.
- Payment of NBN deployment contributions in accordance with the Telecommunications Infrastructure in New Developments (TIND) policy. Developer contribution charges only apply to developers and builders. It is a flat rate charged for:
 - Single Dwelling Units (SDUs): \$600 inc. GST per premises.
 - Multi Dwelling Units (MDUs): \$400 inc. GST per premises.
- Payment of Backhaul contributions if applicable.

NBN Co. has advised it is open to working with other Utility Service Providers (USPs), Government and other utilities to cater for the growth within the North-Western and Western Growth Areas. NBN Co. would also consider significant one-off investments, if deemed necessary, to accommodate future growth. Opportunities may arise to facilitate possible trench sharing opportunities either with Council/Department of Transport and Planning or other utility owners.

NBN Co. advises that some difficulties may arise with the NBN network being located on both sides of the Ballarat-Skipton rail line. As such, NBN would be interested in being involved in any additional service crossings that occur. NBN are constrained by boundaries such as railways, freeways, and watercourses, so any additional crossings enable NBN to increase the robustness of the network.

8.4.5 Summary of Outcomes

- The North-Western and Western Growth Areas are not currently serviced by NBN's fixed line fibre optic network.
- Telstra supplies existing rural properties within the North-Western and Western Growth Areas via its copper and optic fibre network.
- Optus owns and maintains optic fibre cables in the North-Western and Western Growth Areas.
- The Western Growth Area contains two mobile phone towers. It is recommended that the phone towers be retained in their current locations unless there is a strong case for relocation.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



- The North-Western Growth Area can be serviced via extension of the NBN fixed line fibre optic network along Remembrance Drive and Cuthberts Road and will connect to the Wendouree Fibre Access Node site.
- The Western Growth Area can be serviced via extension of the NBN fixed line fibre optic network along Cuthberts Road, Ballarat-Carngham Road, Greenhalghs Road and Glenelg Highway and will connect to the Redan Fibre Access Node site.
- Interim solutions will be considered and assessed by NBN Co. on a case-by-case basis. Out of sequence works or upgrades to the fixed line network may incur backhaul costs to be borne by the Developer.

8.5 GAS

APA Group is the responsible authority for gas transmission pipelines with Victoria and AusNet Gas Services is responsible for the gas distribution network. Natural Gas is conveyed through transmission pressure pipelines at pressures greater than 2,500 kPa. The high gas pressures are reduced at specific locations along the transmission network, known as City Gates. A City Gate includes a custody transfer meter and gas regulator heater. The custody transfer meter allows APA to monitor gas volumes extracted from the transmission pipeline. The gas regulator heater is used to regulate temperature fluctuations that occur due to pressures changes. Once the gas pressures have been reduced, they are transferred to the gas distribution network which supplies customers.

8.5.1 Existing Servicing, North-Western Growth Area

AusNet Gas Services has advised that it owns and operates an existing high pressure distribution network in the North-Western Growth Area, which includes a 150mm diameter steel pipeline on the southern side of Remembrance Drive that supplies natural gas to Cardigan Village. A 63mm diameter polyethylene main has been extended approximately 90 metres south along the eastern side of Whites Road, refer to Figure 28.

The balance of the North-Western Growth Area is not serviced with reticulated natural gas supply.



Figure 28: High Pressure Reticulation Gas Main – Remembrance Drive.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



The suburb of Lucas, to the east of the North-Western Growth Area, has been fully reticulated with natural gas supply and is fed from the 150mm diameter main in Remembrance Drive, refer to Figure 29.



Figure 29: High Pressure Reticulation Gas Main – Remembrance Drive & Lucas.

8.5.2 Existing Servicing, Western Growth Area

AusNet Gas Services has advised that it owns and operates an existing high pressure distribution network in the Western Growth Area (refer to Figure 30), and includes:

- a 125mm diameter polyethylene main on the north side of Cuthberts Road.
- a 63mm diameter polyethylene main at the intersection of Cuthberts Road and Lakeland Drive, including an extension into Lot 2 (PS835474) Cuthberts Road ready for the extension of Lakeland Drive.
- a 125mm diameter polyethylene main on the western side of Dyson Drive between Fawcett Road and Ballarat-Carngham Road.
- a 125mm diameter polyethylene main on the north side of Greenhalghs Road, however it has not been extended to the boundary of the Western Growth Area. It currently terminates approximately 1.2km to the east at Winter Valley.
- a 125mm diameter polyethylene main on the northern side of Glenelg Highway with a 63mm diameter main on the eastern side of Kensington Boulevard. These mains terminate at the boundary of the Western Growth Area.
- a 125mm diameter polyethylene main has been constructed on the eastern side of Cherry Flat Road, however, it currently does not extend to Bells Road. It terminates approximately 1.6km from Cherry Flat Road, however plans show the main to be extended to Schreenans Road.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



The balance of the Western Growth Area is not serviced with reticulated natural gas supply.

The existing residential subdivisions to the east of the Western Growth Area have been fully reticulated with natural gas supply and are fed from the 125mm diameter mains in Dyson Drive, Ballarat-Carngham Road, Greenhalghs Road and Glenelg Highway, refer to Figure 31, Figure 32 and Figure 33.



Figure 30: High Pressure Reticulation Gas Main – Cuthbert Road & Surrounding Developments.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



Figure 31: High Pressure Reticulation Gas Main – Dyson Drive & Surrounding Developments.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



Figure 32: High Pressure Reticulation Gas Main – Greenhalghs Road & Surrounding Developments.



Figure 33: High Pressure Reticulation Gas Main – Glenelg Highway & Surrounding Developments.

8.5.3 Future Servicing Arrangements

APA Group has confirmed that it does not have current plans to extend the transmission network further west, so a Ballarat West city gate is unlikely to be required.

AusNet Gas Services has advised that significant augmentation to its existing distribution network would be required to support the North-Western and Western Growth Areas. Planning is already underway to augment the supply to the Ballarat West UGZ which will also support the NGA and NWGA in the order of 2,000 to 2,500 allotments. AusNet advises that a new field regulator may be required to extend the high-pressure distribution network, however, these can be accommodated within a pit and reserve land. Providing capacity to the new growth areas will require a staged solution over multiple years.

Recently, the Victorian Government announced a new policy to phase out natural gas supply to new homes from the 1st of January 2024 to reduce Victoria's reliance on fossil fuels. This will be implemented through an amendment to the Victorian Planning Provisions and all planning schemes. This policy will affect the construction of new dwellings and residential subdivisions with planning permits but will not impact new dwellings that do not require a planning permit, existing homes with existing gas connections and will not impact renovations or extensions to existing dwellings. New residential subdivisions within the North-Western and Western Growth Areas will be impacted by the policy changes and will not be supplied with reticulated natural gas. Non-residential (commercial and/or industrial) uses may require natural gas supply and as such will need to be supplied via extensions to the existing distribution network. This matter should be reviewed prior to preparation of the Precinct Structure Plans as clean alternatives to natural gas may also have advanced enough for consideration.

8.5.4 Expected Funding Arrangements

AusNet Gas Services has advised that network augmentation to increase network capacity to service the future network expansion into the North-Western and Western Growth Areas would be funded by its Gas Access Arrangement Review (GAAR) submission. Developers would need to contribute to any mains extensions to reach their property. This contribution is based on an economic feasibility test which calculates the anticipated revenue from the provision of natural gas to the development and the anticipated cost of servicing the development. The feasibility test occurs when the formal new estate application is made by the developer.

8.5.5 Summary of Outcomes

- The North-Western and Western Growth Areas are largely not serviced by AusNet Gas Services' existing natural gas distribution network, with exception of a 150mm diameter main in Remembrance Drive and an existing distribution network within the Ballarat West UGZ.
- AusNet Gas Services has advised that significant augmentation to its existing distribution network would be required to support the North-Western and Western Growth Areas.
- The Victorian Government announced a new policy to phase out natural gas supply to new homes from the 1st of January 2024. This will be implemented through an amendment to the Victorian Planning Provisions and all planning schemes.
- Network augmentation to increase network capacity to service the future network expansion into the North-Western and Western Growth Areas would be funded by AusNet. Developers would need to contribute to any mains extensions to reach their property. This contribution is based on an economic feasibility test which calculates the anticipated revenue versus the anticipated cost to service.
- Interim solutions will be considered and assessed by AusNet Services on a case-by-case basis. Out of sequence works or upgrades to the natural gas distribution network may incur costs to the Developer.

8.6 STORMWATER MANAGEMENT

8.6.1 Existing Services

Alluvium Consulting (Alluvium) was engaged by Taylors to undertake an existing site analysis and assessment of drainage and waterway conditions. The high-level surface water and geomorphology assessment of the existing conditions has been completed to inform the future drainage strategy of the growth areas. This site analysis / preliminary strategy report is a first step in defining surface water management conditions for the two growth areas.

The Existing Conditions / Situational Analysis report is part of the Stormwater Management Strategy in Appendix A. The relevant sections summarise existing conditions and the current surface water runoff on the site, as well as issues and constraints that may impact upon the implementation of future stormwater management strategies.

Figure 34 shows the topography across the North-Western Growth Area. Elevation ranges from 448 m AHD along the south-eastern boundary of the site, to 409 m AHD at the north-western boundary along Draffins Road. The site generally falls in a north-westerly direction with the northern portion grades varying from 0.5% to 2.5%. The section south of Remembrance Drive is more complicated with separation of a ridge and trough lines which results in the land falling in south-westerly and north-westerly directions.

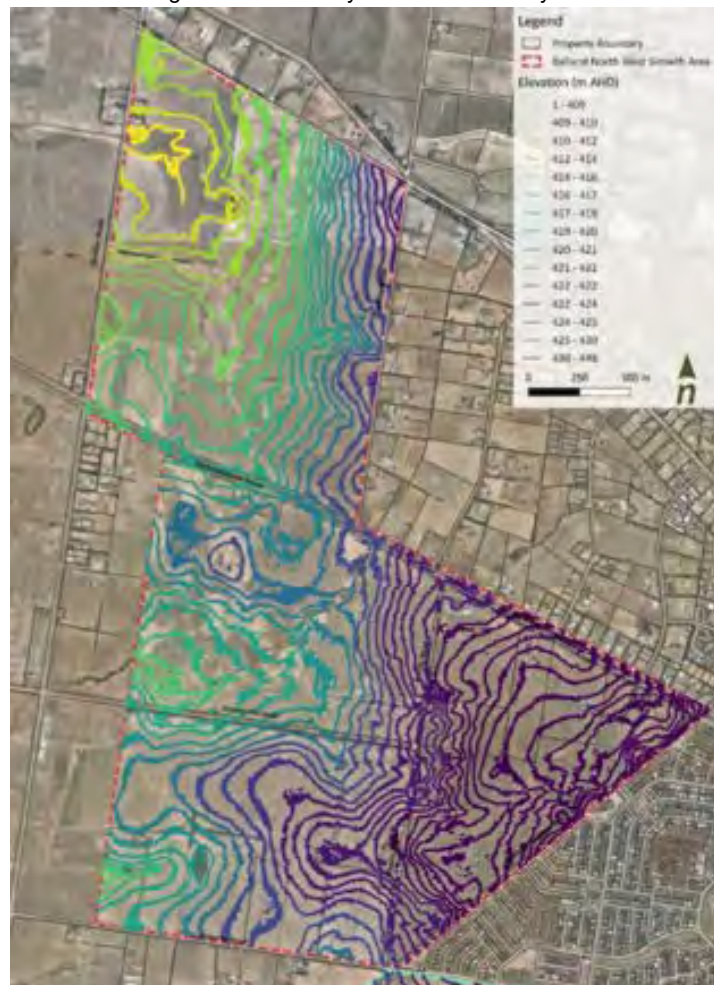


Figure 34: Topography - North-Western Growth Area.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



Figure 35 shows the topography across the Western Growth Area. The elevation in the Western Growth Area ranges from 440 m AHD at the north, to 386 m AHD at the south-eastern end of the area boundary. The overall topography within the Western Growth Area falls in a southerly direction. A higher elevation area at the north results in the topography falling mainly in a southern direction towards the low point around Bells Road. From this location the land continues to fall towards the east along Bells Road. Overall, the Western Growth Area is steeper than the North-Western Growth Area, with grades varying from 1% to 4.5%.

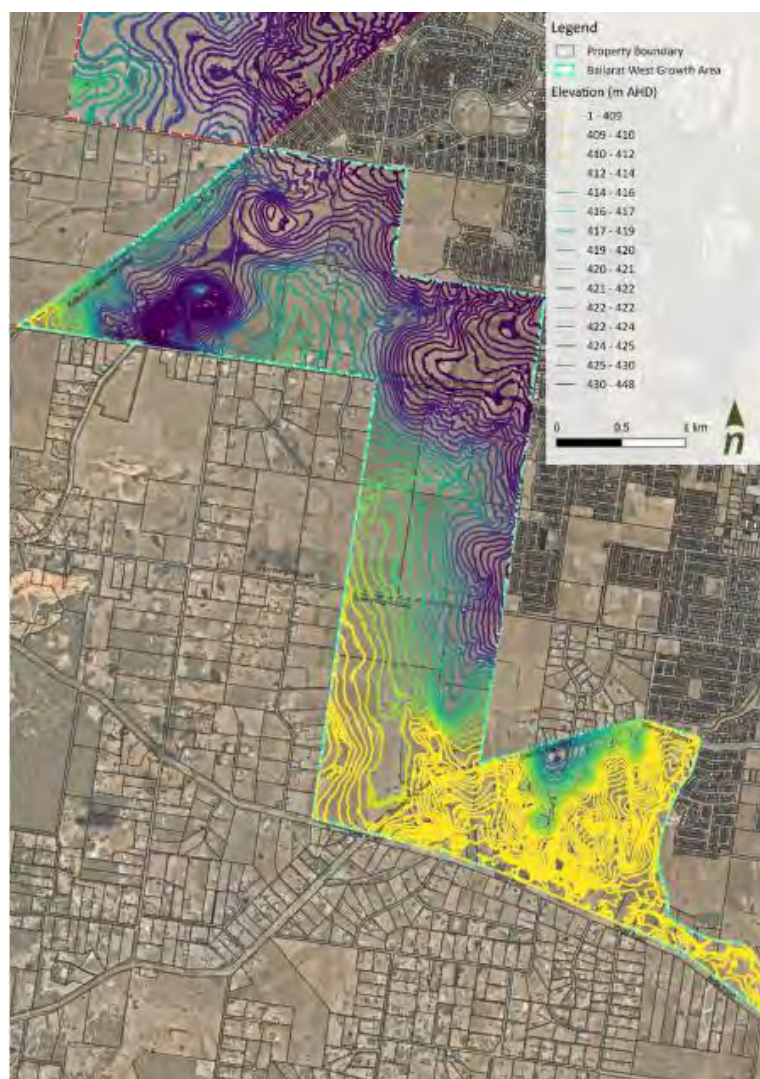


Figure 35: Topography - Western Growth Area.

Overall, the assessment found the headwater streams that line the study area have been extensively modified by agriculture, either by excavation of linear drainage lines, disconnection via road culverts or a complete change in form due to cropping. This history of land use and modification means that none of the waterways can be considered locally rare or threatened and for this reason have low geomorphic value.

Addition of stormwater flows from developments is likely to exacerbate backwater ponding upstream of the existing culverts and has the potential to cause some incision (deepening) of the waterways that are well defined. Overall, establishing appropriately designed constructed waterways that convey the runoff from the developed areas is an appropriate management of these waterways from a purely geomorphic form

perspective. In the upper reaches of the catchment where safe flow conveyance capacity allows, the existing drainage lines could potentially be modified to a pipe and road reserve as part of the urbanisation process.

A biodiversity assessment undertaken by Nature Advisory in 2022 was also reviewed as part of the assessment. The biodiversity assessment highlighted flora and fauna habitats in the south-east portion of the North-Western Growth Area and northern portion of the Western Growth Area where the impacts of development should be minimised to retain biodiversity.

The assessment also included a review of a Cultural Heritage Desktop assessment completed by Archaeological Excavations in 2021. The assessment confirmed no areas were identified within the Ballarat North-Western Growth Area that needed to be prevented from development or required the relevant approval for development; 11 places were identified within 200 m of the eastern boundary of the growth area.

The assessment then included extensive hydrologic modelling of both pre-development conditions and post development conditions. The hydraulic modelling is used to inform the future surface stormwater management strategy required for the growth areas and define the stormwater quantity and stormwater quality assets required to control the impact of development downstream.

The surface water management strategy is designed around:

- Stormwater quantity management – In the event of a 1 in 100 year ARI storm (1% AEP), post-development stormwater runoff rates are to be retarded back to the equivalent pre-development peak flow rates, before discharging downstream.
- Stormwater conveyance - Is typically designed according to a regime where minor flows up to and including a 1 in 5 year ARI storm (20% AEP) are conveyed via the sub-surface stormwater pit and pipe network and major flows between the 20% AEP and 1% AEP event are conveyed on the surface via roadways and waterways.
- Stormwater quality treatment – Concept measures are developed to meet the State Environmental Protection Policy (SEPP) best practice environmental management (BPEM) pollution reduction targets before being discharged into drainage networks and into receiving waters.
- Stormwater flow volume management - The Environment Protection Act includes a “general environmental duty (GED)” provision, which for urban growth requires consideration to be given to options that minimise the risk (as far as reasonably practical) to public health and the environment by managing the impacts from stormwater runoff that arises from land development.

The design and layout of the proposed assets are provided at a conceptual level later in this report.

8.6.2 Future Servicing Arrangements

Refer Appendix A for a full copy of the Stormwater Management Strategy (SWMS). As part of the SWMS a hydrologic analysis of the growth areas was completed to determine the post development peak runoff flow rates for various flood events throughout the catchment. The peak flow rates were then used to calculate the storage capacity requirements of future proposed retarding basins. The basins are designed to restrict the post developed peak stormwater runoff rates to equivalent predeveloped peak flowrate conditions. Analysis also determined the stormwater treatment wetland asset to be located within the base of each basin.

For an overview of basin location and modelling results refer Figure 36, Figure 37 and Figure 38 below.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas

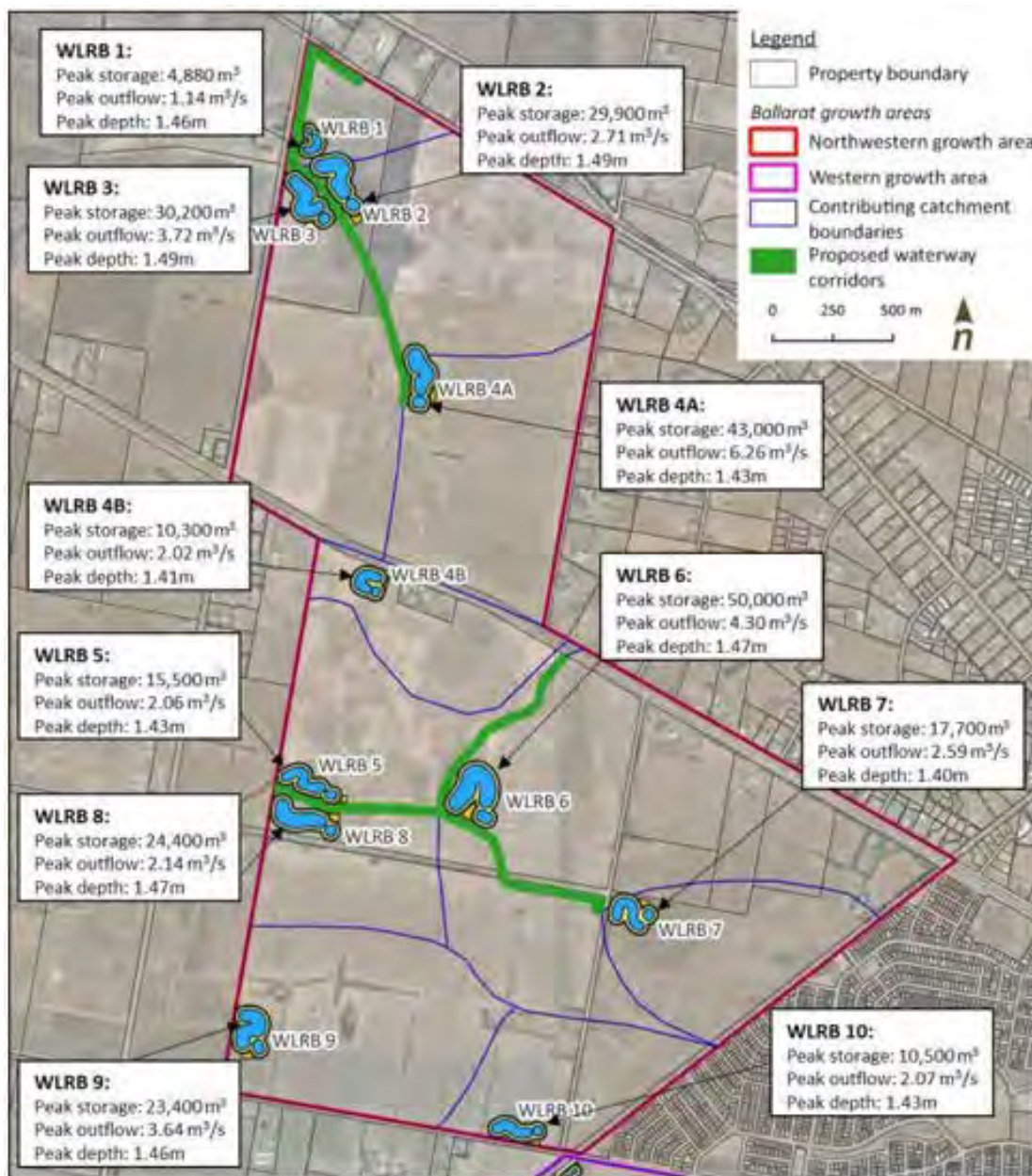


Figure 36: Retarding basin locations and modelling results - North-Western Growth Area.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas

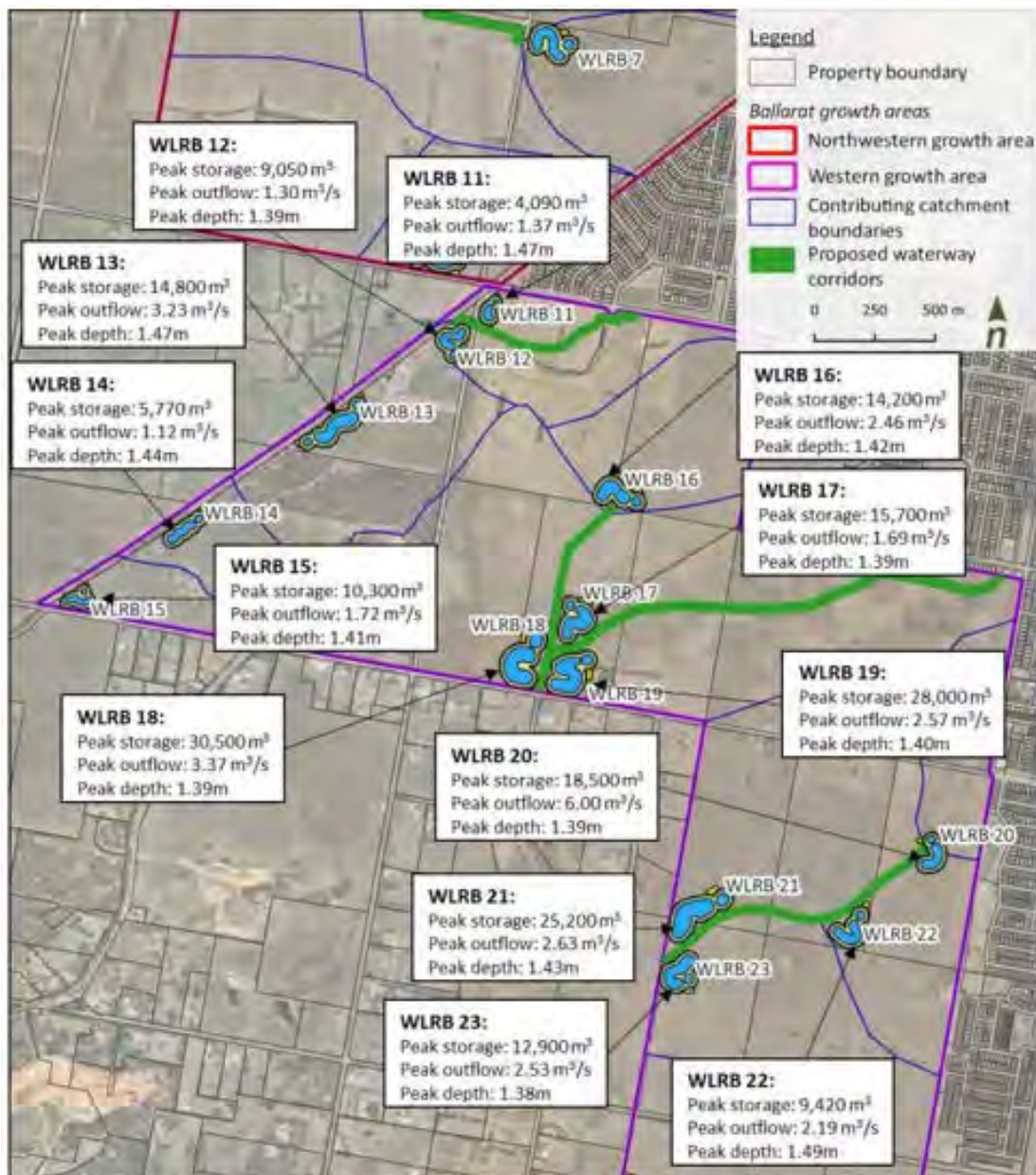


Figure 37: Retarding basin locations and modelling results - North section of the Western Growth Area.

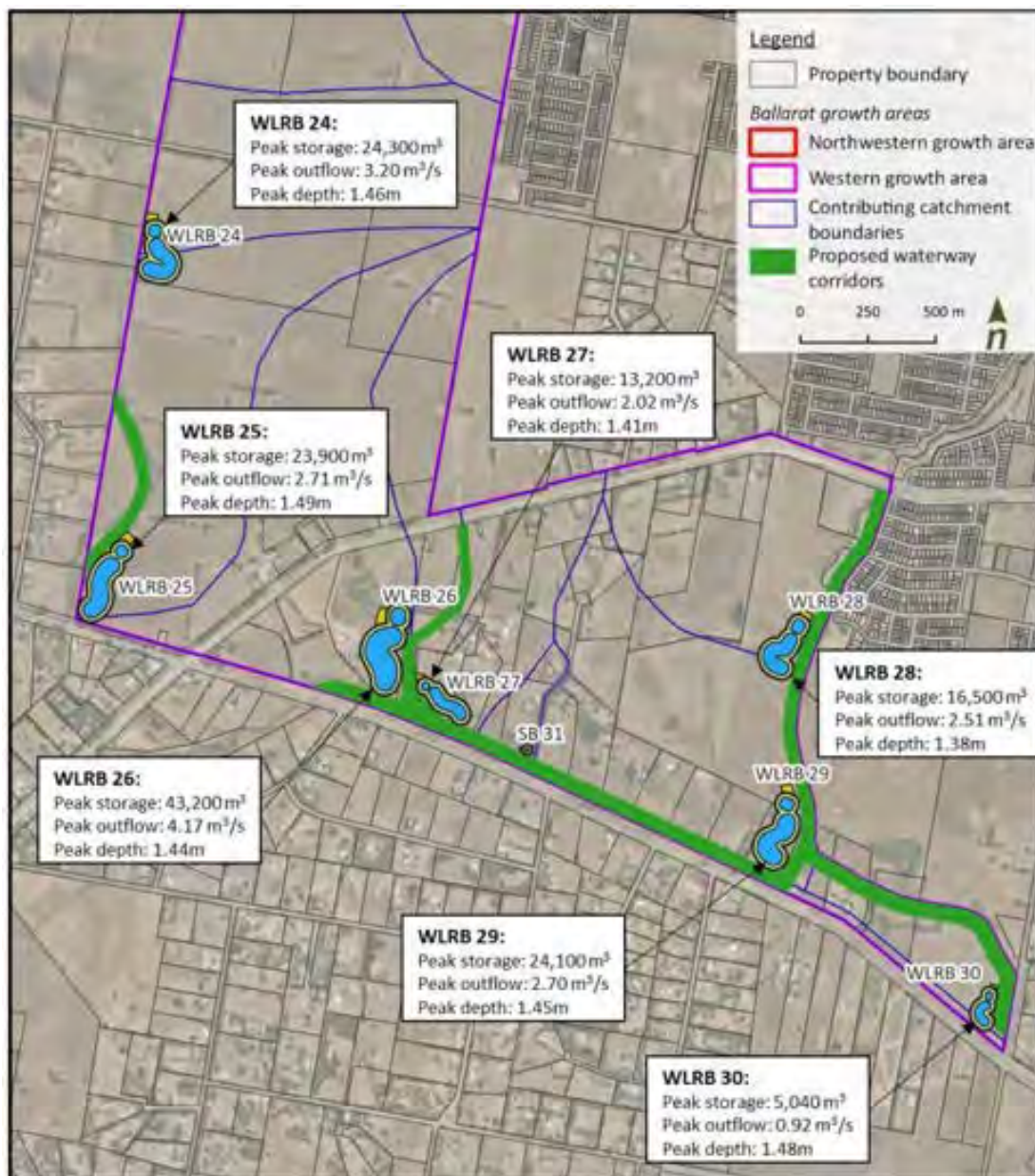


Figure 38: Retarding basin locations and modelling results - South section of Western Growth Area.

The next step was to work through the waterway corridor requirements for conveying water between the basins. Melbourne Water Waterway Corridor Guidelines were used to determine appropriate waterway corridor widths. Waterway corridor alignments were then established based on earlier existing conditions modelling and natural corridor alignment data obtained.

Refer Figure 39: Waterway Corridors - North-Western Growth Area. Figure 40: Waterway Corridors - Northern section of Western Growth Area. and Figure 41: Waterway Corridors - Southern section of the Western Growth Area. for waterway corridor alignments and widths.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas

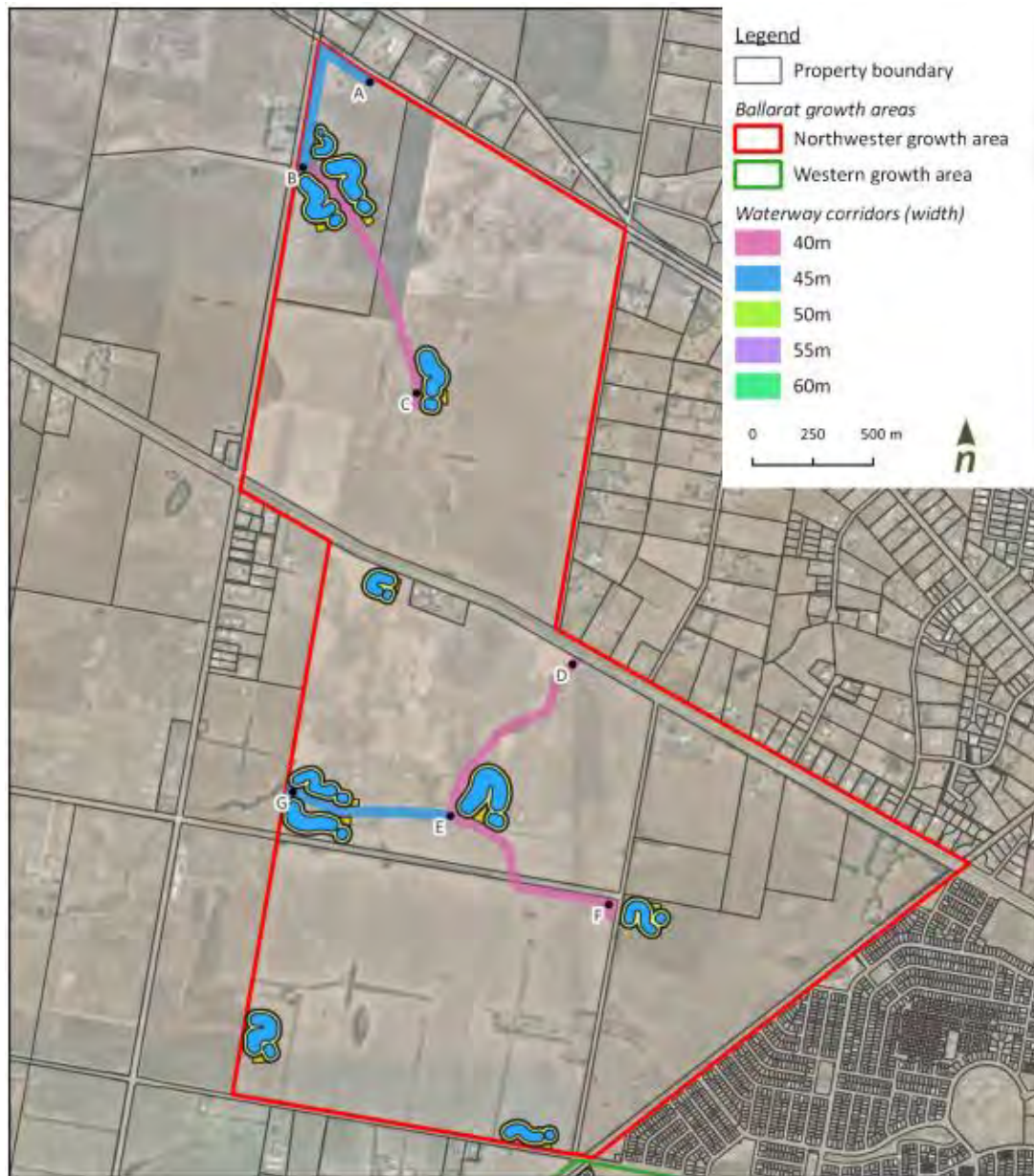


Figure 39: Waterway Corridors - North-Western Growth Area.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



Figure 40: Waterway Corridors - Northern section of Western Growth Area.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas

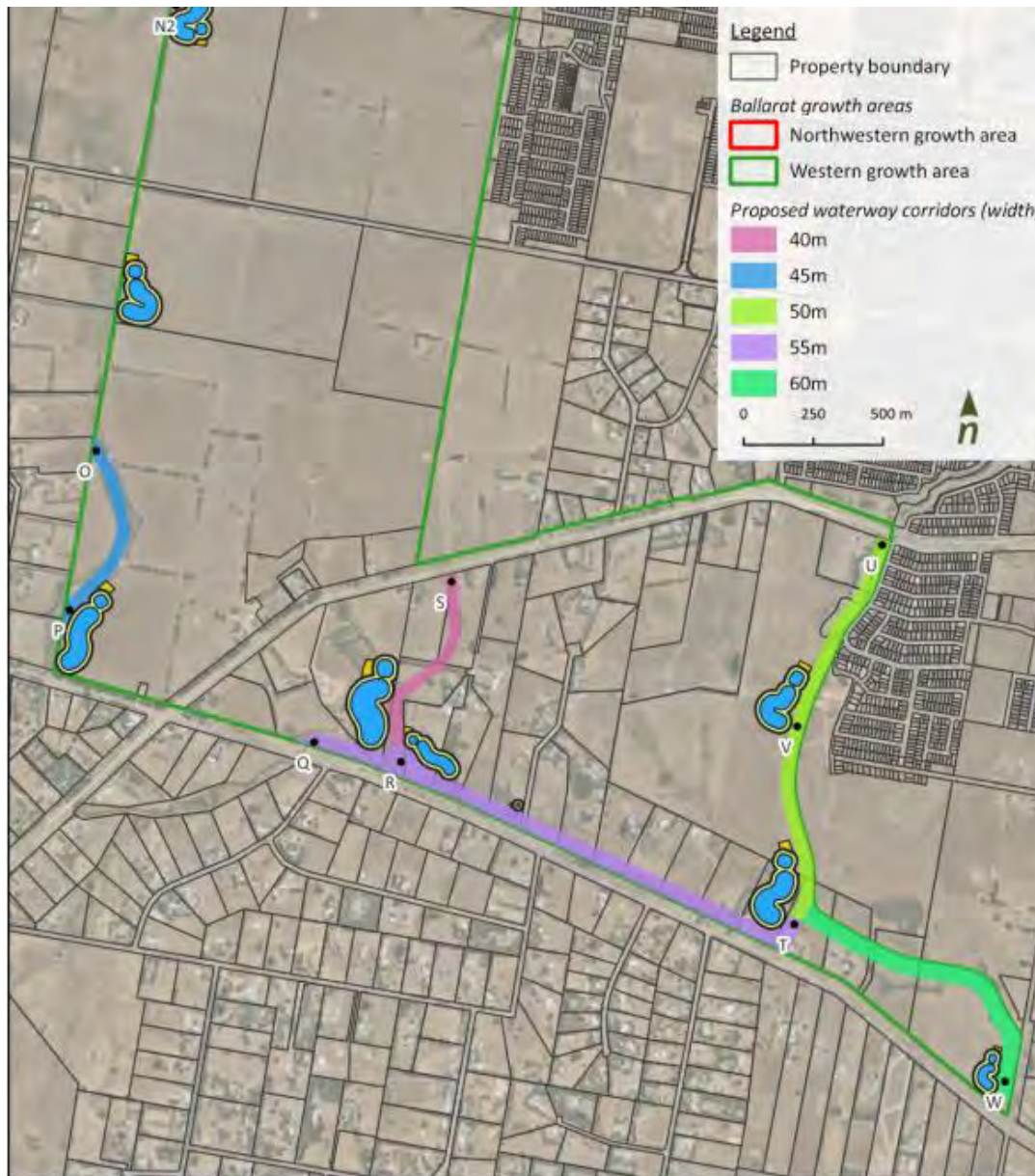


Figure 41: Waterway Corridors - Southern section of the Western Growth Area.

The longitudinal slope is dictated by invert controls at the downstream and upstream extents of the constructed waterway. The provided design features changes in slope along the alignment. A key requirement with respect to waterway longitudinal grades is ensuring grades are no steeper than 1 in 200 for stability and erosion management. Where the average slope of the existing topography is steeper than 1 in 200, grade control structures will be required.

The waterway cross-sectional geometry should be designed to accommodate the 4EY (exceedance per year) to 1EY flows in the low flow channel and the 1% AEP flows in the full compound channel.

As part of the review Alluvium highlighted the importance of the waterway management approach for the south-western draining waterway that intersects the boundary of the Western Growth Area (i.e. Winter Creek). The waterway naturally moves inside and outside of the growth area boundary at a number of locations. As a result Alluvium recommended considering an alternative framework plan option which 'extends' the Western Growth Area boundary to incorporate the entire waterway reach. This will allow future construction of the waterway corridor outside of the current growth area whilst providing a natural buffer between the urbanised residential area and existing rural living area. Refer Figure 42 for suggested changes to the western boundary of the southern portion of the North-Western Growth Area.

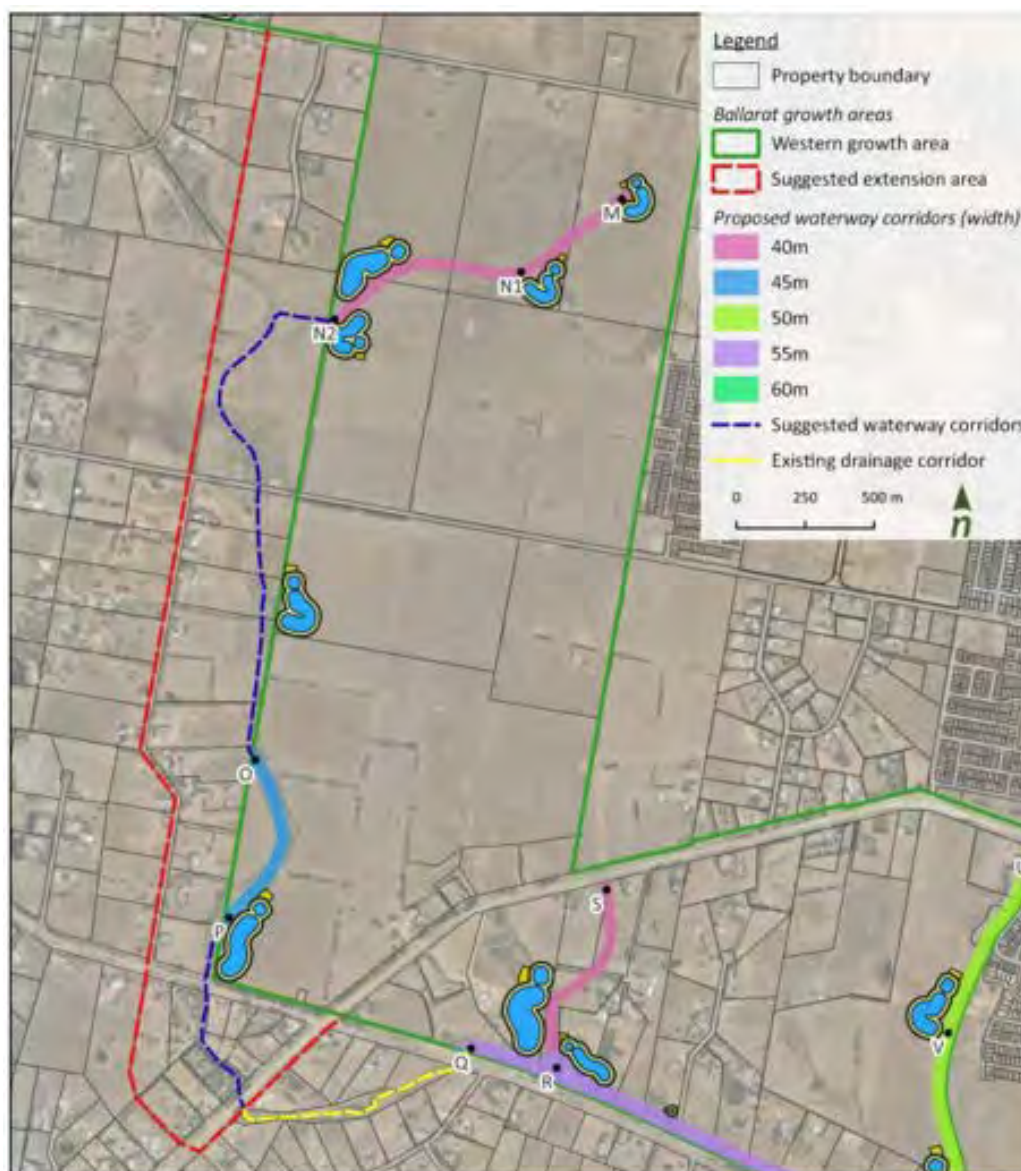


Figure 42: Suggested growth area changes to provide continuity.

If the boundary of the Western Growth Area is to be extended to ensure continuity in the waterway corridor and a more natural buffer between residential growth and rural area, further design of wetland / retarding basins would be required to manage both the quantity and quality of stormwater runoff generated within the extension area.

8.6.3 Expected Funding Arrangements

All retarding basins, associated water quality treatment assets and waterway corridor requirements identified have been costed in the infrastructure list in Appendix C.

Stormwater infrastructure in areas such as the Western and North-Western Growth Areas could be provided through a number of mechanisms including:

- Subdivision construction works by developers,
- Development contributions (development infrastructure levy), and
- Capital works projects by City of Ballarat and state government agencies.

The relevant Ministerial Direction stipulates that drainage assets can be funded through a development contributions levy, but must be shared assets servicing a broader catchment area than individual estates. For infrastructure to be covered in the Development Contributions Plan (DCP), or partly covered, there must be a demonstrated need for the asset created by the development, the levy imposed must be an equitable, fair and reasonable apportionment of the cost and there must be a reasonable nexus between the development and the need satisfaction measures.

As part of the preparation of this report, all key stormwater management infrastructure that could be identified in the phase of the project has been listed and estimated. Refer Appendix C for the full infrastructure list. This list was considered when establishing the recommended sequencing of precincts. The list also includes suggestions for potential funding sources for the assets.

8.7 INTEGRATED WATER MANAGEMENT


8.7.1 Existing Services

Alluvium was engaged by Taylors to complete an Integrated Water Management (IWM) Strategy for the Western and North-Western Growth Areas, refer to Appendix A. As part of the background research all relevant plans and strategies were considered, including but not limited to the Ballarat Integrated Water Management Plan 2017 and Central Highland Urban Water Strategy 2022. All relevant water cycle assets in the region were also considered, along with the challenges and risks climate change presents to water balance in the region, relevant data and catchments, proposed stormwater management and water quality assets in the areas, and all other relevant information to present a strategy that identifies issues and opportunities around integrated water management.

8.7.2 Future Servicing Arrangements



The IWM Strategy listed some opportunities that are already assumed to be rolled out, such as potable water use reduction targets and smart meters, along with other IWM issues and opportunities. Refer Alluvium IWMS sections 4.1 and 4.2 in Appendix B respectively for issues and opportunities identified. From that Alluvium developed an Integrated Water Management Plan at a strategic level. The Plan has a series of proposed actions to achieve outcomes such as safe, secure, and affordable water supplies in an uncertain future. Refer Table 21 for details.

Table 21: IWM Plan Summary.

Outcome	Issue or opportunity	Proposed action	Comment / Next steps
	40% reduction in household potable water use to meet 124 L / person / day.	No action - Assumed to be a CHW requirement for new development.	Require water efficient appliances and rainwater tanks to meet this target, unless an alternative approach is proposed.
	Instal smart meters on all lots.	No action - Assumed to be rolled out as per current CHW policy.	
	Rainwater harvesting as the source of a managed aquifer recharge scheme.	Continue investigations into the viability of rainwater to MAR.	Consider residential and commercial roofs in the Western and North-Western Growth Areas as part of the rainwater to MAR scheme.
	Co-locate commercial and activity centres, open spaces with wetlands to support irrigation and other end uses.	As part of Master planning, ensure that water demand nodes like open spaces are proximate to potential non-potable water sources like stormwater wetlands.	Identify larger open spaces and ensure these and other non-potable demand nodes are well within the 800m theoretical distance limit between source and demand. Propose 400m or similar as a maximum distance.
	Regional stormwater harvesting scheme.	Align investigations with the SDS action Ballarat West Stormwater Harvesting. Undertake initial pre-feasibility investigations into a regional stormwater harvesting scheme that incorporates all or some of the growth area wetlands. As part of that study, consider the potential of supplying farmland to the west with excess treated stormwater.	Engage with Melbourne Water to gather learnings from the Sunbury and Melton Growth Area regional schemes. Smart technologies should be considered as part of the scheme to optimise performance and efficiency.

Our Ref: 24268E
 Bazarat North-Western & Western Growth Areas



Outcome	Issue or opportunity	Proposed action	Comment / Next steps
	WSUD in areas of high imperviousness to support stormwater management, cooling and place making.	As part of Masterplanning, identify areas with high areas of imperviousness (e.g. > 80%). Consider applying a concentrated WSUD approach that includes passively irrigated canopy cover and 'ground level' greening through WSUD.	This is to address stormwater quality as well as urban heat and amenity issues in car parks, industrial and commercial areas etc.
	Development wide imperviousness targets.	Consider reducing imperviousness across the development as part of Master planning. For example reducing from typical residential of 0.75 to 0.6.	Reduced imperviousness targets have been adopted by Sydney Water in the Western Growth Areas of Sydney. This may fundamentally change the approach and requirements for surface water management.
	Leaky wetlands to meet infiltration targets.	As part of wetland design, investigate the potential for stormwater treatment wetlands to have a leaky base to contribute to infiltration. Consider also the potential to reduce costs through changed material and construction requirements.	The confined aquifer means that leaky wetlands are unlikely to impact groundwater quality. As part of this work, consider the impact of leaky wetlands on groundwater dependent ecosystems.
	Passive irrigation of street trees using stormwater. Align passive irrigation to Urban Forest Strategy target of 40% canopy cover in public realm.	Passive irrigation to support trees to meet canopy cover targets. Identify main boulevards and passive transport routes to design enhanced canopy cover or 'shadeways'.	There is a preference for low maintenance passive irrigation options e.g. kerb cuts or similar. Examples of shadeways are available having been designed in Melbourne Metropolitan greenfield developments.
	Climate resilience of canopy trees and habitat vegetation (e.g. along constructed waterways).	Ensure that species selected for street trees and vegetation within open space is: <ul style="list-style-type: none"> ▪ Resilient to the effects of climate change, and ▪ Consistent with broader habitat and biodiversity goals. 	Habitat suitability of street trees.

Case Ref: 24268E
 Barak North-Western & Western Growth Areas



Outcome	Issue or opportunity	Proposed action	Comment / Next steps
	Mulawalla Wetland management plan (Winter Swamp) maintaining cultural and environmental values.	Undertake an ecohydrology assessment of the Mulawalla Wetland (Winter Swamp) to understand the impact of development on cultural and environmental values.	Ensure that analysis provides options or recommendations for maintaining values and/or mitigating the impacts of development.
	Ecological corridors along constructed waterway corridors with plantings and approach aligning to biodiversity objectives for the region.	Related to canopy trees action above, ensure that plantings around wetlands and along waterway corridors are consistent with broader biodiversity and ecological objectives.	
 Community values affected by:	Orientation of dwellings to maximise passive heating / cooling. Maximise connectivity of communities to natural spaces / orientation of households toward natural assets. Co-locate commercial and activity centres, open spaces with wetlands to support irrigation and other end uses.	The masterplan needs to support IWM objectives through: <ul style="list-style-type: none"> ▪ Co-location of wetlands and open spaces. ▪ Alignment of streetscapes (to minimise energy needs), and ▪ Connection of residences to natural areas. 	Input to the master planning process from an IWM perspective to make sure that these opportunities are not eliminated.
	Consideration of wider road widths along key commuter boulevards to accommodate WSUD and passive irrigation assets.	Related to the above, introduce wider road widths along key boulevards and 'shadeways' to accommodate necessary assets and infrastructure e.g. passive irrigation, streetscape WSUD etc.	

8.7.3 Expected Funding Arrangements

The funding for IWM measures will be spread across all stakeholders such as developers for streetscapes, authorities for waterbodies, builders for rainwater tanks and property owners for water efficient appliances. The values and contributions from all stakeholders will be critical to its success.

8.8 TRAFFIC & TRANSPORT

8.8.1 Executive Summary

In the preparation of the Traffic and Transport Strategy, Taylors partnered with One Mile Grid (OMG) to provide specialist traffic engineering and transport planning services. As part of this assessment,

- OMG inspected the site with due consideration of the project context,
- Sourced and reviewed all relevant background reports and outlined relevant aspects in strategic context,
- Considered the Ballarat West PSP area impacts and benefits from infrastructure proposed within it (BW DCP),
- Collected and reviewed traffic data in the vicinity of the site to establish existing traffic conditions and road network characteristic, and
- Considered the application of public transport and active transport principles.

This analysis and data collation allowed the development of recommendations for the high-level transport provisions and networks to be incorporated into the strategy along with traffic modelling. The provision, networks and modelling is then used to inform the selection of a suitable road network to cater for the traffic and transport demands, from both the low and high growth scenarios. Refer Appendix D for a full copy of One Mile Grid report.

The report considers Public Transport requirements across the growth areas to ensure adequate space is provided to enable future provision of time competitive services to private vehicles and that services be delivered early during subdivisions to ensure residents transport choices are not limited as they establish new travel patterns at their new home. In light of the above, the following public transport elements are recommended for incorporation into the infrastructure servicing strategy:

- Provision for a future railway station,
- High-frequency routes along the transit corridors of Ballarat-Carngham Road, Glenelg Highway, Remembrance Drive and the Link Road,
- Secondary bus routes along adjacent major roads to achieve increased coverage, and
- Provision for bus head start infrastructure at all signalised intersections.

Refer Figure 43 for details of the proposed public transport network within the study area.

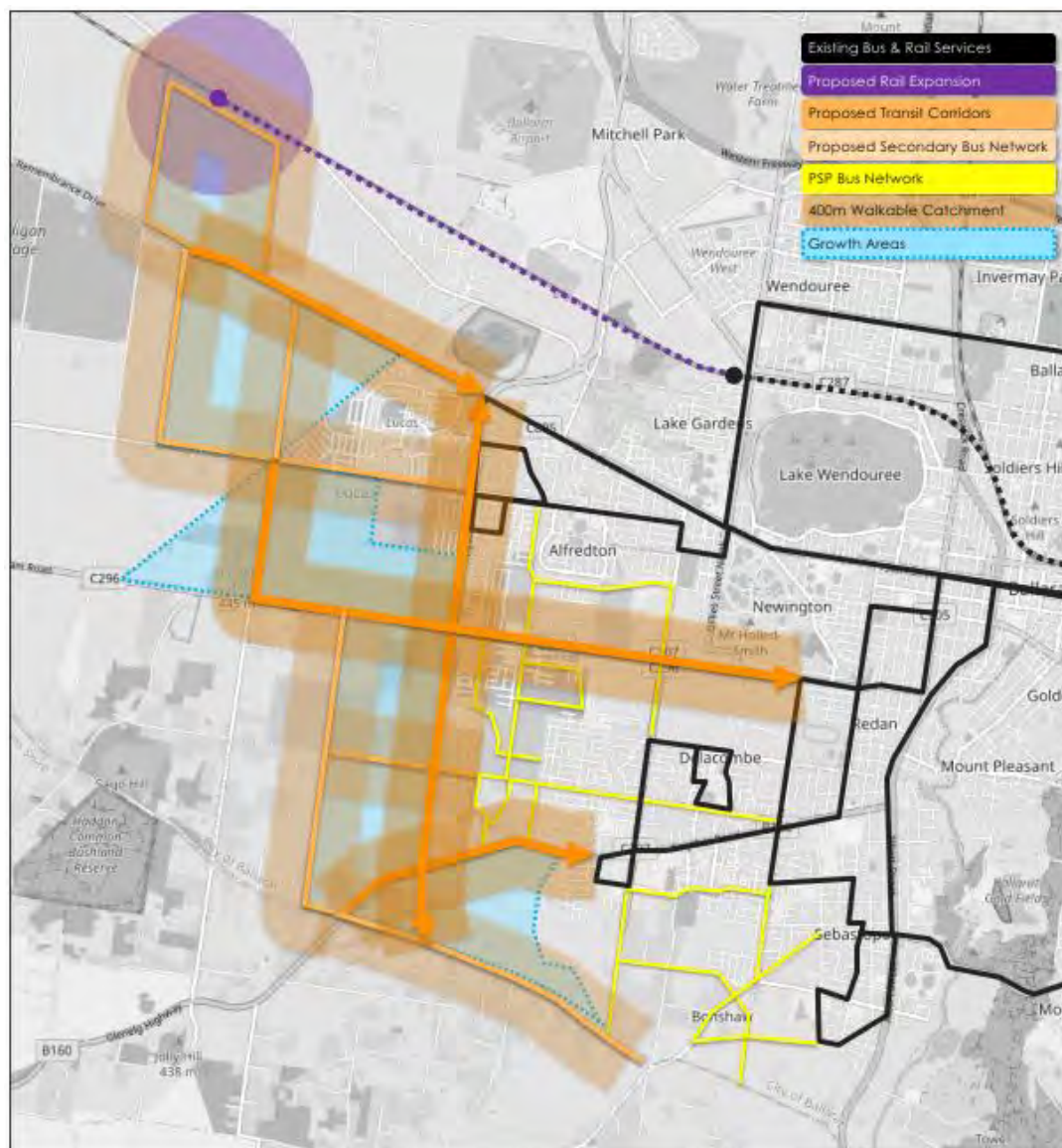


Figure 43: Proposed Public Transport Network.

In relation to Public Transport relevance to sequencing of the five precincts within the two growth areas (Ref Figure 2 in this report for Precincts), Precincts 2 and 3 within the Western Growth Area will be easiest to connect to. There are existing bus connections on Cuthberts Road up to Dyson Drive, which could readily be extended to the boundary of these two areas. There is also a dense network of bus-capable roads within the Ballarat West PSP that could link to other services. Precinct 1 would precede Precinct 4 given there are existing services in the south-east connecting to the boundary. Figure 13 in Appendix D gives a good indication of connectivity to planned routes in the PSP and existing routes servicing western Ballarat.

Note: The Department of Transport and Planning (DTP) has not committed to any extension of public transport.

In relation to Active Transport, Council’s relevant strategic documents and best practice scenarios were considered and the following provisions are recommended for incorporation into the infrastructure servicing strategy:

- Provision of dedicated off-road bicycle paths along arterial routes, separated from pedestrian facilities.
- Provision of alternate cycling and shared path facilities for recreation along waterways and reserves. At the time of writing, these features are not yet identified.
- Retention of the Ballarat-Skipton Rail Trail and improvement as an active transport connection.
- Priority crossings for shared paths and bicycle paths at uncontrolled side-road intersections.
- Signalised pedestrian crossings where signalised intersections are otherwise not provided near major destinations.

Refer Figure 44 for details of the proposed active transport network within the study area.

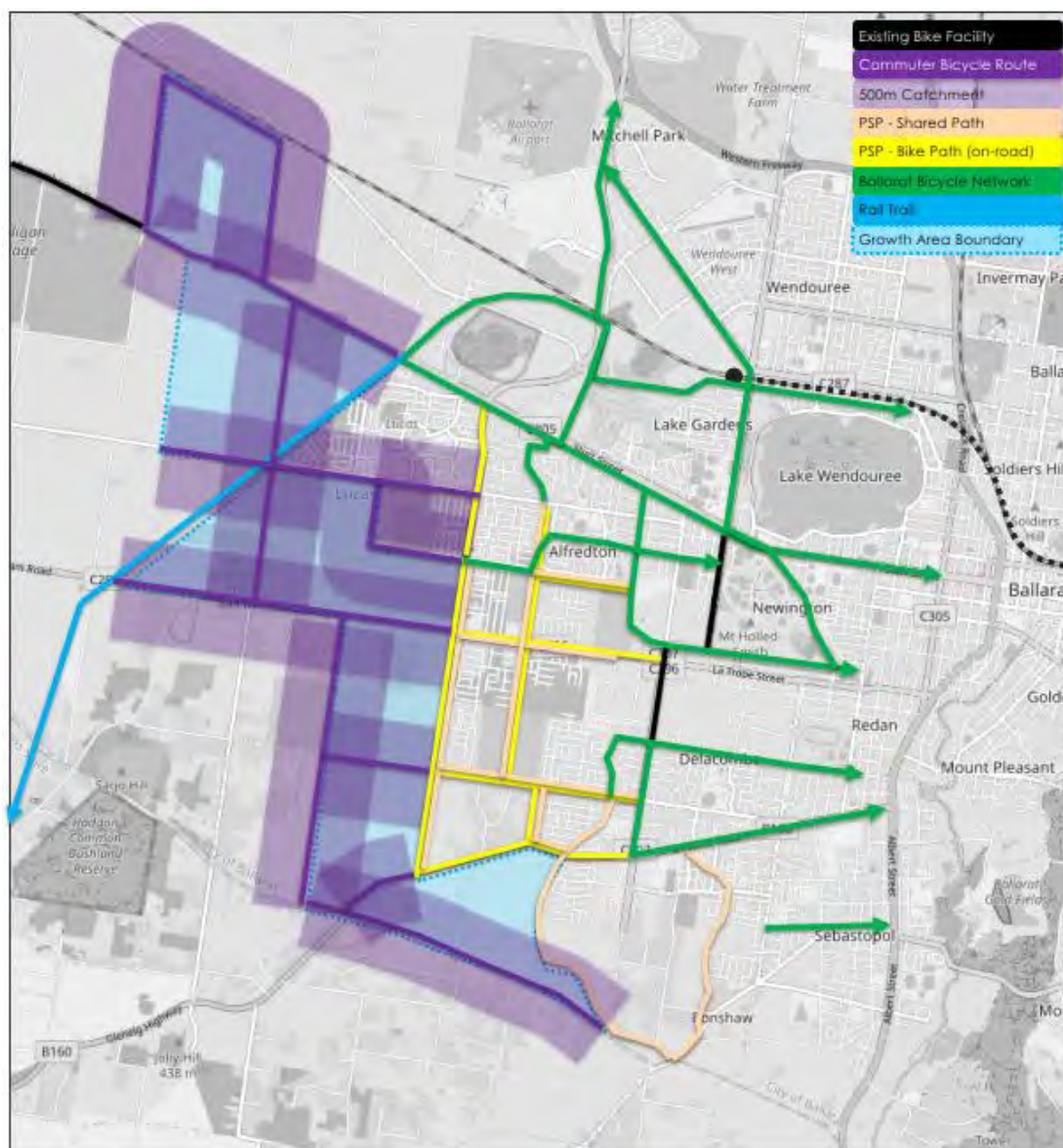


Figure 44: Proposed Active Transport Network.

In relation to Active Transport relevance to sequencing, having Precinct 4 connect first leverages the existing Skipton Rail Trail and Remembrance Drive path. Precinct 3 is otherwise likely to have the best access, given that the Ballarat West PSP area immediately east will include a few shared and bike path facilities when complete. Then Precinct 2 and 1 due to Ballarat West PSP and then Precinct 5 last.

Traffic modelling was completed for both low and high growth scenarios. For analysis purposes, the following assumptions were relied on:

- The growth areas will incorporate largely residential land uses; and
- Daily traffic generation rate of 7 trips per dwelling per day.

It is noted that the default rate commonly utilised in evaluation of growth areas transport infrastructure is 9 trips per dwelling per day, which is considered a conservatively high estimate of traffic generation. This is likely to result in an oversupply of traffic infrastructure. Should the growth areas achieve targets of high mode share for walking, cycling and public transport trips, it is anticipated this reduced rate will be readily achievable. It is noted, however, that car trips will remain a significant portion of households trips into the future and the reduction is in-part contingent on provision of suitable sustainable transport options at the time of occupation of these growth areas.

When combined with existing flows, future traffic volumes are likely to exceed the existing capacity of many roads within and adjacent to the growth areas. Refer Table 22 for estimated traffic volumes on the future road network and Figure 45 and Figure 46 for illustrated maps showing the network required to service low and high yield respectively.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



Table 22: Future Road Network – Estimated Traffic Volumes.

Road Name	Location	Low Yield				High Yield			
		Approximate Future Traffic Volumes	Future Classification	Upgrade Required	Land Acquisition	Approximate Future Traffic Volumes	Future Classification	Upgrade Required	Land Acquisition
Remembrance Drive	West of Draftins Rd	2,000	Arterial – 2 lane	No	None	2,500	Arterial – 2 lane	No	None
Remembrance Drive	Draftins Rd & Finchs Rd	12,000	Arterial – 2 lane	No	None	15,000	Arterial – 2 lane	No	None
Remembrance Drive	Finchs Rd & Dyson Dr	18,500	Arterial – 2 lane	Yes	None	23,000	Arterial – 4 lane	Yes	None
Remembrance Drive	East of Dyson Dr	34,500	Arterial – 4 lane	Yes	None	42,000	Arterial – 6 lane	Yes	None
Finchs Road	Cuthberts Rd & Remembrance Dr	9,000	Link Road	Yes	Yes	12,000	Link Road	Yes	Yes
Finchs Road	Ballarat-Carrigham Rd & Cuthberts Rd	6,500	Link Road	Yes	Yes	8,500	Link Road	Yes	Yes
Cuthberts Road	West of Finchs	1,000	Collector Street	Yes	None	1,000	Collector Street	Yes	None
Cuthberts Road	East of Finchs	9,000	Link Road	Yes	None	11,000	Link Road	Yes	None
Ballarat-Carrigham Road	West of Finchs Rd	1,500	Arterial – 2 lane	No	None	1,500	Arterial – 2 lane	No	None
Ballarat-Carrigham Road	Finchs Rd & Dyson Dr	23,000	Arterial – 4 lane	Yes	Yes [PAO]	29,000	Arterial – 4 lane	Yes	Yes [PAO]
Ballarat-Carrigham Road	Dyson Dr & Wiltshire Ln	11,500	Arterial – 2 lane	Yes	Yes [PAO]	14,000	Arterial – 2 lane	Yes	Yes [PAO]
Lalrobe Street	East of Wiltshire Ln	21,500	Arterial – 4 lane	Yes	None	25,000	Arterial – 4 lane	Yes	None
Leamonth Street	North of Ballarat-Carrigham Rd	14,500	Arterial – 2 lane	No	None	17,000	Arterial – 2 lane	No	None
Wiltshire Lane	South of Ballarat-Carrigham Rd	18,000	Arterial – 2 lane	No	None	19,500	Arterial – 2 lane	No	None
Link Road	North of Blind Creek Rd	16,000	Arterial – 2 lane	No	None	20,000			
Link Road (Dyson Drive)	Remembrance Dr & Blind Creek Rd	18,000	Arterial – 2 lane	No	None	22,000	Arterial – 4 lane	Yes	None
Link Road (Dyson Drive)	R'brance Dr & Ballarat-Carrigham Rd	28,000	Arterial – 4 lane	Yes	None	34,000	Arterial – 4 lane	Yes	None
Link Road (Dyson Drive)	Ballarat-Carrigham Rd & Greenhalghs Rd	14,500	Arterial – 2 lane	No	None	19,000	Arterial – 2 lane	Yes	None
Link Road (Dyson Drive)	Greenhalghs Rd & Glenelg Hwy	18,000	Arterial – 2 lane	No	None	24,000	Arterial – 4 lane	Yes	None
Greenhalghs Road	West of Hayes Dr	500	Rural Access	No	None	500	Rural Access	No	None
Greenhalghs Road	Hayes Dr & Link Rd	4,000	Collector Street	Yes	None	5,000	Collector Street	Yes	None
Greenhalghs Road	East of Link Rd	8,500	Link Road	Yes*	None	11,000	Link Road	Yes*	None
Bells Road	West of Glenelg Hwy	2,000	Link Road	Yes	None	2,000	Link Road	Yes	None
Bells Road	Glenelg Hwy & Link Rd	1,000	Link Road	Yes	None	1,000	Link Road	Yes	None
Bells Road	Link Road & Doble Rd	5,500	Arterial – 2 lane	No	None	7,000	Arterial – 2 lane	No	None
Bells Road	Doble Rd & Ross Creek Rd	11,000	Arterial – 2 lane	No	None	14,500	Arterial – 2 lane	No	None
Bells Road	East of Ross Creek Rd	10,000	Arterial – 2 lane	No	None	13,000	Arterial – 2 lane	No	None
Glenelg Highway	Southwest of Bells Rd	8,000	Arterial – 2 lane	No	None	9,000	Arterial – 2 lane	No	None
Glenelg Highway	Bells Rd to Link Rd	9,000	Arterial – 2 lane	No	None	10,000	Arterial – 2 lane	No	None
Glenelg Highway	Link Rd to Marada Blvd	9,500	Arterial – 2 lane	No	None	10,500	Arterial – 2 lane	No	None
Glenelg Highway	East of Marada Blvd	8,500	Arterial – 2 lane	No	None	9,500	Arterial – 2 lane	No	None
Ross Creek Road	North of Bells Rd	5,500	Link Road	No	None	7,500	Link Road	No	None
Blind Creek Road	West of Link Road	10,000	Link Road	Yes	None	13,000	Link Road	Yes	None

* To be upgraded within Ballarat West PSP area

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas

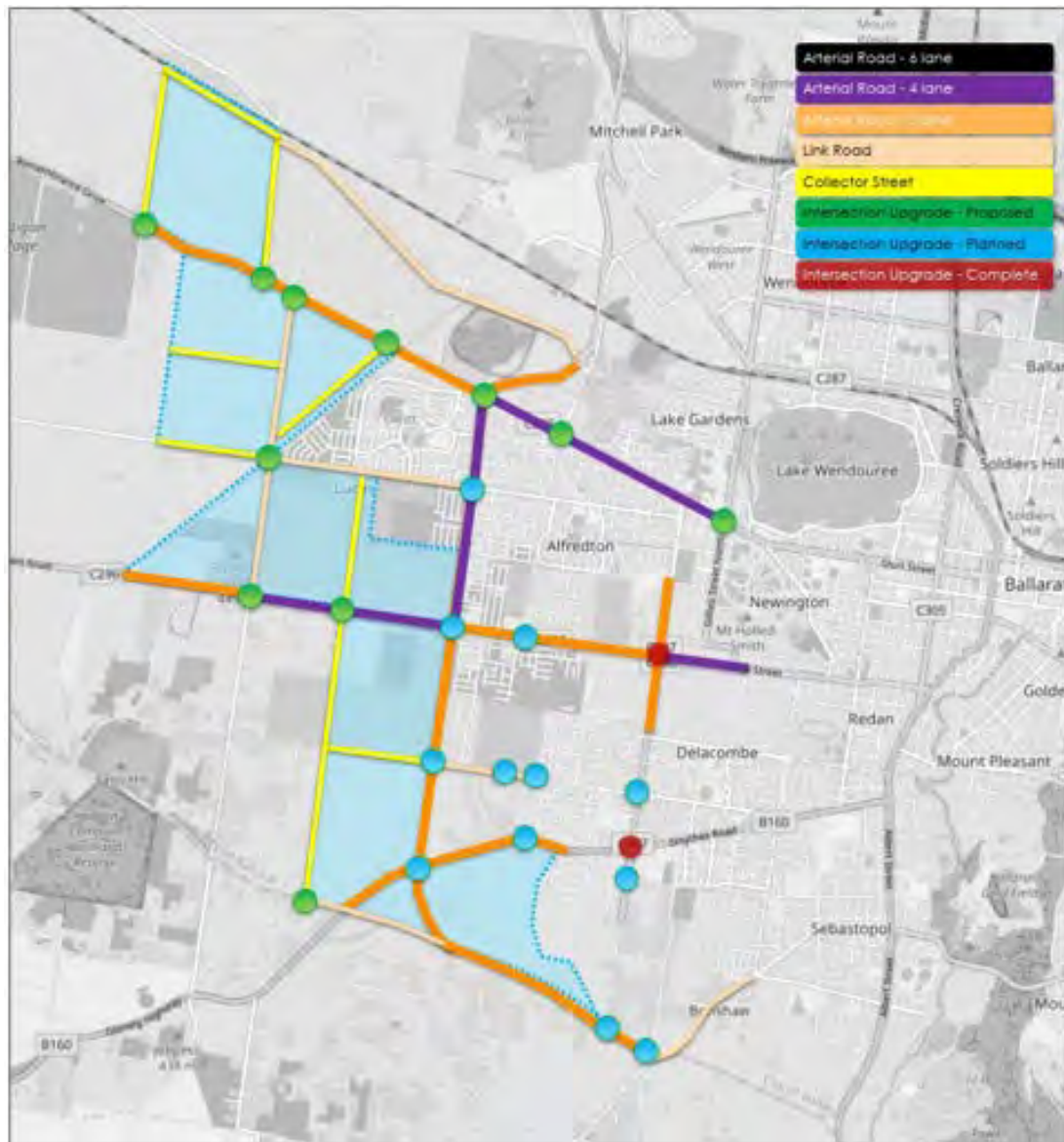


Figure 45: Future Traffic Network - Low Yield.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas

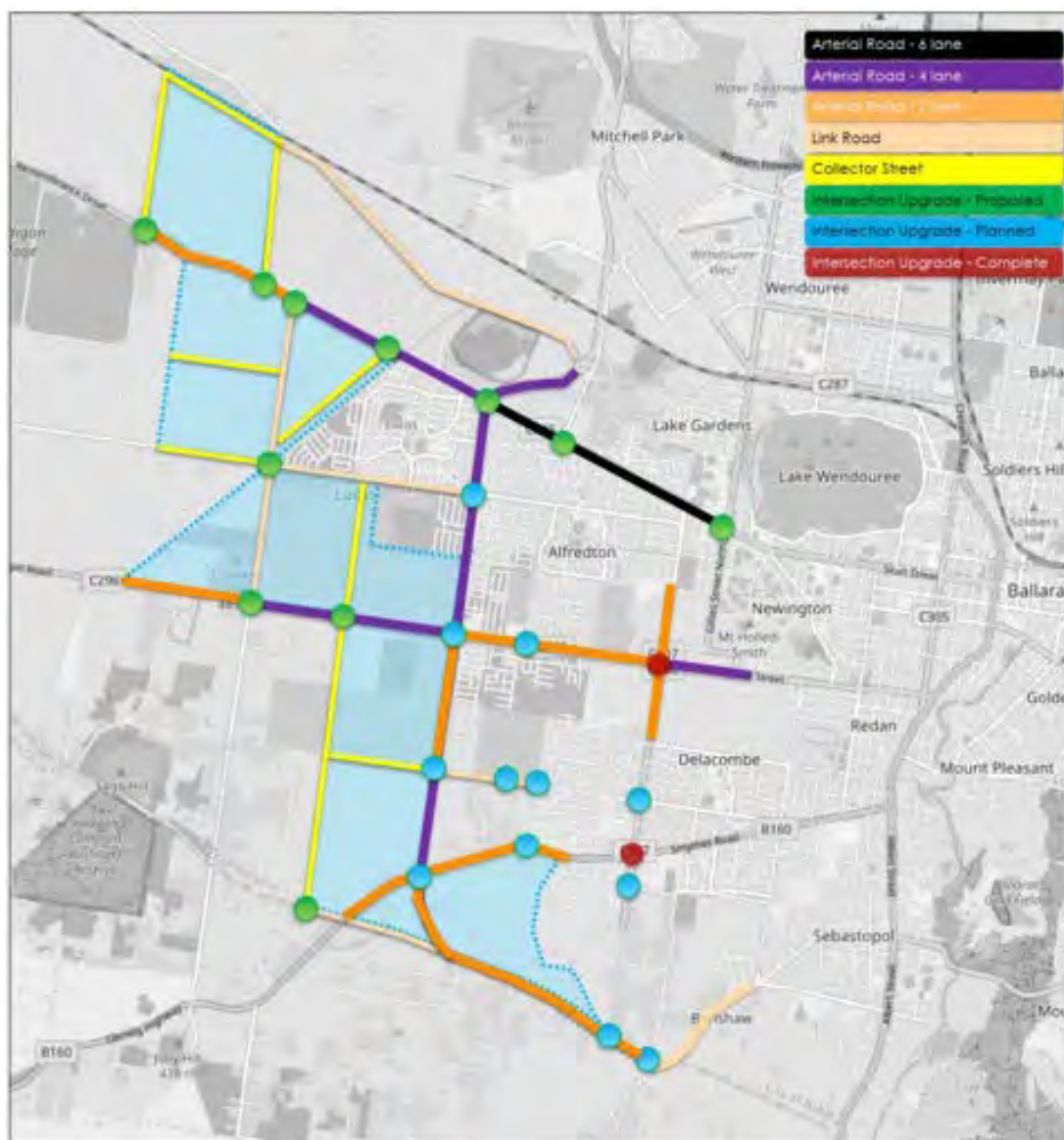


Figure 46: Future Traffic Network - High Yield.

The upgrade requirements of Remembrance Drive, particularly east of the Link Road, will remain a major challenge because of the heritage significance of the Avenue of Honour. It is recommended that when going into further detail in preparation of the Framework Plan traffic diversion / incentive measures are considered as an alternate.

In broad terms, the traffic modelling estimates indicate that the planned level of development can be catered for, subject to the provision of supporting transport infrastructure. The impacts of continuing development within the Ballarat West PSP area, yet to be developed, should also be confirmed.

It should be noted that the traffic analysis and conclusions are drawn from a conventional “predict and provide” approach to modelling. The development of these growth areas is a long-term prospect, and likely represents a land supply in excess of 30 years. This long-term development horizon suggests likely changes in household trip generation, and ongoing reductions in car trips. Should the growth areas succeed in achieving many of

Council's aspirations for increased active and public transport use, there will naturally be reduced reliance on private vehicle trips, and reduced requirements for supporting road infrastructure.

Additionally, there are both "push" and "pull" factors that influence travel mode choice. Introduction of improved sustainable transport services and facilities "pull" more trips by improving the relative attractiveness of these modes. "Push" factors include elements like traffic congestion or parking pricing that offer a disincentive to private vehicle trips and are an important travel demand management tool. There is presently limited congestion in Ballarat during commuter peak periods, but with ongoing development from the PSP and growth areas, this is expected to increase.

OMG also evaluated the development capacity and traffic impacts to the growth areas if the Link Road extension to Bells Road cannot be delivered. This assessment considers both the fully developed growth areas, and an evaluation of development capacity up to typical capacity thresholds for key road links.

The modelling results assume the completion of the following pieces of road infrastructure:

- Duplication of Ballarat-Carngham Road (as a four-lane arterial) and
- Completion of all roads and intersections within the Ballarat West PSP.

The additional daily traffic volumes within and surrounding the growth areas are listed below in Table 23 and upgrades required if the Link Road is not extended are illustrated in Figure 47 and Figure 48.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



Table 23: Future Road Network - Estimated Traffic Volumes (Without Link Road).

Road Name	Location	Low Yield				High Yield			
		Approximate Future Traffic Volumes	Future Classification	Upgrade Required	Land Acquisition	Approximate Future Traffic Volumes	Future Classification	Upgrade Required	Land Acquisition
Remembrance Drive	West of Draftins Rd	2,000	Arterial – 2 lane	No	None	2,500	Arterial – 2 lane	No	None
Remembrance Drive	Draftins Rd & Finchs Rd	12,500	Arterial – 2 lane	No	None	15,500	Arterial – 2 lane	No	None
Remembrance Drive	Finchs Rd & Dyson Dr	17,500	Arterial – 2 lane	No	None	22,000	Arterial – 4 lane	Yes	None
Remembrance Drive	East of Dyson Dr	30,000	Arterial – 4 lane	Yes	None	36,000	Arterial – 4 lane	Yes	Yes
Finchs Road	Cuthberts Rd & Remembrance Dr	9,500	Link Road	Yes	Yes	12,500	Link Road	Yes	Yes
Finchs Road	Ballarat-Camgham Rd & Cuthberts Rd	7,000	Link Road	Yes	Yes	9,000	Link Road	Yes	Yes
Cuthberts Road	West of Finchs	1,000	Collector Street	Yes	None	1,000	Collector Street	Yes	None
Cuthberts Road	East of Finchs	8,500	Link Road	Yes	None	10,500	Link Road	Yes	None
Ballarat-Camgham Road	West of Finchs Rd	1,500	Arterial – 2 lane	No	None	1,500	Arterial – 2 lane	No	None
Ballarat-Camgham Road	Finchs Rd & Dyson Dr	21,000	Arterial – 4 lane	Yes	Yes (PAD)	26,500	Arterial – 4 lane	Yes	Yes (PAD)
Ballarat-Camgham Road	Dyson Dr & Withshire Ln	16,000	Arterial – 2 lane	No	Yes (PAD)	20,500	Arterial – 4 lane	Yes	Yes (PAD)
Lafrobe Street	East of Withshire Ln	26,000	Arterial – 4 lane	Yes	None	30,500	Arterial – 4 lane	Yes	None
Learnmonth Street	North of Ballarat-Camgham Rd	17,500	Arterial – 2 lane	No	None	18,500	Arterial – 2 lane	No	None
Withshire Lane	South of Ballarat-Camgham Rd	28,000	Arterial – 4 lane	Yes	None	33,500	Arterial – 4 lane	Yes	None
Link Road	North of Blind Creek Rd	15,500	Arterial – 2 lane	No	None	19,000	Arterial – 2 lane	No	None
Link Road (Dyson Drive)	Remembrance Dr & Blind Creek Rd	17,000	Arterial – 2 lane	No	None	21,000	Arterial – 4 lane	Yes	None
Link Road (Dyson Drive)	R' brance Dr & Ballarat-Camgham Rd	21,500	Arterial – 4 lane	Yes	None	25,000	Arterial – 4 lane	Yes	None
Link Road (Dyson Drive)	Ballarat-Camgham Rd & Greenhalghs Rd	-	-	-	-	-	-	-	-
Link Road (Dyson Drive)	Greenhalghs Rd & Glenelg Hwy	-	-	-	-	-	-	-	-
Greenhalghs Road	West of Hayes Dr	500	Rural Access	No	None	500	Rural Access	No	None
Greenhalghs Road	Hayes Dr & Link Rd	10,000	Link Road	Yes	Yes	13,000	Link Road	Yes	Yes
Greenhalghs Road	East of Link Rd	10,500	Link Road	Yes*	No	13,500	Link Road	Yes*	No
Bells Road	West of Glenelg Hwy	2,000	Link Road	Yes	None	2,000	Link Road	Yes	None
Bells Road	Glenelg Hwy & Link Rd	1,500	Link Road	Yes	None	2,000	Link Road	Yes	None
Bells Road	Link Road & Doble Rd	3,000	Link Road	No	None	4,000	Link Road	No	None
Bells Road	Doble Rd & Ross Creek Rd	8,500	Link Road	No	None	11,500	Link Road	No	None
Bells Road	East of Ross Creek Rd	10,000	Link Road	No	None	13,000	Link Road	No	None
Glenelg Highway	Southwest of Bells Rd	8,000	Arterial – 2 lane	No	None	9,000	Arterial – 2 lane	No	None
Glenelg Highway	Bells Rd to Link Rd	10,000	Arterial – 2 lane	No	None	11,000	Arterial – 2 lane	No	None
Glenelg Highway	Link Rd to Masada Blvd	12,500	Arterial – 2 lane	No	None	15,000	Arterial – 2 lane	No	None
Glenelg Highway	East of Masada Blvd	8,500	Arterial – 2 lane	No	None	9,500	Arterial – 2 lane	No	None
Ross Creek Road	North of Bells Rd	5,500	Link Road	No	None	7,500	Link Road	No	None
Blind Creek Road	West of Link Road	10,000	Link Road	Yes	None	12,500	Link Road	Yes	None
N/S Collector	Ballarat-Camgham Rd & Greenhalghs Rd	4,500	Collector Street	Yes	Yes	6,000	Collector Street	Yes	Yes
N/S Collector	Greenhalghs Rd & Glenelg Hwy	5,000	Collector Street	Yes	Yes	7,000	Collector Street	Yes	Yes
Innsbruck Road	Greenhalghs Rd & Glenelg Hwy	1,000	Link Road	Yes*	No	1,000	Link Road	Yes*	No

* To be upgraded within Ballarat West PSP area

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas

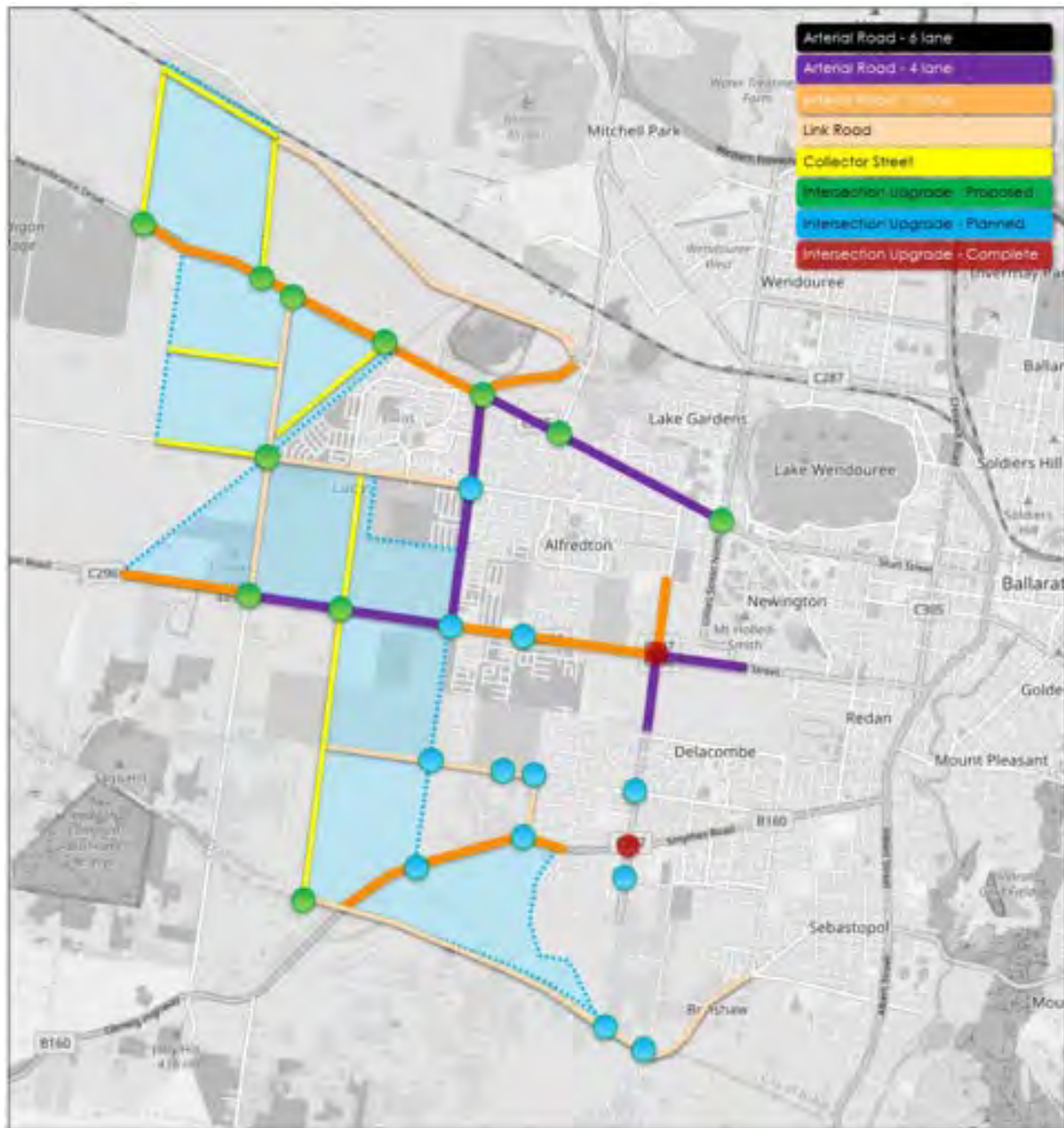


Figure 47: Future Traffic Network - Low Yield (No Link Road).

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas

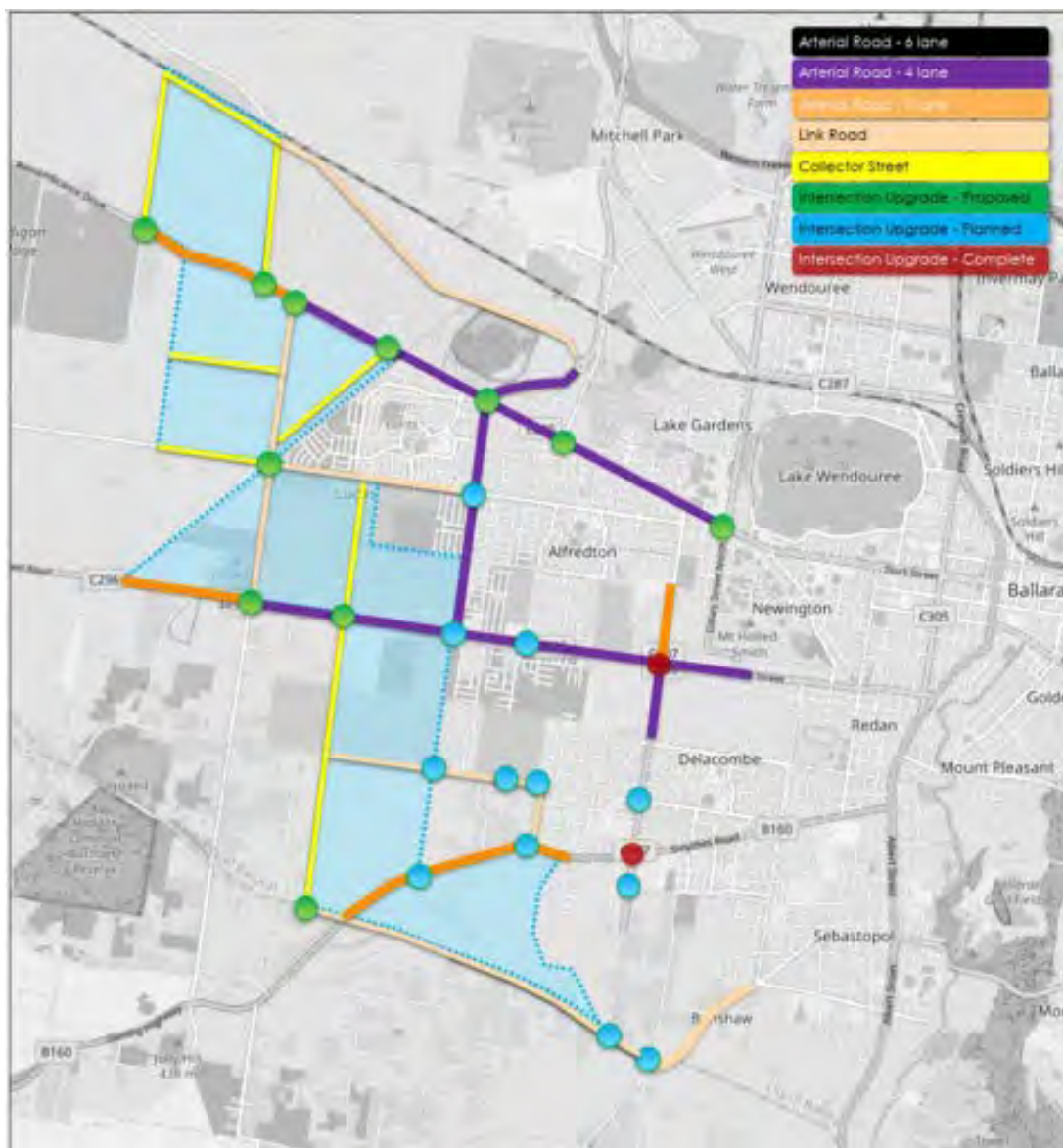


Figure 48: Future Traffic Network - High Yield (No Link Road).

Notable observations from the modelling include:

- The removal of the southern portion of the Link Road places a greater reliance on alternative north-south road connections and linking routes. Ballarat-Carngham Road, Wiltshire Lane and Greenhalghs Road in particular are required to accommodate higher traffic volumes relative to the equivalent Link Road scenario, and
- Catering for traffic volumes along Remembrance Drive will still be challenging.

Development thresholds (number of developed lots) at which point critical roads must be upgraded to provide additional mid-block capacity was calculated and is listed in

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



Table 24 below.

Table 24: Road Upgrade Thresholds

		Road Upgrade	Threshold
Remembrance Drive	Finchs Rd & Dyson Dr	2 lanes > 4 lanes	15,600 lots
Remembrance Drive	East of Dyson Dr	2 lanes > 4 lanes	9,400 lots
Ballarat-Carngham Road	Finchs Rd & Dyson Dr	2 lanes > 4 lanes	18,700 lots
Ballarat-Carngham Road	Dyson Dr & Wiltshire Ln	2 lanes > 4 lanes	25,400 lots
Latrobe Street	East of Wiltshire Ln	2 lanes > 4 lanes	12,000 lots
Wiltshire Lane	South of B-C Rd	2 lanes > 4 lanes	9,400 lots
Link Road (Dyson Drive)	R'brance Dr & Blind Creek Rd	2 lanes > 4 lanes	25,400 lots
Link Road (Dyson Drive)	R'brance Dr & B-C Rd	2 lanes > 4 lanes	17,400 lots

OMG also undertook a review of potential sequencing of development, to understand how this may impact on the timing and need for transport infrastructure.

Assuming that the Link Road is not completed prior to any land development occurring within the study area, OMG established that any half of the southern or northern portions of the Western and North-Western Growth Areas may be fully developed without requiring road upgrades external to the study area. Noting this sequencing is only considering traffic and there are many other servicing factors and impacts that need to be taken into account.

Should the Western Growth Area develop first in its entirety (approximately 17,200 lots), then upgrade thresholds to Latrobe Street (east of Wiltshire Lane) and Wiltshire Lane (south of Ballarat-Carngham Road) would be met, exceeding capacity by approximately 3,500-4,000 vehicles per day.

If the Link Road is constructed at the time of development, development thresholds and upgrades are generally the same, with the exception of the Western Growth Area. Should the northern portion of this area develop first (7,700 lots), warrants would be met for Latrobe Street duplication, and Ballarat-Carngham Road (between Finchs Road and Link Road) due to increased reliance on Link Road for north-south connections. Should the southern portion develop first (9,500 lots), there are no requirements for transport upgrades at all across the study area and surrounds (except for direct connections and internal roads).

8.8.2 Expected Funding Arrangements

Traffic and Transport infrastructure in areas such as the Western and North-Western Growth Areas is provided through a number of mechanisms, including:

- Subdivision construction works by developers,
- Development contributions (development infrastructure levy), and
- Capital works projects by City of Ballarat and state government agencies.

The relevant Ministerial Direction stipulates the traffic and transport infrastructure that can be funded through a development contributions levy, including:

- Acquisition of land for roads, public transport corridors,
- Construction of roads, including bicycle and foot paths, and traffic management and control devices, and
- Construction of public transport infrastructure, including fixed rail infrastructure, railway stations, bus stops and tram stops.

For infrastructure to be covered in the DCP, or partly covered, there must be a demonstrated need for the asset created by the development, the levy imposed must be an equitable, fair and reasonable apportionment of the cost and there must be a reasonable nexus between the development and the need satisfaction measures.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



As part of the preparation of this report all key transport and traffic infrastructure that could be identified in each phase of the project has been listed and estimated. Refer Appendix E for Traffic and Transport Infrastructure list and estimates. This list was considered when establishing the recommended sequencing of precincts. The list also includes suggestions for potential funding source for the assets.

In relation to OMG's discussion of cost apportionment of the link road, further investigations are recommended to establish a sound nexus between demand for use of the link road by the Western & North-Western Growth Areas and provision in the DCP for partial funding of the land and infrastructure required for its delivery.

9 SEQUENCING

Due to the size of the Ballarat North-Western and Western Growth Areas, development areas will need to be rolled out in a logical order or sequence. The anticipated sequencing of the precincts within the Ballarat North-Western and Western Growth Areas has been assessed based on the following criteria:

- Estimate Infrastructure Project Costs,
- Infrastructure Project Complexity,
- Infrastructure Project Benefit to the wider Ballarat Community,
- Estimated Yield, and
- Estimate Cost per ha.

The estimated infrastructure project costs, yield and cost per ha metrics are based on engineering principles. The infrastructure project complexity and benefit to the wider community, while still founded on engineering principles, cannot be confirmed until further design can be undertaken. The anticipated sequencing therefore could be changed based on several factors including appropriate interim strategies, infrastructure contribution plan project funding, and landowner / developer cooperation. Refer to **Table 25** to **Table 29** for each breakdown.

Refer **Figure 49: Locality Plan & Proposed Precincts**.

for Locality Plan & Proposed Precincts. The ranking for estimated cost was based on lowest cost to highest cost.

Table 25: Estimated Infrastructure Project Costs Matrix.
Precincts

	1	2	3	4	5
Roads & Transport	\$ 49.52	\$ 107.54	\$ 116.04	\$ 99.65	\$ 116.95
Drainage	\$ 55.54	\$ 51.17	\$ 57.17	\$ 51.29	\$ 33.95
Water	\$ 16.36	\$ 15.95	\$ 12.30	\$ 12.77	\$ 10.84
Sewer	\$ 20.09	\$ 38.36	\$ 45.31	\$ 63.15	\$ 62.83
Elec	n/a	n/a	n/a	n/a	n/a
Comms	n/a	n/a	n/a	n/a	n/a
Gas	n/a	n/a	n/a	n/a	n/a
Total	\$ 141.51	\$ 213.03	\$ 230.83	\$ 226.85	\$ 224.56
Ranking	1	2	5	4	3



Figure 49: Locality Plan & Proposed Precincts.

Table 26: Infrastructure Project Complexity.
Precincts

	1	2	3	4	5
Roads & Transport	1	5	4	2	3
Drainage	3	4	5	2	1
Water	1	2	5	3	4
Sewer	1	2	3	4	5
Elec	n/a	n/a	n/a	n/a	n/a
Comms	n/a	n/a	n/a	n/a	n/a
Gas	n/a	n/a	n/a	n/a	n/a
Total	6	13	17	11	13
Ranking	1	Eq.3	5	2	Eq.3

Table 27: Infrastructure Project Benefit to Wider Community.

		Precincts				
		1	2	3	4	5
Service	Roads & Transport	5	1	2	3	4
	Drainage	2	3	1	4	5
	Water	5	4	3	1	2
	Sewer	1	2	3	4	5
	Elec	n/a	n/a	n/a	n/a	n/a
	Comms	n/a	n/a	n/a	n/a	n/a
	Gas	n/a	n/a	n/a	n/a	n/a
	Total	13	10	9	12	16
	Ranking	4	2	1	3	5

Table 28: Estimated Yield (20 dwellings / ha).

		Precincts				
		1	2	3	4	5
Yield		3,820	6,400	6,980	6,160	3,440
Ranking		4	2	1	3	5

Table 29: Estimated Cost per ha (20 dwellings / ha).

		Precincts				
		1	2	3	4	5
Cost / ha		\$741k	\$666k	\$661k	\$737k	\$1,306k
Ranking		4	2	1	3	5

The rankings for each criterion have then been given a weighting, based on the apparent importance, as follows:

- Estimate Infrastructure Project Costs (25%)
- Infrastructure Project Complexity (25%)
- Infrastructure Project Benefit to the wider community (30%)
- Estimated Yield (10%)
- Estimate Cost per Lot (10%)

Therefore, the final precinct sequencing (weighted) is shown in Table 30.

Table 30: Final Precinct Sequencing (Weighted).

		Precincts				
		1	2	3	4	5
Ranking		2	1	Eq.3	Eq.3	5

10 SERVICING INNOVATION & SUSTAINABILITY OPPORTUNITIES

10.1 Non-Drinking Water & Urban Cooling

As outlined in Alluvium's Integrated Water Management Strategy in Appendix B, there are issues that are driving the need for an Integrated Water Management (IWM) approach such as population growth, climate change, water supply reliability and the urban heat island effect. Issues for IWM planning and implementation that must be considered include, but are not limited to:

- Adequate space is necessary across all scales - lot, street, and precinct - to accommodate additional IWM related assets. It is important that this is considered early in the planning process and that this need can be translated to the masterplan. Examples include:
 - On-lot to accommodate assets like rainwater tanks, and
 - Streetscape widths to accommodate greening and canopy cover initiatives e.g. passive irrigation.
- Open spaces need to accommodate tanks or treatment infrastructure prior to irrigation. Note that an AFL sized oval would typically require 100 kL of onsite storage. Aesthetically, however, it is undesirable to have tanks on every open space.
- If a stormwater network is planned for, then alignments and easements for pipelines will also be required as well as space for pump stations near wetland outlets.
- Responsibility for, and cost of, operation and maintenance is a common issue for all scales of IWM intervention. As this IWM plan progresses minimising the maintenance burden will be critical and could be achieved by implementation of measures such as:
 - Low maintenance passive irrigation assets,
 - Smart networks for things like networked rainwater and stormwater harvesting schemes to improve operability and support feasibility, and
 - Planning streetscapes from the start to maximise passive heating and cooling benefits e.g. ensuring suitable orientation.

10.2 Carbon Storage

Increased tree planting to improve canopy coverage has an important secondary feature - carbon sequestration. Carbon sequestration is the capture and long-term storage of carbon dioxide. Release of carbon dioxide into the atmosphere through burning of fossil fuels is the leading cause of climate change. Carbon sequestration seeks to remove carbon dioxide from the atmosphere by enhancing storage capabilities of soils, trees and vegetation. Carbon sequestration from revegetation and mass plantings can provide a significant short-term contribution to climate change mitigation. Longer-term, however, additional strategies are required to reduce reliance on fossil fuels and over-use of natural resources. The PSP can support carbon sequestration by increasing density of planting in landscaped areas and in public and active open spaces.

10.3 Resource Management

One strategy to reduce the over-use of natural resources, that has been adopted by many Victorian councils, including Ballarat City Council, is climate change adaptation. Climate change adaptation seeks to increase resilience to climate change impacts.

On 26 October 2022 Ballarat City Council also adopted The Ballarat Net Zero Emissions Plan. The Plan outlines an aspirational community-wide target of reaching net zero emissions by 2030 and the actions required to achieve this target. It comprises of five Net Zero Outcomes on Business, Homes, New Developments, Transport and Waste. Emissions in Ballarat were estimated to total 1.5 million tonnes in 2020. The Plan includes a series of actions relevant to this report, including:

- Transition towards all-electric houses,
- Advocate for higher Environmentally Sustainable Design Standards,
- Implement actions in Victoria's Gas Substitution Roadmap to support electrification,

- Integrate net zero design standards within the construction of new developments,
- Ensure the construction and development process eliminates waste to landfill,
- Design includes resilience to extreme weather and climate-related events,
- Increase use of public and active transport modes to reduce the need to drive,
- Improving the design of community spaces and key activity areas to improve walkability, accessibility, safety and social inclusion, and
- Coordinate city planning of electric vehicle charging.

The City of Ballarat is also conducting a voluntary trial of the Sustainable Subdivisions Framework (SSF). The framework can be used to integrate sustainability interventions in subdivision design to create fundamental conditions for a sustainable and resilient community. It is hoped that the seven categories underpinning the SSF, including ecology and urban heat, site layout and liveability and integrated water management, will ultimately form part of a future amendment to update the Ballarat Planning Scheme.

Another strategy that could be implemented within the PSPs is the use of recycled products in road pavement construction. Studies supported by Sustainability Victoria have shown the use of recycled road pavement materials reduces impact on the environment through efficient use of extractive industries, reduces waste to landfill (and increased life of local landfill facilities) and reduces energy required to produce pavement construction materials as recycled products are less energy intensive to produce than quarry materials.

11 FURTHER INVESTIGATION

As discussed in the One Mile Grid Traffic & Transport Report upgrade requirements of Remembrance Drive, particularly east of the Link Road, will remain a major challenge because of the heritage significance of the Avenue of Honour. It is recommended that when preparing the Framework Plan, traffic diversion / incentive measures are considered as an alternate.

The sequencing outlined in this report does not suggest that alternate arrangements could not be considered, subject to, but not limited to, developer's provision of supportable interim measures like temporary alternate stormwater and water quality management measures, and / or limiting the growth in precincts to density that would not trigger the requirements for major external road upgrades. Any early development that would not trigger works such as external road upgrades would still need to provide a proportional contribution for the ultimate upgrade the development will require to ensure appropriate, sustainable provisions for the new and broader community.

In addition, further engagement with the traditional owners of the land, the Wadawurrung and Dja Dja Wurrung People, will be required to better understand the cultural and environmental values that Alluvium highlighted in their Integrated Water Management Strategy (e.g. Mulawalla Wetland management plan). Engagement had not been undertaken at the time of preparation on Alluvium's IWMS.

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



12 APPENDIX A – STORMWATER MANAGEMENT STRATEGY



SURFACE/STORMWATER MANAGEMENT STRATEGY

Ballarat Western and North-Western Growth Areas

Ballarat City Council

April 2024

Document history

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Contents

1	Introduction	5
1.1	References	5
1.2	Location	5
2	Site Analysis	7
2.1	Current land use	7
2.2	Topography	10
2.3	Designated waterways	12
2.4	Catchments	13
2.5	Existing flood modelling	16
3	Site visit	17
4	Waterway and Geomorphic Assessment	18
	North waterways	19
	Middle waterways	19
	South waterways	20
	Conclusion	20
4.1	Flora and Fauna assessment	20
4.2	Cultural Heritage Desktop Assessment	21
5	Existing conditions flood modelling	25
5.1	Hydrology	25
	Hydrologic modelling	25
	Input parameters	25
	Catchment modelling	26
	Model Development	31
6	Post development objectives and conditions	38
6.1	Aim	38
6.2	Objectives and approach	38
	1. Stormwater quantity management	38
	2. Stormwater conveyance	38
	3. Stormwater quality treatment	38
	4. Waterway corridors	38
7	Stormwater Quantity management	40
7.1	Hydrologic modelling	40
7.2	Storage design	42
8	Stormwater conveyance	48
8.1	Waterway corridor	48
8.2	Longitudinal profile	52
8.3	Cross section geometry	53
8.4	Considerations for future waterway continuity	55
9	Stormwater quality treatment	57
9.1	Sediment Basin	60

9.2 Velocities	60
10 Concept design layout	61
10.1 Alternative outfall arrangement	61
11 Conclusion	62
Appendix A	63
Flood mapping	63
Appendix B	78
Sediment Basin Fair and Geyer Calculations	78
Appendix C	95
Wetlands/Retarding Basins Conceptual Layout	95
Figures	
Figure 1. <i>Ballarat northwest and west growth areas context map</i>	6
Figure 2. <i>Existing land use – Ballarat North-western Growth Area</i>	7
Figure 3. <i>Existing land use – Ballarat Western Growth Area</i>	8
Figure 4. <i>Historic PSP's within the previous Ballarat West Growth Area (source: Ballarat City Council) – subject areas shown in red</i>	9
Figure 5. <i>Topography of the Ballarat North-western Growth Area</i>	10
Figure 6. <i>Topography of the Ballarat Western Growth Area</i>	11
Figure 7. <i>CMA boundaries within the Ballarat growth areas</i>	12
Figure 8. <i>Designated waterways within the Ballarat growth areas</i>	13
Figure 9. <i>Major catchments 1 and 2 and flow directions through the Ballarat north-western growth area</i>	14
Figure 10. <i>Major catchment 3 and flow directions through the Ballarat western growth area</i>	15
Figure 11. <i>Catchments covered by the Watertech flood mapping (Source: Watertech, 2019)</i>	16
Figure 12. Photo of a typical road crossing of the waterway in the North-west growth area	17
Figure 13. <i>The study area showing waterways, elevation and the north, middle and south waterway areas used in this section.</i>	19
Figure 14. <i>Examples of waterway form typical of the north, middle and south sections of the study area.</i>	20
Figure 15. <i>Native vegetation identified within the Ballarat growth areas (Source: Nature Advisory 2022)</i>	21
Figure 16. <i>Identified Aboriginal places within the Ballarat growth areas (source: Archaeological Excavations 2021)</i>	23
Figure 17. <i>Cultural sensitive locations within the Ballarat growth areas (source: Archaeological Excavations 2021)</i>	24
Figure 18. <i>RORB model for the Ballarat north-western growth area</i>	27
Figure 19. <i>RORB model for the Ballarat north-western growth area</i>	28
Figure 20. <i>Location of key flow rates within the Ballarat growth areas</i>	29
Figure 21. <i>Ballarat Northwest and West Precinct TUFLOW model extents</i>	32
Figure 22. <i>Ballarat Northwest and West Precinct TUFLOW boundary conditions</i>	33
Figure 23. <i>Ballarat Northwest and West Precinct TUFLOW culvert crossings</i>	35
Figure 24. <i>Existing conditions 1% AEP flood extents – North Western growth area</i>	36
Figure 25. <i>Existing conditions 1% AEP flood extents – Western growth area</i>	37
Figure 26. <i>RORB model for the Ballarat north-western growth area – developed conditions</i>	41
Figure 27. <i>RORB model for the Ballarat western growth area – developed conditions</i>	42
Figure 28. <i>Retarding basin locations and modelling results in Ballarat north-western growth area</i>	45
Figure 29. <i>Retarding basin locations and modelling results in Ballarat western growth area - plan 1</i>	46
Figure 30. <i>Retarding basin locations and modelling results in Ballarat western growth area – plan 2</i>	47
Figure 31. <i>Waterway corridor (Melbourne Water's Waterway Corridor Guidelines)</i>	48
Figure 32. <i>Constructed Waterway corridor requirements (Melbourne Water's Waterway Corridor Guidelines)</i>	49
Figure 33. <i>Waterway corridors within the Ballarat NW growth area</i>	50

Figure 34. <i>Waterway corridors within the Ballarat W growth area – plan 1</i>	51
Figure 35. <i>Waterway corridors within the Ballarat W growth area – plan 2</i>	52
Figure 36. <i>Conceptual arrangement of a typical cross section for a 40m wide waterway corridor</i>	54
Figure 37. <i>Conceptual arrangement of a typical cross section for a 45m wide waterway corridor</i>	54
Figure 38. <i>Conceptual arrangement of a typical cross section for a 50m wide waterway corridor</i>	55
Figure 39. <i>Conceptual arrangement of a typical cross section for a 55m wide waterway corridor</i>	55
Figure 40. <i>Conceptual arrangement of a typical cross section for a 60m wide waterway corridor</i>	55
Figure 41. Suggested growth area changes to provide waterway continuity	56
Figure 42. MUSIC model for the Ballarat growth areas	57
Figure 43. <i>Treatment asset locations overview</i>	59
Figure 44. Existing conditions 1% AEP velocity – North Western growth area	64
Figure 45. Existing conditions 1% AEP flood extents – Western growth area	65
Figure 46. Existing conditions 1% AEP flood depth – North Western growth area	66
Figure 47. Existing conditions 1% AEP flood depth – Western growth area	67
Figure 48. Existing conditions 0.5% AEP flood extents – North Western growth area	68
Figure 49. Existing conditions 0.5% AEP flood extents – Western growth area	69
Figure 50. Existing conditions 2% AEP flood extents – North Western growth area	70
Figure 51. Existing conditions 2% AEP flood extents – Western growth area	71
Figure 52. Existing conditions 5% AEP flood extents – North Western growth area	72
Figure 53. Existing conditions 5% AEP flood extents – Western growth area	73
Figure 54. Existing conditions 10% AEP flood extents – North Western growth area	74
Figure 55. Existing conditions 10% AEP flood extents – Western growth area	75
Figure 56. Existing conditions 20% AEP flood extents – North Western growth area	76
Figure 57. Existing conditions 20% AEP flood extents – Western growth area	77
Figure 58. <i>Asset details of WLRB 1 to WLRB 4B</i>	96
Figure 59. <i>Asset details of WLRB 5 to WLRB 10</i>	97
Figure 60. <i>Asset details of WLRB 11 to WLRB 19</i>	98
Figure 61. <i>Asset details of WLRB 20 to WLRB 24</i>	99
Figure 62. <i>Asset details of WLRB 25 to WLRB 27 (including SB 31)</i>	100
Figure 63. <i>Asset details of WLRB 28 to WLRB 30</i>	101

Tables

Table 1. Major Catchments of Ballarat North-western and Western growth areas	15
Table 2. Directly and indirectly connected impervious fractions for lots and roads	25
Table 3. Summary of Kc calibration flows	26
Table 4. RORB modelling results for major catchments of Ballarat north-western and western growth areas	30
Table 5. Summary of LiDAR data	32
Table 6. Material roughness	34
Table 7. Key culvert crossings within the Ballarat TUFLOW model	34
Table 8. TUFLOW duration summary	35
Table 9. Summary of Kc calibration flows – developed conditions	40
Table 10. 1% AEP event RORB modelling results for the growth	43
Table 11. Retarding basin requirements (1% AEP event)	44
Table 12. waterway corridor widths for the proposed growth areas	49
Table 13. Longitudinal slope along waterway reaches	53
Table 14. Channel cross-section geometry and design parameters	53
Table 15. Treatment asset parameters	58
Table 16. Overall treatment performance of the system in Major Catchment 1 (Burrumbeet Creek)	60
Table 17. Overall treatment performance of the system in Major Catchment 2 (Woody Yaloak River)	60
Table 18. Overall treatment performance of the system in Major Catchment 3 (Yarrowee River)	60
Table 19. WLRB 1: Sediment Pond design parameters and checks	79
Table 20. WLRB 2: Sediment Pond design parameters and checks	79

Table 21. WLRB 3: Sediment Pond design parameters and checks	80
Table 22. WLRB 4A: Sediment Pond design parameters and checks	80
Table 23. WLRB 4B: Sediment Pond design parameters and checks	81
Table 24. WLRB 5: Sediment Pond design parameters and checks	81
Table 25. WLRB 6: Sediment Pond design parameters and checks	82
Table 26. WLRB 7: Sediment Pond design parameters and checks	82
Table 27. WLRB 8: Sediment Pond design parameters and checks	83
Table 28. WLRB 9: Sediment Pond design parameters and checks	83
Table 29. WLRB 10: Sediment Pond design parameters and checks	84
Table 30. WLRB 11: Sediment Pond design parameters and checks	84
Table 31. WLRB 12: Sediment Pond design parameters and checks	85
Table 32. WLRB 13: Sediment Pond design parameters and checks	85
Table 33. WLRB 14: Sediment Pond design parameters and checks	86
Table 34. WLRB 15: Sediment Pond design parameters and checks	86
Table 35. WLRB 16: Sediment Pond design parameters and checks	87
Table 36. WLRB 17: Sediment Pond design parameters and checks	87
Table 37. WLRB 18: Sediment Pond design parameters and checks	88
Table 38. WLRB 19: Sediment Pond design parameters and checks	88
Table 39. WLRB 20: Sediment Pond design parameters and checks	89
Table 40. WLRB 21: Sediment Pond design parameters and checks	89
Table 41. WLRB 22: Sediment Pond design parameters and checks	90
Table 42. WLRB 23: Sediment Pond design parameters and checks	90
Table 43. WLRB 24: Sediment Pond design parameters and checks	91
Table 44. WLRB 25: Sediment Pond design parameters and checks	91
Table 45. WLRB 26: Sediment Pond design parameters and checks	92
Table 46. WLRB 27: Sediment Pond design parameters and checks	92
Table 47. WLRB 28: Sediment Pond design parameters and checks	93
Table 48. WLRB 29: Sediment Pond design parameters and checks	93
Table 49. WLRB 30: Sediment Pond design parameters and checks	94
Table 50. Sediment Basin SB31: Sediment Pond design parameters and checks	94



1 Introduction

Alluvium Consulting (Alluvium) has been engaged by Taylors to undertake a surface/storm water management strategy (SWMS) for Ballarat City Council's future North-Western and Western growth areas. The surface water and geomorphology assessments of the existing conditions have been previously completed by Alluvium (Aug, 2013) to inform the future drainage strategy of the growth areas. This document consolidates the findings from the existing situational analysis report (Alluvium, Aug 2013) with the proposed approach to manage urban stormwater runoff generated from development within the growth areas.

This SWMS acts as critical component in defining the future stormwater management requirements for the growth area Framework Plan, in particular defining management strategies for:

- Stormwater quantity management
- Stormwater quality management
- Stormwater conveyance

Through meeting these objectives, this SWMS ensures stormwater is managed in accordance with Council's requirements. The strategy will directly inform the local drainage design for the growth areas. Information with respect to ultimate assets are provided at a concept design level.

1.1 References

The following documents and guidelines were used as reference in the producing this report:

- Urban Stormwater Best Practice Environmental Management Guidelines (1999)
- Australian Rainfall & Runoff (2016) – Engineers Australia
- Flood Mapping Technical Specifications (2018) – Melbourne Water
- Waterway Corridors Greenfield Development Guidelines (2013) – Melbourne Water
- Constructed Waterways design guidelines (2019) – Melbourne Water
- Urban Stormwater Management Guidance (2021) – EPA Victoria
- Ballarat West Growth Area (2016) – SMEC
- Summary Report: Ballarat Mapping Updates (2019) – Water Technology
- Current Drainage Assets Status and Existing RORB Modelling (2023) – Engeny
- North West Growth Area Ballarat Biodiversity Assessment (2022) – Nature Advisory
- Cultural Heritage Assessment West Ballarat (2021) – Archaeological Excavations
- Existing Conditions/Situational Analysis Stormwater and Waterway Assessment for the Ballarat Western and North-Western Growth Areas (Aug, 2023) – Alluvium
- Integrated Water Management Strategy (2023) – Alluvium

1.2 Location

The Ballarat north-western and western growth areas are located 110 km north-west of Melbourne's CBD and covers an area of 1,769 ha. The north-western growth area is generally bounded by Draffins Road to the west, the railway line and Blind Creek Road to the north, Cuthberts Road to the south, and Ballarat-Skipton Rail Trail to east.

The Ballarat west growth area is generally bounded by Ballarat-Skipton Rail Trail to the west, Cuthberts Road to the north, Bells Road to the south, and Cherry Flat Road to the east. The areas consist of privately-owned landholdings for farm use and open paddocks. For the detailed growth areas boundaries, a site context map is provided in Figure 1.



Figure 1. Ballarat northwest and west growth areas context map



2 Site Analysis

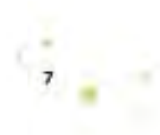
2.1 Current land use

The existing areas are zoned for farm use, which is typically associated with agricultural practice. The current areas mainly consist of privately-owned farms and open paddocks.

The North Western growth area consists of major roads along the boundaries of the growth area referred to as Draffins Road, Dowling Road and Cuthberts Road, the railway line and the walking track known as Ballarat-Skipton Rail Trail. Remembrance Drive and Finchs Road intersect the growth area running east-west and north-south respectively.



Figure 2. Existing land use – Ballarat North-western Growth Area



The Western growth area consists of major roads along the boundaries of the growth area referred to as Ballarat-Carnham Road, Dyson Drive, Bells Road, Cherry Flat Road and the walking track known as Ballarat-Skipton Rail Trail. Greenhalgs Road and Glenelg Highway intersect the growth area running east-west.



Figure 3. Existing land use – Ballarat Western Growth Area

Significant development has occurred to the east of the growth areas in recent years, with the majority being residential development (i.e. Lucas township). The majority of the land within the growth areas is currently used for agricultural purposes. A large bushland reserve is located to the west of the growth areas (i.e. Haddon Common Bushland Reserve).



The area east of the North Western and Western growth areas was historically rezoned for development under the previous Ballarat West Growth Area Plan by Ballarat City Council in 2016. The growth area provides for around 18,000 new homes to accommodate a population of 40,000 people. The growth area consisted of four Precincts, known as:

- Bonshaw Creek (Precinct 1)
- Greenhalghs Road (Precinct 2)
- Alfredton West (Precinct 3)
- Carngham road (Precinct 4).

Figure 4 below provides an overview of the previous Precinct structure Plans (PSP's) located east of the proposed North Western and Western growth areas.

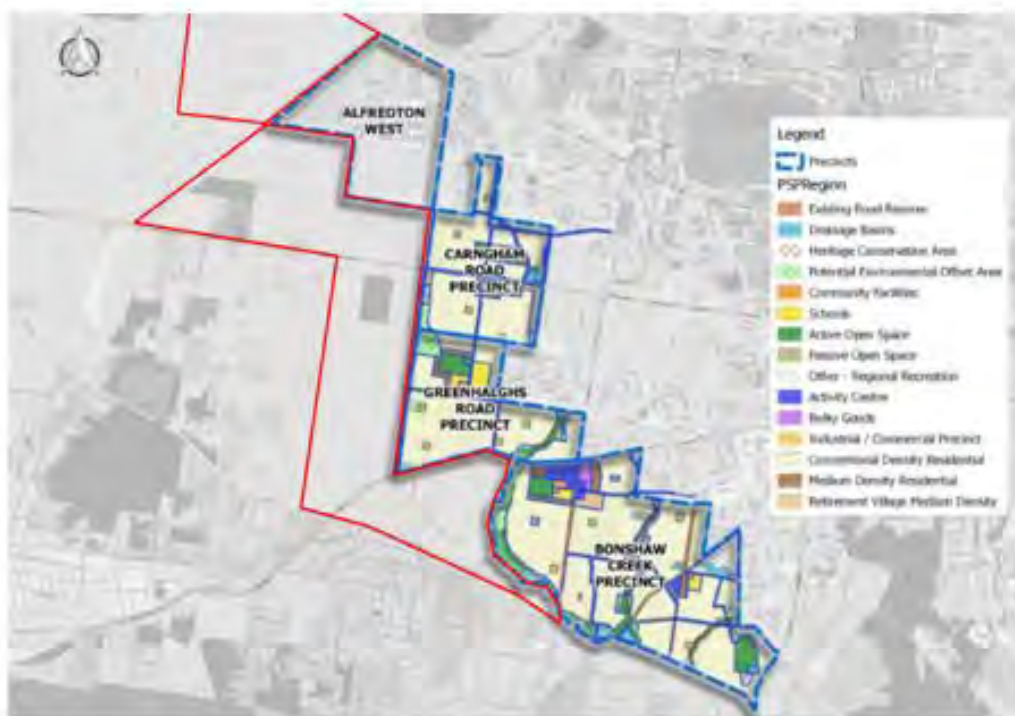


Figure 4. Historic PSP's within the previous Ballarat West Growth Area (source: Ballarat City Council) – the new proposed growth areas (subject of this report) are shown in red



2.2 Topography

Ballarat North-Western Growth Area

Figure 5 shows the topography across the Ballarat North-western growth area. Elevation ranges from 448 m AHD along the south-eastern boundary of the site, to 409 m AHD at the north-western boundary along the Draffins Road. The site generally falls in a north-western direction.

The site topography is generally gentle, with grades varying from 0.5% to 2.5%. The topography to the south of Remembrance Drive is more complicated than the north. Rather than continuously falling in the western direction, the topography at the south of Remembrance Drive is further separated and guided by ridge and trough lines which results in the land falling in south-western and north-western directions.

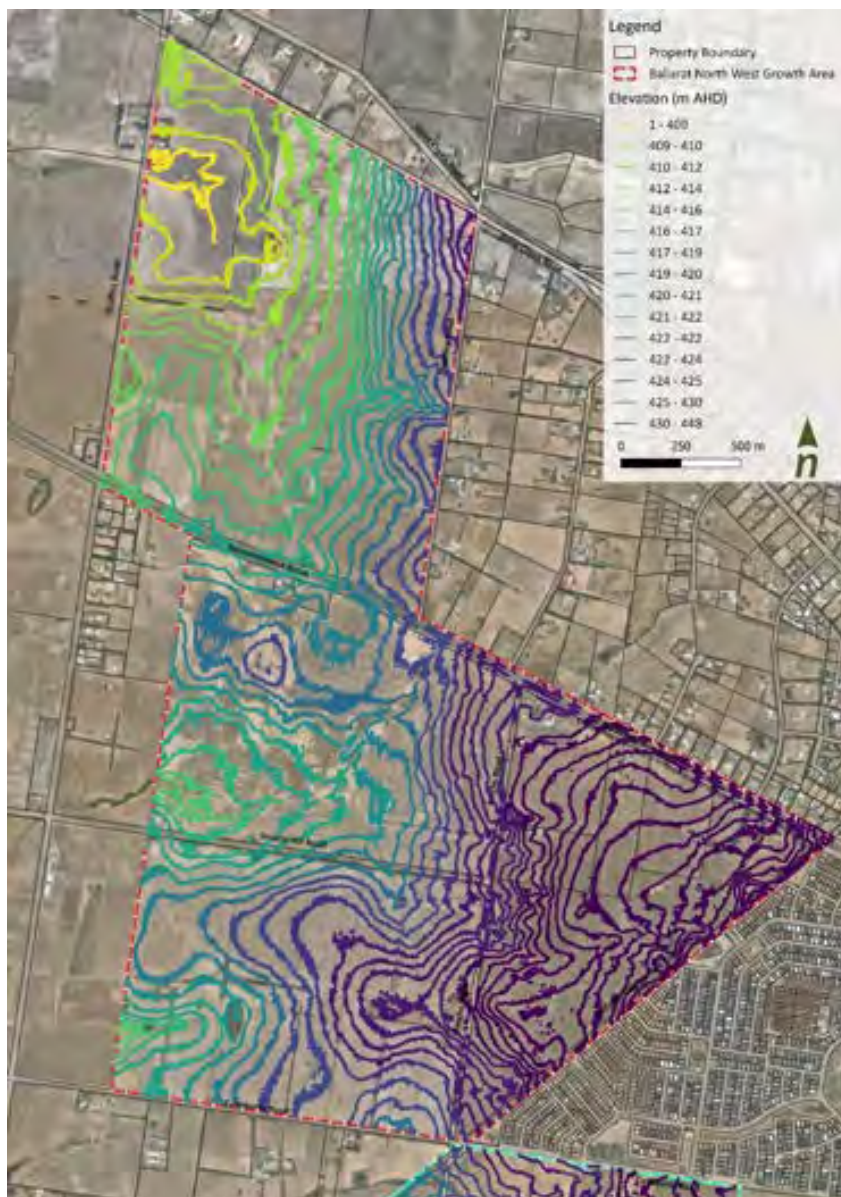


Figure 5. Topography of the Ballarat North-western Growth Area



Ballarat Western Growth Area

Figure 6 shows the topography across the Ballarat Western growth area. The elevation in the Western growth area ranges from 440 m AHD at the north, to 386 m AHD at the southeastern end of the area boundary.

The overall topography within the Western growth area falls in a southern direction. A higher elevation area at the north results in the topography falling mainly in a southern direction towards the low point around Bells Road. From this location the land continues to fall towards the east along Bells Road.

Overall, the Western growth area is steeper compared to the North-western growth area, with grades varying from 1% to 4.5%.

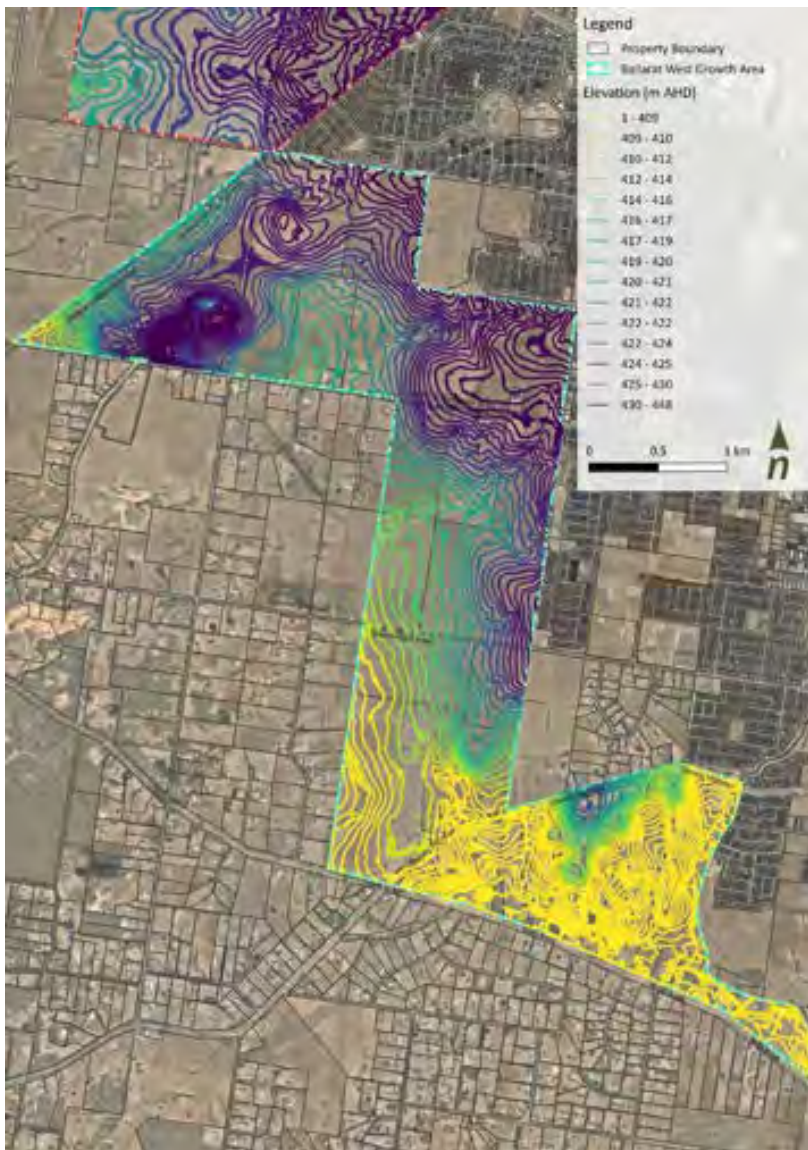


Figure 6. Topography of the Ballarat Western Growth Area

2.3 Designated waterways

The existing waterways within the Ballarat growth areas are under management of two Catchment Management Authorities, the Corangamite Catchment Management Authority (CCMA) and the Glenelg Hopkins Catchment Management Authority (GHCMA). Figure 7 below provides a layout of the two Catchment Management Authority (CMA) boundaries.

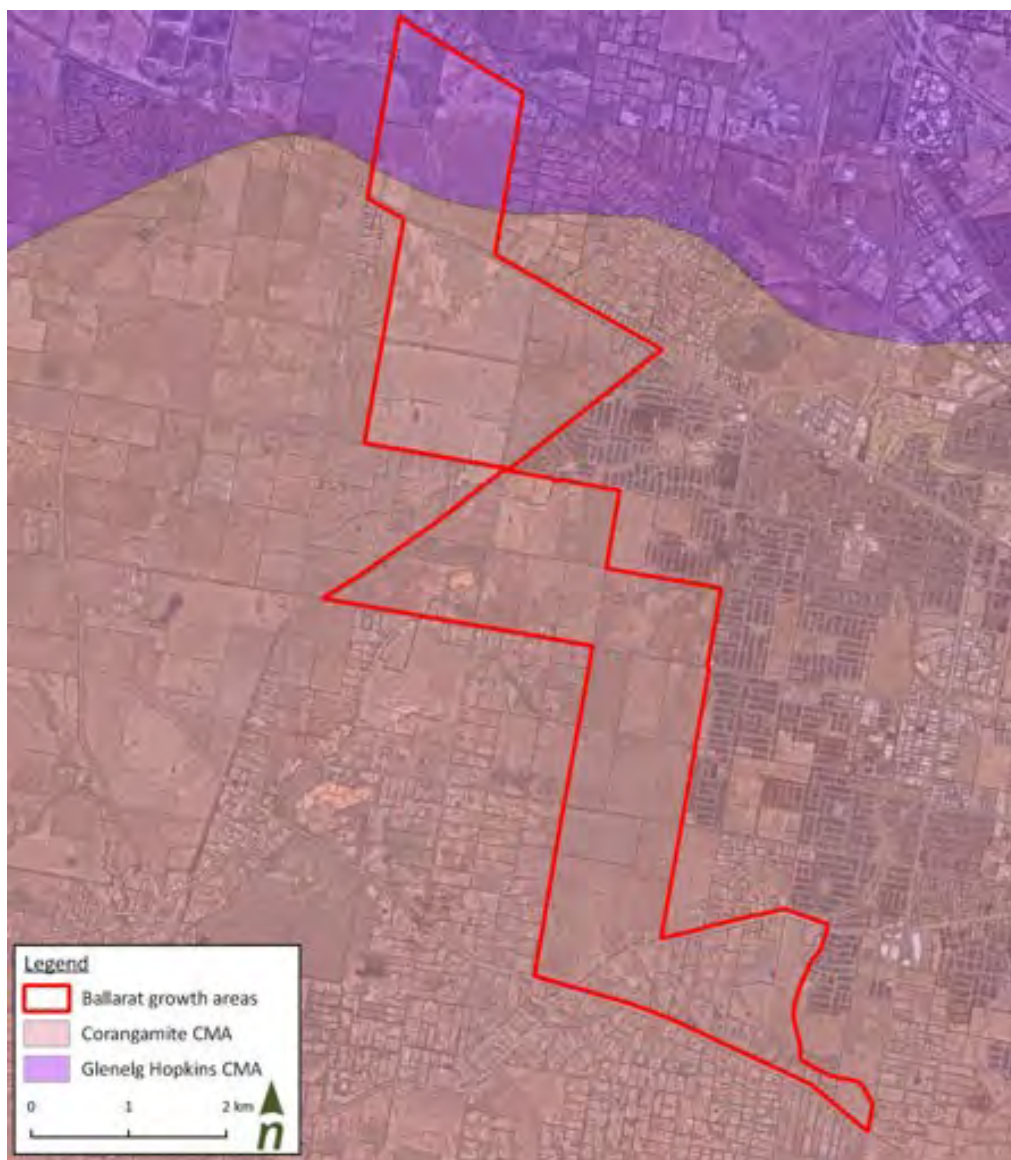


Figure 7. CMA boundaries within the Ballarat growth areas

Following discussions with Council, the Corangamite CMA and the Glenelg Hopkins CMA, it was agreed that in lieu of any local waterway corridor guidelines, Melbourne Water's Waterway Corridor Guidelines are to be used when determining appropriate waterway corridor widths.

As provided by the Corangamite CMA, there are several designated waterways that have been previously defined. These waterways have been investigated as part of the geomorphic assessment (Section 4). Figure 8 below provides a layout of the designated waterways within the Ballarat growth areas.

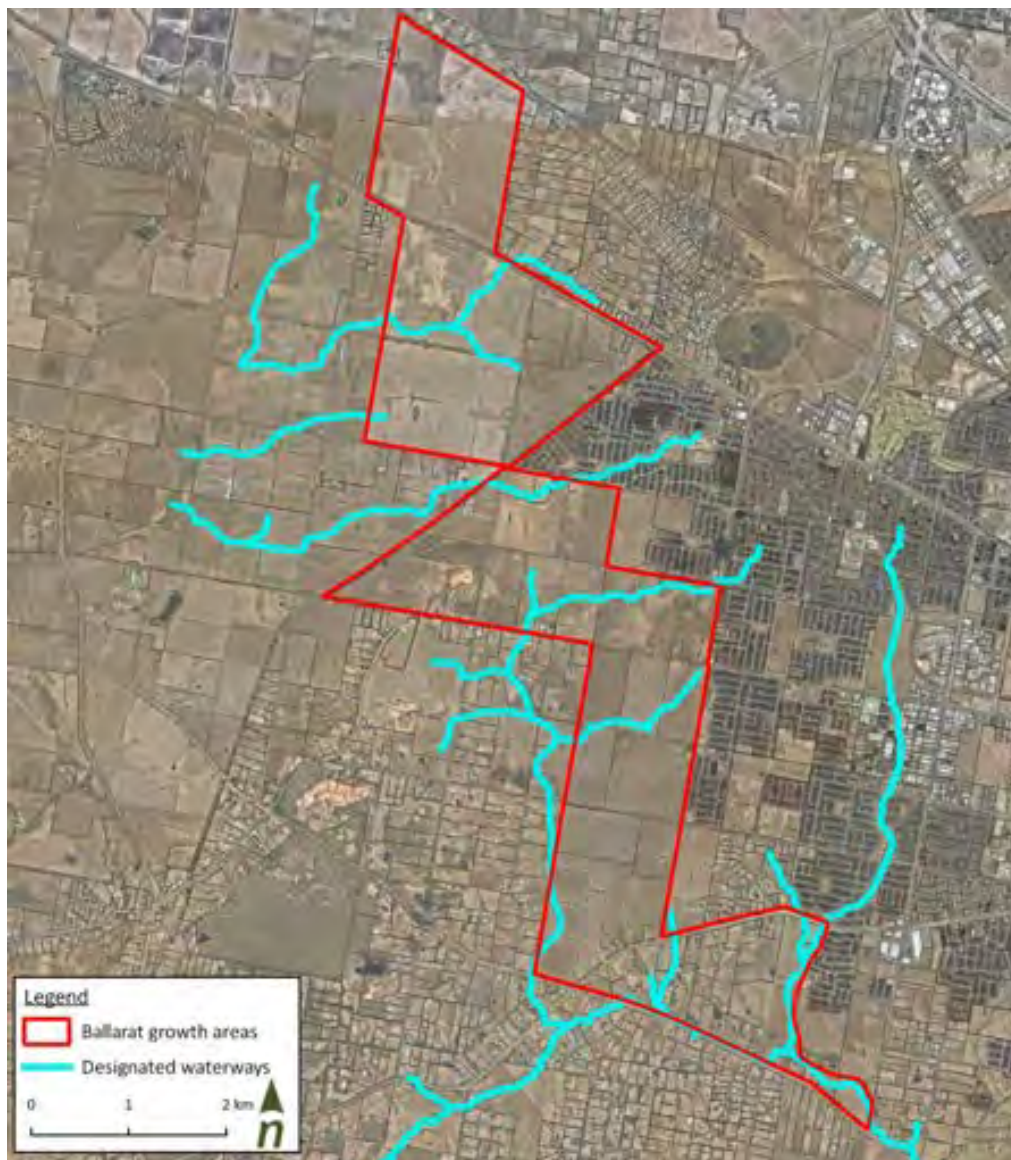


Figure 8. Designated waterways within the Ballarat growth areas (source: adapted from CCMA supplied information)

2.4 Catchments

The major catchments within the growth areas contribute to three different major watercourses, which are Burrumbeet Creek north-west of the site, Woody Yaloak River south-west of the site, and Yarrowee River south-east of the site.

The catchments covering the growth areas are separated into three major catchments based on the contributing mainstreams. Catchment 1 covers a portion of the north-western growth area and flows in a

westerly direction outfalling towards Burrumbeet Creek. Catchment 2 covers a portion of the north-western growth area and outfalls in a westerly direction to Woody Yaloak River. Catchment 3 covers the total western growth area and outfalls in an easterly direction towards the tributary of Yarrowee River. The land use within the three major catchments is generally rural, with some urbanised areas to the east upstream.

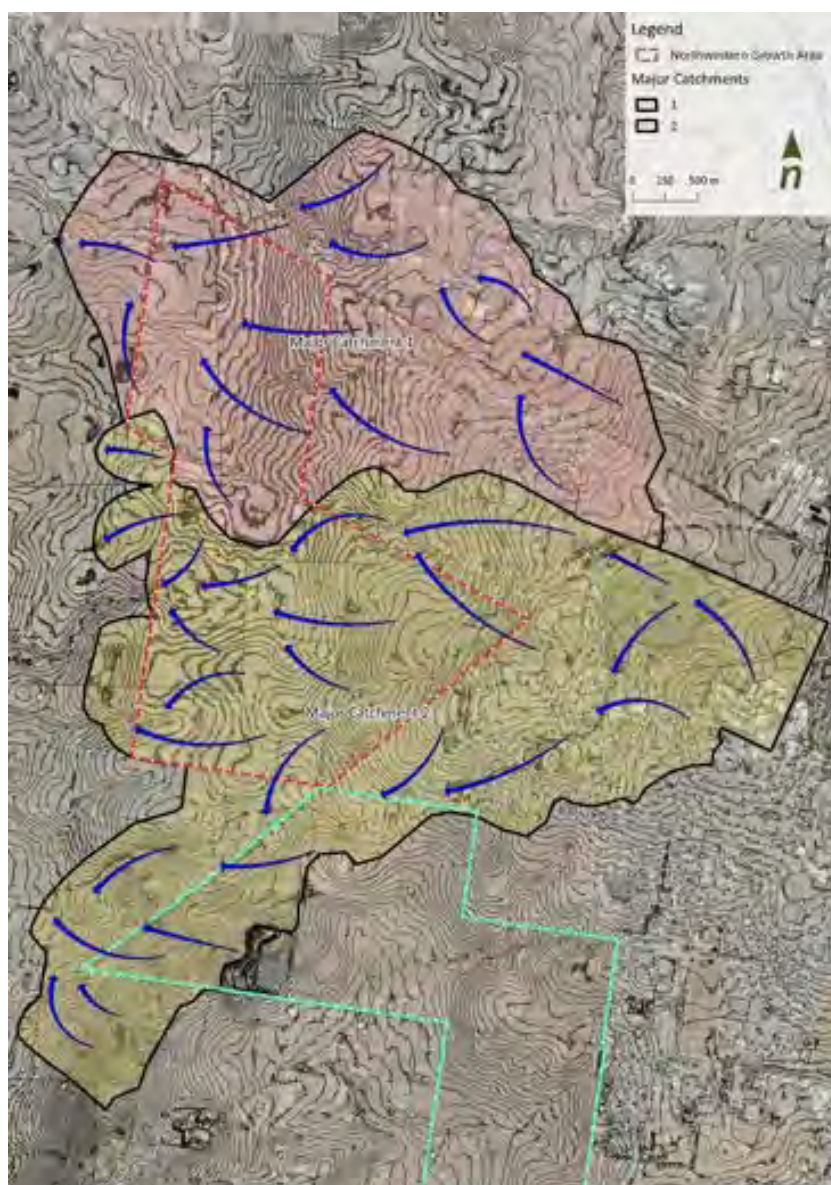


Figure 9. Major catchments 1 and 2 and flow directions through the Ballarat north-western growth area

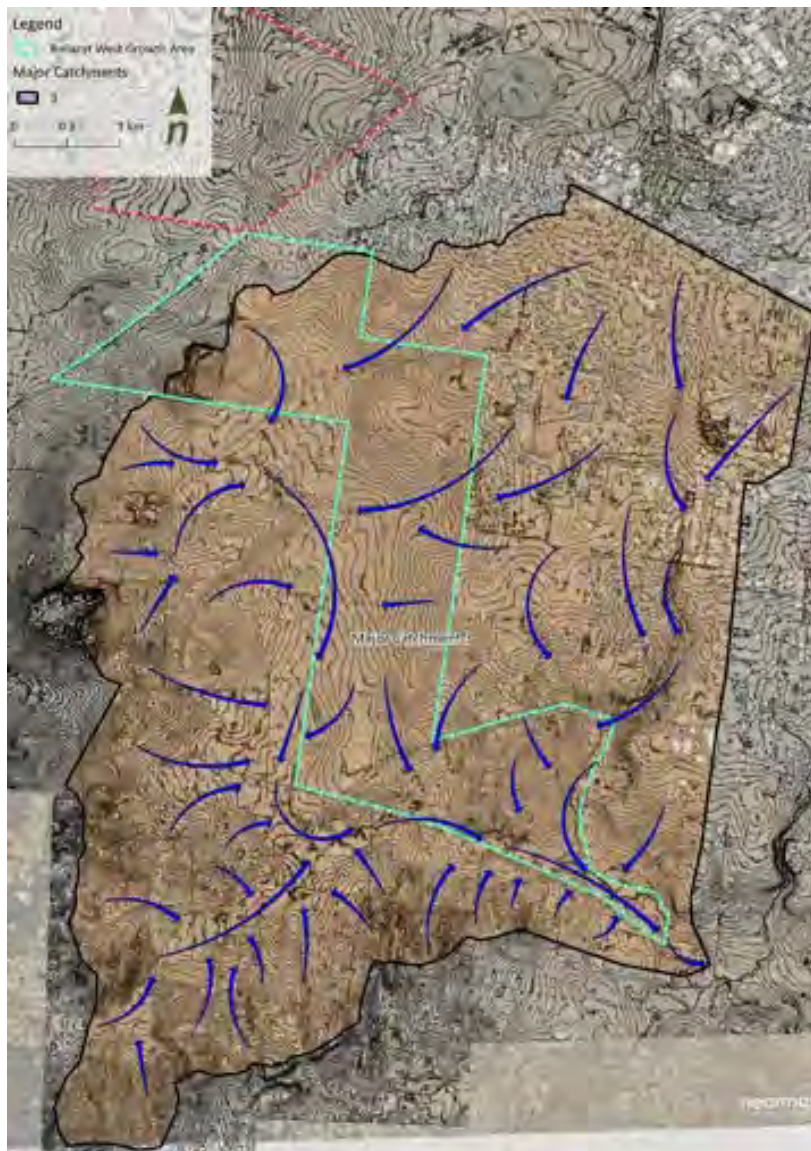


Figure 10. Major catchment 3 and flow directions through the Ballarat western growth area

Table 1. Major Catchments of Ballarat North-western and Western growth areas

Catchment	Area (km ²)	Catchment within NW&W growth areas	Comment
1	9.35	NW: 2.82 km ²	Major Catchment 1 outfalls west towards the tributary of Burrumbeet Creek.
2	14.50	NW: 4.27 km ² W: 1.37 km ²	Major Catchment 2 outfalls west towards the tributaries of Woody Yaloak River.
3	42.43	W: 9.23 km ²	Major Catchment 3 outfalls south-east towards the tributary of Yarrowee River.

2.5 Existing flood modelling

Previous flood modelling work has been completed for the Ballarat growth areas by Watertech in 2019 in a report referred to as “Summary Report: Ballarat Mapping Updates” – September 2019 (Water Technology). The report presents an update of previous flood modelling to the ARR 2019 standards, for the Ballarat growth areas outlined. The flood modelling has been used to inform the Land Subject to Inundation Overlay (LSIO) and Flood Overlay (FO) for a future planning scheme amendment.

The Watertech modelling project covered a number of catchments as outlined in Figure 11 below.

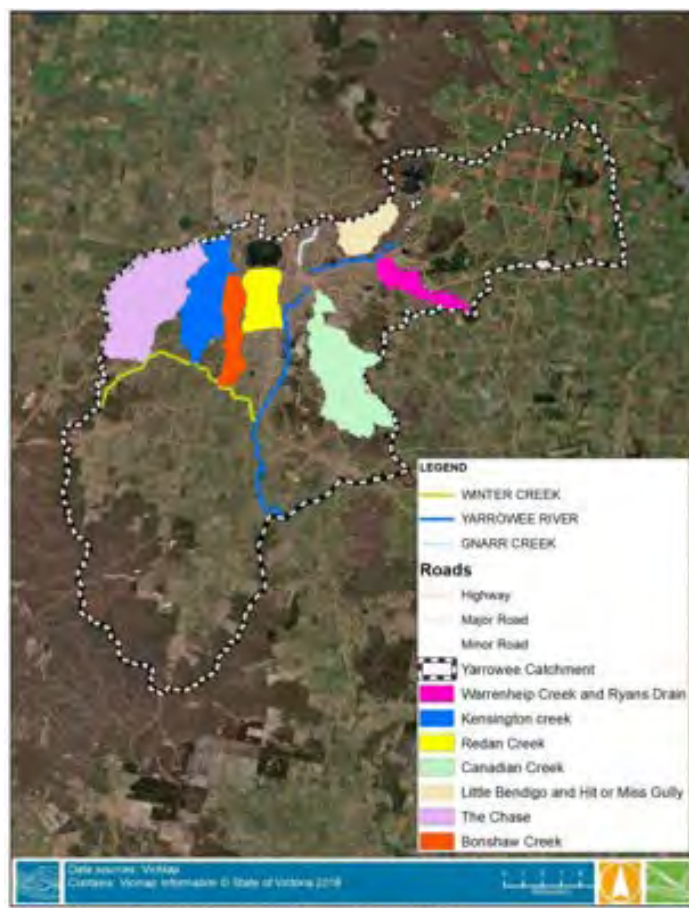


Figure 11. Catchments covered by the Watertech flood mapping (Source: Watertech, 2019)

The Watertech hydrologic modelling was undertaken using RORB, and was calibrated to the Mount Mercer streamflow gauge. Data from the streamflow gauge extends from 1957 to current day. Given the gauge flow data was available, k_c , Initial Loss and Continuing loss parameters were modified to match the available data at the gauge.

The Watertech flood modelling covered areas of the proposed Ballarat growth areas, and will provide a point of calibration for Alluvium’s hydrologic model (RORB) and the hydraulic model (TUFLOW). Subsequent investigations have been undertaken by Engeny (2023) for Council, calibrating loss values and k_c variables in line with the previous Watertech RORB modelling.

3 Site visit

A site visit was conducted on Thursday, 4th May 2023 to gain a better understanding of the local terrain, site constraints and opportunities.

A number of road culvert and bridge crossings of the waterways were inspected around the growth areas. The crossings (where accessible) were inspected by Alluvium during the site visit where the culvert size, configuration and depth were measured to provide information on existing waterway obstructions for the hydraulic modelling of the site and to determine upstream and downstream boundary conditions of the model. All measurements and inspections were completed from the road, as landowner access was not permitted at the time of the site visit. As a result, any internal property characteristics have been assumed based upon the drone footage and latest aerial imagery (nearmap). The most recent aerial imagery was taken on 6th April 2023 for the Ballarat area.

A drone flight of the growth area and the surround was undertaken by Alluvium during the field visit to provide enough information for the geomorphic assessment that was conducted. The geomorphic assessment is further discussed in Section 4 below.



Figure 12. Photo of a typical road crossing of the waterway in the North-west growth area

4 Waterway and Geomorphic Assessment

A geomorphic assessment of the waterways within the study area was undertaken in May 2023. Site access limitations meant that the geomorphic assessment was undertaken from the road and where possible, using a small UAV (a drone) to capture imagery. The geomorphic assessment focused on the existing form and processes in the waterways and had two aims:

- To identify whether any of the waterways that flow through the study area support geomorphic values that warrant protection (i.e whether any of the waterway were of an especially rare or sensitive form).
- To identify, at a high level, the likely impact of development on the waterways so that necessary mitigation measures can be identified.

The waterways within the study area are ephemeral headwater streams that convey runoff across the low-gradient landscape towards larger waterways downstream. For the purposes of description, the waterways have been separated into a North, Middle and South section as shown in Figure 13.

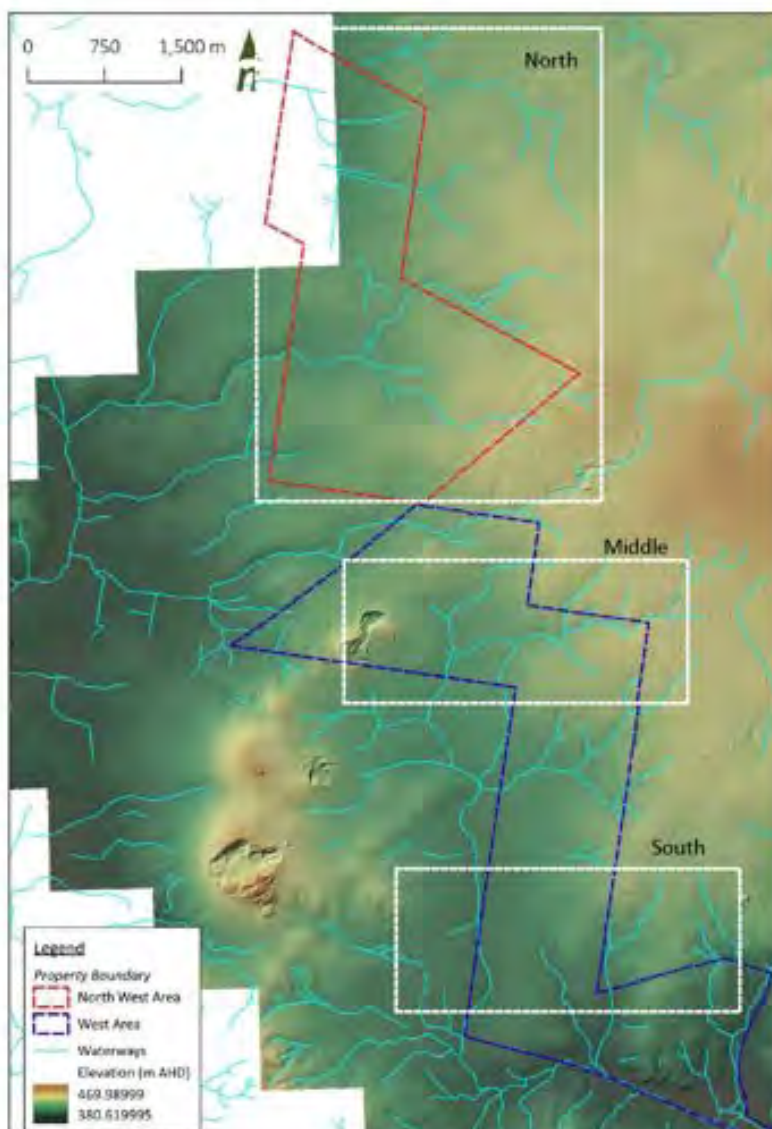


Figure 13. The study area showing waterways, elevation and the north, middle and south waterway areas used in this section.

North waterways

Waterways in the northern section of the study area have been extensively modified by cropping activities and by the presence of roads that dissect the flow paths. In many places the waterways do not have a clear and continuous channel and are instead wide, flat swampy areas. Many of the wet areas have had linear drainage structures excavated to promote drainage for agriculture (Figure 14A). These drains occur throughout the study area and provide no environmental value. Swampy backwater zones have formed upstream, and in some cases immediately downstream, of the culverts that allow flow to pass beneath the roads (Figure 14B).

Middle waterways

The waterways in the middle section of the study area are more defined than those in the north. The ephemeral, meandering waterways are slightly deeper and include occasional 'pools'. These channels have the broad planform of a chain of ponds type waterway (which are a rare waterway type that is often protected

and enhanced), but in reality are too degraded to be considered of geomorphic value (Figure 14C). These floodplain channels are not functioning as a chain of ponds, are devoid of vegetation and have been extensively modified in several areas.

South waterways

Waterways in the south alternate between artificial and very straight drains and open, flat and swamps areas, usually upstream of constrictions such as road culverts (Figure 14D).

Conclusion

Overall, the headwater streams that line the study area have been extensively modified by agriculture, either by excavation of linear drainage lines, disconnection via road culverts or a complete change in form due to cropping. This history of land use and modification means that none of the waterways can be considered locally rare or threatened and for this reason have low geomorphic value.

Addition of stormwater flows from development is likely to exacerbate backwater ponding upstream of the existing culverts, and has the potential to cause some incision (deepening) of the waterways that are well defined. Overall, establishing appropriately designed constructed waterways that convey the runoff from the developed areas is an appropriate management of these waterways from a purely geomorphic form perspective. In the upper reaches of the catchment where safe flow conveyance capacity allows, the existing drainage lines could potentially be modified to a pipe and road reserve as part of the urbanisation process.



Figure 14. Examples of waterway form typical of the north, middle and south sections of the study area.

4.1 Flora and Fauna assessment

A biodiversity assessment was undertaken by Nature Advisory in 2022 to inform the flora and fauna species existing or potentially existing within the Ballarat north-western growth area and the north of Ballarat western growth area. The areas identified with flora and fauna species are to provide the information relating to the

future local development and potential engineering designs. The identified flora and fauna habitats act as the guide for development planners to avoid or minimise the impacts of development on the areas with the purpose of enhancing biodiversity values. The identified species are presented in Figure 15 below.



Figure 15. Native vegetation identified within the Ballarat growth areas (Source: Nature Advisory 2022)

Figure 15 shows that patches of Plains Grassy Woodlands and River Swamp Wallaby-grass exist within the southeast of the Ballarat north-western growth area, which are all located close to Finchs Road and Ballarat-Skipton Rail Trail. Moreover, several Flora and Fauna Guarantee species were identified along the Dowling Road. For the north of the Ballarat western growth area, 11 scattered trees were observed within the patches. The Aquatic Herbland are located close to the existing watercourse with few large scatter trees being around. Figure 13 indicates that when the local development happens around the identified species, it is suggested either avoid the development in these areas or apply the low-impact techniques of drainage design, such as constructed wetlands, to deal with the objectives set up in the drainage strategy.

4.2 Cultural Heritage Desktop Assessment

The cultural heritage assessment at the Ballarat North-western growth area was completed by Archaeological Excavations in 2021. The assessment was conducted to inform the Aboriginal and historical heritage values of the Ballarat North-western growth area and further develop the potential locations that needs to be prevented from the development or obtain the corresponding approval for development. Notably, referring to the report, no areas were identified within the Ballarat north-western growth area; only 11 places were identified within 200 m away from the eastern boundary of the growth area. Specifically, these 11 locations of

the Aboriginal places and relevant cultural sensitive areas are located in the Lucas Township, which is the eastern side of Ballarat-Skipton Rail Trail and the northern side of Cuthberts Road.

Figure 16 and Figure 17 below show the identified Aboriginal places and corresponding cultural sensitive locations.

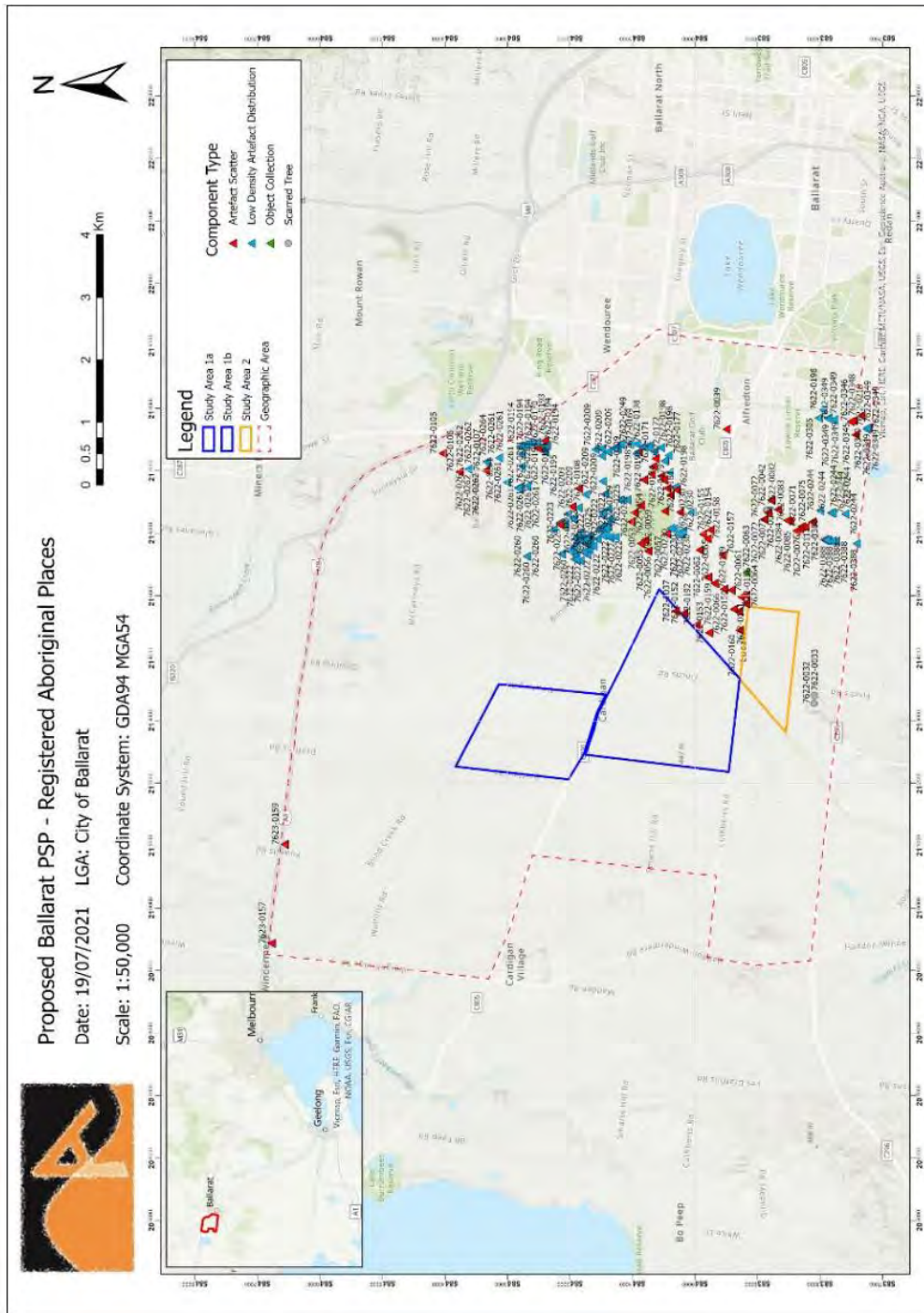


Figure 16. Identified Aboriginal places within the Ballarat growth areas (source: Archaeological Excavations 2021)

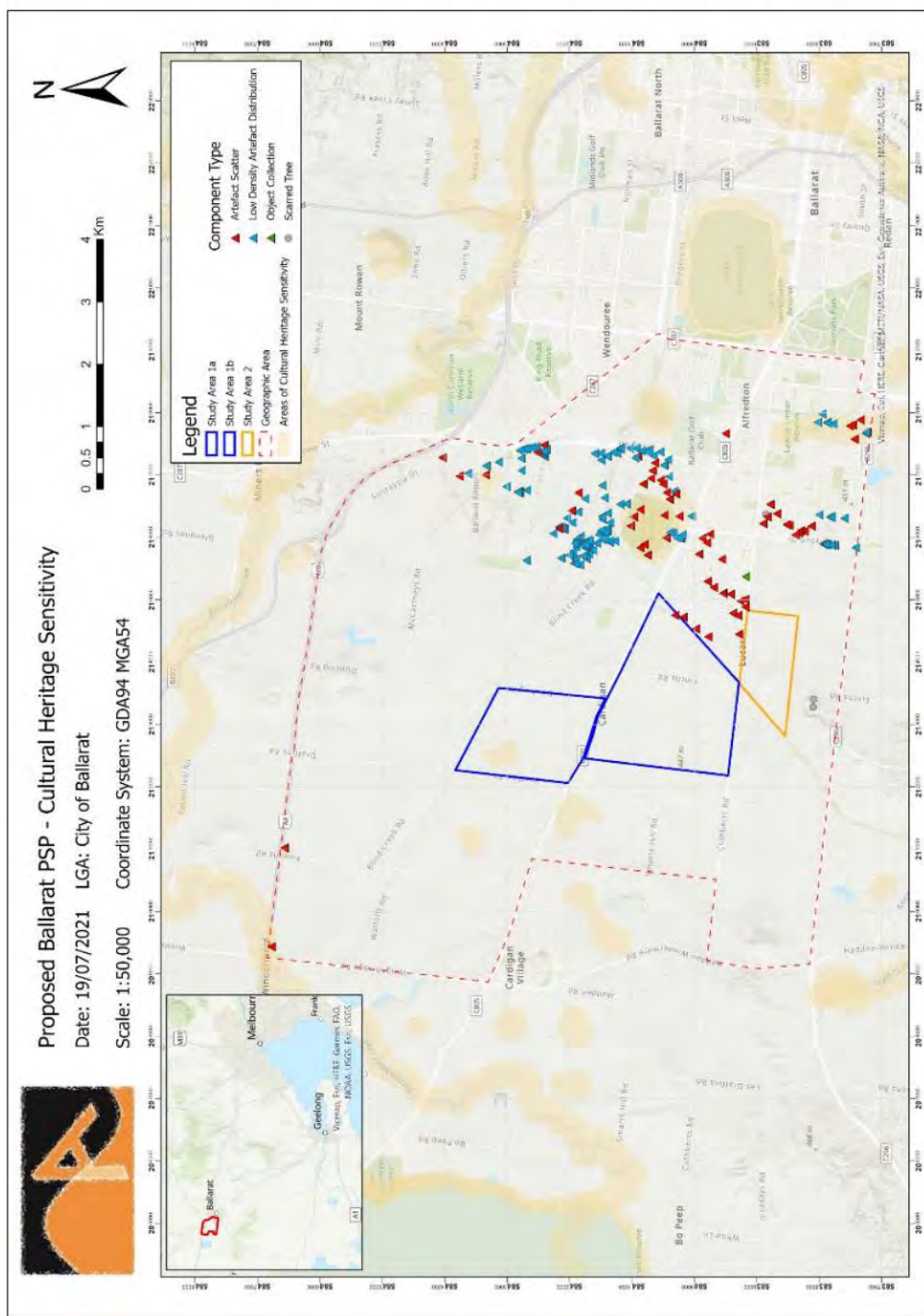


Figure 17. Cultural sensitive locations within the Ballarat growth areas (source: Archaeological Excavations 2021)

5 Existing conditions flood modelling

5.1 Hydrology

The hydrologic analysis of the Ballarat north-western and western growth areas was undertaken to determine the existing peak runoff flow rate (m^3/s) for various flood events throughout the catchment. The hydrologic analysis is used to inform the existing peak flow rates flowing into and out of the catchment. The peak flow rates at the points of interest were determined for further use in the flood modelling.

Hydrologic modelling

The hydrologic analysis was undertaken using RORB (v6.31), which is a runoff-routing software designed to simulate attenuation and time of concentrations to produce flood estimates at specified catchment locations.

A RORB model was created for the Ballarat north-western and western areas to determine:

- Existing peak flows
- Flood hydrographs for the existing peak flows

The RORB model was built by delineating the major catchments into sub-areas based on topography, potential and existing roads alignments, and lot layouts. The major catchments include the undeveloped areas proposed for future residential use and the existing residential areas. The fraction impervious values adopted for the existing conditions model are specified in Table 2. These areas are further divided into directly and indirectly connected impervious areas.

Table 2. Directly and indirectly connected impervious fractions for lots and roads

Type	Impervious fraction assigned	Area (existing conditions)	
Existing residential	0.75	Major Catchment 1:	0.163 km ²
		Major Catchment 2:	1.460 km ²
		Major Catchment 3:	5.448 km ²
Roads	0.70	Major Catchment 1:	0.045 km ²
		Major Catchment 2:	0.825 km ²
		Major Catchment 3:	2.537 km ²
Undeveloped/open space	0.10	Major Catchment 1:	9.142 km ²
		Major Catchment 2:	12.215 km ²
		Major Catchment 3:	34.445 km ²

Input parameters

In line with the Australian Rainfall & Runoff (2019), calibration of the hydrologic model (i.e. RORB model) is required in order to determine the estimation of rainfall intensities for a specific site.

In line with the flood mapping project completed by Watertech in 2019, the k_c parameter was calibrated to the Mount Mercer streamflow gauge. To be consistent with the routing parameter k_c calibration, the initial and continual losses for undeveloped areas were adopted from the Ballarat Mapping updates undertaken by Water Technology (2022). These parameters were also adopted for the Yarrowee River RORB model for design flood modelling.

Similarly, the initial loss and continuing loss values were modified to match the gauge data. Subsequent RORB modelling updates have been completed by Engeny (2023) for Council, providing further data such as k_c/d_{av} ratios, pervious area initial loss and continuing loss values and also effective impervious area and indirectly connected area initial loss and continuing loss values.

A summary of the adopted routing parameters are shown below for the Ballarat North-western and Western growth areas (existing conditions) RORB model (Table 3).

Table 3. Summary of Kc calibration flows

Parameter	Value
kc/dav calibration ratio	2.04
Routing parameter kc (adopted)	6.08 (Major catchment 1)
	5.60 (Major catchment 2)
	14.00 (Major catchment 3)
m	0.80
Initial Loss for undeveloped areas	25 mm
Continuing Loss for undeveloped areas	2.0 mm/hr
Initial loss for Effective Impervious Areas (EIA)	1.0 mm
Continuing loss for Effective Impervious Areas (EIA)	0 mm/hr
Initial loss for Indirectly Connected Areas (ICA)	16.8 mm
Continuing loss for Indirectly Connected Areas (ICA)	2.0 mm/hr

Catchment modelling

The aim of the RORB modelling is to establish critical peak flows flowing into and out of the Ballarat North-western and Western growth areas, in particular the points of interest used as the inputs into the flood modelling.

The RORB model setup for major catchments is provided in Figure 18 and Figure 19.

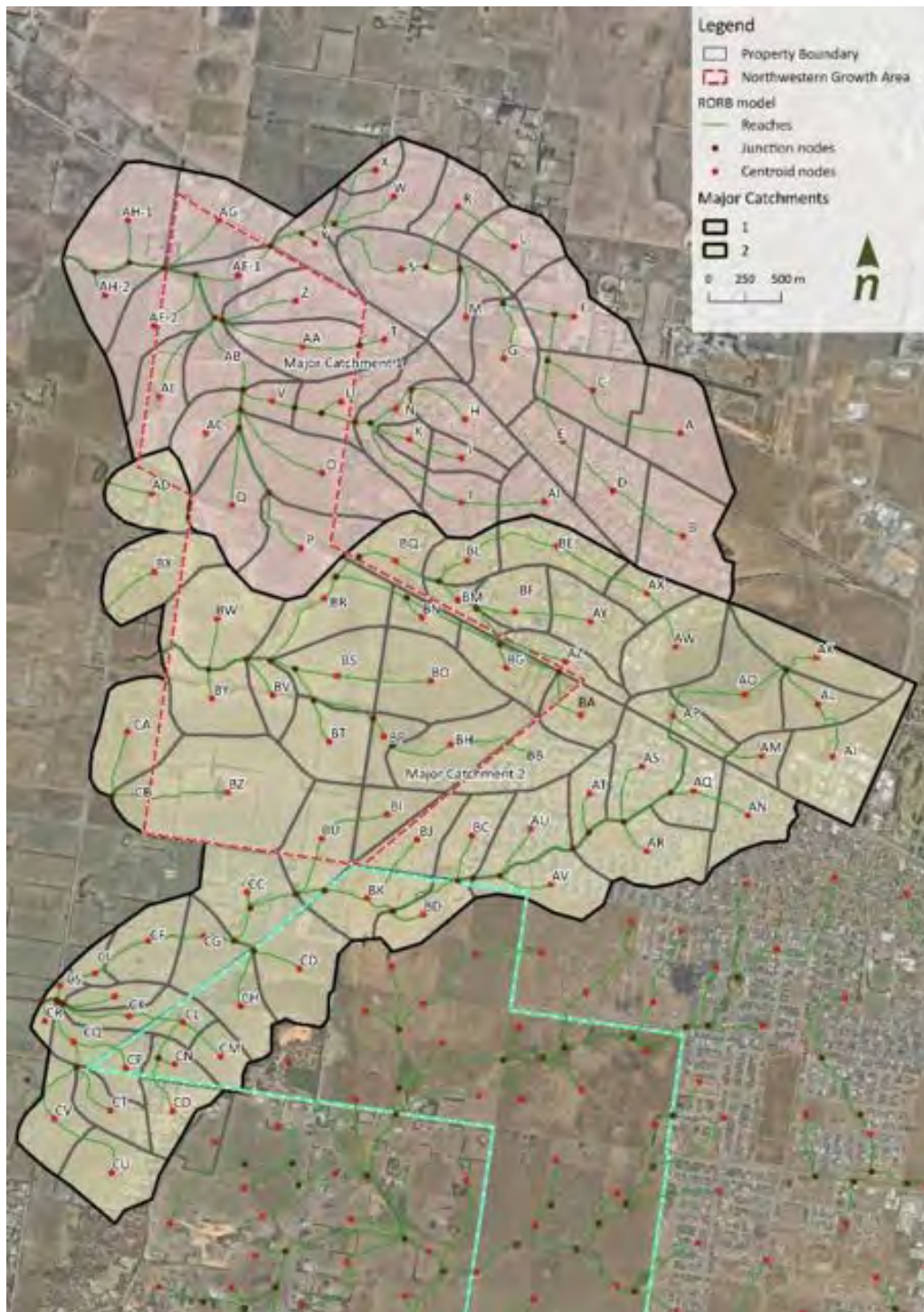


Figure 18. RORB model for the Ballarat north-western growth area (Major catchment 1 & Major Catchment 2)

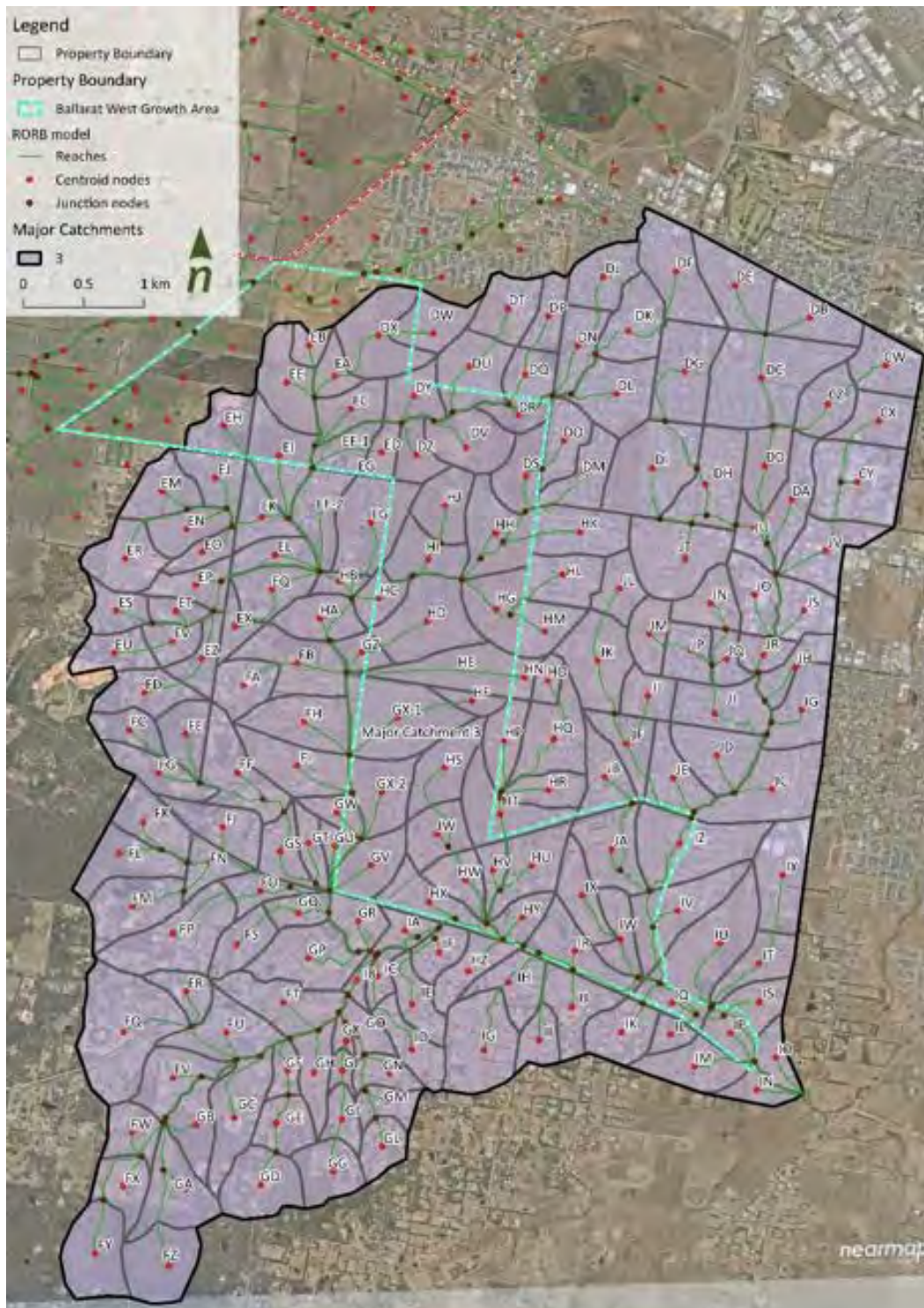


Figure 19. RORB model for the Ballarat north-western growth area (Major Catchment 3)

The RORB model has been run for the 0.5%, 1%, 2%, 5%, 10% and 20% AEP events. A number of flow outputs were determined at key locations within the growth areas as identified in Figure 20 below. Details of these peak flow rates are provided in Table 4.

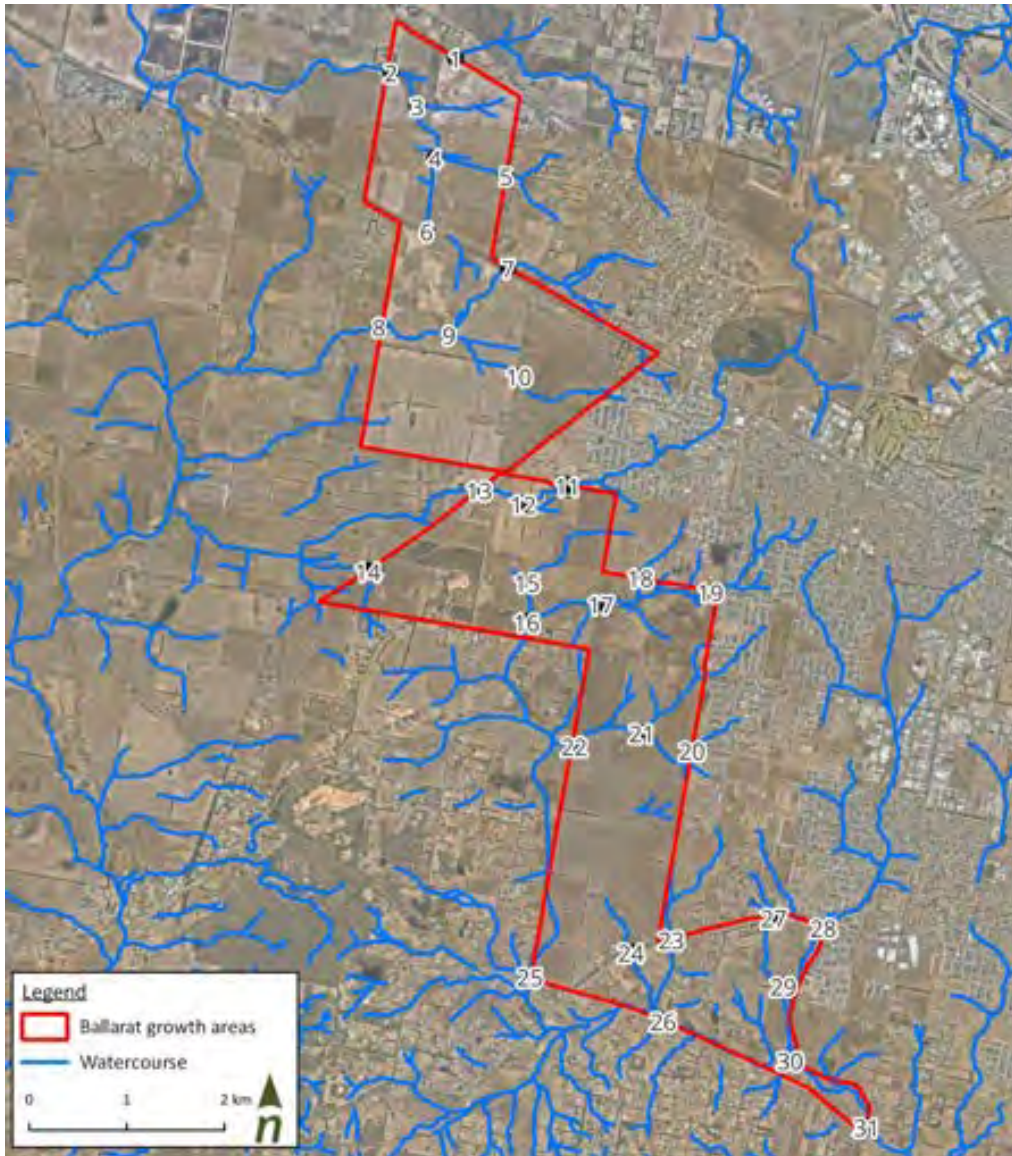


Figure 20. Location of key flow rates within the Ballarat growth areas



Table 4. RORB modelling results for major catchments of Ballarat north-western and western growth areas

Flow location	0.5%AEP (m ³ /s)	1%AEP (m ³ /s)	2%AEP (m ³ /s)	5%AEP (m ³ /s)	10%AEP (m ³ /s)	20%AEP (m ³ /s)
1	10.65	8.77	7.35	5.73	4.34	2.97
2	26.16	21.24	17.59	13.74	10.34	7.09
3	18.29	14.83	12.08	8.58	6.54	4.59
4	17.15	14.02	11.07	8.36	6.10	4.07
5	5.29	4.29	3.37	2.52	1.83	1.26
6	3.30	2.70	2.14	1.51	1.15	0.79
7	9.07	7.59	6.00	4.26	3.36	2.39
8	16.04	13.23	11.01	8.81	6.89	4.71
9	15.27	12.61	10.66	8.11	6.44	4.59
10	4.68	3.95	3.27	2.41	1.81	1.22
11	19.42	16.68	14.24	11.04	8.99	7.21
12	15.97	13.54	11.20	8.56	6.76	5.21
13	15.43	12.98	10.59	7.88	6.13	4.69
14	2.77	2.24	1.78	1.26	0.94	0.63
15	6.38	5.25	4.24	3.26	2.31	1.46
16	17.01	14.17	11.72	9.07	7.08	5.17
17	16.21	13.62	11.08	8.01	6.41	4.86
18	6.92	5.81	4.94	3.83	3.12	2.19
19	11.45	9.84	8.47	6.56	5.28	4.23
20	4.17	3.42	2.86	2.43	1.96	1.60
21	13.12	11.09	9.20	7.05	5.45	3.88
22	35.55	29.47	24.57	19.37	15.24	10.51
23	4.35	3.48	2.84	2.04	1.56	1.09
24	2.60	2.11	1.64	1.18	0.89	0.59
25	36.55	29.78	24.82	19.45	14.96	10.36
26	57.61	47.36	38.96	29.83	22.33	15.47
27	1.89	1.59	1.31	1.00	0.73	0.46
28	46.14	39.25	32.50	24.75	19.14	14.25
29	2.78	2.25	1.76	1.25	0.95	0.63
30	62.72	51.04	41.68	31.39	23.25	16.14
31	84.33	69.44	57.05	40.05	29.83	19.73

5.2 Hydraulic Modelling

A 1D/2D hydraulic model was created for the Ballarat Northwest and West Precincts and the surrounding catchments using TUFLOW version 2020-10-AF. The TUFLOW model is used to estimate peak flood levels, flood extents, flows and velocities for a range of storm events and durations. The model was run using HPC (heavily Parallelised Compute). The TUFLOW model was computed for the existing conditions scenario.

The TUFLOW model was created based on the following data:

- LiDAR information used to generate a Digital Elevation Model (DEM),
- Inflow boundary conditions to produce runoff within the model, hydrographs were generated from the RORB model from section 3,
- Surface roughness values based on the existing site conditions,
- 1D network data for pipes, pits & culvert crossings,
- Downstream 1D & 2D boundary conditions where required.

Based on the above, the TUFLOW model was run for the 0.5%, 1%, 2%, 5%, 10% and 20% AEP events.

Model Development

Model Extent

The TUFLOW model extent was determined based on the key topographic features of the Precinct Boundary's (Northwest and West), and the surrounding area. Where it isn't necessary to model the entire upstream catchment areas, key locations are required to be modelled in order to determine how runoff enters the Northwest and West Precincts. This model extent has been determined based on the LiDAR information and professional judgement. The model extent (or 'Code Boundary') is shown in Figure 21 below.

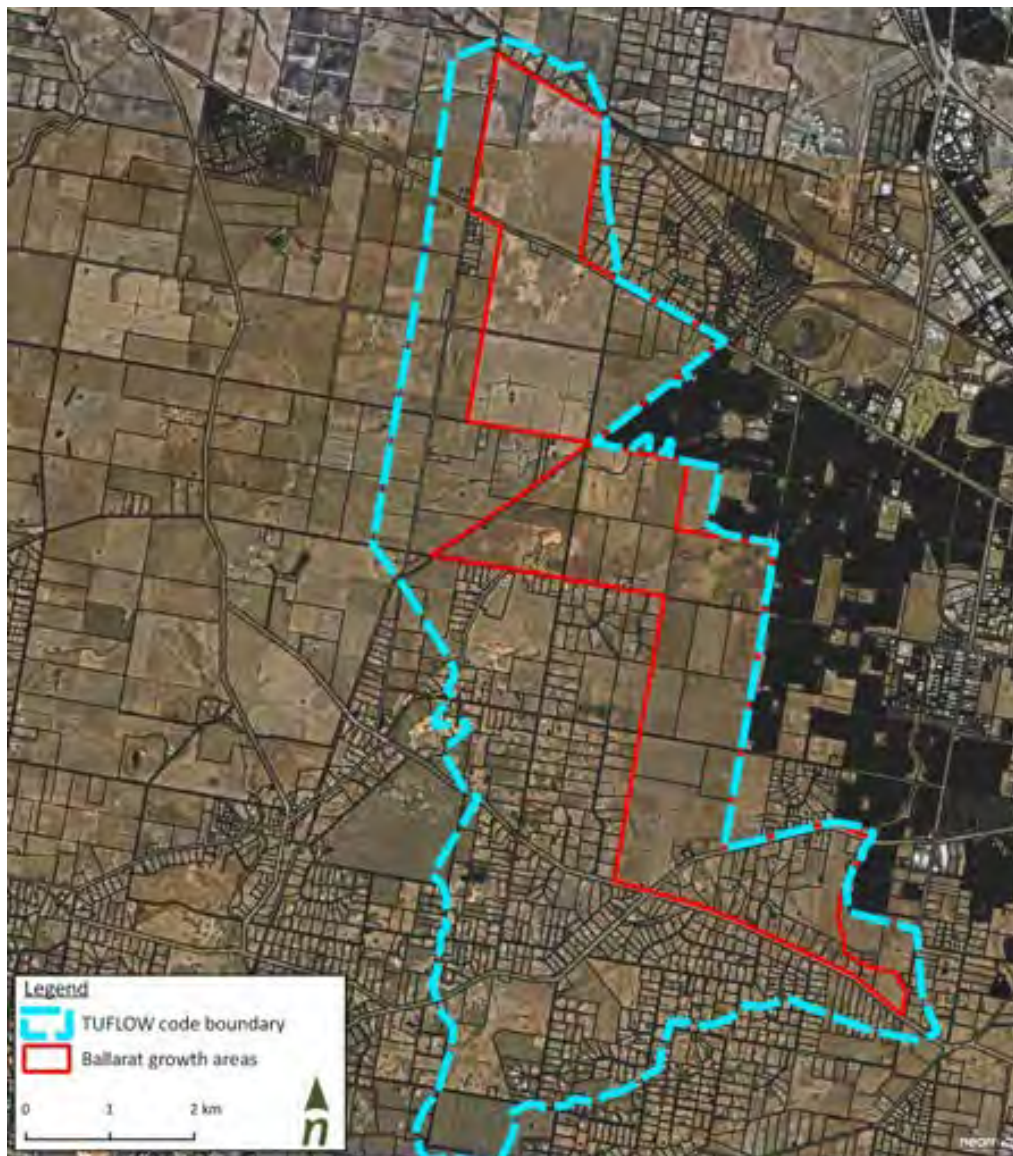


Figure 21. Ballarat Northwest and West Precinct TUFLOW model extents

Topography

The DEM used for the TUFLOW model was created by merging LiDAR tiles in GIS. The LiDAR tiles were obtained from the Elvis website (Elevation and Depth Spatial Data). The model was run using a 5 metre grid size. A summary of the LiDAR data sets obtained are summarised below.

Table 5. Summary of LiDAR data

Data set	Resolution	Year captured
Ballarat LiDAR	1 metre	2019
Golden Plains	50 centimetre	2021



Boundary Conditions

Boundary conditions have been determined at the upstream and downstream areas of the TUFLOW model. A number of QT (flow vs time) boundary conditions were defined at the upstream end of the model extents, where runoff outfalls along major overland flow paths. Within the model extents, 2D source areas were determined, the source areas are represented by subcatchments from the RORB model, and rainfall excess hydrographs applied.

The downstream boundary conditions consisted of 2D HQ (Head vs flow) conditions, where overland flow exits the model extents, to prevent pooling at the downstream boundary of the model.

An overview of the boundary conditions applied is provided below.

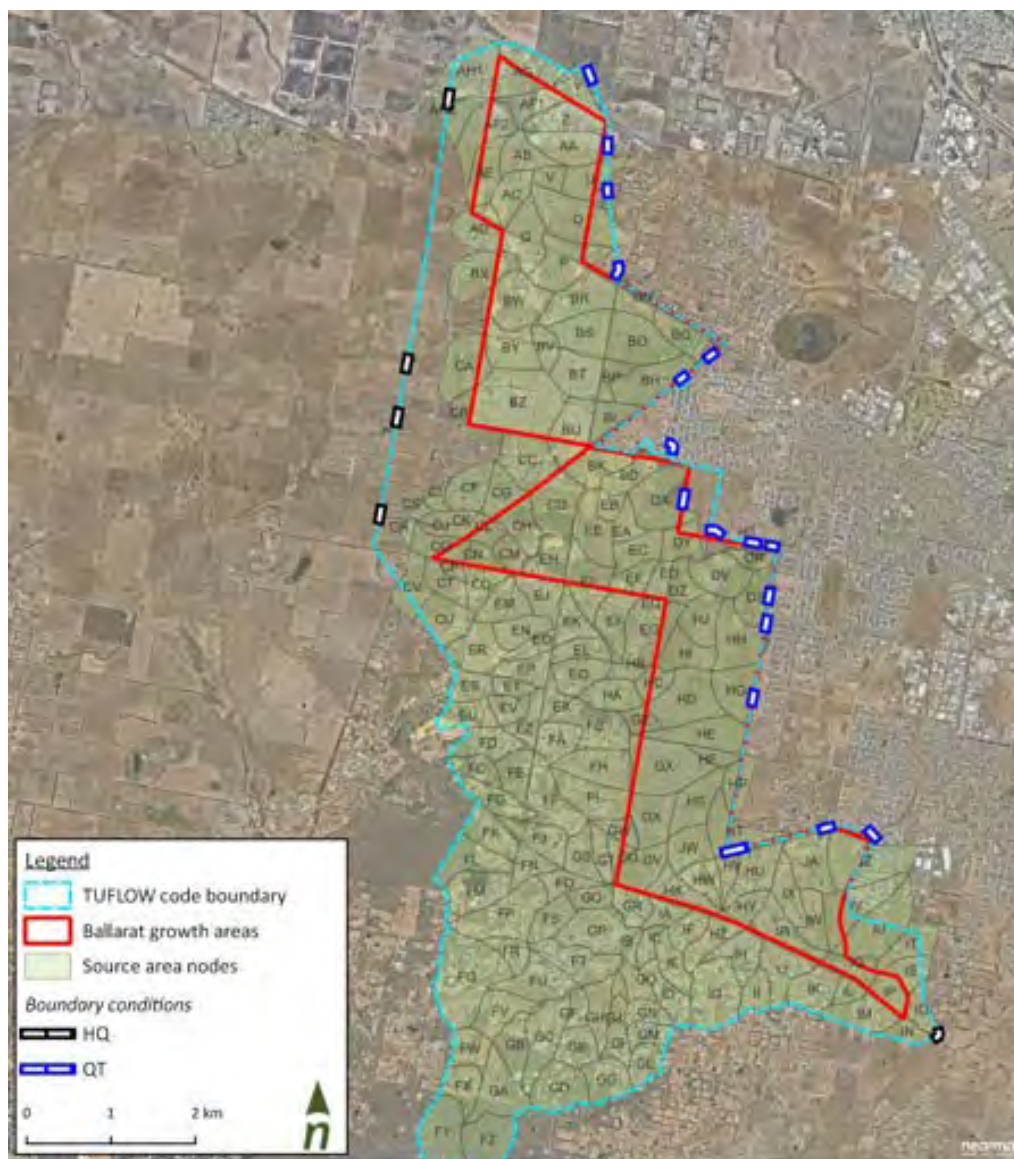


Figure 22. Ballarat Northwest and West Precinct TUFLOW boundary conditions



Surface Roughness

Land use types were defined based on the existing site conditions using aerial imagery. The land use types were determined in order to reflect the appropriate Manning's 'n' roughness value. The Manning's 'n' values adopted are shown in Table 6.

Table 6. Material roughness

Material Type	Manning's 'n' Roughness
Residential footprints	0.50
Rural Residential footprints	0.15
Open space area, minimal vegetation cover (grass)	0.05
Open space area, moderate vegetation cover (shrub)	0.06
Open space area, thick vegetation cover (tree)	0.09
Waterways, minimal vegetation	0.04
Waterways, thick vegetation	0.07
Concrete channels	0.017
Paved roads	0.025
Unpaved roads	0.030
Open waterbody (no vegetation)	0.08
Open waterbody (emergent vegetation)	0.065
Railway line	0.125
Industrial / commercial	0.35

Culvert Structures

Existing culvert data was added to the TUFLOW model as 1D pipes along major road crossings within the model extent. The size and description of these culvert crossings is shown in Table 7 below. An overview of the culvert crossings is shown in Figure 23 below.

Table 7. Key culvert crossings within the Ballarat TUFLOW model

Location	Description	Size
1	Blind Creek Road crossing upstream of the NW growth area boundary.	2 x 1.10 m (W) x 1.00 m (H)
2	Railway line crossing upstream of the NW growth area boundary	2 x 1.10 m (W) x 1.00 m (H)
3	Draffins Road crossing downstream of the NW growth area boundary	5 x 1.20 m (W) x 0.750 m (H)
4	Dowling Road crossing upstream of the NW growth area boundary	1 x 0.60 m Dia.
5	Remembrance Drive crossing within the NW growth area	1 x 0.75 m (W) x 0.60 m (H)
6	Remembrance Drive crossing within the NW growth area	1 x 1.20 m (W) x 0.60 m (H)
7	Remembrance Drive path crossing within the NW growth area	1 x 1.20 m (W) x 0.60 m (H)
8	Finchs Road crossing within the NW growth area	1 x 0.15 m Dia.
9	Finchs Road crossing within the NW growth area	1 x 0.15 m Dia.
10	Cuthberts Road crossing upstream of the W growth area boundary (outfall from existing Retarding Basin)	3 x 1.20 m (W) x 0.90 m (H)
11	Ballarat-Carngham Road crossing downstream of the W growth area boundary	1 x 3.50 m (W) x 1.20 m (H)
12	Greenhalgs Road crossing west of the W growth area boundary	1 x 1.20 m Dia.
13	Bells Road crossing west of the W growth area boundary	2 x 3.00 m (W) x 1.80 m (H)
14	Bells Road crossing west of the W growth area boundary	2 x 3.00 m (W) x 1.80 m (H)
15	Bells Road crossing downstream of the W growth area boundary	1 x 3.00 m (W) x 1.80 m (H)
16	Glenhelg Highway crossing within the W growth area	1 x 3.00 m (W) x 1.80 m (H)
17	Ballarat-Skipton Rail Trail at the downstream boundary of the W growth area	1 x 1.20 m (W) x 0.90 m (H)
18	Finchs Road crossing within the W growth area	1 x 1.20 m (W) x 0.90 m (H)

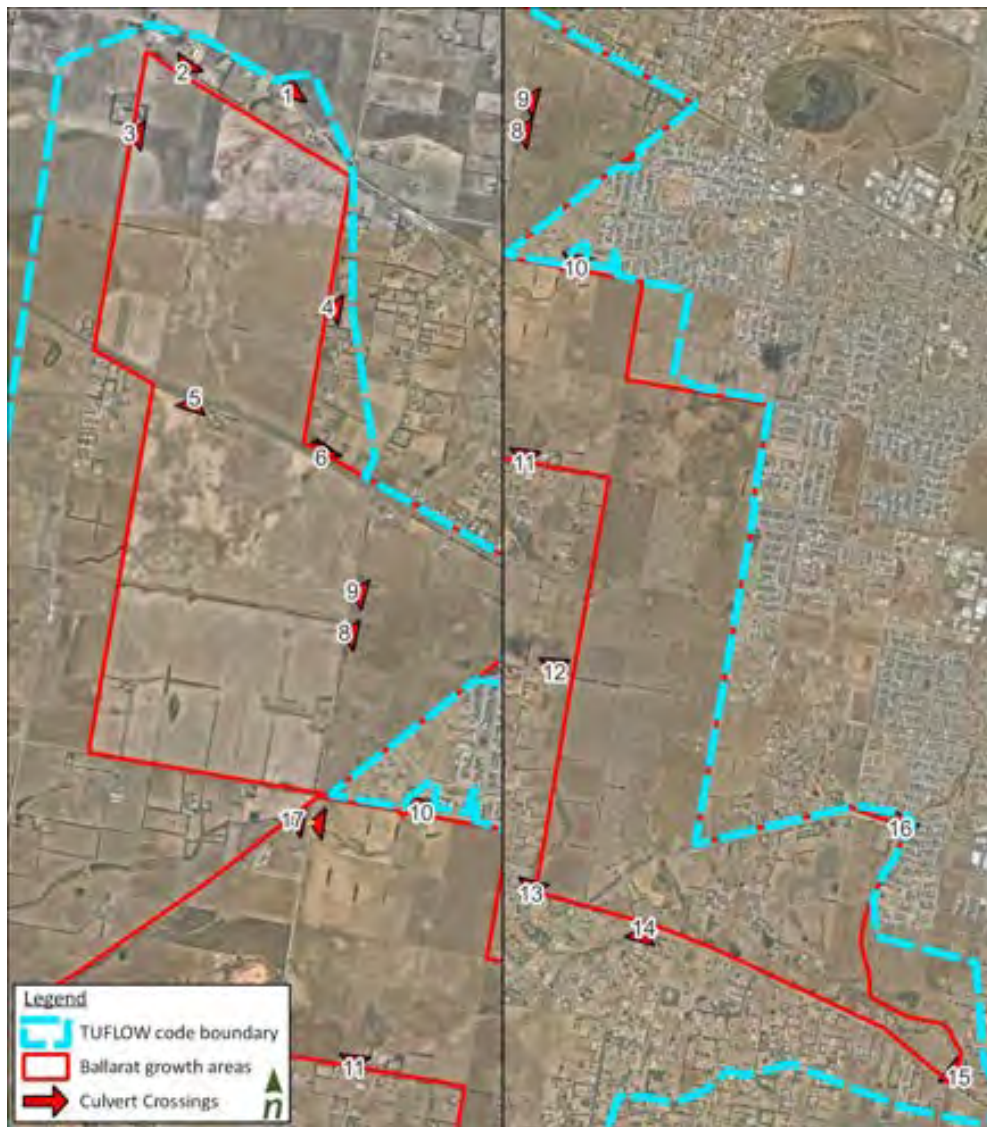


Figure 23. Ballarat Northwest and West Precinct TUFLOW culvert crossings

Results

Peak flow rates determined from the hydrologic modelling have been used to determine selection of modelling runs used in the TUFLOW model. Table 4 provides a summary of peak flow rates at locations of interest within the model. The TUFLOW model was run for the following events and durations specified in Table 8.

Table 8. TUFLOW duration summary

Event	Duration (hr)	Temporal Pattern
1% AEP	4.5	27
1% AEP	6	29
1% AEP	12	21



An overview of the flood extents from the results of the TUFLOW model are provided below for the 1% AEP event (ie Figure 24 and Figure 25). This will be used to inform the future surface/storm management strategy for the North Western and Western growth areas.

Flood depth and velocity mapping for all design AEP events computed are provided in Appendix A.



Figure 24. Existing conditions 1% AEP flood extents – North Western growth area

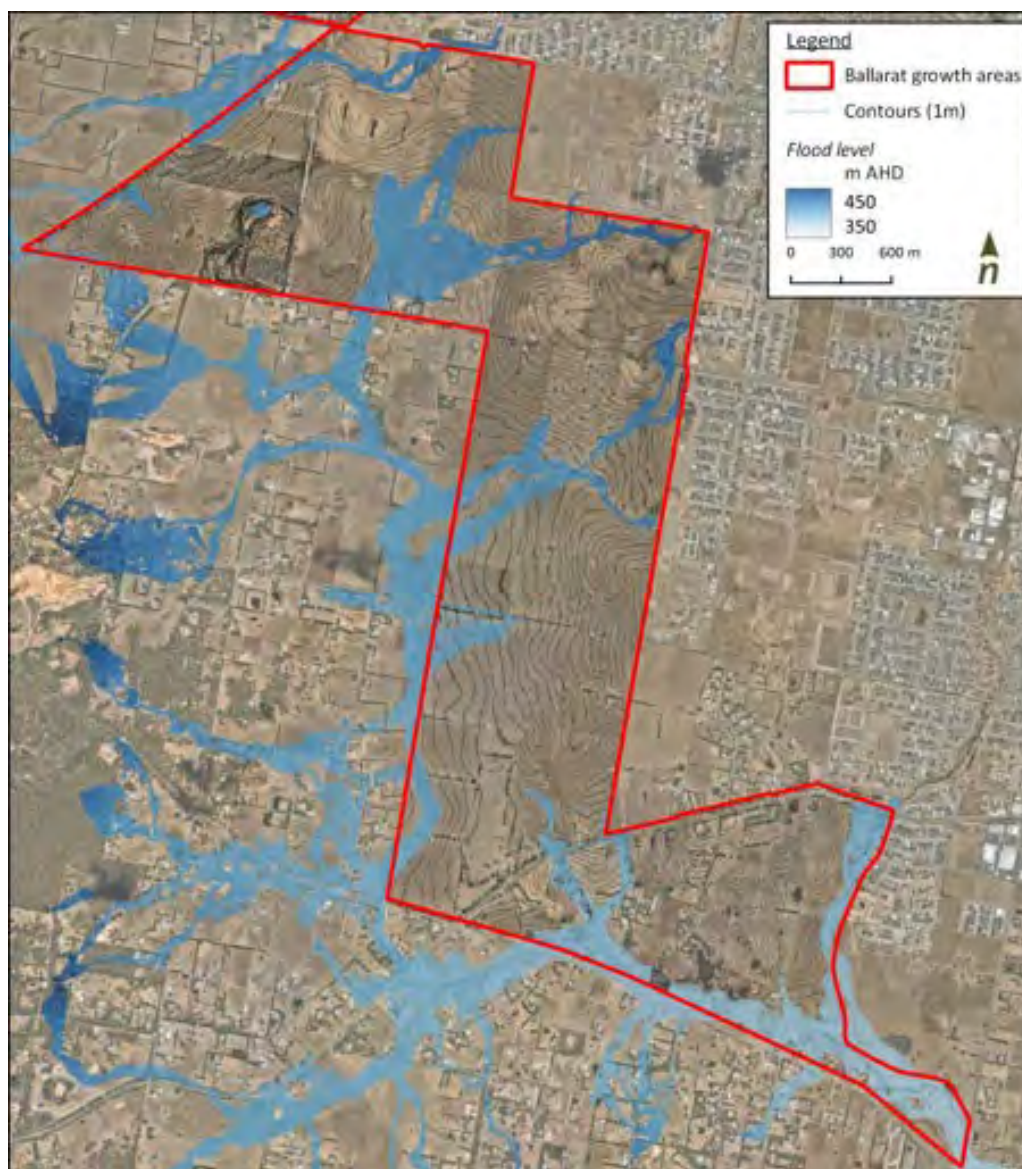


Figure 25. Existing conditions 1% AEP flood extents – Western growth area

6 Post development objectives and conditions

The following sets out the aim, objectives and approach of the surface water analysis aspect of the post-development conditions strategy.

6.1 Aim

The aim is to define the flood mitigation and stormwater quality management requirements for the post development conditions of the Ballarat North western and Western growth areas based on the future land use of the site. In doing so the work will define the stormwater quantity and stormwater quality assets required to control the impact of development downstream and comment upon the optimal layout of those assets to support complimentary water cycle objectives. The design and layout of the proposed assets will be provided at a conceptual level.

6.2 Objectives and approach

There are four main objectives of the surface water management plan which are in line with the strategic context:

1. Stormwater quantity management

Fully developed 1% AEP stormwater runoff rates are to be retarded back to the equivalent 1% AEP pre-development peak flow rates before discharging downstream. This is typically achieved through the implementation of stormwater retardation (or detention) systems within the catchment.

2. Stormwater conveyance

Stormwater conveyance is typically designed according to a major and minor flow regime where:

- Minor flows i.e. up to and including the 20% AEP storm event (approximately the 1 in 5-year ARI event), are conveyed via the sub-surface stormwater network.
- Major flows i.e. between the 20% AEP and 1% AEP event are conveyed on the surface via roadways and waterways.

In line with the findings from the Geomorphic Assessment, existing drainage lines could be modified to a pipe and road reserve as part of the urbanisation process where safe conveyance allows.

3. Stormwater quality treatment

Stormwater treatment concepts are required to meet the State Environmental Protection Policy (SEPP) best practice environmental management (BPEM) pollution reduction targets before being discharged into drainage networks and into receiving waters. These targets are defined as:

- 80% reduction in the annual load of Total Suspended Solids (TSS)
- 45% reduction in the annual load of Total Phosphorus (TP)
- 45% reduction in the annual load of Total Nitrogen (TN)
- 70% reduction in the annual load of Gross Pollutants (GP)

A key requirement as part of the BPEM targets is flow reduction, which is defined in Objective 5 below.

4. Waterway corridors

Constructed waterway corridors are required to convey major flows through the growth area. In line with the Geomorphic Assessment, establishing well designed constructed waterways to convey runoff is an appropriate way to manage the catchment from a geomorphic point of view. The process to define the waterway corridor widths was discussed with the CMA, of which was agreed to be based on the guidance set out in Melbourne Water's Constructed Waterway Design Guidelines and the Waterway Corridor Guidelines.

5. Stormwater flow volume management

The Environment Protection Act has been amended to include a “general environmental duty (GED)” provision. With respect to urban growth, consideration needs to be given to options that minimise the risk (as far as reasonably practical) on public health and the environment by managing the impacts from stormwater runoff that arises from land development. The risks associated with urban runoff stem from stormwater quality impacts and stormwater volume impacts.

A guidance document on this matter has been released by EPA Victoria (Urban Stormwater Management Guidance, June 2021). The guidance document identifies performance objectives for stormwater management. The objectives associated with stormwater quality (see item three above) are well known and have been in place for a long time, however guidance around volumetric objectives and volume reduction are relatively new. It should be noted that the volume reduction performance objectives themselves are not mandatory, and that performance is based on what is reasonably practicable at the development site to eliminate or reduce risk.

Table 1 in the “Urban Stormwater Management Guidance” document includes a water volume performance objective based on rainfall bands and waterway priority areas. The water volume objective has two key elements around:

- Harvest/evapotranspire (% mean annual impervious run-off)
- Infiltrate/filter (% mean annual impervious run-off)

For the Ballarat growth areas, specific or targeted waterway priority areas have not been established therefore the relevant volumetric objective is defined by the “other areas” column associated with the 600mm rainfall band. That is:

- an annual stormwater volume reduction (stormwater harvest/evapotranspire) target of 29%
- an annual infiltration/filter target of 7%

Therefore the future planning of the Ballarat growth areas will need to consider the GED impacts associated with urban stormwater. Refer to the Integrated Water Management Strategy (IWMS – Alluvium 2023) which considers the options and opportunities (eg stormwater harvesting for open space, rainwater tanks, passive irrigation, leaky wetlands) and balances that assessment with the criteria of “as far as reasonably practical”. The IWMS links together the stormwater targets with the other broader urban water cycle objectives such as potable water reduction and resilience.

7 Stormwater Quantity management

The hydrologic analysis of the Ballarat growth areas was undertaken in order to determine the post development peak runoff flow rates for various flood events throughout the catchment. The hydrologic analysis was used in order to determine the storage capacity requirements of future proposed retarding basins. Retarding basins are required in order to control the post developed peak stormwater runoff rates back to equivalent predeveloped peak flowrate conditions.

7.1 Hydrologic modelling

The hydrologic model determined for the existing conditions assessment (Section 5.1) was modified to reflect the proposed developed conditions of the growth areas. The layout of each developed conditions catchment is shown in Figure 26 & Figure 27 below. The developed conditions RORB model sub areas were delineated based on the future drainage conditions, ensuring a minimum of 4 subareas are located upstream of each proposed retarding basin.

The RORB model was run in order to determine the following:

- Existing peak flows
- The impact of development on peak flows
- The reduction in peak flows using retarding basin storages
- The impact of climate change on peak storage.

The kc values for the developed conditions models were calibrated using a kc/dav ratio. Initial loss and continuing loss parameters remain consistent with the existing conditions hydrologic model. A summary of the input parameters is provided in Table 9 below.

Note, for the purposes of defining the sizing of retarding basin for developed and predeveloped conditions, a single fraction impervious input was used (ie fraction impervious of 0.75). This represents a conservative approach to designing future stormwater management infrastructure, given there is no proposed future urban structure layout.

Table 9. Summary of Kc calibration flows – developed conditions

Parameter	Value
kc/dav calibration ratio	2.04
Routing parameter kc (adopted)	6.08 (Major catchment 1)
	5.60 (Major catchment 2)
	14.00 (Major catchment 3)
m	0.80
Initial Loss for undeveloped areas	25 mm
Continuing Loss for undeveloped areas	2.0 mm/hr

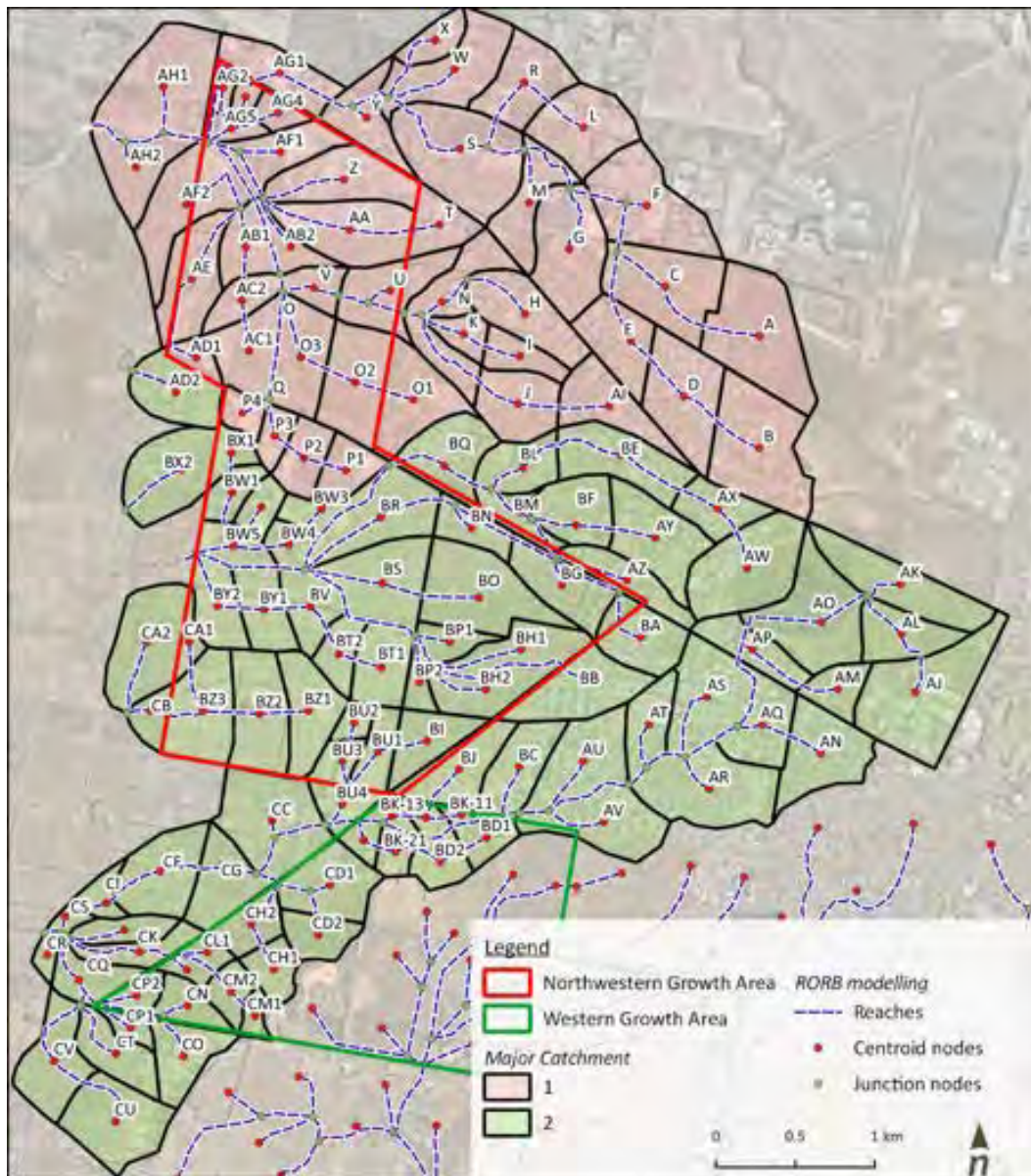


Figure 26. RORB model for the Ballarat north-western growth area – developed conditions



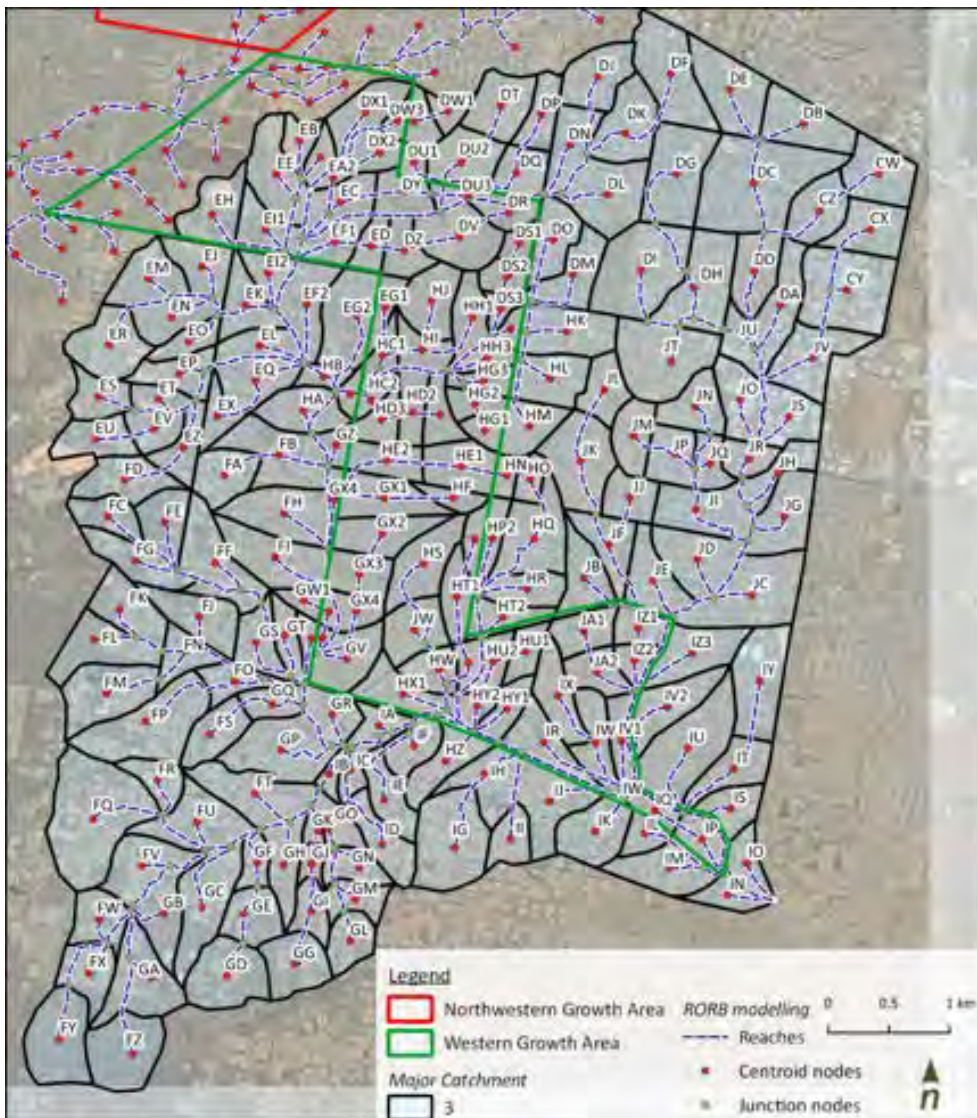


Figure 27. RORB model for the Ballarat western growth area – developed conditions

7.2 Storage design

The aim of the RORB modelling is to establish critical peak flows and the storage requirements within the growth areas. The proposed stormwater management strategy proposes to provide retarding basin storage systems within the catchment. The location of the basins are influenced by:

- the need to attenuate the peak flow rates to pre-development conditions at any outfall downstream of the growth framework plan boundary.
- Where future developed catchments discharge into a receiving waterway (either existing or constructed).

The hydrologic modelling was based upon ARR 2019, which recognises the temporal variability in potential rainfall events and its influence on the conversion of rainfall to peak flows. An ensemble of 10 temporal patterns were run, which allows the model to produce a range of peak flows for each rainfall duration of a

storm event. The median (or 60th percentile) peak flow for a given duration is recorded as the 'critical flow'. The hydrologic modelling considered a range of design storms, from 10 minutes duration through to 72 hours.

The RORB model was computed for the pre and post developed conditions under the 1% AEP flood event. The results are shown in Table 10. The results show the peak flows for the existing and developed conditions flowing into and out of the site.

Table 10. 1% AEP event RORB modelling results for the growth

Retarding Basin location	Predeveloped flow rate (m ³ /s)	Predeveloped critical duration	Developed flow rate (no mitigation) (m ³ /s)	Developed critical duration (no mitigation)
WLRB 1	1.24	2 hr, TP27	2.83	25 min, TP 26
WLRB 2	3.03	2 hr, TP27	7.89	1 hr, TP 28
WLRB 3	3.80	2 hr, TP28	9.43	1 hr, TP 27
WLRB 4A	6.57	2 hr, TP25	12.84	30 min, TP 26
WLRB 4B	2.11	2 hr, TP22	4.77	25 min, TP 28
WLRB 5	2.15	2 hr, TP22	5.59	45 min, TP 26
WLRB 6	4.56	2 hr, TP28	13.24	45 min, TP 26
WLRB 7	2.61	2 hr, TP28	6.22	45 min, TP 26
WLRB 8	2.31	2 hr, TP28	6.57	1 hr, TP 27
WLRB 9	3.96	2 hr, TP22	10.31	25 min, TP 28
WLRB 10	2.15	2 hr, TP22	5.58	25 min, TP 26
WLRB 11	1.51	2 hr, TP27	2.16	45 min, TP 26
WLRB 12	1.30	2 hr, TP24	3.44	45 min, TP 26
WLRB 13	3.31	2 hr, TP27	8.56	20 min, TP 27
WLRB 14	1.23	2 hr, TP28	3.44	20 min, TP 28
WLRB 15	1.82	2 hr, TP22	4.08	2 hr, TP 21
WLRB 16	2.49	2 hr, TP24	5.53	20 min, TP 29
WLRB 17	1.72	2 hr, TP24	4.78	45 min, TP 26
WLRB 18	3.68	2 hr, TP28	9.82	45 min, TP 26
WLRB 19	2.61	3 hr, TP27	7.87	1 hr, TP 28
WLRB 20	6.37	2 hr, TP29	7.26	2 hr, TP 29
WLRB 21	2.78	2 hr, TP27	7.97	45 min, TP 27
WLRB 22	2.21	2 hr, TP27	5.62	25 min, TP 21
WLRB 23	2.63	2 hr, TP22	6.61	25 min, TP 28
WLRB 24	3.20	2 hr, TP24	8.41	45 min, TP 26
WLRB 25	3.00	2 hr, TP24	7.74	45 min, TP 26
WLRB 26	4.36	2 hr, TP27	12.74	1 hr, TP 28
WLRB 27	2.09	2 hr, TP24	5.77	25 min, TP 28
WLRB 28	2.78	2 hr, TP22	7.39	25 min, TP 27
WLRB 29	2.97	2 hr, TP22	7.74	45 min, TP 26
WLRB 30	0.97	2 hr, TP22	2.28	45 min, TP 26

Following the establishment of required peak flow rates, a retarding basin has been modelled and sized to control the flow back to this rate. A stormwater treatment wetland asset is proposed to be located within the base of each retarding basin asset to optimise land use and achieve multi-purpose outcomes for encumbered reserves.

Table 11. Retarding basin requirements (1% AEP event)

Retarding basin	Critical storm	Peak RB outflow (m ³ /s)	Peak RB storage (m ³)	Peak RB flood depth (m)	Outlet size	Footprint* (ha)
WLRB 1	2hr, TP21	1.14	4,880	1.46	1 x 675mm	1.19
WLRB 2	2hr, TP28	2.71	29,900	1.49	1 x 1500mm	3.33
WLRB 3	2hr, TP21	3.72	30,200	1.49	2 x 900mm	3.06
WLRB 4A	2hr, TP28	6.26	43,000	1.43	2 x 1650mm	2.95
WLRB 4B	2hr, TP21	2.02	10,300	1.41	1 x 1050mm	1.80
WLRB 5	2hr, TP27	2.06	15,500	1.43	1 x 1050mm	2.47
WLRB 6	3hr, TP27	4.30	50,000	1.47	2 x 1050mm	4.58
WLRB 7	2hr, TP22	2.59	17,700	1.40	1 x 1500mm	2.48
WLRB 8	2hr, TP21	2.14	24,400	1.47	1 x 1050mm	3.13
WLRB 9	2hr, TP27	3.64	23,400	1.46	2 x 900mm	2.98
WLRB 10	1.5hr, TP27	2.07	10,500	1.43	1 x 1050mm	1.97
WLRB 11	2hr, TP27	1.37	4,090	1.47	1 x 750mm	0.83
WLRB 12	2hr, TP21	1.30	9,050	1.39	1 x 750mm	1.56
WLRB 13	1.5hr, TP27	3.23	14,800	1.47	1 x 1650mm	2.77
WLRB 14	2hr, TP21	1.12	5,770	1.44	1 x 675mm	1.51
WLRB 15	2hr, TP27	1.72	10,300	1.41	1 x 900mm	1.06
WLRB 16	2hr, TP27	2.46	14,200	1.42	1 x 1200mm	2.10
WLRB 17	2hr, TP21	1.69	15,700	1.39	1 x 900mm	2.72
WLRB 18	2hr, TP28	3.37	30,500	1.39	2 x 900mm	3.27
WLRB 19	2hr, TP28	2.57	28,000	1.40	1 x 1350mm	2.92
WLRB 20	2hr, TP24	6.00	18,500	1.39	2 x 1650mm	1.54
WLRB 21	2hr, TP27	2.63	25,200	1.43	1 x 1500mm	3.27
WLRB 22	2hr, TP23	2.19	9,420	1.49	1 x 1050mm	1.90
WLRB 23	2hr, TP27	2.53	12,900	1.38	1 x 1350mm	2.14
WLRB 24	2hr, TP27	3.20	24,300	1.46	1 x 1650mm	2.70
WLRB 25	2hr, TP21	2.71	23,900	1.49	1 x 1500mm	3.19
WLRB 26	2hr, TP28	4.17	43,200	1.44	2 x 1050mm	4.20
WLRB 27	2hr, TP27	2.02	13,200	1.41	1 x 1050mm	1.76
WLRB 28	2hr, TP27	2.51	16,500	1.38	1 x 1350mm	2.67
WLRB 29	2hr, TP27	2.70	24,100	1.45	1 x 1350mm	3.14
WLRB 30	2hr, TP21	0.92	5,040	1.48	1 x 600mm	1.21

* includes batters, access, drying area etc.. (see Section 9)

The results show that the flows are being retarded to below the pre-developed conditions peak flow rates. An overview of the RB location and modelling results is provided in Figure 28, Figure 29, Figure 30.



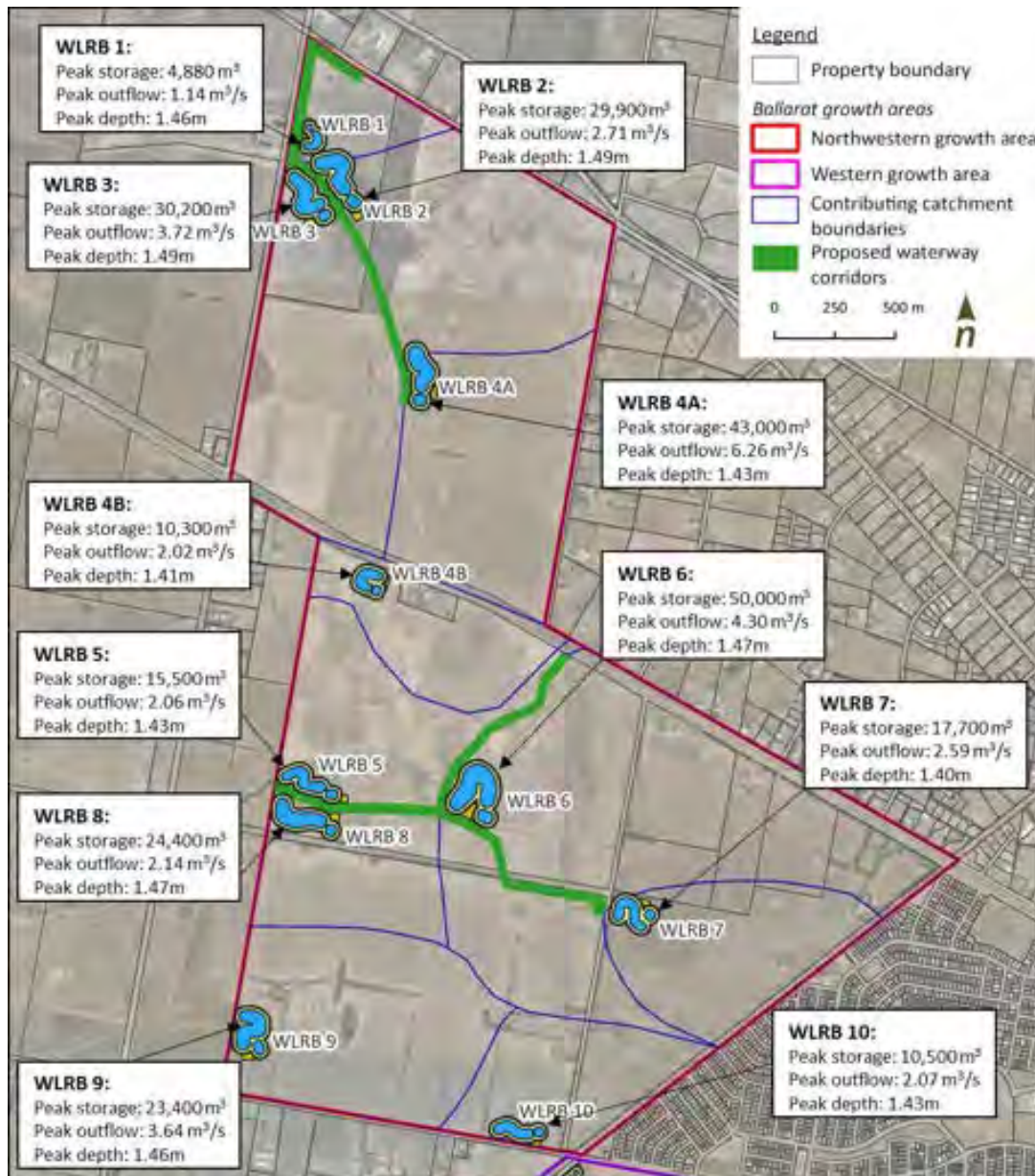


Figure 28. Retarding basin locations and modelling results in Ballarat north-western growth area

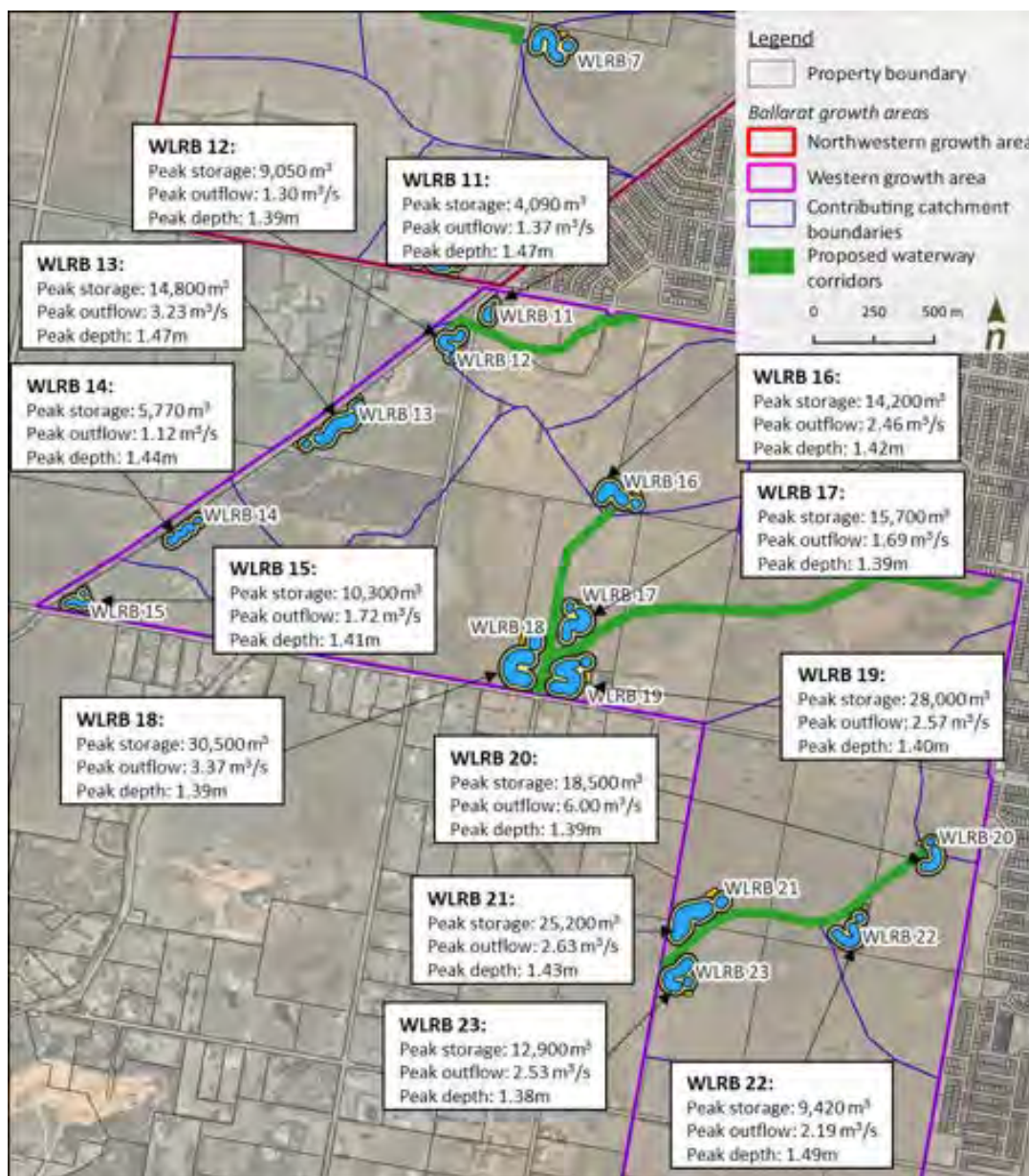


Figure 29. Retarding basin locations and modelling results in Ballarat western growth area - plan 1

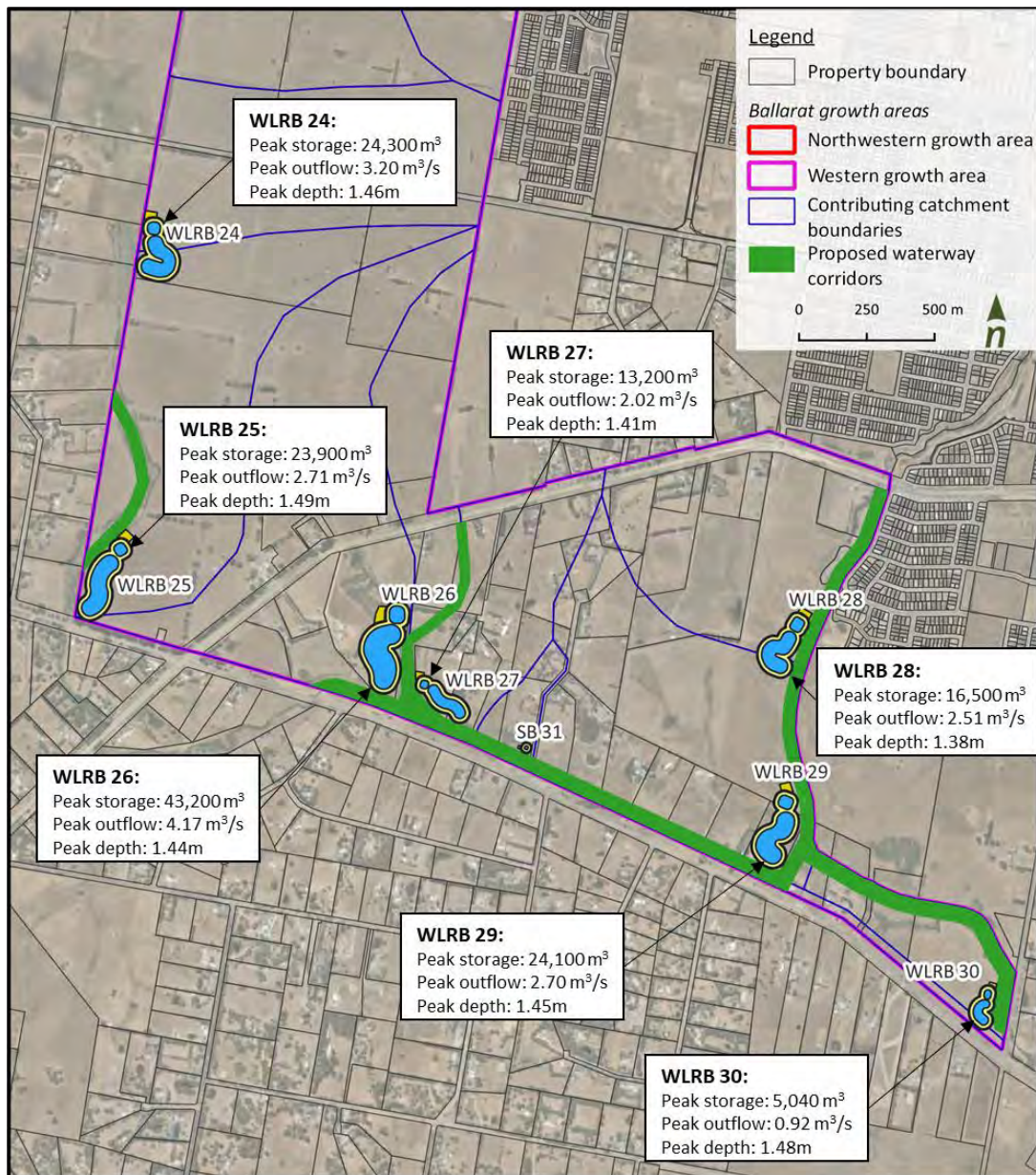


Figure 30. Retarding basin locations and modelling results in Ballarat western growth area – plan 2

8 Stormwater conveyance

The stormwater conveyance component of the SWMS provides management of stormwater runoff through existing or proposed constructed waterways. The main considerations for waterways adjacent to and within a development site are the waterway corridor, constructed waterway design (including waterway crossings), and flood levels. Proposed waterway corridors are designed to be sufficient in terms of flow conveyance and providing for river health and amenity opportunities in a future urbanised landscape.

Following discussions with Council, the Corangamite CMA and the Glenelg Hopkins CMA, it was agreed that in lieu of any local waterway corridor guidelines, Melbourne Water's Waterway Corridor Guidelines are to be used when determining appropriate waterway corridor widths.

8.1 Waterway corridor

Waterways, whether natural or constructed, need to have an appropriate waterway corridor or reserve provided adjacent to development in order to accommodate objectives for flood protection, river health, biodiversity and amenity.

A waterway corridor is defined as the waterway channel and its associated riparian zones. The riparian zones consist of two parts:

- the vegetated buffer
- the core riparian zone

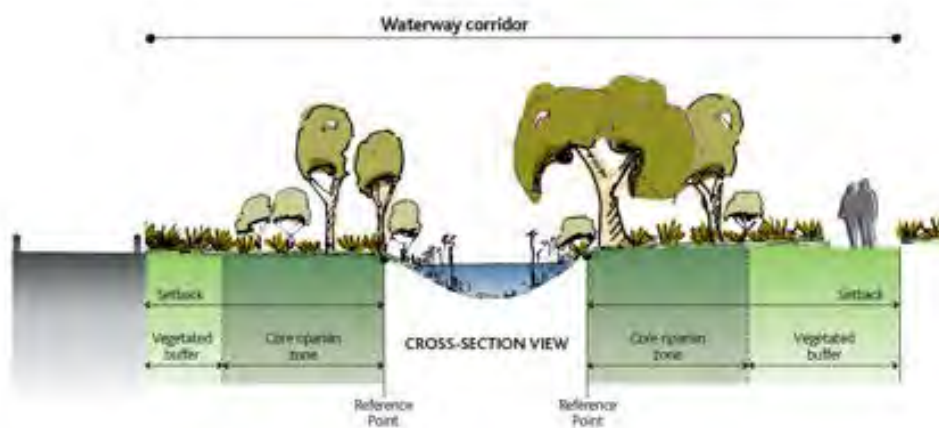


Figure 31. Waterway corridor (Melbourne Water's Waterway Corridor Guidelines)

According to Melbourne Water's Waterway Corridor Guidelines "assigning a waterway corridor preserves areas of the riparian zone that protect or enhance native vegetation, river health and biodiversity, and provide space for recreational infrastructure and activities (e.g. shared paths and (in some cases) stormwater treatment systems)".

A fundamental principle is to provide continuity along the core riparian zone, therefore the strong preference is to locate shared paths and other infrastructure outside of the core riparian zone. However "in some instances, stormwater treatment systems such as constructed wetlands and bio-retention systems may be located within the core riparian zone but should form a relatively small proportion of the area of the core riparian zone so as not to degrade its ecological function".

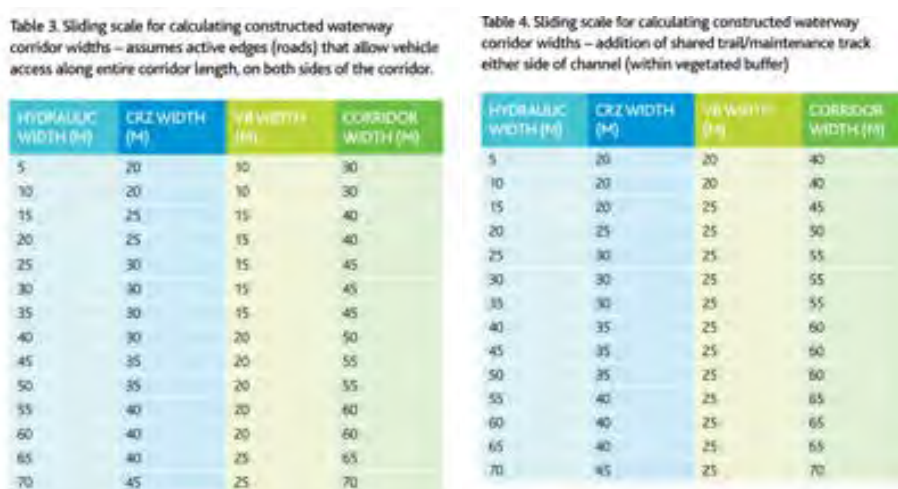


Figure 32. Constructed Waterway corridor requirements (Melbourne Water’s Waterway Corridor Guidelines)

Waterway corridor alignments were determined based on the existing conditions modelling provided in section 5 and the natural waterway alignment data provided by the CMA. From the determination of general locations of each waterway, the developed conditions RORB model was used to determine 1% AEP flows contributing to each proposed reach of waterway. Based on the contributing 1% AEP flow, hydraulic widths were determined for each reach of the waterway, and the calculated Core Riparian Zones (CRZ), Vegetated Buffers (VB) and overall corridor widths were determined from Figure 32 above. The corridor widths have assumed active edges (i.e. roads) on both sides of the waterway. Table 12 below provides details on each reach of the proposed waterways.

Table 12. waterway corridor widths for the proposed growth areas

Waterway Reach	1% AEP Flow (m ³ /s)	Hydraulic Width (m)	Core Riparian Zone (CRZ) (m)	Vegetated Buffer (VB) (m)	Waterway Corridor (m)
A – B	9.28	21.7	30	15	45
C – B	7.82	16.8	25	15	40
D – E	6.95	16.1	25	15	40
F – E	2.43	11.3	25	15	40
E – G	13.07	23.8	30	15	45
H – I	7.55	16.6	25	15	40
J – K1	2.30	11.1	25	15	40
K1 – K2	17.94	25.8	30	15	45
L – K1	14.08	24.3	30	15	45
M – N1	5.93	15.3	25	15	40
N1 – N2	7.2	16.3	25	15	40
O – P	36.59	31.9	30	15	45
S – R	3.06	12.2	25	15	40
Q – R	56.18	44.3	35	20	55
R – T	61.36	45.1	35	20	55
U – V	49.71	39.4	30	20	50
V – T	51.39	39.8	30	20	50
T – W	85.66	52.4	40	20	60

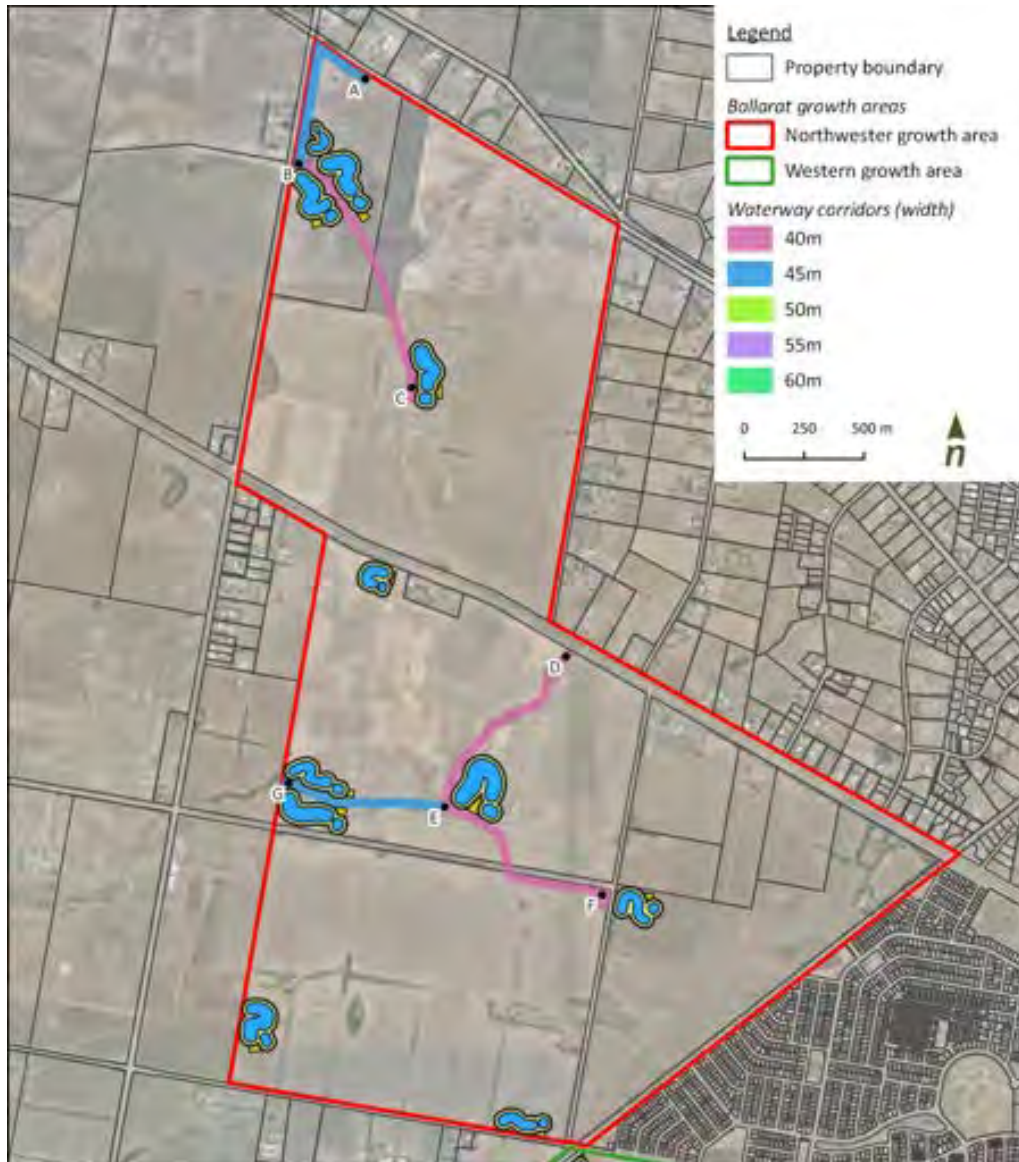


Figure 33. Waterway corridors within the Ballarat NW growth area





Figure 34. Waterway corridors within the Ballarat W growth area – plan 1



Figure 35. Waterway corridors within the Ballarat W growth area – plan 2

8.2 Longitudinal profile

The longitudinal slope is dictated by invert controls at the downstream and upstream extents of the constructed waterway. The provided design features change in slope along the alignment, discussed in Table 13. A key requirement with respect to waterway longitudinal grades is ensuring grades are no steeper than 1in200 for stability and erosion management. Where the average slope of the existing topography is steeper than 1in200, grade control structures will be required.

Table 13. Longitudinal slope along waterway reaches

Waterway Reach	Upstream elevation (m AHD)	Downstream elevation (m AHD)	Average slope (1 in x)	Number of grade control structures required
A – B	411	409	370	–
C – B	418	409	189	1
D – E	424	418	143	1
F – E	427	418	101	3
E – G	418	414	173	1
H – I	430	421	95	3
J – K2	422	416	143	2
L – K2	438	416	88	9
M – N2	424	412	105	4
O – P	405	404	750	–
S – R	404	396	95	5
Q – R	397	396	450	–
R – T	396	390	247	–
U – V	403	395	83	5
V – T	395	390	154	2
T – W	390	386	275	–

8.3 Cross section geometry

The cross-sectional geometry should be designed to accommodate the 4EY to 1EY flows in the low flow channel and the 1% AEP flows in the full compound channel. These flows are determined using RORB modelling as discussed in the flood modelling section. The proposed channel cross section has the dimensions given in Table 14.

Table 14. Channel cross-section geometry and design parameters

Parameter	Low flow channel	High flow channel
<i>40m Waterway corridor</i>		
Base width (m)	3	15
Depth (m)	0.5	0.8 (minimum)
Side slope (1 in x)	3	6
Bench slope (1 in x)	–	40 (maximum)
Top width (m)	6	28.2
Freeboard (m)	–	0.3
<i>45m Waterway corridor</i>		
Base width (m)	3	16
Depth (m)	0.6	1.4 (minimum)
Side slope (1 in x)	3	6
Bench slope (1 in x)	–	40 (maximum)
Top width (m)	6.6	36.4
Freeboard (m)	–	0.3
<i>50m Waterway corridor</i>		
Base width (m)	4	23
Depth (m)	0.6	1.4 (minimum)

Parameter	Low flow channel	High flow channel
Side slope (1 in x)	3	6
Bench slope (1 in x)	-	40 (maximum)
Top width (m)	7.6	43.4
Freeboard (m)	-	0.3
55m Waterway corridor		
Base width (m)	5	29
Depth (m)	0.6	1.4 (minimum)
Side slope (1 in x)	5	6
Bench slope (1 in x)	-	40 (maximum)
Top width (m)	11.0	49.4
Freeboard (m)	-	0.3
60m Waterway corridor		
Base width (m)	5	34
Depth (m)	0.6	1.6 (minimum)
Side slope (1 in x)	6	6
Bench slope (1 in x)	-	40 (maximum)
Top width (m)	12.2	56.8
Freeboard (m)	-	0.3

A conceptual layout of a typical cross section for each waterway corridor width is provided below.

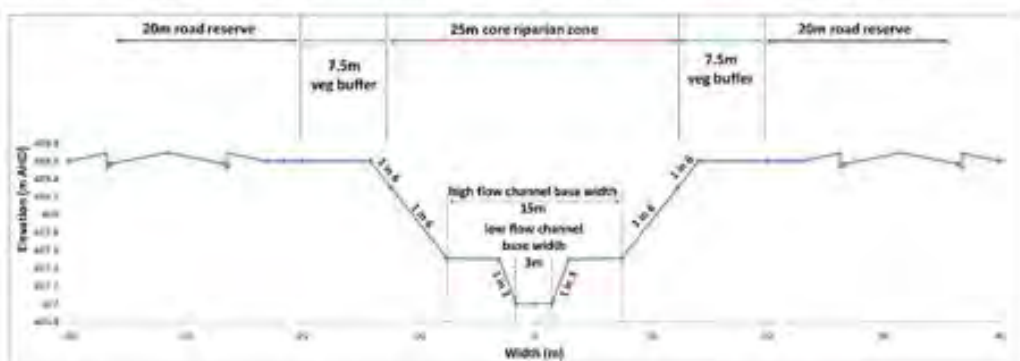


Figure 36. Conceptual arrangement of a typical cross section for a 40m wide waterway corridor

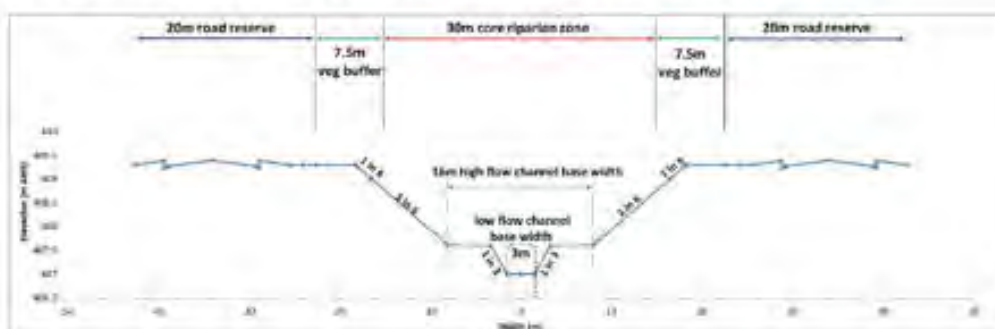


Figure 37. Conceptual arrangement of a typical cross section for a 45m wide waterway corridor

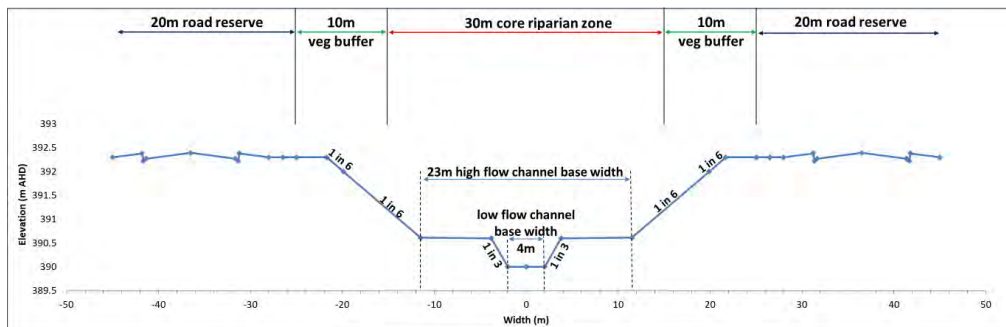


Figure 38. Conceptual arrangement of a typical cross section for a 50m wide waterway corridor

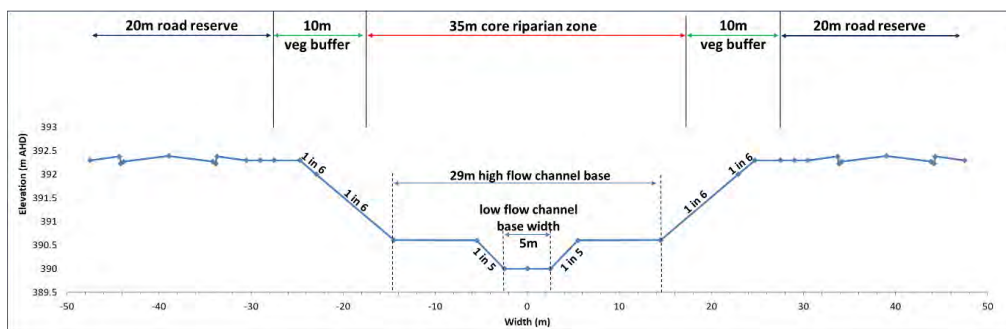


Figure 39. Conceptual arrangement of a typical cross section for a 55m wide waterway corridor

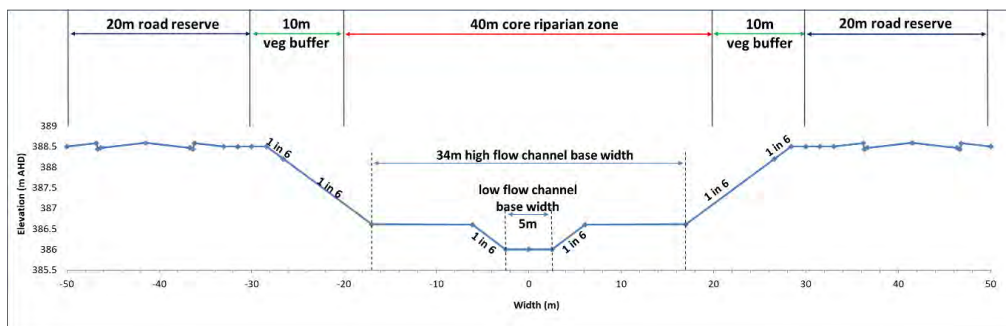


Figure 40. Conceptual arrangement of a typical cross section for a 60m wide waterway corridor

8.4 Considerations for future waterway continuity

A key consideration for constructed waterway design is to ensure that waterway continuity is provided through the reach. It is also important to ensure peak flood levels, velocities and shear stresses are managed within the growth area and the catchment downstream of the growth area. Alluvium has considered the proposed Ballarat North Western and Western growth areas, and how the proposed constructed waterways could be managed.

In particular, consideration of the waterway management approach for the southwestern draining waterway that intersects the boundary of the Western growth area (i.e. Winter Creek). The waterway naturally moves inside and outside of the growth area boundary at a number of locations. As a result, Alluvium has considered an alternative framework plan option which ‘extends’ the western growth area boundary to incorporate the entire waterway reach. This will allow future construction of the waterway corridor outside of the current



growth area whilst providing a natural buffer between the urbanised residential area and existing rural living area.

Similarly, further design of wetland/retarding basins would be required along the suggested waterway corridor to manage both the quantity and quality of stormwater runoff generated within the extension area.

This will include 157.4 ha of additional developable land whilst providing continuity in the Winter Creek waterway alignment. A summary of the additional area proposed for development is highlighted below.

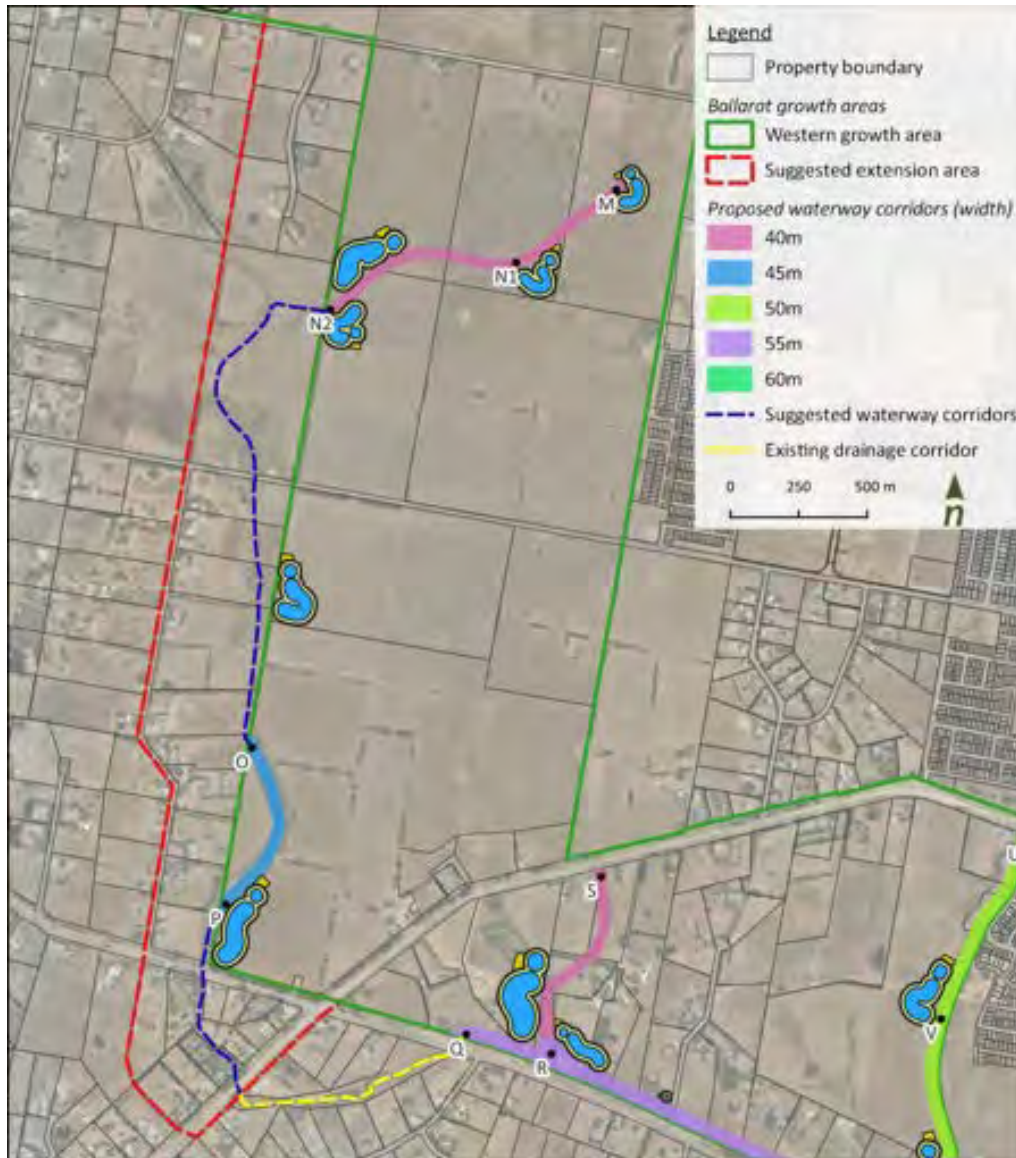


Figure 41. Suggested growth area changes to provide waterway continuity



9 Stormwater quality treatment

Alluvium understands that a key principle for the development of the Ballarat Growth Areas is that all stormwater is to be treated to best practice (ie Best Practice Environmental Management Guidelines (BPEM)) before being discharged into a waterway. The following BPEM targets have been adopted:

- 70% removal of the total Gross Pollutant load
- 80% removal of total Suspended Solids (TSS)
- 45% removal of total Nitrogen (TN)
- 45% removal of total Phosphorus (TP)

A MUSIC (Model for Urban Stormwater Improvement Conceptualisation) model was developed to estimate the pollutant loads generated from the developed conditions scenario. The model was used to size the WSUD assets, including wetland and sediment basins required to meet the pollutant reduction targets.

The key modelling inputs for the MUSIC model are meteorological data:

- Rainfall
- Evapotranspiration

A MUSIC template was created using meteorological data from nearby rainfall stations. Data was checked against the average annual rainfall (mm) and average evapotranspiration (mm/day) for the Ballarat area, in order to select the most appropriate 10 years of data. The Ballarat Aerodrome rainfall station was selected as the most appropriate geographic location, with the best available data. A template was created and is referred to as '89002_Ballarat Aerodrome_6min_1981_1990'.

The MUSIC model layout is shown in Figure 42. The assets have been sized to treat the loads being generated off the future developable area to best practice. Note, all wetland treatment systems are located within the base of the proposed retarding basins. To provide a multifunctional asset, which provides an efficient use of overall land take.

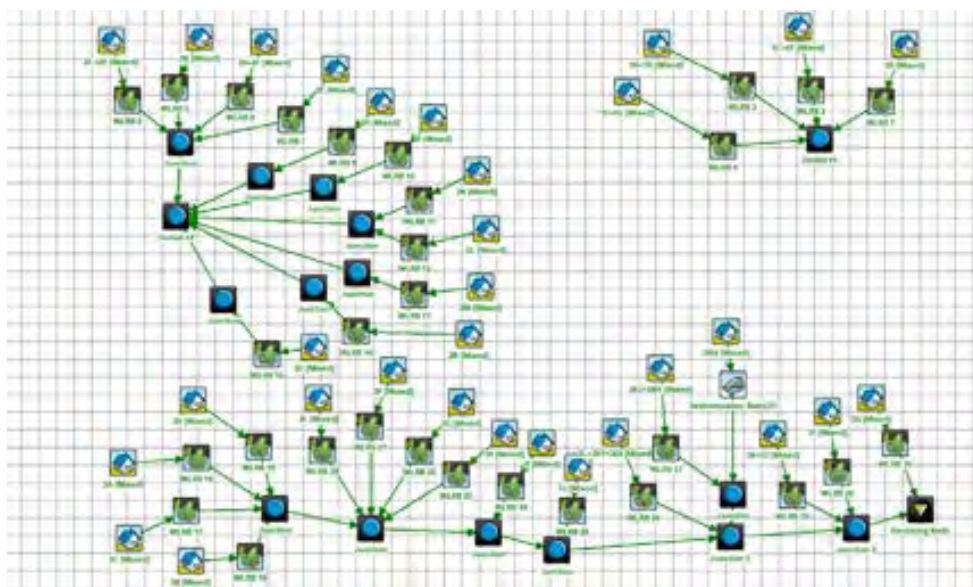


Figure 42. MUSIC model for the Ballarat growth areas

The configuration of the revised treatment train (wetlands and sediment basins) is provided in Table 15.

Table 15. Treatment asset parameters

	Catchment area (ha)	NWL area (m ²)	Average depth (m)	Inlet pond area (m ²)	Extended detention depth (m)	Residence time
WLRB 1	18.85	3,800	0.40	625	0.35	72 hrs
WLRB 2	80.00	14,500	0.40	2,500	0.35	72 hrs
WLRB 3	77.73	10,000	0.40	2,100	0.35	72 hrs
WLRB 4a	73.40	13,000	0.40	2,400	0.35	72 hrs
WLRB 4b	38.00	7,000	0.40	1,300	0.35	72hrs
WLRB 5	51.00	9,500	0.40	1,700	0.35	72 hrs
WLRB 6	128.00	23,000	0.40	3,000	0.35	72 hrs
WLRB 7	51.00	9,500	0.40	1,600	0.35	72 hrs
WLRB 8	77.50	14,500	0.40	1,800	0.35	72 hrs
WLRB 9	75.70	13,750	0.40	2,200	0.35	72 hrs
WLRB 10	40.57	7,500	0.40	1,300	0.35	72 hrs
WLRB 11	11.40	2,200	0.40	360	0.35	72 hrs
WLRB 12	28.20	5,500	0.40	750	0.35	72 hrs
WLRB 13	57.70	10,500	0.40	2,100	0.35	72 hrs
WLRB 14	26.60	5,000	0.40	950	0.35	72 hrs
WLRB 15	15.50	2,900	0.40	520	0.35	72 hrs
WLRB 16	44.00	8,250	0.40	1,400	0.35	72 hrs
WLRB 17	50.00	9,500	0.40	1,200	0.35	72 hrs
WLRB 18	81.90	14,500	0.40	2,800	0.35	72 hrs
WLRB 19	73.00	13,500	0.40	1,750	0.35	72 hrs
WLRB 20	29.00	5,500	0.40	900	0.35	72 hrs
WLRB 21	81.00	15,000	0.40	2,250	0.35	72 hrs
WLRB 22	37.00	7,000	0.40	1,200	0.35	72 hrs
WLRB 23	47.50	9,000	0.40	1,450	0.35	72 hrs
WLRB 24	67.65	12,250	0.40	1,900	0.35	72 hrs
WLRB 25	82.30	15,000	0.40	1,800	0.35	72 hrs
WLRB 26	121.36	21,500	0.40	3,200	0.35	72 hrs
WLRB 27	36.60	6,800	0.40	1,200	0.35	72 hrs
WLRB 28	62.00	11,500	0.40	2,100	0.35	72 hrs
WLRB 29	78.30	14,500	0.40	2,200	0.35	72 hrs
WLRB 30	19.00	3,700	0.40	750	0.35	72 hrs

An overall location plan of the wetland assets are shown in Figure 43. Further detail of individual wetland concepts are provided in Appendix C. In accordance with best practice principles, all wetlands are located off-line from the waterway corridors.

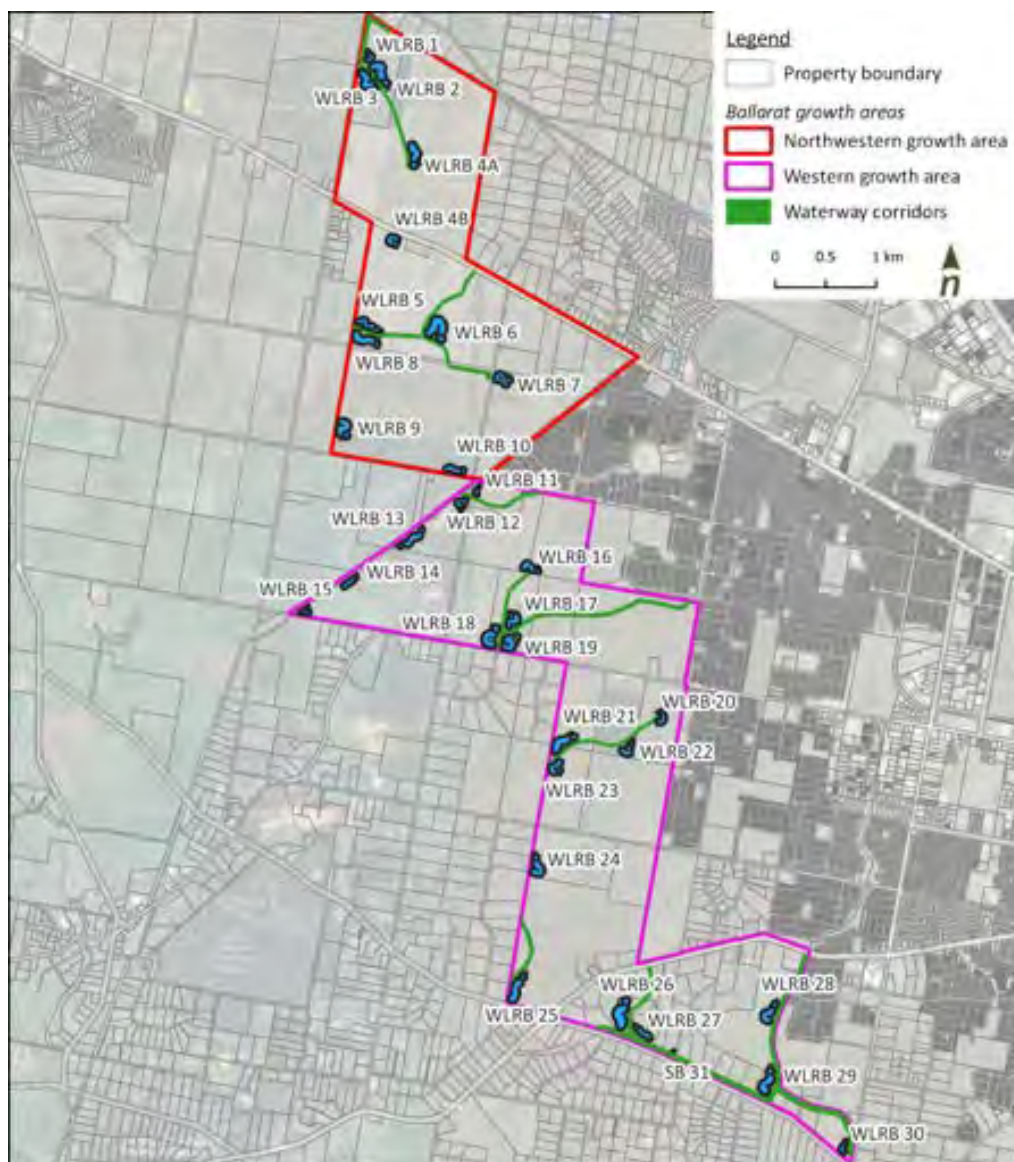


Figure 43. Treatment asset locations overview

The key requirement for the growth areas is to ensure stormwater runoff generated is treated to best practice, prior to leaving the growth area framework plan. The wetland performance has been determined at three key locations,

- The outfall to Burrumbeet Creek (major catchment 1)
- The outfall to Woody Yaloak River (major catchment 2)
- The outfall to Yarrowee River (major catchment 3).

Wetland performance is given in Table 16, Table 17 and Table 18, demonstrating the design meets the best achievable target relative to BPEM targets.

Table 16. Overall treatment performance of the system in Major Catchment 1 (Burrumbeet Creek)

Parameter	Total sources	Residual load	Percent removed (%)
Total Suspended Solids (kg/yr)	212,000	41,100	80.6%
Total Phosphorus (kg/yr)	435	136	68.7%
Total Nitrogen (kg/yr)	3,070	1,650	46.2%
Gross Pollutants (kg/yr)	44,500	0	100%

Table 17. Overall treatment performance of the system in Major Catchment 2 (Woody Yaloak River)

Parameter	Total sources	Residual load	Percent removed (%)
Total Suspended Solids (kg/yr)	422,000	85,100	79.8%
Total Phosphorus (kg/yr)	866	280	67.7%
Total Nitrogen (kg/yr)	6,120	3,320	45.7%
Gross Pollutants (kg/yr)	88,900	0	100%

Table 18. Overall treatment performance of the system in Major Catchment 3 (Yarrowee River)

Parameter	Total sources	Residual load	Percent removed (%)
Total Suspended Solids (kg/yr)	691,000	140,000	79.7%
Total Phosphorus (kg/yr)	1,420	462	67.5%
Total Nitrogen (kg/yr)	10,000	5,460	45.5%
Gross Pollutants (kg/yr)	145,000	0	100%

9.1 Sediment Basin

The sediment basin was sized using Melbourne Water's criteria and the design procedure as detailed in the *WSUD Engineering Procedures: Stormwater (2005)*. The procedure outlined in *WSUD Engineering Procedures (2005)* has been followed and is based on the typical sediment loading rate of 1.6 m³/ha/yr for a developed catchment, which is the appropriate loading rate since an upstream GPT is proposed. These areas assume a depth of 500mm and a sediment cleanout frequency of 5 years.

Sediment basin sizing calculations have been provided in Appendix B.

9.2 Velocities

Minimum width calculations have been undertaken for each proposed wetland, in order to determine the minimum widths required for each asset to meet velocity threshold requirements.

In lieu of local wetland design guidelines, Melbourne Water's constructed wetland design manual has been referred to for velocity threshold requirements. Specifically, the following criteria:

- Velocities must be < 0.05 m/s for events up to and including the 4EY in the macrophyte zone.
- Velocity must be < 0.50 m/s for all events up to the 1% AEP.
- Wetland macrophyte areas have a desirable length to width ratio of 4:1.

The velocity through each treatment asset is considered here. A flow depth of 0.35m, which is the extended detention depth, has been assumed for 4EY, 20% AEP and 1% AEP flows. Note that the 1% AEP flow is not diverted into the treatment asset.

10 Concept design layout

A key consideration for the development of the growth areas is providing appropriate outfall through downstream properties. Two options are generally considered when designing outfalls for a growth area. These are:

- Providing grade out works through the downstream landholdings, to 'daylight' the invert levels of all drainage infrastructure, where all drainage works are designed in cut, and
- Tying the invert level at the downstream boundary of the growth area in with the existing surface, where drainage works outfalling outside of the growth area boundary required embankment structures.

For the purposes of the concept design plan, Alluvium has assumed downstream grade out works will be required where appropriate. A conceptual layout of the wetland / retarding basins within the proposed drainage reserves are shown in Appendix C below.

The concept designs for the options investigated are presented within this section. Each option includes:

- The macrophyte treatment area (NWL) as established in MUSIC
- The storage requirements as established in the hydrologic modelling (RORB)
- A Normal Water Level (NWL) identified by looking at the topography of the site, as well as the inclusion of 0.35m EDD and any freeboard requirements
- An approximate overall footprint based on the selected NWL and battering up to existing surface at a 1 in 6 grade
- Indicative inlet pipe, transfer pipe (sediment basin to wetland), and outlet pipe locations
- A 4m path allowance around the site (alignments to be defined in later design stages)
- Allowance for sediment dry out area, as defined by the sediment basin calculations.

10.1 Alternative outfall arrangement

Alternatively, the growth area can provide outfalls which tie in the with existing surface levels at the downstream boundaries of the growth area. This will ensure that all future development works proposed do not rely on downstream works within landholdings located outside of the growth area. As downstream infrastructure will require embankments and filling of developable area, a significant increase in cost associated with fill material requires, and risk associated with embankment failure is likely, in particular:

- Embankment structures will be required on RBWL systems, to ensure the outfall is located at existing surface level to provide a free draining outfall,
- Extensive filling of future development areas will be required, to ensure incoming pipe, overland flow and waterway drainage infrastructure can outfall to the proposed RBWLs,
- Due to embankments being required for RBWL assets, an increased level of risk associated the failure of these system will be present,
- Consequence and risk assessments of embankments will be required, due to their impact of failure on the existing downstream landowners.

11 Conclusion

This SWMS has proposed management strategies for stormwater quantity, ultimate waterway corridors and stormwater quality. Through meeting these objectives, this SWMS acts as a critical component of the growth area plan and ensures storm water is managed in accordance with Council's requirements.

This SWMS informs the site specific requirements relating to drainage, required as part of the future Ballarat North Western and Western growth area Framework Plans.

Appendix A
Flood mapping

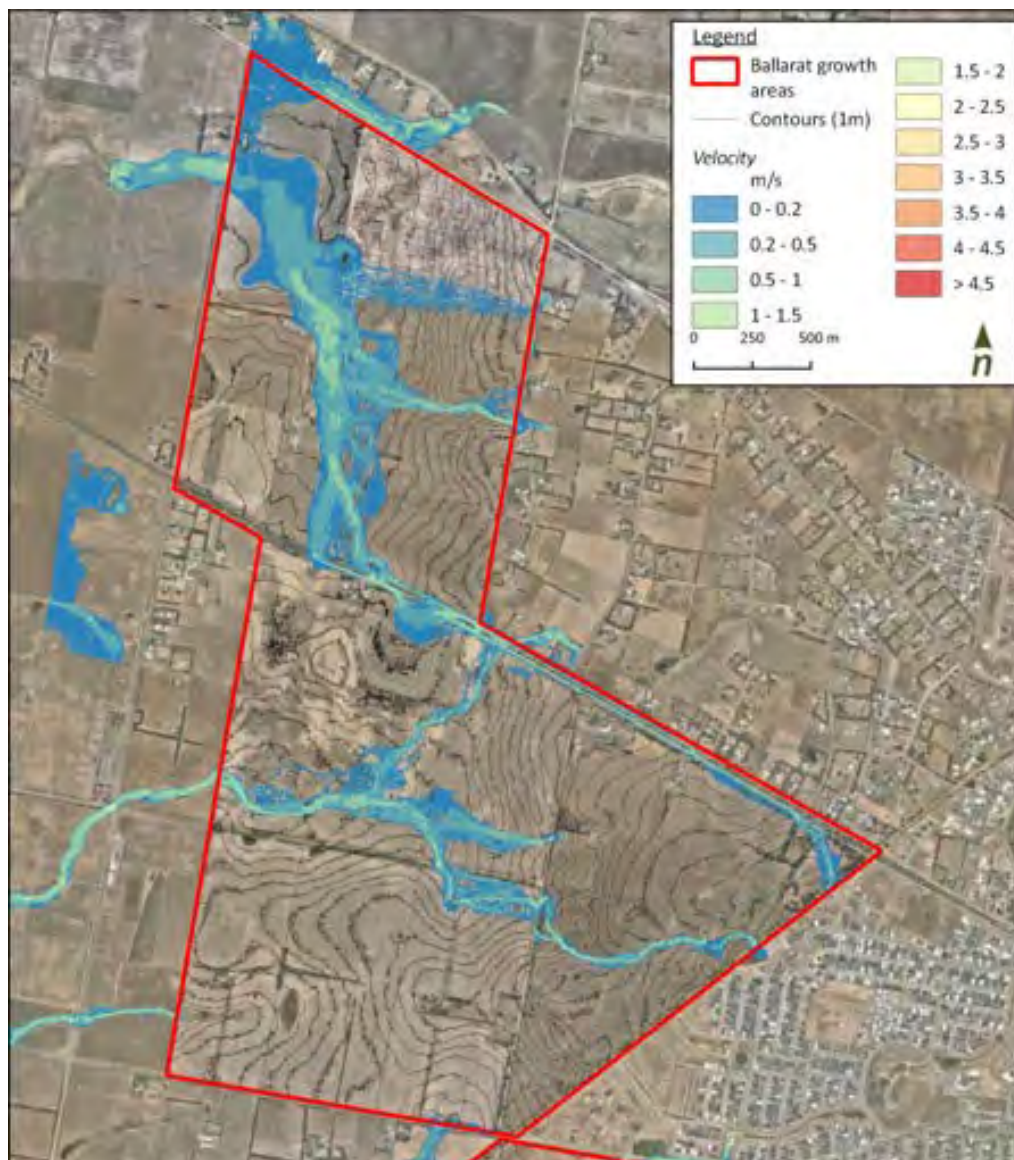


Figure 44. Existing conditions 1% AEP velocity – North Western growth area

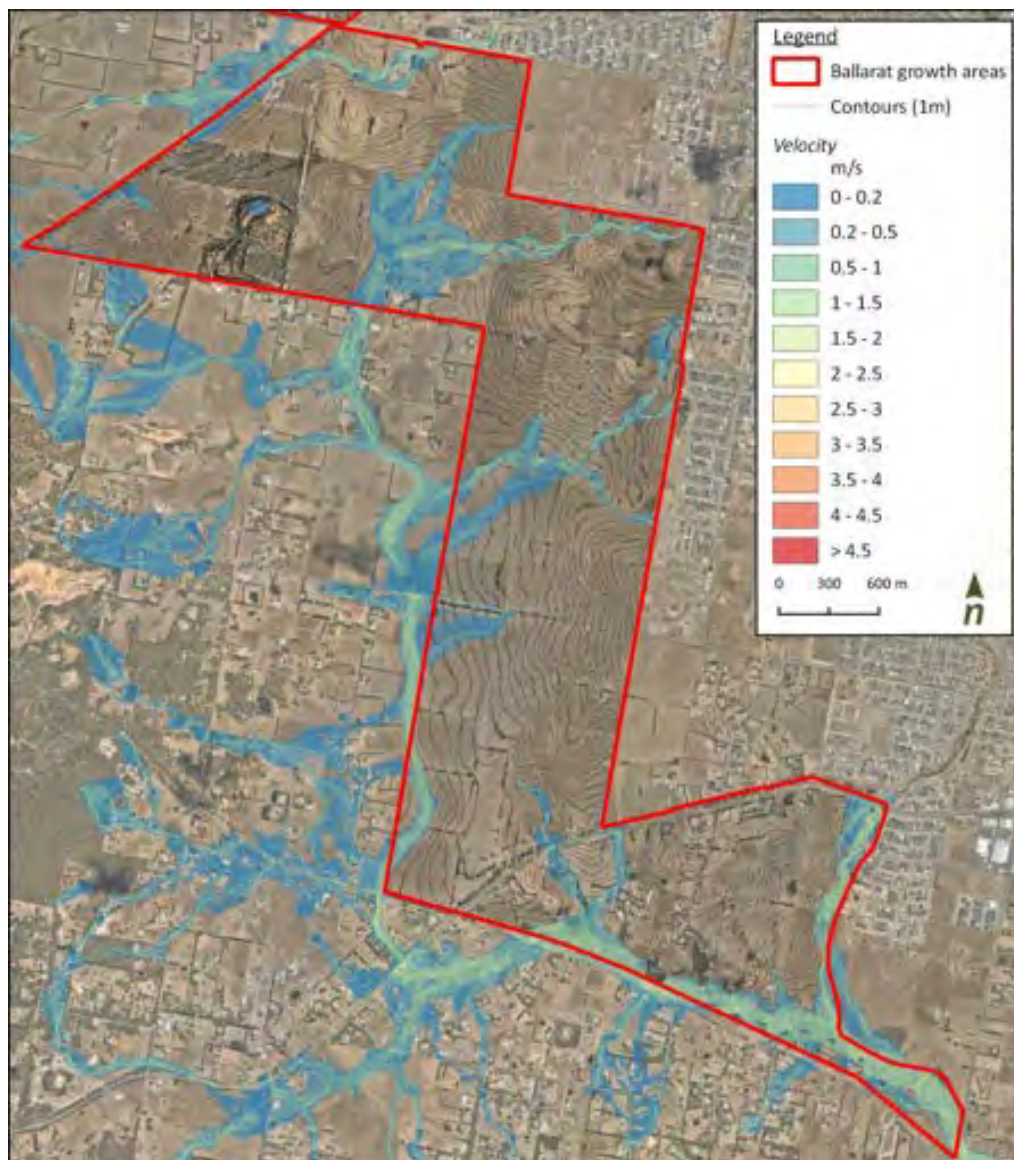


Figure 45. Existing conditions 1% AEP flood extents – Western growth area

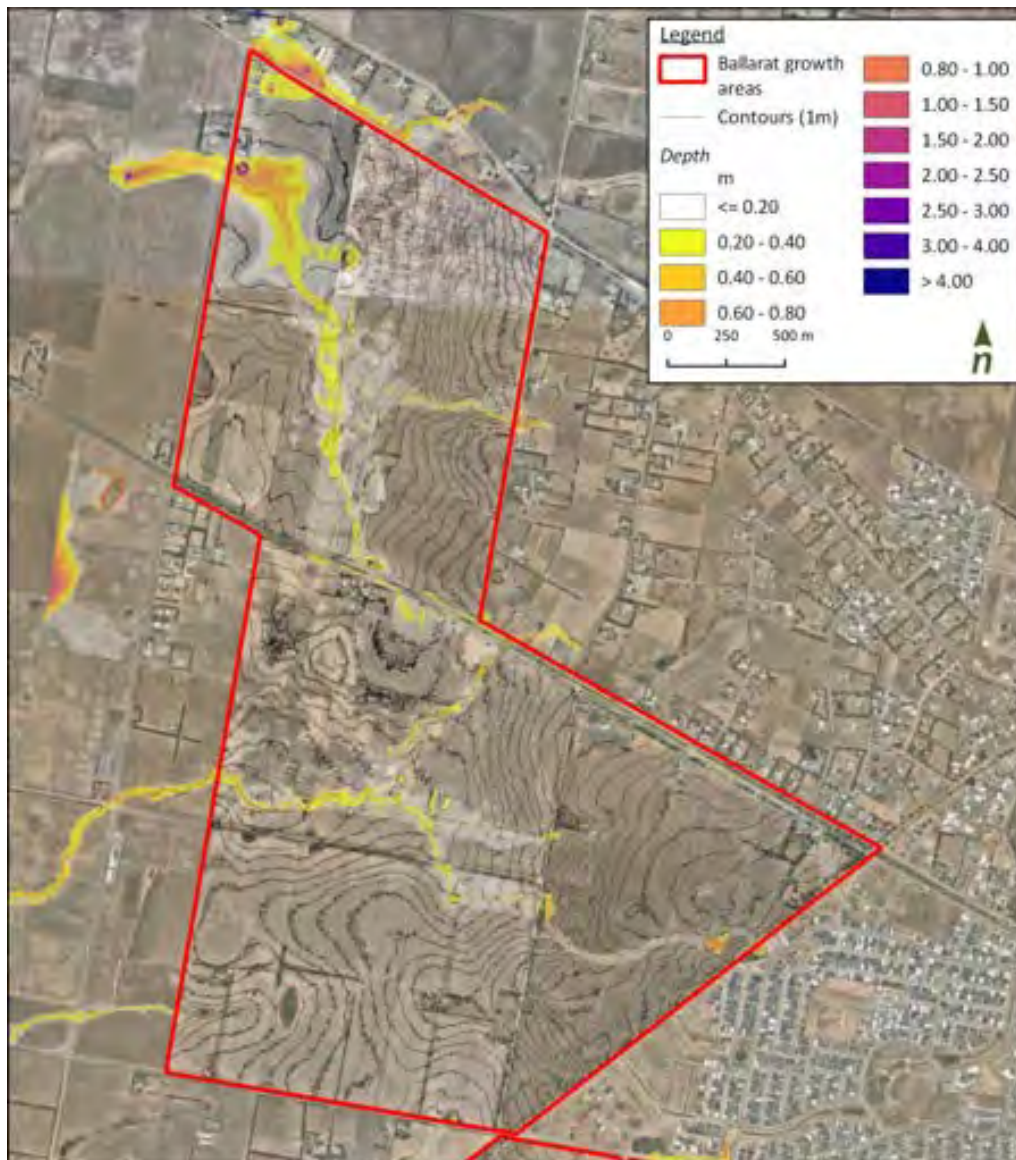


Figure 46. Existing conditions 1% AEP flood depth – North Western growth area

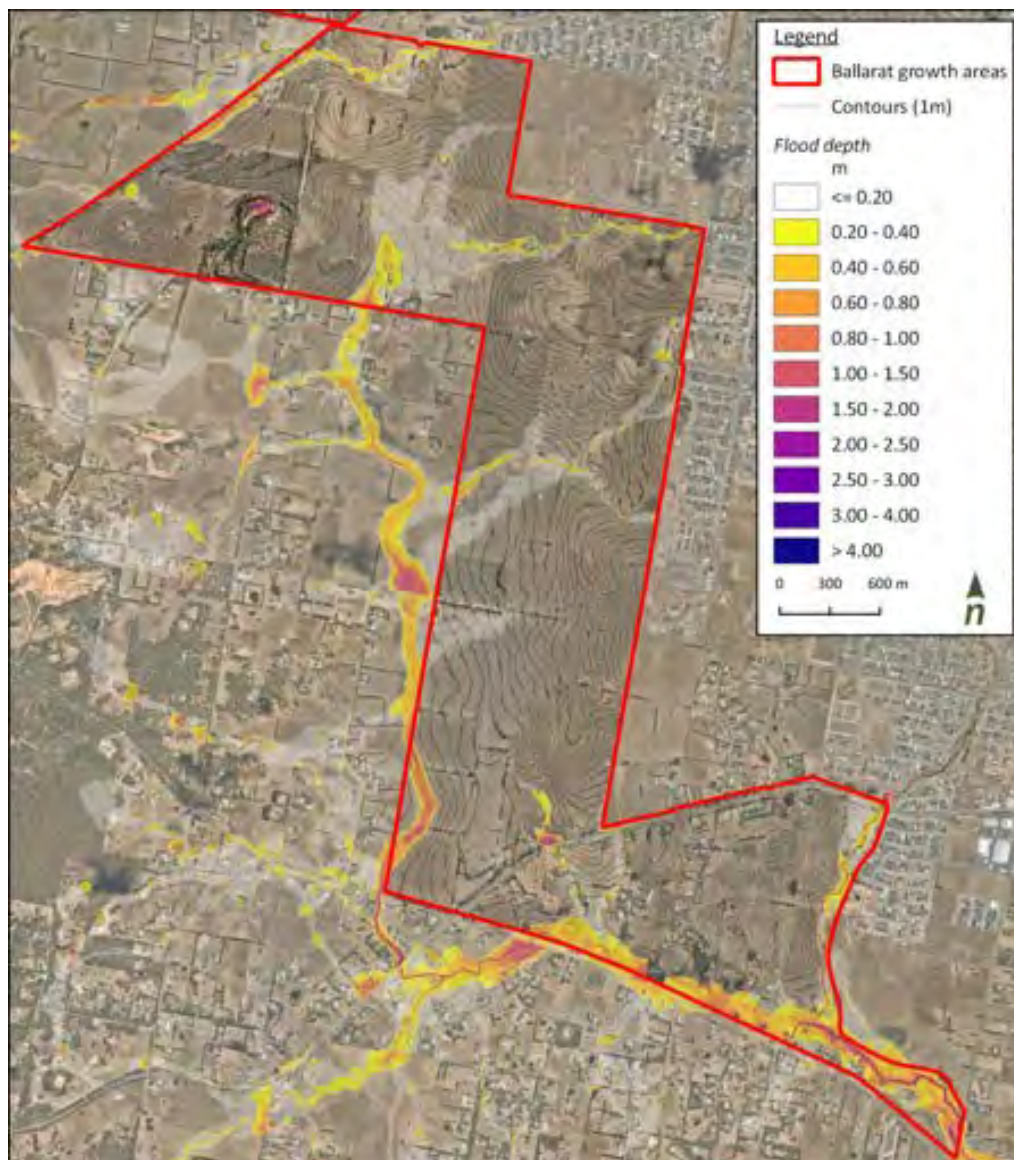


Figure 47. Existing conditions 1% AEP flood depth – Western growth area



Figure 48. Existing conditions 0.5% AEP flood extents – North Western growth area



Figure 49. Existing conditions 0.5% AEP flood extents – Western growth area



Figure 50. Existing conditions 2% AEP flood extents – North Western growth area



Figure 51. Existing conditions 2% AEP flood extents –Western growth area



Figure 52. Existing conditions 5% AEP flood extents – North Western growth area



Figure 53. Existing conditions 5% AEP flood extents – Western growth area



Figure 54. Existing conditions 10% AEP flood extents – North Western growth area



Figure 55. Existing conditions 10% AEP flood extents – Western growth area



Figure 56. Existing conditions 20% AEP flood extents – North Western growth area



Figure 57. Existing conditions 20% AEP flood extents – Western growth area

Appendix B
Sediment Basin Fair and Geyer Calculations

Table 19. WLRB 1: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	18.85
	Area of Basin (m ²)	625
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	0.42
	Capture Efficiency	95.4%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	144
	Available sediment storage volume	455
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	288

Table 20. WLRB 2: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	80.00
	Area of Basin (m ²)	2,500
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.70
	Capture Efficiency	95.4%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	610
	Available sediment storage volume	2,160
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	1,221

Table 21. WLRB 3: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	77.73
	Area of Basin (m ²)	2,100
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.5
	Capture Efficiency	95.1%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	592
	Available sediment storage volume	1,793
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	1,183

Table 22. WLRB 4A: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	73.40
	Area of Basin (m ²)	2,400
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.67
	Capture Efficiency	95.3%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	559
	Available sediment storage volume	2070
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	1,119

Table 23. WLRB 4B: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	38.00
	Area of Basin (m ²)	1,300
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	0.94
	Capture Efficiency	95.1%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	289
	Available sediment storage volume	1,058
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	578

Table 24. WLRB 5: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	51.00
	Area of Basin (m ²)	1,700
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.22
	Capture Efficiency	95.1%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	388
	Available sediment storage volume	1,422
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	776

Table 25. WLRB 6: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	128
	Area of Basin (m ²)	3000
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	2.18
	Capture Efficiency	95.0%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	973
	Available sediment storage volume	2635
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	1,946

Table 26. WLRB 7: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	51
	Area of Basin (m ²)	1600
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.12
	Capture Efficiency	95.2%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	389
	Available sediment storage volume	1329
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	777

Table 27. WLRB 8: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	77.50
	Area of Basin (m ²)	1800
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.26
	Capture Efficiency	95.2%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	590
	Available sediment storage volume	1515
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	1,181

Table 28. WLRB 9: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	75.7
	Area of Basin (m ²)	2200
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.59
	Capture Efficiency	95.1%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	576
	Available sediment storage volume	1883
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	1,151

Table 29. WLRB 10: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	40.57
	Area of Basin (m ²)	1300
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	0.93
	Capture Efficiency	95.1%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	309
	Available sediment storage volume	1053
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	617

Table 30. WLRB 11: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	11.40
	Area of Basin (m ²)	360
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	0.26
	Capture Efficiency	95.1%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	87
	Available sediment storage volume	229
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	173

Table 31. WLRB 12: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	28.2
	Area of Basin (m ²)	750
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	0.54
	Capture Efficiency	95.1%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	215
	Available sediment storage volume	567
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	429

Table 32. WLRB 13: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	57.70
	Area of Basin (m ²)	2100
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.50
	Capture Efficiency	95.1%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	439
	Available sediment storage volume	1793
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	878

Table 33. WLRB 14: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	26.60
	Area of Basin (m ²)	950
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	0.70
	Capture Efficiency	95.0%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	202
	Available sediment storage volume	745
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	404

Table 34. WLRB 15: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	15.50
	Area of Basin (m ²)	520
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	0.37
	Capture Efficiency	95.1%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	118
	Available sediment storage volume	366
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	236

Table 35. WLRB 16: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	44.00
	Area of Basin (m ²)	1400
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	0.99
	Capture Efficiency	95.2%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	335
	Available sediment storage volume	1149
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	670

Table 36. WLRB 17: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	50.00
	Area of Basin (m ²)	
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	0.86
	Capture Efficiency	95.1%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	380
	Available sediment storage volume	967
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	761

Table 37. WLRB 18: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	81.90
	Area of Basin (m ²)	2800
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	2.03
	Capture Efficiency	95.0%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	623
	Available sediment storage volume	2445
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	1245

Table 38. WLRB 19: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	73.00
	Area of Basin (m ²)	1750
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.24
	Capture Efficiency	95.2%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	556
	Available sediment storage volume	1473
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	1112

Table 39. WLRB 20: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	29.00
	Area of Basin (m ²)	900
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	0.65
	Capture Efficiency	95.1%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	221
	Available sediment storage volume	696
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	441

Table 40. WLRB 21: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	81.00
	Area of Basin (m ²)	2250
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.66
	Capture Efficiency	95.0%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	615
	Available sediment storage volume	1931
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	1231

Table 41. WLRB 22: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	37.00
	Area of Basin (m ²)	1200
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	0.87
	Capture Efficiency	95.0%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	281
	Available sediment storage volume	967
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	563

Table 42. WLRB 23: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	47.5
	Area of Basin (m ²)	1450
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.07
	Capture Efficiency	95.0%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	361
	Available sediment storage volume	1195
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	722

Table 43. WLRB 24: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	67.65
	Area of Basin (m ²)	1900
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.39
	Capture Efficiency	95.0%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	514
	Available sediment storage volume	1607
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	1028

Table 44. WLRB 25: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	82.30
	Area of Basin (m ²)	1800
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.30
	Capture Efficiency	95.1%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	626
	Available sediment storage volume	1515
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	1252

Table 45. WLRB 26: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	121.36
	Area of Basin (m ²)	3200
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	2.35
	Capture Efficiency	95.0%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	922
	Available sediment storage volume	2820
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	1844

Table 46. WLRB 27: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	36.60
	Area of Basin (m ²)	1200
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	0.87
	Capture Efficiency	95.0%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	278
	Available sediment storage volume	967
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	557

Table 47. WLRB 28: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	62.00
	Area of Basin (m ²)	2100
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.50
	Capture Efficiency	95.1%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	472
	Available sediment storage volume	1793
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	944

Table 48. WLRB 29: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	78.30
	Area of Basin (m ²)	2200
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	1.61
	Capture Efficiency	95.1%
	Check (>95%)	OK
Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)	1.6
	Desired clean-out frequency, Fr	5
	Storage volume required, St	595
	Available sediment storage volume	1883
	Check (Available storage > required storage)	OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	1190

Table 49. WLRB 30: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	19.00
	Area of Basin (m ²)	750
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	0.53
	Capture Efficiency	95.2%
	Check (>95%)	OK
	Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)
Desired clean-out frequency, Fr		5
Storage volume required, St		145
Available sediment storage volume		567
Check (Available storage > required storage)		OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	289

Table 50. Sediment Basin SB31: Sediment Pond design parameters and checks

	Parameter	Proposed design
Conditions	Contributing Catchment (ha)	6.53
	Area of Basin (m ²)	250
Capture Efficiency	Settling Velocity of Target Sediment (mm/s) [Particle size 125 µm]	11
	Hydraulic Efficiency (λ)	0.11
	Permanent Pool Depth, dp (m)	0.50
	Extended detention depth, de	0.35
	Number of CTSR's, n	1.12
	Depth below permanent pool that is sufficient to retain sediment, d* (m)	0.50
	Design Discharge (m ³ /s) [4EY]	0.18
	Capture Efficiency	95.1%
	Check (>95%)	OK
	Sediment Storage	Sediment Loading rate, Lo (m ³ /ha/yr)
Desired clean-out frequency, Fr		5
Storage volume required, St		50
Available sediment storage volume		142
Check (Available storage > required storage)		OK
Sediment dewatering	Depth for dewatering area (m)	0.50
	Area required for dewatering (m ²)	99

Appendix C
Wetlands/Retarding Basins Conceptual Layout

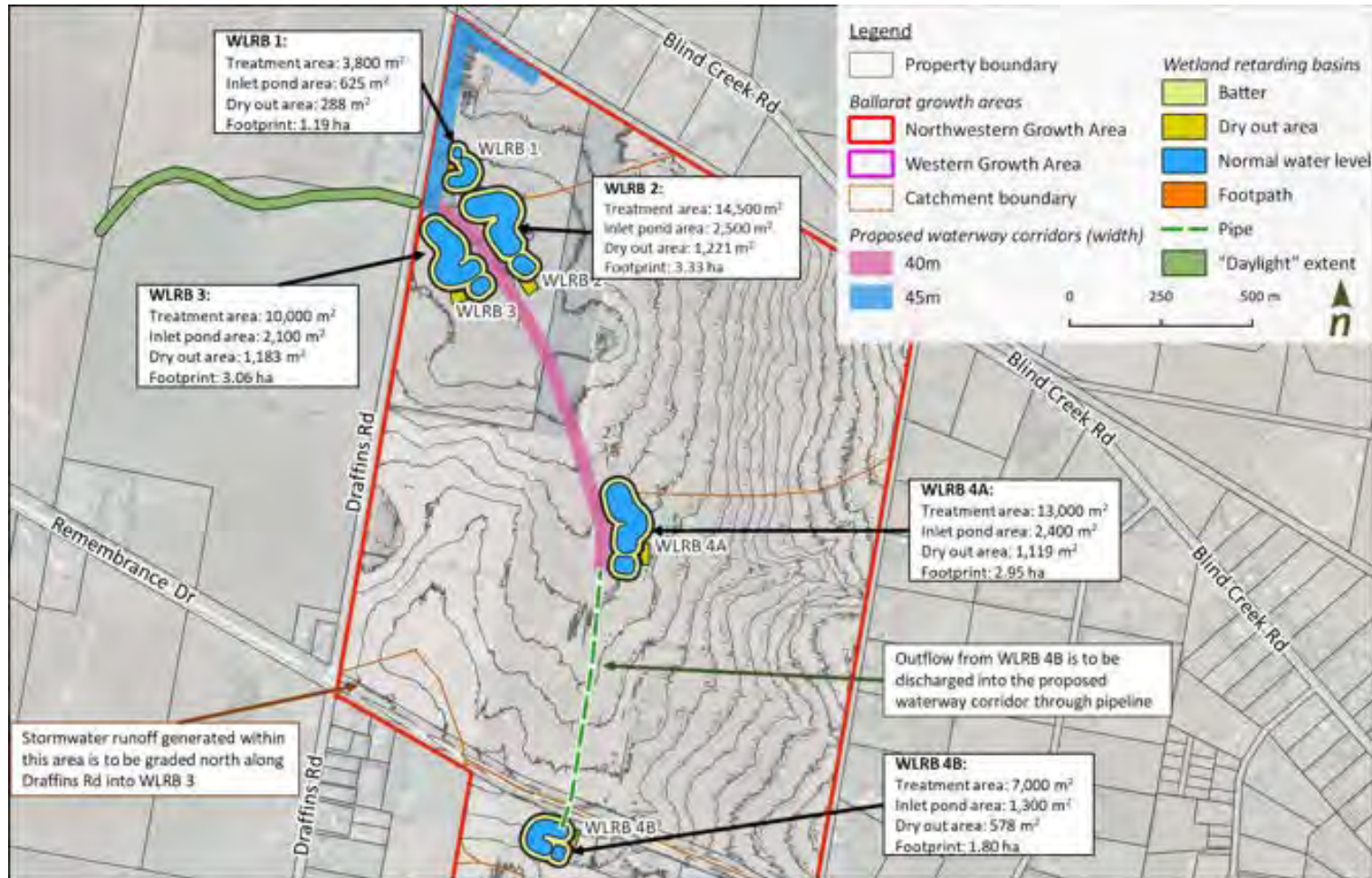


Figure 58. Asset details of WLRB 1 to WLRB 4B

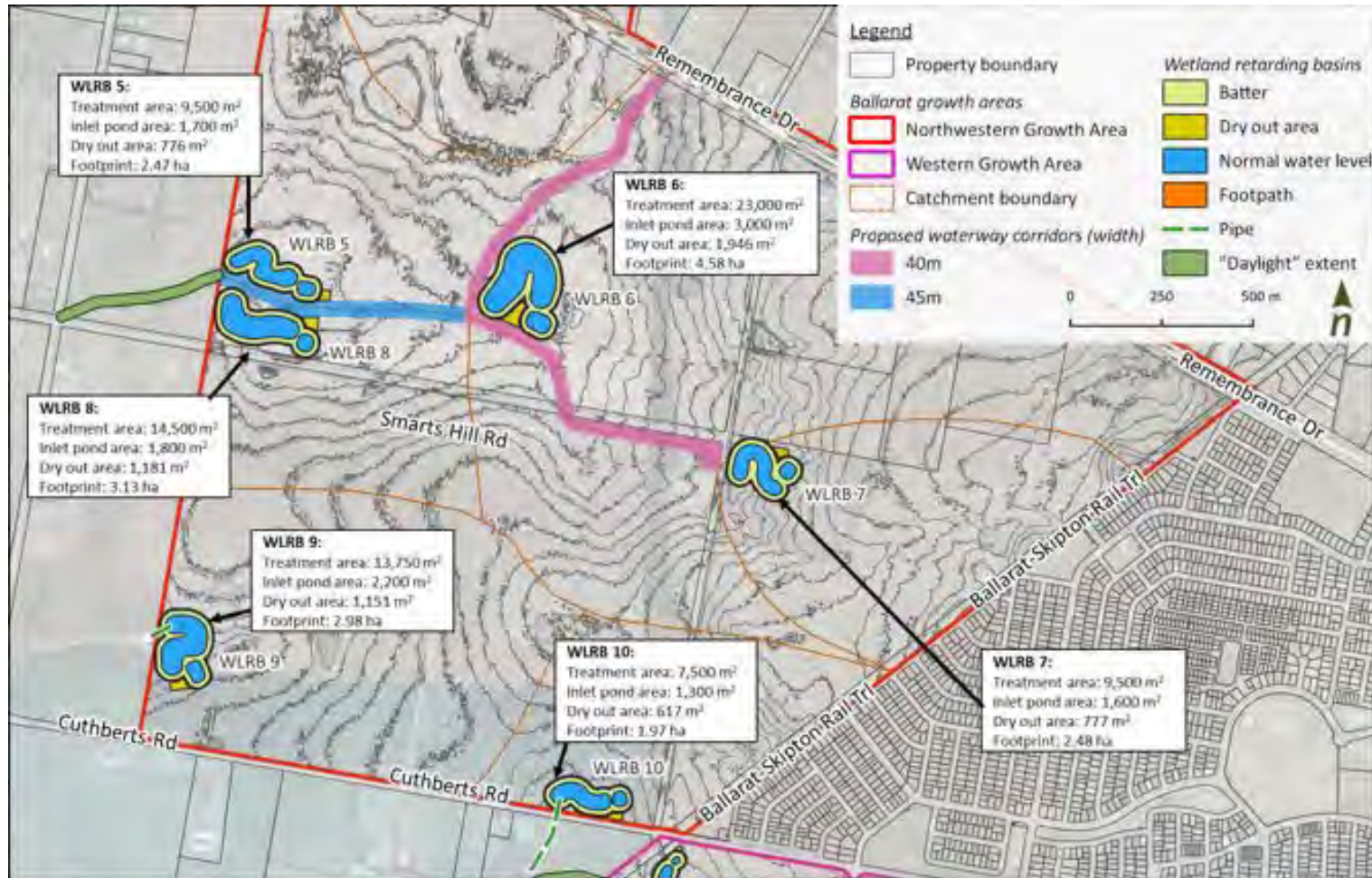


Figure 59. Asset details of WLRB 5 to WLRB 10

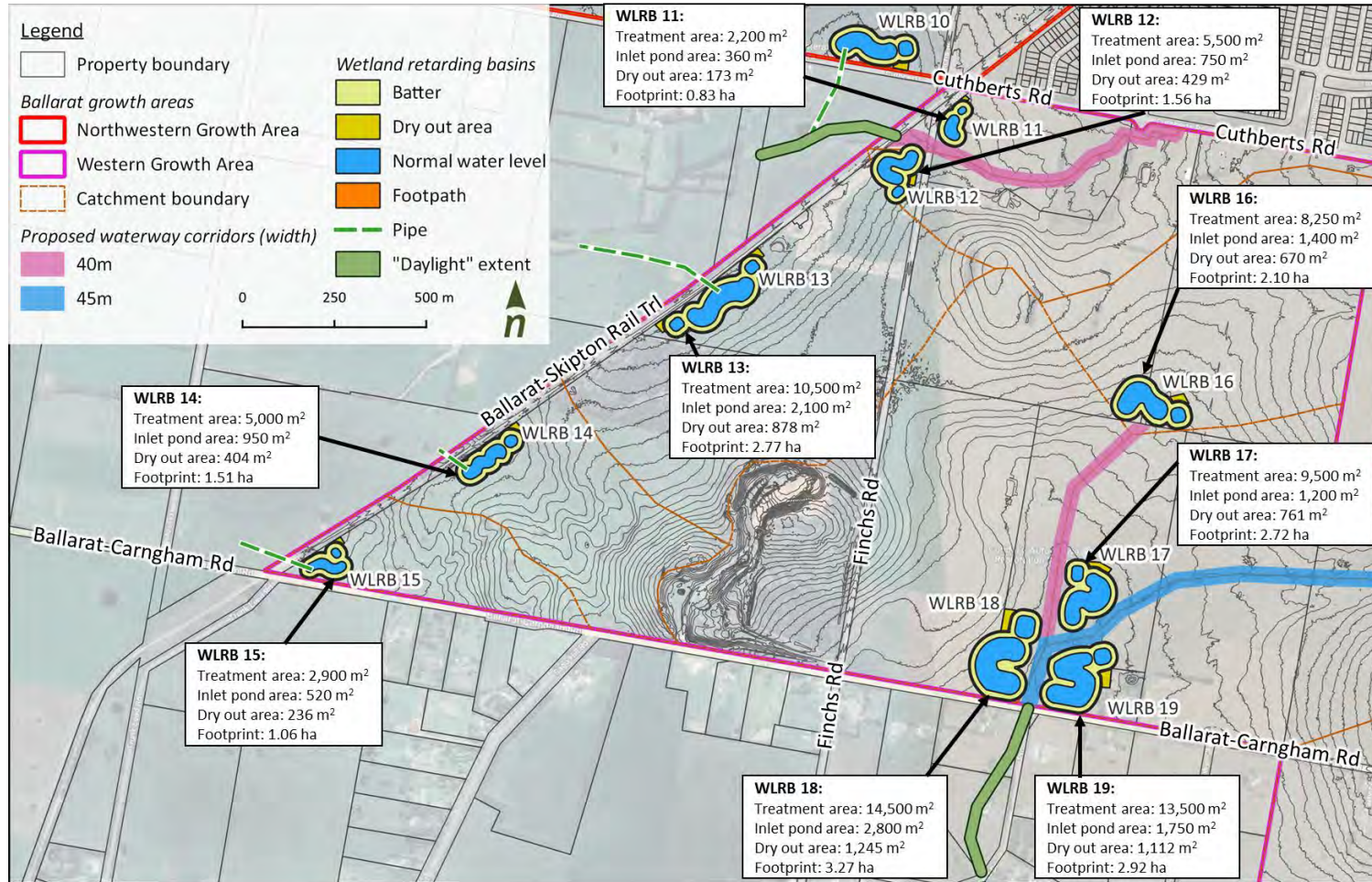


Figure 60. Asset details of WLRB 11 to WLRB 19

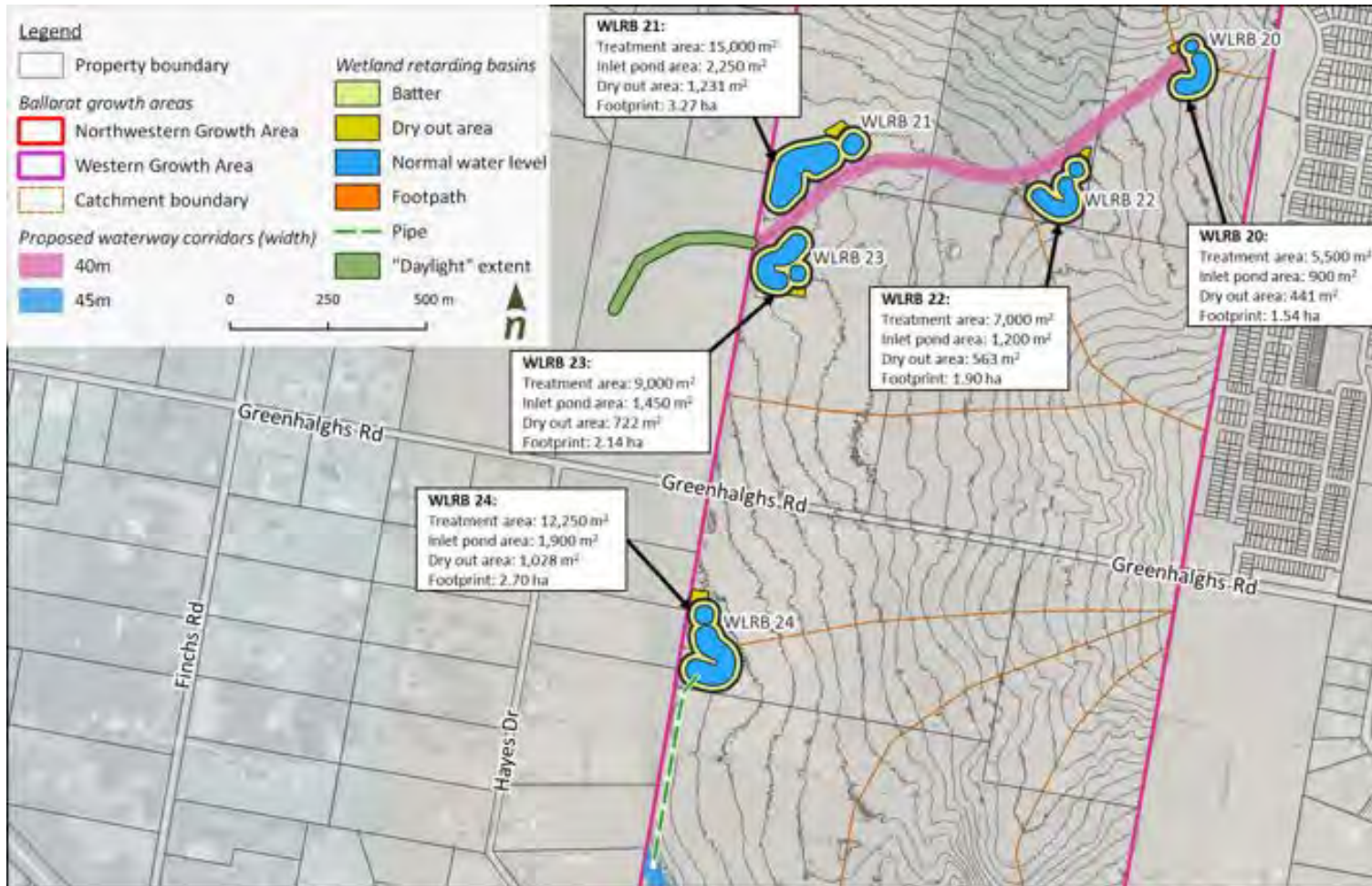


Figure 61. Asset details of WLRB 20 to WLRB 24

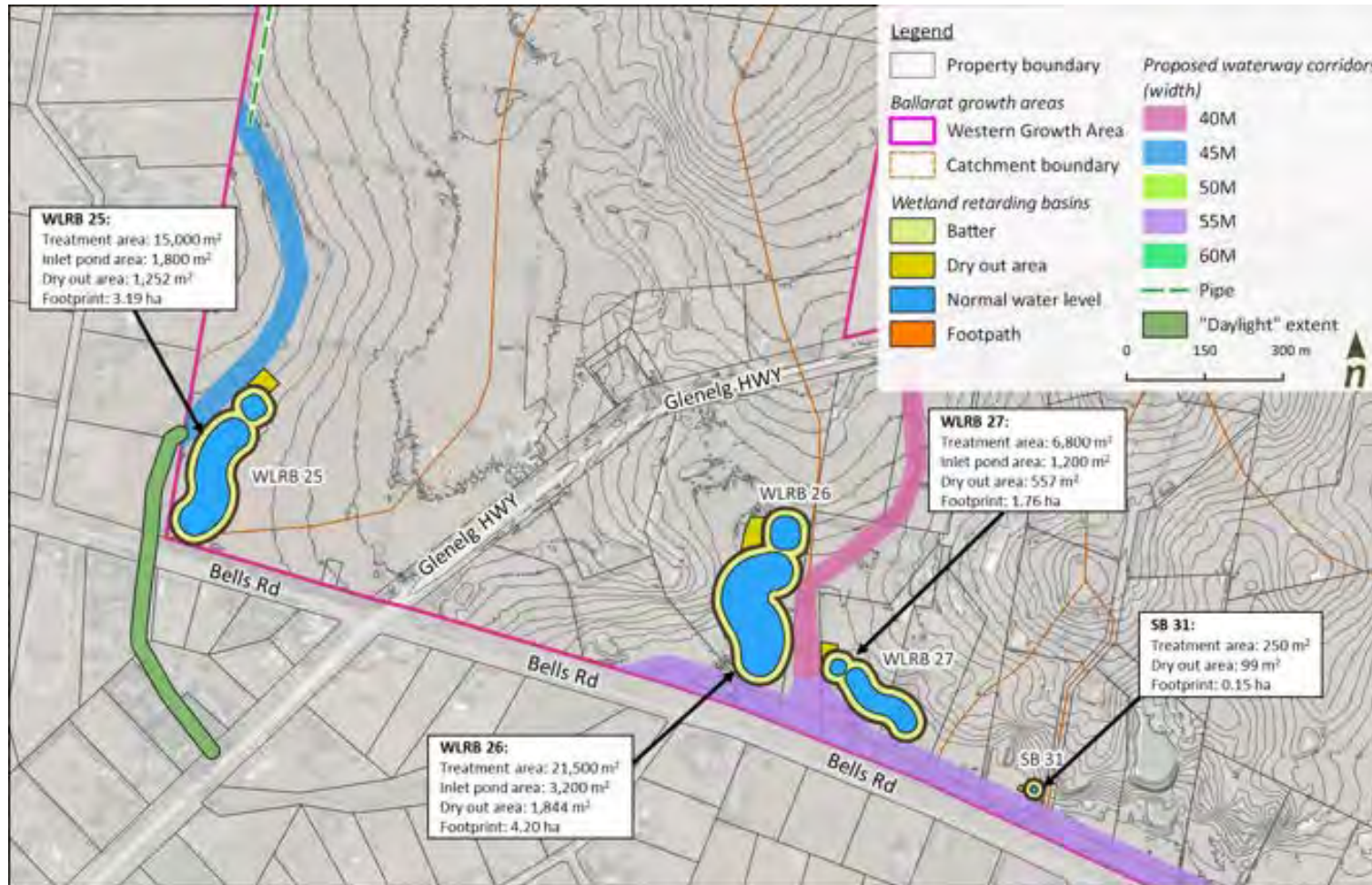


Figure 62. Asset details of WLRB 25 to WLRB 27 (including SB 31)

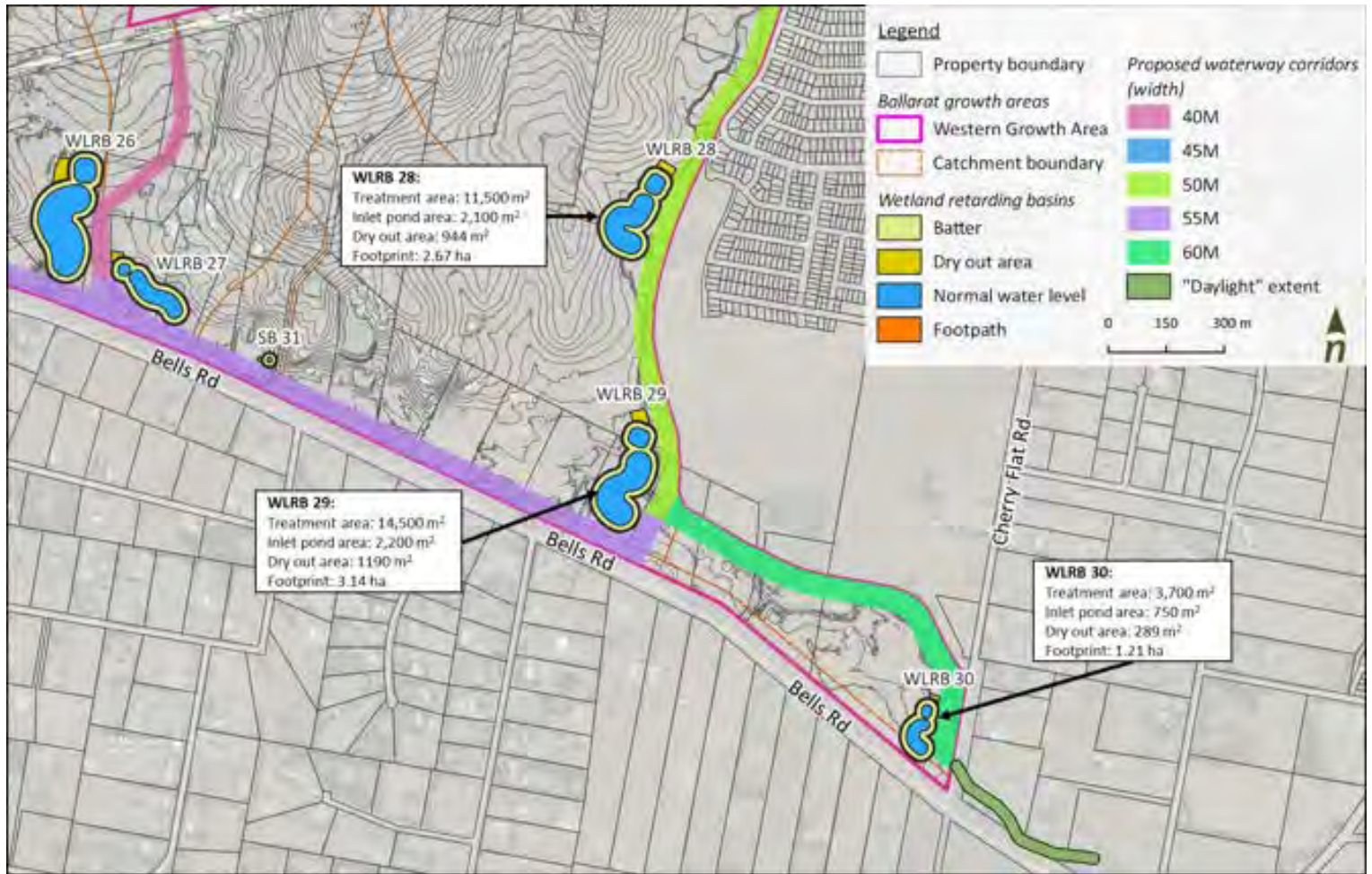


Figure 63. Asset details of WLRB 28 to WLRB 30

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13 APPENDIX B – INTEGRATED WATER MANAGEMENT





Alluvium recognises and acknowledges the unique relationship and deep connection to Country shared by Aboriginal and Torres Strait Islander people, as First Peoples and Traditional Owners of Australia. We pay our respects to their Cultures, Country and Elders past and present.

Artwork by Melissa Barton. This piece was commissioned by Alluvium and tells our story of caring for Country, through different forms of waterbodies, from creeklines to coastlines. The artwork depicts people linked by journey lines, sharing stories, understanding and learning to care for Country and the waterways within.

This report has been prepared by Alluvium Consulting Australia Pty Ltd for **Taylors** under the contract titled **'Ballarat West and North West Growth Areas, Integrated Water Management Strategy'**.

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Cover image: abstract river image, Shutterstock



Contents

- 1 Introduction 1**

 - 1.1 *IWM and the Water Sensitive Urban Design* 2
 - 1.2 *Context* 3
 - Central Highlands Water – Urban Water Strategy (2022) 3
 - Central Highlands Strategic Directions Statement (2018 and 2022)..... 3
 - Central and Gippsland Region Sustainable Water Strategy (2022) 4
 - The Environment Protection Act 2017..... 4
 - EPA 1739.1 Urban Stormwater Management Guidance (2021)..... 4

- 2 Project context..... 5**

 - 2.1 *Water cycle assets* 5
 - 2.2 *Water security* 7
 - 2.3 *Rainfall* 8
 - 2.4 *Climate Change*..... 8
 - 2.5 *Catchment, Waterways and Wetlands*..... 9
 - Catchments 9
 - Waterways 10
 - Constructed assets 11
 - 2.6 *Change in Land Use* 12

- 3 Water and Pollutant Balance 13**

 - 3.1 *Household Water Consumption*..... 13
 - 3.2 *Wastewater Generation*..... 14
 - 3.3 *Open Space Irrigation*..... 14
 - 3.4 *Stormwater volumes, pollutant loads and reduction targets* 15
 - Stormwater volume reduction targets..... 16
 - 3.5 *Water Balance Summary* 17

- 4 Issues and Opportunities 19**

 - 4.1 *Issues*..... 19
 - Available space 19
 - Operation and maintenance..... 19
 - Community values 19
 - Feasibility 20
 - Future proofing 20
 - 4.2 *Opportunities*..... 20
 - 4.3 *IWM Plan* 22

- 5 Preliminary water balance 26**
- 6 Discussion 28**

 - Masterplanning with water, greening and amenity in mind 28
 - Futureproofing 28
 - Engagement and investigation 28

7	References	30
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Figures

Figure 1	<i>Ballarat northwest and west growth areas context map</i>	1
Figure 2.	<i>Urban Water Transitions Framework (Brown, 2009)</i>	2
Figure 3	<i>Greater Central Highlands Strategic Directions Statement outcomes (Source: IWM Forums)</i>	3
Figure 4	<i>Greater Water's additional water source options</i>	4
Figure 5	<i>Ballarat's water supply network, showing the connections to reservoirs and townships including Creswick and Ballan (Source: Central Highlands Water)</i>	6
Figure 6	<i>Ballarat's projected water supply and demand 2022 – 2072 under various climate scenarios (Source: Central Highlands Water)</i>	7
Figure 7	<i>Monthly rainfall pattern of Ballarat Aerodrome station (Bureau of Meteorology)</i>	8
Figure 8	<i>CMA Intersection of developing areas and catchments</i>	9
Figure 9	<i>Designated waterways within the Corangamite CMA region with accompanying photos illustrating typical waterway condition of the Ballarat growth areas</i>	10
Figure 10	<i>Constructed wetlands and waterways as proposed within the Surface Water Management Plan (Alluvium, 2022)</i>	11
Figure 11	<i>Quantitative performance objectives for urban stormwater (Source: EPA Urban Stormwater Management Guidance (2021)</i>	16
Figure 12	<i>Comparison of excess stormwater, irrigation need and stormwater reduction target guidance</i>	26
Figure 13	<i>Constructed wetlands and waterways as proposed within the Surface Water Management Plan (Alluvium, 2022)</i>	27

Tables

Table 1.	<i>Ballarat water efficiency targets (Source: Central Highlands Water, 2018)</i>	13
Table 2.	<i>Potable water demand estimate</i>	13
Table 3.	<i>Assumed irrigation rates</i>	14
Table 4.	<i>Irrigation demand by catchment</i>	14
Table 5.	<i>Pre and post development stormwater volume summary</i>	15
Table 6.	<i>Pre and post development stormwater pollutant summary</i>	15
Table 7.	<i>Stormwater harvesting and infiltration targets</i>	17
Table 8.	<i>Water balance summary (both growth areas)</i>	17
Table 9.	<i>Water balance summary by Growth Area</i>	18
Table 10.	<i>IWM Opportunities in the Ballarat Growth Areas</i>	21
Table 11.	<i>IWM Plan Summary</i>	22

1 Introduction

The City of Ballarat is experiencing rapid growth with predictions that population will grow from approximately 113,000 in 2021 to over 142,000 by 2036 (<https://forecast.id.com.au/ballarat>, Accessed October 2023). On February 23, 2022, the City of Ballarat responded to the need for additional housing by identifying additional land to accommodate future growth within Western and North-Western growth areas. The growth areas were expected to accommodate over 20,000 new houses. While these growth areas will provide housing to accommodate Ballarat’s growing population, greenfield developments represent the best and most cost-effective opportunity for implementing Integrated Water Management (IWM) initiatives.

The Ballarat North-Western and Western growth areas (Figure 1) cover a total area of 1,769 ha with an estimated Net Developable Area (NDA) of 1,396 Ha. 96% will be residential with the remainder non-residential.

The **North-Western growth area** has an NDA of 500 Ha and an estimated residential yield of between 7,200 (@ 15 dwellings / Ha) and 9,600 (@ 20 dwellings / Ha). It is located to the west of Ballarat in the areas of Lucas and Cardigan. It is bounded by Draffins Road to the west, the railway line along with Blind Creek Road to the north, Cuthberts Road to the south, and Ballarat-Skipton Rail Trail to the east.

The **Western growth area** has an NDA of 896 Ha and an estimated residential yield of between 12,902 (@ 15 dwellings / Ha) and 17,203 (@ 20 dwellings / Ha). This growth area covers parts of Bunkers Hill, Lucas, and Smythes Creek. It is bounded by Ballarat-Skipton Rail Trail to the west, Cuthberts Road to the north, Bells Road to the south, and Cherry Flat Road to the east.



Figure 1 Ballarat northwest and west growth areas context map

Both growth areas will combine to deliver a lot yield of between 20,102 and 26,803 lots.

This Plan has been prepared to identify opportunities for IWM and to ensure that these are incorporated early in the planning process.



1.1 IWM and the Water Sensitive Urban Design

Since 2017, DEECA (formerly DELWP) has provided support for the planning and implementation of Integrated Water Management (IWM). They define IWM as a “collaborative approach to the way we plan for and manage all elements of the water cycle”. It explores the provision of water, wastewater, and stormwater services to build system resilience while enhancing urban and natural landscapes and assets. Successful IWM projects rely upon the collaboration between water cycle stakeholders like water corporations, catchment management authorities (CMAs), Traditional Owners and local governments.

In considering the aspirations of this plan, it can be useful to understand the meaning of the term ‘water sensitive city’ that has been defined by the Co-operative Research Centre (CRC) for Water Sensitive Cities (<https://watersensitivecities.org.au/>). The water sensitive city can be described as a liveable, resilient, sustainable and productive place where the city:

- Acts as a catchment, providing different water sources, at different scales, for different end uses
- Has a healthy natural environment that delivers ecosystem services with ecological, social and economic benefits
- Has a ‘water sensitive community’ that is informed, knowledgeable and makes wise choices about water. They are engaged in decision making and exhibit positive behaviour (including water conservation).

The development of an IWM Plan and the concept of the water sensitive city are intrinsically linked and an important step toward becoming ‘water sensitive’. This transition toward water sensitivity is described in Figure 2. The Water Supply, Sewered and Drained City illustrate the progress of cities to deliver clean water, safe disposal of sewage and protection of people and property from flood. In more recent times cities like Melbourne and Ballarat have made progress toward becoming ‘Waterways Cities’ by focussing on the protection of their receiving environments like Port Phillip Bay (through the *Port Phillip Bay Environmental Management Plan, 2001*), the Mulawalla Wetland and the Yarrowee River.

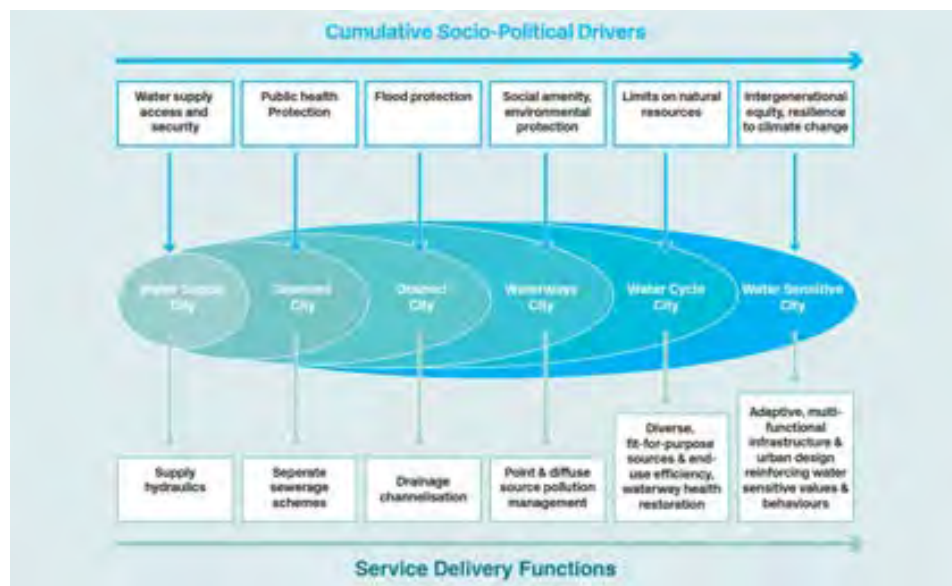


Figure 2. Urban Water Transitions Framework (Brown, 2009)

1.2 Context

The City of Ballarat has a relatively long and successful relationship with IWM planning having prepared the industry leading Ballarat IWM Plan in 2017. IWM practice has evolved since that time, particularly in terms of how it is planned for at a State level. The stakeholders to the 2017 plan continue to be involved in what is now a State wide and State led effort. Some of the key strategic documents that are relevant today are summarised below.

Central Highlands Water – Urban Water Strategy (2022)

The Urban Water Strategy is a planning document that is produced every 5 years by Victoria’s water authorities. It highlights CHW strategic priorities across water, sewerage and recycled water planning as well as highlighting the following priorities that are relevant for this IWM plan:

- Water efficiency through digital metering and education
- Investigating a portfolio of water sources to improve water security and system resilience
- Contributing to State Government initiatives, like the IWM Forum process.

Information pertaining to water, sewerage and recycled water systems has been drawn from the Urban Water Strategy (2022) for inclusion in this document.

Central Highlands Strategic Directions Statement (2018 and 2022)

A critical development in IWM was the formation of Metropolitan and Regional IWM Forums in or about 2018. The Forums were formed by the State Government and provided a space for collaboration between water cycle agencies and the preparation of the Central Highlands Strategic Directions Statement (CHSDS) in 2018. That document has been updated in 2022. The seven outcomes from the 2018 SDS are retained in the 2022 update. These outcomes form the basis of this IWM plan ensuring that, at least at a high level, the outcomes of the growth area and the region are aligned.



Figure 3 Greater Central Highlands Strategic Directions Statement outcomes (Source: IWM Forums)

The 2022 version set out the progress that has been made since 2018 and next steps. Two opportunities that relate directly to Ballarat, and potentially this project include:

- Expanding Ballarat’s Diverse Water Network (noted as being ‘in progress’), and
- Ballarat West Stormwater Harvesting (‘Not started’).

This plan responds to both of these initiatives. Ongoing work is being undertaken in relation to the “Breathing Life into the Yarrowee River: Implementing Priority Actions” project. A masterplan has been completed that importantly focuses on improving the river’s ecology through, at least in part, adopting IWM approaches.

The development of this IWM will look for opportunities to align with these plans and projects.

Central and Gippsland Region Sustainable Water Strategy (2022)

This strategy sets regional scale targets including for 14% of all water used to be 'manufactured' (e.g. desalination, recycled water, stormwater or rainwater) by 2030, with this percentage to be increased to 30% by 2040 (Figure 4). This is seen as required to meet projected shortfalls in water supply in future. Relevant to this IWM Plan is *Action 8-6: Investigate the use of recycled water and stormwater for environmental flows in the Yarrowee and Leigh rivers.*

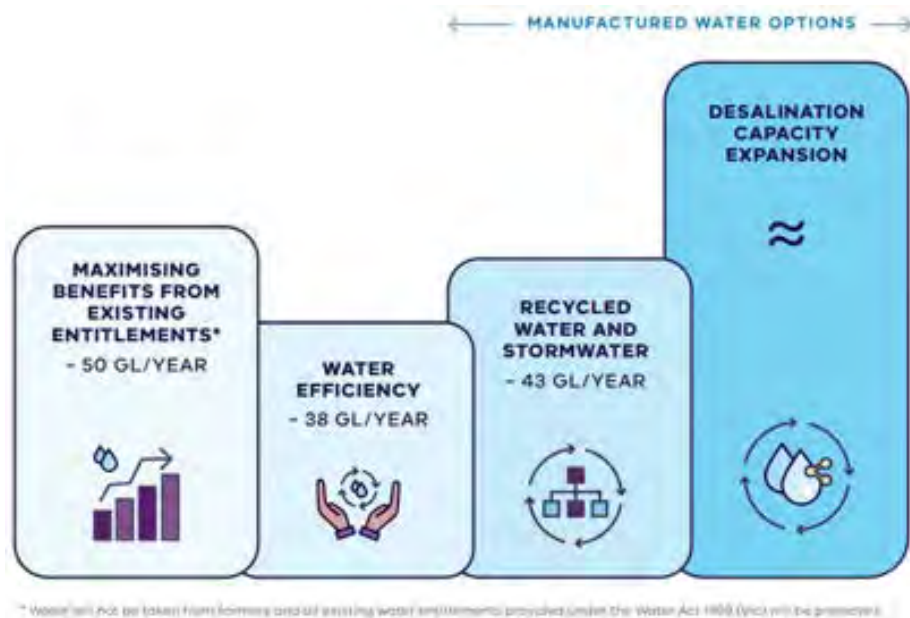


Figure 4 Greater Water's additional water source options

The Environment Protection Act 2017

The Act gives the Environment Protection Authority "powers and tools to prevent and minimise the risks of harm to human health and the environment from pollution and waste" (<https://www.epa.vic.gov.au/>, Accessed October 2023). The general environmental duty (GED) is at the centre of the Act. The GED specifies that it is the responsibility of individuals and businesses to reduce risks to the environment, including through the production of "runoff to stormwater".

EPA 1739.1 Urban Stormwater Management Guidance (2021)

This guidance document reinforces the need for managing stormwater to protect waterways. It includes stormwater harvesting and infiltration targets against a range of average annual rainfall bands. The guidance also provides theoretical stormwater management scenarios to meet the volumetric targets. These requirements are in addition to the water quality targets defined under the *Best Practice Environmental Management Guidelines* (BPEM). The guidance outlines Ballarat's regional targets for stormwater harvesting and infiltration to protect regional waterways based on a rainfall of between 600 and 700mm:

- 29% of excess stormwater to be harvested, and
- 7% of excess stormwater to be infiltrated.

While these targets are not mandatory, they provide a guide as to what targets an IWM plan for new growth areas could aspire to.

2 Project context

The Ballarat North-Western and Western growth areas have a combined area of 1,769 ha. Existing land use is predominantly privately owned farms and open paddocks. While the planned number of dwellings has not been published by the City of Ballarat, indicative lot yields (from Taylors) suggest between 20,102 and 26,803 lots across both growth areas.

2.1 Water cycle assets

Ballarat relies on surface and groundwater from a range of sources (UWS, 2022). These include the following water sources that are also shown schematically in Figure 5. This figure has been included courtesy of Central Highlands Water.

- White Swan Reservoir and connected in-feed storages of Beales, Cosgrave, Gong Gong, Kirks, Moorabool, Newlyn, Pincotts and Wilsons reservoirs
- Lal Lal Reservoir
- Goldfields Superpipe
- Ballarat West bores.

Much of Ballarat's wastewater is treated at the Ballarat South and Ballarat North wastewater treatment plants for release into the Yarrowee River and Burrumbeet Creek systems. Recycled water from Ballarat North is used for maintaining levels in Lake Wendouree and the irrigation of school grounds and open spaces.

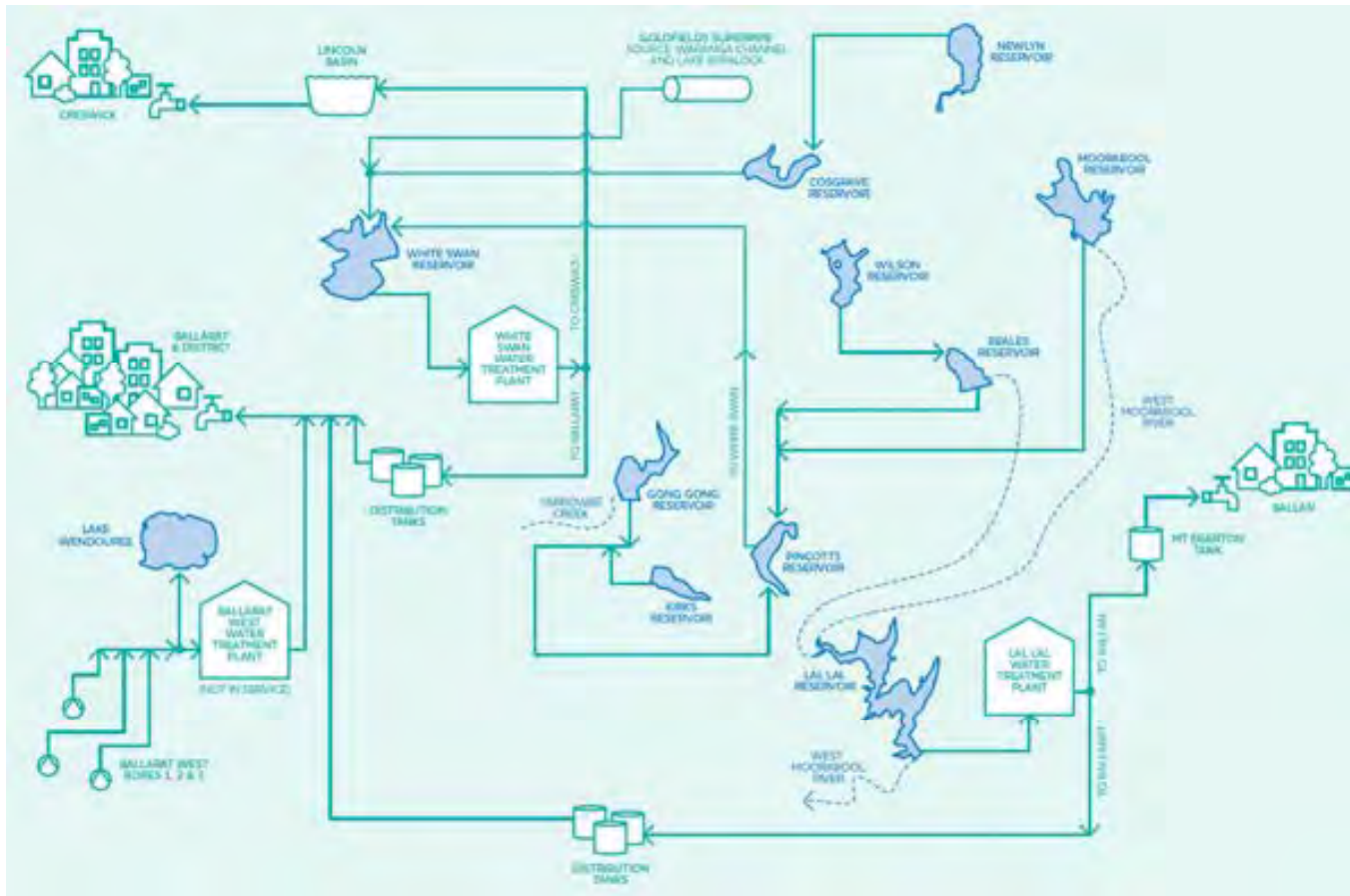


Figure 5 Ballarat’s water supply network, showing the connections to reservoirs and townships including Creswick and Ballan (Source: Central Highlands Water)

2.2 Water security

Climate change and population growth are commonly cited as drivers for an IWM approach. Central Highlands Water have produced Figure 6 to illustrate this. It shows demand growing with population and water resource yield decreasing over time under varying climate scenarios. It identifies 2041 as a potential early year for when demand may begin to exceed supply.

This graph highlights the challenge for IWM and the importance that new greenfield developments minimise their impact on water demand and contribute to providing supply options whenever possible.

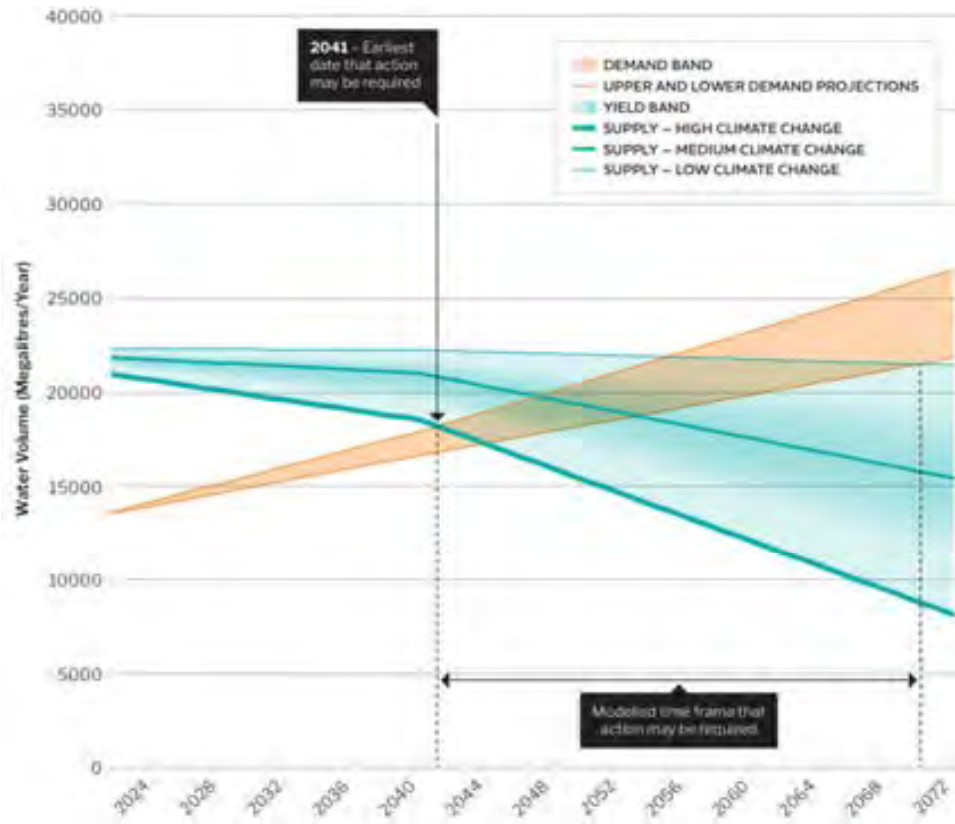


Figure 6 Ballarat’s projected water supply and demand 2022 – 2072 under various climate scenarios (Source: Central Highlands Water)

2.3 Rainfall

Rainfall data has been sourced from the Bureau of Meteorology’s Ballarat Aerodrome station (Site number: 089002) located within the Ballarat Airport. This station reports an annual average rainfall of 686.8 mm and with relatively consistent levels of rainfall over the year, increasing in winter.

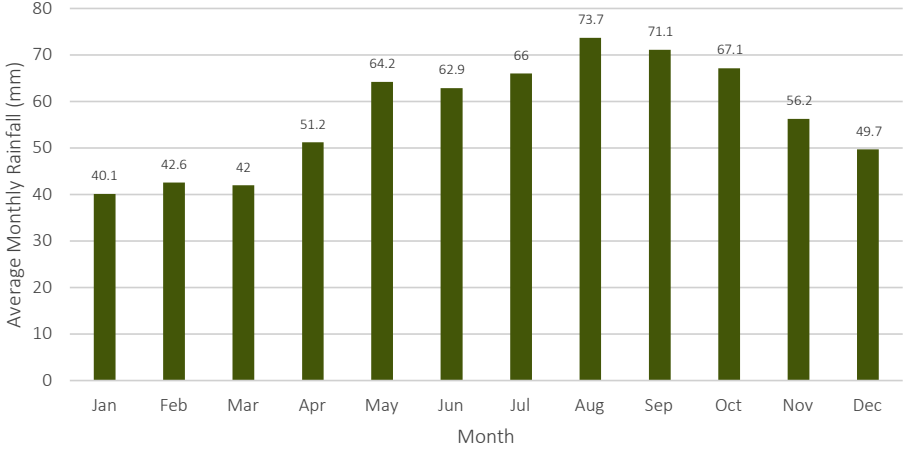


Figure 7 Monthly rainfall pattern of Ballarat Aerodrome station (Bureau of Meteorology)

2.4 Climate Change

The Central Highlands Region, where the City of Ballarat and the growth areas are located, faces a warmer and drier future. Assuming data for the Loddon River Basin, the Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria (DEWLP, 2020) predicts that average annual temperatures across the region are projected to rise by 1.3°C to 2.4°C between 2040 and 2065. This may be exacerbated in urban settings due to the urban heat island effect. In addition to temperature rise, the average annual rainfall is predicted to decrease by 2.8 – 5.6 % between 2040 and 2065.

This establishes further drivers to identify non-traditional water sources and to use that water to cool urban centres where possible.



2.5 Catchment, Waterways and Wetlands

Catchments

The two development areas overlap with three catchments and receiving waterways:

1. Outfalls west towards the tributary of Burrumbeet Creek.
2. Outfalls west towards the tributaries of the Woody Yaloak River.
3. Outfalls south-east towards the tributary of the Yarrowee River.

These catchments are managed by two Catchment Management Authorities (CMAs): The Corangamite CMA and the Glenelg Hopkins CMA (Figure 8).

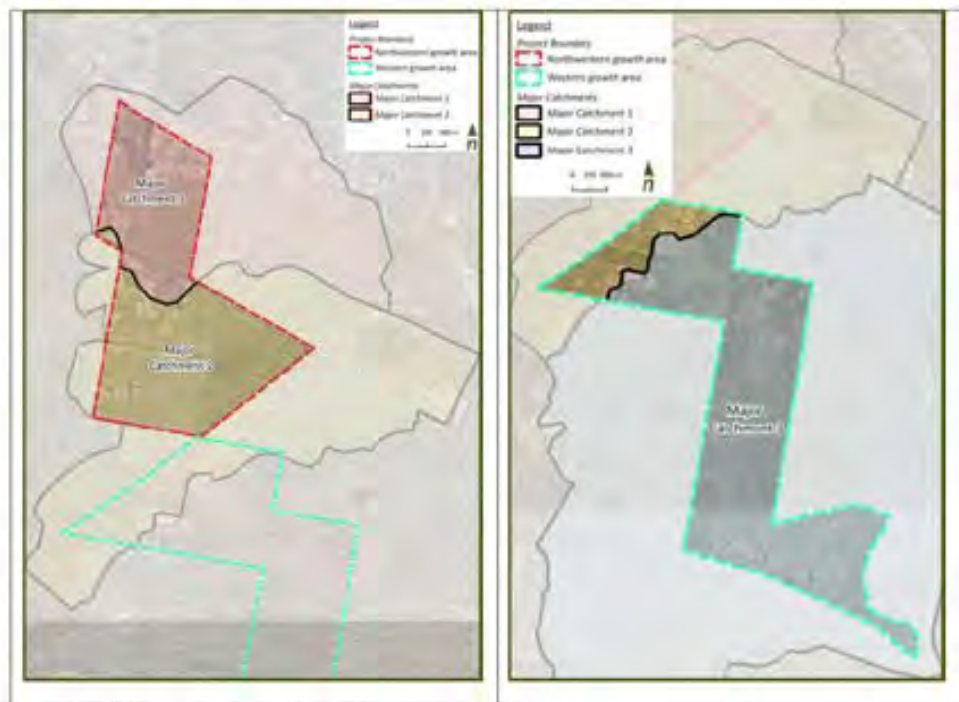


Figure 8 CMA Intersection of developing areas and catchments



Waterways

The Corangamite CMA provided Alluvium with a GIS layer of the designated waterways (Figure 9), while Glenelg Hopkins CMA has not provided information on designated waterways. These waterways have been extensively modified and have low geomorphic value (see Figure 9). In response the City of Ballarat, Corangamite and Glenelg Hopkins CMAs agreed that Melbourne Water’s Waterway Corridor Guidelines will be used to define appropriate waterway corridor widths.

The Yarrowee River is a major waterway that is downstream of the growth areas and is the subject of the SDS priority project: “Breathing Life into the Yarrowee River; implementing Priority Actions” and the resulting masterplan. The Yarrowee runs through the city from the northeast to the south and receives runoff from Ballarat. It is also a critical recreational asset for the people of Ballarat.



Figure 9 Designated waterways within the Corangamite CMA region with accompanying photos illustrating typical waterway condition of the Ballarat growth areas

Constructed assets

There are only two small, natural wetlands that exist within the development area. The Surface Water Management Strategy (Alluvium, 2022) has identified the need for up to 30 constructed wetlands to treat stormwater along with a number of constructed waterways to convey larger flows. These are important assets from an IWM perspective as wetlands offer a potential source of non-potable water while constructed waterways will be critical natural and community assets into the future.

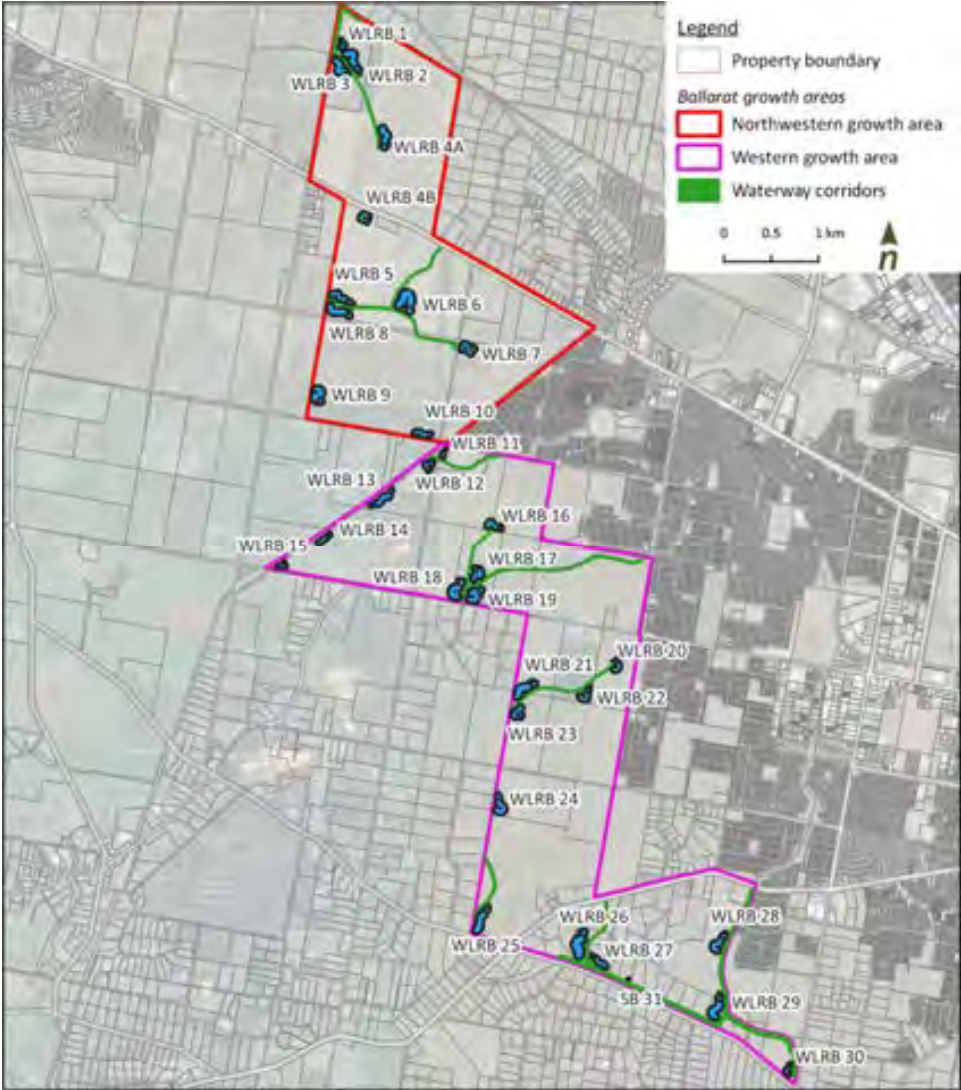


Figure 10 Constructed wetlands and waterways as proposed within the Surface Water Management Plan (Alluvium, 2022)

2.6 Change in Land Use

In addition to climate change and population growth, a key water cycle driver for the adoption of an IWM approach is the volume of poor quality stormwater that is generated during and following development.

Estimating this volume can be undertaken using Model for Urban Stormwater Improvement Conceptualisation, or MUSIC software. Excess stormwater is generated when there is a change on perviousness. That is, when land surfaces like grasslands, pasture or forests are converted into hard surfaces like roads, roofs and pavements creating increased volume of runoff.

Pre development surfaces in these growth areas are estimated to change from an imperviousness fraction of 0.05 that is typical for pastures and farmland, to 0.75 that is typical for residential developments. These fractions have been used in the modelling presented below and are drawn from Melbourne Water's MUSIC Guidelines (2018).

3 Water and Pollutant Balance

The following section sets out estimates for critical elements of the urban water cycle from stormwater and associated pollutants to potable water used and estimates of sewage generated. Given the relatively early stage of planning these are estimates only with all assumptions provided.

The aim of this section is to highlight water cycle risks that present IWM related opportunities.

3.1 Household Water Consumption

Assumptions on potable water demand have been sourced from the Ballarat Potable Water Demand Target (CHW, 2018). It states that there is an existing target water usage of 124 litres per person per day (l/p/day) for residential developments. The guidance provided within the document is designed to achieve this target. While the document doesn't rule out alternatives, it does identify that the target can be achieved through water efficient appliances, fixtures and fittings as well as the connection of a rainwater tank to toilet, laundry and garden (Table 1).

Table 1. Ballarat water efficiency targets (Source: Central Highlands Water, 2018)

Scenario	Water savings (L/person/day)	Net result (L/person/day)	Notes
Base case	–	220	
Water efficiency measures	54	166	Efficient kitchen, toilet and laundry fixtures
Rainwater harvesting (connected to toilet, laundry and garden)	42	124	Assumes a 2kl tank connected to toilet, laundry and garden

For the purpose of estimating future water consumption, two potential development densities have been assumed. For each we have assumed:

- 3 people per lot at densities of 15 lots / Ha, and
- 2.3 people per lot at densities of 20 lots / Ha.

These numbers have been estimated based on [Australian Bureau of Statistics \(2021\)](#) population and density data for new development to the east of the growth areas in question. It can be seen in Table 2 that overall the total consumption estimate is similar, that is, increased lots per Ha is balanced out by a reduced residential population.

For the purposes of ongoing estimates we will assume that water consumption is approximately 2.7 GL/year.

Table 2. Potable water demand estimate

Scenario	15 lots / Ha	20 lots / Ha
Total number of lots	20,102	26,803
People per lot	3.0	2.3
Annual consumption (GL/year assuming 124 L/person/day)	2.7	2.8

(Ballarat Council) Area Intelligence Wide Management (2024)

3.2 Wastewater Generation

Wastewater volumes are not metered and are generally estimated as a percentage of potable water consumed. Sewage volumes typically equate to approximately 80% of potable water use, allowing for consumption and use like irrigation. If we assume 2.7 GL/year of potable water use, then 80% of this, or 2.2 GL/year, is assumed to be the volume of additional wastewater that can be expected in future.

3.3 Open Space Irrigation

As well as reducing potable water use in the house, reducing the volume of potable water used for the irrigation of open spaces is also important. Given that a Masterplan is not yet available, some general assumptions have been made regarding open space and irrigation water demand, including:

- The Net developable area (NDA) across both development areas is approximately 1,396 Ha
- 10% of the estimated NDA will be some kind of open space (~139.6 Ha)
- Half (or 5% of NDA) of open space will be high water demand sportsfields
- Half (or 5% of NDA) of open space will be lower water demand local parks and reserves.

These assumptions were based on the performance targets for open space within the *Victorian Planning Authority's Precinct Structure Planning Guidelines: New Communities in Victoria (October 2021)*. Irrigation demand was estimate using a range of demand and irrigation assumptions drawn from *Efficient Irrigation: A reference manual for turf and landscape (G Connellan, 2002)*. Two irrigation rates were developed using those assumptions, one for sportsfields and one for local parks and reserves (Table 3).

Table 3. Assumed irrigation rates

Open space type	Irrigation rate (ML/Ha/year)
Sportsfield	7.3
Parks and reserves	3.1

This approach estimated an overall irrigation demand of 732 ML/year across the growth areas. Irrigation demand by catchment is summarised in Table 4 below.

Table 4. Irrigation demand by catchment

Catchment	Open space water demand (ML/year)		Sub-Total (ML/year)
	Sportsfield	Parks and Reserves	
1	82	35	117
2	164	70	234
3	266	114	380
	Total		732

3.4 Stormwater volumes, pollutant loads and reduction targets

The pre and post development stormwater volumes were estimated using MUSIC with the results summarised in Table 5. Given similar land use change assumptions were applied to each catchment, there is an estimated 166% increase in stormwater volume across each catchment.

Table 5. Pre and post development stormwater volume summary

Catchment	Total Area (Ha)	Stormwater flows (ML / average year)		Excess stormwater (ML/year)	Excess stormwater (Average %)
		Pre development	Post development		
1	223	390	1040	650	
2	447	760	2020	1260	
3	726	1240	3290	2050	
Total	1,396	2390	6350	3960	166%

Similarly, the estimated increase in stormwater pollutant loads is relatively consistent across catchments as the land uses and assumptions are similar. Therefore the average increase in pollutants is summarised in Table 6.

Table 6. Pre and post development stormwater pollutant summary

Catchment	TN			TP			TSS		
	Pre	Post	Change (%)	Pre	Post	Change (%)	Pre	Post	Change (%)
1	946	1700	80	100	145	45	32,200	44200	37
2	1850	3320	79	195	280	44	63300	87800	39
3	3010	5440	81	319	456	43	103000	140000	36
Average increase (%)			80%			44%			37%

Stormwater volume reduction targets

As noted in Section 1.2 above, the EPA 1739.1 *Urban Stormwater Management Guidance (2021)* identifies stormwater harvesting and infiltration targets for areas within similar rainfall bands. The aim of the stormwater reduction target set out within the EPA guidance, is to reduce the impact of stormwater on waterway health both in terms of water quality but also the erosion and degradation of the waterways physical values. For this plan, that rainfall band for Ballarat is between 600 and 700 mm per year and this requires:

- 29% of excess stormwater to be harvested, and
- 7% of excess stormwater to be infiltrated.

Priority areas have been identified within Melbourne’s Metropolitan Area; however these targets do not apply to regional Victoria.

Indicator	Performance objective				
Suspended solids	80% reduction in mean annual load (Note 1)				
Total phosphorus	45% reduction in mean annual load (Note 1)				
Total nitrogen	45% reduction in mean annual load (Note 1)				
Litter	70% reduction of mean annual load				
Flow (water volume)	Priority areas (Notes 2, 4, 5, 6)		Other areas (Notes 3, 4, 5, 6)		
	rainfall band (mm)	Harvest/evapotranspire (% mean annual impervious run-off)	Infiltrate/filter (% mean annual impervious run-off)	Harvest/evapotranspire (% mean annual impervious run-off)	Infiltrate/filter (% mean annual impervious run-off)
	200	93	0	37	0
	300	88	0	35	0
	400	83	0	33	0
	500	77	5	31	4
	600	72	9	29	7
	700	68	11	27	9
	800	64	14	26	11
	900	60	16	24	13
	1000	56	18	22	14
	1100	53	19	21	15
	1200	50	21	20	17
	1300	48	22	19	18
	1400	46	23	18	18
	1500	44	25	18	20
	1600	42	26	17	21
	1700	40	27	16	22
	1800	38	28	15	22

Figure 11 Quantitative performance objectives for urban stormwater (Source: EPA Urban Stormwater Management Guidance (2021))

Taking these targets, and the estimated flows presented in Table 5, the notional stormwater harvesting and infiltration targets are presented in Table 7. It shows a notional target of 1,148 ML/year of harvesting and 277 ML/year for infiltration.

Table 7. Stormwater harvesting and infiltration targets

Catchment	Excess stormwater (ML/year)	Flow Reduction Target	Infiltration Reduction Target	Stormwater Harvesting Target Volume (ML/year)	Infiltration Target Volume (ML/year)
1	650			188	45
2	1,260	29%	7%	365	88
3	2,050			594	143
Total	3,960			1,148	277

3.5 Water Balance Summary

As illustrated above, urban development will introduce significant changes to the hydrology and water balance of the Western and North-Western growth areas. The key outcomes of this are collated in Table 8. The implications of these changes include:

- Significant increase in potable water demand in future
- The risk that demand (across Ballarat) exceeds supply in the foreseeable future
- Greater wastewater flows to be treated, reused and discharged, and
- Stormwater volumes and associated pollutants that will impact the health of downstream waterways and environments.

Table 8. Water balance summary (both growth areas)

Water cycle element	Pre development	Post development	Change
Potable water demand (ML/year)	–		
• Household		2,840	+2,840
• Irrigation		732	+732
Wastewater generated (ML/year)	–	2,270	+2,270
Stormwater generated (ML/year)	2,390	6,350	+3,960

The table below breaks up each aspect of the water cycle in terms of development area. The breakdown is based on the proportion of developable area within each.

Table 9. Water balance summary by Growth Area

Water cycle element	North-Western growth area	Western growth area
Net developable area	500	896
Residential yield	7,200 – 9,600	12,902 – 17,203
Household potable water demand (ML/year)	1,017	1,823
Irrigation potable water demand (ML/year)	262	470
Wastewater generated (ML/year)	814	1,458
Stormwater generated (ML/year)	2,274	4,076

4 Issues and Opportunities

The IWM Issues and Opportunities identified in this chapter were sourced from the Central Highlands SDS, a workshop with stakeholders on the 5th of October 2023 and previous IWM projects undertaken within the Central Highlands Region.

Given the relatively early stages of planning for the North and North Western Growth areas, the issues and opportunities presented below range from location specific to strategic in nature. They may also build off opportunities that have been identified by Central Highlands Water, the City of Ballarat and the IWM Forum. Some opportunities, such as potable water use reduction targets and smart meters, are planned for and are assumed to be rolled out in future. They are still included here to ensure they are considered along with other IWM opportunities.

Given the early stages of planning for these development areas, preparing this plan now, allows sufficient time for IWM opportunities to be reviewed and investigated further to ultimately gain stakeholder support.

4.1 Issues

There are issues that are driving an IWM approach such as population growth, climate change, water supply reliability and the urban heat island effect. There are also issues for IWM planning and implementation. The following provides a brief summary of these issues that will need to be addressed as IWM opportunities are progressed.

Available space

Adequate space is necessary across all scales - lot, street and precinct - to accommodate IWM related assets. It is important that this be considered early in the planning process and that needs are translated to the masterplan. Examples include:

- On-lot to accommodate assets like rainwater tanks.
- Streetscape widths to accommodate greening and canopy cover initiatives e.g. passive irrigation.
- Open spaces need to accommodate tanks or treatment infrastructure prior to irrigation. Note that an AFL sized oval would typically require 100 kL onsite storage. Council is also aware that aesthetically, it is undesirable to have tanks on every open space.
- In the event that a stormwater network is planned for, then alignments and easements for pipelines will also be required as well as space for pump stations near wetland outlets.

Operation and maintenance

Responsibility and cost of operation and maintenance is a common issue for all scales of IWM intervention. As this IWM plan progresses minimising the maintenance burden will be critical e.g.:

- Low maintenance passive irrigation assets
- Smart networks for things like networked rainwater and stormwater harvesting schemes to improve operability and support feasibility
- Collaboration with IWM partners like Central Highlands Water, to understand the technical requirements associated with stormwater harvesting including for a 'regional' scheme where more than one wetland is networked, and
- Planning streetscapes from the start to maximise passive heating and cooling benefits e.g. ensuring suitable orientation.

Community values

Further engagement with the traditional owners of the land, the Wadawurrung People, will be required to better understand the cultural and environmental values that some of the opportunities below are seeking to support (e.g. Mulawalla Wetland management plan). Engagement has not been undertaken at this time for this plan.

Feasibility

While cost and cost sharing is always an IWM implementation issue some factors will need to be investigated further as this IWM plan evolves and greater development detail is available:

- Construction of IWM assets ‘with development’ as opposed to ‘retrofitting’: while there are many cost uncertainties, avoiding retrofitting is a logical way to reduce cost and improve feasibility.
- Previous work has informed how schemes can be feasible through optimal location and co-location of assets. For example, Central Highlands Water suggest that the upper limit of distance between a stormwater harvesting wetland and an open space is 800m. This should be incorporated into planning and is a limit that is referenced in the opportunities section below.








Future proofing

Given the long lead times and development timeframes, technologies like smart meters and smart networks will be critical to improving the viability of IWM systems like the stormwater harvesting network suggested below, or using lot scale rainwater tanks as smart tanks that can control outflow and provide catchment wide storage volumes.

4.2 Opportunities

The IWM opportunities that have been identified are organised according to SDS Outcome and scale (i.e. lot, street and catchment) below.

Table 10. IWM Opportunities in the Ballarat Growth Areas

	 Safe, secure and affordable supply in an uncertain future	 Effective and affordable wastewater systems	 Avoided or minimised flooding and future flood risk	 Healthy and resilient ecosystems, wetlands and water bodies	 Healthy and vibrant communities	 Community resilience achieved through place-based planning	 Resilient, equitable and sustainable
Lot							
	<p>40% reduction in household potable water use (via rainwater tank, efficient appliances etc)</p> <p>Smart meters on lot</p> <p>Lot scale rainwater harvesting and as a source of water for a managed aquifer recharge scheme over time</p> <p>Large roof harvesting schemes (either to MAR or nearby demand)</p>						
Street							
			Streets that do not form part of the overland flow path network will need to be resilient to flooding	WSUD in areas of high imperviousness to treat stormwater, increase infiltration, mitigate urban heat and place making e.g. car parks, industrial and commercial areas	<p>Passive irrigation of street trees using stormwater. Preference for low maintenance options e.g. kerb cuts or similar</p> <p>Climate resilience of canopy trees and habitat vegetation (e.g. along constructed waterways)</p> <p>Habitat suitability of street trees</p> <p>Wider street reserves to accommodate streetscape IWM and WSUD</p>	<p>Orientation of dwellings to maximise passive heating / cooling</p> <p>Maximise connectivity of communities to natural spaces / Orientation of households toward natural assets</p> <p>Consideration of wider road widths along key commuter boulevards to accommodate WSUD and passive irrigation assets.</p>	
Catchment							
<p>Co-locate commercial and activity centres, open spaces with wetlands to support irrigation and other end uses. 800m is estimated as a theoretical limit</p> <p>Consider groundwater top up for open space irrigation to increase reliability</p> <p>Regional stormwater harvesting scheme is an idea that can be discussed further / Smart technologies will be critical to efficiency of a networked stormwater scheme</p>	<p>Additional 2.2 GL/year of wastewater that could add to existing non-potable water supply resource (e.g. for agricultural and/or commercial activities in surrounding areas.</p>	<p>Co-location of retarding basins and wetlands, as per surface water management strategy (Assumed to be completed as part of the Surface Water Management Strategy)</p>	<p>Development wide imperviousness targets (see Sydney Water for precedent). For example reducing from typical residential of 0.75 to 0.6.</p> <p>Leaky wetlands to meet infiltration targets. A confined aquifer means leaky wetlands would not impact groundwater quality.</p> <p>Understanding of groundwater dependent ecosystems and how (leaky) wetlands can complement and support these</p>	<p>Mulawalla Wetland management plan (Winter Swamp) maintaining cultural and environmental values</p> <p>Align passive irrigation to Urban Forest Strategy target of 40% canopy cover in public realm</p> <p>Ecological corridors along constructed waterway corridors with plantings and approach aligning to biodiversity objectives for the region</p>			<p>Investigate supplying farms to the west with excess treated stormwater.</p>

4.3 IWM Plan


The section above identifies a range of issues and opportunities that are common when trying to implement IWM in greenfield environments. The following table and plan includes proposed actions to address common issues implementing IWM as well as realising opportunities that IWM in greenfield developments present.

Table 11. IWM Plan Summary

Outcome	Issue or opportunity	Proposed action	Comment / Next steps	
	Water efficiency: 40% reduction in household potable water use to meet 124 L/person/day	No action – Assumed to be a CHW requirement for new development.	Require water efficient appliances and rainwater tanks to meet this target, unless an alternative approach is proposed	
	Non-potable water sources	Rainwater harvesting: on lot and as a source of water for a managed aquifer recharge scheme		Continue investigations into the viability of rainwater to MAR e.g. residential and commercial roofs in the West and North West Growth areas as part of the rainwater to MAR scheme.
		Stormwater harvesting investigations:		There is an excess of approximately 1,148 ML/year of stormwater. Figure 12 (below) illustrates a maximum of 732 ML/year of potential irrigation demand within the growth areas. An external demand will be critical to utilising excess stormwater and reducing impacts on waterways.
		<ul style="list-style-type: none"> Align with Ballarat West Stormwater Harvesting (SDS Action). Investigate regional stormwater harvesting scheme feasibility. Smart technologies to be considered as part of the scheme to optimise performance. Investigate additional potential demand for treated stormwater including surrounding agricultural or commercial areas. 		CHW could engage with Melbourne Water to gather learnings from the Sunbury and Melton Growth Area regional stormwater harvesting schemes.
		Recycled water: incorporate additional flows into future recycled water planning, including for potential demands from surrounding agricultural or commercial areas.		An additional 2.2 GL/year is ultimately expected to be generated.
		Install smart meters on all lots	No action – Assumed to be rolled out as per current CHW policy	
Co-locate commercial and activity centres, open spaces with wetlands to support irrigation and other end uses.	As part of Masterplanning, ensure that water demand nodes like open spaces are proximate to potential non-potable water sources like stormwater wetlands.		Identify larger open spaces and ensure these and other non-potable demand nodes are well within the 800m theoretical distance limit between source and demand. Propose 400m or similar as a maximum distance.	

Outcome	Issue or opportunity	Proposed action	Comment / Next steps
	<p>WSUD in areas of high imperviousness to treat stormwater, increase infiltration, mitigate urban heat and place making e.g. car parks, industrial and commercial areas</p>	<p>As part of Masterplanning, identify areas with high areas of imperviousness (e.g. >80%). Consider applying a concentrated WSUD approach that includes biofiltration, passively irrigated canopy cover and 'ground level' greening through WSUD</p>	<p>This is to address stormwater quality, increase infiltration as well as urban heat and amenity issues in car parks, industrial and commercial areas etc</p>
	<p>Development wide imperviousness targets</p>	<p>Consider reducing imperviousness across the development as part of Masterplanning. For example reducing from typical residential of 0.75 to 0.6.</p>	<p>Reduced imperviousness targets have been adopted by Sydney Water in the Western Growth Areas of Sydney. This may fundamentally change the approach and requirements for surface water management.</p>
	<p>Leaky wetlands to meet infiltration targets.</p>	<p>As part of wetland design, investigate the potential for stormwater treatment wetlands to have a leaky base to contribute to infiltration. Consider also the potential to reduce costs through changed material and construction requirements.</p>	<p>The confined aquifer means that leaky wetlands are unlikely to impact groundwater quality. As part of this work, consider the impact of leaky wetlands on groundwater dependent ecosystems</p>

Outcome	Issue or opportunity	Proposed action	Comment / Next steps
 <p>Healthy and varied landscapes</p>	<p>Passive irrigation of street trees using stormwater</p>	<p>Passive irrigation to support trees to meet canopy cover targets</p>	<p>There is a preference for low maintenance passive irrigation options e.g. kerb cuts or similar</p>
	<p>Align passive irrigation to Urban Forest Strategy target of 40% canopy cover in public realm</p>	<p>Identify main boulevards and passive transport routes to design enhanced canopy cover or 'shadeways'</p>	<p>Examples of shadeways are available having been designed in Melbourne Metropolitan greenfield developments</p>
 <p>Healthy and varied landscapes</p>	<p>Climate resilience of canopy trees and habitat vegetation (e.g. along constructed waterways)</p>	<p>Ensure that species selected for street trees and vegetation within open space is</p> <ul style="list-style-type: none"> • Resilient to the effects of climate change • Consistent with broader habitat and biodiversity goals 	<p>Habitat suitability of street trees</p>
	<p>Mulawalla Wetland management plan (Winter Swamp) maintaining cultural and environmental values</p>	<p>Undertake an ecohydrology assessment of the Mulawalla Wetland (Winter Swamp) to understand the impact of development on cultural and environmental values</p>	<p>Ensure that analysis provides options or recommendations for maintaining values and/or mitigating the impacts of development</p>
	<p>Ecological corridors along constructed waterway corridors with plantings and approach aligning to biodiversity objectives for the region</p>	<p>Related to canopy trees action above, ensure that plantings around wetlands and along waterway corridors are consistent with broader biodiversity and ecological objectives</p>	

Outcome	Issue or opportunity	Proposed action	Comment / Next steps
	<p>Orientation of dwellings to maximise passive heating / cooling</p> <p>Maximise connectivity of communities to natural spaces / Orientation of households toward natural assets</p> <p>Co-locate commercial and activity centres, open spaces with wetlands to support irrigation and other end uses.</p>	<p>The masterplan needs to support IWM objectives through</p> <ul style="list-style-type: none"> • Co-location of wetlands and open spaces • Alignment of streetscapes (to minimise energy needs), and • Connection of residences to natural areas. 	<p>Input to the masterplanning process from an IWM perspective to make sure that these opportunities are not eliminated.</p>
	<p>Consideration of wider road widths along key commuter boulevards to accommodate WSUD and passive irrigation assets.</p>	<p>Related to the above, introduce wider road widths along key boulevards and 'shadeways' to accommodate necessary assets and infrastructure e.g. passive irrigation, streetscape WSUD etc.</p>	

5 Preliminary water balance

Taking into account a number of the items discussed above, a small number of scenarios have been modelled to offer a preliminary understanding of the relationship between some factors that will influence water supply and demand in the future development.

Figure 12 provides a comparison between the estimated volume of excess stormwater that will be generated within each catchment, compared to the stormwater volume reduction target guidance and estimated irrigation need. In brief, the excess in stormwater generated is significant when compared to both the target and irrigation need. Further, even if all open space was irrigated with stormwater, this may not meet the EPA's stormwater volume reduction target.

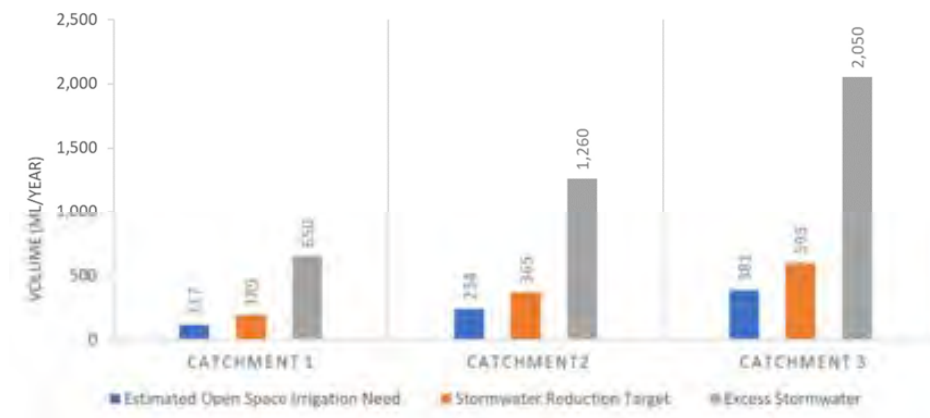


Figure 12 Comparison of excess stormwater, irrigation need and stormwater reduction target guidance

By considering residential use of rainwater tanks we can estimate their impact on potable water use and the volume of excess stormwater. Figure 13 below shows that harvesting rainwater (assuming a 2kL tank connected to toilet, laundry and garden) can yield over 900 ML of water per year. This is based on the assumption that rainwater tanks save 42 L/person/day (Central Highlands Water, 2018). For the purposes of the graph below it is assumed that there are 20,102 lots and 3 people per lot. When combined with open space irrigation, the stormwater targets can conceivably be met.

While we reiterate that the stormwater volume targets are not mandatory, they are used here as a guide to the volume of stormwater that should or could be harvested and reused to protect downstream waterways. With this target as a guide, it can inspire creative thinking regarding opportunities to achieve that target, such as a networked stormwater harvesting scheme, or supplying nearby agricultural operations.

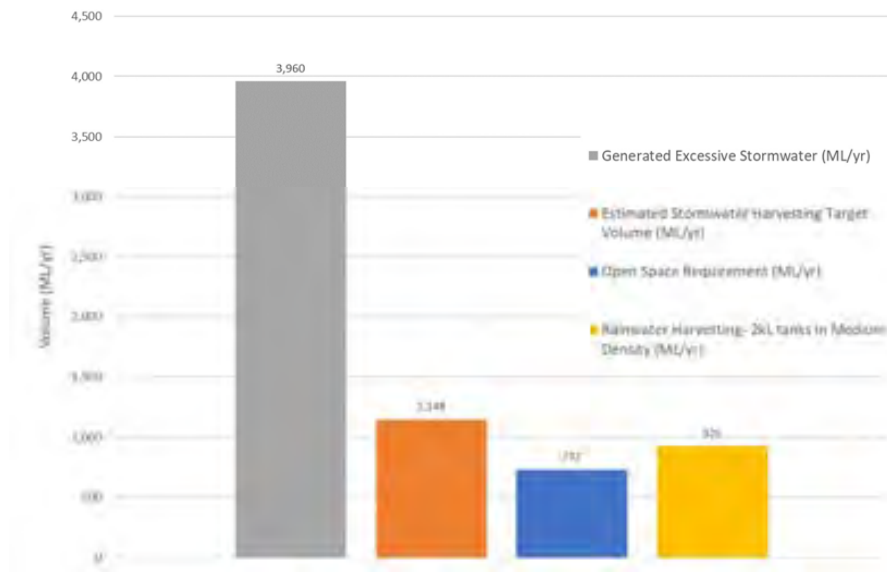


Figure 13 Constructed wetlands and waterways as proposed within the Surface Water Management Plan (Alluvium, 2022)

6 Discussion

The IWM plan set out above is pitched at a relatively strategic level, reflecting the early stage of planning for the growth areas and the absence of a detailed masterplan. As such, the plan primarily responds to issues and opportunities that have been identified through literature review, water balance analysis and engagement with water cycle stakeholders. Engagement with the traditional owners has not been undertaken during the preparation of this IWM Plan and should be as the plan progresses. Given the likely timing to development, the Northern Ballarat PSP is planned to be gazetted by mid-2026, there is an opportunity to plan the development to give the best opportunity for feasible IWM initiatives to be implemented.

In summarising how this IWM plan can contribute to and influence future masterplanning, the following more general statements regarding IWM actions are offered below:

Masterplanning with water, greening and amenity in mind

There are many aspects to this including:

- Co-locating water sources and nodes of water demand wherever possible. Locations for water demanding assets or facilities can be located according to where larger wetlands are thereby reducing conveyance distances and also improving the potential reliability of supply.
- Identifying green boulevards and spaces and designing street widths that can accommodate greening infrastructure.
- Using waterways as ecological corridors that incorporate climate resilient vegetation and specifically designed species habitat. This should align with other City of Ballarat biodiversity (or similar) strategies.
- Identifying large areas of impermeability across the development that will have potential high urban heat and applying greening to cool and WSUD to increase infiltration of stormwater.
- As part of future investigations consider the need for Growling Grass Frog (GGF) habitat and the potential to co-locate GGF habitat and treatment wetlands along the drainage reserve network.

Futureproofing

Applying smart technologies to IWM assets is yet to be fully realised in practice. These growth areas, noting their large area and time to development, hold excellent opportunities to apply smart technologies at a range of scales including:

- Smart metering on individual houses
- Smart control of lot scale rainwater tanks to provide co-ordinated and distributed storage across the growth areas (between 20, 102 and 26,803 lots with 2kL tanks equates to between 40 and 53 ML of storage)
- Smart management of wetlands including water levels, if two or more wetlands are 'networked' to supply a nearby end use. This could extend to a number of wetlands supplying an external demand, such as agriculture to the development's west.

Optimising performance through smart technologies will improve the feasibility of IWM initiatives and exhibit the cutting edge of IWM application.

Engagement and investigation

There has been limited engagement in the preparation of this plan. It is intended that this plan provide the basis for further discussion, particularly with Traditional Owners, so that the plan evolves with the masterplan for the growth areas. There is also time for investigations into some of the potentially more ambitious actions in the plan. For example:

- Smart technologies to co-ordinated lot scale rainwater tanks
- A regional stormwater scheme to supply internal demands and potentially a large, external demand (e.g. agriculture).
- The impact of development on groundwater dependent ecosystems.
- Urban heat modelling to understand where hotspots will be and to formulate mitigating strategies.

These growth areas hold a unique opportunity to implement industry leading initiatives in the greenfield context. The result could be as uniquely liveable growth area with protected ecologies within the development and downstream. An advantage that this region has is the positive collaborative history between the City of Ballarat and Central Highlands Water. Both organisations have experience in planning and implementing IWM strategies and projects. Collaboration is a critical element of IWM and this strong relationship between IWM partners means that the planning, research and design processes can be undertaken and implemented together.

7 References

<https://forecast.id.com.au/ballarat>, Accessed October 2023

Central Highlands Water (2018), Ballarat Potable Water Demand Target

G Connellan (2002), Efficient Irrigation: A reference manual for turf and landscape

The State of Victoria Department of Environment, Land, Water and Planning (2020), Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria

Victorian Planning Authority (2021), Precinct Structure Planning Guidelines: New Communities in Victoria



Doc Ref: 2425AE
 Balance North-Western & Western Growth Areas



14 APPENDIX C – STORMWATER MANAGEMENT INFRASTRUCTURE LIST

North Western Growth Area

Item	Growth Area	Precinct	Responsible Authority	Indicative Cost (\$)	Funding Source	Timing (ST-MT-LT)	
Waterway Corridor – A to B	NW	5	Council	\$3.00M	DCP	LT	Refer Alluvium SWMS Fig 33 pg 50
Waterway Corridor – C to D	NW	5	Council	\$3.85M	DCP	LT	Refer Alluvium SWMS Fig 33 pg 50
Wetland Retarding Basin – WLRB1	NW	5	Council	\$2.38M	DCP	LT	Refer Alluvium SWMS Fig 58 pg 96
Wetland Retarding Basin – WLRB2	NW	5	Council	\$6.66M	DCP	LT	Refer Alluvium SWMS Fig 58 pg 96
Wetland Retarding Basin – WLRB3	NW	5	Council	\$6.12M	DCP	LT	Refer Alluvium SWMS Fig 58 pg 96
Wetland Retarding Basin – WLRB4A	NW	5	Council	\$5.50M	DCP	LT	Refer Alluvium SWMS Fig 58 pg 96
Waterway Corridor – D to E	NW	4	Council	\$3.05M	DCP	LT	Refer Alluvium SWMS Fig 33 pg 50
Waterway Corridor – F to E	NW	4	Council	\$3.01M	DCP	LT	Refer Alluvium SWMS Fig 33 pg 50
Waterway Corridor – E to G	NW	4	Council	\$2.54M	DCP	LT	Refer Alluvium SWMS Fig 33 pg 50
Wetland Retarding Basin – WLRB4B	NW	4	Council	\$3.60M	DCP	LT	Refer Alluvium SWMS Fig 59 pg 97
Wetland Retarding Basin – WLRB5	NW	4	Council	\$4.94M	DCP	LT	Refer Alluvium SWMS Fig 59 pg 97
Wetland Retarding Basin – WLRB6	NW	4	Council	\$9.16M	DCP	LT	Refer Alluvium SWMS Fig 59 pg 97
Wetland Retarding Basin – WLRB7	NW	4	Council	\$4.56M	DCP	LT	Refer Alluvium SWMS Fig 59 pg 97
Wetland Retarding Basin – WLRB8	NW	4	Council	\$6.26M	DCP	LT	Refer Alluvium SWMS Fig 59 pg 97
Wetland Retarding Basin – WLRB9	NW	4	Council	\$5.96M	DCP	LT	Refer Alluvium SWMS Fig 59 pg 97
Wetland Retarding Basin – WLRB10	NW	4	Council	\$5.94M	DCP	LT	Refer Alluvium SWMS Fig 59 pg 97
Road Culverts Precinct 5: Draffins Road WLRB1 - 1 x 675 dia	NW	5	Council	\$0.10M	DCP	LT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 58 pg 96
Road Culverts Precinct 5: Draffins Rd WLRB3 - 2 x 900 dia	NW	5	Council	\$0.24M	DCP	LT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 58 pg 96
Road Culverts Precinct 4: Remembrance Drive WLRB4B - 1 x 1050 dia	NW	4	Council	\$0.16M	DCP	LT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 59 pg 97
Road Culverts Precinct 4: West Bay WLRB5 - 1 x 1050 dia	NW	4	Council	\$0.16M	DCP	LT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 59 pg 97
Road Culverts Precinct 4: West Bay WLRB6 - 1 x 1050 dia	NW	4	Council	\$0.16M	DCP	LT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 59 pg 97
Road Culverts Precinct 4: West Bay WLRB9 - 2 x 900 dia	NW	4	Council	\$0.17M	DCP	LT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 59 pg 97
Road Culverts Precinct 4: Finch Rd WLRB7 - 1 x 1500 dia	NW	4	Council	\$0.21M	DCP	LT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 59 pg 97
Road Culverts Precinct 4: Culberts Rd WLRB10 - 1 x 1050 dia	NW	4	Council	\$0.16M	DCP	LT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 59 pg 97
Main Drains Precinct 5: WLRB 4B to 4A 1050 dia	NW	5	Council	\$1.12M	DCP	LT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 58 pg 96
Main Drains Precinct 4: WLRB10 to outfall - 1 x 1050 dia	NW	4	Council	\$0.47M	DCP	LT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 60 pg 98
Downstream Outfall Grade Out Works	NW	5	Council	\$4.58M	DCP	LT	
Downstream Outfall Grade Out Works	NW	4	Council	\$2.38M	DCP	LT	
IWMS – Passive Irrigation Street Trees			Council		Develop or		
IWMS – Irrigation Open Space			Council		Unknown at this stage		
TOTAL NORTH WESTERN GROWTH AREA				\$66.24M			

Doc Ref: 2425AE
 Global North-Western & Western Growth Areas



Western Growth Area

Item	Growth Area	Precinct	Responsible Authority	Indicative Cost (\$)	Funding Source	Timing (ST-MT-LT)	
Waterway Corridor – H to I	W	3	Council	\$2.68M	DCP	MT	Refer Alluvium SWMS Fig 34 pg 51
Waterway Corridor – J to K	W	3	Council	\$2.31M	DCP	MT	Refer Alluvium SWMS Fig 34 pg 51
Waterway Corridor – K1 to K2	W	3	Council	\$0.76M	DCP	MT	Refer Alluvium SWMS Fig 34 pg 51
Waterway Corridor – L to K1	W	3	Council	\$7.92M	DCP	MT	Refer Alluvium SWMS Fig 34 pg 51
Wetland Retarding Basin – WLRB11	W	3	Council	\$1.60M	DCP	MT	Refer Alluvium SWMS Fig 60 pg 98
Wetland Retarding Basin – WLRB12	W	3	Council	\$3.12M	DCP	MT	Refer Alluvium SWMS Fig 60 pg 98
Wetland Retarding Basin – WLRB13	W	3	Council	\$5.54M	DCP	MT	Refer Alluvium SWMS Fig 60 pg 98
Wetland Retarding Basin – WLRB14	W	3	Council	\$3.02M	DCP	MT	Refer Alluvium SWMS Fig 60 pg 98
Wetland Retarding Basin – WLRB15	W	3	Council	\$2.12M	DCP	MT	Refer Alluvium SWMS Fig 60 pg 98
Wetland Retarding Basin – WLRB16	W	3	Council	\$4.20M	DCP	MT	Refer Alluvium SWMS Fig 60 pg 98
Wetland Retarding Basin – WLRB17	W	3	Council	\$5.44M	DCP	MT	Refer Alluvium SWMS Fig 60 pg 98
Wetland Retarding Basin – WLRB18	W	3	Council	\$6.54M	DCP	MT	Refer Alluvium SWMS Fig 60 pg 98
Wetland Retarding Basin – WLRB19	W	3	Council	\$5.64M	DCP	MT	Refer Alluvium SWMS Fig 60 pg 98
Waterway Corridor – M to N1	W	2	Council	\$1.79M	DCP	MT	Refer Alluvium SWMS Fig 34 pg 51
Waterway Corridor – N1 to N2	W	2	Council	\$2.00M	DCP	MT	Refer Alluvium SWMS Fig 34 pg 51
Waterway Corridor – N2 to O	W	2	Council	\$7.66M	DCP	MT	Refer Alluvium SWMS Fig 41 pg 56
Waterway Corridor – O to P	W	2	Council	\$2.78M	DCP	ST	Refer Alluvium SWMS Fig 34 pg 51
Waterway Corridor – P to Q	W	2	Council	\$3.40M	DCP	ST	Refer Alluvium SWMS Fig 41 pg 56
Wetland Retarding Basin – WLRB20	W	2	Council	\$3.09M	DCP	MT	Refer Alluvium SWMS Fig 61 pg 99
Wetland Retarding Basin – WLRB21	W	2	Council	\$6.54M	DCP	MT	Refer Alluvium SWMS Fig 61 pg 99
Wetland Retarding Basin – WLRB22	W	2	Council	\$3.60M	DCP	MT	Refer Alluvium SWMS Fig 61 pg 99
Wetland Retarding Basin – WLRB23	W	2	Council	\$4.28M	DCP	MT	Refer Alluvium SWMS Fig 61 pg 99
Wetland Retarding Basin – WLRB24	W	2	Council	\$5.40M	DCP	ST	Refer Alluvium SWMS Fig 61 pg 99
Wetland Retarding Basin – WLRB25	W	2	Council	\$6.38M	DCP	ST	Refer Alluvium SWMS Fig 62 pg 100
Waterway Corridor – S to R	W	1	Council	\$2.66M	DCP	ST	Refer Alluvium SWMS Fig 34 pg 51
Waterway Corridor – Q to R	W	1	Council	\$1.83M	DCP	ST	Refer Alluvium SWMS Fig 34 pg 51
Waterway Corridor – R to T	W	1	Council	\$6.50M	DCP	ST	Refer Alluvium SWMS Fig 34 pg 51
Waterway Corridor – U to V	W	1	Council	\$4.12M	DCP	ST	Refer Alluvium SWMS Fig 34 pg 51
Waterway Corridor – V to T	W	1	Council	\$2.77M	DCP	ST	Refer Alluvium SWMS Fig 34 pg 51
Waterway Corridor – T to W	W	1	Council	\$7.43M	DCP	ST	Refer Alluvium SWMS Fig 34 pg 51
Wetland Retarding Basin – WLRB26	W	1	Council	\$5.49M	DCP	ST	Refer Alluvium SWMS Fig 62 pg 100
Wetland Retarding Basin – WLRB27	W	1	Council	\$3.02M	DCP	ST	Refer Alluvium SWMS Fig 62 pg 100
Wetland Retarding Basin – WLRB28	W	1	Council	\$5.34M	DCP	ST	Refer Alluvium SWMS Fig 63 pg 101
Wetland Retarding Basin – WLRB29	W	1	Council	\$6.28M	DCP	ST	Refer Alluvium SWMS Fig 63 pg 101
Wetland Retarding Basin – WLRB30	W	1	Council	\$2.42M	DCP	ST	Refer Alluvium SWMS Fig 63 pg 101
Sediment Basin – SB1	W	1	Council	\$0.30M	DCP	ST	Refer Alluvium SWMS Fig 62 pg 100
Road Culverts Precinct 3: WLRB18 – 2 x 900 dia	W	3	Council	\$0.24M	DCP	MT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 60 pg 98
Road Culverts Precinct 3: WLRB19 – 1 x 1350 dia	W	3	Council	\$0.19M	DCP	MT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 60 pg 98
Road Culverts Precinct 2: WLRB21 – 1 x 1500 dia	W	2	Council	\$0.21M	DCP	ST/MT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 61 pg 99 & Fig 62 pg 100

Doc Ref: 2425AE

Global North-Western & Western Growth Areas



Item	Growth Area	Precinct	Responsible Authority	Indicative Cost (\$)	Funding Source	Timing (ST-MT-LT)	
Road Culverts Precinct 2: WLRB23 - 1 x 1350 dia	W	2	Council	\$0.19M	DCP	ST/MT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 61 pg 99 & Fig 62 pg 100
Road Culverts Precinct 2: WLRB25 / Belts Rd - 1 x 1000 dia	W	2	Council	\$0.21M	DCP	ST/MT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 61 pg 99 & Fig 62 pg 100
Road Culverts Precinct 1: Belts Rd to WLRB26 - 1 x 1500 dia	W	1	Council	\$0.21M	DCP	ST	Refer Alluvium SWMS Table 11 Pg 44 & Fig 62 pg 100
Road Culverts Precinct 1: WLRB30 Cherry Flat Road - 1 x 900 dia	W	1	Council	\$0.10M	DCP	ST	Refer Alluvium SWMS Table 11 Pg 44 & Fig 62 pg 100
Main Drains Precinct 3: WLRB13 - 1 x 1650 dia	W	3	Council	\$0.89M	DCP	MT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 60 pg 98
Main Drains Precinct 3: WLRB14 - 1 x 675 dia	W	3	Council	\$0.11M	DCP	MT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 60 pg 98
Main Drains Precinct 3: WLRB15 - 1 x 900 dia	W	3	Council	\$0.29M	DCP	MT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 60 pg 98
Main Drains Precinct 2: WLRB24 to Waterway - 1 x 1650 dia	W	2	Council	\$1.05M	DCP	ST/MT	Refer Alluvium SWMS Table 11 Pg 44 & Fig 61 pg 99
Main Drains Precinct 1: WLRB26 to Waterway - 2 x 1050 dia	W	1	Council	\$0.31M	DCP	ST	Refer Alluvium SWMS Table 11 Pg 44 & Fig 61 pg 99
Main Drains Precinct 1: WLRB27 to Waterway - 1 x 1000 dia	W	1	Council	\$0.16M	DCP	ST	Refer Alluvium SWMS Table 11 Pg 44 & Fig 61 pg 99
Main Drains Precinct 1: WLRB28 to Waterway - 1 x 1350 dia	W	1	Council	\$0.19M	DCP	ST	Refer Alluvium SWMS Table 11 Pg 44 & Fig 61 pg 99
Main Drains Precinct 1: WLRB29 to Waterway - 1 x 1350 dia	W	1	Council	\$0.19M	DCP	ST	Refer Alluvium SWMS Table 11 Pg 44 & Fig 61 pg 99
Main Drains Precinct 1: WLRB30 to Waterway - 1 x 600 dia	W	1	Council	\$0.10M	DCP	ST	Refer Alluvium SWMS Table 11 Pg 44 & Fig 61 pg 99
Main Drains Precinct 1: SB31 to Waterway - 1 x 1650 dia	W	1	Council	\$0.21M	DCP	ST	Refer Alluvium SWMS Table 11 Pg 44 & Fig 61 pg 99
Downstream Outfall Grade Out Works	W	3	Council	\$4.30M	DCP	MT	
Downstream Outfall Grade Out Works	W	2	Council	\$1.60M	DCP	ST/MT	
Downstream Outfall Grade Out Works	W	1	Council	\$2.50M	DCP	ST	
IWMS - Passive Irrigation Street Trees			Council			Development	
IWMS - Irrigation Open Space			Council			Unknown at this stage	
TOTAL WESTERN GROWTH AREA				\$163.98M			

Our Ref: 24268/E
Ballarat North-Western & Western Growth Areas



15 APPENDIX D – TRAFFIC & TRANSPORT REPORT



Ballarat Western & North Western Growth Areas Infrastructure Servicing Strategy – Traffic & Transport



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30 April 2024

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CONTENTS

1	INTRODUCTION.....	5
2	EXISTING CONDITIONS.....	5
2.1	Site Location.....	5
3	STRATEGIC CONTEXT.....	6
3.1	Integrated Transport Action Plan.....	6
3.2	Ballarat Cycling Action Plan.....	6
3.3	Strategic Cycling Corridors.....	7
3.4	Ballarat's Urban Transit Future	8
3.5	Ballarat Walking Framework –Evolution Roadmap.....	9
3.6	Ballarat's Future Rail Network.....	9
3.7	Ballarat Strategy.....	10
3.8	Ballarat Link Road.....	10
3.9	Planned Works.....	11
4	BALLARAT WEST PRECINCT STRUCTURE PLAN.....	12
4.1	General.....	12
4.2	Road Network, Public Transport, Walking and Cycling.....	13
4.3	Ballarat West Development Contributions Plan.....	16
5	ROAD NETWORK.....	18
5.1	Traffic Volumes and Speeds.....	18
5.2	Freight.....	20
5.3	Road Hierarchy.....	20
6	PUBLIC TRANSPORT.....	22
6.1	Principles.....	22
6.2	Public Transport Network.....	23
7	ACTIVE TRANSPORT.....	25
7.1	Principles.....	25
7.2	Active Transport Network.....	26
8	TRAFFIC.....	28
8.1	Principles.....	28
8.2	Traffic Modelling.....	28
8.3	Discussion.....	36
8.4	Sensitivity Testing.....	39
8.5	Development Sequencing.....	45
8.6	Cost Apportionment.....	46
9	CONCLUSION.....	47

TABLES

Table 1	Traffic Volume and Speed Surveys.....	19
Table 2	Road Network Characteristics.....	21
Table 3	Development Yields – Number of Lots.....	28
Table 4	Future Road Network.....	33
Table 5	Future Road Network (No Link Road).....	42
Table 6	Road Upgrade Thresholds.....	45

FIGURES

Figure 1	Site Location.....	5
Figure 2	Ballarat Bicycle Network.....	7
Figure 3	Strategic Cycling Corridors.....	8
Figure 4	Ballarat Link Road Alignment.....	11

Figure 5	PSP Future Urban Structure	12
Figure 6	PSP Road Network	13
Figure 7	PSP Public Transport Network	14
Figure 8	PSP Walking & Cycling Network	15
Figure 9	Development Contributions Plan – Roads and Traffic Management	16
Figure 10	Development Contributions Plan – Land for Roads and Traffic Management	17
Figure 11	Traffic Survey Locations	18
Figure 12	Heavy Vehicle Routes	20
Figure 13	Future Public Transport Network	24
Figure 14	Active Transport Network	27
Figure 15	Traffic Volume Growth – Low Yield	30
Figure 16	Traffic Volume Growth – High Yield	31
Figure 17	Traffic Network – Low Yield	34
Figure 18	Traffic Network – High Yield	35
Figure 19 (bottom)	Remembrance Drive: Finchs Road to Link Road – Existing (top) and proposed 37	
Figure 20 (bottom)	Remembrance Drive: Link Road to Ring Road – Existing (top), 4-lane (middle), 6-lane 38	
Figure 21	Traffic Volume Growth – Low Yield (No Link Road)	40
Figure 22	Traffic Volume Growth – High Yield (No Link Road)	41
Figure 23	Traffic Network – Low Yield (No Link Road)	43
Figure 24	Traffic Network – High Yield (No Link Road)	44

1 INTRODUCTION

onemilegrid has been requested by Taylors to assist with traffic and transport aspects of the Ballarat North-Western and Western Growth Areas Infrastructure Servicing Strategy

As part of this assessment the subject site has been inspected with due consideration of the project context, traffic data has been sourced and relevant background reports have been reviewed.

2 EXISTING CONDITIONS

2.1 Site Location

The study area comprises both the Western and North-Western growth areas, and is located to the west of established areas of Ballarat.

The North-Western Growth Area is generally bound by the railway line to the north, Draffins Road to the west, Cuthberts Road to the south, and the Ballarat-Skipton Rail Trail to the south and east.

The Western Growth Area is located further south, immediately west of the Ballarat West Precinct Structure Plan area, and is generally bound by the Ballarat-Skipton Rail Trail to the west, the Dyson Drive / Link Road alignment to the east, and Bells Road to the south.

The study area is shown in Figure 1 below.

Figure 1 Site Location



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Land use within the study area is largely rural/agricultural, with some pockets of low-density residential uses to the south.

3 STRATEGIC CONTEXT

3.1 Integrated Transport Action Plan

The *Ballarat Integrated Transport Action Plan* was prepared by Council in July 2020. The document acknowledges the challenges presented by continuing population growth in Ballarat, and outlines a vision, approach, advocacy needs and directions for the preferred transport network.

Fundamentally, the plan seeks to create a more liveable, sustainable, healthy, equitable and prosperous city through increased emphasis on walking, cycling, and public transport.

Of relevance to the planning for transport within the western and north-western growth areas, the following points are noted:

- Design of transport infrastructure should consider the safety of all road users;
- Transport infrastructure should support Council's aspirations for compact, 10-minute cities, including safe and well-connected neighbourhoods for cyclists and pedestrians, and well-connected and efficient public transport networks;
- The bus network will be transitioned to high-frequency transit corridors, and allow for future conversion to high-capacity bus routes or tram corridors in the long-term. Ballarat-Carngham Road, Glenelg Highway, Remembrance Drive and the Link Road are identified as potential routes providing 10-15-minute headway services.
- Long-term planning should allow for the preservation of existing transit corridors or new corridors for transit use;
- Alternative routes to Remembrance Drive should be investigated over the longer term to minimise traffic growth along the corridor. Changes to improve safety and capacity should consider its historical and commemorative significance in design;
- Consider provision of additional linkages rather than upgrading existing roads to add capacity;
- Completion of the Link Road is a high priority.

3.2 Ballarat Cycling Action Plan

The *Ballarat Cycling Action Plan 2017-2025* was prepared in 2017 and establishes a network of cycling routes to encourage cycling use among all members of the community. The Action plan aims to make Ballarat a better place to ride a bike, and expresses Council's goal to embed cycling as a fundamental mode of transport within an integrated transport system for Ballarat.

Key aspects of the Action Plan relating to the Infrastructure Servicing Strategy, in particular the establishment of new cycling routes, include:

- Establishing a cohesive network of cycling routes between destinations, targeted at novice or everyday riders;
- Cycling routes should provide direct connections between Activity Centres across the Municipality;
- The network should maximise coverage and accessibility (more than 90% of urban homes within 500m of a route), providing excellent levels of local access;
- Routes should connect with cycle networks already planned for in Precinct Structure Plans for Ballarat West and Alfredton West (Lucas) growth areas

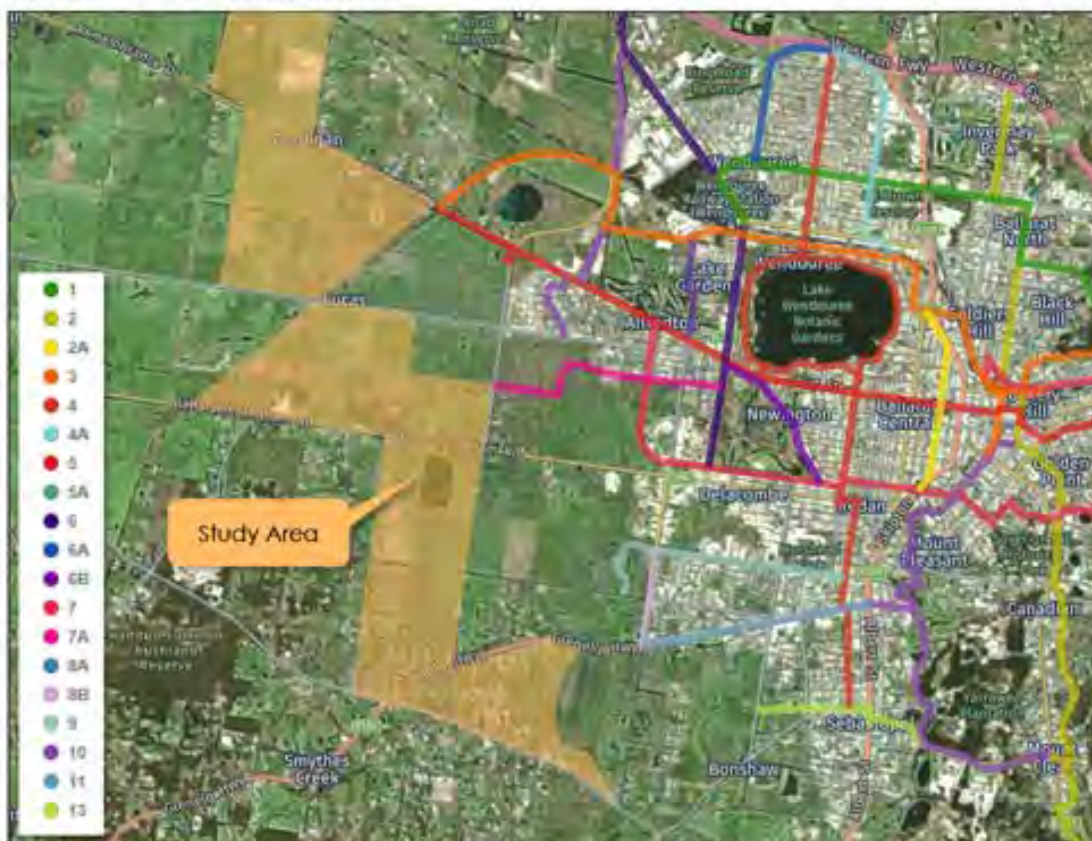
As part of the Action Plan, the [Ballarat Bicycle Network](#) was established which identifies a network of continuous, safe cycling routes linking key destinations across the city. Key routes connecting to or near the study areas include:

- Route 3: BWEZ to CBD
- Route 5: Lucas to Warrenheip

- Route 7A: Alfredton to Ballarat Station
- Route 9: Ballarat West to Sebastopol
- Route 11: Glenelg Highway to Sebastopol

These are shown in Figure 2 below.

Figure 2 Ballarat Bicycle Network



3.3 Strategic Cycling Corridors

Strategic Cycling Corridors are important routes for cycling for transport and link up important destinations including the Central City, National Employment and Innovations Clusters, Metropolitan Activity Centres and other destinations of metropolitan and regional significance.

Strategic Cycling Corridors (SCC) are considered to be the arterials for bicycles, and have been designed to provide connected, low stress and safe routes, intended primarily for the use of cyclists for transport (rather than recreation).

These corridors are the responsibility of Department of Transport and Planning (DTP).

The SCCs in the vicinity of the site are shown in Figure 3.

Figure 3 Strategic Cycling Corridors

SCCs in the vicinity of the site include:

- Remembrance Drive / Sturt Street;
- Link Road;
- Ballarat-Carngham Road;
- Glenelg Highway; and
- Bells Road.

It is noted that SCCs do not necessarily reflect existing, high-quality routes, but instead include existing and aspirational routes.

3.4 Ballarat's Urban Transit Future

The *Ballarat's Urban Transit Future* document was prepared by Movement & Place Consulting in November 2019 to explore the issues, challenges and opportunities for the urban transit network in the Ballarat region.

Of relevance to the project, the following items were noted:

- Urban transit offers affordable alternatives to car use, improving: traffic congestion, health and environmental outcomes, and economic activity. It also improves access to education and employment for those who do not own cars, or prefer not to provide long distances;
- The majority of work trips are directed to the CBD;

- It is planned to establish high-quality public transport services (10-minute headways) to facilitate "Convenience Living Corridors" along Remembrance Drive, Ballarat-Carngham Road and Glenelg Highway;
- The potential expansion of Route 26 and provision of new routes to service the western growth areas; and
- Continuing improvements to public transport infrastructure and service will drive increase patronage, and may ultimately require provision of mass transit systems to cater for passenger demands.

3.5 Ballarat Walking Framework – Evolution Roadmap

The *Ballarat Walking Framework – Evolution Roadmap* document was prepared by Movement & Place Consulting in February 2019, and outlines the development of a walking strategy, with a goal for supporting enhanced transport options.

Of relevance to the project, the following items were noted:

- Council seeks to increase the proportion of people walking to work and education through the 10-minute city concept in the Ballarat Strategy;
- Council will manage the transport network so as to promote sustainable transport alternatives, improve accessibility and inclusiveness, and benefit the walking economy;
- All of the street network should have a footpath on at least one side of the road;
- 90% of urban streets should have footpaths on both sides of the road;
- Footpaths should be 2m wide;
- Pedestrian movements should be prioritised in areas of intensity;

We understand that Council is developing a Footpath Construction Strategy to identify and prioritise where new footpaths are to be constructed. The strategy will include a framework that prioritises where new footpaths are needed most while identifying missing links in the footpath network.

3.6 Ballarat's Future Rail Network

The *Ballarat's Future Rail network* document was prepared by Movement & Place Consulting in June 2019 and explores the issues, challenges and opportunities for the heavy rail network in the Ballarat region.

Of relevance to the planning for transport within the western and north-western growth areas, the following points are noted:

- Upgrades are planned for the Ballarat Line, including additional services to/from Maryborough, and investigation of the need for extra stations within Ballarat;
- The document recognises the need for improved frequency and reliability to ensure it remains an attractive option for residents and workers;
- Wendouree station (the closest to the study area) has seen considerable patronage growth;
- If opportunities arise, railway stations west of Ballarat on the Ararat line should be considered as part of future Precinct Structure Planning. Such stations could form part of the Ballarat Metro rail connection into Ballarat and Wendouree Stations, as well as connections to Melbourne and Geelong. Any future long-term greenfield growth should be assessed for possible rail connections at an early stage as part of integrated land use and transport planning.

3.7 Ballarat Strategy

The *Ballarat Strategy* is a document prepared by the City of Ballarat in 2015, that outlines Council's plan for growth and development of Ballarat to 2040.

Part 4 of the strategy relates to transport and connections within Ballarat, with an overarching goal to integrate transport and land use planning to link people to each other, jobs, services and goods to markets.

Of relevance to the planning for transport within the western and north-western growth areas, the following items within the strategy are noted:

- Council intends to encourage a transition to a more sustainable transport system which achieves a greater balance between cars and other modes such as walking, cycling and public transport will help address challenges of congestion, rising costs, and environmental impacts;
- Provision of high quality cycle paths, tracks and trails as well as highly walkable routes between key nodes such as schools, employment hubs and activity centres;
- The Link Road forms a key transport connection for the growth areas west of Ballarat;

3.8 Ballarat Link Road

The Ballarat Link Road is a proposed 12 kilometre arterial link along the western boundary of Ballarat, connecting industrial and residential growth zones in Ballarat's west with other parts of the region.

The first stage of the Link Road is complete, connecting from the Western Highway to Remembrance Drive. The second and third stages are still in the planning phase, and are intended to extend further south, linking Ballarat-Carngham Road, Greenhalghs Road, Glenelg Highway, Bells Road, and Midland Highway.

The road will initially operate with a two-way, two-lane cross-section, and will include major intersections at intersecting road, including:

- Roundabout at Cuthberts Road;
- Roundabout at Ballarat-Carngham Road;
- Roundabout at Greenhalghs Road;
- Roundabout at Glenelg Highway;
- T-intersections at Lewis Court, Kirks Road, Heather Close, Doble Road, Cherry Flat Road;
- Roundabout at Bells Road / Midland Highway;

Ultimately, the Link Road will operate with a two-way, four-lane cross-section from the Western Freeway to the Glenelg Highway, and with a two-way, two-lane cross-section from Glenelg Highway to Midland Highway (with provision for future widening). Preliminary concepts also depicting on-road cycle lanes in both directions.

The proposed alignment is shown in Figure 4 below.

Figure 4 Ballarat Link Road Alignment



Public Acquisition Overlays are in place to facilitate the transport of land for Stages 2 and 3 of the Link Road (including intersections), to the west of the Dyson Drive alignment (north of Ballarat-Carngham Road), and then centrally along property boundaries for the remainder of the alignment up to Bells Road.

3.9 Planned Works

Works are presently underway for upgrade of the Dyson Drive and Ballarat-Carngham Road intersection to a roundabout control.

In addition, land has been set aside through a Public Acquisition Overlay (PAO) to facilitate the future duplication of Ballarat-Carngham Road between Dyson Drive and Wiltshire Lane to the north of the existing carriageway. The duplication works are not yet funded.

4 BALLARAT WEST PRECINCT STRUCTURE PLAN

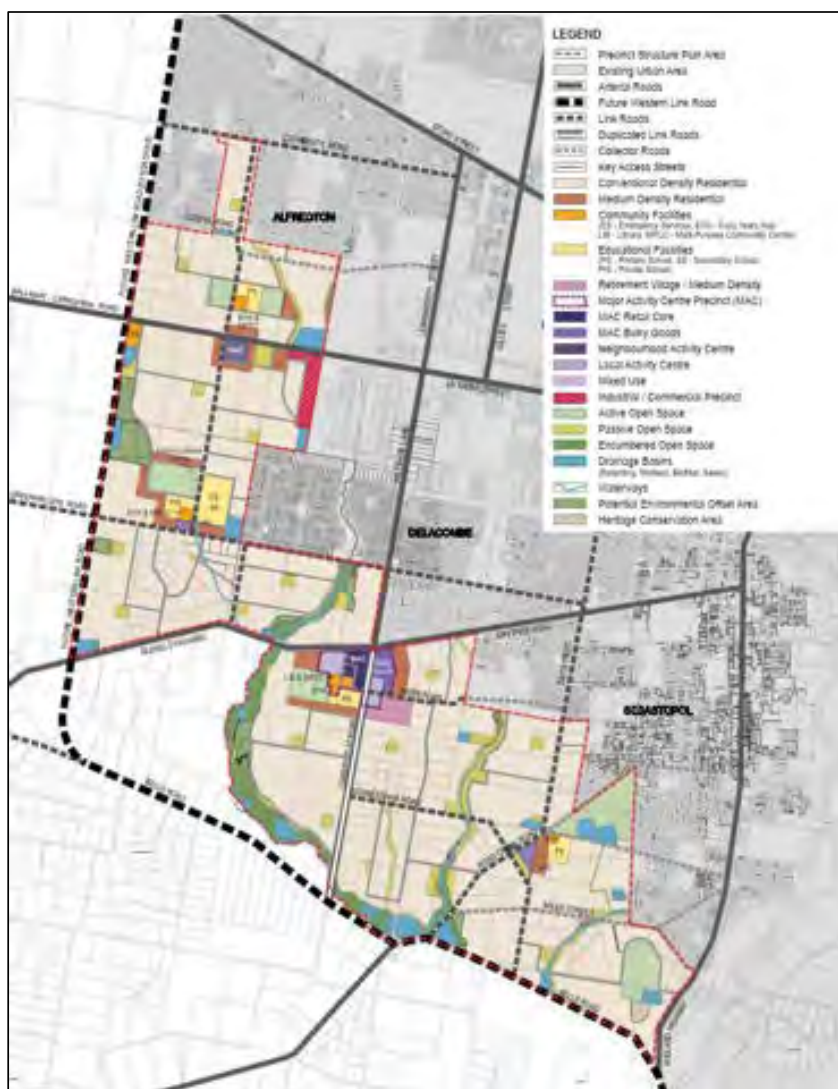
4.1 General

The Ballarat West Precinct Structure Plan (PSP) was prepared by Council and outlines the preferred direction for land use and infrastructure within the growth areas west of Ballarat.

The PSP area abuts the Western Growth area that forms part of the study area, and thus is a key consideration of the context of the Infrastructure Servicing Strategy, noting that transport routes will form key connections between the growth areas and central Ballarat.

A view of the PSP urban structure plan is provided below, indicating largely residential uses, supported by education, Activity Centres, and open space.

Figure 5 PSP Future Urban Structure



4.2 Road Network, Public Transport, Walking and Cycling

Extracts of the PSP maps are shown below, indicating the road network, public transport, walking and cycling network proposed in the vicinity of the site.

Figure 6 PSP Road Network

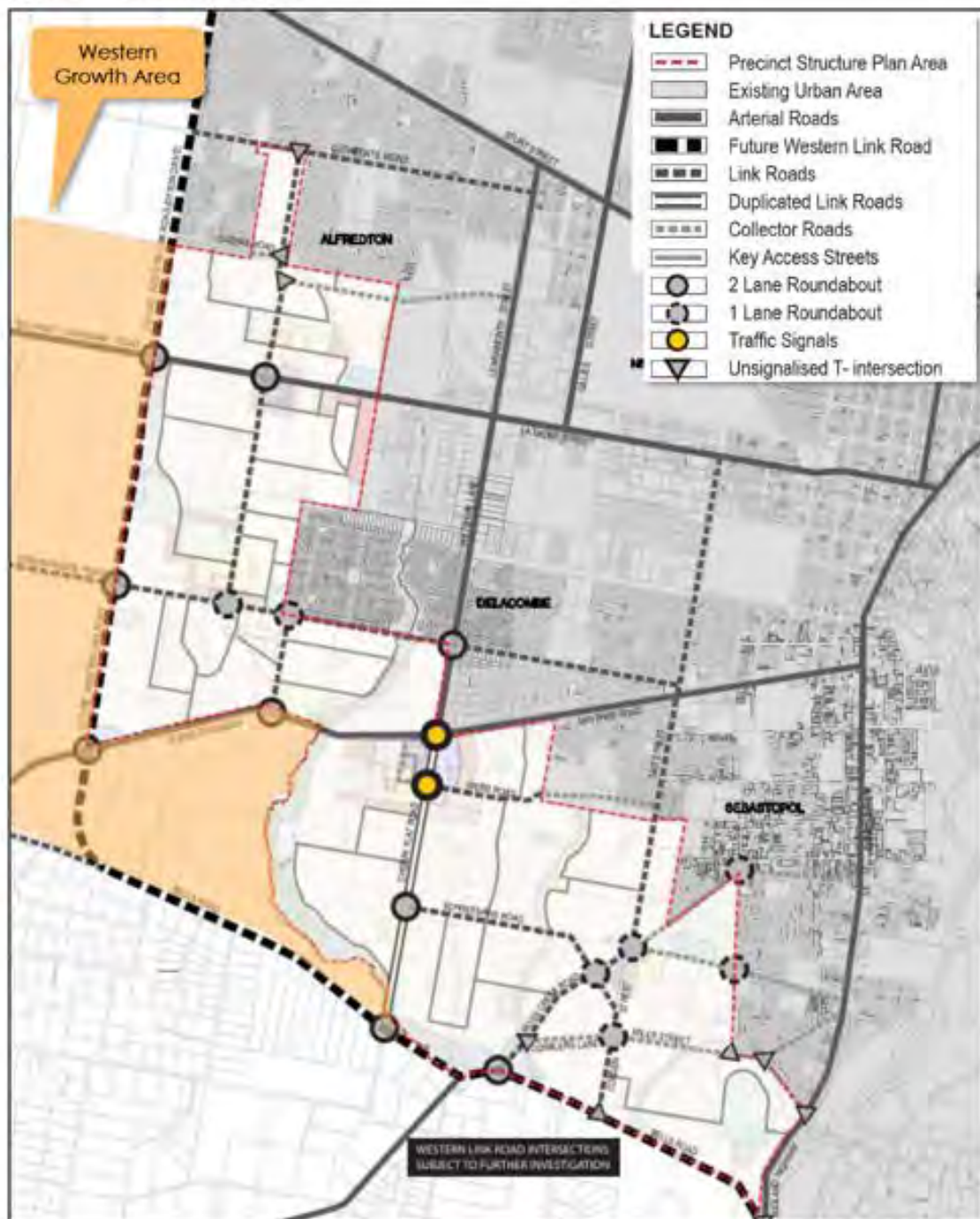


Figure 7 PSP Public Transport Network

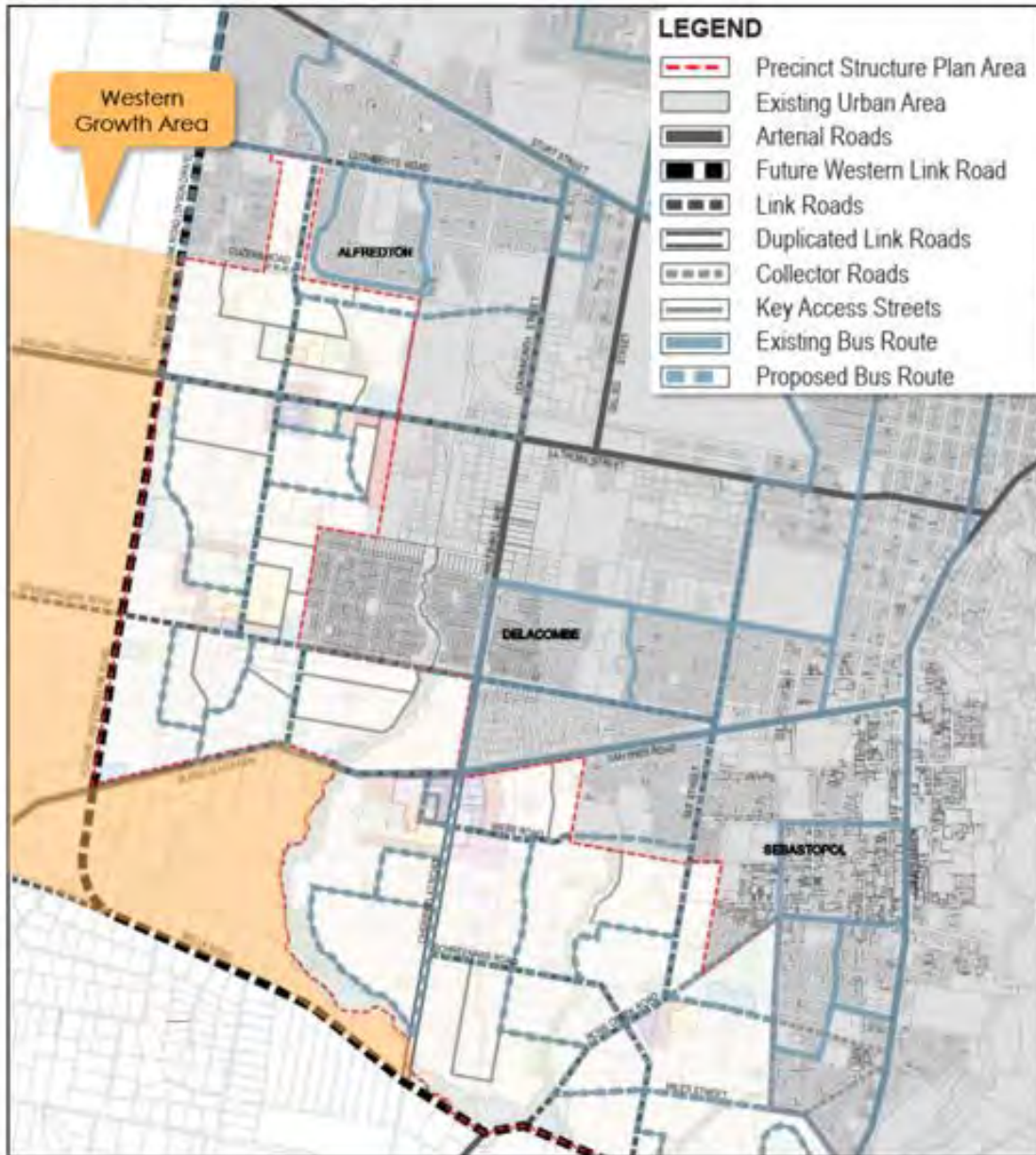
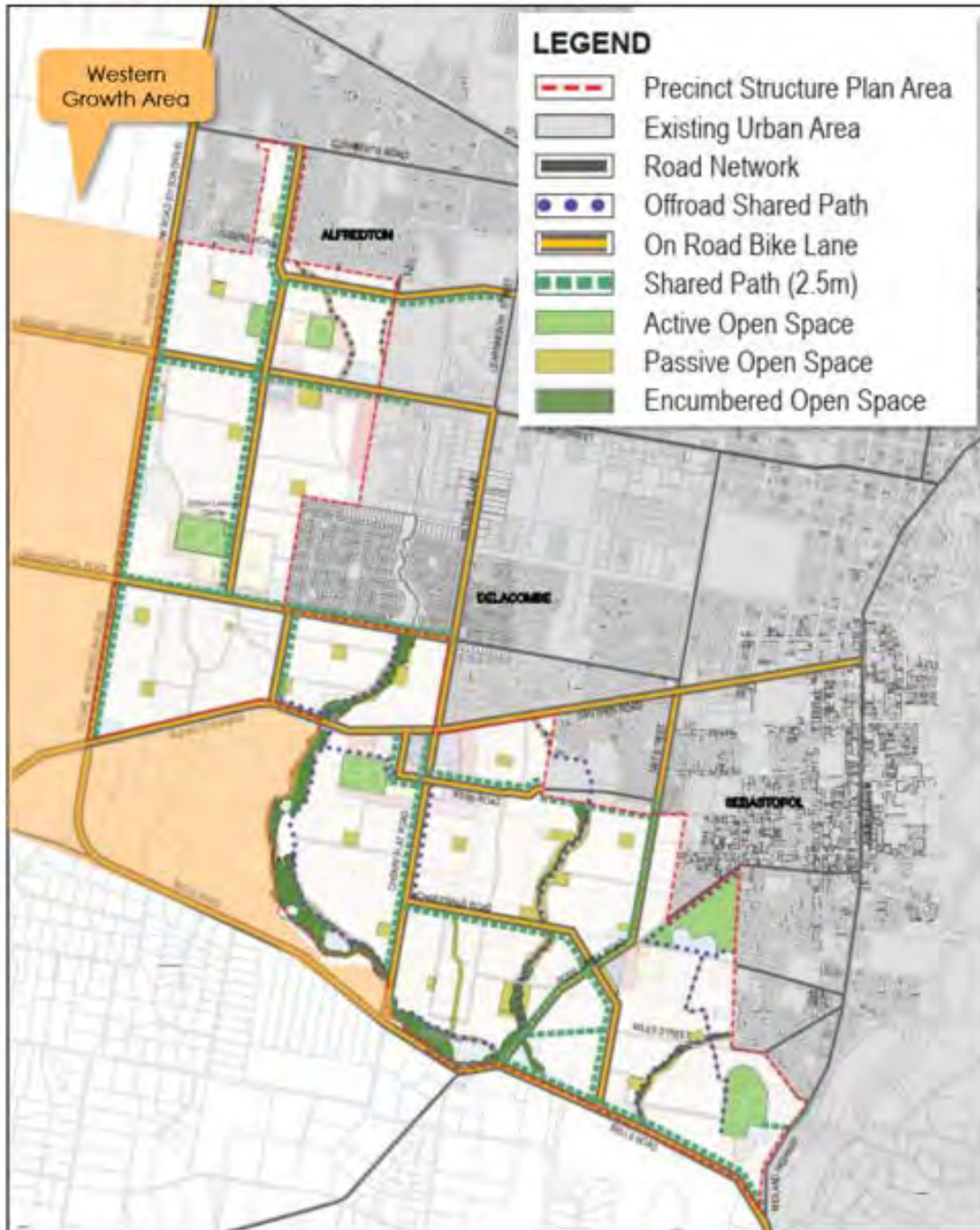


Figure 8 PSP Walking & Cycling Network



4.3 Ballarat West Development Contributions Plan

The Ballarat West Development Contributions Plan (DCP) was prepared by the City of Ballarat, and outlines the projects, framework and financial contribution required to deliver the infrastructure projects necessary for future residents of the PSP area. It includes the land and cost to fund road network upgrades, intersection construction and community facilities.

An extract from the DCP is shown below, showing all the proposed road network upgrades, intersection construction and community facilities. These infrastructure projects will be included in the Infrastructure Contributions Plan, where financial contributions are received from developers to deliver the infrastructure projects necessary for future residents.

The transport projects are identified in Figure 9 below, and the land acquisition is shown in Figure 10.

Figure 9 Development Contributions Plan – Roads and Traffic Management

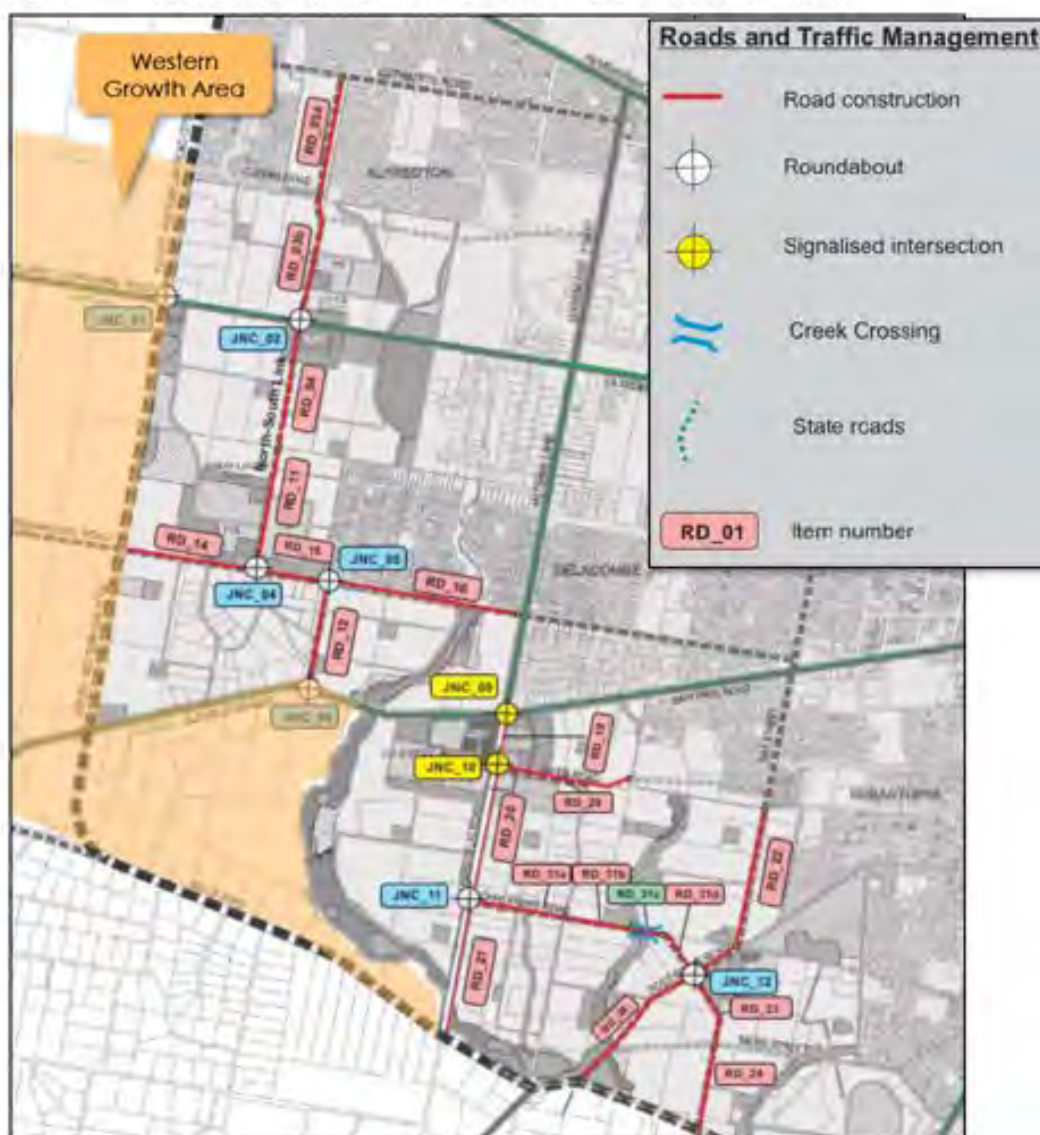
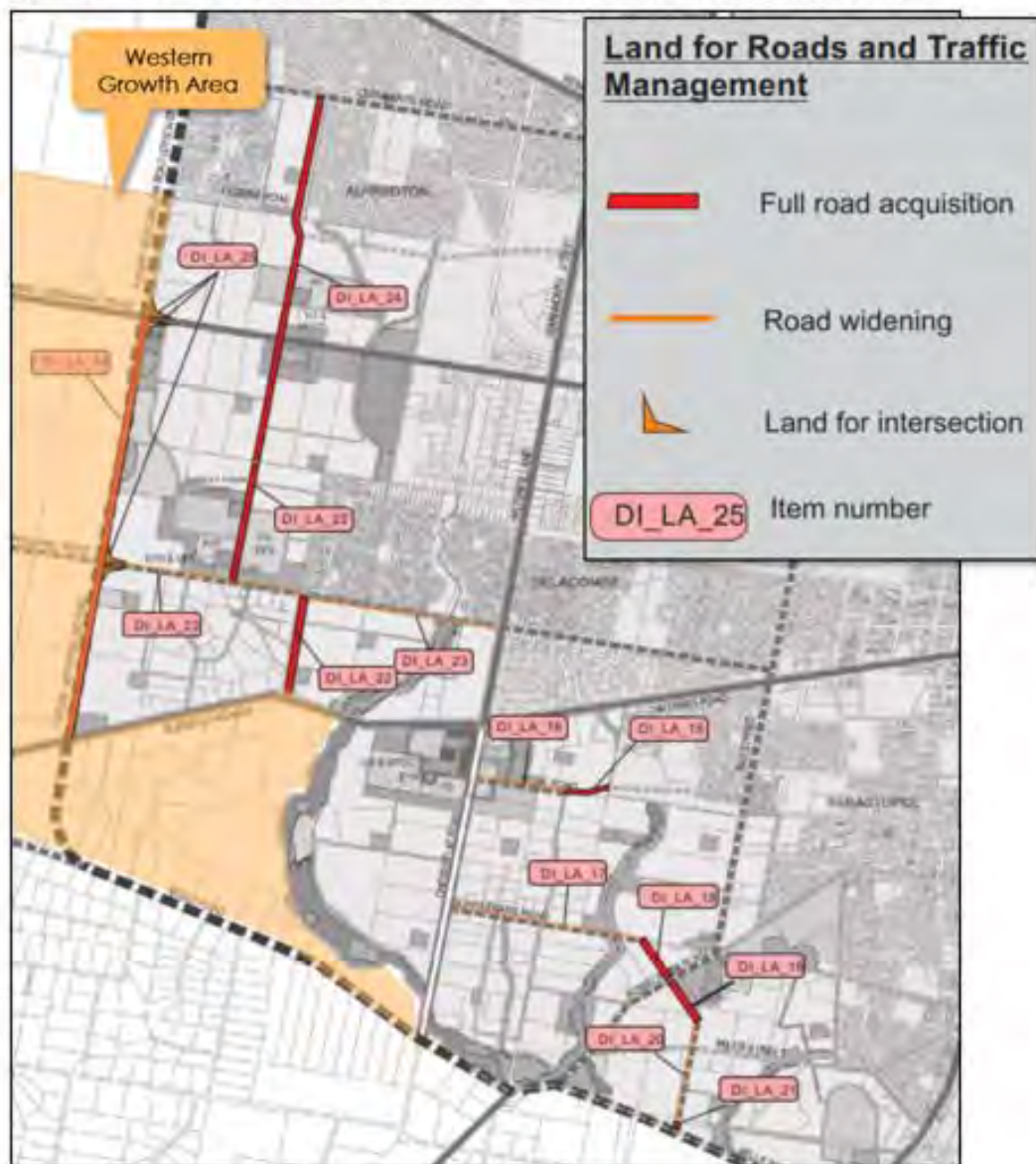


Figure 10 Development Contributions Plan – Land for Roads and Traffic Management



Notable projects in the vicinity of the Western Growth Area include:

- > JNC_01: Roundabout at Ballarat-Carngham Road / Dyson Drive;
- > JNC_02: Roundabout at Ballarat-Carngham Road / Presentation Boulevard (North-South Link);
- > JNC_08: Roundabout at Glenelg Highway;
- > JNC_09: Signalised intersection at Glenelg Highway / Wiltshire Lane
- > RD_14/16: Upgrade of Greenhalghs Road

5 ROAD NETWORK

5.1 Traffic Volumes and Speeds

In order to establish existing traffic conditions in the vicinity of the site, **onemilegrid** commissioned a number of 24-hour, 7-day traffic surveys, from Monday 20th March 2023. The surveys aimed to capture daily traffic data, speeds, vehicle classifications and any other relevant information on the local streets within the study area.

The exact location of the tube counters is illustrated in Figure 11 below, with the surveyed weekday daily traffic volumes identified for each location. A summary of each traffic survey is provided in Table 1.

The data suggests that volumes are within the environmental capacity of each road.

Figure 11 Traffic Survey Locations



Table 1 Traffic Volume and Speed Surveys

Location	Segment	Direction	Daily Traffic Volume (vpd)	Peak Traffic Volume (vpd)		85 th %ile Speed (km/h)
				AM Peak	PM Peak	
Ballarat Link Road	Between Blind Creek & Remembrance Drive	Northbound	2,679	358	214	81.4
		Southbound	2,524	156	319	83.4
		Combined	5,203	512	506	82.4
Dyson Drive	Between Cuthberts Road & Hunter Street	Northbound	5,124	611	449	55.4
		Southbound	5,027	468	557	55.5
		Combined	10,152	909	941	55.5
Dyson Drive	Between Cuthberts Road & Chase Street	Northbound	4,388	487	386	59.9
		Southbound	4,429	303	474	62.5
		Combined	8,818	790	841	61.3
Dyson Drive	Between Andrianus Street & Anton Drive	Northbound	4,041	400	367	71.2
		Southbound	3,996	328	417	71.6
		Combined	8,037	727	773	71.4
Draffins Road	North of Remembrance Drive	Northbound	19	2	2	86.9
		Southbound	21	1	2	86.5
		Combined	40	3	4	86.8
Dowling Road	North of Remembrance Drive	Northbound	136	11	14	93.0
		Southbound	160	13	15	88.5
		Combined	296	23	30	90.2
Remembrance Drive	East of Dowling Road	Westbound	1,913	94	196	109.7
		Eastbound	1,826	212	155	85.5
		Combined	3,739	307	351	97.6
Finchs Road	South of Remembrance Drive	Northbound	56	10	5	74.7
		Southbound	65	4	12	65.8
		Combined	118	14	17	70.3
Cuthberts Road	West of Finchs Road	Westbound	415	31	59	93.2
		Eastbound	346	53	23	79.3
		Combined	761	84	82	85.8
Cuthberts Road	East of Shortridge Drive	Westbound	1,000	84	103	77.4
		Eastbound	940	115	71	71.4
		Combined	1,940	199	174	74.4
Ballarat-Carrham Road	East of Finchs Road	Westbound	2,504	142	282	99.6
		Eastbound	2,703	312	182	103.7
		Combined	5,207	453	464	101.6
Greenhalghs Road	East of Hayes Drive	Westbound	606	42	73	90.0
		Eastbound	555	55	40	107.8
		Combined	1,161	97	113	98.3
Glenelg Highway	North of Bells Road	Northbound	3,198	330	225	103.5
		Southbound	3,134	140	339	100.4
		Combined	6,332	470	564	102.0
Bells Road	East of Glenelg Highway	Westbound	553	51	62	97.6
		Eastbound	609	82	56	86.7
		Combined	1,162	134	118	91.6
Bells Road	East of Cherry Flat Road	Westbound	2,060	217	181	88.8
		Eastbound	2,359	227	255	90.8
		Combined	4,419	444	435	89.8

5.2 Freight

Figure 12 below identifies approved routes for b-double trucks through the study area. This includes Remembrance Drive, Ballarat-Camgham Road, and Glenelg Highway. These same routes are approved for oversize agricultural vehicles.

Figure 12 Heavy Vehicle Routes



5.3 Road Hierarchy

A summary of the cross-section and operating characteristic of each road within the study area is presented in Table 2 below.



Table 2 Road Network Characteristics

Road Name	Between	Classification	Alignment	Cross-Section	Reservation	Carriageway	Indicative Midblock Capacity (vpd)	Footpath Provision	Bicycle Facilities	Car Parking	Speed Limit
Remembrance Drive	Whites Rd & Finchs Rd	Arterial	NE-SW	Two-way / Two-lane	60m	10m	20,000	None	None	None	100km/h
Remembrance Drive	Finchs Rd & Rail Trail	Arterial	NE-SW	Two-way / Two-lane	60m	10m + 6m	20,000	None	None	None	80km/h
Smarts Hill Road	Whites Rd & Finchs Rd	Local	E-W	Two-way (unsealed)	30m	5m	150	None	None	None	100km/h (default)
Cuthberts Road	Whites Rd & Rail Trail	Local	E-W	Two-way / Two-lane	20m	6m	20,000	None	None	None	100km/h (default)
Cuthberts Road	Rail Trail & Shortridge Dr	Local	E-W	Two-way / Two-lane	25m	10.6m	16,000	North side	North side – On-road	North side – Indented	100km/h (default)
Ballarat-Carrgham Road	Rail Trail & Dyson Drive	Arterial	E-W	Two-way / Two-lane	23m	6m	20,000	None	None	None	80-100km/h
Finchs Road	Cuthberts Road & Remembrance Dr	Local	N-S	Two-way (unsealed)	20m	8m	150	None	None	None	80km/h
Finchs Road	Ballarat-Carrgham Rd & Cuthberts Rd	Local	N-S	Two-way (unsealed)	20m	8m	150	None	None	None	80km/h
Greenhalghs Road	Hayes Dr & Masada Blvd	Local	E-W	Two-way / Two-lane	20m	7m	20,000	None	None	None	100km/h (default)
Glenelg Highway	Bells Rd & Karingal Park Dr	Arterial	SW-NE	Two-way / Two-lane	60m	10m	20,000	None	None	None	100km/h
Glenelg Highway	Karingal Park Dr & Kensington Blvd	Arterial	SW-NE	Two-way / Two-lane	60-70m	10m	20,000	None	None	None	80km/h
Bells Rd	Hayes Dr & Glenelg Hwy	Local	NW-SE	Two-way / Two-lane	60m	6m	20,000	None	None	None	100km/h (default)
Bells Rd	Glenelg Hwy & Sebastopol-Smythesdale Rd	Local	NW-SE	Two-way / Two-lane	60m	6m	20,000	None	None	None	100km/h (default)
Karingal Park Drive		Local	N-S	Two-way (unsealed)	9m	4m	150	None	None	None	N/A
Lewis Court		Local	N-S	Two-way	20m	5m	1,000	None	None	None	N/A
Cherry Flat Road	Bells Rd & Schreenans Rd	Local	N-S	Two-way / Two-lane	41m	6m	20,000	None	None	None	80km
Blind Creek Road	Dowling Rd & Link Rd	Local	E-W	Two-way / Two-lane	30m	6m	20,000	None	None	None	100km/h (default)



6 PUBLIC TRANSPORT

6.1 Principles

We acknowledge that this project is not intended to fully articulate the future public transport services within the Western and North-Western growth areas. Rather this report is intended to ensure that sufficient physical space is provided to enable them into the future.

Successful cities must provide convenient and meaningful opportunities for residents and workers to select from equally convenient travel modes. Thus, it is important to ensure that public transport is suitably high-frequency (generally accepted to be defined as running with less than 15 minute headways) to remain time-competitive to private vehicle trips, and that services extend from early morning to late-evening all week.

Additionally, services should be delivered early during subdivisions to ensure residents transport choices are not limited as they establish new travel patterns at their new home.

Council's aspirations for public transport detailed within the various strategic documents are presented in Section 3, and include:

- Establishing high-frequency transit corridors along Ballarat-Carringham Road, Gleneig Highway, Remembrance Drive and the Link Road;
- If opportunities arise, railway stations west of Ballarat on the Ararat line should be considered as part of future Precinct Structure Planning. Such stations could form part of the Ballarat Metro rail connection into Ballarat and Wendooree Stations, as well as connections to Melbourne and Geelong. Any future long-term greenfield growth should be assessed for possible rail connections at an early stage as part of integrated land use and transport planning.

Buses are generally the first step in establishing public transport services within growth areas, as they require limited supporting infrastructure, have minimal start-up costs, and remain flexible for route variations as new areas develop.

Best-practice route planning for bus services ensures that the majority of residents are within a 400m walk from bus services, but balances this need for coverage, with often conflicting goals for direct, and time-competitive services between major destinations. Noting this, it is recommended that most lots are within a 400m walk from a bus route, but this additional coverage does not come at the expense of a direct service.

To be efficient and equitable, road managers must favour higher value trips and more space-efficient modes under congested conditions, so travellers will choose more efficient modes, for example, using buses and ridesharing when commuting on congested corridors.

Provision of bus priority lanes has been demonstrated to improve reliability and punctuality of bus services, allowing for more predictable travel times. Research suggests that even a modest (20%) reduction in travel time on a corridor can see a 25% increase in ridership.

Warrants for provision of bus lanes vary among local and international transport authorities. Some contend that priority lanes should be introduced where passenger volumes would be greater than that within the adjacent lane, others suggest that they should be installed where total travel time of all passengers along the corridor reduce after their implementation. On balance, research suggests that they are warranted where they would attract more than 800 peak-hour passengers. For a typical bus at 2/3 capacity, this is around 20 peak-hour services (one-way) or a 3-minute headway.

As development continues and ridership grows, these bus services may be replaced by higher-capacity, mass-transit systems that may include: Bus Rapid Transit, trackless trams, light rail, or even conventional passenger-rail services. It is commonplace to co-locate the alignment of these services with roads, however systems such as the [Adelaide O-Bahn](#) have seen success along dedicated public transport corridors.



6.2 Public Transport Network

In light of the above, the following public transport elements are recommended for incorporation into the infrastructure servicing strategy:

- Provision for a future railway station;
- High-frequency routes along the transit corridors of Ballarat-Carngham Road, Glenelg Highway, Remembrance Drive and the Link Road;
- Secondary bus routes along adjacent major roads to achieve increased coverage; and
- Provision for bus head start infrastructure at all signalised intersections.

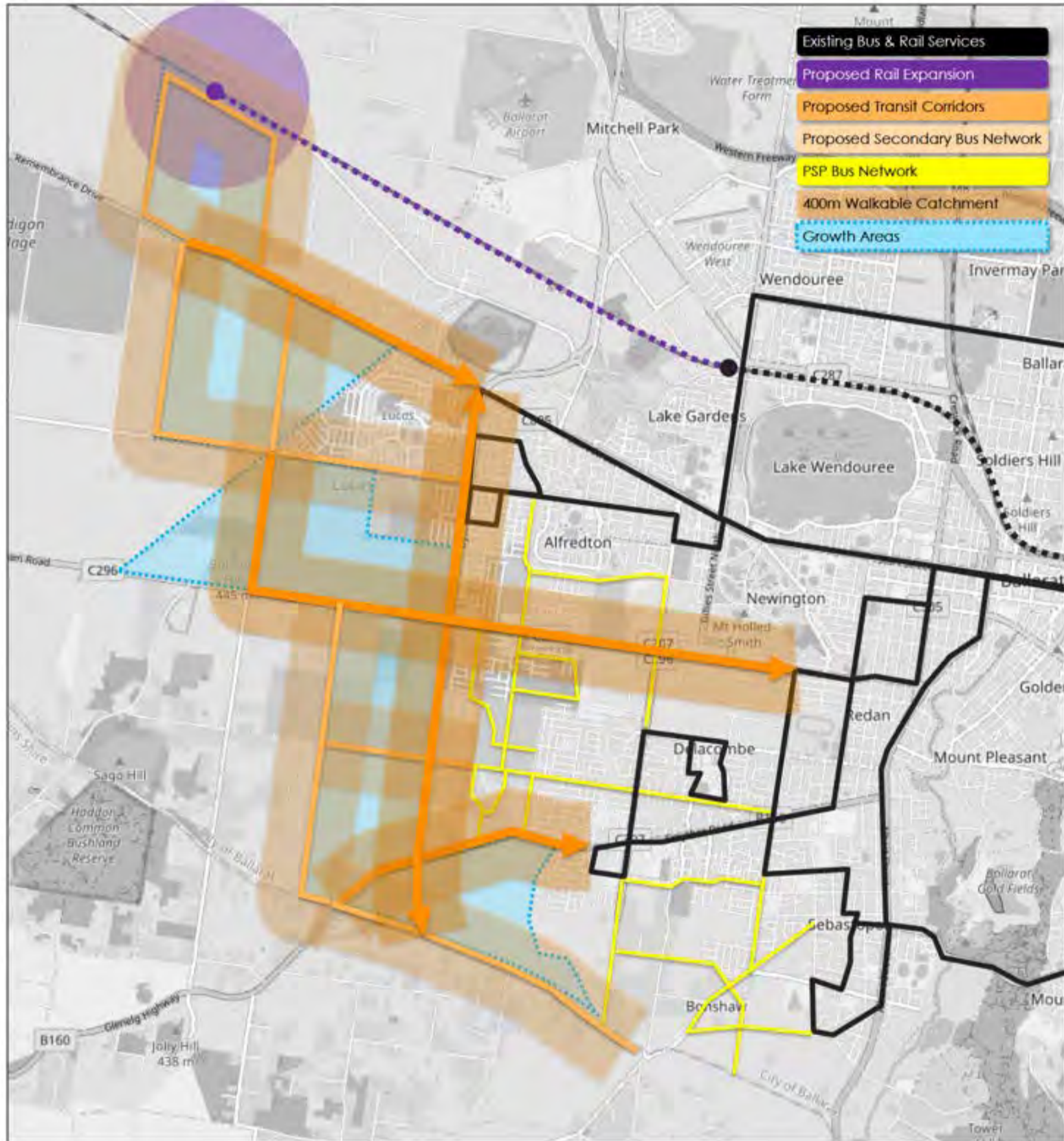
Figure 13 below details the proposed public transport network within the study area.

It is noted that new public transport routes are only shown to the point where they connect with other existing or planned services.

The Department of Transport and Planning (DTP) has not committed to any extensions of public transport.



Figure 13 Future Public Transport Network





7 ACTIVE TRANSPORT

7.1 Principles

Council's various strategic documents identify aspirations for increased cycle usage, with a goal to embed cycling as a fundamental mode of transport within an integrated transport system for Ballarat. Specifically, they seek to ensure the following:

- Establishing a cohesive network of cycling routes between destinations, targeted at novice or everyday riders;
- Introduction of cycling "super-highways" that offer direct routes with cyclist priority measures; and
- A network that maximises coverage and accessibility (more than 90% of urban homes within 500m of a route), providing excellent levels of local access.

A bicycle route is often judged in its entirety by the most stressful portion of the journey. Noting Council's desire for increased ridership, every effort should be made to ensure provision of continuous, low stress, protected and separated cycling routes suitable for use by cyclists of all ages, abilities and confidence levels. A low-stress and comfortable route will ensure cycling is an attractive prospect and will encourage growth in usage by facilitating:

- Maintenance of speed when cycling;
- Safe passing distances by drivers;
- Space to ride two abreast;
- Space to ride clear of hazards (e.g., car doors opening, gutters); and
- Smooth riding surfaces.

In the absence of modal separation, routes should be designed so that the speed of motor vehicles will not be appreciably higher than that of bicycles, enabling cyclists to use the road space safely and comfortably on equal terms. Most design guidelines have general agreement in shared use of an urban carriageway by drivers and cyclists for 85th percentile traffic speeds up to 30km/h and volumes generally up to 1,500-3,000 vehicles per day. This is a typical threshold at which most cyclists will feel comfortable sharing the road with vehicle traffic and aligns with Safe System principles for the energy threshold in crashes with vulnerable road users. This will be the case for local access streets throughout the growth areas.

For higher-order roads (connector streets, link roads and arterials), cycling facilities should be fully separated from vehicle traffic, and be provided priority treatments at intersections with other roads.

Best-practice planning would offer fully-separated pedestrian and cycling facilities on major cycling routes, which are likely to be attractive to commuter cyclists seeking direct and fast connections.

Consistent with Council's walking framework, all streets (with the exception of shared streets such as access places or laneways) should provide footpaths on both sides, of preferably 2m width.

While not aligned with the traditional sense of "active" transport, it is considered that modes such as e-scooters and e-bikes (both personal and shared commercial use) benefit from use of the same active transport infrastructure discussed above. Ballarat is part of the e-scooter trial within Victoria. The relatively high e-scooter usage around the previous growth areas (Lucas and Alfredton) indicate an opportunity to further develop these modes in additional growth areas. Further, recent expansions of the e-scooter trials suggest a future scenario with considerably more use for these vehicles in short trips.



7.2 Active Transport Network

In light of the above, the following elements are recommended for incorporation into the infrastructure servicing strategy:

- Provision of dedicated off-road bicycle paths along arterial routes, separated from pedestrian facilities;
- Provision of alternate cycling and shared path facilities for recreation along waterways and reserves. At the time of writing, these features are not yet identified;
- Retention of the Ballarat-Skipton Rail Trail and improvement as an active transport connection;
- Priority crossings for shared paths and bicycle paths at uncontrolled side-road intersections;
- Signalised pedestrian crossings where signalised intersections are otherwise not provided near major destinations;

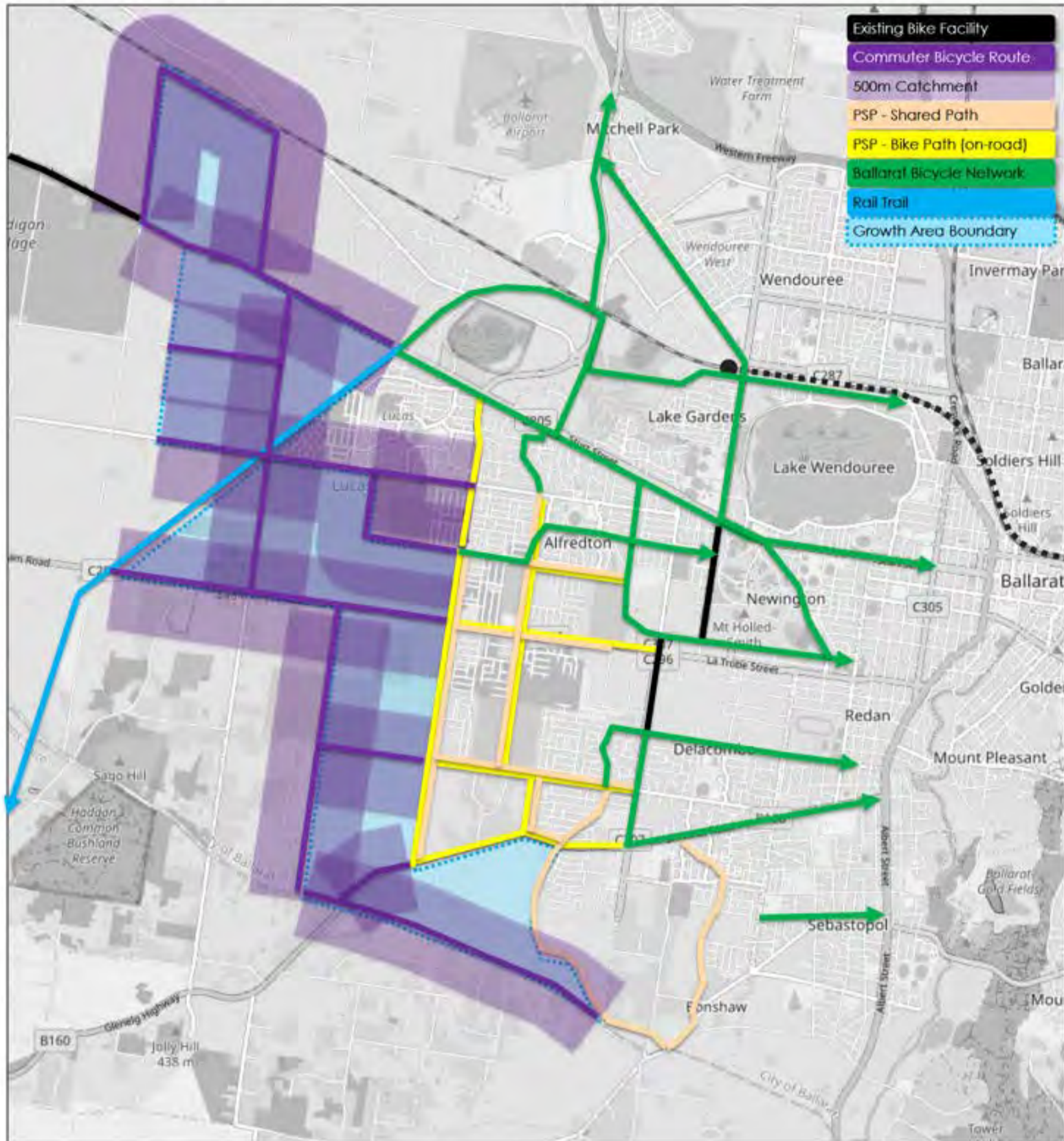
Figure 14 below details the proposed active transport network within the study area.

New active transport links are only shown to the point where they connect with other existing or planned services.

Consideration may be given to the implementation of mobility hubs within the growth areas.



Figure 14 Active Transport Network



8 TRAFFIC

8.1 Principles

Council's aspirations for Ballarat's transport future seeks to maintain a road network generally free of congestion, and aims for compact 10-minute neighbourhoods that allow ease of access and connectivity.

Delivery of well-designed neighbourhoods and transport networks will see an increase in mode share of sustainable transport modes, but there will remain demand for car trips by households into the future. The road network must therefore offer sufficient mid-block capacity to cater for daily traffic flows, and intersections must allow for safe and efficient vehicle movement.

Transport planning convention offers arterial routes at approximately 1.6km spacing (one mile grid), with lower-order link or collector roads evenly spaced between, controlled with signalised or roundabout intersections. This arrangement allows for relatively short and direct trips between origins/destinations and major thoroughfares.

Where possible, existing road reservations should be relied upon for the future road network, to minimise costs of land acquisition and road construction, and ensure the timely delivery of roads that may otherwise be contingent on sequencing of development.

8.2 Traffic Modelling

To inform selection of a suitable road network, high-level traffic modelling has been undertaken for the two growth areas to establish likely changes to traffic volumes within the study area and surrounding roads.

This work includes estimation of trip generation to and from the growth areas, and the distribution of these across the existing and future road network, having regard to the ultimate origin and destinations (e.g. central Ballarat or BWEZ) and the fastest or most convenient route.

Lot yields have been provided by Taylors to assist, as follows.

Table 3 Development Yields – Number of Lots

Growth Area	Net Developable Area	Indicative Lot Yield	
		Low (15 dw / ha)	High (20 dw / ha)
Western Growth Area	896 ha	12,902	17,203
North-Western Growth Area	500 ha	7,200	9,600
Totals	1,396 ha	20,102	26,803

For context, the high-yield growth scenario would represent a population increase of approximately 60% from the current Ballarat population.

For analysis purposes, the following assumptions have been relied upon:

- The growth areas will incorporate largely residential land uses; and
- Daily traffic generation rate of 7 trips per dwelling per day.

It is noted that the default rate commonly utilised in evaluation of growth areas transport infrastructure is 9 trips per dwelling per day, which is considered a conservatively high estimate of traffic generation. This is likely to result in an oversupply of traffic infrastructure. Should the growth areas achieve targets of high mode share for walking, cycling and public transport trips, we anticipate this reduced rate will be readily achievable. The provision of suitable sustainable transport options at the time of occupation of these growth areas is essential to this.

Based on the above, the growth areas are expected to generate between 145,000 and 193,000 total vehicle trips per day.

It has been assumed that 11% of trips are internal to the growth areas, reflecting trips such as recreation, education or shopping trips undertaken close to home. Further, it is assumed that the majority of trips are distributed towards central Ballarat.

It is noted that this analysis has been undertaken in isolation from ongoing growth associated with the Ballarat West PSP development, as this is beyond the scope of this review.

The modelling results assume the completion of the following pieces of road infrastructure:

- Duplication of Ballarat-Carngham Road (as a four-lane arterial);
- Completion of the Link Road (as a four-lane arterial to Glenelg Highway and two-lane arterial further south) along the Bells Road alignment; and
- Completion of all roads and intersections within the Ballarat West PSP.

The additional daily traffic volumes within and surrounding the growth areas are illustrated in Figure 15 below.

Note – The “Link Road” cross-section classification as described within the following figures and discussion should not be confused with the road name “Link Road” (the Ballarat West Link Road).

Figure 15 Traffic Volume Growth – Low Yield

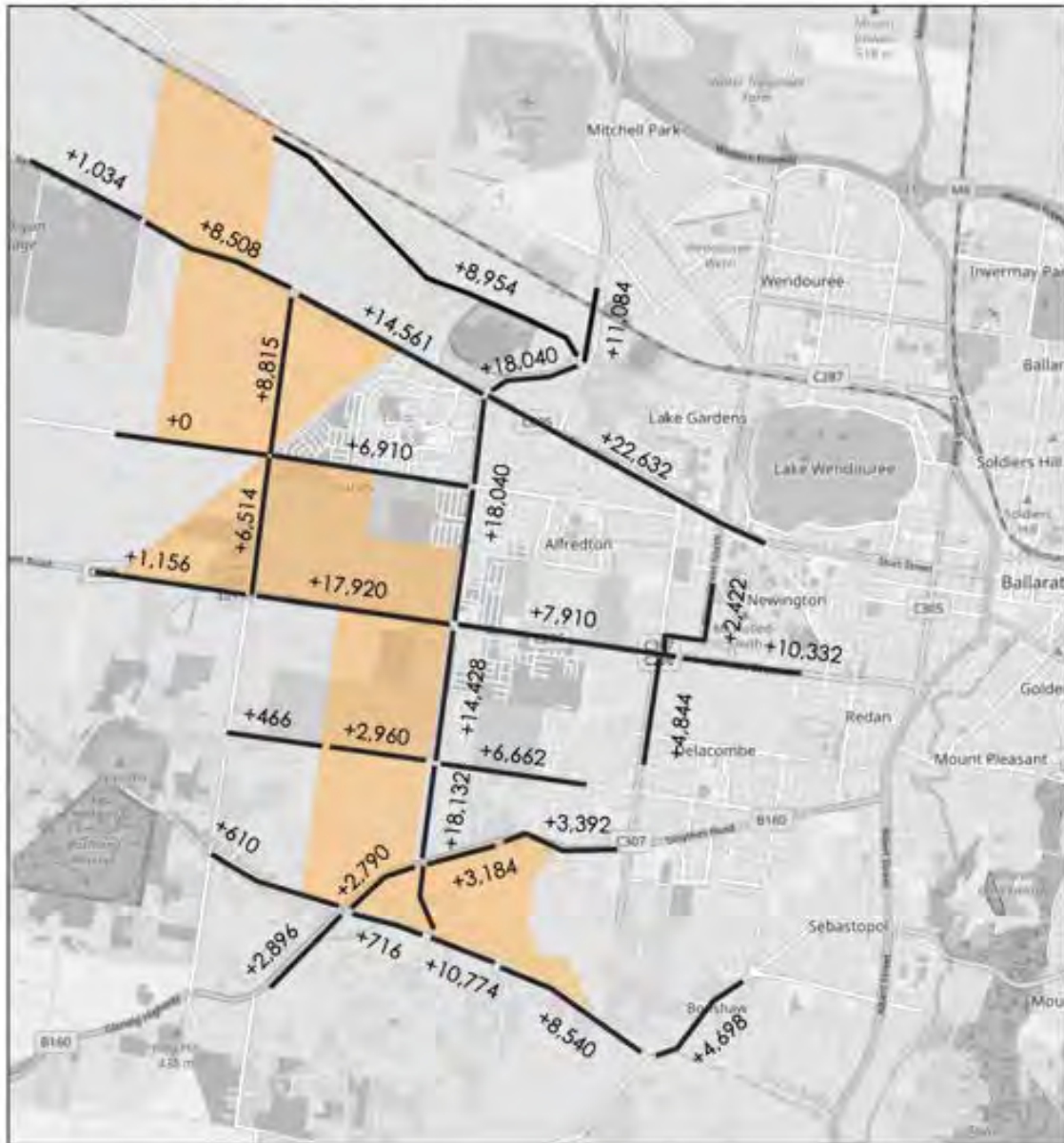
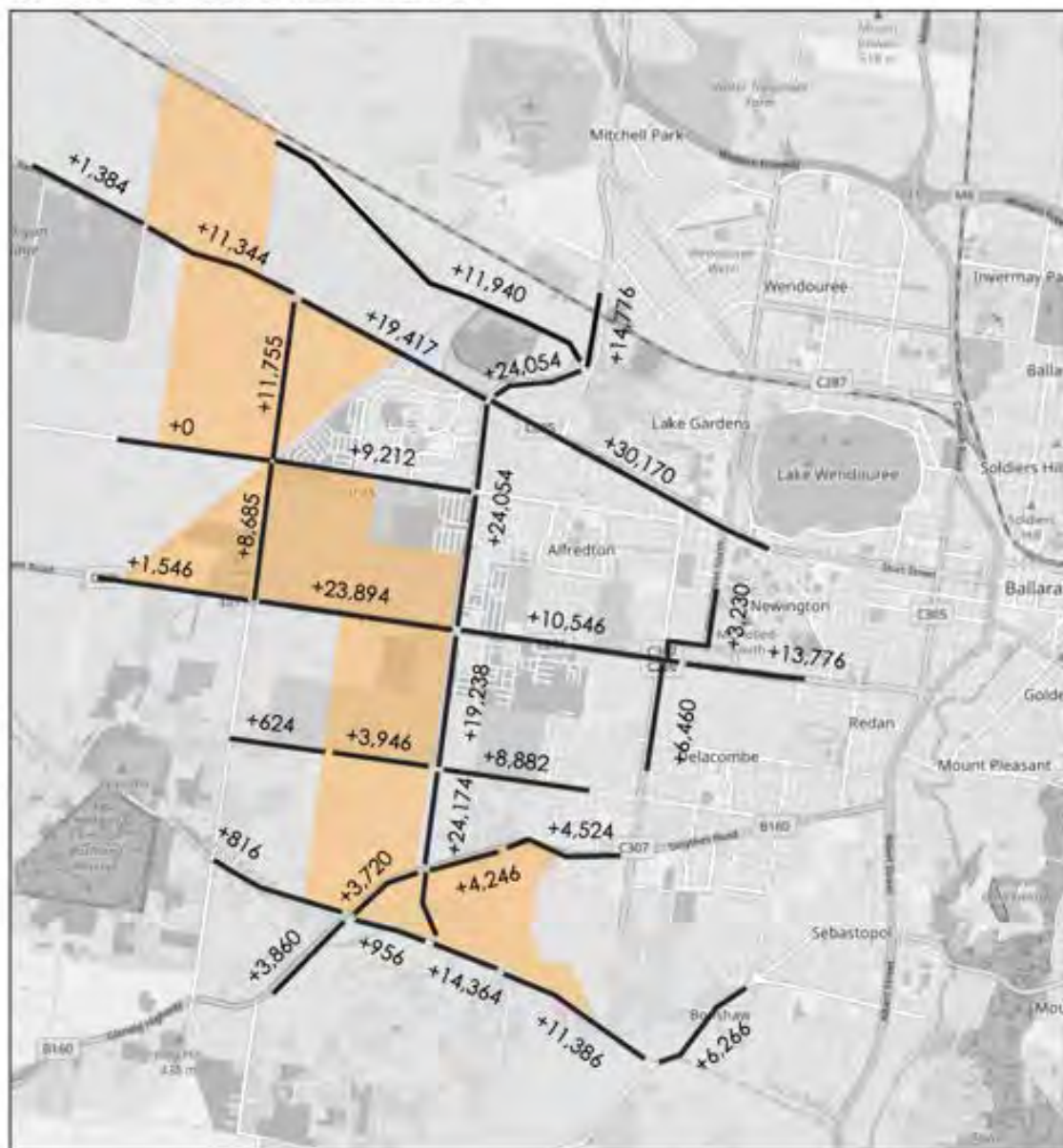


Figure 16 Traffic Volume Growth – High Yield



The above data suggests considerable growth in traffic volumes along major routes servicing the growth areas, including Remembrance Drive / Sturt Street into central Ballarat, the Link Road, and Ballarat-Camgham Road, regardless of the growth scenario.

Modest levels of growth are also expected to the south-west and north-west. While traffic volumes are expected to remain within capacity for these roads, there may be some potential impact top farming areas.

When combined with existing flows, future traffic volumes are likely to exceed the existing capacity of many roads within and adjacent to the growth areas. The following are "rule of thumb" typical capacities for major roads:

- Collector Street: 7,000 vpd, ~18m minimum reservation;
- Link Road: 15,000 vpd, ~25m minimum reservation;
- Single carriageway (two-lane, two-way): 20,000 vpd, ~25m minimum reservation;
- Dual carriageway (four-lane, two-way): 40,000 vpd, ~34m minimum reservation; and
- Triple carriageway (six-lane, two-way): 60,000 vpd, ~40m minimum reservation.



Table 4 Future Road Network

Road Name	Location	Low Yield				High Yield			
		Approximate Future Traffic Volumes	Future Classification	Upgrade Required	Land Acquisition	Approximate Future Traffic Volumes	Future Classification	Upgrade Required	Land Acquisition
Remembrance Drive	West of Draffins Rd	2,000	Arterial – 2 lane	No	None	2,500	Arterial – 2 lane	No	None
Remembrance Drive	Draffins Rd & Finchs Rd	12,000	Arterial – 2 lane	No	None	15,000	Arterial – 2 lane	No	None
Remembrance Drive	Finchs Rd & Dyson Dr	18,500	Arterial – 2 lane	Yes	None	23,000	Arterial – 4 lane	Yes	None
Remembrance Drive	East of Dyson Dr	34,500	Arterial – 4 lane	Yes	None	42,000	Arterial – 6 lane	Yes	None
Finchs Road	Cuthberts Rd & Remembrance Dr	9,000	Link Road	Yes	Yes	12,000	Link Road	Yes	Yes
Finchs Road	Ballarat-Carngham Rd & Cuthberts Rd	6,500	Link Road	Yes	Yes	8,500	Link Road	Yes	Yes
Cuthberts Road	West of Finchs	1,000	Collector Street	Yes	None	1,000	Collector Street	Yes	None
Cuthberts Road	East of Finchs	9,000	Link Road	Yes	None	11,000	Link Road	Yes	None
Ballarat-Carngham Road	West of Finchs Rd	1,500	Arterial – 2 lane	No	None	1,500	Arterial – 2 lane	No	None
Ballarat-Carngham Road	Finchs Rd & Dyson Dr	23,000	Arterial – 4 lane	Yes	Yes (PAO)	29,000	Arterial – 4 lane	Yes	Yes (PAO)
Ballarat-Carngham Road	Dyson Dr & Wiltshire Ln	11,500	Arterial – 2 lane	Yes	Yes (PAO)	14,000	Arterial – 2 lane	Yes	Yes (PAO)
Latrobe Street	East of Wiltshire Ln	21,500	Arterial – 4 lane	Yes	None	25,000	Arterial – 4 lane	Yes	None
Learmonth Street	North of Ballarat-Carngham Rd	16,500	Arterial – 2 lane	No	None	17,000	Arterial – 2 lane	No	None
Wiltshire Lane	South of Ballarat-Carngham Rd	18,000	Arterial – 2 lane	No	None	19,500	Arterial – 2 lane	No	None
Link Road	North of Blind Creek Rd	16,000	Arterial – 2 lane	No	None	20,000			
Link Road (Dyson Drive)	Remembrance Dr & Blind Creek Rd	18,000	Arterial – 2 lane	No	None	22,000	Arterial – 4 lane	Yes	None
Link Road (Dyson Drive)	R*embrance Dr & Ballarat-Carngham Rd	28,000	Arterial – 4 lane	Yes	None	34,000	Arterial – 4 lane	Yes	None
Link Road (Dyson Drive)	Ballarat-Carngham Rd & Greenhalghs Rd	14,500	Arterial – 2 lane	No	None	19,000	Arterial – 2 lane	Yes	None
Link Road (Dyson Drive)	Greenhalghs Rd & Glenelg Hwy	18,000	Arterial – 2 lane	No	None	24,000	Arterial – 4 lane	Yes	None
Greenhalghs Road	West of Hayes Dr	500	Rural Access	No	None	500	Rural Access	No	None
Greenhalghs Road	Hayes Dr & Link Rd	4,000	Collector Street	Yes	None	5,000	Collector Street	Yes	None
Greenhalghs Road	East of Link Rd	8,500	Link Road	Yes*	None	11,000	Link Road	Yes*	None
Bells Road	West of Glenelg Hwy	2,000	Link Road	Yes	None	2,000	Link Road	Yes	None
Bells Road	Glenelg Hwy & Link Rd	1,000	Link Road	Yes	None	1,000	Link Road	Yes	None
Bells Road	Link Road & Doble Rd	5,500	Arterial – 2 lane	No	None	7,000	Arterial – 2 lane	No	None
Bells Road	Doble Rd & Ross Creek Rd	11,000	Arterial – 2 lane	No	None	14,500	Arterial – 2 lane	No	None
Bells Road	East of Ross Creek Rd	10,000	Arterial – 2 lane	No	None	13,000	Arterial – 2 lane	No	None
Glenelg Highway	Southwest of Bells Rd	8,000	Arterial – 2 lane	No	None	9,000	Arterial – 2 lane	No	None
Glenelg Highway	Bells Rd to Link Rd	9,000	Arterial – 2 lane	No	None	10,000	Arterial – 2 lane	No	None
Glenelg Highway	Link Rd to Masada Blvd	9,500	Arterial – 2 lane	No	None	10,500	Arterial – 2 lane	No	None
Glenelg Highway	East of Masada Blvd	8,500	Arterial – 2 lane	No	None	9,500	Arterial – 2 lane	No	None
Ross Creek Road	North of Bells Rd	5,500	Link Road	No	None	7,500	Link Road	No	None
Blind Creek Road	West of Link Road	10,000	Link Road	Yes	None	13,000	Link Road	Yes	None

* To be upgraded within Ballarat West PSP area



Figure 17 Traffic Network – Low Yield

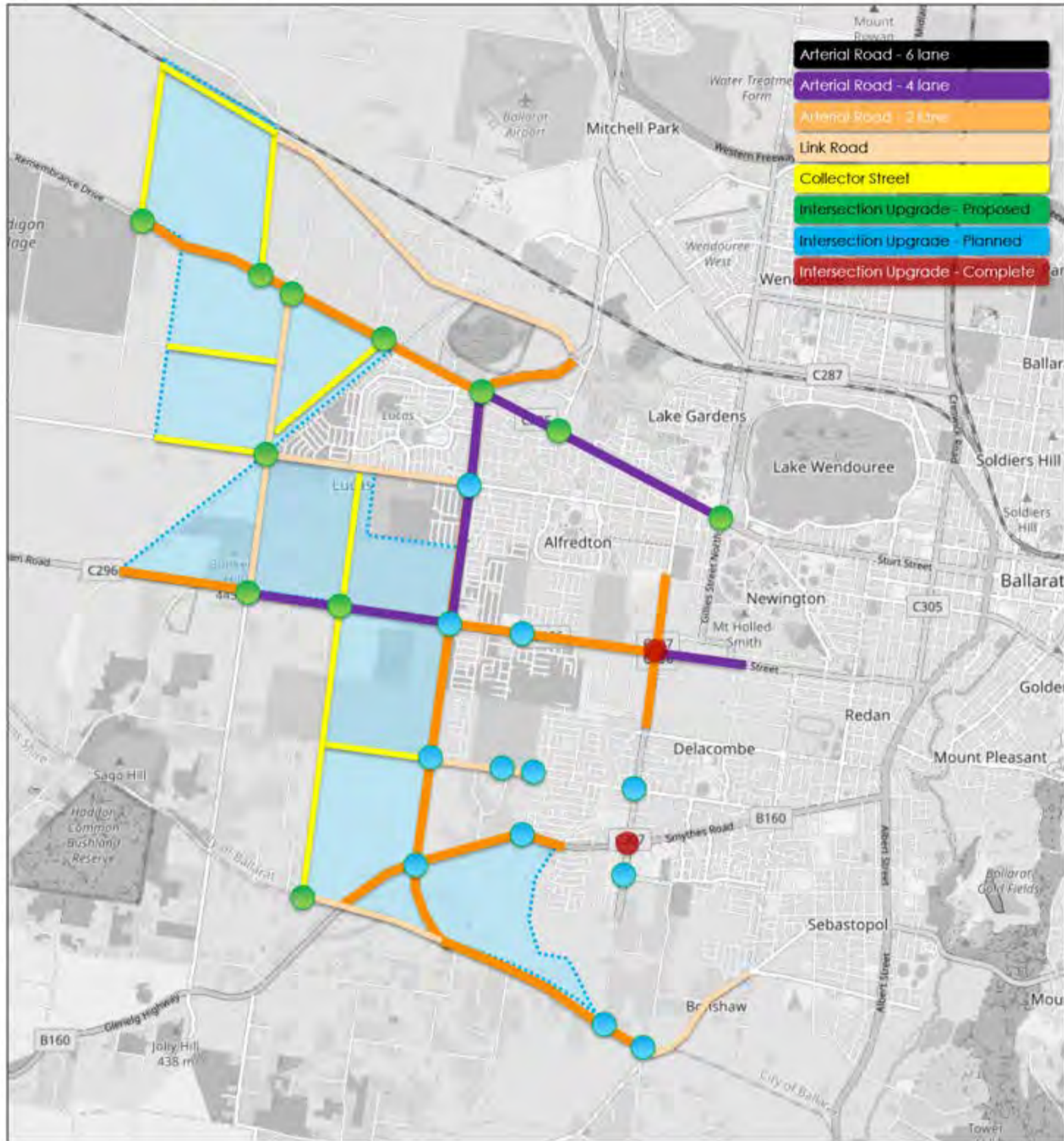
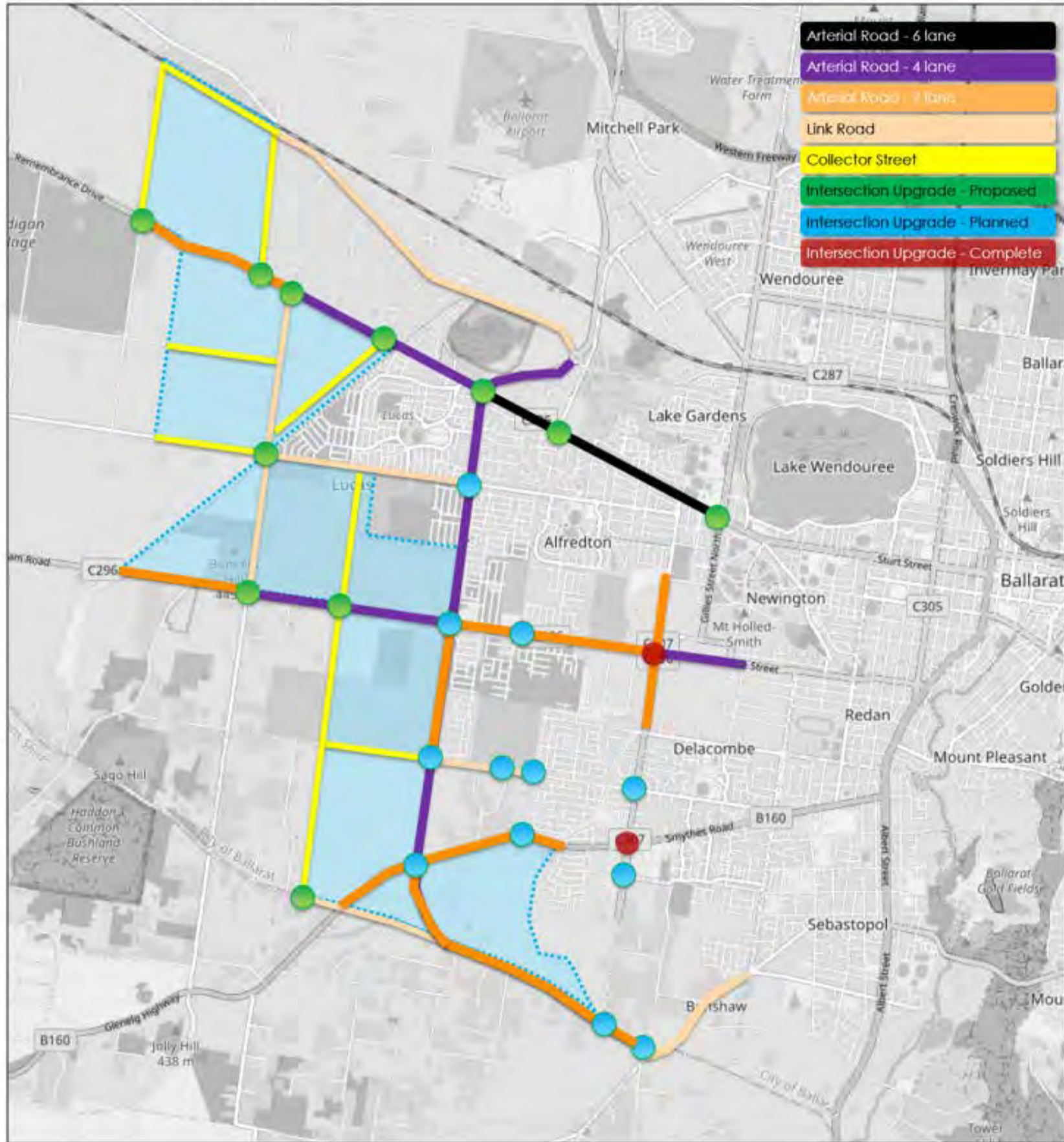




Figure 18 Traffic Network – High Yield





8.3 Discussion

Notable observations from the modelling include:

- The low-yield scenario of 15dw/h (plus non-residential uses) results in approximately 18,300 vpd in the section of Remembrance Drive west of the Link Road, suggesting no upgrade on this section would be required. Modelled traffic volumes in the high-yield scenario will exceed the capacity of the existing cross-section (20,000 vpd), east of Finchs Road, indicating approximately 23,000 vpd. The density threshold across both growth areas is approximately 16.5 dw/h, which equates to in the order of 7,900 dwellings within the north-western growth area, and 14,200 within the western area.
- It is anticipated that Remembrance Drive may be readily upgraded to a 4-lane cross-section up to Ring Road, as illustrated within Figure 19 and Figure 20 below.
- In low or high-growth scenarios, the section of Remembrance Drive / Sturt Street south-east of Link Road will require a 4-6 lane cross-section. A four-lane cross-section may be achieved per the sketch below. A 6-lane cross-section will necessitate removal of the existing trees as shown in Figure 20, though can be accommodated within the existing reservation. This should be considered in context with environmental and heritage considerations.
- Further south-east along Remembrance Drive / Sturt Street, it appears as though the north-westbound carriageway could be modified to provide two 3.5m traffic lanes, however it is expected that traffic along the outer edges of the pavement may impact the health of the trees. Additionally, placing traffic closer to these trees will likely necessitate crash protection with guardrail of some description.
- Latrobe Street (east of Wiltshire Lane) is expected to exceed its daily traffic capacity, necessitating an upgrade to a 4-lane cross-section;
- The duplication of Ballarat-Carngham Road east of Link Road is not considered necessary, with a 2-lane cross-section sufficient for future traffic flows. Estimates of future volumes suggesting a 4-lane cross-section would be required between Finchs Road and Dyson Drive;
- The unconstructed portions of the Link Road will need either a 2-lane or 4-lane cross-section;
- Both Greenhalghs Road and Cuthberts Road are projected to have sufficient capacity for future growth in both scenarios. The impacts of continuing development within the PSP area should be confirmed.
- New intersections of Connector/Connector, Connector/Arterial or Arterial/Arterial roads will require upgrade to signalised or roundabout control to ensure they remain functioning at appropriate safety and capacity levels. Various existing intersections will also require capacity upgrades to match into expanded approach roads, and may require localised flaring or acquisition to cater for turn lanes and paths where matching into widened cross-sections.
- In broad terms, the preceding modelling estimates indicate that the planned level of development can be catered for, subject to the provision of supporting transport infrastructure.
- Additional development capacity could be potentially realised within the north-western precinct, should a formalised rail crossing and road connection be provided to Wiggins Road / Airport Road. It is noted however that this will be required to be grade-separated, at considerable expense.
- Further technical investigations will need to be undertaken as part of PSP preparation to determine constraints associated with the proposed road network, including consideration of cultural heritage, amenity and vegetation.
- Further development and provision of sustainable transport options (e.g. mobility hubs) may assist with minimising traffic infrastructure requirements.

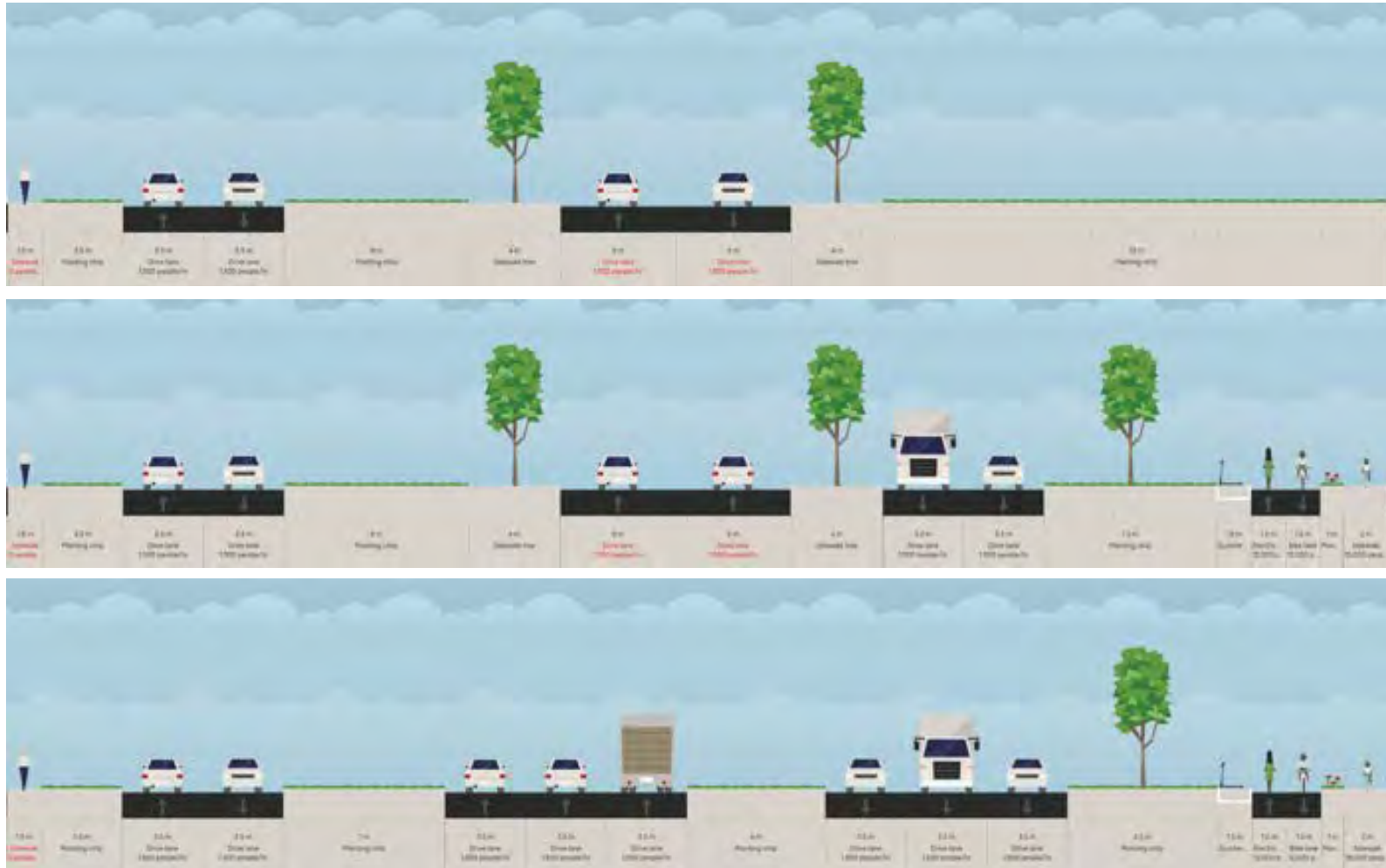


Figure 19 Remembrance Drive: Finchs Road to Link Road – Existing (top) and proposed (bottom)





Figure 20 Remembrance Drive: Link Road to Ring Road – Existing (top), 4-lane (middle), 6-lane (bottom)



The above analysis and conclusions are drawn from a conventional "predict and provide" approach to modelling. The development of these growth areas is a long-term prospect, and likely represents a land supply for in excess of 30 years. This long-term development horizon suggests likely changes in household trip generation, and ongoing reductions in car trips. Should the growth areas succeed in achieving many of Council's aspirations for increased active and public transport use, there will naturally be reduced reliance on private vehicle trips, and lesser requirements for supporting road infrastructure.

Additionally, there are both "push" and "pull" factors that influence travel mode choice. Introduction of improved sustainable transport services and facilities "pull" more trips by improving the relative attractiveness of these modes. "Push" factors include elements like traffic congestion or parking pricing that offer a disincentive to private vehicle trips, and are an important travel demand management tool. There is presently limited congestion in Ballarat during commuter peak periods, but with ongoing development from the PSP and growth areas, this is expected to increase.

8.4 Sensitivity Testing

In addition to the above analysis, we have been requested to evaluate the development capacity and traffic impacts to the growth areas if the Link Road extension to Bells Road is never able to be delivered. This assessment is outlined below, which considers both the fully developed growth areas, and an evaluation of development capacity up to typical capacity thresholds for key road links.

The modelling results assume the completion of the following pieces of road infrastructure:

- Duplication of Ballarat-Carngham Road (as a four-lane arterial);
- Completion of all roads and intersections within the Ballarat West PSP.

The additional daily traffic volumes within and surrounding the growth areas are illustrated in Figure 15 below.

Figure 21 Traffic Volume Growth – Low Yield (No Link Road)

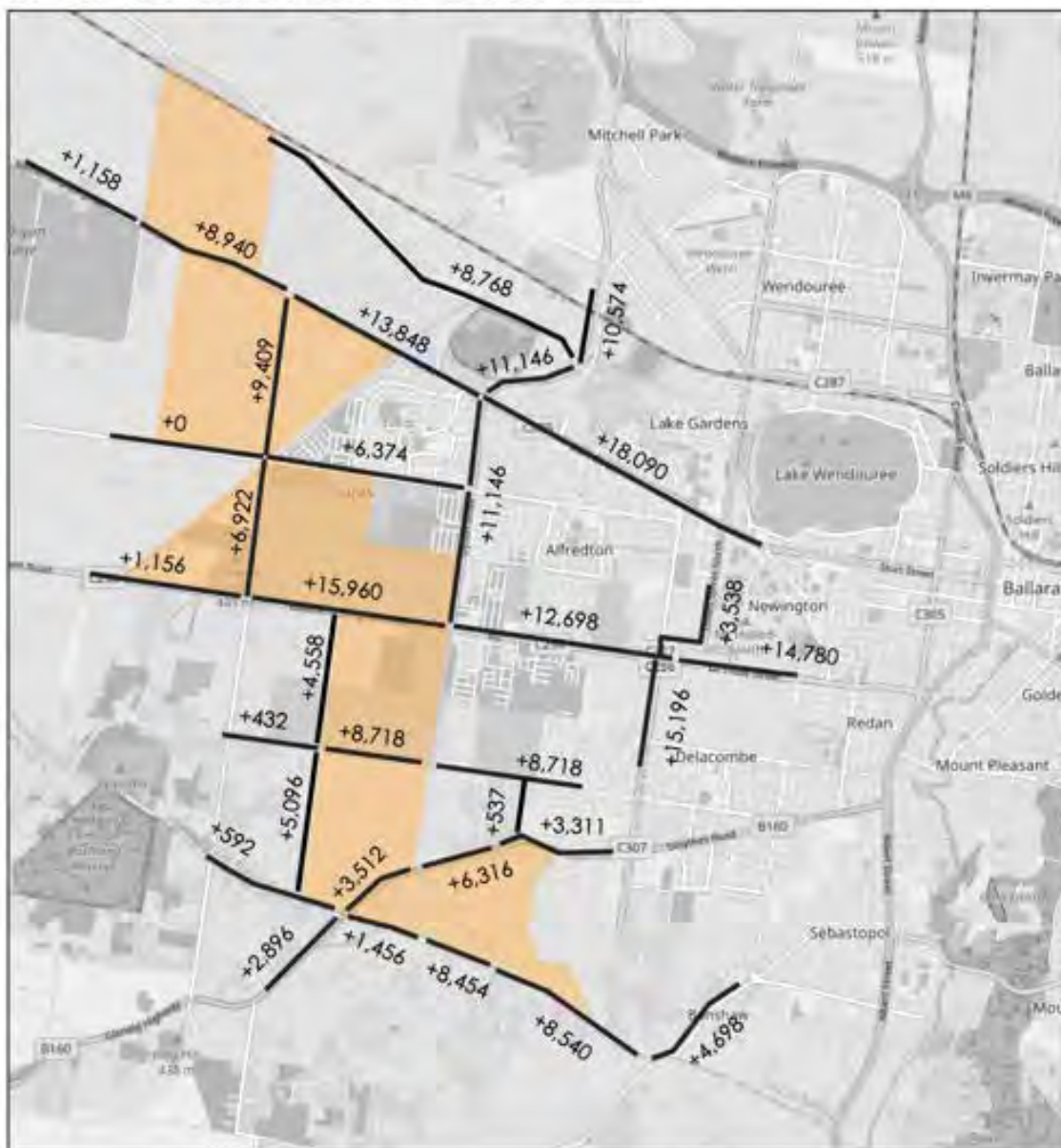


Figure 22 Traffic Volume Growth – High Yield (No Link Road)

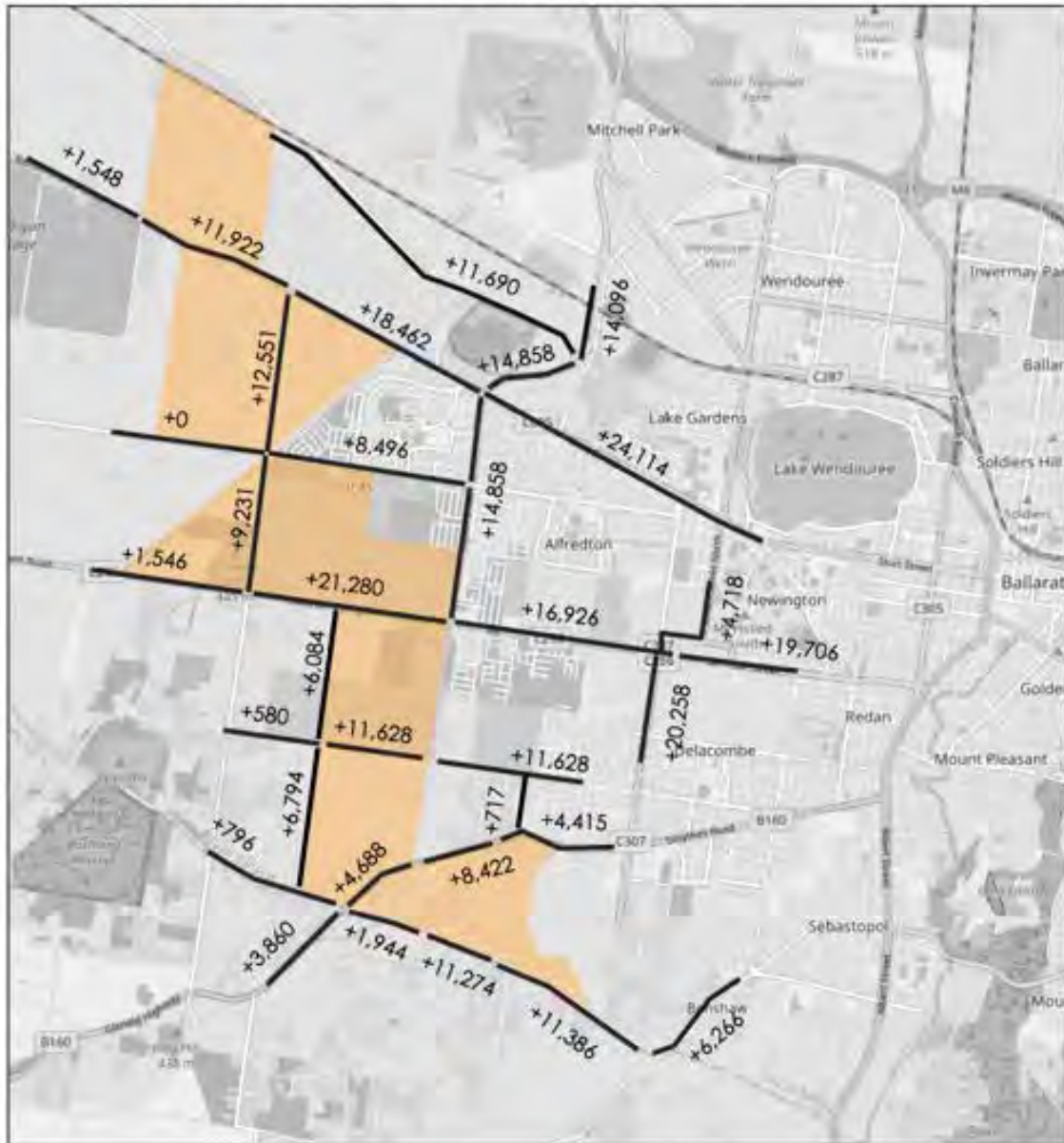




Table 5 Future Road Network (No Link Road)

Road Name	Location	Low Yield				High Yield			
		Approximate Future Traffic Volumes	Future Classification	Upgrade Required	Land Acquisition	Approximate Future Traffic Volumes	Future Classification	Upgrade Required	Land Acquisition
Remembrance Drive	West of Draffins Rd	2,000	Arterial – 2 lane	No	None	2,500	Arterial – 2 lane	No	None
Remembrance Drive	Draffins Rd & Finchs Rd	12,500	Arterial – 2 lane	No	None	15,500	Arterial – 2 lane	No	None
Remembrance Drive	Finchs Rd & Dyson Dr	17,500	Arterial – 2 lane	No	None	22,000	Arterial – 4 lane	Yes	None
Remembrance Drive	East of Dyson Dr	30,000	Arterial – 4 lane	Yes	None	36,000	Arterial – 4 lane	Yes	Yes
Finchs Road	Cuthberts Rd & Remembrance Dr	9,500	Link Road	Yes	Yes	12,500	Link Road	Yes	Yes
Finchs Road	Ballarat-Camrgham Rd & Cuthberts Rd	7,000	Link Road	Yes	Yes	9,000	Link Road	Yes	Yes
Cuthberts Road	West of Finchs	1,000	Collector Street	Yes	None	1,000	Collector Street	Yes	None
Cuthberts Road	East of Finchs	8,500	Link Road	Yes	None	10,500	Link Road	Yes	None
Ballarat-Camrgham Road	West of Finchs Rd	1,500	Arterial – 2 lane	No	None	1,500	Arterial – 2 lane	No	None
Ballarat-Camrgham Road	Finchs Rd & Dyson Dr	21,000	Arterial – 4 lane	Yes	Yes (PAO)	26,500	Arterial – 4 lane	Yes	Yes (PAO)
Ballarat-Camrgham Road	Dyson Dr & Wiltshire Ln	16,000	Arterial – 2 lane	No	Yes (PAO)	20,500	Arterial – 4 lane	Yes	Yes (PAO)
Latrobe Street	East of Wiltshire Ln	26,000	Arterial – 4 lane	Yes	None	30,500	Arterial – 4 lane	Yes	None
Learmonth Street	North of Ballarat-Camrgham Rd	17,500	Arterial – 2 lane	No	None	18,500	Arterial – 2 lane	No	None
Wiltshire Lane	South of Ballarat-Camrgham Rd	28,000	Arterial – 4 lane	Yes	None	33,500	Arterial – 4 lane	Yes	None
Link Road	North of Blind Creek Rd	15,500	Arterial – 2 lane	No	None	19,000	Arterial – 2 lane	No	None
Link Road (Dyson Drive)	Remembrance Dr & Blind Creek Rd	17,000	Arterial – 2 lane	No	None	21,000	Arterial – 4 lane	Yes	None
Link Road (Dyson Drive)	Rembrance Dr & Ballarat-Camrgham Rd	21,500	Arterial – 4 lane	Yes	None	25,000	Arterial – 4 lane	Yes	None
Link Road (Dyson Drive)	Ballarat-Camrgham Rd & Greenhalghs Rd	-	-	-	-	-	-	-	-
Link Road (Dyson Drive)	Greenhalghs Rd & Glenelg Hwy	-	-	-	-	-	-	-	-
Greenhalghs Road	West of Hayes Dr	500	Rural Access	No	None	500	Rural Access	No	None
Greenhalghs Road	Hayes Dr & Link Rd	10,000	Link Road	Yes	Yes	13,000	Link Road	Yes	Yes
Greenhalghs Road	East of Link Rd	10,500	Link Road	Yes*	No	13,500	Link Road	Yes*	No
Bells Road	West of Glenelg Hwy	2,000	Link Road	Yes	None	2,000	Link Road	Yes	None
Bells Road	Glenelg Hwy & Link Rd	1,500	Link Road	Yes	None	2,000	Link Road	Yes	None
Bells Road	Link Road & Doble Rd	3,000	Link Road	No	None	4,000	Link Road	No	None
Bells Road	Doble Rd & Ross Creek Rd	8,500	Link Road	No	None	11,500	Link Road	No	None
Bells Road	East of Ross Creek Rd	10,000	Link Road	No	None	13,000	Link Road	No	None
Glenelg Highway	Southwest of Bells Rd	8,000	Arterial – 2 lane	No	None	9,000	Arterial – 2 lane	No	None
Glenelg Highway	Bells Rd to Link Rd	10,000	Arterial – 2 lane	No	None	11,000	Arterial – 2 lane	No	None
Glenelg Highway	Link Rd to Masada Blvd	12,500	Arterial – 2 lane	No	None	15,000	Arterial – 2 lane	No	None
Glenelg Highway	East of Masada Blvd	8,500	Arterial – 2 lane	No	None	9,500	Arterial – 2 lane	No	None
Ross Creek Road	North of Bells Rd	5,500	Link Road	No	None	7,500	Link Road	No	None
Blind Creek Road	West of Link Road	10,000	Link Road	Yes	None	12,500	Link Road	Yes	None
N/S Collector	Ballarat-Camrgham Rd & Greenhalghs Rd	4,500	Collector Street	Yes	Yes	6,000	Collector Street	Yes	Yes
N/S Collector	Greenhalghs Rd & Glenelg Hwy	5,000	Collector Street	Yes	Yes	7,000	Collector Street	Yes	Yes
Innsbruck Road	Greenhalghs Rd & Glenelg Hwy	1,000	Link Road	Yes*	No	1,000	Link Road	Yes*	No

* To be upgraded within Ballarat West PSP area



Figure 23 Traffic Network – Low Yield (No Link Road)

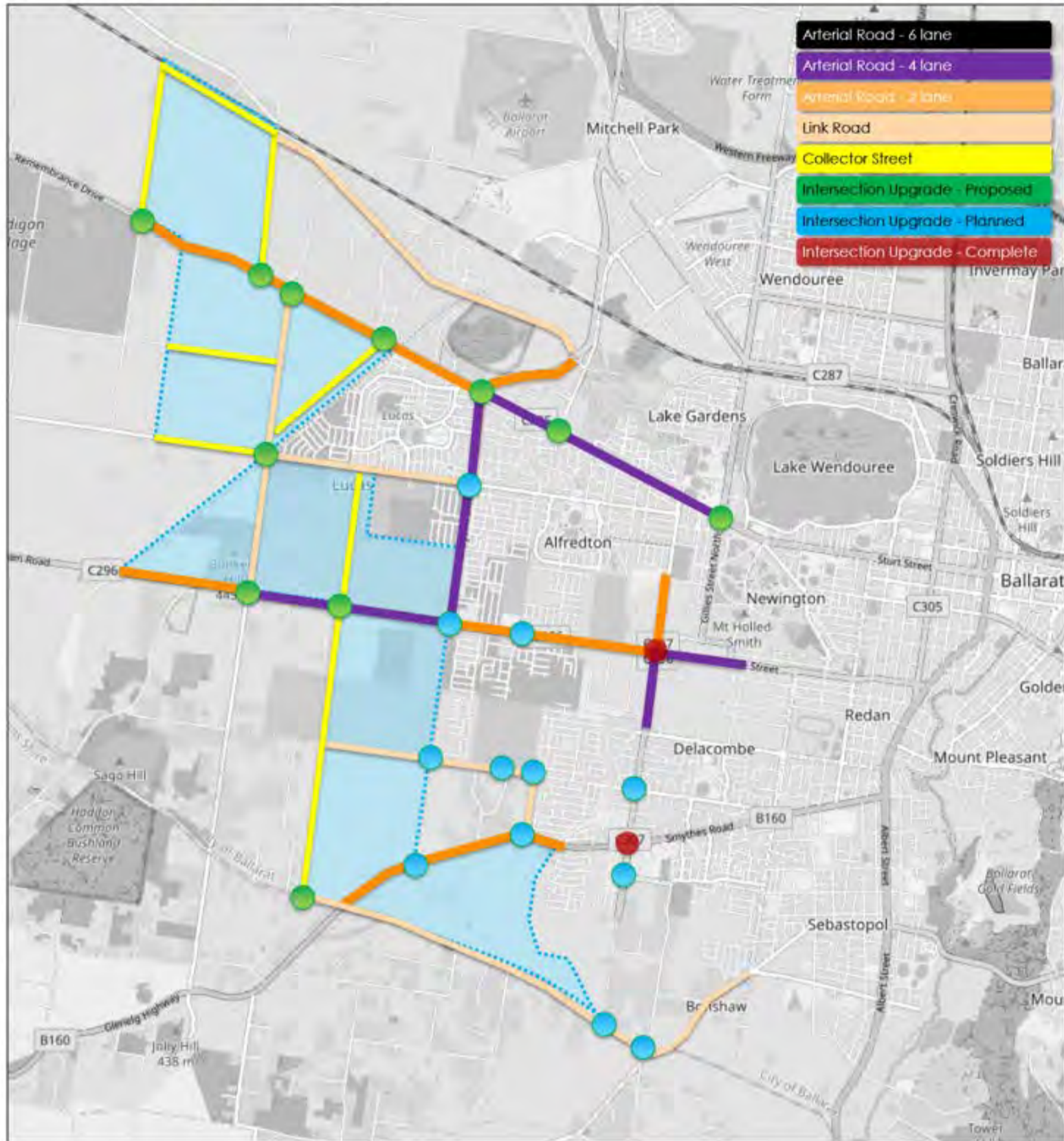
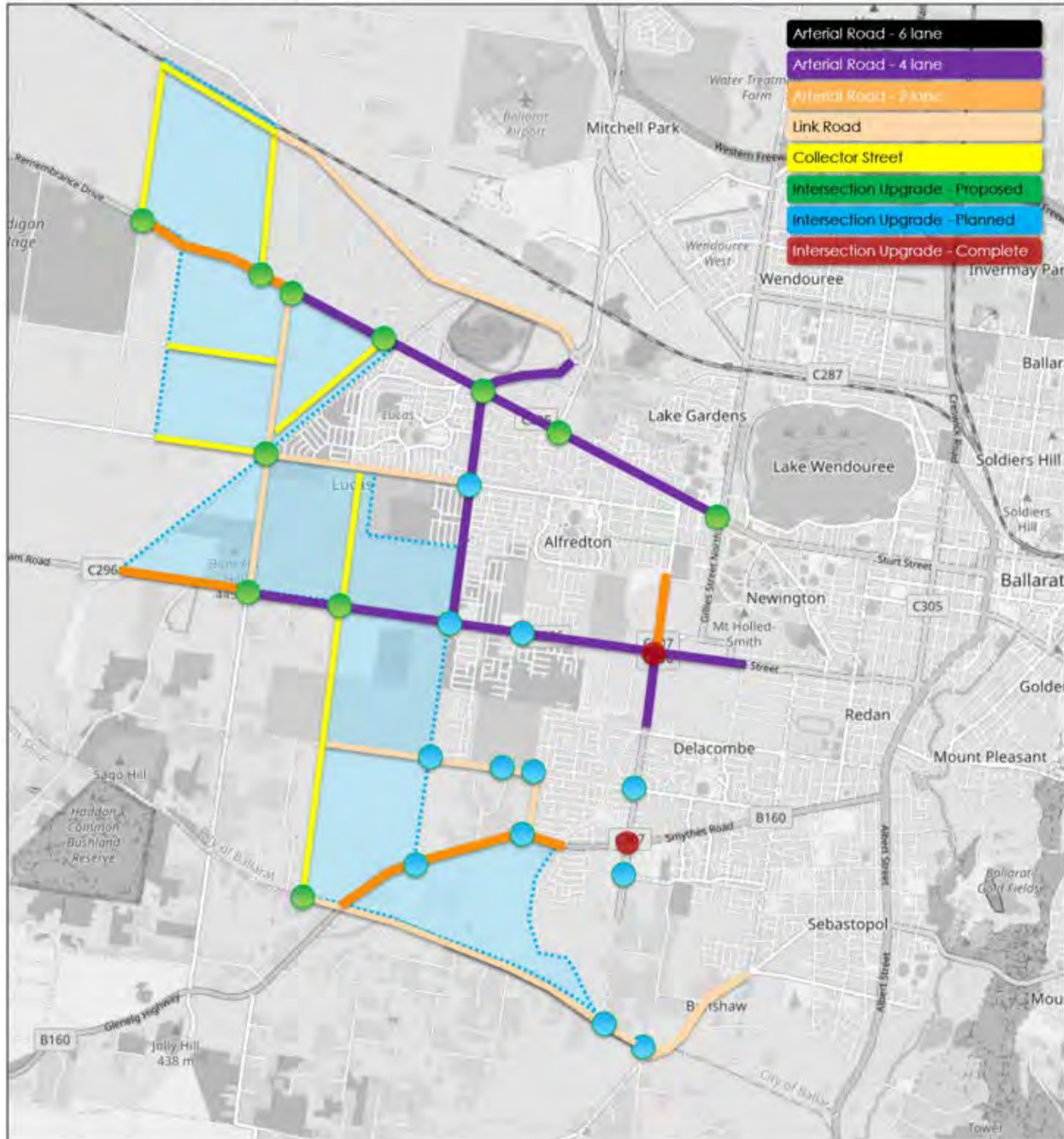




Figure 24 Traffic Network – High Yield (No Link Road)





Notable observations from the modelling include:

- The removal of the southern portion of the Link Road places a greater reliance on alternative north-south road connections and linking routes. Ballarat-Camgham Road, Wiltshire Lane and Greenhalghs Road in particular are required to accommodate higher traffic volumes relative to the equivalent Link Road scenario;
- Traffic volumes along Remembrance Drive still necessitate upgrades to either 4-lane or 6-lane cross-sections. As identified above, a 4-lane cross-section may be relatively easily accommodated west of the Link Road, however upgrades east of the Link Road would necessitate alterations to the existing tree planting;
- Subject to resolving the upgrade requirements on Remembrance Drive, the planned levels of development can be accommodated.

We have determined development thresholds (number of developed lots) at which point critical roads must be upgraded to provide additional mid-block capacity. These are outlined below in Table 6

Table 6 Road Upgrade Thresholds

		Road Upgrade	Threshold
Remembrance Drive	Finchs Rd & Dyson Dr	2 lanes > 4 lanes	15,600 lots
Remembrance Drive	East of Dyson Dr	2 lanes > 4 lanes	9,400 lots
Ballarat-Camgham Road	Finchs Rd & Dyson Dr	2 lanes > 4 lanes	18,700 lots
Ballarat-Camgham Road	Dyson Dr & Wiltshire Ln	2 lanes > 4 lanes	25,400 lots
Latrobe Street	East of Wiltshire Ln	2 lanes > 4 lanes	12,000 lots
Wiltshire Lane	South of B-C Rd	2 lanes > 4 lanes	9,400 lots
Link Road (Dyson Drive)	R'brance Dr & Blind Creek Rd	2 lanes > 4 lanes	25,400 lots
Link Road (Dyson Drive)	R'brance Dr & B-C Rd	2 lanes > 4 lanes	17,400 lots

8.5 Development Sequencing

In addition to the above analysis, we have also undertaken a review of potential sequencing of development, to understand how this may impact on the timing and need for transport infrastructure.

Assuming that the Link Road is not completed prior to any land development occurring within the study area, we have established that any half of the southern or northern portions of the Western and North-Western growth areas may be fully developed without requiring road cross-section upgrades external to the study area. Capacity constraints on Cuthberts Road immediately west of the Link Road may need to be reviewed with ongoing development in this area. There would naturally be a requirement though for provision of roads and intersections servicing the precinct directly.

Should the North-Western precinct develop first in its entirety (approximately 9,600 lots), then the upgrade warrants for Remembrance Drive (east of Dyson Drive) would be met (by 500 vehicles per day).

Should the Western precinct develop first in its entirety (approximately 17,200 lots), then upgrades to Latrobe Street (east of Wiltshire Lane) and Wiltshire Lane (south of Ballarat-Camgham Road) would be met, exceeding capacity by approximately 3,500-4,000 vehicles per day.

If the Link Road is constructed at the time of development, development thresholds and upgrades are generally the same, with the exception of the Western growth precinct. Should the northern portion of this area develop first (7,700 lots), warrants would be met for Latrobe Street duplication, and Ballarat-Camgham Road (between Finchs Road and Link Road) due to increased reliance on



Link Road for north-south connections. Should the southern portion develop first (9,500 lots), there are no requirements for transport upgrades at all across the study area and surrounds (except for direct connections and internal roads).

We emphasise that the above conclusions assume all roads and upgrades contemplated within the BWSP are completed. At such time that any PSPs for the growth areas are prepared, or precincts developed it is recommended that further modelling specific to those areas is undertaken.

8.6 Cost Apportionment

onemilegrid has been requested to provide comment on the basis or need for contributions from the study areas towards funding of the Link Road construction.

The principles of establishing contributions towards communally used infrastructure were established at the Administrative Appeals Tribunal of Victoria (Eddie Barron Constructions Pty Ltd v Shire of Pakenham (1991)) and are summarised below:

- 1) Need – The need created by the development and the measures, to satisfy the need must be adequately identified
- 2) Equity – The payment or levy must be a fair and reasonable apportionment of the cost of implementing the need satisfaction measures
- 3) Accountability – The responsible authority should implement procedures to ensure that the money collected cannot be used for any purpose other than that for which it was levied and which clearly show how, when and where the money collected is spent
- 4) Nexus – There must be a reasonable nexus between the development and the need satisfaction measures

While the transport network may function without the southern portion of the Link Road, there is greater reliance on alternative, less direct access routes, and there is clearly a *need* for the infrastructure.

An established methodology for calculating an *equitable* contribution towards infrastructure upgrades is based on the relative contribution of each party towards future traffic volumes. This ensures that any 'agent of change' is not unreasonably imposed the entire costs of mitigating measures because (for example) they are the last to develop. Modelling results presented in Table 4 indicate daily traffic volumes of between 14,500 and 24,000 on new sections of the Link Road, in isolation of changes in existing traffic movements from completion of the road, and also excluding any traffic growth associated with ongoing development in the Ballarat West PSP area. Further analysis will need to be undertaken to determine the relative proportions of traffic flow associated with the study area.

In terms of *accountability*, it is envisioned that there will be a legal arrangement whereby any contributions must be directed towards the transport infrastructure. This is beyond the scope of our review.

The generally accepted tests of *nexus* are that:

- 1) The condition must fairly and reasonably relate to the proposed development
- 2) The condition must reasonably be directed to the achievement of a planning objective or at least have that effect

There is a direct link between development within the study area, and the performance of the surrounding transport network, and that the upgrades benefit both the broader community and residents and visitors to the growth areas.



9 CONCLUSION

onemilegrid has been engaged by Taylors on behalf of Ballarat City Council to assist with traffic and transport aspects of an Infrastructure Servicing Strategy for the Western and North-Western Growth Areas of Ballarat. This strategy is intended to identify key issues or constraints associated with future development of the area and plan for necessary infrastructure to support future residents.

It is envisioned that this document is primarily an assessment of the general feasibility of further land development, which will eventually be followed by further assessment and analysis as part of a Precinct Structure Planning process.

Having regard to the preceding report, we can draw the following conclusions:

- Council has prepared a considerable body of strategic documentation that outlines its desire for a healthy and sustainable city. These provide clear direction on the provision of active and public transport facilities within established and growth areas of the city.
- The growth areas are located in close proximity to the Ballarat West Precinct Structure Plan area, that is undergoing development. Traffic growth and infrastructure provided in the PSP area will naturally influence traffic conditions on major access routes to the growth areas that are the focus of this review.
- Provision of high-quality public transport services to the growth areas will be essential to **achieving many of Council's transport goals**. Provision should be made for the following public transport elements as part of the Infrastructure Servicing Strategy:
 - ✦ A future railway station.
 - ✦ High-frequency routes along the transit corridors of Ballarat-Carngham Road, Glenelg Highway, Remembrance Drive and the Link Road.
 - ✦ Secondary bus routes along adjacent major roads to achieve increased coverage.
 - ✦ Provision for bus head start infrastructure at all signalised intersections.
- Similarly, active transport infrastructure should be considered in the transport infrastructure needs of the growth areas, and should generally include:
 - ✦ Provision of dedicated off-road bicycle paths along arterial routes, separated from pedestrian facilities.
 - ✦ Provision of alternate cycling and shared path facilities for recreation along waterways and reserves.
 - ✦ Retention of the Ballarat-Skipton Rail Trail and improvement as an active transport connection.
 - ✦ Priority crossings for shared paths and bicycle paths at uncontrolled side-road intersections.
 - ✦ Signalised pedestrian crossings where signalised intersections are otherwise not provided near major destinations.
 - ✦ Potential for mobility hubs at key locations.
- Traffic modelling has been undertaken to assess the potential demand for vehicle trips within the growth areas and along key feeder routes. This assessment has not considered the cumulative impacts of undeveloped land within the BWSP area, but has assumed that the BWSP road network is fully delivered.
- The modelling assumes a traffic generation rate lower than typically adopted, on the assumption that the growth areas will be serviced by a dense, high-quality network of sustainable transport options.
- Considerable traffic growth is expected in many locations, but modelling estimates indicate that the planned level of development can be catered for, subject to the provision of supporting transport infrastructure triggering requirements for upgraded traffic infrastructure.



- Sufficient space is largely available to facilitate these upgrades within existing or planned road reservations, with the exception of Remembrance Drive, where upgrades may necessitate the removal of important trees within the reservation under some development scenarios.
- Further technical investigations will need to be undertaken as part of PSP preparation to determine constraints associated with the proposed road network, including consideration of cultural heritage, amenity and vegetation. Additionally, further review of sustainable transport options and travel demand management tools may assist with minimising traffic infrastructure requirements however these are beyond the scope of this review.
- Should the southern portion of the Link Road not be completed, the network may still cater for development, albeit with increase infrastructure requirements elsewhere across the network;
- Development thresholds (no. of lots) have been determined to identify when key infrastructure elements would need to be delivered.
- The sequence of lane development will influence the need for supporting traffic infrastructure, but (subject to this infrastructure being provided), there is no preference for a preferred development sequence from a transport perspective.
- There is likely to be a reasonable case for contributions from the growth areas towards construction of the Link Road.
- As further planning for the growth areas development occurs, there is likely to be need for more detailed traffic analysis, including identification for intersection upgrades and triggers, which is typically undertaken during the conventional PSP process.

Our Ref: 24258E
Ballarat North-Western & Western Growth Areas



16 APPENDIX E – TRAFFIC & TRANSPORT INFRASTRUCTURE LIST

North Western Growth Area

Item	Growth Area	Predict	Issuance Authority	Road Classification VPA List	Intersecting Classification VPA List	Indicative Estimate (\$)	Funding Source	DCP Estimate	Comments
Low Yield - Road Projects									
Draffins Road Upgrade (Between Remembrance Dr & Railway Interface Road) from rural 2 lane road to Collector Road	NW	5	Council	Collector Road		\$11.00M	Developer		
Dowling Road Upgrade (Between Remembrance Dr & Railway Interface Road) from rural 2 lane road to Collector Road	NW	5	Council	Collector Road		\$10.20M	Developer		
Railway Interface Road (Between Draffins Rd & Dowling Rd) new Collector Road	NW	5	Council	Collector Road		\$5.75M	Developer		
Remembrance Drive Upgrade (Between Ballarat Link Road & Skipton Rail Trail (Future Rd)) Upgrade from local 2 lane to 2 lane arterial	NW	4 & 5	Council	Secondary Arterial		\$9.60M	DCP	\$9.60M	
Remembrance Drive Upgrade (Between Ring Road & Ballarat Link Road) Upgrade from 2 lane to 4 lane arterial	NW	4 & 5	Council	Primary Arterial		\$9.70M	DCP	\$9.70M	
Remembrance Drive Upgrade (Between Gibbs Street & Ring Road) Upgrade from 2 lane to 4 lane arterial	NW	4 & 5	Council	Primary Arterial		\$21.95M	DCP	\$21.95M	
Remembrance Drive Upgrade (Between Dowling Rd & Draffins Rd) Upgrade from rural 2 lane to 2 lane arterial	NW	4 & 5	Council	Secondary Arterial		\$11.68M	DCP	\$11.68M	
Remembrance Drive Upgrade (Between Finchs Rd & Dowling Rd) Upgrade from rural 2 lane to 2 lane arterial	NW	4 & 5	Council	Secondary Arterial		\$3.92M	DCP	\$3.92M	
Remembrance Drive Upgrade (Between Finchs Rd & Skipton Rail Trail Interface Rd) Upgrade from rural 2 lane to 2 lane arterial	NW	4 & 5	Council	Secondary Arterial		\$10.80M	DCP	\$10.80M	
Finchs Road - Bthen Cuthberts Rd & Remembrance Dr. Upgrade from unsealed road to 2 lane collector road	NW	4	Council	Link Road		\$11.70M	Developer		
Cuthberts Road - West of Finchs Upgrade from 2 lane country road to 2 lane collector road	NW	4	Council	Collector Road		\$5.70M	Developer		
Ballarat Link Road Upgrade (Between Remembrance Dr & Blind Creek Rd) to 2 lane arterial	NW	4 & 5	Council	Secondary Arterial		\$9.60M	DCP	\$9.60M	
Blind Creek Road Upgrade (Between Dowling Rd & Ballarat Link Rd) from 2 lane rural to link road	NW	5	Council	Link Road		\$27.18M	DOI	\$27.18M	
Smarts Hill Road (Between Finchs Rd & Predict Boundary) construction of Collector Road	NW	4	Council	Collector Road		\$1.90M	Developer		
Skipton Rail Trail Interface Road (Between Finchs Rd & Remembrance Dr) construction of Collector Road	NW	4	Council	Collector Road		\$11.60M	Developer		
Low Yield - Intersection Projects									
Remembrance Drive - Ballarat Ring Road - T Intersection	NW	4 & 5	Council		Primary / Secondary T signalised	\$5.50M	Part DCP / State Gov	\$2.75M	Minimal upgrade required on this intersection. Is already 4 lane on west side and 2 lanes west bound approaching intersection. Really on east bound departing intersection that needs work
Remembrance Drive / Ballarat Link Road - Cross Intersection	NW	4 & 5	Council		Primary / Secondary Cross signalised	\$8.50M	Part DCP / State Gov	\$4.25M	

Dir Ref: 24258E
Ballarat North-Western & Western Growth Areas



Item	Growth Area	Priority	Responsible Authority	Road Classification W/A List	Intersection Classification VPA List	Ballarat Estimate (\$)	Funding Means	DCP Estimate	Comments
Bluff Street / Gillies Street - Cross Intersection	NW	4 & 5	Council		Primary / Existing Secondary Cross signalised	\$3.5M	Part DCP / State Gov	\$4.2M	
Remembrance Drive / Skipton Rail Trail Interface Road - T Intersection	NW	4	Council		Secondary / Connector Blvd T signalised	\$4.3M	DCP	\$4.3M	
Remembrance Drive / Finchs Road - T Intersection	NW	4	Council		Primary / Connector Blvd T signalised	\$4.8M	DCP	\$4.8M	
Remembrance Drive / Dowling Road - T Intersection	NW	5	Council		Secondary / Connector Blvd T signalised	\$4.3M	DCP	\$4.3M	
Remembrance Drive / Draffins Road / Whites Road - Cross Intersection	NW	5	Council		Secondary / Connector Blvd Cross signalised	\$5.3M	DCP	\$5.3M	
Bicycle Lanes			Council				DCP		
Bus Routes and Stops			Council				DCP		
						\$276.53M		\$134.57M	
High Yield - Road Projects									
Draffins Road Upgrade (Between Remembrance Dr & Railway Interface Road) from rural 2 lane road to Collector Road	NW	5	Council	Collector Road		\$11.10M	Developer		
Dowling Road Upgrade (Between Remembrance Dr & Railway Interface Road) from rural 2 lane road to Collector Road	NW	5	Council	Collector Road		\$10.20M	Developer		
Railway Interface Road (Between Draffins Rd & Dowling Rd) new Collector Road	NW	5	Council	Collector Road		\$8.7M	Developer		
Remembrance Drive Upgrade (Between Ballarat Link Road & Skipton Rail Trail (Future Rd)) Upgrade from local 2 lane to 2 lane arterial	NW	4 & 5	Council	Primary Arterial		\$12.00M	Part DCP / State Gov	\$12.00M	Also seek State Gov funding
Remembrance Drive Upgrade (Between Ring Road & Ballarat Link Road) Upgrade from 2 lane to 6 lane arterial	NW	4 & 5	Council	Primary Arterial		\$12.13M	Part DCP / State Gov	\$12.13M	Also seek State Gov funding
Remembrance Drive Upgrade (Between Gillies Street & Ring Road) Upgrade from 2 lane to 6 lane arterial	NW	4 & 5	Council	Primary Arterial		\$27.44M	Part DCP / State Gov	\$27.44M	Also seek State Gov funding
Remembrance Drive Upgrade (Between Dowling Rd & Draffins Rd) Upgrade from rural 2 lane to 2 lane arterial	NW	4 & 5	Council	Secondary Arterial		\$11.68M	DCP	\$11.68M	
Remembrance Drive Upgrade (Between Finchs Rd & Dowling Rd) Upgrade from rural 2 lane to 2 lane arterial	NW	4 & 5	Council	Secondary Arterial		\$3.52M	DCP	\$3.52M	
Remembrance Drive Upgrade (Between Finchs Rd & Skipton Rail Trail Interface Rd) Upgrade from rural 2 lane to 4 lane arterial	NW	4 & 5	Council	Primary Arterial		\$13.50M	DCP	\$13.50M	
Finchs Road - (Between Cuthberts Rd & Remembrance Dr) Upgrade from unsealed road to 2 lane collector road	NW	4	Council	Link Road		\$11.70M	Developer		
Cuthberts Road - West of Finchs Road Upgrade from 2 lane country road to 2 lane collector road	NW	4	Council	Collector Road		\$8.70M	Developer		
Ballarat Link Road Upgrade (Between Remembrance Dr & Blind Creek Rd) to 2 lane arterial	NW	4 & 5	Council	Primary Arterial		\$12.00M	DCP	\$12.00M	
Blind Creek Road Upgrade (Between Dowling Rd & Ballarat Link Rd) from 2 lane rural to link road	NW	5	Council	Link Road		\$27.18M	DCP	\$27.18M	
Smarts Hill Road (Between Finchs Rd & Precinct Boundary) construction of Collector Road	NW	4	Council	Collector Road		\$9.10M	Developer		
Skipton Rail Trail Interface Road (Between Finchs Rd & Remembrance Dr) construction of Collector Road	NW	4	Council	Collector Road		\$11.00M	Developer		
High Yield - Intersection Projects									

Doc Ref: 24268E

Balrath North-Western & Western Growth Areas



Item	Growth Area	Precinct	Responsible Authority	Road Classification WPA List	Intersecting Classification WPA List	Indicative Estimate (\$)	Funding Means	DCP Estimate	Comments
Remembrance Drive / Ballarat Ring Road - T Intersection	NW	4 & 5	Council		Primary / Secondary T signalised	\$6.50M	Part DCP / State Gov	\$3.25M	Minimal upgrade required as this intersection is already 4 lane on west side and 2 lanes west bound approaching intersection. Really on east bound departing intersection that needs work
Remembrance Drive / Ballarat Link Road - Cross Intersection	NW	4 & 5	Council		Primary / Primary Cross signalised	\$9.00M	Part DCP / State Gov	\$4.50M	
Sturt Street / Gillies Street - Cross Intersection	NW	4 & 5	Council		Primary / Existing Secondary Cross signalised	\$8.80M	Part DCP / State Gov	\$4.40M	
Remembrance Drive / Skipton Rail Trail Interface Road - T Intersection	NW	4	Council		Primary / Connector Blvd T signalised	\$4.80M	DCP	\$4.80M	
Remembrance Drive / Finchs Road - T Intersection	NW	4	Council		Primary / Link Rd T signalised	\$5.00M	DCP	\$5.00M	
Remembrance Drive / Dowling Road - T Intersection	NW	5	Council		Primary / Connector Blvd T signalised	\$4.39M	DCP	\$4.39M	
Remembrance Drive / Draffins Road / Whites Road - Cross Intersection	NW	5	Council		Primary / Connector Blvd Cross signalised	\$5.33M	DCP	\$5.33M	
Bicycle Lanes			Council				DCP		
Bio Routes and Stops			Council				DCP		
						\$734.20M		\$151.52M	

Western Growth Area

Item	Growth Area	Precinct	Responsible Authority	Road Classification WPA List	Intersecting Classification WPA List	Indicative Estimate (\$)	Funding Means	DCP Estimate	Comments
Low Yield - Road Projects									
Finchs Road - Btw Ballarat-Camgham Rd & Cuthberts Rd. Upgrade from unsealed road to 2 lane collector road.	W	3	Council	Link Road		\$10.02M	Developer		
Cuthberts Road - Btw Finchs Rd & North-South Collector. Upgrade from 2 lane country road to 2 lane collector road.	W	3	Council	Link Road		\$3.30M	DCP	\$3.30M	Collects Road external to the Growth Area
Cuthberts Road - Btw North-South Collector & Dyson Dr. Upgrade from 2 lane country road to 2 lane collector road.	W	3	Council	Link Road		\$11.25M	DCP	\$11.25M	Road upgrade outside of growth area
Balrath-Camgham Road - Btw Finchs Rd & North-South Collector Rd. Upgrade from 2 lane country road to 4 lane arterial.	W	3	Council	Primary Arterial		\$12.25M	DCP	\$12.25M	
Balrath-Camgham Road - Btw North-South Collector Rd & Dyson Dr. Upgrade from 2 lane country road to 4 lane arterial.	W	2 & 3	Council	Primary Arterial		\$12.00M	DCP	\$12.00M	
Balrath-Camgham Road - Btw Dyson Dr & Wilshire Ln. Upgrade from 2 lane country road to 2 lane arterial.	W	2 & 3	Council	Secondary Arterial		\$19.68M	DCP	\$19.68M	
Balrath-Camgham Road - Btw Finchs Rd & Skipton Rail Trail. Upgrade from 2 lane country road to 2 lane arterial.	W	3	Council	Secondary Arterial		\$12.30M	DCP	\$12.30M	
Latrobe Street - East of Wilshire Lane. Upgrade short section from 2 lane arterial to 4 lane arterial.	W	2 & 3	Council	Primary Arterial		\$10.30M	Part DCP / State Gov	\$5.15M	
Wilshire Lane Upgrade (Btw La Trobe St & Whitelaw Ave) upgrade to 4 lane arterial road.	W	2 & 3	Council	Primary Arterial		\$9.90M	Part DCP / State Gov	\$4.90M	

Our Ref: 24258E
Ballarat North-Western & Western Growth Areas



Item	Growth Area	Priority	Responsible Authority	Road Classification VPA List	Intersection Classification VPA List	Ballastown Estimate (\$)	Funding Source	DCP Estimate	Comments
Leamouth Street Upgrade (Btw La Trobe St & Napier Ave) upgrade to 2 lane arterial road	W	2 & 3	Council	Secondary Arterial		\$6.88M	Part DCP / State Gov	\$3.44M	
Greenhalghs Road - Btw North-South Collector & Dyson Dr. Upgrade from 2 lane country road to 2 lane collector road	W	2	Council	Collector Road		\$7.32M	Developer		
Bells Road - West of Glenelg Hwy. Upgrade from 2 lane country road to 2 lane arterial	W	2	Council	Link Road		\$2.49M	DCP	\$2.49M	
Bells Road - Btw Glenelg Hwy & Lewis Crt. Upgrade from 2 lane country road to 2 lane Link Road	W	1	Council	Link Road		\$8.04M	DCP	\$8.04M	
Bells Road - Btw Lewis Crt & Cherry Flat Rd. Upgrade from 2 lane country road to 2 lane Link Road	W	1	Council	Secondary Arterial		\$16.44M	DCP	\$16.44M	
Bells Road - Btw Cherry Flat Rd & Ross Creek Rd. Upgrade from 2 lane country road to 2 lane Link Road	W	1	Council	Secondary Arterial		\$5.28M	DCP	\$5.28M	
North-South Collector Road (Btw Bells Road & Greenhalghs Rd). Construct new Collector Road	W	2	Council	Collector Road		\$10.67M	Developer		
North-South Collector Road (Btw Greenhalghs Rd & Ballarat-Camgham Rd) Construct new Collector Road	W	2	Council	Collector Road		\$9.67M	Developer		
North-South Collector Road (Btw Ballarat-Camgham Rd & Cuthberts Rd) Construct new Collector Road	W	2	Council	Collector Road		\$9.61M	Developer		
Ballarat Link Road (Dyson Drive) - Btw R'barca Dr & Cuthberts Rd Upgrade from 2 lane to 4 lane arterial	W	1, 2 & 3	Council	Primary Arterial		\$11.00M	Part DCP / State Gov	\$5.50M	
Ballarat Link Road (Dyson Drive) - Btw Cuthberts Rd & Ballarat-Camgham Rd. Upgrade from 2 lane to 4 lane arterial	W	1, 2 & 3	Council	Primary Arterial		\$16.50M	Part DCP / State Gov	\$8.25M	
Ballarat Link Road (Dyson Drive) - Btw Ballarat-Camgham Rd & Greenhalghs Rd. Upgrade to 2 lane arterial	W	1, 2 & 3	Council	Secondary Arterial		\$13.20M	Part DCP / State Gov	\$6.60M	
Ballarat Link Road (Dyson Drive) - Btw Greenhalghs Rd & Glenelg Hwy. Upgrade to 2 lane arterial	W	1, 2 & 3	Council	Secondary Arterial		\$9.76M	Part DCP / State Gov	\$4.88M	
Ballarat Link Road (Dyson Drive) - Btw Glenelg Hwy & Bells Rd. Construct new 2 lane arterial	W	1, 2 & 3	Council	Secondary Arterial		\$9.60M	Part DCP / State Gov	\$4.80M	
Low Yield - Intersection Projects									
Finchs Road / Cuthberts Road - T intersection	W	3	Council		Link Road / Link Road T signalised	\$4.60M	DCP	\$4.60M	
Finchs Road / Ballarat Camgham Road - Cross Intersection	W	3	Council		Primary / Secondary Cross signalised	\$6.00M	DCP	\$6.00M	
Ballarat Camgham Road / North-South Collector Road - Cross Intersection	W	2 & 3	Council		Primary / Connector Cross signalised	\$5.79M	DCP	\$5.79M	
Ballarat Camgham Road / Wilshire Lane - Cross Intersection	W	2 & 3	Council		Primary / Secondary Cross signalised	\$8.58M	DCP	\$8.58M	
Bells Road / North-South Collector Road - T intersection	W	2	Council		Collector / Link Road signalised	\$4.20M	DCP	\$4.20M	
Bicycle Lanes			Council				DCP		
Bus Routes and Stops			Council				DCP		
						\$265.77M		\$175.37M	
High Yield - Road Projects									
Finchs Road - Btw Ballarat-Camgham Rd & Cuthberts Rd Upgrade from unsealed road to 2 lane collector road	W	3	Council	Link Road		\$10.02M	Developer		
Cuthberts Road - Btw Finchs Rd & North-South Collector. Upgrade from 2 lane country road to 2 lane collector road	W	3	Council	Link Road		\$3.30M	DCP	\$3.30M	Collector Road external to the Growth Area
Cuthberts Road - Btw North-South Collector & Dyson Dr. Upgrade from 2 lane country road to 2 lane collector road	W	3	Council	Link Road		\$11.25M	DCP	\$11.25M	Collector Road external to the Growth Area

Our Ref: 24258E

Ballarat North-Western & Western Growth Areas



Item	Growth Area	Priority	Responsible Authority	Road Classification W/A List	Intersection Classification WPA List	Ballarat Estimate (\$)	Funding Source	DCP Estimate	Comments
Ballarat-Camgham Road – Btwn Finchs Rd & North-South Collector Rd. Upgrade from 2 lane country road to 4 lane arterial	W	3	Council	Primary Arterial		\$12.25M	DCP	\$12.25M	
Ballarat-Camgham Road – Btwn North-South Collector Rd & Dyson Dr. Upgrade from 2 lane country road to 4 lane arterial	W	2 & 3	Council	Primary Arterial		\$12.00M	DCP	\$12.00M	
Ballarat-Camgham Road – Btwn Dyson Dr & Wiltshire Ln. Upgrade from 2 lane country road to 2 lane arterial	W	2 & 3	Council	Secondary Arterial		\$19.68M	DCP	\$19.68M	
Ballarat-Camgham Road – Btwn Finchs Rd & Skipton Rail Trail. Upgrade from 2 lane country road to 2 lane arterial	W	3	Council	Secondary Arterial		\$12.36M	DCP	\$12.36M	
Lahrobe Street – East of Wiltshire Lane. Upgrade short section from 2 lane arterial to 4 lane arterial	W	2 & 3	Council	Primary Arterial		\$10.30M	Part DCP / State Gov	\$5.15M	
Wiltshire Lane Upgrade (Btwn La Trobe St & Whitelaw Ave) upgrade to 4 lane arterial road	W	2 & 3	Council	Primary Arterial		\$9.90M	Part DCP / State Gov	\$4.90M	
Leamouth Street Upgrade (Btwn La Trobe St & Napier Ave) upgrade to 2 lane arterial road	W	2 & 3	Council	Secondary Arterial		\$6.88M	Part DCP / State Gov	\$3.44M	
Greenhalghs Road – Btwn North-South Collector & Dyson Dr. Upgrade from 2 lane country road to 2 lane collector road	W	2	Council	Collector Road		\$7.32M	Developer		
Bells Road – West of Glenelg Hwy. Upgrade from 2 lane country road to 2 lane arterial	W	2	Council	Link Road		\$2.48M	DCP	\$2.48M	
Bells Road – Btwn Glenelg Hwy & Lewis Crt. Upgrade from 2 lane country road to 2 lane Link Road	W	1	Council	Link Road		\$8.04M	DCP	\$8.04M	
Bells Road – Btwn Lewis Crt & Cherry Flat Rd. Upgrade from 2 lane country road to 2 lane Link Road	W	1	Council	Secondary Arterial		\$16.44M	DCP	\$16.44M	
Bells Road – Btwn Cherry Flat Rd & Ross Creek Rd. Upgrade from 2 lane country road to 2 lane Link Road	W	1	Council	Secondary Arterial		\$5.28M	DCP	\$5.28M	
North-South Collector Road (Btwn Bells Road & Greenhalghs Rd). Construct new Collector Road	W	2	Council	Collector Road		\$10.67M	Developer		
North-South Collector Road (Btwn Greenhalghs Rd & Ballarat-Camgham Rd). Construct new Collector Road	W	2	Council	Collector Road		\$9.67M	Developer		
North-South Collector Road (Btwn Ballarat-Camgham Rd & Cuthberts Rd). Construct new Collector Road	W	2	Council	Collector Road		\$9.61M	Developer		
Ballarat Link Road (Dyson Drive) – Btwn Rbrance Dr & Cuthberts Rd. Upgrade from 2 lane to 4 lane arterial	W	1, 2 & 3	Council	Primary Arterial		\$11.00M	Part DCP / State Gov	\$5.50M	
Ballarat Link Road (Dyson Drive) – Btwn Cuthberts Rd & Ballarat-Camgham Rd. Upgrade from 2 lane to 4 lane arterial	W	1, 2 & 3	Council	Primary Arterial		\$16.50M	Part DCP / State Gov	\$8.25M	
Ballarat Link Road (Dyson Drive) – Btwn Ballarat-Camgham Rd & Greenhalghs Rd. Upgrade to 2 lane arterial	W	1, 2 & 3	Council	Secondary Arterial		\$13.20M	Part DCP / State Gov	\$6.60M	
Ballarat Link Road (Dyson Drive) – Btwn Greenhalghs Rd & Glenelg Hwy. Upgrade to 2 lane arterial	W	1, 2 & 3	Council	Primary Arterial		\$12.20M	Part DCP / State Gov	\$6.10M	
Ballarat Link Road (Dyson Drive) – Btwn Glenelg Hwy & Bells Rd. Construct new 2 lane arterial	W	1, 2 & 3	Council	Secondary Arterial		\$8.80M	Part DCP / State Gov	\$4.40M	
High Yield - Intersection Projects									
Finchs Road / Cuthberts Road - T intersection	W	3	Council		Link Road / Link Road T signalised	\$4.60M	DCP	\$4.60M	
Finchs Road / Ballarat-Camgham Road - Cross intersection	W	3	Council		Primary / Secondary Cross signalised	\$6.00M	DCP	\$6.00M	
Ballarat-Camgham Road / North-South Collector Road - Cross Intersection	W	2 & 3	Council		Primary / Collector Cross signalised	\$5.78M	DCP	\$5.78M	
Ballarat-Camgham Road / Wiltshire Lane - Cross Intersection	W	2 & 3	Council		Primary / Secondary Cross signalised	\$8.58M	DCP	\$8.58M	

Doc Ref: 24258E
 (Global North-Western & Western Growth Areas)



Item	Growth Area	Priority	Responsible Authority	Road Classification VPA List	Intersection Classification VPA List	Ballot Item Estimate (\$)	Funding Source	DCP Estimate	Comments
Bells Road / North-South Colliery Road - T Intersection	W	2	Council		Collecter / Link Road signalled	\$4.20M	DCP	\$4.20M	
Bicycle Lanes			Council				DCP		
Bus Routes and Stops			Council				DCP		
						\$268.21M		\$176.59M	

From [REDACTED] 14 August 2024 Planning Delegated Committee Meeting 6.1.4

Sent Friday, August 9, 2024 at 10:46 AM

To: [REDACTED]

Subject: Update Eastwood Residents - Bulletin 14/8/24 EA 25 - P030644

[REDACTED]

We have started work on the review of upgrade thresholds and potential observations on greenfield sites.

As detailed within the report, the upgrade threshold for Longwellford has been reduced to 20,000 vehicles per day.

In addition to one of the three greenfield sites, we will indicate that the upgrade threshold for that site should not be used for development of sites located "along the driveway" (strictly within 100m) of a greenfield site at levels of traffic growth greater than 200% (200% is not used in the Downlands, EA 25 context).

North-Western Precinct

Road	Location	Existing Volumes	Demanded Volumes	Future Volumes
Westwood Drive	West of Outlets Rd	1,000	+800	1,800
Westwood Drive	Outlets Rd & Hinch Rd	3,700	+15,500	19,200
Westwood Drive	Fricks Rd & Dyer Dr	3,700	+15,500	19,200
Westwood Drive	East of Dyer Dr	12,000	+18,500	30,500

Western Precinct

Road	Location	Existing Volumes	Demanded Volumes	Future Volumes
Westwood Drive	West of Outlets Rd	1,000	+800	1,800
Westwood Drive	Outlets Rd & Hinch Rd	3,700	+1,000	4,700
Westwood Drive	Fricks Rd & Dyer Dr	3,700	+3,000	6,700
Westwood Drive	East of Dyer Dr	12,000	+14,500	26,500

South Precinct

Road	Location	Existing Volumes	Demanded Volumes	Future Volumes
Westwood Drive	West of Dyer Dr	1,000	+1,500	2,500
Westwood Drive	Dyer Dr & Fricks Rd	3,700	+15,500	19,200
Westwood Drive	Fricks Rd & Dyer Dr	3,700	+15,500	19,200
Westwood Drive	East of Dyer Dr	12,000	+16,000	28,000

We are happy to approach the Committee on 28th August with a two-way flow cross-section for the road to be set up in the future. The existing flow will be maintained. The existing flow will be maintained. The existing flow will be maintained. The existing flow will be maintained. The existing flow will be maintained.

We would be interested to hear from the Committee on 28th August with a two-way flow cross-section for the road to be set up in the future. The existing flow will be maintained. The existing flow will be maintained. The existing flow will be maintained. The existing flow will be maintained. The existing flow will be maintained.

Further capacity improvements may be required for the road to be set up in the future. The existing flow will be maintained. The existing flow will be maintained. The existing flow will be maintained. The existing flow will be maintained. The existing flow will be maintained.

Further capacity improvements may be required for the road to be set up in the future. The existing flow will be maintained. The existing flow will be maintained. The existing flow will be maintained. The existing flow will be maintained. The existing flow will be maintained.

Regards,

[REDACTED]

[REDACTED]

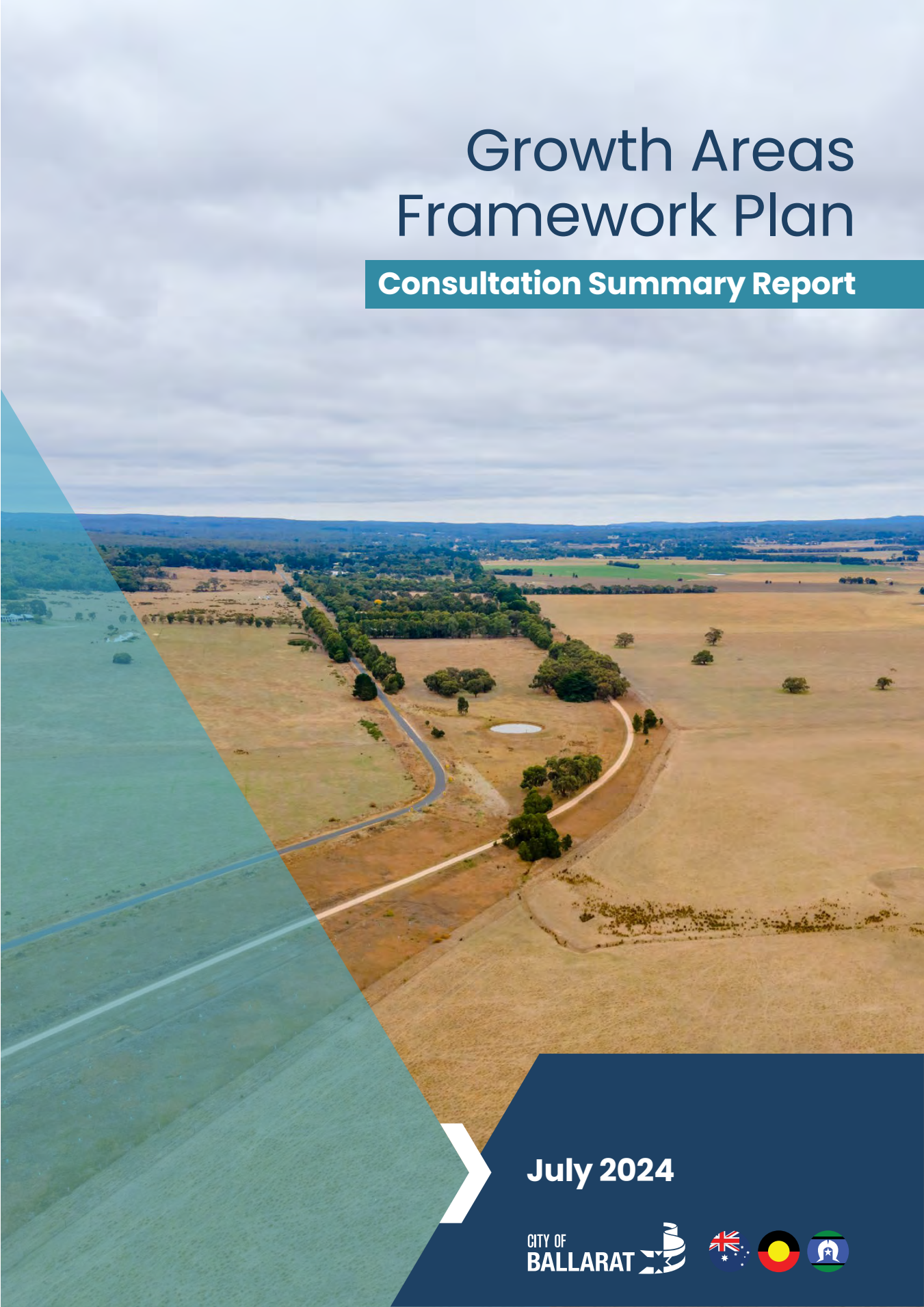
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Growth Areas Framework Plan

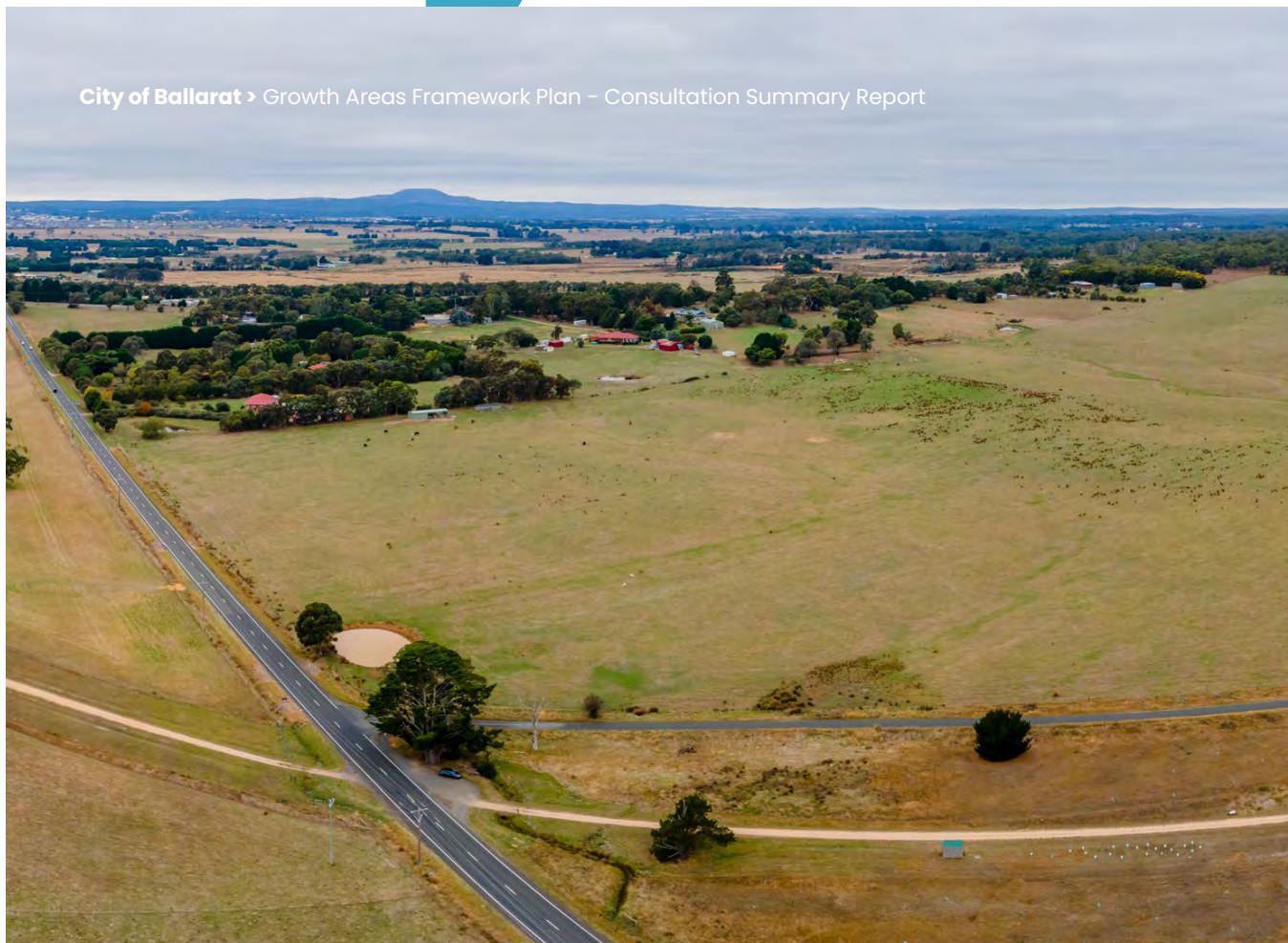
Consultation Summary Report



July 2024



City of Ballarat > Growth Areas Framework Plan – Consultation Summary Report



Contents

Executive Summary	3
Consultation Summary	4
Submissions	5
MySay Survey	6
Developer Workshops	7
Drop in Sessions	7
Themes	8
Existing Growth Areas and Land Supply	8
Timing and Staging of Future Growth Areas	8
Infrastructure	8
Environmental Considerations	8
Recommendations	9

Executive Summary

The Growth Areas Framework Plan (Framework Plan) was prepared internally by the City of Ballarat. The Framework Plan was informed by technical work undertaken by external consultants.

The Framework Plan was released on 9th May 2024, following Ballarat Council's endorsement of a consultation period.

Between the 9th to 31st May consultation occurred. Sessions were run with developers, landowners, and the public to discuss the Framework Plan. Submissions and survey responses were also received during this time.

28 submissions were received, including 7 from community members, 9 from the development industry and 12 from government departments. Major themes from submissions related to land supply, timing, staging, infrastructure, and densities.

14 survey results were received on the MySay page. Major themes from the survey results included environmental considerations, infrastructure, density and transport.

Two developer workshops were held, Key discussions were around the long-term growth of Ballarat, land supply, Ballarat West PSP, staging, timing of the Western Growth Area, infill vs greenfield, servicing, multiple growth fronts and density.

Two landowner and one general drop-in session were held. Key discussions were around the timing of the new growth areas, new infrastructure to be delivered and the existing Ballarat West PSP.

The report format includes a Submissions Summary section outlining in detail the findings from the consultation process.

The report then summarises the key findings into main themes:

- Existing Growth Areas and Land Supply
- Timing and Staging of Future Growth Areas
- Infrastructure
- Environmental Concerns

In response to the main themes, the report outlines the following recommendations:

- The land supply numbers will be removed from the Growth Areas Framework Plan., Consideration will be given to engaging an independent consultant to undertake a greenfield land supply analysis in collaboration with the Ballarat development industry. This could occur as part of the preparatory work for a future planning panel.
- Some of the technical studies for the Western Growth area will be brought forward to reduce the timeframes of the PSP preparation including further investigation of environmental and transport matters. This will enable the City to react to any changes to land supply in a more timely manner.
- No changes to the sub precinct staging or boundaries of the Growth Areas. The proposed sub precinct staging is indicative only and will be fully determined as part of future PSP preparation. The Growth Areas Framework Plan also notes that the boundaries of the Growth Areas may be altered at the PSP preparation stage.
- Dwelling supply numbers for the future growth areas to be updated to reflect alternative dwelling per hectare scenarios.
- Update wording in Growth Areas Framework Plan to address some comments and concerns.

Consultation Summary

Methods of Consultation



28

written submissions



14

survey responses



2

workshops



3

drop in sessions

Consultation Themes

There is an overestimation of existing and future land supply	Development of Ballarat West PSP will be limited	Development of the Northern PSP will be limited
20 dwellings per hectare is unachievable	The timing of the Western Growth Area should be brought forward	Some were supportive and others were unsupportive of staging growth
Some were supportive and others were unsupportive of sub precinct staging	Additional areas should be included in the Growth Areas Framework Plan staging – Cambrian Hill, Northern Expanded Area, Wyn Close	Concern with the number and type of road upgrades
Multiple growth fronts should exist at once	Ballarat is a greenfield, not an infill market	Protect key environmental aspects
There is a need for public transport in growth areas	There should be increased densities in commercial areas	Transport infrastructure should focus on prioritising cycling

Submissions

The Framework Plan was made available on a City of Ballarat project MySay page, where readers had the option to provide an open-ended individual submission.

Of the 28 submissions received:

- 7 were from community members;
- 9 were from the development industry (developers, real estate agents, consultants);
- 12 were from agencies and government departments.

A major theme that came out of the submissions was that the existing and future land supply estimates were overestimated. Estimates from the development industry ranged between 3 – 11 years of existing land supply, in comparison to the City of Ballarat's estimation of 17 years. Questions were raised around the consistency between the UDP land supply figures and those in the Framework Plan.

The development industry did not agree that the entire Ballarat West PSP area could be developed (due to land fragmentation, expensive high quality lifestyle properties and servicing constraints) and disagreed that existing supply should include an assumption that this area will be fully developed.

In addition, submitters did not agree that the Northern PSP should be included in the existing supply numbers because the PSP has not yet been completed. There was concern that the Northern PSP would face development constraints (due to the area being adjacent to Western Highway) and the assumed dwelling number would not be delivered.

Concerns were raised about the use of a density of 20 dwellings per hectare, which was considered unrealistic. Densities of 15-17 dwellings per hectare were considered more reasonable. There was concern that the demand rate used was unrepresentative of future demand. One submitter suggested that the City of Ballarat should work with the development industry to agree upon land supply, forecast number of lots and timing.

The timing of the Western Growth Area was also a major theme. The development industry was unsupportive of the medium-term timing of the Western Growth Area and requested that the rezoning and PSP preparation should be brought forward in the short term. It was noted that this would also align with the Council Meeting Resolution 23 February 2022.

The development industry highlighted that an array of work would need to be completed as part of the PSP process and this, along with the argument that land supply was diminishing, were reasons to bring the Western PSP forward. It was also noted that bringing forward the PSP and releasing land supply earlier would provide supply, affordable housing options and choice to the Ballarat market. It was noted that the market should direct land supply by Council releasing the land for the new growth areas. It was also highlighted that the preparation of a PSP can take more than 7 years before housing can be brought to market.

Government agencies requested that Ballarat Council bring forward some of the technical work associated with preparing a PSP.

The staging of the growth areas was another key theme. Submitters were generally supportive of staging the growth areas and of the proposed staging plan. Some submitters were unsupportive of the sub precinct staging of the Western Growth and requested that some stages should be consolidated. One submitter requested that a section of the Western Growth Area be brought forward in the short term as an individual precinct. It was also suggested that the North Western Growth Area should be sequenced before the Western Growth Area as it did not share the land fragmentation issues of the Western Growth Area and has existing infrastructure to support development. Some submitters also requested that the Cambrian Hill development in Golden Plains Shire, Wyn Close and the Northern Expanded area should be included in the Framework Plan staging. It was also noted that developer landholdings and developer experience were not considered in the proposed staging.

Road upgrades were also a key theme. Concerns were raised by government agencies on the amount of road upgrades needed to service the growth areas. The proposed upgrades to Remembrance Drive were not supported. It was noted that road upgrades to Link Road and Ballarat-Carrnham Road were not funded and that the Framework Plan needed to reflect this and find alternative solutions if funding could not be obtained.

City of Ballarat > Growth Areas Framework Plan

Other items mentioned in submissions included:

- The Growth Areas Framework Plan will limit multiple growth areas existing at once;
- The infill aspiration is unrealistic in the short to medium term, because infill development faces increased costs, transport, planning approval times, heritage and environmental factors;
- The two major landowners within the Northern PSP will control the choice and price of a large portion of greenfield land supply;
- Buyers in Ballarat want a detached home in greenfield settings;
- The increased DCP rate in the Ballarat PSP area will affect development feasibility;
- Criticism of the scoring of Precincts in the Taylors ISS work;
- Rental demand is higher in new homes than old homes and existing supply is limited;
- Concern that the Framework Plan is being rushed to favour Council election dates;
- Clarification on the perceived airport noise impact on the Western Growth Area;
- Minor comments on the content of the Growth Areas Framework Plan including suggested changes to wording;
- Dwelling numbers differ between the Growth Areas Framework Plan and the Housing Strategy;
- Current growth areas are well serviced to enable additional growth in adjoining future growth areas;
- The Ballarat VICSES unit should not be relocated;
- The transport network should include a bus network and include consideration of cyclists;
- The growth areas should support a mix of housing, including higher densities close to commercial areas;
- Missing references to existing Central Highlands Water Projects including the Ballarat Southern Trunk Sewer and Cardigan Sewer Pipeline;
- Sewer servicing of the Western Growth Area;
- Central Highlands Water should consider out of sequence development in line with City of Ballarat and DTP; and
- Queries about existing conditions of the growth areas.

MySay Survey

In addition to submissions, 14 survey responses from the MySay page were received. While written submissions could address any matters of interest to the submitter, survey results were more targeted, seeking feedback on access to services in the area and foreseeable issues and challenges with future development. Surveys were available to be made on the MySay project page.

Survey questions asked respondents to comment on key aspects of the area that people currently liked. Respondents focused on environmental aspects including wildlife, vegetation, bush semi-rural setting, large blocks, canopy trees and watercourses.

Survey respondents commented that access to services ranged from poor to excellent depending on where the person lived. There was clear support for additional public transport.

Foreseeable issues for future development included additional traffic, additional facilities and services, the need for public transport, flooding around the North – South Collector Road and loss of land and habitat.

Survey respondents wanted to see increased density around commercial areas, green and tree lined streets, low rise development, development of the entire Ballarat West PSP area and noted that it would be difficult for infrastructure to keep up with the pace of residential growth.

Developer Workshops

Two workshops were held with the Ballarat development industry on the 13th and 14th May 2024, as part of broader engagement and consultation being undertaken for the Ballarat Housing Strategy and the Social and Affordable Housing Action Plan.

44 individuals attended from the development industry, community housing providers, landowners, organisations such as Grampians Health and other interested parties.

Presentations were given on each of the updated plans/strategies. Breakout sessions were then facilitated by City of Ballarat staff, centered around discussion questions to gain feedback on the plans/strategies.

The following questions related to the Growth Areas Framework Plan were posed to guide conversation:

- Urban Development Objectives – are these achievable? Is this what you envision for a future community?
- Key Growth Actions – are these achievable? Do you have further information on some of these issues? Can these be resolved?
- Out of Sequence Criteria – are these achievable, is it helpful to include these criteria in the Framework Plan, would you consider using them?

Attendees were also directed to the online MySay webpage and provided with officers' contact details to provide more detailed feedback.

Themes from the developer sessions were very similar to those that came out of submissions. In addition to the guided conversation questions, discussions were had around the long term growth of Ballarat, land supply, Ballarat West, staging, timing of the Western Growth Area, infill vs greenfield, servicing, multiple growth fronts and density.

Drop in Sessions

The landowner and general sessions were informal in nature. Drop-in sessions were held on the 13th May and 21st May. The project team were available to answer any questions that attendees had.

Around 40 people attended the sessions.

Generally, attendees wanted to understand when development was expected to occur and how the Growth Areas Framework Plan may impact certain landholdings and developer interest in the growth areas.

Attendees were generally supportive of staging the growth areas and supported the Western Growth Area being developed first, as its location to the Ballarat West PSP area would provide great benefit. Some attendees raised concerns about flooding and servicing issues in the area that would need to be resolved.

Attendees were also supportive of the Link Road upgrades, especially in the context of additional growth in Ballarat.

Some attendees from neighbouring areas also attended the session to raise concern that the new growth areas would limit the rural amenity of their properties and suggested that these areas should be rezoned in line with a more urban setting.

Themes

The submissions, survey results and sessions were analysed and the feedback provided was sorted and summarised into key themes:

Existing Growth Areas and Land Supply

There was an overwhelming response from the development community about land supply. Most of the development community questioned the Framework's assumptions surrounding existing and anticipated land supply and argued that the figures in the Framework were incorrect. The inaccuracy of the land supply figures was therefore expected to have an adverse impact on housing supply both within the growth areas and across Ballarat more broadly.

Additionally, many within the development community argued that the Growth Areas Framework Plan would limit development to a single growth area instead of allowing development to occur simultaneously across multiple growth areas. This would result in various adverse consequences including limiting housing choice, increasing housing unaffordability and reducing availability of land supply.

Timing and Staging of Future Growth Areas

The submissions received from the public and development community held differing perspectives on the timing and staging of the Growth Areas.

The development community argued that the Growth Area Framework Plan would unreasonably limit growth in areas where significant investments in infrastructure had already been made. On this basis many developers advocated for advancing the release of the Western Growth Area. This position, however, was not universally held with several developers making arguments for other areas, including the North-Western Growth Area, to be brought forward of the Western Growth Area on the grounds that the required infrastructure to commence development of the North-Western Growth Area already existed.

Conversely, the public also held strong views about the proposed timing and staging of the Growth Areas as identified within the Growth Areas Framework Plan. While there was some disagreement amongst the public about the sub precinct staging of the Growth Areas, most respondents were supportive of both the proposed staging and timing as contained within the Growth Area Framework Plan.

Infrastructure

Many submissions highlighted the amount of infrastructure required to meet the increased population's needs. Concerns were expressed about how a lack of infrastructure would adversely impact the future development of the Growth Areas including the ability and capacity of authorities to deliver on key infrastructure questioned. Transport and sewer infrastructure was the focus of these concerns. The lack of public transport within current Growth Areas was strongly emphasised with multiple submissions anticipating an increase in vehicular traffic and levels of car dependency resulting from the future development of the Growth Areas.

The community submissions provided additional insight into what the public considered were important outcomes for the current and future Growth Areas to meet the needs of the existing and future population. These outcomes included improved services and infrastructure provision, improved public transport provision including active transport options, and the provision of high-quality public parks and open spaces.

Environmental Considerations

Protection of the environment was another key theme that was highlighted by many submitters. Understanding the significance of the land, its ecology, and the importance of sustainable subdivision design, is seen by many as integral to achieving sound environmental outcomes and improved sustainability.

Key environmental matters included:

- The importance of supporting the region's ecology, including providing sufficient suitable habitat for native flora and fauna to flourish.
- Ensuring that the Growth Areas provide for subdivisions that incorporate environmentally sustainable subdivision principles at their core.
- The potential impact of flooding on the Growth Areas, including climate change induced flooding, and the resulting viability on proposed subdivisions.
- The potential for land contamination associated with former landfill and mining sites, and any requirements to remediate the land and make safe for residential development.
- The requirement for any future planning scheme amendments to address the requirements of Ministerial Direction No. 19 including the adoption of any recommendations provided by the Environment Protection Authority Victoria (EPA).



Recommendations

This section summarises consequential recommendations to the current draft Growth Areas Framework Plan in response to the consultation feedback.

As a result of the key themes raised in the submissions the following recommendations are proposed:

- The land supply numbers will be removed from the Growth Areas Framework Plan. Following the adoption of the Growth Areas Framework Plan, Council officers will engage an independent consultant to undertake a greenfield land supply analysis in collaboration with the Ballarat development industry.
- Technical studies for the Western Growth will be brought forward to reduce the timeframes of the PSP preparation including investigation of environmental and transport matters.
- No changes to the sub precinct staging or boundaries of the Growth Areas. The proposed sub precinct staging is indicative only and will be fully determined as part of future PSP preparation. The Growth Areas Framework Plan also notes that the boundaries of the Growth Areas may be altered at the PSP preparation stage.
- Dwelling supply numbers for the future growth areas to be updated to reflect alternative dwelling per hectare scenarios.
- Update wording in Growth Areas Framework Plan to address some comments and concerns.



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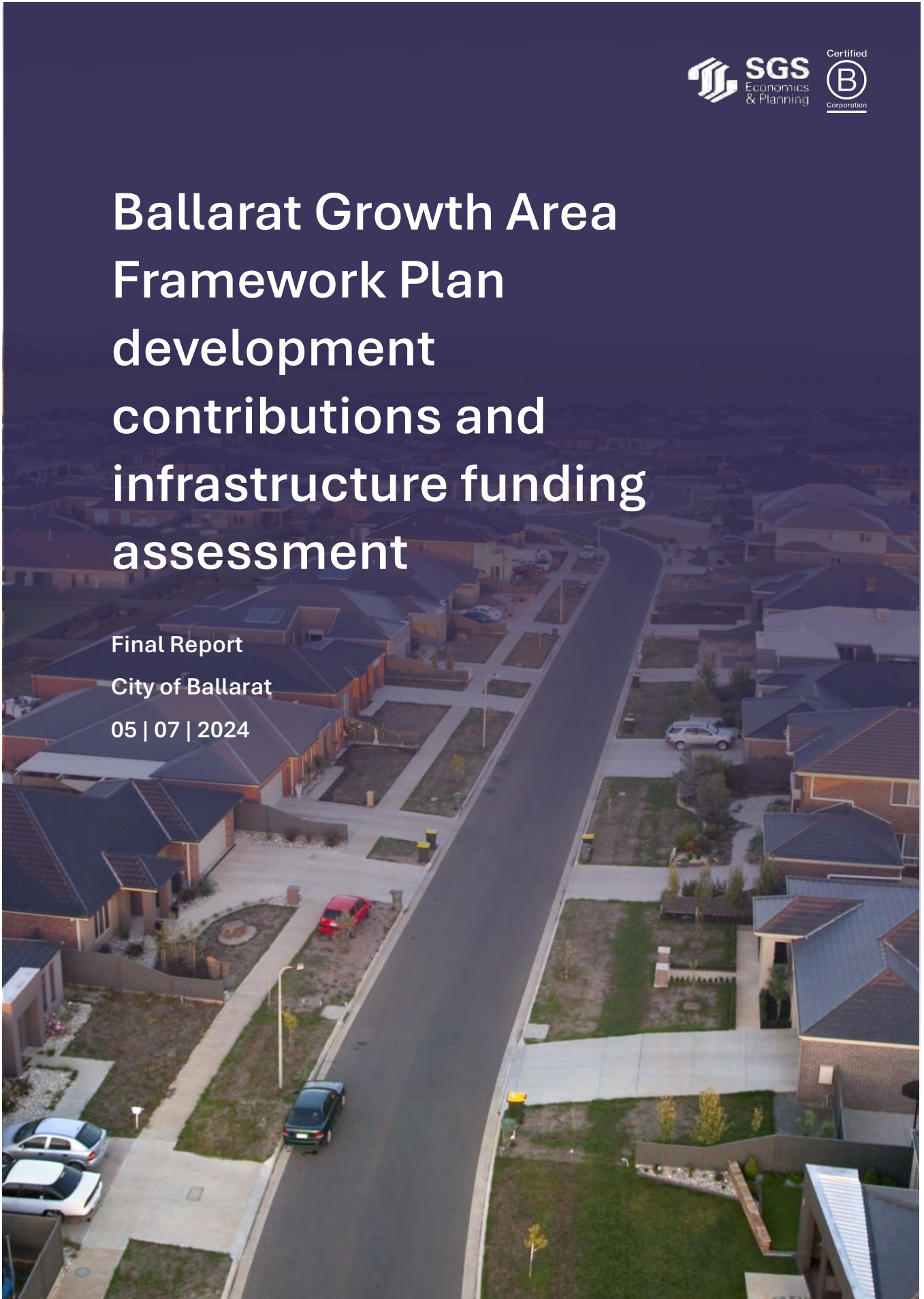
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July 2024



Ballarat Growth Area Framework Plan development contributions and infrastructure funding assessment

Final Report
City of Ballarat
05 | 07 | 2024





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Contents

Executive summary	5
2. Introduction.....	10
2.1 Context	10
2.2 This report	10
3. Key assumptions and data sources	12
3.1 Data sources	12
3.2 Project category and external demand assumptions	12
3.3 Scenarios tested	13
3.4 Assumed share of land uses	13
3.5 Cost assumptions.....	15
3.6 Timing and staging assumptions.....	19
4. Results and implications	21
4.1 Indicative DCP charges	21
4.2 Benchmarking.....	24
4.3 Council’s infrastructure funding liabilities	25
4.4 Key findings and implications for Council	28

LIST OF TABLES

Table 1: DCP charges with CIL cap considered, higher external demand scenario.....	6
Table 2: DCP charges, lower external demand scenario, CIL cap	6
Table 3: DCP charges, lower external demand scenario, all projects DI	7
Table 4: Total cost and Council's funding liability, higher external demand scenario	8
Table 5: Total cost and Council's funding liability, lower external demand scenario, CIL cap	8
Table 6: Total cost and Council's funding liability, lower external demand scenario, all projects DI.....	9
Table 7: Estimated residential dwellings for each precinct	14
Table 8: Estimated retail and local shop floorspace demand	15
Table 9: Projects identified as being partly funded by State Government	16
Table 10: Land cost estimates for DCP projects	19
Table 11: Number of DCP projects and costs for Ballarat Northwestern and Ballarat West	19

Table 12: Infrastructure charges, higher external demand scenario, with CIL cap.....	22
Table 13: Infrastructure charges, lower external demand scenario, with CIL cap.....	22
Table 14: Infrastructure charges, lower external demand scenario, all projects DI	23
Table 15: Total charge per hectare comparison with CIL cap.....	24
Table 16: Funding liability for Council under the higher external demand scenario	26
Table 17: Funding liability for Council under the lower external demand scenario, CIL cap	26
Table 18: Funding liability for Council under the lower external demand scenario, all DI projects.....	27
Table 19: External demand assumptions, Ballarat Western	29
Table 20: External demand assumptions, Ballarat North-Western	34
Table 21: Demand projection assumptions, residential dwellings, by precinct and year	37
Table 22: Demand projection assumptions, retail foospace, by precinct and year.....	39

LIST OF FIGURES

Figure 1: Proposed precincts.....	11
Figure 2: Estimated floorspace demand for non-residential uses	14
Figure 3: Indicative community centre locations in the catchment areas.....	17
Figure 4: Indicative active open space and indoor recreation facility locations and catchments.....	18

APPENDICES

Appendix A: External demand assumptions	29
Appendix B: Demand timing assumptions.....	37
Appendix C: Alternative funding and financing sources	41

Executive summary

This report provides an assessment of the likely infrastructure funding requirements and development contributions for the Ballarat Western and North-Western growth areas. The Western growth area might accommodate between 12,900 and 17,200 dwellings, and the North-Western, between 7,200 and 9,600 dwellings at completion.

These new growth areas will bring financial costs for Council. Specifically, Council will incur costs for infrastructure projects that are not fully funded by a Development Contribution Plan (DCP) or funded from other external sources.

SGS was commissioned by the City of Ballarat to undertake a high-level economic feasibility assessment of Council's long-term financial commitment to service these future growth areas. This assessment will be used to provide background information on the possible financial implications of the recommended directions in the Growth Areas Framework Plan, and may inform the future sequencing of PSP preparation within the Framework Plan area.

To estimate revenues from a DCP and external funding requirements, this analysis has considered a 'lower external demand' scenario (i.e. lower cost to Council) and 'higher external demand' scenario (i.e. higher cost to council) by varying the share of external demand assumptions in the modelling.

Estimate of DCP charges

The estimated DCP charges for the Western and North-Western growth areas are summarised in Tables 1 and 2 below for the higher external demand and lower external demand scenarios respectively.

For the higher external demand scenario, the average total charge per hectare is estimated to be \$520,913 in the Western growth area and \$490,288 in the North-Western growth area (Table 1). For the lower external demand scenario the average total charge per hectare is estimated to be \$663,030 for the West and \$830,251 for the North-West (Table 2).

In the lower external demand scenario, the Community Infrastructure Levy cap of \$1,368 per dwelling reduces the community infrastructure (CI) portion of the DCP charges. However, if all infrastructure is treated as development infrastructure, thus avoiding the cap, the charges would increase by 6-7 per cent to \$710,494 and \$882,800 respectively (see Table 3).

Evidently, the assumptions about external demand have a significant bearing on the likely DCP charges. The reallocation of CI to Development Infrastructure (DI) in the lower external demand scenario makes a modest but not insignificant changes to the charge (and also Councils finding liabilities, discussed below)

Broadly speaking, the DCP charges identified in this analysis are significantly higher than the existing Ballarat West DCP and the draft Shepparton South East DCP which are \$316,339 and \$411,223 per hectare respectively. The magnitude of the estimated DCP charges may present a challenge to the viability of developing these growth areas.

Table 1: DCP charges with CIL cap considered, higher external demand scenario

	Development contributions			
	DI	CI*	Total per demand unit	Total per hectare
Precinct 1	\$31,440	\$653	\$32,094	\$641,872
Precinct 2	\$23,163	\$1,084	\$24,248	\$484,952
Precinct 3	\$24,954	\$939	\$25,894	\$517,870
Western Growth Area – weighted average			\$26,046	\$520,913
Precinct 4	\$22,667	\$1,148	\$23,814	\$476,289
Precinct 5	\$26,719	\$717	\$27,436	\$548,715
North-Western Growth Area – weighted average			\$24,514	\$490,288

Source: SGS Economics and Planning (2024). *Note: Under this scenario, the total DCP charges for community infrastructure projects are below the CIL cap.

Table 2: DCP charges, lower external demand scenario, CIL cap

	Development contributions			
	DI	CI*	Total per demand unit	Total per hectare
Precinct 1	\$37,048	\$1,346	\$38,394	\$767,872
Precinct 2	\$28,163	\$1,346	\$29,509	\$590,188
Precinct 3	\$34,358	\$1,346	\$35,704	\$714,086
Western Growth Area – weighted average			\$33,152	\$663,030
Precinct 4	\$37,203	\$1,346	\$38,549	\$770,987
Precinct 5	\$48,405	\$1,346	\$49,751	\$995,017
North-Western Growth Area – weighted average			\$41,513	\$830,251

Source: SGS Economics and Planning (2024). *Note: Under this scenario, the DCP charges for community infrastructure projects have been limited to the CIL cap of \$1,346.

Table 3: DCP charges, lower external demand scenario, all projects DI

	Development contributions			
	DI	CI*	Total per demand unit	Total per hectare
Precinct 1	\$39,661	NA	\$39,661	\$793,223
Precinct 2	\$32,501	NA	\$32,501	\$650,012
Precinct 3	\$38,116	NA	\$38,116	\$762,319
Western Growth Area – weighted average			\$35,525	\$710,494
Precinct 4	\$41,795	NA	\$41,795	\$835,891
Precinct 5	\$51,272	NA	\$51,272	\$1,025,446
North-Western Growth Area – weighted average			\$44,140	\$882,800

Source: SGS Economics and Planning (2024). *Note: As all projects are allocated to the development infrastructure category, no charges are reported for the CI column.

Estimates of Council’s infrastructure funding liabilities

Council’s potential infrastructure funding liabilities are estimated for the lower external demand and higher external demand scenarios. The results are summarised in the following three tables. For the higher external demand scenario (Table 4), in the Western Growth Area infrastructure costs of \$452 million would be funded through development contributions, \$43 million is expected to come from the state government¹, and the balance of \$178 million would need to be provided by Council. For the North-Western Growth Area, \$237 million in development contributions is anticipated, \$12 million from state government and the balance of \$208 million provided by Council.

In the lower external demand scenario (Table 5), Council’s contributions are reduced as a larger share of the infrastructure costs fund are attributable to development contributions. In this scenario Council’s funding liabilities are reduced significantly to \$52 million for the Western Growth Area and \$42 million for the North-Western Growth Area. In this scenario, the CIL cap increases Council’s funding liability by limiting development contribution for community infrastructure. Classifying *all* infrastructure as development infrastructure would reduce Council’s liabilities to \$13 million and \$18 million for the West and North-Western Growth areas respectively (Table 6).

¹ The expected funding from the state government for some infrastructure projects is outlined in the Services Investigation Report (Taylors, November 2023).

Table 4: Total cost and Council's funding liability, higher external demand scenario

	DI	CI*	Total
Western Growth Area			
Total infrastructure cost	\$608,821,981	\$63,970,105	\$672,792,086
Expected funding from the state government	\$43,120,000	\$0	\$43,120,000
DCP charges (CIL cap applied)	\$436,527,314	\$15,558,811	\$452,086,124
Funding gap	\$129,174,667	\$48,411,294	\$177,585,962
North-Western Growth Area			
Total infrastructure cost	\$419,831,320	\$38,145,822	\$457,977,142
Expected funding from the state government	\$12,150,000	\$0	\$12,150,000
DCP charges (CIL cap applied)	\$228,201,472	\$9,290,826	\$237,492,298
Funding gap	\$179,479,849	\$28,854,996	\$208,334,845

Source: SGS Economics and Planning (2024). *Note: Under this scenario, the DCP charges for CI do not exceed the cap of \$1,346.

Table 5: Total cost and Council's funding liability, lower external demand scenario, CIL cap

	DI	CI*	Total
Western Growth Area			
Total infrastructure cost	\$608,821,981	\$63,970,105	\$672,792,086
Expected funding from the state government	\$43,120,000	\$0	\$43,120,000
DCP charges	\$554,383,290	\$23,468,158	\$577,851,448
Funding gap	\$11,318,691	\$40,501,947	\$51,820,638
North-Western Growth Area			
Total infrastructure cost	\$419,831,320	\$38,145,822	\$457,977,142
Expected funding from the state government	\$12,150,000	\$0	\$12,150,000
DCP charges	\$390,459,611	\$13,413,099	\$403,872,710
Funding gap	\$17,221,709	\$24,732,723	\$41,954,432

Source: SGS Economics and Planning (2024). *Note: Under this scenario, the DCP charges for CI limited to the CIL cap of \$1,346.

Table 6: Total cost and Council's funding liability, lower external demand scenario, all projects DI

	DI	CI*	Total
Western Growth Area			
Total infrastructure cost	\$672,792,086	NA	\$672,792,086
Expected funding from the state government	\$43,120,000	NA	\$43,120,000
DCP charges	\$616,618,533	NA	\$616,618,533
Funding gap	\$13,053,553	NA	\$13,053,553
Difference in funding gap due to CIL cap			\$38,767,084
North-Western Growth Area			
Total infrastructure cost	\$457,977,142	NA	\$457,977,142
Expected funding from the state government	\$12,150,000	NA	\$12,150,000
DCP charge	\$427,622,917	NA	\$427,622,917
Funding gap	\$18,204,226	NA	\$18,204,226
Difference in funding gap due to CIL cap			\$23,750,206

Source: SGS Economics and Planning (2024). *Note: As all projects are allocated to the development infrastructure category, no charges are reported for the CI column.

Discussion

The results illustrate that there are potentially significant costs to Council that will not be covered by the application of the DCP. In summary:

1. Development of the Western Growth Area could cost Council between \$13 million and \$178 million in infrastructure funding. This large range is varied by the degree of the assumed external demand on infrastructure and whether the CIL cap is applied or removed.
2. Development of the North-Western Growth Area could cost Council between \$18 million and \$208 million, based on the same variables.
3. Across both areas, the upper cost would be \$386 million (a high external demand scenario), the lower cost would be \$95 million (a low external demand scenario), and the lowest cost would be \$31 million (low external demand and higher proportion of DI projects)
4. Council's costs would be minimised through a low external demand scenario and removal of the CIL Cap.
5. To further clarify the costs that Council may face, project-by-project analysis is required to determine the level of external demand and whether they are DI or CI, which in turn would dictate whether the CIL cap is applied.

This would require further analysis through the development of a detailed DCP.

2. Introduction

This report provides an assessment of the economic feasibility of planned growth areas to the west of Ballarat, including the cost implications for Council.

2.1 Context

Ballarat's population is expected to grow to 170,000 by 2040-2041, which represents an increase of 57,000 persons.² As outlined in DELWP Planning Practice Note 90, Council is required to plan for the accommodation of projected population growth over at least a 15-year period and provide clear direction on locations where growth should occur. It has been identified that future greenfield land supply will be provided within the **Ballarat Western** and **North-Western** growth areas.

The Western growth area might accommodate between 12,902 and 17,203 dwellings, and the North-Western, between 7,200 and 9,600 dwellings at completion.

The Infrastructure Servicing Strategy (2023) identifies five precinct growth areas as follows, and shown in Figure 1 (below):

- Ballarat Western growth area made up of Precincts 1, 2 and 3.
- Ballarat North-Western growth area made up of Precincts 4 and 5.

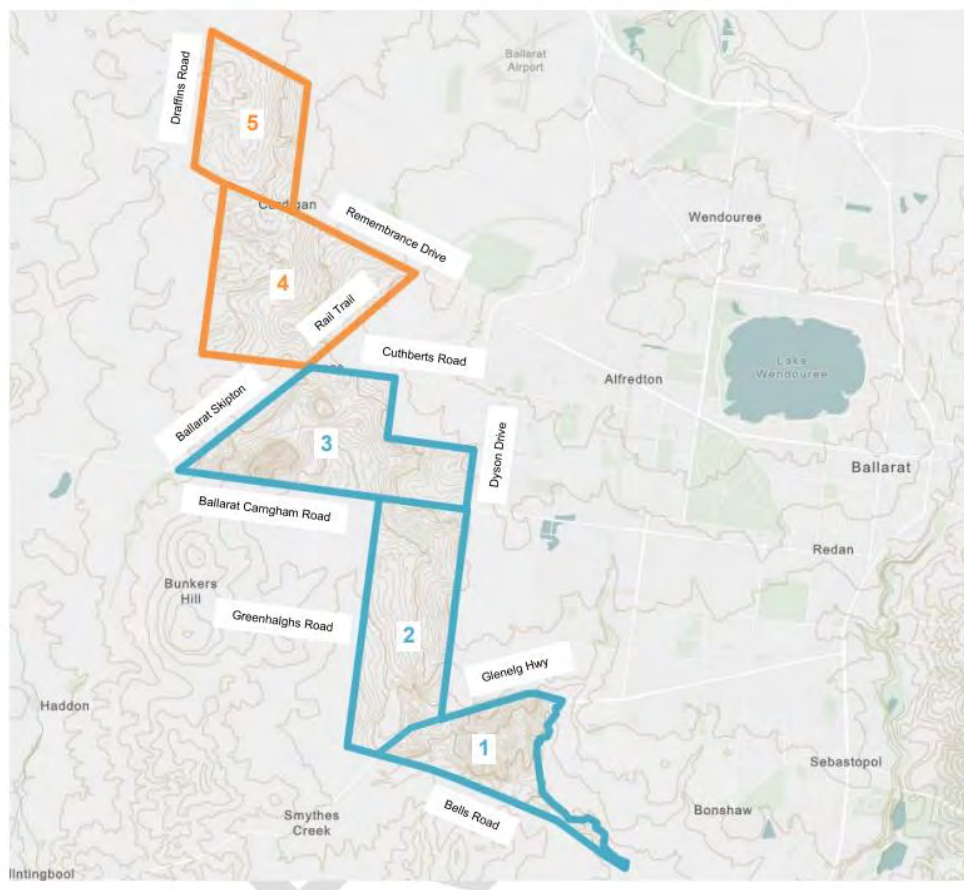
2.2 This report

The introduction of new growth areas through a Precinct Structure Plan (PSP) and Development Contributions Plan (DCP) is expected to bring financial costs for Council. Specifically, Council will incur infrastructure costs in the new growth areas through the share of items in the DCP that benefit the wider community, and for items that are not covered by the DCP.

SGS was commissioned by the City of Ballarat to undertake a high-level economic feasibility assessment of Council's long-term financial commitment to service the future growth areas. This assessment will be used to provide background information on the possible financial implications of the recommended directions in the Growth Areas Framework Plan, and may inform the future sequencing of PSP preparation within the Framework Plan area.

² Ballarat City Council, 2024.

Figure 1: Proposed precincts



Source: Taylors (2023)

Method overview

SGS modelled the potential infrastructure costs that might be funded via and DCP and the share of costs that are unfunded and would need to be met by Council or other sources.

Report structure

The remainder of this report is structured as follows:

- Chapter 2 describes the key assumptions and data sources used in the modelling.
- Chapter 3 provides the results from the modelling and the financial implications for the Council, including a comparison with other DCPs and the identification of alternative funding and financing sources.

3. Key assumptions and data sources

The sections below detail the key assumptions and data sources that have been used in the analysis.

3.1 Data sources

The data and underlying assumptions that have been used in the analysis are sourced from:

- Services Investigation Report, Engineering Servicing Advice, Ballarat Western & North-Western Growth Areas (Taylors, November 2023).
- Ballarat Western and North-Western Growth Areas Framework Plan, Community Infrastructure Assessment, Draft Report (ASR Research, November 2023).
- Growth Areas Framework Plan, Retail Assessment (Macroplan, February 2024).
- Other information provided to SGS by Council.

The cost estimates provided in the above reports are from late 2023 and 2024. Given potential increases in construction costs since the reports were prepared, the actual costs (and therefore DCP charges) may be higher if more up to date costs were used.³

3.2 Project category and external demand assumptions

Project category assumptions

Based on the data provided, projects for the DCP model are categorised into the following infrastructure types:

- Drainage (Stormwater)
- Road and Transport
- Community Facilities
- Open Space and Recreation
- Land (i.e. the cost of land required to deliver the above infrastructure).

Note: Strategic planning costs were not included in the modelling as agreed with Council, as these are likely to only represent a very small proportion of the cost associated with the growth areas.

³ Based on ABS Producer Price Indexes, Australia, Cat. No. 6427.0. costs have increased for Road and bridge construction (by 2.7%), Non-residential building construction (6.5%), Heavy and civil engineering construction (1.9%), and Other heavy and civil engineering construction (2.1%), between September 2023 and March 2024.

To allocate the contributions across the likely development types to be delivered in the growth areas, the following development uses are also assumed:

- Retail
- Residential dwellings.

External demand assumptions

An important element of the DCP calculation is allocating appropriate shares of the costs of infrastructure to those who will use and/or benefit from it. As such, SGS's DCP model integrates an assumption for how much of the infrastructure project will be used by those outside of the growth areas – i.e. external demand – which cannot be charged under the DCP (as it would, in theory, be charged through another DCP elsewhere).

For the purposes of this analysis, external demand assumptions were allocated based on a simple incremental scale – of 25 per cent, 50 per cent, or 75 per cent for each project.

The assumptions applied for each project were informed by Council advice, and are detailed in Appendix A.

3.3 Scenarios tested

Two scenarios were developed through SGS's DCP model, in consultation with Council:

- A **'lower external demand' scenario** –where the share of external demand for DCP projects is lower and therefore a higher share of the infrastructure costs will fall on developers.
- A **'higher external demand' scenario** –where the share of external demand for DCP projects is higher and therefore a higher share of the infrastructure costs will fall on Council.

Both scenarios were based on the higher dwelling yield scenario for the two growth areas, which applies a density of 20 dwellings per hectare.

3.4 Assumed share of land uses

The Ballarat's Infrastructure Servicing Strategy report (2023) indicated a net residential developable area of 860 hectares in the Western growth area, and 480 hectares in the North-Western growth area, broken down by each precinct. As noted, an assumption of 20 dwellings per hectare was applied in the analysis.

Table 7 shows the estimated dwellings under the high scenario, and the respective share of development in each precinct. The share of growth area development was based on the respective proportion of residential development in each precinct within each growth area.

Table 7: Estimated residential dwellings for each precinct

	Residential NDHA ⁴	Estimated residential dwellings (high scenario: 20 dph)	Share of growth area development
Precinct 1	191 hectares	3,820 dwellings	22.21%
Precinct 2	320 hectares	6,400 dwellings	37.21%
Precinct 3	349 hectares	6,980 dwellings	40.58%
Total Western GA	860 hectares	17,200 dwellings	100.00%
Precinct 4	308 hectares	6,160 dwellings	64.17%
Precinct 5	172 hectares	3,440 dwellings	35.83%
Total North-Western GA	480 hectares	9,600 dwellings	100.00%

Source: Taylors (2023)

For retail-related components, Council's Retail Assessment report (2024) was used to form the assumptions for the estimated floorspace demand for the two growth areas, as follows (Figure 2).

Figure 2: Estimated floorspace demand for non-residential uses

City of Ballarat growth areas - estimated total centre floorspace*					
	Centre shares**	15 dwellings/ha		20 dwellings/ha	
		Western	North Western	Western	North Western
Supermarkets	59%	12,541 - 14,979	6,998 - 8,359	16,721 - 19,973	9,331 - 11,146
Retail specialties & majors	34%	7,227 - 8,632	4,033 - 4,817	9,636 - 11,510	5,377 - 6,423
Non-retail specialties	7%	1,488 - 1,777	830 - 992	1,984 - 2,370	1,107 - 1,322
Total	100%	21,256 - 25,388	11,861 - 14,168	28,341 - 33,853	15,815 - 18,892

*range based on 0.36 - 0.43 sq.m per person provision of supermarket floorspace, **Chart 2.3, excluding external/other
Source: City Of Ballarat, Macroplan

Source: Macroplan (2024)

Using lower bound data from the Retail Assessment report and the share of residential development in each precinct, floorspace demand for retail uses in each precinct under the high scenario (Table 8) was calculated and assumed that retail will have the same share of development as residential dwellings.

⁴ Net Developable Area is defined in the PSP Guidelines as "Land within a precinct available for development. This excludes encumbered land, arterial roads, railway corridors, schools and community facilities and public open space. It includes lots, local streets and connector streets." <https://www.vpa.vic.gov.au/wp-content/Assets/Files/PSP%20Guidelines%20-%20PART%20TWO.pdf>

Note: The retail category combined the 'Retail specialities & majors' and Supermarkets' categories from the Retail Assessment.

Table 8: Estimated retail and local shop floorspace demand

	Estimated retail floorspace demand
Precinct 1	6,295 sqm
Precinct 2	10,546 sqm
Precinct 3	11,502 sqm
Total Western GA	28,342 sqm
Precinct 4	10,148 sqm
Precinct 5	5,667 sqm
Total North-Western GA	15,815 sqm

Source: SGS Economics and Planning (2024). Note: All numbers have been rounded.

3.5 Cost assumptions

Infrastructure cost assumptions were taken from the Services Investigation Report (2023) and the Community Infrastructure Assessment (2023) prepared for Council by ASR Research.

State Government funding assumptions were on the estimates provided in the Services Investigation Report, which indicate expected funding for some projects, including for upgrades to major arterial roads such as Remembrance Drive and the Ballarat Link Road (see Table 9). These assumptions are indicative only, and funding has not been committed by the State Government at this point in time.

Table 9: Projects identified as being partly funded by State Government

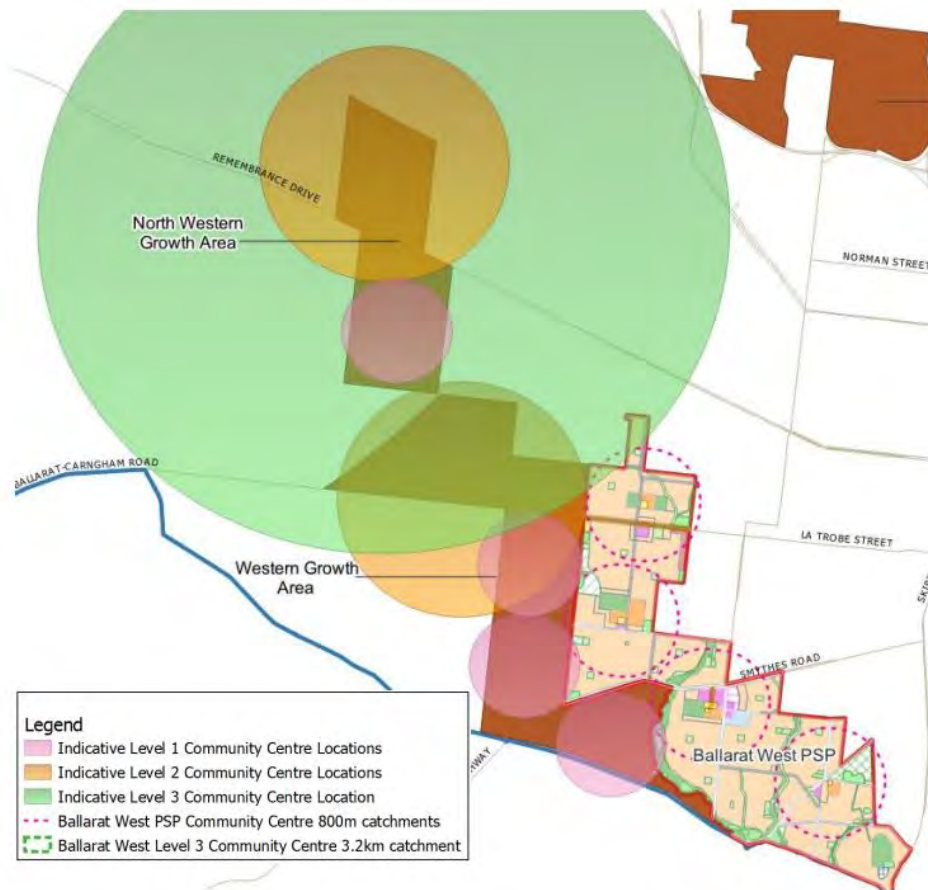
Project name	Precinct	Expected funding from the state government
Latrobe Street – East of Wiltshire Lane. Upgrade short section from 2 lane arterial to 4 lane arterial.	Precinct 2 and 3	\$5,150,000
Wiltshire Lane Upgrade (Btw La Trobe St & Whitelaw Ave) upgrade to 4 lane arterial road.	Precinct 2 and 3	\$4,900,000
Learmouth Street Upgrade (Btw La Trobe St & Napier Ave) upgrade to 2 lane arterial road.	Precinct 2 and 3	\$3,440,000
Ballarat Link Road (Dyson Drive) – Btw R’brance Dr & Cuthberts Rd. Upgrade from 2 lane to 4 lane arterial.	Precinct 1, 2 and 3	\$5,500,000
Ballarat Link Road (Dyson Drive) – Btw Cuthberts Rd & Ballarat-Carngham Rd. Upgrade from 2 lane to 4 lane arterial.	Precinct 1, 2 and 3	\$8,250,000
Ballarat Link Road (Dyson Drive) – Btw Ballarat-Carngham Rd & Greenhalghs Rd. Upgrade to 2 lane arterial.	Precinct 1, 2 and 3	\$6,600,000
Ballarat Link Road (Dyson Drive) – Btw Greenhalghs Rd & Glenelg Hwy. Upgrade to 2 lane arterial.	Precinct 1, 2 and 3	\$4,880,000
Ballarat Link Road (Dyson Drive) – Btw Glenelg Hwy & Bells Rd. Construct new 2 lane arterial.	Precinct 1, 2 and 3	\$4,400,000
Remembrance Drive - Ballarat Ring Road - T intersection	Precinct 4 and 5	\$3,250,000
Remembrance Drive / Ballarat Link Road - Cross Intersection	Precinct 4 and 5	\$4,500,000
Sturt Street / Gillies Street - Cross intersection	Precinct 4 and 5	\$4,400,000

Source: Taylors (2023).

The modelling used a discount rate of zero per cent for all project costs in the DCP timeframe.

Specific locations for community infrastructure projects required are not identified in the Assessment. For the purposes of this analysis, indicative locations identified for community centres (Figure 3) and active open space and recreational facilities (Figure 4) were used to allocate each project to one of the precincts.

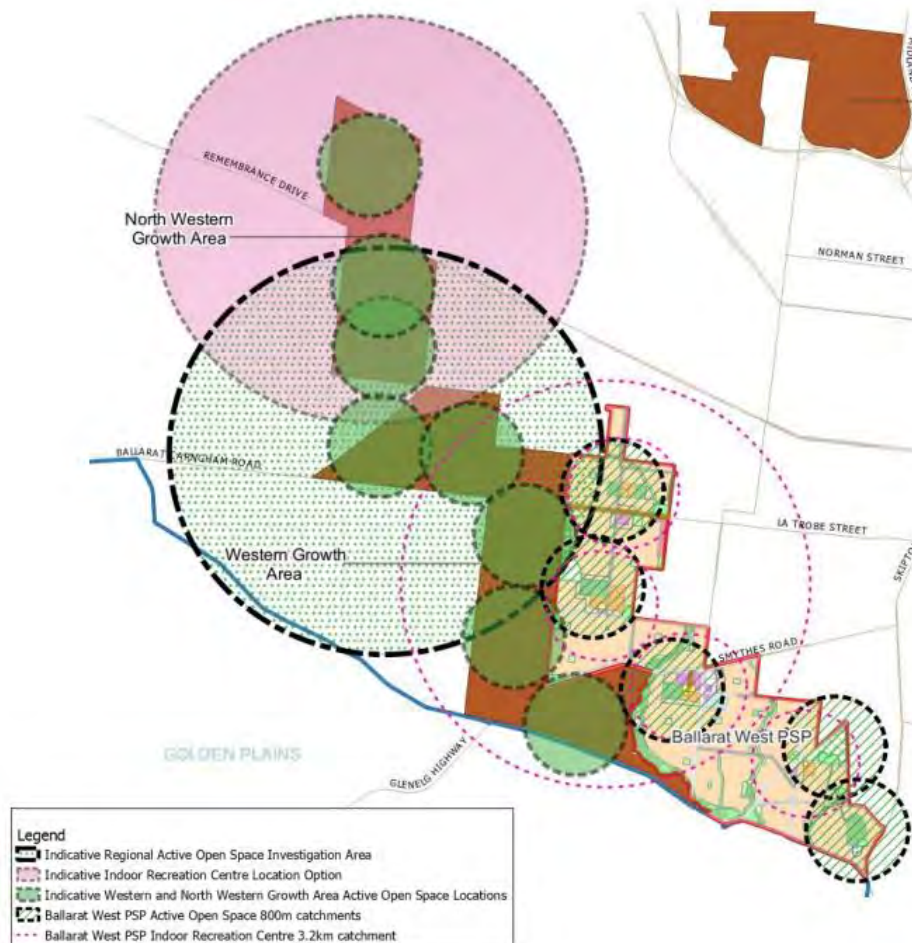
Figure 3: Indicative community centre locations in the catchment areas



Source: ASR Research (2023)

It was assumed that the indoor recreational centre will be built in the North-Western growth area, based on its indicative catchment in Figure 4. Therefore, the cost of \$32 million associated with this project is assumed to be included in the modelling of Ballarat North-Western growth area only.

Figure 4: Indicative active open space and indoor recreation facility locations and catchments



Source: ASR Research (2023)

Land acquisition costs for most projects, based on the respective land areas, were estimated through discussion with Council and are shown in Table 10.

Table 10: Land cost estimates for DCP projects

	North-Western Growth Area		Western Growth Area	
	Land area (ha)	Estimated costs	Land area (ha)	Estimated costs
Roads	86.29	\$64,717,500	48.15	\$36,114,676
Wetlands and Basins	39.8	\$29,850,000	25.8	\$19,350,000
Waterways	52.4	\$39,300,000	18.1	\$13,575,000
Community Centres	5.6	\$4,200,000	3	\$2,250,000
Active Open Space	54	\$40,500,000	29	\$21,750,000
Passive Open Space	34	\$25,500,000	19	\$14,250,000
Indoor Recreation Centre			3	\$2,250,000

Source: SGS Economics and Planning (2024) based on assumed land cost of \$750,000 per hectare as advised by Council. Note: The land area for the indoor recreation centre has been estimated based on the ASR’s planning guideline for community infrastructure in growth areas. <https://vpa-web.s3.amazonaws.com/wp-content/uploads/2016/07/Planning-for-Community-Infrastructure-in-Growth-Areas-%E2%80%93-April-2008.pdf>

Table 11 provides a summary of the number of DCP projects and total costs for the two growth areas respectively.

Table 11: Number of DCP projects and costs for Ballarat Northwestern and Ballarat West

	Ballarat North-Western	Ballarat Western
Number of projects (incl. land acquisitions)	57	89
Estimated total cost	\$457,977,142	\$672,792,086

Source: SGS Economics and Planning (2024)

3.6 Timing and staging assumptions

Timing assumptions

The DCP timeframe is assumed to range from 2034 to 2055 for projects occurring in the Western growth area, whereas the timeframe for the North-Western growth area will range from 2053 to 2066. These assumptions are based on input from Council, and also assume a three-year overlap between

different projects. Staging assumptions were also considered when establishing timing, meaning the specific timeline depends on which precinct(s) each project will be delivered in.

It is assumed that each precinct will have a flat rate of floorspace demand for each development type, during the timeframe indicated. In some instances, however, the first and final years of the timeframes will see slowed development of residential dwelling and retail. This assumption was applied based on discussion with Council and observed development rates in Ballarat West.

The demand/development was assumed to continue at the same rate until the allocated units identified in each precinct (see Table 7) was exhausted. Note: The residential demand is expressed in units, whereas retail and local shop floorspace demand is expressed in square metres – details of the assumed demand for each year in each precinct is provided in Appendix B.

Staging assumptions

The modelling adopted the precinct sequencing as identified in the Taylor's Services Investigation Report, that is, in order of development:

- Precinct 2
- Precinct 1
- Precinct 3
- Precinct 4
- Precinct 5.

4. Results and implications

The results of the analysis are detailed below, including the estimated DCP charges and the potential funding gap for Council.

4.1 Indicative DCP charges

The indicative DCP charges were identified for each precinct and growth area by land use, per demand unit, and on a per hectare basis.

Results are provided for the higher external demand and lower external demand scenarios. In the case of the lower external demand scenario, further modelling was undertaken to test the impact of classifying all projects as development infrastructure and thus avoiding the impact of the CIL cap on contributions (and on the funding gap that fall on Council).⁵

Higher external demand scenario

Table 12 below shows the infrastructure charge per demand unit and per hectare for DCP projects in the Western and North-Western growth areas under the higher external demand scenario.

The infrastructure charge per hectare was calculated as the identified infrastructure charge per demand unit multiplied by 20 (in alignment with the 20 dwellings per hectare assumption of yield). In addition, the weighted averages of charge for the two growth areas were calculated using the share of growth area development as each precinct's weight.

The weighted average total charge per hectare in the Western growth area is estimated to be \$520,913, whereas for the North-Western growth area it is estimated to be \$490,288. Overall, Precinct 4 has the lowest total and per hectare charges, and Precinct 1 is the highest.

In this scenario the CIL cap does not affect the total infrastructure charges (i.e. the calculated charges for CI in each precinct are below the \$1,346 cap).

⁵ Section 46L (1)(a) and (1)(b) of the Planning and Environment Act sets a maximum levy for community infrastructure. As of 2023/2024, the rate is capped at \$1,346 per dwelling. Community infrastructure projects include those projects classified as Open Space and Recreation.

Table 12: Infrastructure charges, higher external demand scenario, with CIL cap

	Development contributions			
	DI	CI*	Total per demand unit	Total per hectare
Precinct 1	\$31,440	\$653	\$32,094	\$641,872
Precinct 2	\$23,163	\$1,084	\$24,248	\$484,952
Precinct 3	\$24,954	\$939	\$25,894	\$517,870
Western Growth Area – weighted average			\$26,046	\$520,913
Precinct 4	\$22,667	\$1,148	\$23,814	\$476,289
Precinct 5	\$26,719	\$717	\$27,436	\$548,715
North-Western Growth Area – weighted average			\$24,514	\$490,288

Source: SGS Economics and Planning (2024). *Note: Under this scenario, the DCP charges for CI projects are below the CIL cap.

Lower external demand scenario

For the lower external demand scenario, the weighted average total charge per hectare for the Western growth area is estimated to be \$663,030 with the CIL considered, whereas for the North-Western growth area it is estimated to be \$830,251. Overall, Precinct 5 has the highest total per hectare charge, while Precinct 2 has the lowest.

Table 13: Infrastructure charges, lower external demand scenario, with CIL cap

	Development contributions			
	DI	CI*	Total per demand unit	Total per hectare
Precinct 1	\$37,048	\$1,346	\$38,394	\$767,872
Precinct 2	\$28,163	\$1,346	\$29,509	\$590,188
Precinct 3	\$34,358	\$1,346	\$35,704	\$714,086
Western Growth Area – weighted average			\$33,152	\$663,030
Precinct 4	\$37,203	\$1,346	\$38,549	\$770,987
Precinct 5	\$48,405	\$1,346	\$49,751	\$995,017
North-Western Growth Area – weighted average			\$41,513	\$830,251

Source: SGS Economics and Planning (2024). *Note: DCP charges for CI projects are limited by the CIL cap of \$1,346.

The CIL cap reduces the total infrastructure charge in both growth areas. In comparison, Table 14 provides a summary of the infrastructure charges for both growth areas under the lower external demand without the CIL cap. With no CIL considered, the weighted average total charge per hectare for the Western growth area is estimated to be \$710,494 – a difference of \$47,464 compared to the situation where the cap is applied.

Similarly, for the North-Western growth area, the weighted average total charge per hectare with no CIL considered is estimated to be \$882,800 – representing a difference of \$52,549 under the scenario with the cap.

Table 14: Infrastructure charges, lower external demand scenario, all projects DI

	Development contributions			
	DI	CI*	Total per demand unit	Total per hectare
Precinct 1	\$39,661	NA	\$39,661	\$793,223
Precinct 2	\$32,501	NA	\$32,501	\$650,012
Precinct 3	\$38,116	NA	\$38,116	\$762,319
Western Growth Area – weighted average			\$35,525	\$710,494
Precinct 4	\$41,795	NA	\$41,795	\$835,891
Precinct 5	\$51,272	NA	\$51,272	\$1,025,446
North-Western Growth Area – weighted average			\$44,140	\$882,800

Source: SGS Economics and Planning (2024). *Note: As all projects are allocated to the development infrastructure category, no charges are reported for the CI column.

4.2 Benchmarking

Table 15 provides a comparison of the respective total charges per hectare above with the existing Ballarat West DCP (2023)⁶ and the draft Shepparton South East DCP (2024).⁷

With or without the CIL cap, the charges per hectare are generally higher than the rate in the Ballarat West DCP and the draft Shepparton South East DCP under both higher and lower external demand scenarios.

Table 15: Total charge per hectare comparison with CIL cap

Comparison DCPs	Total charge per hectare
Ballarat West	\$316,339
Shepparton South East	\$411,223
Inclusive of contributions cap	Total charge per hectare
Western growth area (indicative)	\$520,913 - \$663,030
North-Western growth area (indicative)	\$490,288 - \$830,251
Exclusive of contributions cap	Total charge per hectare
Western growth area (indicative)	\$520,913 - \$710,494
North-Western growth area (indicative)	\$490,288 - \$882,800

Source: Compiled by SGS Economics and Planning (2024). Note: All numbers have been rounded.

⁶ Urban Enterprise (2017) *Ballarat West Development Contributions Plan*, accessed 15 April 2024. https://www.ballarat.vic.gov.au/sites/default/files/2019-04/ballarat_west_dcp.pdf

⁷ Victorian Planning Authority (2024) *Shepparton South East Development Contributions Plan*, accessed 15 April 2024. <https://vpa-web.s3.amazonaws.com/wp-content/uploads/2024/02/Shepparton-South-East-PSP-Development-Contributions-Plan-VPA-February-2024.pdf>

4.3 Council's infrastructure funding liabilities

The total cost of infrastructure projects is estimated at \$673 million for the Western growth area and \$458 million for the North-Western growth area. A proportion of these costs are recoverable through the DCP, but the gap between the total costs and costs recovered through the DCP are funding liabilities that fall on Council.

Estimate of the total funds received through the DCP and Council's funding liabilities are provided in the following three tables. Table 16 presents the findings for the lower external demand scenario. Table 17 relates to the higher external demand scenario, assuming the CIL cap is applied to community infrastructure projects. Finally, Table 18 is also based on the higher external demand scenario but in this case all projects are classified as development infrastructure, thus avoiding the impact of the CIL cap.

In the higher external demand scenario, the Western Growth Area has total infrastructure costs of \$673 million. \$452 million of this would be funded through development contributions, \$43 million is expected to come from the state government,⁸ and the balance of \$178 million would need to be provided by Council. For the North-Western Growth Area, the total costs of \$458 million would be funded through \$237 million in development contributions, an anticipated \$12 million from state government and the balance of \$208 million provided by Council.

In the lower external demand scenario Council's contributions are reduced as a larger share of the infrastructure costs fund are attributable to development contributions. In this scenario with the CIL cap considered, Council's liability is reduced significantly to \$52 million for the Western Growth Area and \$42 million for the North-Western Growth Area. In this scenario, the CIL cap increases Council's funding liability by limiting the amount of development contribution for community infrastructure. Further modelling considered the impact of avoiding the CIL cap by classifying *all* infrastructure as development infrastructure. This reduced Council's liabilities to \$13 million and \$18 million for the West and North-Western Growth areas respectively.

This modelling demonstrates how the allocation of external demand/usage in the adopted contribution plan will influence Council's potential infrastructure funding liabilities for the development of the growth areas.

⁸ The expected funding from the state government for some infrastructure projects is outlined in the Services Investigation Report (Taylors, November 2023).

Table 16: Funding liability for Council under the higher external demand scenario

	DI	CI	Total
Western Growth Area			
Total infrastructure cost	\$608,821,981	\$63,970,105	\$672,792,086
Expected funding from the state government	\$43,120,000	\$0	\$43,120,000
DCP charges (CIL cap applied)	\$436,527,314	\$15,558,811	\$452,086,124
Funding gap	\$129,174,667	\$48,411,294	\$177,585,962
North-Western Growth Area			
Total infrastructure cost	\$419,831,320	\$38,145,822	\$457,977,142
Expected funding from the state government	\$12,150,000	\$0	\$12,150,000
DCP charges (CIL cap applied)	\$228,201,472	\$9,290,826	\$237,492,298
Funding gap	\$179,479,849	\$28,854,996	\$208,334,845

Source: SGS Economics and Planning (2024). *Note: Under this scenario, the DCP charges for CI do not exceed the cap of \$1,346.

Table 17: Funding liability for Council under the lower external demand scenario, CIL cap

	DI	CI*	Total
Western Growth Area			
Total infrastructure cost	\$608,821,981	\$63,970,105	\$672,792,086
Expected funding from the state government	\$43,120,000	\$0	\$43,120,000
DCP charges	\$554,383,290	\$23,468,158	\$577,851,448
Funding gap	\$11,318,691	\$40,501,947	\$51,820,638
North-Western Growth Area			
Total infrastructure cost	\$419,831,320	\$38,145,822	\$457,977,142
Expected funding from the state government	\$12,150,000	\$0	\$12,150,000
DCP charges	\$390,459,611	\$13,413,099	\$403,872,710
Funding gap	\$17,221,709	\$24,732,723	\$41,954,432

Source: SGS Economics and Planning (2024). *Note: Under this scenario, the DCP charges for CI limited to the CIL cap of \$1,346.

Table 18: Funding liability for Council under the lower external demand scenario, all DI projects

	DI	CI*	Total
Western Growth Area			
Total infrastructure cost	\$672,792,086	NA	\$672,792,086
Expected funding from the state government	\$43,120,000	NA	\$43,120,000
DCP charges	\$616,618,533	NA	\$616,618,533
Funding gap	\$13,053,553	NA	\$13,053,553
Difference in funding gap due to CIL cap			\$38,767,084
North-Western Growth Area			
Total infrastructure cost	\$457,977,142	NA	\$457,977,142
Expected funding from the state government	\$12,150,000	NA	\$12,150,000
DCP charge	\$427,622,917	NA	\$427,622,917
Funding gap	\$18,204,226	NA	\$18,204,226
Difference in funding gap due to CIL cap			\$23,750,206

Source: SGS Economics and Planning (2024). *Note: As all projects are allocated to the development infrastructure category, no charges are reported for the CI column.

4.4 Key findings and implications for Council

This analysis considered a lower and higher external demand scenario of potential infrastructure costs for the Western and North-Western growth area precincts. The application of the cap on CIL contributions was also considered.

There is wide variation in the indicative charge for both growth areas between the lower and higher external demand scenarios, indicating the sensitivity of the charges to the shares of future demand assigned to each infrastructure project. Broadly, the ranges for the charges identified in this analysis (on a per hectare basis) are generally higher than the benchmarked DCPs, under both higher and lower external demand scenarios.

The inclusion of the CIL cap also has an impact on the indicative infrastructure charges under the lower external demand scenario, and in turn the share of the infrastructure costs the DCP could potentially cover for Council for this scenario.

In summary:

1. Development of the Western Growth Area could cost Council between \$13M and \$178M in infrastructure funding. This large range is varied by the degree of external demand on infrastructure and whether the CIL cap is applied or removed.
2. Development of the North-Western Growth Area could cost Council between \$18M and \$208M, based on the same variables.
3. Across both areas, the upper cost would be \$386M (a high external demand scenario), the lower cost would be \$95M (a low external demand scenario), and the lowest cost would be \$31M (low external demand and higher proportion of DI projects)
4. Council's costs would be minimised through a low external demand scenario and removal of the CIL Cap.
5. To further clarify the costs that Council may face, project-by-project analysis is required to determine the level of external demand and whether they are DI or CI, which in turn would dictate whether the CIL cap is applied.

The results illustrate that there are potentially significant costs to Council that will not be covered by the application of the DCP. As such, confirming the appropriate external usage assumptions in practice will be critical to understanding the long-term financial commitment for Council in developing the Western and North-Western growth areas.

Potential alternative funding and financing sources to meet the future gap are outlined in Appendix C.

Appendix A: External demand assumptions

The tables below detail the external demand assumptions for each project in the Ballarat Western growth area (Table 19) and the Ballarat North-Western growth area (Table 20) under the lower external demand and higher external demand scenarios respectively.

Note: All drainage projects have been assumed to have 0 per cent external demand under both scenarios, as it is expected that the entirety of the costs for these projects will be required from the application of the DCP (i.e. internal demand accounts for 100 per cent of usage).

Table 19: External demand assumptions, Ballarat Western

Project	Lower external demand scenario % assumed	Higher external demand scenario % assumed
Waterway Corridor – H to I	0%	0%
Waterway Corridor –J to K1	0%	0%
Waterway Corridor – K1 to K2	0%	0%
Waterway Corridor – L to K1	0%	0%
Wetland Retarding Basin – WLRB11	0%	0%
Wetland Retarding Basin – WLRB12	0%	0%
Wetland Retarding Basin – WLRB13	0%	0%
Wetland Retarding Basin – WLRB14	0%	0%
Wetland Retarding Basin – WLRB15	0%	0%
Wetland Retarding Basin – WLRB16	0%	0%
Wetland Retarding Basin – WLRB17	0%	0%
Wetland Retarding Basin – WLRB18	0%	0%
Wetland Retarding Basin – WLRB19	0%	0%

Project	Lower external demand scenario % assumed	Higher external demand scenario % assumed
Waterway Corridor – M to N1	0%	0%
Waterway Corridor – N1 to N2	0%	0%
Waterway Corridor – N2 to O	0%	0%
Waterway Corridor – O to P	0%	0%
Waterway Corridor – P to Q	0%	0%
Wetland Retarding Basin – WLRB20	0%	0%
Wetland Retarding Basin – WLRB21	0%	0%
Wetland Retarding Basin – WLRB22	0%	0%
Wetland Retarding Basin – WLRB24	0%	0%
Wetland Retarding Basin – WLRB25	0%	0%
Waterway Corridor – S to R	0%	0%
Waterway Corridor – Q to R	0%	0%
Waterway Corridor – R to T	0%	0%
Waterway Corridor – U to V	0%	0%
Waterway Corridor – V to T	0%	0%
Waterway Corridor – T to W	0%	0%
Wetland Retarding Basin – WLRB26	0%	0%
Wetland Retarding Basin – WLRB27	0%	0%
Wetland Retarding Basin – WLRB28	0%	0%
Wetland Retarding Basin – WLRB29	0%	0%
Wetland Retarding Basin – WLRB30	0%	0%
Sediment Basin - SB1	0%	0%
Road Culverts Precinct 3: WLRB18 - 2 x 900 dia	0%	0%

Project	Lower external demand scenario % assumed	Higher external demand scenario % assumed
Road Culverts Precinct 3: WLRB19 - 1 x 1350 dia	0%	0%
Road Culverts Precinct 2: WLRB21 - 1 x 1500 dia	0%	0%
Road Culverts Precinct 2: WLRB23 - 1 x 1350 dia	0%	0%
Road Culverts Precinct 2: WLRB25 / Bells Rd - 1 x 1500 dia	0%	0%
Road Culverts Precinct 1: Bells Rd to WLRB26 - 1 x 1500 dia	0%	0%
Road Culverts Precinct 1: WLRB30 Cherry Flat Road - 1 x 600 dia	0%	0%
Main Drains Precinct 3: WLRB13 - 1 x 1650 dia	0%	0%
Main Drains Precinct 3: WLRB 14 - 1 x 675 dia	0%	0%
Main Drains Precinct 3: WLRB15 - 1 x 900 dia	0%	0%
Main Drains Precinct 2: WLRB24 to Waterway - 1 x 1650 dia	0%	0%
Main Drains Precinct 1: WLRB26 to Waterway - 2 x 1050 dia	0%	0%
Main Drains Precinct 1: WLRB27 to Waterway - 1 x 1050 dia	0%	0%
Main Drains Precinct 1: WLRB28 to Waterway - 1 x 1350 dia	0%	0%
Main Drains Precinct 1: WLRB29 to Waterway - 1 x 1350 dia	0%	0%
Main Drains Precinct 1: WLRB30 to Waterway - 1 x 600 dia	0%	0%
Main Drains Precinct 1: SB31 to Waterway - 1 x 1650 dia	0%	0%
Downstream Outfall Grade Out Works	0%	0%
Downstream Outfall Grade Out Works	0%	0%
Downstream Outfall Grade Out Works	0%	0%
Cuthberts Road - Btw Finchs Rd & North-South Collector. Upgrade from 2 lane country road to 2 lane collector road.	0%	75%
Cuthberts Road - Btw North-South Collector & Dyson Dr. Upgrade from 2 lane country road to 2 lane collector road.	0%	75%

Project	Lower external demand scenario % assumed	Higher external demand scenario % assumed
Ballarat-Carngham Road – Btwn Finchs Rd & North-South Collector Rd. Upgrade from 2 lane country road to 4 lane arterial.	0%	75%
Ballarat-Carngham Road – Btwn North-South Collector Rd & Dyson Dr. Upgrade from 2 lane country road to 4 lane arterial.	0%	75%
Ballarat-Carngham Road - Btwn Finchs Rd & Skipton Rail Trail. Upgrade from 2 lane country road to 2 lane arterial.	0%	75%
Latrobe Street – East of Wiltshire Lane. Upgrade short section from 2 lane arterial to 4 lane arterial.	0%	50%
Wiltshire Lane Upgrade (Btw La Trobe St & Whitelaw Ave) upgrade to 4 lane arterial road.	0%	50%
Learmouth Street Upgrade (Btw La Trobe St & Napier Ave) upgrade to 2 lane arterial road.	0%	50%
Bells Road - West of Glenelg Hwy. Upgrade from 2 lane country road to 2 lane arterial.	0%	50%
Bells Road – Btwn Glenelg Hwy & Lewis Crt. Upgrade from 2 lane country road to 2 lane Link Road.	0%	50%
Bells Road – Btwn Lewis Crt & Cherry Flat Rd. Upgrade from 2 lane country road to 2 lane Link Road.	0%	50%
Bells Road – Btwn Cherry Flat Rd & Ross Creek Rd. Upgrade from 2 lane country road to 2 lane Link Road.	0%	50%
Ballarat Link Road (Dyson Drive) – Btwn R’brance Dr & Cuthberts Rd. Upgrade from 2 lane to 4 lane arterial.	0%	50%
Ballarat Link Road (Dyson Drive) – Btw Cuthberts Rd & Ballarat-Carngham Rd. Upgrade from 2 lane to 4 lane arterial.	0%	50%
Ballarat Link Road (Dyson Drive) – Btw Ballarat-Carngham Rd & Greenhalghs Rd. Upgrade to 2 lane arterial.	0%	50%
Ballarat Link Road (Dyson Drive) – Btw Greenhalghs Rd & Glenelg Hwy. Upgrade to 2 lane arterial.	0%	25%
Ballarat Link Road (Dyson Drive) – Btw Glenelg Hwy & Bells Rd. Construct new 2 lane arterial.	0%	25%

Project	Lower external demand scenario % assumed	Higher external demand scenario % assumed
Finchs Road / Cuthberts Road - T intersection	0%	50%
Finchs Road / Ballarat Carngham Road - Cross intersection	0%	50%
Ballarat Carngham Road /North-South Collector Road - Cross Intersection	0%	50%
Ballarat Carngham Road / Wiltshire Lane - Cross Intersection	0%	50%
Bells Road / North-South Collector Road - T intersection	0%	50%
Level 1 Multipurpose community centre	0%	75%
Level 2 Multipurpose community centre	0%	75%
Active open space (8 to 10 hectares)	0%	75%
Sports Pavilion serving 2 playing areas	0%	75%
Sports pavilion serving 3 playing areas	0%	75%

Source: SGS Economics and Planning (2024)

Table 20: External demand assumptions, Ballarat North-Western

Project	Lower external demand scenario % assumed	Higher external demand scenario % assumed
Waterway Corridor – A to B	0%	0%
Waterway Corridor – C to B	0%	0%
Wetland Retarding Basin – WLRB1	0%	0%
Wetland Retarding Basin – WLRB2	0%	0%
Wetland Retarding Basin – WLRB3	0%	0%
Wetland Retarding Basin – WLRB4A	0%	0%
Waterway Corridor – D to E	0%	0%
Waterway Corridor – F to E	0%	0%
Waterway Corridor – E to G	0%	0%
Wetland Retarding Basin – WLRB4B	0%	0%
Wetland Retarding Basin – WLRB5	0%	0%
Wetland Retarding Basin – WLRB6	0%	0%
Wetland Retarding Basin – WLRB7	0%	0%
Wetland Retarding Basin – WLRB8	0%	0%
Wetland Retarding Basin – WLRB9	0%	0%
Wetland Retarding Basin – WLRB10	0%	0%
Road Culverts Precinct 5: Draffins Road WLRB1 - 1 x 675 dia	0%	0%
Road Culverts Precinct 5: Draffins Rd WLRB3 - 2 x 900 dia	0%	0%
Road Culverts Precinct 4: Remembrance Drive WLRB4B - 1 x 1050 dia	0%	0%
Road Culverts Precinct 4: West Bdy WLRB5 - 1 x 1050 dia	0%	0%
Road Culverts Precinct 4: West Bdy WLRB8 - 1 x 1050 dia	0%	0%
Road Culverts Precinct 4: West Bdy WLRB9 - 2 x 900 dia	0%	0%

Project	Lower external demand scenario % assumed	Higher external demand scenario % assumed
Road Culverts Precinct 4: Finch Rd WLRB7 - 1 x 1500 dia	0%	0%
Road Culverts Precinct 4: Cuthberts Rd WLRB10 - 1 x 1050 dia	0%	0%
Main Drains Precinct 5: WLRB 4B to 4A 1050 dia	0%	0%
Main Drains Precinct 4: WLRB10 to outfall - 1 x 1050 dia	0%	0%
Downstream Outfall Grade Out Works	0%	0%
Downstream Outfall Grade Out Works	0%	0%
Remembrance Drive Upgrade (Between Ballarat Link Road & Skipton Rail Trail (Future Rd)) Upgrade from local 2 lane to 2 lane arterial.	0%	75%
Remembrance Drive Upgrade (Between Ring Road & Ballarat Link Road) Upgrade from 2 lane to 4 lane arterial	0%	75%
Remembrance Drive Upgrade (Between Gillies Street & Ring Road) Upgrade from 2 lane to 4 lane arterial.	0%	75%
Remembrance Drive Upgrade (Between Dowling Rd & Draffins Rd) Upgrade from rural 2 lane to 2 lane arterial.	0%	75%
Remembrance Drive Upgrade (Between Finchs Rd & Dowling Rd) Upgrade from rural 2 lane to 2 lane arterial	0%	75%
Remembrance Drive Upgrade (Between Finchs Rd & Skipton Rail Trail Interface Rd) Upgrade from rural 2 lane to 2 lane arterial	0%	75%
Ballarat Link Road Upgrade (Between Remembrance Drv & Blind Creek Rd) to 2 lane arterial.	0%	75%
Blind Creek Road Upgrade (Between Dowling Rd & Ballarat Link Rd) from 2 lane rural to link road.	0%	75%
Remembrance Drive - Ballarat Ring Road - T intersection	0%	75%
Remembrance Drive / Ballarat Link Road - Cross Intersection	0%	75%
Sturt Street / Gillies Street - Cross intersection	0%	75%

Project	Lower external demand scenario % assumed	Higher external demand scenario % assumed
Remembrance Drive / Skipton Rail Trail Interface Road - T Intersection	0%	75%
Remembrance Drive / Finchs Road - T intersection	0%	75%
Remembrance Drive / Dowling Road - T Intersection	0%	75%
Remembrance Drive / Draffins Road / Whites Road - Cross intersection	0%	75%
Level 1 Multipurpose community centre	0%	75%
Level 2 Multipurpose community centre	0%	75%
Level 3 Multipurpose community centre	75%	75%
Active open space (8 to 10 hectares)	0%	75%
Sports Pavilion serving 2 playing areas	0%	75%
Sports pavilion serving 3 playing areas	0%	75%
Indoor Recreation Centre	0%	50%

Source: SGS Economics and Planning (2024)

Appendix B: Demand timing assumptions

The following tables show SGS's assumptions for the distribution over time of the delivery of dwellings (Table 21) and retail floorspace (Table 22) for each precinct across the two growth areas.

Table 21: Demand projection assumptions, residential dwellings, by precinct and year

Year	Precinct 2	Precinct 1	Precinct 3	Precinct 4	Precinct 5
2034	400				
2035	600				
2036	800				
2037	864				
2038	864				
2039	864				
2040	864				
2041	600	264			
2042	400	464			
2043	144	720			
2044		864			
2045		800	64		
2046		600	264		
2047		108	756		
2048			864		
2049			864		
2050			864		

Year	Precinct 2	Precinct 1	Precinct 3	Precinct 4	Precinct 5
2051			864		
2052			864		
2053			650	214	
2054			500	364	
2055			426	438	
2056				864	
2057				864	
2058				864	
2059				864	
2060				800	64
2061				600	264
2062				288	576
2063					864
2064					864
2065					600
2066					208

Source: SGS Economics and Planning (2024)

Table 22: Demand projection assumptions, retail foospace, by precinct and year

Year	Precinct 2	Precinct 1	Precinct 3	Precinct 4	Precinct 5
2034	450				
2035	1184				
2036	1184				
2037	1424				
2038	1424				
2039	1424				
2040	1424				
2041	984	440			
2042	700	724			
2043	348	1076			
2044		1424			
2045		1184	240		
2046		950	474		
2047		497	927		
2048			1424		
2049			1424		
2050			1424		
2051			1424		
2052			1424		
2053			1184	240	
2054			950	474	
2055			607	817	
2056				1424	

Year	Precinct 2	Precinct 1	Precinct 3	Precinct 4	Precinct 5
2057				1424	
2058				1424	
2059				1424	
2060				1250	174
2061				1100	324
2062				571	853
2063					1424
2064					1424
2065					1000
2066					468

Source: SGS Economics and Planning (2024)

Appendix C: Alternative funding and financing sources

The costs faced by Council to provide necessary infrastructure for the development of the Western and North-Western growth areas are substantial, though this situation is not unique to the Ballarat context.

There are a limited number of alternative funding and financing sources open to Council which could help to address a future funding gap for development (i.e. civil and servicing infrastructure) and community facilities respectively.

National Housing Infrastructure Facility – Critical Infrastructure (NHIF CI)

The National Housing Infrastructure Facility (NHIF) is a \$1 billion facility that provides finance for some infrastructure types that are deemed ‘critical’ infrastructure to unlock and accelerate new housing supply – which overlaps substantially with the types of infrastructure typically included in DCPs. The funding can be applied to new or upgraded infrastructure components for electricity and gas, water, sewerage and stormwater, transportation (including roads), and telecommunications, as well as for demolition and site remediation, and on site and linking infrastructure.⁹

Financial support under the NHIF CI can be provided through:

- Concessional loans – such as longer loans, lower interest rates, extended capitalisation periods beyond construction completion, deferrals or other tailored repayment schedules, low/different fee structures, and commercial structuring allowing for flexibility in debt structuring.
- Grants
- Equity investments, or
- A combination of these.

As a local government authority, the City of Ballarat would likely be eligible for funding through the scheme, however, the funding received cannot be used for some elements of the development process, including the actual housing delivery, community infrastructure, acquisitions or refinancing, planning studies or administrative costs. A key element of the eligibility requirements is also demonstrating that the development project would be unlikely to proceed, would be significantly delayed, or deliver less affordable housing without the funding from NHIF.¹⁰

The provision of funding under the NHIF is subject to sufficient funds being available each financial year.

⁹ <https://www.housingaustralia.gov.au/national-housing-infrastructure-facility-critical-infrastructure-nhif-ci>

¹⁰ <https://www.housingaustralia.gov.au/sites/default/files/2023-09/NHIF%20CI%20Factsheet.pdf>

Treasury Corporation of Victoria loans

All local governments in Victoria are eligible for consideration under the Treasury Corporation of Victoria (TCV) loans scheme. The scheme aims to support the strategic use of cost-effective debt to benefit local communities, utilising the Victorian Government's ability to borrow and lend at cheaper than commercial rates.¹¹ Among the objectives identified for the TCV loans are those specifically related to supporting infrastructure delivery, including:

- to incentivise councils to consider the strategic use of debt to fund capital expenditure that provides intergenerational community benefits
- to incentivise councils to bring forward community infrastructure delivery by providing increased opportunities to access affordable finance
- to support a range of local community projects which ultimately deliver on the objectives of both the Victorian Government and the local council and maximise community access and benefit.¹²

The funding from the loans is not tied to specific works, but must be used to fund infrastructure and general working capital requirements, in compliance with the relevant legislation and borrowing guidelines set by Treasury. Loan funding is not able to be used for refinancing purposes or investments in financial assets.

As such, funding from the loan process could be used to supplement the cost of items for Council identified in the DCP, either development or community infrastructure.

Other funding streams for community infrastructure

Projects in Ballarat can also be eligible for other Victorian Government grant programs that have a focus on community infrastructure, including the types that would be included in the growth areas DCP. However, these programs change and are variable and subject to State budgets and are typically focused on 'shovel-ready' projects that can be delivered within a certain timeframe.

Examples of these have included:

*Regional Community Sports Infrastructure Fund*¹³

This program is focused on supporting projects that can improve participation in sport and active recreation, with priority given to those that target disadvantaged groups.

There are five streams of funding under the program:

- Indoor Stadiums and Aquatic Facilities (which includes multi-sport indoor courts)
- Community Facilities (which includes pavilions and other features for outdoor recreation in open space)

¹¹ <https://www.localgovernment.vic.gov.au/council-innovation-and-performance/treasury-corporation-of-victoria-loans>

¹²

https://www.localgovernment.vic.gov.au/__data/assets/pdf_file/0026/199403/TCV_loans_to_Victorian_councils.pdf

¹³ https://sport.vic.gov.au/__data/assets/pdf_file/0018/204705/RCSIF-Frequently-Asked-Questions-web.pdf

- Women and Girls Facilities
- All Abilities Infrastructure
- All Abilities Participation.

Councils are required to match funding according to set ratios for the relevant stream, and limits apply to the maximum funding available per Council (\$3 million for the Indoor Stadiums and Aquatic Facilities stream, \$500,000 for the All Abilities Participation stream, and \$1 million for the other three streams).

*Local Sports Infrastructure Fund*¹⁴

Similar to the above, this program from 2023-24 provided funding across three streams:

- Community Facilities
- Community Sports Lighting
- Planning.

The maximum grant available per applicant under this program was \$300,000 in the Community Facilities Stream, of which eligible project types included pavilions and other active open space infrastructure. The Planning stream funding was available for either the planning for particular facilities (which would likely be the case for the Ballarat growth areas in relation to the indoor recreation centre) or strategic level planning such as recreation and leisure strategies, feasibility studies, and master planning for multiple sites.¹⁵

¹⁴ <https://sport.vic.gov.au/grants-and-funding/our-grants/local-sports-infrastructure-fund>

¹⁵ https://sport.vic.gov.au/__data/assets/pdf_file/0026/202589/Local-Sports-Infrastructure-Fund-Guidelines-2023_PDF_WEB.pdf

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Planning today for the communities of tomorrow

Ballarat Western and North-Western Growth Areas Framework Plan

Community Infrastructure Assessment

Final Report

November 1, 2023

Version 3

Prepared for Ballarat City Council
by ASR Research Pty Ltd
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*Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report***Table of Contents**

1	INTRODUCTION	4
1.1	BACKGROUND	4
1.2	ASSESSMENT OBJECTIVES.....	5
1.3	REVIEW SCOPE.....	6
2	METHODOLOGY.....	7
3	ADJOINING GROWTH AREAS	8
3.1	BALLARAT WEST PRECINCT STRUCTURE PLAN	8
3.2	CAMBRIAN HILL PRECINCT	10
4	OVERVIEW OF THE COMMUNITY INFRASTRUCTURE PLANNING PROCESS	11
4.1	KEY ELEMENTS OF COMMUNITY INFRASTRUCTURE PLANNING	11
4.2	COMMUNITY INFRASTRUCTURE PLANNING GUIDELINES.....	11
4.3	ISSUES WITH THE APPLICATION OF CURRENT PROVISION BENCHMARKS.....	12
4.4	PROVISION & COST BENCHMARKS.....	13
4.5	COST ESTIMATE BENCHMARKS FOR KEY DCP COMMUNITY INFRASTRUCTURE ITEMS	17
5.	REVIEW OF KEY POLICIES & STRATEGIC DOCUMENTS.....	19
5.1	OVERVIEW.....	19
5.2	CITY OF BALLARAT COMMUNITY INFRASTRUCTURE PLANNING POLICY (2020)	19
5.3	CITY OF BALLARAT COMMUNITY INFRASTRUCTURE NEEDS & GAP ANALYSIS REPORT.....	20
5.5	IMPLICATIONS	20
6	BALLARAT WESTERN AND NORTH-WESTERN GROWTH AREAS DEVELOPMENT & POPULATION ANALYSIS	21
6.1	OVERVIEW.....	21
6.2	FRAMEWORK PLAN GROWTH AREA DEVELOPMENT ASSUMPTIONS.....	21
6.3	CURRENT DWELLING AND POPULATION ESTIMATE FOR THE BALLARAT WEST PSP	23
7	EXISTING & PLANNED COMMUNITY INFRASTRUCTURE NEAR FRAMEWORK PLAN AREAS	24
7.1	OVERVIEW.....	24
8	PRELIMINARY COMMUNITY INFRASTRUCTURE ASSESSMENT	25
9	SUMMARY OF KEY FINDINGS & RECOMMENDATIONS	47
9.1	DWELLING & POPULATION OUTCOMES	47
9.2	PUBLIC OPEN SPACE & RECREATION	47
9.3	MULTIPURPOSE COMMUNITY CENTRES & COMMUNITY SERVICES	49
9.4	EDUCATION	51
9.5	LAW COURTS, POLICE & EMERGENCY SERVICES.....	52
9.6	HEALTH	53
9.7	AGED CARE & OTHER SERVICES FOR OLDER PERSONS.....	53
9.8	CONSISTENCY WITH STATUTORY POLICIES AND OTHER STRATEGIC DOCUMENTS	53
9.9	FURTHER PROCESS RECOMMENDATIONS.....	53
10	INDICATIVE COMMUNITY INFRASTRUCTURE HUB LOCATIONS & DCP COST IMPLICATIONS	54
10.1	INDICATIVE COMMUNITY INFRASTRUCTURE HUB LOCATIONS.....	54
10.2	INDICATIVE DCP COST IMPLICATIONS.....	57
	APPENDICES.....	59

*Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report***LIST OF TABLES**

Table 1 – Key Community Infrastructure Benchmark Cost Estimates for the 2023/2024 Financial Year (1 July 2023)	18
Table 2 – Ballarat West and North-Western Growth Area Framework Plan Dwelling and Population Assumptions	22
Table 3 – Potential Requirements within the Ballarat West Growth Area.....	26
Table 4 – Indicative DCP Community Infrastructure Project Cost Estimates for the Ballarat Western and North-Western Growth Areas (excluding land acquisition costs): Low Development Scenario.....	57
Table 5 – Indicative DCP Community Infrastructure Project Cost Estimates for the Ballarat Western and North-Western Growth Areas (excluding land acquisition costs): High Development Scenario.....	58
Table 6 – Key Elements of the PSP Guidelines Relevant to the Community Infrastructure Assessment Process	63
Table 7 - Ballarat City Council Strategic Documents Potentially Relevant to the Assessment	70
Table 8 - Non-Council Strategies and Plans	74
Table 9 - Typical PSP Active Open Space Specifications by Size	103
Table 10 - Typical PSP Sport Pavilion Specifications by Number of Playing Fields.....	104
Table 11 – Typical PSP Community Centre Configurations x Hierarchy Type	105

List of Figures

Figure 1- Location of Western and North-Western Growth Areas	4
Figure 2 – Location of Main Existing and Planned Community Infrastructure Items within the Ballarat West PSP.....	9
Figure 4 - Indicative Community Centre Facility Locations and Catchment Areas.....	54
Figure 5 - Indicative Active Open Space and Indoor Recreation Facility Locations and Catchment Areas.....	55
Figure 6 - Indicative Government Education Facility Locations and Catchment Areas.....	56
Figure 7 - Libraries, Community Centres, Cultural Facilities and Halls	80
Figure 8 - Early Years Facilities: Sessional Kindergarten (K) and Maternal & Child Health (M)	81
Figure 9- Early Years Facilities: Long Day Child Care (L)	82
Figure 10 – Outdoor Passive and Active Open Space Facilities	83
Figure 11 – Indoor Recreation Facilities	84
Figure 12 - Education Facilities	85
Figure 13 - Law Courts, Police and Emergency Services.....	86
Figure 14 - Acute and Community Health Services	87
Figure 15 - Residential Aged Care (R), Supported Residential Services (S) and Planned Activity Group Venues (P).....	88

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

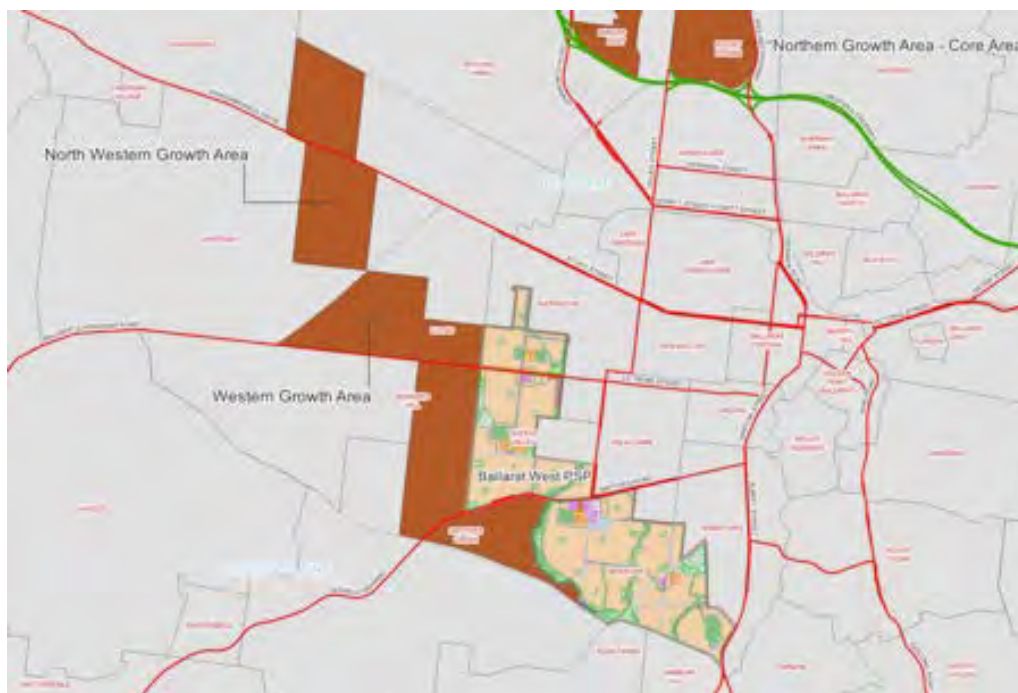
1 Introduction

1.1 Background

The City of Ballarat's population is expected to grow to 185,000 by 2041. This is an increase of 72,611 persons requiring approximately 29,000 dwellings or 1,450 dwellings per year across the municipality. The Department of Environment, Land, Water and Planning¹ (DELWP) Practice Note 90 requires that Local Authorities plan to accommodate projected population growth over at least a 15-year period and provide clear direction on locations where growth should occur.

Key to future land supply will be the Ballarat Western and North-Western Growth Areas. The location and boundary of these growth Areas is shown in Figure 1 below.

Figure 1- Location of Western and North-Western Growth Areas



On 23 February 2022, Council resolved to prepare a Growth Area Framework Plan for the Western and North-western Growth Areas to guide the future urban development of these areas. The relevant parts of the resolution are as follows:

¹ Now the Department of Energy, Environment and Climate Action (DEECA) as of 2023

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

6. Notes that the 'Growth Areas Framework Plan' will be prepared to establish the most appropriate sequencing of Precinct Structure plan preparation for the western and north-western growth areas, aligned to sustainable development principles and the likely or planned construction of infrastructure or community facilities to support well-planned and sustainable communities.

7. Report back to Council, quarterly, on the progress of the rezoning to UGZ and the project plan including timeframes for the Growth Areas Framework Plan.

The Western and North-western Growth Areas were identified through earlier strategic investigations². The purpose of preparing a Growth Area Framework Plan is to identify high level infrastructure requirements, and to determine a logical sequence for future Precinct Structure Plan preparation in both the Western and North-western Growth Areas. In addition, the Framework Plan must also have regard to future proximate urban development within Golden Plains Shire (Cambrian Hill).

Other planning work occurring concurrently with the preparation of the Growth Area Framework Plan for the Western and North-western Growth areas includes City of Ballarat Housing Strategy, and a high level strategic review of land supply by the Victorian Planning Authority (VPA). The VPA has also been appointed as the planning authority for the Northern Growth Area Precinct Structure Plan

1.2 Assessment Objectives

The Ballarat Western and North-Western Growth Areas will embrace best practice planning to ensure that new communities are liveable, well connected and well serviced. Provision of appropriate community and recreation facilities will be critical to achieving this, and it is important that early work inform the development of the Growth Areas Framework Plan. The objectives of the assessment were to:

- Provide advice on future community and recreation infrastructure requirements for the Ballarat Western and North-Western Growth Areas to inform the preparation of the Growth Area Framework Plan. This work should reflect a base case (15 dwellings per hectare) and PSP 2.0 scenarios in relation to dwelling density, as well as other emerging trends and policy issues which will impact future demand and supply for such facilities.
- Consider the current suite of planned and existing community infrastructure in the adjoining Ballarat West Precinct Structure Plan and identify any gaps, shortfalls or other requirements which will need to be addressed as part of the development of the Ballarat Western and North-Western Growth Areas. Specific consideration should be given to potential constraints to community and recreation

² Refer Ballarat Long Term Growth Options Investigation, Hansen, Arup and Tim Nott, January 2016.

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

infrastructure provision in the Ballarat West Precinct Structure Plan (PSP) and the extent to which this will impact future requirements in the Growth Areas to the west and north-west of the PSP.

- Provide advice on the amount of provision required for specific types of community and recreation facilities, likely land supply requirements and consideration of optimal locational criteria within the Western and North-western Growth Areas. A potential investment pipeline should be provided including indicative preliminary probable cost estimates.

1.3 Review Scope

The scope of community infrastructure assessed as part of this assessment is divided into two components: 1) primary community infrastructure items, and 2) secondary community infrastructure items.

Primary community infrastructure items consist of:

1. Passive and active open spaces (sports grounds) and indoor recreation facilities; and
2. The services and activities typically accommodated within Council multipurpose community centres.
The list of services and activities includes:
 - Kindergartens;
 - Maternal and child health;
 - Long day child care;
 - Occasional child care;
 - Playgroups;
 - Youth services;
 - General community meeting spaces made available for community hire;
 - Neighbourhood houses;
 - Libraries;
 - Arts and cultural activities / services; and
 - Aged care and disability services.
3. Education facilities.

Items 1 and 2 form represent the majority of community infrastructure forms identified in typical Precinct Structure Plans (PSPs) and Development Contributions Plans (DCPs). Education facilities are also typically identified in PSPs but do not form part of DCPs.

Secondary community infrastructure items consist of:

1. Law courts, police and emergency services;

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

2. Acute and community health services; and
3. Residential aged care.

Although these secondary items are not included in DCPs, they are important considerations for the health and well-being of local communities. The assessment findings associated with these items will allow Ballarat City Council to engage and consult with the relevant external agencies responsible for the funding, ownership, and management of these services to discuss future provision strategies for the Ballarat community.

2 Methodology

This report has been developed to ensure both City of Ballarat departments and external agency stakeholders have sufficient information to make informed decisions about future community infrastructure provision strategies for the Ballarat Western and North Western Growth Areas. To achieve this the following methodology was used to inform the preparation of the assessment:

1. Providing an overview of the community infrastructure planning process as it applies to growth areas.
2. Reviewing many of the more relevant statutory and strategic documents likely to have the most significant influence on the community infrastructure outcomes associated with the development of the Ballarat Western and North-Western Growth Areas.
3. Mapping the main existing and planned community infrastructure in surrounding established communities and the adjoining Ballarat West PSP, including those items specifically identified within the Ballarat West Development Contributions Plan (DCP).
4. Reviewing and analysing the implications of the current development and population assumptions for the Ballarat Western and North-Western Growth Areas on likely future community infrastructure needs.
5. Undertaking a preliminary assessment of potential DCP community infrastructure items for the Ballarat Western and North-Western Growth Areas.
6. Identifying indicative locations for future community infrastructure hub locations the Ballarat Western and North-Western Growth Areas.

3 Adjoining Growth Areas

This assessment provides an analysis of the relationship between the existing adjoining growth areas (i.e. the Ballarat West PSP and the proposed Cambrian Hill Precinct located in the Shire of Golden Plains) and the proposed Western and North-Western Growth Areas with a specific focus on the following matters.

- Any identified shortfall in community and recreation infrastructure provision in the existing Ballarat West PSP which should be provided for in the future growth areas in particular the Western.
- Any additional external demand on Ballarat West PSP infrastructure resulting from the proposed growth areas.
- Likely constraints on supply of future facilities within Ballarat West due to factors such as potential contamination of land, unsuitable former land uses (e.g., mining activity), or constraints on available land supply such as allotment size, access constraints etc.
- The extent to which the future Ballarat West Growth Area is to make provision for regional facilities that will meet the needs of both the population within the existing PSP area and the future population within the Ballarat West Growth Area and parts of Golden Plains Shire (Cambrian Hill Precinct).

3.1 Ballarat West Precinct Structure Plan

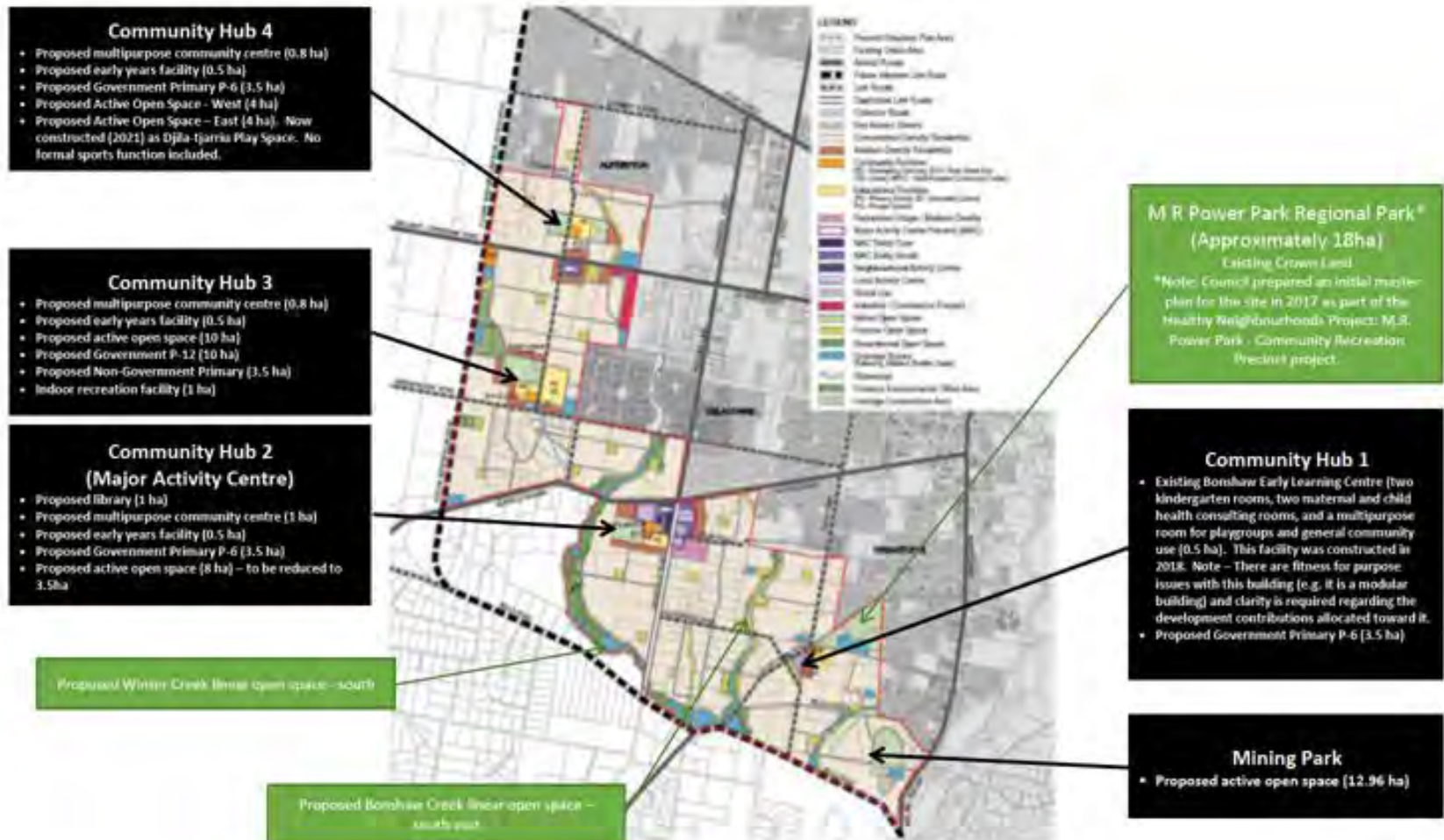
Figure 2 shows the location and distribution of community infrastructure items identified by the PSP. Most of the community infrastructure is to be delivered across 4 major community infrastructure hubs. In summary, the current PSP proposes to deliver the following community infrastructure:

- 26 neighbourhood / passive parks and 1 existing regional park;
- 4 new active open spaces (outdoor sports grounds);
- 2 Indoor recreation facilities;
- Linear open space including Winter Creek and Bonshaw Creek;
- 4 early years hubs and 3 multipurpose community centres;
- 1 Library³;
- 4 Government primary schools, 1 Government secondary school and 1 non-Government school site;
- An emergency services site; and
- A privately owned / operated retirement village site.

³ Note: Council also plans to construct the Wendouree Library and Learning Centre which is anticipated to service both the Ballarat Northern Growth Area and Ballarat West and North West Growth Areas. Design work is currently scheduled for 2029/30 financial year and construction for 2031/32. The location of the proposed library will provide easy access for residents in the Ballarat West and North West Growth Areas because of proposed link road upgrades.

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Figure 2 – Location of Main Existing and Planned Community Infrastructure Items within the Ballarat West PSP



Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

It should be noted that a separate assessment reviewing the community infrastructure needs of the Ballarat West PSP was also being prepared concurrently with this assessment. This report titled the *Ballarat West Precinct Structure Plan Review – Community and Recreation Infrastructure*, was also being prepared by ASR Research on behalf of Ballarat City Council. It is anticipated there will be some key changes to the provision items shown in Figure 2.

It is anticipated that a large number of other services operated by the private and not-for-profit community sector will also be accommodated within the Ballarat West PSP. For the purposes of this assessment, the items identified in the PSP are distinct from these other services and facilities in the following manner:

- They reflect items which are to be either totally or partially funded by the DCP (either land or construction, or both); or
- Are proposed education sites with a specified land allocation and in a specific location that are to be purchased by either the Department of Education (DE) or a non-government education provider such as Catholic Education Ballarat.

3.2 Cambrian Hill Precinct

The proposed Cambrian Hill Precinct abuts the southern boundary of the Ballarat West Precinct Structure Plan area and is located in the Shire of Golden Plains. Planning is being progressed via a rezoning amendment concurrently with the development of the Golden Plains Settlement Strategy (GPSS).

At this preliminary stage of the planning process, it is assumed that the Cambrian Hill Precinct has capacity to accommodate 3,000 dwellings. A preliminary community infrastructure assessment prepared on behalf of the major land developer of the Precinct (Grange Development) indicates that the Precinct will include a range of local community infrastructure including:

- Public open space;
- A Council multipurpose community facility (which would include sessional kindergarten, maternal & child health services and community meeting spaces);
- A Government primary school (subject to Department of Education approval); and
- A private long day child care facility.

However, beyond this local infrastructure and the activities and services it will accommodate, it is reasonable to assume that the remaining community infrastructure demands (e.g. independent schools, hospitals, higher education, arts and cultural facilities and events, police and emergency services) of this new development will largely be met by existing and planned community infrastructure located in the City of Ballarat.

4 Overview of the Community Infrastructure Planning Process

4.1 Key Elements of Community Infrastructure Planning

The community infrastructure planning process typically involves an interrelated set of considerations. These include:

- Scope - Defining what services and facilities to plan for.
- Policy and regulation – Government policies and regulation play a significant role in the provision of both public and private social infrastructure provision.
- Demand – what the future demand for a given service or facility is likely to be. Demand calculations are often associated with the use of provision benchmarks (refer to Section 4.4 for more details).
- Supply – what existing and planned provision is required to service the demand. As with demand calculations, supply calculations are often associated with the use of provision benchmarks (refer to Section 4.4 for more details).
- Models of provision – how are services and facilities best configured / arranged to meet demand (e.g. land size, facility type, multiservice / shared use of resources etc) and by whom (e.g. public / private).
- Distribution and location – how the facility or service should best be geographically / spatially delivered (i.e. catchment area).
- Timing of provision – when should services and facilities be delivered and by whom.
- Funding – how will services and facilities be funded.

4.2 Community Infrastructure Planning Guidelines

4.2.1 Victorian Planning Authority Endorsed Guidelines

Community infrastructure objectives are a central element of many key State Government planning policies and strategies such as *Plan Melbourne 2017-2050*. The Victorian Planning Authority (VPA) plays an important role in implementing many of the directions contained within Melbourne's metropolitan strategy. There are also a number of reports that have been prepared on behalf of the VPA that focus on or include community infrastructure planning guidelines. The key documents include:

- Precinct Structure Planning Guidelines (2021);
- Planning for Community Infrastructure in Growth Areas Communities – PCIGAC (2008);

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

- Kindergarten Infrastructure Needs Assessment in Greenfield Growth Areas (2015)⁴;
- A Short Guide to Growth Area Community Infrastructure Planning (2009);
- A Strategic Framework for Creating Liveable New Communities – April 2008;
- A Strategic Framework for Creating Liveable New Communities – The Framework at a Glance;
- Community Infrastructure – Liveability Planning Checklist – April 2008; and
- Creating Liveable New Communities Promising Practice: A book of good practice – case studies.

Of these documents the Precinct Structure Planning Guidelines (PSP Guidelines), the Planning for Community Infrastructure in Growth Areas Communities (PCIGAC) and the Kindergarten Infrastructure Needs Assessment in Greenfield Growth Areas contain most of the key provision guidelines or benchmarks used by the VPA in the planning of greenfield sites. Key provision guidelines contained within these documents are used throughout this assessment.

4.3 Issues with the Application of Current Provision Benchmarks

Although community infrastructure covers a potentially wide variety of services and facilities provided by all forms of Government, the private for-profit sector and not-for-profit organisations, much of what is planned for within PSP locations largely focus on the following six infrastructure forms:

1. Passive and active open space (bundled together under the term unencumbered public open space);
2. Indoor recreation facilities;
3. Local multipurpose community centres which can have many potential configurations but are typically classified into two main types (Levels 1 & 2 - refer to Section 4.4.3 for more details);
4. Higher order community centres (Level 3 centres which can accommodate services such as libraries, youth programs and Planned Activity Groups - refer to Section 4.4.3 for more details);
5. Government primary and secondary Schools; and
6. Non-Government Schools.

Although indicative provision benchmarks exist for many of these infrastructure forms, there remain many issues with the acceptance of benchmarks as a tool for planning in greenfield locations, ranging from whether specific benchmarks are too high or too low to whether there are better methods for determining and responding to community infrastructure need. Some of the key issues are summarised below:

- Benchmarks provide simplicity but are often ‘narrow’ (i.e. linked to only a population or dwelling number as a trigger for provision) when other variables and criteria are not taken into account (e.g.

⁴ Note: The Kindergarten Infrastructure Needs Assessment in Greenfield Growth Areas report was developed in 2015, prior to the introduction of the Universal Access policies (i.e. 15 hours of 3 year old kindergarten and 30 hours of pre-prep).

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

age cohort profiles) and used in isolation from other important assessment steps (e.g. the existing capacity of the nearest facilities to a PSP location).

- Most benchmarks are currently expressed as an infrastructure driven model (e.g. 1 Government Primary School per 3,000 dwellings) rather than a demand based model (e.g. 66 4 year olds per 4 year old Kindergarten room).
- Some forms of community infrastructure are more difficult to quantify the demand for (e.g. community meeting spaces, youth services and arts / cultural activities) and thus make the task of assigning a benchmark far more difficult.
- Explicit policies stating preferred provision standards and models of delivery across PSP growth area remains in varying states of 'maturity'.
- There is often a lack of clarity about preferred provision levels and models with many forms of State based social infrastructure (e.g. health and emergency services).

4.4 Provision & Cost Benchmarks

4.4.1 Overview

This section provides a brief description of the key community infrastructure provision benchmarks, facility configuration models and cost benchmarks used to assess both the likely number of facilities likely to be required within the Ballarat Western and North-Western Growth Areas, and the preliminary DCP cost implications for these Growth Areas.

4.4.2 Open Space & Recreation

The VPA PSP Guidelines include some key provision targets for open space and recreation planning. Its focus has largely (but not exclusively) been on 'local' scale provision as opposed to regional / sub-regional provision. Key guidelines are:

- Unencumbered passive open space (3 to 5% of Net Developable Area or NDA); and
- Active open space - sports grounds and outdoor court based facilities such as tennis and netball (5 to 7% of NDA).

In addition to these documented measures, are other less well documented factors / guidelines influencing open space and recreation outcomes include:

- Encumbered open space, particularly open space set aside for drainage purposes and as part of linear networks along rivers and creeks, typically represent a significant proportion of the gross area of a

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

PSP site. The contribution these assets provide by way of informal recreation outcomes and improved physical and mental health is considerable. Encumbered open space provision outcomes are not prescriptively derived as each PSP site provides unique topographical, hydrological and environmental characteristics.

- There has been the occasional application of a regional active open space benchmark in previous growth area planning exercises (30 hectares per 50,000 people), but the benchmark is not contained within the current PSP guidelines.

In addition to these PSP guideline provision benchmarks this review includes demand-based estimates for organised sport derived from the AusPlay Survey⁵ (AusPlay) which provides the major source of participation data for sport and other informal physical activities in Australia. These estimates are contained within Appendix 3 of this report and referred to in Section 8.

4.4.3 Multipurpose Community Centres

For the purposes of this assessment a multipurpose community centre is defined as a building owned and or managed by Local Government which accommodates a range of services and offers flexible community spaces made available to local residents and community groups for a variety of potential uses.

In the context of greenfield locations community centres have primarily incorporated a range of early years services and offered flexible community meeting spaces. However, the potential range of services and functions a community centre can incorporate is very broad. In order to ensure the effective and efficient use of capital and operational resources contemporary community centres are multipurpose (i.e. offering more than one service and function) rather than stand-alone (i.e. dedicated to one service or function only), and, where practical, co-located with other community infrastructure and public open space. Land area allocations in greenfield locations are reasonably generous in comparison to the actual building footprint provided in order to allow for sufficient on-site car parking and facilitate longer term expansion requirements as local needs evolve and change and shifts in government policy occur (e.g. the Victorian State Government's proposed introduction of 15 hours per week of funded 3 year old Kindergarten over the coming decade).

Other key characteristics and issues associated with multipurpose community centres are outlined below.

- Although not all multipurpose community centres are identical, it is possible to describe the types of services and functions typically incorporated into such facilities.

⁵ Ausplay is a large scale national population tracking survey funded and led by Sport Australia. AusPlay collects participation data; not membership data. The club sport data in AusPlay relates to how participation took place (e.g. survey respondents who self-identified that they participated in an activity through a sports club or association).

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

- Typically, such facilities are a combination of a few (but rarely all) of the following services and functions: Kindergarten; Maternal & child health; Playgroups; Occasional child care; long day child care; community meeting spaces; Planned Activity Groups; Neighbourhood houses / adult education; and Library.
- Multipurpose community centres can vary greatly in size depending on the services and activities to be accommodated within it and can typically range from 500 square metres to 2,500 square metres.
- Unlike public open space (both passive and active), the VPA PSP Guidelines do not specify a quantitative measure of how many facilities should be provided either using an area based standard (as applies to public open space) or a population based standard. Municipal Planning schemes do not provide any guidance on this matter either.
- In the absence of specific PSP Guidelines and statutory requirements, the VPA has tended to rely on the provision guidelines outlined in the Planning for Community Infrastructure in Growth Area Communities (2008).
- However, it is possible to estimate the level of demand for specific service types likely to be generated by a PSP.

The *Planning for Community Infrastructure in Growth Area Communities* – PCIGAC (2008) report includes guidelines for many discrete services and functions that would typically be accommodated within a Council multipurpose community centre. However, it is assumed that most of these could be included as part of two main types of community centre:

- Level 1 Community Centres provided @ 1 centre per 8,000 to 10,000 people on 0.8 hectare sites; and
- Level 3 Community Centres @ 1 centre per 40,000 to 50,000 people on 1.5 hectare sites.

The *Kindergarten Infrastructure Needs Assessment in Greenfield Growth Areas* (2015) refers to two key benchmarks in relation to the provision of Kindergarten programs, of which Local Government is a major provider:

- 1 kindergarten room per 1,400 households at the peak; and
- 1 kindergarten room per 2,100 households in the long term.

Under the proposed roll-out of the Victorian State Government's Best Start, Best Life Policy (June 2022), the City of Ballarat will adopt a provision of ratio of one licenced kindergarten place per 1 child aged 4 years of age and one licenced kindergarten place per 2 children aged 3 years of age. Council kindergarten facilities will aim to accommodate 75% of 3 and 4 year demand for sessional kindergarten. Council's preferred kindergarten room size equates to a room with capacity to accommodate 33 licenced places (based on 3.25 square metres per

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

licenced place). A Level 1 community centre will typically include 3 to 4 kindergarten rooms each. Council intends to operate with 3 rooms.

It should be noted that this assessment evaluates the impact of the proposed roll-out of the Victorian State Government's Best Start, Best Life Policy (June 2022) which assumes 15 hours of 3 year old kindergarten and 30 hours of pre-prep per week.

Due to the large variety of possible community configuration options the analysis focuses on the following 3 types of community centres:

- Level 1 community facility (1,200 m2 building footprint & 0.8 ha of land) @ 1 centre per 9,000 people;
- Level 2 community facility (1,500 m2 building footprint & 1 ha of land) @ 1 centre per 25,000 people; and
- Level 3 community facility (2,500 m2 building footprint & 1.5 ha of land) @ 1 centre per 50,000 people.

For the purposes of this assessment the following community centre provision ratios have been adopted:

- 1 Level 1 community centre per 10,000 people on 0.8 ha of land;
- Every second Level 1 Centre (approximately 20,000 people) is upgraded into a larger community centre with larger community meeting space that is capable of accommodating a neighbourhood house, and is provided on 1.2 ha of land;
- 1 Level 3 community centre per 60,000 people on 1.5 ha of land.

The scope of services and activities covered by these facilities include Kindergarten, Maternal & Child Health, Playgroups, Occasional Child Care, Neighbourhood Houses, Libraries and a variety of flexible community meeting spaces and consulting rooms.

Appendix 4 shows indicative community centre configurations for each of the 3 types of community centres considered by the review and which are included in the VPA commissioned *Benchmark Infrastructure and Costs Guide* (prepared by Cardno). Level 1 and 2 community centres both include Kindergarten and Maternal and Child Health rooms as well as multipurpose community meeting spaces. Level 2 centres have larger community meeting spaces that are capable of accommodating a neighbourhood house service. Level 3 community centres differ from Level 1 centres by not including early years services such as Kindergarten and Maternal and Child Health. Instead, these facilities include higher order services (i.e. services provided to a larger population catchment) such a Library and specialised community space for other service forms and population target groups.

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

4.4.4 Government Education Provision

There are two key Government education provision benchmarks used for PSP planning purposes. These are:

- 1 Government Primary School per 3,000 dwellings (3.5 ha site); and
- 1 Government Secondary School per 10,000 dwellings (8.4 ha site).

The Department of Education and Training (DET) also identifies a long-term enrolment (LTE) objective for each primary and secondary school. These are:

- Government Primary Schools: 450-475 long term enrolments and generally with a maximum capacity of 600 enrolments; and
- Government Secondary Schools: 1,100 long term enrolments and generally with a maximum capacity to accommodate 50% more (approximately 1,600 to 1,700 enrolments).

4.5 Cost Estimate Benchmarks for Key DCP Community Infrastructure Items

The VPA has also prepared the Benchmark Infrastructure and Costs Guide (prepared by Cardno) to provide context and to guide us in the use of benchmark designs and costs in preparing an Infrastructure Contributions Plan (ICP), the term now used instead of Development Contributions Plan (DCP) when preparing new PSPs. The Guide covers:

- The role of scope and cost estimates in ICPs;
- The development of the benchmark design and costs;
- Role of the Benchmark Infrastructure and Costs Guide in preparing ICPs, including how to adjust the estimates to deal with scope variations if needed; and
- How the Benchmark Infrastructure and Costs Guide will be reviewed and kept up to date; and
- Reproduces the results of the Cardno work.

The use of the guide was approved by the VPA Board on 9 October 2019.

The benchmark cost estimates for the development of community centres, sports reserve and sporting pavilions are used by this report to review the adequacy of cost estimates for key DCP community infrastructure items identified in the Ballarat West DCP.

A summary of the key community infrastructure benchmark costs for the 2023/2024 financial year are presented in Table 1 on the following page and includes 1 July 2023 index costs.

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Table 1 – Key Community Infrastructure Benchmark Cost Estimates for the 2023/2024 Financial Year (1 July 2023)

Community Infrastructure BIC						
ITEM	CATEGORY	DESCRIPTION	STANDARD	COST APPLICATION	ESTIMATE P\$0	ESTIMATE P\$0
37	Community Facilities	Level 1 Facility	Contemporary standard	Bldg floor area	\$7,980,915	\$8,894,189
38	Community Facilities	Level 2 Facility	Contemporary standard	Bldg floor area	\$9,429,758	\$10,440,090
39	Community Facilities	Level 3 Facility	Above contemporary standard allowing for place making architectural features	Bldg floor area	\$12,583,535	\$13,833,587
Sports Pavilion BIC						
40	Sports and Recreation Facilities	Sports Pavilion 2 playing areas	Contemporary standard multi-purpose facility	Bldg floor area	\$1,887,355	\$1,936,468
41	Sports and Recreation Facilities	Sports Pavilion 3 playing areas	Contemporary standard multi-purpose facility	Bldg floor area	\$3,142,083	\$3,219,262
Sports and Recreation Facility BIC						
42	Sports and Recreation Facilities	Sports and recreation facility 5 to 6 hectare site	Contemporary senior and junior sporting competition standard	Per Reserve	\$8,117,731	\$8,379,476
43	Sports and Recreation Facilities	Sports and recreation facility 8 to 10 hectare site	Contemporary senior and junior sporting competition standard	Per Reserve	\$10,537,147	\$12,108,773

BENCHMARK INFRASTRUCTURE COST ITEM	BENCHMARK ITEMS	1 JULY 2023 INDEX
Roads and Intersection	1 to 16	1.24
Bridges and Culverts	17 to 36	1.24
Community Infrastructure	37 to 39	1.17
Sports Pavilion	40 to 41	1.17
Sports & Recreation Facility	42 to 43	1.17

Source: Review of Benchmark Infrastructure Costings: Benchmark Infrastructure Costing, Prepared for VPA by Cardno (1 July 2022)

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

5. Review of Key Policies & Strategic Documents

5.1 Overview

This section reviews many of the more relevant statutory and strategic documents likely to have the most significant influence on the community infrastructure outcomes associated with the development of the Ballarat West PSP. The material reviewed includes:

- City of Ballarat Community Infrastructure Needs & Gap Analysis Report (June 2021);
- City of Ballarat Community Infrastructure Plan 2022 to 2037;
- Precinct Structure Planning (PSP) Guidelines (2021), prepared by the Victorian Planning Authority (VPA);
- Other City of Ballarat strategic documents of relevance to this review; and
- Non-Council strategic documents of relevance to this review.

A more detailed summary of the PSP Guidelines, Council and non-Council strategic documents are presented in Appendix 1 of this Background Report.

5.2 City of Ballarat Community Infrastructure Planning Policy (2020)

City of Ballarat (Council) is a provider of community infrastructure including community centres, public halls, sports pavilions, aquatic facilities, libraries, early years facilities, senior citizens centres and playgrounds. It owns and manages community facilities and delivers services to the community through those facilities. Council also supports the provision of community infrastructure by other providers through direct funding and/or advocacy. A holistic and strategic planning approach ensures that Council understands communities' current and future needs for community infrastructure and enables it to meet those needs effectively and efficiently.

This policy outlines Council's commitment to an integrated and strategic planning process for the delivery of Community Infrastructure across the Ballarat municipality. The purpose of this policy is to:

- Provide the general community, stakeholder organisations and Council employees with an understanding of Council's objectives and approach to providing for community services infrastructure in Ballarat;
- To direct sound decision making about planning, funding, delivering and negotiating for community infrastructure;

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

- To demonstrate commitment to community and stakeholder engagement when planning for community infrastructure; and
- To assist with a coordinated approach within Council to undertake this work.

The Community Infrastructure Planning Policy provides a set of agreed guiding principles which set out the underlying philosophy that should be followed in the prioritisation, planning, design and provision of community infrastructure to promote more consistent understanding and practice.

5.3 City of Ballarat Community Infrastructure Needs & Gap Analysis Report

The Community Infrastructure Needs and Gap Analysis Report was prepared as a key source of evidence to inform the development of the 2022-2037 City of Ballarat Community Infrastructure Plan (see Section 5.3 for more details). This report has collated information gathered in the community infrastructure audit phase of the process and considered it in relation to the provision and service standards, agreed hierarchies, and demand assessments to identify both current and future gaps in community infrastructure provision. It has included a review of existing plans, strategies, policies, and known projects, recognising the contributions that have already been made by the community to these processes. It also offered an opportunity for community facility managers to provide information and feedback. The analysis is presented by both service area and planning area.

Both the Western and North Western Growth Areas are largely located within the West Planning Area (refer to report for detailed analysis and recommendations for this Planning Area) except for a small portion of the south east component of the Western Growth Area which is located within the South West Planning Area (refer to report for detailed analysis and recommendations for this Planning Area).

5.5 Implications

The implications of the documents reviewed are referred to, where applicable, throughout the course of the review process.

6 Ballarat Western and North-Western Growth Areas Development & Population Analysis

6.1 Overview

This section provides an overview of the indicative development and population assumptions for the Western and North-Western Growth Areas which underpin the community infrastructure provision estimates identified by this assessment. These assumptions are indicative only and subject to change once formal Precinct Structure Planning processes commence in these locations. For this reason, the community infrastructure provision requirements identified in this report need to be interpreted with caution. For example, it is common for the Net Developable Area (NDA) estimates to change once formal planning processes commence and more detailed investigations such as drainage studies are undertaken. This, in turn, can impact on the amount of unencumbered and encumbered public open space each growth area is likely to yield.

Although public open space provision requirements are largely determined by the amount of NDA available in any given PSP, community infrastructure provision levels are largely based on dwelling and population assumptions. Therefore, if the underlying dwelling and population assumptions significantly change in future, then the number of community infrastructure items, or the capacity of existing planned items may need to also change.

6.2 Framework Plan Growth Area Development Assumptions

This assessment considers two development scenarios for the Framework Plan Growth Areas: 1) based on current conventional densities occurring in the City of Ballarat growth areas (i.e. 15 dwellings per hectare); and 2) residential densities proposed by the Victorian Planning Authority (i.e. ranging from 20 dwellings per hectare in across a PSP area).

The Victorian Planning Authority's recently released *Precinct Structure Planning Guidelines: New Communities in Victoria* (October 2021) includes a chapter on "Viable Densities" (Part 3 – Constructing a PSP). The purpose of this chapter is to outline a model for the delivery of affordable and accessible housing choices for Victoria's rapidly growing population. The Guidelines assert that the model for housing density and diversity presented by the Guidelines is an opportunity to change the form of streets and neighbourhoods to support lot and housing diversity for future communities. It states that planning for new communities should ensure:

- housing densities beyond current levels for land supply to last beyond 2050;

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

- diversity of housing close to where people want to live to create communities that cater to people as they move through different stages of life;
- compact and walkable neighbourhoods through the alignment of housing density and diversity with precinct structure, to ensure benefits for health, sustainability and community cohesion; and
- delivery of housing and population at densities that make local services and transport viable.

The Guidelines provide for the following two major dwelling density targets (T1 & T2):

1. T1 - The PSP should facilitate increased densities with an average of 30 dwellings or more per Net Developable Hectare (NDHA) within:
 - 400m walkable catchment of an activity centre or train station
 - 50m of open space, (both credited and encumbered open space), boulevards and major public transport routes, including but not limited to the Principal Public Transport Network (PPTN) or similar.
2. T2 - The PSP should facilitate increased densities with an average of 20 dwellings or more per NDHA across the entire PSP area.

Table 2 below summarises the two development scenarios for the Western and North-Western Growth Area. It reveals a combined developable area of approximately 1,400 hectares and a population capacity ranging from a base case of approximately 54,000 people (approximately 20,000 dwellings) to 72,000 people (27,000 dwellings). The largest share of this population will reside in the Western Growth Area (64%) which also accounts for approximately 64% of the total developable area. When the two growth areas are combined with the current Ballarat West PSP population capacity estimate (40,000 people), the broader Ballarat West Growth Area has the capacity to accommodate approximately 94,000 to 112,000 people.

Table 2 - Ballarat West and North-Western Growth Area Framework Plan Dwelling and Population Assumptions

	Ballarat Western Growth Area		Ballarat North-Western Growth Area		Total Western & North-Western Growth Areas	
Net Developable Hectare Area (NDHA)	896 hectares		500 hectares		1,396 hectares	
NDHA Non-Residential	36		20		56 hectares	
NDHA Residential	860		480		1,340 hectares	
Dwelling yield	Base Case (@ 15 dwellings per ha)	PSP 2.0 Scenario (@ 20 dwellings per ha)	Base Case (@ 15 dwellings per ha)	PSP 2.0 Scenario (@ 20 dwellings per ha)	Base Case (@ 15 dwellings per ha)	PSP 2.0 Scenario (@ 20 dwellings per ha)
	12,902	17,203	7,200	9,600	20,102	26,803
Average overall household size*	2.7	2.7	2.7	2.7	2.7	2.7
Population yield	34,835	46,448	19,440	25,920	54,275	72,368

* Average household size assumptions have been derived from Council's Population and household forecasts, 2021 to 2036, prepared by i.d (Informed Decisions), January 2023.

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

6.3 Current Dwelling and Population Estimate for the Ballarat West PSP

According to 2021 Census of Population and Housing⁷, the Ballarat West PSP area accommodated approximately 2,200 dwellings and had a population of approximately 6,200 residents.

Based on Council's most recently updated planning data (February 2023), the Ballarat West PSP has 8,390 lots which have either been completed, partially completed or have received planning approval (approximately 53% of the total revised dwelling capacity of the PSP). This supply consists of:

- 5,380 Completed lots;
- 1,950 lots under construction;
- 1,060 lots with planning permits issued;

A further 2,120 planning permits have been lodged or at the pre-application stage. The remaining supply of lots is estimated at 5,270 (or 33% of total lots).

When the two growth areas are combined with the current Ballarat West PSP population capacity estimate (40,000 people), the broader Ballarat West Growth Area has the capacity to accommodate between 94,000 to 112,000 people.

⁷ Source: Australian Bureau of Statistics (ABS), using Mesh Block geographic units which encompass the Ballarat West PSP area. Mesh Blocks are the smallest geographic areas defined by the ABS and form the building blocks for the larger regions of the Australian Statistical Geography Standard (ASGS). They broadly identify land use such as residential, commercial, primary production and parks.

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

7 Existing & Planned Community Infrastructure Near Framework Plan Areas

7.1 Overview

This section identifies both the main existing and planned community infrastructure nearest to the Framework Plan Growth Areas including the Ballarat West PSP.

Appendix 2 of this assessment provides a series of maps showing the extent of existing and planned community infrastructure surrounding both the Western and North-Western Growth Areas.

The maps presented are:

- Figure 5 - Libraries, Community Centres, Cultural Facilities and Halls;
- Figure 6- Early Years Facilities: Sessional Kindergarten and Maternal & Child Health;
- Figure 7- Early Years Facilities: Long Day Child Care;
- Figure 8 – Outdoor Passive and Active Open Space Facilities;
- Figure 9 – Indoor Recreation Facilities;
- Figure 10 - Education Facilities;
- Figure 11 - Law Courts, Police and Emergency Services;
- Figure 12 - Acute and Community Health Services; and
- Figure 13 - Residential Aged Care, Supported Residential Services and Planned Activity Group Venues.

The location of facilities has been considered as part of the detailed assessment presented in Section 8 of this report.

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

8 Preliminary Community Infrastructure Assessment

Table 3 on the following pages provides a detailed assessment of the implications of the revised dwelling and population assumptions for community infrastructure provision within the Ballarat West PSP. The detailed calculations, benchmarks (e.g. for sessional kindergarten demand) and data sources used to inform the assessment are presented in Appendix 3 of this report.

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Table 6.1: Community Infrastructure Requirements for Western Growth Areas

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
Early years services						
Sessional 3 and 4 year old Kindergarten	<p>Although the Ballarat West PSP / DCP does not specify the number of kindergarten rooms to be provided within the PSP, there are 4 proposed early years facilities, all of which will include kindergarten services. These facilities are:</p> <ul style="list-style-type: none"> Community Hub 1 Early Years Hub – the already constructed Bonshaw Early Years Centre (0.5 ha). This facility includes two kindergarten rooms. Community Hub 2 Early Years Hub (0.5 ha). Community Hub 3 Early Years Hub (0.5 ha). Community Hub 4 Early Years Hub (0.5 ha). 	<p>Approximately 12 kindergarten rooms under the present kindergarten policy environment (15 hours of four year old kindergarten per week, and 15 hours of three year old kindergarten per week) and 18 kindergarten rooms under the proposed kindergarten policy environment⁴ (30 hours of four year old kindergarten per week, and 15 hours of three year old kindergarten per week).</p> <p>Response measures based on the implementation of the proposed policy change to kindergarten services will require further input from the Department of Education prior to confirming the</p>	<p>Approximately 16 kindergarten rooms under the present kindergarten policy environment (15 hours of four year old kindergarten per week, and 15 hours of three year old kindergarten per week) and 24 kindergarten rooms under the proposed kindergarten policy environment (30 hours of four year old kindergarten per week, and 15 hours of three year old kindergarten per week).</p> <p>Response measures based on the implementation of the proposed policy change to kindergarten services will require further input from the Department of Education prior to confirming the</p>	<p>Approximately 7 kindergarten rooms under the present kindergarten policy environment (15 hours of four year old kindergarten per week, and 15 hours of three year old kindergarten per week) and 10 kindergarten rooms under the proposed kindergarten policy environment (30 hours of four year old kindergarten per week, and 15 hours of three year old kindergarten per week).</p> <p>Response measures based on the implementation of the proposed policy change to kindergarten services will require further input from the Department of Education prior to confirming the</p>	<p>Approximately 9 kindergarten rooms under the present kindergarten policy environment (15 hours of four year old kindergarten per week, and 15 hours of three year old kindergarten per week) and 14 kindergarten rooms under the proposed kindergarten policy environment (30 hours of four year old kindergarten per week, and 15 hours of three year old kindergarten per week).</p> <p>Response measures based on the implementation of the proposed policy change to kindergarten services will require further input from the Department of Education prior to confirming the</p>	<p>Sessional Kindergarten demand will largely be met by the delivery of proposed Level 1 and Level 2 Community Centres across both growth areas and potentially supplemented by additional provision at future Government Primary Schools and Catholic Primary Schools.</p> <p>At this early stage of planning, it is anticipated that 28 (under a low development scenario) to 38 (under a high development scenario) sessional kindergarten rooms will need to be included in as many as six Council community centres (@ 4 to 6 rooms per facility) and supplemented by an additional 6 to 8 rooms at Government Primary / Catholic Primary Schools.</p>

⁴ Victorian State Government Best Start, Best Life Policy (June 2022).

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
Maternal & Child Health	<p>Although the Ballarat West PSP / DCP does not specify the number of MCH rooms to be provided within the PSP, there are 4 proposed early years facilities, some of which will include MCH services. These facilities are:</p> <ul style="list-style-type: none"> Community Hub 1 Early Years Hub – the already constructed Bonshaw Early Learning Centre 	<p>kindergarten provision strategy for the future PSPs delivered across the two growth areas. Kindergartens are to be located within all proposed multipurpose community centres and / or proposed Government Primary Schools (containing kindergarten rooms licensed for 33 places each) and co-located with proposed government primary schools⁴.</p> <p>The demand estimates indicate a need for 4.1 MCH consulting rooms to satisfy demand in the Western Growth Area.</p>	<p>kindergarten provision strategy for the future PSPs delivered across the two growth areas. Kindergartens are to be located within all proposed multipurpose community centres and / or proposed Government Primary Schools (containing kindergarten rooms licensed for 33 places each) and co-located with proposed government primary schools.</p> <p>The demand estimates indicate a need for 5.4 MCH consulting rooms to satisfy demand in the Western Growth Area.</p>	<p>kindergarten provision strategy for the future PSPs delivered across the two growth areas. Kindergartens are to be located within all proposed multipurpose community centres and / or proposed Government Primary Schools (containing kindergarten rooms licensed for 33 places each) and co-located with proposed government primary schools.</p> <p>The demand estimates indicate a need for 2.3 MCH consulting rooms to satisfy demand in the Western Growth Area.</p>	<p>kindergarten provision strategy for the future PSPs delivered across the two growth areas. Kindergartens are to be located within all proposed multipurpose community centres and / or proposed Government Primary Schools (containing kindergarten rooms licensed for 33 places each) and co-located with proposed government primary schools.</p> <p>The demand estimates indicate a need for 3.0 MCH consulting rooms to satisfy demand in the Western Growth Area.</p>	<p>It is recommended Council engage with DoE to discuss adopting a shared approach to the delivery and funding of future kindergarten facilities within both growth areas.</p> <p>Maternal & Child Service (MCH) demand will largely be met by the delivery of proposed Level 1 and Level 2 Community Centres across both growth areas.</p> <p>At this early stage of planning, it is anticipated that 6 consulting rooms (under a low development scenario) to 8 consulting rooms (under a high development scenario) will</p>

⁴ It is State Government policy that new government primary schools must have a kindergarten co-located with the school (Source: Victorian Government School Site Selection Criteria – Toolbox, October 2021, Department of Education & Training, page 2)

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
Long Day Child Care	<p>(0.5 ha). This facility has been built and includes two kindergarten rooms.</p> <ul style="list-style-type: none"> Community Hub 2 Early Years Hub (0.5 ha). Community Hub 3 Early Years Hub (0.5 ha). Community Hub 4 Early Years Hub (0.5 ha). <p>Ballarat City Council has a policy position that it will not be a direct provider of new long day child care services in the municipality. Therefore, it can be assumed that all provision will need to be met by the private or not-for-profit community sector.</p>	The Western Growth Area may generate demand for as many as 1,100 long day child care places, the equivalent of 9 large sized long day child care centres.	The Western Growth Area may generate demand for as many as 1,480 long day child care places, the equivalent of 12 large sized long day child care centres.	The North-Western Growth Area may generate demand for as many as 620 long day child care places, the equivalent of 5 large sized long day child care centres.	The North-Western Growth Area may generate demand for as many as 830 long day child care places, the equivalent of 7 large sized long day child care centres.	<p>need to be included in as many as three Council community centres (@ 3 rooms per facility). However, Council may wish to amend the configuration options when formal planning processes commence across both growth areas.</p> <p>Continue to encourage private and community based long day child care provision across both growth areas, especially close to community infrastructure hubs.</p> <p>At this early stage of planning, it is anticipated that as many as 14 (under a low development scenario) to 19 (under a high development scenario) long day child care centres will be needed to satisfy demand across both growth areas.</p>
Youth	The Ballarat West PSP does not refer specifically to youth service or youth facility provision.	Although there are no specific youth service facility benchmarks or demand estimators, this assessment recommends Council	Although there are no specific youth service facility benchmarks or demand estimators, this assessment recommends Council	Although there are no specific youth service facility benchmarks or demand estimators, this assessment recommends Council	Although there are no specific youth service facility benchmarks or demand estimators, this assessment recommends Council	Confirm with Council which of the proposed future community centres will perform a youth service role.

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
		identify which of the future community facilities can and should provide a youth service function.	identify which of the future community facilities can and should provide a youth service function.	identify which of the future community facilities can and should provide a youth service function.	identify which of the future community facilities can and should provide a youth service function.	
Education facilities						
Government Primary Schools	<p>The Ballarat West PSP includes provision for 4 Government Primary Schools. These facilities are:</p> <ul style="list-style-type: none"> Community Hub 1 Government Primary School (3.5 ha). Community Hub 2 Government Primary School (Major Activity Centre – included as part of a 10 ha P-12 Government School site). Community Hub 3 Government Primary School site (3.5 ha). Community Hub 4 Government Primary School site (3.5 ha). 	This assessment estimates the need for potentially 4 Government Primary school sites (2,100 enrolments).	This assessment estimates the need for potentially 6 Government Primary school sites (2,800 enrolments).	This assessment estimates the need for potentially 2 Government Primary school sites (1,200 enrolments).	This assessment estimates the need for potentially 3 Government Primary school sites (1,600 enrolments).	<p>This assessment indicates a potential combined need for 6 (low scenario) to 9 (high scenario) Government Primary Schools to service the demands generated by the Western and North-Western Growth Area.</p> <p>Further consultation with the Department of Education will be required once formal planning processes commence in both growth areas to confirm provision strategies.</p>
Government Secondary Schools	The Ballarat West PSP includes provision for 1 Government Secondary School to be located within Community Hub 2 (Major	This assessment estimates the need for 1.3 Government Secondary school sites (1,300 enrolments).	This assessment estimates the need for 1.7 Government Secondary school sites (1,700 enrolments).	This assessment estimates the need for 0.7 Government Secondary school sites (710 enrolments).	This assessment estimates the need for 1.0 Government Secondary school sites (950 enrolments).	This assessment indicates a potential combined need for 2 Government Secondary Schools (under both a low and high

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
Government Specialist Schools	<p>Activity Centre – included as part of a 10 ha P-12 Government School site).</p> <p>The Ballarat West PSP does not include provision for a Government Specialist School.</p>	No formal facility provision benchmarks exist for Government Specialist Schools.	No formal facility provision benchmarks exist for Government Specialist Schools.	No formal facility provision benchmarks exist for Government Specialist Schools.	No formal facility provision benchmarks exist for Government Specialist Schools.	<p>development scenario) across the two growth areas.</p> <p>Further consultation with the Department of Education will be required once formal planning processes commence in both growth areas to confirm provision strategies.</p> <p>Given the absence of formal facility provision benchmarks for Government Specialist Schools it is too early to estimate future needs generated by the Western and North-Western Growth Areas. However, early engagement with DoE is recommended once formal planning processes commence across both growth areas to confirm its provision strategy.</p>
Non-Government Schools	The Ballarat West PSP includes provision for 1 non-Government School site.	<p>The following enrolment demands are anticipated for the Western Growth Area:</p> <ul style="list-style-type: none"> 1,100 Catholic Primary School enrolments; 	<p>The following enrolment demands are anticipated for the Western Growth Area:</p> <ul style="list-style-type: none"> 1,500 Catholic Primary School enrolments; 	<p>The following enrolment demands are anticipated for the North-Western Growth Area:</p> <ul style="list-style-type: none"> 600 Catholic Primary School enrolments; 	<p>The following enrolment demands are anticipated for the North-Western Growth Area:</p> <ul style="list-style-type: none"> 800 Catholic Primary School enrolments; 	<p>This assessment considers there will be a likely need to set aside land for potentially as many as three non-Government school sites (two primary schools and one secondary school).</p>

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
Higher Education	The Ballarat West PSP does not include provision for a higher education facility.	<ul style="list-style-type: none"> 470 other non-Government Primary school enrolments; 900 Catholic Secondary School enrolments; and 650 other non-Government Secondary school enrolments. <p>The following enrolment demands are anticipated for the Western Growth Area:</p> <ul style="list-style-type: none"> 730 TAFE enrolments; and 1,500 university enrolments. 	<ul style="list-style-type: none"> 630 other non-Government Primary school enrolments; 1,200 Catholic Secondary School enrolments; and 860 other non-Government Secondary school enrolments. <p>The following enrolment demands are anticipated for the Western Growth Area:</p> <ul style="list-style-type: none"> 980 TAFE enrolments; and 2,000 university enrolments. 	<ul style="list-style-type: none"> 260 other non-Government Primary school enrolments; 500 Catholic Secondary School enrolments; and 360 other non-Government Secondary school enrolments. <p>The following enrolment demands are anticipated for the North-Western Growth Area:</p> <ul style="list-style-type: none"> 410 TAFE enrolments; and 820 university enrolments. 	<ul style="list-style-type: none"> 350 other non-Government Primary school enrolments; 680 Catholic Secondary School enrolments; and 480 other non-Government Secondary school enrolments. <p>The following enrolment demands are anticipated for the North-Western Growth Area:</p> <ul style="list-style-type: none"> 550 TAFE enrolments; and 1,100 university enrolments. 	<p>However, early engagement with the Diocese of Ballarat Catholic Education Limited (DOBCEL) and other local independent schools is recommended once formal planning processes commence across both growth areas to confirm provision needs.</p> <p>Given the absence of formal provision benchmarks for higher education facilities it is too early to estimate future needs generated by the Western and North-Western Growth Areas.</p> <p>However, Early engagement with the Department of Education, Federation University and Australian Catholic University is recommended to confirm provision needs.</p>
Libraries, community centres, learning centres, community meeting spaces and arts / cultural facilities						
Library	The current Ballarat West PSP includes provision for a	The Western Growth Area generates a need	The Western Growth Area generates a need	The North-Western Growth generates a	The North-Western Growth generates a	Given that there are two proposed future libraries.

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
Level 1 multipurpose community centre	<p>new Library facility (1,800 square metres) within Community Hub 2 (Major Activity Centre) on a 1-hectare site and co-located with a Level 3 multipurpose community centre and an early years facility.</p> <p>Council also plans to construct the Wendouree Library and Learning Centre which is anticipated to service both the Ballarat Northern Growth Area and Ballarat West and North West Growth Areas. Design work is currently scheduled for 2029/30 financial year and construction for 2031/32. The location of the proposed library will provide easy access for residents in the Ballarat West and North West Growth Areas because of proposed link road upgrades.</p> <p>The Ballarat West PSP includes provision for 2 Level 1 Multipurpose</p>	for 0.9 library facility and will generate the equivalent of 188,000 loans per annum and 153,000 visits per annum.	for 1.2 library facilities and will generate the equivalent of 260,000 loans per annum and 204,000 visits per annum.	need for 0.5 library facilities and will generate the equivalent of 105,000 loans per annum and 85,500 visits per annum.	need for 0.7 library facilities and will generate the equivalent of 140,000 loans per annum and 114,000 visits per annum.	<p>(Ballarat West PSP and the Wendouree Library) that are likely to service the demands generated by the Western and North-Western Growth Areas additional library provision in these areas is unlikely to be needed. However, as a contingency, it is recommended that Council continue to monitor the need for a facility (potentially in the North-Western Growth Area as part of a Level 3 Community Centre) depending on changes to population assumptions and travel times.</p> <p>Depending on the development scenario, this assessment supports the need for three to four Level</p>

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
Level 2 multipurpose community centre	<p>Community Centres located in:</p> <ul style="list-style-type: none"> Community Hub 3 (0.8 hectare); and Community Hub 4 (0.8 hectare). <p>The Ballarat West PSP does not identify any proposed Level 2 Community Centres.</p>	<p>Level 1 multipurpose community centres.</p> <p>The Western Growth Area generates a population catchment sufficient to justify 1.7 Level 2 multipurpose community centres.</p>	<p>Level 1 multipurpose community centres.</p> <p>The Western Growth Area generates a population catchment sufficient to justify 2.3 Level 2 multipurpose community centres.</p>	<p>Level 1 multipurpose community centres.</p> <p>The North-Western Growth Area generates a population catchment sufficient to justify 1 Level 2 multipurpose community centres.</p>	<p>Level 1 multipurpose community centres.</p> <p>The North-Western Growth Area generates a population catchment sufficient to justify 1.3 Level 2 multipurpose community centres.</p>	<p>1 Community Centres to service the demands generated by the Western and North-Western Growth Areas.</p> <p>Depending on the development scenario, this assessment supports the need for two to three Level 2 Community Centres to service the demands generated by the Western and North-Western Growth Areas and, ideally, one in each growth area.</p>
Level 3 multipurpose community centre	<p>The Ballarat West PSP includes provision for 1 Level 3 Multipurpose Community Centre in Community Hub 2 (1 hectare site in the proposed MAC).</p>	<p>The Western Growth Area generates a population catchment sufficient to justify 0.6 of a Level 3 multipurpose community centre.</p>	<p>The Western Growth Area generates a population catchment sufficient to justify 0.8 of a Level 3 multipurpose community centre.</p>	<p>The North-Western Growth Area generates a population catchment sufficient to justify 0.3 of a Level 3 multipurpose community centre.</p>	<p>The North-Western Growth Area generates a population catchment sufficient to justify 0.4 of a Level 3 multipurpose community centre.</p>	<p>This assessment supports the need for one Level 3 Community Centre to service the demands generated by the Western and North-Western Growth Areas. Ideally, this facility should be located centrally within the North-Western Growth Area.</p>
Neighbourhood House / Learning centre	<p>The Ballarat West PSP does not identify any proposed Neighbourhood House / Learning Centre facilities.</p>	<p>The Western Growth Area generates a population catchment sufficient to justify 1.2 Neighbourhood Houses.</p>	<p>The Western Growth Area generates a population catchment sufficient to justify 1.7 Neighbourhood Houses.</p>	<p>The North-Western Growth Area generates a population catchment sufficient to justify 0.7 Neighbourhood Houses.</p>	<p>The North-Western Growth Area generates a population catchment sufficient to justify 0.9 Neighbourhood Houses.</p>	<p>This assessment supports the need for at least two additional Neighbourhood House facilities to service the demands generated by the Western and North-</p>

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
Arts / cultural facilities:	<p>The Ballarat West PSP does not identify any dedicated arts and cultural facilities. However, it is feasible to allocate and configure arts and cultural spaces within one or more of the multipurpose community centres proposed for the PSP.</p> <p>Council's Arts and Cultural Infrastructure Report (2021) identifies how the proposed Ballarat West PSP community facilities will support arts and cultural activities. These include:</p> <ul style="list-style-type: none"> The new Delacombe Library and Community Hub is a \$18.1 million project expected to be designed in FY25-26 which is identified in the Ballarat West Development Contributions Plan, Similar to the Ballarat 	<p>By full development approximately 9,800 people may participate in activities such as drama, singing or playing a musical instrument, dance and art and craft activities. Although it is difficult to determine where such activities will be undertaken, it is reasonable to assume that proposed Council community centres can play a significant role in meeting some of the demand for arts and cultural activities.</p>	<p>By full development approximately 13,100 people may participate in activities such as drama, singing or playing a musical instrument, dance and art and craft activities. Although it is difficult to determine where such activities will be undertaken, it is reasonable to assume that proposed Council community centres can play a significant role in meeting some of the demand for arts and cultural activities.</p>	<p>By full development approximately 5,500 people may participate in activities such as drama, singing or playing a musical instrument, dance and art and craft activities. Although it is difficult to determine where such activities will be undertaken, it is reasonable to assume that proposed Council community centres can play a significant role in meeting some of the demand for arts and cultural activities.</p>	<p>By full development approximately 7,300 people may participate in activities such as drama, singing or playing a musical instrument, dance and art and craft activities. Although it is difficult to determine where such activities will be undertaken, it is reasonable to assume that proposed Council community centres can play a significant role in meeting some of the demand for arts and cultural activities.</p>	<p>Western Growth Areas: Ideally, these facilities should be incorporated into the two proposed Level 2 Community Centres.</p> <p>It is recommended that Council ensure that arts and cultural facilities are embedded in all proposed multipurpose community centre spaces and recreation facilities including:</p> <ul style="list-style-type: none"> Soundproofing meeting rooms to make them dual rehearsal spaces / recording spaces; Provision of wet spaces (such as large kitchen environments) which can be used as wet work spaces (ceramics, mosaics, painting) with wipe clean surfaces; Improved WIFI network service permitting good upload and download capacity for creative businesses; and Sprung floors in large sporting areas (such as a basketball court) to make

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
	<p>Library model, it is expected that the development will include dedicated spaces for arts and cultural programming, including multipurpose meeting rooms, coworking spaces and maker spaces.</p> <ul style="list-style-type: none"> Alfredton Early Years and Community Hub (Ballymanus). The Alfredton Early Years and Community Hub is a project identified in the Ballarat West Development Contributions plan which is expected to commence construction in FY22-23. The development is expected to include an early years kindergarten and a number of multipurpose community rooms which could have the potential to service arts and cultural programming and activities. Greenhaults Road Sub-precinct (Winter Valley). A community hub and kindergarten is planned for development in FY31. 					<p>it suitable for dance rehearsal.</p> <p>It is also recommended that Council identify which of the seven proposed multipurpose community centres recommended by this assessment (4 Level 1 facilities, 2 Level 2 facilities and 1 Level 3 facility) should incorporate a more dedicated arts and cultural function (e.g. gallery spaces in the Level 3 facility).</p>

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
	32 in the Greenhaugh Road Sub-precinct which is identified in the Ballarat West Development Contributions Plan. There is an opportunity to service arts and cultural needs through the community hub.					
Major open space reserves (active and passive)						
Regional open space	The current Ballarat West PSP includes the existing MR Power Park (18 hectares) which is identified as a regional open space with a major focus on the provision of active open space. However, since the preparation of the PSP, a Council prepared Master Plan for the site has indicated a preference for a predominantly passive open space and informal recreation role for MR Power Park.	No provision benchmark for regional open space.	No provision benchmark for regional open space.	No provision benchmark for regional open space.	No provision benchmark for regional open space.	Given the projected shortfall in active open space identified as part of the Ballarat West PSP Review process currently being undertaken by Council, it is recommended that a Council investigate the feasibility of establishing a 30-hectare regional active open space reserve within the boundaries of either the Western or North-Western Growth Areas. Subject to funding and planning constraints, Council should also assess the merits of a smaller regional open space and / or land potentially classified as encumbered open space but does not

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
Local passive open space	<p>The current Ballarat West PSP includes provision for 58.15 hectares of unencumbered passive open space and linear open spaces.</p> <p>The overall supply of proposed passive open space within the Ballarat West PSP will increase significantly because of a number of key changes that have occurred since approval of the original PSP including:</p> <ul style="list-style-type: none"> Council's preference to identify and configure MR Power Park (18 hectares) as a predominantly passive open space performing a range of natural and 	<p>The Western Growth Area generates a need equating to approximately 34 hectares based on the application of 4% of NDA for passive open space, distributed across a network of local parks generally located within 400 metres of residential dwellings).</p>	<p>The Western Growth Area generates a need equating to approximately 34 hectares based on the application of 4% of NDA for passive open space, distributed across a network of local parks generally located within 400 metres of residential dwellings).</p>	<p>The North-Western Growth Area generates a need equating to approximately 19 hectares based on the application of 4% of NDA for passive open space, distributed across a network of local parks generally located within 400 metres of residential dwellings).</p>	<p>The North-Western Growth Area generates a need equating to approximately 19 hectares based on the application of 4% of NDA for passive open space, distributed across a network of local parks generally located within 400 metres of residential dwellings).</p>	<p>require permanent water to be stored.</p> <p>It is recommended that the revised Ballarat West PSP identify MR Power Park as regional open space with a predominantly passive open space and informal recreation role.</p> <p>This assessment indicates a potential combined need of 53 hectares of unencumbered passive open space to service the demands generated by the Western and North-Western Growth Areas. However, there may be a need to trade-off some of the supply of passive open space for active open space due the shortfall of active open space identified as part of the Ballarat West PSP Review process currently being undertaken by Council.</p> <p>It is recommended Council identify the hierarchy of open spaces proposed for the Ballarat West PSP in line with the hierarchy outlined</p>

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
Local Formal & Informal active open space	<p>informal recreational functions; and</p> <ul style="list-style-type: none"> A reduction in the size of the Community Hub 4 active open space reserve allocation (originally a proposed allocation of 8 hectares of active open space split across two reserve sites, now reduced to 4 hectares at one site only). <p>These changes will result in an additional 22 hectares of passive open space provision for the Ballarat West PSP and increase overall supply to 80.15 hectares.</p> <p>The current Ballarat West PSP includes provision for approximately 57 hectares of active open space to be delivered across the following five sites:</p> <ul style="list-style-type: none"> M R Power Regional Park (An existing 18 hectare reserve will perform a dual regional / local sports reserve role. The outdoor 	<p>The Western Growth Area generates a need equating to approximately 52 hectares of local active open space based on the application of 6% of NDA for active open space guideline. This equates to approximately 5 larger sized active open space reserves (each 10.8 hectares in size).</p>	<p>The Western Growth Area generates a need equating to approximately 52 hectares of local active open space based on the application of 6% of NDA for active open space guideline. This equates to approximately 5 larger sized active open space reserves (each 10.8 hectares in size).</p>	<p>The North-Western Growth Area generates a need equating to approximately 29 hectares of local active open space based on the application of 6% of NDA for active open space guideline. This equates to approximately 3 larger sized active open space reserves (each 10 hectares in size).</p>	<p>The North-Western Growth Area generates a need equating to approximately 29 hectares of local active open space based on the application of 6% of NDA for active open space guideline. This equates to approximately 3 larger sized active open space reserves (each 10 hectares in size).</p>	<p>by the Ballarat Open Space Strategy (BOSS) and clearly distinguish between Neighbourhood, District and Regional open spaces.</p> <p>Given the net developable area estimates for the two growth areas, and the projected shortfall in active open space supply in the Ballarat West PSP, the following indicative provision strategy is recommended for each growth area:</p> <ul style="list-style-type: none"> Indicatively, the Western Growth Area

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
	<p>formal sports function will reduce to approximately 4 hectares).</p> <ul style="list-style-type: none"> • Mining Park (a 12.96 hectare); • Community Hub 2 (originally a proposed 8 hectare reserve, now reduced to 3.5 hectares); • Community Hub 3 (a proposed 10 hectare reserve); and • Community Hub 4 (a proposed 8 hectare reserve split across two reserve sites). <p>The overall supply of proposed active of open space within the Ballarat West PSP will significantly reduce because of a number of key changes that have occurred since approval of the original PSP. Overall supply will decrease from 57 hectares to 33.5 hectares leaving a shortfall of 25.5 hectares (note: this shortfall has been offset by a large corresponding surplus of</p>					<p>should include 52 hectares of active open space which can be configured in any number of ways Council deems appropriate of the time formal PSP planning commences and 1 regional active open space (30 hectares); and</p> <ul style="list-style-type: none"> • Indicatively, the North Western Growth Area should include 29 hectares of active open space which can be configured in any number of ways Council deems appropriate of the time formal PSP planning commences. <p>The potential to secure joint school / community active open space should also be explored by Council on a case by case basis.</p>

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
	<p>41.5 hectares of passive open space).</p> <p>In response to this reduced supply of active open space it is recommended that Council assess implementing a number of measures including investigating opportunities to secure active open space land in the adjoining future growth areas.</p>					
Indoor recreation facilities						
Multipurpose indoor court facility	<p>The Ballarat West PSP includes two proposed Council indoor recreation centres. These are:</p> <ul style="list-style-type: none"> Community Hub 3 indoor recreation facility (8 courts) on a 1 hectare site. MR Power Regional Park indoor recreation facility (4 courts). <p>Given the demand and supply requirements generated by the Ballarat West PSP, and Council's current position on the future role and function</p>	<p>The demand generated by the Western Growth Area is equivalent to approximately 4 indoor multipurpose courts.</p>	<p>Equivalent to approximately 5 indoor multipurpose courts.</p>	<p>The demand generated by the North-Western Growth Area is equivalent to approximately 2 indoor multipurpose courts.</p>	<p>Equivalent to approximately 3 indoor multipurpose courts.</p>	<p>Although some of the indoor recreation needs of the Western Growth Area are likely to be catered for by the proposed 8 court indoor facility earmarked for Community Hub 3 in the Ballarat West PSP, it is recommended that one additional indoor recreation centre (with capacity to cater for up to 8 courts under a high development scenario) be established to service the demand generated by the Western and North Western Growth Areas. Ideally, this facility should be located centrally</p>

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
Aquatic leisure centres	<p>MR Power Park as an informal regional passive open space, the proposed indoor recreation facility earmarked for MR Power Park will be removed as a requirement of the Ballarat West PSP.</p> <p>The Ballarat West PSP does not include an existing or planned Council aquatic leisure centre. The nearest Council indoor aquatic leisure facility is the Ballarat Aquatic & Lifestyle Centre located approximately 6 kilometres north of the Delacombe Major Activity centre.</p>	The demand generated by the Western Area is equivalent to approximately 178,000 Council aquatic leisure centre visits per annum and 0.3 Council aquatic leisure centre facilities.	Equivalent to approximately 237,000 Council aquatic leisure centre visits per annum and 0.4 Council aquatic leisure centre facilities.	The demand generated by the North-Western Area is equivalent to approximately 99,000 Council aquatic leisure centre visits per annum and 0.2 Council aquatic leisure centre facilities.	Equivalent to approximately 132,000 Council aquatic leisure centre visits per annum and 0.2 Council aquatic leisure centre facilities.	<p>within the North-Western Growth Area.</p> <p>Given its reasonable proximity to the Ballarat Aquatic & Lifestyle Centre no additional aquatic leisure centre provision is recommended for the Western and North-Western Growth Areas. However, it is recommended that Council undertake an assessment of the capacity of the existing aquatic facility to absorb the future demands generated by an additional 56,000 to 75,000 people and identify what, if any, facility expansion / redevelopment needs might be required.</p> <p>It is also recommended that Council assess the potential need for a Splash Park in the Ballarat West Growth Areas.</p>
Health services						

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
Local GP Clinics	Although not specifically identified in the Ballarat West PSP, it can be assumed that private GP clinics will be established within proposed activity centres, especially the proposed Major Activity Centre.	Equivalent to 10 medical centres delivered by the private sector.	Equivalent to 14 medical centres delivered by the private sector.	Equivalent to 6 medical centres delivered by the private sector.	Equivalent to 8 medical centres delivered by the private sector.	Local GP clinics will be delivered by private and or / not for profit service providers (e.g. community health). However, it is recommended that Council determine preferred locations for further medical centre provision across both growth areas with an aspirational target of accommodating up to 16 to 22 GP clinics depending on the development scenario. However, the provision of these services is not typically shown in a PSP.
Acute / Sub-acute services	The Ballarat West PSP does not include an existing or planned acute / subacute health service site.	The demand generated by the Western Growth Area is equivalent to approximately 120 public/private hospital beds.	Equivalent to approximately 170 public/private hospital beds.	The demand generated by the North-Western Growth Area is equivalent to approximately 70 public/private hospital beds.	Equivalent to approximately 90 public/private hospital beds.	Given the absence of formal provision benchmarks for acute/sub-acute health facilities it is too early to estimate future needs generated by the Western and North-Western Growth Areas. However, early engagement with the Department of Health and Ballarat Health Service.
Community health services	The Ballarat West PSP does not include an existing or planned community health service site.	Equivalent to approximately 1,000 community health service clients.	Equivalent to approximately 1,300 community health service clients.	Equivalent to approximately 560 community health service clients.	Equivalent to approximately 740 community health service clients.	Given the absence of formal provision benchmarks for community health facilities it is too early to estimate future needs generated by

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
						the Western and North-Western Growth Areas. However, early engagement with the Department of Health and Ballarat Community Health.
Police & Emergency services						
Police Station	The Ballarat West PSP originally included provision for an emergency services hub site on the north western boundary of the PSP, but was subsequently relocated to the north eastern boundary in Lucas which includes the Ballarat West Police Station located adjacent to the Ballarat West Fire Station. The first stage of the Ballarat West Police Station was built in 2015 and Stage 2 in 2016.	No formal facility provision benchmarks exist for police stations.	No formal facility provision benchmarks exist for police stations.	No formal facility provision benchmarks exist for police stations.	No formal facility provision benchmarks exist for police stations.	The existing Ballarat West Police Station, located within the north east section of the Ballarat West PSP operates as a 16 hour police station. Although this existing facility is not located in, or adjacent to an activity centre (the preferred location for police stations), there is unlikely to be a need to establish a new Police Station within the Western and North Western Growth Areas. However, as population in Ballarat West continues to grow it is likely that the existing 16 hour Ballarat West Police Station will need to be increased to a 24 hour operation.
Ambulance Station	There is no ambulance station located within the Ballarat West PSP. The nearest existing ambulance	No formal facility provision benchmarks exist for ambulance stations.	No formal facility provision benchmarks exist for ambulance stations.	No formal facility provision benchmarks exist for ambulance stations.	No formal facility provision benchmarks exist for ambulance stations.	Although there are no existing or planned ambulance stations for the Ballarat West PSP, the

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
Fire Services	<p>stations are located to the east of the PSP in Sebastopol (approximately 4 kilometres east of the Delacombe Town Centre) and Bakery Hill (approximately 8 kilometres from the Delacombe Town Centre).</p> <p>The Ballarat West PSP originally included provision for an emergency services hub site on the north western boundary of the PSP, but was subsequently relocated to the north eastern boundary in Lucas and is co-located with the Ballarat West Police Station. The Lucas Fire Station was constructed in 2019.</p>	No formal facility provision benchmarks exist for fire stations.	No formal facility provision benchmarks exist for fire stations.	No formal facility provision benchmarks exist for fire stations.	No formal facility provision benchmarks exist for fire stations.	<p>proximity of the PSP to existing facilities to the east (Sebastopol and Bakery Hill) indicates that emergency response times to the PSP will remain adequate. However, additional provision may be required as part of the future planning of the Ballarat Western and North Western Growth Areas. This will be confirmed with the relevant agencies when PSP processes formally commence.</p> <p>The existing Ballarat West Fire Station will be sufficient to meet the future needs of the Ballarat West PSP. However, additional provision may be required as part of the future planning of the Ballarat Western and North Western Growth Areas. This will be confirmed with the relevant agencies when PSP processes formally commence.</p>
VicSES	There is no VicSES facility located within the Ballarat West PSP. The nearest existing facility is located at	No formal facility provision benchmarks exist for VicSES facilities.	No formal facility provision benchmarks exist for VicSES facilities.	No formal facility provision benchmarks exist for VicSES facilities.	No formal facility provision benchmarks exist for VicSES facilities.	There is a need to identify a new location for the existing Ballarat VicSES facility currently operating from

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
Law courts	<p>short distance east of the PSP boundary in Alfredton (115B Gillies St, Alfredton) and operates from a leased site owned by Ballarat City Council. The Department of Justice and Community Safety (DJCS) has indicated that Ballarat City Council will not renew the lease at the existing site.</p> <p>There are no law courts located within the Ballarat West PSP. The nearest existing law court facility is the Ballarat Magistrates Court located approximately 8 kilometres east of the Delacombe Town Centre (approximately 12-minute drive time).</p>	No formal facility provision benchmarks exist for law court facilities.	No formal facility provision benchmarks exist for law court facilities.	No formal facility provision benchmarks exist for law court facilities.	No formal facility provision benchmarks exist for law court facilities.	<p>leased premises owned by Ballarat City Council which it will not renew. The Ballarat West PSP, along with the future Ballarat West Growth Area, provides an opportunity to identify a new site location for VICSES. This review recommends that Council and the Department of Justice and Community Safety (DJCS) undertake a coordinated and collaborative planning exercise to identify a suitable site either within the Ballarat West PSP or the Western or North Western Growth Areas.</p> <p>Given the scale of projected population growth and the proximity of the PSP to the existing Ballarat Magistrates Court (approximately 8 kilometres east of the Delacombe Town Centre) indicates the need for a new law court facility in the Western and North Western Growth Areas is not justified. However, as the population of Ballarat continues to grow over the coming decades there may</p>

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Nearest Existing and Planned Provision including the Ballarat West PSP	Potential Requirements within the Ballarat Western Growth Area		Potential Requirements within the Ballarat North-Western Growth Area		Implications for Future Community Infrastructure Provision
		Low Population Scenario	High Population Scenario	Low Population Scenario	High Population Scenario	
						be a new to expand and / or redevelop the existing Ballarat Magistrates Court and increase its operational resources.
Residential aged care and other older persons services	Residential aged The Ballarat West PSP includes provision of a retirement village site.	Equivalent to approximately 390 aged care places (equivalent to 3 to 4 facilities).	Equivalent to approximately 520 aged care places (equivalent to 5 to 6 facilities).	Equivalent to approximately 220 aged care places (equivalent to 2 to 3 facilities).	Equivalent to approximately 290 aged care places (equivalent to 3 to 4 facilities).	Residential aged care provision will be delivered by private and or / not for profit service providers. However, it is recommended that Council determine preferred locations for further residential aged care provision across both growth areas with an aspirational target of accommodating 5 to 10 facilities depending on the development scenario. However, the provision of these services is not typically shown in a PSP.

9 Summary of Key Findings & Recommendations

Based on the information presented and analysed in the previous sections of this report a summary of key findings and recommendations is summarised below.

9.1 Dwelling & Population Outcomes

1. It is currently estimated that the Ballarat Western and North-Western Growth Areas has a combined developable area of approximately 1,400 hectares and a population capacity ranging from of approximately 54,000 people (approximately 20,000 dwellings) to 72,000 people (27,000 dwellings). The largest share of this population will reside in the Western Growth Area (64%) which also accounts for approximately 64% of the total developable area.
2. When the two growth areas are combined with the current Ballarat West PSP population capacity estimate (40,000 people), the broader Ballarat West Growth Area has the capacity to accommodate approximately 94,000 to 112,000 people.

9.2 Public Open Space & Recreation

Encumbered Open Space

3. When future PSP processes formally commence in both growth areas, and more details about the extent and location of encumbered land becomes known, it is recommended that Council confirm what informal recreational opportunities exist as part of the development of encumbered open spaces.

Regional Open Space

4. Given the projected shortfall in active open space identified as part of the Ballarat West PSP Review process currently being undertaken by Council, it is recommended that a Council investigate the feasibility of establishing a 30-hectare regional active open space reserve within the boundaries of either the Western or North-Western Growth Areas.
5. Subject to funding and planning constraints, Council should also assess the merits of a smaller regional open space and / or land potentially classified as encumbered open space (but where the site does not require permanent water to be stored).

Passive Open Space

6. This assessment indicates a potential combined need of 56 hectares of unencumbered passive open space to service the demands generated by the Western and North-Western Growth Areas. However, there may be a need to trade-off some of the supply of passive

open space for active open space due the shortfall of active open space identified as part of the Ballarat West PSP Review process currently being undertaken by Council.

7. When future PSP processes formally commence in both growth areas, it is recommended that Council identify the hierarchy of open spaces for both areas in line with the hierarchy outlined by the Ballarat Open Space Strategy (BOSS) to clearly distinguish between Neighbourhood, District and Regional open spaces.

Active Open Space

8. Given the net developable area estimates for the two growth areas, and the projected shortfall in active open space supply in the Ballarat West PSP, the following indicative provision strategy is recommended for each growth area:
 - Indicatively, the Western Growth Area should include 52 hectares of active open space which can be configured in any number of ways Council deems appropriate of the time formal PSP planning commences and 1 regional active open space (30 hectares); and
 - Indicatively, the North Western Growth Area should include 29 hectares of active open space which can be configured in any number of ways Council deems appropriate of the time formal PSP planning commences.
9. The potential to secure joint school / community active open space should also be explored by Council on a case by case basis.

Indoor Recreation

10. Although some of the indoor recreation needs of the Western Growth Area are likely to be catered for by the proposed 8 court indoor facility earmarked for Community Hub 3 in the Ballarat West PSP, it is recommended that one additional indoor recreation centre (with capacity to cater for up to 8 courts under a high development scenario) be established to service the demand generated by the Western and North Western Growth Areas. Ideally, this facility should be located centrally within the North-Western Growth Area.
 11. Given its reasonable proximity to the Ballarat Aquatic & Lifestyle Centre no additional aquatic leisure centre provision is recommended for the Ballarat West PSP. However, it is recommended that Council undertake an assessment of the capacity of the existing aquatic facility to absorb the future demands generated by an additional 56,000 to 75,000 people and identify what, if any, facility expansion / redevelopment needs might be required.
 12. It is also recommended that Council assess the potential need for a Splash Park in the Ballarat West Growth Areas.
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9.3 Multipurpose Community Centres & Community Services

Multipurpose Community Centres

13. Depending on the development scenario, this assessment supports the need for three to four Level 1 Community Centres to service the demands generated by the Western and North-Western Growth Areas.
14. Depending on the development scenario, this assessment supports the need for two to three Level 2 Community Centres to service the demands generated by the Western and North-Western Growth Areas and, ideally, at least one in each growth area.
15. This assessment supports the need for one Level 3 Community Centre (which could include a library) to service the demands generated by the Western and North-Western Growth Areas. Ideally, this facility should be located centrally within the North-Western Growth Area.

Early Years Services – Long Day Child Care

16. At this early stage of planning, it is anticipated that as many as 15 (under a low development scenario) to 20 (under a high development scenario) long day child care centres will be needed to satisfy demand across both growth areas.

Early Years Services – 3 & 4 Year Old Sessional Kindergarten

17. Sessional Kindergarten demand will largely be met by the delivery of proposed Level 1 and Level 2 Community Centres across both growth areas and potentially supplemented by additional provision at future Government Primary Schools and Catholic Primary Schools.
18. At this early stage of planning, it is anticipated that 24 (under a low development scenario) to 32 (under a high development scenario) sessional kindergarten rooms will need to be included in as many as six Council community centres (@ 4 to 6 rooms per facility) and supplemented by an additional 6 to 8 rooms at Government Primary / Catholic Primary Schools.
19. It is recommended Council engage with DoE to discuss adopting a shared approach to the delivery and funding of future kindergarten facilities within both growth areas and develop a kindergarten infrastructure services plan.

Early Years Services – Maternal & Child Health

20. In Maternal & Child Service (MCH) demand will largely be met by the delivery of proposed Level 1 and Level 2 Community Centres across both growth areas.
21. At this early stage of planning, it is anticipated that 7 consulting rooms (under a low development scenario) to 9 consulting rooms (under a high development scenario) will

need to be included in as many as three Council community centres (@ 2 to 3 rooms per facility). However, Council may wish to amend the configuration options when formal planning processes commence across both growth areas.

Early Years Services – Youth

22. Confirm with Council which of the proposed community centres will perform a youth service role.

Neighbourhood Houses / Adult Education

23. This assessment supports the need for at least two additional Neighbourhood House facilities to service the demands generated by the Western and North-Western Growth Areas. Ideally, these facilities should be incorporated into two proposed Level 2 Community Centres.

Libraries

24. Given that there are two proposed future libraries (Ballarat West PSP and the Wendouree Library) that are likely to service the demands generated by the Western and North-Western Growth Areas additional library provision in these areas is unlikely to be needed. However, as a contingency, it is recommended that Council continue to monitor the need for a facility (potentially in the North-Western Growth Area as part of a Level 3 Community Centre) depending on changes to population assumptions and travel times.

Arts & Cultural Facilities

25. It is also recommended that Council ensure that arts and cultural facilities are embedded in the proposed multipurpose community centre spaces and recreation facilities including:

- Soundproofing meeting rooms to make them dual rehearsal spaces / recording spaces;
- Provision of wet spaces (such as large kitchen environments) which can be used as wet work spaces (ceramics, mosaics, painting) with wipe clean surfaces;
- Improved WIFI network service permitting good upload and download capacity for creative businesses; and
- Sprung floors in large sporting areas (such as a basketball court) to make it suitable for dance rehearsal.

22. It is also recommended that Council identify which of the seven proposed multipurpose community centres recommended by this assessment (4 Level 1 facilities, 2 Level 2 facilities and 1 Level 3 facility) should incorporate a more dedicated arts and cultural function (e.g. gallery spaces in the Level 3 facility).

9.4 Education

Government Primary

23. This assessment indicates a potential combined need for 7 (low scenario) to 9 (high scenario) Government Primary Schools to service the demands generated by the Western and North-Western Growth Area.
24. Further consultation with the Department of Education will be required once formal planning processes commence in both growth areas to confirm provision strategies.
25. The location and configuration of proposed Government school sites should be delivered in accordance with the Victorian Government School Site Selection Criteria – Toolbox (October 2021).

Government Secondary

26. This assessment indicates a potential combined need for 2 Government Secondary Schools (under both a low and high development scenario) across the two growth areas.
27. Further consultation with the Department of Education will be required once formal planning processes commence in both growth areas to confirm provision strategies.
28. The location and configuration of proposed Government school sites should be delivered in accordance with the Victorian Government School Site Selection Criteria – Toolbox (October 2021).

Government Specialist Schools

29. Given the absence of formal facility provision benchmarks for Government Specialist Schools it is too early to estimate future needs generated by the Western and North-Western Growth Areas. However, early engagement with DoE is recommended once formal planning processes commence across both growth areas to confirm its provision strategy.

Non-Government Schools

30. This assessment considers there will be a likely need to set aside land for potentially as many as three non-Government school sites (two primary schools and one secondary school).
31. However, early engagement with the Diocese of Ballarat Catholic Education Limited (DOBCCEL) and other local independent schools is recommended once formal planning processes commence across both growth areas to confirm provision needs.

University and TAFE

32. Given the absence of formal provision benchmarks for higher education facilities it is too early to estimate future needs generated by the Western and North-Western Growth Areas.
33. However, Early engagement with the Department of Education, Federation University and Australian Catholic University is recommended to confirm provision needs.

9.5 Law Courts, Police & Emergency Services

Police

34. Given the absence of formal facility provision benchmarks for police stations it is too early to estimate future needs generated by the Western and North-Western Growth Areas. However, early engagement with Victoria Police is recommended once formal planning processes commence across both growth areas.

Fire Services

35. Given the absence of formal facility provision benchmarks for fire stations it is too early to estimate future needs generated by the Western and North-Western Growth Areas. However, early engagement with Fire Rescue Victoria is recommended once formal planning processes commence across both growth areas.

Ambulance Services

36. Given the absence of formal facility provision benchmarks for ambulance stations it is too early to estimate future needs generated by the Western and North-Western Growth Areas. However, early engagement with the Department of Health is recommended once formal planning processes commence across both growth areas.

State Emergency Services

37. Given the absence of formal facility provision benchmarks for VicSES facilities it is too early to estimate future needs generated by the Western and North-Western Growth Areas. However, early engagement with Emergency Services Infrastructure Authority is recommended once formal planning processes commence across both growth areas.
38. There is a need to identify a new location for the existing Ballarat VICSES facility currently operating from leased premises owned by Ballarat City Council which it will not renew. The Ballarat West PSP, along with the future growth areas, provides an opportunity to identify a new site location for VICSES.
39. Council and the Department of Justice and Community Safety (DJCS) should undertake a coordinated and collaborative planning exercise to identify a suitable site within one of the growth areas.

Law Courts

40. Given the absence of formal facility provision benchmarks for law courts it is too early to estimate future needs generated by the Western and North-Western Growth Areas.
-

However, early engagement with Court Services Victoria is recommended once formal planning processes commence across both growth areas.

9.6 Health

Acute / Sub-Acute Health Services

41. Given the absence of formal provision benchmarks for acute/sub-acute health facilities it is too early to estimate future needs generated by the Western and North-Western Growth Areas. However, early engagement with the Department of Health and Ballarat Health Service.

Community Health Services

42. Given the absence of formal provision benchmarks for community health facilities it is too early to estimate future needs generated by the Western and North-Western Growth Areas. However, early engagement with the Department of Health and Ballarat Community Health.

9.7 Aged Care & Other Services for Older Persons

Aged Care Places

43. Residential aged care provision will be delivered by private and or / not for profit service providers. However, it is recommended that Council determine preferred locations for further residential aged care provision across both growth areas with an aspirational target of accommodating 5 to 10 facilities depending on the development scenario. However, the provision of these services is not typically shown in a PSP.

9.8 Consistency with Statutory Policies and Other Strategic Documents

44. The recommendations outlined above a broadly in accordance with the statutory and strategic documentation reviewed by this assessment, and in particular the requirements and directions outlined in the Ballarat Planning Scheme and other City of Ballarat policies, strategies and plans.

9.9 Further Process Recommendations

45. Further discussion and engagement with Ballarat City Council and other external agencies is recommended to confirm support for the conclusions and recommendations outlined by this assessment.

10 Indicative Community Infrastructure Hub Locations & DCP Cost Implications

10.1 Indicative Community Infrastructure Hub Locations

This section brings together the estimates of community infrastructure demand and supply requirements and the location of existing and planned community infrastructure to provide indicative community infrastructure hub locations for both the Western and North-Western Growth Areas.

Figure 4 below shows the indicative locations for all proposed Level 1, Level 2 and Level 3 Community Centres.

Figure 3 - Indicative Community Centre Facility Locations and Catchment Areas

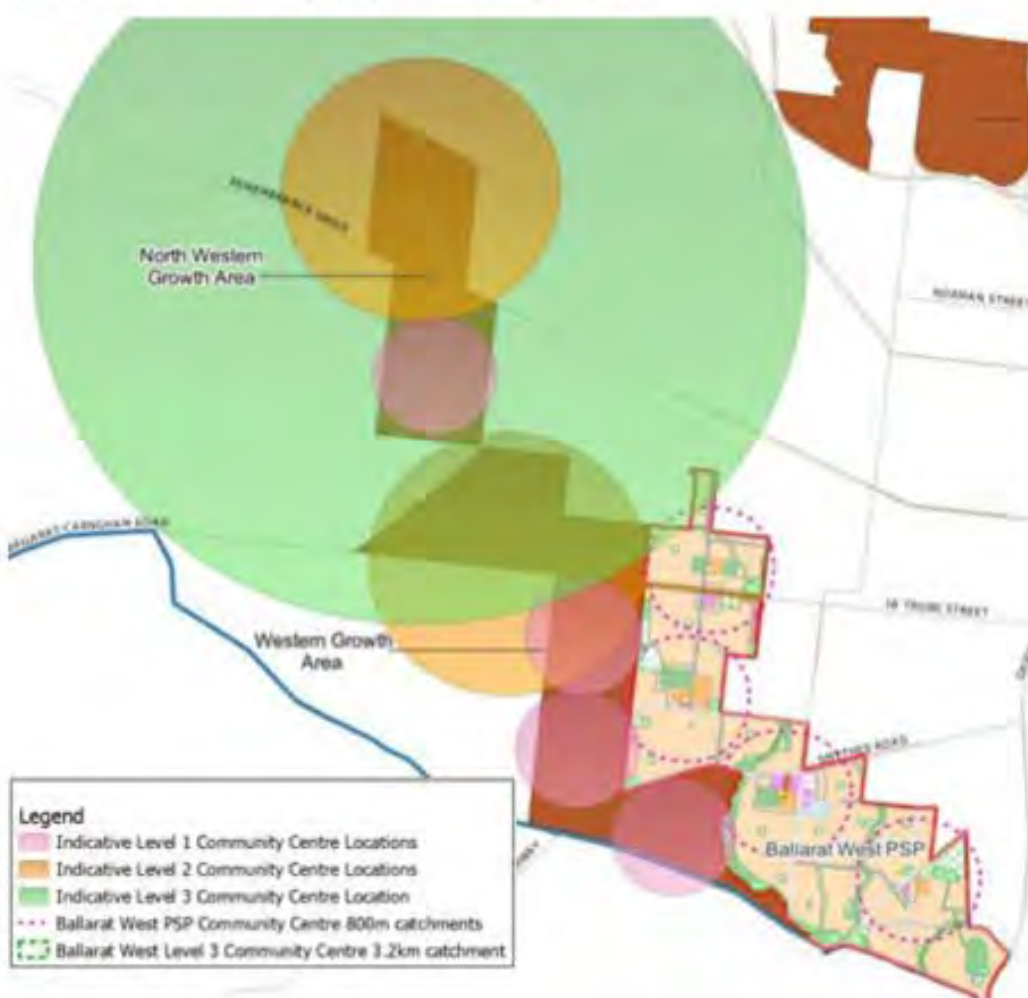


Figure 5 below shows the indicative locations for all proposed local and regional active open spaces and indoor recreation centres.

Figure 4- Indicative Active Open Space and Indoor Recreation Facility Locations and Catchment Areas

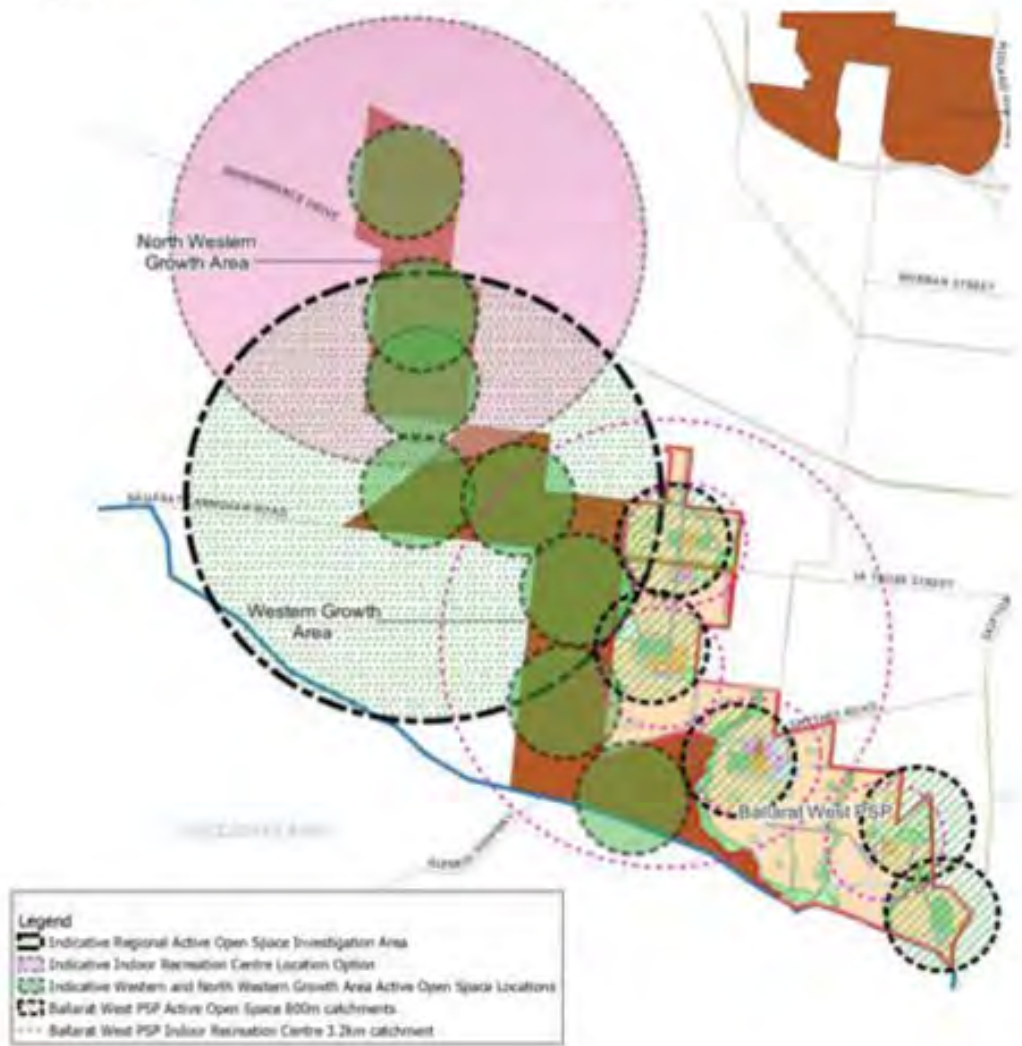


Figure 6 below shows the indicative locations for all proposed Government Primary and Secondary Schools.

Figure 5 - Indicative Government Education Facility Locations and Catchment Areas



10.2 Indicative DCP Cost Implications

10.2.1 Low Development Scenario DCP Cost Estimates

Table 4 below shows the indicative DCP community infrastructure project cost estimates for the Ballarat Western and North-Western Growth Areas (excluding land acquisition costs) using a low development scenario. These projects are based on the recommendations contained in Section 9 of this report and limited to those projects which can be funded by the Development Infrastructure Levy (DIL) component of the DCP. Potential projects that may be funded via the Community Infrastructure Levy (CIL) component only are also shown in Table 4, but not costed at this early stage of planning. The current cost to deliver all of these core community infrastructure projects across both growth areas is estimated to be \$165,726,771. When combined with the cost of constructing a regional active open space (30 hectares and 3 sports pavilions) and an indoor recreation stadium (6 courts), the total cost increases to approximately \$239 million.

Table 4 – Indicative DCP Community Infrastructure Project Cost Estimates for the Ballarat Western and North-Western Growth Areas (excluding land acquisition costs) Low Development Scenario

Item	Indicative Quantity Required in Western Growth Area	Indicative Quantity Required in North-Western Growth Area	Cost Estimate Per Item	Total Cost Estimate (excluding land acquisition costs)
Level 1 Multipurpose community centre	2 (0.8 hectares each)	1 (0.8 hectares)	\$7,855,281	\$23,565,843
Level 2 Multipurpose community centre	2 (1.2 hectares each)	1 (1.2 hectares)	\$9,249,319	\$27,747,957
Level 3 Multipurpose community centre	0	1 (1.5 hectares)	\$12,297,044	\$12,297,044
Active open space (8 to 10 hectares)	5 (54 hectares in total)	3 (30 hectares in total)	\$10,541,568	\$84,332,544
Sports Pavilion serving 2 playing areas	3	2	\$1,779,971	\$8,899,855
Sports pavilion serving 3 playing areas	2	1	\$2,961,176	\$8,883,528
Total Development Infrastructure Levy Cost Estimate (excluding land acquisition cost)				\$165,726,771
Regional Active Open Space	Approximately \$41 million to construct ¹⁰			
Indoor Recreation Centre	Likely to only form Part of the Community Infrastructure Levy Component of the DCP (approximately \$32 million ¹¹)			

Source: Costing estimates based on the Review of Benchmark Infrastructure Costings: Benchmark Infrastructure Costing, Prepared for VPA by Cardno (1 July 2022). Estimates are for the 2022/2023 Financial Year (1 July 2022)

¹⁰ Based on costings identified by the Review of Benchmark Infrastructure Costings: Benchmark Infrastructure Costing (prepared for VPA by Cardno) for: 1) the construction of an 8 to 10 hectare active open space reserve multiplied by 3 to account for a 30 hectare reserve, and 2) the construction of a sports pavilion serving 3 playing areas multiplied by 3.

¹¹ Based on cost (\$31 million) to develop Cobblebank Indoor Stadium (6 indoor courts) in the City of Melton which was completed in 2021.

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

10.2.1 High Development Scenario DCP Cost Estimates

Table 5 below shows the indicative DCP community infrastructure project cost estimates for the Ballarat Western and North-Western Growth Areas (excluding land acquisition costs) using a high development scenario. The current cost to deliver all of these core community infrastructure projects across both growth areas is estimated to be \$173,582,052. When combined with the cost of constructing a regional active open space (30 hectares and 3 sports pavilions) and an indoor recreation stadium (8 courts), the total cost increases to approximately \$257 million.

Table 5 – Indicative DCP Community Infrastructure Project Cost Estimates for the Ballarat Western and North-Western Growth Areas (excluding land acquisition costs): High Development Scenario.

Item	Indicative Quantity Required in Western Growth Area	Indicative Quantity Required in North-Western Growth Area	Cost Estimate Per Item	Total Cost Estimate (excluding land acquisition costs)
Level 1 Multipurpose community centre	3 (0.8 hectares each)	1 (0.8 hectares)	\$7,855,281	\$31,421,124
Level 2 Multipurpose community centre	2 (1.2 hectares each)	1 (1.2 hectares)	\$9,249,319	\$27,747,957
Level 3 Multipurpose community centre	0	1 (1.5 hectares)	\$12,297,044	\$12,297,044
Active open space (8 to 10 hectares)	5 (54 hectares in total)	3 (30 hectares in total)	\$10,541,568	\$84,332,544
Sports Pavilion serving 2 playing areas	3	2	\$1,779,971	\$8,899,855
Sports pavilion serving 3 playing areas	2	1	\$2,961,176	\$8,883,528
Total Development Infrastructure Levy Cost Estimate (excluding land acquisition cost)				\$173,582,052
Regional Active Open Space	Approximately \$41 million to construct ²²			
Indoor Recreation Centre	Likely to only form part of the Community Infrastructure Levy Component of the DCP (approximately \$42 million to construct ²³)			

Source: Costing estimates based on the Review of Benchmark Infrastructure Costings; Benchmark Infrastructure Costing, Prepared for VPA by Cardno (1 July 2022). Estimates are for the 2022/2023 Financial Year (1 July 2022).

²² Based on costings identified by the Review of Benchmark Infrastructure Costings; Benchmark Infrastructure Costing (prepared for VPA by Cardno) for: 1) the construction of an 8 to 10 hectare active open space reserve multiplied by 3 to account for a 30 hectare reserve, and 2) the construction of a sports pavilion serving 3 playing areas multiplied by 3.

²³ Based on cost (\$31 million) to develop Cobblebank Indoor Stadium (6 indoor courts) in the City of Melton which was completed in 2021.

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Appendices

Appendix 1 – Review of Relevant Polices, Guidelines & Strategic Documents

1.1 Precinct Structure Planning Guidelines

The Precinct Structure Planning Guidelines: New Communities in Victoria (the Guidelines) are a Victorian Government initiative to ensure the Victorian Planning Authority (VPA) and other planning authorities prepare plans for places that enable best practice, liveable new communities for Victoria.

The purpose of the Guidelines is to provide the framework for preparing PSPs that guarantees quality outcomes while also being flexible, responsive and supportive of innovation by setting aspirational goals for our future communities. The approach provides a transitional model enabling 20-minute neighbourhoods to evolve over time and achieve the objectives as the area matures. The Guidelines are based on planning for 20-minute neighbourhoods, a principle in Plan Melbourne 2017-2050 (Plan Melbourne) that advocates for living locally to ensure accessible, safe and attractive local communities.

The Guidelines are structured in the following four parts:

- PART 1 - PURPOSE AND PLANNING CONTEXT. Provides the context for preparing a PSP, including how the Guidelines ensure a future where Victoria is socially and economically strong, environmentally resilient and engaged with the opportunities of a rapidly changing world. It outlines the United Nations Sustainable Development Goals (UN SDGs) and relevant Plan Melbourne policy and explains the 20-minute neighbourhood integrating framework and where PSPs fit in the planning hierarchy.
- PART 2 - PSP PATHWAYS AND PROCESSES (PSP 2.0). Outlines the process for co-designing a PSP with key stakeholders using the PSP 2.0 approach to develop a shared vision for the precinct and resolve key planning challenges early. It also outlines the innovation pathway, which provides new opportunities to deliver over and above expected outcomes.
- PART 3 - CONSTRUCTING A PSP. Provides specific guidance on the General Principles and Performance Targets to be adopted when preparing a PSP. The principles and targets reflect the aspirations of policies such as Plan Melbourne and UN SDGs. They also reflect broader updates to State Government policies including the Department of Transport's Movement and Place Framework and Resilient Melbourne's Living Melbourne – Our Metropolitan Urban Forest. Part 3 also provides guidance on how to demonstrate a PSP has achieved its principles and targets, and where the innovation pathway should be considered.
- PART 4 - PRACTITIONER'S TOOLBOX. Provides guidance on the more detailed aspects of planning for Victoria's new communities. The Practitioner's Toolbox is available online and kept up to date with the latest tools and practices, including updates and changes to relevant government planning policies and guidance notes.

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

The Guidelines have a hierarchy of elements to explain what needs to be considered and delivered in a PSP. Elements are grounded in state policy and strategy or key future directions for greenfield precincts as determined by the VPA through the preparation process.

There are a number of sections within the PSP Guidelines that specifically relevant to the preparation of a Community Infrastructure Assessment. The most relevant elements are located in Part 3 (Constructing a PSP) and include:

- **Offer High-Quality Public Realm**
 - Offer high-quality public realm and open space
 - The public realm and open space network are crucial to creating the identity of a neighbourhood, and can have a significant impact on liveability, social cohesiveness, sense of place, the community's health and wellbeing, and the urban heat island effect.

- **Services and Destinations**
 - Provide services and destinations that support local living
 - Encouraging communities to 'live locally' means ensuring facilities and services are located close to housing and that the services meet the community's daily needs.

- **Infrastructure and Coordination**
 - Smarter infrastructure investment, and an integrated approach to land-use planning, is essential to unlocking development and ensuring housing affordability PSPs identify infrastructure needs and coordinate their integration with appropriate future land uses in order to provide for future communities.
 - The Guidelines provide direction around the distribution of community facilities, open space and transport required to support compact, walkable 20-minute neighbourhoods. Coordinated and timely delivery of this infrastructure is critical to enable development in greenfield areas and therefore affordability of land. The logical and orderly development of precincts also ensures that new communities have the things they need to thrive.

Table 6 on the following page provides a summary of the key community infrastructure assessment principles, the application of these principles to the PSP process and key PSP targets.

In addition to the PSP Guidelines the VPA, Department of Education and Training and Catholic Education Melbourne has prepared a number of additional resources to assist with the community infrastructure planning process in PSP locations. These include:

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

- Victorian Planning Authority – Guidance Note – PSP2.0 (November 2021);
- Victorian Planning Authority – Community Infrastructure Planning in New Communities Guidance Note (November 2021);
- Victorian Planning Authority – Infrastructure Contributions Plan Guidelines (March 2021);
- Department of Education & Training - Victorian Government School Site Selection Criteria – Toolbox (October 2021);
- Victorian Planning Authority – PSP Note – Non-Government Schools; and
- Melbourne Archdiocese Catholic Schools - Catholic Schools Site Selection Criteria Guidelines (2021).

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Table 6 – Key Elements of the PSP Guidelines (relevant to the Community Infrastructure Assessment Process)

PSP Feature & General Principles	How to Apply to PSP	PSP / Performance Targets
Offer High-Quality Public Realm		
# 10. Local recreational spaces and facilities		
Networks of open space and facilities that optimise the use of available land and provide equitable access to sport and recreation, leisure, environmental benefits, cultural benefits and visual amenity.		
<p>F 10.1 The open space network should include local parks that:</p> <ul style="list-style-type: none"> • have a variety of sizes and proportions, generally ranging from 0.1 to 3 hectares • are located to enable access by local residents without having to cross significant barriers such as arterial roads, railways or waterways • provide a diversity of amenity experiences – both internal to the park and external interfaces that will provide an amenity context for development. <p>Relevant VPP: Clause 56.05-2</p>	<ul style="list-style-type: none"> • A Public Realm & Water Plan should be developed. The plan may demonstrate a diverse range of open space typologies that respond to place (for example, linear open space, waterway corridors, biodiversity areas and the productive use of encumbered land). The plan should show park sizes, preferred interfaces and walkable catchments (adjusted for significant barriers). 	<p>T11 The open space network should seek to meet the following minimum targets:</p> <ul style="list-style-type: none"> • Within residential areas (including activity centres): <ul style="list-style-type: none"> - 10% of net developable area for local parks and sports field reserves - 3-5% of net developable area set aside for local parks - 5-7% of net developable area set aside for sports field reserves. • Within dedicated employment and/ or economic activity areas, 2% of the net developable area for local parks. <p>Relevant VPP: Clause 19.02-6S, 53.01</p> <p>T12 Open space and sports reserves should be located to meet the following distribution targets:</p> <ul style="list-style-type: none"> • A sports reserve or open space larger than 1 hectare within an 800m safe walkable distance of each dwelling • A local park within a 400m safe walkable distance of each dwelling. <p>Relevant VPP: Clause 56.05-2</p> <p>Note: includes sports reserves and public land that is encumbered by other uses but is capable of being utilised for open space purposes.</p>
<p>F 10.2 Proposed sporting reserves should be located, designed and configured to be:</p> <ul style="list-style-type: none"> • targeted to forecast community needs, including design, landscaping and functionality accessible • appropriately meeting their purpose, having regard to shared use opportunities • able to take advantage of opportunities for alternative water supply (including co-location with stormwater harvesting and treatment facilities) • distinctive and responsive to local character and surrounding land use. 	<ul style="list-style-type: none"> • A community needs analysis should be undertaken to inform the plan at preparation stage. • A Public Realm & Water Plan should show sporting reserve size, purpose and walkable catchments. • Topography should be considered when determining the appropriate location of sport reserves. 	

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

PSP Feature & General Principles	How to Apply to PSP	PSP / Performance Targets
<p>F 10.3 A network of diverse open space should be provided across the precinct that connects (via open space or major pedestrian/cycle links) to metropolitan or regional open space networks.</p>	<ul style="list-style-type: none"> A Public Realm & Water Plan should show linkages and connections, any barriers to connectivity, and measures to overcome barriers. 	
<p>F 10.4 The location and scale of open space should respond to and optimise integration with the existing topography, waterway features, landscape features, biodiversity conservation areas and cultural heritage values.</p>	<ul style="list-style-type: none"> A Public Realm & Water Plan should detail the features the open space network is responding to. A PSP may include any relevant cross section/s of existing or proposed features. For example, waterway conservation area, Water Sensitive Urban Design (WSUD) element with the surrounding urban form to clearly show expected development interface outcomes. 	
<p>F 10.5 The public realm network should be located, configured and designed to enhance and optimise the role of encumbered or restricted public land (for example, waterways, conservation, utility easements, schools) for multifunctional spaces and cater for a broad range of local users and visitors.</p> <p>Where possible, the provision of open space should be integrated with and/or link with waterways and Water Sensitive Urban Design (WSUD) elements. The public realm network should account for provision of multifunctional water management assets.</p> <p>Relevant VPP: Clause 56.05-2, 19.03-35</p>	<ul style="list-style-type: none"> The community needs analysis should identify possible functions of each space. This could also include the potential role and function of school sports fields, waterways and/or floodways in contributing to the network. Place-specific guidance should express expectations with regard to landscaping outcomes in open spaces and the public realm. 	
<p>Services And Destinations</p>		
<p>F 14. Local schools and community infrastructure</p>		
<p>Education and community infrastructure and facilities that are located to equitably and efficiently maximise their accessibility and shared use.</p>		
<p>F 14.1 Education and community facilities (i.e. primary, secondary and specialist schools, kindergartens, community centres, health facilities and sport reserves) should:</p> <ul style="list-style-type: none"> be co-located within community hubs have good visual and physical links to a local centre be located on connector streets, linked by walking and cycling paths be located in proximity to high-quality public transport where possible be located away from potential hazards. <p>Relevant VPP: Clause 56.03-3</p>	<ul style="list-style-type: none"> A Community Infrastructure Plan should show the preferred location of education and community facilities and identify their locational advantages. The assessment should ensure that the context of surrounding or planned development is considered to inform the role and location of education and community facilities. Where a specialist school is required, it should wherever possible, be located adjacent to an existing or proposed government school—preferably a secondary school. Planning to co-locate kindergartens with all new government primary schools (including within co-located community facilities) should be undertaken in consultation with Department 	<p>T18 The location of dwellings should achieve the following accessibility targets in relation to education and community facilities:</p> <ul style="list-style-type: none"> 70% of dwellings located within 800m of a government primary school 100% of dwellings located within 3,200m of a government secondary school 80% of dwellings located within 800m of a community facility 80% of dwellings located within 800m of a health facility. <p>Note: A health facility may include areas where a general practitioner would be capable of operating (for example, commercial or mixed-use zone).</p>

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

PSP Feature & General Principles	How to Apply to PSP	PSP / Performance Targets
	<p>of Education and Training (DET) to determine appropriate land take and design requirements.</p> <p>Note: PSPs are only capable of accommodating the provision of infrastructure. Timing of delivery is subject to the discretion of the relevant service provider.</p>	
<p>F 14.2 High intensity facilities such as libraries, childcare centres, justice/emergency services and community centres should be located within close proximity of an activity centre or have good visual and physical links to an activity centre and active transport routes.</p>	<ul style="list-style-type: none"> • Consultation with agencies and service providers should explore spatial and locational needs of these facilities, as well as likely delivery models. • A community infrastructure needs assessment should be prepared to inform plan preparation, identifying potential local synergies available in the PSP area. 	
<p>F 14.3 Upgrades to existing infrastructure and/or the provision of new infrastructure should align with council and/or agency service plans and provide guidance to reflect the most cost-efficient approach to addressing service needs. This includes making use of any spare capacity of existing facilities within the catchment area and pursuing integrated service planning and delivery opportunities.</p>	<ul style="list-style-type: none"> • A community infrastructure needs assessment should be undertaken to inform plan preparation, identifying spare capacity within the catchment and exploring integrated delivery opportunities. • Consultation with community infrastructure service providers should be undertaken to explore integrated delivery opportunities. 	
<p>F 14.4 Where feasible, education and community infrastructure should provide space for not-for-profit organisations.</p> <p>Opportunities should also be explored in town centres for space that not-for-profits may be able to rent</p>	<ul style="list-style-type: none"> • Consultation with not-for-profit organisations and DET, Council and other community land use managers, as well as developers of town centres, should be undertaken early to identify and co-design opportunities for shared facilities. 	
<p>F 14.5 The location of emergency services should be within easy access to the arterial road network to maximise coverage and reduce response times.</p>	<ul style="list-style-type: none"> • A community infrastructure needs assessment should be undertaken to inform plan preparation, identifying the location of existing or proposed emergency service facilities. • A Community Infrastructure Plan should identify the preferred location of emergency services if located within the precinct. 	
<p>F 13. Lifelong learning opportunities</p> <p>Education and community infrastructure and facilities that cater for the many social needs of the community and individuals at any stage of their lives.</p>		

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

PSP Feature & General Principles	How to Apply to PSP	PSP / Performance Targets
<p>F 15.1 The amount of land allocated for education and community facilities, and their role and function, should be determined in consultation with service providers and should respond to the local context, the broader strategic context, and the forecast service needs of the new or changing community.</p> <p>Relevant VPP: Clause 56.03-3</p>	<ul style="list-style-type: none"> A community infrastructure needs assessment should identify likely community needs. The assessment should ensure that the context of surrounding or planned development is considered to inform the role and location of education and community facilities. Consultation with community infrastructure service providers should be undertaken to explore opportunities to respond to changing needs in an innovative way. 	<p>Refer to T18 Targets</p>
<p>F 15.2 The location and design of education and community facilities should cost-effectively maximise functional use, flexibility, safety, amenity and operational efficiency (e.g. shared use of facilities with active open space, alternative funding models, adaptable design models, community access to school grounds, etc.)</p>	<ul style="list-style-type: none"> A Community Infrastructure Plan should show any proposed agreement for shared use. A Precinct Infrastructure Plan should identify timing, delivery responsibility, potential funding sources and commitments to shared delivery and use of facilities. 	
<p>F 15.3 Opportunities for non-government schools and tertiary education facilities should be identified through engagement with the non-government school and tertiary education sectors.</p>	<ul style="list-style-type: none"> Consultation with non-government education providers should be undertaken early in the PSP process. A Community Infrastructure Plan should identify any nongovernment education facilities (where known). 	
<p>F 15.4 Future opportunities for higher order health and education (e.g. tertiary education) should be considered during the PSP process and land areas or 'areas of strategic interest' should be nominated where known.</p>	<ul style="list-style-type: none"> Consultation with higher order health and education providers should be undertaken early in the PSP process to explore any opportunities for these sites to be nominated and for partnerships to be forged. A Community Infrastructure Plan should identify any facilities (where known) and identify any catalyst impacts of these facilities. 	
Infrastructure Coordination		
F 17: Staging and location of development		
<p>Directing the staging and location of development within a PSP to:</p> <ul style="list-style-type: none"> use available capacity in existing infrastructure support the orderly and economic extension or augmentation of existing infrastructure match the timely provision of new infrastructure. <p>This will include directing the location and timing of development and identifying trigger points for the provision of required infrastructure.</p>		
<p>F 17.1 The structure and design of a PSP should accommodate the coordinated delivery of key infrastructure (basic and essential infrastructure and other infrastructure) and appropriate staging of development to provide for:</p> <ul style="list-style-type: none"> integration and shared-use opportunities; 	<ul style="list-style-type: none"> Encourage active engagement with government departments, service providers and utility agencies to input their forward plans, identify and define essential infrastructure and to explore strategic partnerships for planning, funding and delivery. 	<p>T20 Identify all basic and essential infrastructure with spatial requirements on the future place-based structure plan (e.g. open space, schools, community centres, integrated water management, etc.)</p>

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

PSP Feature & General Principles	How to Apply to PSP	PSP / Performance Targets
<ul style="list-style-type: none"> timely delivery, taking into consideration likely sequencing of development, land ownership constraints and funding sources. efficient delivery, taking into consideration likely sequencing of development development that will not be isolated from basic and essential infrastructure and services ensuring that development does not take place unless it can be serviced in a timely manner ensuring that development within a PSP can be staged to match the attainment of infrastructure triggers and the provision of infrastructure and services opportunities for alternative delivery models that achieve sustainability or other community benefits. 	<ul style="list-style-type: none"> A Precinct Infrastructure Plan should identify all infrastructure needed to service the new neighbourhoods, indicative timing, delivery responsibility, other potential funding sources and any agreed commitments to partnerships or alternative delivery models. The indicative locations of essential infrastructure should consider the local requirements of service providers relevant to the PSP. 	
<p>F 17.2 The staging of development within PSPs should consider:</p> <ul style="list-style-type: none"> proximity to existing or proposed development fronts or serviced land proximity to significant public transport infrastructure or public transport services proximity to existing or committed community infrastructure such as schools proximity to new or existing arterial or connector road infrastructure existing uses (for example, extractive uses) which may transition over a longer period of time its role in facilitating delivery of this infrastructure. 	<ul style="list-style-type: none"> Active engagement with government departments, service providers, utility providers, landowners, developers and local government to explore the potential staging of development that aligns with potential planning, funding and delivery of infrastructure. Spatial arrangement of land uses within a PSP and the provision of infrastructure within a Precinct Infrastructure Plan are aligned to encourage appropriate staging of development. Direction is provided on the location and timing of development fronts within a PSP and the trigger points for required infrastructure, where relevant, in order to ensure development matches the timely provision of infrastructure. An indicative staging plan should be prepared where appropriate. 	
<p>F 17.3 Land should be set aside and reserved to allow for all public land uses, including schools, community centres, health, emergency and justice facilities, road widening and grade separation of rail from all transport corridors (includes roads, pedestrian and bicycle paths) where a delivery agency has agreed to the commitment.</p>	<ul style="list-style-type: none"> Land required in the future should be identified in a Place Infrastructure Plan. 	
<p>F 17.4 Structure and design of a PSP should seek to maximise opportunities for development to utilise existing infrastructure or to capitalise on planned infrastructure commitments.</p>	<ul style="list-style-type: none"> An infrastructure and servicing assessment should be prepared to inform plan preparation and should identify existing capacity of infrastructure. Consultation should be undertaken with agencies and servicing authorities to identify opportunities to leverage planned infrastructure commitments. 	
<p>F 18. Innovative and sustainable infrastructure delivery</p>		

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

PSP Feature & General Principles	How to Apply to PSP	PSP / Performance Targets
<p>Actively pursuing innovative and sustainable models for infrastructure delivery, and long-term strategic infrastructure opportunities that align with the UN SDGs and the 20-minute neighbourhood framework.</p>		
<p>F 18.1 Alternative and innovative infrastructure and service delivery approaches should be explored early in the PSP place-shaping and visioning stages to ensure new and innovative initiatives are embedded in the design and structure of a PSP. Implications for urban form, housing, jobs and other features of the 20-minute neighbourhood should be considered and addressed through the PSP.</p>	<ul style="list-style-type: none"> The PSP vision statement should identify any proposed infrastructure or service delivery innovations, as well as actions to support the vision. 	<p>Refer to Performance Target T18</p>
<p>F 18.2 Potential mechanisms to incentivise the early delivery of key infrastructure should be explored, particularly where fragmented land parcels and/or other site constraints exist that prohibit the logical delivery of infrastructure to support new job growth.</p>	<ul style="list-style-type: none"> Active engagement with key implementing stakeholders will identify opportunities and commitment to bring forward infrastructure. All commitments should be identified in the Precinct Infrastructure Plan. A staged approach to drainage outfall should be considered to align with incremental development of the precinct. 	

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

1.2 City of Ballarat & Non Council Agency Strategic Documents

A number of City of Ballarat and other non-Council agency strategies, plans and policies were identified and reviewed for potential relevance to the review.

1.2.1 City of Ballarat Strategic Documents

The key Council policies, strategies and plans reviewed are listed below and summarised in the Table following this list.

- Community Vision 2021-2031
- Council Plan 2021-2025
- City of Ballarat Health and Wellbeing Plan 2021-2031
- City of Ballarat Asset Plan 2022-2032
- Municipal Early Years Plan 2022-26
- Youth Strategy 2022-2026
- Ageing Well Strategy 2022-2026
- Active Ballarat Strategy
- Active Women and Girls Strategy 2018
- Ballarat Aquatic Strategy 2014
- Ballarat Skate and Youth Facilities Framework (2019)
- Lawn Bowls Facilities Framework (2015)
- Ballarat Open Space Strategy (2008)
- Playspace Planning Framework (2014)
- Ballarat Libraries and Learning Strategy 2022-2027
- Arts and Cultural Infrastructure Report (2021)
- Ballarat Creative City Strategy (2019)
- Ballarat Creative Precinct Master Plan (2019)
- Ballarat Event Strategy 2018-28
- Ballarat Heritage Plan 2017-30
- Social Policy Framework
- Intercultural Plan 2022-2026

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Table 7 – Ballarat City Council Strategic Documents Potentially Relevant to the Assessment

Strategy Type and Name
Corporate Strategies
<p>Community Vision 2021-2031</p> <p>The Community Vision 2021-2031 was informed by a large-scale community engagement process in February and March 2021. A Community Panel, representative of the Ballarat community, further developed community input received during this first stage of engagement via a deliberative engagement process in April and May. The Panel developed the vision statement, principles for decision making and the key themes for action presented in the Vision.</p>
<p>Council Plan 2021-2025</p> <p>The City of Ballarat Council Plan 2021-2025 was adopted by Council at the August 25 Council Meeting. The plan outlines how City of Ballarat will achieve Council's and the community's vision of Ballarat.</p> <p>The plan has six goals:</p> <ul style="list-style-type: none"> • An environmentally sustainable future • A healthy, connected and inclusive community • A city that fosters sustainable growth • A city that conserves and enhances our natural and built assets • A strong and innovative economy and city • A council that provides leadership and advocates for its community
<p>City of Ballarat Health and Wellbeing Plan 2021-2031</p> <p>The City of Ballarat Health and Wellbeing Plan 2021-2031 sets the health priorities for the Ballarat community, outlines strategies to prevent or reduce public health issues and supports the community to achieve optimum health and wellbeing.</p> <p>The Health and Wellbeing Plan 2021-2031 has six priority areas:</p> <ul style="list-style-type: none"> • Tackling climate and its impact on health • Preventing all forms of violence • Increasing healthy eating • Increasing active living • Improving mental wellbeing • Reducing harm from smoking, gambling, alcohol and other drugs
<p>City of Ballarat Asset Plan 2022-2032</p> <p>The Asset Plan 2022-2032 provides clear direction about how the City of Ballarat proposes to manage the portfolio of public assets it controls over the next 10 years and beyond to ensure responsible and sustainable stewardship.</p>
Education, Early Years, Youth and Older Persons
<p>Municipal Early Years Plan 2022-26</p> <p>The Municipal Early Years Plan lays out the Ballarat community's vision and priorities for its children, and for being a child friendly city for every child that lives, learns, is cared for and plays in the municipality. The Plan has six key goals:</p> <ul style="list-style-type: none"> • Valued, loved and safe • Having material basics • Being healthy • Children are learning • Children are participating • Positive sense of culture and identity
<p>Youth Strategy 2022-2026</p> <p>The City of Ballarat Youth Strategy 2022-2026 lays the foundation for our young people to access the programs and services they need to build a brighter future for our city. The visions, voices and creativity of young people will be fostered to grow through a range of exciting programs for young people aged 12-25.</p>
Older Persons
<p>Ageing Well Strategy 2022-2026</p> <p>This strategy has been developed to guide City of Ballarat to respond to the current, changing and emerging needs of residents aged 55 years and over and to identify its future focus and priorities for the community. Priorities include:</p>

<p>Strategy Type and Name</p> <ul style="list-style-type: none"> Improving the accessibility and safety of our spaces, places, and streetscapes; Access to a range of reliable and affordable transport and affordable housing options; The availability of services to maintain independence at home and in the community; Strengthening the regard and respect for people as they age and their contribution and value in community, social, political and economic life.
<p>Open Space & Recreation</p> <p>Active Ballarat Strategy</p> <p>One of the key objectives of the Active Ballarat Strategy is that it aligns with the State government’s plan – Active Victoria – which aims to strengthen the sport and recreation sector and participation across the state. This has been at the forefront of our thinking throughout the development of this strategy.</p> <p>The overall objectives of this strategy are to:</p> <ul style="list-style-type: none"> Establish strategic directions for the planning, provision, development and management of a diverse range of sport and recreation facilities, services and infrastructure; Provide recommendations and strategic outcomes that address short term (1-2 years), medium term (3-4 years) and future term (5-10 years) community needs; and Identify critical policy direction for the City of Ballarat recreation processes and procedures.
<p>Active Women and Girls Strategy 2018</p> <p>This strategic document represents the overarching strategy to guide future initiatives aimed at increasing female participation in sport and physical activity within the municipality. The strategy has a four-year timeframe and is supported by a strategy action plan that identifies priority initiatives, and aligns with Council Plan, key recreation documents and capital programs and budgets.</p> <p>This strategy will identify four key focus areas that will guide Council over the next four years in projects to be delivered. The outcomes of any projects or initiatives will be communicated based on how they address four key pillars. They are:</p> <ul style="list-style-type: none"> Participation; Culture and Environment; Infrastructure; and Media Action.
<p>Ballarat Aquatic Strategy 2014</p> <p>The City of Ballarat Aquatic Plan presents practical projects to be delivered across the municipality over the next five to ten years. These projects are designed to increase participation in aquatic activities by all people, regardless of gender, age or physical capabilities.</p> <p>One of the recommendations contained in this report states: “Given the high growth expected in Ballarat’s west, specific planning must also be undertaken for aquatic play spaces and additional aquatic facilities in this part of the city.”</p>
<p>Ballarat Skate and Youth Facilities Framework (2019)</p> <p>The aim of this report is to ensure that the City of Ballarat has a clear strategic plan to appropriately provide accessible, inclusive and relevant skate, scooter and BMX spaces and broader activity spaces for tweens (aged 8 to 12) and teens in line with current practice for the next ten years.</p>
<p>Lawn Bowls Facilities Framework (2015)</p> <p>The Lawn Bowls Facilities Framework assists the City of Ballarat deliver its stated health and wellbeing domains outlined in the Council Plan, notably in the areas of sustainable built and natural environments, where a key objective is improved access to and utilisation of leisure and recreational facilities.</p> <p>Council will support local bowls clubs and work with other relevant stakeholders, particularly the Ballarat District Bowls Division (BDBD), Bowls Victoria and Bowls Australia, to support the long-term growth and sustainability of bowls in the region.</p>
<p>Ballarat Open Space Strategy (2008)</p> <p>The Ballarat Open Space Strategy:</p> <ul style="list-style-type: none"> Provides a clear and concise policy framework for the management, use and development of the municipality’s open space assets; Determines the appropriate provision of open space to cater to Ballarat’s existing and projected population; Provides environmental management outcomes and solutions for financing the development of open space; Provides a sustainable public landscape and planting vision aimed at responding to the impact of climate change.
<p>Playspace Planning Framework (2014)</p>

Strategy Type and Name
<p>This strategy provides guidance for the provision of integrated play opportunities for people of all ages, interests and abilities throughout the municipality. It is based on ten geographic precincts that comprise the City of Ballarat and form the basis for planning and development of play spaces for all ages. Additionally, the strategy is not intended to cover all forms of physical activity (like sport and organised competition), but focuses on the informal playful and casual activities.</p>
<p>Libraries, Arts & Culture</p>
<p>Ballarat Libraries and Learning Strategy 2022-2027</p> <p>Key priorities of the Strategy are:</p> <p>Reach out</p> <ol style="list-style-type: none"> 1. Engage with the Ballarat community to increase library use and service impact. 2. Target library services to priority community cohorts with a focus on literacy, lifelong learning, digital inclusion and wellbeing. <p>Branch out</p> <ol style="list-style-type: none"> 3. Increase the size, quality and accessibility of the branch library network. 4. Explore use of alternative models that increase community access to library services. <p>Stand out</p> <ol style="list-style-type: none"> 5. Exemplify a strategic approach to delivering purposeful and mutually beneficial service partnerships. 6. Demonstrate regional and industry leadership in provision of community focused public library services. <p>The Strategy identifies that "planning will also be undertaken for a future library to serve the Ballarat West growth area located in the Delacombe Town Centre." (Page 17)</p>
<p>Ballarat Arts and Cultural Infrastructure Report (2021)</p> <p>This Arts and Cultural Infrastructure Report provides an analysis of the current supply and function of private and public cultural facilities in the City of Ballarat, and the anticipated sector trends that will drive infrastructure needs into the future.</p> <p>This Report has identified six strategic priorities to guide the City of Ballarat's investment in:</p> <ul style="list-style-type: none"> • New cultural infrastructure, upgrades or redevelopment of existing arts and cultural assets • Opportunities for the inclusion of cultural use and programming in planned and future infrastructure projects • Initiatives that support the provision and/or operation of cultural infrastructure including the inclusion of provision standards for arts and cultural infrastructure. <p>These six strategic priorities include:</p> <ol style="list-style-type: none"> 1. A holistic, collaborative approach to new and ongoing capital and operational investment in arts and cultural infrastructure 2. The incorporation of cultural use into the design of fit for purpose community infrastructure planning 3. Prioritised investment in arts and cultural infrastructure that supports and improves the productivity, entrepreneurship and sustainability of the sector 4. Arts and cultural infrastructure is visible and accessible to the community and visitors 5. Arts and cultural infrastructure is affordable and supports collaboration, career development and pathways 6. World class arts and cultural infrastructure to be fit for purpose to preserve cultural collections and assets, provide education and learning opportunities, and optimise tourism and visitation.
<p>Ballarat Creative City Strategy (2019)</p> <p>Creative City Strategy presents a proposed long-term vision for the City, to guide policy and investment for the cultural and creative industries. The strategy is built on comprehensive research and extensive engagement with community and expert stakeholders. Collectively, and with community support, the strategy and masterplan aim to position Ballarat as one of Australia's leading creative cities. The Strategy identifies the following seven strategic goals:</p> <p>Goal 1: Ballarat is a creative city with entire community participation</p> <p>Goal 2: Ballarat is a city in which artists and creatives can sustain professional careers and prosper</p> <p>Goal 3: Ballarat has a strong domestic audience and consumer market for local creative product</p> <p>Goal 4: Ballarat's cultural economy and market is continually growing</p> <p>Goal 5: Ballarat is a city with strong representation of a variety of creative industries</p> <p>Goal 6: Ballarat is a city where strong creative capabilities are used throughout industry and the community</p> <p>Goal 7: Ballarat has a high quality creative precinct, which is vibrant, playful and tells the unique Ballarat story</p>
<p>Ballarat Creative Precinct Master Plan (2019)</p>

Ballarat Western and North-Western Growth Areas-Framework Plan Community Infrastructure Assessment: Draft Report

<p>Strategy Type and Name</p> <p>The Precinct Master Plan will provide a framework for the development of the central business district until 2040. Its aim is to help coordinate investment in the Creative Precinct to support Ballarat as a creative city, through creating a vibrant, diverse and participatory place to live, work, study, create and visit.</p>
<p>Ballarat Event Strategy 2018-28</p> <p>This Events Strategy (Strategy) provides a roadmap for the development of Ballarat’s event program over the next eight years. It will help ensure the outcomes of the events program are fully understood, optimised and in line with broader City of Ballarat strategies and priorities. The Strategy is designed to be a practical guide to assist the direction of current events, initiation and acquisition of new events, and provide a rationale for ceasing investment in others – to that end, it is a strategic framework for event development.</p>
<p>Ballarat Heritage Plan 2017-30</p> <p>Our People, Culture & Place: A plan to sustain Ballarat’s heritage 2017 – 2030 is a whole-of-city action plan that details locally and collaboratively developed projects and programs under three key priority areas:</p> <ol style="list-style-type: none"> 1. Regeneration 2. Celebrating and inspiring with Ballarat’s stories 3. Managing change and safeguarding heritage.
<p>Other</p>
<p>Social Policy Framework</p> <p>Social policy relates to people’s wellbeing, particularly the welfare of those who experience disadvantage. It relates to how people work, live, and spend time, and helps determine the best ways to meet human needs such as housing, employment, education, recreation, leisure, health, safety, and the care of children. The City of Ballarat Social Policy Framework highlights the principles, considerations, roles, and responsibilities for policy development in social and wellbeing areas. Council’s position statements accompany the Social Policy Framework, and consolidate our social policies, key messages, roles and responsibilities on several social issues. These include:</p> <ul style="list-style-type: none"> • Access to Food • Affordable Housing • Alcohol and other Drugs • Mental Health and Wellbeing • Preventing Gambling Harm • Preventing Family Violence and • Promoting Active Living
<p>Intercultural Plan 2022-2026</p> <p>Ballarat’s Intercultural City Strategic Plan promotes social inclusion and wellbeing within its multicultural and Indigenous communities, highlighting the positive contributions migrants and Indigenous Australians have made to our community.</p>

1.2.2 Non-Council Strategic Documents

The following important non-Council social infrastructure strategies are summarised in this section:

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

- Victorian State Government, Best Start, Best Life Policy (June 2022);
- Transforming lives and enhancing communities: Federation University Strategic Plan 2018 – 2022;
- Health 2040: Advancing health, access and care;
- Statewide Design, Service and Infrastructure Plan for Victoria’s Health System: 2017–2037;
- Ballarat Health Services Strategic Plan 2017 – 2022;
- Victoria Police Blue Paper: A Vision for Victoria Police In 2025;
- Ambulance Victoria Strategic Plan 2017-2022;
- Court Services Victoria Strategic Asset Plan:2016-2031;
- Fire Rescue Victoria Strategic Plan 2022-2032; and
- Victorian State Emergency Services (VICSES) Service Delivery Strategy 2025.

Table 8 – Non-Growth Strategies and Plans

Document Name
<p>Victorian State Government, Best Start, Best Life Policy (June 2022)</p> <p>The Andrews Labor Government will expand the Best Start, Best Life program with three major new initiatives:</p> <ul style="list-style-type: none"> • Making kinder free across the state • Delivering a new year of universal Pre-Prep for 4-year-olds • Establishing 50 government operated childcare centres <p>This means from 2023, any family with a three or four-year-old will pay nothing for kinder – a saving of up to \$2,500 per child every year.</p> <p>Three-Year-Old Kinder is already rolling out across the state, expanding universal access to 15 hours of government (unded kinder every week – and from next year, it will be free.</p> <p>Four-Year-Old Kinder will also be free, providing much-needed relief for family budgets and giving more women a choice to return to the workforce.</p> <p>Over the next decade, Four-Year-Old Kinder will transition to Pre-Prep – increasing to a universal 30-hour a week program of play-based learning for every four-year-old child in Victoria. Pre-Prep will be delivered through kinders and long day care centres, creating a high-quality, universal program to give four-year-old kids the opportunity to socialise and learn through play.</p>
<p>Transforming lives and enhancing communities: Federation University Strategic Plan 2018 - 2022</p> <p>FedUni is regional Victoria’s largest education institution, with campuses in Ballarat, Berwick, Brisbane, Gippsland and the Wimmera providing easy access to study, and approximately 1,300 staff committed to teaching excellence and student support.</p> <p>The Berwick Campus became part of FedUni in 2017. The campus is located about 40km south east of the Melbourne CBD. It is only a five minute walk from the Berwick Station on the metropolitan Pakenham train line, and adjacent to the Princes Freeway. The multi-level complex of modern architecturally-designed buildings is surrounded by spacious grounds with landscaped gardens and internal courtyards.</p> <p>Purpose: To transform lives and enhance communities.</p> <p>Priorities</p> <ul style="list-style-type: none"> • Lifelong Learning – Provide future-focused, high-quality lifelong learning opportunities for students from all backgrounds. • Global Citizens - Empower students with the necessary knowledge, skills and aptitude for further study, to participate in workplaces and to be effective global citizens. • Partnerships - Use our network of campuses and partnerships to deliver our courses and programs. • Research to Impact – Conduct research with measurable impact on the communities in which we are located and wider society. • Sustainability – Ensure long-term financial sustainability. <p>Outcomes</p> <p>By 2022 FedUni will:</p>

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Document Name
<p>1. Become a popular student destination</p> <ul style="list-style-type: none"> Reach 20,000 higher education and 8,000 TAFE student enrolments. Attract significant numbers of international students. Engage students from a diverse range of backgrounds. Be highly regarded for our range of offerings. <p>2. Offer a high-quality student experience</p> <ul style="list-style-type: none"> Improve student retention rates and success results. Achieve 5 Star rating by the Good Universities Guide for high-quality teaching. Meet students' needs using the latest pedagogy and technology. Create connected alumni who provide industry links and channel future employees. <p>3. Make a positive impact</p> <ul style="list-style-type: none"> Be highly rated by employers for the quality of our graduates. Be known for research that delivers societal impact and be ranked by Times Higher Education (THE), Shanghai Academic Ranking of World Universities (Shanghai) and QS World University Rankings (QS). Lead the sector in best practice community and industry engagement. <p>4. Become a university workplace of choice</p> <ul style="list-style-type: none"> Demonstrate high levels of employee satisfaction. Be in the top quartile of Australian universities for the numbers of female staff in senior leadership roles. Be an asset to regional communities and contribute to capacity building. Be a preferred employer and higher education destination for Indigenous staff and students. Build an efficient organisation
<p>Health 2040: Advancing health, access and care</p> <p>The organisation's vision is for all Victorians to have:</p> <ul style="list-style-type: none"> better health – skills and support to be healthy and well better access – fair, timely and easier access to care better care – world-class healthcare every time. <p>Better health</p> <ul style="list-style-type: none"> A system geared to prevention as much as treatment Everyone understands their own health and risks Illness is detected and managed early Healthy neighbourhoods and communities encourage healthy lifestyles <p>Better access</p> <ul style="list-style-type: none"> Care is always there when people need it More access to care in the home and community People are connected to the full range of care and support they need There is fair access to care <p>Better care</p> <ul style="list-style-type: none"> Target zero avoidable harm Healthcare that focuses on outcomes People are active partners in care Care fits together around people's needs
<p>Statewide Design, Service and Infrastructure Plan for Victoria's Health System: 2017–2037</p> <p>This Plan focuses on five priority areas over the coming 20 years:</p> <ol style="list-style-type: none"> building a proactive system that promotes health and anticipates demand creating a safety and quality-led system integrating care across the health and social service system strengthening regional and rural health services investing in the future—the next generation of healthcare
<p>Ballarat Health Services Strategic Plan 2017 – 2022</p> <p>The BHS 2017 – 22 Strategic Plan:</p>

Sallanar Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Document Name
<ul style="list-style-type: none"> • Identifies important service directions, priorities and actions for the next five years; • Identifies a new set of organisational Values, and a new Vision; • Provides a foundation for the development of a more detailed Service Plan; • Has been developed through extensive consultation with patients, staff, and stakeholders.
<p>Victoria Police Blue Paper: A Vision for Victoria Police in 2025</p> <p>Based on an understanding of the role of Victoria Police, the principles of policing, and the external and internal challenges facing Victoria Police, A Vision for Victoria Police in 2025 lays out three proposed strategic directions to enhance public safety, and increase value for money for the Victorian community through its investment in Victoria Police:</p> <p>1. Better matching of resources to demand by rethinking the traditional operating model</p> <p>The Paper makes the following observations on this direction:</p> <p><i>The traditional police service delivery model needs to shift from one based on an historical geographic footprint, to one that is mobile, technologically-advanced, and more responsive to changing demand. The type and location of police operations should be determined by what is required to provide the best possible service to the community. For example, larger, consolidated 'supersites' should replace many of the smaller and less operationally-effective traditional police stations. The supersite – or sites – in each Division should be the central 'hub' that supports a variety of other Victoria Police service points for local communities, such as 'shopfronts', mobile police stations, and self-service kiosks for non-urgent issues. In rural Victoria, multiple hubs might be required. Supersites should be multi-disciplinary centres where Victoria Police is co-located with other public services**.</i></p> <p>2. Improving capability through workforce reform and technology</p> <p>The Paper makes the following observations on this direction:</p> <p><i>"Victoria Police officers need to be far better supported by modern technology. They need to have the information and systems to do their work in a more 'virtual' environment, and to be freed from time-consuming paperwork. Technology should also support a strong culture of information security.</i></p> <p><i>Frontline officers should not need to return to their supersite during their shift: the proportion of an officer's time spent in the community (not in a police complex) should increase from 54 per cent to around 80 per cent. Each supersite should be designed to accommodate an IP system which allocates tasks and coordinates police operations. The system would integrate audio and video feeds from mobile and fixed sensor platforms, advanced analytics, and advice from partner agencies. It would also have capacity for a custody suite, operated by a private provider.</i></p> <p><i>Victorians should be able to report crime and suspicious activity through online self-service portals, and provide pictures and video to assist in offender identification. There should also be a dedicated non-emergency telephone line, where the public can talk directly to a staff member who can take their report and provide access to crime prevention information. Individuals should be able to track the progress of their reports via a secure online system. The system would, via social media, provide the community with real time alerts and requests for assistance to solve a crime or problem."</i></p> <p>3. Collaborating more closely through partnerships</p> <p>The Paper makes the following observations on this direction:</p> <p><i>"Different types of partnerships with the community are necessary:</i></p> <ul style="list-style-type: none"> • <i>An effective model of local policing in collaboration with residents and business owners will remain of vital importance, for maintaining and building community trust and confidence in Victoria Police;</i> • <i>Local policing partnerships should use practical and wide-reaching methods for public participation to shape local priorities (such as community forums and social media platforms). A more personal approach, through greater face-to-face interaction with identified individual police officers – recognisable 'faces' – is vital.</i> • <i>Victoria Police must increase the trust that communities of identity (relating to gender, ethnicity, religion, sexuality, age, capacity or otherwise) have in its ability to serve them as well and treat them as fairly as anybody else;</i> • <i>Victoria Police needs to engage with businesses in a different way for mutual benefit, based on enduring structures and processes.</i> • <i>Police and private security firms need to work together to deter crime and maintain public order most effectively, but police should retain an involvement in the regulation of the industry and could become involved in the training of its members."</i>
<p>Ambulance Victoria Strategic Plan 2017-2022</p> <p>This Strategic Plan outlines how Ambulance Victoria will continue its recent operational reforms, to provide Victorians with a world-class emergency ambulance service over the next five years.</p> <p>The Plan focuses on achieving four key outcomes and associated priorities:</p>

Sallanar Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

<p>Document Name</p>
<p>Outcome 1 - An exceptional patient experience</p> <ul style="list-style-type: none"> • Providing safe, high quality, timely and expert patient care every time • Helping people to make informed decisions about their emergency health care • Connecting people with the care they need • Using research and evidence to continuously learn and improve our services <p>Outcome 2 - Partnerships that make a difference</p> <ul style="list-style-type: none"> • Working with communities to deliver local emergency health care solutions • Collaborating with our partners to improve health outcomes • Planning for and responding to major events and emergencies • Sharing knowledge, experience and data <p>Outcome 3 - A great place to work and volunteer</p> <ul style="list-style-type: none"> • Keeping our people safe, and physically and psychologically well • Providing an inclusive and flexible workplace • Developing a culture of continual learning and development • Embedding an ethical, just and respectful culture <p>Outcome 4 - A high performing organisation</p> <ul style="list-style-type: none"> • Embracing innovative ideas, systems and technology • Being accountable for our actions and outcomes • Improving our integrated service model • Operating in a financially and environmentally sustainable way
<p>Court Services Victoria Strategic Asset Plan: 2016-2031</p> <p>The purpose of this Plan is to deliver safe, secure and sustainable court and tribunal assets via excellent and expert asset management.</p> <p>Court Services Victoria (CSV) aims to enable provision of accessible justice for all Victorians through a portfolio of buildings that are safe, secure and sustainable to meet the service needs of the jurisdictions, court and tribunal users and community, now and into the future.</p> <p>The key priority focus areas are:</p> <ul style="list-style-type: none"> • Enabling specialist court infrastructure including family violence response • Ensuring safe, flexible, future proofed and fit-for-purpose environments • Delivering Melbourne CBD Legal Precinct (the Precinct) development requirements • Delivering Melbourne growth corridor development priorities • Implementing the Court Services Delineation Model across metropolitan and regional Victoria • Identifying a set of principles that will determine proper priorities and allocation of resources for new capital works and maintenance of the existing asset base both within and between the CBD, metropolitan Melbourne, and regional Victoria. <p>The strategy responds to the defined service needs of all jurisdictions, incorporating the following components over a 15 year period:</p> <ul style="list-style-type: none"> • Investment in ten new court and tribunal facilities • Expansion of five existing court and tribunal facilities • Upgrade and lifecycle management across the court portfolio <ul style="list-style-type: none"> - Accommodating the new Court Services Delineation Model - Replacing/upgrading critical infrastructure - Increase in recurrent maintenance funding • Divestment of up to thirteen properties • Release of up to ten leased properties
<p>Fire Rescue Victoria Strategic Plan 2022-2032</p> <p>The FRV Strategic Plan is built on the following five pillars of focus over the next 10 years:</p> <ol style="list-style-type: none"> 1. Partnering effectively for safer communities; 2. Creating a culture that connects and supports our people; 3. Modernising our organisation to provide better outcomes; 4. Helping Victorian communities build resilience through education and preparation; and 5. Delivering excellence across our fire and rescue services.

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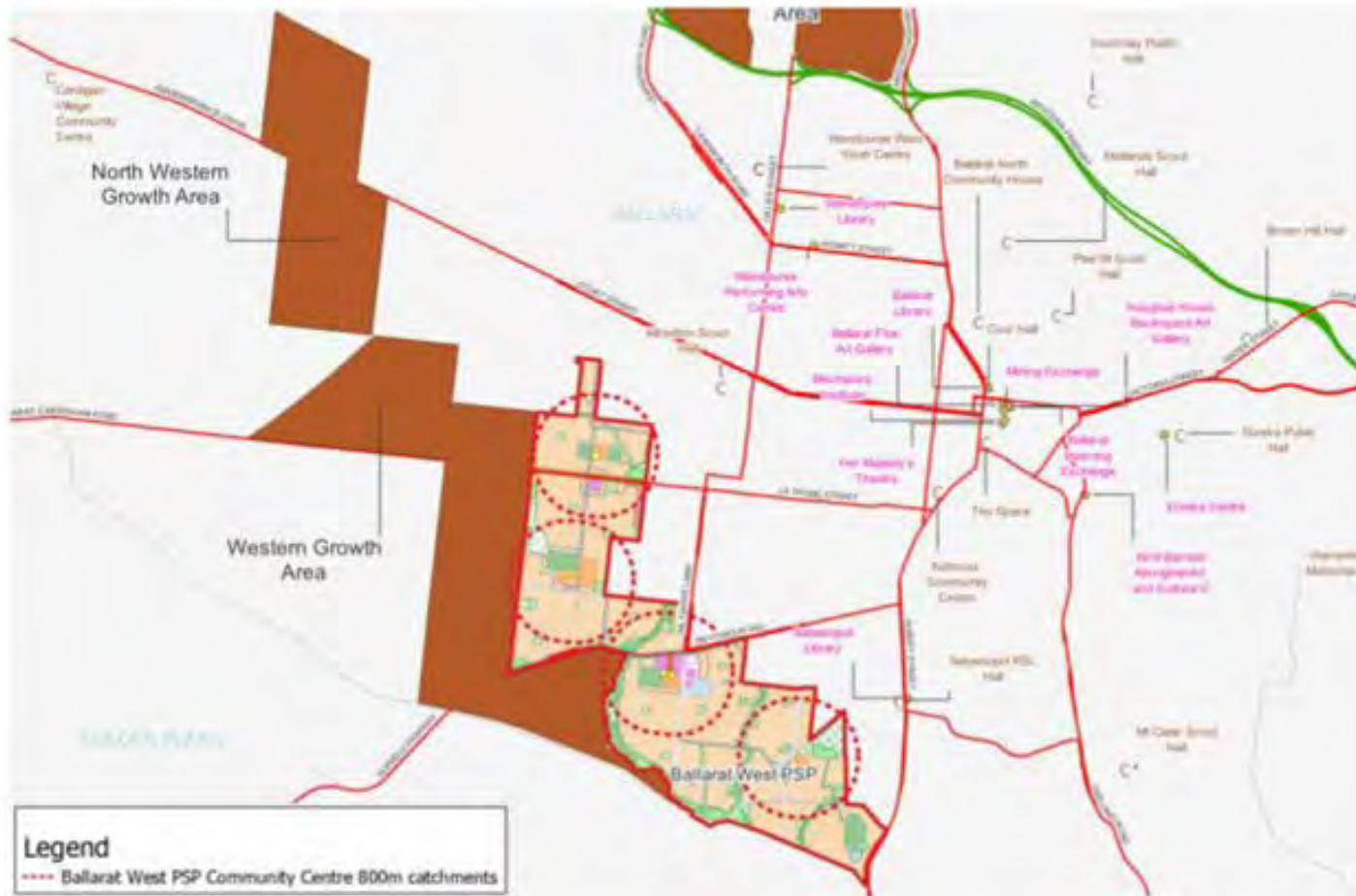
Document Name
The Strategic Plan states that FRV periodically reviews the strategic location of fire stations to look at ways to improve response to the community (page 27).
<p>Victorian State Emergency Services (VICSES) Service Delivery Strategy 2025</p> <p>VICSES is a volunteer-based organisation, providing emergency assistance to minimise the impact of emergencies and strengthen the community's capacity to plan, respond and recover, when emergencies occur. It operates under the Victoria State Emergency Act (2005) and the coordinating agency for emergency management, Emergency Management Victoria (EMV).</p> <p>VICSES aims to partner with communities, government, other agencies and business to provide timely and effective emergency management services, building community preparedness, disaster resilience and contributing to risk prevention.</p>

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[Appendix 2 – Community Infrastructure Audit Maps](#)

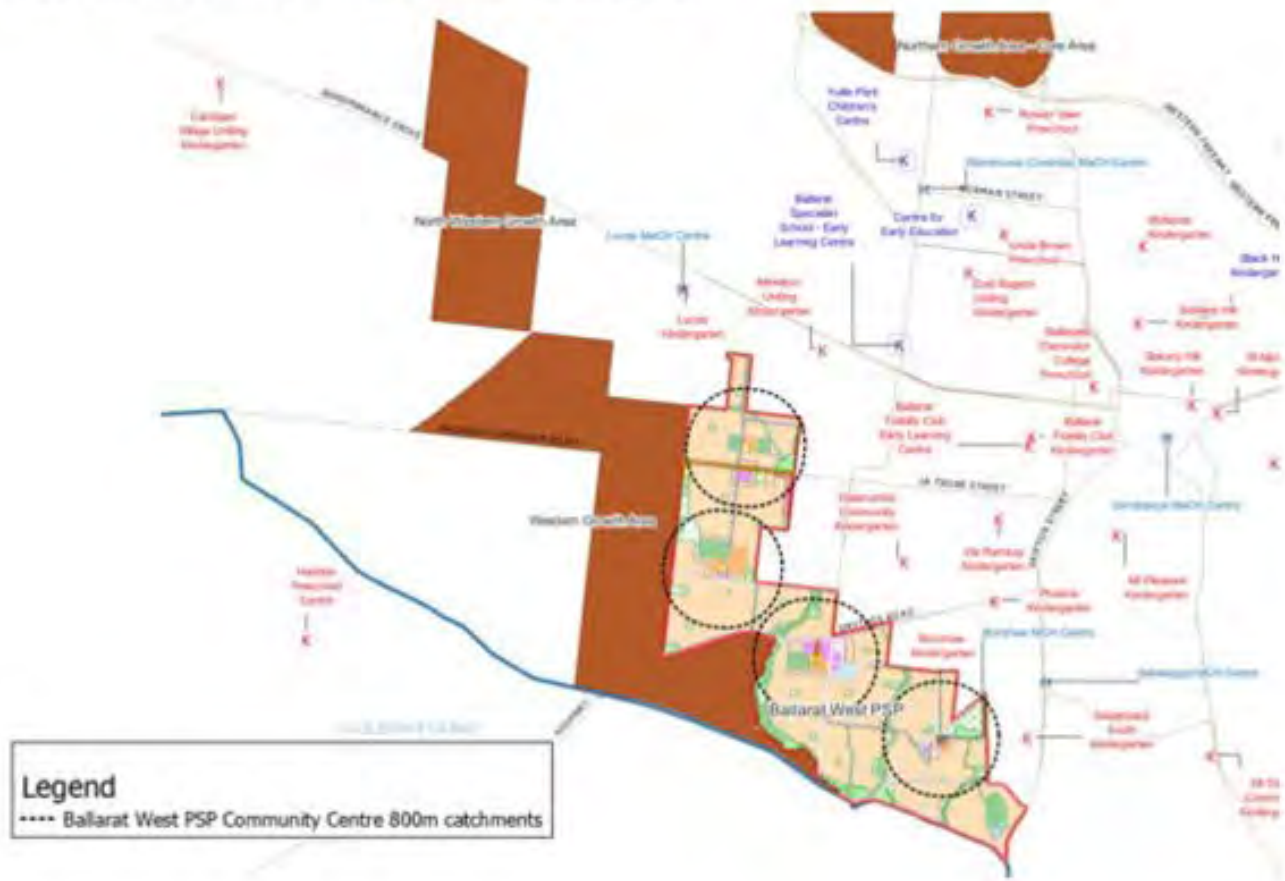
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Figure 6 - Libraries, Community Centres, Cultural Facilities and Halls



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Figure 7 - Early Years Facilities: Sessional Kindergarten (K) and Maternal & Child Health (M)



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Figure 8- Early Years Facilities: Long Day Child Care (L)



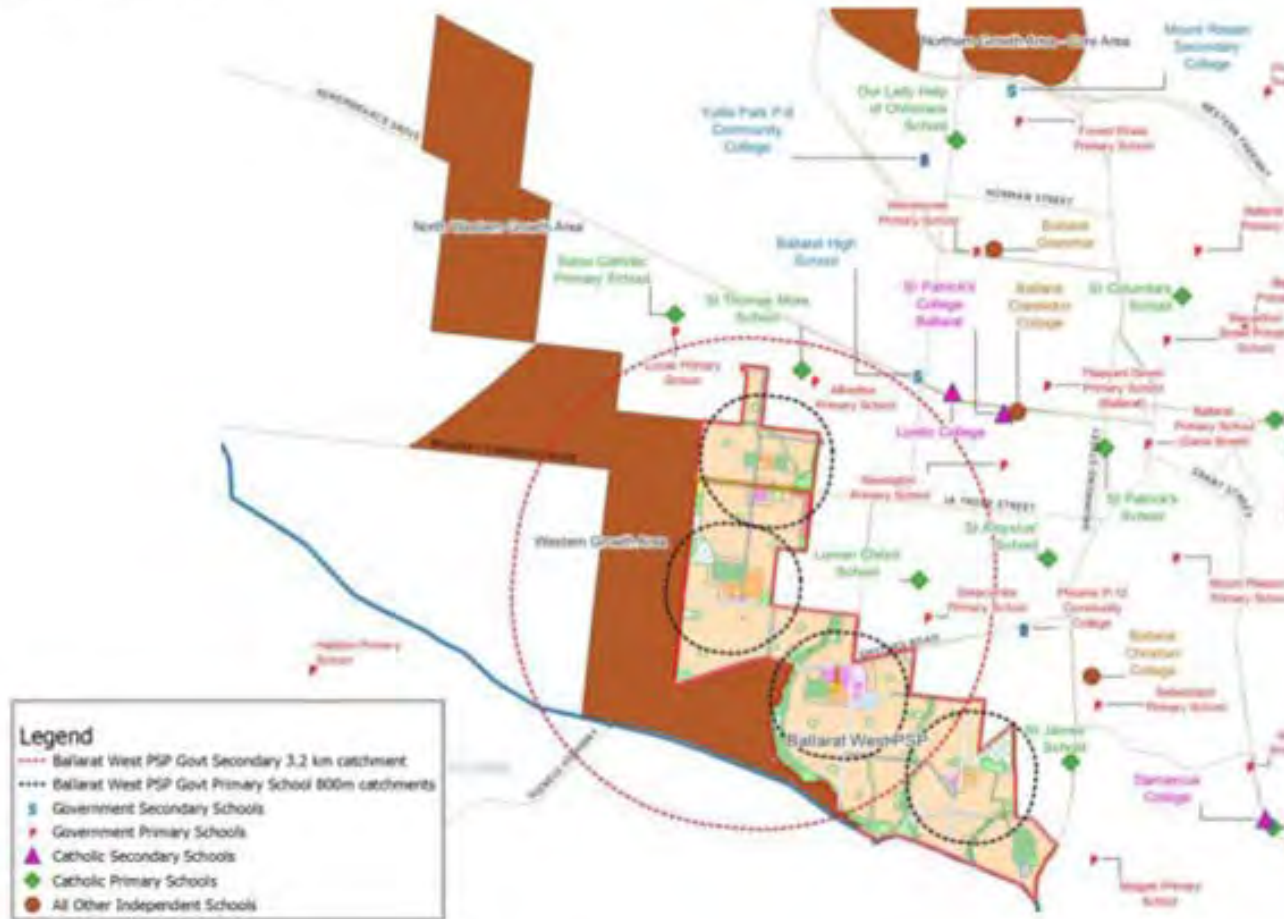
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Figure 9 – Outdoor Passive and Active Open Space Facilities



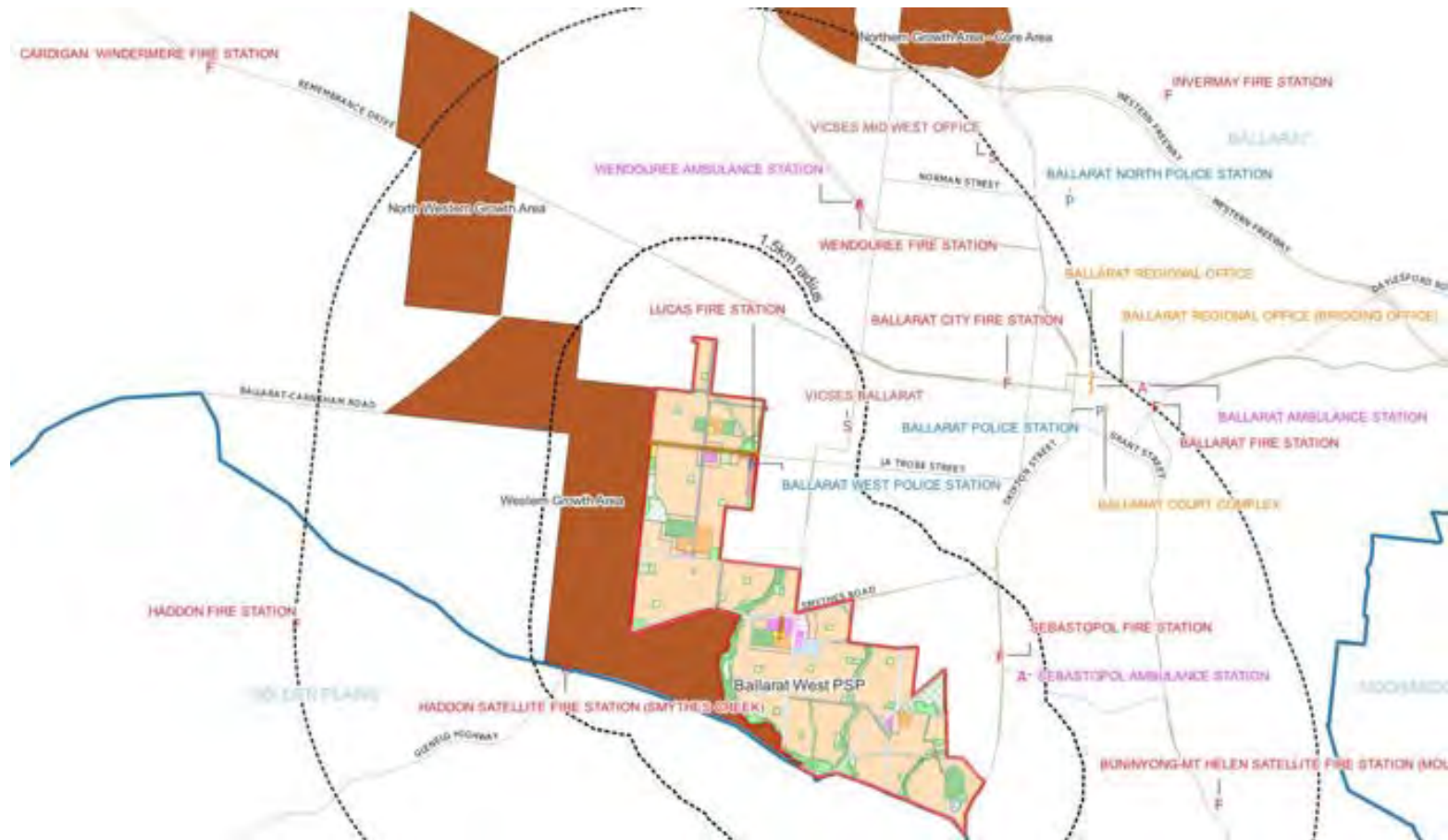
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Figure 11 – Education Facilities



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Figure 12 - Law Courts, Police and Emergency Services



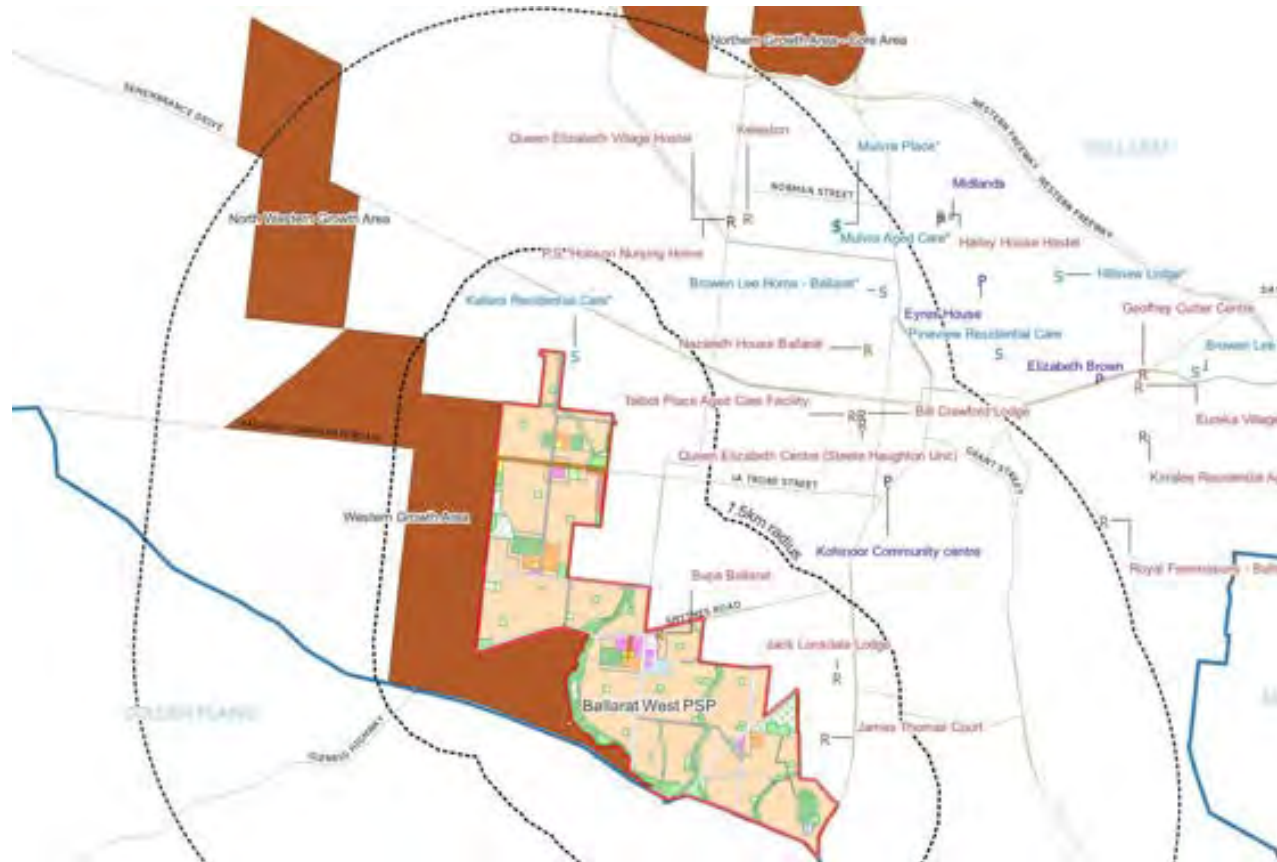
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Figure 13 - Acute and Community Health Services



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Figure 14 - Residential Aged Care (R), Supported Residential Services (S) and Planned Activity Group Venues (P)



Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Appendix 3 – Ballarat Western and North-Western Growth Areas Community Infrastructure Demand & Supply Estimates

Community Infrastructure Category	Provision ratio / participation Rate	Description of measure	Source of measure	Ballarat Western Growth Area		Ballarat North Western Growth Area		Total Western & North Western Growth Areas	
				Low Scenario	High Scenario	Low Scenario	High Scenario	Low Scenario	High Scenario
Public Open Space									
Total public open space contribution (local passive + local active)	10.0%	Percentage of net developable area to be provided as unencumbered public open space	Victorian Planning Authority, Precinct Planning Guidelines (2021)	86.0	86.0	48.0	48.0	134.0	134.0
Local passive open space	4.0%	Percentage of net developable area to be provided as unencumbered public open space	Victorian Planning Authority, Precinct Planning Guidelines (2021)	34.4	34.4	19.2	19.2	53.6	53.6
Local active open space	6.0%	Percentage of net developable area to be provided as unencumbered public open space	Victorian Planning Authority, Precinct Planning Guidelines (2021)	51.6	51.6	28.8	28.8	80.4	80.4
Organised Sport Facility & Participation Estimates									
Indoor and outdoor recreation facilities									
Indoor recreation centres / courts	10,000	Total population per court	Typical standard used by some Melbourne Growth Area Councils (note: individual LGAs vary on their views about the "desired" benchmark and some have no documented working benchmark).	3.5	4.6	1.9	2.6	5.4	7.2

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Provision ratio / participation Rate	Description of measure	Source of measure	Ballarat Western Growth Area		Ballarat North Western Growth Area		Total Western & North Western Growth Areas	
				Low Scenario	High Scenario	Low Scenario	High Scenario	Low Scenario	High Scenario
Council aquatic leisure centre visits per annum	5.1	Number of visits per person per annum	Victorian Department of Jobs, Precincts & Regions, Know Your Council: 2018-2019 Dataset (All Victorian LGA average)	178,009	237,350	99,338	132,451	277,347	369,801
Council aquatic / leisure centres	116,000	Approximate total population per facility	ASR Research benchmark for Melbourne growth areas	0.3	0.4	0.2	0.2	0.5	0.6
Organised Sport Participation									
Participation in organisation/venue based activity: Adults (people aged 15 and over)									
		% of people aged 15 years and over participating in organised physical activity or sport at least once per year	Australian Sports Commission, AusPlay Survey (AusPlay): January 2019 - December 2019 Victoria Data (Table 11)	8,614	11,486	4,807	6,409	13,421	17,895
Fitness/Gym	32.2%	As above	As above	2,595	3,460	1,448	1,931	4,043	5,391
Swimming	9.7%	As above	As above	1,070	1,427	597	796	1,667	2,223
Golf	4.0%	As above	As above	1,043	1,391	582	776	1,626	2,167
Pilates	3.9%	As above	As above	1,097	1,462	612	816	1,709	2,279
Basketball	4.1%	As above	As above	829	1,106	463	617	1,292	1,723
Tennis	3.1%	As above	As above	883	1,177	493	657	1,375	1,834
Football/soccer	3.3%	As above	As above	1,124	1,498	627	836	1,751	2,334
Yoga	4.2%	As above	As above						

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Provision ratio / participation Rate	Description of measure	Source of measure	Ballarat Western Growth Area		Ballarat North Western Growth Area		Total Western & North Western Growth Areas	
				Low Scenario	High Scenario	Low Scenario	High Scenario	Low Scenario	High Scenario
Netball	3.2%	As above	As above	856	1,141	478	637	1,334	1,778
Australian football	3.4%	As above	As above	910	1,213	508	677	1,417	1,890
Athletics, track and field (includes jogging and running)	3.9%	As above	As above	1,043	1,391	582	776	1,626	2,167
Walking (Recreational)	2.9%	As above	As above	776	1,034	433	577	1,209	1,612
Cycling	1.4%	As above	As above	375	499	209	279	584	778
Bowls	1.4%	As above	As above	375	499	209	279	584	778
Cricket	2.2%	As above	As above	589	785	328	438	917	1,223
Organised participation by activity - top 10 activities (children aged 0 to 14)									
		% of children aged 0-14 participating in organised physical activity or sport at least once per year	Australian Sports Commission, AusPlay Survey (AusPlay): January 2019 - December 2019 Victoria Data (Table 10)	1,958	2,611	1,093	1,457	3,051	4,069
Swimming	35.5%	As above	As above	927	1,236	517	690	1,444	1,925
Australian football	16.8%	As above	As above	756	1,008	422	562	1,178	1,570
Basketball	13.7%	As above	As above	353	471	197	263	550	733
Cricket	6.4%	As above	As above	563	750	314	419	877	1,169
Dancing (recreational)	10.2%	As above	As above	320	427	179	238	499	665
Netball	5.8%	As above	As above						

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Provision ratio / participation Rate	Description of measure	Source of measure	Ballarat Western Growth Area		Ballarat North Western Growth Area		Total Western & North Western Growth Areas	
				Low Scenario	High Scenario	Low Scenario	High Scenario	Low Scenario	High Scenario
Football/soccer	10.1%	As above	As above	557	743	311	415	868	1,158
Tennis	6.4%	As above	As above	353	471	197	263	550	733
Gymnastics	11.8%	As above	As above	651	868	363	484	1,014	1,352
Karate	5.2%	As above	As above	287	383	160	213	447	596
Early Years Services									
Kindergartens									
% of 4 year olds participating in 4 year old Kindergarten	100.0%	% of all eligible children participating in 4 Year Old Subsidised Kindergarten	State Government Objective	538	717	300	400	838	1117
Total number of enrolments in 4 year old sessional Kindergarten	75.5%	% of participating children (see above) enrolled at a 4 year old sessional Kindergarten service	Victorian Child and Adolescent Monitoring System (VCAMS), Department of Education & Training Based on indicator 31.4 Number of four year old kindergarten enrolments in a long day care or integrated children's services setting for Ballarat: 24.5% (2015 data).	406	541	227	302	632	843
Total number of enrolments in 3 year old sessional Kindergarten	75.5%	% of participating children (see above) enrolled at a 3 year old sessional Kindergarten service	ASR Research assumption	399	532	223	297	622	829
Total 3 & 4 year old enrolments attending sessional kindergarten				805	1073	449	599	1254	1672

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Provision ratio / participation Rate	Description of measure	Source of measure	Ballarat Western Growth Area		Ballarat North Western Growth Area		Total Western & North Western Growth Areas	
				Low Scenario	High Scenario	Low Scenario	High Scenario	Low Scenario	High Scenario
Number of sessional kindergarten rooms required under current kindergarten policy environment (15 hours per week for both three and four year old kindergarten)	66		ASR constructed calculation	12	16	7	9	19	25
Number of sessional kindergarten rooms required under current kindergarten policy environment (15 hours per week of three year old kindergarten and 30 hours of four year old kindergarten)	66 enrolments for three year old kindergarten & 33 enrolments for four year old kindergarten.		ASR constructed calculation	18	24	10	14	29	38
Maternal & Child Health									
Number of MCH Full-Time Nurses	120	1 FT nurse per 120 children 0 years	ASR Research estimate	4.1	5.4	2.3	3.0	6.3	8.4
Number of MCH consulting units	1	Number of MCH consulting units required per FT nurse	Based on above	4.1	5.4	2.3	3.0	6.3	8.4
Playgroup									
Number of 2 hr playgroup sessions per week	245	Total number of children aged 0-3 years required to generate demand	ASR Research constructed measure using Playgroup Victoria	8.3	11.0	4.6	6.2	12.9	17.2

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Provision ratio / participation Rate	Description of measure	Source of measure	Ballarat Western Growth Area		Ballarat North Western Growth Area		Total Western & North Western Growth Areas	
				Low Scenario	High Scenario	Low Scenario	High Scenario	Low Scenario	High Scenario
		for a 2 hour playgroup session per week							
Occasional Child Care									
Number of occasional child care places	124	Total number of children aged 0-6 years per licensed LDC place	Department of Education & Training, Register of Approved Children's Services in Victoria (City of Ballarat data, 86 places and 3 services) October 2022	318.3	424.4	178	237	496	661
Number of occasional child care centres	30	Total number of facilities required based on number of licensed places generated (see above)	ASR Research constructed measure based on a typical sized occasional child care facility.	10.6	14.1	5.9	7.9	16.5	22.0
Long Day Child Care Centres								0	0
Number of Long Day Child Care places	3.3	Total number of children aged 0-6 years per licensed LDC place	Australian Children's Education and Care Quality Authority (ACECQA) National Register Data (City of Ballarat data, 3251 places and 33 services), October 2022	1,109	1,479	619	825	1,728	2,304
Number of Long Day Child Care centres	120	Total number of facilities required based on number of licensed places generated (see above)	ASR Research constructed measure based on a typical large sized long day child care facility.	9	12	5	7	14	19
Community Centres, Meeting spaces, Neighbourhood Houses & Libraries									

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Provision ratio / participation Rate	Description of measure	Source of measure	Ballarat Western Growth Area		Ballarat North Western Growth Area		Total Western & North Western Growth Areas	
				Low Scenario	High Scenario	Low Scenario	High Scenario	Low Scenario	High Scenario
Level 1 community centre	20,000	Population per Level 1 facility for a catchment of 60,000 people	VPA / ASR Research Growth Area Community Centre Planning Guideline	1.7	2.3	1.0	1.3	2.7	3.6
Level 2 community centre	20,000	Population per Level 2 facility for a catchment of 60,000 people	VPA / ASR Research Growth Area Community Centre Planning Guideline	1.7	2.3	1.0	1.3	2.7	3.6
Level 3 community centre	60,000	Population per Level 3 facility for a catchment of 60,000 people	VPA / ASR Research Growth Area Community Centre Planning Guideline	0.6	0.8	0.3	0.4	0.9	1.2
Neighbourhood Houses								0	0
Number of Neighbourhood House users per week	2.9%	Percentage of population using a Neighbourhood House in a given week	Neighbourhood Houses Victoria, Neighbourhood Houses Survey 2019	1,010	1,347	564	752	1,574	2,099
Number of Neighbourhood Houses	28,000	Approximate total population per facility in the City of Ballarat (2021)	2021 statistic based on 4 existing Neighbourhood House services and a municipal population of 113,500 (2021 estimate)	1.2	1.7	0.7	0.9	1.9	2.6
Libraries								0	0
Number of library loans annum	5.4	Total loans per person	Public Libraries Victoria Network, 2018-19 PLVN Annual Statistical Survey (2019), Central Highlands Libraries	188,111	250,820	104,976	139,968	293,087	390,788

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Provision ratio / participation Rate	Description of measure	Source of measure	Ballarat Western Growth Area		Ballarat North Western Growth Area		Total Western & North Western Growth Areas	
				Low Scenario	High Scenario	Low Scenario	High Scenario	Low Scenario	High Scenario
Number of library visits per annum	4.4	Total visits per person	Public Libraries Victoria Network, 2018-19 PLVN Annual Statistical Survey (2019), Central Highlands Libraries	153,276	204,372	85,536	114,048	238,812	318,420
Number of library facilities	38,000	Population per Library facility	2021 statistic based on 3 branch libraries within the City of Ballarat (excluding mobile library locations) and a municipal population of 113,500 (2021 estimate)	0.9	1.2	0.5	0.7	1.4	1.9
Education Enrolment & Facility Estimates									
Primary Schools									
Govt Primary Enrolment	55%	% of 5-11 year old population	Australian Bureau of Statistics, 2021 Census of Population and Housing, based on data for Ballarat LGA	2,134	2,846	1,191	1,588	3,325	4,434
Catholic Primary Enrolment	27%	% of 5-11 year old population	As above	1,050	1,400	586	781	1,636	2,181
Non Govt Primary Enrolment	12%	% of 5-11 year old population	As above	453	604	253	337	705	941
Total Primary Enrolment	94%	% of 5-11 year old population	As above	3,644	4,858	2,033	2,711	5,677	7,569
Govt Primary School	3,000	Total number of dwellings per facility	Department of Education & Training	4.3	5.7	2.4	3.2	6.7	8.9
Secondary Schools									
Govt Secondary Enrolment	40%	% of 12-17 year old population	Australian Bureau of Statistics, 2021 Census of Population and Housing, based on data for Ballarat LGA	1,271	1,694	709	945	1,980	2,640
Catholic Secondary Enrolment	28%	% of 12-17 year old population	As above	879	1,172	490	654	1,369	1,826

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Provision ratio / participation Rate	Description of measure	Source of measure	Ballarat Western Growth Area		Ballarat North Western Growth Area		Total Western & North Western Growth Areas	
				Low Scenario	High Scenario	Low Scenario	High Scenario	Low Scenario	High Scenario
Non Gov Secondary Enrolment	20%	% of 12-17 year old population	As above	619	826	346	461	965	1,287
Total Secondary Enrolment	88%	% of 12-17 year old population	As above	2,771	3,695	1,546	2,062	4,317	5,757
Govt Secondary School	10,000	Total number of dwellings per facility	Department of Education & Training	1.3	1.7	0.7	1.0	2.0	2.7
TAFE								0	0
TAFE Full-Time Enrolment (15 to 24)	2.5%	% of 15-24 year old population	Australian Bureau of Statistics, 2021 Census of Population and Housing, based on data for Ballarat LGA	115	153	64	86	179	239
TAFE Full-Time Enrolment (25+)	0.5%	% 25 + year old population	As above	109	146	61	81	170	227
TAFE Part-Time Enrolment (15 to 24)	4.4%	% of 15-24 year old population	As above	201	268	112	149	313	417
TAFE Part-Time Enrolment (25+)	1.4%	% 25 + year old population	As above	309	412	172	230	481	642
Total TAFE Enrolments				734	979	410	546	1144	1525
Universities								0	0
University Full-Time Enrolment (15 to 24)	15.2%	% of 15-24 year old population	Australian Bureau of Statistics, 2021 Census of Population and Housing, based on data for Ballarat LGA	687	916	383	511	1,070	1,427
University Full-Time Enrolment (25+)	1.3%	% 25 + year old population	As above	286	382	160	213	446	595
University Part-Time Enrolment (25 to 24)	2.1%	% of 15-24 year old population	As above	97	129	54	72	150	201

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Provision ratio / participation Rate	Description of measure	Source of measure	Ballarat Western Growth Area		Ballarat North Western Growth Area		Total Western & North Western Growth Areas	
				Low Scenario	High Scenario	Low Scenario	High Scenario	Low Scenario	High Scenario
University Part-Time Enrolment (25+)	1.8%	% 25 + year old population	As above	406	542	227	302	633	844
Total University Enrolments				1,476	1,968	824	1,098	2,300	3,067
Primary & Acute Health Services									
Number of public and private hospital beds	3.55	Number of public and private beds per 1,000 people	Australian Institute of Health & Welfare, Hospital resources 2017–18: Australian hospital statistics	124	165	69	92	193	257
Number of public hospital beds	2.34	Number of public beds per 1,000 people	Australian Institute of Health & Welfare, Hospital resources 2017–18: Australian hospital statistics	82	109	45	61	127	169
Community health clients	3%	Proportion of population that is a registered community health client	Victorian Auditor-General's report, Community Health Program (June 2018)	1,000	1,333	558	744	1,558	2,077
Allied health service sites	0.8	Number of allied health service sites per 1,000 people (City of Ballarat)	Department of Health and Human Services, City of Ballarat Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	28	37	16	21	43	58
General practices	0.30	Number of general practice clinics per 1,000 people (City of Ballarat)	Department of Health and Human Services, City of Ballarat Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	10	14	6	8	16	22

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Provision ratio / participation Rate	Description of measure	Source of measure	Ballarat Western Growth Area		Ballarat North Western Growth Area		Total Western & North Western Growth Areas	
				Low Scenario	High Scenario	Low Scenario	High Scenario	Low Scenario	High Scenario
Dental services	0.30	Number of dental service sites per 1,000 people (City of Ballarat)	Department of Health and Human Services, City of Ballarat Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	10	14	6	8	16	22
Pharmacies	0.20	Number of pharmacies per 1,000 people (City of Ballarat)	Department of Health and Human Services, City of Ballarat Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	7	9	4	5	11	14
Projected hospital admissions	476.2	Hospital inpatient separations per 1,000 people (City of Ballarat). Note: projected to increase by 3.2 % per annum until 2026/27.	Department of Health and Human Services, City of Ballarat Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	16,589	22,119	9,257	12,343	25,846	34,462
Emergency presentations	375	Emergency department presentations per 1,000 people (City of Ballarat). Note: projected to increase by 3% per annum until 2026/27	Department of Health and Human Services, City of Ballarat Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	13,063	17,418	7,290	9,720	20,353	27,138
Drug & alcohol clients	5.5	Number of registered Alcohol & Drug Treatment clients	Department of Health and Human Services, City of Ballarat Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	192	255	107	143	299	398

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Provision ratio / participation Rate	Description of measure	Source of measure	Ballarat Western Growth Area		Ballarat North Western Growth Area		Total Western & North Western Growth Areas	
				Low Scenario	High Scenario	Low Scenario	High Scenario	Low Scenario	High Scenario
Mental health clients	18.5	per 1,000 people (City of Ballarat) Number of registered mental health clients per 1,000 people (City of Ballarat)	Department of Health and Human Services, City of Ballarat Health Profile 2015 (https://www2.health.vic.gov.au/about/reporting-planning-data/gis-and-planning-products/geographical-profiles)	644	859	360	480	1,004	1,339
Aged Care & HACC									
Aged Care									
Number of aged care places (residential and home care)	123	Number of aged care places per 1000 people aged 70 years +	Australian Government Planning Ratio 2019	389	518	217	289	606	808
Short Term Restorative Care Programme	2	Number of STRC places per 1000 people aged 70 years +	Australian Government Planning Ratio by 2019	6	8	4	5	10	13
Arts & Cultural Activities									
Type of arts / cultural activity participated in (people aged 15 and over)									
Performing in a drama, comedy, musical or variety act	6.2%	% of 15+ population	Australian Bureau of Statistics, Participation in Selected Cultural Activities, Australia, 2017-18 (Catalogue Number 4921.0)	1,659	2,212	926	1,234	2,584	3,446

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Provision ratio / participation Rate	Description of measure	Source of measure	Ballarat Western Growth Area		Ballarat North Western Growth Area		Total Western & North Western Growth Areas	
				Low Scenario	High Scenario	Low Scenario	High Scenario	Low Scenario	High Scenario
Singing or playing a musical instrument	4.3%	As above	As above	1,150	1,534	642	856	1,792	2,390
Dancing	4.8%	As above	As above	1,284	1,712	717	955	2,001	2,668
Writing	2.8%	As above	As above	749	999	418	557	1,167	1,556
Visual art activities	1.9%	As above	As above	508	678	284	378	792	1,056
Craft activities	1.8%	As above	As above	482	642	269	358	750	1,000
Designing websites, computer games or interactive software	2.8%	As above	As above	749	999	418	557	1,167	1,556
Fashion, interior or graphic design	5.7%	As above	As above	1,525	2,033	851	1,135	2,376	3,168
Type of arts / cultural activity participated in (children aged 0 to 14)				5,083	6,777	2,836	3,782	7,919	10,559
Drama activities	8%	% of 0-14 population participating in activity	Australian Bureau of Statistics, Participation in Selected Cultural Activities, Australia, 2017-18 (Catalogue Number 4921.0)	436	581	243	324	679	905
Singing or playing a musical instrument	23%	As above	As above	1,269	1,692	708	944	1,977	2,636
Dancing	17%	As above	As above	916	1,221	511	681	1,427	1,903
Art and craft activities	39%	As above	As above	2,141	2,854	1,195	1,593	3,335	4,447
Creative writing	23%	As above	As above	1,241	1,655	693	924	1,934	2,579

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Community Infrastructure Category	Provision ratio / participation Rate	Description of measure	Source of measure	Ballarat Western Growth Area		Ballarat North Western Growth Area		Total Western & North Western Growth Areas	
				Low Scenario	High Scenario	Low Scenario	High Scenario	Low Scenario	High Scenario
Creating digital content	17%	As above	As above	910	1,214	508	677	1,418	1,891
Screen based activities	90%	As above	As above	4,982	6,642	2,780	3,707	7,762	10,349
Reading for pleasure	79%	As above	As above	4,331	5,774	2,417	3,222	6,748	8,997

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Appendix 4 – Community Infrastructure Specifications

This Appendix shows indicative community infrastructure specifications for the main DCP items typically identified in a PSP. These specifications include active open space reserves, sporting pavilions and community centres.

Table 9 - Typical PSP Active Open Space Specifications by Size¹⁴

Component	Unit	5 to 6 Hectares	8 to 10 Hectares
Combination of two ovals & three soccer fields	No	1 Ovals 1 soccer	2 Ovals
Car park	Spaces	120	175
Netball / basketball court	No	2	2
Tennis Courts	No	2	
Cricket pitch and practice nets	No	1 / 1	2 / 1
Goals	No	2 sets	4 sets
Internal access road	m ²	1350	1980
Landscaping	m ²	30430	55435
Lighting – training & site	No	6	14
Signage	No	15	24
Site boundary fencing	m	1000	1300
Driveway crossing access from street	No	1	1
Utility service connections	Item	1	1
Interchange shelters	No	5	8
Turf surface and irrigation system	m ²	21340	55440
Score Board	No	2	2

Source: Review of Benchmark Infrastructure Costings: Benchmark Infrastructure Costing, Prepared for VPA by Cardno (2018)

¹⁴ Note: These are indicative VPA specifications which Council may seek to amend them at the formal PSP stage to align with Council and / or peaking sporting association facility guidelines.

*Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report*Table 10 - Typical PSP Sport Pavilion Specifications by Number of Playing Fields¹⁵

Description / Facility	Unit	Two playing areas	Three playing areas
Four change rooms with toilets and showers	m2	120	
Six change rooms with toilets and showers	m2		240
Two umpire change rooms with toilets	m2	40	
Three umpire change rooms with toilets	m2		60
Storage	m2	80	120
Office / first aid room	m2	20	30
Canteen and kitchen	m2	20	40
Public Toilets	m2	40	60
Multipurpose community room / social room (A small (50-80m2) community meeting space, entry foyer and circulation space)	m2	100	
Multipurpose community room / social room (A small (100-125m2) community meeting space, entry foyer and circulation space)	m2		150
Total Building floor space	m2	420	700
Covered spectator area	m2	80	120

Source: Review of Benchmark Infrastructure Costings: Benchmark Infrastructure Costing, Prepared for VPA by Cardno (2018)

¹⁵ Note: These are indicative VPA specifications which Council may seek to amend them at the formal PSP stage to align with Council and / or peaking sporting association facility guidelines.

Ballarat Western and North-Western Growth Areas Framework Plan Community Infrastructure Assessment: Draft Report

Table 11 – Typical PSP Community Centre Configurations x Hierarchy Type¹⁶

Description / Facility	Unit	Level 1	Level 2	Level 3
Kindergarten Facility Two kindergarten rooms to accommodate 99 licensed places, including children's toilets and amenities, storage space, office, staff room and staff toilets and amenities display and circulation space	m2	750	750	
Extra 33-place kindergarten room / multipurpose meeting space	m2	150	150	
Maternal and child health consulting facility (two consulting rooms plus waiting space / program room)	m2	100	100	
Multipurpose community spaces (A combination of small (50-80m2) and medium (100-125m2) community meeting spaces, plus public toilets and amenities, office, staff room and staff toilets and amenities, reception and circulation space)	m2	200	500	
Multipurpose and specialist community spaces (A combination of small (50-80m2), medium (100-125m2) and large (180m2+) community meeting spaces and classrooms plus public toilets and amenities, reception and circulation space)	m2			450
Library	m2			1500
Specialist community space (adult reception / neighbourhood house, arts and cultural facility, youth facility, planned activity group space etc)	m2			250
Total building floor space	m2	1200	1500	2500
Small commercial kitchen	No	1		
Medium commercial kitchen	No		1	
Large commercial kitchen	No			1
Kindergarten outdoor play spaces	m2	700	700	
Car parking spaces	Spaces	60	75	125
Playground	m2	800	800	800
Landscaping	m2	500	500	500

Source: Review of Benchmark Infrastructure Costings: Benchmark Infrastructure Costing, Prepared for VPA by Cardno (2018)

¹⁶ Note: These are indicative VPA specifications which Council may seek to amend them at the formal PSP stage to align with Council facility guidelines and State regulatory requirements.

6.2. HOUSING STRATEGY

Division: Development and Growth
Director: Natalie Robertson
Author/Position: Peter Dreimanis – Strategic Planner

PURPOSE

1. The purpose of this report is to:
 - a. Provide an update on the consultation process undertaken for the draft Ballarat Housing Strategy 2041 and Neighbourhood Character Study.
 - b. Outline the relevant changes made to the revised draft Ballarat Housing Strategy 2041 and Neighbourhood Character Study in response to the consultation process.
 - c. Outline the next steps to implement the recommendations of the Ballarat Housing Strategy 2041 and Neighbourhood Character Study.
 - d. Seek adoption of the Ballarat Housing Strategy 2041 and the Neighbourhood Character Study.

BACKGROUND

2. Housing is a fundamental human right and one of the key universal determinants for achieving positive health and wellbeing outcomes for individuals. The availability of secure, well located, and affordable housing:
 - a. Provides pathways to employment and education.
 - b. Supports a diversity of residential and lifestyle choices.
 - c. Builds strong, connected and sustainable communities.
 - d. Provides equality of opportunities for individuals to participate in community life.
3. The Ballarat Housing Strategy identifies that Ballarat is expected to grow by around 55,000 new residents by the year 2041, and our new residents will need around 29,000 new homes of different types and sizes.
4. *Victoria's Housing Statement: The decade ahead 2024-2034* provides strategic direction to meet the State Government's objective of constructing 800,000 dwellings over the next decade and 2.24 million dwellings by 2051, including 425,600 homes in Regional Victoria. The statement recognises that while growth areas will remain important, there is a need to increase infill development to boost housing supply.
5. More recently, the State Government has released draft housing targets as part of the Plan Victoria engagement process and have identified a draft target for housing of 46,900 additional homes to be accommodated in Ballarat by 2051. State government targets have been calculated based on:
 - a. An area's proximity to jobs and services.
 - b. Level of access to existing and planned public transport.
 - c. Environmental hazards like flood and bushfire risk.
 - d. Current development trends and places already identified for more homes (the Suburban Rail Loop Precincts, for example).
 - e. Demonstrated development potential in established regional cities in Victoria.
6. As a planning authority, the City of Ballarat has a responsibility to plan to accommodate housing growth for at least a 15-year period across the municipality.

7. Finalisation of the Housing Strategy 2041 and the Neighbourhood Character Study will enable a review and implementation of changes to controls and zoning in the Ballarat Planning Scheme to respond to housing needs and population growth in Ballarat.

KEY MATTERS

Ballarat Housing Strategy

8. The Ballarat Housing Strategy 2041 provides the City of Ballarat, the community, agencies, and stakeholders with a framework for managing population and housing growth and provides strategic direction to:
 - a. Ensure Ballarat sustains housing and population growth for at least 15 years.
 - b. Ensure residential growth and change across the municipality considers Ballarat's natural environment and land use context.
 - c. Increase the level of diversity, design, and sustainability of housing in Ballarat.
 - d. Manage the unique character of Ballarat.
 - e. Manage the approach to development in Ballarat's new Growth Areas through the Ballarat Growth Area Framework Plan to ensure staging and sequencing of development occurs in line with infrastructure opportunities.
 - f. Manage housing growth to avoid development in locations where there is risk to life, property, the natural environment, and infrastructure from natural hazards such as bushfire and flooding.
 - g. Increase the level of social and affordable housing in accessible and well serviced areas in alignment with the Social and Affordable housing action plan.
9. The Ballarat Housing Strategy 2041 considers all current residential zoned land, including the Mixed-Use Zone, Township Zone, Residential Growth Zone, General Residential Zone, and the Neighbourhood Residential Zone in the municipality.
10. The Housing Strategy confirms the role of the existing and future growth areas in providing housing supply and confirms that the Growth Areas Framework plan will guide the sequencing and roll-out of greenfield development.
11. In addition, it considers non-residential zoned areas associated with the Ballarat Central Business District (CBD) and Urban Renewal Areas that have the capability to accommodate residential uses, subject to further investigation and planning.
12. Supporting background reports have informed the preparation of the Housing Strategy including:
 - a. Ballarat's Future Housing 2021-2041: Needs Housing Analysis, SGS Economics & Planning, 2023
 - b. Accessibility and Connectivity Analysis, Tract, 2024
 - c. Ballarat Municipal Housing Capacity Assessment, Tract, 2022
 - d. Ballarat Housing Strategy - Submission Analysis Summary Report, City of Ballarat, 2023
 - e. Ballarat Infill Prioritisation Framework, Astrolabe, 2024
 - f. Ballarat Infill Uptake Analysis, SGS Economics, 2024
 - g. Ballarat Biodiversity Strategy: Healing Country Together, City of Ballarat, 2024
 - h. Draft Ballarat Growth Areas Framework Plan, City of Ballarat, 2024
 - i. Draft Industrial Land Strategy, City of Ballarat, 2024
 - j. Social and Affordable Housing Action Plan, City of Ballarat, 2024

- k. Strategic Planning for Bushfire in the City of Ballarat, Kevin Hazell Bushfire Planning, 2020

Key findings

13. The key findings of the Ballarat Housing Strategy 2041 are summarised into the following themes:

Supply

14. The City of Ballarat needs to ensure sufficient land is available for 29,000 new dwellings to be constructed in existing residential areas, urban renewal areas, and growth areas to 2041.
15. Estimated established area (infill) dwelling capacity is shown in Table 1:

Table 1: Estimated Capacity

Infill capacity - existing residential areas	31,250 dwellings
Infill capacity - CBD	4,000 dwellings
Infill capacity - Urban Renewal Sites (non-CBD)	4,643 dwellings
Total infill capacity	39,893 dwellings

Growth Areas Supply

16. Ballarat has extensive greenfield land supply comprising approximately 8,800 lots in Ballarat West Growth Area and a further 800 residential lots in Lucas. In addition, the Northern Growth Area (on which development is projected to commence in 2027) can accommodate 6,600 dwellings. The estimated capacity of these growth areas is around 16,200 dwellings.
17. Work has commenced on planning for the future Western and North-Western Growth Areas, as endorsed by Council in February 2022 (R14/22). The estimated capacity of these growth areas is between 20,100 to 26,803 dwellings.
18. Similarly, the Northern Growth Area (expanded area only) has an estimated additional capacity of 2,600 dwellings, if this area is to come online in the future.
19. As noted, the Growth Areas Framework Plan is the document which will guide the sequencing and roll-out of greenfield development in line with infrastructure capacity and planning.

Change Areas

20. The Ballarat Housing Strategy 2041 applies Change Areas to existing urban Ballarat in accordance with Planning Practice Note 90 (PPN90) as shown in Table 2.
21. Change Areas are defined as being residential areas suitable for increased density and are categorised as either minimal, incremental, or substantial change areas, based upon the level of change to residential density the area can support.

Table 2: Change Area Types

Minimal Change	Incremental Change	Substantial Change:
<p>Minimal Change Areas comprise areas which have limited capacity to accommodate future residential development and growth. These areas represent the lowest degree of intended residential growth and change in Ballarat.</p> <p>Minimal Change Areas comprise locations with significant bushfire risk and/or those established areas with significant barriers to servicing growth. Minimal Change Areas will primarily support low-density detached housing.</p>	<p>Incremental Change Areas will allow for increased housing consistent with the preferred neighbourhood character of the area and site-specific constraints. These areas encompass a large portion of Ballarat's established residential areas.</p> <p>Incremental Change Areas encourage progressive housing growth and will comprise a mixture of housing types including detached houses, dual occupancies, townhouses and apartments. New housing will generally be up to two storeys, consistent with the preferred neighbourhood character of the area.</p>	<p>Substantial Change Areas will provide for housing growth with increased densities and housing diversity in areas with high accessibility to services and are not subject to restrictive constraints. These areas include the Ballarat CBD, Wendouree Station Precinct, and urban renewal sites including underutilised industrial sites suitable for redevelopment.</p> <p>Substantial Change Areas will encourage a diversity of housing types including smaller housing types (particularly one- and two-bedroom dwellings) and apartments with three or more bedrooms. Social and affordable housing will be encouraged in these areas.</p>

22. The application of Minimal, Incremental, and Substantial Change Areas are based on the combined findings from the Bushfire Analysis, Accessibility Analysis, Neighbourhood Character Study, and Housing Capacity Analysis.
23. A properly considered application of the different Change Areas relies on the capacity of the land to accommodate an increased dwelling density envisaged by those Change Areas. A balance has been struck between the Accessibility and Connectivity Analysis, the Neighbourhood Character Analysis, and the Capacity Analysis.

Total Supply

24. Total estimated supply across existing residential areas, greenfield growth areas and urban renewal areas is detailed in Table 3 and outlines the impact of change areas.

Table 3: Supply Estimates

DEMAND	
Total	28,061
SUPPLY WITHOUT CHANGE AREAS	
Zoned Greenfield Land Supply	16,200
Established Areas Land Supply	30,261
Total	46,461
SUPPLY WITH CHANGE AREAS	
Zoned Greenfield Land Supply	16,200
Established Areas Land Supply	31,250
Urban Renewal Supply	8,643
Total	57,093

Neighbourhood Character Study

25. The Neighbourhood Character Study defines the existing and future preferred character of established residential areas within established Ballarat. It will assist to enable future character objectives and design guidelines that will guide future residential development across residential areas of Ballarat.
26. A future project to come from the Neighbourhood Character Study will be to apply design standards and built form outcomes to residential land, which will be applicable to new developments where a planning permit is triggered. This work will go through further community and stakeholder consultation as it continues to progress.
27. Together, the Ballarat Housing Strategy 2041 and the Neighbourhood Character Study will inform changes to planning provisions including the residential zones and overlays as part of the next stages.

Consultation

28. Public consultation and engagement on the draft Ballarat Housing Strategy 2041, draft Neighbourhood Character Study and accompanying reports occurred across September and October 2023, with a further opportunity for the community to view the Ballarat Housing Strategy 2041 post consultation through public advertising that occurred in July 2024.
29. A key objective of the public consultation and engagement process was to seek community feedback through submissions to the draft Ballarat Housing Strategy 2041, the draft Neighbourhood Character Study and accompanying documents.
30. The public consultation and engagement in 2023 consisted of:
 - a. Community information sessions.
 - b. Developer forums.
 - c. Media releases.
 - d. Opportunity for community feedback via the Ballarat MySay webpage.
 - e. Media briefing.
 - f. Website / social media presence.
 - g. Video content.

31. A total of 76 written submissions were received from:
 - a. Development industry (27 submissions).
 - b. Community members (23 submissions).
 - c. Government departments/agencies (11 submissions).
 - d. Consultants/landowners (8 submissions).
 - e. Community groups (7 submissions).
32. A total of 102 online survey responses were received via Ballarat MySay.
33. The Ballarat Housing Strategy: Submissions Analysis Summary Report (November 2023) provides a summary of the submissions by identifying key themes and issues identified by submitters and provides recommendations as to how the strategy might respond to these themes and issues.
34. Key themes identified in the submissions and survey responses include:

Infill and growth area targets:

35. A number of submissions spoke to the proposed 50% split between greenfield and infill development. Submissions supporting the 50% split between greenfield and infill development, or higher infill targets, highlighted the financial costs to Council and the community in continued urban sprawl, its impact on biodiversity, agricultural and landscape values as well as climate change impacts.
36. Submissions not supporting the 50% split between greenfield and infill development raised concerns with the unreliability or unfeasible nature of the infill target to be achieved and the corresponding need for more growth areas to be identified and rezoned.

Biodiversity and climate change:

37. Submissions raised concerns regarding the failure to integrate consideration of biodiversity outcomes when considering the future of housing in Ballarat.
38. Several submissions supported environmentally sensitive areas being identified as 'Minimal Change' and further attention being given to the design details of housing to ensure canopy tree coverage is improved, that site coverage allows for other vegetation, and additional responses to the current biodiversity crisis are integrated into development.
39. Multiple submissions supported a greater focus on green infrastructure in response to climate change.
40. Multiple submissions queried the preparation of the Housing Strategy 2041 prior to a full understanding of flood risks, with a number highlighting that this understanding should be based on future risks associated with the impact of climate change and not just current risks.

Infrastructure:

41. Multiple submissions raised concerns about how accessibility was weighted, particularly the weighting given to train stations, which was raised by the Department of Transport and Planning (DTP).

42. The DTP sought to ensure that increases in housing provision in accessible areas were supported by increases in service frequency and expansion of services to support a more sustainable urban form.
43. Submissions from government agencies highlighted the significant costs to the City of Ballarat associated with the continued expansion of growth areas.

Housing affordability and diversity:

44. Multiple expressions expressed a desire for the Housing Strategy 2041 to address the delivery of social and affordable housing more explicitly, and specifically to address homelessness.
45. Many survey respondents were supportive of smaller dwellings, with the former saleyards site and CBD receiving the highest level of preference for development that increased residential density.

Ballarat's heritage and character:

46. The protection of Ballarat's heritage and character was a recurring theme in community submissions.
47. Submissions from developers identified the lack of certainty and consistency in existing statutory approaches to development in areas affected by a Heritage Overlay as a constraint which could limit uptake of infill development.

State Government Comments:

48. A State Government submission received from the Department of Transport and Planning (DTP) has been the key driver of changes to the draft Housing Strategy. In summary, DTP emphasised the need to comply with *Victoria's Housing Statement: The decade ahead 2024-2034* that provides a plan to address a critical shortage of housing in Victoria, particularly affordable and social housing. A key action is a new plan for Victoria that will focus on delivering more homes near transport, job opportunities, and essential services in vibrant, liveable and sustainable neighbourhoods, with a target of 70% of new homes to be built in established areas and 30% in greenfield areas.
49. In response, the City of Ballarat has recalibrated the Change Areas across Ballarat to respond to delivering increased housing density in areas of higher accessibility, re-written the Neighbourhood Character Study, and included consideration of social and affordable housing alongside providing more policy context for the Housing Strategy 2041 directions.

Response to Submissions

50. The review of submissions received during the 2023 community consultation informed updates to the draft Ballarat Housing Strategy 2041 and draft Neighbourhood Character Study and include:

Infill and growth area targets:

51. Additional discussion and consideration of infill and growth area targets has been included in the Ballarat Housing Strategy 2041, including a review and update of the capacity figures across greenfield and infill sites.

52. The Housing Strategy 2041 has moved away from the explicit 50:50 infill/greenfield target to an overall objective of increasing the proportion of infill housing, noting that the existing split between infill and greenfield in Ballarat has been in the vicinity of 65:35 over the last 5 years. This is in consideration of current State Government messaging through Plan Victoria indicating that a 70:30 split in favour of infill will likely become a State policy objective.
53. Structure changes including additional content and maps have been included in the Ballarat Housing Strategy 2041 to explain the context and background for planning for future housing in Ballarat.
54. Modification to the Change Areas application, including the addition of the CBD and Urban Renewal Areas, within the Ballarat Housing Strategy 2041 to allow for more opportunities for infill development.
55. The Victorian Planning Authority (VPA) confirmed that there is sufficient greenfield supply for almost 20 years indicating sufficient capacity within the growth areas alone to provide for identified growth.

Biodiversity and climate change:

56. Additional discussion and consideration of biodiversity and climate change has been added, including reference to the Ballarat Biodiversity Strategy – Healing Country Together (2024) to ensure that biodiversity and climate change are key considerations in the future application of the Ballarat Housing Strategy 2041.

Infrastructure:

57. Additional discussion and consideration of infrastructure and accessibility has been added to the Ballarat Housing Strategy 2041. This includes:
 - a. Revised weighting of accessibility including an increase in the weighting of train stations and reduction in the weighting of supermarkets.
 - b. Addition of CBD and identification of Urban Renewal Areas as Substantial Change Area including the Wendouree Station Precinct to provide for additional housing provision in accessible areas, supporting long term increases in service frequency and expansion to services.
 - c. A focus on achieving an increase in the proportion of infill housing split to reduce the significant cost exposures to the City of Ballarat associated with the continued expansion of growth areas.

Housing affordability and diversity:

58. Additional information around Ballarat's approach to social and affordable housing has been included including reference to the Social and Affordable Housing Action Plan and identifying the role that City of Ballarat has in providing social and affordable housing.
59. Provision of additional Urban Renewal Areas will increase housing diversity in areas with high accessibility.

Ballarat's heritage and character:

60. Additional discussion and consideration of heritage and character has been included in the Housing Strategy alongside amendment of the Neighbourhood Character Study amended to include:
 - a. Changes to the application of the neighborhood character areas and preferred character statements to ensure a balanced approach to development with the need to increase density surrounding areas of high accessibility.
 - b. Consolidation in the number of Neighbourhood Character 'types' from 8 character types and 33 'sub-areas' to 6 character types and 8 'sub-areas' providing greater certainty to developers around requirements for infill development.

Other changes:

61. Additional background information to explain the rationale of support for infill development including relevant Federal, State, and local government strategy and policy direction.
62. A revised Implementation Plan that includes objectives and actions to achieve the outcomes of the Strategy, including the provision of further strategic work required to bring the Strategy into effect.
63. Further details of changes to the Housing Strategy and NCS are described in the attachment Responses to Submissions.

Public Notification 2024

64. Public notification of the final Ballarat Housing Strategy 2041 and Neighbourhood Character Study was publicly exhibited, beginning 16 July 2024 and ending on 2 August 2024.
65. The purpose of public notification was to provide the community and stakeholders with the Ballarat Housing Strategy 2041 and Neighbourhood Character Study, revised in response to submissions received during the 2023 community consultation process.
66. Public notification was undertaken through:
 - Targeted correspondence to those who provided written submissions during the 2023 community consultation process.
 - Advertising on Council's social medial channels, including Ballarat MySay.
 - A media release.

Project Timeline

67. The findings of the Ballarat Housing Strategy will be implemented through changes to the Ballarat Planning Scheme as set out in Stage 5 of Table 4: Project Timeline (below), following Council adoption of the Ballarat Housing Strategy 2041.

Table 4: Project timeline

Stage	Task
1	Discussion paper preparation and community consultation - February to March 2021.
2	Preparation of the draft Ballarat Housing Strategy, Neighbourhood Character Study and supporting material - April 2022 to August 2023.
3	Consultation on the draft Ballarat Housing Strategy and Neighbourhood Character Study - August 2023 to October 2023.
4	Preparation and adoption of the final Ballarat Housing Strategy 2041 and Neighbourhood Character Study - November 2023 to August 2024.
5	<p>Planning scheme amendment to implement the Ballarat Housing Strategy and Ballarat Growth Area Framework Plan into the Ballarat Planning Scheme</p> <p>Review of residential zones and overlays in line with the recommendations of the Ballarat Housing Strategy</p> <p>Planning scheme amendment to implement the findings of the review of residential zones and overlays including the application of new residential zones to provide certainty about the scale of growth.</p> <p>Structure planning of Urban Renewal Areas</p>

Conclusion

68. In summary, updates have been made to the Housing Strategy in line with the submissions received, as outlined above.

OFFICER RECOMMENDATION

69. That the Planning Delegated Committee:
- 69.1 Adopt the *Ballarat Housing Strategy 2041 and Neighbourhood Character Study*.
- 69.2 Authorise Council Officers to engage with State Government authorities to progress implementation of the *Ballarat Housing Strategy 2041*, including all actions listed within the Implementation Plan, including the implementation of the Housing Framework Plan into the Ballarat Planning Scheme.
- 69.3 Note that consideration of a Policy Amendment to implement the Ballarat Housing Strategy into the Ballarat Planning Scheme will be the subject of a separate report and recommendations to Council.

ATTACHMENTS

1. Governance Review [**6.2.1** - 2 pages]
2. Housing Strategy 2041 [**6.2.2** - 91 pages]
3. Ballarat Housing Strategy – Submission Analysis Summary Report, City of Ballarat, 2023 [**6.2.3** - 9 pages]
4. Ballarat's Future Housing 2021-2041 - Needs Housing Analysis, SGS Economics & Planning, 2023 [**6.2.4** - 59 pages]
5. Ballarat Accessibility and Connectivity Report, Tract 2024 [**6.2.5** - 18 pages]
6. Ballarat Infill Prioritisation Framework, Astrolabe, 2024 [**6.2.6** - 15 pages]
7. Ballarat Infill Uptake Analysis, SGS Economics, 2024 [**6.2.7** - 47 pages]
8. Strategic planning for bushfire in the City of Ballarat Kevin Hazell Bushfire Planning 2020 [**6.2.8** - 29 pages]
9. Neighbourhood Character Study v 9 nodraft [**6.2.9** - 118 pages]

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ALIGNMENT WITH COUNCIL VISION, COUNCIL PLAN, STRATEGIES AND POLICIES

1. This report aligns with Council's Vision, Council Plan, Strategies and Policies.

COMMUNITY IMPACT

2. The Ballarat Housing Strategy 2041 will have positive social and community impacts by providing a framework for managing and accommodating population and housing growth for at least 15 years across the municipality. The strategy will implement key recommendations of various state, regional and local planning policies and strategies by directing residential development to locations that are well serviced and able to better support population and economic growth.

CLIMATE EMERGENCY AND ENVIRONMENTAL SUSTAINABILITY IMPLICATIONS

3. This amendment does not raise any direct climate emergency issues or environmental sustainability implications.

ECONOMIC SUSTAINABILITY IMPLICATIONS

4. Economic sustainability implications identified for this report relate to future planning and identification of funding streams for supporting growth infrastructure. While not a direct consideration of this report or the Housing Strategy, direction of areas for growth and change have been partially driven by estimated infrastructure costs. The Growth Areas Framework Plans explores this consideration in more detail.

FINANCIAL IMPLICATIONS

5. The amendment will not have any significant financial implications to Council with the exception of the usual cost associated with the planning scheme amendment process.
6. As the proponent is the Planning Authority, the City of Ballarat will be responsible for all related costs associated with any future planning scheme amendments that arise from the strategy's implementation plan including any notification of land owners, planning panel hearing fees and engagement of legal representation and expert witnesses at a panel hearing that are associated with planning scheme amendments.

LEGAL AND RISK CONSIDERATIONS

7. The strategy does not raise any legal risks or concerns of note.
8. Section 9(1) of the *Local Government Act 2020* states that a Council must - in the performance of its role - give effect to the overarching governance principles of the Act. Section 9(2) describes the following relevant overarching governance principles—
 - (c) the economic, social, and environmental sustainability of the municipal district, including mitigation and planning for climate change risks, is to be promoted,
 - (d) the municipal community is to be engaged in strategic planning and strategic decision making,
 - (f) collaboration with other Councils and Governments and statutory bodies is to be sought' and,

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(g) the ongoing financial viability of the Council is to be ensured.

9. The strategy gives effect to the overarching governance principles by identifying land suitable for accommodating population and housing growth subject to a robust assessment.
10. The *Planning and Environment Act 1987* (the Act) sets out the framework for the use, development, and protection of land in Victoria in the present and long-term interests of all Victorians.
11. The strategy seeks to identify land suitable for housing growth and manage new residential development and population growth through a range of measures identified in the strategy's implementation plan including a future review of residential zoned land.

HUMAN RIGHTS CONSIDERATIONS

12. It is considered that the report does not impact on any human rights identified in the *Charter of Human Rights and Responsibilities Act 2006*.

COMMUNITY CONSULTATION AND ENGAGEMENT

13. The Ballarat Housing Strategy 2023-2041 and Neighbourhood Character Study was exhibited for public consultation between September and October 2023.
14. Interested parties were able to make submissions which were considered by Council and were addressed in the final documents.

GENDER EQUALITY ACT 2020

15. There are no gender equality implications identified for the subject of this report.

CONFLICTS OF INTEREST THAT HAVE ARISEN IN PREPARATION OF THE REPORT

16. Council officers affirm that no general or material conflicts need to be declared in relation to the matter of this report.

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CITY OF BALLARAT
**Housing Strategy
2041**





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The City of Ballarat acknowledges the Traditional Custodians of the land we live and work on, the Wadawurrung and Dja Dja Wurrung People and recognises their continuing connection to the land and waterways.

We pay our respects to their Elders past, present and extend this to all Aboriginal and Torres Strait Islander People.

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Table of Contents

Glossary of Terms Used in This Report	4
Abbreviations	6
Section 1 Introduction and Background	7
Executive Summary	8
Introduction	11
Engagement	16
Policy Context	20
Section 2 Planning for Housing Growth in Ballarat	32
Ballarat Today	33
Drivers of Change	47
Section 3 Housing Framework Plan	57
Change Areas	61
Conclusion	86
Implementation Plan	87

Supporting documents

Appendix 1 Urban Change Readiness Index
Appendix 2 Housing Needs Analysis
Appendix 3 Accessibility and Connectivity Analysis
Appendix 4 Municipal Housing Capacity Assessment
Appendix 5 Housing Uptake Assessment

Glossary of Terms Used in This Report

TABLE 1 GLOSSARY OF TERMS

<p>Activity Centres - Retail, service and employment hubs that are usually well serviced by public transport. They range in size from local neighbourhood strip shops to major regional shopping malls and centres.</p>
<p>Affordable housing - The Planning and Environment Act 1987 defines affordable housing as 'housing, including social housing, that is appropriate for the housing needs of very low-, low- and moderate-income households'.</p>
<p>Character area - Areas with a common preferred character.</p>
<p>Character type - Broad areas, where the desired character is the same. In these areas, the existing neighbourhood character and era of residential development are usually similar.</p>
<p>Compact City - A high-density mixed-use and intensified urban form that promotes human scale movement.</p>
<p>Detached dwelling - Detached dwelling comprising one dwelling on a site that is held exclusively with that dwelling and has a frontage to a public road.</p>
<p>Dual occupancy - A dwelling occupying a site that is held exclusively with that dwelling and has a frontage to a public road and comprises one of two dwellings erected side by side, joined together and forming, by themselves, a single building.</p>
<p>Dwelling - A self-contained residence. This could be a house, apartment, unit or townhouse.</p>
<p>Established areas - Existing neighbourhoods where there is already housing and associated services and facilities.</p>
<p>Greenfield - Previously undeveloped rural land on the outskirts of the urban area identified for new development.</p>
<p>High density dwellings - Refers to apartments or multi-dwelling development of over three storeys in height.</p>
<p>Household - Those who usually reside in the same dwelling.</p>
<p>Housing capacity - Estimated number of dwellings which could be accommodated in an area.</p>

<p>Incremental Change Area - Residential areas that allow modest housing growth and a variety of medium density housing types which respect the preferred future neighbourhood character, or will make a significant contribution to a new, more desirable preferred future neighbourhood character.</p>
<p>Infill development - The development of land within established areas.</p>
<p>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.</p>
<p>Minimal Change Area - Residential areas that allow for minimal housing change due to significant development constraints.</p>
<p>Overlays - Planning scheme controls that apply to specific areas to address a particular issue such as environmental, landscape, heritage and flooding. These requirements operate in addition to those provided by the land's zoning.</p>
<p>Planning Policy Framework (PPF) - The policy content of planning schemes. It includes part of the Victoria Planning Provisions (VPP) in the form of state and regional planning policies and local content in the form of local planning policies.</p>
<p>Precinct Structure Plan (PSP) - A statutory document that describes how a precinct or series of sites within a growth area will be developed over time. A Precinct Structure Plan sets out the broad environmental, social and economic parameters for the use and development of land within the precinct.</p>
<p>Preferred character statement - Policy statement that articulates an area's desired future character.</p>
<p>Residential development framework - A framework or plan that identifies housing change areas across the municipality and are generally categorised as either minimal, incremental or substantial change areas.</p>
<p>Shoptop - Residential development built on top of retail or commercial uses at the ground level, usually in the form of apartments.</p>
<p>Substantial Change Area - Areas that allow housing growth and diversity at increased densities.</p>
<p>Townhouse - A dwelling occupying a site that is held exclusively with that dwelling and has a frontage to a public road and comprises three or more dwellings erected side by side, joined together and forming, by themselves, a single building.</p>
<p>Urban Renewal Area - Urban renewal precincts, often comprising older industrial areas that are no longer being used for their original purpose and provide opportunity for development and reconsideration of land use.</p>
<p>Zones - Relates to a particular use and is associated with a specific purpose such as residential, commercial or industrial. Each zone has policy guidelines that will describe whether a planning permit is required and set out application requirements and decision guidelines. These requirements must be considered when applying for a permit. All land is covered by a zone in Victoria.</p>



Abbreviations

TABLE 2 GLOSSARY OF ACRONYMS

AEO - Airport Environs Overlay
BMO - Bushfire Management Overlay
CBD - Central Business District
CHRG - Central Highlands Regional Growth Plan
CHW - Central Highlands Water
DTP - Department of Transport and Planning
EAO - Environmental Audit Overlay
EMO - Erosion Management Overlay
EPA - Environmental Protection Authority
ESO - Environmental Significance Overlay
FO - Flood Overlay
HNA - Housing Needs Analysis
HO - Heritage Overlay
ILS - Industrial Lands Strategy
LSIO - Land Subject to Inundation Overlay
NCS - Neighbourhood Character Study
PPF - Planning Policy Framework
PPN - Planning Practice Note
VPO - Vegetation Protection Overlay
VPP - Victorian Planning Policy

Section 1

Introduction and Background





Executive Summary

The Ballarat Housing Strategy 2041 provides the City of Ballarat with a framework for managing and accommodating population and housing growth for a minimum period of 15-years across the municipality.

The Ballarat Housing Strategy builds on and implements key recommendations of various state, regional and local planning strategies and policies by directing residential development to locations that are well serviced and will be able to better support population and economic growth. The strategy will provide the strategic basis to introduce planning tools to enable the delivery of more housing in established areas with existing infrastructure, transport, and facilities.

This strategy focuses on the existing and future residential areas within Ballarat. Ballarat's growth areas, which will play a vital role in meeting the future housing needs of Ballarat, have been specifically addressed through the draft Ballarat Growth Area Framework Plan, a companion document to this Housing Strategy. The Ballarat CBD and Urban Renewal Areas will require further detailed planning and investigation to provide guidance for the future direction for land use and built form outcomes. This strategic planning work will be undertaken after the completion of this Strategy.

› Key findings to deliver long term housing growth in Ballarat

- Ballarat has capacity to cater for substantial population growth in a manner that maximises use of existing services and infrastructure.
- Around 70% of new homes built in Ballarat are constructed in greenfield areas, that is, previously undeveloped land covered by a Precinct Structure Plan (Ballarat West and Alfredton).
- This trend has resulted in an unsustainable increase in infrastructure costs and a sprawling urban form which does not provide accessibility and equity amongst Ballarat's residents.
- There is significant capacity for additional growth within established residential areas and Urban Renewal Areas.
- State and local policy directs and encourages the increase in infill development within established areas. Increasing the proportion of infill development particularly near shops, services and employment will create more vibrant neighbourhoods and reduce car dependency as the population grows. It will also take the pressure off developing in environmentally sensitive and less accessible locations.

The Vision

Ballarat will contain a variety of dwelling types, designs and lot sizes which meet the needs of residents. High quality contemporary housing is embraced that responds to our heritage and neighbourhood character. More people will have access to services and employment without requiring the use of a car with affordable housing located in the most accessible areas for people that need them the most. New homes will be built in areas that do not compromise our native flora and fauna.

> Housing Strategy Objectives

Objective	Directions
Ensure Ballarat sustains housing and population growth for at least 15 years.	<p>Population Growth - Ballarat will accommodate projected population growth over at least a 15-year period.</p> <p>Locations- Clear direction provided on locations where growth should occur.</p> <p>Opportunities - Consolidation, redevelopment and intensification identified.</p>
Provide housing diversity and affordable housing with good access to jobs, activity centres, public transport, schools and open space.	<p>Accessibility - New homes should be in places which have high levels of accessibility.</p> <p>Infrastructure - New housing should be located close to infrastructure to benefit from existing investment.</p> <p>Compact - Planning should reduce sprawl and conflicting uses, increase the proportion of infill housing.</p>
Ensure Ballarat is a distinctive and liveable city with quality design and amenity.	<p>Balancing Character and Heritage - New development should be sensitive to Ballarat's heritage and character elements.</p> <p>Affordability - A diversity of housing types to be provided with a focus on delivery of good design to meet long term housing needs at a range of price points.</p> <p>Diversity - Ballarat will facilitate and manage increased housing diversity to cater for changes in household size.</p>
Ensure housing is in areas that does not increase the risk to human life to human health or the environment.	<p>Safety - Housing should be directed away from areas of high bushfire risk.</p> <p>Mitigation - Where suitable risks should be mitigated to allow for residential development in established areas.</p> <p>Interfaces - Ensuring new residential use and intensification of existing residential areas are compatible with non-residential interfaces.</p> <p>Contamination - Contaminated land should be identified and, where identified for a land use change to a sensitive use, remediated.</p> <p>Habitat - Habitat and native vegetation loss should be avoided, and key biodiversity areas protected.</p>
Ensure there is provision of infrastructure to support housing growth in Ballarat.	<p>Growth infrastructure - Planned for in accordance with capital works programs and developer contributions plans.</p> <p>Costs - Service limitations and costs of providing infrastructure considered.</p> <p>Integration - With transport, open space and community asset plans.</p> <p>Movement - Neighbourhoods promote active lifestyles by promoting walkability and alternative transport.</p>

> Housing Strategy Outcomes

There are five outcomes that will act as measures of success for this strategy:

Outcome 1 - Ballarat has sufficient housing supply to support population growth.

Outcome 2 - Ballarat's infrastructure supports higher density housing.

Outcome 3 - Ballarat provides housing choice in locations close to schools, jobs, transport and services.

Outcome 4 - Ballarat is distinctive for heritage, character and design.

Outcome 5 - Ballarat is a resilient city.



Introduction

The City of Ballarat has experienced significant population growth over the past decade with the current population exceeding 115,000 people. Ballarat's population is expected to continue growing with a population of approximately 170,000 people forecast within the next two decades. The anticipated growth in population will be accompanied by changes in household composition and preferred housing typology.

The City of Ballarat requires a strategy to manage the growth in population and change in household composition. Housing is a fundamental human right and one of the key universal determinants for achieving positive health and wellbeing outcomes for individuals. The availability of secure, well located and affordable housing provides pathways to employment and education, supports a diversity of residential and lifestyle choices, builds strong, connected and sustainable communities and provides equality of opportunities for individuals to participate in community life.

The Housing Strategy 2041 provides the City of Ballarat with a framework for managing population and housing growth. As a planning authority, the City of Ballarat has a responsibility to plan to accommodate population growth for a minimum period of 15 years. This strategy takes into consideration Ballarat's current housing capacity and proposes a longer-term approach to planning for housing across the municipality.

While the Housing Strategy plans to accommodate housing growth until at least the year 2041, this strategy enables opportunity for continued growth beyond this timeframe and has been prepared in accordance with Planning Practice Note 90: Planning for Housing (PPN90). PPN90 is one of a suite of Planning Practice Notes prepared by Department of Transport and Planning that provide local planning authorities with advice to ensure their planning scheme is up to date and fit for purpose.

> Role of the Housing Strategy

The Housing Strategy builds on and implements key recommendations of state, regional and local planning strategies and policies by planning for the long-term growth of Ballarat. This strategy directs residential development to well-serviced locations that will better support population and economic growth. The Strategy, along with background documents including the Neighbourhood Character Strategy (NCS), provides the strategic basis to introduce planning tools to enable the delivery of more housing in established areas with existing infrastructure, transport, and facilities.

The strategy seeks to ensure that the dwellings we build today, and into the future, will meet the needs of future generations and are appropriately located throughout the City of Ballarat. The Housing Strategy includes all residentially zoned land within Ballarat, identified Urban Renewal Areas and Ballarat's Greenfield Growth Areas.

The Housing Strategy will make recommendations regarding housing development in all areas with the capacity to provide future housing across Ballarat and will include existing and new growth areas, and the Ballarat Central Business District (CBD and Urban Renewal Areas). The Ballarat CBD and Urban Renewal Areas will require detailed planning and investigation to set out the relevant planning controls for the preferred land uses and design of these developments.

The strategy will identify areas for substantial, incremental and minimal change across the existing residential areas of Ballarat and will provide strategic justification for reviewing the application of the residential zones and controls.

Ballarat's Greenfield Growth Areas will play a vital role in meeting the future housing needs of Ballarat and have been specifically addressed through the Ballarat Growth Area Framework Plan, a companion document to this Strategy that applies to Ballarat's Western and Northwestern Growth Areas.

The Neighbourhood Character Study is closely associated with the Housing Strategy. The study includes a detailed assessment of Ballarat's existing neighbourhood character, 'preferred character statements' to which will inform the implementation of policy and zone schedules.

The application of revised zones and overlay controls in the Ballarat Planning Scheme will be undertaken as part of the Residential Zones Review project that will follow the Housing Strategy.

The strategy will provide strategic direction on:

- Residential growth and change across the municipality considering Ballarat's natural environment and land use context.

- Increasing the level of diversity, design and sustainability of housing in Ballarat.
- Managing the unique character of Ballarat.
- Managing the approach to development in Ballarat's new Greenfield Growth Areas through the Draft Ballarat Growth Area Framework Plan to ensure staging and sequencing of development occurs in line with infrastructure opportunities.
- Managing housing growth to avoid development in locations where there is risk to life, property, the natural environment and infrastructure from natural hazards such as bushfire and flooding.
- Increasing the level of social and affordable housing in accessible and well serviced areas.

The strategy will seek to achieve the following outcomes:

- Ballarat has sufficient housing supply to support population growth.
- Ballarat's infrastructure supports higher density housing.
- Ballarat provides housing choice in locations close to schools, jobs, transport and services.
- Ballarat is distinctive for heritage, character and design.
- Ballarat is a resilient city.

The strategy is divided into three distinct parts, comprising the following sections:

- Introduction and Background – This section provides background into the creation of the Housing Strategy, the strategic and policy context guiding its development and gives context to Ballarat and its residents.
- Planning for Housing Growth in Ballarat – This section comments on Ballarat today and outlines the drivers and influences on housing in Ballarat.
- Housing Framework Plan – This section identifies the vision for Ballarat and describes areas for housing growth across Ballarat including Growth Areas, Urban Renewal Areas and existing residential areas identified as being areas of either substantial, incremental and minimal change. These change areas will provide the basis for the application of the new residential zones, and other planning controls.

The strategy has been informed by the following studies:

- City of Ballarat Neighbourhood Character Study, Ethos Urban and City of Ballarat, 2024
- Ballarat's Future Housing 2021-2041 - Needs Housing Analysis, SGS Economics and Planning, 2023
- Ballarat Municipal Housing Capacity Assessment, Tract, 2022
- Accessibility and Connectivity Analysis, Tract, 2024
- Strategic planning for bushfire in the City of Ballarat, Kevin Hazell Bushfire Planning, 2020
- Urban Change Readiness Index Survey, Studio THI and City of Ballarat, 2022
- Ballarat 11 Waterways Flood Modelling, Water Technology, 2024
- Ballarat Growth Areas Framework Plan, City of Ballarat, 2024
- Draft Industrial Land Strategy, City of Ballarat, 2024
- Ballarat Infill Prioritization Framework, Astrolabe, 2024
- Ballarat Infill Uptake Analysis, SGS Economics, 2024.
- Ballarat Biodiversity Strategy - Healing Country Together, City of Ballarat, 2024
- Draft Social and Affordable Housing Action Plan, City of Ballarat, 2024

> Background context

Ballarat does not have a comprehensive housing strategy prepared in alignment with State Government policy. The Housing Strategy will inform and be complemented by several municipal based strategies including:

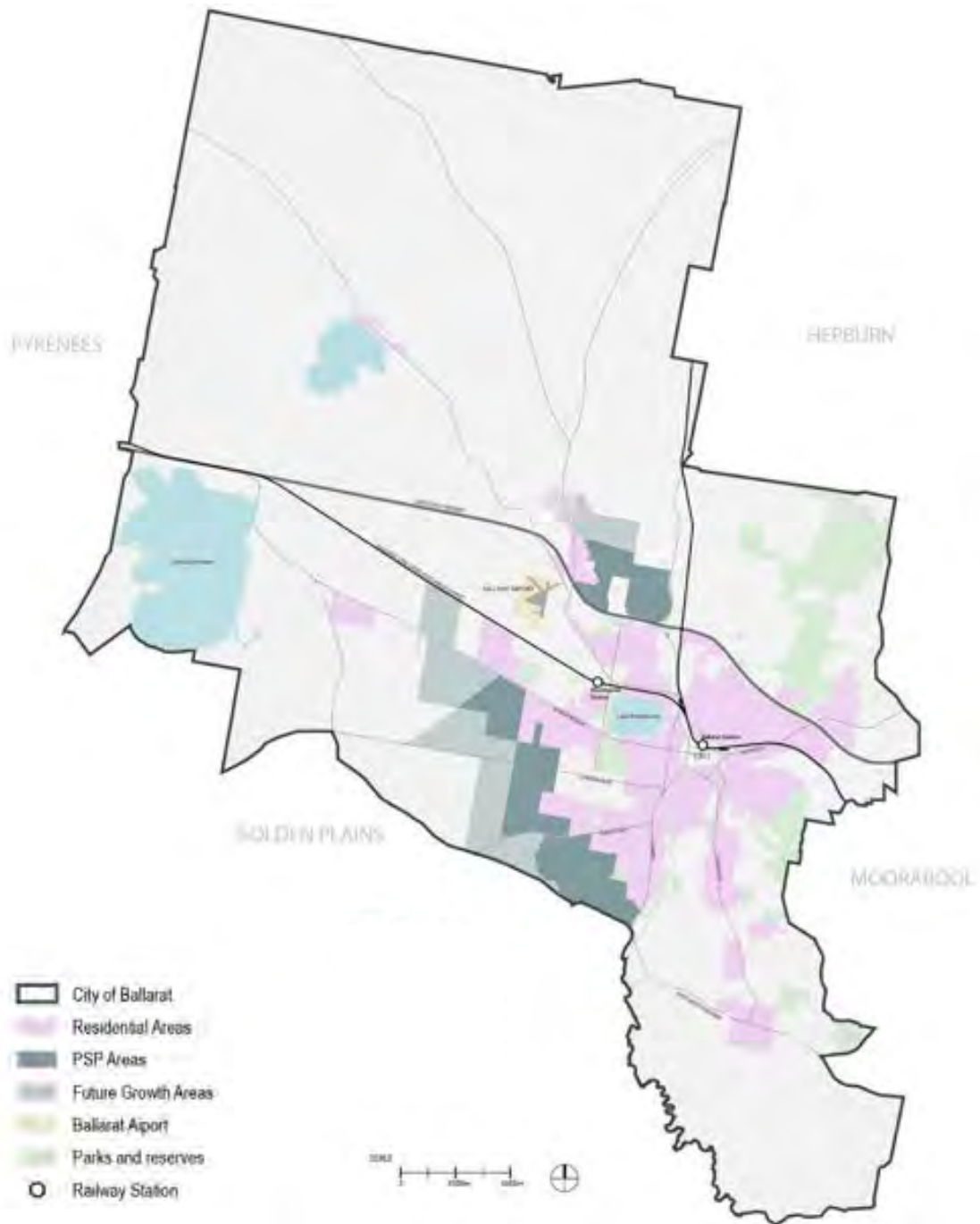
- The CBD Structure Plan
- Open Space Strategy
- Diverse and Affordable Housing Strategy
- Industrial Land Strategy
- Ballarat Integrated Transport and Land Use Strategy Action Plan
- Urban Renewal Area Structure Plans

The project has been undertaken over four stages, as illustrated in figure 1.

FIGURE 1 HOUSING STRATEGY STAGES



FIGURE 2 BALLARAT CONTEXT





Engagement

Engagement with residents, landowners, government agencies and other key stakeholders has provided important input into this strategy. Community views and feedback have further refined the strategy.

> Overview

The objective of community consultation is to work progressively with the Ballarat community, and key stakeholders including State Government agencies to develop the Ballarat Housing Strategy and Neighbourhood Character Study.

The following project objectives for engagement have been used to inform the preparation of the strategy:

- To inform stakeholders and the broader community of the purpose and commencement of the Ballarat Housing Strategy and Neighbourhood Character Study.
- To provide stakeholders and the broader community with the opportunity to contribute towards a vision for housing in Ballarat and to identify issues and opportunities for the Housing Strategy and Neighbourhood Character Study to address.
- To gather feedback on the Housing Strategy and Neighbourhood Character Study and consider all submissions in its finalisation.

Housing Discussion Paper Community Consultation 2021

Community consultation for the discussion paper included:

- Discussion paper made available to key stakeholders and community, including online through the City of Ballarat's engagement portal MySay website, providing background and considerations that will inform preparation and implementation of the Housing Strategy.
- Discussion paper survey distributed online through the City of Ballarat's MySay website.
- Provision of in-person drop-in sessions bookable through the City of Ballarat's MySay website.
- Consultation with State agencies including Department of Transport and Planning (DTP) and Central Highlands Water (CHW).

Consultation on the Draft Housing Strategy and Neighbourhood Character Study August 2023 to October 2023

Feedback on the Draft Housing Strategy and Neighbourhood Character Study was sought prior to the preparation of the final report, between August 2023 and October 2023. Consultation included:

- Facilitation of nine community engagement drop-in sessions undertaken by the City of Ballarat, with the purpose being to introduce and raise awareness of the projects being prepared by the City of Ballarat, including the Housing Strategy and Neighbourhood Character Study. The drop-in sessions were held between 5 September 2023 and 26 September 2023.
- Facilitation of developer forums held on 26 August 2023 and 20 September 2023 respectively and tailored to the key areas of interest to the development community.
- Communications and advertisements via City of Ballarat's website and social media platforms, and items in local media in August/September/October 2023 informing the community that the Draft Housing Strategy was available for review and feedback, and detailing the ways to become involved and make submissions.
- Online consultation platform across the City of Ballarat website providing access to the Draft Housing Strategy and links to the MySay consultation webpage.
- Facilitation of an online survey through the MySay Ballarat Housing Strategy 2023-2041 webpage.
- Consultation with State Agencies including the Environment Protection Authority (EPA), DTP and CHW.

> Key Engagement Findings

Infill and Growth Areas Targets

A large number of submissions spoke directly to the proposed 50% split of greenfield and infill development.

The respondents to the online survey provided a diverse set of opinions with regards to the question of infill versus greenfield development targets. The largest cohort of respondents (29.1%) supported a target of 70% infill and 30% greenfield development while the second largest cohort (19.4%) supported an equal split for development between infill and greenfield sites. In contrast, the majority of written submissions put forward the case that infill development in Ballarat was undesirable or unachievable for a range of different reasons. Many submissions referred to an earlier report which had identified challenges in the delivery of infill via traditional property market mechanisms in Ballarat and sought to have the target adjusted to support increased greenfield development, with some also seeking additional rezonings.

Submissions supporting the 50% split of greenfield and infill development target or seeking a higher infill target highlighted the financial costs to council and the community in continued urban sprawl, its impacts on biodiversity, agricultural and landscape values as well as climate change impacts.

The main concerns with the target were expressed in terms of the unreliability or unfeasible nature of the infill target to be achieved and the corresponding need for more growth areas to be identified and rezoned. The Victorian Planning Authority (VPA) confirmed that there is sufficient greenfield supply for almost 20 years, indicating sufficient capacity within the growth areas alone to provide for identified growth.

Biodiversity and Climate Change

Concerns regarding the failure to integrate consideration of biodiversity outcomes when considering the future of housing in Ballarat were a common thread throughout resident submissions. Multiple submitters specifically supported environmentally sensitive areas being identified as 'minimal change'. Further attention to the design details of housing to ensure canopy tree coverage is improved, that site coverage allows for other vegetation and additional responses to the current biodiversity crisis are integrated. A greater focus on green infrastructure is also urged as part of a response to climate change, which was the focus of multiple submissions.

A number of submissions queried the preparation of the Housing Strategy prior to a full understanding of flood risks, with a number highlighting that this understanding should be based on future risks associated with the impact of climate change and not just current risks.

Infrastructure and Accessibility

Concerns regarding the way accessibility had been weighted, particularly the weighting given to train stations, was raised by the Department of Transport and Planning (DTP). The DTP sought to ensure that increases in housing provision in accessible areas were supported by increases in service frequency and expansions of services to support a more sustainable urban form. Submitters from government agencies highlighted the significant costs to the City of Ballarat associated with the continued expansion of growth areas.

Affordability and Diversity

There was a desire for the Housing Strategy to more explicitly address the delivery of social and affordable housing, and to specifically address homelessness. A majority of survey respondents were supportive of smaller dwellings with the former saleyards site and CBD receiving the highest level of preference for increased residential density.

Heritage and Character

Protection of Ballarat's heritage and character was a reoccurring theme in community submissions while developers identified the lack of certainty and consistency in existing statutory approaches as a constraint which could limit uptake of infill development.

> Urban Change Readiness Index

In 2022, the City of Ballarat partnered with consultants to understand community awareness of and opinions towards upcoming urban change. A broad demographic of Ballarat residents were asked a series of qualitative and quantitative questions and were provided with information about potential future population growth in the municipality.

Some of the findings include:

- 43% of the respondents are excited / confident about change; 34% reported feeling anxious, and 8 per cent were fearful / angry.
- 77% of the respondents are supportive of upcoming change.
- 58% of people believed most future residential growth should be encouraged mainly or entirely in established areas, while 42% felt it should be mainly addressed through Growth Area development.
- The top three benefits of population growth people reported were the support for economic development, the belief it would result in a more vibrant place to live, and that it would bring access to all services closer to home.
- The top three concerns for residents were the impact on the look and feel of Ballarat, issues associated with parking and congestion, and the demand on services / infrastructure.
- 84% of people thought the 10-minute city strategy to be important and attractive.
- The top three aspects that people felt were positive about Ballarat were its connected network of parks and walking / cycling routes, its strong welcome for all kinds of people, and the belief that all needs could be met within a short journey.
- The top three areas where people felt Ballarat fell short was the lack of a range of in housing choices, the lack of housing affordability, and safety.

The Housing Strategy needs to respond to community sentiment alongside making recommendations based on a broad range of evidence inputs to ensure it is complying with State Government guidance. The above outputs from the Change Readiness Index offer a helpful guide to opinions regarding specific types of change and the opportunities that arise from these, particularly in the context of the housing supply and demand data. A more detailed report can be found in **Appendix 1**.

FIGURE 3 ENGAGEMENT



Written Submissions



Key Themes

- Will the infill and growth area targets result in **enough housing**?
- Need to care more for our **biodiversity and climate change**.
- How will **infrastructure** cope with new development?
- Need better housing **affordability and diversity**.
- Need to protect Ballarat's **heritage and character**.



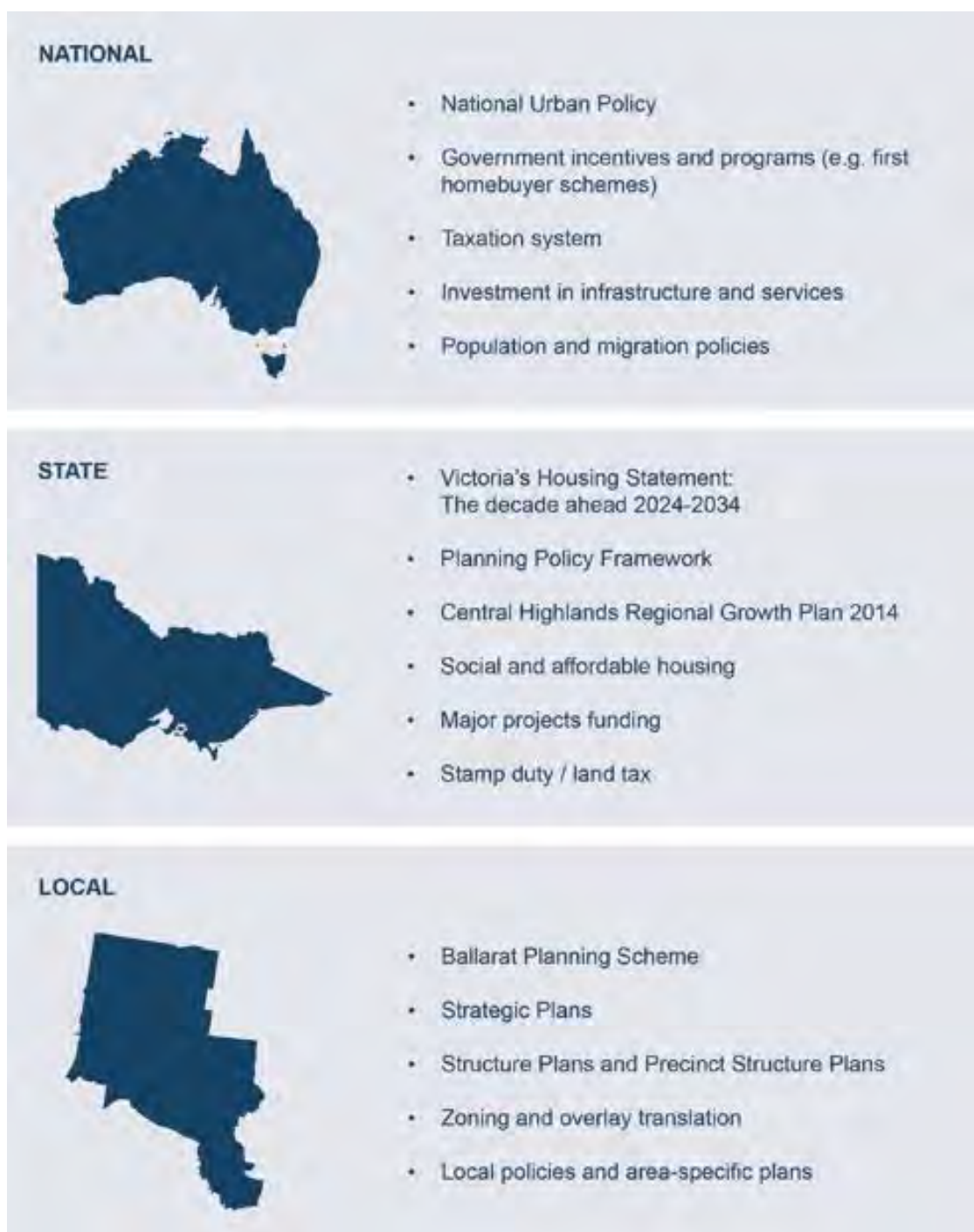
Policy Context

State Government planning policies and guidelines, Planning Practice Notes, the City of Ballarat policies and the Ballarat Planning Scheme have been considered in the preparation of this strategy.

State and local policy encourages planning to increase housing supply in established suburbs to reduce urban sprawl and boost housing supply in locations that are well serviced and accessible.

Every level of government has a different role to play in planning for housing (figure 3). This strategy will inform changes to local planning policy to guide land use and development outcomes including increased housing diversity. Key documents that have informed the preparation of this strategy are summarised on the following pages.

FIGURE 4 POLICY CONTEXT



> Federal Government Policy, Direction and Programs

National Urban Policy

The draft National Urban Policy outlines the Federal Government's goals and objectives to enable our urban areas to be more liveable, equitable, productive, sustainable and resilient. The Federal Government is also working with state and territory governments to reinstate a shared vision for sustainable growth in Australian cities.

Regional Precincts and Partnerships Program

The Regional Precincts and Partnerships Program (RPPP) seeks to support transformative investment in regional, rural and remote Australia based on the principles of unifying regional places, growing economies and serving communities. The RPPP focuses on a partnership approach, bringing together governments and communities to deliver regional precincts that are tailored to local needs and have a shared vision for how that precinct connects to the region.

Housing Australia Future Fund and National Housing Accord

The Housing Australia Future Fund (HAFF) and the National Housing Accord are Federal Government initiatives to improve housing outcomes for Australians and will collectively support the delivery of 20,000 new social and 20,000 new affordable homes across Australia over five years. These programs are administered by Housing Australia.

> State Housing Policy and Direction

The State Government have released draft Housing Targets as part of the Plan Victoria engagement process and have identified a draft target for housing 46,900 additional homes to be accommodated in Ballarat by 2051. State Government targets have been calculated based on:

- An area's proximity to jobs and services.
- Level of access to existing and planned public transport.
- Environmental hazards like flood and bushfire risk.
- Current development trends and places already identified for more homes (the Suburban Rail Loop Precincts, for example).
- Demonstrated development potential in established regional cities in Victoria.

Victoria's Housing Statement: The decade ahead 2024-2034

Victoria's Housing Statement: The decade ahead 2024-2034 provides strategic direction to meet the State Government's objective of constructing 800,000 dwellings over the next decade and 2.24 million dwellings by 2051 including 425,600 homes in Regional Victoria. The statement recognises that while growth areas will remain important, there is a need to increase infill development to boost housing supply.

The statement aims to achieve these objectives through the following measures:

- Reforming Victoria's planning system to boost housing supply across the state.
- Increase housing choice in activity centres and support development through the investment in infrastructure including community facilities, public spaces and parks.
- Support the conversion of under-used commercial buildings to residential buildings.
- Unlock new spaces to build and boost housing supply within established suburbs and stop urban sprawl including supporting the construction of small second homes.
- Build more homes closer to where people have the transport, roads, hospitals and schools that they need.
- Introducing legislative reforms to implement the Red Tape Commissioner recommendations and reduce red tape.
- Clear the backlog of planning permits awaiting approval and provide builders, buyers and renovators with greater certainty around planning approval timeframes.
- Improve the speed of utility connections and infrastructure rollout.

Victoria's Housing Statement, along with policy reforms aimed at tackling housing supply and affordability issues, were incorporated into all Victorian planning schemes through amendments VC242 and VC243. These reforms came into effect on 20 September 2023.

Amendment VC242 which introduces two new controls into Planning Schemes: Clause 53.22 (Significant Economic Development) and Clause 53.23 (Significant Residential Development with Affordable Housing). In summary, these changes seek to provide a facilitated assessment process for significant development which can have an immediate and meaningful effect on addressing current housing and economic issues. The Minister for Planning is the Responsible Authority for decision making regarding these proposals.

- Removing the need for planning permission for a single dwelling on a lot exceeding 300 square meters. Specifically, it removed the provision in the zone schedule that previously mandated planning permission for constructing or extending a single dwelling or erecting or extending a fence within 3 meters of a street on such lots. This change applies across General Residential Zones (GRZ), Neighbourhood Residential Zones (NRZ), and Township Zones (TZ). Consequently, there is no longer a requirement to secure a planning permit for constructing a single dwelling on a lot over 300 square meters, unless otherwise specified by additional provisions of the scheme, such as a planning scheme overlay.
- Introduction of VicSmart permits for applications to construct or extend a single dwelling on a lot of less than 300 square metres where this is appropriate to pursue via the VicSmart pathway.

20-minute Neighbourhoods Initiative and Movement and Place Framework

The State Government aims to create 20-minute cities by implementing planning strategies focused on enhancing accessibility and liveability within neighbourhoods. The State Government has released a set of measures and hallmarks which they encourage to be included into state and local planning policy. The Movement and Place Framework provides three key principals for approaching transport planning. These principles are prioritising people, focusing on outcomes and adopting a holistic approach to transport planning.

> Future Homes

Future Homes comprises a series of three-storey apartment building designs that can be adapted across GRZs provided they are within 800m of a train station, an activity centre in Metropolitan Melbourne, or an identified regional activity centre. The designs are accompanied by a purpose-built planning process, led by the State Government. The changes aim to facilitate development in and around activity centres or public transport. Further exemplar designs are under preparation by the State government.

> Small Second Homes

A small second home up to 60 square metres, also known traditionally as a granny flat, secondary dwelling

or a dependent person's unit, no longer requires a planning permit in most cases where there are no flooding, bushfire, environmental or other overlays. A small second home still requires a building permit in order to meet siting, amenity, design and safety requirements, and cannot be subdivided or separately sold off from the main home.

> Central Highlands Regional Growth Plan 2014

The Central Highlands Regional Growth Plan (CHRGP) sets out a regional approach to land use planning across Central Highlands. Ballarat is identified as the sole regional city in the CHRGP, and it was projected in 2014 that Ballarat's population would reach 113,500 in 2021 and 130,000 in 2031. The CHRGP notes that the region's population is forecast to both grow and age significantly by 2031 as well as be accompanied by a corresponding decrease in household size.

Future directions in the CHRGP include:

- Support development and investment that is consistent with Ballarat's role as a regional city and the largest settlement in the Central Highlands.
- Facilitate growth of the city, particularly through planned development to the west and through infill opportunities.
- Encourage the development of Ballarat's Central Business District as a higher order activity centre with major employment, cultural, service and retail attractors.
- Provide appropriate social, physical and transport infrastructure to support growth.
- Encourage the provision of regionally significant services and ensure they are easily accessible to their regional catchment through integrated land use planning and transport provision.

Key principles to ensure the region is productive, sustainable and liveable include:

- Population growth should be planned in sustainable locations throughout the region.
- The development of sustainable and vibrant communities should be supported by enhancing the level of access to key services.
- Land use patterns, developments and infrastructure should make the region more self-reliant and sustainable.
- Planning for growth should be integrated with the provision of infrastructure.
- The region's land, soil, water and biodiversity should be managed, protected and enhanced.
- The importance of cultural heritage and landscapes as economic and community assets should be recognised.



Department of Transport and Planning Practice Notes

State Government policy PPN90 Planning for Housing and PPN91 Using the Residential Zones have informed the preparation of the Ballarat Housing Strategy. PPN43 Understanding Neighbourhood Character is also referenced.

PPN90 sets out the process local governments should follow to establish a Residential Development Framework (RDF). The Housing Strategy and Neighbourhood Character Study are principal of the RDF.

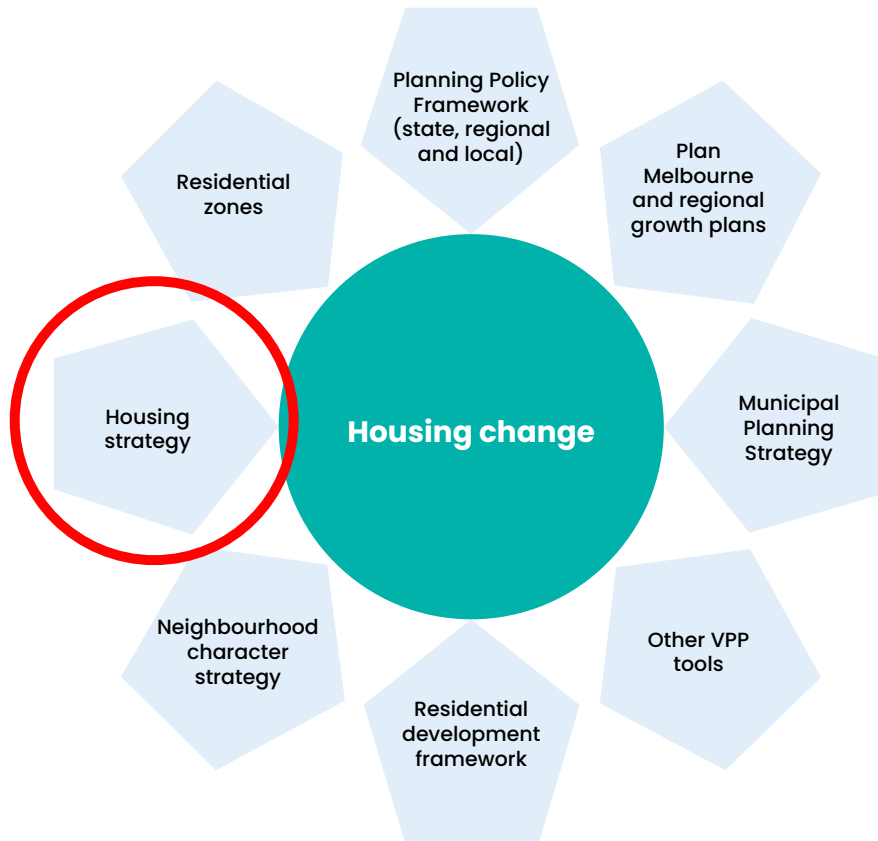
PPN90 requires local councils to plan to accommodate projected population growth over at least a 15-year period and provide clear direction on locations where growth should occur. Residential land supply will be considered on a municipal-wide basis, rather than a town-by-town basis.

PPN90 also notes that the planning for urban growth should consider:

- Opportunities for consolidation, redevelopment and intensification of existing urban areas.
- Neighbourhood character and landscape considerations.
- The limits of land capability and natural hazards and environmental quality.
- Service limitations and the costs of providing infrastructure.

Planning for Housing Change from PPN90 (figure 4) illustrates the Housing Strategy forms a key part of Ballarat's Strategic Framework, functioning within the wider planning framework. Its role is to set out high-level housing objectives that respond to State and regional planning policies and provide directions about where housing growth should occur. It also projects future land supply to ensure growth can be catered for. The Strategy is supported by a range of other strategic policy and scheme provision which guide planning decisions. It does not change the permitted uses of land or the density of dwellings permitted by the Ballarat Planning Scheme. The Residential Zones Review will provide certainty about housing growth.

FIGURE 5 PLANNING FOR HOUSING CHANGE FROM PPN90



> Ballarat Planning Scheme

The Ballarat Planning Scheme sets out the way land may be used or developed. The Planning Scheme is a legal document, prepared and approved under the Planning an Environment Act 1987. The scheme contains state and local planning policies, zones, overlays and other provisions that affect how land can be used and developed.

The Housing Strategy gives effect to State Government policy including:

11.01-1S Settlement: To deliver housing that facilitates access to jobs, services, and infrastructure and community facilities and promote and capitalise on opportunities for urban renewal and infill redevelopment. New residential development should be planned around existing or future activity centres to maximise accessibility to facilities and services.

11.02 -1S Supply of urban land: To ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses. A key strategy of this Clause is to plan accommodate projected population growth over at least a 15 year period and provide clear direction on locations where growth should occur.

12.01-2S Native vegetation management: To ensure that native vegetation is not unnecessarily removed or destroyed.

13.02-1S Bushfire planning: To strengthen the resilience of human settlements and communities. Importantly, this policy outlines the need to give priority to the protection of human life over all other policy considerations.

15.01-1S Urban design: To create urban environments that are safe, healthy, functional and enjoyable and that contribute to a sense of place and cultural identity. Design responses should respond to local contextual features including character, cultural identity, natural features, surrounding landscape and climate.

15.01-5S Neighbourhood character: To support development that respects the existing neighbourhood character or contributes to a preferred neighbourhood character and ensure the preferred neighbourhood character is consistent with medium density housing outcomes in areas identified for increased housing.

16.01-1S Housing supply: Increase the proportion of housing in designated locations in established urban areas (including under-utilised urban land) and reduce the share of new dwellings in greenfield, fringe and dispersed development areas.

Encourage higher density housing development on sites that are well located in relation to jobs, services and public transport.

Identify opportunities for increased residential densities to help consolidate urban areas.

Facilitate diverse housing that offers choice and meets changing household needs by widening housing diversity through a mix of housing types.

Support opportunities for a range of income groups to choose housing in well-served locations.

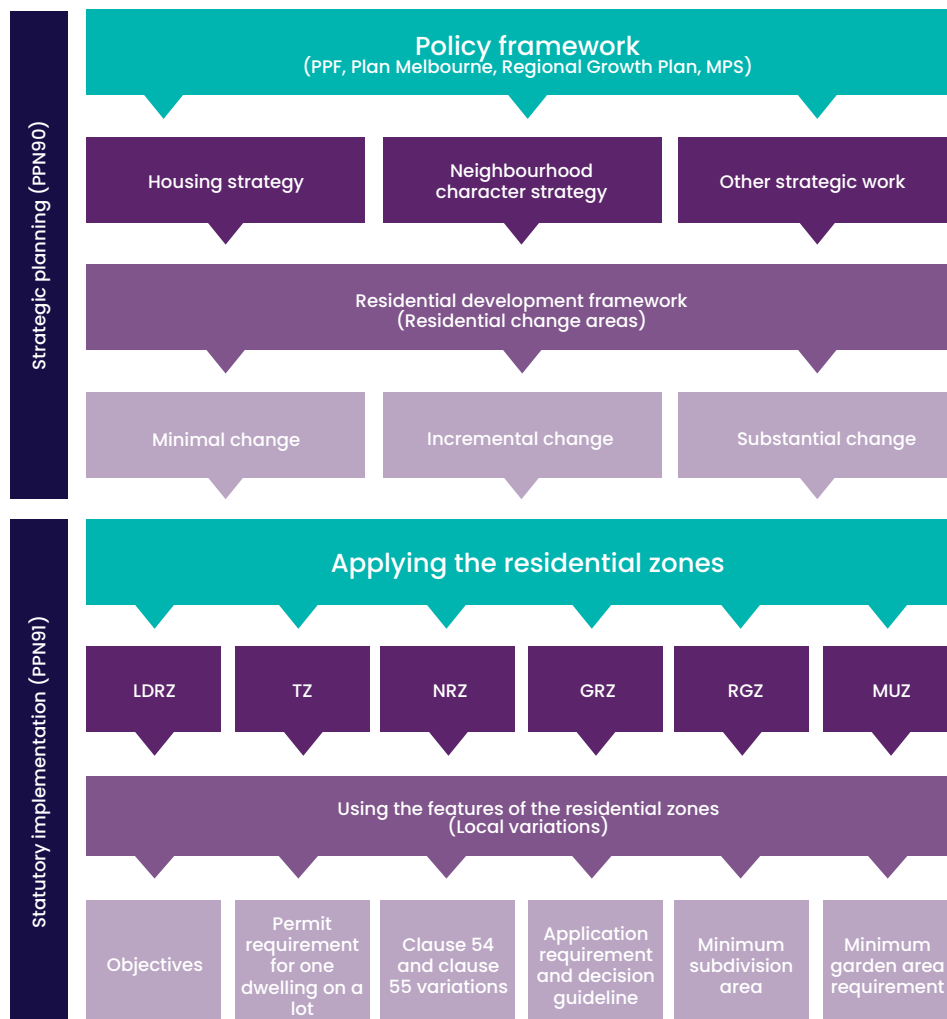
Plan for growth areas to provide for a mix of housing types through a variety of lot sizes, including higher housing densities in and around activity centres.

16.01-2S Housing affordability: To ensure land supply continues to be sufficient to meet demand and to increase choice in housing type, tenure and cost to meet the needs of households as they move through life cycle changes and to support diverse communities.

> **New Residential Zones**

In July 2014, State Government introduced new residential zones into the Victorian Planning Provisions. Local Government’s are required to transition from the previous residential land controls to the new suite of zones consistent with state policy changes. The City of Ballarat will be undertaking a review of residential zones following the completion of the Housing Strategy, and will consider State Government and local housing strategy and policy influences as shown in Figure 5.

FIGURE 6 PPN90 FRAMEWORK DIAGRAM





> Local Policy and Direction

Today, Tomorrow, Together – The Ballarat Strategy 2040 (2015)

The Ballarat Strategy 2040 was adopted by the Ballarat Council in 2015 and sets out the long-term direction to address land use changes and development growth. The strategy reflects on an extensive community engagement process, 'Ballarat Imagine', and supports infill development in appropriate areas subject to character analysis, with further actions seeking the prevention of ad hoc greenfield residential development and advocating for the delivery of affordable housing. It identifies a target for future dwelling supply split 50/50 between established and greenfield areas.

Ballarat Long Term Growth Options Investigation Areas (2018)

The Ballarat Long Term Growth Options Investigation Areas (Hansen Partnerships, Arup and Tim Nott, 2018) (the Study) identified four greenfield investigations areas in Ballarat including the Western Growth Investigation Area (WGIA), North West Growth Investigation Area (NWGIA), the Northern Growth Investigation Area (NGIA) and Eastern Growth Investigation Area (EGIA). It was found that the Northern, Western and North-Western Growth Areas have potential for greenfield development subject to further investigation. This report was considered by Ballarat Council at its meeting held in February 2022 where it was resolved to adopt three growth areas including the Northern Growth Area, the Western Growth Area and the North-Western growth area as Ballarat's new locations for greenfield growth.

Ballarat Growth Area Framework Plan (2024)

The Ballarat Growth Area Framework Plan (GAFP) for the proposed Western and North-Western Growth Areas will identify high-level infrastructure requirements and provide guidance on the sequence of future precinct structure planning. Technical investigations will focus on infrastructure and utility servicing sewerage, water (flooding, stormwater management and recycled water, electricity and telecommunications), and road planning/movement and access (traffic/walking, cycling/public transport and freight).

The GAFP will make recommendations regarding the future sequencing and timing for the preparation of future precinct structure plans for the proposed Western and North-Western Growth Areas. The GAFP considered:

- The ability to provide servicing infrastructure with growth structured and staged with trunk infrastructure.
- Activity centres and community infrastructure.
- Locations with proximity to existing infrastructure and amenities, such as roads, retail, and community facilities.
- Zoned land supply and issues related to the progression of short- or medium-growth options.

FIGURE 7 BALLARAT GROWTH AREA FRAMEWORK AREA AND STAGING PLAN



DRAFT Ballarat Industrial Lands Strategy (2024)

The Draft Industrial Land Strategy provides a framework for future direction of industrial and commercial business activity in Ballarat. Potential new future industrial areas have been identified to ensure Ballarat has sufficient supply of industrial land. Other industrial areas are proposed to transition away from heavy industrial uses.

DRAFT Social and Affordable Housing Action Plan (2024)

In 2024 the City of Ballarat adopted the Draft Social and Affordable Housing Action plan which was developed based on the findings of the City of Ballarat Diverse and Affordable Housing Discussion Paper (2023). The role of the action plan is to outline the actions the City of Ballarat can undertake to contribute to improving housing diversity and affordability as identified within the Diverse and Affordable Housing Discussion Paper.

DRAFT Ballarat Integrated Transport Action Plan (2020)

The Integrated Transport Action Plan Strategy seeks to manage the inevitable transport impacts of Ballarat's population and job growth. This plan is currently being updated inline with the findings of the housing strategy in order to develop the Ballarat Integrated Transport Strategy.

DRAFT Ballarat Open Space Strategy (2024)

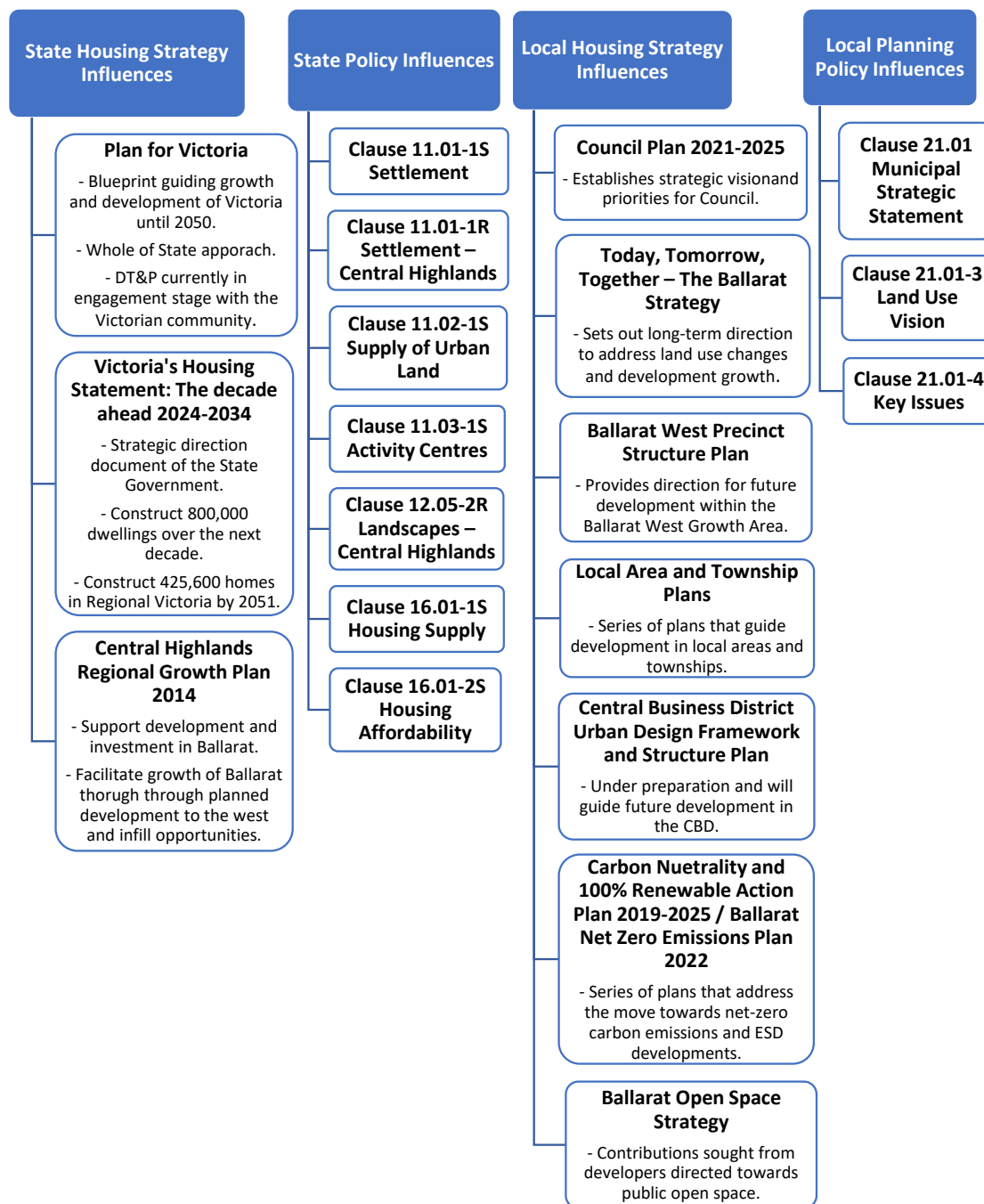
The Open Space Strategy will guide the improvement, acquisition and development of open spaces, parks and reserves across the municipality. The strategy will set out principles, priorities and actions that will help to inform Council's decision-making processes, future investment and development contributions. The Open Space Strategy 2024 will replace and supersede the current Open Space Strategy which has been in place since 2008.

Ballarat Biodiversity Strategy – Healing Country Together (2024)

The Biodiversity Strategy – Healing Country Together will implement short, medium and long-term designed to improve the health of Ballarat's biodiversity. The strategy has at its core the Biodiversity Vision and Commitment for the City of Ballarat and the community that was adopted in 2022, which states: "Championed by an actively engaged and informed community, the natural environment is protected, restored and connected for health and resilience". The Strategy proposes four key groups of actions which are:

1. Immediate action for Biodiversity: Actions that focus on keeping and putting more plants in the ground now and raising the capacity of the City of Ballarat and the community to support biodiversity in the short term.
2. Raise the value of nature: Increasing the communities value of the natural environment and unlocking community appetite for bigger projects.
3. Targeted gains for biodiversity: Build capacity within the City of Ballarat and to determine priority areas for protection and investment to see larger biodiversity gains in the medium to long-term.
4. Landscape scale restoration: Lay the foundations for future strategies to ensure biodiversity survives and thrives in the Ballarat region with climate change with landscape scale restoration to be the long-term goal.

FIGURE 8 PLANNING POLICY FRAMEWORK





Section 2

Planning for Housing Growth in Ballarat



FIGURE 9 BALLARAT TODAY AND TOMORROW



Ballarat Today

As the primary urban centre within the Central Highlands Region, Ballarat has well established services and facilities that cater for the wider region. Ballarat has significant opportunities for growth in established areas with existing infrastructure, open space and access to services. Areas close to the CBD and Wendouree Activity Precinct have the highest levels of accessibility.

Ballarat’s combination of history, culture, natural beauty, community and location make it a special place to live and visit. Ballarat is a regional city of statewide importance being the largest inland city in Victoria and a major driver of regional growth and development. Ballarat is the primary urban centre within the Central Highlands region, providing higher order health, education, retail and government services for the region.

> Transport

Located just over an hour from Melbourne and boasting a regular intercity rail link and two premium railway stations located in the CBD and Wendouree, Ballarat offers the lifestyle benefits of a regional city with easy accessibility to state capital services. Additionally, the high-quality road and rail access to major markets and proximity to supply chains, raw materials and agricultural products gives Ballarat’s economy a distinct advantage.

The scale and location of services makes many areas of Ballarat excellent candidates to deliver walkable neighbourhoods. Currently internal movement within Ballarat is heavily car dependent with a small number of trips undertaken by bus, cycling and walking.

Concentrating growth in locations close to existing services and amenity is critical to providing residents with transport options. The Residential Accessibility Rating Analysis described in section 2 gives further insight into how movement across Ballarat operates.

> Infrastructure

A 2014 infrastructure assessment surveyed existing infrastructure within Ballarat including:

- Wastewater
- Drainage
- Electricity
- Gas
- Potable water
- Telecommunications

The ongoing relevance of this survey has been confirmed with continuing liaison between key service authorities, including CHW and the DTP, as well as the City of Ballarat’s internal services and facilities unit.

This analysis has found that Ballarat is generally well serviced in established areas and that augmentation and extension of key sites can be utilised to increase capacity in areas catering for substantial growth. Managing growth in a targeted manner will be the most effective way to ensure network augmentation and extensions are rationalised. Estimates suggest that the delivery of infrastructure in growth areas is between two and four times higher than in established areas¹.

> Services and Facilities

The Ballarat Health Precinct is centred around the Ballarat Base and St John of God Hospitals. This is the Western Region's highest order health care precinct, encompassing essential supporting services and clinical schools.

Ballarat has four university campuses including, Federation University Australia, Australian Catholic University and rural clinical schools for Deakin University and Melbourne University. Based in Ballarat, Federation University is regional Victoria's largest education institution with two campuses and acts as a service hub for campuses located in surrounding centres.

Ballarat has two Federation University Technology Parks designed to encourage and support the development of both emerging and existing technology-oriented enterprises. The principal focus of the Federation University Technology Parks is the information and communication technologies industry sector, with IBM having been operating from the Mount Helen Technology Park since 1995.

> Heritage

Ballarat has a rich architectural history due to its association with the Victorian gold rush in the 19th century. As a legacy of this, the city boasts beautiful Victorian era architecture, particularly in and surrounding the CBD.

In whole of city consultations, Ballarat residents identified heritage was what they valued most and wanted to retain. There are over 12,000 properties included within the Heritage Overlay, most of these are located in the CBD and surrounding residential suburbs, with smaller concentrations of heritage places found in the townships of Buninyong and Learmonth.

Areas of particular cultural heritage sensitivity are located in the vicinity of the early civic and commercial centres of Ballarat East (Bridge Mall, Bakery Hill, Main Road, Humffray Street) and in pockets of exceptionally high-quality heritage places, such as parts of Soldier's Hill, Ballarat Central and Lake Wendouree. Some areas such as Ballarat East, Newington and Lake Wendouree have highly intact and unique subdivision patterns which tell an important story of Ballarat's history and are sensitive to change.

Balancing heritage with increased urban density and infill development will require careful planning and collaboration between stakeholders to ensure that the key values and identity of Ballarat as a heritage city are maintained. Ongoing strategic heritage planning projects will provide strong justification, policy and

guidelines to ensure that heritage places and areas are protected while allowing the City to grow and thrive, establish areas appropriate for infill development and facilitate adaptive reuse of heritage buildings while accommodating high quality new design.

The City of Ballarat is currently undertaking a Heritage Gaps Analysis which will identify opportunities for improvement in Council's planning instruments and heritage management policies to improve the existing Heritage Overlay. Through a series of projects over several years, the City of Ballarat will identify, document and assess a wide range of new places and precincts of potential heritage significance as well as reviewing existing heritage places to ensure Ballarat's heritage is preserved for future generations.

> Open Space and Recreation

Ballarat offers ample public open space within established areas with world class opportunities for outdoor recreation such as walking, cycling and boating in locations such as Victoria Park, the Ballarat Botanical Gardens and Lake Wendouree.

Ballarat has a strong track record in delivering sporting events on a national, state and local scale. From major national sporting events including AFL, cricket, basketball and cycling, to local activities including athletics, squash and rowing, the city can host events of all sizes. Ballarat boasts high quality recreational facilities including the Ballarat Aquatic and Lifestyle centre, Selkirk Stadium and Mars Stadium. Most of these facilities are located conveniently within proximity of central Ballarat and the Wendouree Activity Centre.

The City of Ballarat is developing a new Open Space Strategy and Draft Recreation Infrastructure Plan 2024-2039 to guide the improvement, acquisition and development of open spaces, parks and reserves across the municipality. The strategy will set out principles, priorities and actions that will help to inform Council's decision-making processes, future investment and development contributions. The Open Space Strategy 2024 will replace and supersede the current Open Space Strategy which has been in place since 2008.

¹Infrastructure Victoria April 2019 Infrastructure Provision in Different Development Settings

TABLE 3 ACTIVITY CENTRE HIERARCHY

Hierarchy	Activity Centre Name
Principal Activity Centre	Ballarat CBD
Major Activity Centre	Wendouree, Glenelg Highway
Large Neighbourhood Activity Centre	Sebastopol, Mount Clear, Buninyong, Lucas
Neighbourhood Activity Centre	Sebastopol South, Carngham Road, Redan Alfredton East, Pleasant Park, Northway, Miners Rest.

> 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 Ballarat Planning Scheme provides an Activity Centre Hierarchy for the city.

This hierarchy reflects the existing spatial growth of Ballarat since European settlement in 1851, characterised by a historic centre and linear growth. This strategy aims to support existing centres, and channel new growth into the most accessible and serviceable of these areas, which will affect how these existing areas develop in the future.

> Environment

The City of Ballarat, comprising an area of approximately 740 square kilometres, is located on the southern end of the Great Dividing Range at the junction of Barwon River, Hopkins River and Loddon River. Ballarat's landscape comprises two main typologies, the Victorian Volcanic Plains (VVP), concentrated in the western section of the municipality, and the Central Victorian Uplands (CVU), concentrated in the eastern section of the municipality. These landscapes have been significantly informed by historic lava-flows, with remnant volcanic mounts prominent features of the municipalities landscape and include Mount Warrenheip, Mount Buninyong and Mount Bolton.

The processes of time and anthropic landscape modification, which has occurred since the arrival of the Wadawurrung and Dja Dja Wurrung peoples and more intensely since the arrival of European settlers in the mid-nineteenth century, has resulted in diverse and varied landscape that incorporates both heavily modified landscapes, developed for either urban purposes or agricultural production, and sections of landscape containing remnant vegetation. These landscapes are home to 22 threatened plant species and 43 threatened animal species. Key threats to the Ballarat environment include invasive weeds and pest species, climate change, fragmentation and habitat loss, and natural disasters.

The City of Ballarat's Biodiversity Strategy – Healing Country Together seeks to address the current degradation of the municipality's biodiversity and position restorative environmental outcomes as a key focus for the future of Ballarat.

Environmental Sustainability and Biodiversity

The City of Ballarat is committed to Environmentally Sustainable Design (ESD) principles and is working with the Municipal Association of Victoria to introduce elevated policy requirements for climate-responsive new dwellings. A new local policy requiring a best practice ESD response is appropriate, alongside others strongly encouraging electrification of new dwellings and those proposed to be modified.

With the Ballarat Planning Scheme not currently providing sufficiently robust planning controls to ensure identified and non-identified environmental values are protected, there is an urgent and essential need to review the Vegetation Protection Overlay and the Environmental Significance Overlay.

It is recommended that infill development be primarily directed towards sustainable areas with good accessibility and without constraints in the form of highly valued built or natural environment characteristics. These areas are generally within the urban boundary and not on the urban fringes. This recommendation should help mitigate against some of the development pressure in those areas where the Vegetation Protection Overlay, Environmental Significance Overlay and Bushfire Management Overlay align on land zoned for residential development.



> Flooding

The City of Ballarat has a history of localised flooding which is mainly due to flash flooding after high intensity rainfall often associated with thunderstorms. Other flooding is associated with flooding from rivers and creeks overflowing after prolonged rainfall. In 1991 and 2011, areas affected by flooding included Ballarat East, Central Ballarat, Miners Rest, Ballarat East, Delacombe and Alfredton.

The City of Ballarat works closely with the North Central Catchment Management Authority, Corangamite Catchment Management Authority and Glenelg Hopkins Catchment Management Authority to ensure flood risk is managed. Consideration of how to manage flood risk is currently underway for 11 waterways including the Yarrowee River that flows through the Ballarat CDB. Avoiding development in locations where there is risk to life, property and infrastructure from hazards associated with flooding is necessary. Consideration of the flood risks when identifying the change areas determined that due to the limited extent of the flood risk and mitigation options available it is unlikely that it will have significant impact on the ability for land to be developed for residential use. In areas where significant change has been identified structure planning will provide the opportunity and mechanisms to manage flooding risks.

> Bushfire

Ballarat is located within the Grampians Region with regards to management by Forest Fire Management Victoria. The predominance of managed farmland and established residential development within the municipality protects Ballarat from the bushfire risk faced by other municipalities within the region, which contain greater proportions of forested areas.

The background document, Strategic Planning for Bushfire in the City of Ballarat, Kevin Hazell Bushfire Planning, 2020, identifies that projections for Victoria's future climate indicate that the frequency and intensity of bushfires in south-east Australia will continue to increase. There are differing levels of bushfire threats across Ballarat from grass fires and forest fires. Areas of extensive bushland to the north-east and east are subject to the most threat from fires.

Determination of the significance of bushfire threat has contributed to the determination of capacity for infill development to ensure growth and development is directed to low-risk locations.

> Land Contamination

There are varying degrees of contamination in Ballarat due to the region's gold mining history, old landfills and industrial sites.

Prior to the commencement of any land use and development of potentially contaminated land, contamination will need to be addressed and any risk to human health mitigated (Practice Note 30 – Potentially Contaminated Land (2021)). Contaminated land can be often safely used and developed following appropriate remediation, provided any necessary controls to manage residual contamination are implemented. Contamination is considered to not compromise the ability to develop land in Ballarat for sensitive uses such as housing. Further strategic work through the preparation of Precinct Structure Plans/Master Plans, will ensure contamination matters are comprehensively considered prior to allowing the land to be developed for a sensitive use.

> Land Use Compatibility

Many land uses, particularly farming, industry and transport, have the potential to produce off-site impacts, such as noise, dust and odour that may impact sensitive residential uses. The purpose of separation distances is to protect sensitive land uses from adverse amenity and health impacts. They also protect industry from encroachment where the impacts from activities such as industrial facilities or intensive animal industries on nearby sensitive uses can constrain the full operation and sometimes ongoing viability of all land uses.

> Planning Framework Constraints

Ballarat's existing planning framework imposes constraints to the delivery of housing. The potential for constraints to impact future residential development has been considered in the context of this Housing Strategy when determining capacity for infill and detail about how these constraints have influenced the change areas is outlined in Section 3 - Housing Framework Plan.

The overlays identified that influence residential development in Ballarat include:

- Airport Environs Overlay (AEO) – Applies to areas subject to elevated levels of aircraft noise and restricts the use of land for sensitive uses.
- Bushfire Management Overlay (BMO) – Applies to areas identified as being affected by bushfire to ensure development is only permitted where the risk to life and property from bushfire can be reduced to an acceptable level. The bushfire risk has been further interrogated via the Strategic Planning for Bushfire in the City of Ballarat, Kevin Hazell Bushfire Planning, 2020. The extent of the bushfire prone areas has informed the application of our growth and change areas in line with the requirements of Clause 13.02 of the Ballarat Planning Scheme.
- Vegetation Protection Overlay (VPO) – Applies to areas identified as significant vegetation and ensures that development minimises loss of vegetation.
- Environmental Significance Overlay 5 (Koala Habitat) (ESO5) – Applies to areas identified as Koala Habitat and can restrict development to minimise any adverse impacts on koala movements and population.
- Heritage Overlay (HO) – Applies to lots containing places of historical and cultural value to conserve and enhance these places.
- Flood Overlay (FO) – Applies to waterways, major flood paths, drainage depressions and high hazard areas which have the greatest risk and frequency of being affected by flooding. The purpose of this overlay is to ensure that any development maintains the free passage and temporary storage of floodwater, minimises flood damage and is compatible with flood hazard, local drainage conditions and the minimisation of soil erosion, sedimentation and silting.
- Land Subject to Inundation Overlay (LSIO) – Applies to flood prone areas affected by the 1 in 100 year flood or any other area determined by the floodplain management authority. To minimise the potential flood risk to life, health and safety associated with development.
- Environmental Audit Overlay (EAO) – Applies to potentially contaminated land and ensure whether it is suitable for a use which could be adversely affected by any contamination.

FIGURE 10 OVERLAY CONTROLS

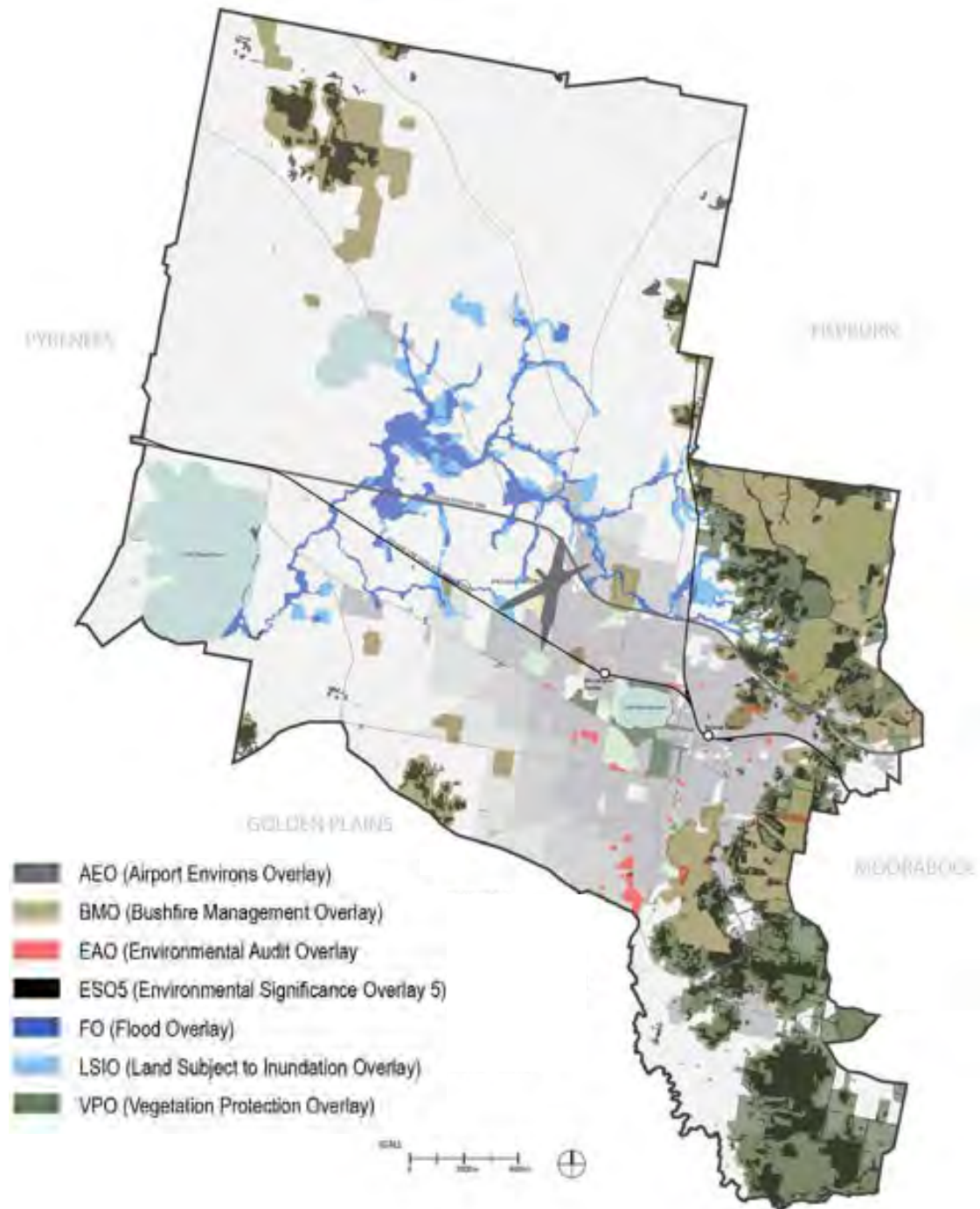
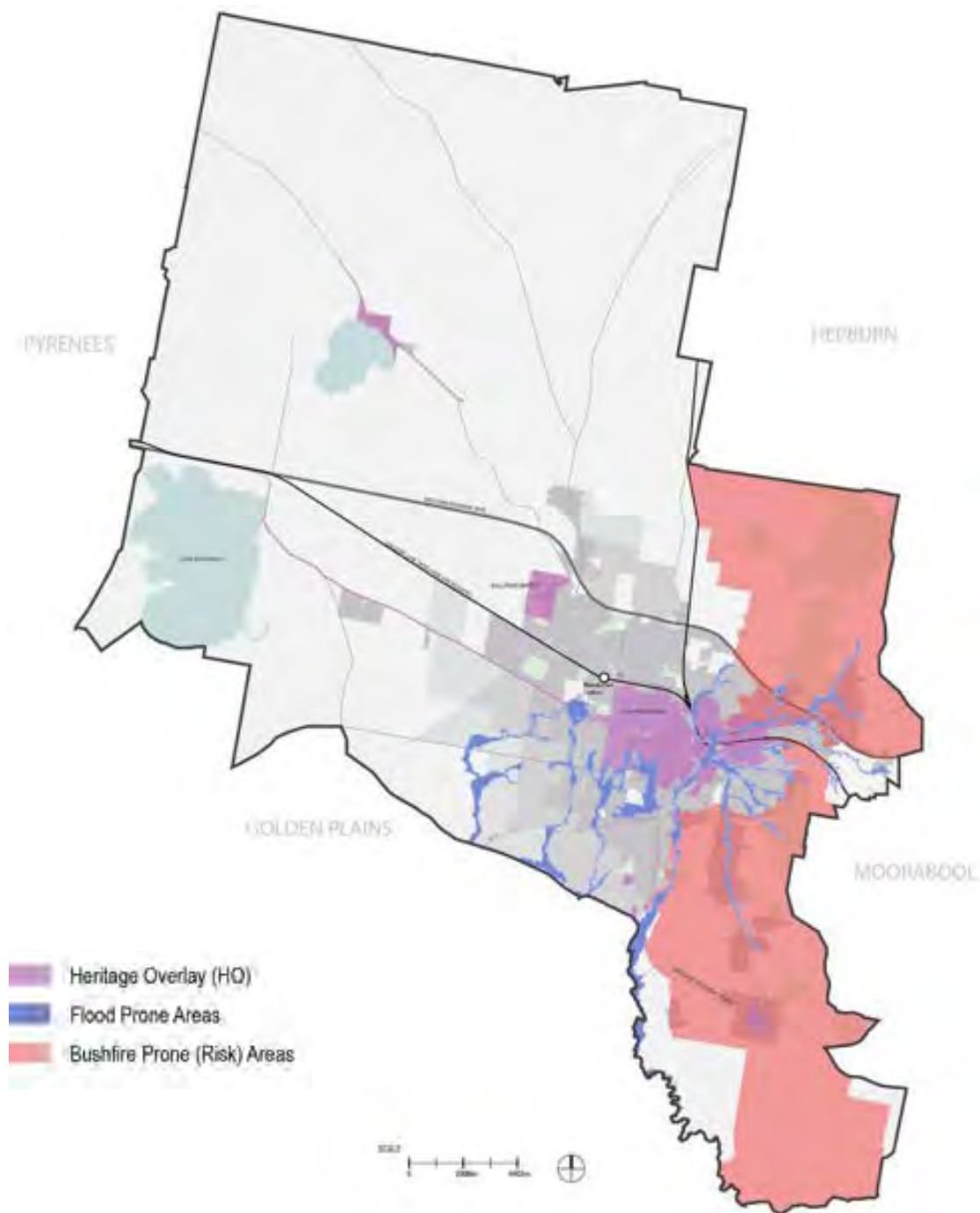


FIGURE 11 FLOODING, BUSHFIRE AND HERITAGE OVERLAYS



> Accessibility

The City of Ballarat commissioned an Accessibility Rating Analysis. The full methodology and findings of this study are available in the Accessibility and Connectivity Assessment, Tract, 2023 (Appendix 3). This analysis assessed the proximity of all areas in the City of Ballarat to amenities including train stations, bus stops, retail, supermarkets, schools, open space, tertiary education, community facilities and health facilities.

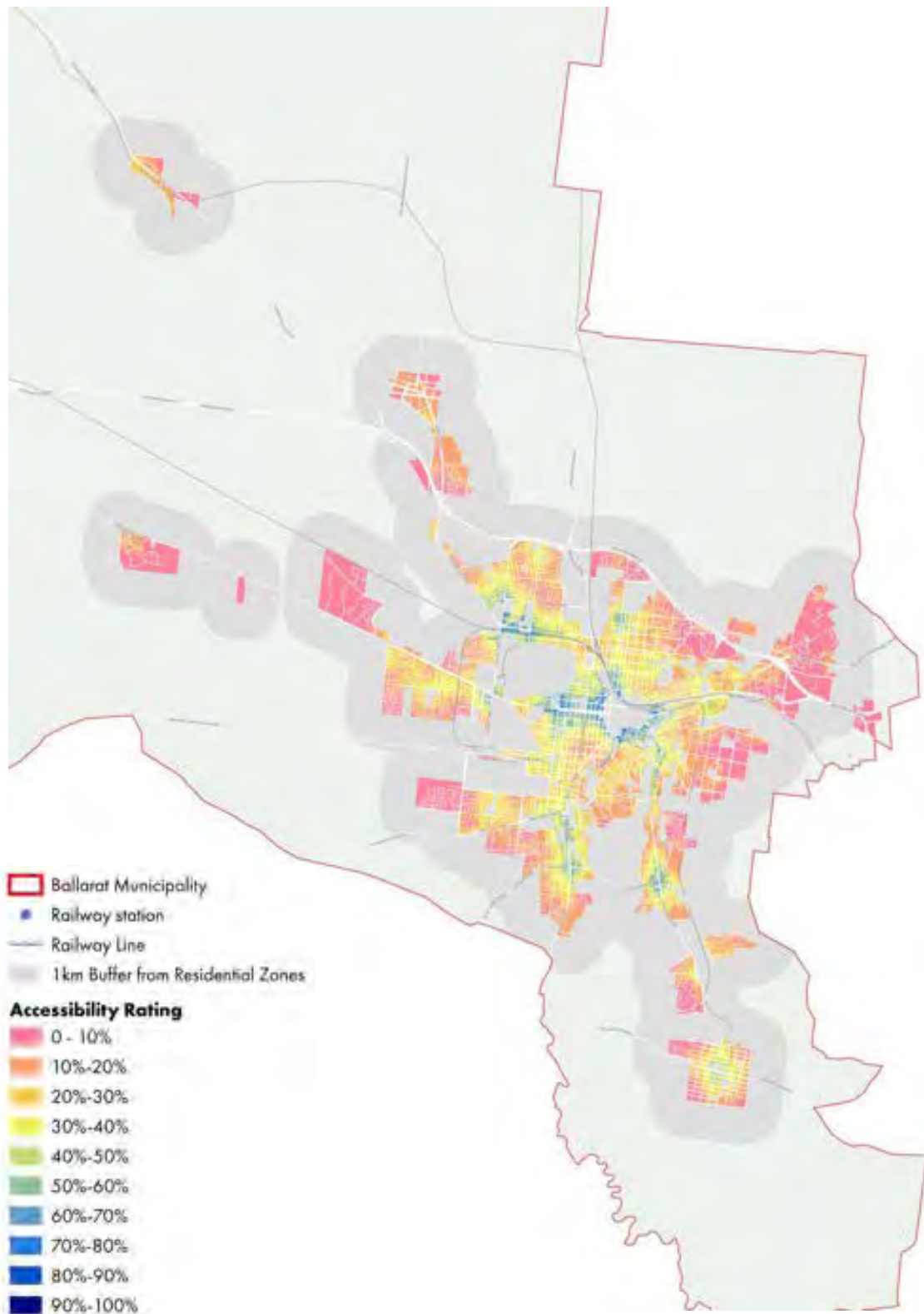
Each destination was given a maximum catchment and a weighting. The maximum catchment indicates the maximum distance people are likely to access the destination on foot. The weighting to each of the destination types was applied to reflect different levels of frequency of usage, importance and attendance (Table 4).

The results of the analysis are shown in Map 7 Overall Accessibility Rating which gives a holistic picture of how Ballarat operates spatially. Areas within and close to the CBD and Wendouree Station precinct have the highest levels of accessibility with people frequenting these areas to access Ballarat's highest order transport, supermarkets, and essential services. Areas close to the Hospital Precinct and Sebastopol and Mount Clear Activity Centres also have a high level of servicing and accessibility. This rating has informed the identification of change areas to ensure that any increases in dwelling density are guided towards areas that are better connected to the services and amenities that people need daily. Areas of low accessibility, shown on Map 7 in red, provide opportunities for State Government and City of Ballarat to work collaboratively to improve accessibility through investment to transport infrastructure.

TABLE 4 DESTINATION MAXIMUM CATCHMENT AND WEIGHTING

DESTINATIONS	MAXIMUM CATCHMENT	WEIGHTING
Train Stations	1000m	100%
Bus Stops	400m	33%
Retail	1000m	66%
Supermarkets	1000m	66%
Schools	1000m	66%
Open Space	1000m	66%
Tertiary Education	1500m	66%
Community Facilities	1000m	33%
Health Facilities	1000m	66%
Essential Services	1000m	100%

FIGURE 12 ACCESSIBILITY RATING



> Neighbourhood Character Study

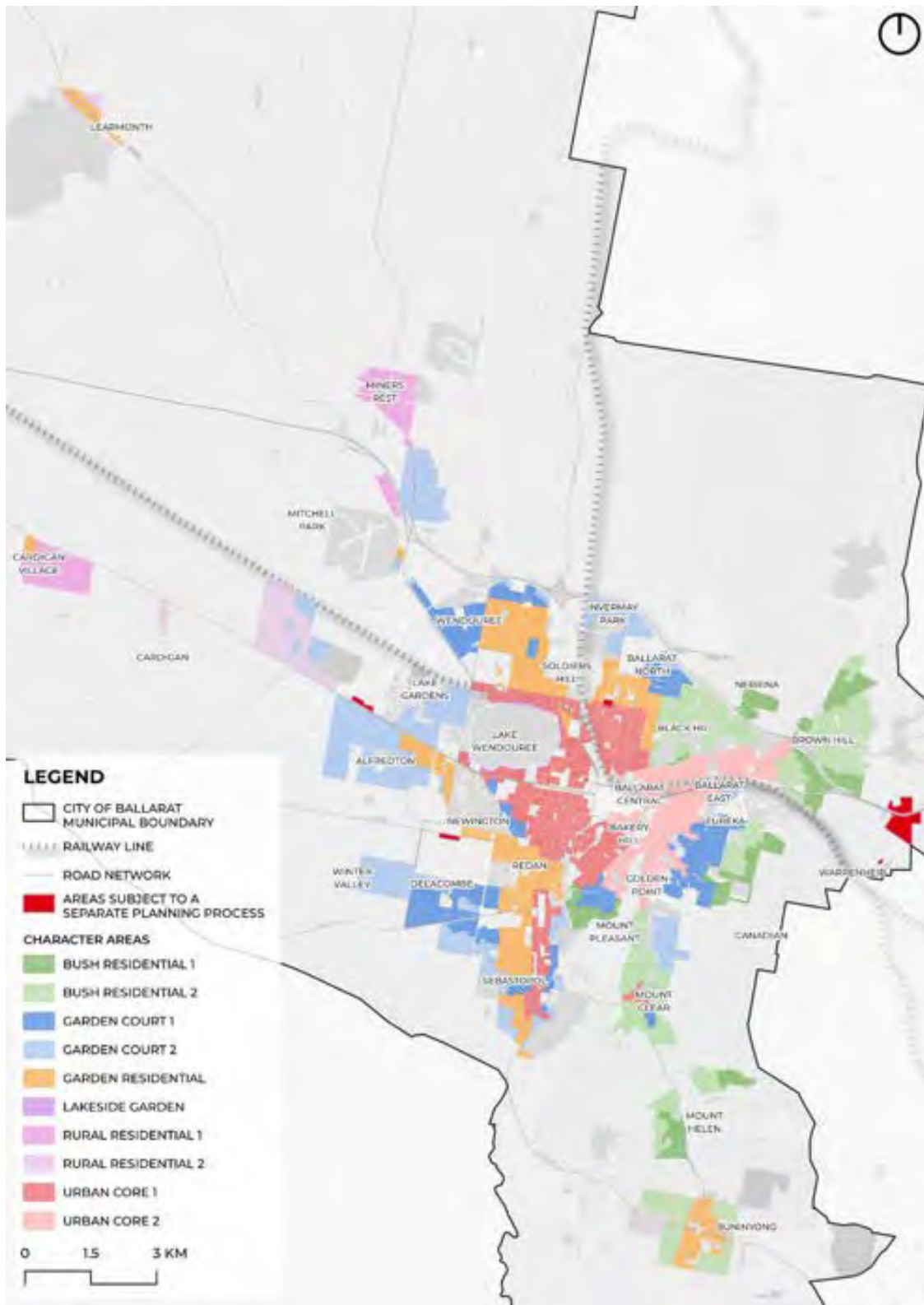
Ballarat has a diverse and unique neighbourhood character that is highly valued by its community. Accordingly, the Ballarat Neighbourhood Character Study has been undertaken to identify the unique values and distinctive attributes within the residential areas of Ballarat. This study develops preferred character objectives and design guidelines that will ensure new residential development is responsive to its context and appropriately reflects the identified preferred Neighbourhood Character across the municipality.

All areas have character, in some areas the character may be more obvious, more unusual, or more attractive, but no area can be described as having no character. The character of all areas is to be respected including areas that planners or designers might not think to be attractive. In determining the change areas neighbourhood character has been considered as an important factor that must be respected but is not one that prevents change. Ultimately, a suite of planning controls will give effect to the preferred character statements and associated design guidelines, based on identified future character attributes and housing growth as informed by the Housing Strategy.

The findings of the Neighbourhood Character Study informed decision making surrounding the application of change areas through a balanced approach with the need to increase density surrounding areas of high accessibility. Further discussion of how factors determining change have been balanced is outline in Section 3 Housing Principles.



FIGURE 13 NEIGHBOURHOOD CHARACTER AREAS





> Opportunities

Existing local planning policy includes opportunities for housing growth that provide desirable circumstances for housing change, including:

- Zone provisions and some overlays, that provide for increased housing development.
- Urban Renewal Areas, where large parcels of land are identified for development or have the potential for development in the future, subject to further work.

Urban Renewal Areas

The Ballarat Planning Scheme identifies areas offering opportunities for urban renewal, where under-utilised or poorly located uses can be redeveloped and revitalized, minimising the need to develop additional greenfield land. The Draft Ballarat Industrial Land Strategy (May 2024) also identifies existing industrial sites that are not strategically required for uses in line with their current industrial zoning.

Providing new housing in Urban Renewal Areas delivers residential capacity without unnecessarily impacting existing residential areas. These areas and

the accompanying structure planning process offer significant opportunities to enact a greater strategic vision, avoiding ad-hoc and fragmented growth. This will result in:

- Improved infrastructure coordination.
- Land use efficiencies through increased densities and co-location of compatible uses.
- Reduced impact of environmental and heritage values.
- Greater opportunities for community consultation.
- Opportunities to incentivise greater housing typology.

The Ballarat Planning Scheme recognises opportunities for urban renewal in Ballarat:

- Wendouree Station Precinct
- Selkirk Precinct, 630 Howitt Sreet, Ballarat North; 804-810 Norman Street, Invermay; 735 Creswick Road, Wendouree.
- Latrobe Street Saleyards Precinct, Delacombe.
- Ballarat CBD.

Urban Renewal Areas are not specific to redevelopment for residential purposes only. It includes change within these precincts that include some large-scale changes, like a change in land use, or small-scale changes like improvements to the public realm. Importantly, urban renewal informed by detailed structure planning provides an opportunity to retain employment uses that better reflect emerging employment trends that can also be accommodated adjacent to sensitive uses.

In addition, where residential or other sensitive uses can be accommodated on Urban Renewal Areas, it is recommended an Environmental Audit Overlay be applied to all current industrial and commercial zones within each urban renewal area to ensure appropriate contamination and remediation in line with EPA requirements and Ministerial Direction 1 – Potentially Contaminated Land.

Descriptions of each Urban Renewal Area and its constraints and opportunities has been provided in Section 3.

The Selkirk Precinct has been excluded from inclusion in this strategy. Consultation with owners of this site have indicated an ongoing commitment and investment in industrial uses into the medium-long term.

The Latrobe Street Saleyards Precinct, including sub precincts of Latrobe Street, Northwest, Old Saleyards, Delacombe South West and Alfredton South have been included in their entirety. Any residential change within this area is likely to include a limited portion of the site due to constraints which will be informed by future investigations and structure planning to detail suitable locations considering mitigation and buffers. This has been reflected in the limited anticipated yield for the area.

The Draft Industrial Land Strategy also identifies areas not already designated as Urban Renewal Areas in the Ballarat Planning Scheme that have been identified as having the potential to accommodate residential uses alongside low-impact employment uses, including:

- Skipton Street, 313 & 317 Skipton Street, Ballarat Central
- Lal Lal Street, 15 Lal Lal Street, Golden Point
- Ballarat East Precinct, bound by Eureka Street, Stawell Street, Charlesworth Street and Fussell Street, Ballarat East
- Rodier Street, 122 Rodier Street, Eureka

Future strategic planning of these sites will determine the extent of urban renewal, detailed uses and applicable zoning.

Wendouree Railway Station Masterplan November 2022

Located approximately 4.8km from the Ballarat CBD, the Wendouree Station Precinct is a key component of the Wendouree Activity Centre. The Wendouree Railway Station Masterplan was developed, and adopted by Ballarat City Council, to create a sense of destination and arrival at Wendouree and to identify which parcels of land surrounding the station may be suitable for development opportunities.

The Wendouree Station Precinct is also identified in the Ballarat Planning Scheme as an Urban Renewal Area and an Ongoing Change Area. Related planning policy seeks to facilitate redevelopment of the precinct. The Housing Strategy recognises the status of Wendouree as an activity centre and an area of significant change.

Residential Growth Zone 1

There are several areas identified within the Ballarat Planning Scheme as Residential Growth Zone 1 (RGZ1). These are generally located in proximity to Wendouree Activity Centre or the CBD.

The purpose of the zone includes:

- To provide housing at increased densities in buildings up to and including four storey buildings. To encourage a diversity of housing types in locations offering good access to services and transport including activity centres and town centres.
- To encourage a scale of development that provides a transition between areas of more intensive use and development and other residential areas. To ensure residential development achieves design objectives specified in a schedule to this zone.
- To allow educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs in appropriate locations.

The RGZ1 land located in proximity to Wendouree Activity Centre has been designated as 'substantial growth' to reflect the opportunities this area has for producing compact neighbourhoods. Where located in proximity to the CBD the RGZ1 land has been designated as 'Incremental Growth' due to the limiting implications the Heritage Overlay controls, and sensitive neighbourhood character may have on infill opportunities in this locality.

Affordable Housing

The City of Ballarat has prepared a Draft Social and Affordable Housing Action Plan that has been developed to identify the ways that the City of Ballarat is able to contribute to social and affordable housing outcomes, with a focus on facilitation and advocacy to address community needs. The action plan focuses on delivering actions within the legislative responsibilities of local government and identifies three tiers of influence available to the City of Ballarat:

- Tier 1: Facilitating efficient housing markets by focusing on partnerships, education and relationship building with industry and community stakeholders. Activity under this tier ensures planning and development control systems are efficient so that the supply side of the market can respond as smoothly as possible to local demand.
- Tier 2: Facilitating affordable housing supply. Activity under this tier would see City of Ballarat take a strong advocacy position in favour of social and affordable housing backed by a well-articulated policy and strategy.
- Tier 3: Investing in affordable housing as a direct agent of social and affordable housing supply, investing ratepayer funds and other assets, such as land to this end.

To underpin the actions in the plan and to clarify City of Ballarat's role in diverse and affordable housing, the following principles will be applied:

1. The City of Ballarat will support affordable housing development located in areas that have good access to schools, shops, services, public open space, and public transport.
2. The city of Ballarat will support and advocate for increased investment in diverse and affordable housing development that is high quality, accessible, sustainable and climate resistant in design and construction.
3. The City of Ballarat will encourage and advocate for support services be in place to ensure successful housing outcomes.
4. The City of Ballarat will encourage and advocate for mixed tenure developments which support a socially cohesive community.
5. The City of Ballarat will take an organisation-wide approach to ensure that actions to support diverse and affordable housing are aligned with other City of Ballarat strategies and plans including but not limited to those that focus on transport, economic development, tourism, asset planning and management.

In response to the above the City of Ballarat has commenced the development of a set of evaluation criteria about the suitability of sites for social and affordable housing (such as location, proximity to services, transport, cost etc) and an audit of City of Ballarat and State Government land and assets to identify any potential sites that meet these criteria.

Next steps include rating of all identified sites, grouping of sites from most feasible to least feasible and identifying possible delivery models for feasible sites, including the most effective role for City of Ballarat (e.g., advocate, supporter, investor, partner etc.) and possible pathways for delivery including partnership and project potential.

Further and ongoing actions include realising opportunities to secure affordable housing in strategic and statutory planning projects, including consideration of inclusionary zoning in a greenfield or urban renewal context, and provide clarity on how City of Ballarat requires developers to deliver social and affordable housing outcomes.

The City of Ballarat has been in ongoing consultation with the development community to increase awareness of the impacts of the current housing crisis and to make provision for social and affordable housing within subdivisions to assist with potential opportunities for State and Federal investment.

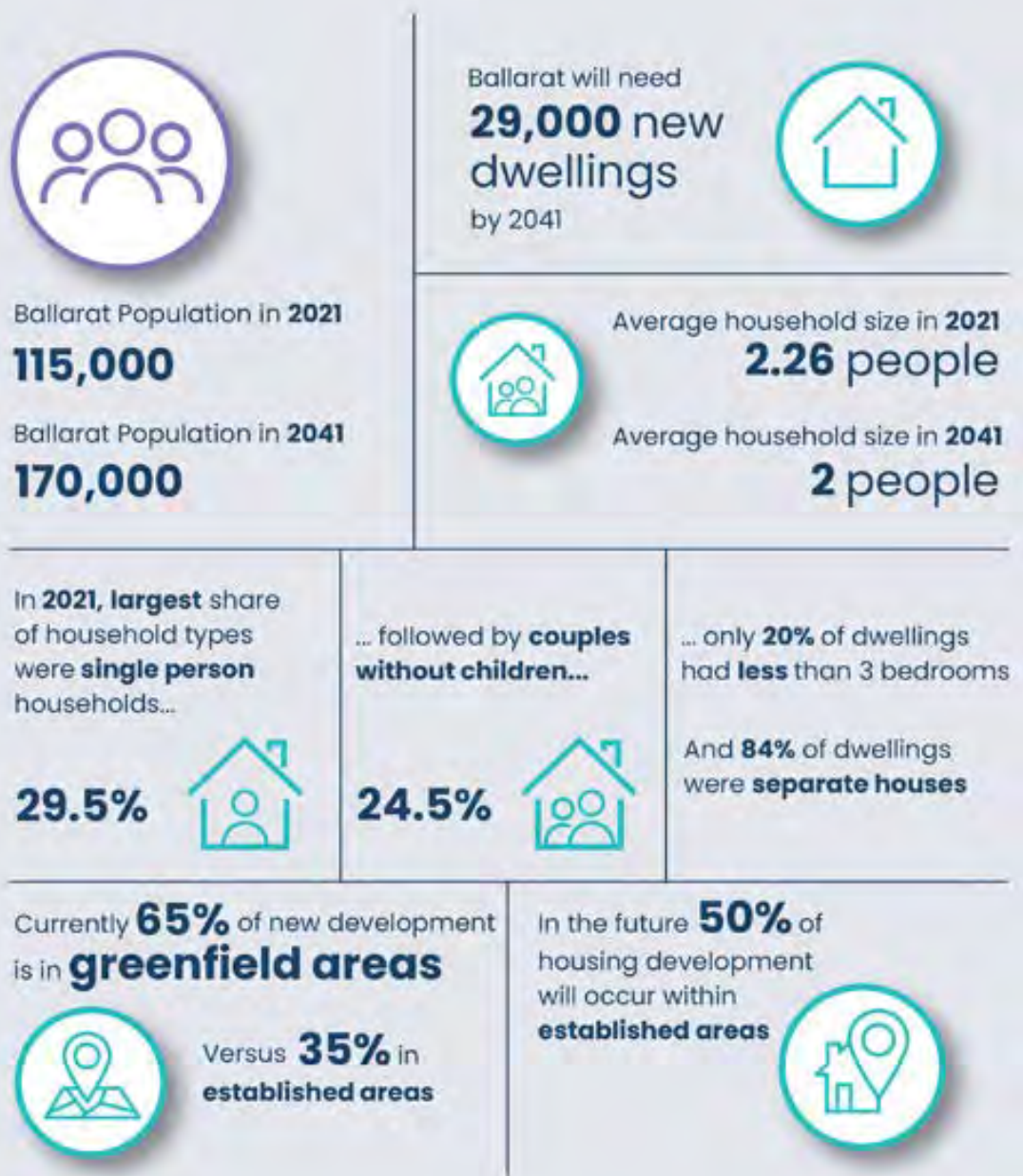
This has been undertaken to ensure there are consistent and clear messages regarding the roles of the City of Ballarat and the operation of planning provisions.

Drivers of Change

Demand for housing requires careful management to ensure our municipality's unique identity is protected and that growth occurs sustainably. Ballarat currently lacks housing diversity and has declining affordability. Ballarat is fortunate to have sufficient supply of

developable land within greenfield and established urban areas that can deliver new housing with access to existing infrastructure, employment, retail, community services and open spaces.

FIGURE 14 DRIVERS OF CHANGE



> Housing Needs

Population Forecast

Population growth is the most fundamental driver of increased housing demand. The State Government provides official population growth forecasts of local government areas through its Victoria in Future (VIF) projections, however the most recently available projections predated both the onset of the pandemic and release of the 2021 Census. At the time of engagement, VIF did not reflect changes in migration, living arrangements and housing markets caused by COVID-19 or the most up-to-date population data for Ballarat. Rather than relying on VIF modelling, the City of Ballarat procured an independent Housing Needs Analysis (HNA) which employed a refined Housing Demand Model to estimate future dwelling demand and housing need in Ballarat.

The Housing Needs Analysis:

- Forecasts new population estimates for Ballarat.
- Models the total demand for housing, based on the new population forecasts.
- Considers the potential impact of different dwelling types and locational preferences.
- Allocates housing demand to greenfield and established areas of Ballarat.

The full report including detailed methodology is provided in Appendix 2.

The 2021 Census recorded 113,482 people living in Ballarat in 50,204 dwellings. The stock of housing in Ballarat has increased by 14,049 dwellings between 2006 and 2021 at an average rate of 2.1% per annum.

The HNA employs a High Growth Scenario which predicts that the recent high population growth experienced in Ballarat in 2021/2 will be sustained over the longer term to 2041. Projecting for population growth at the higher end of the scale allows for reduces the risk of decision makers under forecasting housing needs. A population growth of 2.1% results in a future population of 171,429 by 2041 and a requirement for the City of Ballarat to plan for 28,961 dwellings by 2041.

Demand for Housing Type

To determine how many new dwellings of different types will be required in 2041, the City of Ballarat undertook a Housing Demand Model drawing upon a range of datasets, including population growth projections and trends in population age, family, and household types. The full report including detailed methodology is provided in the Housing Needs Analysis (Appendix 2).

There is currently a mismatch between dwelling sizes (the number of bedrooms in a dwelling) and household sizes (occupancy) in Ballarat. As of the 2021 Census, Ballarat's population of 113,482 was spread across 50,204 dwellings, providing for an average of 2.26 persons-per-household. Lone person households represented the largest share of household types (29.5%) followed by couples without children (24.9%). However, only 20% of dwellings had less than 3 bedrooms.

The HNA projects a significant shrinking in household size over the next 20 years, reaching an average of 2.00 persons-per-household. In response, demand for smaller types of housing (smaller semi-detached dwellings, flats, units and apartments) is expected to grow. Lone person families are expected to experience the largest total increase of all family types and will continue to represent the largest share of all household types to 2041. Couples with children will increase in outright terms but decrease as a share of all households.

In addition to historical trend data the HNA was informed by a Housing Preferences Survey. This involved a combination of qualitative and quantitative survey work with members of the Ballarat community that sought to understand the type of housing they would wish to live in. The purpose of the Survey was to help the City of Ballarat understand the mixture of housing types and size that the community would wish to have as an option to move into for their next home. This survey provided evidence of gaps in Ballarat's housing market for smaller dwellings, dwellings in established areas and affordable homes.

TABLE 5 POPULATION GROWTH – HIGH GROWTH SCENARIO

YEAR	HIGH GROWTH
2021	113,482
2026	128,810
2031	139,478
2036	154,630
2041	171,429
Change	+ 57,947
Average Annual Growth Rate	2.1%

TABLE 6 HOUSEHOLD PROJECTION, BY HOUSEHOLD TYPE, LOW SCENARIO, 2021 TO 2041

	2021	2041	TOTAL CHANGE 2021 TO 2041	AAGR
Couple family with children	11,763	15,629	3,866	1.4%
Couple Family without children	11,872	17,481	5,609	2.0%
Group household	1,808	3,229	1,421	2.9%
Lone person household	14,018	21,130	7,112	2.1%
Multi-family household	402	547	145	1.6%
One parent family	5,658	8,129	2,471	1.8%
Other family	467	632	165	1.5%
Other non-classifiable	1,602	2,180	578	1.6%
Total	47,590	68,957	2,1367	1.9%

TABLE 7 DWELLING TYPOLOGY REQUIREMENTS BASED ON POPULATION PROJECTIONS - 2.1% - HIGH-GROWTH SCENARIO

DWELLING TYPE	2021	2026	2031	2036	2041	EXTRA DWELLINGS NEEDED	CHANGE (%)
Separate house	42,262	47,518	52,753	58,712	65,087	22,825	54%
Attached dwelling	6,335	7,488	8,667	10,024	11,509	5,174	82%
Flat or apartment	1,409	1,619	1,824	2,053	2,332	923	66%
Other	198	207	210	210	237	39	20%
Total	50,204	56,833	63,454	71,000	79,165	28,961	58%



Location of Housing

The City of Ballarat’s ambition of increasing the proportion of infill housing will take some time to achieve. In the short term, it is expected that there will continue to be more greenfield development than infill. However, from 2031 onwards infill will become the dominant form of development. Greenfield locations are expected to deliver detached dwellings in most instances (99% of the total). For infill locations, 32% of new dwellings are projected to be separate houses, with the remaining 68% being attached houses or flats/apartments driven by demand for smaller more accessible dwellings.

The City of Ballarat has collated data on building permits for new houses in infill locations and growth areas indicating a current split of 70% greenfield development versus 30% infill development.

An increased proportion of infill development will require facilitation through the implementation of new planning controls subsequent to the adoption of the Strategy.

TABLE 8 BUILDING PERMITS FOR NEW HOUSES

YEAR ISSUED	TOTAL DWELLINGS	NUMBER OF DWELLINGS (GREENFIELD)	NUMBER OF DWELLINGS (INFILL)	PERCENTAGE SPLIT (GREENFIELD / INFILL)
2019	1,017	610	407	60/40
2020	1,715	1,162	553	68/32
2021	2,013	1,426	587	71/29
2022	1,570	1,210	360	77/23
2023	1,087	775	312	71/29
2024 (Jan – Apr)	339	230	109	68/32
Total	7,741	5,413	2,379	70/30

> Housing Supply

Housing supply in Ballarat can be divided into 3 segments:

Greenfield Land Supply currently zoned as Urban Growth Zone including:

- Ballarat West PSP.
- Alfredton West PSP.
- Northern Growth Area.

Established areas within our six existing residential zones:

- General Residential Zone.
- Mixed Use Zone.
- Neighbourhood Residential Zone.
- Residential Growth Zone.
- Low Density Residential Zone.
- Township Zone.

Urban Renewal Supply

These areas include:

- The Ballarat CBD (Including Scott parade, Haymes crescent and Creswick Rd precincts).
- The Wendouree Station Precinct.
- Ballarat Saleyards Precinct.
- Urban Renewal Areas identified in the draft Industrial Lands Strategy.

Detailed description and interrogation of the potential urban renewal areas is provided in Section 3.

Greenfield Land Supply

The Ballarat Growth Area Framework Plan (the Framework Plan) has been developed to address Ballarat’s future long term greenfield growth by providing a blueprint for an expanded urban area. The capacity of the exiting greenfield areas is outlined in Tables 9 and 10.

TABLE 9 EXISTING GREENFIELD ZONED LAND SUPPLY**

EXISTING ZONED GREENFIELD LAND SUPPLY	DWELLING CAPACITY ASSUMPTIONS
Ballarat West PSP	approx. 8800*
Alfredton West PSP	approx. 800
Northern Growth Areas (Core Area)	6,600
Total	16,200

* 8,800 capacity based upon 15 lots per hectare which is considered to be maximum take up.

TABLE 10 UNZONED GREENFIELD LAND SUPPLY**

UNZONED GREENFIELD LAND SUPPLY	DWELLING CAPACITY ASSUMPTION
Northern Growth Area (expanded area)	2,600
Western Growth Area	12,900 - 17,203
North Western Growth Area	7200 - 9600
Total	22,700 - 29,403

**Figures in Table 9 and 10 are based on data from July 2024.



Established Areas Land Supply

The Municipal Housing Capacity Assessment (Appendix 4) calculates the capacity of established areas to accommodate new dwellings based on both the current planning zone controls and the uplift achieved via application of the proposed Change Areas within the established residential areas of Ballarat (excluding Urban Renewal Areas).

To quantify available land, the study calculated the total number of lots available for development based on the current planning controls and then removed land with constraining factors, specifically:

- Public land uses.
- Strata-titled lots.
- Individually significant heritage places.
- Recently developed properties.
- Parts of lots covered by the existing or proposed Flood Overlay and Land Subject to Inundation Overlay.
- Parts of lots with trees a minimum of 5m tall.
- Lots too small to accommodate a net additional dwelling based on the above and/or dwelling density.

Potential dwelling yield for each available lot was then determined by applying a dwelling density to each lot, informed by typical densities, planning controls and locational characteristics. A net gain in dwellings was then calculated for each available lot and the total potential net gain in dwellings across the municipality.

The Municipal Housing Capacity Assessment identifies potential for an additional 30,261 dwellings within the established residential areas of Ballarat when constraints and current planning controls are applied.

Potential Uplift of Dwelling Capacity Resulting from Change Areas

Once the Change Areas are applied the HNA assessment identifies an increase in the potential dwelling capacity to 31,250 dwellings within Ballarat's established residential areas. This modest increase reflects the reduction in dwelling capacity resulting from the application of the minimal change designation and moderate influence anticipated by the incremental change designation across many existing residential areas.

Potential Uptake within Established Areas

To better understand the likelihood uptake of infill and its impact on land supply the City of Ballarat commissioned SGS Economics to undertake an Infill Uptake Analysis. The Analysis compares total capacity to total demand in order to provide an indication, at the municipal level, of the relationship between forecast growth and hypothetical capacity. The tables below compare capacity to demand for each demand scenario. The full analysis and findings are available in Appendix 5.

The analysis forecast three different scenarios:

1. 20% of new dwellings in established areas and 80% within greenfield areas.
2. 50% of new dwellings in established areas and 50% within greenfield.
3. 70% of new dwellings in established areas and 30% within greenfield areas.

The analysis showed that if only 20 per cent of new dwellings are built in infill areas that there is 18 years of capacity for greenfield housing, which is less than might be required to accommodate the 20-year growth forecast.

The comparison of capacity to the two alternative demand scenarios reveals that there is sufficient theoretical capacity to accommodate demand assuming a higher share of growth in infill locations, up to, and potentially exceeding the City of Ballarat's policy aspiration for 50% of dwelling growth in infill areas.

In summary, Ballarat has capacity to accommodate a range of demand scenarios and that the existing patterns of residential zoning are likely sufficient to accommodate future housing demand, including where a significantly increased share of demand is forecast in established areas.

Dwelling growth in Ballarat has traditionally been dominated by greenfield housing development. However, the Victorian Housing Statement released by the Victorian Government in 2023 commits to a target of 70% infill development across Victoria. Achievement of this aspiration would require all metropolitan and regional housing markets to achieve significantly higher shares of infill development. The alternative demand scenarios developed for this report are hypotheticals drawing on these local and state government policy aspirations. They imply shifts in the location and type of future housing growth relative to recent growth trends.

Urban Renewal Areas Land Supply

Early density estimates for Ballarat's Urban Renewal Areas indicate there is significant potential capacity for these precincts to contribute to housing supply. Although it is not possible to give accurate yield estimates, to give an indication of potential capacity this strategy has applied a rate of between 35 dwellings per gross hectare, based on the yield of similar developments. A very conservative approach has been taken with estimates at the lower end of potential capacity.

Achieving the forecasted dwelling yields will be dependent on future strategic planning work, specifically structure planning, to establish detailed land uses, zoning and planning controls for each site and to plan for the transition of some industrial and commercial land uses out of these precincts. As part of the consideration of land use changes/rezoning for Urban Renewal Areas, the application of the Environmental Audit Overlay (EAO) to potentially contaminated land (land used for industry and mining) where a sensitive use is proposed.

There is short-medium term potential for smaller scale redevelopment to be realised across the Wendouree RGZ area and the Ballarat CBD. While some areas could potentially accommodate higher density structures up to 8 storeys it is important to note the current limited market for apartment-style developments in the City of Ballarat, with only a few existing examples.



TABLE 11 URBAN RENEWAL SITE POTENTIAL DWELLING YIELDS

URBAN RENEWAL SITE	POTENTIAL DWELLING YIELD
Latrobe Street	1574
Ballarat East/Eureka /Rodier Street	836
Lal Lal Street	28
Skipton Street	14
Wendouree Station	2191
CBD	4000
Total Yield	8643

> Urban Renewal- Prioritisation and Infrastructure

The development of the Urban Renewal Areas will be prioritised using a framework that systematically assesses both the demand for, and the supply capacity of, the urban renewal areas to ensure they align with market demand, infrastructure capabilities, and policy objectives. This will ultimately lead to sustainable and beneficial development.

The prioritisation framework uses a multi-criteria analysis (MCA) to determine the priority of Urban Renewal Areas and provides a rapid and strategic comparison of each area. Other tools such as a cost benefit analysis (CBA) are useful as projects progress to planning and detailed design phases. An initial assessment of public finance requirements will be applied to prioritisation to ensure the MCA has regard to cost considerations.

The following principles drawn from Infrastructure Australia's Assessment Framework² underpin this framework.

- Principle 1: Match the tool to the task - the infill prioritisation framework is a complement to the City of Ballarat's existing processes to identify sites for development, it will be used in conjunction with other existing City of Bamerit selection processes.

- Principle 2: Be transparent - documentation needs to be sufficient to understand the basis for the MCA logic, design and recommendations. Documentation should be developed in tandem with the development of the framework tool.
- Principle 3: Address relevant assessment criteria- assessment criteria must be sufficiently met to ensure the robustness of decision-making.
- Principle 4: Address deliverability - prioritising sites must have regard to the financial and time considerations associated with delivery, including relevant assumptions of supply-side constraints that may affect delivery timeframes.

The following Urban Renewal Areas will be assessed using the framework:

1. Skipton Street
2. Lal Lal Street
3. Ballarat East
4. Rodier Street
5. Wendouree Station Precinct
6. Latrobe St Saleyards Precinct.

Each area will be analysed and assessed against several criteria and ranked based on the site analysis scoring with criteria to be weighted or turned on/off to test sensitivity of the prioritisation. Infrastructure cost considerations are built into the prioritisation to consider and prioritise sites based on cost to develop (including enabling infrastructure connections).

Prioritisation will provide council with an indication of priority sites by comparing MCA scores, potential site yield and anticipated costs. Anticipated costs to council include estimated costs to service and develop the sites based on the enabling infrastructure and potential site yield.

Application of the prioritisation framework to Urban Renewal Sites will require the information inputs outlined in table 12.

²Infrastructure Australia, 2021, Guide to multi-criteria analysis: Technical guide of the Assessment Framework. July 2021

TABLE 12 URBAN RENEWAL AREA INPUTS

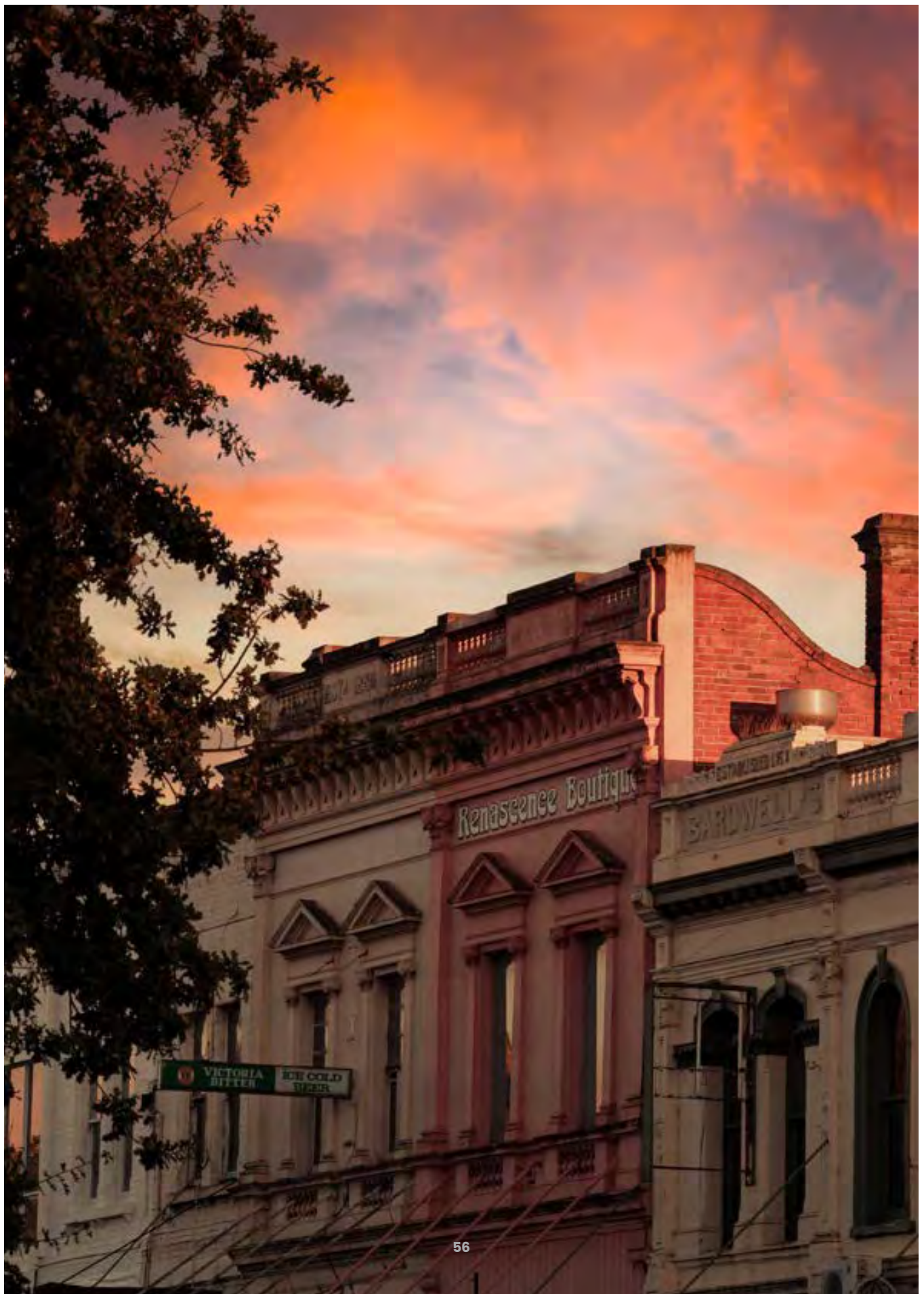
CONSIDERATION	REQUIREMENTS	SOURCE
Water Infrastructure	Pipe capacity, treatment capacity, equivalent tenements	Central Highlands Water (CHW)
Stormwater	Stormwater infrastructure and capacity	Catchment Management Authority (CMA) City of Ballarat
Sewerage	Sewage infrastructure and capacity	CHW
Energy	Energy infrastructure, existing and planned	Powercor (Electricity) AusNet Services (Gas)
Telecommunications	Internet speed and type, connections, network	NBN, Telstra
Open Space	Open Space audit	City of Ballarat
Flooding	Flood prone land	City of Ballarat, CMA
Contamination	Site audits and Remediation plans	City of Ballarat, Landowners
Planning Objectives	Planning Scheme overlays, Zones, current use , strategic directions – local and state)	City of Ballarat, State Government
Employment	Existing Employment Numbers	City of Ballarat, Landowners
Accessibility	Accessibility Mapping	City of Ballarat
Government Infrastructure	Existing and planned infrastructure Projects - mapping	State Government
Developer Attraction	Permits, Developer Community feedback, feasibility analysis	City of Ballarat, Landowners

Overall Supply

As shown in Table 13 there is a sufficient supply of land for new housing in the City of Ballarat for the next 15 years. In response, the application of change areas in the strategy focuses on managing the delivery of this supply in order to activate the vision for new dwellings being located close to services and infrastructure and ensuring development occurs in a manner that protects our existing heritage, character and environment.

TABLE 13 TOTAL POTENTIAL DWELLING YIELDS

DEMAND	
Total	28,961
SUPPLY WITHOUT CHANGE AREAS	
Zoned Greenfield Land Supply	16,200
Established Areas Land Supply	30,261
Total	46,461
SUPPLY WITH CHANGE AREAS	
Zoned Greenfield Land Supply	16,200
Established Areas Land Supply	31,250
Urban Renewal Supply	8,643
Total	57,093



Section 3 Housing Framework Plan

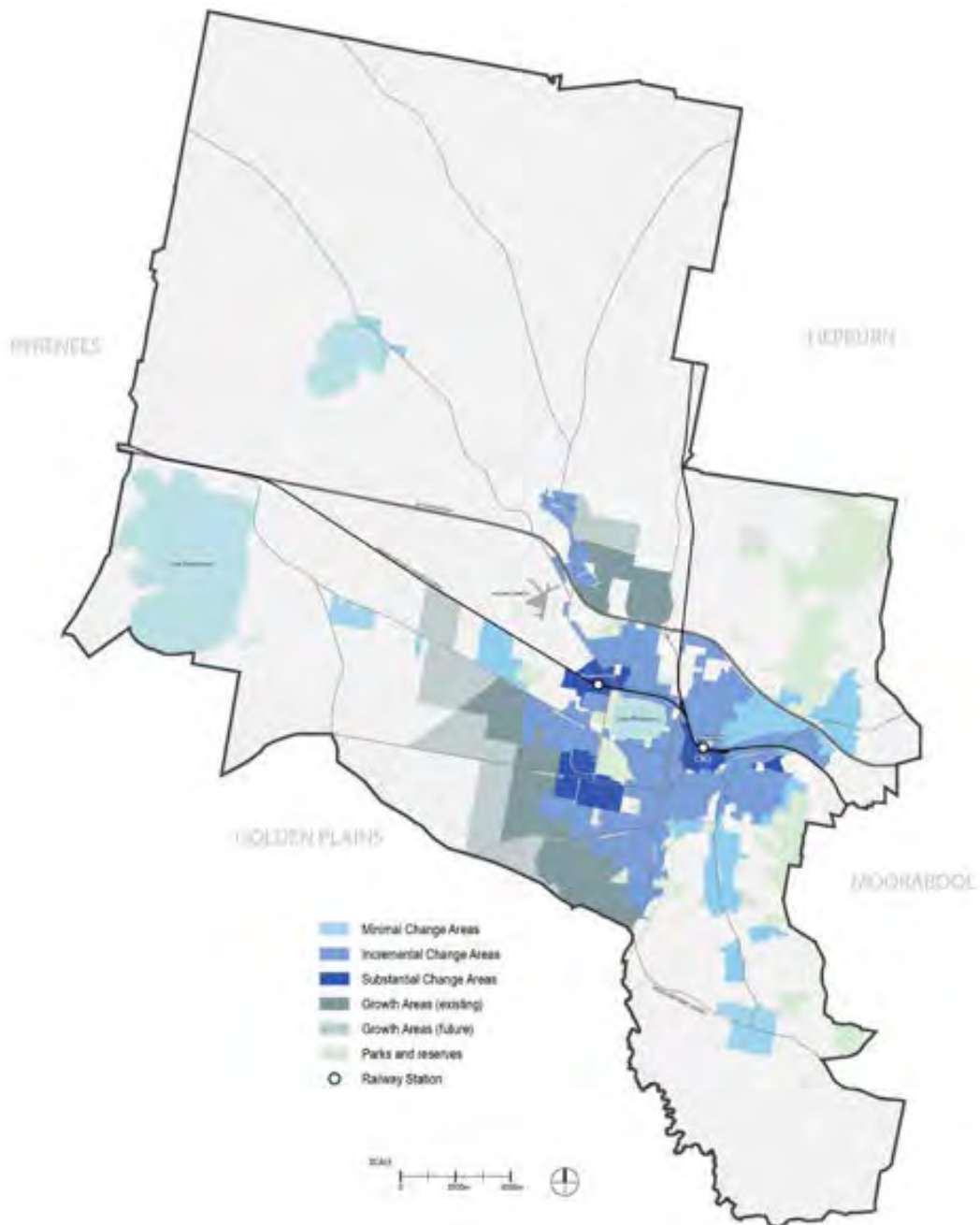


The Vision

The City of Ballarat will contain a variety of dwelling types, designs and lot sizes which meet the needs of residents. High quality contemporary housing is embraced that responds to our heritage and neighbourhood character. More people will have access to services and employment without using a car and affordable housing allocated in the most accessible areas for people that need them most. New homes will be built in areas that do not compromise our native flora and fauna.

Housing Framework Plan

FIGURE 15 HOUSING FRAMEWORK PLAN



> Housing Objectives

The vision for Ballarat has been translated into Change Areas based on the following objectives:

TABLE 14 HOUSING OBJECTIVES

OBJECTIVE	DIRECTIONS
Ensure Ballarat sustains housing and population growth for at least 15 years.	<p>Population Growth - Ballarat will accommodate projected population growth over at least a 15-year period.</p> <p>Locations - Provide clear direction provided on locations where growth should occur.</p> <p>Opportunities - Areas for consolidation, redevelopment and intensification identified.</p>
Provide diverse and affordable housing with access to jobs, activity centres, public transport, schools and open space.	<p>Accessibility - New homes should be in places which have high levels of accessibility.</p> <p>Infrastructure - New housing should be located close to infrastructure to benefit from existing investment.</p> <p>Compact - Planning should reduce sprawl and conflicting uses, increase the proportion of infill housing.</p>
Ensure Ballarat is a distinctive and liveable city with quality design and amenity.	<p>Balancing Character and Heritage - New development should be sensitive to Ballarat's Heritage and Character elements.</p> <p>Affordability - A diversity of housing types to be provided with a focus on delivery of good design to meet long term housing needs at a range of price points.</p> <p>Diversity - Ballarat will facilitate and manage increased housing diversity to cater for a change in household size.</p>
Ensure housing is in areas that does not increase the risk to human life or to human health or the environment.	<p>Safety - Housing should be directed away from areas of high bushfire and flood risk.</p> <p>Mitigation - Where suitable risks should be mitigated to allow for residential development in established areas. For example, flooding.</p> <p>Interfaces - Ensuring new residential use and intensification of existing residential areas are compatible with non-residential interfaces.</p> <p>Contamination - Contaminated land should be identified and where identified for sensitive uses, remediated.</p> <p>Habitat - Habitat and native vegetation loss should be avoided, and key biodiversity areas protected.</p>
Ensure there is provision of infrastructure to support housing growth in Ballarat.	<p>Growth infrastructure - Planned for in accordance with capital works programs and developer contributions plans.</p> <p>Costs - Service limitations and costs of providing infrastructure considered.</p> <p>Integration - With transport, open space and community asset plans.</p> <p>Movement - Neighbourhoods promote active lifestyles by promoting walkability and alternative transport.</p>



Change Areas

The Housing Framework Plan provides the strategic plan for accommodating Ballarat's projected population growth to 2041 and provides clear directions on locations that are most appropriate for residential growth to occur. The Housing Framework Plan demonstrates Ballarat has ample supply of developable land within established areas to account for projected population growth. These established areas provide the greatest opportunities to deliver housing in locations with excellent amenity and accessibility to employment, retail, community services and open spaces.

The directions contained in this strategy will be used to guide the City of Ballarat's response to housing change and growth, including the type, size and form of dwelling stock, in addition to locational characteristics. The sequencing and rate of future residential development will consider natural limitations to the location and extent of development due to servicing constraints and cost. Performance-based development staging requirements will be considered for large subdivision developments.

The Housing Framework Plan identifies Change Areas within the existing residential zones and identified Urban Renewal Areas. The Framework Plan does not identify any new residential areas for greenfield growth as this has been provided for in the Ballarat Growth Area Framework Plan.

The Housing Framework Plan delineates the following three broad categories of housing change to guide the future growth and continued development of Ballarat's established residential areas:

- Minimal Change
- Incremental Change
- Substantial Change

Ensure Ballarat sustains housing and population growth for at least 15 years.

The City of Ballarat will provide sufficient land to accommodate housing growth for at least the next 15 years. The application of Change Areas in the strategy focuses on managing the delivery of this supply to activate the vision for new dwellings being located close to services and infrastructure and ensuring development occurs in a manner that protects our existing heritage, character and environment. Change areas will contribute to the anticipated housing growth in Ballarat.

Provide housing diversity and affordable housing with access to jobs, activity centres, public transport, schools and open space.

To meet the vision of a sustainable, accessible and compact Ballarat, new homes need to be channelled towards areas with access to existing employment, services and amenities.

This direction is in line with State Government planning policy and ensures that Ballarat makes the most of existing infrastructure and establishes sustainable patterns of development that fosters cohesive and strong communities. This does not mean that the City of Ballarat intends to prevent new housing being built in areas with less access to services and amenities, but that development will be channelled to areas where the most can be made of existing resources. One of the key features of the Housing Strategy is that it looks to accommodate growth in existing urban areas by undertaking urban renewal of underutilised industrial sites and increasing the residential occupancy of the CBD.

Good quality access to services and amenities is a fundamental component of socially, economically, and environmentally sustainable development. Infrastructure Victoria's 2023 research 'Choosing Victoria's future: 5 urban development scenarios' identifies benefits of the compact city model, including:

- Reduced infrastructure costs. Across Victoria infrastructure in a dispersed city costs the government approximately \$59,000 extra for every new home built, compared to a compact city.
- More land for agriculture, biodiversity, and wildlife habitat. A sprawling, dispersed city consumes a substantial number of additional hectares of land compared to a compact city.
- Reduced time spent in congested traffic to get to jobs and services resulting in positive environmental, physical, and mental health outcomes.
- Better opportunities to connect business, staff, and customers.

The Accessibility Rating Analysis provides additional insight to Ballarat's existing areas of high accessibility.

Ensure Ballarat is a distinctive and liveable city with quality design and amenity.

Heritage and character play a significant role in what makes Ballarat distinctive. The Ballarat community has previously identified that heritage is highly valued and wanted to retain. A significant portion of our built form heritage is located within the CBD and surrounding residential suburbs. These areas are also some of Ballarat's most accessible with excellent access to services and infrastructure.

In areas where there is the potential for conflict between the desire for growth based on high levels of accessibility and servicing, and the desire to protect heritage and sensitive neighbourhood character, a designation of 'incremental change' has been applied. This reflects the way Ballarat will facilitate and manage progressive housing growth. Preferred neighbourhood character statements are forward-looking so that if an area is identified for increased housing, growth is not restricted by existing character, but rather design and typology is guided by it.

Ensure housing is in areas that does not increase the risk to human life or to human health or the environment.

The City of Ballarat is bordered by undulating mountainous country with typically moderate rainfall and significant dry sclerophyll forest over much of the area on the eastern boundary of the municipality. Past fires in the Ballarat area and surrounds have demonstrated the potential for considerable impact on flora and fauna and property. One of the most effective ways to lower the risk of bushfire impacts is to reduce development activities near areas of high risk. This has been reflected in the strategy by applying a minimal change designation to these areas.

The redevelopment of industrial sites for residential purposes and/or intensification of existing residential may result in interfaces with non-residential uses. In addition, some existing non-residential sites may face issues with contamination due to previous activities, where new residential uses are developed or existing residential areas intensified consideration has been given to the impact this may have on non-industrial uses. Ensuring separation distances are satisfactory will protect residents' health and ensure the ongoing feasibility of non-residential uses. Where the change areas intensify residential uses adjacent to non-residential uses, existing planning scheme controls will continue to ensure land uses are suitably separated.

Areas identified for significant change and urban renewal will require the undertaking of further investigation including structure planning and rezoning. These processes include requirements for risk assessment and application of suitable planning controls to ensure ongoing land use compatibility including the application of the Buffer Area Overlay (BAO) where appropriate.

Ensure there is provision of infrastructure to support housing growth in Ballarat.

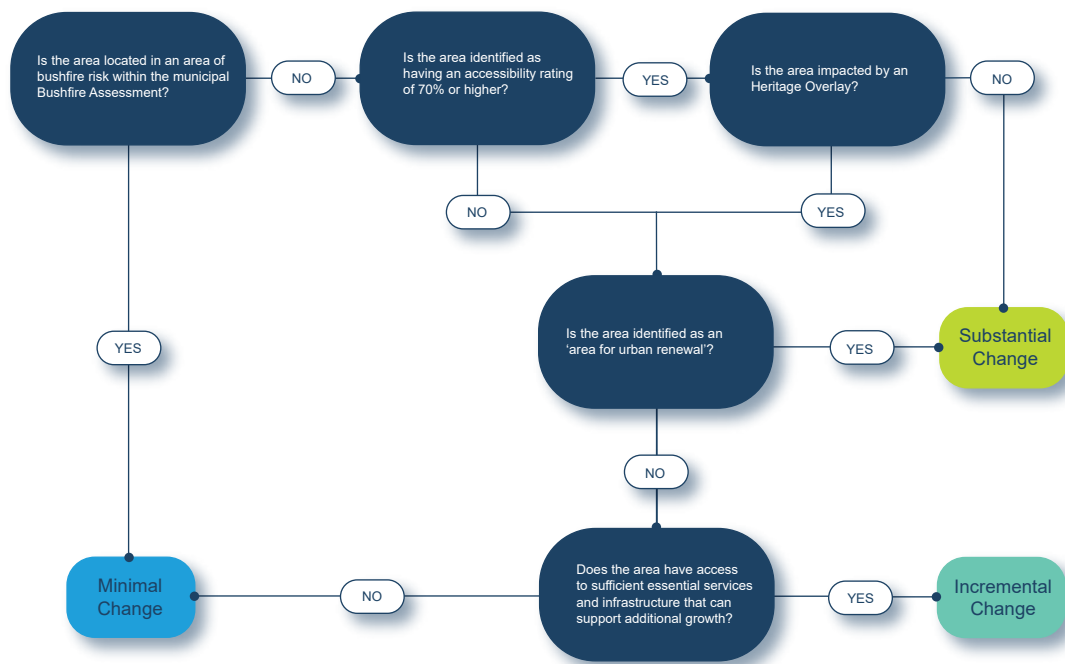
The Housing Strategy identifies locations for the delivery of higher density housing in areas with existing infrastructure. Infrastructure augmentation is to be delivered through State commitments, utility planning and engagement with service delivery agencies such as CHW and the City of Ballarat’s capital works program to support growth. As complementary strategies, the City of Ballarat is developing an Integrated Transport Strategy for Ballarat to ensure efficient provision of transport infrastructure alongside an Open Space Strategy, Diverse and Affordable Housing Action Plan and Community Infrastructure Plan in support of the Housing Strategy.

> Application of Logic

These objectives have been applied to decision making for change areas using the following logic:

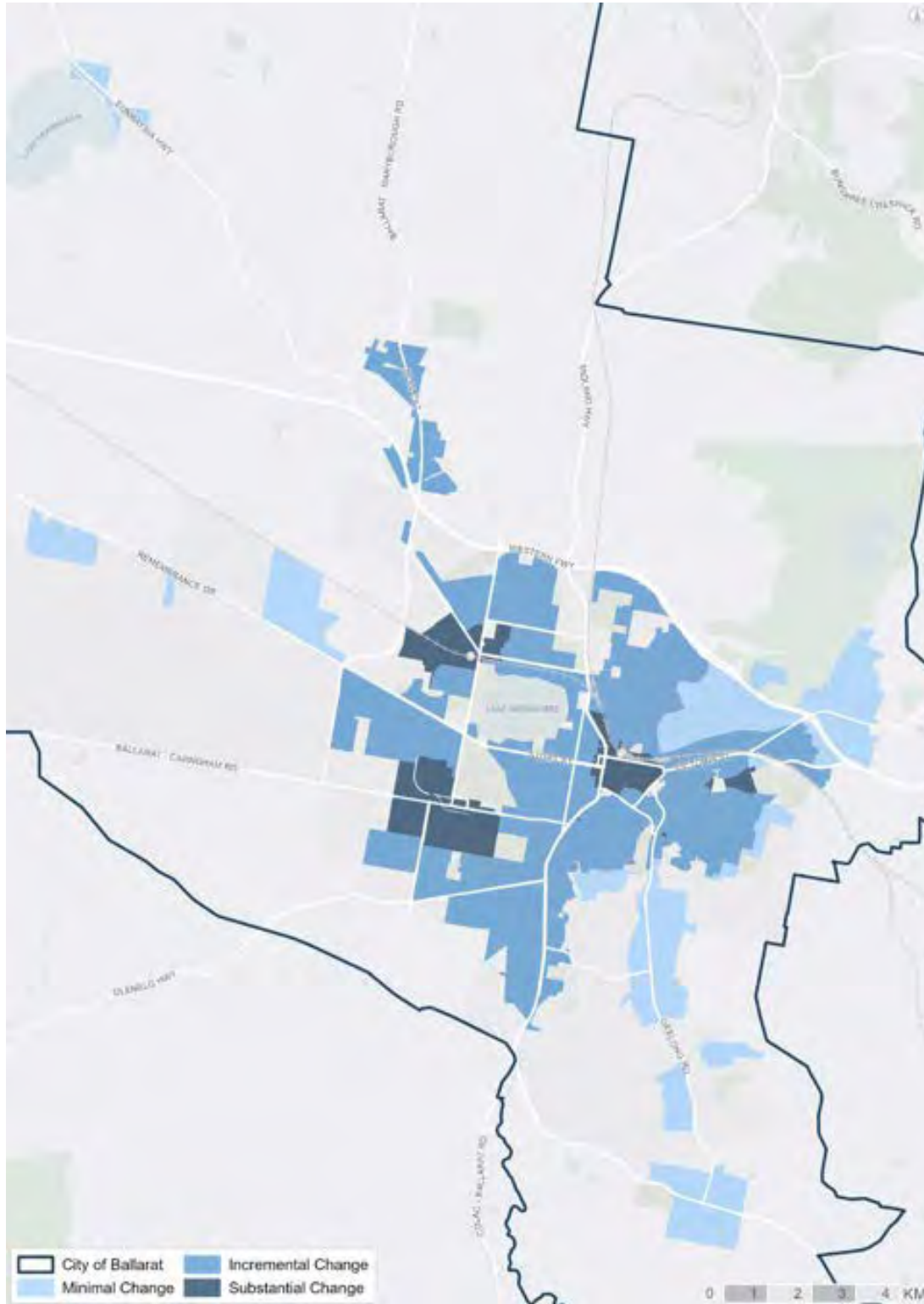
- Boundaries have been designed to provide compact locality. In some cases, streets or whole blocks have been used as logical mapping boundaries for a residential change area and linear inclusions on lots have been eliminated.
- A transition from substantial change through to minimal change has been 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.

FIGURE 16 LOGIC MAPPING



Change Areas

FIGURE 17 CHANGE AREAS





> Minimal Change Areas

Comprised of locations with significant bushfire risk and/or those established areas with significant barriers to servicing growth.

Minimal Change Areas comprise areas which have limited capacity to accommodate future residential development and growth based on the application of the following criteria:

- The identification of the land as bushfire landscape 3a (areas near forest hazards), 3b and 4 (forest hazards) in the strategic planning for bushfire in the City of Ballarat prepared by Kevin Hazell Bushfire Planning.
- Cost of providing services to support growth.
- Strategic directions to ensure a compact form of urban development.

These areas represent the lowest degree of intended residential growth and change in Ballarat. Future housing will predominantly be comprised of one or two storey detached dwellings. Larger lots may be developed with more than two dwellings.

The objectives for the proposed Minimal Change Areas include:

- Encourage a consistency of housing types – in particular, detached housing.
- Ensure new development contributes to the preferred neighbourhood character of the area.
- Encourage retention of existing housing that positively contributes to the preferred neighbourhood character of the area.
- Retain opportunities for household types and sizes that may require larger dwellings, garden spaces and/or adaptable spaces.

> Incremental Change Areas

Incremental Change Areas encompass residential areas that will allow for increased housing consistent with the preferred neighbourhood character of the area and site-specific constraints.

Incremental Change Areas encompass a large portion of Ballarat's established residential areas. This designation will encourage progressive housing growth, with a variety of housing types, consistent with constraints such as the Heritage Overlay (HO), various Design and Development Overlays (DDO) and sensitive neighbourhood character where applicable. The designation acknowledges that much of the most accessible inner areas of Ballarat's established residential areas are managed with a HO and have sensitive character qualities. In these locations, site specific controls and preferred neighbourhood character guidelines will continue to protect sensitive locations from overdevelopment and inappropriate change, while allowing for modest growth and infill opportunities.

Incremental Change Areas will comprise a mixture of future housing in the form of detached houses, dual occupancies, townhouses and apartments. New housing will generally be up to two storeys, consistent with the preferred neighbourhood character of the area.

To retain this strategic direction for the city and enhance neighbourhood character values, residential land that is not either minimal or substantial change is identified as incremental change.

The objectives for the proposed Incremental Change Areas include:

- Allow for modest housing growth and diversification in the form of detached houses, townhouses and apartments.
- Ensure new development contributes to the preferred neighbourhood character of the precinct and addresses values and constraints identified through built form overlays as appropriate.
- Ensure retention of existing housing types and characteristics that positively contribute to the preferred neighbourhood character of the precinct.

Substantial Change Areas

Substantial Change Areas will provide for housing growth with increased densities and housing diversity in areas with high accessibility to services that are not subject to restrictive constraints.

Substantial Change Areas have been identified in areas where housing growth and diversity at increased densities can be achieved. These areas include land located within close walking distance of major activity centres, or areas with opportunities for urban renewal. By focusing growth in these areas, the city can accommodate significant growth in areas with existing servicing and amenity without adversely impacting areas containing either sensitive heritage or neighbourhood character qualities or requiring additional development of greenfield land.

Substantial Change Areas have been identified as best placed to accommodate increased levels of housing in accordance with the following considerations:

- Areas that are very well-serviced by existing transport facilities, as demonstrated by a rating of 70 per cent or higher by the Residential Accessibility Rating Analysis.
- Areas identified for urban renewal in the Ballarat Planning Scheme.
- Underutilised industrial areas that have the potential to accommodate alternative uses, including housing, as identified in the Draft Industrial Land Strategy.

The objectives for the proposed Substantial Change Areas as they relate to the provision of housing include:

- Encourage the development of increased-density housing, particularly townhouses and apartments, to be defined through future structure planning.
- Ensure design and function of new development is of the highest quality and complements Ballarat's overall image and character.
- Encourage a diversity of housing types, including smaller housing types (particularly one- and two-bedroom dwellings) and apartments with three or more bedrooms.
- Encourage a variety of tenures, particularly affordable and social housing types, to meet the needs of a range of households.
- Encourage the planning and provision of physical and social infrastructure.
- Encourage public realm improvements to enhance the appearance, function and safety of those areas subject to the greatest increase in residential density.
- Encourage site amalgamation and consolidation.

- Application of an Environmental Audit Overlay to all current industrial and commercial zones within each urban renewal area to ensure appropriate contamination and remediation in line with EPA requirements and Ministerial Direction 1 – Potentially Contaminated Land.

The RGZ1 land located in proximity to Wendouree Activity Centre has been designated as 'substantial growth' to reflect the opportunities this area has for producing compact neighbourhoods. Where located in proximity to the CBD the RGZ1 land has been designated as 'Incremental Growth' due to the limiting implications the HO controls, and sensitive neighbourhood character may have on infill opportunities in this locality.

Substantial Change Areas

> Ballarat CBD

The Ballarat CBD is characterised by some well preserved and highly intact heritage streetscapes. The CBD also has areas with under-utilised sites, as well as non-heritage areas and sites, all offering a variety of development opportunities, under the current Commercial 1 Zone which encourages higher densities of residential use and development, in addition to commercial, retail and other land uses.

The CBD services the surrounding region in terms of jobs, health and community services, education, in addition to the retail and creative sectors, plus restaurants, cafes and bars. The diverse cultural identity and history of the city makes it a highly popular tourist attraction.

The CBD is the most accessible area in Ballarat in terms of public transport due to the railway station and the convergence of multiple bus routes from surrounding suburbs. This level of access to employment, shopping retails and services provides a strong rationale for increased densities of residential development that would ultimately add life to the streets and to the local economy.

Challenges

The strategic challenges facing the Ballarat CBD are:

- Some areas are prone to flooding, thereby limiting their development potential, or requiring considered design solutions for new buildings.
- Varying degrees of heritage significance that require careful consideration in terms of future design responses.
- Some sensitive interfaces with existing industrial land use (Creswick Road).

Opportunities

The strategic opportunities facing the Ballarat CBD are:

- Excellent access to existing services and infrastructure including Ballarat Railway Station and existing bus services.

Strategic Objectives

The strategic objectives for the Ballarat CBD are:

- Estimated potential dwelling yield – 4000.
- Promote the CBD as area of intensification for mixed-use development that has excellent access to the public transport network, connecting with the surrounding region.
- Undertake urban design analysis and planning to determine an appropriate scale for future buildings across the various parts of the CBD, balancing heritage objectives.

> 15 Lal Lal Street, Golden Point

15 Lal Lal Street is zoned Industrial 3 Zone (IN3Z) and the HO (HO172 – Creeks and River Channels Heritage Precinct) applies to the site. The site was previously used as an industrial scale bakery and has been unused for some time. The site has good access to amenity and services and open space however it is underutilised in its current state. It is surrounded by low density residential development (GRZ1).

Challenges

- Existing long term ongoing industrial and commercial uses.
- Potential for land contamination.
- Small lot size.

Opportunities

- Existing interfaces with residential land zoned GRZ1.
- Small number of land owners.
- Very good accessibility to services and proximity to existing infrastructure.
- Opportunity to maximise existing inner-city location adjacent to major transport route.

Objectives

- Estimated Potential Dwelling Yield: 28 (Gross Areas: 0.8ha).
- Rezone land to allow alternative land uses that are compatible with the surrounding residential context.

> 313 and 317 Skipton Street, Ballarat Central

313 Skipton Street (to the northeast) is zoned Industrial 1 Zone (IN1Z) and the HO (HO168 – South Ballarat Heritage Precinct) applies to the site. The site is used for sheet metal manufacturing. 317 Skipton Street (to the south) is zoned Industrial 3 Zone (IN3Z) and Areas of Cultural Heritage Sensitivity partially affects the site. The site is used for automotive repairs. The site is located close to the Ballarat CBD with good connectivity to the Midland Highway. The site's proximity to the CBD and it's high degree of accessibility makes this an ideal location for higher density residential and/or commercial development.

Challenges

- Existing long term ongoing industrial and commercial uses.
- Potential for existing contamination.

Opportunities

- Existing interfaces with existing residential land.
- Small number of landowners.
- Very good accessibility to services and proximity to existing infrastructure.
- Opportunity to maximise existing inner-city location adjacent to major transport route.

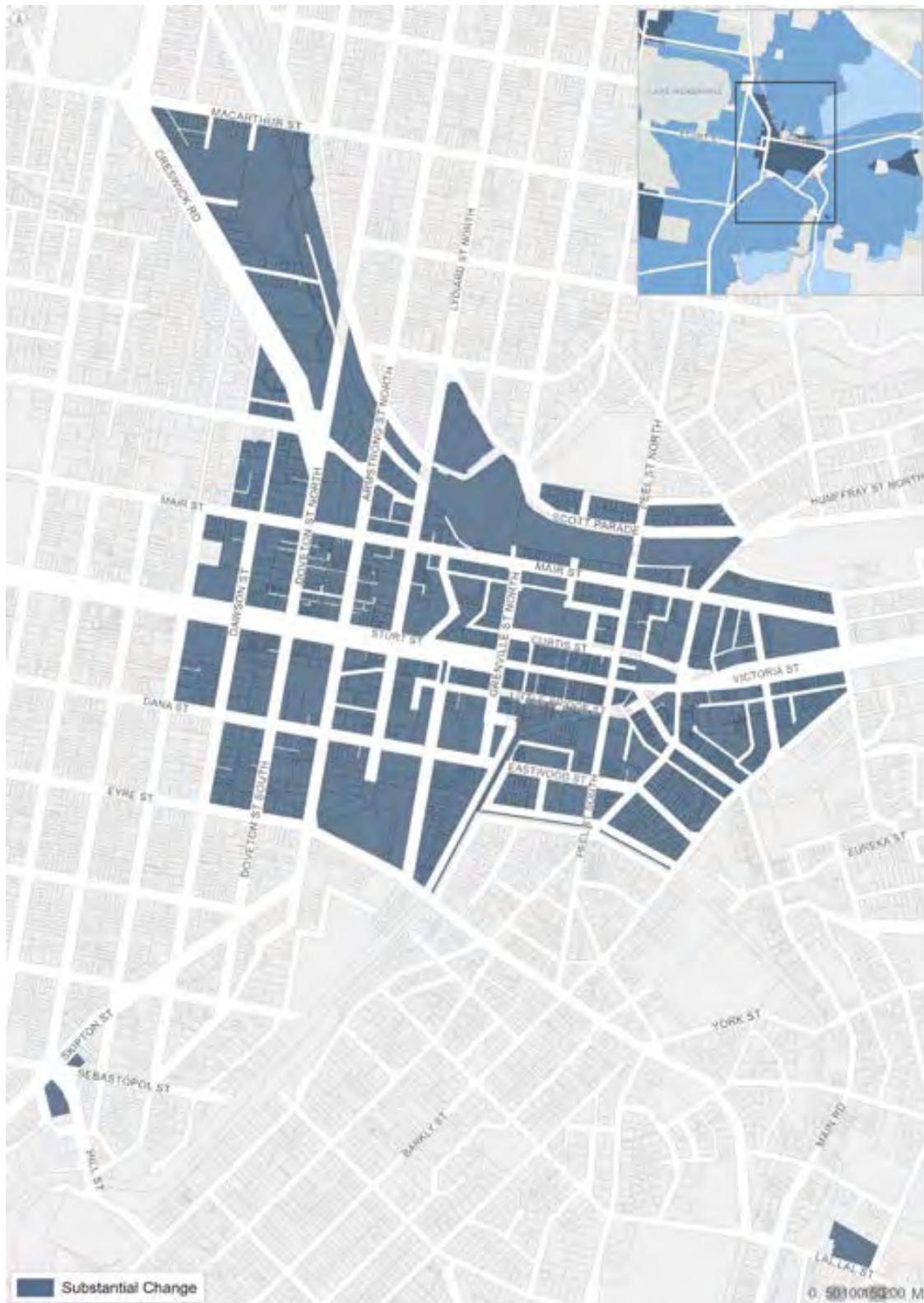
Objectives

- Estimated Potential Dwelling Yield: 14 (Gross Area: 0.4ha).

Strategic objectives

- Rezone land to allow alternative land uses that are compatible with the surrounding residential context.

FIGURE 18 CBD, SKIPTON AND LAL LAL SUBSTANTIAL CHANGE AREA





> Wendouree Station Precinct

The Wendouree Station Precinct is zoned Industrial 1 Zone (IN1Z) and Industrial 3 Zone (IN3Z) with a total area of 62.6ha. The precinct is used as a core industrial precinct hosting employment and population servicing uses for the north-west of Ballarat and has direct access to train services that extend to Melbourne and Ararat. Multiple lots ranging in size with different uses including industrial, warehousing, key logistics, manufacturing, commercial and large format retail uses. The precinct includes an number of existing businesses.

The precinct is identified in the Ballarat Planning Scheme as an Urban Renewal Area – Wendouree Village, and the related planning policy seeks to facilitate redevelopment. It is identified as a regional transport gateway and a Major Activity Centre and Bulky Goods Centre.

The precinct is subject to the adopted Wendouree Railway Station Precinct Master Plan that defines the Wendouree Station Precinct urban renewal area and proposed alternative land uses and enhancements to the public realm. The Wendouree Railway Station Precinct Master Plan is not yet implemented in the planning scheme, and revision is advised to ensure proposed actions are in line with current planning policy and direction. The RGZ1 land located in proximity to Wendouree Station has also been designated as substantial growth to reflect the opportunities this area has for producing compact neighbourhoods.

Challenges

- Existing long term ongoing industrial and commercial uses likely to present long term interfaces.
- Noise from existing road and rail infrastructure.
- Potential for existing contamination.

Opportunities

- Underutilised sites with direct railway station access (via Wendouree Railway Station).
- Some existing interfaces with existing residential land.
- Excellent accessibility to services and proximity to existing infrastructure.

Objectives

- Estimated Potential Dwelling Yield: 2191 (62.6ha).
- Revise the Wendouree Station Master Plan including land within the broader areas.
- Support alternative land uses such as public open space, retail, commercial and residential that capitalise on locations near to services and public transport.
- Improve public realm to support presentation as gateway entry and visitor experience.

FIGURE 19 WENDOUREE STATION PRECINCT SUBSTANTIAL CHANGE AREA





› Latrobe Street Saleyards Precinct

The Latrobe Street Precinct is zoned IN1Z and the Development Plan Overlay 4 (undeveloped industrial land) applies to areas within the precinct. There are areas of Aboriginal Cultural Heritage sensitivity that partially affect the site. There are many small-scale industrial sites and some large, open council-owned spaces including retail and hospitality uses.

The precinct has a mix of small to large lot sizes where some are underutilised and vacant. There are opportunities for public realm improvements. The precinct is identified in the Ballarat Planning Scheme as Urban Renewal Area and ongoing change area and as existing industrial – protect from encroachment.

Planning policy for the site seeks to accommodate small to medium sized industrial needs through provision of a range of lot sizes (1500sqm – 3ha) in the Delacombe Industrial Area.

Much of the precinct is suited for locally significant industrial activity over the medium to long term and there is potential for transport access with an old unused train line reaching the precinct from the north.

Challenges

- Existing long term ongoing industrial and commercial uses creation of poor sensitive use interfaces.
- Buffers resulting from above.
- Noise from existing road infrastructure.
- Existing contamination.

Opportunities

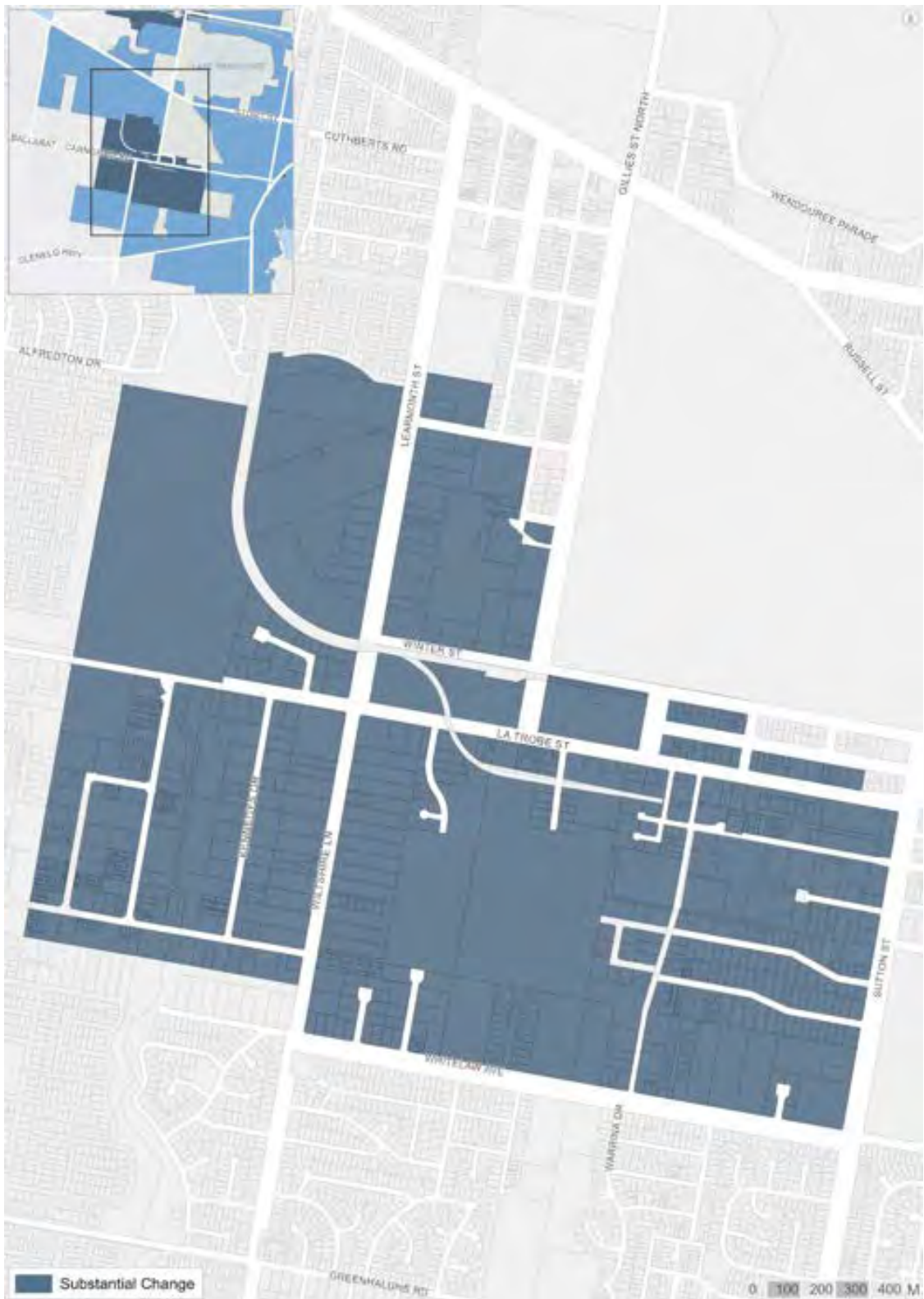
- Existing interfaces with existing residential land.
- Access and views to Victoria Park.

- Excellent accessibility to services and proximity to existing infrastructure.
- State commitment to remediate contaminated land on Old Saleyards site.
- Use of Old Railway line for transport access.
- Existing successful businesses and representing change in nature of employment starting to occupy area in place of heavy industry.

Objectives

- Estimated Potential Dwelling Yield: 1575 (Area: 343.6ha)
- Prepare a Structure Plan for the wider Latrobe Street Saleyards Precinct to guide future land use and development.
- Support locally significant industrial activity over the medium to long term in appropriate locations within the precinct.
- Support new creative retail and hospitality uses to build upon the already growing success of like businesses in the precinct.
- Support the introduction of sensitive uses in appropriate locations across the precinct over time to make best use of strategic advantages.
- Ensure retention of light industry to provide for the growing resident population.
- Re-establish transport access via the old unused train line.
- Ensure improvements to the public realm to improve amenity.
- Manage potential relocation of high-impact industrial uses.

FIGURE 20 LATROBE STREET PRECINCT SUBSTANTIAL CHANGE AREA





> Ballarat East/Eureka and Rodier Street

The Ballarat East Street Precinct includes areas of IN1Z and IN3Z. The Bushfire Management Overlay affects the southeastern portion of the precinct and Areas of Cultural Heritage Sensitivity partially affect the site.

The Precinct currently has multiple lots with different uses including low intensity industrial, general-purpose warehouse, manufacturing and some detached dwellings. Some industrial uses generally support the local community. The Precinct has good access to amenity and services.

Challenges

The strategic challenges facing the Ballarat East/Eureka and Rodier Street Precincts include:

- Existing long term ongoing industrial and commercial uses present long term interfaces issues with surrounding uses.
- Potential for existing contamination.
- Smaller lot sizes/Separate landowners.

Opportunities

- Underutilised and underused industrial land.
- Existing interfaces with existing residential land.
- Very good accessibility to services and proximity to existing infrastructure.
- City shaping opportunity maximising existing inner-city location and tourism focus.

Objectives

- Estimated Potential Dwelling Yield: 836 (Gross Area: 23.9ha).
- Prepare structure plan to provide appropriate land uses and planning controls.
- Support alternative land uses such as low-impact industrial, public open space, retail, commercial and residential commensurate with its setting near to sensitive uses.
- Improve public realm to support presentation in alignment with location adjacent to Eureka Gardens.

FIGURE 21 BALLARAT EAST/EUREKA AND RODIER STREET SUBSTANTIAL CHANGE AREA

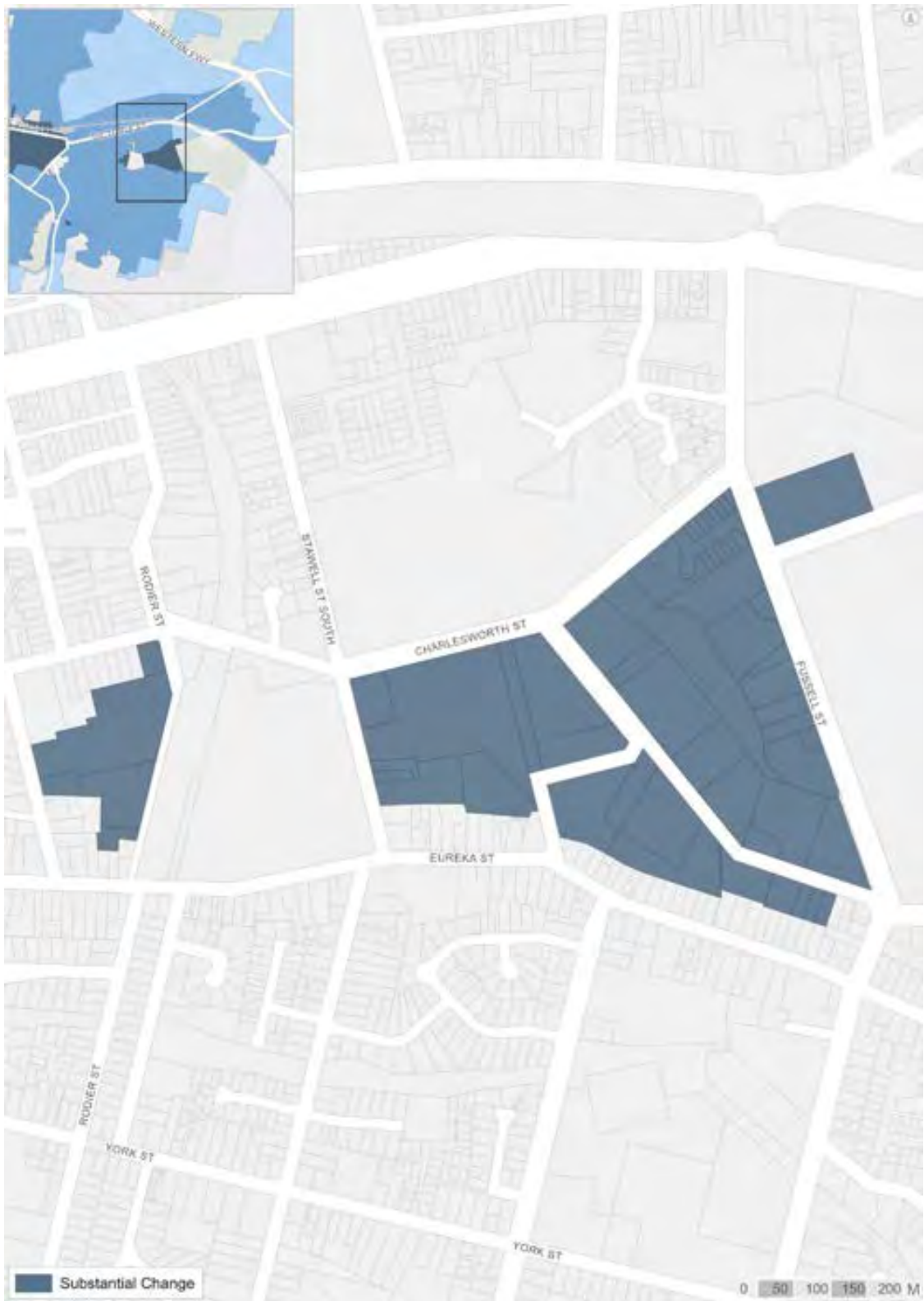


FIGURE 22 BROWN HILL MINIMAL CHANGE AREAS OVERALL

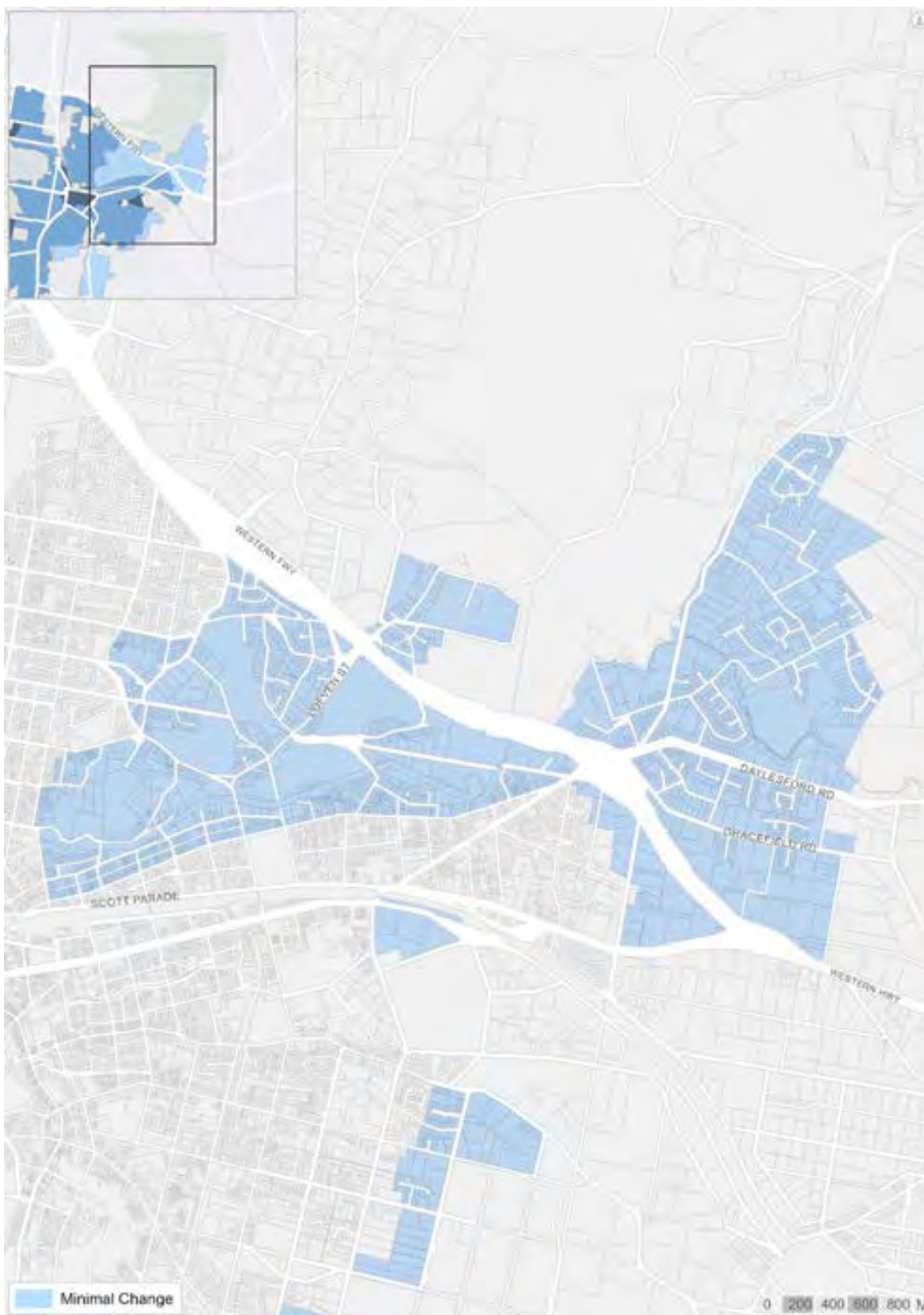


FIGURE 23 BROWN HILL MINIMAL CHANGE AREA EXTRACT

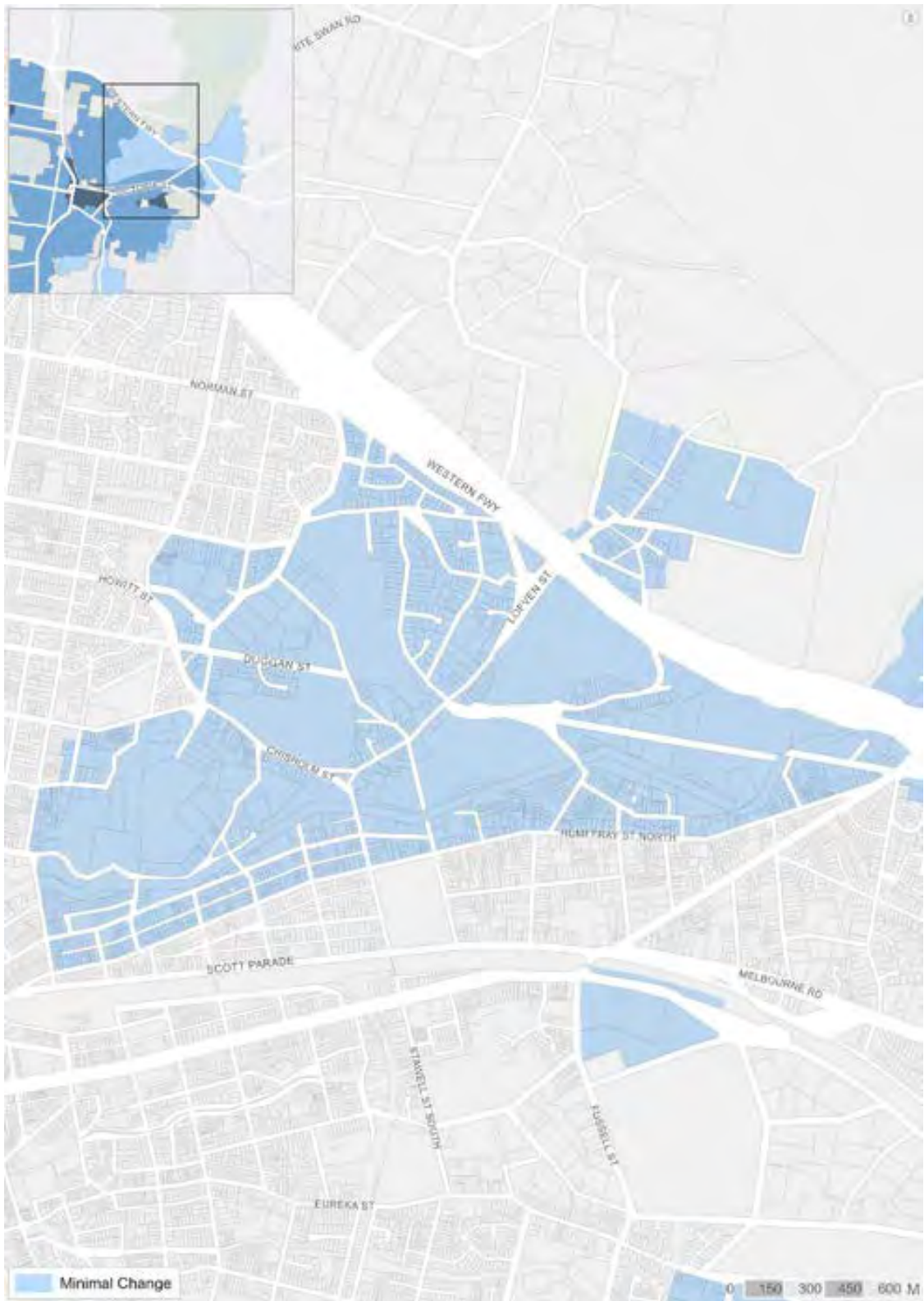


FIGURE 24 BROWN HILL MINIMAL CHANGE AREA EXTRACT

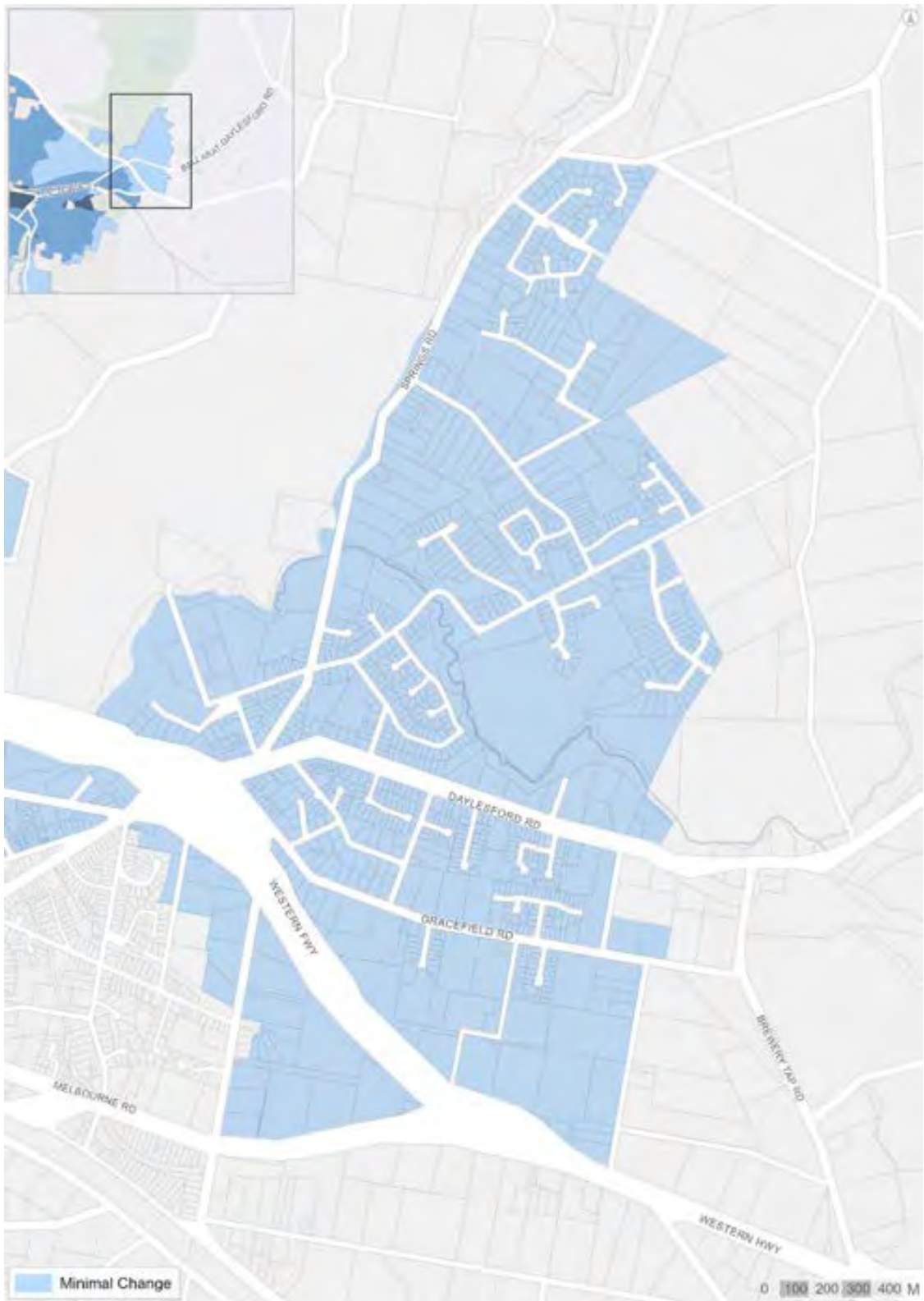


FIGURE 25 BUNINYONG MINIMAL CHANGE AREA EXTRACT

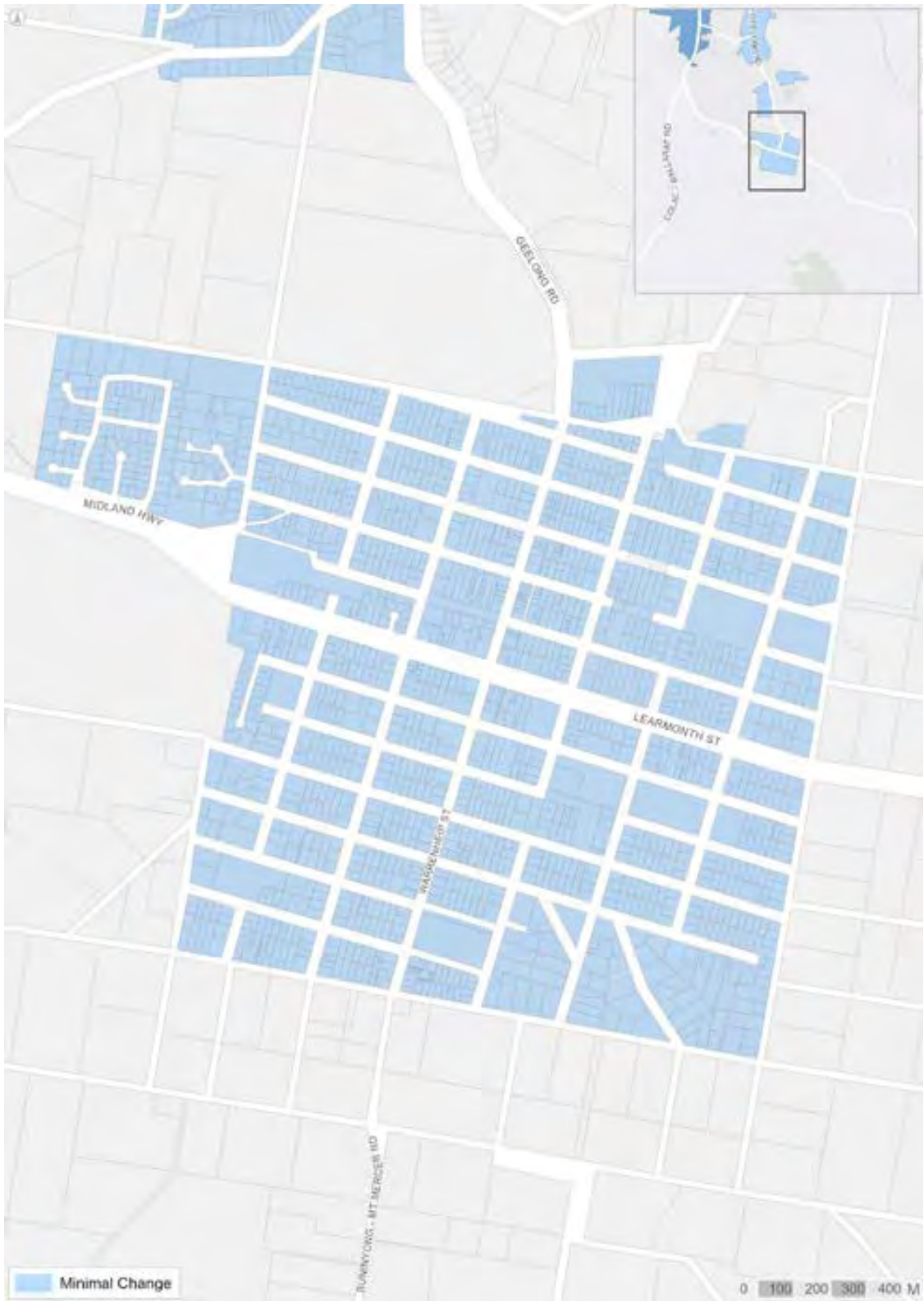


FIGURE 26 MT HELEN MINIMAL CHANGE AREA EXTRACT



FIGURE 27 SOUTHERN OVERALL MINIMAL CHANGE AREAS

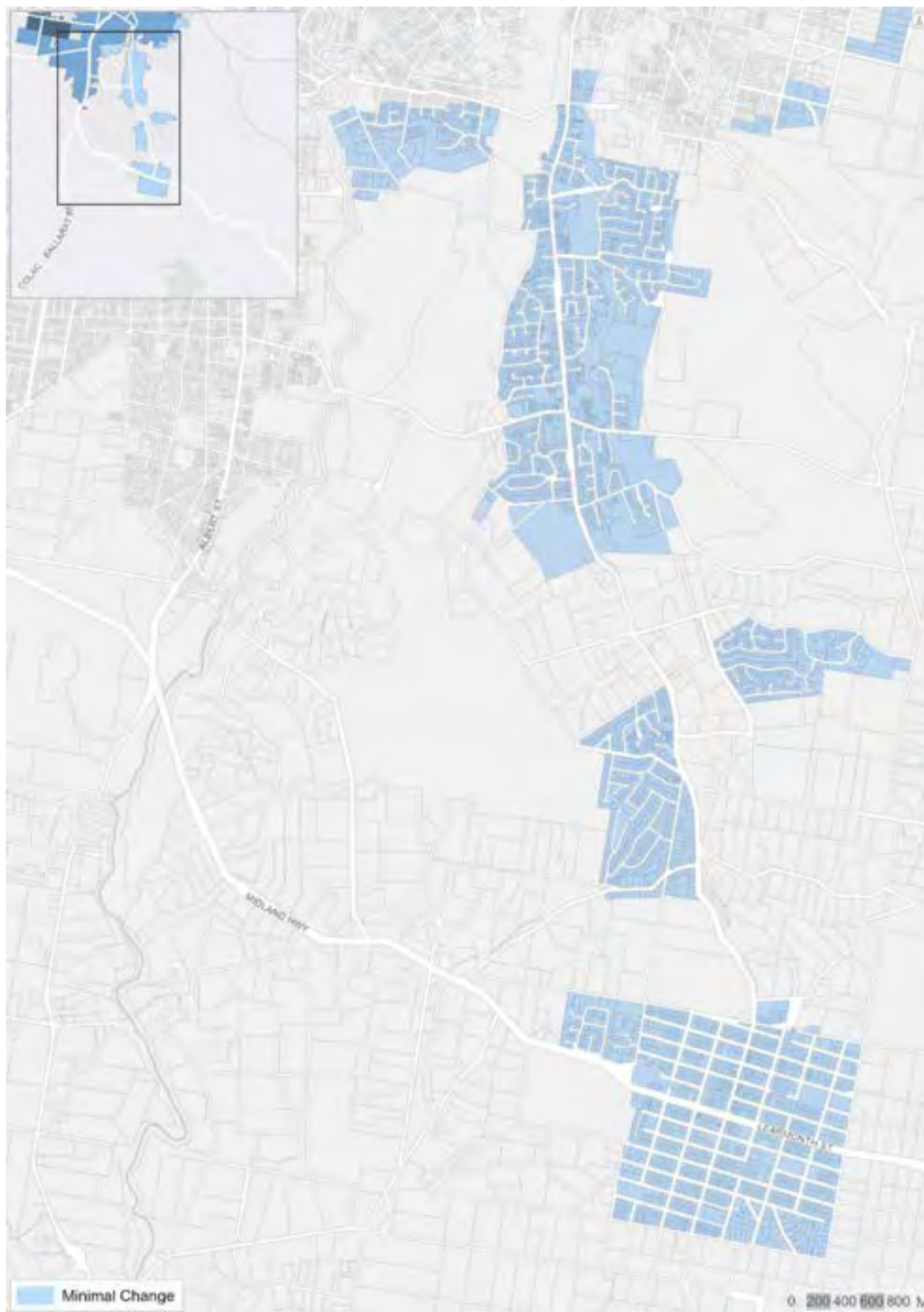


FIGURE 28 MT CLEAR MINIMAL CHANGE AREA EXTRACT

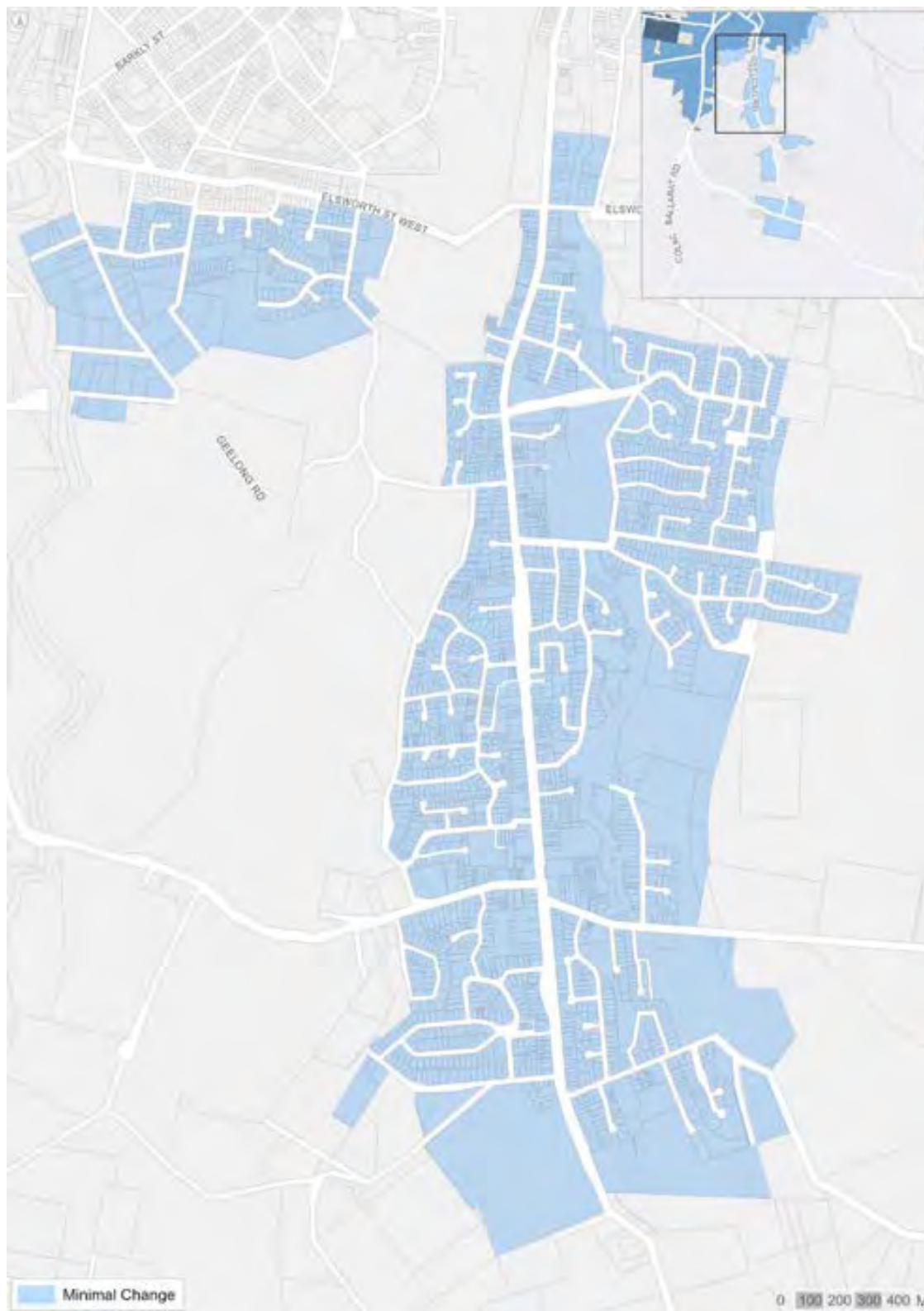


FIGURE 29 MINIMAL EXTRACT SOUTH EAST

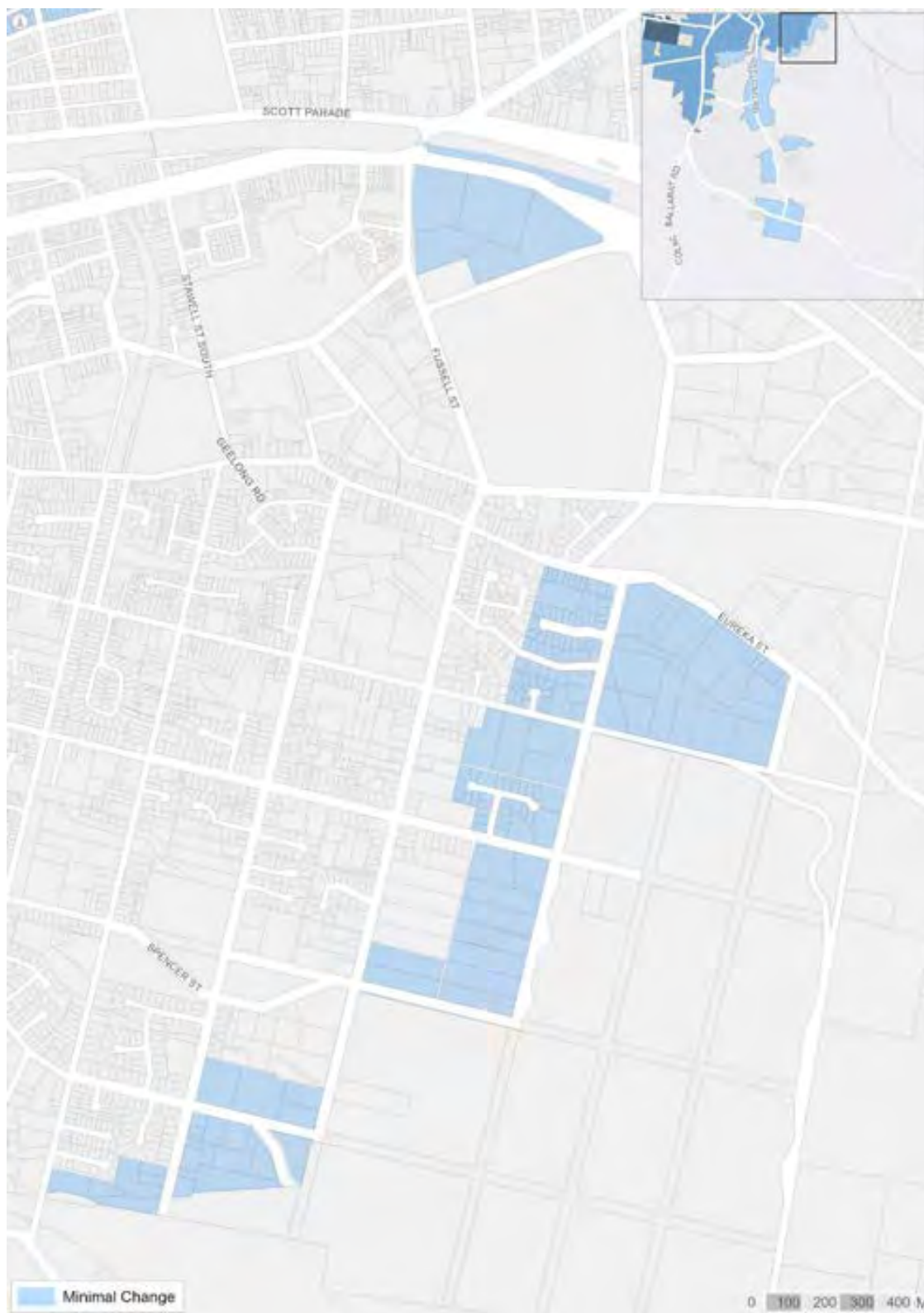


FIGURE 30 WESTERN MINIMAL CHANGE AREA EXTRACT

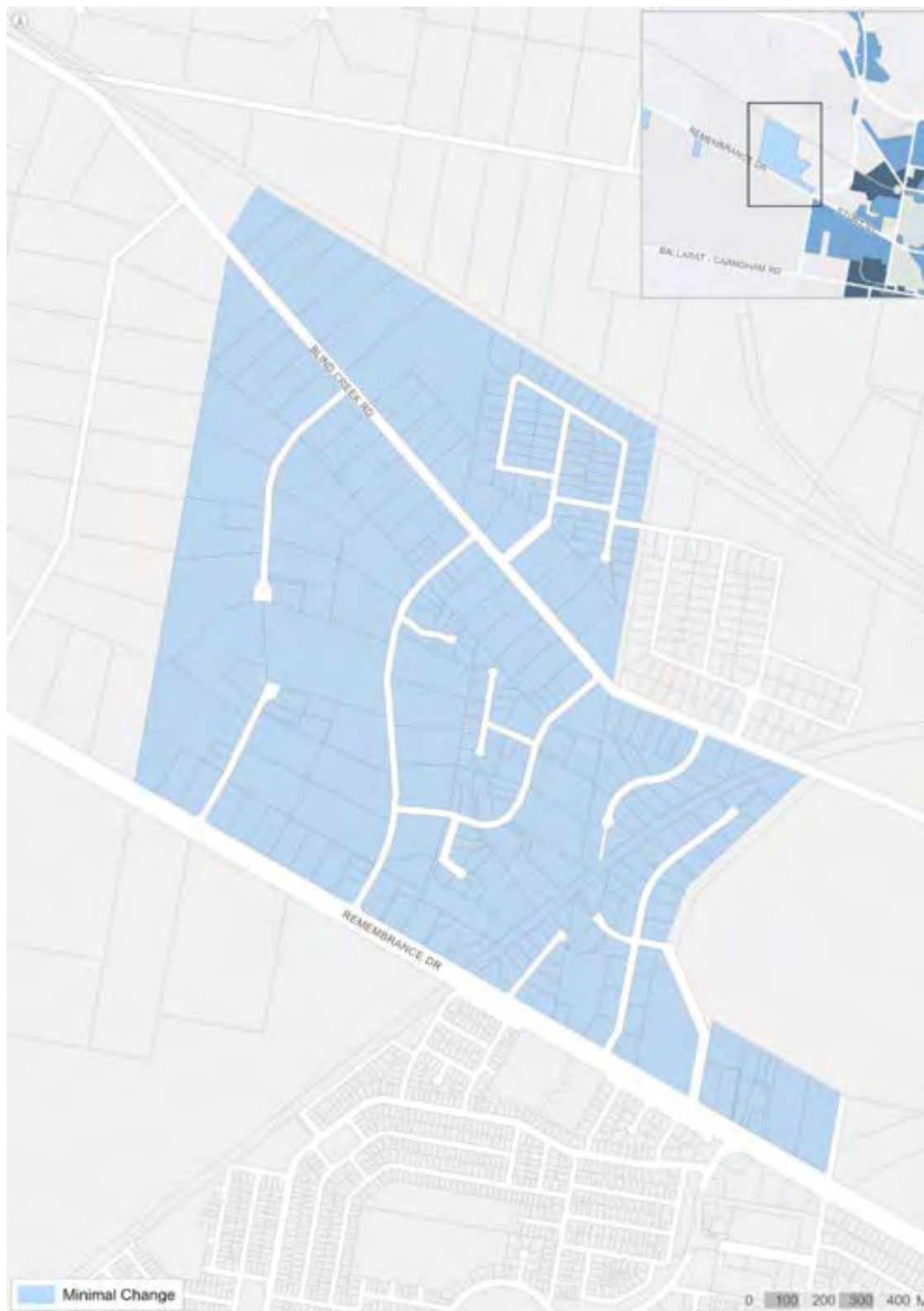


FIGURE 31 CARDIGAN MINIMAL CHANGE AREA EXTRACT



FIGURE 32 SOUTHERN MINIMAL CHANGE AREA EXTRACT





Conclusion

Ballarat will consolidate its role as a high order centre for the Central Highlands Region and deliver new housing in a way that is underpinned by a compact city approach with a focus on accessibility to services and infrastructure and away from areas of environmental risk.

By 2041 Ballarat's population is expected to grow from 113,482 to approximately 171,429. Ballarat has the capacity within its existing greenfield and established areas to accommodate the additional 55,000 people and 28,961 dwellings projected by 2041.

Ballarat has the capacity to accommodate more than 15 years of projected population growth and has provided a framework for accommodating this growth in a way that best implements key recommendations of State Government policies, maximises use of existing infrastructure, reduces sprawl and protects Ballarat's natural environment. In particular, the Housing Strategy has been designed to meet the following objectives:

- Ensure Ballarat sustains housing and population growth for at least 15 years.
- Provide housing diversity and affordable housing with access to jobs, activity centres, public transport, schools and open space
- Ensure Ballarat is a distinctive and liveable city with quality design and amenity.
- Ensure housing is in areas that does not increase the risk to human life or to human health or the environment.
- Ensure there is provision of infrastructure to support housing growth in Ballarat.

This will be achieved in part by increasing the amount of new housing being created within established areas. Currently, around 70% of new homes built in Ballarat are constructed in greenfield areas. State Government and Local Government policy directs and encourages the increase in infill development within established areas. Increasing the proportion of infill development particularly near shops, services and employment will create more vibrant neighbourhoods and reduce car dependency as the population grows. It will also take the pressure off developing in environmentally sensitive and less accessible locations.

Ballarat has a mismatch of housing typology and household type 29.5% of households are single person households followed by 24.5% being couples without children. However only 20% of dwelling in Ballarat have less than 3 bedrooms. Supporting diverse of housing types being built in Ballarat is important to increase choice in housing type, tenure and cost to meet the needs of households as they move through life cycle changes and to support diverse communities.

This strategy has identified areas for housing growth across Ballarat including Growth Areas, Urban Renewal Areas and existing residential areas identified as being areas of either substantial, incremental and minimal change. These change areas will provide the basis for the application of the new residential zones, and other planning controls.



Implementation Plan

The Implementation Plan is structured around achieving 5 outcomes of the Housing Strategy:

1. Ballarat has sufficient housing supply to support population growth
2. Ballarat's infrastructure supports higher density housing
3. Ballarat provides housing choice in locations close to schools, jobs, transport and services
4. Ballarat is distinctive for heritage, character and design
5. Ballarat is a Resilient City

The Housing Strategy takes a whole of government approach to planning implementation by embedding actions across Local and State Government department, authorities, agencies. The Ballarat Planning Scheme will be updated to give effect to the Housing Strategy.

Each outcome has their own action/s that are allocated to a lead agency (or agencies). Many actions also have identified implementation partners critical to the delivery of the action, due to their core responsibilities or area of expertise. Each action has an indicative timeframe for completion. These timeframes are:

- Immediate: takes place immediately as part of implementing the Housing Strategy into the Planning Scheme.
- Short term: first five years after the Housing Strategy is implemented into the Planning Scheme.
- Medium term: 5-10 years after the Housing Strategy is implemented into the Planning Scheme.
- Long term: 10 or more years after the Housing Strategy is implemented into the Planning Scheme.
- Ongoing: no fixed timeframe for completion.

OUTCOME 1 – BALLARAT HAS SUFFICIENT HOUSING SUPPLY TO SUPPORT POPULATION GROWTH

Objective	Action	Lead Agency	Timing
Ensure Ballarat sustains housing and population growth for at least 15 years.	Acknowledge that infill and greenfield development will together contribute to sustaining housing and population growth for at least 15 years in Ballarat through provisions in the Planning Scheme.	City of Ballarat Strategic Planning and Sustainable Growth/Minister for Planning (Department of Transport and Planning (DTP))	Immediate
	Implement the Housing Strategy including the Housing Framework Plan into the Planning Scheme to guide housing growth in infill areas.	City of Ballarat/Minister for Planning (DTP)	Immediate
	Implement the Growth Areas Framework Plan into the Planning Scheme to guide housing growth in greenfield areas.	City of Ballarat/Minister for Planning (DTP)	Immediate
	Facilitate infill development through the implementation of new residential planning controls and structure planning in Urban Renewal Areas.	City of Ballarat/Minister for Planning (DTP), community, relevant authorities	Immediate
	Monitor population growth and housing supply in line with up-to-date information including Victoria in Future publications, housing development data and the Urban Development Program to ensure Ballarat sustains sufficient supply of housing to support population growth.	City of Ballarat Strategic Planning and Sustainable Growth	Medium term/ongoing

OUTCOME 2 – BALLARAT'S INFRASTRUCTURE SUPPORTS HIGHER DENSITY HOUSING

Objective	Action	Lead Agency	Timing
Ensure there is efficient provision of supporting infrastructure to support housing growth in Ballarat.	Implement the Housing Framework Plan into the Planning Scheme to identify locations for the delivery of higher density housing in areas with existing infrastructure and to inform infrastructure enhancement requirements through capital works program to support growth.	City of Ballarat Strategic Planning and Sustainable Growth/Minister for Planning (DTP)	Immediate
	Develop an Integrated Transport Strategy for Ballarat to ensure efficient provision of transport infrastructure.	City of Ballarat Strategic Planning	Short term
	Undertake Prioritisation of Urban Renewal Areas to ensure appropriate sequencing in line with existing or planned infrastructure investment.	City of Ballarat	Short term
	Develop funded Infrastructure Plans to support housing growth.	City of Ballarat, State Government Agencies, Minister for Planning (DTP)	Short Term

OUTCOME 3 – BALLARAT PROVIDES HOUSING CHOICE IN LOCATIONS CLOSE TO SCHOOLS, JOBS, TRANSPORT AND SERVICES

Objective	Action	Lead Agency	Timing
Provide housing diversity and affordable housing with access to jobs, activity centres, public transport, schools and open space	Implement the Housing Framework Plan into the Planning Scheme to provide for increased housing density that is close to services, activity centres, public transport, schools and open space.	City of Ballarat Strategic Planning and Sustainable Growth/Minister for Planning (DTP)	Immediate
	Review residential zones and overlays to ensure planning controls are consistent with the Housing Framework Plan.	City of Ballarat Strategic Planning/Minister for Planning	Immediate
	Develop precinct plans for urban renewal areas identified for substantial change to ensure accessibility is well considered in future planning.	City of Ballarat Strategic Planning/Minister for Planning, community and relevant agencies	Short term
	Continue to develop the Ballarat CBD Urban Design Framework and Structure Plan to guide development in the CBD.	City of Ballarat Strategic Planning	Immediate/ Short term
	Develop an Integrated Transport Strategy for Ballarat to compliment the Housing Strategy and other emerging Ballarat strategies to improve transport and land-use outcomes.	City of Ballarat Strategic Planning	Short term
	Identify housing diversity and affordability issues that need to be addressed through provisions in the Planning Scheme.	City of Ballarat Strategic Planning/Minister for Planning (DTP)	Immediate
	Progress development of the Diverse and Affordable Housing Strategy and implement the recommendations of the Strategy to ensure the delivery of diverse and affordable housing in Ballarat.	City of Ballarat Strategic Planning and Health and Social Planning	Immediate/ Short term
	Facilitate the delivery of housing diversity by reviewing the residential zones and overlays to ensure planning provisions allow for housing choice and affordability.	City of Ballarat Strategic Planning	Immediate
	Monitor housing trends to ensure the development of appropriate housing type.	City of Ballarat Strategic Planning	Ongoing
	Provide housing diversity in new development including the provision of 1, 2 and 3 bedroom apartments and townhouses for 10 or more dwellings.	City of Ballarat Strategic Planning	Ongoing

OUTCOME 4 – BALLARAT IS DISTINCTIVE FOR HERITAGE, CHARACTER AND DESIGN

Objective	Action	Lead Agency	Timing
Ensure Ballarat is a distinctive and liveable city with quality design and amenity.	Develop new residential planning controls consistent with the Neighbourhood Character Study to ensure neighbourhood character is considered as part of any planning permit application.	City of Ballarat Strategic Planning	Immediate/ Short term
	Develop Neighbourhood Character Guidelines to outline the preferred character of different precincts and guide built form of future development.	City of Ballarat Strategic Planning	Immediate/ Short term
	Develop precinct plans for urban renewal precincts to provide a more focused place making approach and to strengthen the design quality of spaces.	City of Ballarat Strategic Planning	Short term
	Ensure Ballarat's heritage assets and distinctive heritage precincts are protected by enhancing local heritage planning policies and ensuring heritage conservation values are considered in urban renewal precincts and other places across Ballarat.	City of Ballarat Strategic Planning	Short term/ ongoing
	Ensure community participation in planning of urban renewal precincts and areas undergoing change to improve the effectiveness of planning.	City of Ballarat Strategic Planning, relevant agencies and authorities, community	Short term

OUTCOME 5 – BALLARAT IS A RESILIENT CITY

Objective	Action	Lead Agency	Timing
Ensure housing is in areas that does not increase the risk to human life or to human health or the environment.	Implement the Housing Framework Plan into the Planning Scheme to ensure housing growth avoids locations where there is risk to life, property biodiversity and the wider natural environment and infrastructure from natural hazards such as bushfire and flooding.	City of Ballarat Strategic Planning and Sustainable Growth/Minister for Planning (DTP)	Immediate
	Apply the Environmental Audit Overlay to Urban Renewal Areas within an Industrial Zone to ensure appropriate consideration of contamination and remediation in line with EPA requirements and Ministerial Direction 1- Potentially Contamination Land.	City of Ballarat Strategic Planning/ Minister for Planning (DTP)/EPA	Short term
	Review land use buffers and separation distances of industrial areas that may influence the possibility of a change of land use to a sensitive use.	City of Ballarat/EPA	Short term
	Implement the 11 Waterways Flood Study and associated flood overlays into the Planning Scheme to ensure flood risk is considered in new development proposals.	City of Ballarat/ Corangamite Catchment Management Authority/ Minister for Planning (DTP)	Immediate



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August 2024



BALLARAT HOUSING STRATEGY

SUBMISSIONS ANALYSIS SUMMARY REPORT

Proposal prepared by **Hansen Partnership**
for **Ballarat City Council**

November 2023

urban planning | urban design | landscape architecture

1 INTRODUCTION

Hansen Partnership has been engaged to undertake an independent review of submissions made during the exhibition period of *Ballarat's Housing Strategy 2023-2041* (draft 2023) and associated supporting documentation.

The *Housing Strategy* was prepared internally by Ballarat City Council, supported by external consultants who undertook targeted background analysis and prepared discussion papers, and was exhibited between 4 September and 6 October 2023.

This work does not represent a peer review of the *Housing Strategy*. Rather, it summarises a comprehensive review of submissions that has been undertaken, and provides advice in the form of recommendations to the City of Ballarat as to changes that may be warranted in response to the submissions received.

Recommendations can generally be categorised as significant in terms of the structure and framing of documentation but generally support the approach taken by the City in the ambition and content of the Strategy.

A detailed analysis was undertaken of the written submissions received, but feedback provided to Council via a survey was also reviewed. No commentary is made on the potential overlap between the two forums, nor does this report make any assessment as to the suitability or otherwise of the approach to consultation, and subsequent response level. In addition, feedback provided verbally to Council officers during meetings or other consultation events has not been considered.



2 SUBMISSIONS & SURVEYS

A total of seventy six (76) written submissions were reviewed, with some submitters providing multiple submissions, which were integrated into a single submission where possible.

Of these submissions:

- 23 were received from community members.
- 27 from the development industry (builders, developers, real estate agents, consultants etc).
- 8 from consultants on behalf of landowners.
- 11 from agencies and government departments.
- 7 from community groups.

Submissions varied in length from short emails to multi- page formal reports.

SURVEY RESULTS

In addition to written submissions, a total of 102 survey results were reviewed. While written submissions could address any matters of interest to the submitter, survey results were more targeted, seeking feedback primarily on matters pertaining to the Neighbourhood Character component.

Questions were framed around the following key themes, with responses to this feedback included as part of relevant recommendations in Section 4.

THEME ONE

Preference in terms of support for greenfield vs infill split

Very diverse opinions in response to all questions in this theme. However, the majority of respondent (29.1%) sought a split of 70% infill and 30% greenfield. The second largest group (19.1%) sought a 50 / 50 split as proposed by the Strategy.

THEME TWO

Level of support for the descriptions of the various character areas.

Level of support for the proposed 'preferred character statements

While it is to be expected that there will be some disagreement in definition of character areas, particularly where areas are reasonably large, for almost all areas, the majority of respondents answered supportively to both questions.

Most of the issues raised in response to these themes related to issues of finer grained mapping detail or boundaries which should be addressed via the alignment of Neighbourhood Character areas and the Housing Strategy as part of the development of a Residential Growth Framework (referred to in the Strategy as the Residential Zone and Overlay Reform Project).

THEME THREE

Questions were also asked about what various neighbourhoods required or issues that should be considered. Many of the responses are not directly relevant to the Strategy but the ability to provide context for the community in how they relate to housing is flagged in the Recommendations section.

Key issues raised included:

- Need more focus on active transport and need for more footpaths (overwhelmingly highest issue).
- Need greater focus on biodiversity in descriptions, increased tree protection and control over vegetation in areas of high biodiversity value (significant number of submissions).
- Need to move away from sprawling suburban areas, to more compact forms, support hubs of higher density even in growth areas, need for more density.
- Specific design suggestions such as 'garages set back so utes don't block footpaths'.
- A variety of view regarding block sizes (i.e. 'should be more smaller blocks with better design' vs 'should be larger blocks').
- Need for more bike paths and public transport
- Should identify that waterway areas are different and should be recognised in assessment of character.
- Some concern regarding traffic congestion.
- Contrary views on protection of heritage / removal of heritage protections.
- Climate responses needed. Need for less concrete, more urban heat responses alongside density. Net zero housing

THEME FOUR

Types or location for housing?

Encouragement for smaller dwellings - 81.6% of respondents agreed.

There was a very wide range of responses in terms of preferred locations - across whole city and surrounding towns. Saleyards and CBD were the most common. Areas close to the CBD, Miners Rest and Lucas were also common responses. Many responses linked location of housing to transport accessibility, supporting the approach taken by the Strategy

THEME ONE

Social and affordable housing mechanisms

Preferred mechanism = Leadership, partnership, and advocacy (engage with State government to facilitate Social and Affordable Housing), with Direct Investment by City of Ballarat a close second.

3 SUMMARY OF ISSUES

INFILL TARGET & GROWTH AREAS

A large number of submissions spoke directly to the proposed 50 / 50 greenfield / infill target. Many submissions put forward the case that infill in Ballarat was undesirable or unachievable for a range of different reasons. Many submissions referred to an earlier report which had identified challenges in the delivery of infill via traditional property market mechanisms in Ballarat. All submissions sought to have the target adjusted to support increased greenfield development, with some also seeking additional rezonings.

A number of counter-submissions to the above position were also received, highlighting the very significant financial, costs to council and the community in continued urban sprawl, the impacts on biodiversity, agricultural and landscape values as well as climate change impacts.

The main concerns with the target were expressed in terms of the unreliability or infeasible nature of the infill target to be achieved and the corresponding need for more growth areas to be identified and rezoned. The submissions from the VPA, who have been monitoring available land in Ballarat confirmed that there is sufficient greenfield supply for almost 20 years, indicating that there is sufficient capacity within the growth areas alone to provide for identified growth.

BIODIVERSITY & CLIMATE CHANGE

A number of submissions expressed concerns about the failure to integrate consideration of biodiversity outcomes when considering the future of housing in Ballarat. While some environmentally sensitive areas have been proposed as 'minimal change' (a proposal supported by a number of submitters) further attention to the design detailing of housing to ensure that canopy vegetation levels are improved, site coverage allows for other vegetation and other responses to the current biodiversity crisis are integrated. A greater focus on green infrastructure is also urged as part of a response to climate change, which was the focus of a number of submissions.

In addition, a number of submissions queried the preparation of the Housing Strategy prior to a full understanding of flood risks, with a number highlighting that this understanding should be based on future risks under climate change, not just current risks.

INFRASTRUCTURE & ACCESSIBILITY

A number of submissions raised concerns with the way accessibility had been weighted in accessibility mapping (which in turn informs change areas in the Strategy), in particular the weighting of train stations. Numerous submissions sought to ensure that increases in housing provision in these 'accessible' areas were supported by increases in service frequency and expansions on services to support a more sustainable urban form.

A number of submissions also sought to ensure growth was supported by corresponding increases to available services and facilities, including schools, childcare etc. Issues around the cost of infrastructure were also raised in relation to growth areas with some submissions highlighting the significant costs to Council associated with continued expansion of growth areas. Central Highlands Water highlighted the scale of investment needed if new growth areas proposed as a concern.

AFFORDABILITY & DIVERSITY

A number of submissions raised concerns about the Strategy's failure to more explicitly address the delivery of Social and Affordable housing, and to address homelessness. It is understood that council is proposing to prepare a separate Affordable Housing Strategy but this is not clearly articulated in the Strategy. Questions around how Council is / should define affordability in a local context were also raised.

STRUCTURE & EVIDENCE BASE

There were a number of suggestions around additional information that would support use of the document, including from the Department of Transport & Planning. The lack of context and highly summarised nature of the Strategy appears to have led to some misconceptions among submitters.

A common theme across a large number of submissions was around the exclusion of both urban renewal areas and the Ballarat CBD from the strategy, with a number of submissions querying how an overarching understanding of housing could be developed without those areas being included.

Two background reports were questioned by a number of submissions in terms of their accuracy and / or approach adopted. These were the Accessibility mapping and the Capacity Analysis, which was identified in many submissions as being fundamentally flawed (see following issue).

CAPACITY & DEVELOPMENT FEASIBILITY

There were a significant number of submissions which raised concerns with the accuracy and reliability of the capacity analysis as it pertained to available infill opportunities.

As noted, a large number of submissions raised issues relating to the feasibility of infill development. Some of these pointed to a failure of the Strategy to address this in any meaningful manner. A wide range of questions were identified with most being related to how Council was proposing to 'shift' the current trajectory based on the content of the Strategy. Further articulation of the question of infill opportunities and development feasibility is likely to be needed.

While it appears that there is sufficient current supply, addressing this issue more directly is likely to be required to meaningfully respond to the majority of submitters.

HERITAGE & CHARACTER

A number of submitters identified the protection of heritage as needing more consideration. While it was referenced generically by many developers a constraint and a reason greenfield development should be preferred, there were a number of more specific issues identified regarding specific areas in particular, with the Ballarat East area identified for Substantial Change.

SUMMARY OF ISSUE THEMES

Rural residential development opportunities	4
Growth Areas	13
Activity Centres	8
Connectivity mapping	4
Greenfield vs infill	19
Increased density / diversity / small homes	13
Climate change responses (built form, site coverage, Energy efficiency)	8
Infrastructure	8
Ambition	7
CBD	6
Homelessness / Distribution of SAH	9
Biodiversity	5
Implementation / Evidence base	10
Flooding & Stormwater management	3
Rezoning request	7
Industrial land	3
Heritage	5
Construction industry issues	7
Neighbourhood Character	13
Site Coverage	5

4 RECOMMENDATIONS

This section summarises consequential recommendations to the current draft *Housing Strategy* in response to submissions,

These recommendations are not based on a peer review or the views of the author, other than where an assessment of what would constitute a reasonable response to a legitimate issues raised via submissions or survey inputs.

The majority of changes relate to the *Housing Strategy* document itself, but some recommendations also relate to other inputs such as the Accessibility and Capacity analysis.

Recommendations below can generally be summarised as pertaining to 'additional' information or discussion that should be integrated into the *Housing Strategy*, rather than changes to recommendations or broad approach, other than some minor changes to some of the supporting analysis which may suggest consequential changes.

HOUSING STRATEGY

1 Many of the recommendations regarding the *Housing Strategy* relate primarily to the structure of the document and the **context and background provided** to support an understanding of why the outcomes proposed have been identified. Additional detail about how the Strategy intersects with other Council policy and projects would support greater understanding of why the project has or has not addressed certain aspects of the housing 'picture'. Recommended changes include:

- A more fullsome introduction including identification of the various appendices and how they have influenced the outcomes of the Strategy so intersections are clearer.
- The Strategy should look at the different 'parts' of the housing 'puzzle' fit together. Adjust text of Page 7 and beyond to remove references to the 'exclusion' of areas which are not residential. This relates to recommendation theme 2 below.
- Showing visually how the different reports which provide direction for different areas fit together would be beneficial (eg larger lot development and rezoning / changes to minimum lots sizes = *Rural Living Strategy*, mechanisms and partnerships to support related to SAH = *Social and Affordable Housing Strategy*, zone changes = *Residential Zone and Overlay Reform Project*). For many readers, the Strategy currently seems to have a number of gaps as they are not aware of these other 'puzzle pieces'.
- This change would also support better understanding of next steps proposed by Council, for example, there is a reference on Pg 20 to a "*Residential Zone and Overlay Reform Project*", which has not been introduced prior.

6

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- A number of different Council strategies are shown on Page 8, with reference to Appendix One but nowhere is it articulated how the Strategy supports or intersects with these other strategies. Articulating this would address a number of queries raised through submissions.
- Similarly, a slight expansion of the dot point list of policy considerations to at least articulate the intersection between the 'considerations' listed and the decisions that are to be made via the *Housing Strategy* would be useful for the community's understanding. A new reference in this section to the recent State Govt Housing Statement and its recommitment to a 70/30 split should also be considered.
- The introduction section of the Strategy could also benefit from introducing the different terminology and areas where housing is anticipated to occur (eg growth areas, CBD, urban renewal areas). This will allow a clear link to be provided between Strategy recommendations, and issues related to delivery of housing in each of these 'areas' can be better understood and responded to. A map which identifies spatially which areas are categorised as which would be useful. If known, urban renewal sites should be listed or numbered.
- While the approach to include summaries of key inputs with the reports included as appendices is supported, the current summary of Housing Needs should be expanded to more clearly articulate what the housing needs actually are (i.e. is this about more one bedroom housing, or about more adaptable housing or more accessible housing or housing in different locations?)

2

The second suite of recommendation relates to the scope and framing of the *Housing Strategy*, most notably the approach that has been adopted to separate out both the 'growth areas' and the Ballarat CBD and Urban Renewal Areas. Failure to **provide a comprehensive picture of housing growth and development in the City** through the exclusion of these areas creates some challenges in communicating a coherent vision for the municipality's housing. While it is understood that the 'implementation' via the preparation of a Residential Development Framework in accordance to the relevant Planning Practice Note will be relevant to the 'infill' areas, this is only for one part of the full housing picture in the municipality.

- It is recommended that the current 'supply' discussion should be expanded and split more clearly between Growth Areas, Infill, Urban renewal areas, CBD, and Satellite Townships, all of which have a role to play in accommodating housing. This then provides an improved line of sight to the 'Spatial distribution of residential growth' discussion.
- Consideration should be given to the framing of the supply section as the current inclusion of content relating to both the UDP and work done internally by Council has created some confusion amongst submitters. The use of the heading as a hyperlink also decreases legibility. Breaking up the discussion of supply into the various 'types' of supply may also allow a more nuanced understanding to be developed (for example, infill supply could be split between that available on sites over 1ha vs other lots).
- The structure where growth areas are on a separate 'standalone page' with extremely limited contextual text should also be reconsidered as part of this more holistic approach to identifying supply across the municipality. This will allow integration of content regarding growth area supply flagged in submissions from both VPA and DTP, as well as updated mapping (eg to specify unfunded projects and current staging).
- The strategy also fails to account for growth in the municipality (which is what is required) that may be accommodated in townships with a number of submissions raising Miners Rest as a key area of omission. Consistent with previous recommendations, understanding the likely growth in these areas and their contribution to overall supply is important to understand housing across the municipality.

3

It is recommended also that, in line with the two preceding recommendations, that there be some 'reframing' of the Supply and Demand section to support **increased linkages to issues resolution**. The Strategy's articulation of issues or and how the Strategy proposes to address these could be improved. This is of particular concern to a range of stakeholders, and it is recommended that this section of the report be restructured to more clearly articulate the supply and demand issues (as well as relevant figures) across the various categories flagged earlier. This provide space for Council to address (or point to other documents which will address) issues raised in submissions.

- Use of common terminology and structure to address, in particular, supply and spatial distribution will greatly enhance the reports user-friendliness.
- Council may also wish to consider a more detailed understanding of the supply vs demand in relation to housing types if this data is available to respond to some submissions (i.e. how many 3+ bedroom dwellings are being delivered vs 1 bedroom dwellings) and how does this relate to the demand identified by relevant background documents. This additional contextual information will support questions raised in submissions.
- The discussion around Infill 'supply' is currently framed around change areas only, which is misleading given typical infill discussions would also include opportunities such as housing in commercial areas, urban renewal areas, and the CBD. The inclusion of considerations such as Industrial land rezoning etc and the anticipated contribution to supply need to be more explicit in the Strategy.
- The current layout of the Strategy means some discussion around different 'change' areas is within the main body of text, and some on separate 'blue' pages with mapping, making it difficult to develop a full understanding of proposed approach.
- The source of statements such as "*up to six storey development in these areas are appropriate*" without any previous reference to built form is also problematic and references to specific heights should either be deleted or improved contextual framing provided. Clarity on the relationship between the heights identified in relation to incremental change areas and potential future zones should also be considered further prior to them being formalised within the strategy (i.e. should the Strategy be flagging 1-2 storey forms if a GRZ without a schedule is likely to be proposed?)

4

An improved sense of **connection between the Vision articulated by the document and the Strategy** section and eventual recommendations would also be beneficial. The current lack of connection makes it difficult to understand how the Strategy supports or delivers various aspects of the Vision which was raised in a number of submissions. Potential changes to this 'framing' may support the integration of responses to various issues raised in submissions. This would then support a clearer link to the current 'Recommendations' section

- It is recommended that Council consider reframing the 'Strategy Summary' section (which is not, in fact, a summary, as it introduces new content) based on key aspects of the Vision. This would provide a much clearer line of sight between aspirations and strategies. This would include how the Strategy has considered the following (noting that the strategy itself may not be what address these items):
 - Liveability / sustainability outcomes (numerous submissions raised issues of green infrastructure and climate resilience and how the Strategy delivers on these aspects of the Vision)
 - Accessibility & Integrated land use planning (allowing better articulation of active transport, public transport changes needed to support housing outcomes). This supports responses to numerous submissions which raised questions around the accessibility in growth areas and how the strategy was addressing these areas.
 - Diversity, both of typologies and in building design (noting that this is not yet addressed by Strategy)
 - Social and Affordable Housing, including consideration relating to key worker housing.
 - Heritage protection and explanation as to how increased housing and heritage protection can be balanced.
- Currently, the first discussion of 'Housing Design' comes on Pg 26 as part of the Strategy Summary, but the Strategy has not articulated what the issues area relating to housing design in order to support any 'summary'. The breath of issues addressed under this heading are also extremely limited and further expansion of the role housing design will play in achieving the Vision for housing.

- It is recommended that an additional section be added to the Housing Strategy which explicitly addresses climate change and associated implications for housing. There are a large number of submitters who have queried the extent of various climate change considerations and it warrants further attention via the Strategy. This should also include identification of not just current, but identified future risks in relation to climate change related hazards, such as flooding, bushfire and urban heat. Identification of how housing will be developed in response to this should then be integrated. Current content relating to ESD could be integrated into this new section.

5

While it is noted Appendix 6 contains a list of 'implementation actions', it is recommended that a **discussion on implementation more broadly is included** within the *Housing Strategy* itself. This will allow the articulation of issues associated with delivery of the Strategy (including the important tissues of the 'how' of implementation / mechanisms to be included). In particular, the inclusion of a section addressing the proposed Strategy to increase infill development would be beneficial as many submissions have identified it is currently difficult to understand what, if any, measures Council is proposing to change the current trajectory of housing delivery.

- It is also recommended that the very specific changes to the planning scheme included in the appendix table be deleted to until such time as there is greater clarity regarding amendment content.
- The inclusion of the link between existing strategies and housing, an improved Vision / Strategy connection and an Implementation section in the Housing Strategy will also assist in providing context for the numerous implementation measures included in this table which have no current direct link to the Strategy.

NEIGHBOURHOOD CHARACTER STUDY

There were no significant issued raised in relation to the character areas and their preferred character, with the majority of respondents supporting these in almost all areas. Most issues were at a high level in the context of *"greenfield should be supported as infill will erode neighbourhood character"*. This can obviously, be managed via controls. Where issues were raised in submissions, these relate primarily to the boundaries and inclusion within each area and the relationship between character areas and change areas, as well as the transition between areas. Both these issues can be addressed via the Residential Zone and Overlay Project, which should be made clearer in the Strategy.

8

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It is recommended based on feedback proposed that **a review of the Ballarat East Substantial Change Area be undertaken** to assess the capacity and likely ability of this area to accommodate the scale of development identified for Substantial Change areas.

ACCESSIBILITY REPORT

Changes sought via submissions are generally supported. It is agreed that placing a greater weight on train stations is warranted. These stations will be important nodes and should be weighted higher in terms of accessibility. Accessibility mapping should be rerun with a higher weighting allocated to train stations than currently proposed.

Consideration should also be given to three other matters which were raised via submissions:

- Whether 'access to fresh fruit & vegetables' should be weighted alongside supermarkets
- Whether separation out of child care / kindergartens should be separated out from general 'community facilities; given these are used more regularly than many other facilities and are often a key driver of movement patterns.
- The integration of accessibility mapping for activity centres within growth areas.

Material made public is limited to mapping which is difficult to read and is not provided with any associated explanation of the issues or decisions which underpin assessments etc. This compromises the ability of readers to understand the logic and robustness of the mapping undertaken. Given it is such a significant factor in the Housing Strategy's identification of areas for change, the Strategy would benefit from greater explanation regarding this component of work. Providing higher resolution images would also support legibility.

Potential upcoming changes to State approach to accessibility mapping may also be worth calibrating against the methodology identified for this work.

CAPACITY ANALYSIS REPORT

(Note: the internal housing capacity work identified in the Strategy has not been reviewed.)

The capacity analysis which underpins the Housing Strategy does need to be ground-truthed to provide more robust base for the Housing Strategy. In the first instance, the work should be updated to more comprehensively consider constraints which may exist across the municipality (for example, latest flood modelling, even if this has not yet been subject to an amendment, buffers and heritage). It appears some of these may not have been considered. There also does not appear to be any consideration of servicing in this assessment (ie what is the capacity in 'well serviced' areas vs not so the strategy can address servicing issues if these are required to support housing growth or direct growth away from areas which are too difficult to service.

A number of submissions also questioned the inclusion of land subject to site specific heritage and public land, among a range of 'anomalies' or errors identified. While the Housing Strategy identifies on Pg 13 that these have been excluded, it is recommended that these be rechecked in order to support confidence in the evidence based underpinning the strategy

It is also recommended that this report be updated to both more explicitly consider the different factors influencing different categories of 'available' land. For example could capacity expectation differ based on constraints such as heritage or lot size. This analysis could then support a response by Council to the suggested inclusion of additional steps regarding strategies to support increased infill development.





Ballarat's Future Housing Needs: 2021-2041

SGS Draft report

City of Ballarat

15 | 06 | 2023





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Contents

Executive summary	5
Background.....	5
Policy context	5
Housing supply in 2021.....	5
Population projection scenarios to 2041	7
Dwelling demand to 2041.....	7
Housing preference scenarios	8
Conclusion	8
1. Introduction.....	10
1.1 Background.....	10
1.2 The impact of COVID-19	10
1.3 Purpose.....	11
1.4 Data definitions and geographies	12
2. Policy review.....	13
2.1 State planning policy	13
2.2 Local policy	15
3. Population projections	22
3.1 Population scenarios	22
3.2 Population estimates to 2041.....	26
3.3 Population by age	28
3.4 Forecast household formation	29
4. Housing supply	33
4.1 Overall supply	33
4.2 Dwelling types	33
4.3 Dwelling size	36
5. Housing demand.....	38
5.1 Dwelling demand forecast method	38
5.2 Forecast dwelling demand.....	43
6. Housing preferences.....	47

6.1 Overview.....	47
6.2 Recent research and advocacy	47
6.3 Housing preferences in Ballarat.....	48
6.4 Alternative dwelling demand forecasts	49
6.5 Alternative dwellings type forecasts.....	52
7. Conclusion	57
7.1 Overview.....	57
7.2 Implications	57

Executive summary

Background

The purpose of this Housing Needs Study is to provide detail on how much housing is needed to support the future population of Ballarat. Updated projections of the number of Ballarat residents have been modelled to account for potential changes driven by responses to the COVID-19 pandemic, and to account a degree of uncertainty with respect to future growth trajectories.

Based on population projections, forecasts of housing demand have been modelled. These projections provide estimates of different types of housing that will be demanded into the future and can be used to inform future planning decisions.

Policy context

Ballarat is identified as a 'major regional city' in state and regional planning policy and is promoted as a place for focused population growth and Victorian Government investment. It is expected that Ballarat will continue to strengthen its existing role as a services hub for the western regions of Victoria.

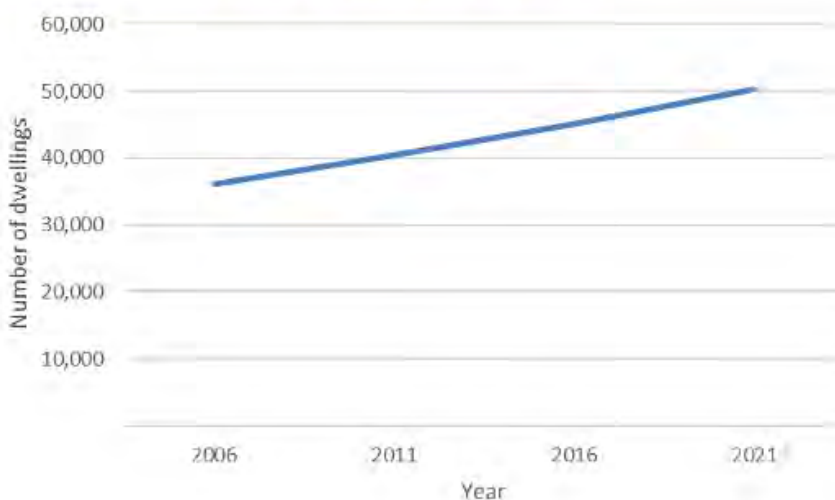
Critically, Clause 11.02-1S of the Planning Policy Framework sets a statutory obligation for local governments to accommodate projected population growth over at least a 15-year period. The City of Ballarat's long-term strategic plan, *Ballarat Strategy 2040*, seeks to respond to these state-level directions by identifying high level strategies to accommodate the projected growth. This overarching policy framework is supported by a suite of strategies and plans that identify preferred places for housing growth, including both greenfield and urban renewal locations.

To ensure that the local housing policy framework in the Planning Scheme meets the housing needs of the community over the long-term, Council is currently undertaking a body of strategic work that will culminate in the preparation of the Ballarat Housing Strategy.

Housing supply in 2021

The 2021 Census recorded 50,204 dwellings in Ballarat (both occupied and unoccupied). The stock of housing in Ballarat has grown steadily over time, increasing by 14,049 dwellings between 2006 and 2021 at an average rate of 2.2 per cent per annum.

FIGURE 1: TOTAL DWELLING SUPPLY, CITY OF BALLARAT, 2006 TO 2021



Source: ABS (2016) and City of Ballarat (2021)

Inconsistencies in data collection across Census years make an exact estimate of shifts in housing stock by dwelling type difficult (particularly in counting non-separate dwelling types). However separate houses comprise the largest share of total dwellings in the LGA, albeit a declining share over time.

TABLE 1: DWELLING TYPE, BALLARAT LGA, GROUPED, 2006, 2011, 2016 AND 2021

DWELLING TYPE	2006	2011	2016	2021	CHANGE 2006-2021	AAGR
Separate house	30,679	34,355	36,706	42,262	11,583	2.2%
Non-separate dwellings*	5,211	5,771	8,150	7,744	2,533	2.7%
Other	265	226	203	198	-67	-1.9%
Total	36,155	40,352	45,059	50,204	14,049	2.2%

Source: ABS Census (2006, 2011, 2016 and 2021)

Note: *Combining attached dwelling, flat, units and apartments dwelling classifications

Population projection scenarios to 2041

The Victorian Government’s most recent official Victoria in Future (VIF19) projections pre-date the COVID pandemic and release of the 2021 Census. Therefore, three population projections have been prepared to demonstrate possible long run population growth trends for use as an input into housing demand modelling, accounting for recent population trends. These are:

- **Low growth scenario:** This scenario leverages the Victorian Government’s official Victoria in Future population projections as the basis for updated population estimates to 2041, rebased to the 2021 Census.
- **Moderate growth scenario:** This scenario draws on historical growth rates and Centre for Population commentary on long-run growth rates for regional Victoria.
- **High growth scenario:** This scenario reflects a situation in which the recent high population growth experienced in Ballarat in 2021/22 is sustained over the long term to 2041.

Together, these population scenarios result in a forecast range of between 43,423 and 57,947 additional residents in Ballarat by 2041.

TABLE 2: POPULATION PROJECTIONS, BY SCENARIO, 2021-2041

POPULATION	2021	2041	CHANGE	CHANGE (%)	AVERAGE ANNUAL GROWTH RATE
Low Scenario	113,482	156,905	43,423	38%	1.6%
Moderate Scenario	113,482	163,897	50,415	44%	1.8%
High Scenario	113,482	171,429	57,947	51%	2.1%

Source: SGS Economics and Planning (2023)

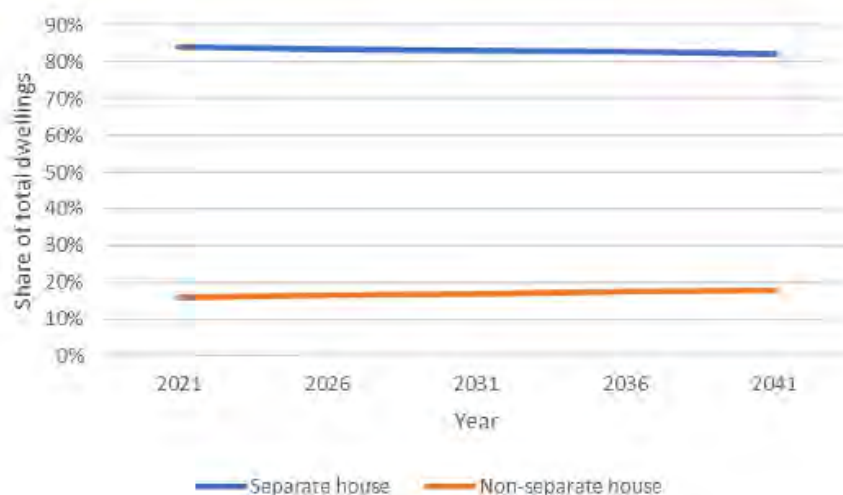
The population of Ballarat is expected to age over time, albeit those under 40 will continue to comprise the largest share of the total population.

With regard to household group formation, all family groups are projected to increase over the time period across all three scenarios. Lone person families are expected to experience the largest total increase of all family types and will continue to represent the largest share of all household types to 2041. Couples with children increase in outright terms but decrease as a share of all family types.

Dwelling demand to 2041

These combined effects of population growth and demographic changes are projected to result in demand for between 22,254 and 28,961 additional dwellings to 2041. Separate houses will maintain the largest share of dwellings demanded in the future; however this type of housing will represent a declining share of total housing stock to 2041.

FIGURE 2: HOUSING DEMAND FORECAST, SHARE OF DWELLINGS BY TYPE, GROUPED, BALLARAT LGA, 2021 TO 2041



Source: SGS Economics and Planning (2023)

Housing preference scenarios

The baseline housing preferences in this study are modelled using historical trends, but this is heavily influenced by supply from the housing market. Two alternative housing preferences scenarios have been prepared with reference to:

- Research demonstrating a mismatch between extant housing supply and the housing people might choose if a greater diversity of stock were provided.
- Council’s policy aspiration for a 50:50 split of dwelling growth between established area and greenfield development by 2041 (from the current split of approximately 30:70).

These alternative housing scenarios show that if the locations of future housing supply were to shift in response to resident preferences for diverse housing in established areas and Council’s policy aspirations, a greater number of non-separate and smaller (two bedrooms or less) will be needed.

Conclusion

The analysis and forecasts in this report document a range of reasonable population and housing scenarios that should inform future strategic planning processes, namely the development of the Ballarat Housing Strategy.

It has been shown that population growth and underlying demographic shifts could result in future demand for between 22,254 and 28,961 dwellings to 2041.

Estimates of dwelling mix in the base dwelling demand scenarios reflect past trends in housing choices. However, research indicates that these revealed housing preferences may reflect constraints on housing choices in the Ballarat housing market.

Policy settings that enable and encourage the provision of a greater diversity of housing stock in Ballarat, particularly in established areas of the City, may result in demand for a greater diversity of housing stock, in terms of type and size, provided they can meet the needs of households in terms of affordability.

1. Introduction

Ongoing growth in resident numbers and a changed landscape due to the COVID-19 pandemic has meant that Council has had to reconsider future housing requirements to meet the minimum 15 year supply of residential growth set out in State policy. Changes to forecasts of resident numbers and housing demand will have important implications for future planning decisions.

1.1 Background

The City of Ballarat is committed to supporting the delivery of sustainable housing outcomes across the municipality over the long term. Critically, Clause 11.02-1S of the Planning Policy Framework sets a statutory obligation for the City of Ballarat to accommodate projected population growth over at least a 15-year period. Achieving this requires consideration of the quantity and types of housing that will be needed to support the city's growing and changing population into the future.

Direction 6.2 of the Victorian Government's metropolitan strategic plan, *Plan Melbourne 2017-2050*, seeks to rebalance the state's population growth from Melbourne to rural and regional Victoria over the life strategy. The *Central Highlands Regional Growth Plan 2014* further supports this vision by identifying Ballarat as a primary location for population and employment growth outside of Melbourne.

The City of Ballarat's long-term strategic plan, *Ballarat Strategy 2040*, seeks to respond to these state-level directions by identifying high level strategies to accommodate the projected growth. The Ballarat Strategy, however, does not provide detailed guidance as to changes required to land use planning controls in the Ballarat Planning Scheme to accommodate projected housing demand.

To ensure that the local housing policy framework in the Planning Scheme aligns with the objectives of Plan Melbourne and the Regional Growth Plan, and meets the future housing needs of the community, Council is currently undertaking a body of strategic work, culminating in the preparation of the Ballarat Housing Strategy.

The Ballarat Housing Strategy will integrate the findings of the Neighbourhood Character Assessment and other strategic work, and will include proposed changes to Ballarat's residential zones and associated planning scheme policies.

1.2 The impact of COVID-19

COVID-19 and our societal response to the pandemic has a number of important implications for housing demand. Changes to migration have arguably been the most significant, with international migration having all but stopped since March 2020 as international borders closed. This has meant that population growth and housing demand growth driven by international migration has largely ceased.

Working from home arrangements in response to lockdowns have meant that people's needs and wants with regard to housing have changed, with people increasingly seeking more rooms in their

homes. Furthermore, many residents have become more willing to trade proximity to work for home size and location, given a reduced need to commute. Outer city and regional house prices and rents have increased in response:

The Victorian Government responded to the pandemic with a variety of new policies aimed at stimulating the economy in reaction to the pandemic related economic downturn. One example that has important implications for housing demand is the *Big Housing Build* program, which aims to deliver substantial social and affordable housing for the state and revitalise some of the existing stock. The total program is forecast to cost \$5 billion, a minimum 25 per cent of which is to be spent in regional Victoria. Ballarat has been guaranteed one of the largest shares of this, with a minimum of \$80 million to be spent on social housing in the area. Despite significant funding, the Big Housing Build does not guarantee that there will be a net increase in social and affordable housing stock.

Given these factors will significantly shape future housing demand, it is important that expectations of future housing growth are reviewed and adjusted. This includes reconsidering population and demographic projections for the City of Ballarat local government area (LGA) and adjusting housing demand projections to meet these potential changes.

1.3 Purpose

The purpose of this Housing Needs Assessment is to provide a key input to the development of the Ballarat Housing Strategy. It provides guidance on how much housing is needed in Ballarat, based on projected population growth, to 2041. The assessment considers the implications from factors such as population and household formation trends, existing housing supply, housing type (such as detached houses, semi-detached houses, or units/apartments) and housing size (number of bedrooms).

To generate the housing needs assessment, SGS has estimated future dwelling demand in Ballarat with the SGS Housing Demand Model. The model estimates *revealed* demand for dwelling types by analysing the likelihood (or propensity) of various age groups forming different household types, and then the likelihood of those household types residing in different dwelling forms based on past trends.

Five key scenarios are generated with the Housing Demand Model:

- Three housing demand scenarios utilising low, moderate high population growth scenarios which account for uncertainty with respect to future growth trajectories in Ballarat.
- Two alternative housing preference scenarios, which leverages recent research demonstrating that a lack of appropriate housing options in Ballarat limits people's housing choices, and demonstrate the dwelling mix required to move towards Council's policy aspiration 50 of future housing development in established areas of the City.

The substantive sections of this report are structured as follows:

- **Section 2** reviews relevant policy and strategy documents to gain an understanding of the policy environment impacting upon the provision of housing in the City of Ballarat.
- **Section 3** covers the population projection scenarios modelled for Ballarat, which form the core of the housing demand forecasts.
- **Section 4** examines supply of housing in the Ballarat local government area.

- **Section 5** contains results of housing demand modelling for Ballarat, including identifying how many of each kind of dwelling are likely to be required into the future.
- **Section 6** examines three housing preference scenarios that address different housing mixes required to better meet the long-term housing needs of Ballarat residents and move towards Council's policy aspiration for the locations of future housing growth.
- **Section 7** provides a conclusion with a brief overview of findings and an outline of potential implications.

1.4 Data definitions and geographies

In this report, dwellings are categorised into four types which are defined by the Australian Bureau of Statistics (ABS) and used in the Census and other statistics. These categories are:

- **Separate house** means a dwelling which is not attached to any other dwelling and is structurally independent. In planning instruments these are called single dwellings.
- **Attached/semi-detached dwellings** are attached on one or more walls, such as semi-detached, terraced and villa-style housing. In planning instruments these are called dual occupancies, semi-detached dwellings, attached dwellings and multi-dwelling housing.
- **Flats or apartments** are dwellings sharing vertical as well as horizontal walls. In planning instruments these are called shop-top housing and residential apartments.
- **Other dwellings** are dwellings that fall outside of the above categories, they include caravans and cabins, improvised dwellings such as tents, houseboats and flats attached to shops or any non-residential structure.

This categorisation refers only to *private dwellings*, which are those in which only a single household life. Ballarat also contains *non-private dwellings* in which more than a single household lives or in which people do not live in traditional households. These dwellings include boarding houses, student accommodation and aged care facilities. Secondary dwellings and granny flats, otherwise referred to as dependent persons units, are inconsistently classified and may not be accurately counted in the ABS Census or in the above categories.

The Victorian Government will:

- *Work with the nine Regional Partnerships and local governments to support the growth of housing and employment in regional cities and towns.*
- *Ensure the right infrastructure and services are available to support the growth and competitiveness of regional and rural industries and their access to global markets*

An addendum to *Plan Melbourne 2017-2050* was released in 2019. This document provides an update on Melbourne's projected population, housing and employment growth (superseding the projections set out in *Plan Melbourne*). It also provides an update on key land use and transport planning that has occurred since 2017 that advance the achievement of *Plan Melbourne* outcomes and directions (namely the Suburban Rail Loop). This document does not contain policy relevant to planning for future housing needs in Ballarat.

Ballarat GovHub project

Development Victoria have led the development of a new government office within the Civic Hall Site in Ballarat CBD in partnership with Regional Development Victoria, the Department of Premier and Cabinet and City of Ballarat. With funding from the Victorian Government in the order of \$47 million, the GovHub has the capacity to accommodate up to 1,000 public sector employees from government agencies.¹ This includes Regional Development Victoria, Department of Education and Training, Department of Justice and Community Safety, State Revenue Office, VicRoads and Services Victoria.

The project aligns with the Victorian Government's broader plans around decentralisation and addressing the professional job and salary discrepancies across the regions. The project's aim is to relocate 600 public sector jobs from Melbourne to Ballarat.² The project was completed and opened in April 2021.

The pandemic response

In May 2020, the Victorian Government announced a \$2.7 billion Building Works package in response to the COVID-19 pandemic, as well as the 2019-20 summer bushfires. The funding from this package has been allocated to a variety of new projects across Victoria including housing, education, community and tourism projects, suburban revitalisation, upgraded roads, freight routes and agricultural supply chains. Over half of the projects emerging from this funding package are located in regional and rural Victoria.³ One of the key components of the Building Works package is the allocation of \$1.18 billion to

¹ Development Victoria (2022) *Ballarat GovHub*, <https://www.rdv.vic.gov.au/grants-and-programs/victorian-govhubs/ballarat-govhub>

² Peck (2021) *GovHub opens in Ballarat as Victoria moves to decentralise public sector workforce*, <https://www.abc.net.au/news/2021-04-21/100-million-dollar-public-sector-office-opens-in-ballarat/100084196>

³ Regional Development Victoria (2021) *Building Works package to create jobs and drive our state's recovery*, <https://www.rdv.vic.gov.au/resources/coronavirus/building-works>

fund education infrastructure projects across the state. This includes repairing ageing buildings, providing extra classrooms and building new schools. Within Ballarat, the schools that will share \$39 million of the total funding are Delacombe Primary School, Miners Rest Primary School, Ballarat High School and Phoenix P-12 Community College. It is estimated that the education infrastructure projects will create space for over 21,000 additional students across Victorian schools.⁴

Increasing the capacity of local schools could have an impact on housing supply and demand, with more families seeking to locate in proximity. This includes a need for rental housing that is affordable and accessible to support families and employment growth in the regions. While this relationship has not been specifically outlined by the Victorian Government, a need for increased and improved housing has also been addressed in response to the pandemic, through the Big Housing Build package. This project seeks to increase the supply of social and affordable housing and is being led by a newly established organisation, Homes Victoria. Twenty-five per cent of the total number of new dwellings are estimated to be located in regional Victoria, amounting to around \$1.25 billion. An aim of the Big Housing Build is to provide a Minimum Investment Commitment to regional local government areas that are experiencing high population growth or have a significant regional city. Ballarat is one of the 18 selected local government areas, and has been allocated a Minimum Investment Guarantee of \$80 million.⁵ To date the program has funded 74 projects, and completed 128 homes with 232 underway.⁶ The project expected to reach completion in 2024.

2.2 Local policy

Ballarat Planning Scheme

The Ballarat Planning Scheme identifies Ballarat as a 'regional centre', servicing people from surrounding rural areas, particularly those to the west. Major retail, health and education facilities are listed as the City's primary attractors, along with its significant history, character, and lifestyle.

The Planning Scheme notes that Ballarat attracts many people from the Melbourne metropolitan area, including families seeking more affordable housing with good access to employment opportunities and better lifestyle choices. It anticipates that Ballarat's population will grow from 100,000 in 2014 to approximately 160,000 by 2040, making Ballarat one of Australia's fastest growing inland centres.

The Planning Scheme includes a vision of Ballarat as:

- *A successful community that has built its future on its beautiful city and great lifestyle*
- *A proud community that has retained its unique sense of identity*

⁴ Premier of Victoria (2020) *Building Works: Better Schools in Education Jobs Blitz*, <https://www.premier.vic.gov.au/building-works-better-schools-education-jobs-blitz>

⁵ Homes Victoria (2021), *Regional investment*, <https://www.homes.vic.gov.au/regional-investment>

⁶ Homes Victoria (2023), *What's happening in my area?* <https://www.homes.vic.gov.au/whats-happening-my-area#ballarat>

- *A desirable city that we love to live and work in, with excellent facilities and services*
- *A friendly city where the sense of community is a daily cornerstone of our life*
- *A healthy and safe community that supports and values its residents.*

The Ballarat West Growth Area is acknowledged as the primary greenfield development location. Other medium- to long-term greenfield investigation areas are identified within the Planning Scheme, each requiring a detailed feasibility assessment to determine the potential for development.

'Ongoing Change Areas' and the municipality's smaller townships are identified for incremental change; change that responds to valued character and community visions identified through local area planning processes.

Ballarat Strategy 2040

Today Tomorrow Together: The Ballarat Strategy 2040 is the city's long-term plan for Ballarat. This strategy was released in 2015 and is undergoing a review in response to the findings of this housing needs assessment and the implementation framework.

The strategy identifies that Ballarat's population will increase, age and diversify over the period from 2015 to 2040 and that family structures will be different. In turn, there will be a greater demand for semi-detached and unit type homes.

Ballarat Council Plan 2021 – 2025

The Council Plan envisions Ballarat, Victoria's heritage city, as a leader in sustainability, innovation and inclusivity. It outlines Council's strategic direction and objectives over a four-year period, with an emphasis on environmental sustainability, innovation and inclusion. A key objective identified in the Plan to achieve both a *healthy, connected and inclusive community* and a *city that fosters sustainable growth* is ensuring that the housing supply is diverse and affordable, meeting the needs of the community. Council's aim is to facilitate increased investment in new social and affordable housing by actively collaborating with Homes Victoria, housing providers and developers.

The City's annual plan 2021/22 highlights a key action towards ensuring affordable housing is to develop the *Ballarat Housing Strategy*.

Ballarat Station Precinct Redevelopment (2020)

This redevelopment seeks to transform the Ballarat Station Precinct into a commercial, community and transport space. It is led by the Victorian Planning Authority, City of Ballarat and VicTrack with the Victorian Government investing a total of \$28.3 million through the Regional Infrastructure Fund. The redevelopment project includes a Quest Apartment hotel, a Goods Shed Convention Centre with retail, dining and event spaces, a public plaza, commuter car park and bus exchange. While it seeks to attract investment and jobs into the city to aid recovery from the COVID-19 pandemic, there does not seem to be any consideration for housing need within the redevelopment. The only accommodation so far provided comprises of hotel apartments.

The Quest apartments and Convention Centre are already open to the public, but the broader delivery of the Master Plan has been paused since January 2022 and is awaiting further technical analysis.

Bakery Hill and Bridge Mall Precinct Renewal (2019)

The Bakery Hill and Bridge Mall Precinct plays a significant role as a historic and commercial nexus within Ballarat's CBD. The renewal of this Precinct is being undertaken by the City of Ballarat and the Victorian Planning Authority. The Urban Renewal Plan identifies key strategic projects to enhance the local economy, catalyse renewal and attract visitors and residents. These include the Bridge Mall opening, the redevelopment of Yarrowee River Parkland and Little Bridge Street car park, the intersection of Grenville Street and Sturt Street, and the Peel Street redevelopment site.

The Urban Renewal Plan is underpinned by the three key pillars of: *Thriving*, *Connected* and *Distinctive*. The *Thriving* pillar speaks to a diverse economy and a resilient and engaged community. The pillar has several key targets to 2050 relating to housing, which include:

- Accommodate approximately 5,000 new residents
- More diverse tenancy mix
- 5 per cent new dwellings delivered as affordable housing.

The Plan seeks to facilitate greater residential densities and diversity through shop top housing, apartments, townhouses, student accommodation, hotel/serviced apartment accommodation and Small Office / Home Office development. The Peel Street redevelopment site has been identified in the Plan as a residential demonstration project of affordable and medium-density housing. Overall, the Bakery Hill and Bridge Mall Precinct is positioned to accommodate a vibrant mix of uses and housing, including at medium densities.

Ballarat Creative City Precinct (2019)

Ballarat's Creative City Strategy guides the development of the arts and creative sector in Ballarat to 2040. Several key projects and initiatives have been identified including policy and capital works that support public realm upgrades, building modifications and the promotion of activation and engagement events. The provision of affordable housing for students and key workers in proximity to employment, education and public transportation is highlighted as a key principle. The Strategy also seeks to increase the number of people residing within the Creative Precinct by encouraging the redevelopment of strategic sites for housing. This includes the GovHub, Health Precinct and strategic landholdings owned by the Victorian Government and Federation University near the station.

The western edge of the Creative Precinct is zoned as Residential Growth Zone (RGZ) and Mixed Use Zone (MUZ). The purpose of these zones is to facilitate housing at increased densities, with the RGZ allowing for buildings of up to four storeys and the MUZ allowing for buildings at heights exceeding this. It is therefore expected that a higher proportion of dwellings and the population will be concentrated in this location within the Creative Precinct.

Ballarat West Structure Plan (2016)

The Ballarat West PSP is a comprehensive plan which provides direction for future urban development within the Ballarat West Precinct and is informed by the Ballarat West Growth Area Plan (2009). The Ballarat West PSP describes how land is expected to be developed and identifies the community infrastructure and services required to support development.

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The Ballarat West PSP applies to approximately 1,290 hectares of land in the Ballarat West Growth Area.

Alfredton West Precinct Structure Plan (2011)

Located within the Ballarat West Growth Area, the Alfredton West Precinct (sub-precinct 3) Structure Plan area covers a 317 hectare site. In relation to housing the Structure Plan seeks to achieve “socially sustainable housing” by creating a diversity of lot sizes to underpin housing affordability and ‘ageing in place’.

At full development, Alfredton West is expected to have 11,000 residents, primarily composed of couple families with children.

Ballarat Long-Term Growth Options Investigation (2018)

Council have currently approved 1,290ha of future urban expansion known as the Ballarat West Growth Area, which provides sufficient land to accommodate urban development extending through to approximately 2040. Three Greenfield Investigation Areas (GIAs) to the north, east and west of the city were nominated by the Ballarat Strategy for further analysis.

The Ballarat Long-Term Growth Options Investigation sought to determine the suitability of the GIAs to accommodate Ballarat’s long-term growth. The Northern GIA was found to be the preferred area to facilitate growth in the long-term.

It is significant to note that the identification of GIAs in the Planning Scheme does not confer a decision on the identified land being appropriate for residential uses. Clause 21.02-4 of the Planning Scheme states that medium to long-term GIAs require a more detailed feasibility assessment to provide strategic support for any land use changes. Further, the Planning Scheme recommends several strategies such as discouraging rezoning of additional greenfield land that would compete with the growth area until the market requires additional supply. Ad-hoc and unplanned and ‘leap frog’ development is also discouraged.

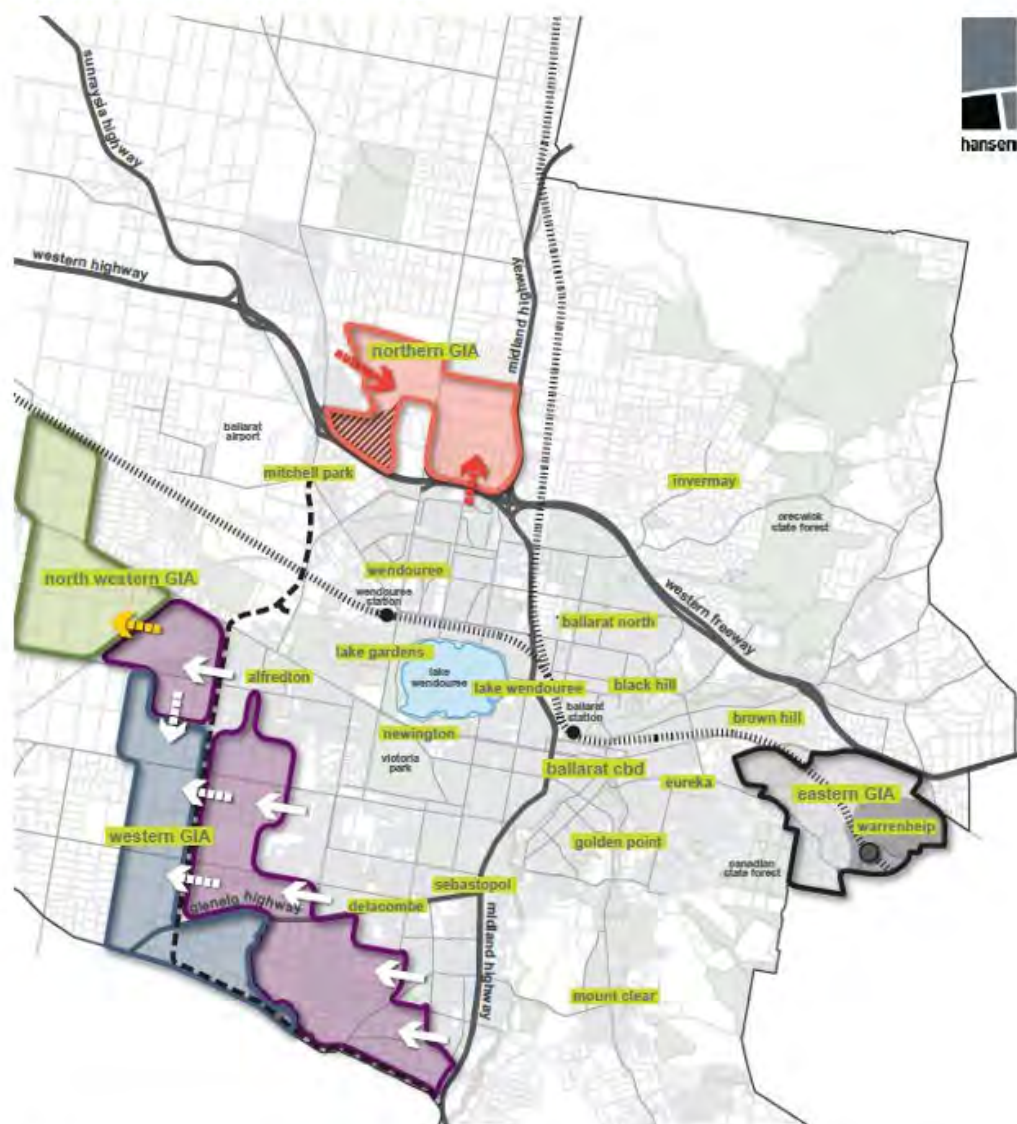
Amendment C194

Amendment C194 sought to formally implement The Ballarat Strategy as well as the recommendations from the Long-Term Growth Options Investigation into the Ballarat Planning Scheme. The associated Planning Panel Report recommended that a fourth area be considered as part of the Greenfield Investigation Area; North West GIA (Ballarat Resort/TIGA - Comprehensive Development Zoned land).

The four Greenfield Investigation Areas (GIAs) are identified in Figure 3 and include:

- Western GIA (Adjacent to existing Growth area)
- Northern GIA (North of Freeway/Mt Rowan)
- Eastern GIA (Warrenheip).
- North West GIA (Ballarat Resort/TIGA - Comprehensive Development Zoned land)

FIGURE 3: GREENFIELD INVESTIGATION AREAS



Source: Hansen Partnership (2018)

Clause 21.02-4 provides the following objectives and strategies in relation to the identified GIA's:

Objective:

To ensure that greenfield development is connected to the existing urban area.

Strategies:

- 4.1 Discourage rezoning of additional greenfield land, which would compete with Ballarat West, until the market requires additional supply.
- 4.2 Ensure that future greenfield development is focused within roughly an 8km arc from the centre of Ballarat.
- 4.3 Avoid ad-hoc and unplanned greenfield development.
- 4.4 Discourage disconnected or 'leap frog' development.
- 4.5 Minimise the impacts of development on Ballarat's historic urban landscape, the environment and Ballarat's natural resource base.
- 4.6 Ensure the need for buffers to protect major water and sewerage assets and treatment plants from encroachment by sensitive land uses is taken into account as part of any greenfield investigation.

Table 3 provides a high-level summary of the housing capacity each of the GIAs. The report ultimately identified the Northern GIA as the preferred option, followed by the Western GIA.

TABLE 3: HIGH LEVEL COMPARISON OF FOUR GREENFIELD INVESTIGATION AREAS

GIA	ESTIMATED FZ LAND ARE	INDICATIVE HOUSING CAPACITY (15 LOTS/HA)	INDICATIVE YEARS CAPACITY (520 DWELLINGS/ YEAR)
Western	790ha	6,900 lots	17 years
North West (TIGA)	570ha	6,500 lots	12 years
Northern	560ha	6,400 lots	12 years
Eastern	610ha	6,900 lots	13 years

Source: City of Ballarat (2020), Council Minutes 27 May 2020

On 30 October 2019, Council resolved to:

Seek authorisation from the Minister for Planning to prepare a Planning Scheme Amendment, pursuant to Section 8A of the Planning and Environment Act 1987, to include a local policy that identifies the Northern and Western Greenfields Investigation Areas as Ballarat's future greenfield growth areas. Place the Amendment on exhibition pursuant to Section 19 of the Planning and Environment Act 1987.

The February Council meeting in 2022 resolved to support the rezoning of three new growth areas in Ballarat, the Northern, Western and North-Western growth areas. The Minister for Planning, authorised the Department of Environment, Land, Water and Planning (now the Department of Transport and Planning) to prepare, adopt and approve an amendment to rezone the core area of the Northern Growth Area and to make the policy changes to the Ballarat Planning Scheme.

The Minister has also appointed the Victorian Planning Authority (VPA) to be the planning authority to prepare the required Precinct Structure Plan, Developer Contribution Plan and Planning Scheme Amendment.

The City of Ballarat applied to the VPA innovation pathway pilot program in July 2022. The pilot program aims to encourage significant innovations in a PSP that might otherwise be difficult to achieve due to policy and practice constraints. The Ballarat North PSP project was chosen by the VPA Board in February 2023 as the successful pilot PSP to test planning and design of desired sustainability outcomes for the Ballarat North precinct.

The VPA has commenced working with Council officers to develop an Implementation Plan that will outline outcomes for each innovation, the necessary technical assessments, funding and resource requirements, timelines, governance and responsibilities for consideration and adoption by Council the VPA and State agencies.

The VPA has also been requested by the Minister for Planning to undertake a high-level strategic review of Ballarat's proposed greenfield and urban renewal areas. The VPA has reviewed the scope of the High-Level Strategic Review and renamed it to IGAF (Infrastructure Growth Alignment Framework). The purpose of the IGAF is to provide a clear strategy for future staging and sequencing of residential growth opportunities to ensure the projected population growth over 15 years can be accommodated for, clear directions on where growth should occur, an evaluation of growth projections within the municipality, a high-level look at land capability, service limitations, infrastructure costs, market trends, an infrastructure review and the need for any upgrades to accommodate population growth. At this stage, the output is advice to the Minister for Planning and the project is anticipated to be completed before mid-2023.

Ballarat Diverse and Affordable Housing Discussion Paper (2023)

The *Ballarat Affordable Housing Discussion Paper* sets out the context of need for increasing the supply of diverse and affordable housing in Ballarat, including additional social and affordable housing. The strategy identifies three tiers of influence for Council in supporting housing affordability and diversity more broadly and enabling social and affordable housing supply.

The strategy proposes strategies and actions for improving housing diversity and affordability which can be broadly grouped into "three tiers" of influence' each level distinguished by the relative level of direct involvement and investment by Council. These include:

- Tier 1: Facilitating efficient housing markets
- Tier 2: Facilitating affordable housing supply
- Tier 3: Investing in affordable housing.

The contents of the Discussion Paper will inform relevant directions of the *Ballarat Housing Strategy*.

3. Population projections

The onset of the pandemic and release of the 2021 Census have meant that official Victorian Government population projections are now out of date. In this report, new population projections were modelled for use in projecting future housing demand within Ballarat.

3.1 Population scenarios

Population growth is the most fundamental drivers of increasing housing demand. The Victorian Government provides official population growth forecasts of local government area population growth through its Victoria in Future (VIF) projections; however, the most recently available projections predate both the onset of the pandemic and release of the 2021 Census. As such, VIF19 does not reflect changes in migration, living arrangements and housing markets caused by COVID-19 or the most up-to-date population data for Ballarat.

As a result, SGS has modelled three municipal-level population growth forecasts (low, moderate and high) for Ballarat to account for uncertainty with respect to the future growth trajectories.

These scenarios have been prepared with reference to:

- ABS Estimated Residential Population (ERP) 2011 to 2022 (past population growth trends),
- Victoria in Future population projections to 2036 (VIF19),
- The Australian Government's Centre for Population (CfP) predictions regarding long running post-COVID population trends for regional Victoria.

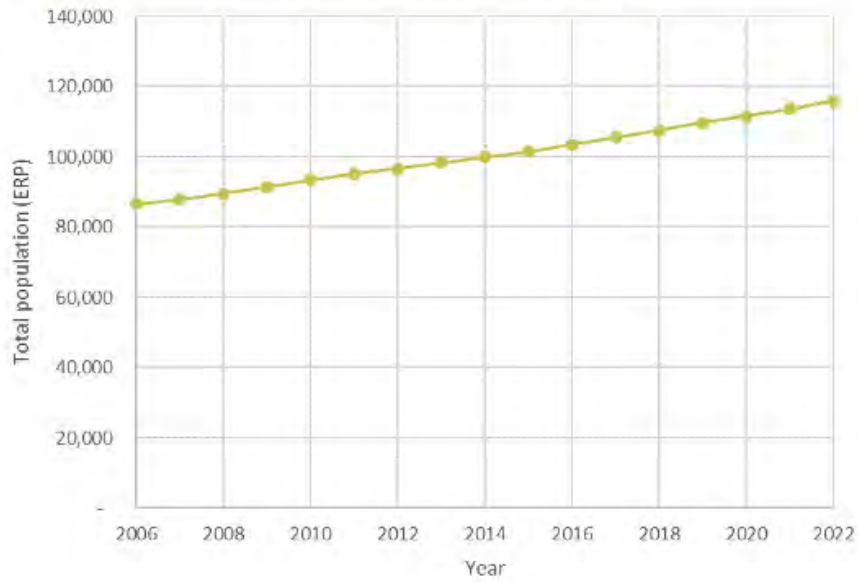
Each of these inputs is described in further detail below, followed by a summary of adopted populations scenarios for Ballarat LGA to 2041.

Past population growth trends

The Estimated Resident Population (ERP) is the official measure of the population prepared by the ABS and is based on the concept of usual residence. It refers to all people, regardless of nationality, citizenship, or legal status, who usually live in a location, with the exception of foreign diplomatic personnel and their families. The ERP includes adjustments to Census population counts to correct for under enumeration relating to usual residents temporarily overseas, incomplete Census data (identified by the Post Enumeration Survey), and back dating of estimates to 30th June of the relevant Census year.

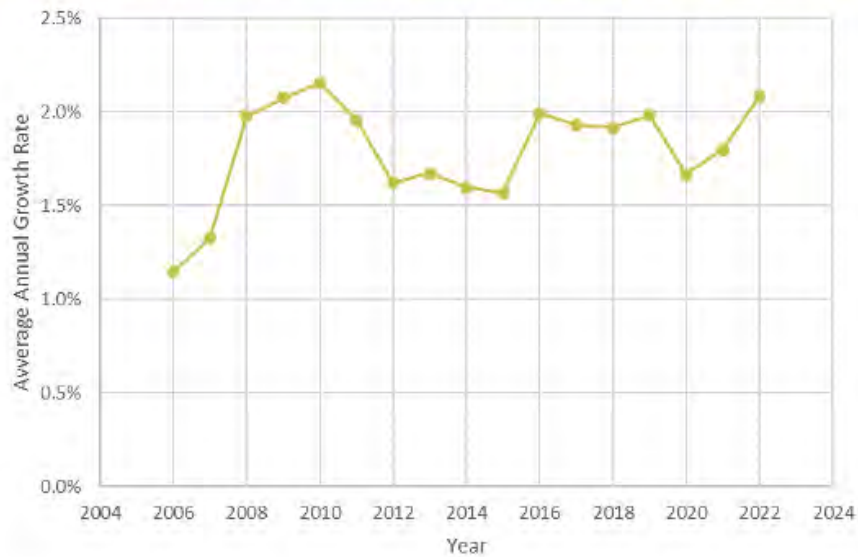
ERP estimates of population in Ballarat between 2006 and 2022 are shown in Figure 4. It shows that over this period, the population of the City has grown by 29,200 residents, or by 134 per cent. The rate of population growth has varied over time (as shown in Figure 5), ranging from 1.1 per cent between 2005 and 2006 to 2.2 per cent between 2009 and 2010 (the post- Global Financial Crisis era).

FIGURE 4: ESTIMATED RESIDENT POPULATION, BALLARAT LGA, 2006-2022



Source: ABS ERP (2022)

FIGURE 5: ESTIMATED RESIDENT POPULATION, AVERAGE ANNUAL GROWTH RATE, BALLARAT LGA, 2006-2022



Source: ABS ERP (2022)

A summary of population growth for the ten-year (2011 to 2021) and five year (2016 to 2021) intercensal periods, as well as the peak growth rate experienced as a result of the COVID pandemic (2021 to 2022) is shown in the table below.

TABLE 4: SUMMARY OF ANNUAL AVERAGE GROWTH RATES

PERIOD	TOTAL POPULATION CHANGE	YEARLY CHANGE	AVERAGE ANNUAL GROWTH RATE
2011 to 2021	18,297	1,830	1.8%
2016 to 2021	9,982	1,996	1.9%
2021 to 2022	2,365	2,365	2.1%

Source: ABS ERP (2022)

Victoria in Future Projections

As noted above, the VIF19 projections are the official Victorian Government projection of population and households. Projections are based on trends and assumptions for births, life expectancy, migration, and living arrangements across all of Victoria to a horizon year of 2036 for each of the state’s LGAs.

Figure 6 plots historic population growth against the VIF19 projections. It shows that actual population growth measured by ERP closely aligns with Victorian Government projections from 2016 to 2022. It also shows a forecast decline in population growth rates to 2036, tapering from 1.9 per cent in 2017 to 1.5 per cent by 2036.

FIGURE 6: VIF19 PROJECTIONS, 2016 TO 2036



Source: Victoria in Future (2019)

Centre for Population, Population Statement 2022

The 2022 Population Statement details the early effects of the COVID-19 pandemic on Australia’s population and projects its impact over the next decade, providing population forecast estimates at several geographies: states and territories, capital cities and ‘rest of state’. A key insight from the statement is the extent to which the impacts of the pandemic has impacted on population trends has been highly varied across the country.

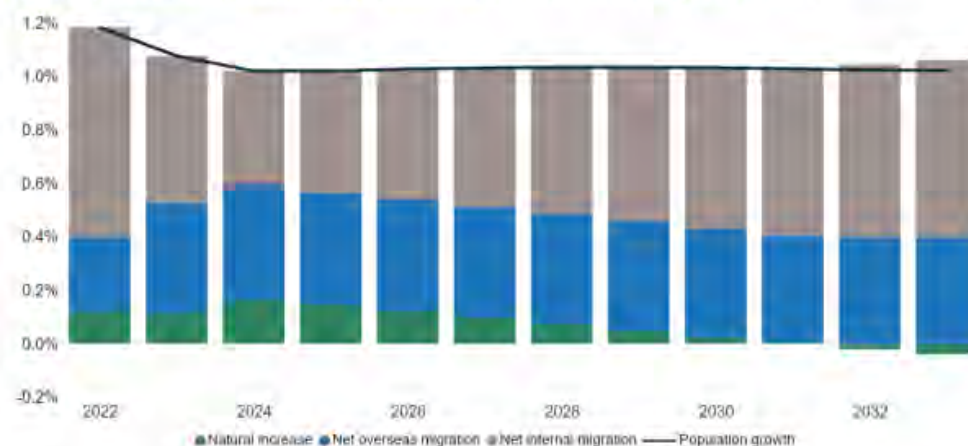
The CFP notes that the pandemic affected Victoria’s population growth more than any other state due to large falls in both net overseas and interstate migration. Annual population growth declined to -0.9 per cent in 2020–21, after averaging 2.1 per cent annual growth between 2014 and 2019. Victoria’s population growth is expected to recover to 1.8 per cent by 2024 and then slowly decline to 1.5 per cent in 2033.

At the sub-state level, the statement documents how Greater Melbourne’s population growth declined further than other cities in 2021, with the loss of overseas migration compounded by falls in net internal migration. Melbourne’s population growth pre-pandemic was 1.8 per cent. By 2020–21, population growth had declined to -1.6 per cent.

Population growth in the rest of Victoria was much stronger than in Melbourne over the pandemic period, supported by strong internal migration in the early stages of the pandemic, which helped offset the decline in overseas migration. While CFP forecasts aggregate expected trends across the whole of regional Victoria, impacts on population growth have been highly variable across the state, with particular spikes in growth experienced in regional cities, and high-amenity and peri-urban areas.

CFP projects that growth rates in regional Victoria will decline and stabilise to 2024 (Figure 7), driven by the declining contribution of natural increase.

FIGURE 7: CFP FORECAST POPULATION GROWTH RATES, REST OF VICTORIA, 2022 TO 2034



Source: Centre for Population, Population Statement 2022 (2022)

Population scenarios summary

Drawing on the information above, Figure 6 provides a summary of population scenarios adopted to inform modelling of Ballarat’s future housing needs. These should be viewed as a range of *possible* populations scenarios, acknowledging that the future (particularly in the post-COVID era) is uncertain.

Low growth scenario: This scenario leverages the Victorian Government’s official Victoria in Future population projections as the basis for updated population estimates to 2041.

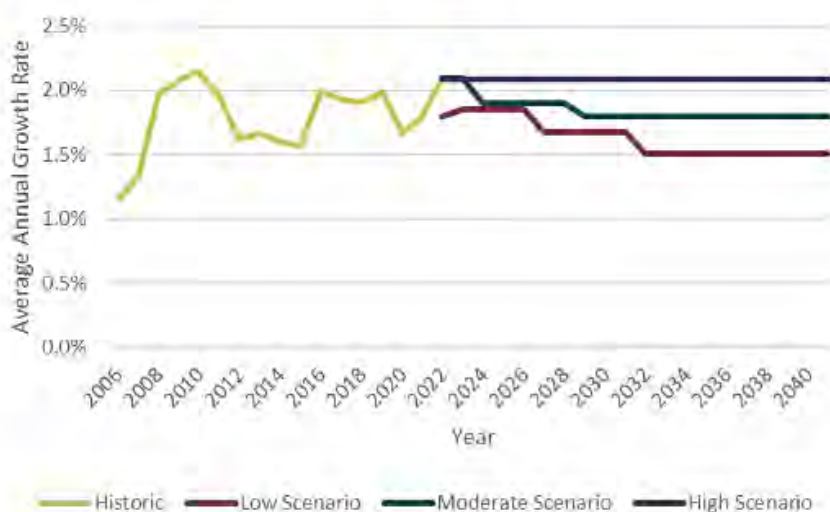
Annual population growth rates to 2036 reported by the VIF forecasts are utilised to estimate year-on-year population increases, rebasing total population estimates at 2021 using Census ERP data. Population projections were made to 2041 by extending the forecast growth at 2036 for a further five years.

Moderate growth scenario: This scenario draws on historical growth rates and Centre for Population commentary on long-run growth rates for regional Victoria.

It assumes that the peak population growth rate experienced in Ballarat as a result of the COVID pandemic (2021-22) of 2.1% will continue for two years. Growth is then expected to taper back to the five-year (2016-2021) AAGR of 1.9% for five years, followed by the 10-year (2011-2021) AAGR for the remainder of the forecast period to 2041.

High growth scenario: This scenario reflects a situation in which the peak AAGR experienced because of the COVID pandemic of 2.1 per cent is sustained over the long term to 2041.

FIGURE 3: AVERAGE ANNUAL GROWTH RATE COMPARISON, HISTORIC AND PROJECTED, ALL SCENARIOS, 2001-2041



Source: SGS Economics and Planning (2023)

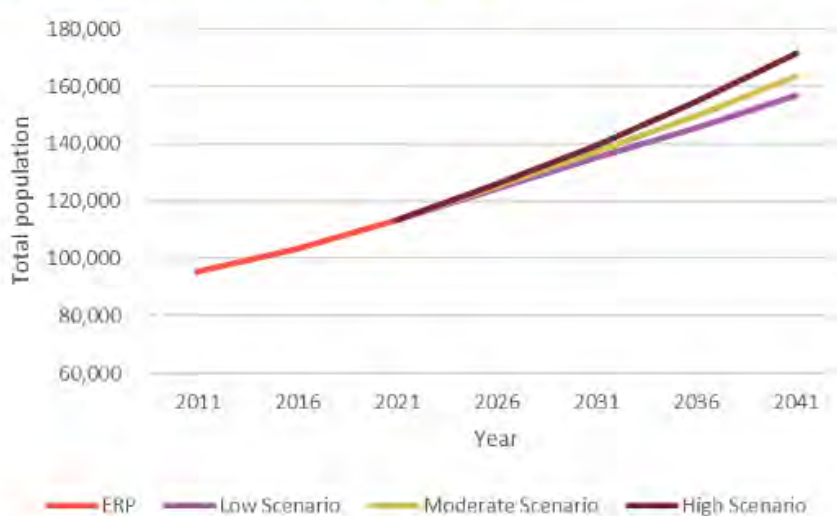
3.2 Population estimates to 2041

Figure 9 shows the population forecasts to 2041 for each of the three scenarios described above. These projections show;

- In the **low growth scenario**, total population increases by 43,423 between 2021 and 2041 (a total increase of 38 per cent, or at an average rate of 1.6 per cent per annum).
- In the **moderate growth scenario**, total population increases by 50,415 between 2021 and 2041 (a total increase of 44 per cent, or at an average rate of 1.9 per cent per annum).
- In the **high growth scenario**, total population increases by 57,947 between 2021 and 2041 (a total increase of 51 per cent, or at an average rate of 2.1 per cent per annum).

These results are shown in further detail in Table 5.

FIGURE 9: POPULATION FORECAST, BY SCENARIO 2021-2041



Source: SGS Economics and Planning (2023)

TABLE 5: POPULATION PROJECTIONS, BY SCENARIO, 2041-2041

POPULATION	2021	2026	2031	2036	2041	CHANGE	CHANGE (%)	AAGR
Low Scenario	113,482	124,373	135,161	145,627	156,905	43,423	38%	1.6%
Moderate Scenario	113,482	125,170	137,117	149,910	163,897	50,415	44%	1.8%
High Scenario	113,482	125,810	139,478	154,630	171,429	57,947	51%	2.1%

Source: SGS Economics and Planning (2023)

3.3 Population by age

A breakdown of total population by 10-year age group is shown in Table 6 to Table 8 below. These estimates have been made by applying the VIF19 forecast age distribution to total population estimates for each of the three scenarios. As such, while total population by age group will vary between scenarios, however the percentage distribution will remain the same. A comparison of the percentage share of 5-year age groups in 2021 and 2041 is shown in Figure 10.

These results show that the population is projected to increase across in absolute terms across all age groups. The population ages across the forecast timeline, with the 60 to 79 and 80+ age groups increasing as a total share of the population, while most age groups below this are declining by share.

The ageing of the population will have implications for housing type demanded, with people downsizing as they approach the retirement age. However, while older age groups are increasing, younger cohorts (those aged under 40) will continue to comprise the largest share of the total population, almost 48 per cent in 2041. Those with young families tend to prefer larger houses in outer, affordable locations and single or young couples without children tend to prefer well located, smaller dwelling types like semi-detached dwellings and apartments.

The following sections will show how the individual population is modelled into households and subsequently into housing demand.

TABLE 6: POPULATION FORECAST, BY AGE GROUP, LOW SCENARIO, 2021, 2031 AND 2041

	0-19	20-39	40-59	60-79	80 AND OVER	TOTAL
2021	28,514	30,294	27,215	22,010	5,449	113,482
2031	31,773	34,789	32,175	28,108	8,316	135,161
2041	35,280	39,088	38,048	32,944	11,543	156,905

Source: SGS Economics and Planning (2023)

TABLE 7: POPULATION FORECAST, BY AGE GROUP, MODERATE SCENARIO, 2021, 2031 AND 2041

	0-19	20-39	40-59	60-79	80 AND OVER	TOTAL
2021	28,514	30,294	27,215	22,010	5,449	113,482
2031	32,233	35,292	32,641	28,515	8,436	137,117
2041	36,852	40,830	39,744	34,413	12,058	163,897

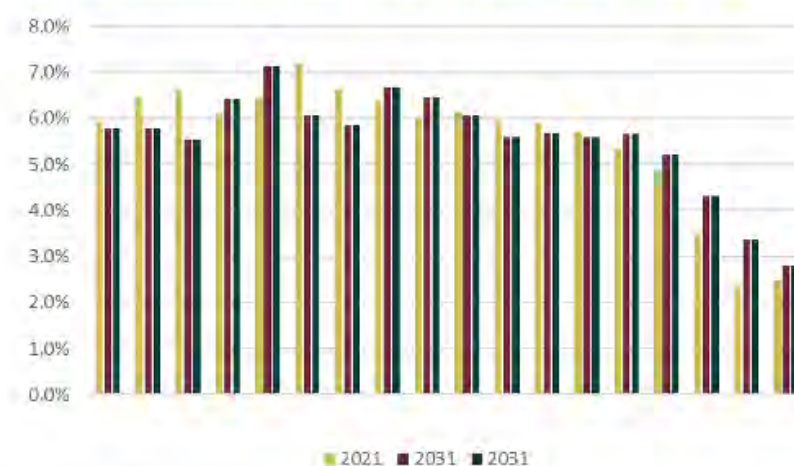
Source: SGS Economics and Planning (2023)

TABLE 8: POPULATION FORECAST, BY AGE GROUP, HIGH SCENARIO, 2021, 2031 AND 2041

	0-19	20-39	40-59	60-79	80 AND OVER	TOTAL
2021	28,514	30,294	27,215	22,010	5,449	113,482
2031	32,788	35,900	33,203	29,005	8,581	139,478
2041	38,546	42,707	41,570	35,994	12,612	171,429

Source: SGS Economics and Planning (2023)

FIGURE 10: POPULATION FORECAST, BY AGE GROUP, PERCENTAGE, 2021 AND 2041



Source: SGS Economics and Planning (2023)

3.4 Forecast household formation

Having forecast population by age groups, we can also forecast population by household types. This is crucial for understanding the types of housing demanded and is done by modelling the propensity for individuals to form households based on age and gender. Propensities are calculated as a function of historical averages across the LGA.

The results of this modelling, including total change as well as average annual growth, are shown in Table 9, Table 10 and Table 11 below. As above, the total count of households by type will vary under each of the population scenarios (as shown in the respective tables), however the share of households will be the same across each (Figure 11) as each scenario leverages the forecast age distribution presented in VIF19.

When projecting household formation across the forecast period, the following observations can be made:

- All family groups are projected to increase over the time under all scenarios.
- Lone person families are expected to experience the largest total increase of all family types, with between an additional 7,112 and 9,068 lone person households added between 2021 and 2041 across the three population scenarios. This group will continue to represent the largest share of all household types, increasing from 29.5 per cent in 2021 to 30.6 per cent in 2041.
- Couple families without children will experience the second highest rate of total growth (between 5,609 and 7,227 additional households) and will increase from a share of 24.9 per cent of all households in 2021 to 25.4 per cent in 2041.
- Couples with children increase in number across all scenarios, but decrease as a share of all family types, going from 24.7 per cent in 2021 to 22.7 per cent in 2041.
- Multifamily households, one parent families and other households are projected to remain fairly stable, with marginal increases in the total number of households across each household type. Albeit each of these groups will decline marginally as a share of total households over the forecast period.

TABLE 9: HOUSEHOLD PROJECTION, BY HOUSEHOLD TYPE, LOW SCENARIO, 2021 TO 2041

	2021	2041	TOTAL CHANGE 2021 TO 2041	AAGR
Couple family with children	11,763	15,629	3,866	1.4%
Couple family without children	11,872	17,481	5,609	2.0%
Group household	1,808	3,229	1,421	2.9%
Lone person household	14,018	21,130	7,112	2.1%
Multi-family household	402	547	145	1.6%
One parent family	5,658	8,129	2,471	1.8%
Other family	467	632	165	1.5%
Other non-classifiable	1,602	2,180	578	1.6%
Total	47,590	68,957	21,367	1.9%

Source: SGS Economics and Planning (2023)

TABLE 10: HOUSEHOLD PROJECTION, BY HOUSEHOLD TYPE, MODERATE SCENARIO, 2021 TO 2041

	2021	2041	TOTAL CHANGE 2021 TO 2041	AAGR
Couple family with children	11,763	16,300	4,537	1.6%
Couple family without children	11,872	18,230	6,358	2.2%
Group household	1,808	3,367	1,559	3.2%
Lone person household	14,018	22,036	8,018	2.3%
Multi-family household	402	571	169	1.8%
One parent family	5,658	8,478	2,820	2.0%
Other family	467	659	192	1.7%
Other non-classifiable	1,602	2,274	672	1.8%
Total	47,590	71,915	24,325	2.1%

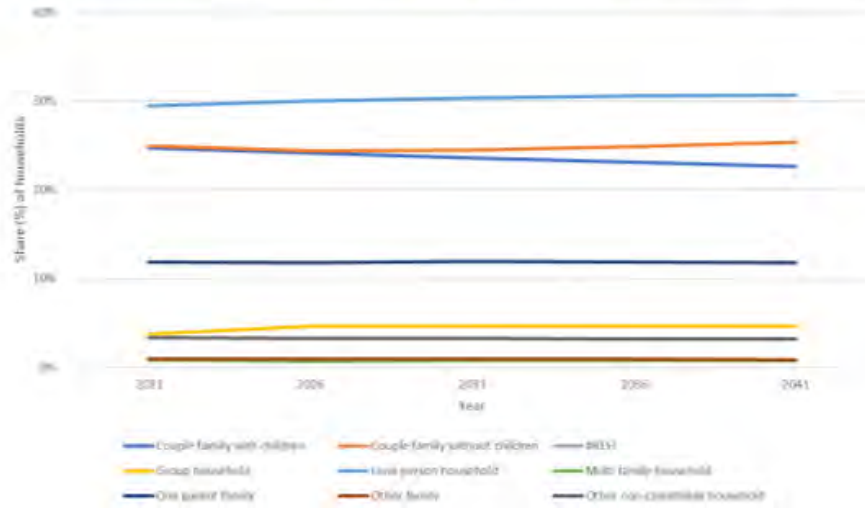
Source: SGS Economics and Planning (2023)

TABLE 11: HOUSEHOLD PROJECTION, BY HOUSEHOLD TYPE, HIGH SCENARIO, 2021 TO 2041

	2021	2041	TOTAL CHANGE 2021 TO 2041	AAGR
Couple family with children	11,763	17,076	5,313	1.9%
Couple family without children	11,872	19,099	7,227	2.4%
Group household	1,808	3,527	1,719	3.4%
Lone person household	14,018	23,086	9,068	2.5%
Multi-family household	402	598	196	2.0%
One parent family	5,658	8,882	3,224	2.3%
Other family	467	691	224	2.0%
Other non-classifiable	1,602	2,382	780	2.0%
Total	47,590	75,341	27,751	2.3%

Source: SGS Economics and Planning (2023)

FIGURE 11: HOUSEHOLD TYPE PROJECTION, BY SHARE, ALL SCENARIOS, 2021 TO 2041



Source: SGS Economics and Planning (2023)

4. Housing supply

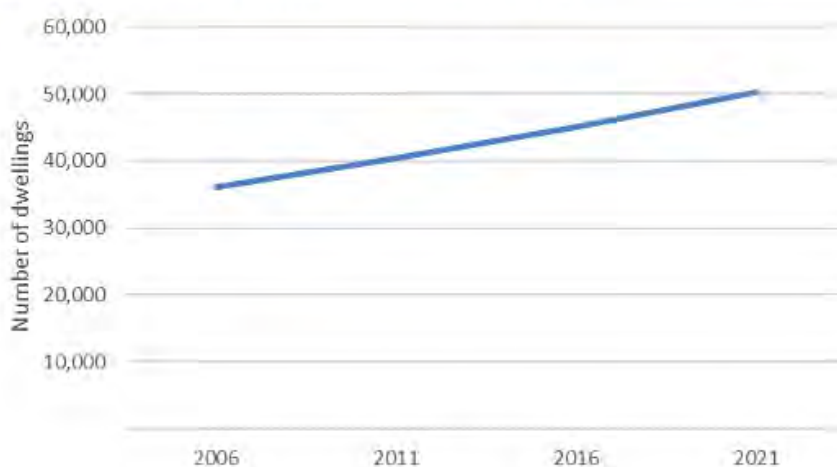
Housing supply here relates to the stock of dwellings currently in Ballarat. Understanding the number of dwellings and their type has important implications for the types of houses future residents will have available to them. This also provides trends which allow for the forecast of future demand.

4.1 Overall supply

Understanding the characteristics of the current housing supply is an important first step in modelling future housing demand. Total dwelling supply refers to the summed total of all dwellings currently present in the area, regardless of occupancy status.

Figure 12 below illustrates dwelling supply in the Ballarat using the latest ABS Census data (2021). The data shows that there were approximately 50,204 dwellings in 2021, an increase of 5,145 from 45,059 in 2016 (or approximately 11 per cent over the five-year period). Figure 12 shows a relatively consistent pattern of growth in dwellings between 2006 and 2021.

FIGURE 12: TOTAL DWELLING SUPPLY, BALLARAT LGA, 2006 TO 2021



Source: ABS (2021)

4.2 Dwelling types

Using ABS Census data, the share of different types of housing can be investigated over time. Table 12 below shows an increase of all dwelling types in the Ballarat LGA between 2006 and 2021. However, between 2006 and 2016, a decline in the number of flats, units or apartments is registered, and a sharp

increase in the number of attached dwellings is observed. It is unlikely that such a high number of flats, units or apartments were demolished during this period. This change is likely caused by discrepancies in the allocation of dwelling structure type across Census years.

The ABS website notes a change in the dwelling structure data collection method in 2016 compared to previous Censuses. The ABS notes that:

*"While there were no classification or definition changes to dwelling structure, the change in procedures for collecting this information has resulted in differences between 2011 and 2016 data for mail out areas. This is particularly noticeable in the separate house, semi-detached, row or terrace house, townhouse etc categories, as well as flat or apartment in a one or two storey block."*⁷

There have also been some methodological changes between the 2016 and 2021 Censuses, and there are resulting inconsistencies in housing classifications.

The most reasonable interpretation of the data is that number of flats, units or apartments stayed relatively steady in Ballarat over the 10-year period and semi-detached dwellings increased. To account for these discrepancies to some degree, data is presented in Table 13 by housing type, as well as 'separate houses' and 'non-separate houses', which combines medium and higher density housing stock (attached dwellings, flats, units and apartments) as well as Other. It is noted that counts of separate houses were also affected by data collection changes.

TABLE 12/ DWELLING TYPE, BALLARAT LGA, 2006, 2011, 2016 AND 2021

DWELLING TYPE	2006	2011	2016	2021	CHANGE 2006-2021	AAG ⁸
Attached dwelling	1,420	2,510	6,490	6,335	4,915	10.5%
Flat or apartment	3,791	3,261	1,660	1,409	-2,382	-6.4%
Other	265	226	203	198	-67	-1.9%
Separate house	30,679	34,355	36,706	42,262	11,583	2.2%
Total	36,155	40,352	45,059	50,204	14,049	2.2%

Source: ABS Census (2006, 2011, 2016 and 2021)

⁷ Australian Bureau of Statistics (2016), 2900.0 - Census of Population and Housing: Understanding the Census and Census Data, Australia, 2016. Available at: <https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2900.0main+features101352016>

TABLE 13: DWELLING TYPE, GROUPED, BALLARAT LGA, 2006, 2011, 2016 AND 2021

DWELLING TYPE	2006	2011	2016	2021	CHANGE 2006-2021	AAGR
Separate house	30,679	34,355	36,706	42,262	11,583	2.2%
Non-separate	5,211	5,771	8,150	7,744	2,533	2.7%
Other	265	226	203	198	-67	-1.9%
Total	36,155	40,352	45,059	50,204	14,049	2.2%

Source: ABS Census (2006, 2011, 2016 and 2021)

Table 13 and Table 15 show the percentage share of dwellings by type across Census years by dwelling type and grouped dwelling types (as above). While the data collection inconsistencies described above are also evident in these results, these tables show that separate houses comprise a large share of total housing stock, albeit there appears to have been a modest increase in non-separate houses over time.

TABLE 14: DWELLING TYPE BY PERCENTAGE, BALLARAT LGA, 2006, 2011, 2016 AND 2021

DWELLING TYPE	2006	2011	2016	2021
Separate house	84.9%	85.1%	81.5%	84.2%
Attached dwelling	3.9%	6.2%	14.4%	12.6%
Flat or apartment	10.5%	8.1%	3.7%	2.8%
Other	0.7%	0.6%	0.5%	0.4%
Total	100.0%	100.0%	100.0%	100.0%

Source: ABS Census (2006, 2011, 2016 and 2021)

TABLE 15: DWELLING TYPE BY PERCENTAGE, GROUPED, BALLARAT LGA, 2006, 2011, 2016 AND 2021

DWELLING TYPE	2006	2011	2016	2021
Separate house	84.9%	85.1%	81.5%	84.2%
Non-separate	14.4%	14.3%	18.1%	15.4%
Other	0.7%	0.6%	0.5%	0.4%
Total	100.0%	100.0%	100.0%	100.0%

Source: ABS Census (2006, 2011, 2016 and 2021)

4.3 Dwelling size

The size of the dwellings in Ballarat LGA can be considered through the proxy measure of how many bedrooms they contain. The Ballarat LGA contains dwellings of a variety of sizes. Three-bedroom dwellings are most prevalent (57.8 per cent), followed by four bedroom (28.8 per cent), and 2 bedroom dwellings (16 per cent). The proportion of each dwellings size is very similar to that of regional Victoria.

TABLE 16: NUMBER OF BEDROOMS, BALLARAT LGA VS REGIONAL VICTORIA, 2021

LOCATION	NONE (INCL. BEDSITTERS)	1 BEDROOM	2 BEDROOMS	3 BEDROOMS	4 BEDROOMS	5 BEDROOMS OR MORE
Ballarat LGA	0.2%	3.4%	16.0%	47.8%	28.8%	3.8%
Regional Victoria	0.4%	3.3%	15.8%	48.3%	27.5%	4.6%

Source: ABS Census (2021)

Table 17 shows changes in dwelling size in Ballarat LGA over the period between 2006 and 2021. There has been a slight decline in shares for smaller and medium housing stock, and an increase in the share larger housing stock. This increase was most pronounced for four bedroom houses, with a seven point increase in between 2011 and 2021. One bedroom houses decreased from 4.4 per cent of all dwellings in 2006 to 3.4 per cent in 2021.

The trend here of increasing dwelling size is somewhat counter to the trend above of the shift away from separate houses and towards semi-detached dwellings. This could be explained by an overall increase in size of new dwellings, with both new detached and new semi-detached dwellings being constructed with four bedrooms.

TABLE 17: NUMBER OF BEDROOMS, BALLARAT LGA, 2006, 2011, 2016 AND 2021

YEAR	NONE (INCLUDES BEDSITTERS)	1 BEDROOM	2 BEDROOMS	3 BEDROOMS	4 BEDROOMS	5 BEDROOMS OR MORE
2006	0.3%	4.4%	18.0%	54.8%	19.5%	3.0%
2011	0.2%	4.1%	18.0%	53.2%	21.3%	3.1%
2016	0.2%	3.7%	17.5%	51.0%	24.1%	3.6%
2021	0.2%	3.4%	16.0%	47.8%	28.8%	3.8%

Source: ABS Census (2016 and 2021)

Table 18 below shows the average number of bedrooms by dwelling type for Ballarat LGA and regional Victoria. The average number of bedrooms for separate houses is highest for all dwelling types at 3.2 bedrooms per dwelling in 2021.

Semi-detached houses, flats and apartments are smaller, with 2.4 and 1.9 bedrooms per dwelling in 2016, respectively. Average dwelling sizes in Ballarat LGA were largely consistent with those across regional Victoria. They have also remained relatively stable over time in Ballarat LGA.

TABLE 18: AVERAGE NUMBER OF BEDROOMS, BALLARAT LGA VS REGIONAL VICTORIA, 2021

LOCATION	YEAR	SEPARATE HOUSE	SEMI-DETACHED	FLAT OR APARTMENT	OTHER	OVERALL AVERAGE
Ballarat LGA	2006	3.1	2.4	1.8	2.0	3.0
	2011	3.2	2.2	1.9	1.5	3.0
	2016	3.2	2.4	1.9	2.1	3.1
	2021	3.3	2.3	1.9	1.8	3.1
Regional Victoria	2021	3.3	2.1	1.9	1.6	3.1

Source: ABS Census (2006 to 2021)

5. Housing demand

In the previous section, population projections were used to determine household type projections. This section projects the housing demanded by those households based on trends in household preferences for dwellings of different types and sizes.

5.1 Dwelling demand forecast method

The analysis in this section draws upon a range of datasets, including population growth projections and trends in population age, family and household types. Building upon these projections and demographic factors, SGS's Housing Demand Model (HDM) determines how many new dwellings of different types will be required in Ballarat LGA in the future.

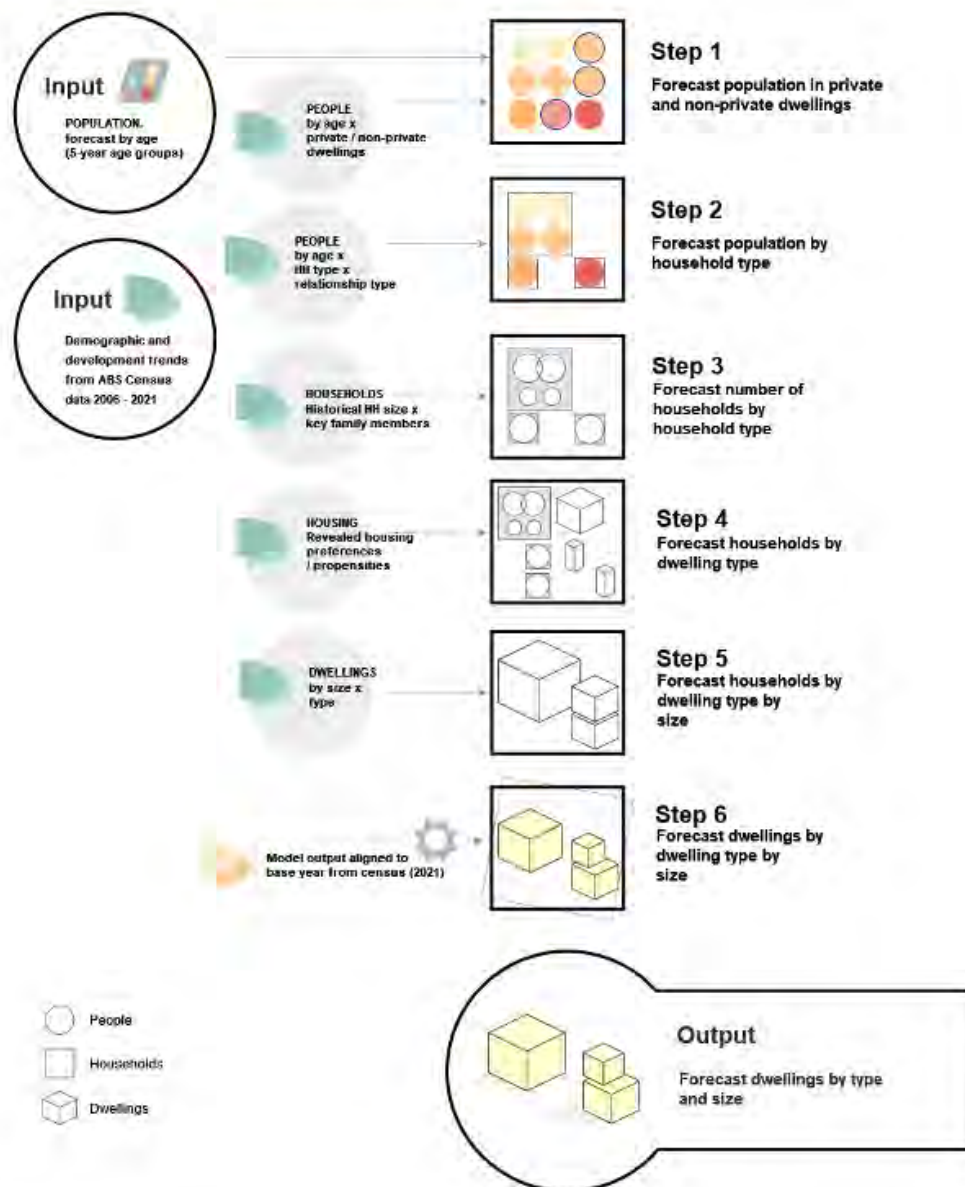
Household projection

The operation of the HDM is shown in Figure 13. Projections for population growth by age in five-year periods are converted to number of people by household and relationship type, and then to number of households by type. In each case, trends in ABS Census data from 2006-2021 have been extrapolated into the future, with checks in place to ensure that they do not deviate too far from historical averages. Trends used include the following, each of which varies over time:

- The proportion of people in each age group living in private dwellings as opposed to non-private dwellings like aged care.
- The likelihood of a person of a given age to live in each kind of household (and different relationship types within each household).
- The average sizes of particular kinds of households.
- The likelihood of a household of a given type to live in each kind of dwelling.

The population forecasts modelled by SGS as outlined previously were used in the housing demand model. This meant that the model accounts for future population changes in response to the pandemic.

FIGURE 13: SGS HOUSING DEMAND MODEL METHOD



Source: SGS (2021)

As has been discussed in earlier sections, the COVID pandemic resulted in disruption to many established population and housing trends, likely reflected in 2021 Census results (such as to vacancy rates, household sizes etc.). Some of these changes may persist to some degree, but it is unlikely that living arrangements as expressed in the 2021 Census influenced by the COVID pandemic and lockdowns are a reliable indicator of long-term housing and demographic trends.

To account for this in housing demand modelling, each demographic and housing market trend used in the housing demand model was reviewed, with Census data available from 2006, 2011, 2016 and 2021 (and in some cases 1996 and 2001). Where 2021 data represented a substantial deviation from the long-term trend visible in earlier Censuses, it was assumed that the 2021 Census data is an outlier and should have limited impact on future modelling. In these cases, the 2021 Census point was either excluded from the model entirely, or the trend extrapolation method used to moderate and forecast a lower change in over time (for example in average household size).

More specifically:

- The proportions of people living in group households, multi-family households, or with family households that they were either related to but not a core member of or unrelated to generally increased substantially between 2016 and 2021. This was assumed to be a product of COVID during which many people moved in with family or friends during lockdowns. As such, the 2021 data reflecting these results was not included in modelled trends in living arrangements.
- Similarly, the proportions of older people living as parents in couple family with children households, and of people aged 20+ living with parents, increased between 2016-2021 likely as people stayed with their parents during and around lockdowns. This data was also excluded from longer term trend prediction.
- The proportion of people in several age ranges in lone person households has changed rapidly between recent Censuses, and it was deemed to be unreasonable to assume that it will continue to change as rapidly in the future, so the size of this trend was moderated.
- The average size of multi-family and other family households changed substantially between 2016 and 2021, and is volatile in the historical Census due to the low number of households of these types. As a result, the average size of multi-family households was not extrapolated into the future (it was fixed at the 2021 value), while a reduced rate of change was applied to the average size of other family households.

To calculate what kinds of housing will be needed to accommodate the forecast community, an assumption is required about housing needs and preferences (that is, what kind of housing a given household type will choose or needs).

The proportion of each household type who is observed to live in each dwelling type is commonly referred to as *revealed housing preferences*. As households are constrained by the kinds of housing available and their affordability, trade-offs are required when they choose where to live. As a result, revealed preferences can differ from people's ideal (unconstrained preferences). Households may also wish to stay in their current dwelling, even if it differs from their ideal preference. Housing preferences, and how people's choices may be constrained by the housing market, are discussed in more detail in Chapter 6.

To forecast housing demand by different dwelling types, trends in revealed preference data from the ABS Census (either 1996 to 2021 or 2006 to 2021) are extrapolated into the future. These trends are broken down by household type and so represent, for example, what proportion of lone person households are likely to live in separate houses versus high density housing forms. As the trends are extrapolated, the model assumes that housing preferences will continue to change in the future, but as it is based on historical Census data it is still constrained by what kind of housing is being delivered.

As such, the model reflects trade-offs made by households based on available housing supply in the Ballarat LGA. For example, the greater incidence of freestanding houses in Ballarat compared with metropolitan areas means that some smaller household types (e.g. single person families) become more likely to choose houses over units. By comparison, smaller households are more likely to choose units in capital cities where affordability and availability make this choice more likely.

As detailed earlier in Section 4 there is substantial 'noise' across the attached and apartment housing categories between 2006 and 2021 Censuses. Dwellings that were previously classified as flats, units or apartments have since been reclassified as attached dwellings, while some housing previously classified as attached dwellings was reclassified in 2021 as separate housing. As a result, it is not possible to make a reliable estimate based on past Census data of how preferences for attached dwellings and flats and apartments might change relative to each other in the future. In addition, there are relatively few flats and apartments in Ballarat and so the small current size of this housing segment provides limited predictive power if higher densities were to become a more popular dwelling choice.

To combat these issues, the apartment and attached dwelling categories were combined in the housing demand model and so the dwelling categories used were:

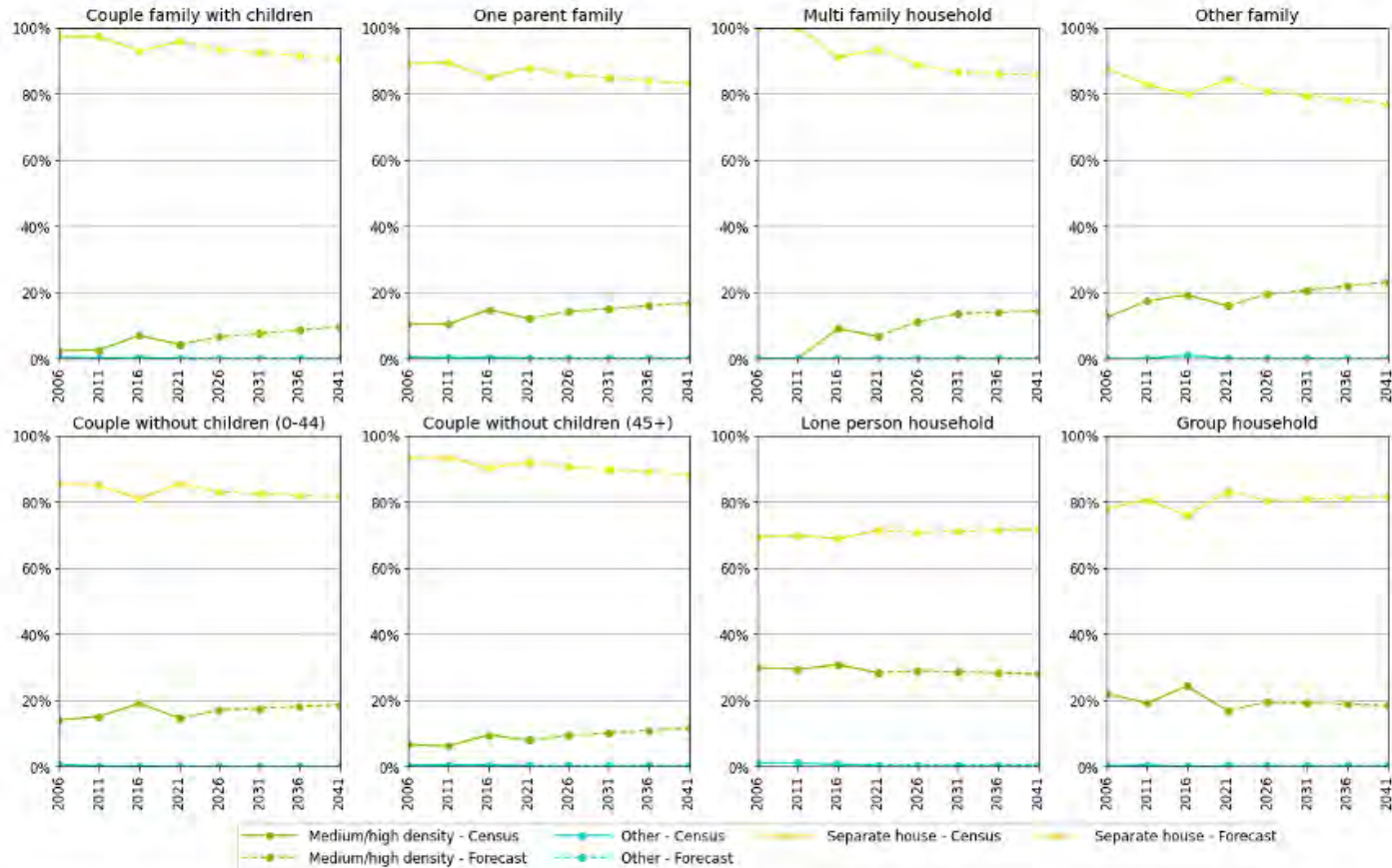
- Separate houses
- Other dwelling types, including attached dwellings and townhouses.

This grouping makes revealed preferences data across Censuses reliable enough to construct long-term trends and make predictions regarding housing demand. However, it does not completely resolve data problems with the ABS Census as there are still some classification issues between the 2016 and 2021 Censuses between attached dwellings and separate houses (this issue cannot be resolved simply).

The resulting forecast of housing propensities, otherwise known as revealed preferences, is shown in Figure 14.

A breakdown of the non-separate houses category into attached dwellings and apartments was conducted based on the 2021 Census results alone (i.e. assuming that the proportion of this combined category that is apartments will remain at its 2021 baseline).

FIGURE 14: FORECAST CHANGE IN HOUSING PROPENSITIES OVER TIME, BALLARAT LGA



Source: SGS (2021) using ABS Census 2006, 2011, 2016

SGS ECONOMICS AND PLANNING: BALLARAT: FUTURE HOUSING NEEDS, 2021-2041

5.2 Forecast dwelling demand

Total dwelling demand

SGS has forecast dwelling demand by drawing on the population forecast scenarios outlined in Section 2. Total dwelling demand for the five year periods between 2021 and 2041 for each of the population scenarios is shown in Table 19. It shows that:

- The **low growth scenario** will result in demand for an additional 22,254 dwellings over the forecast period or increasing by an average annual growth rate of 1.9 per cent.
- The **moderate growth scenario** will result in demand for an additional 25,483 dwellings over the forecast period or increasing by an average annual growth rate of 2.1 per cent.
- The **high growth scenario** will result in demand for an additional 28,961 dwellings over the forecast period or increasing by an average annual growth rate of 2.3 per cent.

TABLE 19: DWELLING DEMAND FORECAST, BY SCENARIO, FROM 2021 TO 2041

SCENARIO	2021	2026	2031	2036	2041	CHANGE 2021 TO 2041	AAGR
Low	50,204	56,184	61,490	66,866	72,458	22,254	1.9%
Moderate	50,204	56,544	62,380	68,833	75,687	25,483	2.1%
High	50,204	56,833	63,454	71,000	79,165	28,961	2.3%

Source: SGS Economics and Planning (2023)

Forecast Dwelling demand by type

The forecasts below show separate houses are likely to account for the greatest total volume of growth, with a range of 17,311 (low scenario) to 22,825 (high scenario) separate dwellings expected to be added between 2021 and 2041. This represents 78 per cent of all additional demand across each of the growth scenarios over the forecast period. Attached dwellings are forecast to make up approximately 19 per cent, while flats, units and apartments comprise a much smaller 3 per cent.

While separate houses are expected to remain the dominant housing types over the period, smaller semi-detached dwellings, and flats, units and apartments are expected to grow at faster rates. Separate houses will increase at an average rate of 1.7 per cent per annum, while attached dwellings, and flats, units and apartments will increase at rates of 2.6 per cent and 2.1 per cent per annum respectively. Overall, separate houses are expected to decline from 84.2 per cent of total dwelling stock in 2021 to 82.2 per cent in 2041 (-2.0 per cent). While non-separate houses (accounting for attached dwellings, flats units and apartments as a combined category) are forecast to make up an increased share of housing by the end of the forecast period, representing 17.8 per cent of all housing in 2041 compared with 15.8 per cent in 2021.

Projected decreases in average family sizes are the key driver behind the forecast growth in demand for smaller dwellings. In particular, significant growth in lone person households is expected to contribute to demand for smaller types of housing.

TABLE 20: HOUSING DEMAND FORECAST, LOW SCENARIO, BY DWELLING TYPE, BALLARAT LGA, 2021 TO 2041

DWELLING TYPE	2021	2026	2031	2036	2041	CHANGE 2021 – 2041	AAGR	SHARE OF CHANGE
Separate house	42,262	46,976	51,120	55,294	59,573	17,311	1.7%	78%
Attached dwelling	6,335	7,403	8,398	9,441	10,534	4,199	2.6%	19%
Flat, unit or apartment	1,409	1,601	1,768	1,934	2,135	726	2.1%	3%
Other	198	204	203	198	217	19	0.5%	0%
Total	50,204	56,184	61,490	66,866	72,458	22,254	1.9%	100%

Source: SGS Economics and Planning (2023)

TABLE 21: HOUSING DEMAND FORECAST, MODERATE SCENARIO, BY DWELLING TYPE, BALLARAT LGA 2021 TO 2041

DWELLING TYPE	2021	2026	2031	2036	2041	CHANGE 2021 – 2041	AAGR	SHARE OF CHANGE
Separate house	42,262	47,277	51,860	56,920	62,228	19,966	1.9%	78%
Attached dwelling	6,335	7,450	8,520	9,718	11,003	4,668	2.8%	19%
Flat, unit or apartment	1,409	1,611	1,793	1,991	2,230	821	2.3%	3%
Other	198	205	206	204	226	29	0.7%	0%
Total	50,204	56,544	62,380	68,833	75,687	25,483	2.1%	100%

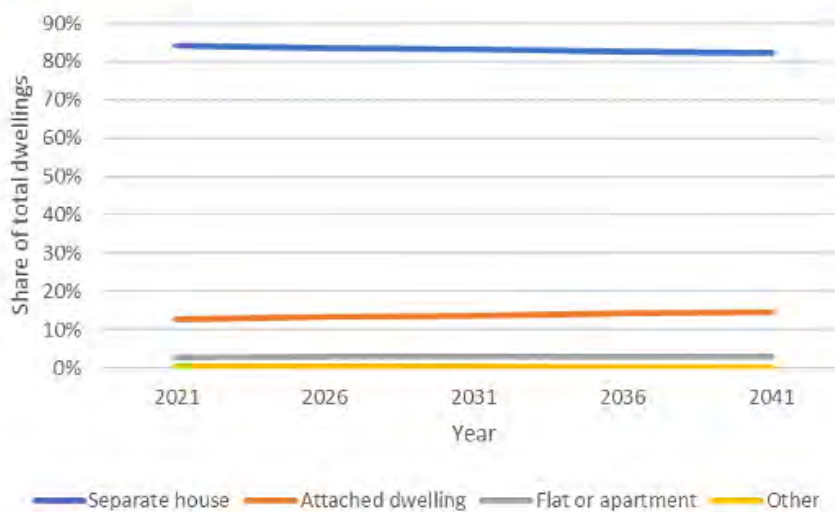
Source: SGS Economics and Planning (2023)

TABLE 22: HOUSING DEMAND FORECAST, HIGH SCENARIO, BY DWELLING TYPE, BALLARAT LGA, 2021 TO 2041

DWELLING TYPE	2021	2026	2031	2036	2041	CHANGE 2021 - 2041	AAGR	SHARE OF CHANGE
Separate house	42,262	47,518	52,753	58,712	65,087	22,825	2.2%	79%
Attached dwelling	6,335	7,488	8,667	10,024	11,509	5,174	3.0%	19%
Flat, unit or apartment	1,409	1,619	1,824	2,053	2,332	923	2.6%	3%
Other	198	207	210	210	237	39	0.9%	0%
Total	50,204	56,833	63,454	71,000	79,165	28,961	2.3%	100%

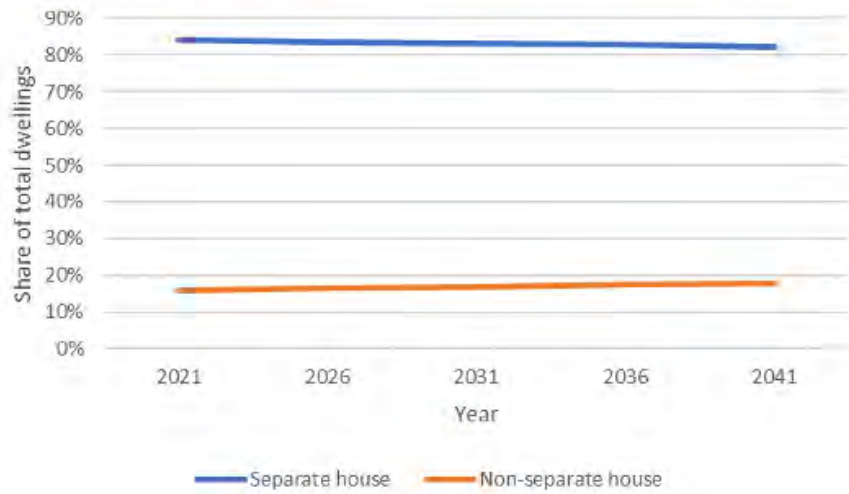
Source: SGS Economics and Planning (2023)

FIGURE 15: HOUSING DEMAND FORECAST, SHARE OF DWELLINGS, BY DWELLING TYPE, BALLARAT LGA, 2021 TO 2041



Source: SGS Economics and Planning (2023)

FIGURE 16: HOUSING DEMAND FORECAST, SHARE OF DWELLINGS, SEPARATE AND NON-SEPARATE DWELLINGS, BALLARAT LGA, 2021 TO 2041



Source: SGS Economics and Planning (2023)

6. Housing preferences

Research demonstrates a mismatch between the housing preferences of households and the stock of housing available within local housing markets. This section investigates the extent to which this is likely the case in Ballarat and presents two alternative dwelling demand scenarios that model to varying degrees shifts towards providing an increased share of housing in established areas of the City, and the implication for the mix and size of dwellings demanded in the future.

6.1 Overview

A limitation of forecast that use historic trends to predict future dwelling demand is the implicit assumption that the economic and social conditions of the past will be largely unchanged in the future. However, there is a high likelihood that these conditions will change over time, shifting both the supply and demand for housing (by type, location, features and price). Existing and proposed government policies in relation to planning, transport policy and infrastructure investments will also continue to have an impact on future housing outcomes.

Another limitation of housing demand forecasts is that they are unconstrained in the sense that they do not consider a range of capacity limitations that can cap the extent to which the forecast housing demand might be realised in a subject location. Potential capacity constraints include the availability of developable land, planning policies, development feasibility and industry capacity.

This section will briefly canvas evidence that future demand for housing by type and location in Ballarat may differ from past trends in a manner that is not fully captured in the base dwelling demand forecasts. It concludes with some alternative housing demand forecasts that seek to explore the potential implications for future housing growth of changing housing preferences.

6.2 Recent research and advocacy

The housing growth challenges for Australian cities has generated considerable interest in the question of housing preferences, and more specifically, whether there is now a mismatch between housing demand and the extant housing stock. Work by the Grattan Institute based on a large choice modelling survey found that in both Sydney and Melbourne there was an undersupply of medium density housing in middle ring locations when compared to demand. A more recent study by Infrastructure Victoria used a similar survey approach to explore the housing preferences of households in Melbourne, Geelong and Ballarat. This study suggested that more households would be attracted to established areas if the dwellings on offer had the same number of bedrooms and were a similar price to new dwellings in greenfield areas. But the quality and affordability of medium density development in established areas were revealed as barriers to greater demand for this type of housing.

The concept of the 'missing middle' (or missing middle housing) has been invoked in a number of jurisdictions (most notably in NSW and Queensland but also in many parts of North America) to highlight the absence of good quality and diverse forms of medium density housing that are sought

after by household but rarely delivered. In Victoria, the Better Homes initiative is aimed at addressing this issue through the release of exemplar plans for four storey apartment developments.

Research on housing preferences and advocacy for quality medium-density developments lends support to long standing planning policies in capital cities (and regional cities to a lesser extent) that have sought to increase the proportion of new housing that is provided in established areas. These policies are aimed at reducing infrastructure costs, achieving sustainability objectives, and preventing spatial disadvantage, rather than satisfying latent housing preferences, although there are obvious synergies between these goals.

The COVID pandemic and associated changes to work practices has added another layer to the complexity to the drivers of dwelling preferences, particularly in Victoria. Many households that can now benefit from more flexible working arrangements and working from home have either sought larger dwellings and/or moved to more distant places as the importance of the daily commute to work on housing location decisions has diminished. These trends would appear to be shifting housing preferences in the opposite direction of increasing demand for more compact living in more central urban areas. On the other hand, COVID travel restrictions brought attention to the role and quality of neighbourhood and local services and facilities for community wellbeing. The extent to which these shifts will become persistent trends is as yet unclear. These trends may continue over the longer term, but it is also conceivable that post-pandemic environment induces a 'correction' towards previous trends, particularly as housing affordability pressures limit the extent to which the households can 'consume' more or larger housing.

6.3 Housing preferences in Ballarat

A survey of 266 households in Ballarat was undertaken to better understand the housing preferences of the local community. The survey asked respondents about their current housing arrangements and the reasons for their choices. They were also asked if they intended to move house and, if so, what are the locational and dwelling features would influence the choice of their future home. One hundred and twenty one households indicated an intention to move in the next 10 years. It should be noted that the survey was conducted in October and November 2022 and as a result the responses may have been coloured by the recent experience of the COVID pandemic.

Some of the key themes arising from the survey included:

- **Changes in housing needs at the community level were inconclusive:** While individual households indicated they expected to have changing housing needs over time (seeking both smaller and larger dwellings), at the overall population level it is unclear what the trends might mean in aggregate (i.e. the survey did not capture the preferences of those households who might move to Ballarat and conceivably bring with them slightly different preferences to the current population).
- **Evidence that limited housing diversity and affordability is having a negative impact on housing choices:** Fifty per cent of households that indicated an intention to move stated it was difficult to find an affordable home; 48 per cent stated it was difficult to find a large yard; 28 per cent stated they would likely move away from Ballarat. Of those that might leave Ballarat, 60 per cent felt there were few/no suitable homes to choose from in the LGA, and of those planning on moving house but staying in Ballarat, 43 per cent felt there were few or no suitable homes to choose from. Almost 60 per cent of couple households without children felt that there are few suitable choices in

Ballarat; and smaller homes and smaller yards were also flagged as features that residents may struggle to find.

- **Evidence of demand for more compact dwellings and/or housing options in established areas:** 21 per cent of moving households had a preference for a 1 or 2 bedrooms dwelling (and 79 per cent had a preference for 3 or more bedrooms). Eight per cent of moving households would seek a medium or high-density dwelling (although by contrast, 13 per cent said they would seek a farm or acreage). Only 22 per cent of households suggested that living in a new modern suburb was a preference, whereas 59 per cent indicated that an older established suburb was desirable.
- **Safety and friendliness of neighbours was a high priority:** These area attributes featured highly in both the reasons for existing housing choices and in the future housing choices of households that indicated an intention to move.

6.4 Alternative dwelling demand forecasts

As noted above, housing demand forecasts are generally tied to past trends and by design do not account for the potential for future shifts in preferences, policies and broader socio-economic conditions. Several recent pieces of credible research had indicated that households in Australia's larger capital cities are seeking more medium density housing in established areas than is currently available. Decades of planning policy have also sought to increase supply of housing in established areas and decrease the reliance on greenfield areas to accommodate housing growth. A survey of Ballarat residents provides some evidence of gaps in Ballarat's housing market for smaller dwellings, dwellings in established areas and affordable homes. A lack of appropriate housing options was also cited reason households might move away from Ballarat in the future.

City of Ballarat has adopted a policy aspiration for a 50:50 split of new housing between established areas and greenfield growth. This represents a departure from recent past trends which have seen a split of around 30:70.⁸ This aspiration has been used as the basis of an alternative dwelling preference forecasts.

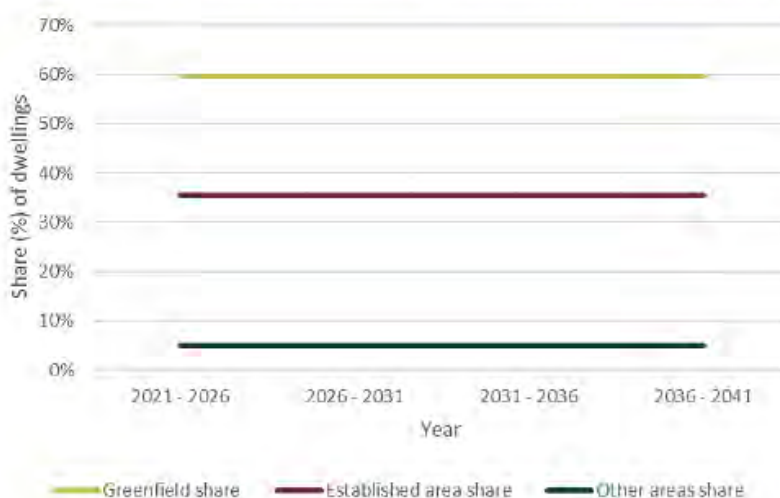
The **'base case' scenario (S1)** assumes the 'business as usual' split of development between established vs greenfield locations. Two alternative dwelling preference scenarios assume a greater share of development will occur in established areas in future, as foreshadowed in a variety of studies and surveys that have examined the issue of dwelling preferences over the past decade or so.

The **first alternative scenario (S2)** implies a progressive shift away from 'business as usual' towards a higher share of established area development; and the **second alternative scenario (S3)** reflects Council's policy aspiration for a 50:50 split of new housing in established and greenfield locations over a 20 year period.

⁸ Estimates of this ratio vary based on geographies and classification approach – e.g. Census data vs permit data – but are this ratio. The balance of established area vs other development, where established area is classified as the redevelopment of previously occupied urban land has been estimated as 14% to 86%.

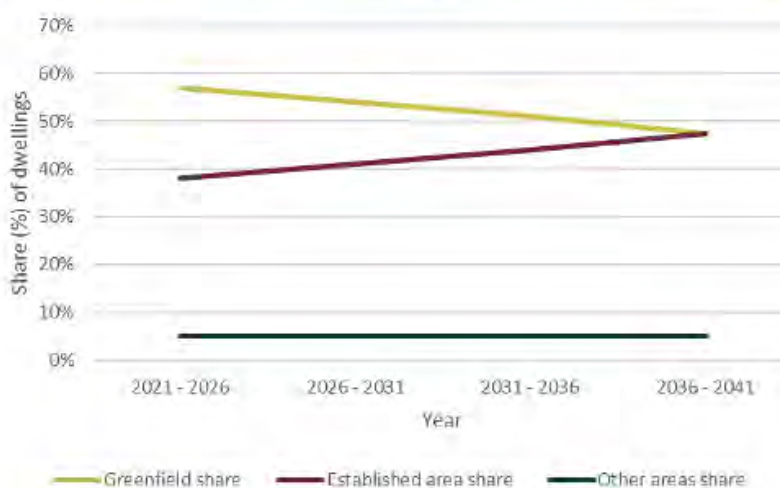
The charts below show how the shift in the mix of new dwellings occurs in each scenario. In the '50:50 policy aspiration' scenario, the mix in dwelling supply by locations transitions from the current share of greenfield development to a higher share of development in established areas over the 20 year period. This would result in a 50:50 split of all growth that occurs between 2021 to 2041. In the moderate scenario, the mix in dwelling supply by location moves towards a 50:50 split in the final 5 year period. This would result in a 45:55 split (established areas vs greenfield areas) of all growth over the 20 years.

FIGURE 17: DWELLING PREFERENCE SCENARIOS (S1), ESTABLISHED VS GREENFIELD, 2021 TO 2041



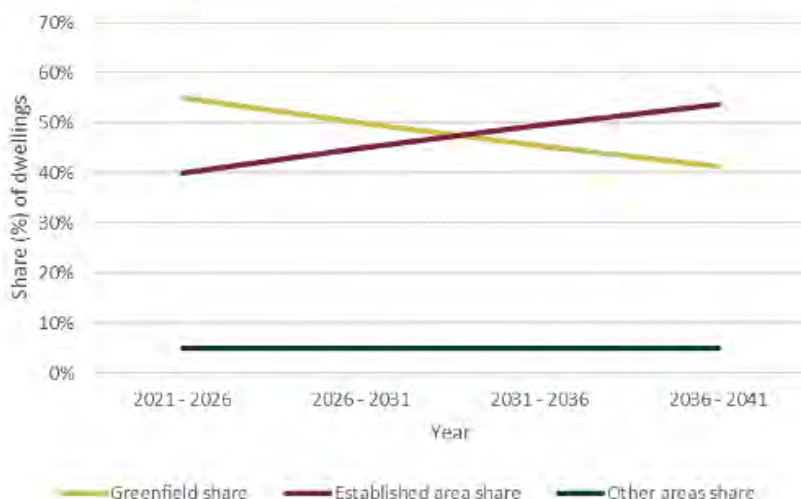
Source: SGS Economics and Planning (2023)

FIGURE 18: DWELLING PREFERENCE SCENARIOS (S2), ESTABLISHED VS GREENFIELD, 2021 TO 2041



Source: SGS Economics and Planning (2023)

FIGURE 19: DWELLING PREFERENCE SCENARIOS (S3), ESTABLISHED VS GREENFIELD, 2021 TO 2041



Source: SGS Economics and Planning (2023)

The alternative dwelling preferences scenarios by location type and dwelling type are summarised in Table 23. These scenarios have only been applied to the high dwelling growth scenario. The logic here is that by looking that the high growth scenario provides the extreme cases of either a high number of established area/non-separate dwellings (i.e. high growth combined Council’s policy aspiration for a 50:50 split) or a high number of greenfield/separate dwellings (i.e. high growth combined with the business as usual locational preferences).

TABLE 23: DWELLING PREFERENCES, S1 (EXISTING PREFERENCES FOR ESTABLISHED VS GREENFIELD), ADDITIONAL DWELLINGS, 2021 TO 2041

DWELLING TYPE	ESTABLISHED	GREENFIELD	OTHER	TOTAL	SHARE
Separate house	4,429	17,017	1,379	22,825	79%
Other dwelling types	5,851	216	69	6,136	21%
Total	10,280	17,233	1,448	28,961	100%
Share	35%	60%	5%	100%	-
Greenfield/established split*	37%	63%	-	-	-

Source: SGS Economics and Planning (2021)
 Note: *Excludes 'Other' dwellings.

TABLE 24: DWELLING PREFERENCES, S2 (INCREASE IN PREFERENCE FOR ESTABLISHED AREA LOCATIONS), ADDITIONAL DWELLINGS, 2021 TO 2041

DWELLING TYPE	ESTABLISHED	GREENFIELD	OTHER	TOTAL	SHARE
Separate house	4,429	14,892	1,379	20,700	71%
Other dwelling types	8,003	189	69	8,261	29%
Total	12,432	15,081	1,448	28,961	100%
Share	43%	52%	5%	100%	-
Greenfield/established split*	45%	55%	-	-	-

Source: SGS Economics and Planning (2021)

Note: *Excludes 'Other' dwellings.

TABLE 25: DWELLING PREFERENCES, S3 (50:50 POLICY ASPIRATION), ADDITIONAL DWELLINGS, 2021 TO 2041

DWELLING TYPE	ESTABLISHED	GREENFIELD	OTHER	TOTAL	SHARE
Separate house	4,429	13,584	1,379	19,392	67%
Other dwelling types	9,327	172	69	9,569	33%
Total	13,757	13,757	1,448	28,961	100%
Share	48%	48%	5%	100%	-
Greenfield/established split*	50%	50%	-	-	-

Source: SGS Economics and Planning (2021)

Note: *Excludes 'Other' dwellings.

6.5 Alternative dwellings type forecasts

In order to translate locational preferences into dwelling preference, ABS data on dwelling types was used to understand growth in dwellings by type, in established and greenfield locations. The dwelling type classifications have been simplified to 'separate dwellings' and 'not separate dwellings' – a catch all for all non-separate dwelling types (i.e. attached dwellings, flats, units and apartments and 'other'). This is necessary due to inconsistencies in the dwelling type data between Census periods that appear to be particularly acute in Ballarat. These inconsistencies are likely the result of both modifications to the way that the ABS classifies dwelling type and 'human error' (inconsistencies in the way that Census collectors have classified dwelling types). The work around is to collapse all non-separate dwelling

categories together for the analysis of past trends, meaning that the forecasts of future trends are also subject to this limitation.

The three scenarios have been converted into dwelling demand by number of bedrooms, drawing on past propensities of households to occupy particular dwellings (type and size) which differ between established and greenfield areas. Under all scenarios there is a shift towards smaller dwellings compared to those supplied in the 10 years preceding the 2021 Census (2011 to 2021). However, new dwellings are still on average larger (in bedroom count) than the existing stock due to the legacy effect of smaller dwellings produced throughout Ballarat development (e.g. 2 bed houses) (refer Table 28).

TABLE 26: EXISTING DWELLING STOCK, TOTAL DWELLINGS, BY BEDROOMS, 2011 TO 2021

	STUDIO	1 BED	2 BED	3 BED	4 BED	5 BED+	TOTAL
Existing stock (2021)	92	1,788	8,224	23,886	14,340	1,873	50,204
Added 2011 to 2021	21	75	812	2,797	5,821	676	10,202

Source: ABS Census (2011 and 2021)

TABLE 27: EXISTING DWELLING STOCK, SHARE OF DWELLINGS, BY BEDROOMS, 2011 TO 2021

	STUDIO	1 BED	2 BED	3 BED	4 BED	5 BED+	TOTAL
Existing stock (2021)	0.2%	3.6%	16.4%	47.6%	28.6%	3.7%	100%
Added 2011 to 2021	0.2%	0.7%	8.0%	27.4%	57.1%	6.6%	100%

Source: ABS Census (2011 and 2021)

TABLE 28: DWELLING PREFERENCE, ALL SCENARIOS, TOTAL ADDITIONAL DWELLINGS BY NUMBER OF BEDROOMS, 2021 TO 2041

SCENARIO	STUDIO	1 BED	2 BED	3 BED	4 BED	5 BED+	TOTAL
S1: Existing preference for greenfield vs established locations	70	929	3,375	7,908	14,544	2,134	28,961
S2: Increase in preferences for established area locations	78	1,238	4,128	7,797	13,597	2,123	28,961
S3: 50:50 established vs greenfield (Councils policy aspiration)	83	1,429	4,592	7,729	13,013	2,116	28,961

Source: SGS Economics and Planning (2023)

TABLE 29: DWELLING PREFERENCE, ALL SCENARIOS, SHARE OF ADDITIONAL DWELLINGS BY NUMBER OF BEDROOMS, 2021 TO 2041

SCENARIO	STUDIO	1 BED	2 BED	3 BED	4 BED	5 BED+	TOTAL
S1: Existing preference for greenfield vs established locations	0.2%	3.2%	11.7%	27.3%	50.2%	7.4%	100%
S2: Increase in preferences for established area locations	0.3%	4.3%	14.3%	26.9%	46.9%	7.3%	100%
S3: 50:50 established vs greenfield (Councils policy aspiration)	0.3%	4.9%	15.9%	26.7%	44.9%	7.3%	100%

Source: SGS Economics and Planning (2023)

TABLE 30: DWELLING PREFERENCE, SMALLER VS LARGER DWELLINGS, EXISTING STOCK AND ALL DWELLING PREFERENCE SCENARIOS, 2021 TO 2041

	2 BED AND LESS	3 BED	4 BED+
Existing stock (2021)	20.1%	47.6%	32.3%
Added 2011 – 2021	8.9%	27.4%	63.7%
S1: Existing preference for greenfield versus established locations (2041)	15.1%	27.3%	57.6%
S2: Increase in preferences for established locations (2041)	18.8%	26.9%	54.3%
S3: 50:50 established vs greenfield (2041)	21.1%	26.7%	52.2%

Source: SGS Economics and Planning (2023)

Two alternative dwelling mix forecasts were prepared based off the high population and dwelling growth scenario. These alternative forecasts draw on a body of recent research (including a survey conducted of Ballarat residents) that demonstrates a mismatch in the housing stock available and that desired by households. This research has found that a greater number of households would choose more diverse housing forms in established areas (as opposed to greenfield areas) if this was available within the local housing market (at an affordable price)

Modelling of these preferences scenarios leveraged Council’s stated policy aspiration for a 50:50 split of established area and greenfield development by 2041.

In the ‘business as usual scenario’ 35 per cent of net new dwellings provided in the 20 years to 2041 occur in established areas, 60 per cent in greenfield areas, and the remainder are in ‘other areas’ (rural or peri-urban). This scenario implies 79 per cent of new additional dwellings will be detached and 21 per cent will be other dwelling types (semi-detached, attached, apartments and other types). Just over 15 per cent of net new dwellings will be 2 bedrooms or less, 27 per cent will be 3 bed and 58 per cent will be 4 bedrooms of more.

The first alternative scenario assumes a shift in dwelling growth pattern towards more supply in established areas: 43 per cent in established areas, 52 per cent in greenfield areas, and 5 per cent in ‘other areas’. This scenario implies 71 per cent of net new dwellings will be detached and 21 per cent will be all other dwelling types. Furthermore, almost 19 per cent will be 2 bedroom or less, 27 per cent will be 3 bedroom dwellings and the remaining 57 per cent will be 4 bedrooms of more.

Council’s policy aspiration is to achieve a 50:50 ratio of new dwellings supplied in the 20 years to 2041. This implies that 48 per cent of dwelling supplied in established areas, 48 per cent in greenfields and 5 per cent in ‘other areas’. This implies a further increase in the share of non-separate dwellings and smaller dwellings in the additional dwelling stock added to 2041: 53 per cent of dwellings will be non-detached; 20 per cent 2 bedrooms or less.

These scenarios might be used to inform the upper and lower bounds for a range of potential dwelling supply scenarios that ultimately will be influenced by a range of endogenous and exogenous factors and subject to a degree of uncertainty.

For example:

- The base case scenario requires almost 23,000 detached dwellings whereas the scenario based on Council's policy aspiration requires 19,000 detached dwellings.
- Conversely, the policy aspiration scenario implies that an additional 9,600 non-separate dwellings will be required whereas the base case scenario requires 6,100 non-separate dwelling types.
- Similarly, the base case scenario implies 17,200 greenfield dwellings are needed while the policy aspiration scenario implies 13,800 greenfield dwellings (and a commensurate shift in dwelling requirements in established areas).
- The base case scenario implies the supply of net new dwellings will require more larger dwellings (4 bedrooms or more) than the policy aspiration scenario (57.6 per cent vs 52.2 per cent). Whereas under the latter scenario almost half (48.2 per cent) of all new dwellings are 3 bedrooms or less.

Estimates of dwelling mix in the base dwelling demand scenarios reflect past trends in housing choices. However, research indicates that these revealed housing preferences may reflect constraints on housing choices in the Ballarat housing market.

Policy settings that enable and encourage the provision of a greater diversity of housing stock in Ballarat, particularly in established areas of the City, may result in demand for a greater diversity of housing stock, in terms of type and size (provided they can meet the needs of households in terms of affordability).

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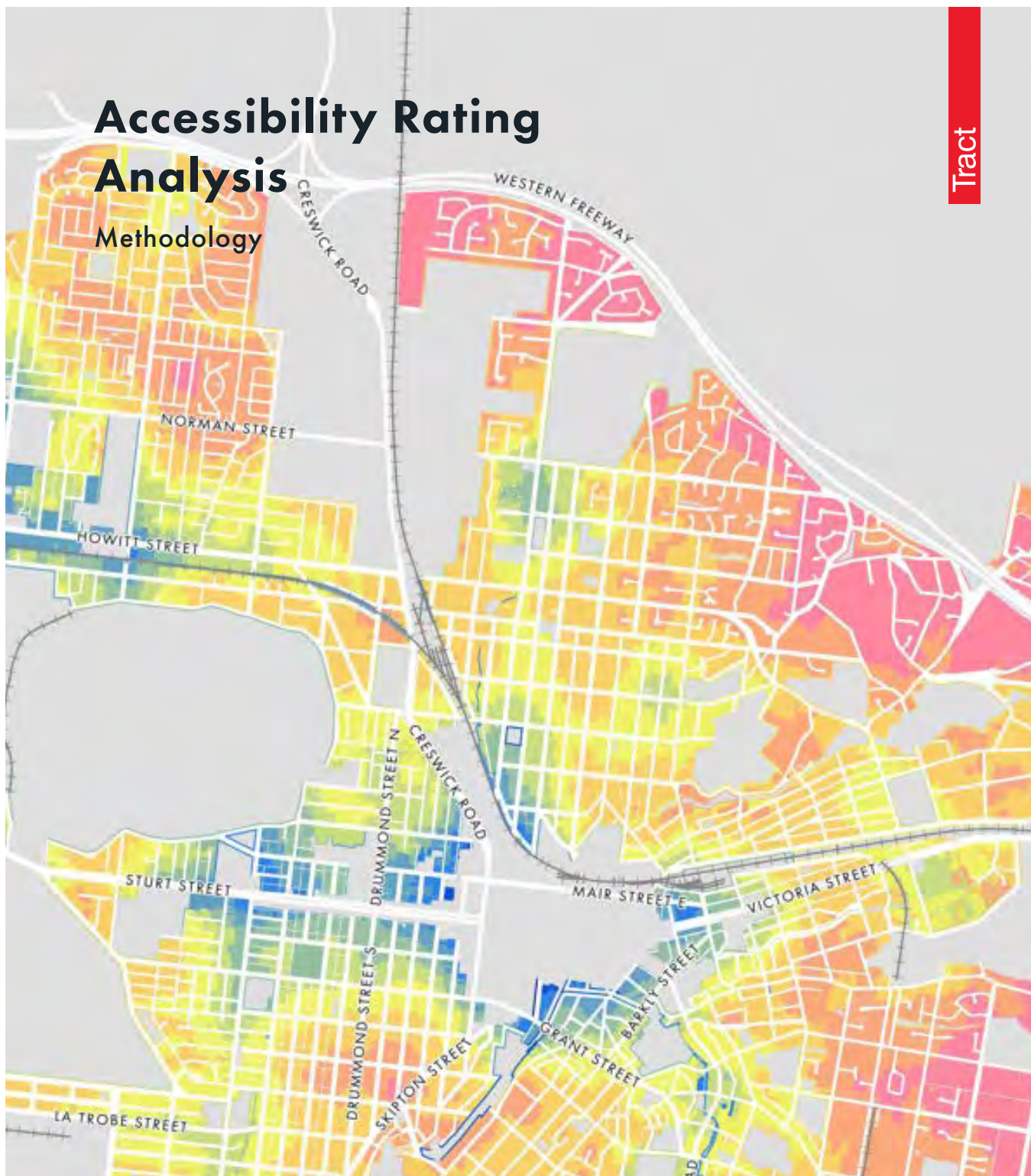
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For the City of Ballarat

Methodology

The Ballarat Accessibility Rating Analysis assesses the proximity to amenities for residential zoned areas within City of Ballarat based on the current planning zone controls. The methodology to undertake this analysis has been detailed below. A summary of the methodology is outlined in Figure 1.

Step1: Extract Residential Zoned Land

The first step in undertaking the Accessibility Rating Analysis was to identify all the residential land by filtering properties within the applicable residential zones. The zones include:

- Low Density Residential Zone (LDRZ)
- Mixed Use Zone (MUZ)
- Township Zone (TZ)
- Residential Growth Zone (RGZ)
- General Residential Zone (GRZ, R1Z, R2Z, R3Z)
- Neighbourhood Residential Zone (NRZ)

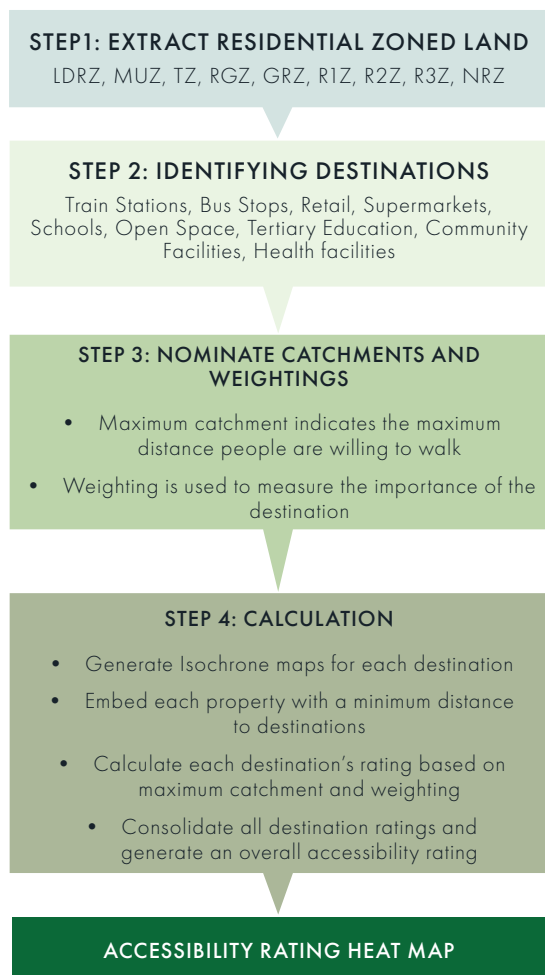


Figure 1. Summary of Methodology

Step 2: Identifying Destinations

The next step was to identify all the common amenities as destinations. The list broadly covers public transport, shopping, education, recreation and health. The identified destinations and their details are listed below:

Destinations	Inclusion/Exclusion
Train Stations	Train Stations serviced by V/Line, including Ballarat Station and Wendouree Station. Data provided by VICMAP
Bus Stops	Only bus stops with services provided on weekdays were included. Bus stops with services provided over the weekends (lower frequencies) were excluded.
Retail	Commercial 1 Zone land and some manual additions, data provided by Onemap/ Department of Energy, Environment and Climate Action.
Supermarkets	Woolworths, Coles, Supa IGA, Aldi, Derived from Woolworths, Coles, IGA, Aldi, LeMax Group, Thomas Dux & About Life Data
Schools	Primary schools and secondary schools (both government and non-government). Data provided by Department of Energy, Environment and Climate Action
Open Space	Typically PPRZ and PCRZ land. Data provided Department of Energy, Environment and Climate Action
Tertiary Education	Australian Catholic University, Federation University, TAFE. Data provided by OPENSTREETMAP
Community Facilities	Early years, Libraries & outreach services, Community meeting spaces, recreation. Data provided by City of Ballarat
Health facilities	Hospitals, clinics, medical centres, pharmacies. Data provided by OPENSTREETMAP
Essential Services	Police Station, Service Australia, City Council. Data provided by City of Ballarat

Table 1. Destinations

Step 3: Nominate Catchment and Weighting

Each destination was then given a maximum catchment and a weighting. The maximum catchment indicates the maximum distance people are likely to access the destination on foot. Generally, 400m is a 5-minute walk, while 1000m can take about 10 to 12 minutes for most people. The catchments were determined through learnings on similar projects and discussions with Council officers.

A weighting to each of the destination types was applied to reflect different levels of frequency of usage, importance and attendance.

As a regional hub, Ballarat provides relevant connection to broader Victoria by V/Line, so train station is one of the most important destination. Considering above, the weighting for train stations is 100%. Essential Services received 100% weighting as well, as they provide spaces to manage and support local infrastructure.

Retail, supermarkets, schools, open space, tertiary education and health facilities provide services that meet the day-to-day needs of local community, and are visited regularly. The weighting (66%) of them represents a medium level of frequency of attendance and usage.

The bus connectivity within Ballarat is generally low, and not a preferred mode of movement for Ballarat residents, bus stops received a weighting of 33%.

Community facilities provides spaces for community events, recreation or daycare. They are destinations with a lower frequency of usage and attendance, so the weighting of community facilities is 33%.

Destinations	Maximum Catchment	Weighting
Train Stations	1000m	100%
Bus Stops	400m	33%
Retail	1000m	66%
Supermarkets	1000m	66%
Schools	1000m	66%
Open Space	1000m	66%
Tertiary Education	1500m	66%
Community Facilities	1000m	33%
Health facilities	1000m	66%
Essential Services	1000m	100%

Table 2. Destinations' maximum catchment and weighting

Step 4: Calculation

Based on the existing road network, isochrone maps were generated for each destination (see figure 2) to literal walking distances, calculated based on road network data from VICMAP, existing footpath data. The residential properties were intersected with the isochrones and a corresponding distance attribute was assigned to each residential property.



Figure 2. A zoom-in example of an isochrone map generated for Essential services, with 1000m as maximum catchment and 10m interval lines.

Based on the distance-decay relationship, likelihood of people accessing the destination on foot decreases as the distance increases. With the property dataset enriched with distance to destinations, the accessibility rating can be calculated. If the distance to a destination is under the maximum catchment, the difference between the two values was multiplied by their weighting, resulting in a rating. The closer to the destination, the greater the difference, therefore resulting in a higher rating figure. If the distance to the destination is greater than the maximum catchment, it receives 0 for its rating. For each destination, the calculation can be simply put as below:

if (destination distance ≤ maximum catchment)
Then rating = (maximum catchment - distance) / maximum catchment x weighting;

if (destination distance > maximum catchment)
Then rating = 0.

The ratings for each destination were then added together. This provides a Rating Sum for each site:

Rating Sum = Train Stations rating + Bus Stops rating + ...+ Health Facilities rating

In order to create a percentage rating, the sum of the ratings for each site is divided into the sum of the highest rated site in the study area:

*Percentage Rating = (Rating Sum / Rating Sum of the Highest Rated Site)*100%*

Finally, utilising the percentage value calculated above, an Accessibility Rating heat map (figure 3) was generated to reveal the overall accessibility conditions in the municipality and highlight hotspots where residential lots are well-served by all types of amenities.

Limitation:

Due to lack of complete footpath data, the walking distance is calculated based on road network data from VICMAP. We are mindful that this work does not reflect the true pedestrian network.

At current stage, the maps don't take the accessibility needs of those with disabilities into account due to lack of data, so there is a potential weakness with the analysis which requires further work.

Example

Example using a residential property on Howitt Street

Accessibility Rating
41.7%



Train Stations Rating:

Distance to nearest Train Station:
1770m > Maximum catchment
(1000m)

Rating = 0%

Bus Stops Rating:

Distance to nearest Bus Stop: 60m
< Maximum catchment (1000m)

Rating = $(1000 - 60) / 1000 \times 66\%$
= 28.1%

Repeat for all destinations

Destinations	Maximum Catchment	Distance to nearest	Weighting	Rating
Train Stations	1000m	1770m	100%	0%
Bus Stops	400m	60m	33%	28.05%
Retail	1000m	130m	66%	57.42%
Supermarkets	1000m	730m	66%	17.82%
Schools	1000m	990m	66%	0.66%
Open Space	1000m	490m	66%	33.66%
Tertiary Education	1500m	1470m	66%	1.32%
Community Facilities	1000m	230m	33%	25.41%
Health facilities	1000m	350m	66%	42.90%
Essential Services	1000m	1001m	100%	0%

Table 3. Distance and rating of a residential lot on Howitt Street

Then

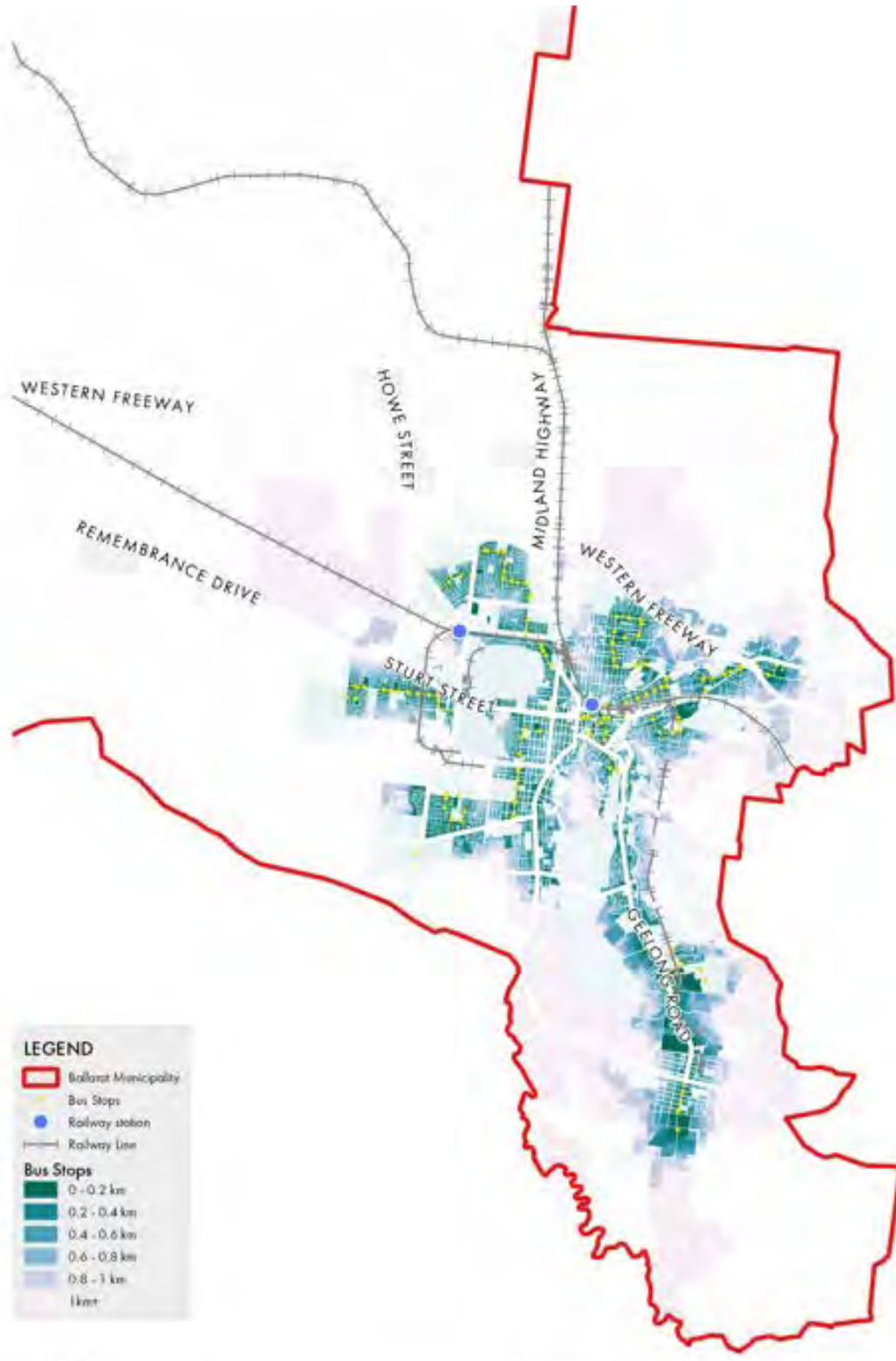
Rating Sum = Train Station Rating + Bus Stops Rating + + Health Facilities Rating
= 207.24%

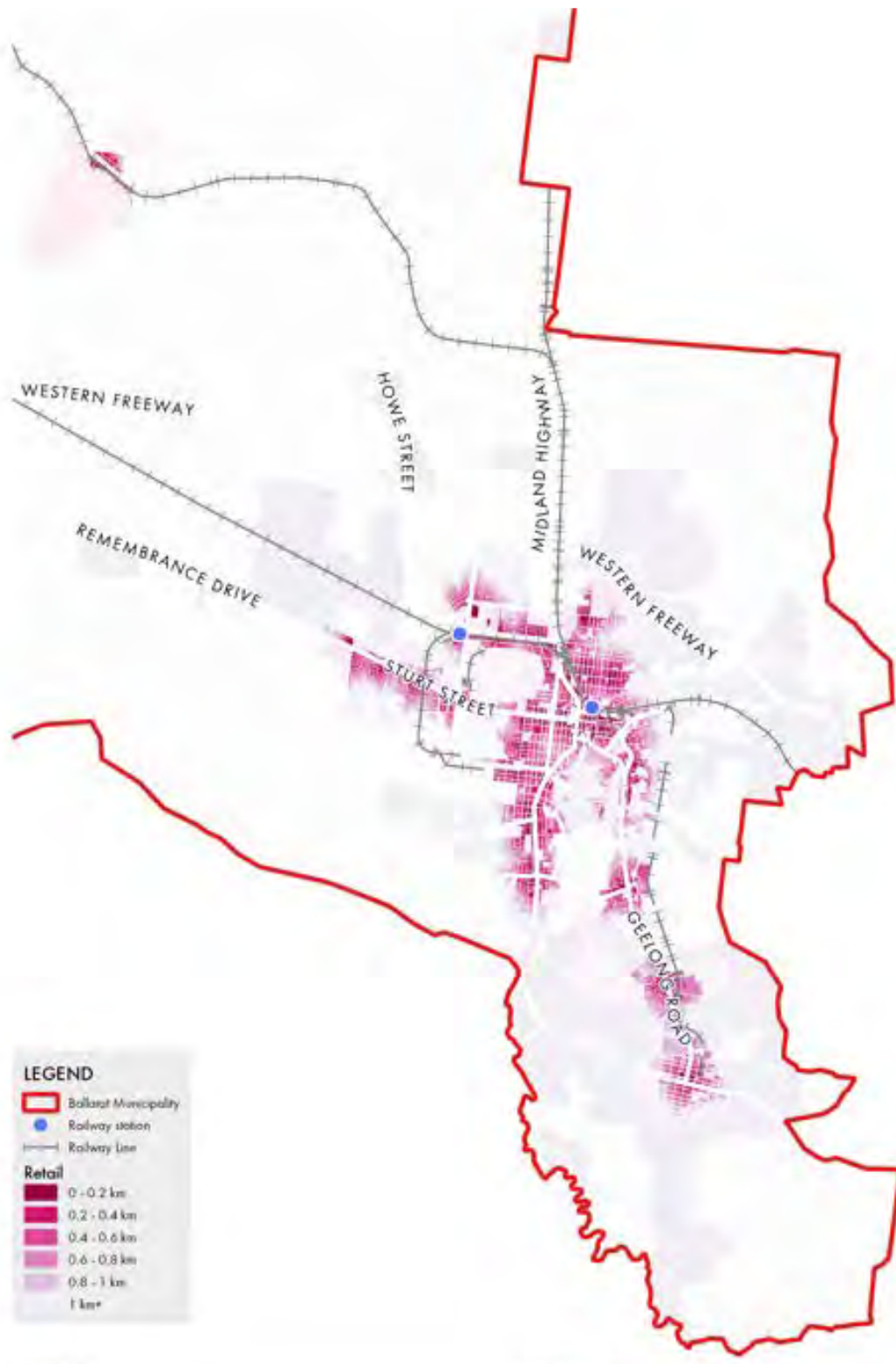
Percentage Rating = $(\text{Rating Sum} / \text{Rating Sum of the Highest Rated Site}) \times 100\%$
= 41.7%

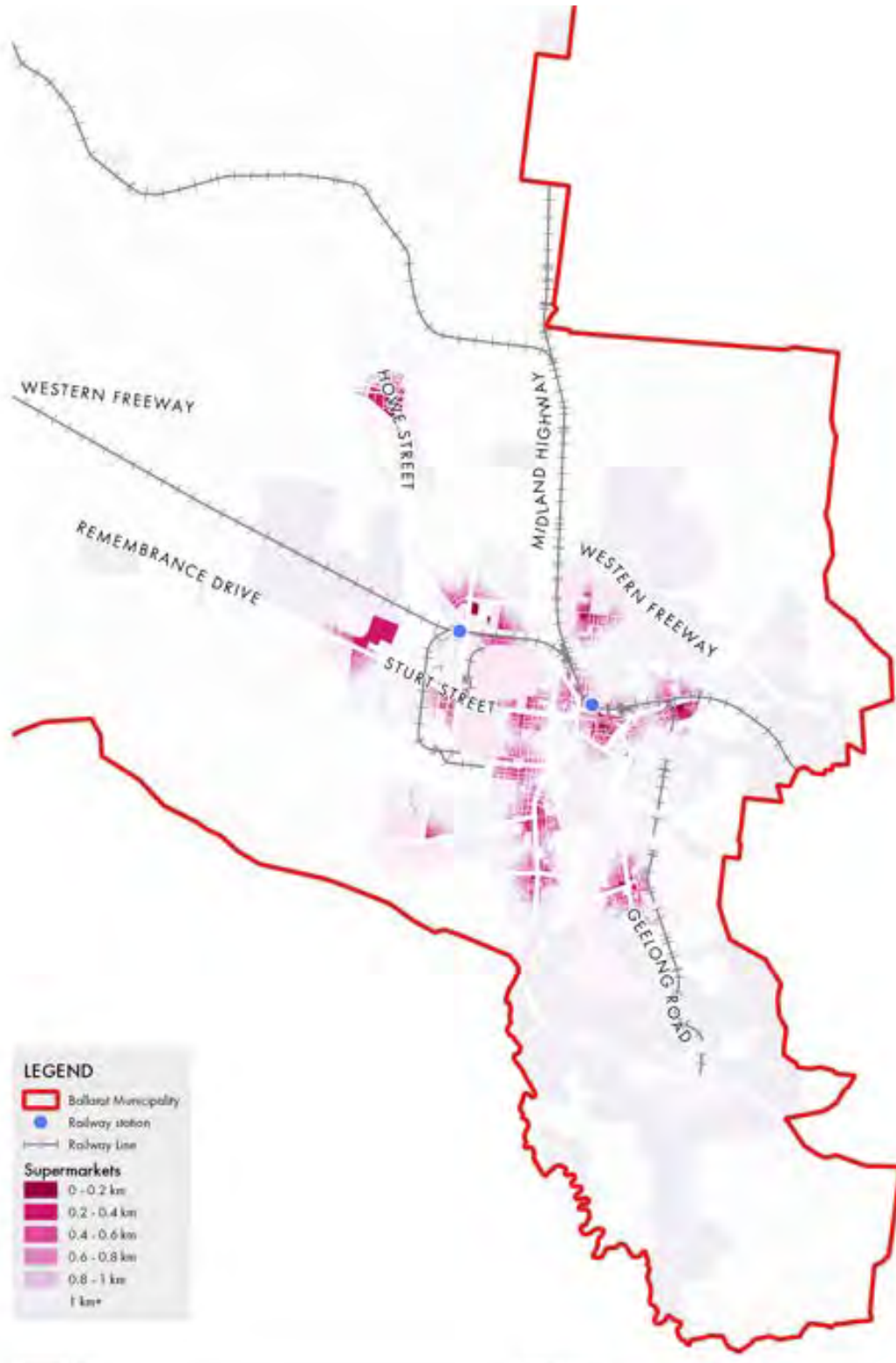
Destination Catchments

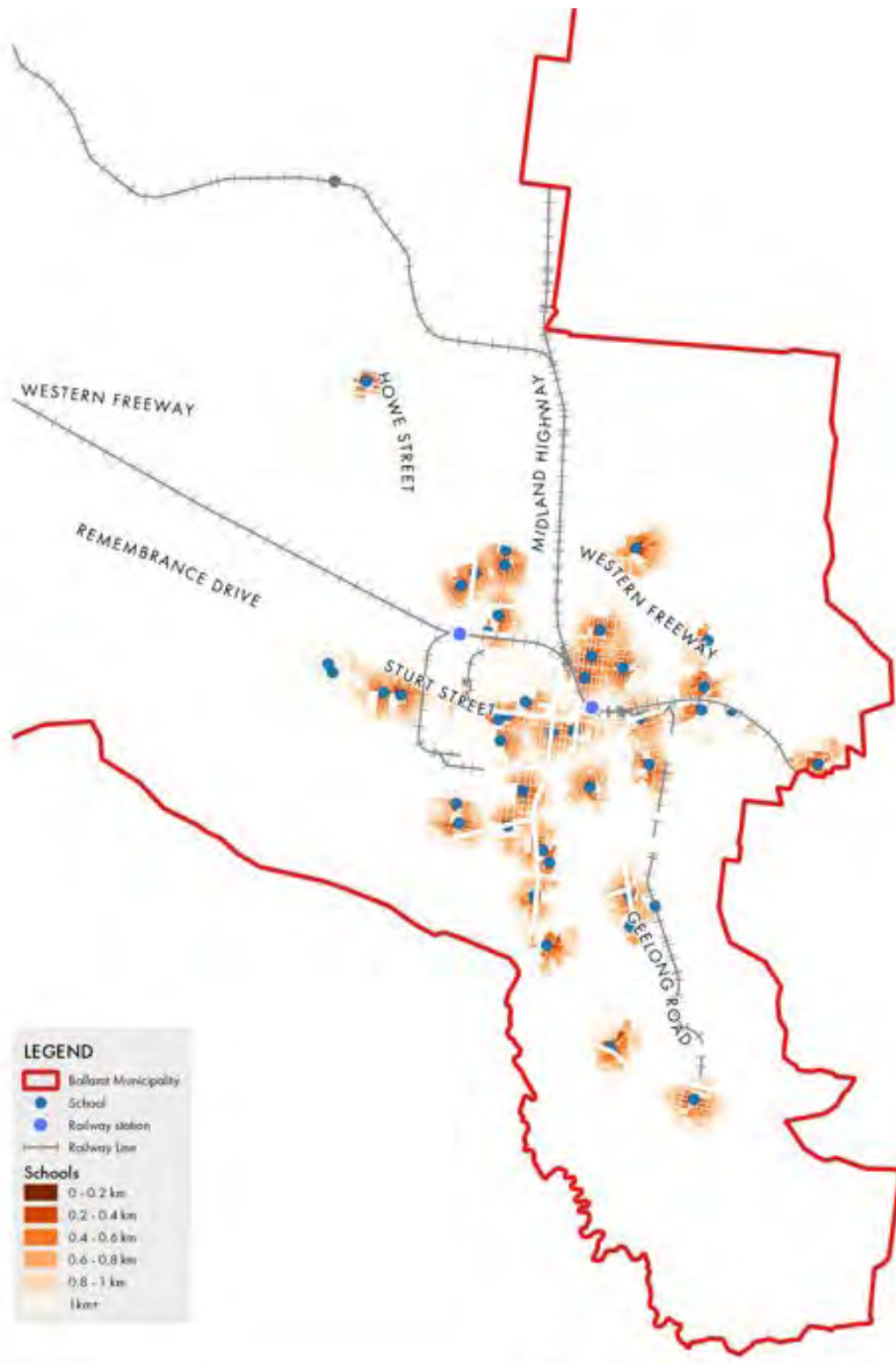


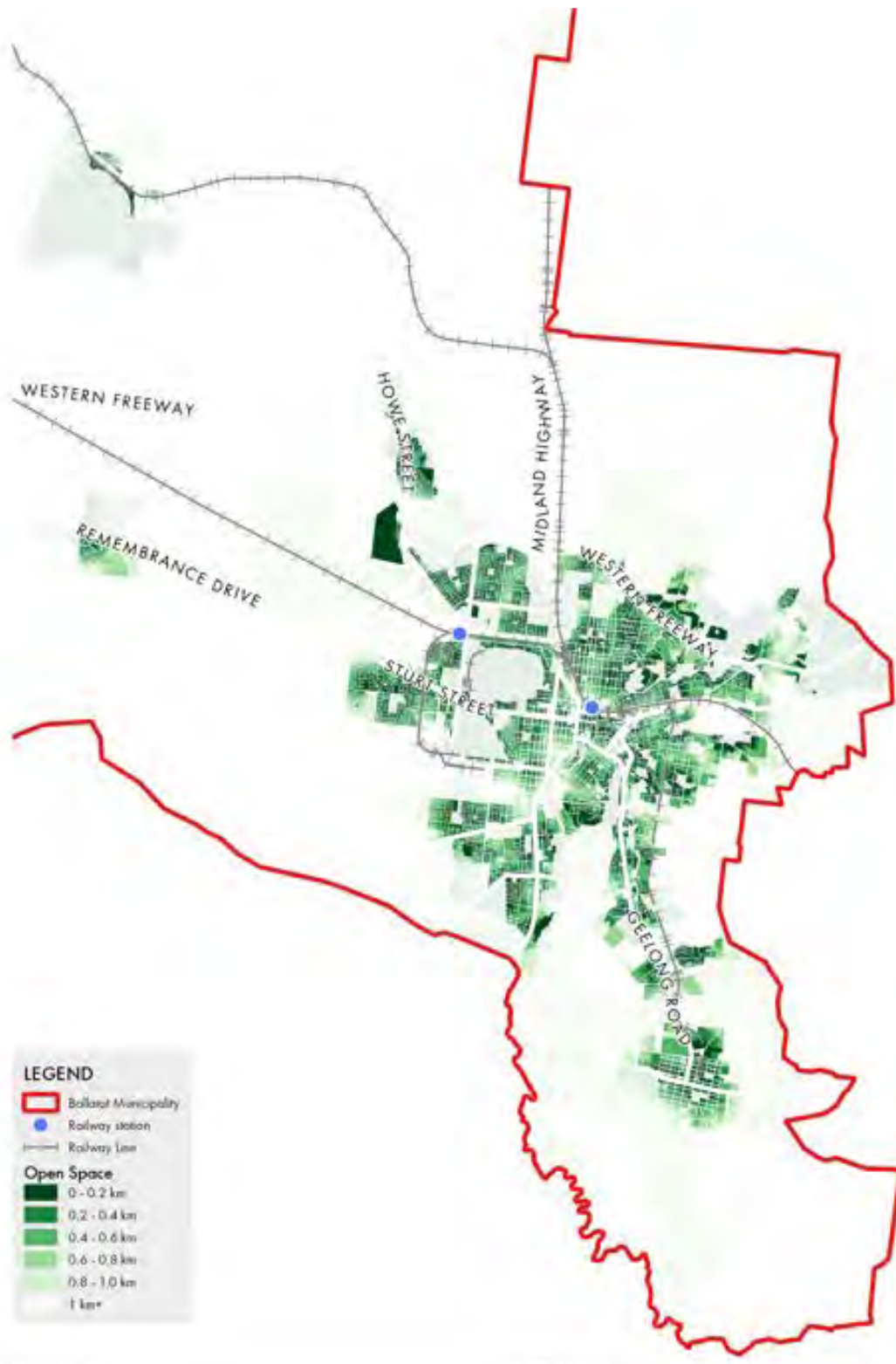
Figure 3. Isochrone Maps for each destination

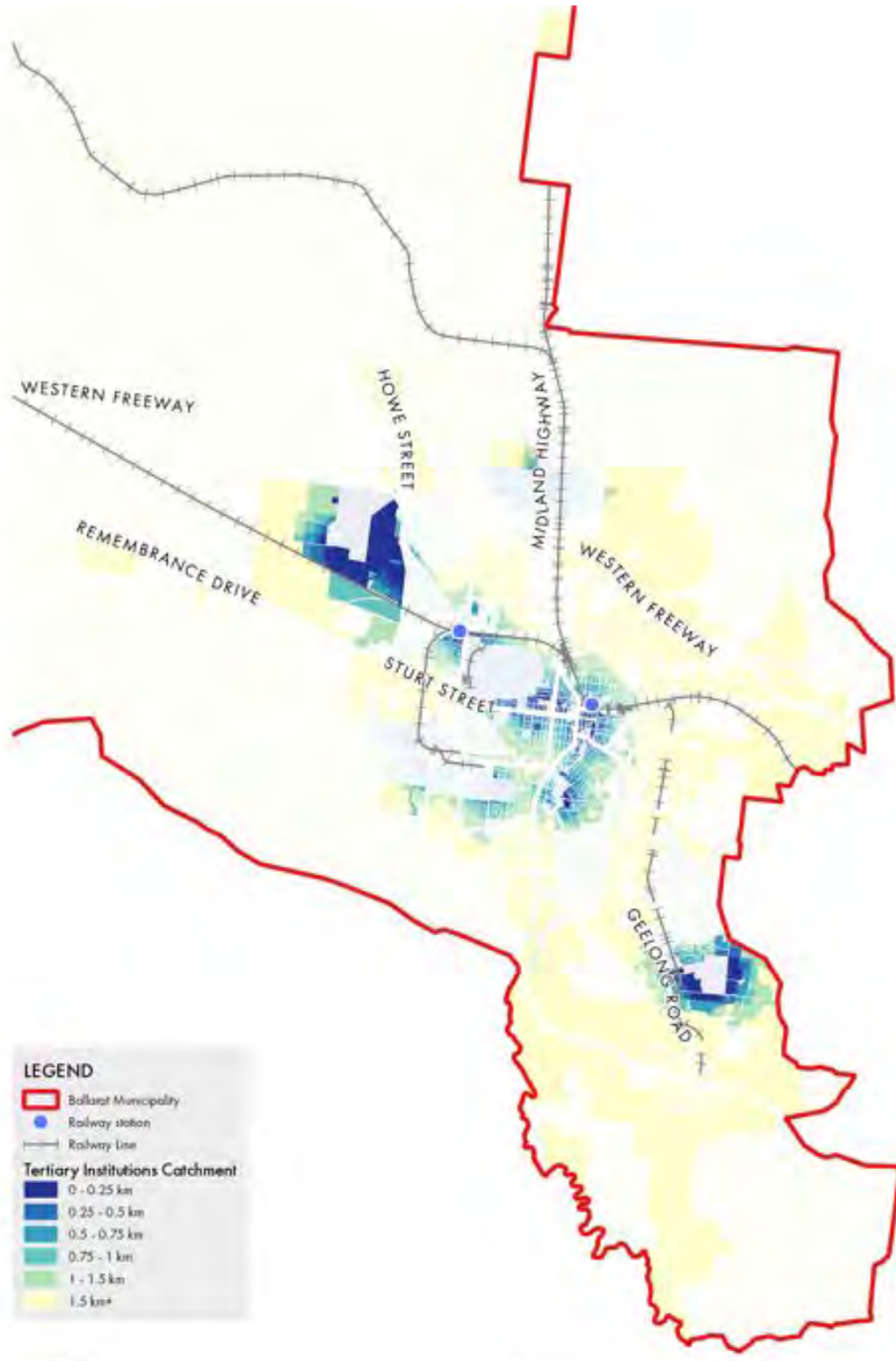


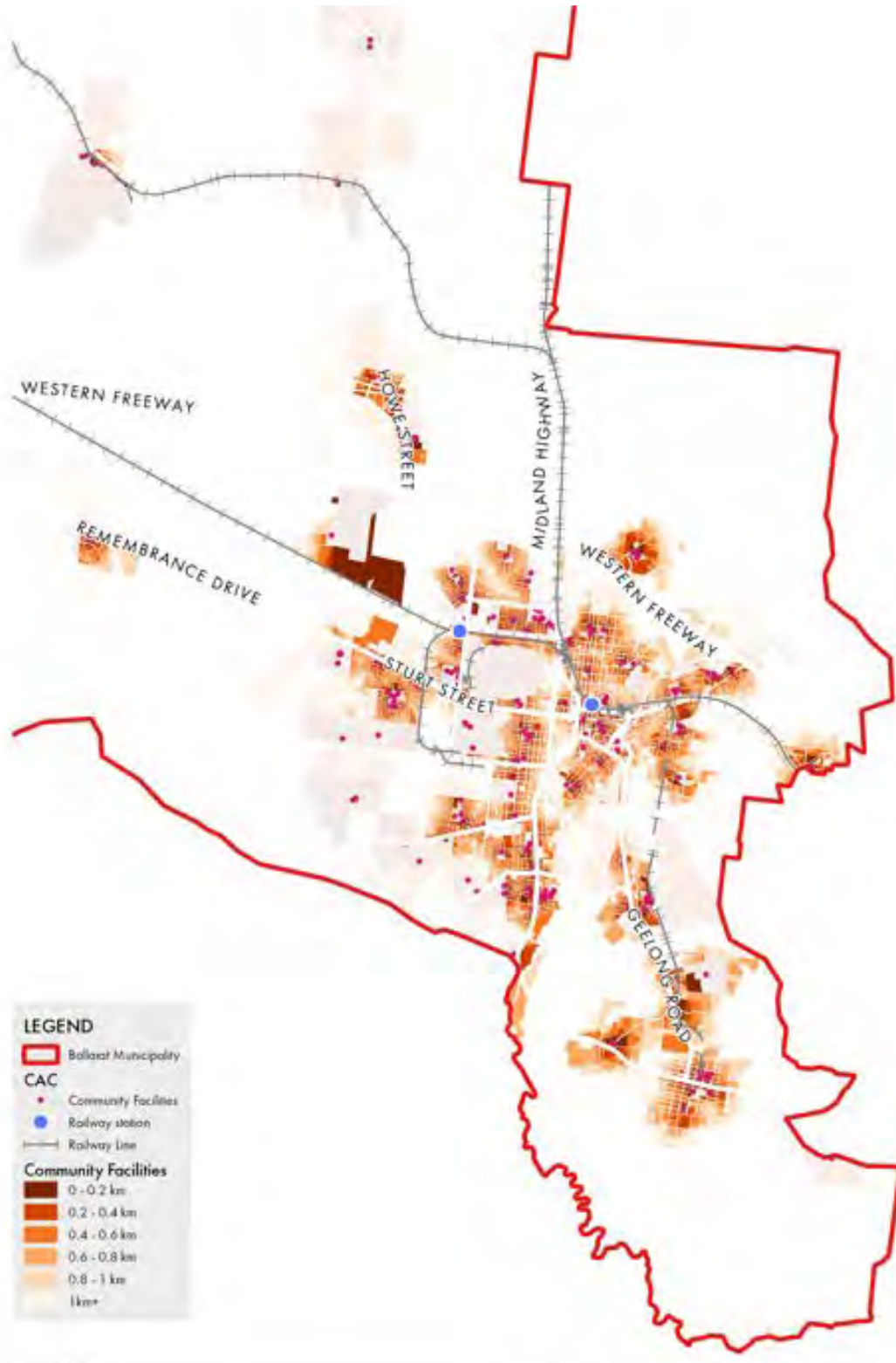


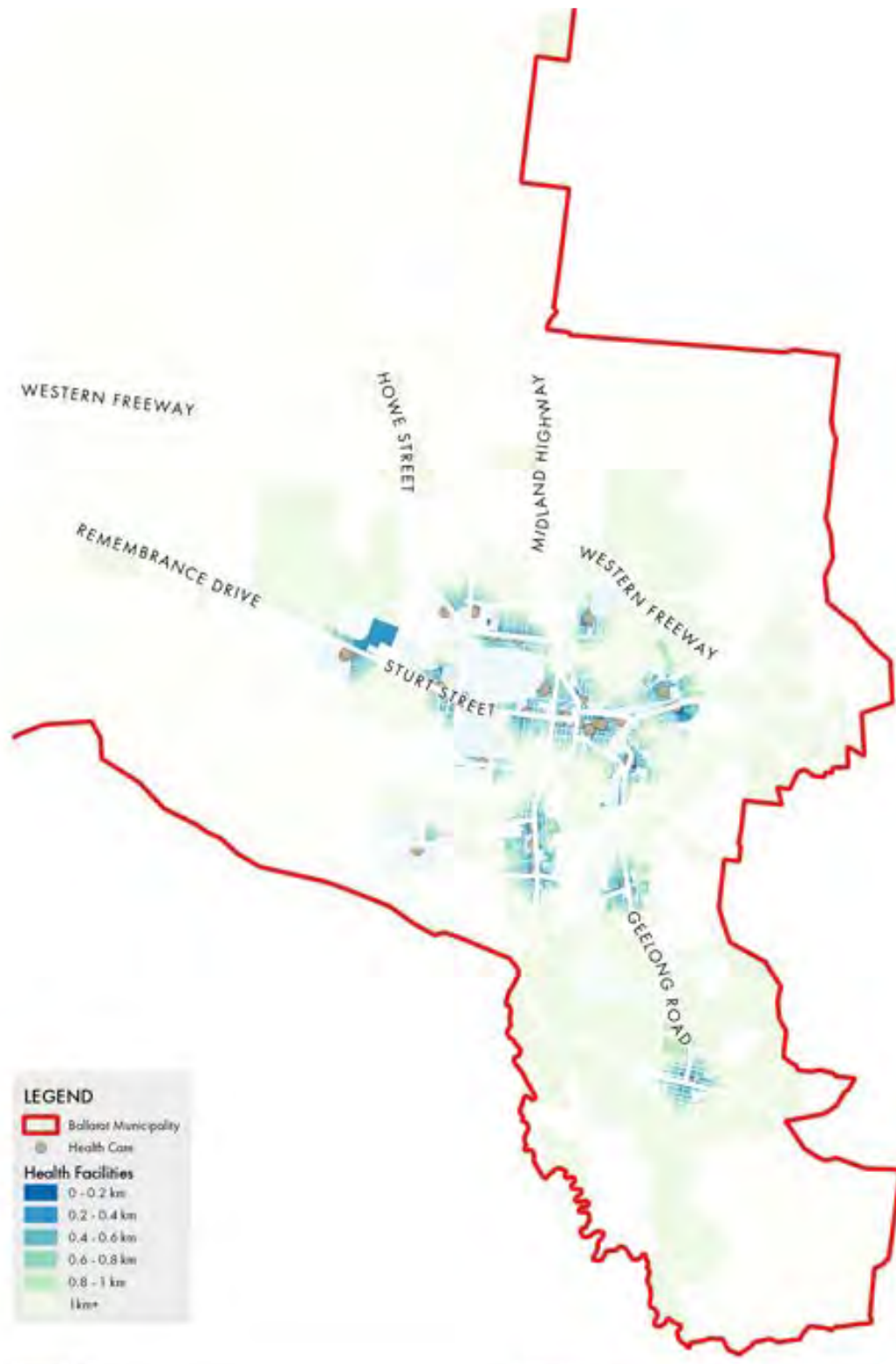






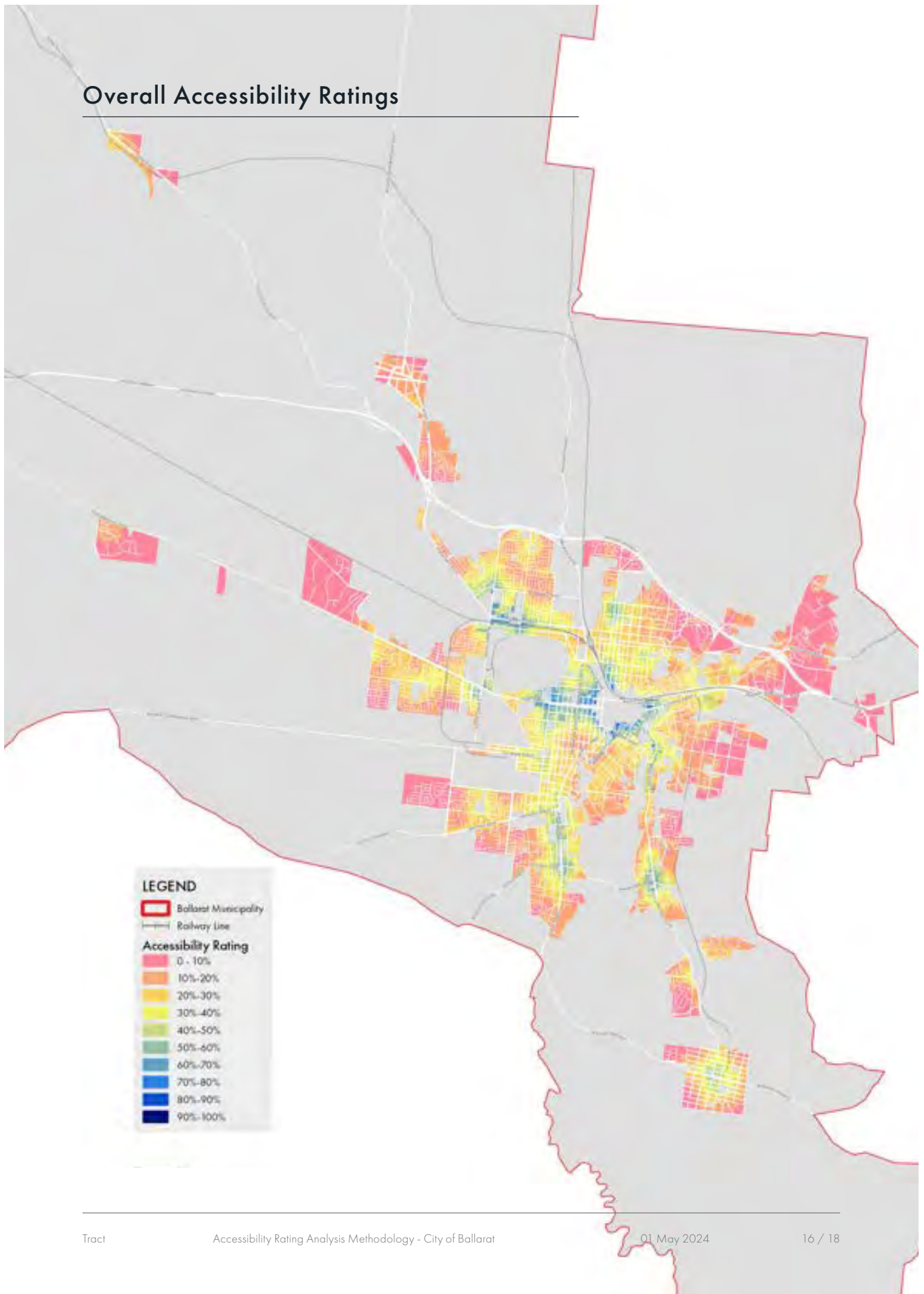








Overall Accessibility Ratings



Data Sources

A number of datasets have been relied on to undertake the analysis. These datasets are outlined in Table 3.

Data Source	Description	Provider
Properties	Consists of polygons representing Victoria's properties	Department of Energy, Environment and Climate Action
Planning Zones	Contains polygon features representing land use zones, it is used to extract residential land use, retail land use and open space.	Department of Energy, Environment and Climate Action
Road Network	An extensive digital road network - line features delineating state wide road network	Department of Energy, Environment and Climate Action
Public Transport	Train Stations, Bus Routes, Bus Stops	Department of Energy, Environment and Climate Action
Supermarkets	Woolworths, Coles, Supa IGA, Aldi, Leo's Fine Food & Wine, and Maxi Foods stores	Derived from Woolworths, Coles, IGA, Aldi, LeMax Group, Thomas Dux & About Life Data
Schools	Primary schools and secondary schools (both government and non-government)	Department of Energy, Environment and Climate Action
Tertiary Education	Universities, TAFE, Polytechnics	OpenStreetMap
Community and Social Infrastructure Model (CASIMO)	Early years, Libraries & outreach services, Community meeting spaces, recreation.	City of Ballarat
Health Facilities	Hospitals, clinics, medical centres, pharmacies.	OpenStreetMap
Essential Services	Police Station, Service Australia, City Council.	City of Ballarat

Table 4. Datasets utilised for the Accessibility Rating Analysis

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Project	Infill Prioritisation Framework, City of Ballarat	Ref	514
Document Purpose	Memo – Infill development prioritisation framework rationale (Stage 1)		
Date	16/04/2024		

Purpose

To establish an effective framework for prioritising urban renewal areas, it's essential to systematically assess both the demand for and the supply capacity of potential sites. This approach ensures that urban renewal efforts align with market demand, infrastructure capabilities, and policy objectives, ultimately leading to sustainable and beneficial development.

This memo sets out the proposed infill development prioritisation framework rationale (Stage 1). This framework can be used to develop and apply the framework (Stage 2) to provide Council with the prioritised sites for development (Stage 3).

Background

Astrolabe has been engaged by the City of Ballarat to develop an infill development prioritisation framework (the framework). The project is broken into three stages:

- Stage 1 – infill development prioritisation framework rationale (current scope of work)
- Stage 2 – application of the prioritisation framework (not within current scope of work)
- Stage 3 – prioritisation and sequencing roadmap (not within current scope of work)

Astrolabe visited Ballarat and the sites included in the framework on Thursday, 28 March 2024.

Prioritisation framework principles

We have recommended, through co-design with Council, that a prioritisation framework that uses a multi-criteria analysis (MCA) is used to determine the priority of development. An MCA enables a rapid and strategic comparison between the sites which is useful at this early stage of development. Other tools such as a cost benefit analysis (CBA) would be useful as projects go through concept and detailed design phases. We have recommended that an initial assessment of public finance requirements is applied to prioritisation to ensure the MCA has regard to cost considerations. This requires further testing and refinement within the framework.

We propose the following principles to underpin this framework, elements of these have been adapted from Infrastructure Australia's Assessment Framework¹.

- **Principle 1: Match the tool to the task** – the infill prioritisation framework is a complement to Council's existing processes to identify sites for development, it should be used in conjunction with other existing Council merit selection processes.

¹ Infrastructure Australia, 2021, *Guide to multi-criteria analysis: Technical guide of the Assessment Framework*. July 2021



- **Principle 2: Be transparent** – documentation needs to be sufficient to understand the basis for the MCA logic, design and recommendations. Documentation should be developed in tandem with the development of the framework tool (Stage 2).
- **Principle 3: Address relevant assessment criteria**—assessment criteria must be sufficiently met to ensure the robustness of decision-making.
- **Principle 4: Address deliverability** – prioritising sites must have regard to the financial and time considerations associated with delivery, including relevant assumptions of supply-side constraints that may affect delivery timeframes.

Reports informing the framework

The framework will have regard to the following information provided by Council:

- City of Ballarat Draft Housing Strategy 2023 – 2041
- Department of Transport and Planning (DTP) comments on City of Ballarat Draft Housing Strategy Consultation, letter dated 25 October 2023
- Ballarat Infrastructure and Growth Alignment Framework, December 2023
- SGS Economics and Planning, 2024, Industrial Land Analysis: Supply, Demand and Precinct Planning Directions

Sites and lots

The following sites and lots will be assessed using the framework:

1. Skipton Street
2. Lal Lal Street
3. Eureka
4. Rodier Street
5. Wendouree Station Precinct
6. Delacombe
7. Old Saleyards
8. Alfredton South

Based on conversations with City of Ballarat (Terry, 28 March 2024) the Selkirk site, as mentioned in the SGS Economics report 2024², has been excluded from the framework.

² SGS Economics and Planning, 2024, *Industrial Land Analysis: Supply, Demand and Precinct Planning Directions*. Prepared for City of Ballarat, provided to Astrolabe on 28 March 2024





Prioritisation framework

We propose the framework performs the following functions:

- **Site analysis** – each site is analysed and assessed against several criteria through a multi-criteria analysis (MCA) (as per the table below).
- **Prioritisation** – each site is ranked based on the site analysis scoring; criteria can be weighted and can be turned on/off to test sensitivity of the prioritisation. Cost considerations could be built into the prioritisation to consider and prioritise sites based on cost to develop (including enabling infrastructure connections) and site analysis scoring.

Site analysis

Astrolabe proposes the criteria in the table below be used to assess each site.

Scoring

Each criterion, and sub-criteria, will be scored on 1 – 5 scale, the scale for these criteria will be determined based on the specifics of the criteria. The scoring will be developed during stage 2 – see Appendix 1 – example scoring.

Discoverable and accessible

The table below lists the potential sources of data that will be used to build out the framework. Some of this data and information is easily found (discoverable) and some is easily accessed (accessible), however other data and information sources can be easily found but difficult to access, or hard to discover yet required for the framework to be built. Appendix B – information request sets out the data and information required to complete the framework assessment.

Criteria	Sub-criteria	Rationale	Source	Discoverable	Accessible	How the criteria responds to DTP feedback	Notes
Location and accessibility	Size	Size of the lots/sites to inform development potential, efficiency, and space.	SGS Economics and Planning, 2024, Industrial	✓	✓	N/A	



Criteria	Sub-criteria	Rationale	Source	Discoverable	Accessible	How the criteria responds to DTP feedback	Notes
			Land Analysis: Supply, Demand and Precinct Planning Directions				
	Transport	Determine the accessibility of the site regarding public transport, walkability, car dependency, road types, active transport and count of traffic incidents.	Public Transport Network Annual regional train station entries 2022-23 ABS Census: Method of travel to work, number of vehicles per dwelling Buffers on each site – 15min drive, 30min drive	✓	X Walkability layers not readily accessible. See Appendix B – Information Request.	Infrastructure required to support housing growth, particularly utilities and transport (i) Accessibility requirements (j) Increase housing close to railway stations and activity centres (k)	



Criteria	Sub-criteria	Rationale	Source	Discoverable	Accessible	How the criteria responds to DTP feedback	Notes
			and 15min walk Road use hierarchy Crown land owned roads				
	Proximity to Ballarat CBD	Determine access to employment, services, entertainment, and other activities.	Simple GIS enquiry – using GIS layers publicly available, driving distance buffers	✓	✓	Accessibility requirements (j) Increase housing close to railway stations and activity centres (k)	
	Ability to commute to Melbourne	Determine ease of access to job markets and education opportunities in Melbourne.	Simple GIS enquiry – using GIS layers publicly available, driving distance buffers	✓	✓	Accessibility requirements (j)	



Criteria	Sub-criteria	Rationale	Source	Discoverable	Accessible	How the criteria responds to DTP feedback	Notes
	Open space	Proximity and amount of open space.	Council information request Victoria Features of Interest – Parks and Rec areas	✓	X Open space as a GIS layer required. See Appendix B – information request.	Accessibility requirements (j)	<i>Astrolabe assume Council has a GIS layer with open space identified.</i>
	Distance and capacity: schools and childcare	Ensure there is sufficient capacity and access to schools and childcare.	School Locations ABS Census SA1 or SA2 number of school children Early learning centres ABS Census SA1 or SA2 count children aged 0-4	✓	✓	Accessibility requirements (j)	
	Site compatibility	Establish what activities are undertaken on the	Victorian Planning Scheme	✓	✓	Provide a rationale for excluding recommendations	



Criteria	Sub-criteria	Rationale	Source	Discoverable	Accessible	How the criteria responds to DTP feedback	Notes
		site and adjacent sites to ensure development and use is sensitive to other existing uses.				regarding potential housing supply within non-residential zones (b)	
	Proximity to points of interest	Establish proximity to current infrastructure such as hospitals, aged-care facilities, community facilities, etc inside 1000m or similar walking/driving distance/time buffer.	POI data (Victoria)	✓	✓	Accessibility requirements (j)	
Planning and development	Planning constraints	Determine barriers to developing the site. This will include multi-criteria ranking based on zone, permissibility, contamination, natural hazards (i.e. bushfire prone,	Victorian Planning Scheme	✓	X Flood prone land and FSR are needed to assess each site. These are not available through the Victorian Planning Scheme. See	Provide a rationale for excluding recommendations regarding potential housing supply within non-residential zones (b)	

Criteria	Sub-criteria	Rationale	Source	Discoverable	Accessible	How the criteria responds to DTP feedback	Notes
		flooding), heritage, existing buildings and uses.			Appendix B – information request		
	Employment sustainability	Determine the site's capacity to retain employment numbers on/near the site.	Council to advise of employment surveys based on existing uses on the nominated sites.	X	X	Discuss the CBD strategy and how Council will increase residential uses in the CBD (h)	
	Enabling infrastructure	Establish the availability and capacity of essential infrastructure services including stormwater, sewage, water, energy and telecommunications, including net capacity of specific infrastructure (such	Council to advise	X	X Water infrastructure, stormwater, sewage, energy and telecommunications layers not discoverable or accessible. See Appendix B – information request.	DTP letter requires staging of development be based on <i>existing infrastructure capacity</i> and committed investment (a) Infrastructure to support housing growth (i)	Water infrastructure we would need equivalent tenements, pipe capacity, treatment capacity



Criteria	Sub-criteria	Rationale	Source	Discoverable	Accessible	How the criteria responds to DTP feedback	Notes
		as water and energy).					
	Government programmed infrastructure	Determine existing and planned infrastructure projects by the Council or State Government that could enhance or limit development potential.	Government strategic documents Council to advise	✓	X This information may be available through public facing documents, however specific details on cost and location may not. See Appendix B – information request.	DTP letter requires staging of development be based on <i>existing infrastructure capacity</i> and committed investment (a) Differentiate between funded and unfunded infrastructure (e.g. Link Road Corridor) (e)	This should have regard to infrastructure that is currently funded and unfunded – a hierarchy will be established to differentiate.
Functional use	Uses	Provide an understanding of the alternate uses of the site and estimated yield – lots (for select sites	SGS Economics and Planning, 2024, Industrial Land	✓	✓	Provide a theoretical capacity and use of the sites to provide a holistic picture of supply,	



Criteria	Sub-criteria	Rationale	Source	Discoverable	Accessible	How the criteria responds to DTP feedback	Notes
		only this is available in the IGAF report).	Analysis: Supply, Demand and Precinct Planning Directions Ballart Infrastructure and Growth Alignment Framework (IGAF), December 2023			acknowledging constraints such as contamination (b) Discuss the CBD strategy and how Council will increase residential uses in the CBD (h)	
	Affordable housing potential	Determine whether the site could host affordable housing to meet the needs of the community.	Rental Affordability Index – SA1 or SA2 Mortgage Affordability Index – SA1 or SA2 Household income ranges	✓	✓	Identify where affordable housing should be directed or initiatives to encourage the delivery of more affordable housing (f)	

Criteria	Sub-criteria	Rationale	Source	Discoverable	Accessible	How the criteria responds to DTP feedback	Notes
Developer attraction	N/A	Measure the interest of developers in each suburb using PriceFinder data, DA's submitted to Council and Council knowledge to determine interest.	PriceFinder Council DA's and local knowledge	✓	X Astrolabe have paid access to PriceFinder to extract the required information. Council will need to provide DA's and local knowledge to augment this criteria. See Appendix B – Information request	Discuss the CBD strategy and how Council will increase residential uses in the CBD (h)	
Deliverability	N/A	Deliverability is a measure that tells you, on an estimated timescale, when housing on the site may be developed and ready for occupation.	N/A – determined by understanding developer attraction and enabling infrastructure. See table in Appendix A.	X	X	Differentiate between funded and unfunded infrastructure (e.g. Link Road Corridor) (e) Economic viability to determine which areas are more likely to be developed in the short term to assist	

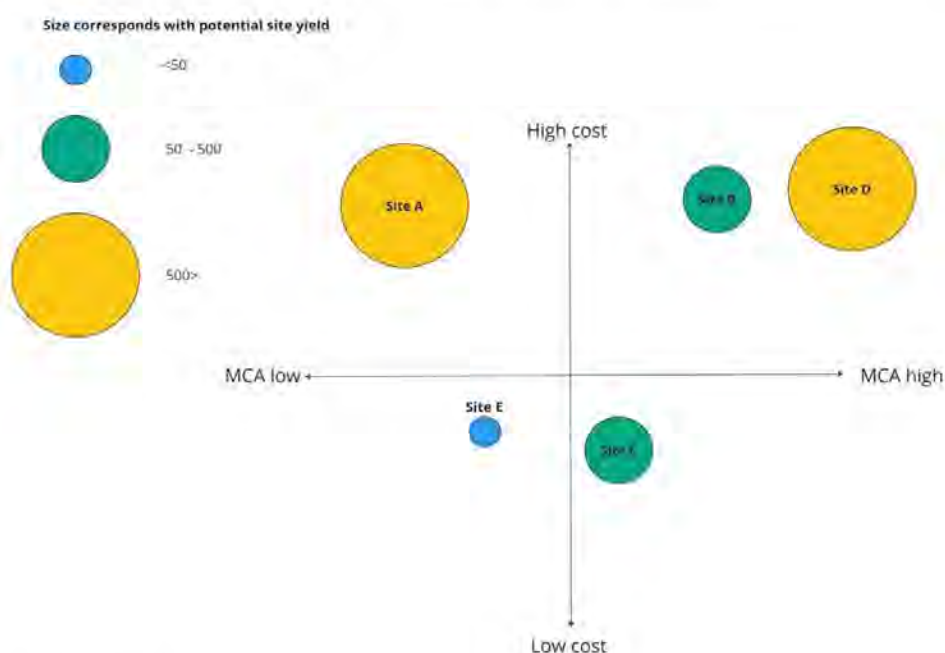
Criteria	Sub-criteria	Rationale	Source	Discoverable	Accessible	How the criteria responds to DTP feedback	Notes
						infrastructure authorities with forward planning and the Council to prioritise mechanisms to encourage infill. (c)	
						Discuss the CBD strategy and how Council will increase residential uses in the CBD (h)	



Prioritisation

Prioritisation will provide council with an indication of priority sites by comparing MCA scores, potential site yield and anticipated costs. Anticipated costs to council include estimated costs to service and develop the sites based on the enabling infrastructure and potential site yield.

The diagram below illustrates how this could be visualised. In the example below, Site D and Site B appear in the upper right quadrant. Site D could be prioritised before Site B given its high MCA scoring and high yield potential. Comparatively, Site B is a similar cost and lower overall yield. While Site A, had a high potential yield it has a high cost and a lower MCA scoring.



Next steps

Astrolabe have identified the following next steps:

- Council to test and validate the framework, as presented in this memo, to its relevant stakeholders to ensure the criteria above satisfies internal and external to Council requirements.
- Council commences an information request from relevant third parties, such as water and energy utilities, to provide relevant data and information that can be used in stage 2 to apply the framework. See Appendix B – Information request for data and information required from Council and/or third parties.
- Astrolabe will submit a variation to execute Stage 2 – Application of the Prioritisation Framework for Council's consideration.





Appendix A – Framework scoring

The following table is an example of how the scoring will be derived for particular criterion. The following is the scoring for 'Deliverability'.

For example, if Site 1 scores 3 for developer attraction and a 4 for enabling infrastructure, it would initially score 7 for deliverability.

		Developer attraction				
		1	2	3	4	5
Enabling infrastructure	1	2	3	4	5	6
	2	3	4	5	6	7
	3	4	5	6	7	8
	4	5	6	7	8	9
	5	6	7	8	9	10



Appendix B – Information request

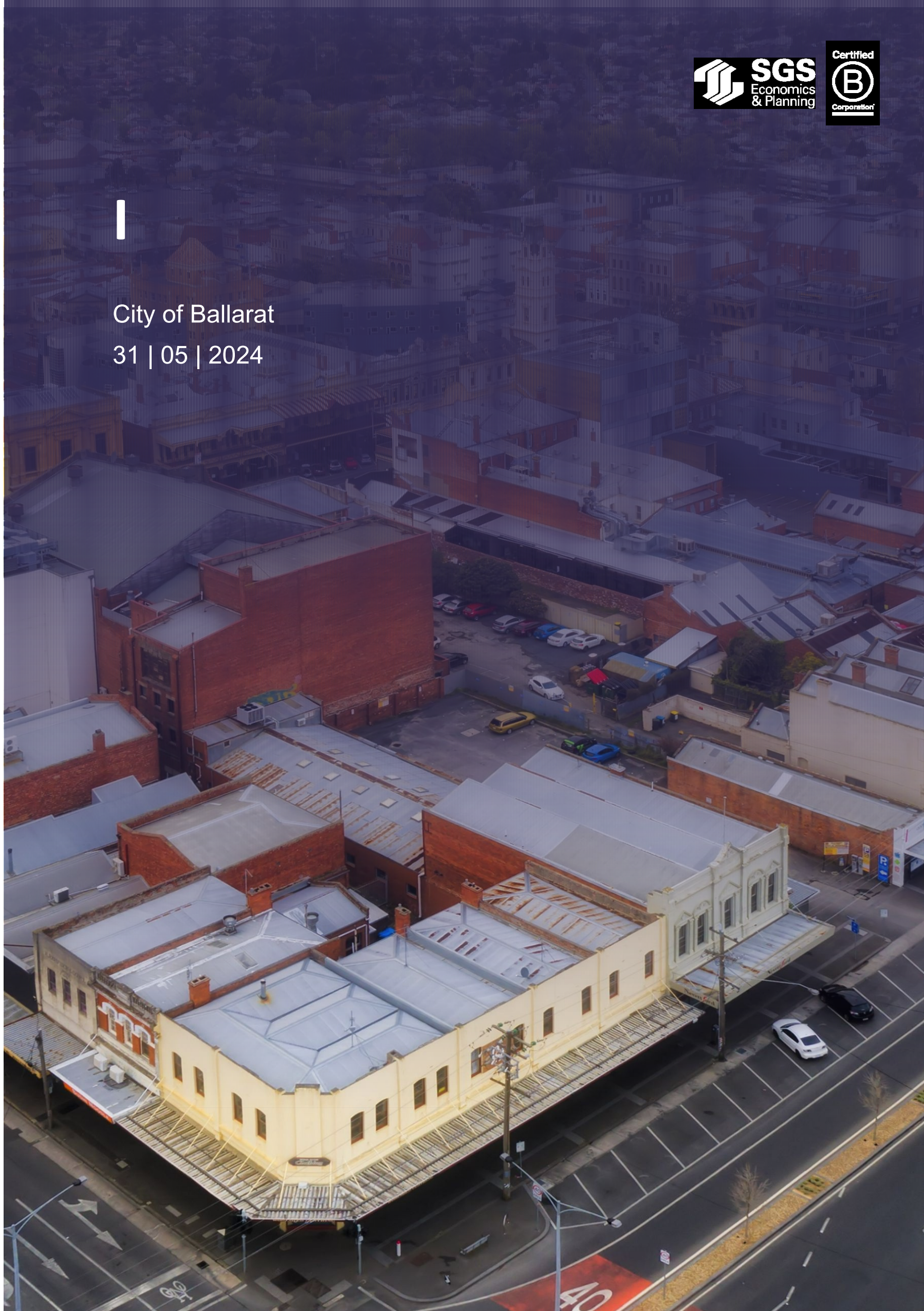
The following table identifies spatial data that is not publicly available and would be required for Stage 2 – Application of the Prioritisation Framework. Obtaining this data as shapefiles would be preferred.

Sub-criteria	Requirements	Possible source
Water infrastructure	Water: Pipe capacity, treatment capacity, equivalent tenements	Central Highlands Water
Stormwater	Stormwater infrastructure and capacity	Central Highlands Water
Sewage	Sewage infrastructure and capacity	Central Highlands Water
Energy	Energy infrastructure, existing and planned	Powercor (Electricity) AusNet Services (Gas)
Telecommunications	Internet speed and type, connections, network	NBN
Open space	Open space	Council
Planning constraints: Flood prone land	Flood prone land	Council
Planning constraints: FSR	FSR	Council
Employment sustainability	Existing employment numbers for sites	Council
Transport: Walkability	Walkability layers	Council
Government programmed infrastructure	Existing and planned infrastructure projects	Council Victorian State Government
Developer attraction	DA's submitted within set distance of the site(s)	Council





|
City of Ballarat
31 | 05 | 2024





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Contents

Executive summary.....	1
1. Introduction	4
1.1 Project Context.....	4
1.2 Report Purpose and Structure	5
1.3 Key definitions	5
2. Housing demand.....	7
2.1 Housing Needs Analysis (2023) method and results	7
2.3 Updated housing demand scenarios	12
3. Housing Capacity.....	5
3.1 Municipal Housing Capacity Analysis (2022) method and results	5
3.2 Other capacity data sources	8
3.3 Housing capacity by housing typology and submarket	1
4. Demand and capacity compared.....	4
4.1 Base case scenario.....	4
4.2 Alternative scenarios 1 and 2.....	6
5. Summary and conclusion.....	9

Executive summary

Context

Council is currently preparing the *Ballarat Housing Strategy* which will provide a framework for managing housing growth across the municipality to 2041. Central to the development of the Strategy is the consideration of whether current land use planning controls provide sufficient regulatory capacity to accommodate projected growth in housing over the coming 20-years. This includes meeting council's statutory requirements to provide a minimum of 15 years of residential land supply on a municipal basis.

Previous studies have estimated demand for housing to 2041 and capacity for housing, based on existing planning controls in both the established and growth areas of Ballarat. Council identified that further analysis was needed to integrate the findings of this past work and better understand how housing demand and capacity compare at a more granular sub-LGA level.

Housing demand

Between 2021 and 2041, there is projected to be demand for an additional 29,861 dwellings in Ballarat. In this report, three demand scenarios were developed based on the split of infill and greenfield growth across the municipality over 20 years. The base case scenario assumes past development trends (20:80 infill:greenfield) while the two alternative scenarios assume higher shares of residential development in established areas (35:65 and 50:50). The second alternative scenario reflects Council's policy aspiration for a 50:50 split of new housing in established and greenfield locations.

The table below shows how the total demand of 29,861 may be realised across the City for infill and greenfield areas for all scenarios.

Total dwelling demand, infill and greenfield areas, by scenario, 2021 to 2041

	Base case (20:80)	Alternative 1 (35:65)	Alternative 2 (50:50)
Infill	5,614	10,136	14,481
Greenfield	23,347	18,825	14,481
Total	28,961	28,961	28,961

Source: SGS Economics and Planning, 2024, using VBA building approvals data, 2021 to 2023

Existing housing capacity

There is existing capacity for 49,035 dwellings under current planning settings, including capacity for 28,236 dwellings in established areas, and 20,799 in greenfield currently zoned for urban uses.

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Total capacity, infill and greenfield areas, Ballarat LGA, 2022/2023

	Capacity	%
Infill	28,236	57%
Greenfield	20,799	43%
Total	49,035	100%

Source: Tract Consultants (2022), City of Ballarat Growth Area Framework Plan (2023)

Capacity and demand compared

Comparing total capacity to total demand provides an indication, at the municipal level, of the relationship between forecast growth and hypothetical capacity. The tables below compare capacity to demand for each demand scenario.

An at aggregate level there is an estimated 34 years of supply of residential land in Ballarat, exceeding the Victorian Government's requirement for 15 years of residential land supply measured on a municipal basis.

The comparison of capacity and the base demand scenario (BAU) suggest that there is 18 years of capacity for greenfield housing, which is less than might be required to accommodate the 20 year growth forecast.

The comparison of capacity to the two alternative demand scenario reveals that there is sufficient theoretical capacity to accommodate demand assuming a higher share of growth in infill locations, up to, and potentially exceeding Council's policy aspiration for 50 per cent of dwelling growth in infill areas.

In summary, it appears that current planning controls provide sufficiently theoretical capacity to accommodate a range of demand scenarios.

Demand versus capacity, established and greenfield areas, base case scenario, Ballarat LGA

Base case (20:80)	Demand to 2041	Capacity (2022)	Capacity - Demand	% capacity used	Years of supply
Established	5,701	28,236	22,534	20%	99
Greenfield	23,260	20,799	-2,461	112%	18
Total	28,961	49,035	20,074	59%	34

Source: SGS Economics and Planning, 2024

Demand versus capacity, established and greenfield areas, Alternative scenarios 1, Ballarat LGA

Alternative 2 (50:50)	Demand to 2041	Capacity (2022)	Capacity - Demand	% capacity used	Years of supply
Established	10,136	28,236	18,099	36%	56
Greenfield	18,825	20,799	1,974	91%	22
Total	28,961	49,035	20,074	59%	34

Source: SGS Economics and Planning, 2024

Demand versus capacity, established and greenfield areas, Alternative scenarios 2, Ballarat LGA

Alternative 2 (50:50)	Demand to 2041	Capacity (2022)	Capacity - Demand	% capacity used	Years of supply
Established	14,481	28,236	13,755	51%	39
Greenfield	14,481	20,799	6,318	70%	29
Total	28,961	49,035	20,074	59%	34

Source: SGS Economics and Planning, 2024

Further analysis by submarket and housing typology

Analysis by submarket and housing typology was also undertaken and is discussed in Section 4. These analyses suggest that the existing patterns of residential zoning are likely sufficient to accommodate future housing demand, including where a significantly increased share of demand is forecast in established areas.

Caveats

Dwelling growth in Ballarat has traditionally been dominated by greenfield housing development. However, the Victoria Government has committed to a target of 70 per cent infill development across Victoria. Achievement of this aspiration would require all metropolitan and regional housing markets to achieve significantly higher shares of infill development.

The alternative demand scenarios developed for this report are hypotheticals drawing on these local and state government policy aspirations. They imply shifts in the location and type of future housing growth relative to recent growth trends. The analyses presented here do not suggest that these alternative demand scenarios will be realised, only that there is theoretical capacity to support them being achieved.

The location and composition of future dwelling supply will be a function of a range of influence including state planning policy, local planning policy,

infrastructure delivery, housing preferences, development feasibility and broader market conditions.

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1. Introduction

The section of the report provides context for the project, outlines the structure of this report, and defines key terms.

1.1 Project Context

Victorian Government planning policy requires local governments to proactively plan for population and housing growth to appropriately support the efficient operation of housing markets, with the state's Planning Policy Framework (PPF) stating that local governments must:

“Plan to accommodate projected population growth over at least a 15-year period and provide clear direction on locations where growth should occur. Residential land supply will be considered on a municipal basis, rather than a town-by-town basis.”

There is little in the way of further guidance from the state government about this benchmark. However, it is broadly understood to refer to the relationship between expected demand for housing in the future and the ability to accommodate this demand within the regulatory capacity of land use planning controls.

The City of Ballarat is preparing the *Ballarat Housing Strategy* (the Housing Strategy) to ensure policy frameworks are appropriate to manage growth over time. This includes meeting its statutory requirements for land supply (noted above) and various other state and local housing objectives. A central recommendation of the draft Housing Strategy is that “50 per cent of new dwellings will be directed to infill and urban renewal locations” and “50 per cent of new dwellings will be directed to the Growth Areas.” This objective was previously adopted by Council.

In preparing the draft Housing Strategy, council commissioned research to investigate demand for housing to 2041 and measure available capacity for new housing under existing land use planning controls.^{1 2} Combining the findings of these two pieces of analysis, the draft Housing Strategy stated that:

- ✦ *“Approximately 29,000 dwellings are required to meet projected population growth in Ballarat to the year 2041.”³*

¹ SGS Economics and Planning (2023), Housing Needs Analysis.

² Tract Consultants (2022), Municipal Housing Capacity Analysis.

³ City of Ballarat (2023), Draft Ballarat Housing Strategy, page 26.

- ✿ *“The City of Ballarat can demonstrate a combined current and future supply of approximately 73,600 dwellings (42,700 in greenfield locations and 34,000 in infill location).”⁴*

Based on these findings, the draft Housing Strategy concluded that there is sufficient residentially zoned land in both infill and greenfield locations to accommodate projected growth in accordance with council’s adopted 50:50 ambitions.

However, it has been identified that further scrutiny of this conclusion is needed, including understanding how housing demand and capacity compare at a more granular sub-LGA level, and considering the types of housing that may be demanded in the future.

In light of this context, the following section outlines the purpose and scope of the analysis contained in this report.

1.2 Report Purpose and Structure

This report aims to further investigate the findings of the draft Housing Strategy by comparing housing demand and capacity at a sub-LGA (submarket) scale and by housing typology in accordance with demand scenarios.

Following the introduction, this report is structured as follows:

- ✿ **Section 2:** Provides a summary of the dwellings demand analysis presented in the Housing Needs Analysis (HNA) report as the basis for preparing updated dwelling demand scenarios, reported by submarket and housing typology.
- ✿ **Section 3:** Provides a summary of housing capacity data sources and reconfigures these by submarket and housing typology to align with dwelling demand scenario outputs.
- ✿ **Section 4:** Compares housing demand by housing type and submarket to available housing capacity to identify any expected gaps in the supply of residential land to 2041.
- ✿ **Section 5** Presents a brief summary of key findings and offers conclusions derived from the analysis undertaken in this report.

1.3 Key definitions

Capacity	Refers to the maximum number of dwellings that can be built on a particular piece of land or within a defined area. It considers factors such as zoning regulations, land use restrictions, infrastructure availability, and environmental considerations.
-----------------	--

⁴ Ibid.

Sometimes “supply” is used interchangeably with capacity, however supply (or land supply) refers to the actual amount of land available for development within a particular area or jurisdiction. It includes both undeveloped land and parcels that may be suitable for redevelopment.

Dwelling demand	Refers to the need for housing units within a particular market or area. It represents the quantitative requirements for housing accommodation based on factors such as population growth, demographic trends, economic conditions, and lifestyle preferences. In this study, the timeframe is set to 2041.
Dwelling density	Describes the number of houses per hectare. It is a measure used to estimate housing typology (defined below).
Greenfield development	Refers to the process of constructing new buildings, infrastructure, or projects on previously undeveloped or agriculturally used land, typically located on the outskirts of urban or suburban areas
Housing type or typology	Refers to the categorisation of different types of housing based on one or more attributes. This study's housing typology is broadly based on building density per hectare and aligns with single stand-alone houses (very low and low density), terrace and townhouses (medium density), and apartment buildings (high density).
Infill development	Refers to the construction or redevelopment of buildings or housing units on vacant or underutilized parcels of land within an existing urban or suburban area.
Net dwellings	Related to capacity, net dwellings refers to the total number of potential additional housing units after accounting for the stock of existing dwellings.
Submarket	A grouping of suburbs with similar housing development and type characteristics. A submarket classification refers to whether the development occurred in established (infill) or new growth areas (greenfield).
Supply	Refers to the quantity and availability of residential properties available for purchase or rent within a specific market or geographic area. Supply can also be used in relation to ‘land supply’, which refers to land available for development (as discussed above under ‘capacity’).

2. Housing demand

This section overviews the results of the Housing Needs Analysis report (2023) and outlines updated housing demand scenarios to inform the later housing demand versus capacity assessment.

2.1 Housing Needs Analysis (2023) method and results

This Housing Needs Analysis undertaken by SGS in 2023 provided updated population and housing projections to inform the City of Ballarat's strategic planning decision-making, particularly the development of the *draft Ballarat Housing Strategy*. The following section provides a summary of the method and findings of this work as relevant to informing the housing demand scenarios utilised in this report.

Population and dwelling forecasts

The *Housing Needs Analysis* (HNA) provided three housing demand scenarios, based on three alternative population projections.

These projection scenarios were developed in response to concerns regarding the currency of the official Victorian Government Victoria in Future projections (VIF19), recognizing that the VIF19 projections relied on 2016 Census data and predated the onset of the COVID-19 pandemic.

They each sought to demonstrate possible long run population growth trends, accounting to varying degrees, for the considerable adjustments to long-run demographic and housing trends that occurred because of the pandemic. These population scenarios were:

- ✦ **Low growth scenario:** leveraging the VIF19 population projections as the basis for updated population estimates to 2041, rebased to the 2021 Census population estimate.
- ✦ **Moderate growth scenario:** drawing on historical growth rates and Centre for Population commentary on long-run growth rates for regional Victoria.
- ✦ **High growth scenario:** Reflecting a situation in which high population growth experienced in Ballarat during the pandemic years (2021/2) is sustained over the long term to 2041.

Each scenario was used as the basis for modelling future housing demand using SGS's Housing Demand Model (HDM). At a high-level the HDM produces an estimate of number of dwellings needed by type and size to house the future community in a given area. The model does this by synthesising population projections, local demographic and housing trends in the revealed housing

preferences for different households types (i.e. what proportion of households live in each kind of dwelling).⁵

It should be noted that a range of detailed assumptions were made in preparing these forecasts. These are documented in detail in the HNA report (see Section 5 of the HNA report), but broadly relate to:

- ✦ Adjustments to Census datasets used in the HDM modelling where significant deviation from long running trends was identified and where it was assumed that the 2021 Census data is an outlier and should have limited impact on future modelling.
- ✦ Checks to ensure that trends projected in the model did not deviate too far from historical averages.

The resultant total population forecasts for each scenario, along with associated estimates of future housing demand (total and by dwelling types) are shown in Table 1 to Table 3 below. Some key observations are:

- ✦ Population forecasts range from 43,423 (low scenario) to 57,947 (high scenario), with average annual growth rates ranging from 1.6 per cent to 2.1 per cent per annum respectively to 2041.
- ✦ The combined effects of population growth and demographic changes are projected to result in demand for between 22,254 and 28,961 additional dwellings to 2041.
- ✦ Separate houses will maintain the largest share of dwellings demanded in the future; however this type of housing will represent a declining share of total housing stock to 2041. While separate houses are expected to remain the dominant housing types over the period, smaller semi-detached dwellings, and flats, units and apartments are expected to grow at faster rates.

An important point to note regarding the method for deriving forecasts for future dwellings by type is that (as noted above) these estimates are based on revealed household preferences for dwellings by type as observed from Census data, extrapolated into the future. Because of this, the model reflects trade-offs made by households based on available housing supply in the Ballarat LGA.

Following the finalisation of the HNA report, Council resolved to adopt the high scenario figures and is working toward planning to accommodate 28,961 new dwellings in the municipality by 2041.

Table 1: Population forecast, by scenario, Ballarat LGA, 2021 to 2041

Scenario	2021	2026	2031	2036	2041	Change 2021-41	AAGR
----------	------	------	------	------	------	----------------	------

⁵ The proportion of each household type who is observed to live in each dwelling type is commonly referred to as *revealed housing preferences*.

Low	113,482	124,373	135,161	145,627	156,905	43,423	1.6%
Moderate	113,482	125,170	137,117	149,910	163,897	50,415	1.8%
High	113,482	125,810	139,478	154,630	171,429	57,947	2.1%

Source: SGS Economics and Planning (2023)

Table 2: Dwelling demand forecast, by scenario, Ballarat LGA, 2021 to 2041

Scenario	2021	2026	2031	2036	2041	Change 2021-41	AAGR
Low	50,204	56,184	61,490	66,866	72,458	22,254	1.9%
Moderate	50,204	56,544	62,380	68,833	75,687	25,483	2.1%
High	50,204	56,833	63,454	71,000	79,165	28,961	2.3%

Table 3: Dwelling type forecasts, high scenario, Ballarat LGA, 2021 to 2041

Dwelling Type	2021	2026	2031	2036	2041	Change 2021-41	AAGR	Share of change
Separate house	42,262	47,518	52,753	58,712	65,087	22,825	2.2%	79%
Attached dwelling	6,335	7,488	8,667	10,024	11,509	5,174	3.0%	19%
Flat, unit or apartment	1,409	1,619	1,824	2,053	2,332	923	2.6%	3%
Other	198	207	210	210	237	39	0.9%	0%
Total	50,204	56,833	63,454	71,000	79,165	28,961	2.3%	100%

Source: SGS Economics and Planning (2023)

Alternative dwellings demand scenarios

As noted above, the housing demand forecasts generated using the HDM are generally tied to past trends and by design do not fully account for the potential for future shifts in housing preferences, policies and socio-economic conditions. In recognition of this, the HNA included two alternative dwelling demand scenarios (in addition to the base case scenario), modelled to account to varying degrees an increase in households seeking more medium and high-density housing options in established areas. These two additional scenarios were prepared with reference

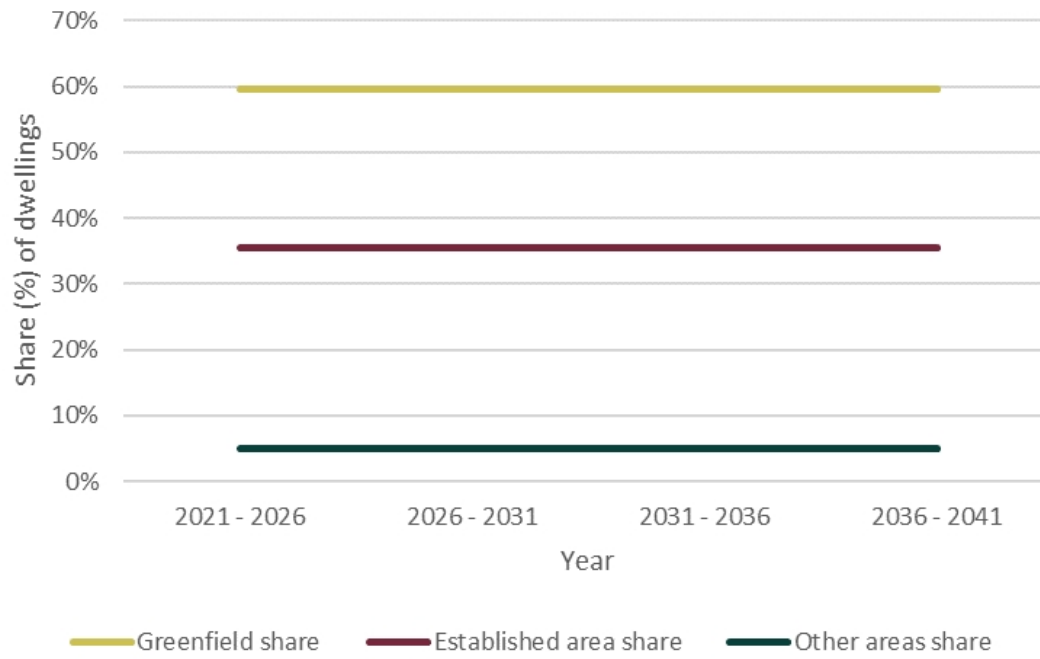
to: research demonstrating a mismatch between extant housing supply and the housing people might choose if a greater diversity of stock were provided, and Council's policy aspiration for a 50:50 split of dwelling growth between established area and greenfield development by 2041 (from the current split of approximately 30:70).⁶ The housing preferences scenarios were modelled using the high growth scenario, and were defined as follows:

- ✦ The **'base case' scenario (S1)** which assumed the 'business as usual' split of development between established vs greenfield locations.
- ✦ The **first alternative scenario (S2)** which implied a progressive shift away from 'business as usual' towards a higher share of established area development, resulting in a 50:50 split of all growth that occurs between 2021 to 2041; and
- ✦ The **second alternative scenario (S3)** which reflects Council's policy aspiration for a 50:50 split of new housing in established and greenfield locations over a 20 year period, resulting in a 50:50 split of all growth that occurs between 2021 and 2041

The results of the alternative dwelling preferences scenarios by location type and dwelling type are summarised in the charts below. These scenarios show that if the locations of future housing supply were to shift in response to resident preferences for diverse housing in established areas and Council's policy aspirations, a greater number of non-separate and smaller (two bedrooms or less) will be needed.

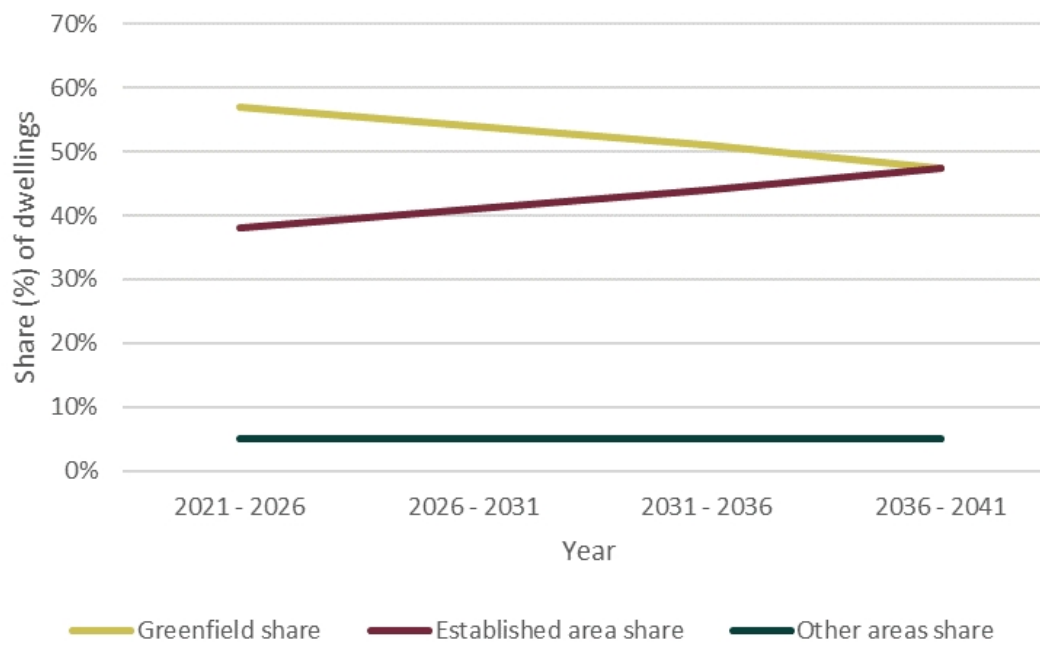
⁶ Note that the infill:greenfield split of past development can vary slightly (as will be seen later in this report) depending on differences in defining "infill" and "greenfield" and the boundaries of geographical areas of analysis.

Figure 1: Dwelling preference scenario S1, established vs greenfield, 2021 to 2041



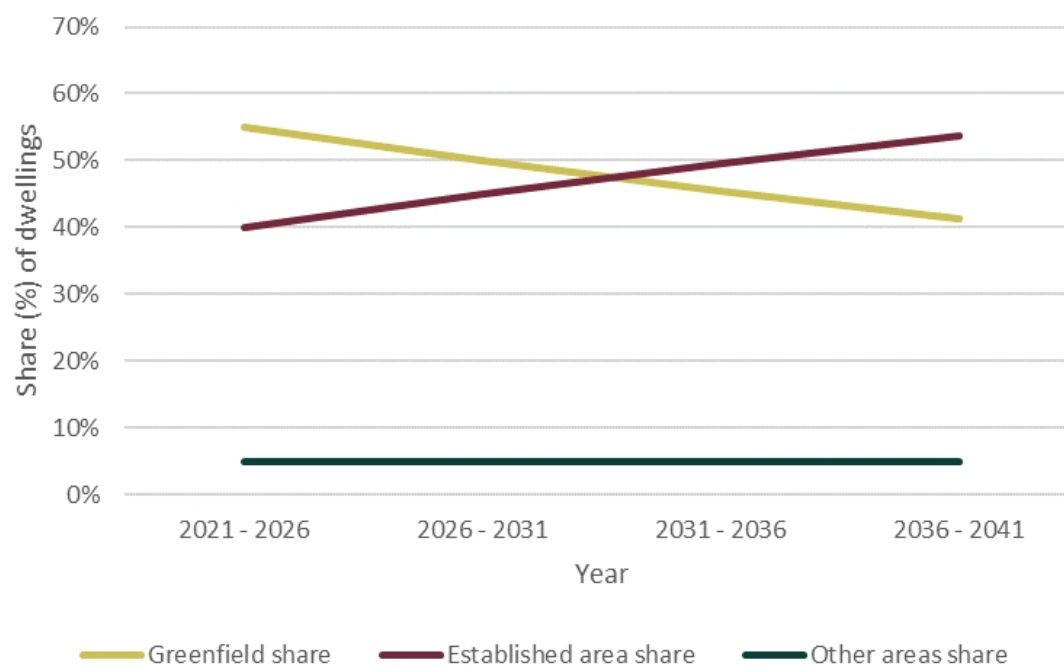
Source: SGS Economics and Planning (2023)

Figure 2: Dwelling preference scenarios S2, established vs greenfield, 2021 to 2041



Source: SGS Economics and Planning (2023)

Figure 3: Dwelling preference scenarios S3, established vs greenfield, 2021 to 2041



Source: SGS Economics and Planning (2023)

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2.3 Updated housing demand scenarios

As stated in the introduction, the purpose of this study is to utilise the findings of the HNA to compare housing demand with assessed housing capacity in more detail. Specifically, comparing housing demand and capacity by submarket and projected housing types. This is because current findings:

- ✿ Are reported at a high-level and do not account for past or potential future distribution of housing demand across the LGA at a more granular (submarket) scale. While the Victorian Government only requires local governments to consider residential land supply on a “municipal basis”, lack of consideration for past and potential future spatial patterns of growth may result in the misallocation of residential land supply compared with locational preferences of the market. This is particularly relevant for a large regional municipality that provides diverse housing opportunities.
- ✿ Do not consider housing demand and capacity by housing type. Further consideration of the types of housing that may be demanded by future households is needed. This is to ensure that the development typologies supported by the underlying residential zones aligns with the housing type preferences of future households (and is provided in appropriate locations, as noted in the point above).
- ✿ Are contingent on the realisation of council’s 50:50 objective. This target arguably presents a aspirational vision for development given that 80 per cent of housing growth has occurred in greenfield areas over the past ten years. There is need to better understand the demand versus capacity equation under a range of scenarios in light of past development trends to ensure that the supply of residential land can reasonably accommodate growth, accounting for the inherent uncertainty of future housing demand.

The updated housing demand scenarios were prepared using the following method:

- ✿ **Step 1:** Identify housing submarkets.
- ✿ **Step 2:** Identify past trends in residential development by type in the submarkets in Step 1.
- ✿ **Step 3:** Determine “base case” and “alternative” demand scenario .

These steps are explained in further detail below.

Step 1: Identify housing submarkets

Most local government areas can be thought of containing multiple housing submarkets that are defined by consistent attributes in terms of location and access, housing type and price, and neighbourhood and landscape character. For the purposes of this study, the City of Ballarat has been divided into six

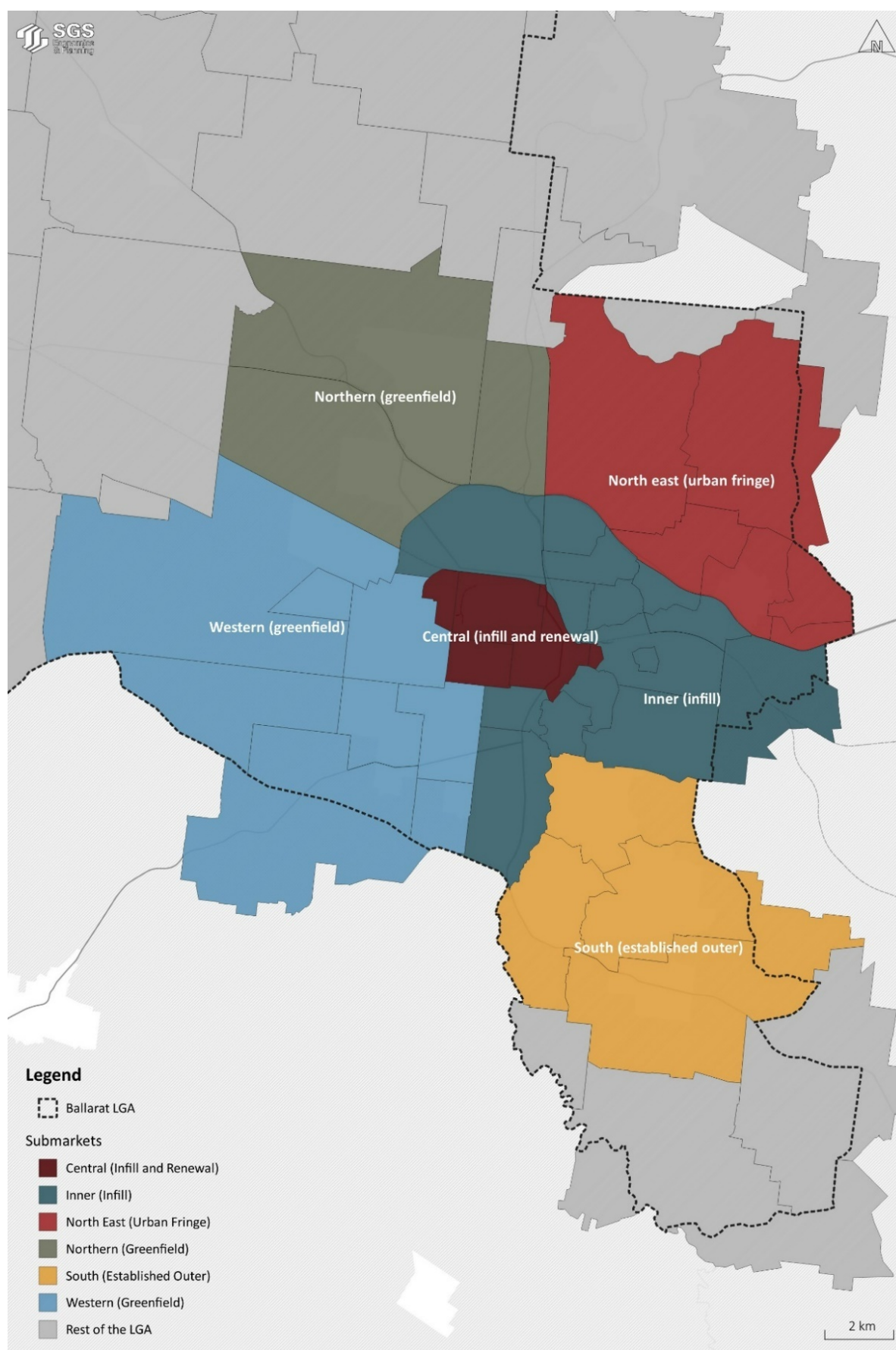
submarkets as shown in Figure 4. These are defined broadly by location and predominant development type (in brackets):⁷

- ✿ Central (Infill and Renewal)
- ✿ Inner (Infill)
- ✿ North East (Urban Fringe)
- ✿ Northern (Greenfield)
- ✿ South (Established Outer)
- ✿ Western (Greenfield)

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⁷ Note: Submarkets do not cover the entire LGA and exclude outer rural areas that are expected to experience minimal future growth.

Figure 4: Ballarat housing submarkets



Source: SGS Economics and Planning, 2024

Step 2: Identify past trends in residential development by type and location

The next step involves understanding past patterns of residential development in each submarket. These form the basis for the spatial distribution of the base case demand forecast across the submarkets and the mix of dwelling types.

Building permit data from the Victorian Building Authority (VBA) was used for this purpose. However, there are several limitations of this dataset which should be noted.

- The VBA data was initially analysed for the period 2011 to 2023. However, development activity in 2013 and 2017 showed significant divergences from the overall trends. Therefore, past development rates were drawn from 2021 to 2023 as these were deemed to be most consistent.
- The VBA data provides limited information on dwelling types.⁸ A proxy measure of dwelling density was used to broadly estimate development activity by housing type, utilising available information relating to 'site area' and 'new dwelling number', as per the following equation.

$$\frac{\text{site area (ha)}}{\text{new dwellings}} = \text{gross dwelling density (dph)}$$

This dwelling density measure was then used to categorise each development into one of four broad housing typology categories (shown in Table 4).

- The VBA data is collected by suburb. In certain instances, suburbs span more than one submarket. This is the case of Nerrina, Brown Hill (Vic.) and Warrenheip, where housing typologies south of the Western Highway differ from those to the north. Demand by location was allocated based on the share of residentially zoned land within each submarket area.

⁸ The VBA data provides information on the building classification according to the National Construction Code, Building Code of Australia. However, the building classification doesn't distinguish between single, standalone, single houses, and horizontally attached houses, such as terrace houses. Therefore, a proxy indicator of dwelling density was calculated using 'net dwelling number' and 'site area' information to determine past development activity by dwelling type. The net dwelling number refers to new dwellings built on empty lots, excluding new buildings that replaced demolished structures. This dwelling density measure was then used to categorise each development into one of four broad housing typology categories (shown in Table 4). However, as shown in **Error! Reference source not found.** The defined dwelling density categories can relate to several dwelling type classifications and, therefore, should be taken as indicative only.

Table 4: Housing typology categories

Density	Housing typology	Example
0 to 10 dwellings per hectare	Very low	Detached dwellings in a rural or urban fringe or other very low density locations
10 to 40 dwellings per hectare	Low	Detached dwellings in a suburban context and lower density inner urban locations
40 to 100 dwellings per hectare	Medium density	Semi-attached dwellings (units and townhouses) in inner, suburban and greenfield locations
100+ dwellings per hectare	High density	Apartments, generally confined to inner urban locations in Ballarat

Source: SGS Economics and Planning, 2024

Based on the VBA data from 2021 to 2023, the total count of new dwellings by submarket and typology are shown in Table 6. The share of dwellings by submarket and typology are shown in Table 7.

The Western submarket experienced the largest total quantity of development, accounting for 78 per cent of all development for each year. This is followed by the Inner submarket, which accounted for approximately 13 per cent of the total development. The concentration of development in the Western submarket aligns with several large greenfield growth areas within suburbs such as Lucas, Alfredton, and Delacombe. These areas have been experiencing significant residential expansion and are contributing substantially to the overall development activity in Ballarat.

Furthermore, the data indicates that low-density development predominated across all submarkets in Ballarat between 2021 and 2023, representing around 84 per cent to 92 per cent of total development each year. This trend aligns with the predominant development form in Ballarat's growth areas, where single-family homes and low-density housing estates are prevalent.

In summary, the data suggests that the Western submarket, particularly the greenfield growth areas, has been the focal point of development activity in Ballarat, with a significant emphasis on low-density housing. Table 5 Combines dwelling development activity across all submarkets based on their classification as either infill or greenfield. It shows that between 2021 and 2023, 81 per cent of dwellings were produced in greenfield areas.

Table 5: Dwelling development activity, infill versus greenfield, 2021 to 2023

Classification	2021 to 2023 (total dwellings)	2021 to 2023 (% of total dwellings)
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Infill	827	20%
Greenfield	3,350	80%

Source: SGS Economics and Planning, 2024, using VBA building approvals data, 2020 to 2023

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Table 6: Total dwelling development activity by submarket and typology, 2021 to 2023

Submarket	2023					2022					2021					2021 to 2023 total	Share of total
	V. Low	Low	Med.	High	Total	V. Low	Low	Med.	High	Total	V. Low	Low	Med.	High	Total		
Western (Greenfield)	94	637	13	1	745	68	993	9	1	1,071	44	1,367	17	0	1,428	3,244	78%
Central (Infill and Renewal)	2	6	0	0	8	1	28	1	0	30	12	18	2	0	32	70	2%
Inner (Infill)	11	108	7	2	128	18	157	13	1	189	22	193	21	2	238	555	13%
South (Established Outer)	12	12	0	0	24	17	17	0	0	34	16	35	0	0	51	109	3%
North East (Urban Fringe)	5	8	0	0	13	12	20	0	0	32	14	34	0	0	48	93	2%
Northern (Greenfield)	3	7	0	0	10	3	16	0	0	19	7	70	0	0	77	106	3%
Total	127	778	20	3	928	119	1,231	23	2	1,375	115	1,717	40	2	1,874	4,177	100%

Table 7: Share of dwelling development activity by submarket and typology, 2021 to 2023

Submarket	2023					2022					2021				
	V. Low	Low	Med.	High	Total	V. Low	Low	Med.	High	Total	V. Low	Low	Med.	High	Total
Western (Greenfield)	10.1%	68.6%	1.4%	0.1%	80.3%	4.9%	72.2%	0.7%	0.1%	77.9%	2.3%	72.9%	0.9%	0.0%	76.2%
Central (Infill and Renewal)	0.2%	0.6%	0.0%	0.0%	0.9%	0.1%	2.0%	0.1%	0.0%	2.2%	0.6%	1.0%	0.1%	0.0%	1.7%
Inner (Infill)	1.2%	11.6%	0.8%	0.2%	13.8%	1.3%	11.4%	0.9%	0.1%	13.7%	1.2%	10.3%	1.1%	0.1%	12.7%
South (Established Outer)	1.3%	1.3%	0.0%	0.0%	2.6%	1.2%	1.2%	0.0%	0.0%	2.5%	0.9%	1.9%	0.0%	0.0%	2.7%
North East (Urban Fringe)	0.5%	0.9%	0.0%	0.0%	1.4%	0.9%	1.5%	0.0%	0.0%	2.3%	0.7%	1.8%	0.0%	0.0%	2.6%
Northern (Greenfield)	0.3%	0.8%	0.0%	0.0%	1.1%	0.2%	1.2%	0.0%	0.0%	1.4%	0.4%	3.7%	0.0%	0.0%	4.1%
Total	13.7%	83.8%	2.2%	0.3%	100%	8.7%	89.5%	1.7%	0.1%	100%	6.1%	91.6%	2.1%	0.1%	100%

Source: SGS Economics and Planning, 2024, using VBA building approvals data, 2021 to 20

Step 3: Identify base case and alternative dwelling demand scenarios

The HNA report projected that under a *high growth scenario*, there is expected to be demand for 28,961 additional dwellings across the LGA by 2041.⁹ Using this forecast total, three scenarios were developed to better understand how demand might be realised over time across the LGA at the submarket level and by defined housing typologies. These demand scenarios leverage the those used in the HNA report as the starting point for this analysis (refer to Table 8). Each scenario is described in further detail below.

Table 8: Demand scenarios summary

Scenario	Description
Base case	Assumes the 'business as usual' split of development by location and type to 2041.
Alternative 1	Implies a progressive shift away from 'business as usual' towards a higher share of established area development, resulting in a 50:50 split of all growth that occurs at 2041.
Alternative 2	Reflects Council's policy aspiration for a 50:50 split of new housing in established and greenfield locations over a 20 year period, resulting in a 50:50 split of all growth that occurs between 2021 and 2041

Source: SGS Economics and Planning (2023 and 2024)

Base case scenario

The base case scenario draws on the analysis of past development trends using VBA data. This scenario has been developed under the assumption that past trends provide a reasonable indication of what might happen in the future, particularly in the near-term.

To allocate the demand across the municipality, the average annual share of development by location and housing typology from 2021 to 2023 was applied to the total projected future demand (29,861 dwellings). That is, the three-year average was calculated from the shares shown above in Table 7 above, and are reported in Table 14.

These averages were then applied to the total forecast demand of 29,861 dwellings, as per the following equation:

$$\begin{aligned} & \text{total future dwelling demand} \\ & \quad \times \text{past share of development by submarket and typology} \\ & \quad = \text{total future dwellings by submarket \& typology} \end{aligned}$$

The outcomes of applying past shares of development to total future demand are shown in Table 10. Results show that under the base case, 23,300 dwellings are

⁹ The high growth scenario was formally adopted by council for the purpose of informing the Ballarat Housing Strategy.

expected in greenfield submarkets (Western and northern) to 2041, and almost 26,000 will be in the low-density category.

Table 9: Share of development by submarket and typology, average share by typology, 2021 to 2023

Submarket	Very Low	Low	Medium	High	Total
Central (Infill and Renewal)	0.3%	1.2%	0.1%	0.0%	1.6%
Inner (Infill)	1.2%	11.1%	0.9%	0.1%	13.4%
North East (Urban Fringe)	0.7%	1.4%	0.0%	0.0%	2.1%
Northern (Greenfield)	0.3%	1.9%	0.0%	0.0%	2.2%
South (Established Outer)	1.1%	1.5%	0.0%	0.0%	2.6%
Western (Greenfield)	5.8%	71.3%	1.0%	0.1%	78.1%
Total	9.5%	88.3%	2.0%	0.2%	100%

Source: SGS Economics and Planning, 2024, using VBA building approvals data, 2021 to 2023

Table 10: Total dwellings, by submarket and typology, base case, 2021 to 2041

Submarket	Very Low	Low	Medium	High	Total
Central (Infill and Renewal)	90	352	17	0	459
Inner (Infill)	354	3,220	272	38	3,885
North East (Urban Fringe)	208	399	0	0	607
Northern (Greenfield)	88	546	0	0	634
South (Established Outer)	327	424	0	0	751
Western (Greenfield)	1,682	20,640	286	17	22,625
Total	2,749	25,581	576	56	28,961

Source: SGS Economics and Planning, 2024, using VBA building approvals data, 2021 to 2023

Alternative scenarios 1 and 2

As noted in Table 7 and discussion further above two alternative scenarios were developed to account for possible changes to past trends over time based on the findings of research and in response to Council's ambition for a greater share of development to be realised in established areas.

For both alternative scenarios, adjustments were made to the average development shares shown in Table 9 to arrive at 50 per cent of development in established areas at 2041 (alternative 1), and 50 of development in established areas *between* 2021 and 2041 (alternative 2). For alternative 1, the total split of

development in established areas versus greenfield areas is equivalent to 35:65 over the 20 years forecast period.

Several additional adjustments were made to average development shares for both alternative scenarios:

- Due to the known low availability of land in established areas for low density housing, the established:greenfield ratios for this development typology were fixed to the base case averages.
- The increase in infill and decrease in greenfield that would have occurred for very low in alternative scenarios 1 and 2 has been distributed across the rest of the typologies (low, medium, high) proportionally to their share in relevant submarkets. **This assumes a saturation in the market for low density and same past preference for alternative densities.**

The adjusted development shares for each scenario are shown in Table 11 and Table 12 respectively.

Table 11: Share of development by submarket and typology, adjusted shares, alternative 1, 2021 to 2041

Submarket	Very Low	Low	Medium	High	Total
Central (Infill and Renewal)	0.3%	2.4%	0.1%	0.0%	2.8%
Inner (Infill)	1.2%	20.6%	1.7%	0.2%	23.8%
North East (Urban Fringe)	0.7%	3.0%	0.0%	0.0%	3.7%
Northern (Greenfield)	0.3%	1.5%	0.0%	0.0%	1.8%
South (Established Outer)	1.1%	3.5%	0.0%	0.0%	4.6%
Western (Greenfield)	5.8%	56.6%	0.8%	0.0%	63.2%
Total	9.5%	87.6%	2.6%	0.3%	100.0%

Source: SGS Economics and Planning, 2024, using VBA building approvals data, 2021 to 2023

Table 12: Share of development by submarket and typology, adjusted shares, alternative 2, 2021 to 2041

Submarket	Very Low	Low	Medium	High	Total
Central (Infill and Renewal)	0.3%	3.5%	0.2%	0.0%	4.0%
Inner (Infill)	1.2%	30.0%	2.5%	0.4%	34.1%
North East (Urban Fringe)	0.7%	4.6%	0.0%	0.0%	5.3%
Northern (Greenfield)	0.3%	1.1%	0.0%	0.0%	1.4%
South (Established Outer)	1.1%	5.5%	0.0%	0.0%	6.6%
Western (Greenfield)	5.8%	42.2%	0.6%	0.0%	48.6%

Total	9.5%	86.8%	3.3%	0.4%	100.0%
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Source: SGS Economics and Planning, 2024, using VBA building approvals data, 2021 to 2023

As with the base case scenario described earlier, these development shares were applied to total future demand to estimate the distribution of future dwelling demand by submarket and type. The results of this process area shown in Table 13 and Table 14..

Under alternative scenario 1, the Western (Greenfield) submarket is expected to accommodate 18,311 dwellings over the next 20-years, 90 per cent of which are in a low-density typology. The second submarket to experience the most demand is the Inner (Infill), with 6,906 new dwellings.

For Alternative 2, total dwelling demand in the Western (Greenfield) submarket is expected to reduce further to 14,086 dwellings. By contrast, the total share of the Inner (Infill) submarket increases to 9,866 dwellings, out of which 8,675 are in the low-density typology.

Table 13: Number of dwellings by submarket and typology, alternative 1, 2021 to 2041

Submarket	Very Low	Low	Medium	High	Total
Central (Infill and Renewal)	90	692	34	0	815
Inner (Infill)	354	5,976	505	71	6,906
North East (Urban Fringe)	208	871	0	0	1,079
Northern (Greenfield)	88	425	0	0	513
South (Established Outer)	327	1,009	0	0	1,335
Western (Greenfield)	1,682	16,389	227	14	18,311
Total	2,749	25,361	766	85	28,961

Source: SGS Economics and Planning, 2024

Table 14: Number of dwellings by submarket and typology, alternative 2, 2021 to 2041

Submarket	Very Low	Low	Medium	High	Total
Central (Infill and Renewal)	90	1,025	50	0	1,165
Inner (Infill)	354	8,675	734	103	9,866
North East (Urban Fringe)	208	1,334	0	0	1,542
Northern (Greenfield)	88	306	0	0	395
South (Established Outer)	327	1,581	0	0	1,908

Western (Greenfield)	1,682	12,224	169	10	14,086
Total	2,749	25,146	953	113	28,961

Source: SGS Economics and Planning, 2024

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3. Housing Capacity

This section overviews capacity results reported in the Municipal Housing Capacity Analysis (2023) and Urban Development Program (2023). These capacity findings are then reconfigured to align with the housing submarkets and dwelling typologies defined in Section 2.

3.1 Municipal Housing Capacity Analysis (2022) method and results

Tract Consultants were commissioned to undertake an assessment of potential housing capacity across the City of Ballarat to inform the Ballarat Housing Strategy. The study focused on residential zones within the established areas of Ballarat.

Housing capacity within the growth areas and capacity for sites over one hectare within the established areas of Ballarat are assessed separately by the Victorian Government through the Urban Development Program (UDP). Capacity reported in the UDP is presented in Section 3.2.

The Tract assessment provides an estimate of potential net dwellings by suburb have been calculated within the following zones: Residential Growth Zone (RGZ), General Residential Zone (GRZ), Neighbourhood Residential Zone (NRZ), Mixed Use Zone (MUZ), Low Density Residential Zone (LDRZ), Rural Living Zone (RLZ), Commercial 1 Zone (C1Z), and Schedule 14 to the Special Use Zone - Ballarat West Employment Zone (SUZ14).

The detailed methodology underpinning the assessment is described in Section 1.3 of the Tract report, however, the broad steps included:

1. Identification of lots within applicable zones (listed above)..
2. Exclusion of lots unavailable for development (public land uses, strata titled lots, heritage sites, recently developed lots, small lots, lots subject to flooding and inundation, and vegetated lots)
3. Assessment of potential yield, considering typical densities for housing types likely to be delivered, specific locational attributes, existing heritage constraints, and lot size requirements in the Ballarat Planning Scheme.

An extract from the Tract report showing dwelling yield assumptions is shown in **Error! Reference source not found..** These density assumptions are used later in this report as the basis for converting the capacity results to capacity by dwelling typology.

Figure 5: Municipal Housing Capacity Analysis, dwelling yield assumption, 2022

Planning Zone and Condition	Proposed Site / Net Density (Dwellings / Ha)	Land per dwelling (sq.m)	Rationale for Density
Residential Growth Zone 1 (RGZ1) adjacent to CBD	140	N/A	Reflects density associated with low-scale apartment development (3-4 storeys)
Residential Growth Zone 1 (RGZ1) elsewhere	50	200	Reflects density associated with 2-3 storey townhouse development.
General Residential Zone 1 (GRZ1)	30	333	Reflects historical densities for unit and townhouse development across Ballarat
General Residential Zone 1 (GRZ1) - Contributory Heritage Sites	20	500	A lower density than GRZ areas to accommodate retention of existing dwelling
Neighbourhood Residential Zone 1 (NRZ1)	12.5	800	Reflects the zone schedule minimum lot size
Neighbourhood Residential Zone 2 (NRZ2)	12.5	800	Reflects the zone schedule minimum lot size
Neighbourhood Residential Zone 2 (NRZ2) - Contributory Heritage Sites	12.5	800	Reflects the zone schedule minimum lot size
Mixed Use Zone (MUZ)	50	200	Reflects density associated with 2-3 storey townhouse development.
Mixed Use Zone (MUZ) - Contributory Heritage Sites	50	200	Reflects density associated with 2-3 storey townhouse development.
Township Zone (TZ)	13.3	750	Reflects desired future lot sizes for TZ areas
Low Density Residential Zone (LDRZ) - Sewered	5	2000	Reflects zone schedule minimum lot size for sewered properties
Low Density Residential Zone (LDRZ) - Unsewered	2.5	4000	Reflects zone schedule minimum lot size for unsewered properties
Rural Living Zone (RLZ) - Larger Lots	0.25	40000	Reflects zone schedule minimum lot sizes
Rural Living Zone (RLZ)	0.5	20000	Reflects zone schedule minimum lot sizes
Commercial 1 Zone (C1Z) - CBD	150	N/A	Reflects low-scale mixed use apartment development of 4-6 storeys
Commercial 1 Zone (C1Z) - CBD - Contributory Heritage Sites	100	N/A	Assumes a lower density than non-heritage sites due to heritage constraints
Commercial 1 Zone (C1Z) - Outside of CBD	80	N/A	Reflects a low-scale apartment development of 2-3 storeys appropriate to areas outside of the CBD
Commercial 1 Zone (C1Z) - Outside of CBD - Contributory Heritage Sites	65	N/A	Assumes a lower density than non-heritage sites due to heritage constraints
Special Use Zone 14 (SUZ14)	4*	2000	Reflects future lot sizes identified in Schedule 10 to the Development Plan Overlay.

Source: Tract Consultants (2022)

Table 8 outlines the capacity results across different suburbs and zones. The capacity assessment identifies the potential for an additional 30,019 dwellings within the established areas of Ballarat. The General Residential Zone 1 (GRZ1) has the most capacity by zone contributing to 55 per cent of the overall capacity. Furthermore, Ballarat Central, Sebastopol, and Wendouree emerge as the top

three suburbs with the largest total capacity, collectively accounting for 36 per cent.

Table 15: Net dwelling capacity by suburb and zone, Ballarat LGA, 2022

Suburb	RGZ	GRZ	NRZ	NRZ	MUZ	TZ	LDR	RLZ	C1Z	SUZ	Tota	Sha
Alfredton		871			215				89		1,17	3.9
Bakery	93	3			7				777		880	2.9
Ballarat	172	178			187				4,32		4,86	16.1
Ballarat	26	967	146		278				222		1,63	5.4
Ballarat		787			33				16		836	2.8
Black Hill		550									550	1.8
Brown		1,75	317		19		34				2,12	7.0
Buninyon		117		236	31			53	155		592	2.0
Canadian		913	104		5			5			1,02	3.4
Cardigan						100	375	3		94	572	1.9
Cardigan						11					11	0.0
Creswick								13			13	0.0
Delacom		1,07			373						1,44	4.8
Durham								31			31	0.1
Eureka		73									73	0.2
Golden		359			149						508	1.7
Invermay								52			52	0.2
Invermay		189									189	0.6
Lake		12			24						36	0.1
Lake		448			30						478	1.6
Learmont						178					178	0.6
Magpie								46			46	0.2
Miners		933			277						1,21	4.0
Mitchell		474						28			502	1.7
Mount	33	777	96		6			5	100		1,01	3.4
Mount		166	37		4		6	16			229	0.8
Mount		995			40						1,03	3.4
Mount								1			1	0.0
Nerrina		579						4			583	1.9
Newingto		73			1						74	0.2
Redan		502			87						589	1.9
Scotchm								6			6	0.0
Sebastop		1,99			54				1,00		3,05	10.1
Soldiers		202			10						212	0.7
Warrenh		47			1,34		5	18			1,41	4.7
Wendour	343	1,70			746				201		2,99	9.9

Winter		18									18	0.1
Total	667	16,7	700	236	3,92	289	420	281	6,88	94	30,2	
Share	2.2	55.4	2.3	0.8	13.0	1.0	1.4	0.9	22.8	0.3		

Source: Tract, 2022

3.2 Other capacity data sources

Urban Development Program (2023)

Victoria's Urban Development Program (UDP) is a state initiative that reports on the supply and development of residential and industrial land across the state. it provides information on:

- ✿ The supply of greenfield residential land in Melbourne's Growth Areas and key regional centres
- ✿ the pipeline of major residential redevelopment projects in established areas¹⁰

The UDP classifies sites as either of the below:

- Greenfield: Land with no previous residential use
- Major infill: Developments within established residential areas over 1ha

Within the city of Ballarat, the distribution of land supply is detailed in Table 16 and illustrated in Figure 6.

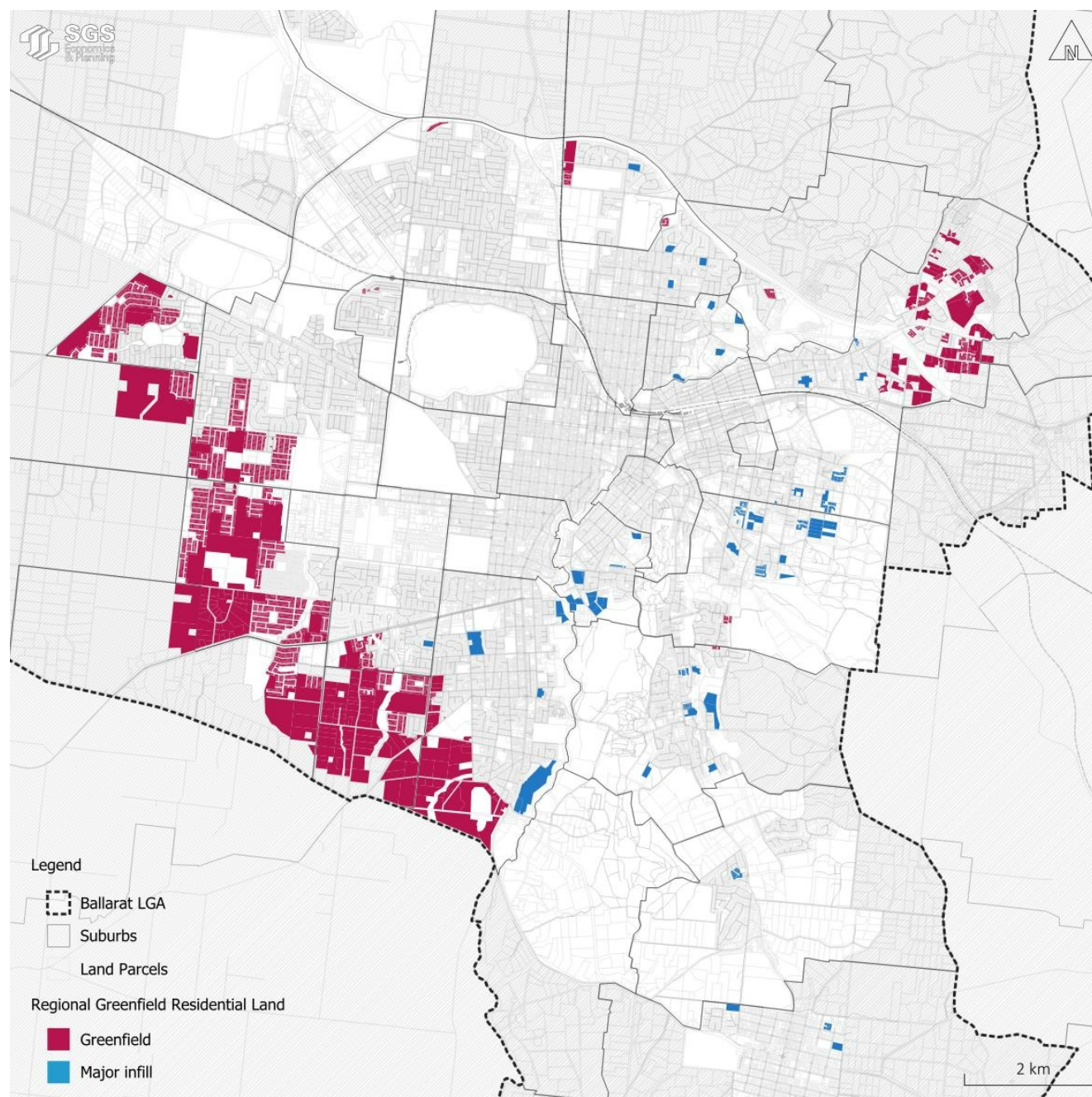
Table 16: Regional UDP data by Zone code by Development Type

Development Type	UGZ2	GRZ1	UGZ1	NRZ1	NRZ2	RGZ1	MUZ	Totals
Greenfield	12,208	1,400	2,819	305	0	0	9	16,741
Major Infill	0	1,084	0	196	37	25	0	1,342
Total	12,208	2,484	2,819	501	37	25	9	18,083

Source: SGS based on Spatial Data from the Regional Greenfield residential land, June 2021

¹⁰ <https://www.planning.vic.gov.au/guides-and-resources/data-and-insights/urban-development-program>

Figure 6: UDP land supply by development type in the City of Ballarat



Source: SGS Economics and Planning, 2024

Planned growth areas

The planned growth areas in Ballarat are part of a strategic initiative to accommodate the city's future long-term greenfield growth, with overarching guidance to be provided by the Growth Areas Framework. The Framework includes updated capacity data for greenfield areas in the City subject to a current or future Precinct Structure Plan. This is shown in Table 17.

Table 17: Growth Areas Framework, capacity data

Greenfield areas (zoned)	Capacity
Alfredton PSP	10,068
Ballarat West PSP	1,006
Northern Growth Area (core only)	6,600
Total	17,674

Source: City of Ballarat, Growth Area Framework Plan

For the purpose of this analysis, we have combined capacity data from the City of Ballarat for growth areas (rather than UDP data), UDP data for Major Infill sites, and Tract capacity data for other established areas.

Table 18: Growth Areas Framework, capacity data

Source	Source	Capacity total
Established areas	Tract, 2022	30,019
Major Infill sites	UDP, 2023	1,342
Growth Areas Framework Plan	City of Ballarat, 2023	17,674
Total		49,035

3.3 Housing capacity by housing typology and submarket

Housing capacity by submarket

The net dwelling capacity numbers from the Tract report and the Ballarat Growth Areas Framework were grouped to align with SGS’s identified submarkets. Results are shown in Table 19.

Note that some of the suburbs featured in the Tract study are not included in the submarkets defined by SGS for this study. These suburbs include Cardigan Village, Creswick, Durham Lead, Scotchmans Lead and Learmonth, hence the difference in totals between Table 15 and Table 19.

Table 19: Net dwelling capacity by submarket, 2022

Submarket	Capacity (Tract)	Capacity (Growth Areas Framework)	Capacity (UDP Major Infill)	Total capacity	Share of total capacity
Central (Infill and Inner (Infill))	7,091	14	39	7,144	14.6%
North East (Urban)	1,846	562	0	2,408	4.9%
Northern	1,713	6,751	76	8,540	17.4%
South (Established)	1,884	5	211	2,100	4.3%
Western	3,214	9,024	21	12,259	25.0%
Total	30,019	17,674	1,342	49,035	100.0%

Source: SGS Economics and Planning, 2024, based on the 2022 Tract study, and the Urban Development Program 2021

It is also worth noting that Brown Hill, Nerrina and Warrenheip stretch across two submarkets (see Figure 9). Capacity identified for each of these suburbs has been allocated to submarkets based on the percentage of land area contained in as identified in Table 20.

Table 20: Market share of capacity by suburb, 2022

Suburb	Total capacity	Percentage of land area		Allocation of total	
		North East (%)	Inner (%)	North East (%)	Inner (%)
Brown Hill	123	59%	41%	73	50
Nerrina	21	43%	57%	9	12
Warrenheip	4	0%	100%	-	4

Source: SGS Economics and Planning, 2024, based on Tract, 2022

Housing capacity by typology

The density yield assumptions identified by Tract (shown in Figure 5) were translate to dwelling typology classification of very low, low, medium and high density based on the concordance shown in Table 21. Capacity counts were then distributed across the respective submarkets using the associated land zone and location information.

Table 21: Tract dwelling density assumptions and SGS housing typology concordance, 2024

Zone	Tract density assumption (dw/ ha)	SGS typology
Residential Growth Zone 1 (RGZ1) adjacent to CBD	140	High density associated with low-scale apartment development (3-4 storeys)
Residential Growth Zone 1 (RGZ1) elsewhere	50	Medium density associated with 2-3 storey townhouse development
General Residential Zone 1 (GRZ1)	30	Reflects historical low densities for unit and townhouse development across Ballarat
General Residential Zone 1 (GRZ1) - Contributory Heritage Sites	20	A lower density than GRZ areas to accommodate retention of existing dwelling
Neighbourhood Residential Zone 1 (NRZ1)	12.5	Very low density reflecting the zone schedule minimum lot size
Neighbourhood Residential Zone 2 (NRZ2)	12.5	Very low density reflecting the zone schedule minimum lot size
Neighbourhood Residential Zone 2 (NRZ2) - Contributory Heritage Sites	12.5	Very low density reflecting the zone schedule minimum lot size
Mixed Use Zone (MUZ)	50	Medium density associated with 2-3 storey townhouse development
Mixed Use Zone (MUZ) - Contributory Heritage Sites	50	Medium density associated with 2-3 storey townhouse development
Township Zone (TZ)	13.3	Low-density desired future lot sizes for TZ areas
Low Density Residential Zone (LDRZ) - Sewered	5	Low-density zone schedule minimum lot size for sewered properties

Low Density Residential Zone (LDRZ) - Unsewered	2.5	Low-density zone schedule minimum lot size for unsewered properties
Rural Living Zone (RLZ) - Larger Lots	0.25	Low-density zone schedule minimum lot sizes
Rural Living Zone (RLZ)	0.5	Low-density zone schedule minimum lot sizes
Commercial 1 Zone (C1Z) - CBD	150	High density reflecting low-scale mixed use apartment development of 4-6 storeys
Commercial 1 Zone (C1Z) - CBD - Contributory Heritage Sites	100	High density , although assuming a lower density than non-heritage sites due to heritage constraints
Commercial 1 Zone (C1Z) - Outside of CBD	80	Medium density reflecting a low-scale apartment development of 2-3 storeys appropriate to areas outside of the CBD
Commercial 1 Zone (C1Z) - Outside of CBD - Contributory Heritage Sites	65	Medium density , although assuming a lower density than non-heritage sites due to heritage constraints
Special Use Zone 14 (SUZ14)	4	Very low density reflecting future lot sizes identified in Schedule 10 to the Development Plan Overlay

Source: SGS Economics and Planning, 2024

Data from the Growth Areas Framework provides the total number of real or potential lots categorised by zone and development type. However, it does not provide the density metrics, such as the number of potential lots per hectare. To address this, historical data on how lots have been distributed across various density categories—ranging from very low to high density—is used to estimate the proportion of lots that fall into each density typology.

Table 22: Dwelling capacity by submarket and typology, 2022

Submarket	Very Low	Low	Medium	High	Total
Central (Infill and Renewal)	11	1,505	1,383	4,244	7,144
Inner (Infill)	625	11,366	4,572	21	16,584

North East (Urban Fringe)	459	1,782	167	0	2,408
Northern (Greenfield)	866	7,397	277	0	8,540
South (Established Outer)	584	1,187	329	0	2,100
Western (Greenfield)	1,046	10,421	786	6	12,259
Total	3,592	33,658	7,514	4,270	49,035

Source: SGS Economics and Planning, 2024 based on the Tract report, 2022 and UDP data 2021

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4. Demand and capacity compared

This section compares demand and capacity by submarket and typology for each of the three demand scenarios to identify any emerging gaps in supply of residential land.

4.1 Base case scenario

Table 23 shows the combined dwelling demand to 2041 versus available capacity under current planning controls at the LGA level and broken down by established and greenfield areas. Over the 20-year analysis period there is expected to be an oversupply of residential capacity equating to almost 20,000 dwellings, or 34 years of land supply. This oversupply is predominantly driven by capacity in established areas (demand vs capacity gap of 22,500), where there is an estimated 99 years of capacity. In the greenfield areas, there is an estimated 18 years of supply remaining.

Important to note, however, is that this analysis reflects past trends in development and therefore does not account for potential shifts in demand for housing in established areas driven by concerted policy efforts to redistribute future demand; shifts in household dwelling preferences and changing market dynamics. The capacity figures also do not account for the potential further supply of greenfield land in planned but unzoned growth areas.

Further to this point, exhaustion of land supply in particular areas is to be expected and is not undesirable, particularly where there are considerable opportunities for demand to be realised in other locations across the municipality. While this study has segmented the municipality into distinct submarkets for the purpose of comparing capacity and demand at a more granular level. To some extent these boundaries are arbitrary and do not fully reflect the real choices and trade-offs households make when selecting a home. For instance, in a real-life scenario, a household may consider housing opportunities in a number of locations across the City, depending on the specific housing qualities they are seeking. Their needs could be met equally by a low density product in a greenfield areas as a medium density home in the established outer areas of Ballarat City, depending on their particular preferences. In summary, while the tables below present a static view of demand to 2041, actual expressions of housing demand by households over time are likely to be considerably more fluid.

Table 23: Demand versus capacity, established and greenfield areas, base case scenario, Ballarat LGA

Base case (20:80)	Demand to 2041 (a)	Capacity 2022 (b)	Gap at 2041 (b-a)	% capacity used	Years of supply
Established	5,701	28,236	22,534	20%	99

Greenfield	23,260	20,799	-2,461	112%	18
Total	28,961	49,035	20,074	59%	34

Source: SGS Economics and Planning, 2024

Results are broken down further by submarket in Table 24. These shows that, as above, there is a significant amount of capacity for new dwellings in established areas, particularly in the Central and Inner submarkets. Land supply in most submarkets meets or exceeds the Victorian Government's 15 year benchmark under base case or 'business as usual' conditions. The Western submarket has approximately 11 years of supply remaining.

Table 24: Demand versus capacity, by submarket areas, base case scenario, Ballarat LGA

Base case (20:80)	Demand to 2041 (a)	Capacity 2022 (b)	Gap at 2041 (b-a)	% capacity used	Years of supply
Central (Infill and Renewal)	459	7,144	6,685	6%	311
Inner (Infill)	3,885	16,584	12,700	23%	85
North East (Urban Fringe)	607	2,408	1,801	25%	79
Northern (Greenfield)	634	8,540	7,906	7%	269
South (Established Outer)	751	2,100	1,349	36%	56
Western (Greenfield)	22,625	12,259	-10,366	185%	11
Total	28,961	49,035	20,074	59%	34

Source: SGS Economics and Planning, 2024

Table 25 reports findings by housing typology. Due to the projected low demand for moderate and high density housing in the base case scenario, only a small percentage of total capacity is expected to be absorbed (8 per cent and 1 per cent, respectively), while capacity for very-low and low density housing will be taken up at much higher rates (77 per cent and 76 per cent, respectively). However, in all cases, there is greater than 15 years of supply of land.

Table 25: Demand versus capacity, by typology, base case scenario, Ballarat LGA

Base case (20:80)	Demand to 2041 (a)	Capacity 2022 (b)	Gap at 2041 (b-a)	% capacity used	Years of supply
Very low	2,749	3,592	843	77%	26
Low	25,581	33,658	8,077	76%	26
Moderate	576	7,514	6,938	8%	261

High	56	4,270	4,215	1%	1537
Total	28,961	49,035	20,074	59%	34

Source: SGS Economics and Planning, 2024

4.2 Alternative scenarios 1 and 2

As noted throughout this report, research and policy anticipates an increase in demand for (affordable) medium and higher density forms of housing in established and well-serviced locations. Alternative scenarios 1 and 2 explore this proposition to varying degrees (as discussed in detail in Section 2 of this report, and Section 6 of the HNA report). To recap:

- ✦ **Alternative scenario 1** implies a progressive shift towards a higher share of infill development. Under this scenario, 35 per cent of future development over the next 20 years will occur in infill areas.
- ✦ **Alternative Scenario 2** reflects the Council’s policy aspiration for a 50:50 split of new housing in established and greenfield locations over a 20-year period.

The tables below compare demand under these alternative scenarios to capacity. Table 26 shows, that the overall demand vs capacity gap and total years of land supply remain the same across the LGA at 2041 under the alternative demand scenarios as in the base case. However, the undersupply of land in greenfield areas over the 20-year analysis period is expected to reduce considerably as demand is redirected from greenfield to established areas. Relatedly, estimated years of supply is expected to increase in greenfield areas from the base case by between 4 and 9 years across both alternative scenarios respectively.

Table 26: Demand versus capacity, established and greenfield areas, Alternative scenarios 1 and 2, Ballarat LGA

Alternative 1 (35:65)	Demand to 2041 (a)	Capacity 2022 (b)	Gap at 2041 (b-a)	% capacity used	Years of supply
Established	10,136	28,236	18,099	36%	56
Greenfield	18,825	20,799	1,974	91%	22
Total	28,961	49,035	20,074	59%	34
Alternative 2 (50:50)	Demand to 2041 (a)	Capacity 2022 (b)	Gap at 2041 (b-a)	% capacity used	Years of supply
Established	14,481	28,236	13,755	51%	39

Greenfield	14,481	20,799	6,318	70%	29
Total	28,961	49,035	20,074	59%	34

Source: SGS Economics and Planning, 2024

Examining the results by submarket (refer Table 27) shows that demand will increase markedly in the Central, Inner, Northeast and South submarkets under both scenarios, and decrease in the Northern and Western submarkets. While a demand vs capacity gap remains for the Western submarket over 20 years, all submarkets are expected to greater than 15 years of supply in Alternative 2.

Table 27: Demand versus capacity, by submarket areas, Alternative scenarios 1 and 2, Ballarat LGA

Alternative 1 (35:65)	Demand to 2041 (a)	Capacity 2022 (b)	Gap at 2041 (b-a)	% capacity used	Years of supply
Central (Infill and Renewal)	815	7,144	6,328	11%	175
Inner (Infill)	6,906	16,584	9,678	42%	48
North East (Urban Fringe)	1,079	2,408	1,328	45%	45
Northern (Greenfield)	513	8,540	8,027	6%	333
South (Established Outer)	1,335	2,100	764	64%	31
Western (Greenfield)	18,311	12,259	-6,052	149%	13
Total	28,961	49,035	20,074	59%	34
Alternative 2 (50:50)	Demand to 2041 (a)	Capacity 2022 (b)	Gap at 2041 (b-a)	% capacity used	Years of supply
Central (Infill and Renewal)	1,165	7,144	5,979	16%	123
Inner (Infill)	9,866	16,584	6,719	59%	34
North East (Urban Fringe)	1,542	2,408	866	64%	31
Northern (Greenfield)	395	8,540	8,145	5%	433
South (Established Outer)	1,908	2,100	192	91%	22
Western (Greenfield)	14,086	12,259	-1,827	115%	17
Total	28,961	49,035	20,074	59%	34

Source: SGS Economics and Planning, 2024

Table 24 presents results by housing typology. Uptake of available capacity will increase from 7 per cent (base case) to 12 per cent (Alternative 2) for medium density housing, and from 1 per cent (base case) to 3 per cent (Alternative 2) for

high density housing. Despite this increased uptake, land availability in the established submarkets will be sufficient to accommodate demand in very low, low, medium and high-density housing under both alternative demand scenarios.

Table 28: Demand versus capacity, by typology, Alternative scenarios 1 and 2, Ballarat LGA

Alternative 1 (35:65)	Demand to 2041 (a)	Capacity 2022 (b)	Gap at 2041 (b-a)	% capacity used	Years of supply
Very low	2,749	3,592	843	77%	26
Low	25,361	33,658	8,297	75%	27
Moderate	766	7,514	6,747	10%	196
High	85	4,270	4,186	2%	1010
Total	28,961	49,035	20,074	59%	34
Alternative 2 (50:50)	Demand to 2041 (a)	Capacity 2022 (b)	Gap at 2041 (b-a)	% capacity used	Years of supply
Very low	2,749	3,592	843	77%	26
Low	25,146	33,658	8,513	75%	27
Moderate	953	7,514	6,561	13%	158
High	113	4,270	4,157	3%	756
Total	28,961	49,035	20,074	59%	34

Source: SGS Economics and Planning, 2024

5. Summary and conclusion

The results report in Section 4 suggests that there is likely to be enough residential capacity under existing planning controls to meet projected demand over a 20 year period. Overall, there is an estimated 34 years of supply of residential land in Ballarat (excluding planned but unzoned growth areas), exceeding the Victorian Government's requirement for 15 years of residential land supply measured on a municipal basis.

Analysis by submarket and housing typology also suggests that the existing patterns of residential zoning are likely sufficient to accommodate forecast demand, including where an increasing share of demand is forecast in established areas.

The analysis does suggest that capacity may be exhausted in the Western submarket by 2041 (in 20 years) under the base case and Alternative 1 scenarios. However, it is acknowledged that excess demand in this location could feasibly be absorbed by other submarkets that offer comparable lifestyle and housing opportunities (particularly the Northern submarket).

Given Victorian Government and Council policy focus on increasing residential development in established areas, constraints in greenfield submarkets may not be undesirable for their potential to encourage delivery of housing in alternative locations and forms. The analysis indicates that capacity available in established submarkets is likely to be sufficient to accommodate a shift in demand towards more centrally located and higher density housing forms, as demonstrated by Alternative scenarios 1 and 2.

However, it is important to note that the alternative demand scenarios are hypotheticals, based on policy aspiration and indicative research of changing housing preferences. While they point to the *potential* for changes in demand over time, they do not suggest that these alternative patterns of demand *will* be realised or that the market will/can respond to provide the location and mix of housing stock these scenarios suggest.

Analysis of past development trends undertaken in Section 2.2 (although referencing only three years of development data) suggests a relatively stable share of development (80 per cent) in greenfield submarkets. Shifting these established development patterns will be subject to a range of factors, such as:

- ✿ Increased maturity and diversity of the developers active in Ballarat, with experience in delivering medium and higher density housing.
- ✿ Changes in the cost and availability of major inputs in the development process such as land, labour and materials.
- ✿ Expression of household preferences for medium and higher density housing in established areas (i.e. actual demonstration of demand for these products by households).

- Continued investment in social and development infrastructure in established areas to support potential increases in population in these submarkets.

In conclusion, the results show that there is generally sufficient theoretical capacity to support future housing demand in infill areas for all housing densities, aligning with the council's aspiration to achieve a significant increase in development in established areas and a move towards medium densities. However, facilitating more significant shifts in the diversity of dwellings may be challenging without significant intervention.

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Kevin Hazell BUSHFIRE PLANNING

Strategic planning for bushfire in the City of Ballarat

PREPARED FOR THE CITY OF BALLARAT

23 December 2020

Version 1

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

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Disclaimer

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Contents

1.	Introduction.....	1
2.	The bushfire context of the municipality	2
3.	Bushfire landscape areas	6
4.	Ballarat core areas.....	10
5.	Landscape type 1: Grasslands	12
6.	Landscape type 2: West of forest hazards	14
7.	Landscape type 2 or 3: Grasslands near forest hazards	16
8.	Landscape type 3a: Areas near forest hazards	18
9.	Landscape types 3b and 4: Forest hazards	20
10.	Locations for lower risk urban growth.....	22
	References	23
	Attachment 1: Bushfire Management Overlay and bushfire prone area	24
	Attachment 2: Regional bushfire planning assessment extract.....	25

1. Introduction

The City of Ballarat (the 'Council') seeks to embed bushfire considerations into the earliest stages of strategic planning projects and as part of preparing amendments to the Ballarat Planning Scheme (the 'planning scheme').

This document supports strategic planning by providing a starting point for how to consider bushfire at the beginning of strategic projects. By providing geographic (or spatial) information on the bushfire characteristics and landscape risk in different parts of the municipality, more detailed place-based strategic planning can emerge. This includes in the commissioning of further bushfire assessments.

By using this document and further locally specific bushfire assessments, information on the relative bushfire risk of different locations can inform how bushfire-related policies in the planning scheme are applied. This includes policies that seek to assess alternative locations for growth as part of settlement planning and that direct growth to locations that are lower risk.

See **Figure 1: Key planning scheme bushfire policies in the Ballarat Planning Scheme**

This document also identifies selected areas as being lower risk locations for urban growth and as suitable locations to direct greenfield urban development. This enables these areas to not need further assessment based on strategic and landscape factors as part of potential future planning scheme changes.

Strategic planning relevant to this report includes the setting of directions for growth and change that may be included into the planning scheme through the preparation, authorisation, adoption, and approval of a planning scheme amendment. It does not include decisions under the planning scheme (for example, planning permit applications and development plan approvals). Information in this document should only be used to inform strategic planning activities being undertaken by the Council.

The Country Fire Authority on 29 July 2020 participated in a discussion with the Council in conjunction with this document being prepared. A draft report was provided on 6 August 2020 for comment. The Council intends to work with the Country Fire Authority in taking forward the findings in this document and in on-going strategic planning for bushfire in Ballarat.

FIGURE 1: KEY PLANNING SCHEME BUSHFIRE POLICIES IN THE BALLARAT PLANNING SCHEME

c13.01-15 Natural hazards and climate change	c13.02-15 Bushfire Planning
<p>The objective is:</p> <p><i>To minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning.</i></p> <p>Strategies to meet the above objective include:</p> <ul style="list-style-type: none"> ▪ Consider the risks associated with climate change in planning and management decision making processes. ▪ Identify at risk areas using the best available data and climate change science. ▪ Integrate strategic land use planning with emergency management decision making. ▪ Direct population growth and development to low risk locations. ▪ Develop adaptation response strategies for existing settlements in risk areas to accommodate change over time. ▪ Ensure planning controls allow for risk mitigation or risk adaptation strategies to be implemented. ▪ Site and design development to minimise risk to life, property, the natural environment and community infrastructure from natural hazards. 	<p>The objective is:</p> <p><i>To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life.</i></p> <p>Strategies that direct bushfire decision making include:</p> <ul style="list-style-type: none"> • Prioritising the protection of human life over all other policy considerations. • Directing population growth and development to low risk locations and ensuring the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire. • Reducing the vulnerability of communities to bushfire through the consideration of bushfire risk in decision making at all stages of the planning process. <p>Strategies that seek to direct new development:</p> <ul style="list-style-type: none"> • Directing population growth and development to low risk locations, being those locations assessed as having a radiant heat flux of less than 12.5 kilowatts/square metre under <i>AS3959-2009 Construction of Buildings in Bushfire-prone Areas</i> (Standards Australia, 2009)¹. • Assessing alternative low risk locations for settlement growth on a regional, municipal, settlement, local and neighbourhood basis. • Directing population growth and development to low risk locations and ensuring the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire. • Not approving any strategic planning document, local planning policy, or planning scheme amendment that will result in the introduction or intensification of development in an area that has, or will on completion have, more than a BAL-12.5 rating under AS 3959-2009.

¹ AS3959-2018 *Building in a bushfire prone area* (Standards Australia) has superseded the 2009 edition

2. The bushfire context of the municipality

About the municipality

The Council's municipal fire management plan describes the municipality as follows:

The City of Ballarat is in the Grampians Region, strategically located in the Central Highlands Region of Victoria, and surrounded by the municipalities of Hepburn, Pyrenees, Golden Plains and Moorabool. Ballarat is 115 kilometres west of Melbourne and just over one-hour drive on the Western Highway. Ballarat is one of Australia's largest inland cities and the third largest city in Victoria.

The municipality covers some 740 square kilometres of a wide range of land types from steep incised areas to the northwest and northeast of the City to the flatter basaltic plains of the southwest area, and to the south. Significant land managers in the municipality include the City of Ballarat and DELWP

(City of Ballarat, 2018).

The eastern part of the municipality contains the settlement of Ballarat. The north east of Ballarat contains state forest, several small reserves and scattered small and rural-residential settlements. The south and south-eastern parts of Ballarat contain the hilly and undulating terrain of Mount Clear, Mount Helen and the foothills of Mount Buninyong. Plantations and heavily vegetated forests border the linear settlement pattern in these areas. The northern and western areas of the municipality are dominated by large lots generally devoid of expansive woodland or forest vegetation (DPCD, 2012).

When are bushfires likely to occur?

The climate in the municipality is dominated by warm dry summers and cool wet winters. The bushfire season generally runs from December to April. Whilst bushfires can start any time of the year, most occur between October and April. The largest and most damaging bushfires generally occur from December through February, with about one-quarter of bushfires in January (DEWLP, 2015).

Bushfire conditions anticipated in the municipality

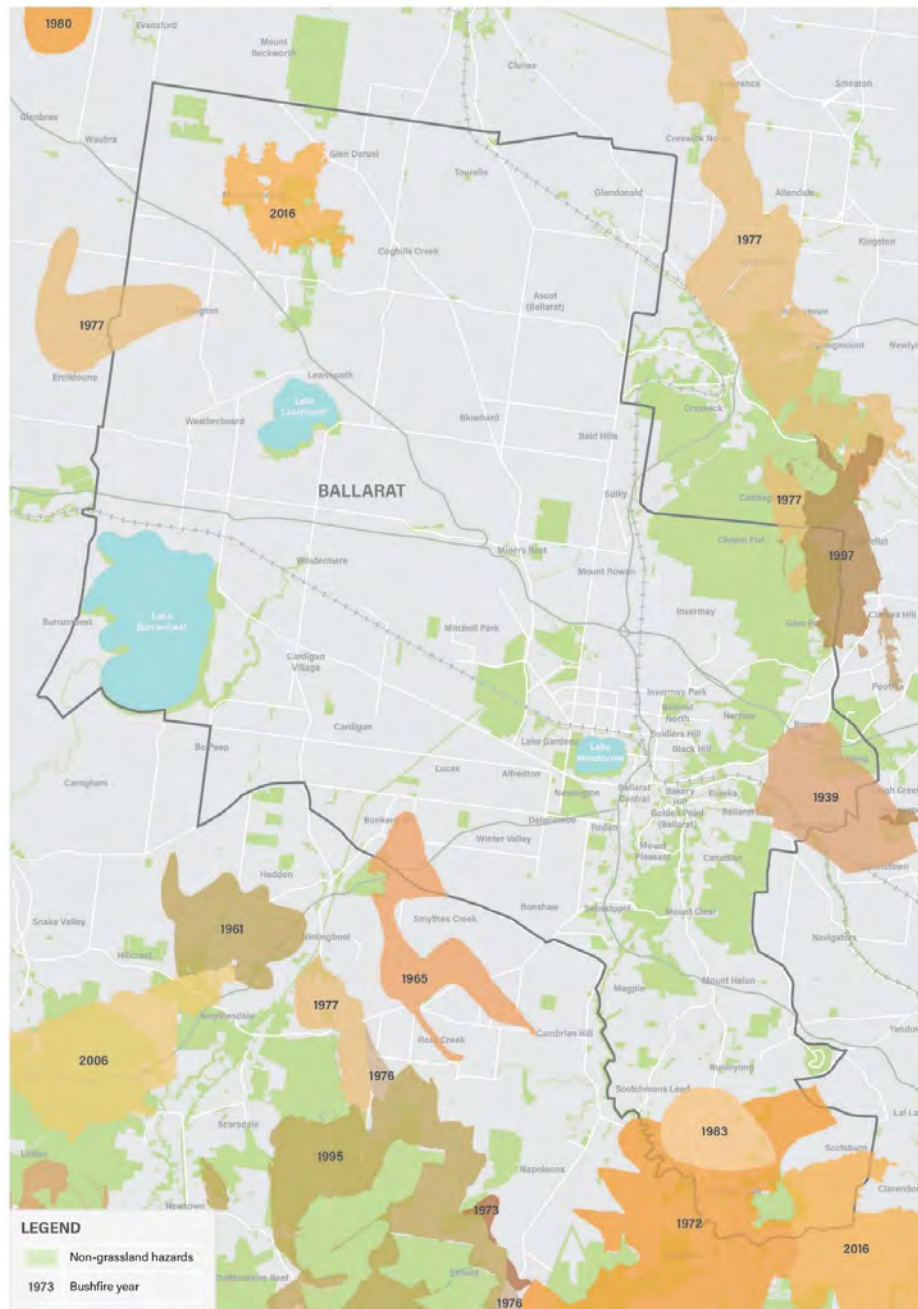
The Department of Environment, Land, Water and Planning identifies key features relevant to bushfires in the municipality. These include:

- A forest fire danger index of well over 100.
- Severe drought conditions.
- Temperatures above 40°C.
- Relative humidity below 10%.
- Strong to gale-force north-westerly winds.
- A strong to gale-force west-south-westerly wind change that turns the eastern flank of a running bushfire into a wide new fire front

These conditions can create bushfires with powerful convection columns. Ember storms, wind-blown debris, downbursts, fire tornadoes and explosive flares of igniting eucalyptus vapour are common. DELWP notes that these weather conditions are representative of where a bushfire does most of its damage in a single day.

Due to the fragmentation of native vegetation, bushfires in the municipality are not usually as protracted as they can be in the large forests in eastern Victoria. The main damage from bushfire occurs on the first day. The greatest loss of life and property have historically been caused by such single day bushfires (DEWLP, 2015).

FIGURE 2: BUSHFIRE HISTORY



Changing bushfire conditions

Long-term records show an increase in bushfire danger and the length of the bushfire season for Victoria in recent decades. Projections for Victoria's future climate indicate that the frequency and intensity of bushfires in south-east Australia will continue to increase (*DELWP, 2015*). It is predicted that there may be an increase in the number of extreme fire danger days (with FFDI greater than 75) by between 15% and 70% by 2050.

How and where bushfires start

Bushfires can start from accidental causes, such as machinery, trains and escapes from campfires and burn-offs. Deliberate action by people can cause bushfire, and natural causes, such as lightning, also causes bushfires. A high proportion of ignitions occur around the population centre of Ballarat (*DELWP, 2015*).

See **Figure 2: Bushfire history in and around the City of Ballarat**

Measures to reduce the impact of bushfire

The Council, Forest Fire Victoria and the Country Fire Authority (CFA) carry out fire management operations on public and private land in the municipality. This includes extensive interventions in public land to the east and north east of Ballarat.

Potential for destructive bushfires

Areas most likely to be subject to larger bushfires include settlement areas of Ballarat that are in the path of bushfires that can start up to 50km away. The greatest-impact bushfires tend to start in agricultural land and become large by the time they enter forested areas. They then emerge from the forests to threaten residential areas to their east, such as Buninyong and the southern suburbs of Ballarat (*DELWP, 2015*).

The catchments' mostly undulating terrain is largely grassy/heathy dry forest with small patches of foothill forest. These are eucalypt forests with a shrubby understorey and potentially high bark hazard. Bushfires in these areas may be high intensity, with high levels of convection and ember production. Softwood plantations can increase the intensity of bushfires.

See **Figure 3: Spatial representation of bushfire in the City of Ballarat**

Planning scheme bushfire designations

Planning schemes identify potentially bushfire affected land through the inclusion of land into the Bushfire Management Overlay or within a designated bushfire prone area (referenced in c13.02-1S Bushfire Planning and approved under the building regulations).

See **Attachment 1: Bushfire Management Overlay and bushfire prone area in the City of Ballarat**

3. Bushfire landscape areas

The following parts of this document identify bushfire landscape areas. These provide a spatial representation of how different parts of the municipality are affected by different landscape scale bushfire hazards. Based on this information, places that are relatively higher or lower risk emerge.

Bushfire landscape areas are described according to the landscape typology set out in *Planning Permit Applications Bushfire Management Overlay Technical Guide (DELWP, 2017)*. These typologies, when applied, provide a basis for considering the relative bushfire risk of different locations based on strategic factors. They therefore are an important tool to support strategic planning decision making.

See **Figure 4: An overview of bushfire landscape types**

The landscape areas are:

LANDSCAPE TYPE	DESCRIPTOR
Landscape type 1	Grasslands
Landscape type 2	West of forest hazards
Landscape type 2 or 3	Grasslands near forest hazards
Landscape type 3a	Areas near forest hazards
Landscape type 3b or 4	Forest hazards
The core area of Ballarat is not assigned a landscape type	

See **Figure 5: Bushfire landscape areas**

For each landscape area, the following is included:

- A description of the area, including whether they are likely to be within the Bushfire Management Overlay or a declared bushfire prone area.
- Whether the *Victorian Fire Risk Register* (Victorian Government) or the *Regional Bushfire Planning Assessment – Grampians Region* (DPCD, 2011) include the area as at risk.
- A high-level assessment against *c13.02-1S Bushfire Planning*, focused on the extent of landscape hazards and the availability of low fuel areas² for shelter.
- Mitigation that would likely need to accompany planning scheme decision making, focused on strategic justification for any proposals and impacts on environmental objectives and building construction.
- The outputs to be anticipated in preparing an evidence base to support bushfire decision making under the planning scheme.
- Key messages based on the landscape area that may be of assistance in the early stages of community engagement.

This report represents bushfire landscape areas in a schematic format. They are not intended to be scalable to property boundaries given the strategic purpose for which they have been prepared³.

² Low fuel areas referenced in this report are areas capable of being assessed as BAL:Low under *AS3959-2018 Building in a bushfire prone area* (Standards Australia) or areas that already comply with *c53.02 Bushfire Planning, Table 6 Vegetation management*

³ The bushfire landscape areas do not provide sufficient information for the purpose of a bushfire hazard landscape assessment required under *c44.06 Bushfire Management Overlay* and the content of this report should not be used for that purpose.

FIGURE 4: OVERVIEW OF BUSHFIRE LANDSCAPE TYPES

Planning Permit Applications Bushfire Management Overlay Technical Guide (DELWP, 2017) identifies landscape types to inform decision making based on the risk from the landscape beyond the site. They enable landscape bushfire information to be described according to a simple framework to assist planning decision making.

Landscape types assist in:

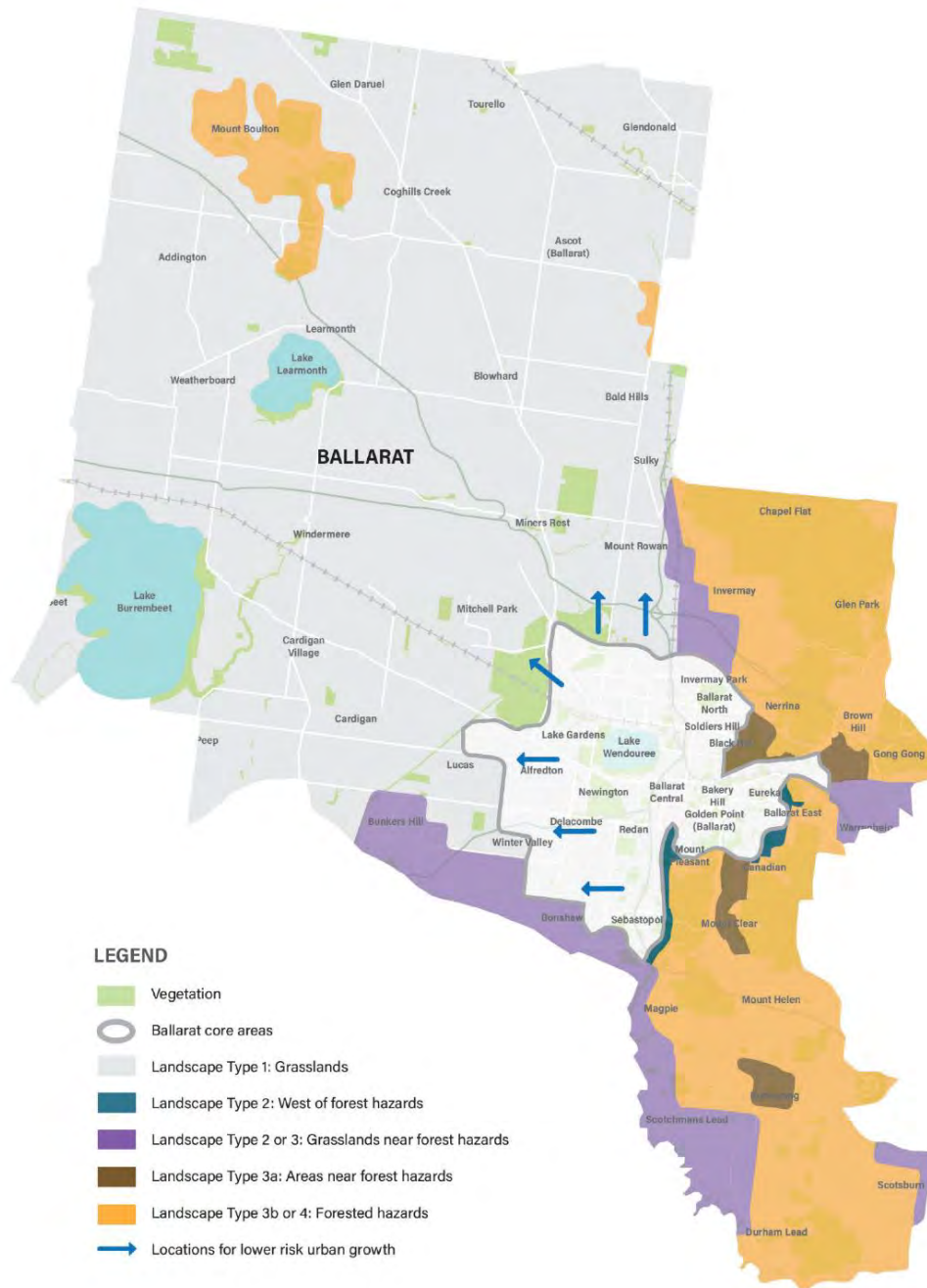
- Consistently describing landscape hazards. Landscape hazards are bushfire hazards more than 150m from an area that inform the likelihood of a bushfire threatening a location and its likely intensity and destructive power.
- Describing proximity and access to low fuel areas that may provide shelter from bushfire. In these areas, people may avoid flame contact and can withstand the effects of radiant heat from a moving bushfire.
- Understanding the relative risk between different locations.

The diagram below summarises landscape types. For this report, landscape type 3 has been adjusted into type 3a and 3b to better reflect access to low fuel areas and the variability of landscape risk within the landscape type 3 spectrum.

LANDSCAPE TYPE 1	LANDSCAPE TYPE 2	LANDSCAPE TYPE 3		LANDSCAPE TYPE 4				
<ul style="list-style-type: none"> ▪ There is little vegetation beyond 150 metres of the site (except grasslands and low-threat vegetation) ▪ Extreme bushfire behaviour is not possible ▪ The type and extent of vegetation is unlikely to result in neighbourhood scale destruction of property ▪ Immediate access is available to a place that provides shelter from bushfire 	<ul style="list-style-type: none"> ▪ The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site ▪ Bushfire can only approach from one aspect and the site is located in a suburban, township or urban area managed in a minimum fuel condition ▪ Access is readily available to a place that provides shelter from bushfire. This will often be the surrounding developed area 	<ul style="list-style-type: none"> ▪ The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site ▪ Bushfire can approach from more than one aspect 	<table border="1"> <thead> <tr> <th>Type 3a⁴</th> <th>Type 3b</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> ▪ The area is located in an area that is managed in a minimum fuel condition ▪ Access to an appropriate place that provides shelter from bushfire is available </td> <td> <ul style="list-style-type: none"> ▪ The area is located in an area that is not managed in a minimum fuel condition ▪ Access to an appropriate place that provides shelter from bushfire is not certain </td> </tr> </tbody> </table>	Type 3a ⁴	Type 3b	<ul style="list-style-type: none"> ▪ The area is located in an area that is managed in a minimum fuel condition ▪ Access to an appropriate place that provides shelter from bushfire is available 	<ul style="list-style-type: none"> ▪ The area is located in an area that is not managed in a minimum fuel condition ▪ Access to an appropriate place that provides shelter from bushfire is not certain 	<ul style="list-style-type: none"> ▪ The broader landscape presents an extreme risk ▪ Bushfires may have hours or days to grow and develop before impacting ▪ Evacuation options are limited or not available
Type 3a ⁴	Type 3b							
<ul style="list-style-type: none"> ▪ The area is located in an area that is managed in a minimum fuel condition ▪ Access to an appropriate place that provides shelter from bushfire is available 	<ul style="list-style-type: none"> ▪ The area is located in an area that is not managed in a minimum fuel condition ▪ Access to an appropriate place that provides shelter from bushfire is not certain 							

⁴ Adapted by author

FIGURE 5: BUSHFIRE LANDSCAPE AREAS



Kevin Hazell BUSHFIRE PLANNING

4. Ballarat core areas

Description

These locations comprise urban areas within Ballarat. They are developed low fuel areas that have minimal interaction with landscape hazard areas. Bushfire is not a relevant strategic planning factor in these areas. This is because they lack classifiable vegetation⁵, contain no riparian and vegetated corridors that create hazard paths into urban areas and they have a configuration of vegetation (including in open spaces) that is unlikely to carry a moving bushfire front. The potential for ember attack in these areas is low.

Subject to more detailed assessments as part of any strategic planning proposal, these areas can generally be defined as land more than 100m from the edge of a declared bushfire prone area. These locations are not included within the Bushfire Management Overlay or a declared bushfire prone area. These areas are sufficiently low risk that they do not fall within a landscape type.

Joining up with other bushfire products

The Victorian Fire Risk Register (Victorian Government) does not include any human settlement at-risk assets in these areas. The *Regional Bushfire Planning Assessment – Grampians Region* (DPCD, 2011) does not include any 'identified areas'.

Strategic assessment against c13.02-1S Bushfire

These locations are low risk as they have limited interaction with bushfire hazards. Planning proposals are likely to be favourably assessed against *c13.02-1S Bushfire Planning* because:

- There is limited (or no) exposure to large, landscape-scale bushfire.
- The potential for neighbourhood scale destruction is low.
- These areas are low fuel through their urban structure and extent of urban infrastructure.

Mitigation to inform strategic planning decisions

Mitigation is delivered through the geographic separation from landscape hazard areas and the existing physical characteristics of these locations. Bushfire-related construction requirements do not arise in these areas as they are outside of a bushfire prone area.

A bushfire evidence base for strategic projects

A bushfire evidence base for strategic projects should:

- ✓ Confirm the locality is consistent with the description identified in this document. It is anticipated the Council can confirm this in-house, without the need for further expert advice.
- ✓ Include descriptive content from this document into the bushfire section of a planning scheme amendment explanatory report.

⁵ Classifiable vegetation is hazardous vegetation as defined in *AS3959-2018 Building in a bushfire prone area* (Standards Australia)

Key messages for engagement activity on planning scheme changes

The following can be considered for inclusion into communication material associated with strategic planning proposals:

The bushfire risk according to planning scheme considerations is low. Planning scheme bushfire considerations do not impact on how the Planning Authority plans and delivers planning scheme changes in these areas.

5. Landscape type 1: Grasslands

Description

These locations comprise grassland areas in the western and northern parts of the municipality. Within these areas are the smaller settlements of Cardigan Village, Miners Rest and Learmonth.

Some of the grassland areas are in a managed setting because of agricultural activities. However, when considering the landscape risk associated with grasslands for strategic planning decisions it is prudent to assume that grasslands are unmanaged as they may become so in future.

Interspersed with grassland areas are areas of fragmented vegetation. These will include clumps of non-grassland vegetation, roadside vegetation, strips of trees (for example, along vehicle accesses and water courses) and the occasional smaller patch of non-grassland vegetation. The extent of fragmentation will be a factor when considering bushfire at the local scale but the impact on landscape-scale bushfire is minimal. The grassland vegetation will be the dominant driver of bushfire behaviour in these grassland areas.

Subject to more detailed assessments as part of any strategic planning proposal, these areas can generally be defined as areas with managed or unmanaged grasslands in the western and northern parts of the municipality. They will be within bushfire prone areas.

Figure 5: Key characteristics of grassfires (CFA, 2020)

- Grassfires can start and spread quickly and are extremely dangerous.
- Grassfires can travel up to 25 km per hour and pulse even faster over short distances.
- Grass is a fine fuel and burns faster than bush or forests.
- Grassfires tend to be less intense and produce fewer embers than bushfires, but still generate enormous amounts of radiant heat.
- The taller and drier the grass, the more intensely it will burn.
- The shorter the grass, the lower the flame height and the easier the fire will be to control.
- Grassfires can start earlier in the day than bushfires, because grass dries out more quickly when temperatures are high.

Joining up with other bushfire products

The Victorian Fire Risk Register (Victorian Government) includes the settlements in these areas as a risk. The *Regional Bushfire Planning Assessment – Grampians Region* (DPCD, 2011) does not include any ‘identified areas’ relevant to these areas.

These grassland areas are not included within the Bushfire Management Overlay. Grassland areas are included within the declared bushfire prone area as referenced in *c13.02-1S Bushfire Planning*.

Strategic assessment against *c13.02-1S Bushfire Planning*

These locations are lower risk compared to other parts of the municipality that have non-grassland landscape bushfire hazards. Planning proposals are likely to be favourably assessed against *c13.02-1S Bushfire Planning* because:

- There is limited (or no) exposure to large, landscape-scale bushfire.
- The potential for neighbourhood scale destruction is low, although the edges of grassland areas need to be separated from new development at the local scale.

- Settlements within these areas (Cardigan Village, Miners Rest and Learmonth) contain low fuel areas where protection from the harmful effect of bushfire is provided. This is typically achieved by walking away from grassland hazard edges deeper into settlement areas.

Mitigation to inform strategic planning decisions

Mitigation is delivered through the geographic separation from non-grassland hazard areas, avoiding the potential for more destructive bushfires to arise in these areas. Mitigation is likely to include:

- Confirming that site-based exposure is no more than 12.5kw/sq.m of radiant heat.
- Confirming access is available to low fuel areas.

A low-fuel area adjoining grassland can ensure that a moving grassfire cannot approach development. Planning scheme changes should not introduce fuels that undermine a defined hazard edge to grassland areas or a low fuel area where people may move to for enhanced safety.

Bushfire-related construction requirements will arise throughout grassland areas and on the grassland hazard interface. Planning scheme changes should not impact on buildings and works being constructed to bushfire vegetation standards⁶.

A bushfire evidence base for strategic projects

A bushfire evidence base for strategic projects should:

- ✓ Confirm the locality is consistent with the description identified in this document. It is anticipated that this can be confirmed by the Council in-house, without the need for further expert advice.
- ✓ Confirm that site-based exposure benchmarks can or will be met. This will require a bushfire hazard site assessment to be prepared.
- ✓ Confirm that low fuel areas are available.

The bushfire evidence base for strategic projects can draw on this document when preparing an explanatory report for a planning scheme amendment.

Key messages for engagement activity on planning scheme changes

The following can be considered for inclusion into communication material associated with strategic planning proposals:

Grassfires can be dangerous to people and assets throughout grassland areas. They move fast and you may not have much warning before it approaches. Planning scheme bushfire considerations require the Planning Authority to ensure grassfires cannot enter settlements or approach new development. To do this existing vegetation close to new development may need to be managed for bushfire protection purposes. Planning scheme changes need to demonstrate that these outcomes will be met.

⁶ Bushfire vegetation standards are defined in Table 6 in c53.02 Bushfire Planning

6. Landscape type 2: West of forest hazards

Description

These locations are near forested areas where bushfires can start and grow large. However, they are located to the west of forests and comprise lower-fuel urban land. Despite their proximity to landscape scale hazards, they are at a lower risk to bushfire as any bushfire under Victoria's dominant bushfire weather would be pushing a bushfire away from these areas.

These areas can generally be defined as urban areas to the west of forested areas in Sebastopol, Canadian and Ballarat East. Parts are included in the Bushfire Management Overlay and/or a bushfire prone area because an ember protection buffer applies based on the forest hazards in the locality⁷.

Joining up with other bushfire products

The *Victorian Fire Risk Register* (Victorian Government) does not include these areas as a risk. The *Regional Bushfire Planning Assessment – Grampians Region* (DPCD, 2011) reflects the interface with landscape hazard areas to the east.

Strategic assessment against c13.02-1S Bushfire Planning

These locations are lower risk. Strategic planning proposals can be favourably assessed because there is limited exposure to large bushfires under Victoria's dominant north-west and south-west bushfire winds. These locations are mostly low fuel areas. The potential for neighbourhood scale destruction is limited.

Mitigation to inform strategic planning decisions

Mitigation is delivered through the favourable location west of landscape hazard areas. The potential for large bushfires to impact on these areas is avoided. Mitigation is likely to include:

- Confirming that site-based exposure is no more than 12.5kw/sq.m of radiant heat.
- Confirming access is available to low fuel areas. Existing low fuel areas should be maintained.
- Confirming the edges of development are separated from forested areas.

Opportunities for environmental enhancements can be contemplated where they will not create a bushfire hazard to existing and new development.

Bushfire-related construction requirements will arise in these areas. Planning scheme changes should not impact on buildings and works being constructed to bushfire standards.

A bushfire evidence base for strategic projects

A bushfire evidence base for strategic projects should:

- ✓ Confirm the locality is consistent with the description identified in this document. It is anticipated that this can be confirmed by the Council in-house, without the need for further expert advice.

⁷ The Bushfire Management Overlay and bushfire prone area do not consider wind direction or aspect in applying the ember protection buffer

- ✓ Confirm that site-based exposure benchmarks can or will be met. This will require a bushfire hazard site assessment to be prepared.
- ✓ Confirm that low fuel areas are available.
- ✓ Confirm with municipal bushfire experts that the Victorian Fire Risk Register (human settlement) does not identify any at-risk assets in an area proposed for planning scheme changes.

The bushfire evidence base for strategic projects can draw on this document when preparing an explanatory report for a planning scheme amendment.

Key messages for engagement activities

The following can be considered for inclusion into communication material associated with strategic planning proposals:

Urban areas west of forested hazards are favourably located as any bushfire would likely to be pushed away under dominant bushfire weather. These areas are also lower fuel. The bushfire risk according to planning scheme considerations is lower because of this.

It is still important that development immediately adjoining hazard areas are carefully planned, and we should seek to keep fuels low. However, planning scheme bushfire considerations are not a significant influence on how the Planning Authority plans and delivers planning scheme changes in these areas.

7. Landscape type 2 or 3: Grasslands near forest hazards

Description

These locations comprise grassland areas that are influenced by forested areas⁸ in the surrounding landscape. They include grassland areas on the south-west local government area boundary, in proximity to Mount Rowan, Warrenheip and east of Mount Helen.

These grassland areas are higher risk as they are influenced by nearby forested areas. Because of this, they are more susceptible to fire because bushfire in forested areas may run into them through continuous fuel paths and they may experience more grassfires through ember attack from forested areas.

These areas can generally be defined as managed or unmanaged grasslands that are exposed to bushfire in nearby forested areas. Areas closest to forested areas will be within a Bushfire Management Overlay and all these areas are within a bushfire prone area.

Joining up with other bushfire products

The *Victorian Fire Risk Register* (Victorian Government) includes many of these grassland areas as a risk where there is development (for example, houses). The *Regional Bushfire Planning Assessment – Grampians Region* (DPCD, 2011) includes ‘identified areas’ associated with low density and rural living development.

Strategic assessment against c13.02-1S Bushfire Planning

These locations have an elevated bushfire risk arising from being in proximity to larger hazard areas. These areas require a nuanced assessment because:

- There is potential for neighbourhood scale destruction through ember attack and ember ignited grassfires.
- There may or may not be immediate access to low fuel areas where protection from the harmful effect of bushfire is provided. Strategic projects need to consider whether such areas are available or should be provided.

Mitigation to inform strategic planning decisions

Mitigation is not being delivered through the geographic separation from landscape hazard areas. There remains the potential for large bushfires to impact, including through ember attack. Mitigation is likely to include:

- Confirming that site-based exposure is no more than 12.5kw/sq.m of radiant heat.
- Confirming access is available to low fuel areas. Existing low fuel areas should be maintained.

The above may be difficult to achieve given the extent of bushfire hazards and the lack of low fuel areas. The advice of the relevant fire authority and municipal bushfire experts will be important inputs to decision making.

Planning scheme changes that have the effect of introducing fuels into these areas may create continuous hazard paths for a moving bushfire to move into and around these areas. This needs to be minimised in strategic planning proposals. Creating a defined edge to bushfire hazards will be important.

⁸ For this report, forested areas includes areas that may be assessable under AS3959-2018 *Building in a bushfire prone area* (Standards Australia) as woodland vegetation or assessed as modified vegetation using Table 2 to c53.02 *Bushfire Planning*.

Environmental enhancements need to focus on win-win outcomes for bushfire (life safety) and environmental objectives. This will require strong partnership working with the relevant fire authority. Introducing new fuels can be contemplated where they can be assessed as low-threat and will not enable a bushfire to propagate through an area. Such fuels would be consistent with bushfire vegetation standards⁹. Proposals should not make it more difficult to provide bushfire vegetation standards.

Bushfire-related construction requirements will arise in these areas. Planning scheme changes should not impact on buildings and works being constructed to bushfire standards.

A bushfire evidence base for strategic projects

A bushfire evidence base for strategic projects should:

- ✓ Confirm the locality is consistent with the description identified in this document. It is anticipated the Council can confirm this in-house, without the need for further expert advice.
- ✓ Confirm that site-based exposure benchmark of 12.5kw/sq.m of radiant heat is met by separating new development from bushfire hazards. Proposals that make achieving this outcome more difficult would not satisfy site-based exposure benchmarks.
- ✓ Confirm that an area of low fuel is available. For development in or close to an existing settlement, this may be available in nearby urban developed areas. It may also need to be created as part of the justification for planning scheme changes.

The bushfire evidence base for strategic projects can draw on this document when preparing an explanatory report for a planning scheme amendment.

Key messages for engagement activities

The following can be considered for inclusion into communication material associated with strategic planning proposals:

Grasslands areas that can be impacted by bushfires in surrounding forests are a bushfire risk. These areas can also be some distance from low fuel areas where shelter from bushfire can be provided.

Planning scheme bushfire considerations require the Planning Authority to plan for any proposals for new growth or change carefully. We will need to make sure people can find places where they can shelter from bushfire and survive its harmful effects. Because of this changes to the bushfire hazard need to be carefully managed. Where possible, reducing fuels is likely to be the priority.

Opportunities to enhance the environment are still possible, but these need to be carefully planned on a site-by-site and street-by-street basis. We especially need to make sure vegetation close to development are as bushfire ready as possible. Planning scheme changes that would increase fuels in these areas are unlikely to satisfy planning scheme bushfire policies.

⁹ Bushfire vegetation standards are defined in Table 6 in c53.02 Bushfire Planning

8. Landscape type 3a: Areas near forest hazards

Description

These locations are near forested areas where bushfires can start and grow large. They are generally lower fuel where a moving bushfire front is unlikely. They will be subject to high levels of ember attack. This can create localised¹⁰ fires throughout these areas. These locations will also be areas of movement before, during and after a bushfire as people closer to and within more hazardous areas seek enhanced safety.

These areas can generally be defined as areas outside of the Bushfire Management Overlay in Mount Clear, Mount Pleasant, Buninyong, and low fuel urban areas in Brown Hill. They will be extensively within a bushfire prone area. Some limited areas may not be in either the Bushfire Management Overlay or a bushfire prone area.

Joining up with other bushfire products

The *Victorian Fire Risk Register* (Victorian Government) includes these areas as a risk. The risk reduces the further away from forested areas. The *Regional Bushfire Planning Assessment – Grampians Region* (DPCD, 2011) includes many 'identified areas' associated with proximity and interface with large hazard areas.

Strategic assessment against c13.02-1S Bushfire Planning

There is an elevated bushfire risk from being in proximity to forested areas. The areas are mostly lower fuel developed areas that can provide shelter from the harmful effects of flame contact and radiant heat from a moving bushfire. They will be subject to ember attack and the potential for fires started by ember attack. But their low fuel existing characterises are a favourable locational attribute despite their proximity to forested areas.

Strategic planning proposals require a nuanced assessment against *c13.02-1S Bushfire Planning* to demonstrate the risk is not increased and, where possible, reduced, especially in response to ember attack.

Mitigation to inform strategic planning decisions

Mitigation is mostly delivered through the geographic separation from forested areas, but the potential for ember attack into these areas and localised fires is on-going. Mitigation is likely to include:

- Confirming that site-based exposure is no more than 12.5kw/sq.m of radiant heat.
- Confirming access is available to low fuel areas. Existing low fuel areas should be maintained.

Changes should not introduce fuels that undermines a defined hazard edge or low fuel areas. Fuels should be consistent with bushfire vegetation standards. However, where they are consistent opportunities for environmental enhancements can be contemplated. These will need to be carefully planned on a site-by-site and street-by-street basis. Detailed analysis of changes arising from environmental initiatives should inform strategic planning.

Bushfire-related construction requirements will arise in these areas. Planning scheme changes should not impact on buildings and works being constructed to bushfire standards.

A bushfire evidence base for strategic projects

¹⁰ Localised fires can arise from ember attack creating fires in houses and other structures and in vegetation on roadsides, parks and gardens.

A bushfire evidence base for strategic projects should:

- ✓ Confirm the locality is consistent with the description identified in this document. This may require further bushfire evidence to be prepared.
- ✓ Confirm that site-based exposure benchmarks can or will be met. This will require a bushfire hazard site assessment to be prepared.
- ✓ Confirm that low fuel areas are available.
- ✓ Respond to the ongoing risk of ember attack. This may require bushfire vegetation standards to be applied in areas proposed for change.

The bushfire evidence base for strategic projects can draw on this document when preparing an explanatory report for a planning scheme amendment.

Key messages for engagement activities

The following can be considered for inclusion into communication material associated with strategic planning proposals:

Areas near forest hazards perform a mixed role. They are themselves at risk of bushfire, including from ember attack. They also provide shelter for people moving away from more dangerous areas closer to the forest.

Planning scheme bushfire considerations require the Planning Authority to plan for any proposals for new growth or change carefully. We will need to make sure people in these areas and from nearby areas can find places where they can shelter from bushfire and survive its harmful effects. Because of this changes to the bushfire hazard need to be carefully managed. Where possible, reducing fuels is likely to be the priority.

Opportunities to enhance the environment are still possible, but these need to be carefully planned on a site-by-site and street-by-street basis. We especially need to make sure vegetation close to development is as bushfire ready as possible. Planning scheme changes to increase fuels need to be carefully considered.

9. Landscape types 3b and 4: Forest hazards

Description

These locations are within or close to forest hazards. Moving bushfire fronts and ember attack are likely in these areas. They include large areas that are not managed in a low fuel condition. Larger fires and neighbourhood scale destruction from bushfires are likely to arise in these areas. The ability for people to move away from hazardous areas is not certain, meaning people may need to shelter on their own land or they may have limited shelter options (for landscape type 3b) or no shelter options (for landscape type 4).

These areas can generally be defined as areas within or within 150m of forested areas. These areas will be extensively within the Bushfire Management Overlay and within a bushfire prone area.

Joining up with other bushfire products

The *Victorian Fire Risk Register* (Victorian Government) includes urban areas, some low-density / rural living areas and smaller settlements as a risk. The *Regional Bushfire Planning Assessment – Grampians Region* (DPCD, 2011) includes many 'identified areas'.

Strategic assessment against c13.02-1S Bushfire Planning

These locations are a high bushfire risk as they are in or in very close proximity to larger forested areas. There is potential for neighbourhood-scale destruction and because of this strategic planning proposals may be less favourably assessed against c13.02-1S Bushfire Planning. This is because:

- There is potential for neighbourhood scale destruction.
- These areas are not managed in a low fuel condition.
- Survivability and the ability to move away from bushfires is not certain and will be complex before, during and after a bushfire event. There is not typically immediate access to low fuel areas where protection from the harmful effect of bushfire is provided.

Mitigation to inform strategic planning decisions

Mitigation is not being delivered through the geographic separation from hazard areas, so there remains the potential for large bushfires to impact. Mitigation is likely to include confirming that site-based exposure is no more than 12.5kw/sq.m of radiant heat.

Ensuring access is available to low fuel areas will be important. This may be within a development proposal or on nearby low-fuel land. Existing low fuel areas should be maintained and, where possible, enhanced. This may be difficult to achieve given the extent of bushfire hazards and the lack of low fuel areas. The advice of the relevant fire authority and municipal bushfire experts will be important inputs to decision making.

Environmental enhancements need to focus on win-win outcomes for bushfire (life safety) and environmental objectives. This will require strong partnership working with the relevant fire authority. Introducing new fuels can be contemplated where they can be assessed as low-threat and will not enable a bushfire to propagate through an area. Such fuels would be consistent with bushfire vegetation standards. Proposals should not make it more difficult to meet bushfire vegetation standards.

Bushfire-related construction requirements will arise in these areas. Planning scheme changes should not impact on buildings and works being constructed to bushfire standards.

A bushfire evidence base for strategic projects

A bushfire evidence base for strategic projects will require further bushfire assessments. It will be necessary to:

- ✓ Confirm the locality is consistent with the description identified in this document. This will require further bushfire evidence to be prepared. It will be particularly important that further assessments determine whether a locality best fits within Landscape type 3 (a shelter option can be confirmed or created) or landscape type 4 (no shelter option is not available). Where not available, proceeding with changes need to be carefully considered.
- ✓ Confirm that site-based exposure benchmarks can or will be met. This will require a bushfire hazard site assessment to be prepared.
- ✓ Confirm that low fuel areas are available.

Key messages for engagement activities

The following can be considered for inclusion into communication material associated with strategic planning proposals:

Places in proximity to large, forested hazard areas are some of the most dangerous places in the municipality. Bushfire in these areas are a real possibility every fire season and protecting human life as best as possible is a priority when doing strategic planning in these areas.

Planning scheme bushfire considerations require the Planning Authority to be extremely cautious when contemplating increasing bushfire risk in these areas, either through new strategic growth proposals or through planning scheme changes that impact on bushfire safety. Where possible, reducing fuels is likely to be the priority.

Opportunities to enhance the environment are possible, but these will need to be managed to be bushfire ready. Planning scheme changes cannot have the effect of enabling a bushfire to spread more easily through these areas.

Planning scheme changes require the Planning Authority to work closely with the Country Fire Authority and the Minister for Planning. Only with their agreement can we proceed with proposals. We need to work with the community to identify proposals that can meet the needs of these other stakeholders and demonstrate the bushfire is fully considered and addressed.

The safety of the community will be paramount in decision making.

10. Locations for lower risk urban growth

Locations for lower risk urban growth are shown schematically (using arrows) on **Figure 5: Bushfire landscape areas**.

Urban growth can be directed to these locations having regard to planning scheme bushfire policies that support growth being directed to lower risk areas. These areas are lower risk because they have:

- Limited exposure to large, landscape-scale bushfire.
- Minimal potential for neighbourhood-scale destruction.
- Good shelter options found in nearby low fuel urban areas or the ability to create shelter options as part of urban development.

The residual landscape risk, which is from grassland hazards, can be mitigated through passive measures as part of proposals for urban growth. This can include creating a permanent hazard edge that delivers exposure at no more than 12.5kw/sq.m of radiant heat by:

- Providing bushfire vegetation standards on the hazard edge to stop a grassfire from entering developed areas.
- Providing a perimeter road to create a well-designed interface with hazard areas.
- Ensuring open spaces and riparian corridors do not create continuous fuel paths into developed areas.

The lower risk is reinforced by the typology of development which is likely to include urban lots and urban style infrastructure. These have a reduced potential to carry increased fuels and are likely to provide future occupants with access on foot to low fuel areas.

Further information on these directions for lower risk urban growth can be found in *the Ballarat Northern Growth Area* (Bushfire Planning, 2020a) and *Ballarat Western Growth Area Bushfire Assessment* (Bushfire Planning, 2020b).

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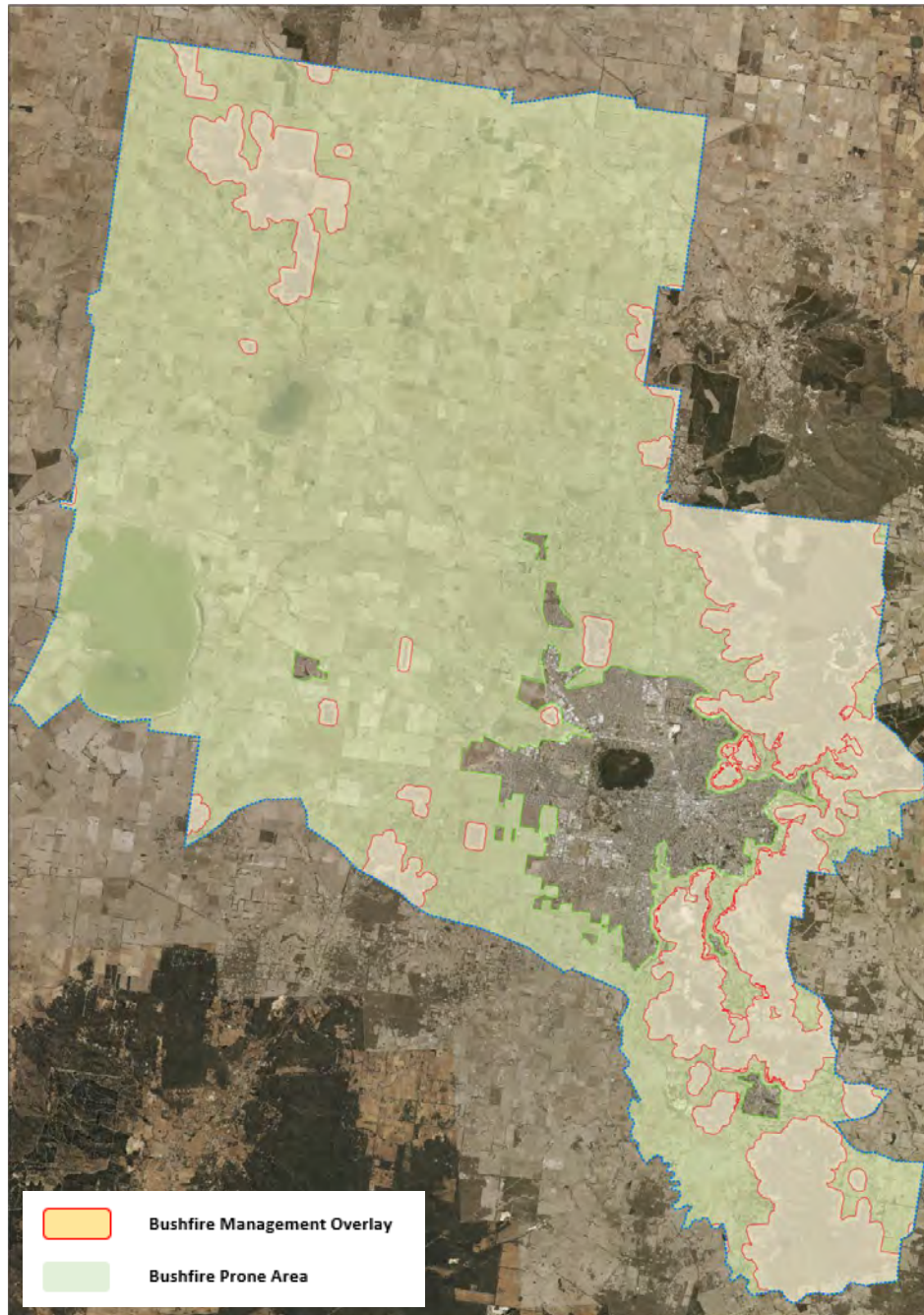
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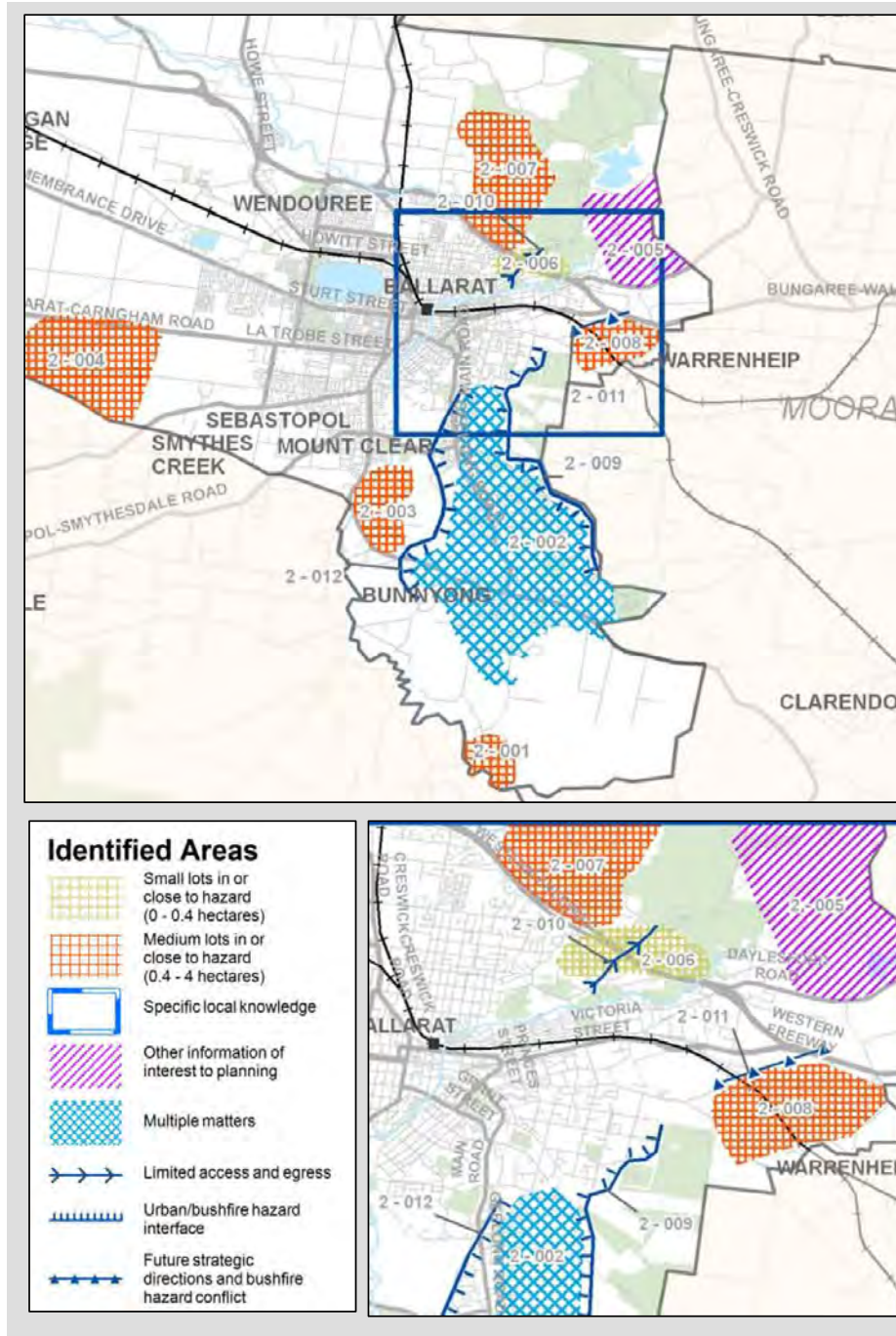
Strategic Bushfire Management Plan West Central, Department of Environment, Land, Water and Planning, 2015.

Victorian Fire Risk Register – Ballarat Output 03 (human settlement), Country Fire Authority, 2020.

Attachment 1: Bushfire Management Overlay and bushfire prone area



Attachment 2: Regional bushfire planning assessment extract





CITY OF BALLARAT
**Neighbourhood
Character Study
August 2024**





—

The City of Ballarat acknowledges the Traditional Custodians of the land we live and work on, the Wadawurrung and Dja Dja Wurrung People and recognises their continuing connection to the land and waterways.

We pay our respects to their Elders past, present and extend this to all Aboriginal and Torres Strait Islander People.

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Glossary of Terms

Term	Definition
Activity Centres	Retail, service and employment hubs that are usually well serviced by public transport. They range in size from local neighbourhood strip shops to major regional shopping malls and centres.
Articulation	The finer details which provide additional visual interest and reinforce the intentions of the 'Architectural Form'.
Ballarat Planning Scheme	The Ballarat Planning Scheme sets out objectives, policies and provisions relating to the use, development, protection and conservation of land in the area to which it applies. It regulates the use and development of land through planning provisions to achieve those objectives and policies.
Building	Definition from Section 3 of the Planning and Environment Act 1987. A building includes: <ul style="list-style-type: none"> • a structure and part of a building or a structure. • fences, walls, out-buildings, service installations and other appurtenances of a building.
Building Scale	The size of a building relative to the buildings or elements around it.
Character Area	Areas with a common preferred character.
Character Type	Broad areas, where the desired character is the same. In these areas, the existing neighbourhood character and era of residential development are usually similar.
Contemporary Architecture	Contemporary architecture essentially refers to the current style of architecture. For example, a house built this year according to current trends would be considered contemporary architecture.
Contemporary Infill Development	A new development within a streetscape of older buildings.
Court	A development pattern characterised by streets with multiple curves, typical of many modern subdivision.
Curvilinear Street Network	A development pattern characterised by streets with multiple curves.
Dwelling	Definition from Clause 73.03 of the Ballarat Planning Scheme. A building or part of a building used as a self-contained residence, which must include: <ul style="list-style-type: none"> • a kitchen sink • food preparation facilities • a bath or shower • a closet pan and wash basin It includes out-buildings and works normal to a dwelling.

Term	Definition
Gridded Street Network	Refers to a uniform and rigid pattern of streets that follows a predictable and orthogonal layout.
Gable Roof	A roof that connects to the wall of the building with a vertical end.
Hipped Roof	A roof that connects to the wall of the building with an angled end.
Inter-war Architecture (1918 - 1939)	Inter-war period saw the emergence of the Art Deco, Functionalist, Mediterranean, Spanish Mission, Californian Bungalow, Old-English and Inter-war Queensland architectural styles. Single storey detached houses and simple building forms with limited embellishment were common during this period, as well as large setbacks on large blocks.
Kerb and channel	Refers to a gutter which forms a barrier between the road pavement and the nature strip and directs stormwater into stormwater drains to protect the edge of the road from erosion. A gutter is generally constructed of concrete or bluestone.
Modern Architecture	Emerging in the first half of the 20th century. Modern architecture is a style of building that emphasises function and a streamlined form over ornamentation. This design aesthetic is a departure from more elaborate and decorated homes like Queen Anne, Victorian, or Gothic Revival styles. Modern architecture usually involves sharp, clean lines. Common modern architectural features include flat roofs, walls made of rectilinear geometric shapes and floor-to-ceiling windows.
Modified-grid street network	Refers to a modified version of the typical, uniform grid and features an interconnected pattern of streets that follows a predictable, roughly orthogonal layout.
Muted Colour Palette	Palette of earthen and bush tones, particularly various greens, darker browns and greys which complement the vegetated landscape setting.
Neighbourhood Character	The interplay between development, vegetation and topography in the public and private domains that distinguishes one residential area from another.
Neutral Colour Palette	Palette of natural tones, particularly lighter browns, greys, blues and creams which complement the coastal setting.
Orientation	Refers to how a building is positioned in relation to the sun's paths in different seasons, as well as to prevailing wind patterns. As the path of the sun in Australia is to the north, orientation is usually about whether the living areas of a dwelling are north facing.
Open Swale	An open channel that collects water from hard surfaces and allows it to percolate into the ground, reducing the amount of runoff leaving the road or property.
Overlays	Planning scheme controls that apply to specific areas to address a particular issue such as environmental, landscape, heritage and flooding. These requirements operate in addition to those provided by the land's zoning.
Pitched Roof	A roof that is not flat. Generally, roofs will have an angle of pitch from 20-40°.
Planning Policy Framework (PPF)	Comprises general principles for land use and development in Victoria contained in the planning scheme. It sets visions, objectives, strategies and decision guidelines that must be taken into consideration by local Governments when making a planning decision.

Term	Definition
Post-war Architecture (1945 - 1965)	Although more traditional than those of modern design, post-war houses are usually single storey with interconnected living rooms - a move towards open planning. Post-war houses are often characterised by the triple fronted brick veneer.
Precinct Profile	Provide a summary of unique character areas with associated character objectives and design guidelines to provide guidance to future development.
Preferred Character Statement	Policy statement that articulates an area's desired future character.
Public Realm	Relates to all exterior places, linkages and built form elements that are physically and/or visually accessible regardless of ownership. These elements include but are not limited to, streets, footpaths, bike paths, vehicle crossovers, nature strips, water fronts, parks, view corridors, landmarks and building interfaces.
Render Finish	Textured concrete that is applied over brickwork to walls or fences.
Semi-detached Dwelling	A dwelling that shares a common wall with another dwelling.
Setbacks	The distance that a building is located from the site boundary. This Study has looked at the pattern of front setbacks and side setbacks within each street, i.e. the distance the buildings are located from the front or side site boundaries respectively.
Solar access	Refers to the availability of sunlight to a property.
Street	A public road in a city, town, or village, typically with building on one or both sides.
Storey	That part of a building between floor levels. If there is no floor above, it is the part between the floor level and ceiling. It may include an attic, basement, built over car parking area, and mezzanine.
Transparent Fencing	Fencing that creates a barrier between the public and private realm without reducing the view to the other side. They are often constructed of wire and post, chain links, or metal bars such as wrought iron.
Views	Relates to views from the public realm to dwellings, between dwellings and vistas across the landscape.
Vehicle Storage	An area on a private property designated for the parking of vehicles. This can include garages, open car port styles and hardstand areas or driveways.

Table of Contents

Glossary of Terms	3
1.0 Introduction	7
2.0 Planning Context	16
3.0 Engagement	29
4.0 Key Issues and Threats	31
5.0 Performance of Existing Settings	37
6.0 Housing Strategy	40
7.0 Updated Neighbourhood Character Types	42
8.0 Neighbourhood Character Precinct Profiles	47
9.0 Next Steps	111





1.0 Introduction

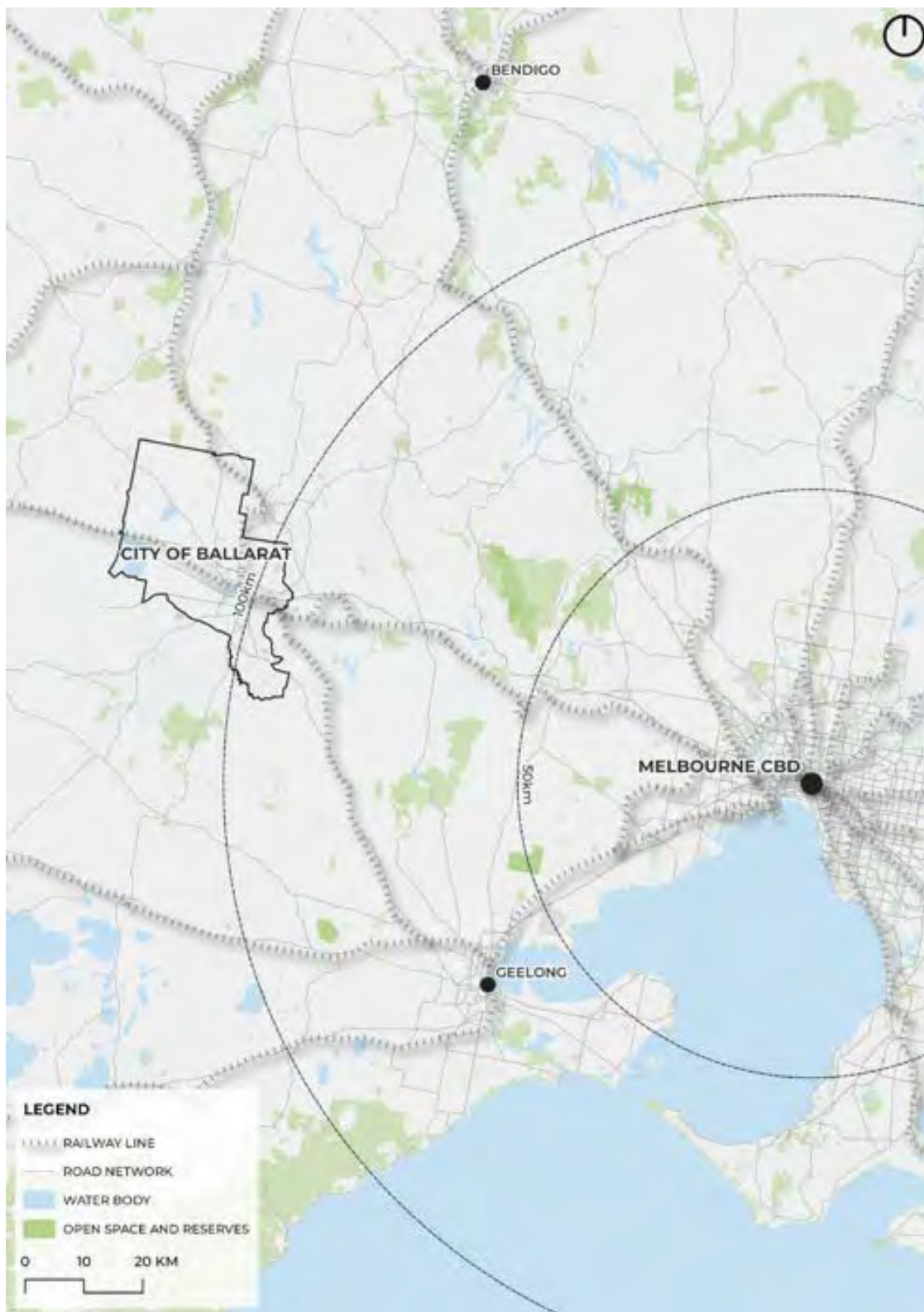
1.1 Overview

The City of Ballarat has a diverse and unique neighbourhood character that is highly valued by its community. Ranging from the historical development located closer to the Ballarat CBD to bush blocks and distinctly rural settlements outside of the central urban area, the character of Ballarat greatly varies.

Accordingly, this updated Ballarat Neighbourhood Character Study has been undertaken to identify the unique values and distinctive attributes within the residential areas of Ballarat.

This Study develops preferred character objectives and design guidelines that will ensure new residential development is responsive to its context and appropriately reflects the identified preferred Neighbourhood Character across the municipality.

Context Map





Project Overview

This updated Study will reflect Ballarat’s existing and preferred neighbourhood character and outline how new development should appropriately respond and contribute to the valued characteristics of the city’s established residential areas.

The objectives of this project are to:

- Undertake an assessment to identify existing character areas across the study area.
- Undertake a review of relevant background material, including relevant policy, VCAT decisions and relevant consultation outcomes.
- Informed by the housing change areas in the Updated Ballarat Housing Strategy, identify the preferred character for each character area.
- Prepare Precinct Profiles for each character area including preferred character statements, character objectives and design guidelines.
- Provide recommendations for implementation into the Ballarat Planning Scheme.

Project Stages

This project will be undertaken over the following stages:

Stage	Task	Date
1	Background Analysis	Late 2019
2	Identify existing Neighbourhood Character	2020
3	Community Consultation – Stage 1	July-September 2020
4	Draft Neighbourhood Character Study	April 2023
5	Community Consultation – Stage 2	2024
6	Updated Draft Neighbourhood Character Study	2024
7	Community Consultation – Stage 3	Mid 2024
8	Final Neighbourhood Character Study	Mid 2024

1.2 Purpose of this Study

This Neighbourhood Character Study provides, for each area, a statement of preferred character, character objectives and design guidelines to guide future development across residential areas of Ballarat.

Recommendations will also be provided for implementation and next steps.

This updated Neighbourhood Character Study includes the following:

- Definition of Neighbourhood Character.
- Outline of methodology.
- Overview of Policy and Statutory Context.
- Overview of existing strategies and background information.
- Summary of community consultation (to date)
- Identification and summary of the key issues and threats to character in Ballarat.
- Proposed Precinct Profiles of each Neighbourhood Character Area, including:
 - Character Area description
 - Key Attributes
 - Preferred Character Statements
 - Character Objectives
 - Character Area Maps
 - Photos
 - Design Guidelines
- Recommendations for statutory and strategic implementation.

Why is this Study being undertaken?

The City of Ballarat recognises that the existing Ballarat Urban Character Study from 1999 is dated. A new study is required to ensure that the preferred neighbourhood character across all of the residentially zoned area in Ballarat can be identified and managed.

Neighbourhood character is highly valued by the community and the retention of the character of residential areas is important to them. The Study seeks to define the unique character of Ballarat neighbourhoods and ensure it is considered as Ballarat grows and develops.

There is currently limited guidance in the Ballarat Planning Scheme about what preferred neighbourhood character is and how development can appropriately respond to its context.

Therefore, it is important that a detailed Neighbourhood Character Study is undertaken so that controls can be developed to facilitate appropriate development outcomes in Ballarat.

The Study carefully considers character boundaries and identifies residential areas that may require further protection. The identified character types and precincts will be used to develop preferred character objectives and design guidelines. Ultimately, a suite of planning controls will give effect to the preferred character statements and associated design guidelines, based on identified future character attributes and housing growth targets (as informed by the Housing Strategy).

The updated Neighbourhood Character Study, Housing Strategy and a future Residential Development Framework will enable the City of Ballarat to meet future housing growth and demographic trends, while still ensuring new development reflects the preferred character of the municipality.

1.3 Study Area

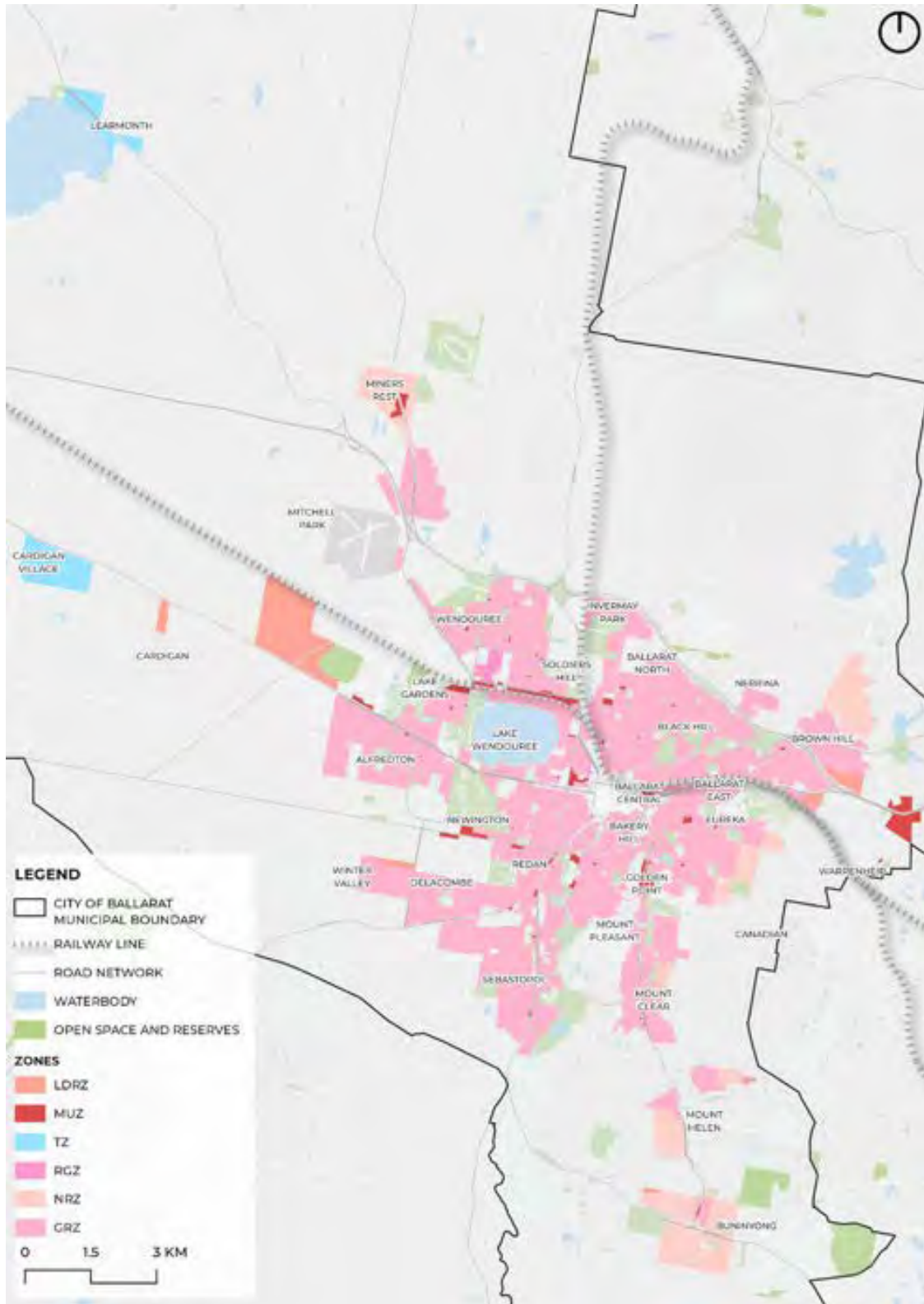
The study area for the Ballarat Neighbourhood Character Study includes the residential areas in the following zones:

- Low Density Residential Zone (LDRZ)
- Mixed Use Zone (MUZ)
- Township Zone (TZ)
- Residential Growth Zone (RGZ)
- Neighbourhood Residential Zone (NRZ)
- General Residential Zone (GRZ)

Localities that are covered by the study area include:

- | | |
|--------------------|------------------|
| • Alfredton | • Little Bendigo |
| • Ballarat East | • Lucas |
| • Ballarat North | • Sebastopol |
| • Ballarat South | • Winter Valley |
| • Black Hill | • Miners Rest |
| • Brown Hill | • Mount Pleasant |
| • Buninyong | • Mount Helen |
| • Canadian | • Mount Clear |
| • Cardigan | • Nerrina |
| • Cardigan Village | • Newington |
| • Delacombe | • Wendouree |
| • Eureka | • Warrenheip |
| • Golden Point | |
| • Invermay Park | |
| • Redan | |
| • Learmonth | |

Study Area Map



Historical Context

Local Indigenous History

For thousands of years, the City of Ballarat has been the Traditional Country of the Wadawurrung and Dja Dja Wurrung People. The Wadawurrung and Dja Dja Wurrung People are a part of the Kulin Nation, which consists of five language groups whose collective territories extend from Port Phillip and Western Port to the Great Dividing Range and the Loddon and Goulburn River Valleys.

The lives of the Wadawurrung and Dja Dja Wurrung peoples were rich in culture and ritual and they remain deeply connected to these landscapes to this day.

Gold Rush

In July 1851, gold was discovered at Clunes, Buninyong and Golden Point. Extensive diggings soon developed in the adjoining areas that are now known as Ballarat East. The area of the diggings can be generally traced from the irregular and curving streets, in contrast to the surveyed township in 1854 west of the river.

Ballarat's gold mines attracted migrants arriving from the ports of Melbourne or Geelong and settled close to the gold deposits. An estimated 6,000 diggers arrived each week seeking their fortune and by the end of 1851, an estimated 10,000 diggers were working in the Ballarat diggings.

Within three years of the discovery of gold, Ballarat had an estimated population of 25,000 people, of which a large proportion were temporary or seasonal workers.

Development Pattern

In the early years Ballarat consisted of two towns The Ballarat West borough and the Ballarat East borough. The Ballarat West borough was an early industrial area whilst Ballarat East was generally used for agriculture. This split is evidenced by remnant buildings. Ballarat West used local clay for bricks, whilst the early buildings of Ballarat East were mostly made of timber and calico and have since been destroyed by flooding or bushfire.

In 1862, the railway reached Ballarat, linking it to the Geelong Port and Ballarat emerged as a major railway hub. The railway station in Ballarat West facilitated more development in the area that is now known as Ballarat Central as shops and commerce moved away from Ballarat East.

Ballarat was established as a major centre for Victoria and a very prosperous colonial city. Grand buildings were constructed for hospitals, churches, schools and government institutions. The layout of Sturt and Lydiard Street with their exceptionally fine buildings had been delivered and in itself was an indicator of the success of Ballarat during the Victorian gold rush period.

By 1871, Ballarat's wider metropolitan area had a population of approximately 50,000 people. Ballarat had become a regional centre and funding was delivered for public works and civic buildings, which led to the construction of Lake Wendouree and the Ballarat Botanical Gardens, the Ballarat Art Gallery, Ballarat Town Hall, and the Royal South Street Memorial Theatre.



Ballarat East, viewed from the School of Mines, 1882
Source: State Library of Victoria

City of Ballarat Snapshot

- The Ballarat CBD is located at the centre of the municipality and operates as a higher order service centre for the City of Ballarat and the surrounding region. The City of Ballarat is served by a railway line that connects Ballarat to Melbourne and Ararat. Various bus routes operate throughout the City of Ballarat to provide public transport connections from its surrounding suburbs to the CBD.
- Immediately surrounding Ballarat CBD is residentially zoned land that accommodates localities such as Ballarat East, Ballarat North and Wendouree. A substantial amount of this area is affected by heritage controls.
- Extending beyond inner Ballarat are localities such as Alfredton, Delacombe, Invermay Park, and Sebastopol that typically include detached dwellings and larger lot sizes whilst still having convenient access to the Ballarat CBD.
- Rural townships such as Buninyong, Cardigan, Mount Clear, Mount Helen and Miners Rest have buffers of the Farming Zone or Public Conservation and Resource Zone that distinctly separate them from the rest of Ballarat.
- Topography is generally flat with some gentle undulating slopes in the south and east of the municipality. The highest area of topography is the Ballarat CBD which enables views of the city skyline from adjacent residential areas. The area surrounding the urban areas of Ballarat include generally flat terrain that provides long range views to the surrounding rural landscape.
- The City of Ballarat contains extensive open space networks, particularly on the outskirts of the urban areas. Key areas of open space include Lake Wendouree, the Worwookarung Regional Park and the Glen Park State Forest which directly interface with residential land.

Ballarat Snapshot	
118,137	Estimated residents in 2023
+10,004	Population increase between 2016 and 2021
+13,089	Additional dwellings forecast to be required by 2036 (or 873 per annum)
110km	North-west of Melbourne CBD

Source: Informed Decisions 2024



1.4 What is Neighbourhood Character?

The definition of neighbourhood character is drawn from Planning Practice Note 43 Understanding Neighbourhood Character and has been adapted to reflect the local context of the City of Ballarat.

Neighbourhood character in Ballarat

Neighbourhood character is what visually differentiates a neighbourhood from another, and is the measure of a local identity. It encompasses the way a neighbourhood looks and feels. It is created by a combination of landscape, vegetation, the built environment, history and culture, and how they interact.

Local character is distinctive. It influences the sense of belonging a person feels to that place, the way people respond to ambience, how it influences their mood, their emotional response, and the stories that come out of their relationship with that place.

Neighbourhood character contains many different facets. It is important to understand character in a holistic way, which involves examining the relationship between people and the social, environmental and economic characteristics of place. Local character should guide how to manage a changing urban environment so that any changes are sympathetic to the valued characteristics and ultimately shape a preferred character for an area in the future.

Neighbourhood character is underpinned by the following core concepts:

- Character is a combination of the public and private realms and how they relate to one another.
- Every property, public place or piece of infrastructure makes a contribution, whether great or small.
- It is the cumulative impact of all 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.
- All areas have a character in the same way that all people have a personality. In some areas the character may be more obvious, more unusual, or more attractive, but no area can be described as having no character.
- The understanding of the key components of neighbourhood character ultimately informs the definition of statements of preferred character for the future.

The attributes that contribute to the neighbourhood character in Ballarat include:

- Landscape character and setting
- Public realm and streetscape
- Architectural style

- Dwelling typology
- Building height and scale
- Building orientation and layout
- Building materials
- Setbacks
- Garden style
- Car parking and other outbuildings (where relevant)
- Front boundary treatment

Neighbourhood character and Amenity

Amenity concerns aspects such as pleasantness, ambience and liveability of an area. Neighbourhood character is about sense of place and community value. Regardless of the character of an area there are standards of residential amenity that apply to all residential development.

These basic amenity standards include overlooking, overshadowing and solar access. Sometimes, these amenity standards can have an effect on neighbourhood character, but as a general principle, neighbourhood character and amenity should be treated separately.

Neighbourhood character and Heritage

In defining neighbourhood character, it is important to understand the differences between neighbourhood character and places of heritage significance that are generally recognised in the planning scheme.

While all areas have a history, not all areas are of heritage significance. Heritage significance is determined by recognised criteria set by Commonwealth, State and local governments, with reference to the Burra Charter. In governments, heritage places and areas are recognised by application of the Heritage Overlay in planning schemes or inclusion on the Victorian Heritage Register. Cultural heritage is largely embodied in the underlying values and the broader physical context of a building or place. It is important to manage and retain this fabric and setting to retain the cultural significance of a place. Heritage significance can't be improved, but the fabric of a place can be improved, restored or reinterpreted.

In many areas building style is important to setting the character of the area. This includes not just typical form and massing, but may also include architectural details, materials and colours. Buildings do not need to be old or historically significant to have a character that is important to people's understanding and enjoyment of an area.

* It should also be noted that issues related to traffic, on-street parking, traffic connectivity and the movements of cars are not relevant to the assessment of neighbourhood character as defined in Planning Practice 43 Understanding Neighbourhood Character.

1.5 Methodology

Desktop Analysis & Background Review

The desktop analysis produced character area boundaries and enabled a general understanding of the study area. Indicative character area boundaries identified in the 2015 Ballarat Strategy were referred to and further refinement was undertaken. The desktop analysis included all land within the Low Density Residential Zone (LDRZ), Mixed Use Zone (MUZ), Township Zone (TZ), Residential Growth Zone (RGZ), Neighbourhood Residential Zone (NRZ), General Residential Zone (GRZ).

Site Survey

Field surveys were undertaken to ground truth the preliminary neighbourhood character areas, which resulted in further refinement of boundaries.

The methodology for the field surveys included:

- A review of the previous neighbourhood character area boundaries.
- A site survey to verify desktop analysis of preliminary character areas.
- An assessment of areas based on the general attributes of private and public realms: built form and layout of the different areas; overall streetscape qualities; vegetation and landscape quality and the era of development.
- Photos for each area and character type.
- Identification of the characteristics and neighbourhood character impacts of new and infill development.
- Identification of more specific character precincts within each character type.

Engagement

Stage 1 – Community Consultation

The first stage of engagement was conducted between July and September 2020.

This initial stage primarily sought to inform the community about the project, educate the community about neighbourhood character, introduce the Study and preliminary character boundaries, and understand the communities' views on what's important about the character in their local neighbourhoods.

Various engagement methods included:

- Online engagement and surveys via MySay.
- Social media engagement via Instagram and Facebook.
- In person and online.
- Engagement materials set up in Bridge Mall shop windows.

Stage 2 – Community Consultation

The second stage of engagement occurred between September to October 2023. The purpose of this stage was to seek feedback on both the first draft of the Neighbourhood Character Study and draft Housing Strategy. This stage included an online survey and opportunity for the community to provide written submissions.

The Department of Transport and Planning (DTP) also provided a suite of comments on the Draft Study as a part of this stage of consultation that provided guidance for the need for further strategic work to inform the preferred character statements and refinement of character areas boundaries.

Stage 3 – Community Consultation

The third stage of engagement was conducted in response to this updated Draft Neighbourhood Character Study. The purpose of this stage was to ensure all community feedback relevant to the draft study has been captured.

Neighbourhood Character Study

Following all stages of consultation, the updated Neighbourhood Character Study was prepared to reflect the findings of the Strategic Background work, the site survey, and the values identified by the community and the City of Ballarat.

The Study has been finalised to reflect the findings of the final stage of community consultation.



2.0 Planning Context

2.1 Planning Policy Framework

Overview

This section provides an outline of the Planning Policy Framework (PPF) for the City of Ballarat and outlines the implications for the Neighbourhood Character Study.

The PPF seeks to guide future development within the City of Ballarat, including specific policies relating to built form, vegetation and neighbourhood character.

The City of Ballarat Local Planning Policy Framework (LPPF) contains specific neighbourhood character objectives, strategies and implementation guidelines that have statutory effect.

This Neighbourhood Character Study will synthesise the existing policy context, ensuring that preferred character objectives and design guidelines are appropriate and align with both State and Local planning directives.

Planning Policy Framework

The Planning Policy Framework (PPF) provides context for planning decision making. Planning objectives are fostered through appropriate land use and development policies and practices, which integrate relevant environmental, social and economic factors.

The PPF recognises the importance of neighbourhood character and contextual design. It states that neighbourhood character should be protected and recognised.

The PPF includes both Victorian Planning Provisions (VPPs) and Local Planning Provisions (LPPs) which provide general objectives and specific local directions respectively.

The VPPs relevant to this Study include:

11.01-1S Settlement: Seeks to deliver housing that facilitates access to jobs, services, infrastructure and community facilities. A key component of this clause is to promote and capitalise on opportunities for urban renewal and infill redevelopment. New residential development should be planned around existing or future activity centres to maximise accessibility to facilities and services.

12.01-2S Native Vegetation Management: Seeks to ensure that native vegetation is not unnecessarily removed or destroyed.

12.05-2S Landscapes: Seeks to protect and enhance significant landscapes and open spaces that contribute to character, identity and sustainable environments.

13.02-1S Bushfire Planning: Seeks to strengthen the resilience of human settlements and communities. Importantly, this policy outlines the need to give priority to the protection of human life over all other policy considerations.

15.01-1S Urban Design: Seeks to create urban environments that are safe, healthy, functional and enjoyable and that contribute to a sense of place and cultural identity. Design responses should respond to local contextual features including, character, cultural identity, natural features, surrounding landscape and climate.

15.01-5S Neighbourhood Character: Seeks to recognise, support and protect neighbourhood character, cultural identity, and sense of place. Design responses should for new development should respect existing neighbourhood character or contribute to a preferred neighbourhood character.

16.01-1S Housing Supply: Seeks to provide well-located, integrated and diverse housing that meets community needs. Design responses for new housing in established urban areas should focus on providing higher density housing development on sites that are proximal to jobs, services and public transport.

Further objectives, strategies and guidelines that are specific to Ballarat are included within LPPs. Those that are of most relevance to this Study include:

Municipal Strategic Statement: The City of Ballarat is currently preparing an Amendment to update the Local Planning Policy framework (Planning Scheme Amendment C215ball) as required by VC148 which introduced a new state-wide Planning Policy Framework. Amendment C215ball is for the most part, policy neutral, therefore recommendations are provided in response to the existing Municipal Strategic Statement (will be renamed Municipal Planning Strategy following amendment) under Clause 21 of the Ballarat Planning Scheme.

Clause 21.01-4 Key Issues: This policy is designed to ensure that infill development enhances the cultural significance and character of historic areas. This emerged as a key issue in the Ballarat Strategy. This Study seeks to facilitate infill development that respects existing neighbourhood character and is responsive to preferred neighbourhood character.

Clause 21.02-1 Urban Growth: This policy recognises that Ballarat's population is forecast to grow by 160,000 people by 2040, most of which is planned to be accommodated in established areas, convenience living areas close to public transport, urban renewal precincts, and in properly planned greenfield growth areas. In areas outside those designated and which are not adequately serviced by public transport, change should be incremental and to an appropriate scale. Specific guidance is provided in the different areas, which include: Areas of convenience living, Urban renewal precincts, Strategic investigation areas, Prioritised completion of the Ballarat West Growth Area, Longer-term greenfield investigation areas, Townships, and Ongoing change areas.

Clause 21.02-2 Areas of convenience living: This policy defines Areas of convenience living as areas of housing close to public transport and services where growth in density and diversity of housing supports the long-term potential for a rapid-transit style public transport network in Ballarat. More residential development along defined corridors is a pre-requisite to viable high frequency public transport services.

Clause 21.02-3 Urban renewal precincts: This policy defines Urban renewal precincts as sites or areas with significant potential for large-scale renewal and redevelopment. Further investigation and feasibility work is required to determine the extent of potential for change within each precinct. Structure, framework or master plans will be prepared for these precincts and incorporated into the planning scheme where appropriate to help facilitate development.

Clause 21.02-4 Greenfield investigation areas: This policy identifies key greenfield development areas in the short- to medium-term. Medium to long-term greenfield investigation areas require further strategic assessment.

Clause 21.02-5 Ongoing change areas: This policy defines Ongoing change areas as residential areas that are valued for their existing suburban character and housing supply. Infill development is encouraged at a scale appropriate to their relative distance to high frequency public transport corridors, activity centres, employment and taking into account the neighbourhood character. In fringe areas, overall density should provide an important transition between urban areas and rural, lifestyle or other low density non-urban uses.

Clause 21.02-6 Townships: This policy identifies that the townships of Buninyong, Burrumbeet, Cardigan Village, Learmonth, Miners Rest and Warrenheip and their surrounding communities provide an attractive lifestyle choice in a rural setting. These townships are valued by residents for their character, community and lifestyle. They represent a different style of living to urban Ballarat and contribute to the diversity of lifestyle and choice in the municipality. Services and infrastructure are unique to each township, as are local values and expectations. Significant land use changes should respond to local township character, and long-term community aspirations.

Clause 21.02-7 Housing: This policy highlights the importance of social diversity, which requires a mix of housing sizes and types, affordable and social housing, and housing suitable for people of all abilities.

Clause 21.03-1 Biodiversity: This policy identifies that protecting and enhancing habitats and biodiversity throughout Ballarat as part of an urban forest. This will be addressed in the Preferred Neighbourhood Character Statements as well as objectives and decision guidelines contained within the new Schedules to the Residential zones.

Clause 21.03-2 Significant Environments and Landscapes: This policy identifies that Ballarat is home to a range of important vistas including sweeping views of gently undulating grazing land, treed roadsides, mountains, lakes and wetlands, and that it is also host to important natural features and areas of high natural biodiversity values. This Study includes a recommendation about how landscape and views should be preserved in residential areas with these characteristics. It is anticipated that the findings from the Ballarat Skyline and Views Study will be implemented through an Amendment to the Ballarat Planning Scheme.

Clause 21.06-1 Urban Design: This policy identifies that design quality is crucial to Ballarat's identity and competitiveness. High quality streetscapes and open spaces can increase the level of amenity and functionality, making places more attractive to visitors, investors, retailers and consumers. The proposed new Schedules to residential zones into the Ballarat Planning Scheme will include objectives, requirements and application guidelines that seek to deliver high quality urban design outcomes that consider context and local values. The planning controls will require that a planning application considers scale, bulk and quality of infill development.

Clause 21.06-2: Heritage: This policy acknowledges that the Ballarat community highly values Ballarat's heritage and historic character and that these must be retained into the future. It aims to preserve and enhance heritage character in Ballarat. This Study will include recommendations for planning controls that encourage new infill development that respects and enhances the heritage character of Ballarat.

Clause 21.06-3: Neighbourhood Character: This policy demonstrates the importance Council places on identifying and preserving areas with significant neighbourhood character values. The policy states that neighbourhood character must be considered in the assessment of infill housing development proposals within existing residential areas, while acknowledging tensions between urban consolidation and respecting residential amenity and neighbourhood character.

2.2 Zone and Overlays

Overview

This section provides an outline of the zones and overlays that affect the City of Ballarat and outlines the associated implications for the Neighbourhood Character Study.

Local variations to zone schedules and overlays provide existing controls to guide appropriate built form outcomes, retain existing vegetation and enhance significant landscapes.

Planning Scheme Zones

The Residential Zones applicable to the Study include:

- Low Density Residential Zone (LDRZ)
- Mixed Use Zone (MUZ)
- Township Zone (TZ)
- Residential Growth Zone (RGZ)
- General Residential Zone (GRZ)
- Neighbourhood Residential Zone (NRZ)

Low Density Residential Zone (LDRZ)

The LDRZ applies generally to areas on the periphery of the existing GRZ land. In Ballarat, LDRZ is present in Brown Hill, Buninyong, Cardigan, Mount Hellen, Warrenheip and Winter Valley localities. Typically the LDRZ provides for low density residential development on lots which, in the absence of reticulated sewerage, can treat and retain all wastewater on site. Typical housing development includes single storey detached dwellings.

There are no requirements for building height and building height cannot be specified in a schedule to the zone. Limited ResCode requirements must be met for subdivisions.

There are no opportunities to vary ResCode requirements.

Mixed Use Zone (MUZ)

The MUZ provides for a range of residential, commercial and industrial uses that complement the role and function of activity centres. MUZ is present in multiple locations across the municipality, typically along declared roads and railway lines. There are no requirements for building height, however, a maximum building height can be specified in a schedule to the zone.

ResCode requirements must be met for dwellings and subdivisions. The zone schedule allows for the inclusion of design objectives and to vary ResCode requirements relating to street setback, site coverage, permeability, landscaping, side and rear setbacks, walls on boundaries, private open space and front fence height. These standard built form requirements have not been varied in Ballarat.

Township Zone (TZ)

The TZ currently applies to the municipality's smaller settlements, Cardigan, Cardigan Village and Learmonth, where the separation of land uses (between residential, industrial and commercial) is not as critical to the function of town. Building height is discretionary and defaults to Clause 54 and Clause 55 standards (9 metres) if nothing is specified in the schedule.

ResCode requirements must be met for dwellings and subdivisions. The zone schedule allows for the inclusion of design objectives and to vary ResCode requirements relating to street setback, site coverage, permeability, landscaping, side and rear setbacks, walls on boundaries, private open space and front fence height. These standard built form requirements have not been varied in the City of Ballarat.

Neighbourhood Residential Zone (NRZ)

The NRZ applies to pockets of residential development in Ballarat East, Brown Hill, Buninyong, Canadian, Miners Rest, Mount Clear and Mount Helen.

The purpose of the NRZ is to recognise areas of predominantly single and double storey residential development.

The NRZ allows for building heights of up to 9 metres and must not exceed 2 storeys at any point. Specific local controls for Ballarat Council can be specified in a schedule to the zone.

The NRZ is the only residential zone in the Ballarat Planning Scheme that includes multiple schedules. The NRZ includes three schedules to the zone:

- Schedule 1 to the NRZ applies generally with no variation to the ResCode controls.

- Schedule 2 to the NRZ applies to areas in Buninyong and applies a minimum lot size of 800m² for subdivision. Schedule 2 includes variations to ResCode that requires no more than 45% of site coverage, no more than 30% non permeable area and a minimum rear setback of 5m.
- Schedule 3 applies to Miners Rest North and includes neighbourhood character objectives that seek to maintain a rural township character and views to the surrounding rural landscape. Schedule 3 applies a minimum lot size of 750m² for subdivision. It includes a variation to ResCode to require one canopy tree per 175m² of site area.

Residential Growth Zone (RGZ)

The RGZ applies to a select number of sites in Bakery Hill, Ballarat Central, Ballarat East and Wendouree, allowing for increased densities given proximity to commercial services and facilities. Typical housing development includes unit complexes, duplexes and apartment developments.

There is a maximum mandatory building height of 13.5 metres, unless specified otherwise in a schedule to the zone. ResCode requirements must be met for dwellings and subdivisions.

There is an opportunity to introduce design objectives and to vary ResCode requirements relating to street setback, site coverage, permeability, landscaping, side and rear setbacks, walls on boundaries, private open space and front fence height.

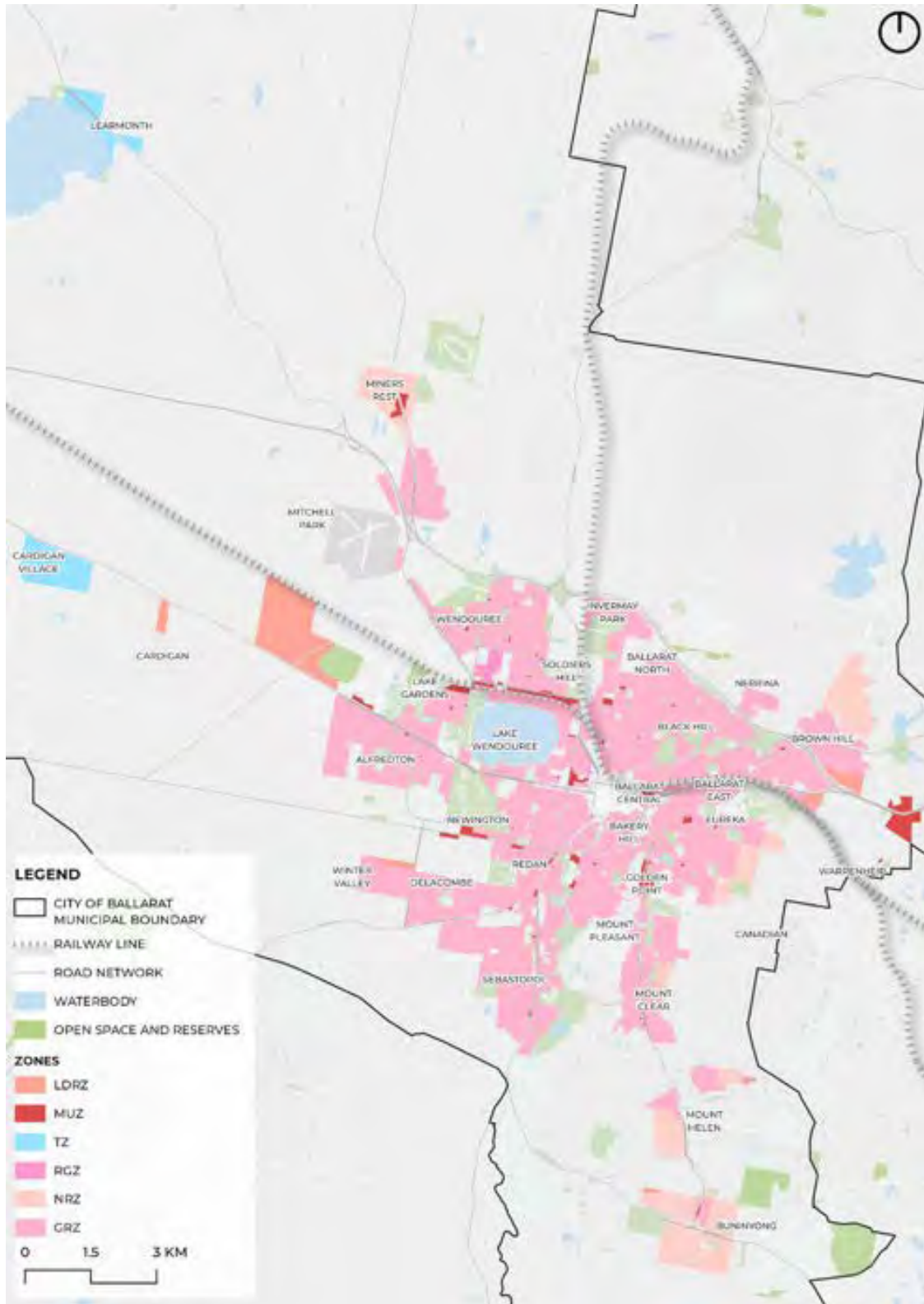
General Residential Zone (GRZ)

The predominant residential zoning within the City of Ballarat is the GRZ. Typical housing development within the GRZ includes single detached dwellings and multi detached dwellings, with the occasional unit complex closer to town centres.

There is a maximum mandatory building height of 11 metres and 3 storeys, unless specified otherwise in a schedule to the zone. ResCode requirements must be met for dwellings and subdivisions.

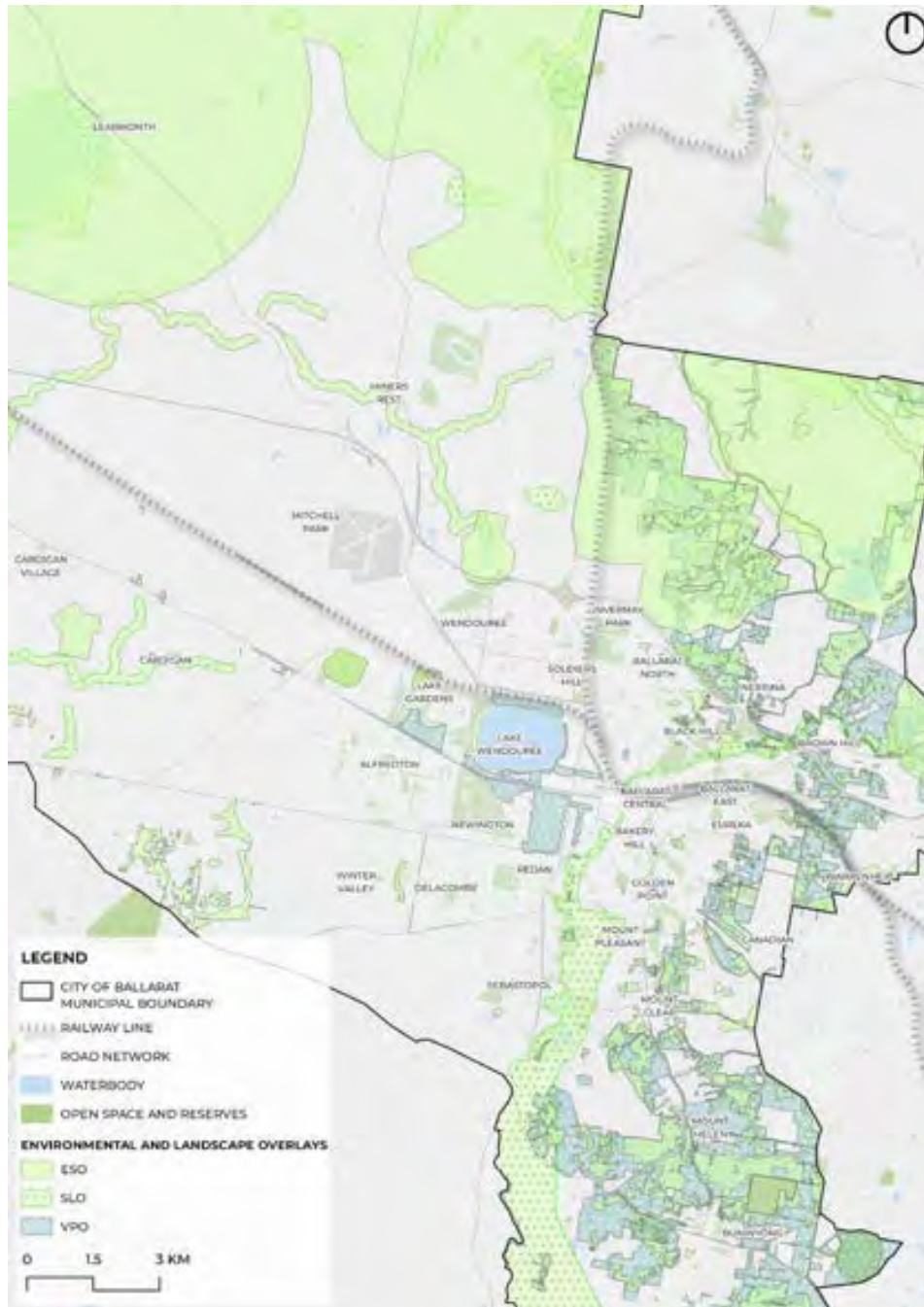
There is an opportunity to introduce neighbourhood character objectives and to vary ResCode requirements relating to street setback, site coverage, permeability, landscaping, side and rear setbacks, walls on boundaries, private open space and front fence height. These standard built form requirements have not been varied in Ballarat.

Zone Map



Overlays

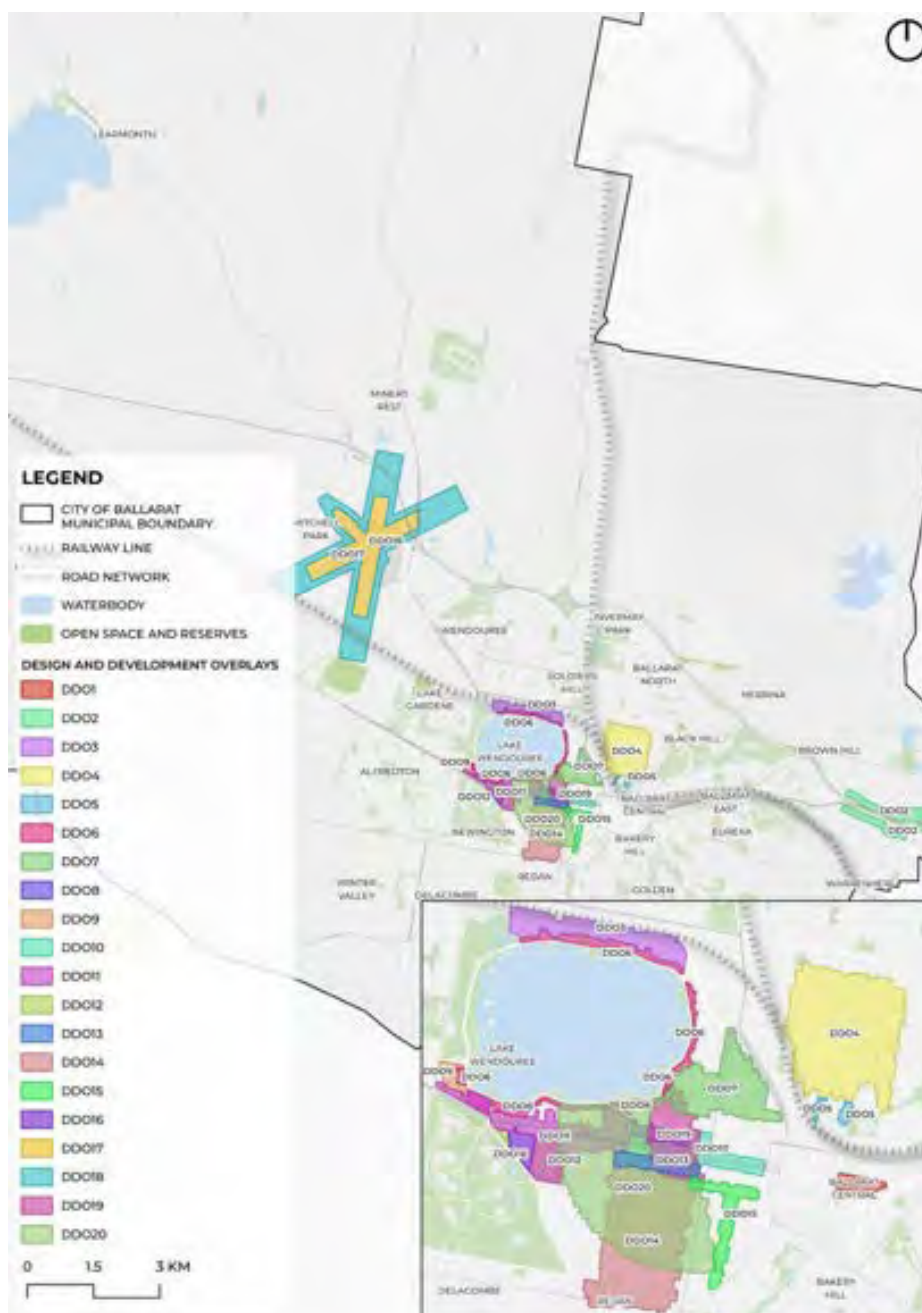
Zone Map



Environmental and Landscape Overlays:

- **Environmental Significance Overlay (ESO):** identifies areas where development may be affected by environmental constraints and ensures that development is compatible with environmental values.
- **Significant Landscape Overlays (SLO):** identifies and protects the character of significant landscapes.
- **Vegetation Protection Overlay (VPO):** identifies areas of existing significant vegetation and encourages regeneration of native plants and trees.

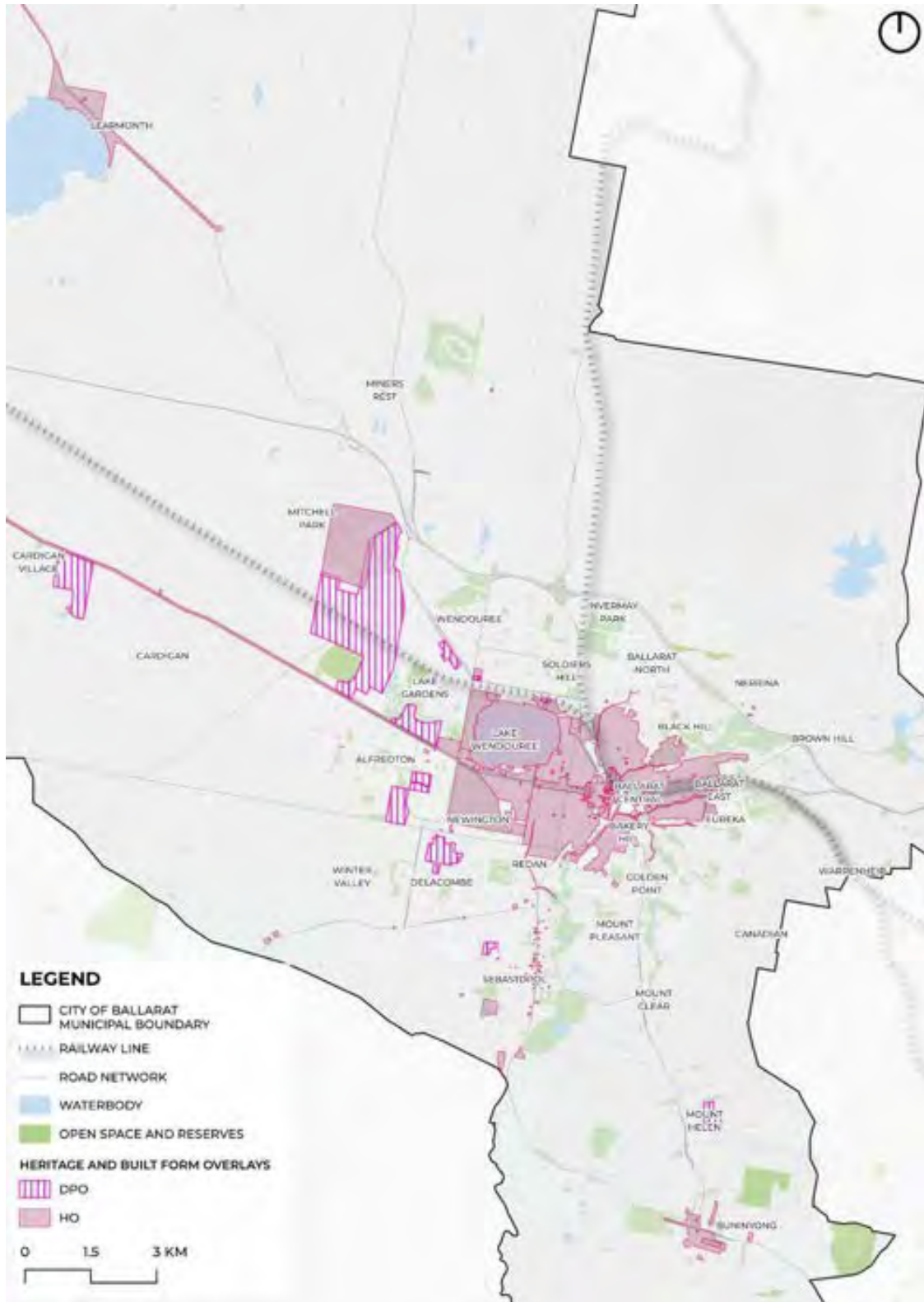
Design and Development Overlay Map



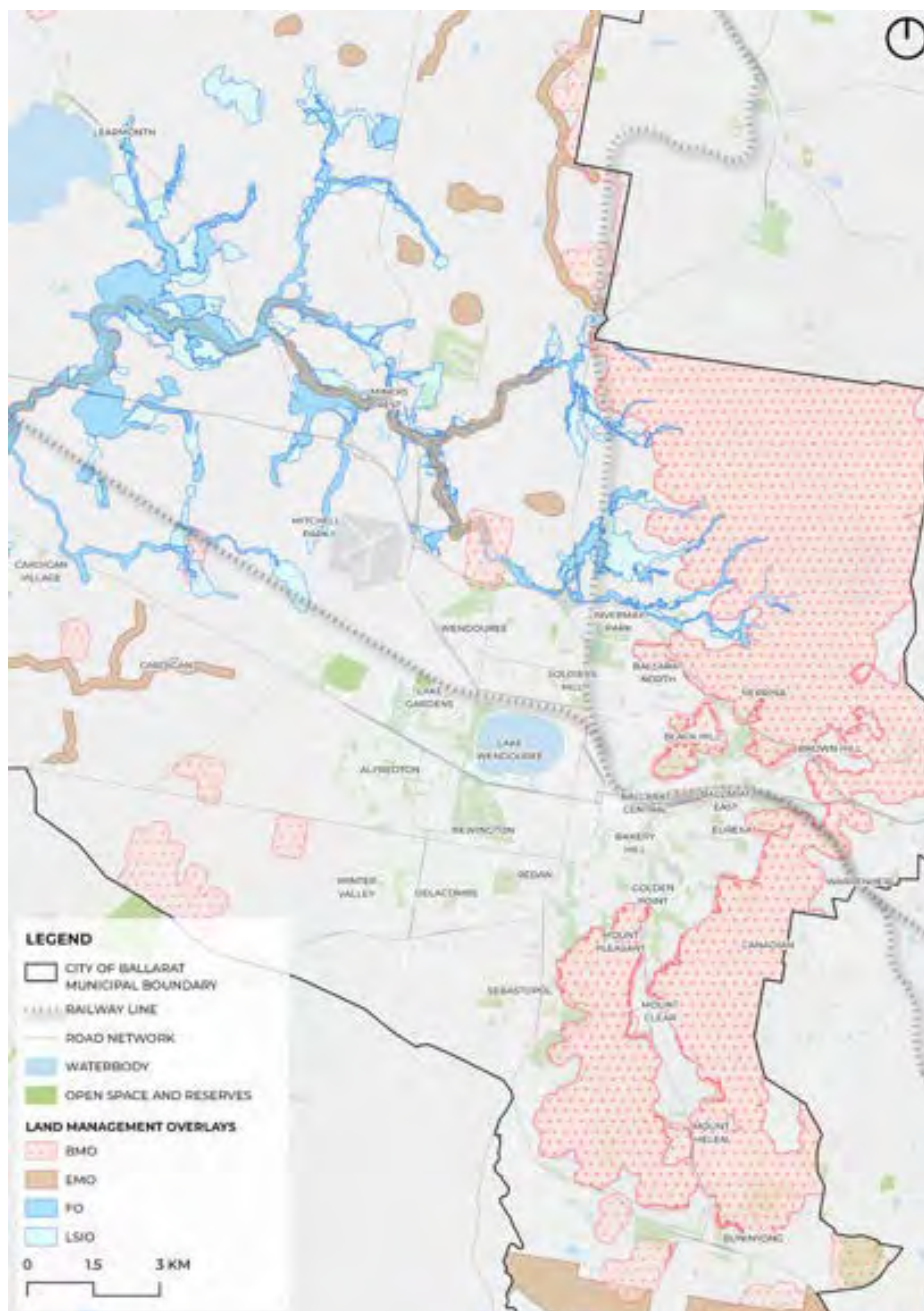
Heritage and Built Form Overlays:

- **Design and Development Overlay (DDO):** identifies areas which are affected by specific requirements relating to the design and built form of new development.
- **A review of the DDO Schedules that impact the study area is included at Appendix A.**
- **Development Plan Overlay (DPO):** identifies areas that require future use and development to be outlined on a development plan, before a permit can be granted.
- **Heritage Overlay (HO):** identifies, conserves and enhances heritage places of natural or cultural significance and to ensure development does not adversely affect the significance of heritage places.

Development Plan Overlay and Heritage Overlay Map



Land Management Overlays Map



Land Management Overlays:

- **Bushfire Management Overlay (BMO):** identifies land where there is a high potential for bushfire risk.
- **Erosion Management Overlay (EMO):** Seeks to protect areas prone to erosion, landslip, other land degradation or coastal processes by minimising land disturbance and inappropriate development.
- **Floodway Overlay (FO):** identifies waterways, major footpaths, drainage depressions and high hazard areas which have the greatest risk and frequency of flooding.
- **Land Subject to Inundation (LSIO):** identifies flood prone areas and requires development to maintain the free passage of flowing flood water.

Other Overlays Map



Other Overlays:

- **Airport Environs Overlay (AEO):** ensures that land use and development are compatible with the operation of airports.
- **Environment Audit Overlay (EAO):** ensures that potentially contaminated land is suitable for a use which could be significantly adversely affected by any contamination.
- **Public Acquisition Overlay (PAO):** identifies land which is proposed to be acquired by the Minister, public authority or local government.

2.3 Neighbourhood Character Policy

Neighbourhood Character Assessment

How neighbourhood character is defined and assessed is set out in Planning Practice Note 43.

A qualitative assessment is used to assist with identifying features and characteristics of an area to define the neighbourhood character of the area. The assessment takes into account elements of the public and private realms which has informed the assessment of the existing neighbourhood character, as well as the development of preferred character statements and design guidelines included in this Study.

Updates to Victorian Planning Provisions

In 2013, Amendment V8 introduced new residential zones into the Victorian Planning Provisions. The new zones support a range of housing densities and cater to changing needs of households and allow for local variations to residential development in the form of residential zone schedules to protect local neighbourhood character.

Planning Practice Notes

Planning Practice Notes (PPN) define what is meant by neighbourhood character and inform the neighbourhood character methodology of this Study.

Practice Note 43 – Understanding Neighbourhood Character (DTP, 2018)

Planning Practice Note 43 provides guidance for applicants, the community and Councils about:

- Understanding what is meant by neighbourhood character.
- Preparing or assessing a permit application for a residential development.

The PPN43 details the key attributes that cumulatively contribute to character. Importantly, PPN43 establishes that neighbourhood character is considered to be the cumulative impact of attributes in both the public and private realms. It is the relationship between these attributes, and how they physically appear on the ground, that is the most important consideration for neighbourhood character.

Practice Note 90 – Planning for Housing (DTP, 2019)

Planning Practice Note 90 provides information and guidance about how to plan for housing growth and protect neighbourhood character.

Key points relevant to this Study include:

- Respecting character does not mean preventing change. In simple terms, respect for the character of a neighbourhood means that development should be designed in response to its context.

This Study will identify qualities of the public and private realm that contribute to neighbourhood character in Ballarat.

Practice Note 91 – Using Residential Zones (DTP, 2019)

Planning Practice Note 91 provides information and guidance about the use of residential zones in addition to the local policies and overlays to implement strategic work and how best to make use of the key features of the residential zones.

Key points relevant to this Study include:

- Rather than specifying preferred neighbourhood character statements in local planning policy, objectives can be specified in a schedule to a residential zone to implement the preferred neighbourhood character.
- The Neighbourhood Character Overlay (NCO) can be used for an area that exhibits characteristics that are distinctly unique to the rest of the municipality and require a specific approach to assessing neighbourhood character.
- An NCO cannot be used as a 'blanket' control across the municipality, but rather should only be applied when the following criteria are met:
 - the proposed area exhibits existing characteristics that need to be protected, or need to be changed to achieve a preferred character.
 - the area, relative to the rest of the municipality, can be demonstrated to require a specific approach to neighbourhood character.
 - the application of local planning policy cannot meet the neighbourhood character objectives for that area.
 - the application of objectives, standards or variations to clause 54 and clause 55 cannot meet the neighbourhood character objectives for that area.
- Generally, the NCO should not be applied to areas impacted by a Heritage Overlay. Whilst the heritage characteristics of an area will contribute to neighbourhood character, the role of the Heritage Overlay should be to solely conserve existing buildings and is not used as a neighbourhood character control.

Key findings of this Study will consider how the existing zone schedules and overlays can be better utilised to protect and enhance neighbourhood character in Ballarat.

Victoria's Housing Statement

The following section provides an overview of the impact of the Victoria's Housing Statement and reforms to policy which seek to address issues of housing supply and affordability. Specifically, Amendment VC242 and VC243 came into effect during stage 4 of this Project, gazetted on the 20th of September 2023.

Amendment VC242

A major change has been introduced to all Victorian Planning Schemes via Amendment VC242 following the release of Victoria's Housing Statement (22 September 2023). Amendment VC242 is required to facilitate development that provide a significant level of housing, improving housing choice and affordability.

Specific implications of Amendment VC242

Essentially, Amendment VC242 introduces two new controls into Planning Schemes:

- Clause 53.22 (Significant Economic Development)
- Clause 53.23 (Significant Residential Development with Affordable Housing)

These new planning pathways are voluntary and do not apply to current/live applications.

In summary, these changes seek to provide a facilitated assessment process for significant development which can have an immediate and meaningful effect on addressing current housing and economic issues.

Amendment VC243

A further change has been introduced via Amendment VC243 which is required to support the delivery of housing in Victoria.

Amendment VC243 seeks to:

- Codify residential development standards.
- Implement the Future Homes project across the State.
- Remove permit requirements for single dwellings on lots of 300 square metres or more.
- Introduce VicSmart permits for single dwellings on lots less than 300 square metres.

Implications of Amendment VC243

Codifying residential development standards

The codification of residential development standards relates to those at Clause 54 (one dwelling on a lot) and Clause 55 (two or more dwellings on a lot) of the Planning Scheme.

This process seeks to create a more certain planning permit process, reducing potential barriers to swift approvals and clarifying how the standards are to be met.

Future Homes

Amendment VC243 introduces a new General Requirement and Performance Standard at Clause 53.24 of the Scheme in respect to the Future Homes initiative.

Clause 53.24 seeks to facilitate apartments developments that:

- Incorporate exemplar designs approved under the Future Homes project.
- Increase the density and diversity of housing to respond to Victoria's population growth.
- Are exemplary in their design, liveability and sustainability.

Clause 53.24 will apply to any application under the General Residential Zone (GRZ) to construct two or more dwellings on a lot provided:

- The development is an apartment development.
- Design of the apartment development must use a licensed exemplar design approved under the Future Homes project overseen by the DTP.
- The land is within 800 metres of a railway station or an activity centre.
- The land is not within a Heritage Overlay or Neighbourhood Character Overlay.

Removal of the requirement for planning permission for a single dwelling on a lot over 300 square metres

Amendment VC243 removes from the GRZ, NRZ and TZ, the ability to specify in the schedule to those zones that planning permission is required to construct or extend a single dwelling on a lot (or construct or extend a fence within 3 metres of a street) on a lot of 300 square metres or more.

Effectively, there is no longer a requirement to obtain a planning permit to construct a single dwelling on a lot over 300 square metres unless this a requirement specified under other provisions of the Scheme i.e. an Overlay.

Introduction of VicSmart permits for single dwellings on lots less than 300 square metres

By making applications to construct or extend a single dwelling on a lot of less than 300 square metres appropriate to pursue via the VicSmart pathway, this will reduce the administrative cost and resources for the responsible authority, allowing planners to focus on assessing larger and more complex proposals.

Granny Flat Permit Exemption

Following the Victorian Housing Statement, a small second home up to 60 square metres, also known as a granny flat, secondary dwelling or an accessory dwelling unit, no longer requires a planning permit in most cases where there is no flooding, environmental or other special planning controls.

A small second home still requires a building permit, to meet siting, amenity, design, and safety requirements – and cannot be subdivided or separately sold off from the main home.

Amendment VC253 made changes to the Victoria planning provisions and all planning schemes to coordinate the approval processes to build a small second home.

2.4 Strategic Documents

As part of this Study a review of the City of Ballarat's suite of strategic documents has been undertaken. Findings from this review relevant to neighbourhood character and this Study, as well as future development opportunities within the City of Ballarat have been grouped by theme.

- City of Ballarat Council Plan 2021-2025 (August 2021)
- Ballarat Station Precinct Redevelopment (March 2022)
- Ballarat West Precinct Structure Plan (October 2016)
- Alfredton West Precinct Structure Plan (2011)
- Urban Forest Action Plan (March 2019)
- Today Tomorrow Together: Ballarat Strategy 2040 (July 2015)
- Ballarat's Future Housing Needs: 2021-2041 (June 2023)
- Bakery Hill Urban Renewal Plan (October 2019)
- Ballarat Creative City Strategy (April 2019)
- Ballarat Heritage Plan 2017-2030 (December 2017)

Housing

- The City of Ballarat acknowledges that increased residential development is necessary to support its growing population.
- Ballarat has capacity to deliver housing via infill development and in its growth areas.
- New housing should be located to have access to services, infrastructure and amenity. New infrastructure may need to be delivered to ensure Ballarat's growth areas have an equal access to services as its established suburbs.
- Although there is high demand for single, detached dwellings, there is a need for future development to provide more diverse housing choices.
- The Ballarat community supports increased diversity of housing, given that it responds to the character of a neighbourhood.

Heritage

- The heritage of Ballarat contributes to the overarching character and identity of Ballarat as a regional centre of Victoria.
- Central Ballarat is a key heritage precinct that is situated on a plateau which provides views to Ballarat East and other important visual landmarks including Mt Warrenheip and Mt Buninyong.
- Views to prominent landmarks in the heritage precincts of the Ballarat CBD are highly vulnerable to greater building density and a change in the ratio of space and mass as a result of increased development.
- In heritage precincts, the colours and materials used in new development should be sympathetic and consistent with the colours and materials used in existing development.

Vegetation and Landscaping

- Ballarat has extensive tree canopy coverage that contributes to the greening of streetscapes and the overall amenity of the municipality.
- With goals to increase tree canopy cover to 40% by 2040, it is generally expected that new development will include generous landscaping with at least one canopy tree in the front setback.
- Tree canopy coverage is highest in areas that are within proximity to waterways and areas of public open space. Trees in these areas are often protected by environmental overlays.
- The street trees within Ballarat Central and Ballarat East have heritage values and are widely valued by the community of Ballarat. These trees are mature and overhang the road to frame the streetscape.

Please refer to **Appendix B** for a summary of the strategic documents and implications for Neighbourhood Character.



3.0 Engagement

Two separate stages of community engagement have been undertaken to date to consult with the local community. The first stage occurred between July and September 2020 and the second stage occurred between September and October 2023.

Promotional activities for both stages of engagements included:

- Distribution of project brochure
- Posts to Ballarat My Say page
- Social media promotion
- FAQ one page overview
- Media releases and advertising in newspapers
- Social media advertising
- Radio interviews and advertising

3.1 Summary of Stage 1 Engagement

Stage 1 engagement occurs between July and September 2020 included the following consultation activities includes:

- One to one online engagement sessions
- Online community information drop-in sessions
- Online community feedback survey
- Interactive neighbourhood character feedback map
- Targeted stakeholder engagement
- Invitation to provide written feedback

A total of 659 people engaged with the material provided online during the first phase of consultation. This led to 59 responses to the community feedback survey and 10 attendees at the community information drop-in sessions.

These consultation activities invited respondents to identify elements of neighbourhood character that they valued, including:

- Streetscape and relationship of buildings to the street
- Architectural style of buildings
- The palette of material used for the façade of buildings
- Retained or rehabilitated heritage buildings
- Roof styles
- Landscaping of front yards
- Canopy cover on streetscape
- Front fencing

Respondents generally identified all the above character attributes as important, with 41% noting that the streetscape was the most valued element of their neighbourhood.

The survey also asked respondents to identify the type of housing they would like to see where they live. This question received 53 responses, of which the majority of respondents identified a preference for detached dwellings.

3.2 Summary of Stage 2 Engagement

Stage 2 of community consultation occurred between September and October 2023. It included an invitation to local residents and key stakeholders to provide a written submission detailing their feedback on the Draft Ballarat Housing Strategy.

A total of 76 written submissions were received. Of these submissions:

- 23 were received from community members
- 27 were from the development industry
- 8 were from consultants on behalf of landowners
- 11 were from agencies and government departments
- 7 were from community groups

Whilst none of the submissions raised issue with the Draft Ballarat Neighbourhood Character Study and the character areas, they provide commentary on key issues that relate to housing and sustainable development in Ballarat.

All submissions were reviewed and included in a thematic analysis to understand the key issues, opportunities and considerations that needed to be further addressed in the Final Ballarat Housing Strategy.

This analysis found that submissions were generally supportive of the character areas included in the Draft Neighbourhood Character Study.

DTP provided a submission that included commentary on the character areas and the Draft Neighbourhood Character Study. The commentary identified elements

of the Draft Neighbourhood Character Study that could be improved which includes:

- The preferred neighbourhood character should be considered separately from level of change, rather than defining preferred character based of the level of change envisaged for an area.
- The geographical boundaries of each character area should be mapped to avoid misalignment of the boundaries for character areas and housing change area.
- Characters areas should be consolidated to ensure that one housing change area has been applied for each character area so that they include distinct character objectives that inform the selection and extent of the change areas.
- Recommendation for a Residential Development Framework to show change areas and character areas on the map.

The key issue themes and commentary from the submissions include:

- Infill target and growth areas:
 - The heritage constraints and cost of land in the urban areas of Ballarat make it difficult to deliver infill development.
- Biodiversity and climate change:
 - The biodiversity of landscaping across Ballarat contributes to character and should be retained to address climate change.
- Affordability and Diversity
 - A greater diversity of housing types can be supported in Ballarat without devaluing neighbourhood character by providing high quality building designs.
- Structure and Evidence Base
 - DTP's comments primarily requested further information to form a stronger planning context to support the Ballarat Housing Strategy.
- Heritage and Character:
 - Concerns were raised that the heritage constraints to the development of land hadn't been fully considered in land capacity analysis. This had consequential concerns that the delivery of housing would be prioritised over the protection of heritage buildings.
 - The heritage areas in Ballarat East and Ballarat North were noted as requiring special protection.

An additional stage of community consultation, known as Stage 3 Engagement, was undertaken on this updated Draft Neighbourhood Character Study in the second half of 2024.

4.0 Key Issues and Threats

4.1 Overview

In order to appropriately determine the future planning provisions for the implementation of the preferred neighbourhood character areas in this Neighbourhood Character Study, the key issues and threats to character require consideration.

These issues and threats are summarised below, and are based on the desktop assessment, site visit findings and outcomes of community consultation.

The following themes have been identified as the key issues and threats:

- Heritage
- Loss of vegetation and landscaping
- Topography and views
- Contemporary infill development
- Dominant fencing styles
- Location of car parking

The following section provides an overview of each of these issues and threats and identifies areas and key locations which are affected by these themes.

4.2 Heritage

- The study area includes a high number of heritage buildings and precincts, particularly in the areas within close proximity to Ballarat CBD in Ballarat East, Ballarat South and Ballarat North.
- Heritage buildings are less common outside the inner suburbs of Ballarat, with the exception of Sebastopol that includes a number of heritage dwellings along Albert Street.
- Protection of heritage buildings is important to the community and plays a key role in the identity of the City of Ballarat.
- Ballarat East, Ballarat South and Ballarat North include various early to late Victorian dwellings that were constructed between 1900 and 1940. These dwellings are impacted by the Heritage Overlay which applies controls that restrict the extent of works that can occur to the external components of some dwellings.
- Ballarat East and Ballarat North feature non-residential heritage buildings, particularly on street corners, that contribute to the character of these areas.
- A mix of heritage and non-heritage dwellings are located around Lake Wendouree, with heritage dwellings more common on the eastern side of the lake.
- Learmouth is identified as a key heritage precinct for the City of Ballarat and is impacted by the Heritage Overlay.

Infill and large scale development can threaten the quality of heritage precincts by dominating and disrupting the streetscape and delivering modern architectural styles and materials that are inconsistent with the wider heritage precinct.



Dwellings in Ballarat East
Photos by Ethos Urban



Dwelling in Ballarat North

4.3 Vegetation and Landscaping

- The residential streets throughout the City of Ballarat typically include street tree planting, with a higher density of street tree planting in the older residential areas compared to the more recently development estates.
- Ballarat East includes mature canopy trees on both sides of the street as a key attribute to its character. The large and well established street trees in Ballarat East acts as the main form of landscaping on the streetscape as dwellings in Ballarat East often do not include a front setback that can accommodate vegetation.
- Mature street trees are also prevalent in Ballarat North however not to the same extent and density as Ballarat East. Infill development in Ballarat North with reduced front and side setbacks that do not provide the area required for new canopy tree planting threatens the delivery of landscaping visible from the streetscape.
- Dwellings in Ballarat North and Redan typically include formal gardens in its front setback with groundcover and shrub vegetation with some small trees. Vegetation has been removed from various sites to accommodate infill development. Landscaping works to extensively remove vegetation is considered 'moonscaping' and is a key threat for the existing vegetation of these areas.
- In the more recently developed areas of the City of Ballarat, including Winter Valley and Alfredton, street trees are intermittent and minimal vegetation in front setbacks is often the only vegetation visible from the public realm. Small front and side setbacks are a threat to the continued planting of vegetation and provision of deep soil areas for canopy trees.
- Native vegetation is prominent in Mount Pleasant, Black Hill and Brown Hill, particularly in the areas that interface with Yarrowee River. These areas are impacting by environmental overlays that restrict vegetation removal.
- Significant vegetation exists in Mount Helen and Mount Clear and often permeates across lot boundaries.



Street trees in Ballarat East

Photos by Ethos Urban



Dwelling sitting with the vegetation in Brown Hill

4.4 Topography and Views

- The occasionally undulating topography in Ballarat North and Soldiers Hills affords attractive views to the skyline of the CBD with the rural landscape in the background. Large scale developments in the north of the Ballarat CBD with high building heights would threaten the retention of these views.
- Development in Brown Hill and parts of Black Hill and Nerrina benefit from views to nearby bushland reserves that provide an attractive backdrop that is important to the character of these areas. Increased height and scale of development in these areas can detract from the attractiveness of the area by encroaching on key view lines.
- Alfredton, Winter Valley, Sebastopol and Delacombe have a generally flat topography that enables views to the rural landscape to the south east of the City of Ballarat.
- The sites facing Lake Wendouree have been developed to maximise views to the lake and its associated open space. These views are important to the character of Lake Wendouree and its residents. Development of more than two storeys on the lots facing Lake Wendouree would threaten lakeside views from adjoining streets.



Views to Ballarat CBD from Soldiers Hill
Photos by Ethos Urban



Vegetated backdrop in Brown Hill

4.5 Contemporary Infill Development

- Infill development is prominent across the City of Ballarat, often using architectural styles and material palettes that contrast with existing development.
- The prominence of infill development is more obvious in Ballarat East and adjacent to the Ballarat CBD where higher densities of development can occur to capitalise on the wider range of services that are accessible in these areas. This infill development can often contrast quite significantly with the predominant heritage built form that exists in these areas.
- Infill development that uses a material palette of washed brickwork and timber cladding has less of a contrast to the streetscape and can compliment surrounding heritage buildings.
- Infill development in Ballarat Central includes apartment developments which have been strategically located in areas of flat topography and existing multilevel buildings. New large scale buildings that protrude above the predominant low scale built form would threaten character.



Infill development in Ballarat East

Photo by Ethos Urban

4.6 Dominant fencing styles

- Front fencing styles differ throughout the City of Ballarat. Despite this, there is an overarching preference for fencing styles that allow views to front gardens from the street.
- Typical picket fencing is common in Ballarat East, Ballarat North and Soldiers Hill. Picket fencing is often no more than 1.2m in height and provide views to the dwelling when viewed from the street. New development in these areas often replicates the 1.2m height but uses materials that are less transparent and restricts views to front gardens.
- Low brick fencing is particularly common in Redan and Newington. The low brick fencing would not exceed 0.5m and creates a sense of openness between the front yards of dwellings and the streetscape. New developments in Redan and Newington include high and solid fencing that disrupts the streetscape and reduce views to front gardens.
- Front fencing is generally absent in Mount Helen, Brown Hill and parts of Mount Pleasant, Mount Clear and Black Hill. In these areas vegetation is typically used to define the front boundary of the site rather than fencing. High and solid fencing in these areas would reduce the dominance of vegetation in the streetscape and are a threat to the overall streetscape character.
- Wire fencing or no fencing is common in the areas that interface with the Farming Zone, including Cardigan and Learmouth.
- Higher fencing of up to 1.5m is more common on sites fronting busy roads or to adjoining lots with non-residential uses.



Low brick fencing in Delacombe
Photos by Ethos Urban



Vegetation is used instead of fencing in Brown Hill

4.7 Location of Car Parking and Storage

- New development throughout the City of Ballarat typically include onsite car parking, usually with a garage, to avoid the use of on street car parking.
- In Ballarat East, it is uncommon to have a garage or car parking space per dwelling. The streetscape of Ballarat East includes generous space for on street car parking. New development that includes a garage on the front façade would disrupt the dominant streetscape pattern and facilitate an architectural style that is inconsistent with existing buildings.
- Garages are typically provided in line with the front façade of more recently constructed dwellings. Garages often dominate the façade of dwellings, particularly in Delacombe, Sebastopol, Alfredton and Winter Valley.
- The older housing stock in Redan, Newington and Mount Pleasant often includes a single garage. Otherwise, car parking is located in the driveway. Dwellings in these areas often have more than one car which results in cars being parked in front gardens and on the street. This makes car parking a dominant feature for these areas and reduce the space to be used for landscaping.
- Dwellings with larger lot areas, particularly in Cardigan, Miners Rest and Brown Hill, have garages that are often in line with or set back from the façade of the dwelling and occasionally include informal car parking areas in the front setback.



Garage in front setback in Delacombe
Photos by Ethos Urban



Car parking in front yard in Brown Hill



5.0 Performance of Existing Settings

5.1 VCAT Cases Summary

The following is a summary of a selection of VCAT cases relating to neighbourhood character in Ballarat. The key implications for this Study are outlined below.

All five VCAT cases reviewed raised concerns over proposed development in residential locations that were not subject to either an SLO, a DDO or a schedule to a residential zone that outlined specific Neighbourhood Character Objectives.

In one case only, the City of Ballarat and VCAT were both satisfied with the application's expected outcome. The proposal was found to be consistent with the RGZ and policy directions that acknowledge a change in preferred character as a result of support for more intensive development. VCAT supported City of Ballarat decision. City of Ballarat had issued a Notice of Decision to grant a permit following objections received and VCAT supported City of Ballarat decision.

In three instances, City of Ballarat refused to grant a permit raising concerns with built form elements including scale, intensity, landscape values, poor ecology and bushfire considerations, and rural vistas.

In one instance, VCAT reaffirmed City of Ballarat refusal to grant a permit on the grounds that the proposed subdivision did not adequately respond to the requirements of the ESO5, BMO and VPO1.

However, in two of these cases VCAT was satisfied that the proposals were consistent with the local policies and strategic directions and balanced the existing and preferred outcome for the sites. The role of Clause 71.02-3 in balancing conflicting objectives was highlighted.

In another case, City of Ballarat sought to approve a proposal within a Heritage Overlay on the grounds that the proposal was consistent with strategic directions that seek to accommodate residential growth. A previous appeal was cited, which raised the lack of metrics to exercise discretion in applications within a Heritage Overlay that achieve policy objectives. However, VCAT was not satisfied that the proposal would achieve acceptable heritage and character outcomes.

The following table summarises the relevance of each case for this Study.

CASE	RELEVANCE TO NEIGHBOURHOOD CHARACTER
Monsien Holdings Pty Ltd v Ballarat CC [2019] VCAT 324	This case tested the concept of higher-density development within the Convenience Living Corridor in a GRZ1.
Liu v Ballarat CC [2020] VCAT 756	This case tested the concept of higher-density development within the Convenience Living Corridor in a GRZ1 and subject to a HO166.
New Home Shop Pty Ltd v Ballarat CC [2024] VCAT 313	This case tests a subdivision within the NRZ1, subject to ESO5, BMO and VPO1, and the Canadian Valley Outline Development Plan.
Howlett v Ballarat CC [2023] VCAT 340	This case considers a higher-density development within the RGZ.
Pilmore v Ballarat CC [2023] VCAT 568	This case considers a three lot subdivision in an Ongoing change area and within the Canadian Valley Outline Development Plan..

The key gaps in the Planning Scheme identified in these cases are related to:

- Lack of specific Neighbourhood Character Objectives and guidelines in residential zone schedules.
- Lack of character and built form guidance when exercising discretion in applications under a Heritage Overlay.
- Lack of guidance in local policy that informs preferred character outcomes.

Further details of each VCAT case are included at **Appendix C**.

5.2 Bushfire Management

Bushfire Management Overlay and the Bushfire Prone Area Designation

Much of Ballarat is a Designated Bushfire Prone Area (BPA) under section 192A of the Building Act 1993 and sections of the municipality are also subject to a Bushfire Management Overlay (BMO).

Exemptions apply to buildings built prior to 10 September 2009 and are set out in clause 52.12 (Bushfire Protection: Exemptions). The exemptions apply regardless of whether a permit is required to remove vegetation under any other provision of the planning scheme (e.g. clause 52.17: Native Vegetation, Vegetation Protection Overlay, Environmental Significance Overlay or the like). That is, the exemptions trump all other planning permit triggers, meaning that the City of Ballarat does not have the power to prevent the removal of vegetation covered by the exemptions. For land within the BMO, any vegetation can be cleared within 10 metres of buildings used for accommodation plus any vegetation (except trees) within 50 metres, provided that it was constructed or approved before September 2009.

For land mapped as BPA, vegetation can be cleared within 10 metres of a building used for accommodation plus any vegetation (except trees) within 30 metres.

Clause 52.12-2 also provides for an exemption allowing the removal of vegetation from along a fence for a combined maximum width of four metres either side.

While allowing residents to mitigate bushfire risk on their properties is integral to the protection of human life anecdotal evidence suggests that an unfortunate consequence is the impact on neighbourhood character. The cumulative impact of vegetation removal from individual properties poses a threat to the highly valued 'treed' character of Ballarat.



Photo by Ethos Urban

6.0 Housing Strategy

6.1 Ballarat Housing Strategy 2041

The Ballarat Housing Strategy 2041 provides the City of Ballarat with a framework for managing population and housing growth for the next 15 years across the City of Ballarat.

The strategy envisions a population growth of 55,000 additional residents in Ballarat by 2041, who will need to be accommodated in 29,000 additional dwellings. The City of Ballarat has a responsibility to ensure existing and future residents have access to safe, comfortable, well-located homes that are designed to meet high environmental standards and respect the unique heritage character of the city and townships. The Housing Strategy has been prepared to respond to these challenges.

The Housing Strategy outlines three types of Change Areas (Figure 21) that should be applied when considering accommodation of population growth.

- **Substantial Change Areas** will see a significant change to their neighbourhood character. Higher density residential development is suitable in these areas, which are well-connected to services and amenities. Appropriate development will comprise of a mix of apartments and townhouses up to six storeys high, offering high quality and environmentally sustainable design. More intensive development is encouraged through site consolidation.
- **Incremental Change Areas** will accommodate additional residential development given their location within close proximity to services and amenities. Appropriate development will see smaller

dwellings designed in a way that respects identified heritage values and increases diversity of dwelling typologies and bedroom sizes. Neighbourhood character in these areas will evolve progressively as additional dwelling density is achieved, with massing of generally single and two storeys suitable.

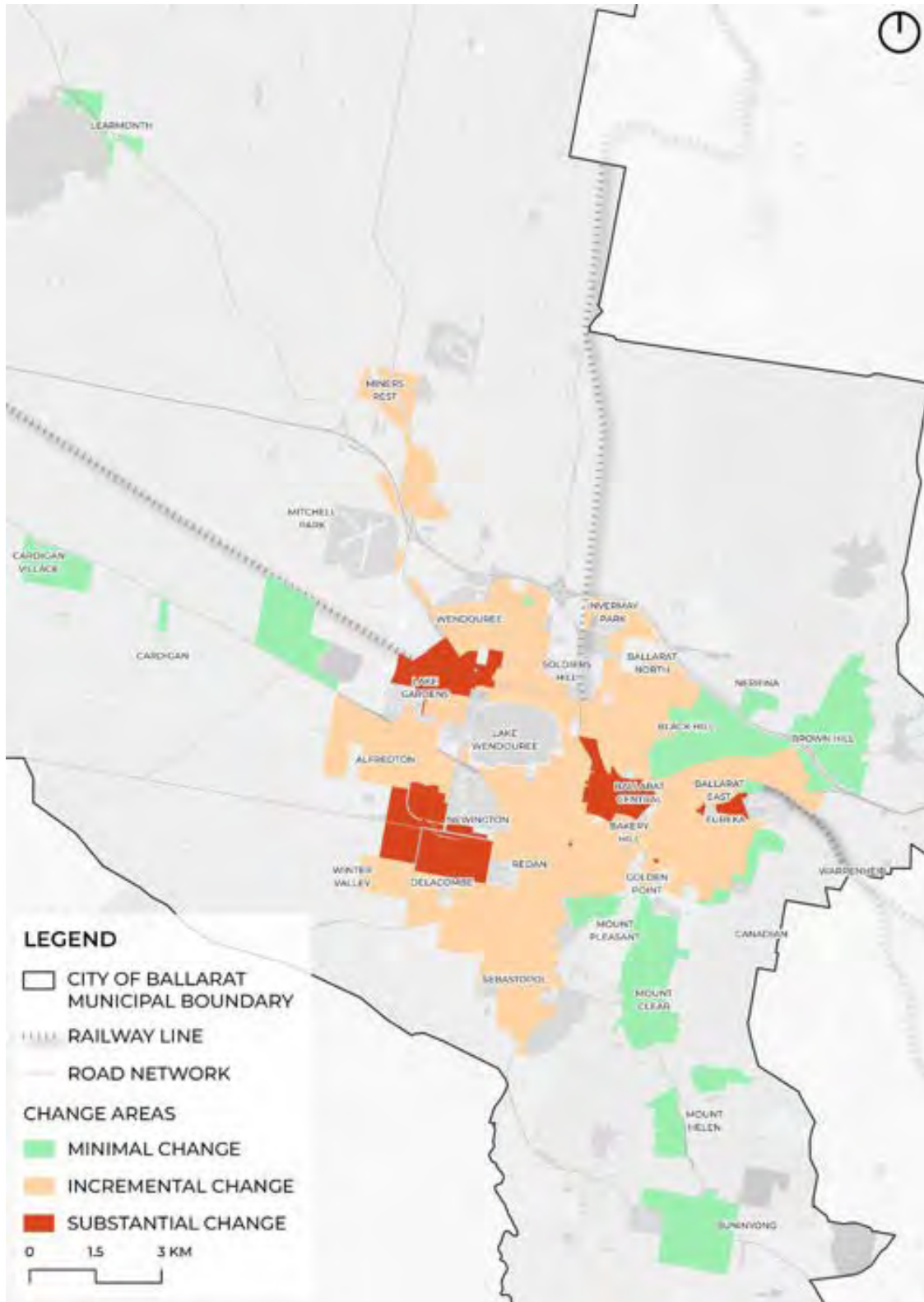
- **Minimal Changes Areas** will accommodate no additional residential development beyond what can be done under the current planning controls, and no increase in existing density patterns will be promoted. Future zone and overlay controls to come from the application of Change Areas will be determined through the future Residential Zone and Overlay Reform Project. Improved bushfire protection measures and opportunities for associated improved biodiversity outcomes are needed. Estimates of how many dwellings per hectare can be achieved in these areas have been applied and have given an indication of the potential Zone(s) that may be applied to these areas in future.

The Housing Strategy was prepared alongside this Neighbourhood Character Study which together will be used to identify what locations are best suited to accommodate more new housing.

Further community consultation occurred to seek feedback on both the Updated Draft Housing Strategy and the Updated Draft Neighbourhood Character Study.

The outcomes of this community consultation were used to prepare the Final Housing Strategy and Neighbourhood Character Study.

Draft Housing Change Areas



7.0 Updated Neighbourhood Character Types

This section outlines the updated neighbourhood character areas identified within the City of Ballarat as part of the desktop analysis and site surveys undertaken for this Study.

These updated neighbourhood character areas also reflect the key values identified through community consultation undertaken in 2020 and 2023.



Six Neighbourhood Character Types were identified across the existing residential areas in Ballarat:

- Bush Residential
- Garden Court
- Garden Residential
- Lakeside Garden
- Rural Residential
- Urban Core

Character Sub Types are included for Bush Residential, Garden Court, Rural Residential and Urban Core Character Areas. While still exhibiting the overarching character type, each subtype includes distinct attributes relevant to character in these areas.

The following table provides an overview of the updated character areas identified by this Study and also demonstrates the key differences between each area and sub type.

Table of Neighbourhood Character Types

Bush Residential 1	Bush Residential 2
	

Photos by Ethos Urban

- Features a mix of architectural styles from the late Victorian period to the late 20th century.
- Moderately sized lots with front and side setbacks ranging from typical to generous.
- Views to surrounding creek corridors and bushland.
- Predominantly informal landscaped gardens.
- Streets following an informal street layout, featuring a mix of sealed and unsealed roads with no footpaths.
- Flat to sloping topography.

- Features Post-war, modern and occasional Contemporary dwellings.
- Moderately sized lots and typical front and side setbacks.
- Intermittent views to surrounding bushland.
- A mixture of informal and formal landscaped gardens.
- Curvilinear street layout with sealed roads.
- Undulating to Sloping topography.

Garden Court 1



Garden Court 2



Photos by Ethos Urban

- Predominantly late 20th century, interwar and post war style dwellings.
- Streets follow both grid and curvilinear layouts with court bowls.
- Low levels of vegetation in front gardens.
- Predominantly flat topography.
- Fencing is absent or low.

- Predominantly Modern and Contemporary Style Dwellings.
- Predominantly single storey.
- Minimal front and site setbacks.
- Low levels of establishing vegetation and formal planting styles.
- Predominantly flat topography.
- Absence of front fencing.

Garden Residential



Lakeside Garden



Photos by Ethos Urban

- Predominantly interwar and postwar styles with occasional contemporary infill development.
- Enclosed views along tree-lined streets and avenues.
- Sealed roads with gravel shoulders.
- Single storey with occasional double storey development.
- Flat to sloping typography.

- A mix of single, double and three storey development.
- A mix of architectural styles.
- Established front gardens.
- Front setbacks range from minimal to general depending on the building style, with minimal side setbacks.
- Built form designed to maximise views to Lake Wendouree.

Rural Residential 1



Rural Residential 2



Photos by Ethos Urban

- Large lots and floor plates.
- Generous front and side setbacks.
- Dwellings are oriented parallel to the street.
- Low to medium level of established vegetation and expansive grass lawns.
- Low or no front fencing.
- Views to surrounding farmland and nearby settlements.

- Large lots and floor plates.
- Long, unsealed driveways.
- Inconsistent siting of dwellings.
- Spacious setbacks.
- Low or no front fencing.
- Significant level of remnant native trees in private and public realm.

Urban Core 1



Urban Core 2

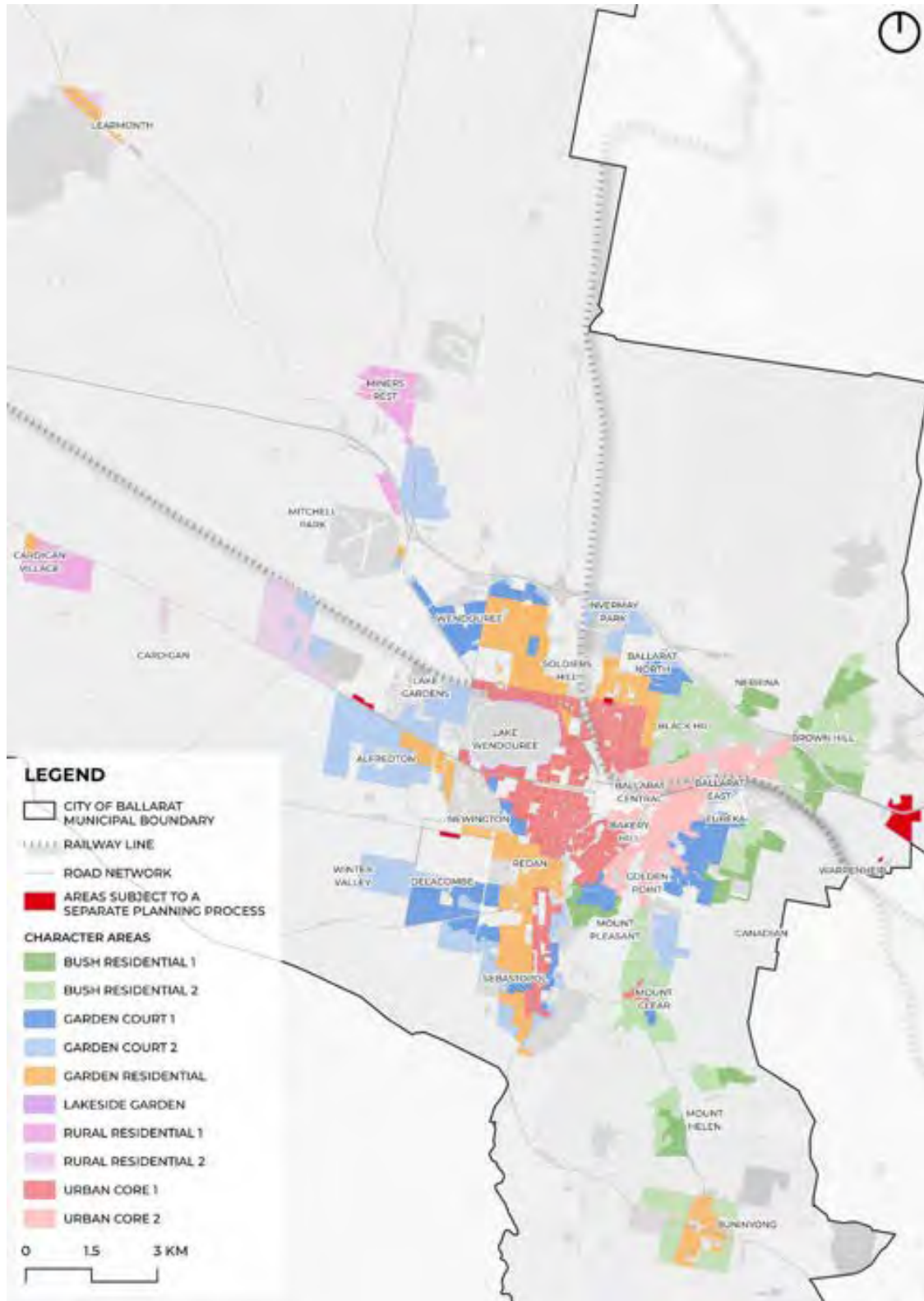


Photos by Ethos Urban

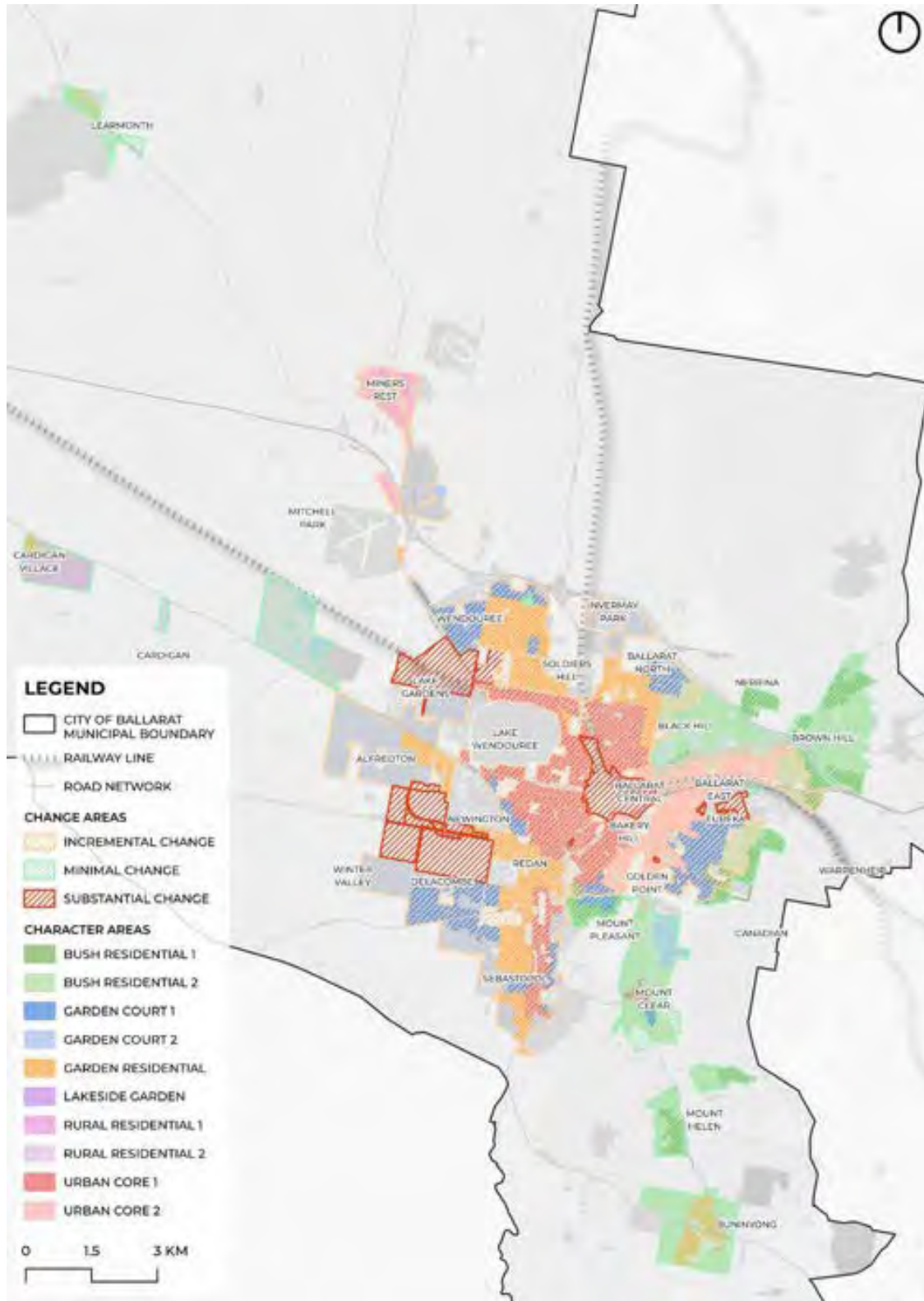
- Mixture of Victorian, Edwardian, Inter-war and Post-war styles.
- Low to medium levels of established vegetation.
- Typical front setbacks with minimal side setbacks.
- Gridded street layout featuring wide sealed roads.
- Scale of dwellings responds to the presence of heritage dwellings.
- Footpaths generally present on both sides.

- Mixture of Victorian, Edwardian, Inter-war and Post-war styles.
- Front gardens contain formal planting styles.
- Predominantly weatherboard and brick dwellings, with a neutral colour palette including browns, greys, cream and white.
- Minimal to typical front setbacks and minimal side setbacks.
- Buildings are predominantly detached single dwellings with some semi-detached.
- Footpaths are generally present on one side.

Character Areas



Character Areas and Change Areas





8.0 Neighbourhood Character Precinct Profiles

8.1 What is preferred Neighbourhood Character?

As outlined in Planning Practice Note 90, under clause 54 and clause 55, new development should respect the existing neighbourhood character or contribute to a preferred neighbourhood character. Preferred neighbourhood character is either:

- The existing character of an area.
- An identified future neighbourhood character different from the existing character of an area.

Where the existing neighbourhood character is the preferred neighbourhood character, it is important to identify the existing features and characteristics of the area to be respected.

A preferred neighbourhood character statement can articulate the valued features and characteristics of an area to be respected by new development. There is no prescribed format for a preferred neighbourhood

character statement. Its form will depend on several factors including the features and characteristics of an area or municipality, the housing outcomes sought, and the views of the local community.

It is important that preferred neighbourhood character statements are 'forward-looking' so that if an area is identified for increased housing growth, the growth is not undermined by neighbourhood character policies that seek to maintain the existing neighbourhood character.

8.2 How to read the Character Precinct Profiles

Neighbourhood character precinct profiles have been prepared for each neighbourhood character area identified within the City of Ballarat. Each profile provides a summary of the character area with associated character objectives and design guidelines to provide guidance for future development, ensuring that it reflects the preferred character as best as possible.

The precinct profiles include:

- Character Description
- The Preferred Character Area Map
- A summary of key character attributes
- Preferred Character Statement
- Preferred Character Objectives
- Design Guidelines
- Example Images

Neighbourhood Character Objectives and Design Guidelines

The purpose of the character objectives and design guidelines is to provide clear direction and guidance on built form outcomes based on preferred neighbourhood character outcomes.

In alignment with Planning Practice Note 91, the Preferred Character Statement directly informs the five design objectives per character area, which can be specified in a schedule to a residential zone to implement the preferred neighbourhood character.

A number of character areas include additional objectives and guidelines for areas that have been identified for incremental and substantial change in the City of Ballarat's Housing Strategy. For each character areas, objective 5 will be replaced with an additional objective when referring to new development located in the areas identified for Incremental and Substantial Change.

Effective design guidelines should be used as a basis for Council planners when assessing planning applications. Design guidelines that are to be translated into a zone schedule, to vary ResCode standards, should be enhanced by including specific details of the schedule changes (i.e. permeability, site coverage, front and side setbacks).

CHARACTER ATTRIBUTES	
Landscape character and setting	<ul style="list-style-type: none"> • Topography • Vegetation • Views
Public realm and streetscape	<ul style="list-style-type: none"> • Street layout • Street trees • Footpaths • Drainage • On-street parking
Architectural style	<ul style="list-style-type: none"> • Architectural style/age of buildings • Roof styles
Dwelling typology	<ul style="list-style-type: none"> • Single/detached
Building height and scale	<ul style="list-style-type: none"> • Number of storeys • Lot size • Site coverage
Building orientation and layout	<ul style="list-style-type: none"> • Parallel/inconsistent
Building materials	<ul style="list-style-type: none"> • Walls • Roofs • Colours
Setbacks	<ul style="list-style-type: none"> • Front • Side
Garden style	<ul style="list-style-type: none"> • Low, medium or high levels of vegetation • Native / exotic • Formal / informal
Car parking and outbuildings (where relevant)	<ul style="list-style-type: none"> • Garage / carport • Driveways sealed / unsealed • Location of garage
Front boundary treatment	<ul style="list-style-type: none"> • Front fencing height • Front fencing materials



Photo by Ethos Urban

8.3 Bush Residential 1

Character Description

Bush Residential 1 (BR1) Areas typically comprise low density residential development on the edge or within existing bushland. Topographically, BR1 areas are located on sloping land or low lying areas at the base of a hillside or slope. Surrounding bushland tends to enclose these areas, limiting views, but filtered visibility of distant landscapes including the Yarrowee River and adjacent creek corridors are available in some areas. Streets largely take an irregular, curvilinear form, responding to the high presence of vegetation. Unsealed roads are a feature, with grassed shoulders and usually no formal footpaths or drainage.

Dwellings are from the Interwar period until the late 20th century, with a mix of styles from these eras. Dwellings are detached and predominantly single storey, with occasional double storey development. Site coverage is low, enhancing the bushland setting.

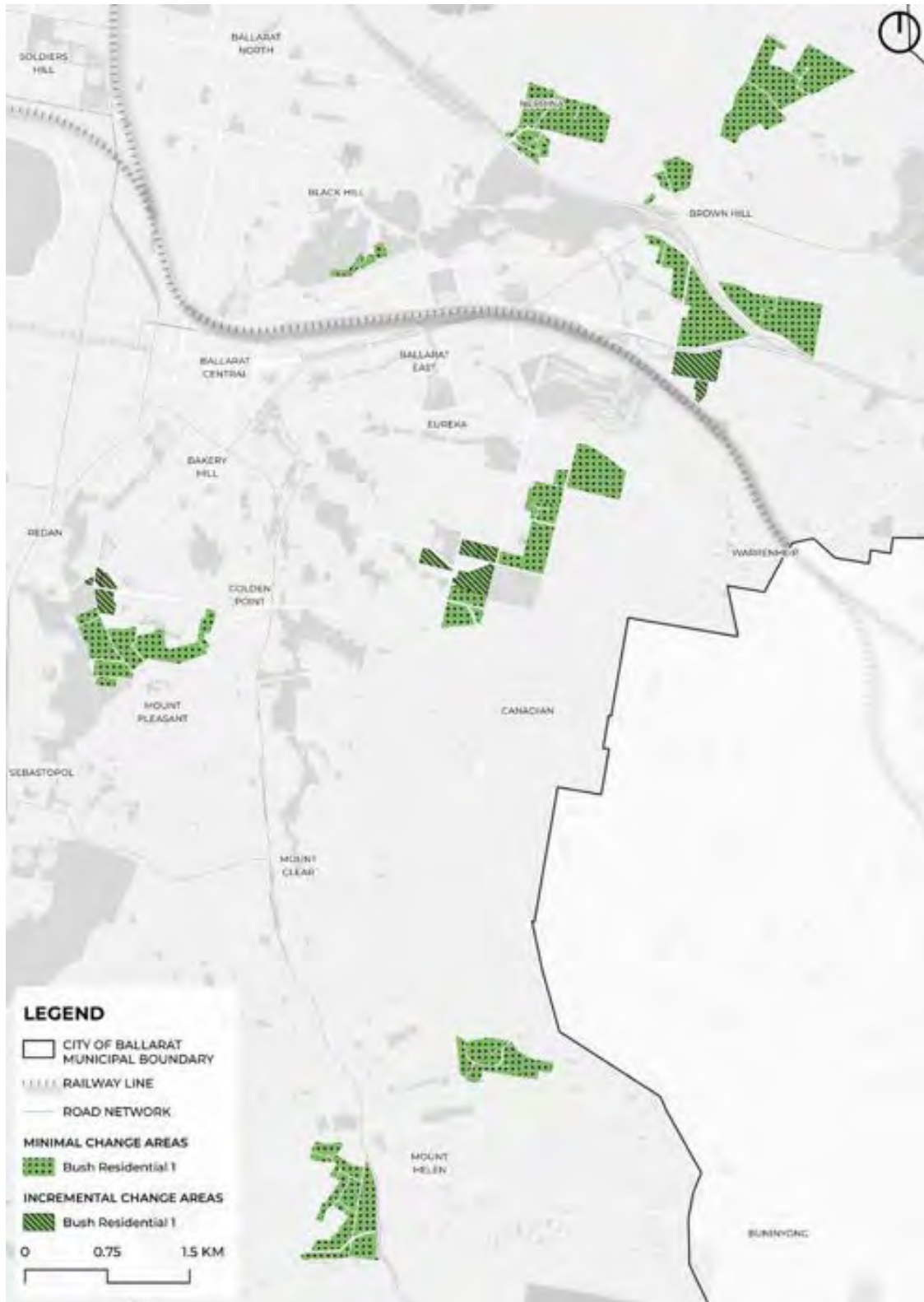
Buildings' orientations to streets are varied, responding to existing vegetation, particularly in areas that are sloping. Dwellings are prominently constructed of brick or weatherboard featuring hipped or gabled roof styles.

Front and side setbacks are generous supporting large established gardens. Front gardens often feature a mix of native and exotic trees, medium shrubs, and remnant native canopy. Parking structures are generally obscured behind dwellings and vegetation, or built into more recently constructed dwellings. Front boundary treatment is usually comprised of vegetation or occasional low, semi-transparent fencing.

CHARACTER ATTRIBUTES	
Landscape character and setting	<ul style="list-style-type: none"> • Relatively flat terrain exists in Black Hill and the low lying areas of Mount Pleasant, whilst sloping terrain is present in Nerrina, Brown Hill, Little Bendigo and the fringes of the residential areas in Ballarat East, Canadian and Mount Helen. • Dwellings are enclosed by bushland, offering views through to tree canopies in the surrounding area.
Public realm and streetscape	<ul style="list-style-type: none"> • Views are afforded to the Yarrowee River and adjacent creek corridors. • Medium to high level of intermittent street trees in the public realm with a high level of dense canopy present in the surrounding bushland. • Streets following a generally informal layout and feature a mix of sealed and unsealed roads and no footpaths. • Informal swale drainage with kerbs present in some areas. • Minimal delineation between the public and private realm.
Architectural style	<ul style="list-style-type: none"> • Mix of architectural styles from the interwar period through to the late 20th century. • Front façades are articulated with the use of verandahs, windows and porch entries.
Dwelling typology	<ul style="list-style-type: none"> • Buildings are detached single dwellings.
Building height and scale	<ul style="list-style-type: none"> • Predominantly single storey. • Mix of medium to large lot sizes, generally between 650m² to 1900m². • Variety of site coverage, from 10% to 50%.
Building orientation and layout	<ul style="list-style-type: none"> • Dwellings are generally orientated parallel to the street.
Building materials	<ul style="list-style-type: none"> • Predominantly weatherboard or brick. • Predominantly hipped roof forms constructed of metal or tile. • Muted colours palette of earthen and bushy tones, including various greens, browns, greys and cream.
Setbacks	<ul style="list-style-type: none"> • Front setbacks generally range from 5m to 7m. Occasionally dwellings are setback 10+m from the street, particularly on properties located in Brown Hill, Ballart East and Canadian. • Side setbacks range from 2m to 3m.
Garden style	<ul style="list-style-type: none"> • Front gardens contain high levels of native and exotic vegetation. • Some gardens feature remnant native trees and a mix of native and exotic shrubs.
Car parking and outbuildings where relevant	<ul style="list-style-type: none"> • Vehicle storage is typically detached and located behind the front façade. • Recent infill dwellings have integrated garages aligned with the front facade. • Driveways are typically unsealed.
Front boundary treatment	<ul style="list-style-type: none"> • A predominant absence of front fences. • Where a fence is provided it is typically low, semi-transparent, and up to 1.2m in height constructed of timber or post and rail or wire.

Preferred Character Area Map

Bush Residential 1 Character Areas



Preferred Character Statements**All Areas**

Streetscapes are dominated by large indigenous and native canopy trees with supporting undergrowth.

Dwellings are sited within the highly vegetated landscape that consists of informal indigenous and native plantings which flourish in a spacious bushy setting.

View corridors to the Yarrowee River and adjacent creek Corridors, surrounding bushland are retained. Often formalised footpaths are not present. A mix of sealed and unsealed roads wind informally through well vegetated areas with minimal delineation between public and private realms.

New development positively responds to the predominantly low scale, single storey dwellings using natural materials, a muted colour palette of earthen and bush tones, and simple building forms to fit within the heavily vegetated setting.

Generous front and side setbacks provide for high levels of indigenous and native vegetation which embrace remnant canopy and amenity trees, and screen dwellings from view.

Garages and carports are hidden from view, often located behind the line of the front dwelling façade and are integrated with the design of the dwelling.

Absent, low or transparent, front fencing contributes to the bushy and informal transition between public and private realms.

Incremental

Streets in Incremental Change areas will support a low to medium scale built form which respond to the existing built form that sits within the highly vegetated setting, utilising natural material and a muted colour palette consistent with existing dwellings and the surrounding landscape.

Neighbourhood Character Objectives**All Areas**

1. To ensure that new buildings and extensions do not dominate the streetscape and sit within the vegetated landscape.
2. To maintain and strengthen the spaciousness and bush setting surrounding dwellings, minimising disruption to existing indigenous and native canopy trees and other plant species.
3. To retain the bushy informal transition of public and private realms, characterised by absent or permeable low front fences.
4. To maintain and enhance views corridors to the Yarrowee River and adjacent creek corridors, surrounding bushland and the vistas, streetscapes, and backdrops of the precinct, characterised by indigenous and native canopy trees and lush understoreys of shrubs and grasses.
5. To ensure new development positively responds to the preferred scale and styles of the precinct, characterised by predominantly low scale dwellings and simple building forms, utilising a muted colour palette of earthen and bush tones sympathetic to the highly vegetated setting.

Incremental

To ensure the low to medium scale built form positively responds to the preferred scale and styles of the precinct, characterised by dwellings which feature well-articulated facades and a consistent material palette.

Photos by Ethos Urban



Brown Hill



Brown Hill



Mt Pleasant



Brown Hill

Design Guidelines

Character Elements	Design Response
Building height and form	
All areas	<ul style="list-style-type: none"> • New development should complement the design of existing dwellings, utilising natural materials and a muted colour palette of earthen and bush tones, particularly darker browns, various greens and greys that complement the bush setting. • Buildings should not penetrate the mature native tree canopy, where a canopy is present. • Buildings should be designed to follow the topography of the land, and minimise the need for cut and fill throughout the site. • Articulate the front façades of buildings through the use of verandahs, windows, doors and porch entries. • Use non-reflective materials and finishes for walls, roofs and windows. • Buildings should provide a pitched roof with prominent eaves.
Minimal	<ul style="list-style-type: none"> • New development should complement the low scale of existing dwellings.
Incremental	<ul style="list-style-type: none"> • New development should complement a low to medium scale built form.

Character Elements	Design Response
Siting and setbacks	
All areas	<ul style="list-style-type: none"> If more than one dwelling is proposed, provide sufficient separation between each dwelling to allow for the planting of native trees and understorey vegetation. Buildings should be sited to take into account the sharing of view corridors (where present) to the Yarrowee River and adjacent creek corridors, surrounding bushland and the vistas, streetscapes, and backdrops of the precinct.
Minimal	<ul style="list-style-type: none"> Buildings should be set back a minimum of 3m from one side to retain separation between buildings and enable landscaping.
Incremental	<ul style="list-style-type: none"> Buildings should be set back a minimum of 2m from one side to retain separation between buildings and enable landscaping. Setback upper levels above 2 storeys to achieve visual recession.
Gardens and landscaping	
All areas	<ul style="list-style-type: none"> Retain existing native canopy trees and understorey vegetation and replant where possible. If this cannot be achieved, or a tree is considered appropriate for removal, the site should provide adequate space for offset planting of native trees that will grow to a mature height similar of the tree to be removed. Buildings must provide a high-quality landscaping response to the street that contributes to the public realm through innovative design, landscaping and open frontages. Prepare a landscape plan to accompany all applications for new dwellings that utilises appropriate indigenous and native species identified by the City of Ballarat. Ensure submitted Landscape Plans demonstrate how development will contribute to the 40% tree canopy targets outlined in the City of Ballarat's Urban Forest Action Plan. Encourage informal front gardens that predominantly incorporate indigenous vegetation and native canopy trees. The site area covered by buildings should not exceed 40%. Provide at least 40% of the site as permeable surface.
Minimal	<ul style="list-style-type: none"> Provide indigenous canopy trees occurring at a density of one to every 100m².
Incremental	<ul style="list-style-type: none"> Provide indigenous canopy trees occurring at a density of one to every 150m².
Garage storage and vehicle access	
All areas	<ul style="list-style-type: none"> Locate garages and carports behind or in line with the front dwelling facade, ensuring that they are integrated with the design of the dwelling. Minimise paving in front yards, including the driveway. Provide only one vehicular crossover per typical site frontage. Provide landscaping and plantings to the soften the appearance of driveways.
Front fencing	
All areas	<ul style="list-style-type: none"> Fencing should be set back from the front site boundary to allow for landscaping in front of the fence. Encourage vegetated front boundary treatments. A front fence within 3 metres of a street should provide no or a low, open style up to 1.2m in height, constructed of timber or post and rail or wire.



Photo by Ethos Urban

8.4 Bush Residential 2

Character Description

Bush Residential 2 (BR2) Areas are located within undulating topography dominated by views within and across bushland. Dwellings are of a mix of architectural styles including post war and later development periods with modern and contemporary style developments common in some areas. Pockets of contemporary style dwellings exist in Black Hill, Ballarat North, Buninyong and Brown Hill, whilst there is a mix of older post war and modern style dwellings located in residential areas developed on the ridge running north-south between the Yarrowee corridor and Canadian Creek. Dwellings are predominantly constructed of brick or weatherboard featuring hipped or gabled roof styles.

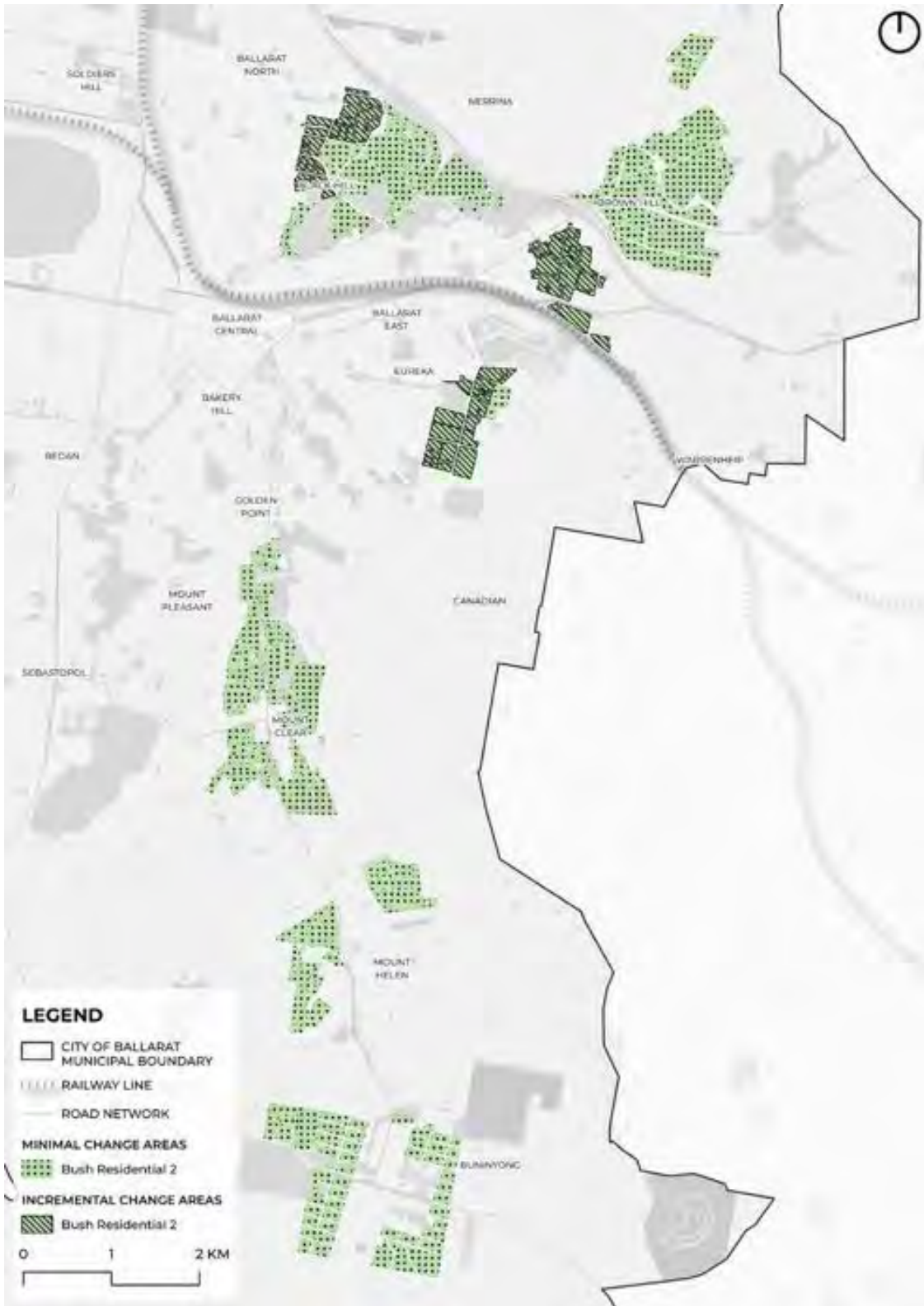
Although there is a mix in styles, all dwellings are sited on moderately sized lots within a sloping, well vegetated landscape with views to surrounding areas. Moderate front setbacks support a high retention and continued planting of vegetation but side setbacks are relatively narrow.

There is a lack of front fencing that promotes an openness to the streetscape and blending of the public and private realm. Roads are generally sealed and include drainage infrastructure in the form of concrete kerbs.

CHARACTER ATTRIBUTES	
Landscape character and setting	<ul style="list-style-type: none"> • Sloping and undulating topography. • Views within and over the surrounding bushland is achieved at vantage points. • View afforded to the Yarrowee River and adjacent creek corridors and surrounding bushland.
Public realm and streetscape	<ul style="list-style-type: none"> • Irregular and informal mature street trees. • Streets following a curvilinear layout and feature predominantly sealed roads becoming narrow in some areas. • Footpaths are occasionally present on one side. • Drainage infrastructure includes concrete kerb and channel.
Architectural style	<ul style="list-style-type: none"> • Predominantly post war and modern style dwellings with occasional contemporary styles.
Dwelling typology	<ul style="list-style-type: none"> • Buildings are predominantly detached single dwellings.
Building height and scale	<ul style="list-style-type: none"> • Predominantly single storey dwellings with occasional double storey development. • Lot sizes are generally between 700m² to 1000m². • Site coverage ranges from 20% to 50%.
Building orientation and layout	<ul style="list-style-type: none"> • Dwellings are oriented parallel to address the street.
Building materials	<ul style="list-style-type: none"> • Predominantly brick with the occasional use of render and weatherboard. • Neutral colour palette sympathetic to the surrounding landscape setting including muted greys, greens, creams and brown. • Predominantly hipped roof forms constructed of tile or metal.
Setbacks	<ul style="list-style-type: none"> • Front setbacks range from 3m to 10m. • Side setbacks range from 1m to 3m.
Garden style	<ul style="list-style-type: none"> • Medium to high level of vegetation in front gardens. • Mix of informally and formally landscaped gardens, comprising a mix of native and non-native plants, and remnant indigenous canopy and amenity trees. • Some dwellings are obscured from view due to dense vegetation.
Car parking and outbuildings where relevant	<ul style="list-style-type: none"> • Vehicle storage is in line with or set back from the façade of the dwelling. • Most garages are integrated with the dwelling. • Driveways are typically sealed.
Front boundary treatment	<ul style="list-style-type: none"> • A predominant absence of front fences. • Where a fence is provided it is typically low, semi-transparent and up to 0.8m in height constructed from a mix of materials.

Preferred Character Area Map

Bush Residential 2 Character Areas



Preferred Character Statements

All Areas

Indigenous and native canopy trees and understorey planting in the public and private realms, combined with the undulating topography, ensures that dwellings do not visually dominate the streetscape, enhancing the bushy vistas, streetscapes and backdrops of the precinct.

View corridors through to the Yarrowee River and adjacent creek Corridors, surrounding bushland are retained.

New development positively responds to the predominantly low scale building forms, using natural materials and a muted colour palette of earthen and bush tones.

Garages and carports are often located behind the line of the front dwelling façade and are unobtrusive and integrated with the design of the dwelling.

Absent, low or transparent, front fencing contributes to the bushy and informal transition between public and private realms.

Mostly sealed roads wind through the undulating landscape and are dominated by indigenous and native canopy and amenity trees, with a presence of footpaths on one side the street.

Incremental

Streets in Incremental Change areas will support low to medium scale developments which respond to the existing built form that sits within the highly vegetated setting, utilising natural material and a muted colour palette consistent with existing dwellings and the surrounding landscape.

Neighbourhood Character Objectives

All Areas

1. To ensure that new development sits within the existing native tree canopy and provides setbacks that allow for the retention and continued planting of vegetation and trees.
2. To maintain and enhance views corridors to the Yarrowee River and adjacent creek corridors, surrounding bushland and the vistas, streetscapes, and backdrops of the precinct, characterised by indigenous and native canopy trees and lush understoreys of shrubs and grasses.
3. To retain and reinforce the spaciousness and bushy setting of the streetscape, characterised by no or low, permeable front fences with views to front garden areas.
4. To ensure new development uses vegetation to soften the appearance of driveways and locates garages behind or integrated with the façade of the dwelling.
5. To ensure new development positively responds to the preferred scale and styles of the precinct, characterised by predominantly low scale dwellings, utilising a muted colour palette of earthen and bush tones sympathetic to the vegetated setting.

Incremental

To ensure the built form of low to medium scale development positively responds to the preferred scale and styles of the precinct, characterised by dwellings which feature well-articulated facades and natural materials, utilising a muted colour palette of earthen and bush tones.

Photos by Ethos Urban



Brown Hill



Black Hill



Brown Hill



Brown Hill

Design Guidelines

Character Elements	Design Response
Building height and form	
All areas	<ul style="list-style-type: none"> • New development should complement the design of existing dwellings, utilising natural materials and a muted colour palette of earthen and bush tones, particularly darker browns, various greens and greys that complement the bush setting. • Buildings should not penetrate the mature native tree canopy and should be sited below the height of trees along a ridgeline, where a canopy is present. • Buildings should be designed to follow the topography of the land, and minimise the need for cut and fill throughout the site. • Articulate the front façades of buildings through the use of verandahs, windows, doors and porch entries. • Use non-reflective materials and finishes for walls, roofs and windows. • Buildings should provide a pitched roof with prominent eaves.
Minimal	<ul style="list-style-type: none"> • New development should complement the low scale of existing dwellings.
Incremental	<ul style="list-style-type: none"> • New development should complement a low to medium scale built form.

Character Elements	Design Response
Siting and setbacks	
All areas	<ul style="list-style-type: none"> If more than one dwelling is proposed, provide sufficient separation between each dwelling to allow for the planting of native trees and understorey vegetation. Buildings should be sited to take into account the sharing of view corridors (where present) to surrounding bushland areas and to the Yarrowee River from Brown Hill.
Minimal	<ul style="list-style-type: none"> Buildings should be set back a minimum of 3m from one side to retain separation between buildings and enable landscaping.
Incremental	<ul style="list-style-type: none"> Buildings should be set back a minimum of 2m from one side to retain separation between buildings and enable landscaping. Setback upper levels above 2 storeys to achieve visual recession.
Gardens and landscaping	
All areas	<ul style="list-style-type: none"> Retain existing native canopy trees and understorey vegetation and replant where possible. If this cannot be achieved, or a tree is considered appropriate for removal, the site should provide adequate space for offset planting of native trees that will grow to a mature height similar of the tree to be removed. Buildings must provide a high-quality landscaping response to the street that contributes to the public realm through innovative design, landscaping and open frontages. Prepare a landscape plan to accompany all applications for new dwellings that utilises appropriate indigenous and native species identified by the City of Ballarat. Ensure submitted Landscape Plans demonstrate how development will contribute to the 40% tree canopy targets outlined in the City of Ballarat's Urban Forest Action Plan. Ensure that all retained and proposed trees can reach maturity and are sustained over the longer term. The site area covered by buildings should not exceed 50%. Provide at least 40% of the site as permeable surface.
Minimal	<ul style="list-style-type: none"> Provide indigenous canopy trees occurring at a density of one to every 150m², providing room for at least 1 canopy tree in the front setback.
Incremental	<ul style="list-style-type: none"> Provide indigenous canopy trees occurring at a density of one to every 200m², providing room for at least 1 canopy tree in the front setback.
Garage storage and vehicle access	
All areas	<ul style="list-style-type: none"> Locate garages and carports behind or in line with the front dwelling facade, ensuring that they are integrated with the design of the dwelling. Minimise paving in front yards, including the driveway. Provide only one vehicular crossover per typical site frontage. Provide landscaping and plantings to the soften the appearance of driveways.
Front fencing	
All areas	<ul style="list-style-type: none"> Fencing should be set back from the front site boundary to allow for landscaping in front of the fence. Encourage vegetated front boundary treatments. A front fence within 3 metres of a street should provide no or a low, open style up to 1.2m in height, constructed of timber or post and rail or wire.



Photo by Ethos Urban

8.5 Garden Court 1

Character Description

Garden Court 1 (GC1) Areas are characterised by low scale dwellings predominantly from the interwar and post-war periods, with the regularity of house design indicating these were master-planned estates. Intermittent contemporary infill is also present. Hipped roofs are common features on detached, single storey dwellings and buildings are predominantly constructed of brick or weatherboard.

Dwellings are generally sited parallel to streets with moderate front setbacks and minimal side setbacks. Topography is predominantly flat. Some areas to the east of the centre of Ballarat are sloping, affording more opportunities for views to other residential areas and surrounding bushland, including the Ballarat North Bushland Reserve and Plantations located in Canadian and Mount Clear. GC1 areas feature curvilinear and cul-de-sac street layouts, generally with footpaths on one side and with some limited tree planting in the nature strips.

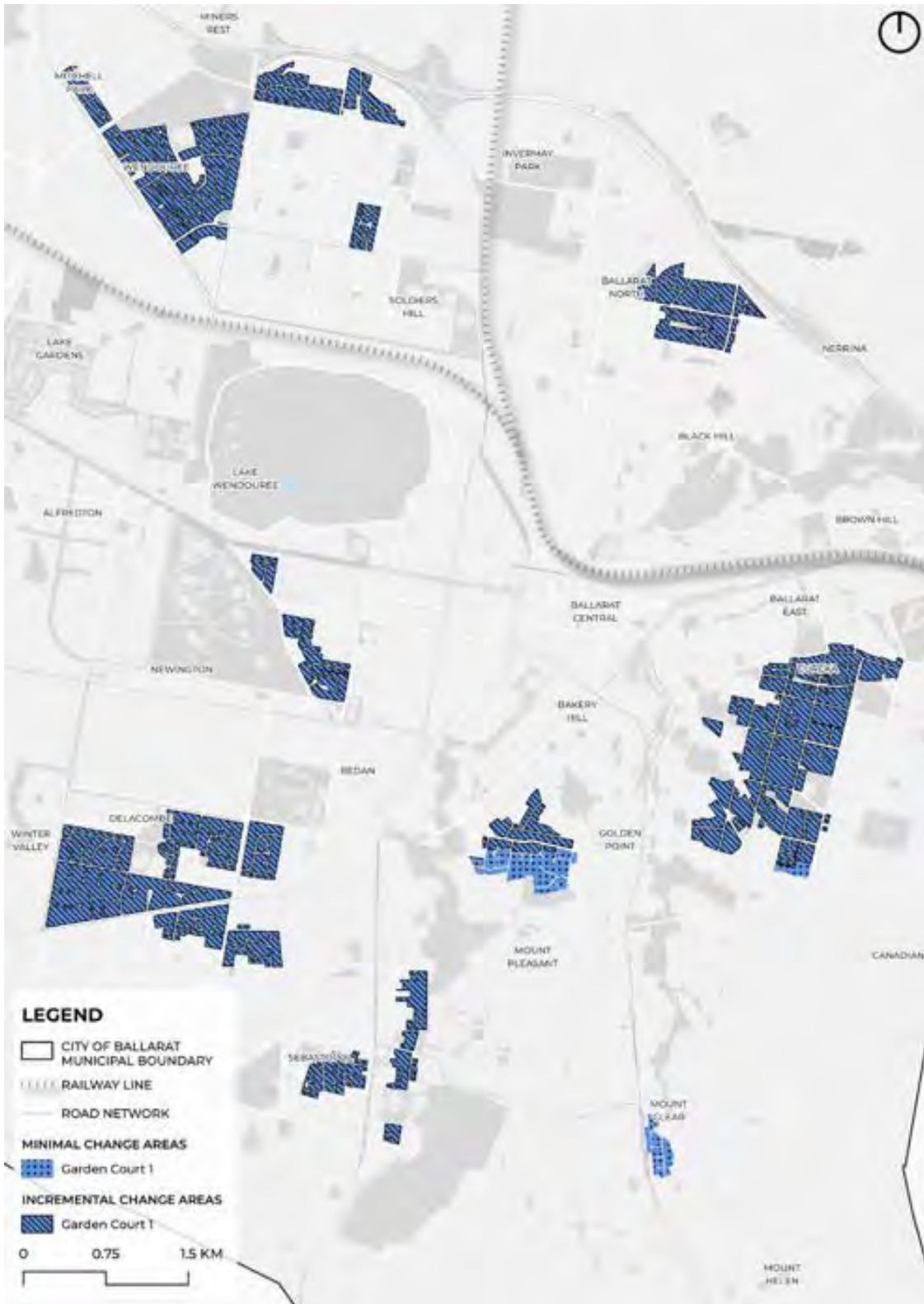
Front gardens are often sparsely vegetated, featuring grassed lawns and minimal plantings of exotic trees or bushes. Most dwellings have off-street parking available, with standalone garages or car ports generally in line with or set behind the façade of the dwelling. Where a fence is provided it is typically low, semi-transparent, and up to 1.2m in height constructed from a mix of materials.

Some area have a substantially intact character, including the Waller Estate located in Newington. The Waller Estate was predominantly constructed in 1945 to 1961 on empty allotments and is a forerunner of the modern housing estate development that is now common in Ballarat and its distinctive layout and appearance remains substantially intact.

CHARACTER ATTRIBUTES	
Landscape character and setting	<ul style="list-style-type: none"> • Predominantly flat topography with no dominant view lines. • Some areas to the east of the township are sloping and afford more opportunities for views to other residential areas and surrounding bushland, including the Ballarat North Bushland Reserve and Plantations located in Canadian and Mount Clear.
Public realm and streetscape	<ul style="list-style-type: none"> • General absence of street trees. • Streets follow both grid and curvilinear layouts with court bowls and feature sealed roads. • Footpaths are occasionally present on both sides. • Drainage infrastructure includes concrete kerb and gravel verges.
Architectural style	<ul style="list-style-type: none"> • Predominantly late 20th century, interwar and post war style dwellings.
Dwelling typology	<ul style="list-style-type: none"> • Buildings are generally detached single dwellings.
Building height and scale	<ul style="list-style-type: none"> • Predominantly single storey, but with occasional double storey development. • Lot sizes range from 400m² to 900m². • Site coverage ranges from 20% to 45%.
Building orientation and layout	<ul style="list-style-type: none"> • Dwellings are oriented parallel to address the street.
Building materials	<ul style="list-style-type: none"> • Predominantly brick or weatherboard. • Neutral colour palette including browns, greys and cream. • Predominantly hipped and gabled roof forms constructed of tile or metal.
Setbacks	<ul style="list-style-type: none"> • Front setbacks range from 3m to 10m. • Side setbacks range from 1m to 2m.
Garden style	<ul style="list-style-type: none"> • Low levels of vegetation in front gardens. • Typically, front gardens consist of grass lawns and a mix of native and exotic low lying shrubs.
Car parking and outbuildings where relevant	<ul style="list-style-type: none"> • Vehicle storage is generally in line or set behind the façade of the dwelling. • Driveways are sealed.
Front boundary treatment	<ul style="list-style-type: none"> • A predominant absence of front fences. • Where a fence is provided it is typically low, semi-transparent, and up to 1.2m in height constructed from a mix of materials.

Preferred Character Area Map

Garden Court 1 Character Areas



Preferred Character Statements**All Areas**

New development sits within a formal landscape setting and responds to the built form of existing dwellings, articulated façades and a consistent material palette of brick and weatherboard with neutral tones.

Building separation is compact with moderate front setbacks. New development allows space for increased vegetation planting within the front setbacks adding to formal garden setting.

Absent or low front fences enable views through to dwellings and front garden areas.

Garages and carports are often located to the side of the dwellings and are visually unobtrusive and compatible with the development.

Sealed asphalt roads and consistent spacing of vehicle crossovers provide a sense of formality and order within the precinct.

Incremental

Streets in Incremental Change areas will support low to medium scale developments which respond to the existing built form, massing and styles of older housing stock.

Neighbourhood Character Objectives**All Areas**

1. To maintain and reinforce the predominant building alignment along the street, characterised by setbacks that contribute to the sense of openness.
2. To encourage space for increased indigenous and native vegetation planting, including canopy and amenity trees within the private realm, to strengthen the garden setting of dwellings and contribute to the enhancement of the public realm.
3. To ensure new development does not dominate the streetscape but minimises the dominance of car parking access and structures instead.
4. To maintain the openness of the streetscape, characterised by absent front fences.
5. To ensure new development reflects the preferred scale and styles of the precinct, characterised by dwellings from the postwar era which feature well-articulated façades and a consistent material and colour palette of neutral tones.

Incremental

To ensure the built form of low to medium scale development positively responds to the preferred scale and styles of the precinct, characterised by dwellings which feature well-articulated facades and natural materials, utilising a neutral colour palette including muted browns, greys and cream.

Photos by Ethos Urban



Delacombe



Newington



Newington



Delacombe

Design Guidelines

Character Elements	Design Response
Building height and form	
All areas	<ul style="list-style-type: none"> • New development should complement the building materials of existing dwellings such as brick and weatherboard, utilising a neutral colour palette of natural tones, particularly muted browns, greys and creams. • Ensure new development responds to any local heritage plan that has been implemented by the City of Ballarat. • Buildings should provide a pitched roof with prominent eaves. In cases where eaves are not provided, alternative techniques to articulate the dwelling should be introduced, which may include window shading, window shrouds, and other architectural features. • Orient buildings parallel to the street and incorporate façade articulation with the use of porches, recesses, windows, and doorways that provide rhythm without repetition, ensuring that contemporary design details do not directly mimic older architectural styles. • Use non-reflective materials and finishes for walls, roofs and windows. • In the case of side-by-side development, provide each dwelling with a separate roofline and a discernible sense of address. • Locate habitable rooms and dwelling entrances to face the street where possible.
Minimal	<ul style="list-style-type: none"> • New development should complement the low scale of existing dwellings.
Incremental	<ul style="list-style-type: none"> • New development should complement a low to medium scale built form. • Ensure the main pedestrian entrance is legible in the streetscape while the vehicle entry is designed to be less prominent.

Character Elements	Design Response
Siting and setbacks	
All areas	<ul style="list-style-type: none"> • New development should maintain consistent setbacks that create a rhythm in the streetscape and provide for visual breaks and vegetation and planting. • In the case of multi-dwellings on a lot, design the front dwelling to present as one dwelling to the street through the use of roof forms, materials and design detail. • If more than one dwelling is proposed, provide sufficient separation between each dwelling to allow for the planting of canopy trees and understorey vegetation. • Buildings should be set back at least 2m from one side boundary and 1m from the other side boundary to retain separation between buildings and enable landscaping.
Minimal	<ul style="list-style-type: none"> • Buildings should be set back a minimum of 3m from one side boundary to retain spacing between buildings and enable landscaping.
Incremental	<ul style="list-style-type: none"> • Buildings should be set back a minimum of 2m from one side boundary to retain spacing between buildings and enable landscaping. • Setback upper levels above 2 storeys to achieve visual recession.
Gardens and landscaping	
All areas	<ul style="list-style-type: none"> • Retain existing indigenous and native canopy trees and understorey vegetation and replant wherever possible. Where indigenous and larger native species cannot be retained on a site, the site should provide adequate space for offset planting of indigenous and native trees that will grow to a mature height similar to the height of the tree that was removed. • Buildings must provide a high-quality landscaping response to the street that contributes to the public realm through innovative design, landscaping and open frontages. • Provide landscaping along shared driveways to soften the appearance of buildings, fencing and hardstand areas. • Prepare a landscape plan to accompany all applications for new dwellings that utilises appropriate indigenous and native species identified by the City of Ballarat. Ensure submitted Landscape Plans demonstrate how development will contribute to the 40% tree canopy targets outlined in the City of Ballarat's Urban Forest Action Plan.
Minimal	<ul style="list-style-type: none"> • Provide indigenous and native canopy trees occurring at a density of one to every 250m².
Incremental	<ul style="list-style-type: none"> • Provide indigenous and native canopy trees occurring at a density of one to every 300m².
Garage storage and vehicle access	
All areas	<ul style="list-style-type: none"> • Locate garages and carports in line or behind the front façade of the dwelling, ensuring that they do not dominate streetscape. • Provide only one vehicular crossover per typical site frontage. • Limit the width of vehicle accessways. • Provide landscaping and plantings to soften the appearance of driveways • Minimise paving in front yards, including the driveway. • In the case of side-by-side development, space the vehicle crossovers to retain the existing rhythm of the street.
Front fencing	
All areas	<ul style="list-style-type: none"> • Fencing should be set back from the front site boundary to allow for landscaping in front of the fence. • A front fence within 3 metres of a street should provide no or a low, open style up to 1.2m constructed of materials sympathetic to the surrounding context.



Photo by Ethos Urban

8.6 Garden Court 2

Character Description

Garden Court 2 (GC2) Areas are characterised by modern infill developments primarily built after 1990, often sited adjacent to older housing stock. Some estates are master planned, while other areas located closer to the CBD are smaller subdivisions.

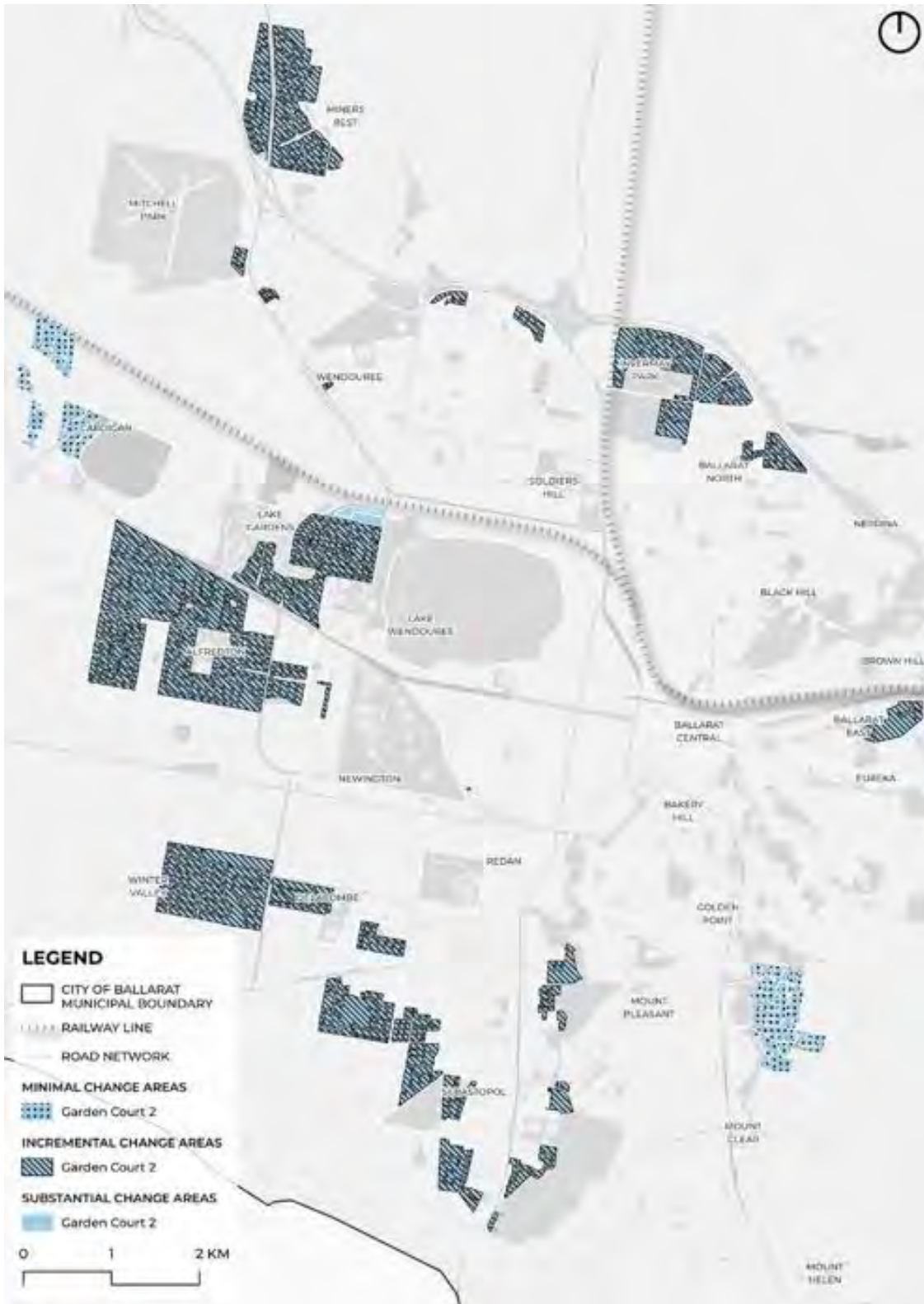
Topography in GC2 areas is relatively flat with views largely contained within the residential areas. The streetscape is defined by curvilinear street patterns complimented by cul-de-sacs. Formal drainage including kerb and channel is present and footpaths generally occur on at least one side. Street trees are generally consistent along the roads and are largely native.

Dwellings are oriented parallel to address the street and often have garages that are in line with and integrated into the façade of the dwelling. Buildings are generally constructed of brick and render and have articulated facades and entrances that provide a sense of address. Materiality and colour palette consists of neutral tones. Front gardens consist of low levels of maturing vegetation and front fencing is mostly absent.

CHARACTER ATTRIBUTES	
Landscape character and setting	<ul style="list-style-type: none"> • Predominantly flat topography.
Public realm and streetscape	<ul style="list-style-type: none"> • Maturing intermittent street trees. • Streets following a curvilinear layout, include cul de sacs, and feature sealed roads. • Footpaths are occasionally present on one side. • Drainage infrastructure includes concrete kerbs.
Architectural style	<ul style="list-style-type: none"> • Predominantly modern and contemporary style dwellings.
Dwelling typology	<ul style="list-style-type: none"> • Buildings are predominantly detached dwellings.
Building height and scale	<ul style="list-style-type: none"> • One to two storey dwellings.
Building orientation and layout	<ul style="list-style-type: none"> • Dwellings are oriented parallel to address the street. • Lot sizes are between 400m² and 1000m². • Medium to high site coverage ranges from 30% to 60%.
Building materials	<ul style="list-style-type: none"> • Brick and render. • Neutral colour palette including browns, greys and cream. • Predominantly hipped roof forms constructed of metal or tile.
Setbacks	<ul style="list-style-type: none"> • Front setbacks range from 3m to 10m. • Side setbacks range from 1m to 2m.
Garden style	<ul style="list-style-type: none"> • Low levels of establishing vegetation in front gardens. • Mix of exotic and native formal plantings and grass lawns.
Car parking and outbuildings where relevant	<ul style="list-style-type: none"> • Vehicle storage is generally in line and integrated with the façade of the dwelling. • Driveways are sealed and double garages are common.
Front boundary treatment	<ul style="list-style-type: none"> • A predominant absence of front fences.

Preferred Character Area Map

Garden Court 2 Character Areas



Preferred Character Statements

All Areas

New development sits within a formal landscape setting and responds to building design and scale of existing dwellings, using consistent materials of brick and render and a neutral colour palette.

Regular and spacious front setbacks provide space for native plants, canopy and amenity trees and understorey vegetation, to mature and reinforce the garden setting. Low level and formal front gardens, comprising native plantings, flow uninterrupted into the public realm.

Garages and carports are often located to the side of the dwellings and are visually unobtrusive and compatible with the development.

Absent or low front fences facilitate the blending of vegetation between the public and private realms and enable views through to dwellings and front garden areas.

Vistas around street bends and courts are characterised by public spaces featuring native plantings, with a presence of footpaths on one side of the street.

Incremental

Incremental Change areas will support low to medium scale developments that are contemporary in design and feature well articulated façades, consistent setbacks and flourishing front gardens with establishing vegetation.

Substantial

Substantial Change areas will experience increased change through housing diversity at greater densities and heights, achieving residential development that is uniform but well-articulated in design.

Neighbourhood Character Objectives

All Areas

1. To maintain and strengthen the presence of established native vegetation, including canopy trees in front setbacks and amenity trees in side setbacks.
2. To minimise the dominance of car parking access and structures by ensuring they are integrated with the façade of the dwellings.
3. To retain the spaciousness of the streetscape, characterised by absent, or low, front fences with views to front garden areas.
4. To maintain consistent front and side setbacks that allow for spacing to provide visual breaks and amenity.
5. To ensure new development positively responds to the preferred scale and styles of the precinct, characterised by predominantly low scale dwellings, utilising materials sympathetic to existing development and a neutral colour palette.

Incremental

To ensure the built form of low to medium scale development positively responds to the preferred scale and styles of the precinct, characterised by contemporary dwellings which feature well-articulated facades and a consistent material palette.

Substantial

To ensure higher density development responds to the preferred scale and styles of the precinct, characterised by contemporary dwellings which feature well-articulated facades and a consistent material palette.

Photos by Ethos Urban



Alfredton



Winter Valley



Winter Valley



Winter Valley

Design Guidelines

Character Elements	Design Response
Building height and form	
All areas	<ul style="list-style-type: none"> • New development should compliment the building materials of existing dwellings such as brick and render, utilising a neutral colour palette of natural tones, particularly browns, greys and cream. • Buildings should provide a pitched roof with prominent eaves. In cases where eaves are not provided, alternative techniques to articulate the dwelling should be introduced, which may include window shading, window shrouds, and other architectural features. • Orient buildings parallel to the street and incorporate façade articulation with the use of porches, recesses, windows, and doorways that provide rhythm without repetition. • Use non-reflective materials and finishes for walls, roofs and windows. • In the case of side-by-side development, provide each dwelling with a separate roofline and a discernible sense of address. • Encourage contemporary building design and innovative architecture that articulates façades and responses to sensitive interfaces. • Locate habitable rooms and dwelling entrances to face the street where possible.
Minimal	<ul style="list-style-type: none"> • New development should complement the low scale of existing dwellings.
Incremental	<ul style="list-style-type: none"> • New development should complement a low to medium scale built form. • Ensure the main pedestrian entrance is legible in the streetscape while the vehicle entry is designed to be less prominent.
Substantial	<ul style="list-style-type: none"> • New development should complement the medium scale built form. • Ensure the main pedestrian entrance is legible in the streetscape while the vehicle entry is designed to be less prominent.

Character Elements	Design Response
Siting and setbacks	
All areas	<ul style="list-style-type: none"> • New development should maintain consistent setbacks that create a rhythm in the streetscape and provide for visual breaks and garden areas. • In the case of multi-dwellings on a lot, design the front dwelling to present as one dwelling to the street through the use of roof forms, materials and design detail. • If more than one dwelling is proposed, provide sufficient separation between each dwelling to allow for the planting of canopy trees and understorey vegetation.
Minimal	<ul style="list-style-type: none"> • Buildings should be set back at least 2m from one side boundary to retain spacing between buildings and enable landscaping.
Incremental and Substantial	<ul style="list-style-type: none"> • Buildings should be set back at least 1m from one side boundary and 1m from the other side boundary to retain separation between buildings and enable landscaping. • Setback upper levels above 2 storeys to achieve visual recession.
Gardens and landscaping	
All areas	<ul style="list-style-type: none"> • Retain existing indigenous and native canopy trees and understorey vegetation and replant wherever possible. Where indigenous and larger native species cannot be retained on a site, the site should provide adequate space for offset planting of indigenous and native trees that will grow to a mature height similar to the height of the tree that was removed. • Development must provide a high-quality landscaping response to the street that contributes to the public realm through innovative design, landscaping and open frontages. • Paths in the front setback should be integrated with the driveway to maximise space for landscaping and planting. • Provide landscaping along shared driveways and laneways to soften the appearance of buildings, fencing and hardstand areas. • Prepare a landscape plan to accompany all applications for new dwellings that utilises appropriate indigenous and native species identified by the City of Ballarat. Ensure submitted Landscape Plans demonstrate how development will contribute to the 40% tree canopy targets outlined in the City of Ballarat's Urban Forest Action Plan.
Minimal	<ul style="list-style-type: none"> • Provide indigenous and native canopy trees occurring at a density of one to every 250m².
Incremental	<ul style="list-style-type: none"> • Provide indigenous and native canopy trees occurring at a density of one to every 300m².
Substantial	<ul style="list-style-type: none"> • Provide indigenous and native canopy trees occurring at a density of one to every 350m².
Garage storage and vehicle access	
All areas	<ul style="list-style-type: none"> • Locate garages and carports in line or behind the front façade of the dwelling, ensuring that they are do not dominate streetscape. • Provide only one vehicular crossover per typical site frontage. • Limit the width of vehicle accessways. • Provide landscaping and plantings to soften the appearance of driveways • Minimise paving in front yards, including the driveway. • In the case of side-by-side development, space the vehicle crossovers to retain the existing rhythm of the street.
Front fencing	
All areas	<ul style="list-style-type: none"> • Fencing should be set back from the front site boundary to allow for landscaping in front of the fence. • A front fence within 3 metres of a street should provide no or a low, open style up to 0.8m constructed of materials sympathetic to the surrounding context. • A front fence may be constructed up to 1.8m when located on a main road where they provide at least 25% permeability.



Photo by Ethos Urban

8.7 Garden Residential

Character Description

Garden Residential (GR) Areas generally characterised by formal subdivision patterns with a modified grid layout, wide cross sections and kerb and channel drainage. Most dwellings are single storey with compact siting reflective of Inter-War and Post-War architectural styles. Many areas also contain some infill development with dwellings reflective of more contemporary dwelling designs. The topography is flat and dwellings are oriented parallel to the street.

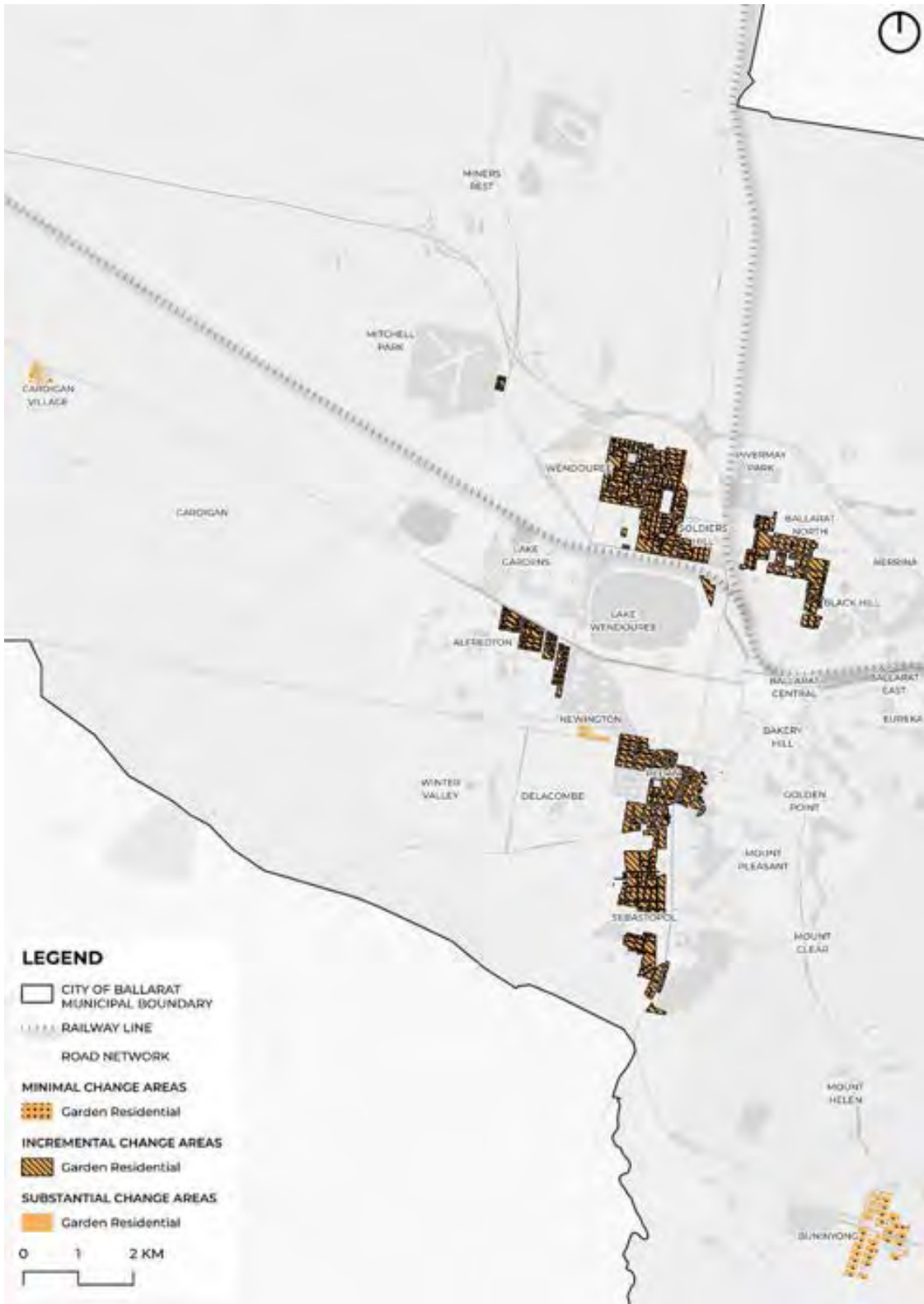
Dwellings are often constructed of brick and weatherboard and have a mix of levels of established vegetation present in front gardens. Garages are typically sited behind the rear line of dwellings and driveways are generally sealed.

Mature, medium sized street trees occur consistently in the public realm and footpaths generally occur on one side of the street.

CHARACTER ATTRIBUTES	
Landscape character and setting	<ul style="list-style-type: none"> • Flat to sloping topography. • Short range views along tree-lined streets and avenues.
Public realm and streetscape	<ul style="list-style-type: none"> • Native and exotic street trees of varying maturity are consistently planted in most areas. • Streets following a grid layout and feature sealed roads with gravel verges. • Footpaths are present on one side and occasionally on two. • Drainage infrastructure includes concrete kerbs and channels.
Architectural style	<ul style="list-style-type: none"> • Predominantly interwar and postwar styles with occasional contemporary development.
Dwelling typology	<ul style="list-style-type: none"> • Buildings are detached single dwellings.
Building height and scale	<ul style="list-style-type: none"> • Predominantly single storey, but with some occasional double storey.
Building orientation and layout	<ul style="list-style-type: none"> • Dwellings are oriented parallel to address the street. • Lot sizes range from 500m² to 1000m². • Site coverage ranges from 25% to 45%.
Building materials	<ul style="list-style-type: none"> • Predominantly brick and weatherboard. • Neutral colour palette including browns, greys and cream. • Predominantly hipped and gabled roof forms constructed of tile or metal.
Setbacks	<ul style="list-style-type: none"> • Front setbacks range from 5m to 10m. • Side setbacks range from 1m to 3m.
Garden style	<ul style="list-style-type: none"> • Low to medium levels of established vegetation. • A mixture of native and exotic canopy trees.
Car parking and outbuildings where relevant	<ul style="list-style-type: none"> • Vehicle storage is generally set behind the façade of the dwelling. • Driveways are sealed.
Front boundary treatment	<ul style="list-style-type: none"> • Front fences are generally present and are typically low, semi-transparent and up to 1.2m in height constructed from a mix of materials.

Preferred Character Area Map

Garden Residential Character Areas



Preferred Character Statements

All Areas

New development is sited within the landscape to allow for increased vegetation, including indigenous and native canopy tree coverage. Built form reflects the scale of existing dwellings, using simple building forms and neutral building materials including weatherboard and brick.

Buildings are articulated with recesses, porch areas and large windows, to complement the architectural detailing of the older style dwellings.

Consistent front and site setbacks create a sense of openness in the streetscape. New development allows space for increased indigenous and native vegetation planting, including canopy and amenity trees, contributing to the garden character.

Garages and carports are often located behind or in line with the façade of the dwelling and are visually unobtrusive and compatible with the development.

A mix of low scale and permeable front fencing allows for views to dwellings and front garden areas.

Streetscapes are often characterised by public spaces featuring a mix of native and non-native plantings, with a presence of paved footpaths on both sides of the street.

Incremental

Incremental Change areas will support low to medium scale developments, while still retaining the garden setting of the precinct by providing adequate space for increased native vegetation planting including canopy trees and shrubs.

Substantial

Substantial Change areas will experience increased change through housing diversity at greater densities and heights.

Neighbourhood Character Objectives

All Areas

1. To maintain and reinforce the predominant building alignment along the street, characterised by setbacks that contribute to the sense of openness.
2. To encourage space for increased indigenous and native vegetation planting, including canopy and amenity trees within the private realm, to strengthen the garden setting of dwellings and contribute to the enhancement of the public realm.
3. To ensure new development does not dominate the streetscape but minimises the dominance of car parking access and structures instead.
4. To maintain the openness of the streetscape and views through to front gardens, characterised by absent front fences.
5. To ensure new development positively responds to the preferred scale and styles of the precinct, characterised by predominantly low scale dwellings, utilising simple building forms and materials sympathetic to existing development with a neutral colour palette.

Incremental

To ensure the built form of low to medium scale development positively responds to the preferred scale and styles of the precinct, characterised by dwellings which feature well-articulated facades and natural materials, utilising a neutral colour palette including muted browns, greys and cream.

Substantial

To ensure higher density development responds to the preferred scale and styles of the precinct, characterised by townhouse, unit and apartment developments which feature well-articulated facades and a consistent material palette.

Photos by Ethos Urban



Ballarat North



Redan



Ballarat North/Soldiers Hill



Sebastopol

Design Guidelines

Character Elements	Design Response
Building height and form	
All areas	<ul style="list-style-type: none"> • New development should complement the low scale built form and sitting of existing dwellings and use of neutral materials such as brick and weatherboard. • Ensure new development responds to any local heritage plan that has been implemented by the City of Ballarat. • Orient buildings parallel to the street and incorporate façade articulation with the use of porches, recesses, windows, and doorways that provide rhythm without repetition, ensuring that contemporary design details do not directly mimic older architectural styles. • Use non-reflective materials and finishes for walls, roofs and windows. • Encourage contemporary building design and innovative architecture that articulates façades and responses to sensitive interfaces. • Locate habitable rooms and dwelling entrances to face the street where possible. • In the case of side-by-side development, provide each dwelling with a separate roofline and a discernible sense of address. • New development should maintain generous setbacks that provide for visual breaks and garden areas.
Minimal	<ul style="list-style-type: none"> • New development should complement the low scale of existing dwellings.
Incremental	<ul style="list-style-type: none"> • New development should complement a low to medium scale built form. • Ensure the main pedestrian entrance is legible in the streetscape while the vehicle entry is designed to be less prominent.
Substantial	<ul style="list-style-type: none"> • New development should complement the medium scale built form. • Ensure the main pedestrian entrance is legible in the streetscape while the vehicle entry is designed to be less prominent.

Character Elements	Design Response
Siting and setbacks	
All areas	<ul style="list-style-type: none"> • New development should maintain consistent setbacks that provide for a sense of openness with visual breaks through to garden areas. • Incorporate upper level setbacks to maintain the appearance of low scale street frontages when viewed from the street. • In the case of multi-dwellings on a lot, design the front dwelling to present as one dwelling to the street through the use of roof forms, materials and design detail. • If more than one dwelling is proposed, provide sufficient separation between each dwelling to allow for the planting of canopy trees, amenity trees and understorey vegetation. • The site area covered by buildings should not exceed 50%. • Provide at least 30% of the site as permeable surface. • Provide for one area within the front set back with minimum dimensions of 5m x 5m to accommodate at least one canopy tree.
Minimal	<ul style="list-style-type: none"> • Buildings should be set back a minimum of 2m from one side and 1m from the other side to retain separation between buildings and enable landscaping.
Incremental and Substantial	<ul style="list-style-type: none"> • Buildings should be set back a minimum of 1m from each side to retain separation between buildings and enable landscaping. • Setback upper levels above 2 storeys to achieve visual recession.
Gardens and landscaping	
All areas	<ul style="list-style-type: none"> • Retain existing indigenous and native canopy trees, amenity trees and understorey vegetation and replant wherever possible. • Buildings must provide a high-quality landscaping response to the street that contributes to the public realm through innovative design, landscaping and open frontages. • Ensure that all retained and proposed trees can reach maturity and are sustained over the longer term. • Provide landscaping along shared driveways and laneways to soften the appearance of buildings, fencing and hardstand areas. • Paths in the front setback should be integrated with the driveway to maximise space for landscaping and planting. • Prepare a landscape plan to accompany all applications for new dwellings that utilises appropriate indigenous and native species identified by the City of Ballarat. Ensure submitted Landscape Plans demonstrate how development will contribute to the 40% tree canopy targets outlined in the City of Ballarat's Urban Forest Action Plan. • Maintain the formal garden setting of the precinct by providing garden beds in front yards with space for new vegetation to establish, including along fence lines, driveways, front façades and other accessways.
Minimal and Incremental	<ul style="list-style-type: none"> • Provide indigenous and native canopy trees occurring at a density of one to every 250m².
Substantial	<ul style="list-style-type: none"> • Provide indigenous and native canopy trees occurring at a density of one to every 300m².

Character Elements	Design Response
Garage storage and vehicle access	
All areas	<ul style="list-style-type: none"> • Locate garages and carports behind or in line with the front dwelling façade, ensuring that they are integrated with the design of the dwelling. • Where a side by side development occurs, space the vehicle crossovers to retain the existing rhythm of the street. • Limit the width of vehicle accessways and minimise hard paving within the front setback. • Paths in the front setback should be integrated with the driveway to maximise space for landscaping and planting. • Provide only one vehicular crossover per typical site frontage. • Provide landscaping and plantings to soften the appearance of driveways.
Front fencing	
All areas	<ul style="list-style-type: none"> • Fencing should be set back from the front site boundary to allow for landscaping in front of the fence. • A front fence within 3 metres of a street should provide no or a low, open style up to 1.2m constructed of materials sympathetic to the surrounding context. • A front fence may be constructed up to 1.8m when located on a main road where they provide at least 25% permeability.



Photo by Ethos Urban

8.8 Lakeside Garden

Character Description

The Lakeside Garden (LG) Area is located exclusively around Lake Wendouree in Ballarat's west. Lake Wendouree is a valued feature of the city, with streetscapes in its immediate vicinity characterised by Ballarat's most eclectic combination of architectural styles, stretching back from early European settlement into the present day with contemporary designs evident. Dwellings in this Character Area tend to be large scale, with a variety of dwelling densities. Dwellings of two storeys are common; three storeys are also present and are designed to harness lake views.

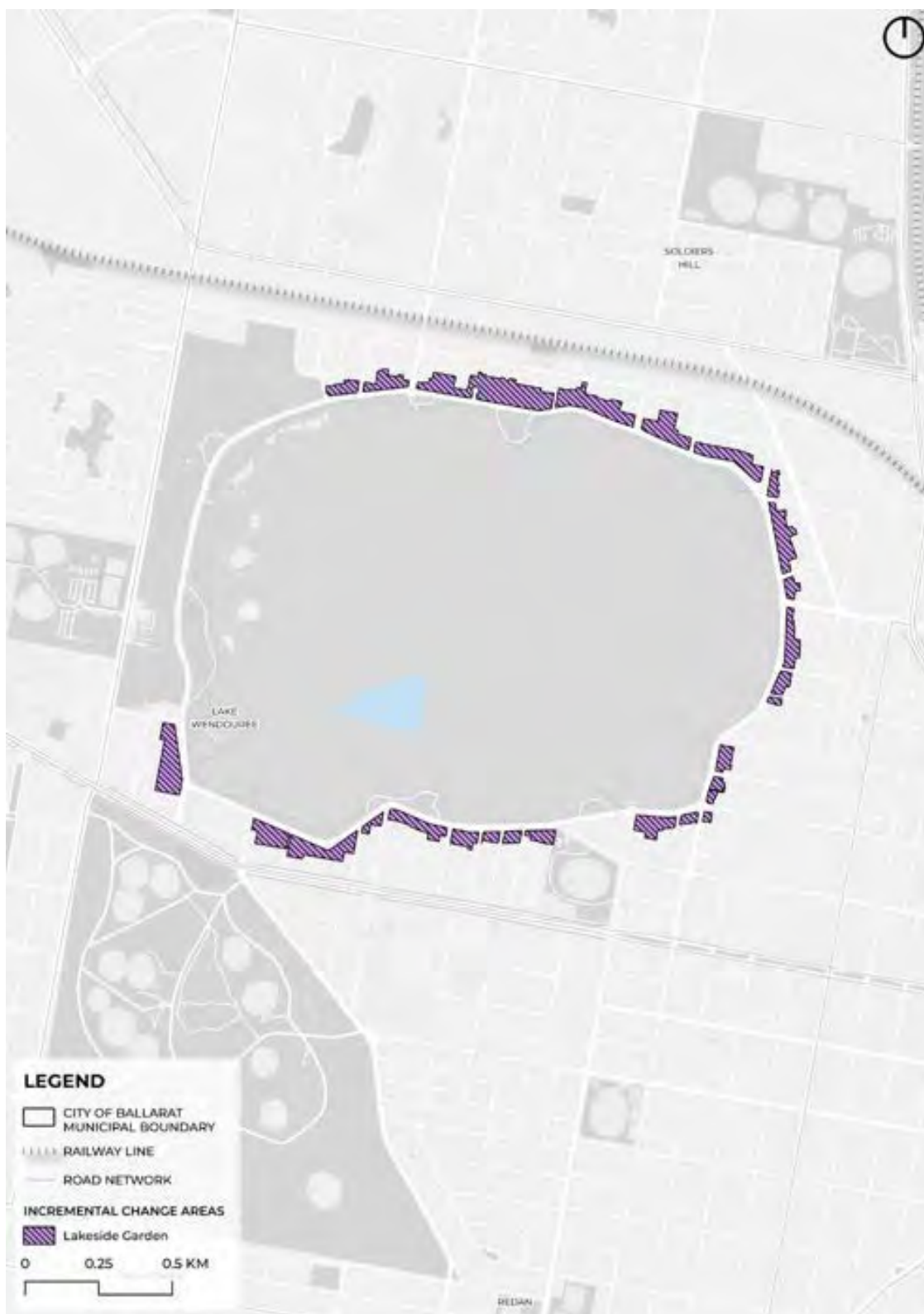
The key characteristics of Lakeside Garden Character Area are the eclectic mix of architecture styles and of dwellings situated on large lots. Extensive views to Lake Wendouree and distant intermittent parklands and city scapes are afforded in this areas and mature exotic trees are prominent in the public and private realms. Footpaths are typically present on both sides of the street.

Garages are often integrated with or set behind the façade of the dwelling and driveways are sealed. Front boundary treatment varies with fences constructed from a range of materials up to 1.2m in height. A number of fences are solid and seek to provide privacy given the main road frontage.

CHARACTER ATTRIBUTES	
Landscape character and setting	<ul style="list-style-type: none"> • Flat topography with views to Lake Wendouree and distant intermittent parklands and city scapes.
Public realm and streetscape	<ul style="list-style-type: none"> • Native and exotic street trees of varying maturity are present in most areas. • Streets following a curvilinear layout and feature sealed roads. • Footpaths are present on both sides of the road. • Drainage infrastructure includes concrete kerbs and occasionally bluestone kerbs in areas surrounding Lake Wendouree.
Architectural style	<ul style="list-style-type: none"> • Predominantly interwar, post war, and occasional contemporary style dwellings.
Dwelling typology	<ul style="list-style-type: none"> • Buildings are detached single dwellings.
Building height and scale	<ul style="list-style-type: none"> • Predominantly double storey dwellings, with some single storey the occasional three development. • Lot size range from 400m² to 1200+m². • Site coverage ranges from 20% to 45%.
Building orientation and layout	<ul style="list-style-type: none"> • Dwellings are oriented parallel to address the street.
Building materials	<ul style="list-style-type: none"> • Predominantly brick, render or weatherboard. • A muted colour palette of browns, reds, greys and cream. • Predominantly hipped and gabled roof forms constructed of tile or metal.
Setbacks	<ul style="list-style-type: none"> • Front setbacks range from 4m to 10m. • Side setbacks range from 1m to 2m.
Garden style	<ul style="list-style-type: none"> • Front gardens a medium level of formal plantings including established native and exotic shrubs and trees.
Car parking and outbuildings where relevant	<ul style="list-style-type: none"> • Vehicle storage is generally in line or set behind the façade of the dwelling. • Driveways are sealed.
Front boundary treatment	<ul style="list-style-type: none"> • Where a fence is provided it is constructed from a mix of materials up to 1.2m in height. • Occasionally fences exceed 1.2m and are solid to provide privacy, given the main road frontage.

Preferred Character Area Map

Lakeside Garden Character Areas



Preferred Character Statements

All Areas

New development will reflect the moderate scale and built forms of existing dwellings, using contemporary facade articulation, a consistent palette of materials and muted tones sympathetic to the surrounding landscape character.

New development will be designed to maximise views to the lake and distant intermittent parklands and city scapes and to make reasonable effort to ensure view sharing between neighbouring properties.

Front and side setbacks will allow for the retention and continued planting of native vegetation and tree canopy within a flourishing formal garden settings.

Vehicle storage will be located in line of or behind the dwelling façade and will be visually unobtrusive and integrated with the design of the dwelling.

Front fencing will allow for views through to dwellings and front garden areas whilst ensuring privacy for dwellings located on busy street corners and more frequented areas.

Vistas around streets bends will be characterised by grassed nature strips with native plantings, establishing canopy trees and footpaths on both sides of the street.

Neighbourhood Character Objectives

All Areas

1. To ensure new development positively responds to the preferred building materials, scale and styles of the precinct, characterised by detached, medium scale dwellings with a contemporary architectural style that utilise consistent materials and muted colour palette sympathetic to existing development and the landscape setting.
2. To ensure new development makes reasonable effort to ensure view sharing between neighbouring properties.
3. To ensure new development does not dominate the streetscape and minimises the dominance of car parking access and structures instead.
4. To provide for car parking which is in alignment with the dwelling façade and ensure parking does not dominate the streetscape.
5. To maintain and improve the vegetated character of the area through encouraging the retention and continued planting of native vegetation and tree canopy within the private realm.

Photos by Ethos Urban



Lake Wendouree



Lake Wendouree



Lake Wendouree



Lake Wendouree

Design Guidelines

Character Elements	Design Response
Building height and form	
All areas	<ul style="list-style-type: none"> • New development should complement the built form and scale of existing development, utilising a muted colour palette and materials including brick, weatherboard and render. • Ensure new development responds to any local heritage plan that has been implemented by the City of Ballarat. • Buildings should provide a pitched roof with prominent eaves. In cases where eaves are not provided, alternative techniques to articulate the dwelling should be introduced, which may include window shading, window shrouds, and other architectural features. • Orient buildings parallel to the street and incorporate façade articulation with the use of porches, recesses, windows, and doorways that provide rhythm without repetition, ensuring that contemporary design details do not directly mimic older architectural styles. • Use non-reflective materials and finishes for walls, roofs and windows.

Character Elements	Design Response
Building height and form	
All areas	<ul style="list-style-type: none"> • Ensure the main pedestrian entrance is legible in the streetscape while the vehicle entry is designed to be less prominent. • Encourage innovative and integrated balcony and window screening treatments where required to address overlooking requirements. • Encourage contemporary building design and innovative architecture that articulates facades and responses to sensitive interfaces. • Locate habitable rooms and dwelling entrances to face the street where possible. • Minimise the visibility of infrastructure and services from the public realm and other sensitive interfaces. • In the case of side-by-side development, provide each dwelling with a separate roofline and a discernible sense of address. • New development should complement the medium scale height of existing dwellings.
Siting and setbacks	
All areas	<ul style="list-style-type: none"> • New development should maintain consistent setbacks that provide for visual breaks and garden areas. • Buildings should be sited to take into account the sharing of view corridors to the lake and distant landscapes. • In the case of multi-dwellings on a lot, design the front dwelling to present as one dwelling to the street through the use of roof forms, materials and design detail. • If more than one dwelling is proposed, provide sufficient separation between each dwelling to allow for the planting of canopy trees and shrubs. • Buildings should be set back at least 2m from one side boundary to retain spacing between buildings and enable landscaping. • Setback upper levels above 2 storeys to achieve visual recession.
Gardens and landscaping	
All areas	<ul style="list-style-type: none"> • Retain established or mature trees and provide space for the planting of new canopy trees and vegetation. Where indigenous and larger native species cannot be retained on a site, the site should provide adequate space for offset planting of indigenous and native trees that will grow to a mature height similar to the height of the tree that was removed. • Buildings must provide a high-quality landscaping response to the street that contributes to the public realm through innovative design, landscaping and open frontages. • Provide landscaping along shared driveways and laneways to soften the appearance of buildings, fencing and hardstand areas. • Paths in the front setback should be integrated with the driveway to maximise space for landscaping and planting. • Prepare a landscape plan to accompany all applications for new dwellings that utilises appropriate indigenous and native species identified by the City of Ballarat. Ensure submitted Landscape Plans demonstrate how development will contribute to the 40% tree canopy targets outlined in the City of Ballarat's Urban Forest Action Plan. • Provide indigenous and native canopy trees occurring at a density of one to every 250m² across the site. • Provide at least 20% of the site as permeable surface.

Garage storage and vehicle access**All areas**

- Locate garages and carports in line or behind the front façade of the dwelling, ensuring that they do not dominate streetscape.
- Provide only one vehicular crossover per typical site frontage.
- Provide landscaping and plantings to soften the appearance of driveways.
- Minimise paving in front yards, including the driveway.
- In the case of side-by-side development, space the vehicle crossovers to retain the existing rhythm of the street.

Front fencing**All areas**

- A front fence within 3 metres of a street should provide an open style up to 1.2m constructed of materials sympathetic to the surrounding context.
 - A front fence may be constructed up to 1.8m when located on a main road where they provide at least 25% permeability.
-



Photo by Ethos Urban

8.9 Rural Residential 1

Character Description

The Rural Residential 1 (RR1) Area is predominantly located in Cadigan Village and Miners Rest. These areas are characterised by formal streetscapes and predominantly modern and contemporary architectural styles. Dwellings have large floor plates and are generally built from brick or concrete with a rendered finish. Dwellings feature generous front and side setbacks, allowing for landscaping and planting.

Dwellings contain varying levels of vegetation and often feature a mix of native and non-native, planting. Open lawns stretching from the dwelling to the street verge are also prominent throughout the precinct. Absent, or low and permeable front fences constructed from timber allow for views through to dwellings and front garden areas.

The topography is relatively flat or gently sloping in some areas, and coupled with the lack of canopy trees, this gives rise to extensive views from the edges of the residential areas to surrounding farmland and nearby settlements. Low site coverage provides a strong sense of openness and streets are laid out in a curvilinear form, with a mixture of formal and natural drainage. Footpaths are found along some street frontages and street trees are intermittent with the exception of main roads.

CHARACTER ATTRIBUTES	
Landscape character and setting	<ul style="list-style-type: none"> • Flat to gently sloping with extensive views to open farmland and nearby settlements.
Public realm and streetscape	<ul style="list-style-type: none"> • Street trees are generally absent with the exception of main roads. • Streets following a grid layout and feature sealed roads with grass and gravel verges. • Footpaths are not present. • Drainage infrastructure includes a mix of swales, kerbs, and channels.
Architectural style	<ul style="list-style-type: none"> • A mix of 20th and 21st century style dwellings.
Dwelling typology	<ul style="list-style-type: none"> • Buildings are detached single dwellings.
Building height and scale	<ul style="list-style-type: none"> • Predominantly single storey. • Lot sizes range from 1000m² to 5000m². • Site coverage ranges from 10% to 20%.
Building orientation and layout	<ul style="list-style-type: none"> • Dwellings are oriented parallel to address the street.
Building materials	<ul style="list-style-type: none"> • Predominantly weatherboard and brick. • Neutral colour palette including browns, greys, cream and white. • Predominantly hipped and gabled roof forms constructed of tile or metal.
Setbacks	<ul style="list-style-type: none"> • Front setbacks range from 3m to 18m. • Side setbacks are generally 3m to 4m.
Garden style	<ul style="list-style-type: none"> • Low to medium levels of established vegetation and expansive grass lawns. • A mixture of native and exotic canopy trees and low lying shrubs.
Car parking and outbuildings where relevant	<ul style="list-style-type: none"> • Vehicle storage is either detached and setback or in line and integrated with the façade of the dwelling. • Driveways are sealed.
Front boundary treatment	<ul style="list-style-type: none"> • A predominant absence of front fences. • Where a fence is provided it is typically low, semi-transparent and up to 0.8m in height constructed from timber or post and wire.

Preferred Character Area Map

Rural Residential 1 Character Areas



Preferred Character Statements

All Areas

New development is set within the flat to sloping landscape and reflects the semi-rural character of low scale dwellings with a contemporary architectural style that utilises natural materials and a neutral colour palette of softer tones sympathetic to the rural landscape character.

New development provides significant front and side setbacks to allow for the retention and continued planting of indigenous and native vegetation, canopy and amenity trees.

Dwellings are sited on large lots that accommodate a mixture of indigenous and native species, strongly textured planting and vast open lawns.

The streetscapes feature a formal character, with a presence of sealed roads and mix of drainage infrastructure including swales and channels.

Garages and carports are often located behind the line of the front dwelling façade and are unobtrusive and integrated with the design of the dwelling.

Front fencing is absent or of a low rural style and permeable, allowing for views through to landscaping located in the front setbacks of dwellings.

Incremental

New development will reflect the moderate scale and built forms of existing dwellings, using contemporary facade articulation, a consistent palette of materials and muted tones sympathetic to the surrounding landscape character.

Neighbourhood Character Objectives

All Areas

1. To minimise the dominance of vehicle access and structures with unsealed crossovers and driveways and locating garages and carports behind or in line with the front facade of the dwelling.
2. To strengthen the vegetation-dominated landscape, characterised by large rural lots with significant setbacks that allow continued planting of indigenous and native vegetation, canopy and amenity trees.
3. To ensure new development sits with the existing rural landscape setting, maximising view sharing to surrounding rural areas and landscapes.
4. To retain the spaciousness of the streetscape, characterised by no or low rural style, permeable front fences with views through to landscaping located in the front setbacks of dwellings.
5. To ensure new development reflects the preferred built form, characterised by low scale dwellings with a contemporary architectural style that utilises natural materials and a muted colour palette of earthen and bush tones to enhance the precinct’s semi-rural character.

Incremental

To ensure new development reflects the preferred built form, characterised by medium to low scale dwellings with a contemporary architectural style that utilises natural materials and a muted colour palette of earthen and bush tones to enhance the precinct’s semi-rural character.

Photos by Ethos Urban



Cardigan Village



Cardigan Village



Cardigan Village



Cardigan Village

Design Guidelines

Character Elements	Design Response
Building height and form	
All areas	<ul style="list-style-type: none"> • New development should complement the contemporary building forms, natural materials and siting of existing dwellings. • New development should use a neutral colour palette of earthen bush tones, particularly greens, browns and greys. • Articulate the front façades of buildings through the use of verandahs, windows, doorways and porch entries. • Buildings should provide a pitched roof with prominent eaves. In cases where eaves are not provided, alternative techniques to articulate the dwelling should be introduced, which may include window shading, window shrouds, and other architectural features. • Buildings should not penetrate the tree canopy, where a canopy is present. • Use non-reflective materials and finishes for walls, roofs and windows.
Minimal	<ul style="list-style-type: none"> • New development should complement the low scale of existing dwellings.
Incremental	<ul style="list-style-type: none"> • New development should complement a low to medium scale built form.

Character Elements	Design Response
Siting and setbacks	
All areas	<ul style="list-style-type: none"> The site area covered by buildings should not exceed 45%. Provide at least 45% of the site as permeable surface. If more than one dwelling is proposed, provide sufficient separation between each dwelling to allow for the planting of indigenous and native canopy trees, amenity trees and understorey vegetation.
Minimal	<ul style="list-style-type: none"> Buildings should be set back a minimum of 4m from both side boundaries to enable the planting of indigenous and native trees and understorey planting.
Incremental	<ul style="list-style-type: none"> Buildings should be set back a minimum of 3m from one side boundary and 2m from the other side boundary.
Gardens and landscaping	
All areas	<ul style="list-style-type: none"> Retain existing indigenous and native canopy trees, amenity trees and understorey vegetation and replant wherever possible. Ensure that all retained and proposed trees can reach maturity and are sustained over the longer term. Buildings should be sited and designed to incorporate space for planting of indigenous and native vegetation. Prepare a landscape plan to accompany all applications for new dwellings that utilises appropriate indigenous and native species identified by the City of Ballarat. Ensure submitted Landscape Plans demonstrate how development will contribute to the 40% tree canopy targets outlined in the City of Ballarat's Urban Forest Action Plan.
Minimal	<ul style="list-style-type: none"> Provide indigenous canopy trees occurring at a density of one to every 150m².
Incremental	<ul style="list-style-type: none"> Provide indigenous canopy trees occurring at a density of one to every 200m².
Garage storage and vehicle access	
All areas	<ul style="list-style-type: none"> Locate garages and carports behind the line of the front dwelling façade, ensuring that they are integrated with the design of the dwelling. Provide only one vehicular crossover per typical site frontage. Minimise paving in front garden areas including driveways and cross overs. Use permeable driveway materials. Provide landscaping and plantings to soften the appearance of driveways.
Front fencing	
All areas	<ul style="list-style-type: none"> Fencing should be set back from the front site boundary to allow for landscaping in front of the fence. A front fence within 3 metres of a street should provide low, open rural style constructed of timber or post and wire up to 0.8m in height.



Photo by Ethos Urban

8.10 Rural Residential 2

Character Description

The Rural Residential 2 (RR2) Area features large open paddocks amongst the residential dwellings. There is a mixture of architectural styles from the mid to late 20th Century onwards mainly large, single storey 'ranch style' detached dwellings, predominantly built of brick with hipped or gabled roof forms.

Views out over the surrounding paddocks are found in most areas but are occasionally restricted by mature boundary planting. Dwellings are inconsistently sited to respond to vegetation and include large front setbacks supporting the high level of plantings. Gardens are well established and consist of a combination of mown lawn with individual trees and shrub borders featuring both exotic and native planting with conifers in particular used for screening the street or neighbouring properties.

Roads are generally sealed with wide reserves and grass verges. There are no footpaths and street trees are largely absent.

Garages, carports, and sheds are generally detached and well setback from the street frontage. Front fencing is mostly present including post and wire, post and rail and the occasional brick with metal railings.

CHARACTER ATTRIBUTES	
Landscape character and setting	<ul style="list-style-type: none"> • Flat topography. • Views to open surrounding rural properties, distant settlements and vegetation.
Public realm and streetscape	<ul style="list-style-type: none"> • Informal street planting characterised by medium to high levels of established, native trees. • Streets mostly follow a modified grid layout and feature a mix of sealed and unsealed roads with gravel verges. • Informal streetscapes typically with no footpaths and a lack of formal drainage infrastructure, usually in the form of trenches or swales.
Architectural style	<ul style="list-style-type: none"> • A mix of 20th and 21st century style dwellings.
Dwelling typology	<ul style="list-style-type: none"> • Buildings are detached single dwellings.
Building height and scale	<ul style="list-style-type: none"> • Predominantly single storey up to 5m in height. • Lot size range from 5000m² to 30,000m². • Site coverage ranges from 5% to 15%.
Building orientation and layout	<ul style="list-style-type: none"> • Inconsistent siting and orientation of dwellings.
Building materials	<ul style="list-style-type: none"> • Predominantly weatherboard and brick. • Neutral colour palette of earthen and bush tones including browns, greens, greys and cream. • Predominantly hipped and gabled roof forms constructed of tile or metal.
Setbacks	<ul style="list-style-type: none"> • Front setbacks are generous, in excess of 9m. • Front setbacks are generous, in excess of 9m. • Dwellings are separated by spacious side setbacks, in excess of 5m.
Garden style	<ul style="list-style-type: none"> • Medium levels of established vegetation, where planting is a mix of densely vegetated native and non-native species and is complimented by remnant native canopy in vast lawns.
Car parking and outbuildings where relevant	<ul style="list-style-type: none"> • Vehicle storage is primarily equal with the front facade, occasionally forward of the dwelling. • Predominantly unsealed, long driveways (mix of gravel and dirt).
Front boundary treatment	<ul style="list-style-type: none"> • A predominant absence of front fences. • Where a fence is provided it is typically low, semi-transparent and up to 0.8m in height constructed from timber or post and wire.

Preferred Character Area Map

Rural Residential 2 Character Areas



Preferred Character Statements**All Areas**

Streetscapes are dominated by indigenous and native canopy trees with supporting undergrowth. New development is sited to strengthen the vegetation dominated landscape. Informal bush gardens surround low scale dwellings on spacious lots.

New development provides generous front and side setbacks to allow for the retention and continued planting of indigenous and native vegetation and open lawns.

New development reflects the low scale of dwellings, using simple building forms and low pitched roofs.

Dwellings do not penetrate the existing remnant native tree canopy and are often obscured by dense roadside vegetation.

Dwellings utilise natural materials and a muted colour palette of earthen and bush tones to fit within the vegetated landscape setting.

The streetscapes feature an informal character which embraces roadside vegetation and a mixture of sealed and unsealed roads.

Garages and carports are hidden from view, often located behind the line of the front dwelling façade and are integrated with the design of the dwelling.

Front fencing is low and permeable, blending with gardens and the unsealed roads.

Neighbourhood Character Objectives**All Areas**

1. To ensure new development reflects the preferred built form, characterised by low scale dwellings with a contemporary architectural style that utilises natural materials and a neutral colour palette of earthen and bush tones.
2. To ensure new development does not dominate the wider landscape setting nor penetrates the existing indigenous and native tree canopy but instead sits behind trees and bushes, often obscured by the vegetation, and minimises site disturbance and the impact of buildings on the landscape.
3. To strengthen the vegetation-dominated landscape, characterised by large rural lots with generous setbacks that allow retention of remnant indigenous and native vegetation and continued planting of canopy trees and gardens.
4. To minimise the dominance of vehicle access and structures with unsealed crossovers and driveways and locating garages and carports behind the front facade of the dwelling.
5. To retain low, permeable front fences constructed of timber or post and wire, that blend with gardens and existing vegetation that lines the street.

Photos by Ethos Urban



Cardigan



Cardigan



Cardigan



Cardigan

Design Guidelines

Character Elements	Design Response
Building height and form	
All areas	<ul style="list-style-type: none"> • New development should complement the low scale, simple building forms and large floor plates of existing dwellings. • New development should use a neutral colour palette of earthen bush tones, particularly greens, browns, greys and greys. • Articulate the front façades of buildings through the use of verandahs, windows, doorways and porch entries. • Buildings should provide a pitched roof with prominent eaves. In cases where eaves are not provided, alternative techniques to articulate the dwelling should be introduced, which may include window shading, window shrouds, and other architectural features. • Buildings should not penetrate the tree canopy, where a canopy is present. • Use non-reflective materials and finishes for walls, roofs and windows. • New development should maintain generous separation between dwellings that provides for visual breaks, sharing of views and garden areas.

Character Elements	Design Response
Siting and setbacks	
All areas	<ul style="list-style-type: none"> • Buildings should be set back a minimum of 5m from both side boundaries to enable the planting of indigenous and native trees and understorey planting. • The site area covered by buildings should not exceed 30%. • Provide at least 50% of the site as permeable surface. • If more than one dwelling is proposed, provide sufficient separation between each dwelling to allow for the planting of indigenous and native canopy trees, amenity trees and understorey vegetation.
Gardens and landscaping	
All areas	<ul style="list-style-type: none"> • Retain existing indigenous and native canopy trees, amenity trees and understorey vegetation and replant wherever possible. • Ensure that all retained and proposed trees can reach maturity and are sustained over the longer term. • Buildings should be sited and designed to incorporate space for planting of indigenous and native vegetation. • Provide indigenous canopy trees occurring at a density of one to every 200m². • Prepare a landscape plan to accompany all applications for new dwellings that utilises appropriate indigenous and native species identified by the City of Ballarat. Ensure submitted Landscape Plans demonstrate how development will contribute to the 40% tree canopy targets outlined in the City of Ballarat's Urban Forest Action Plan.
Garage storage and vehicle access	
All areas	<ul style="list-style-type: none"> • Locate garages and carports behind the line of the front dwelling façade, ensuring that they are integrated with the design of the dwelling. • Provide only one vehicular crossover per typical site frontage. • Minimise paving in front garden areas including driveways and cross overs. • Use permeable driveway materials. • Provide landscaping and plantings to soften the appearance of driveways.
Front fencing	
All areas	<ul style="list-style-type: none"> • Fencing should be set back from the front site boundary to allow for landscaping in front of the fence. • A front fence within 3 metres of a street should provide low, open rural style constructed of timber or post and wire up to 0.8m in height.



Photo by Ethos Urban

8.11 Urban Core 1

Character Description

The Urban Core 1 (UC1) Area is located in some of the oldest residential areas of Ballarat: Soldiers Hill and Ballarat Central, the latter comprising parts of Wendouree and Newington. These areas were developed over a long time period with later development in some areas affected by the continuing presence of deep lead mining on the flat basalt plain. The area is strongly characterised by the formal grid layout based on the 19th Century government survey.

The undulating topography in Soldiers Hill and the elevated areas in Ballarat Central, affords significant views along streets towards the Ballarat city skyline, and beyond to key landmarks including Mount Buninyong and Mount Warrenheip, City Oval, Lake Wendouree and Black Hill. Nearly all gridded streets feature prominent avenues of mature to semi-mature trees. UC1 is distinguished by the extensive intact networks of bluestone drainage channels in combination with wide gravel and grass shoulders.

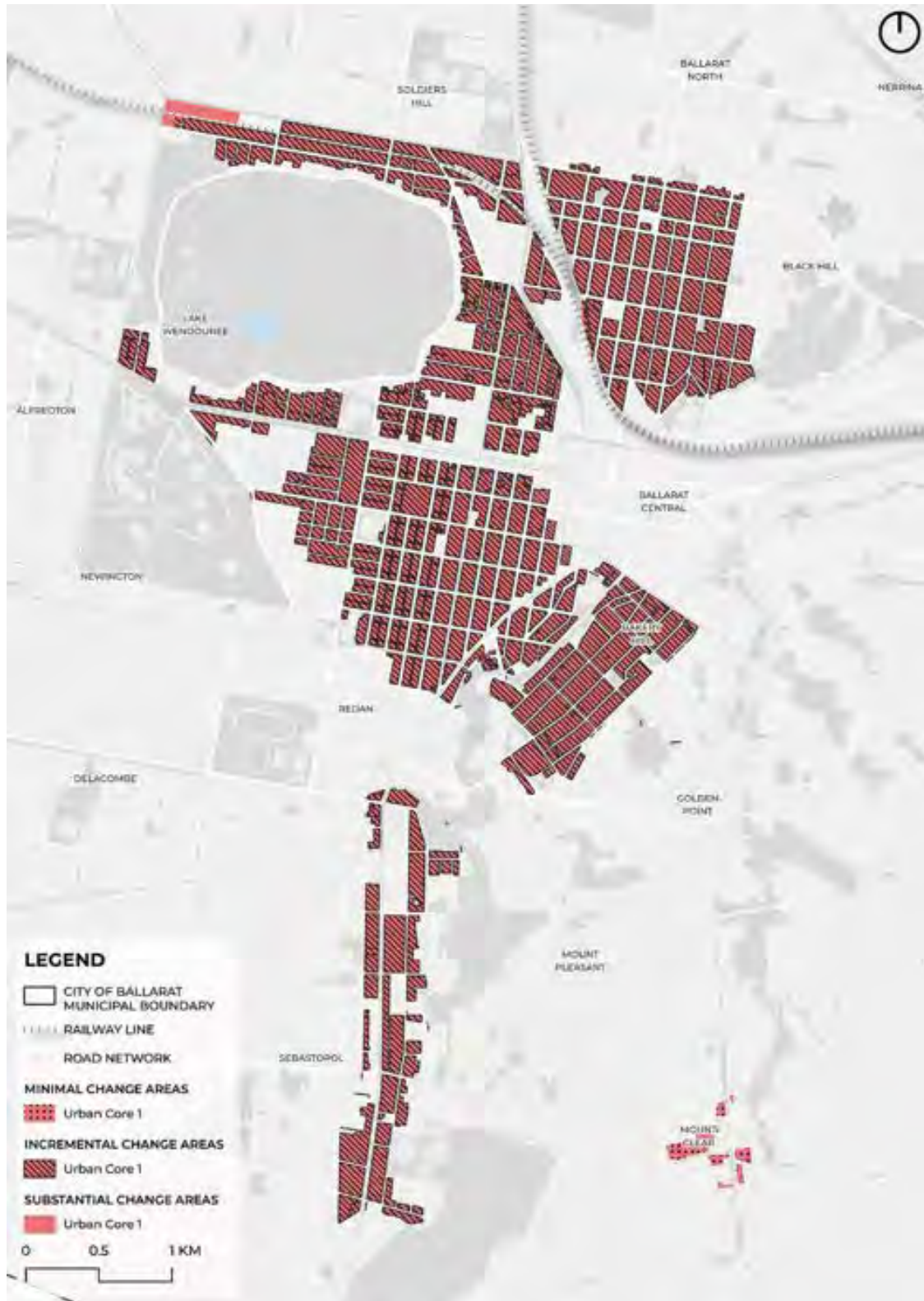
These areas are characterised by a combination of intact and individually significant detached residential buildings, generally from the Victorian, Federation, and Interwar era periods. Typical residential buildings are single storey, constructed of weatherboard, brick, or bluestone with hipped or gabled roofs. Buildings on the corners of principal roads that would have, historically, have been occupied by commercial businesses are evident, though in many cases are now in residential use. Front setbacks are typical, with smaller side setbacks reflecting the high-density nature of these areas.

Gardens are typically well-maintained, some with notable mature canopy trees and front fencing is constructed from a range of materials. Single garages, where they exist, are set back from dwelling façades, and often accessed via rear laneways.

CHARACTER ATTRIBUTES	
Landscape character and setting	<ul style="list-style-type: none"> • Flat to sloping topography. • Short range views along tree-lined streets and main roads. • Areas located within the elevated ground of Soldiers Hill provide views to the Ballarat CBD.
Public realm and streetscape	<ul style="list-style-type: none"> • Native and exotic street trees of varying maturity are consistently planted in most areas. • Streets following a grid layout and feature sealed roads with gravel verges. • Footpaths are generally present on both sides. • Drainage infrastructure includes concrete kerbs and channels. • Networks of back alleyways providing rear lane access in some areas.
Architectural style	<ul style="list-style-type: none"> • Mixture of Victorian, Edwardian, Inter-war and Post-war styles interspersed by heritage and some contemporary developments.
Dwelling typology	<ul style="list-style-type: none"> • Buildings are detached single dwellings.
Building height and scale	<ul style="list-style-type: none"> • Predominantly single storey, but with some double storey up to 9m. • Lot sizes range from 400m² to 1000m². • Site coverage ranges from 30% to 55%.
Building orientation and layout	<ul style="list-style-type: none"> • Dwellings are oriented parallel to address the street.
Building materials	<ul style="list-style-type: none"> • Predominantly weatherboard and brick and occasionally bluestone. • Neutral colour palette including browns, greys, cream and white.
Setbacks	<ul style="list-style-type: none"> • Front setbacks range from 3m to 7m. • Side setbacks range from 1m to 2m.
Garden style	<ul style="list-style-type: none"> • Low to medium levels of established vegetation. • A mixture of native and exotic canopy trees and low lying shrubs.
Car parking and outbuildings where relevant	<ul style="list-style-type: none"> • Vehicle storage is generally detached and set behind the façade of the dwelling. • Driveways are sealed.
Front boundary treatment	<ul style="list-style-type: none"> • Front fences are generally present and are typically low, semi-transparent and up to 1.2m in height constructed from a mix of materials.

Preferred Character Area Map

Urban Core 1 Character Areas



Preferred Character Statements

All Areas

New development will be predominantly low scale, utilising a mix of materials and a neutral colour palette that is sympathetic to existing, older development including Victorian, Edwardian, Inter-war and Post-war architectural styles.

Dwellings will be consistently sited within formal garden settings which provide space for increased vegetation, including native shrubs and canopy tree coverage.

Vehicle storage will be located in line of or behind the dwelling facade, and will be visually unobtrusive and compatible with the development.

Front facade articulation is achieved through the use of recesses to complement the verandah and porch areas of the existing traditional dwellings.

The scale of dwellings will support views in sloping areas, along streets towards the Ballarat city skyline, but also beyond to key landmarks including Mount Buninyong and Mount Warrenheip, City Oval, Lake Wendouree and Black Hill.

Incremental

Incremental Change areas will support low to medium scale developments, while still responding to existing built form and maintaining appropriate setbacks that provide space for increased native vegetation planting.

Substantial

Substantial Change areas will experience increased change through housing diversity at greater densities and heights, achieving residential development that is uniform but well-articulated in design.

Neighbourhood Character Objectives

All Areas

1. To ensure that new development is designed to respect the key elements of existing buildings from Victorian, Edwardian, Inter-war and Post-war eras.
2. To ensure that new buildings and extensions do not dominate the streetscape.
3. To maintain and reinforce the predominant building alignment along the street and to retain the existing street rhythm.
4. To ensure new dwellings positively respond to the predominant weatherboard materials of the precinct.
5. To maintain and strengthen the vegetated settings of dwelling.

Incremental

To ensure the built form of low to medium scale development positively responds to the preferred scale and styles of the precinct, characterised by dwellings which feature well-articulated facades and consistent material and colour palette sympathetic to older buildings.

Substantial

To ensure higher density development responds to the preferred scale and styles of the precinct, characterised by townhouse, unit and apartment developments which feature well-articulated facades and a consistent material palette sympathetic to older buildings.

Photos by Ethos Urban



Ballarat East



Soldiers Hill



Ballarat Central



Ballarat Central

Design Guidelines

Character Elements	Design Response
Building height and form	
All areas	<ul style="list-style-type: none"> • New development should complement the design and simple building forms of existing dwellings, utilising a neutral colour palette of natural tones, particularly browns, greys and cream. • Ensure new development responds to any local heritage plan that has been implemented by the City of Ballarat. • In the case of side-by-side development, provide each dwelling with a separate roofline and a discernible sense of address. • Buildings should provide a pitched roof with prominent eaves. In cases where eaves are not provided, alternative techniques to articulate the dwelling should be introduced, which may include window shading, window shrouds, and other architectural features. • Orient buildings parallel to the street and incorporate façade articulation with the use of porches, recesses, windows, and doorways that provide rhythm without repetition, ensuring that contemporary design details do not directly mimic older architectural styles. • Use non-reflective materials and finishes for walls, roofs and windows. • Ensure the main pedestrian entrance is legible in the streetscape while the vehicle entry is designed to be less prominent. • Encourage contemporary building design and innovative architecture that articulates façades and responses to sensitive interfaces.

Character Elements	Design Response
Building height and form	
Minimal	<ul style="list-style-type: none"> New development should complement the low scale of existing dwellings.
Incremental	<ul style="list-style-type: none"> New development should complement a low to medium scale built form.
Substantial	<ul style="list-style-type: none"> New development should complement the medium scale built form.
Siting and setbacks	
All areas	<ul style="list-style-type: none"> New development should maintain consistent setbacks that provide for a sense of openness and visual breaks and garden areas. Orient dwellings parallel to the street. In the case of multi-dwellings on a lot, design the front dwelling to present as one dwelling to the street through the use of roof forms, materials and design detail. If more than one dwelling is proposed, provide sufficient separation between each dwelling to allow for the planting of canopy trees and understorey vegetation.
Minimal	<ul style="list-style-type: none"> Buildings should be set back a minimum of 2m from one side boundary to retain spacing between buildings and enable landscaping.
Incremental and Substantial	<ul style="list-style-type: none"> Buildings should be set back a minimum of 1m from one side boundary to retain spacing between buildings and enable landscaping. Setback upper levels above 2 storeys to achieve visual recession.
Gardens and landscaping	
All areas	<ul style="list-style-type: none"> Provide landscaping along shared driveways and laneways to soften the appearance of buildings, fencing and hardstand areas. Prepare a landscape plan to accompany all applications for new dwellings that utilises appropriate indigenous and native species identified by the City of Ballarat. Ensure submitted Landscape Plans demonstrate how development will contribute to the 40% tree canopy targets outlined in the City of Ballarat's Urban Forest Action Plan. Maintain the formal garden setting of the precinct by providing garden beds in front yards with space for new vegetation to establish, including along fence lines, driveways, front façades and other accessways.
Garage storage and vehicle access	
All areas	<ul style="list-style-type: none"> Locate garages and carports behind or in line with the front façade of the dwelling, ensuring that they do not dominate streetscape. Provide only one vehicular crossover per typical site frontage. Limit the width of vehicle accessways. Minimise paving in front yards, including the driveway. In the case of side-by-side development, space the vehicle crossovers to retain the existing rhythm of the street. Where a rear Right of Way exists, vehicle storage should be located at the rear of a dwelling.
Front fencing	
All areas	<ul style="list-style-type: none"> A front fence within 3 metres of a street should provide a low, open style up to 1.2m constructed of timber pickets or similar, sympathetic to the surrounding context. A front fence may be constructed up to 1.8m when located on a main road where they provide at least 25% permeability.



8.12 Urban Core 2

Character Description

The Urban Core 2 (UC2) Area is found in the inner east of Ballarat, with its historic origins associated with gold mining evident from the presence of many irregular lot shapes and sizes. Humffray and Eureka Streets were once the main entries into Ballarat from the east. Once the mines closed the UC2 areas transitioned to residential. Although the rectangular lots were formally surveyed, many of the irregular shaped lots derive from historic 'Miners Rights' leases.

Some sloping areas allow for expansive views to the cityscape and natural landmarks. The street layout is a mixture of grid layouts and curvilinear forms. Grass and gravel verges, bluestone and brick spoon drains and channels, and mature exotic trees are also important features.

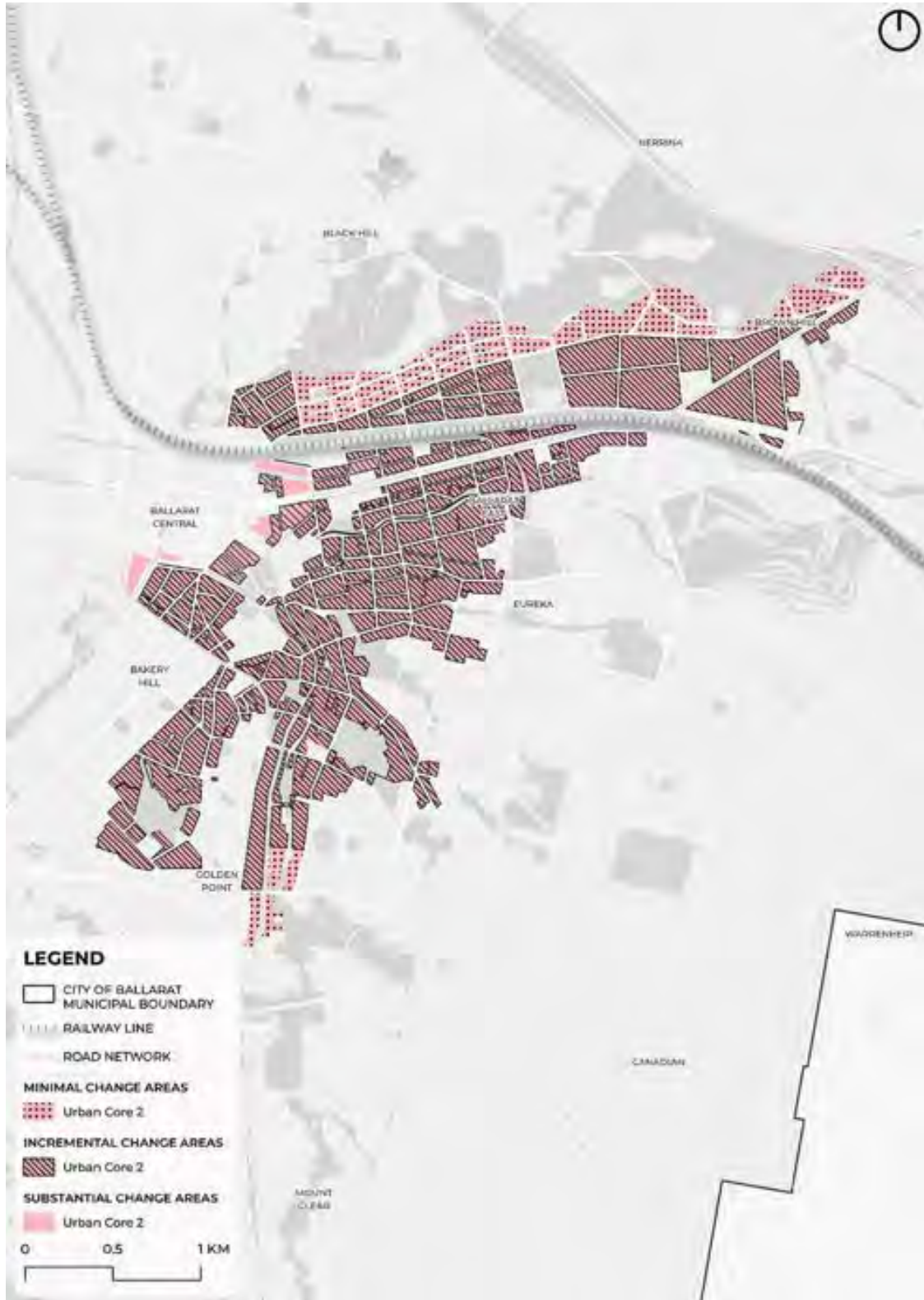
The UC2 areas consist of a mixture of Victorian, Edwardian, Inter-war and Post-war styles interspersed by heritage developments. Commonly, dwellings are detached and occasional semi-detached dwellings are present. Varying lot sizes and subdivision patterns contribute to an inconsistent layout although dwellings generally face the street. Front setbacks vary significantly with smaller front gardens more common in areas closer to commercial areas. Side setbacks are similarly varied in general but slightly more generous in Golden Point.

Front gardens are well maintained and feature low to medium levels of established native and exotic vegetation, with single garages generally sitting behind the principal dwelling facades. Fencing is typically constructed of timber or brick and occasionally robust hedging occurs along the front boundary.

CHARACTER ATTRIBUTES	
Landscape character and setting	<ul style="list-style-type: none"> • A gently sloping to rolling landform dissected by rivers and creek. Mature exotic trees are an important landscape feature. • The varied topography give rise to many views to surrounding areas and landmarks – Black Hill, Canadian Forest, CBD. • Significant views of the city skyline from parts of Golden Point.
Public realm and streetscape	<ul style="list-style-type: none"> • Native and exotic street trees of varying maturity are inconsistently planted. • Streets following a grid layout and feature sealed roads with gravel verges. • Footpaths are generally present on one side. • Drainage infrastructure includes concrete kerbs and channels, occasionally constructed from bluestone. • Networks of back alleyways providing rear lane access in some areas.
Architectural style	<ul style="list-style-type: none"> • Mixture of Victorian, Edwardian, Inter-war and Post-war styles interspersed by heritage developments.
Dwelling typology	<ul style="list-style-type: none"> • Buildings are predominantly detached single dwellings with some semi-detached.
Building height and scale	<ul style="list-style-type: none"> • Predominantly single storey, but with some double storey. • Lot sizes range from 300m² to 800m². • Site coverage ranges from 25% to 45%.
Building orientation and layout	<ul style="list-style-type: none"> • Dwellings are oriented parallel to address the street.
Building materials	<ul style="list-style-type: none"> • Predominantly weatherboard and brick. • Neutral colour palette including browns, greys, cream and white. • Predominantly hipped and gabled roof forms constructed of tile or metal.
Setbacks	<ul style="list-style-type: none"> • Front setbacks range from 2m to 7m. • Side setbacks range from 1m to 2m.
Garden style	<ul style="list-style-type: none"> • Low to medium levels of established vegetation. • A mixture of native and exotic canopy trees and shrubs. • Front gardens contain formal planting styles and there is a presence of hedges.
Car parking and outbuildings where relevant	<ul style="list-style-type: none"> • Vehicle storage is generally detached and set behind the façade of the dwelling. • Driveways are sealed.
Front boundary treatment	<ul style="list-style-type: none"> • Front fences are generally present and are typically low, semi-transparent and up to 1.2m in height constructed from a mix of materials and hedging.

Preferred Character Area Map

Urban Core 2 Character Areas



Preferred Character Statements

All Areas

New development will be consistent with the scale, built form and diversity of existing dwellings intrinsic to these established residential areas, utilising a mix of materials and a neutral colour palette that is sympathetic to existing, older development.

Dwellings will be consistently sited within formal garden settings which provide space for increased vegetation, including native shrubs and canopy tree coverage.

Front facade articulation is recessed to complement the existing pattern of verandah and porch areas of the traditional dwellings.

Vehicle storage will be located in line of or behind the dwelling facade, and will be visually unobtrusive and compatible with the development.

New development will be designed to respond to the topography of the land, to retain intermittent views to surrounding residential areas.

Incremental

Streets in Incremental Change areas will support low to medium scale developments which respond to the existing built form, massing and styles of older housing stock.

Substantial

Substantial Change areas will experience increased change through housing diversity at greater densities and heights, achieving residential development that is uniform but well-articulated in design.

Neighbourhood Character Objectives

All Areas

1. To ensure that new development is designed to respect the key elements of existing buildings from Victorian, Edwardian, Inter-war and Post-war eras.
2. To ensure that new buildings and extensions do not dominate the streetscape.
3. To maintain and strength the vegetated setting of the precinct, including the continued planting of canopy trees.
4. To ensure new development positively responds to the preferred scale and styles of the precinct, characterised by dwellings which feature well articulated facades and a consistent material palette.
5. To maintain and reinforce the predominant building alignment along the street and to retain the existing street rhythm.

Incremental

To ensure the built form of low to medium scale development positively responds to the preferred scale and styles of the precinct, characterised by dwellings which feature well-articulated facades and consistent material and colour palette sympathetic to older buildings.

Substantial

To ensure higher density development responds to the preferred scale and styles of the precinct, characterised by townhouse, unit and apartment developments which feature well-articulated facades and a consistent material palette sympathetic to older buildings.

Photos by Ethos Urban



Black Hill



Ballarat East



Soldiers Hill



Soldiers Hill

Design Guidelines

Character Elements	Design Response
Building height and form	
All areas	<ul style="list-style-type: none"> • New development should complement the design and simple building forms of existing dwellings, utilising a neutral colour palette of natural tones, particularly browns, greys and cream. • Ensure new development responds to any local heritage plan that has been implemented by the City of Ballarat. • In the case of side-by-side development, provide each dwelling with a separate roofline and a discernible sense of address. • Buildings should provide a pitched roof with prominent eaves. In cases where eaves are not provided, alternative techniques to articulate the dwelling should be introduced, which may include window shading, window shrouds, and other architectural features. • Orient buildings parallel to the street and incorporate façade articulation with the use of porches, recesses, windows, and doorways that provide rhythm without repetition, ensuring that contemporary design details do not directly mimic older architectural styles. Use non-reflective materials and finishes for walls, roofs and windows. • Ensure the main pedestrian entrance is legible in the streetscape while the vehicle entry is designed to be less prominent. • Encourage contemporary building design and innovative architecture that articulates façades and responses to sensitive interfaces.

Character Elements	Design Response
Building height and form	
Minimal	<ul style="list-style-type: none"> New development should complement the low scale of existing dwellings.
Incremental	<ul style="list-style-type: none"> New development should complement a low to medium scale built form.
Substantial	<ul style="list-style-type: none"> New development should complement the medium scale built form.
Siting and setbacks	
All areas	<ul style="list-style-type: none"> New development should maintain consistent setbacks that provide for a sense of openness and visual breaks and garden areas. Orient dwellings parallel to the street. In the case of multi-dwellings on a lot, design the front dwelling to present as one dwelling to the street through the use of roof forms, materials and design detail. If more than one dwelling is proposed, provide sufficient separation between each dwelling to allow for the planting of canopy trees and understorey vegetation.
Minimal	<ul style="list-style-type: none"> Buildings should be set back a minimum of 2m from one side boundary to retain spacing between buildings and enable landscaping.
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Gardens and landscaping	
All areas	<ul style="list-style-type: none"> Provide landscaping along shared driveways and laneways to soften the appearance of buildings, fencing and hardstand areas. Prepare a landscape plan to accompany all applications for new dwellings that utilises appropriate indigenous and native species identified by the City of Ballarat. Ensure submitted Landscape Plans demonstrate how development will contribute to the 40% tree canopy targets outlined in the City of Ballarat's Urban Forest Action Plan. Maintain the formal garden setting of the precinct by providing garden beds in front yards with space for new vegetation to establish, including along fence lines, driveways, front façades and other accessways.
Garage storage and vehicle access	
All areas	<ul style="list-style-type: none"> Locate garages and carports behind or in line with the front façade of the dwelling, ensuring that they do not dominate streetscape. Provide only one vehicular crossover per typical site frontage. Limit the width of vehicle accessways. Minimise paving in front yards, including the driveway. In the case of side-by-side development, space the vehicle crossovers to retain the existing rhythm of the street. Where a rear Right of Way exists, vehicle storage should be located at the rear of a dwelling.
Front fencing	
All areas	<ul style="list-style-type: none"> A front fence within 3 metres of a street should provide a low, open style up to 1.2m constructed of materials sympathetic to the surrounding context. A front fence may be constructed up to 1.8m when located on a main road where they provide at least 25% permeability.



9.0 Next Steps

9.1 Implementation Overview

The following chapter outlines the means by which the City of Ballarat can implement the recommendations of this Neighbourhood Character Study.

Implementing the recommendations of this updated Study can include a range of statutory and nonstatutory mechanisms.

Statutory implementation, refers to the introduction of planning controls to the City of Ballarat Planning Scheme, that can be utilised to protect the character of the residential areas across the municipality, in accordance with the objectives and requirements of the identified Character Areas. This is in the form of Residential Zone and Overlay Schedules.

The implementation process also requires a nonstatutory yet equally important step of updating the City of Ballarat Planning Policy Framework (PPF) with the non measurable elements of the Character Areas Profiles including, Character Area Maps and character elements which cannot sit within a Zone or Overlay Schedule, which also assist in protecting and enhancing the character of these residential areas.

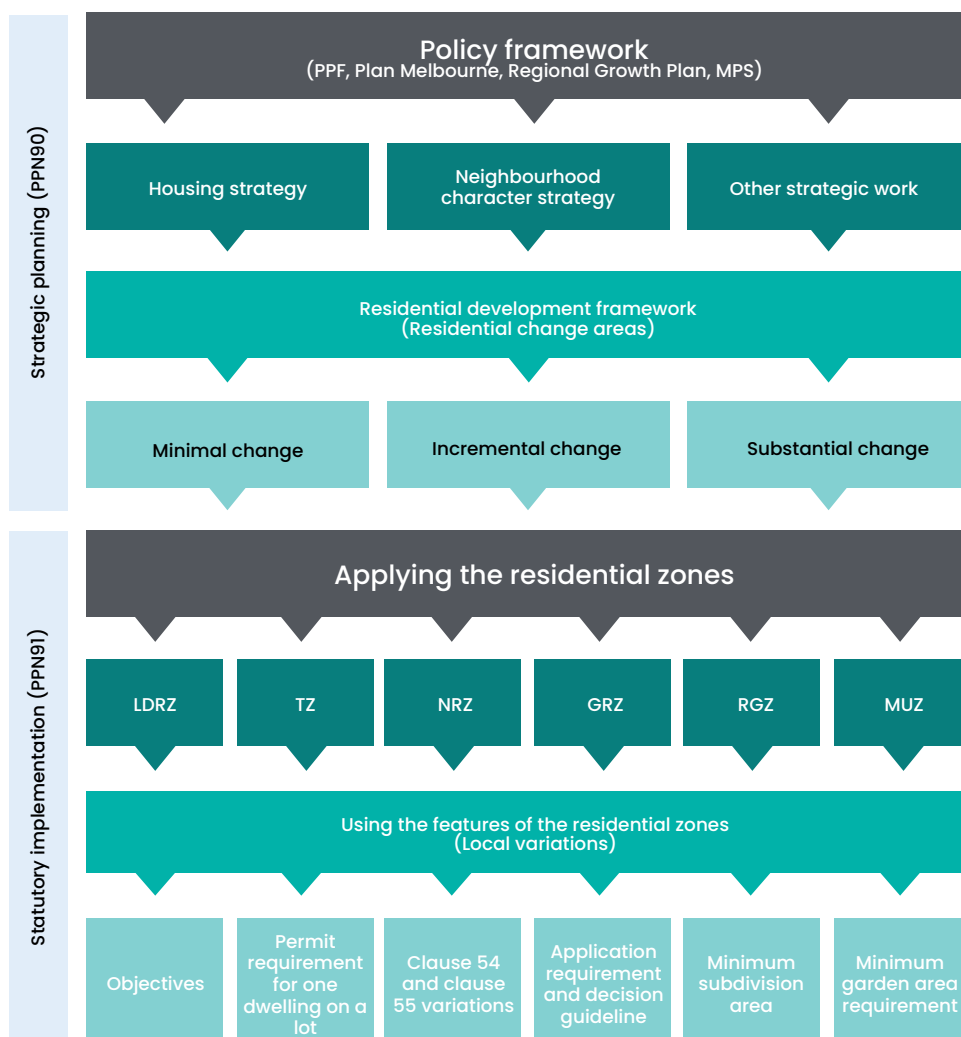
However, it should be noted that in accordance with Planning Practice Note 91: Using the Residential Zones, the application of zones should not be informed by Character alone, but derived from a municipal-wide strategic framework plan or residential development framework - Neighbourhood Character is one input into a larger strategic framework. The process for strategic planning and statutory implementation is shown in Figure 61.

The Neighbourhood Character areas identified in this Study have been informed by the City of Ballarat preparation of a Housing Strategy. In order to balance the objectives and outputs of the Neighbourhood Character Study, Housing Strategy and any other relevant Heritage, environmental, landscape and land capability study, Planning Practice Note 90 recognises the importance of creating a Residential Development Framework (RDF).

An RDF will identify the appropriate application of zones across the study area based on the outcomes of the NCS and Housing Strategy to prioritise the preferred development outcomes for different areas.

While preferred neighbourhood character will continue to be an important consideration in these areas, there is also a need to respond to State Government requirements for growth in residential supply and diversity. The Neighbourhood Character Study, Housing Strategy and Residential Development Framework will enable the City of Ballarat to meet future housing growth and demographic trends, while still ensuring new development reflects preferred character across the Municipality.

Balancing housing growth with protection of neighbourhood character
 Source: Department of Transport and Planning; Planning Practice Note 91 (2023)



9.2 Proposed Zone Schedules

Neighbourhood Character Objectives

The Ballarat Planning Policy Framework will be amended through updates to applicable residential zone schedules.

In alignment with PPN90 and PPN91, the five neighbourhood character objectives for each neighbourhood character area and housing change area, will be specified in a schedule to a residential zone to implement the preferred neighbourhood character in the Ballarat Planning Scheme. Unless stated, character objectives which apply to all areas also apply to incremental and substantial change areas.

Design Guidelines

Schedules that can be added to the Residential Zones provide the mechanism to implement many of the Design Guidelines developed to achieve the Preferred Character for each neighbourhood character precinct and housing change area. The schedules can contain different design standards than those that would otherwise apply through the ResCode standards at Clauses 54 and 55 of the planning scheme. For Zone Schedules that don't permit ResCode variations (i.e., LDRZ), the design guidelines could be implemented via DDO schedules.

New zone schedule provisions will need to consider any existing DDO or SLO provision that might also apply to the area.

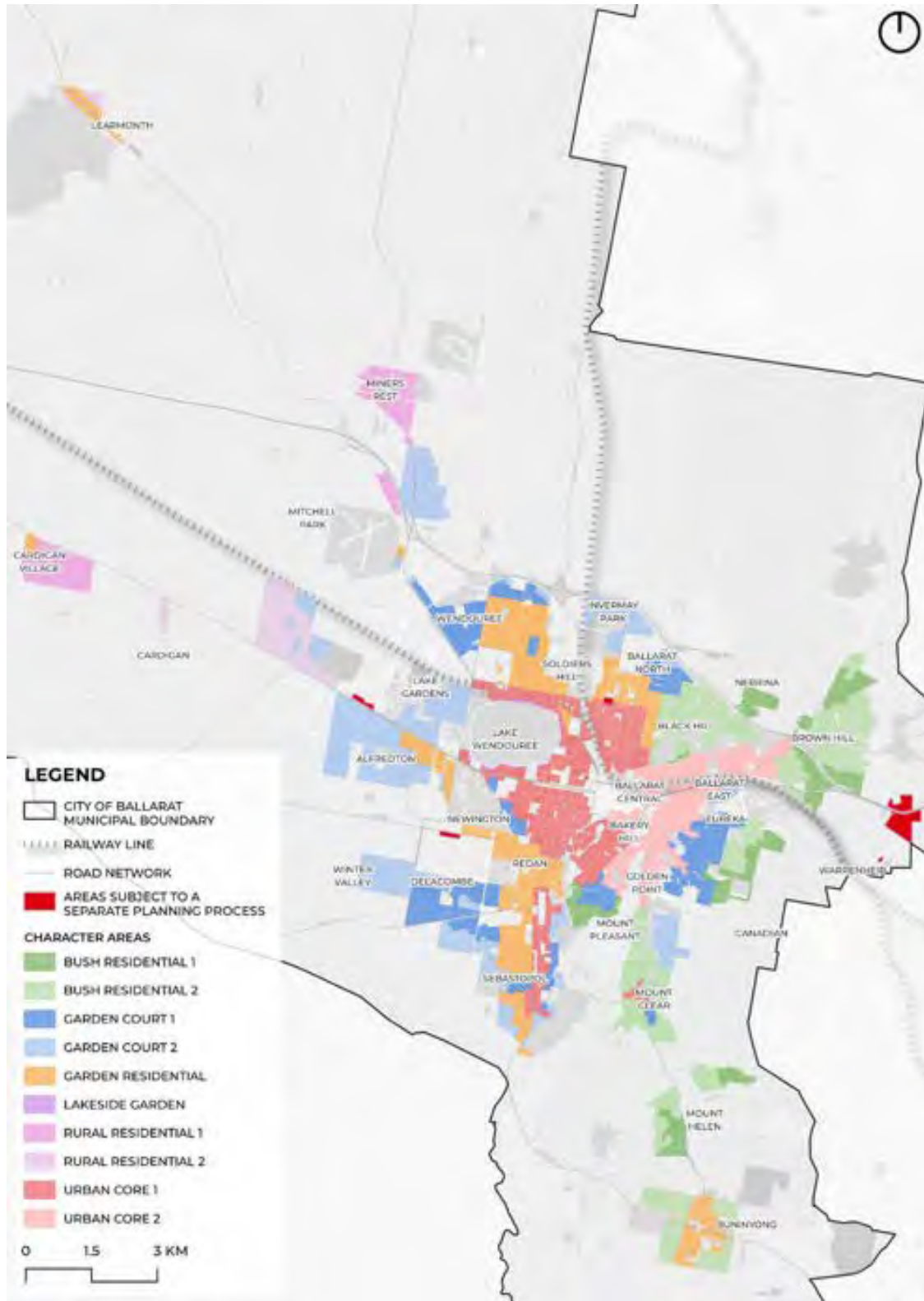
9.3 Neighbourhood Character Areas Map

The following Character Area Map shows the identified Neighbourhood Character Areas within the City of Ballarat.

As mentioned earlier, this Character Area Map forms part of the non-statutory process of updating the City of Ballarat Planning Scheme. This Character Area Map will assist in protecting and enhancing the character of these residential areas in tandem with the other non-measurable elements of the Precinct Profiles.



Neighbourhood Character Areas Map



Cit

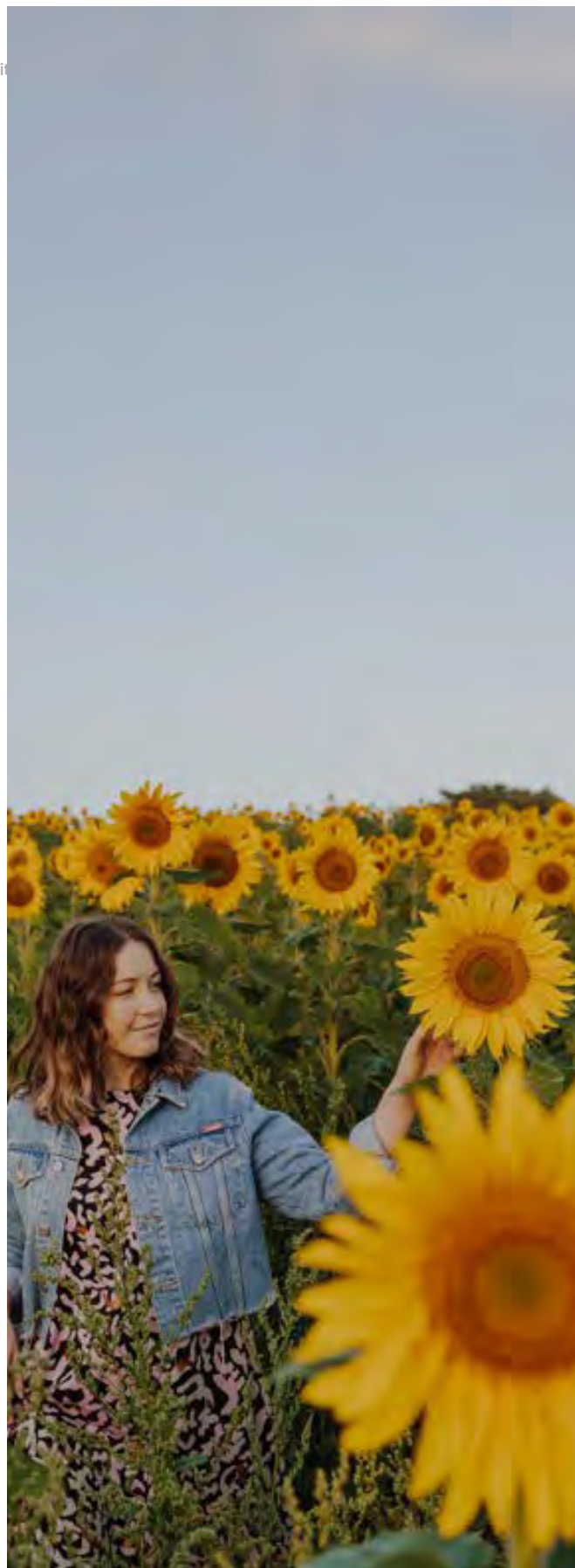
9.4 Proposed Overlays

Proposed Significant Landscape Overlay

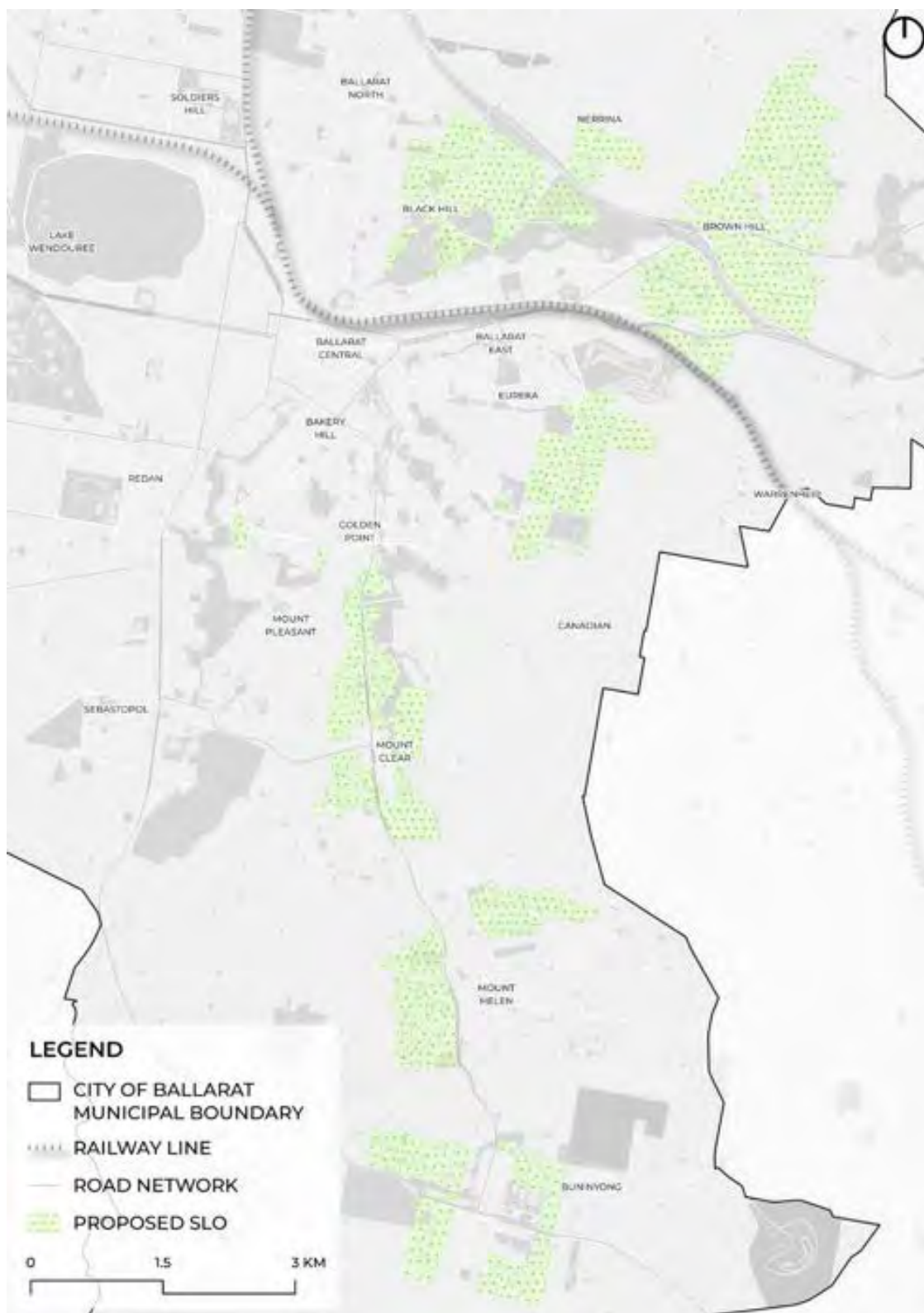
The map below identifies the proposed Significant Landscape Overlay (SLO) for Character Areas within the City of Ballarat. The SLO is proposed for heavily vegetated Character Areas that are not currently covered by an existing SLO. This includes Bush Residential 1 and Bush Residential 2 character areas. Some of these areas are already covered by an SLO or VPO but there are a number of areas that may warrant further protection.

The SLO will require a permit for the removal of indigenous and native vegetation and trees. The SLO will also reflect the minimum site coverage and permeability requirements to the Zone schedule.

To ensure consistency, the existing SLO which currently applies to certain areas may also need to be amended.



Proposed SLO Map



9.5 Recommendations

Reflect the findings of the NCS and Housing Strategy in a Residential Development Framework

In order to balance the objectives and outputs of the Neighbourhood Character Study, Housing Strategy and any other relevant Heritage, environmental, landscape and land capability study, Planning Practice Note 90 recognises the importance of creating a Residential Development Framework (RDF).

A Residential Development Framework provides:

- a coherent strategic vision containing a plan, or plans, that balances competing objectives by prioritising preferred development outcomes for different areas.
- Specifically, an RDF will identify the appropriate application of zones across the study area based on the outcomes of the NCS and Housing Strategy to prioritise the preferred development outcomes for different areas.
- Ultimately, the Neighbourhood Character Study, Housing Strategy and Residential Development Framework would enable Ballarat to meet future housing growth and demographic trends, while still ensuring new development reflects preferred character across the township.

Design and Development Overlays

It is recommended that the City of Ballarat conduct a review and assessment of all relevant DDO's that apply across the City of Ballarat. This would be to ensure there are no duplications or conflicts between controls across proposed zone schedules and existing DDO's.

Where possible and relevant, the City of Ballarat should remove objectives and controls within existing DDO's schedules that would be more appropriately reflected in relevant zone schedules.

For existing DDO's that have been implemented for specific areas based on a targeted strategic plan, it is considered appropriate to retain the existing planning controls.



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August 2024

6.3. PLANNING SCHEME AMENDMENT C254BALL: HOUSING STRATEGY AND GROWTH AREAS FRAMEWORK PLAN IMPLEMENTATION

Division: Development and Growth
Director: Natalie Robertson
Author/Position: Evan Burman – Principal Strategic Planner and Urban Designer

PURPOSE

1. The purpose of this report is to:
 - Request the Minister for Planning authorise the preparation and exhibition of Ballarat Planning Scheme Amendment C254ball (the Amendment) that proposes to implement the *Ballarat Housing Strategy 2041 (2024)* and the *Growth Areas Framework Plan (2024)* into the Ballarat Planning Scheme.
 - Outline the changes proposed to the Ballarat Planning Scheme as part of Ballarat Planning Scheme Amendment C254ball.
 - Outline the steps in the planning scheme amendment process.

BACKGROUND

2. *The Ballarat Housing Strategy 2041 (2024)* has been prepared to ensure housing needs in Ballarat are addressed up to year 2041.
3. *The Growth Areas Framework Plan (2024)* has been developed to plan for two new growth areas, the Western and North-western Growth Areas and sets out objectives for those areas in terms of development outcomes and the sequence in which these areas should be planned and developed in the future, through Precinct Structure Plans (PSPs).
4. State Government requires the City of Ballarat as the planning authority to:
 - a. Ensure the ongoing provision of land and supporting infrastructure to support sustainable urban development.
 - b. Ensure that sufficient land is available to meet forecast demand.
 - c. Plan to accommodate housing growth for at least a 15-year period and provide clear direction on locations where growth should occur.

KEY MATTERS

5. In line with State Government policy, the City of Ballarat seeks to minimise outward expansion of the urban area of Ballarat by concentrating more housing growth in the established areas. This approach known as a Compact City principle will be introduced through this amendment.
6. Housing growth also needs to occur in growth (greenfield) areas to ensure a sufficient supply of land for the construction of new dwellings.

AMENDMENT C254BALL

7. The Amendment implements the *Ballarat Housing Strategy 2041 (2024)* and the *Growth Areas Framework Plan (2024)* into the Ballarat Planning Scheme to:
 - a. Ensure that Ballarat has a sufficient supply of land for residential purposes for the next 15 years.
 - b. Provide greater certainty over the level of housing change envisaged across the municipality, by adopting a tiered (hierarchical) approach to residential development (minimal, incremental and substantial).
 - c. Encourage a more sustainable (compact) pattern of growth by directing higher densities of residential development around activity centres and urban renewal areas that have (or will have) good access to public transport, employment opportunities, shopping facilities and services.
 - d. Support the delivery of a range of housing types and sizes which meets the increasingly diverse housing needs of the community.
 - e. Provide a balance between the need to facilitate housing growth whilst responding to the preferred neighbourhood character and heritage values.
 - f. Provide a clear direction for the development and staging of Ballarat's growth areas, as set out in the *Growth Areas Framework Plan (2024)*.
 - g. Ensure that Ballarat's growth areas are delivered as liveable, well-connected communities (neighbourhoods).
 - h. Encourage sustainable development with a diversity of housing in Ballarat's growth areas.
 - i. Encourage opportunities for the delivery of social and affordable housing.
8. The Amendment proposes a number of changes to the Ballarat Planning Scheme to give effect to the recommendations of the *Ballarat Housing Strategy 2041 (2024)* and the *Growth Areas Framework Plan (2024)*.
9. The primary changes are proposed in the Municipal Strategic Statement (MSS) Clauses 21.01 (Municipal Overview) and 21.02 (Settlement and Housing) (further described in the attached Explanatory Report), including:
 - a. An updated Housing Framework Plan.
 - b. A Development Staging Plan for the Growth Areas.
 - c. Future Urban Structure Plans for the North Western and Western Growth Areas.
 - d. Updating content to reflect current population projections and including policy to guide minimal, incremental and substantial housing growth.
 - e. The removal of the following aspirational planning concepts, which are no longer aligned with the policy set out in the *Ballarat Housing Strategy 2041 (2024)* in terms of the location and density of future housing:
 - The 10 Minute City (current Clause 21.01-3); and
 - Convenience Living Corridors (current Clause 21.02-2).

CHANGES TO CLAUSE 21.01 – MUNICIPAL OVERVIEW

Municipal Overview (Clause 21.01-1)

10. The Municipal Overview has been updated to reflect current population projections and dwelling requirements for the municipality. Much of the descriptive content in relation to the municipality remains, as it is still relevant.

Community Vision (Clause 21.01-2)

11. The Community Vision has been amended to include reference to the *Ballarat Housing Strategy 2041 (2024)* and the *Growth Areas Framework Plan (2024)*. It is important that the more recent and up to date work is referenced as it now provides the strategic direction for housing and supersedes the direction set out by previous strategies in relation to housing.

Land Use Vision (Clause 21.01-3)

12. A key change to this sub-clause is the replacement of the '10 Minute City' concept with the 'Compact City' concept. The rationale for this is that it does not align with the *Ballarat Housing Strategy 2041 (2024)*, and the 10 minute city is an aspirational (and undefined) idea but not a practical way of undertaking strategic planning. 10 minutes is an arbitrary measurement of an area, not defined by actual distance or the various modes of transport that might be used to travel (that distance).
13. The 'Compact City' is an established planning concept that describes cities as compact and accessible in terms of various sustainable modes of transport, and implies increased densities of development close to transport, shops, jobs, and services. The more cities spread out (urban sprawl) and at lower densities, the more expensive and unfeasible the cost of providing infrastructure becomes.

Key Issues (Clause 21.01-4)

14. The key issues section has been updated to reflect (in particular):
 - Current and future population (projections).
 - The need to plan for long term land supply.
 - Social and affordable housing issues.
 - The need to deliver more diverse housing that meets the needs of the current and future population.

CHANGES TO CLAUSE 21.02 – SETTLEMENT AND HOUSING

Housing Growth (Clause 21.02-1)

15. Formerly 'urban growth', this sub-clause sets out the future direction for housing across Ballarat and has made some minor changes to the previous sub-clause. This includes inserting a vision for future housing and a different set of sub-headings that follow in the subsequent sub-clauses.
16. Another key difference is updated population projections, which in turn determine future dwelling needs. The population is forecast to increase by 55,000 people by 2041, requiring approximately 29,000 new dwellings, which is determined also by dwelling and household sizes (the number of people that occupy a single dwelling, which is lower than previously).
17. Finally, a new Housing Framework Plan will be inserted under this sub-clause, replacing the current plan that appears at Clause 21.02-5 – Townships. The new Housing Framework Plan identifies three categories of change (minimal, incremental and substantial) for Ballarat's established residential areas, and also urban renewal precincts.

18. The urban renewal precincts have been changed, with some modifications to the precinct boundaries, to identify where large parcels of land have the potential to be developed subject to further work, including a new site known as Ballarat East. The sites known as the Selkirk Precinct and Delacombe Precinct have been removed. The new plan identifies Ballarat's current and future growth areas.

Growth Areas (Clause 21.02-2)

19. This sub-clause has been developed (amended) to implement the *Growth Areas Framework Plan (2024)* and its objectives for two new growth areas, the Western and North-Western Growth Areas.
20. Formerly 'greenfield investigation areas', the 'growth areas' sub-clause sets out new policy for growth areas in general, but also specifically for the two future growth areas, to be further planned in future through Precinct Structure Plans (PSPs).
21. The objectives set out under this sub-clause seek to ensure that development proceeds in a sequenced manner and that new development is well-designed and sustainable, having regard to the *Growth Areas Framework Plan (2024)*.
22. Other key policy objectives include housing diversity, minimum dwelling densities (20 per hectare), and the provision of social and affordable housing.

Established Residential Areas (Clause 21.02-3)

23. Formerly 'ongoing change areas', this sub-clause sets out the policy direction for the established residential areas in terms of the location and density of new housing. The policy encourages housing growth, having regard to the following change categories:
 - Minimal change
 - Incremental change
24. Minimal change areas have been assessed and identified as highly constrained, either due to bushfire risk, or remoteness in terms of access to public transport and activity centres. These areas are generally outside of the urban core of Ballarat.
25. The policy set out for minimal change areas seeks to limit increased densities of dwellings as they are not seen as appropriate areas for future housing growth and intensification.
26. Incremental change areas can accommodate increased densities of housing growth based on their levels of access to public transport and nearby activity centres. The public transport network in Ballarat is predominantly buses that cover a vast area and converge upon the Ballarat Central Business District (CBD), connecting with the regional rail network.
27. Increased densities of dwellings on existing (or consolidated) urban lots are encouraged in the Incremental Change Areas.

Substantial Change Areas (Clause 21.02-4)

28. Previously 'urban renewal precincts', this sub-clause sets out the policy direction for the urban renewal precincts and the Ballarat CBD, in terms of encouraging increased and higher densities of residential development subject to more detailed structure planning.

OTHER CHANGES

29. Following on from these main changes, the following clauses are mostly unchanged (and their numbering has changed to reflect one less sub-clause due to the deletion of 'Convenience Living Corridors'):
 - Townships (to become Clause 21.02-5)
 - Housing diversity (to become Clause 21.02-6)
 - Open space (to become Clause 21.02-7)
30. Clause 21.02-9 (Implementation) has been deleted, as a new clause in planning schemes (Clause 74.02) has become the location to insert 'Further strategic work'. Changes have been made to this clause to update the further work that Council will undertake to deliver on actions in current strategies.
31. Clause 21.08-1 (Integrated Transport) has been amended to remove reference to Convenience Living Corridors and the policy direction for locating higher densities of development along transport corridors, as not aligned with the *Ballarat Housing Strategy 2041 (2024)*.
32. Clause 21.09-1 (CBD) has been amended to further encourage higher densities of housing in the CBD, whilst also responding to the heritage character of the city centre.
33. The *Ballarat Housing Strategy 2041 (2024)* and *Growth Areas Framework Plan (2024)* will be inserted as 'Background documents' at Schedule to Clause 72.08.
34. Clause 74.02 (Further strategic work) has been amended to insert content from Clause 21.02-9 (Implementation), delete out of date references to work that is either completed or redundant, and insert further work recommended by the *Ballarat Housing Strategy 2041 (2024)* and *Growth Areas Framework Plan (2024)*.
35. The further strategic work recommended by the *Ballarat Housing Strategy (2024)* and *Ballarat Growth Areas Framework Plan (2024)* includes, but is not limited to:
 - a. Preparation of structure plans for urban renewal precincts and greenfield growth areas.
 - b. Development of neighbourhood character guidelines to guide built form outcomes.
 - c. Review of residential zones, overlays and other provisions.
 - d. Development of an integrated transport strategy to ensure efficient provisions of transport infrastructure to support growth.
 - e. Review of land use buffers and separation distances and local heritage planning provisions.

NEXT STEPS

36. Council officers will submit the draft Amendment for authorisation to the Minister for Planning which will undergo a process of review by the Department of Transport and Planning.
37. Once the Minister has decided, the Amendment will be prepared for, and placed on, public exhibition (consultation/engagement with the community and all stakeholders).
38. Exhibition of the amendment will not occur until the next term of Council has commenced, and it is anticipated that it will be in the first half of next year (2025).
39. Following public exhibition of the Amendment, Council will consider submissions and

determine whether to appoint an Independent Planning Panel to consider the Amendment and submissions.

40. The Independent Planning Panel will submit a report to Council whereby the Council will decide on the Amendment to adopt, change or abandon, before notifying the Minister for Planning on its decision.
41. If the Council decides to adopt the Amendment, the Minister for Planning will decide whether to approve, change or refuse the Amendment.

OFFICER RECOMMENDATION

42. That the Planning Delegated Committee resolves to:
 - 42.1 Note the adopted *Ballarat Housing Strategy 2041 (2024)* and *Growth Areas Framework Plan (2024)* and acknowledge the importance of progressing the implementation of the strategies into the Ballarat Planning Scheme to give statutory weight to those strategies in order to manage the challenges facing Ballarat's population and housing growth.
 - 42.2 Acknowledge that further strategic work is required to bring the *Ballarat Housing Strategy 2041 (2024)* and *Growth Areas Framework Plan (2024)* into full effect.
 - 42.3 Seek authorisation from the Minister for Planning to prepare Ballarat Planning Scheme Amendment C254ball to implement the recommendations of the *Ballarat Housing Strategy 2041 (2024)* and *Growth Areas Framework Plan (2024)* into the planning scheme pursuant to 8A of the *Planning and Environment Act 1987* as attached, and to place the Amendment as attached on exhibition pursuant to section 19 of the *Planning and Environment Act 1987*.
 - 42.4 Authorise the Director Development and Growth to undertake administrative changes that do not change the intent of Planning Scheme Amendment C254ball.

ATTACHMENTS

1. Governance Review [6.3.1 - 2 pages]
2. C254ball Explanatory Report July 2024 DRAFT (2) [6.3.2 - 12 pages]
3. C254ball 21.01 MUNICIPAL OVERVIEW [6.3.3 - 5 pages]
4. C254ball 21.02 SETTLEMENT AND HOUSING [6.3.4 - 10 pages]
5. C254ball 21.08 TRANSPORT AND INFRASTRUCTURE [6.3.5 - 4 pages]
6. C254ball 21.09 LOCAL AREAS [6.3.6 - 13 pages]
7. C254ball SCHEDULE TO CLAUSE 72.08 BACKGROUND DOCUMENTS [6.3.7 - 1 page]
8. C254ball 21.01 MUNICIPAL OVERVIEW Compare [6.3.8 - 6 pages]
9. C254 ball 21.02 SETTLEMENT AND HOUSING Compare [6.3.9 - 14 pages]
10. C254ball 21.08 TRANSPORT AND INFRASTRUCTURE Compare [6.3.10 - 6 pages]
11. C254ball 21.09 LOCAL AREAS Compare [6.3.11 - 13 pages]
12. C 245 ball SCHEDULE TO CLAUSE 74.02 FURTHER STRATEGIC WORK [6.3.12 - 1 page]

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ALIGNMENT WITH COUNCIL VISION, COUNCIL PLAN, STRATEGIES AND POLICIES

1. This report aligns with Council's Vision, Council Plan, Strategies and Policies, in particular Goal 3 – A city that fosters sustainable growth:
 - *3.1 Ensure housing supply, diversity and affordability meets the needs of our growing and changing community*
 - *3.2 Facilitate opportunities for appropriate infill residential development within the CBD*
 - *3.3 Ensure urban growth planning delivers high quality communities*
 - *3.4 Ensure environmental sustainability outcomes are embedded in new developments*

COMMUNITY IMPACT

2. The amendment supports the delivery of housing diversity to accommodate a growing population in suitable locations of high accessibility to transport networks, services and employment opportunities. This in turn has a positive community impact and supports the provision of affordable housing through increased supply.

CLIMATE EMERGENCY AND ENVIRONMENTAL SUSTAINABILITY IMPLICATIONS

3. This amendment does not raise any direct climate emergency issues or environmental sustainability implications. However, by promoting a compact city form with increased densities of housing, the amendment locates people in close proximity to public transport networks and other modes.

ECONOMIC SUSTAINABILITY IMPLICATIONS

4. The amendment supports a compact city form that promotes population growth, access to sustainable transport, services and jobs, thereby supporting a thriving economy.

FINANCIAL IMPLICATIONS

5. The amendment process will not have any significant financial implications to Council with the exception of the usual cost associated with the planning scheme amendment process.
6. As the proponent is the Planning Authority, the City of Ballarat will be responsible for all amendment related costs including notification of landowners, planning panel hearing fees and engagement of legal representation and expert witnesses at a panel hearing.

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LEGAL AND RISK CONSIDERATIONS

7. The amendment does not raise any legal risks or concerns of note.
8. Section 9(1) of the *Local Government Act 2020* states that a Council must - in the performance of its role - give effect to the overarching governance principles of the Act. Section 9(2) describes the following relevant overarching governance principles—
 - (c) the economic, social, and environmental sustainability of the municipal district, including mitigation and planning for climate change risks, is to be promoted,
 - (d) the municipal community is to be engaged in strategic planning and strategic decision making,
 - (f) collaboration with other Councils and Governments and statutory bodies is to be sought' and,
 - (g) the ongoing financial viability of the Council is to be ensured.
9. The Amendment gives effect to the overarching governance principles by identifying land suitable for heritage protection subject to a robust assessment.

HUMAN RIGHTS CONSIDERATIONS

10. It is considered that the report does not impact on any human rights identified in the *Charter of Human Rights and Responsibilities Act 2006*.

COMMUNITY CONSULTATION AND ENGAGEMENT

11. The amendment will be exhibited in accordance with the provisions of the *Planning and Environment Act 1987*.

GENDER EQUALITY ACT 2020

12. There are no gender equality implications identified for the subject of this report.

CONFLICTS OF INTEREST THAT HAVE ARISEN IN PREPARATION OF THE REPORT

13. Council officers affirm that no general or material conflicts need to be declared in relation to the matter of this report.

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Planning and Environment Act 1987

Ballarat Planning Scheme

Amendment C254ball

Explanatory Report

Overview

Amendment C254ball implements the strategic direction set out in the *Ballarat Housing Strategy 2041* (2024) and the *Ballarat Growth Areas Framework Plan* (2024) to ensure that future housing growth is consistent with the recommendations and located in areas identified by these two strategic documents.

The *Ballarat Housing Strategy 2041* (2024) responds to state planning policy by identifying areas that can accommodate housing in order to house a population that is predicted to grow by approximately 55,000 people, within approximately 29,000 new dwelling by 2041. Housing growth will be distributed across Ballarat's established residential areas and in new, sustainably planned growth areas on the urban fringe of Ballarat.

The *Growth Areas Framework Plan* (2024) identifies two new growth areas and sets objectives for how these areas will develop, to be implemented through Precinct Structure Plans (PSPs), and the sequence in which they will develop to ensure the sustainable and efficient delivery of services and infrastructure.

Where you may inspect this amendment

The amendment can be inspected free of charge at the Ballarat City Council website at www.ballarat.vic.gov.au

The amendment is available for public inspection, free of charge, during office hours at the following places:

Ballarat City Council
The Phoenix Building
25 Armstrong Street South
BALLARAT CENTRAL VIC

The amendment can also be inspected free of charge at the Department of Transport and Planning website at www.planning.vic.gov.au/public-inspection or by contacting 1800 789 386 to arrange a time to view the amendment documentation.

Submissions

Any person who may be affected by the amendment may make a submission to the planning authority.

Submissions about the amendment must be received by close of business, TBC.

A submission must be sent to: strategicplanningsubmissions@ballarat.vic.gov.au

Panel hearing dates

In accordance with clause 4(2) of Ministerial Direction No.15 the following panel hearing dates have been set for this amendment:

- Directions hearing: TBC
- Panel hearing: TBC

Details of the amendment

Who is the planning authority?

This amendment has been prepared by the Ballarat City Council who is the planning authority for this amendment.

Land affected by the amendment

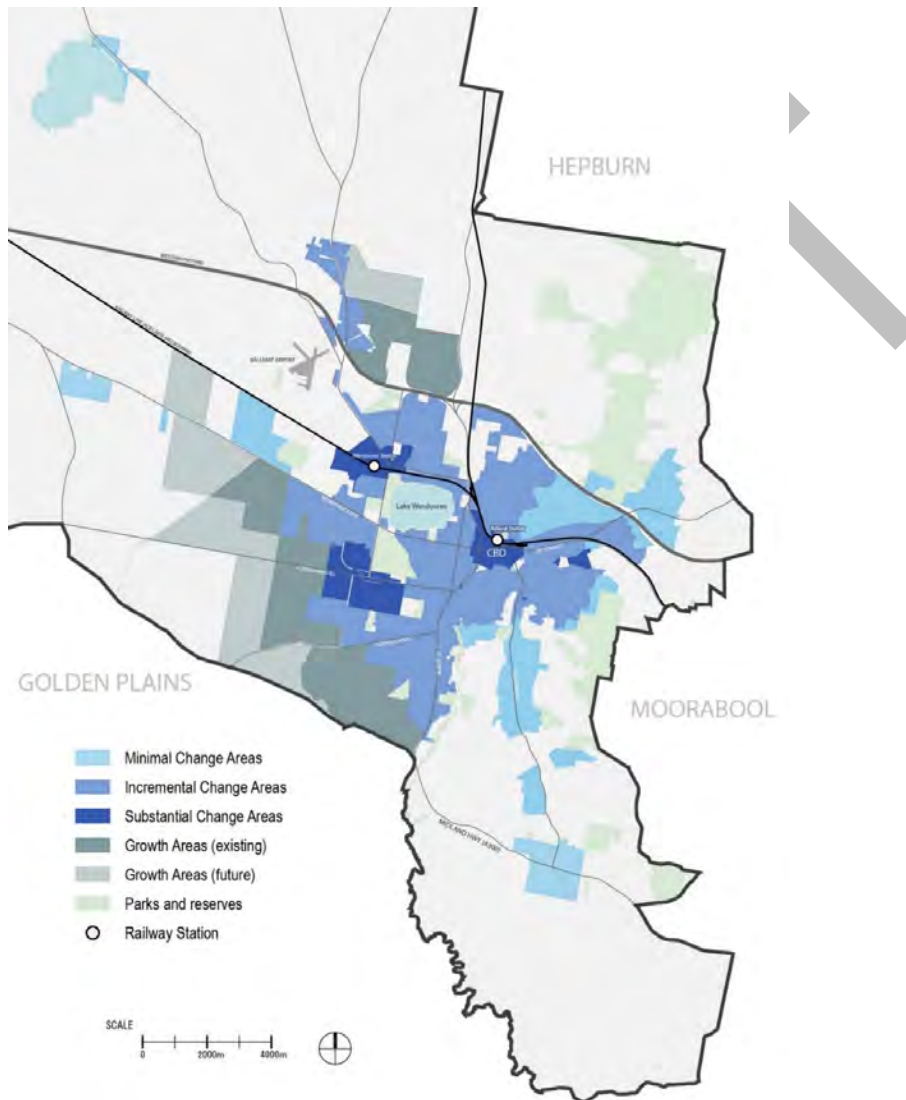


Figure 1. Housing Framework Plan

The land affected by the amendment is identified as Minimal Change Areas, Incremental Change Areas, Substantial Change Areas, Growth Areas (existing) and Growth Areas (future) as identified by the Housing Framework Plan (Figure 1) that forms part of the amendment.

Land includes all residentially zoned land including the Mixed Use Zone, Township Zone, Residential Growth Zone, General Residential Zone and Neighbourhood Residential Zone.

Some land zoned for industrial and commercial purposes is also affected by the amendment.

What the amendment does

The amendment introduces the *Ballarat Housing Strategy 2041 (2024)* and the *Ballarat Growth Areas Framework Plan (2024)* as background documents and makes policy changes to Clause 21 of the Ballarat Planning Scheme, including updating the Housing Framework Plan, and inserting new plans that identify the Western and North-western Growth Areas.

The Housing Framework Plan identifies three categories of change that will occur across land that is currently zoned or has been earmarked for future rezoning for residential purposes, to facilitate residential development and housing growth across Ballarat.

Specifically, the amendment makes the following changes:

Planning scheme ordinance

- Amends Clause 21.01-1 (Context) to reflect current population and population projections that inform the Housing Strategy.
- Amends Clause 21.01-2 (Community vision) to reference the *Ballarat Housing Strategy 2041 (2024)* and the *Ballarat Growth Areas Framework Plan (2024)* that are the basis of the amendment.
- Amends Clause 21.01-3 (Land use vision) to introduce the “Compact City” concept in place of the “10 Minute City” and minor changes that describe the city in broad terms.
- Amends Clause 21.01-4 (Key Issues) to reflect current population projections and key issues for Ballarat and to insert an updated Strategic Framework Plan.
- Amend Clause 21.02-1 (Urban Growth) to:
 - Change the title of the Clause to Housing Growth.
 - Insert a vision for housing growth in Ballarat.
 - Update population forecasts and forecast dwelling requirements to 2041, describing the locations where housing growth will occur.
 - Delete reference to Areas of Convenience Living, Strategic Investigation Areas, Ongoing Change Areas and Greenfield Investigation Areas as they are redundant.
 - Insert new policy to provide guidance on how to support a compact city form.
 - Insert the Housing Framework Plan.
- Deletes Clause 21.02-2 (Areas of convenience living) as the Areas of Convenience Living concept is redundant as it does not align with the direction set out for future housing locations and dwelling density in the *Ballarat Housing Strategy 2041 (2024)*.
- Amends Clause 21.02-4 (Greenfield investigation areas) to:
 - Change the Clause title to Growth Areas and move to Clause 21.02-2.
 - Distinguish between current and future growth areas and identify the future growth areas (Western and North-western Growth Areas) as set out in the *Growth Areas Framework Plan (2024)* and accompanying objectives and strategies in relation to infrastructure delivery, sequencing and compact, sustainable development outcomes.
 - Insert strategies in relation to minimum dwelling density and diversity of housing.
 - Insert the Development Staging Plan and Future Urban Structure Plans for the Western and North-Western Growth Areas (Figures 2, 3 & 4).
 - Delete out of date references to the growth areas.
- Delete Clause 21.02-3 (Urban Renewal Precincts) by changing the title to Substantial Change Areas and inserting at Clause 21.02-4, where *urban renewal precincts* will become a sub-heading under the new sub-clause that will:

- Identify areas where substantial change will occur, in the form of increased densities of development, delivered through structure plans and urban design frameworks
- Set out the policy direction in terms of delivering higher densities of housing in suitable locations.
- Encourage housing diversity including social and affordable housing.
- Amend Clause 21.02-5 (Ongoing change areas) to:
 - Change the Clause title to Established Residential Areas and move to Clause 21.02-3
 - Describe the role of Established Residential Areas in providing housing density in accordance with the categories of change (as identified on the Housing Framework Plan)
 - Introduce objectives that set out policy for the minimal and incremental change areas.
 - Delete reference to the ongoing changes areas.
- Insert new Clause 21.02-4 (Substantial Change Areas) to:
 - Identify areas of substantial change
 - Set out the policy direction in terms of delivering higher densities of housing in suitable locations.
- Moves Clauses 21.02-6 to 21.02-8 into Clause 21.02-5 to 21.02-7 to ensure consistent flow of the structure of the planning scheme.
- Deletes Clause 21.02-9 (Implementation) as this is amended and moved to Clause 74 (Further Strategic Work).
- Amends Clause 21.08-1 (Integrated transport networks) to remove references to Convenience Living Corridors and policy direction for higher densities along transport corridors (as does not align with the Ballarat Housing Strategy).
- Amends Clause 21.09-1 (CBD) to clearly state policy direction for the CBD in terms of encouraging higher density residential development and also heritage considerations, and housing diversity (including social and affordable housing).
- Amends Schedule to Clause 72.08 (Background documents) to include the *Ballarat Housing Strategy 2041 (2024)* and the *Ballarat Growth Areas Framework Plan (2024)* as background documents.
- Amends Clause 74.02 (Further Strategic Work) to insert an up-to-date list of strategic projects stemming from the Ballarat Housing Strategy and other current strategic projects.

Table 1: Changes to Municipal Strategic Statement structure.

Existing Clause Structure	Status	Proposed Clause Structure
Clause 21.01-1 (Context)	Amended	Clause 21.01-1 (Context)
Clause 21.01-2 (Community vision)	Amended	Clause 21.01-2 (Community vision)
Clause 21.01-3 (Land use vision)	Amended	Clause 21.01-3 (Land use vision)
Clause 21.01-4 (Key issues)	Amended	Clause 21.01-4 (Key issues)
Clause 21.02 -1 (Urban growth)	Amended and title change	Clause 21.02 -1 (Housing growth)
Clause 21.02-2 (Areas of convenience living)	Deleted and replaced with amended Clause 21.02-4 (Greenfield investigation areas). Title changed.	Clause 21.02-2 (Growth areas)

Clause 21.02-3 (Urban renewal precincts)	Deleted and replaced with amended Clause 21.02-5 (Ongoing change areas). Title changed.	Clause 21.02-3 (Established residential areas)
Clause 21.02-4 (Greenfield investigation areas)	Amended and moved to Clause 21.02-2 (Growth Areas) New clause inserted. Title changed.	Clause 21.02-4 (Substantial change areas)
Clause 21.02-5 (Ongoing change areas)	Moved to Clause 21.02-3 (Established residential areas) and amended.	Clause 21.02-5 (Townships)
Clause 21.02-6 (Townships)	Moved to 21.02-5	Clause 21.02-6 (Housing diversity)
Clause 21.02-7 (Housing diversity)	Moved to 21.02-6	Clause 21.02-7 (Open space)
Clause 21.02-8 (Open space)	Moved to 21.02-7	N/A
Clause 21.02-9 (Implementation)	Deleted, amended and inserted at Clause 74.02 (Further Strategic Work)	N/A
Clause 21.08-1 (Integrated transport networks)	Amended	Clause 21.08-1 (Integrated transport networks)
Clause 21.09-1 (CBD)	Amended	Clause 21.09-1 (CBD)

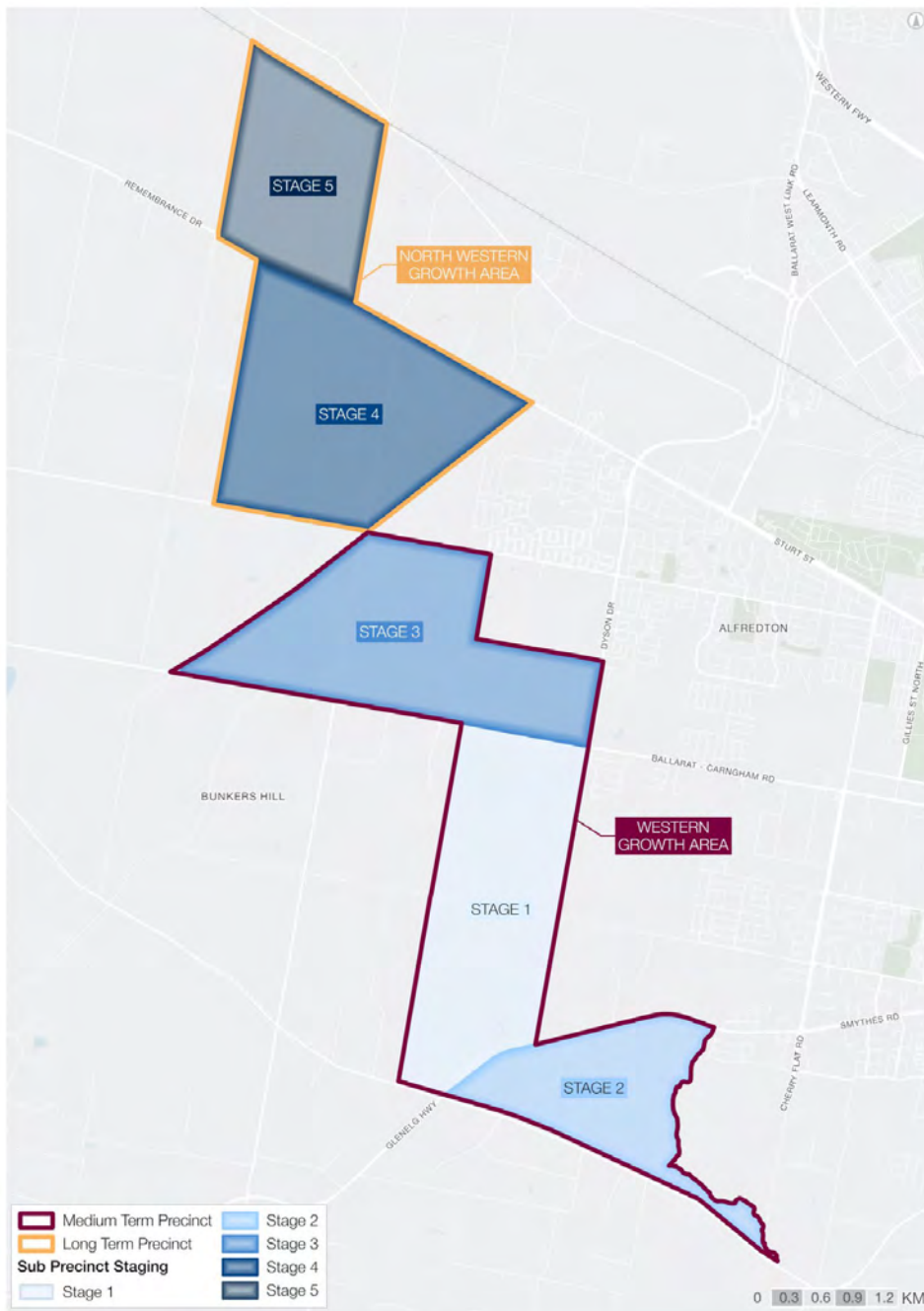


Figure 2. Development Staging Plan

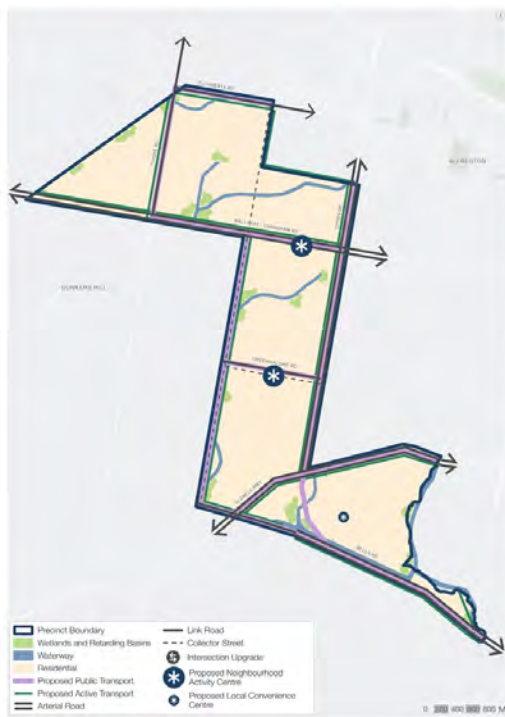


Figure 3. Future Urban Structure (Western Growth Area)

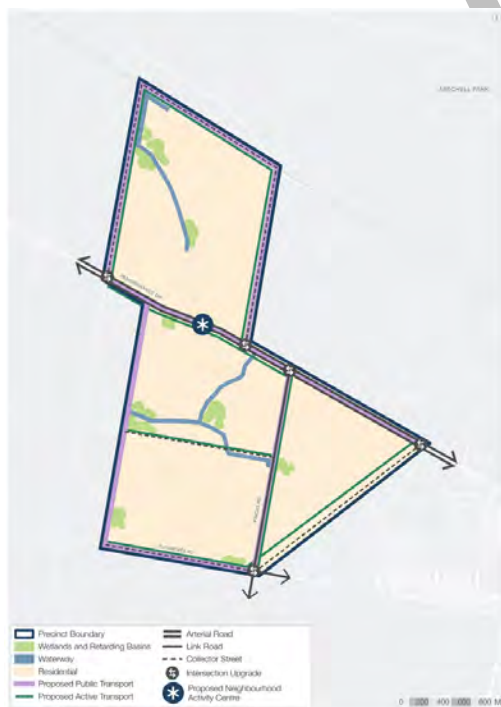


Figure 4. Future Urban Structure (North Western Growth Area)

Strategic assessment of the amendment

Why is the amendment required?

The amendment is required to facilitate housing growth in Ballarat in accordance with the *Ballarat Housing Strategy 2041 (2024)* and the *Ballarat Growth Area Framework Plan (2024)*.

The *Ballarat Housing Strategy 2041 (2024)* identifies the areas of Ballarat that will accommodate future housing and the levels of change designated for those areas, which will be delivered through varying degrees of dwelling density and with different housing typologies, that will be determined by preferred future neighbourhood character.

The *Growth Areas Framework Plan (2024)* sets the strategic direction for two of Ballarat's growth areas, the Western and North-western Growth Areas, in terms of the staging of development and the objectives to be achieved by future developers of these areas. This enables appropriate planning for infrastructure delivery and provides certainty for the development industry in terms of timing and the delivery of sustainable, well-connected neighbourhoods.

The amendment seeks to:

- Ensure that Ballarat has a sufficient supply of land for residential purposes for the next 15 years.
- Provide greater certainty over the level of housing change envisaged across the municipality, by adopting a tiered (hierarchical) approach to residential development (minimal, incremental and substantial).
- Encourage a sustainable (compact) pattern of growth by directing higher densities of residential development around activity centres and urban renewal areas that have (or will have) good access to public transport, employment opportunities, shopping facilities and services.
- Support the delivery of a range of housing types and sizes which meets the increasingly diverse housing needs of the community.
- Provide a balance between the need to facilitate housing growth whilst responding to the preferred neighbourhood character and heritage values.
- Provide a clear direction for the development and staging of Ballarat's growth areas, as set out in the *Ballarat Growth Areas Framework Plan (2024)*.
- Ensure that Ballarat's growth areas are delivered as liveable, well-connected communities (neighbourhoods).
- Encourage sustainable development with a diversity of housing in Ballarat's growth areas.
- Encourage opportunities for the delivery of social and affordable housing.

How does the amendment implement the objectives of planning in Victoria?

The amendment implements the following objectives for planning in Victoria as outlined in Section 4 (1) and 12(1)(a) of the *Planning & Environment Act 1987*:

- a) "Provide for the fair, orderly, economic and sustainable use, and development of land;"

The amendment will result in the fair, orderly, economic and sustainable use and development of land by implementing two well-planned, holistic strategies that addresses the needs of the existing and future community of Ballarat.

- c) *“Secure a pleasant, efficient and safe working, living and recreational environment for all Victorians and visitors to Victoria;”*

The amendment will guide various densities of housing growth to established residential areas, areas located in and around activity centres, urban renewal areas and close to the public transport network. The amendment will also limit growth in areas with low levels of access to shops, services and public transport, and areas prone to flooding and bushfire risk.

The amendment will ensure that planning for growth areas is undertaken in a logical and staged fashion to efficiently deliver liveable neighbourhoods that are well connected via public transport and active transport networks.

- d) *“Conserve and enhance those buildings, areas or other places which are of scientific, aesthetic, architectural or historical interest, or otherwise of special cultural value;”*

The amendment enhances the local policy provisions relating to cultural diversity and heritage assets.

- e) *“Facilitate development in accordance with the objectives set out in paragraphs (a), (b), (c), (d) and (e);”* and

The amendment introduces a suite of planning scheme provisions to guide development for the benefit of Ballarat, consistent with state, regional and local planning policy.

- f) *“Balance the present and future interests of all Victorians.”*

The amendment identifies areas that will provide a range of housing that meets future demand, including a population that will be comprised of local people and people from other parts of Victoria, Australia and overseas.

How does the amendment address any environmental, social and economic effects?

The amendment will deliver positive **environmental effects** by facilitating housing growth in appropriate locations that will have limited effect on biodiversity values and the natural landscape. The amendment ensures that the environment will be considered in future planning of residential areas.

The amendment will deliver positive **social effects** to the community by contributing to housing diversity by providing residential growth in areas which are well serviced by public transport, community infrastructure and employment opportunities. The amendment also seeks to encourage the diversification of housing types to better respond to the community’s changing housing needs, including the facilitation of social and affordable housing opportunities.

The amendment delivers positive **economic effects** by encouraging housing growth within locations which will strengthen the economic viability of activity centres and commercial land uses. This will result in an increase in spending on local retail goods and services by new residents.

Does the amendment address relevant bushfire risk?

The amendment meets bushfire policy in Clause 13.02 (Bushfire) that aims to strengthen the resilience of settlements and communities to bushfire through risk-based planning that priorities the protection of human life.

Bushfire prone areas in Ballarat are identified in the supporting document *Strategic Planning for Bushfire in the City of Ballarat* (Kevin Hazell, December 2020) that has informed the application of the level of change areas in Ballarat. There are differing levels of bushfire threats across Ballarat, from grass fires to forest fires. Areas of extensive bushland to the northeast and east are subject to the most threat from fires and therefore have been identified for minimal change to ensure there is no increase in population density or further risk to human life in these areas.

Does the amendment comply with the requirements of any other Minister's Direction applicable to the amendment?

The amendment is consistent and complies with:

- Ministerial Direction on the Form and Content of Planning Schemes - under section 7(5) of the *Planning and Environment Act 1987*.
- Ministerial Direction No. 11 Strategic Assessment of Amendments - which seeks to ensure comprehensive strategic assessment of a planning scheme amendments.

The amendment complies with Ministerial Direction No. 11 (Strategic Assessment of Amendments) under section 12 of the *Planning and Environment Act 1987*, by ensuring a comprehensive strategic evaluation of the planning scheme amendment and the outcomes it produces.

- Ministerial Direction No. 19 Ministerial Direction - the Preparation and Content of Amendments that May Significantly Impact the Environment, Amenity and Human Health

The Environment Protection Authority (EPA) was consulted about the *Ballarat Housing Strategy 2041 (2024)* and the *Ballarat Growth Areas Framework Plan (2024)* who support the strategies. The EPA provided advice to ensure appropriate consideration is given to land use compatibility, separation distances, noise, vibration and air quality and potentially contaminated land prior to any land rezoning to sensitive uses. The *Ballarat Housing Strategy 2041 (2024)* and the *Ballarat Growth Areas Framework Plan (2024)* recognise that further consideration of potentially contaminated is required prior to future rezoning of land that will allow sensitive uses. The *Ballarat Housing Strategy 2041 (2024)* recommends the application of the Environmental Audit Overlay (EAO) on sites zoned for industrial purposes and will be considered in a future planning scheme amendment.

- Ministerial Direction No. 1 Potentially Contaminated Land.

The amendment identifies that there are varying degrees of contamination in Ballarat due to the region's gold mining history, old landfills and industrial sites. The application of an EAO will be considered on sites that are known to be potentially contaminated, including land used for industrial purposes (identified by the Industrial 1 and Industrial 3 Zone), in accordance with this Ministerial Direction. More detailed investigation is required into land use history and potential sources of contamination, prior to any application of an EAO.

How does the amendment support or implement the Planning Policy Framework and any adopted State policy?

The amendment is consistent with, and implements the following aspects of the Planning Policy Framework and adopted State policy:

- Clause 11.01-1S (Settlement) seeks to "*promote the sustainable growth and development of Victoria and deliver choice and opportunity for all Victorians through a network of settlements*". Key relevant strategies include to:
 - "*Develop compact urban areas that are based around existing or planned activity centres to maximise accessibility to facilities and services*"; and
 - "*Encourage a form and density of settlements that supports sustainable transport to reduce greenhouse gas emissions*".
- Clause 11.02-1S (Supply of urban land) seeks to "*ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses*". Key relevant strategies include:
 - "*Plan to accommodate projected population growth over at least a 15 year period and provide clear direction on locations where growth should occur.*"
 - "*Planning for urban growth should consider:*

- *Opportunities for the consolidation, redevelopment and intensification of existing urban areas.*
- *Neighbourhood character and landscape considerations.*
- *The limits of land capability and natural hazards and environmental quality.*
- *Service limitations and the costs of providing infrastructure”*
- Clause 11.03-1S (Activity centres) seeks “*to encourage the concentration of major retail, residential, commercial, administrative, entertainment and cultural developments into activity centres that are highly accessible to the community*”. A key strategy includes “*encourage a diversity of housing types at higher densities in and around activity centres*”.
- Clause 15.01-5S (Neighbourhood character) seeks “*to recognise, support and protect neighbourhood character, cultural identity, and sense of place*”. A relevant strategy includes to “*ensure development responds to cultural identity and contributes to existing or preferred neighbourhood character*”.
- Clause 16.01-1S (Integrated Housing) seeks “*to promote a housing market that meets community needs*”. A relevant strategy includes to “*increase the supply of housing in existing urban areas by facilitating increased housing yield in appropriate locations, including under-utilised urban land.*”
- Clause 16.01-2S (Location of residential development) seeks to “*locate new housing in designated locations that offer good access to jobs, services and transport*”. Key relevant strategies include to:
 - “*Increase the proportion of new housing in designated locations within established urban areas and reduce the share of new dwellings in greenfield and dispersed development areas*”.
 - “*Encourage higher density housing development on sites that are well located in relation to jobs, services and public transport*”.
 - “*Identify opportunities for increased residential densities to help consolidate urban areas*”.
- Clause 16.01-3S (Housing diversity) seeks “*to provide for a range of housing types to meet diverse needs*”.

The amendment will deliver opportunities to consolidate, redevelop and intensify existing urban areas by providing clear direction on the location of higher density residential development, as well as lower densities, and preferred neighbourhood character.

The amendment also delivers opportunities to increase the supply of housing in an orderly and efficient manner in Ballarat’s growth areas. This will allow the City of Ballarat to meet the current and future housing needs of the community and accommodate projected population growth.

How does the amendment support or implement the Local Planning Policy Framework, and specifically the Municipal Strategic Statement?

The amendment is supported by, but also changes policy statements within sub-clauses throughout Clause 21 (the MSS) of the Ballarat Planning Scheme to reflect the key principles set out in the *Ballarat Housing Strategy, 2024* and the *Growth Areas Framework Plan, 2024*.

The amendment will encourage housing diversity by providing a residential framework which encourages growth in areas which are well serviced by activity centres, public transport, community infrastructure and employment opportunities. The amendment will also encourage the provision of various housing types and sizes to better respond to the community’s changing housing needs.

For Ballarat’s growth areas, the amendment provides stronger direction on the location and staging of future residential development to ensure new suburbs are planned in terms of services and infrastructure, open space, activity centres and accessibility by the public transport network.

Does the amendment make proper use of the Victoria Planning Provisions?

The amendment makes proper use of the Victorian Planning Provisions (VPPs) by updating the Municipal Strategic Statement (Clause 21) to set out planning policy that implements the *Ballarat Housing Strategy (2024)* and the *Ballarat Growth Areas Framework Plan (2024)* and facilitates housing growth in a considered and logical way, delivering outcomes consistent with the VPPs.

How does the amendment address the views of any relevant agency?

The amendment was prepared in consultation with the following stakeholders. Issues that were raised were considered in the preparation of the amendment.

- Country Fire Authority (CFA)
- Carangamite Catchment Management Authority (CCMA)
- Heritage Victoria
- Department of Transport and Planning (DTP)
- Victorian Planning Authority (VPA)
- Environmental Protection Authority (EPA)
- Department of Energy, Environment and Climate Action (DEECA)

Does the amendment address relevant requirements of the Transport Integration Act 2010?

The amendment complies with the relevant requirements of the *Transport Integration Act 2010*, specifically Part 2, Division 2, 11 (Integration of transport and land use).

Through the Housing Framework Plan, the City of Ballarat has directed a large proportion of housing growth to established residential areas with access to the existing public transport network.

The *Growth Areas Framework Plan (2024)* provides the basis with which future discussions with the Department of Transport and Planning (DTP), and the Victorian Planning Authority (VPA), can be undertaken when PSPs are prepared, enabling the future consideration and planning for public transport and other movement networks.

Resource and administrative costs**What impact will the new planning provisions have on the resource and administrative costs of the responsible authority?**

The amendment is not expected to have any significant impact on the resource and administrative costs of the responsible authority.

BALLARAT PLANNING SCHEME

21.01 MUNICIPAL OVERVIEW

Proposed C254ball

21.01-1 Context

Proposed C254ball

Ballarat is a city of communities, home to many diverse peoples, each contributing their own culture, ideas and aspirations to Ballarat's identity.

Ballarat's natural heritage was formed over 500 million years ago while its rich cultural heritage began over 40,000 years ago, extending over parts of the Wadawurrung and Dja Dja Wurrung peoples' country which is the ancestral land of modern indigenous people who remain connected to these places today. Ballarat's urban heritage and diverse community is much more recent. The city was born out of the hunt for gold and one of the most important international mass migrations of people in the 19th century: the 1850's gold rushes.

Today Ballarat exemplifies the natural, cultural and historical values of the Central Victorian Goldfields region. Its extensive and highly intact built heritage, landmark buildings, parks, lakes and gardens, statues and cultural and public institutions are a lasting legacy of this golden era.

As a regional centre, Ballarat's service catchment extends beyond its borders and encompasses major retail, health and education facilities. People from surrounding rural areas, particularly to the west, are attracted to Ballarat for employment and education purposes as well as its significant history, character and lifestyle. Ballarat also attracts many people from the Melbourne metropolitan area, including families seeking more affordable housing with good access to employment opportunities and better lifestyle choices. People also come to Ballarat as visitors and Ballarat is a key tourism location in the distinctive Central Victorian Goldfields region.

Ballarat encompasses an urban core, outlying townships and a large agricultural base across approximately 740 square km. The population in 2021 was approximately 115,000 people. It is forecast to grow to approximately 170,000 by 2041 making Ballarat one of Australia's fastest growing inland centres. Ballarat is also a significant source of jobs for regional Victoria.

There are shared boundaries, connections and relationships with Hepburn Shire to the north, Moorabool Shire to the east, Golden Plains Shire to the south, and Pyrenees Shire to the west. It also has a strong relationship to the Central Victorian Goldfields region due to its shared history and character. Ballarat's relative proximity to Melbourne, being just 110 kilometres to the west of the Capital, makes it a crucial part of the Victorian growth story.

21.01-2 Community vision

Proposed C254ball

The input from Ballarat's biggest-ever community conversation, 'Ballarat Imagine', led to the development of *Our Vision for 2040* which outlines what the community values about Ballarat now, the collective hopes for Ballarat's future (the vision), and how it is going to achieve the vision (the key principles). The community's vision guides the *Ballarat Strategy* (2015) which in turn informs sections of this MSS. The Ballarat Strategy, and more recent work in the Ballarat Housing Strategy (2024) and Growth Areas Framework Plan (2024), are fundamental pieces of work that inform Council's approach to managing future change and guiding new growth in Ballarat to the year 2041.

By 2041, Ballarat will be:

- A diverse and successful community that has built its future on its beautiful city and great lifestyle.
- A proud community that has retained its unique sense of identity.
- A desirable city that we love to live and work in, with excellent facilities and services.
- A friendly city where the sense of community is a daily cornerstone of our life.
- A healthy and safe community that supports and values its residents.

BALLARAT PLANNING SCHEME**21.01-3 Land use vision**

Proposed C254ball

The *Ballarat Housing Strategy (2024)* sets out the long-term strategic direction for Ballarat towards 2041. It outlines the shared community vision for a greener, more vibrant and connected Ballarat, embracing the following concepts:

The Compact City

The Compact City is a city that is developed in areas that have access to existing services, infrastructure and sustainable, accessible transport networks, and with varying levels of density (change areas). It supports the ability for all residents of Ballarat to be able to do more of their day to day shopping, accessing of services and business in local neighbourhood centres. It also promotes the improvement of walking and cycling connections in local neighbourhoods so residents find it easier to move around and reduce the need to use the car for short-journeys. It will help guide growth and change in Ballarat so in 2040 it is a place which has:

- Compact city form.
- Complete and accessible local neighbourhoods.
- Land uses and precincts supporting jobs, productivity and efficiency.
- High quality local connections.

The City in the Landscape

The 'City in the Landscape' concept reflects Ballarat's enviable physical, cultural and historical location within its landscape. It will help guide growth and change in Ballarat so in 2041 it is a place which:

- Supports urban areas linked and embedded with natural values and biodiversity.
- Manages change in a city rich in history and cultural diversity.
- Undertakes integrated local planning as vital for local communities.
- Builds upon the mixture of urban and rural areas, which contribute to Ballarat's identity.
- Recognises and responds to a changing climate, and is resilient to environmental impacts and risks.

21.01-4 Key Issues

Proposed C254ball

As an outcome of the above profile and vision, Clauses 21.02 to 21.09 provides strategic directions for the following key issues:

Settlement and Housing

- Accommodating a projected population of approximately 170,000 people by 2041.
- Ensuring a sufficient long-term (minimum 15 years) supply of land for residential development.
- Maintaining a compact settlement form.
- Encouraging higher density residential growth in the CBD and Urban Renewal Areas.
- Facilitating higher density development in urban renewal areas.
- Providing a diversity of housing that responds to changing community needs and household types and sizes.
- Identifying opportunities and planning for social and affordable housing.
- Providing a greater proportion of infill housing in established residential and substantial change areas.
- Recognising community values and infrastructure limitations unique to townships.

BALLARAT PLANNING SCHEME

- Providing quality open space as essential for community health.
- Ensuring that new development incorporates ESD (Environmentally Sustainable Design) principles.

Environmental and Landscape Values

- Protecting and creating new connections between remnant vegetation and areas of high biodiversity value.
- Greening the urban area as an urban forest to improve biodiversity, manage heat, improve amenity and enhance Ballarat's rural identity.
- Protecting and enhancing the distinctive sense of place, cultural identity and the natural, cultural and historic landscape across the Ballarat municipality.

Environmental Resilience

- Minimising greenhouse gas emissions.
- Ensuring new development adopts best practice approaches to minimising energy, resource and water use, reuse and recycling.
- Protecting the community from the economic, social and environmental risks associated with flooding.
- Discouraging residential development in areas prone to bushfire risk.

Natural Resource Management

- Protecting productive agricultural land.
- Preventing ad-hoc and inappropriate use of productive agricultural land for non-agricultural uses, particularly lifestyle housing.
- Avoiding decision-making which creates long-term conflict with farming operations.
- Maintaining natural environmental processes within water catchments.
- Minimising the impacts of development on water catchments.
- Managing water demand including the impact of development and population growth.
- Managing the impact of climate change and below average rainfall.

Built Form, Heritage and Design

- Improving the presentation of built areas and entrances.
- Improving the design, siting and landscaping of development.
- Minimising the impact of advertising signage on visual amenity.
- Managing change as part of a city rich in cultural diversity and heritage assets.
- Protecting significant areas and features of the built and natural environment.
- Ensuring infill development enhances the cultural significance and identified heritage areas.

Economic Development

- Planning for sufficient land supply for economic growth.
- Supporting the agglomeration of key businesses and industries.
- Enabling innovation in key businesses and industries.
- Enhancing the role of the CBD as the principal activity centre in Ballarat.
- Providing sufficient land for industrial growth and expansion.

BALLARAT PLANNING SCHEME

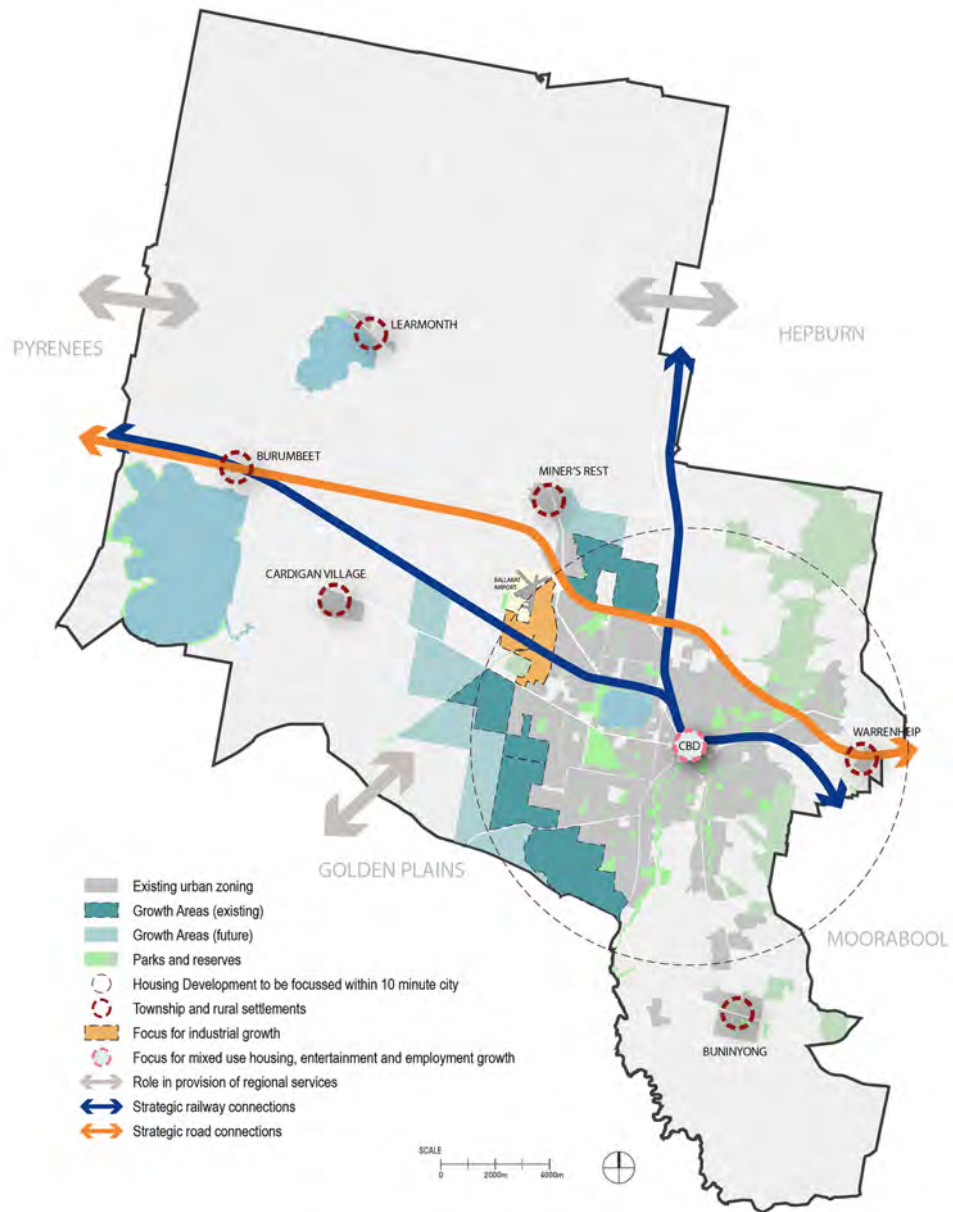
- Encouraging a cohesive built form and high quality landscaping in industrial areas.
- Ensuring industrial precincts are protected from intrusion by inappropriate land uses which put pressure on lawful existing industrial activities.
- Supporting growth in the tourism industry in Ballarat.
- Ensuring the urban realm contributes to a high quality visitor experience.
- Supporting growth in the racing industry in Ballarat.
- Minimising long-term impacts on the racing industry from new development.
- Minimising the potential harms associated with gaming.
- Identifying and encouraging the redevelopment of urban renewal precincts.

Transport and Infrastructure

- Transitioning Ballarat towards a more sustainable transport system.
- Supporting a less car dependent community.
- Improving the connectivity and quality of walking and cycling networks.
- Improving the efficiency of moving freight and people.
- Ensuring infrastructure provision keeps pace with population and housing growth.

BALLARAT PLANNING SCHEME

Strategic Framework Plan



BALLARAT PLANNING SCHEME**21.02 SETTLEMENT AND HOUSING**

Proposed C254ball

This clause provides local content to support Clause 11 (Settlement) and Clause 16 (Housing) of the State Planning Policy Framework.

21.02-1 Housing growth

Proposed C254ball

The City of Ballarat will contain a variety of dwelling types, designs and lot sizes which meet the needs of residents. High quality contemporary housing is embraced that responds to our heritage and neighbourhood character. More people will have access to services and employment without using a car and affordable housing allocated in the most accessible areas for people that need them most. New homes will be built in areas that do not compromise our native flora and fauna.

Ballarat is forecast to grow significantly towards 170,000 people by 2041, an increase of approximately 55,000 people that will be accommodated in approximately 29,000 new dwellings.

A significant proportion of this increased population is planned to be accommodated through infill development in established residential areas, urban renewal precincts, the Ballarat CBD and in well-planned and sequenced Growth Areas.

Maintaining a compact, efficient and productive settlement form is crucial to Ballarat's long-term future as a sustainable, accessible and liveable city. Specific guidance is provided on change in the following areas (as identified on the Housing Framework Plan):

- Growth areas.
- Established residential areas.
 - Minimal change
 - Incremental change
- Substantial change areas.
 - Urban renewal precincts
 - The Ballarat CBD
- Townships.

Objective 1

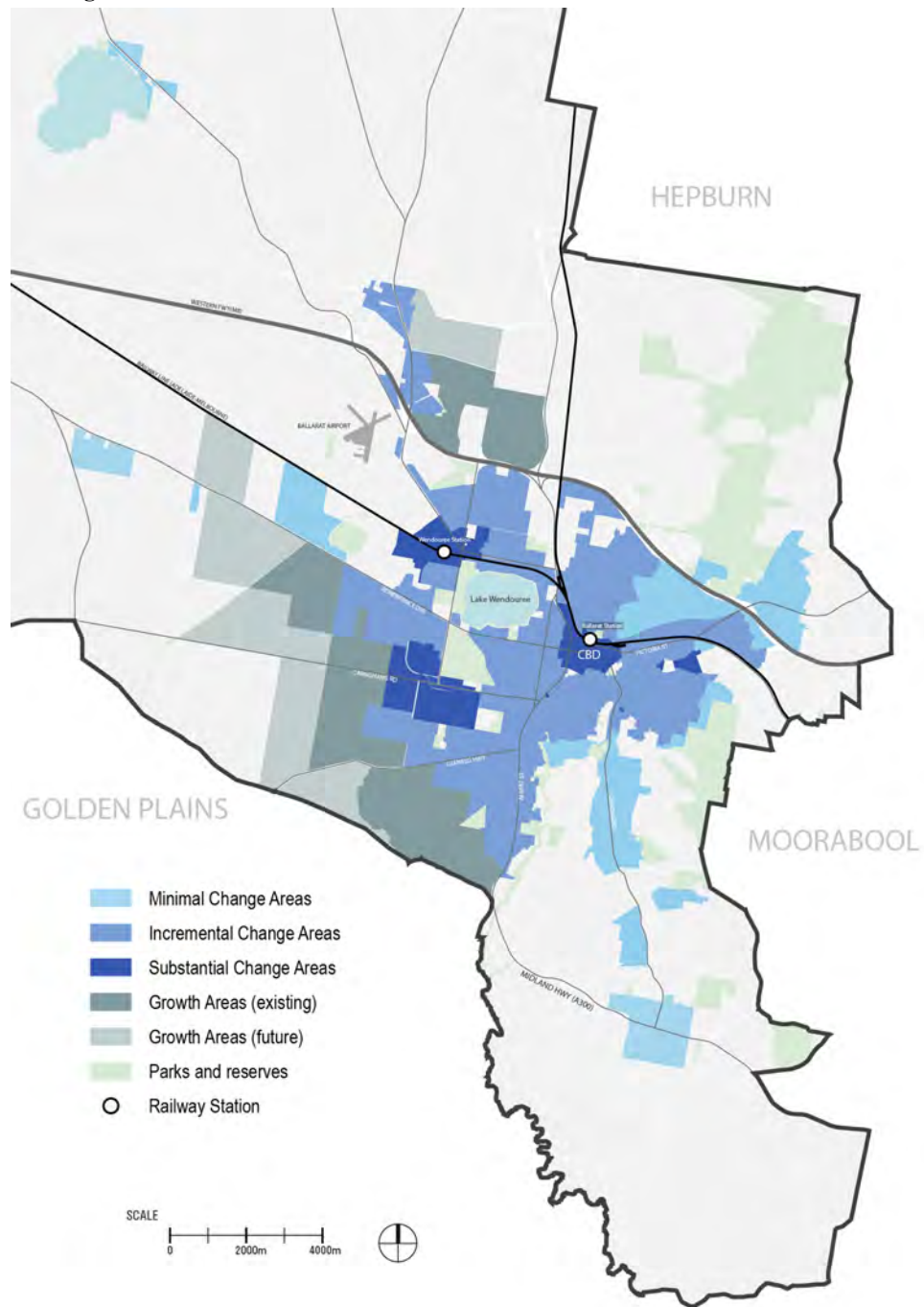
To reinforce a compact city form.

Strategies

- 1.1 Encourage design excellence in new mixed use development in the CBD which supports the knowledge sector and education, commercial and retail opportunities, and higher density residential development.
- 1.2 Encourage higher density housing in substantial change areas (urban renewal precincts and the Ballarat CBD).
- 1.3 Provide increased densities of housing in areas identified as incremental and substantial change areas.
- 1.4 Limit the outward expansion of Ballarat's urban area and ensure that Growth Areas are well serviced by accessible, frequent public transport.
- 1.5 Discourage increased dwelling density in minimal change areas.

BALLARAT PLANNING SCHEME

Housing Framework Plan



21.02-2

Growth areas

Proposed C254ball

The Ballarat West, Alfredton West and Northern Growth Areas are the current areas that provide for greenfield housing development in the short to medium term.

Ballarat’s future growth areas include the Western and North Western Growth areas and are subject to future Precinct Structure Plan preparation as per the *City of Ballarat Growth Areas Framework Plan (2024)*.

BALLARAT PLANNING SCHEME

Ballarat's growth areas should be sustainable, self-sufficient communities that support integrated transport, physical and community infrastructure, activity centres and sustainable initiatives.

Objective 2

To ensure that Ballarat's future growth areas are delivered in a logical and sequential manner to support orderly planning.

Strategies

- 2.1 Manage the release of growth areas to ensure that infrastructure, services and facilities are provided in a timely and efficient way.
- 2.2 Ensure development proceeds in a logical, sequenced manner that maximises the efficient delivery and use of development and community infrastructure.
- 2.3 Ensure that planning for future growth areas has regard to the Ballarat Growth Areas Framework Plan (2024).
- 2.4 Ensure that when subdivision of land occurs, and no development is proposed, lots for diverse housing are to be nominated on a Housing Diversity Plan and secured through a suitable mechanism such as Section 173 Agreement on title or a Memorandum of Common Provisions before a Statement of Compliance is issued for the relevant stage of subdivision.

BALLARAT PLANNING SCHEME

Development Staging Plan



BALLARAT PLANNING SCHEME**Objective 3**

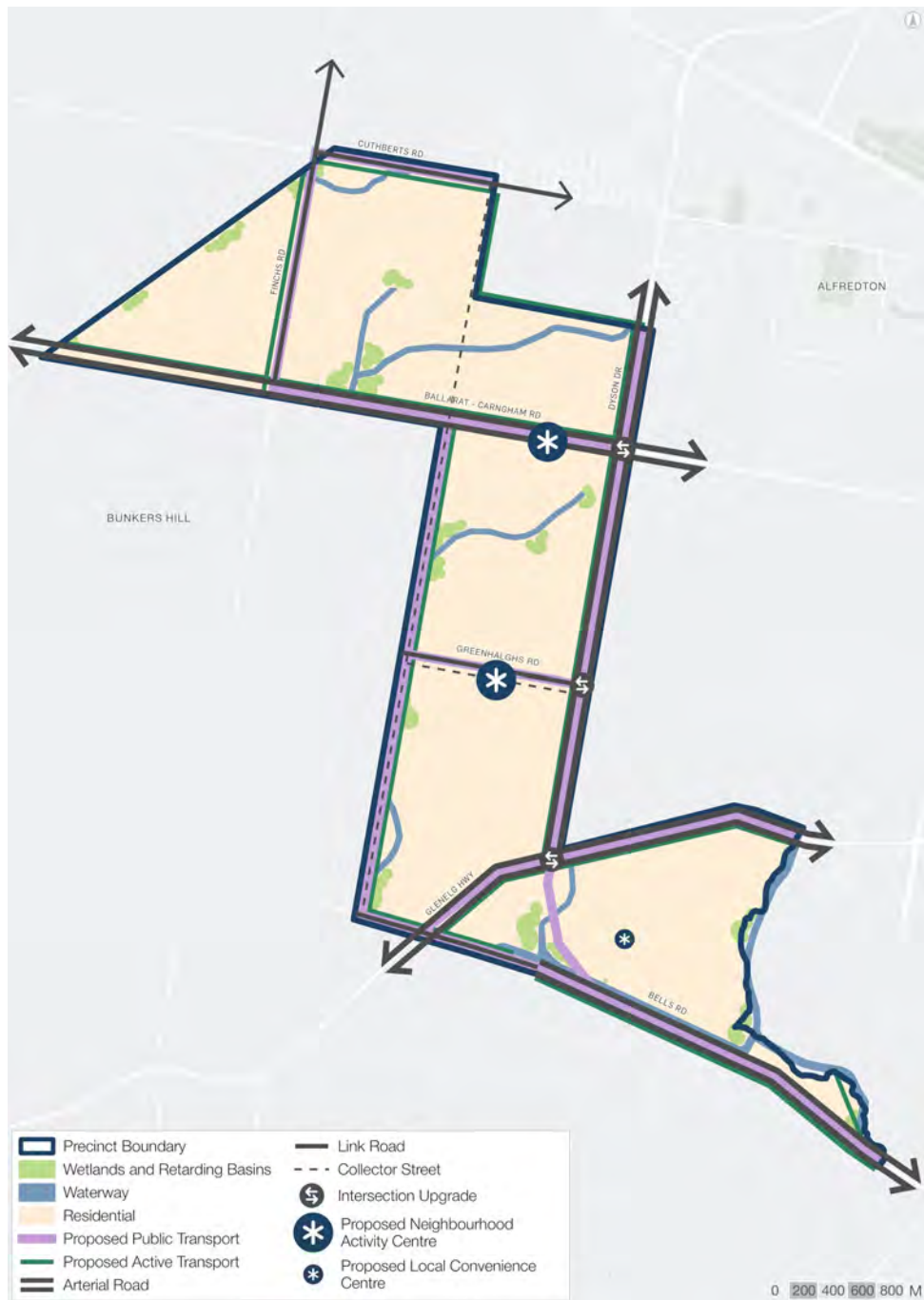
To ensure that Ballarat's future growth areas are compact, accessible communities that are well-designed, well-serviced and sustainable whilst creating a unique sense of place, character and identity.

Strategies

3.1	Develop a transport network that enables road, walking, cycling and public transport options that connect the growth areas to existing areas within Ballarat.
3.2	Develop an activity centre network that provides for the needs of residents and contributes to the existing activity centre network of Ballarat.
3.3	Encourage new development in growth areas to deliver a net zero future.
3.4	Ensure that development follows the staging set out within PSPs to ensure the efficient and orderly provision of infrastructure and services.
3.5	Provide an average density of 20 dwellings per hectare unless site specific constraints require a lower density.
3.6	Encourage increased densities in higher amenity locations supported by features such as activity centres, public transport, community facilities and open space.
3.7	Provide a range of dwelling types and sizes (including 1, 2 and 3 bedroom houses and townhouses) for subdivisions and/or development of 10 or more lots/dwellings.
3.8	Provide a mix of housing options including social and affordable housing.

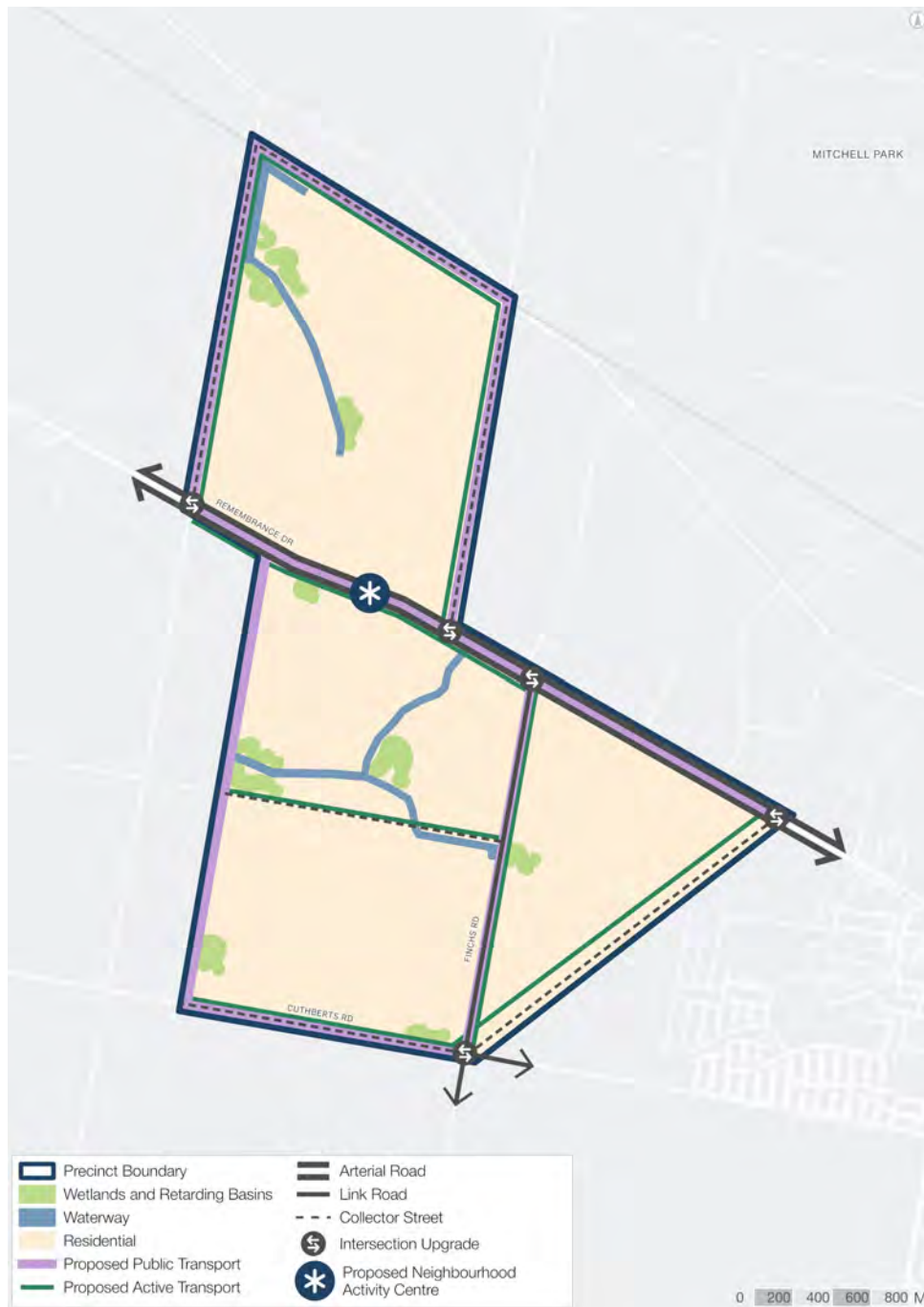
BALLARAT PLANNING SCHEME

Future Urban Structure (Western Growth Area)



BALLARAT PLANNING SCHEME

Future Urban Structure (North Western Growth Area)



21.02-3

Proposed C254ball

Established residential areas

Infill development is encouraged in established residential areas at a scale and density appropriate to the designated change category for that area (see Housing Framework Plan) and the preferred neighbourhood character.

BALLARAT PLANNING SCHEME

Dwelling density in established areas should be relative to walking distances to public transport, activity centres, employment and taking into account the preferred neighbourhood character of the area.

Minimal Change Areas have limited capacity to accommodate future residential development and growth (increased density) based on a number of factors, including:

- The area is prone to bushfire (risk);
- The area is not accessible by a reasonably walkable distance to the nearest public transport stop or station; and
- The area is not within walking distance of an identified activity centre.

Incremental Change Areas encompass residential areas that will allow for increased housing consistent with the preferred neighbourhood character of the area and site-specific constraints. These areas are accessible by the public transport network.

Objective 4

To encourage minimal change in areas which have limited capacity to accommodate future residential development and growth.

Strategies

- 4.1 Facilitate minimal change in areas that are prone to bushfire risk and areas that are not highly accessible (within an acceptable walking distance) of the public transport network.
- 4.2 Discourage increased housing density in locations that are bushfire prone and/or do not have plans for future infrastructure provision, including the public transport network, through a Precinct Structure Plan (PSP) and the *Growth Areas Framework Plan (2024)*.

Objective 5

To facilitate incremental change in established residential areas, identified as such on the Housing Framework Plan, at a scale and dwelling density appropriate to the area, and in accordance with the preferred neighbourhood character

5.1	Encourage development at increased densities that responds to the existing neighbourhood character within established residential areas.
5.2	Provide medium density housing that contributes to neighbourhood character and responds to site context
5.3	Ensure that development responds the heritage character and values of the area.

21.02-4

Proposed C254ball

Substantial Change Areas

Substantial Change areas will provide for housing growth with increased densities and housing diversity in areas with high accessibility to public transport and services. This includes Urban Renewal Precincts and the Ballarat CBD.

The Ballarat CBD will undergo urban design analysis and structure planning to identify and determine locations for more intense development whilst respecting and conserving the historic character of the buildings and streetscapes.

The following Urban Renewal Precincts are identified as Substantial Change Areas:

- Lal Lal Street Precinct
- 313 and 317 Skipton Street, Ballarat Central
- Wendouree Station Precinct

BALLARAT PLANNING SCHEME

- Latrobe Street Saleyards Precinct
- Ballarat East Precinct (Eureka and Rodier Street)

Objective 6

To encourage substantial change in areas with high levels of accessibility to transport, shops and services.

Strategies

6.1	Undertake urban design frameworks and structure plans to provide more detailed direction on the future land use and development direction of substantial change areas.
6.2	Encourage and facilitate higher density development that responds to site location and context, and the direction of any relevant structure plan (or similar strategic plan).
6.3	Ensure that development responds to the heritage values of the location and area.
6.4	Provide housing diversity in new development including the provision of one, two and three-bedroom apartments and townhouses.
6.5	Identify and plan for social and affordable housing opportunities.
6.6	Encourage social and affordable housing provision through the ability to vary height limits in built form controls (such as the Design and Development Overlay or similar).
6.7	Ensure that the Environmental Audit Overlay (EAO) is applied when rezoning land that would allow sensitive uses, in accordance with Ministerial Direction No. 1 - Potentially Contaminated Land.

21.02-5

Proposed C254ball

Townships

The townships of Buninyong, Burrumbeet, Cardigan Village, Learmonth, Miners Rest and Warrenheip and their surrounding communities provide an attractive lifestyle choice in a rural setting. These townships are valued by residents for their character, community and lifestyle. They represent a different style of living to urban Ballarat and contribute to the diversity of lifestyle and choice in the municipality. Services and infrastructure are unique to each township, as are local values and expectations. Significant land use changes should respond to local township character, and long-term community aspirations.

In some small towns and surrounding rural living communities there is a need for a clear long-term vision. Natural, engineering and cultural considerations place limitations on new growth and development opportunities. Structure and community plans are needed to provide a framework for informing land use planning decisions, directing future growth and development opportunities that respond to community needs.

Objective 6

To facilitate development in township areas in accordance with local area planning and the long-term aspirations of the community.

Strategies

- 6.1 Reinforce the township atmosphere and valued local character when managing long-term change in township areas.
- 6.2 Maintain residential development to within existing township boundary.

BALLARAT PLANNING SCHEME**21.02-6 Housing diversity**

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Proposed C254ball

Social diversity is an important factor in the social health of the city. A diverse population needs a mixture of housing sizes and types. There is also a need to increase the proportion of affordable housing, social housing and housing for people of all abilities.

Objective 7

To provide a range of housing types in terms of design, size, location and density.

Strategies

- 7.1 Support a range of housing types and sizes to meet diverse housing needs.
- 7.2 Encourage a range of lot sizes and densities within new residential development in the growth areas.
- 7.3 Support the provision of well-designed and managed social housing, crisis accommodation, rooming houses and aged care facilities.
- 7.4 Encourage the provision of social and affordable housing in the growth areas and areas that will deliver increased dwelling density.

21.02-7 Open space

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Proposed C254ball

Publicly accessible open space in Ballarat includes Lake Wendouree, Victoria Park, Lake Learmonth and Mount Buninyong as well as smaller community open spaces. Each area contributes environmentally, as well as being important for the health and wellbeing of the community. Many significant natural environments, heritage and cultural features are preserved within the open space network.

Objective 8

To improve the provision and quality of open space.

Strategies

- 8.1 Ensure a variety of public open spaces meet the needs of the growing and ageing population for formal and informal outdoor recreation.
- 8.2 Encourage the development of linear reserves, habitat corridors and linkages between key open spaces and community destinations and along waterways, disused railway corridors or other crown land.
- 8.3 Reinforce the 'Compact City' principle when planning for open space across the municipality.
- 8.4 Provide an integrated network of public open spaces in urban renewal and growth areas.
- 8.5 Protect and enhance the biodiversity and habitat value of parks, gardens, open spaces and waterways.
- 8.6 Ensure development and signage in and surrounding open space is appropriate to its context.

Objective 9

To improve the accessibility of open space.

Strategies

- 9.1 Encourage residential subdivision proposals to be linked with existing and proposed open space, pedestrian paths and bicycle trails.
- 9.2 Encourage residential development which abuts open space to provide appropriate frontage and passive surveillance to open space areas.
- 9.3 Encourage the co-location of open space with community infrastructure or facilities.
- 9.4 Encourage the design of open space areas to be inclusive for residents of all abilities, ages and interests.

BALLARAT PLANNING SCHEME**21.08 TRANSPORT AND INFRASTRUCTURE**

Proposed C254ball

This clause provides local content to support Clause 18 (Transport) and Clause 19 (Infrastructure) of the State Planning Policy Framework.

21.08-1 Integrated transport networks

Proposed C254ball

The layout, structure and connectivity of Ballarat is crucial to its economy, liveability, creativity and ecological footprint. A compact form with well connected and walkable centres has numerous benefits. An efficient road, rail and freight network is crucial to business competitiveness and prosperity.

High quality public transport enables a more efficient, accessible and sustainable municipality. An excellent walking network is necessary for the functioning of all the other modes. Cycling represents an affordable, enjoyable and efficient mode of transport for commuting or leisure, and has the potential for significant growth as a mainstream transport mode.

Objective 1

To integrate transport and urban growth.

Strategies

- 1.1 Support land use decisions which integrate and value add to major transport infrastructure.
- 1.2 Locate incremental and substantial housing growth areas in close proximity to the public transport network.
- 1.3 Ensure that development responds to the preferred neighbourhood character when increasing densities in sensitive areas.

Objective 2

To develop and maintain a comprehensive, safe, comfortable and convenient pedestrian network throughout the municipality.

Strategies

- 2.1 Give priority to pedestrian use in high volume pedestrian areas, particularly in the CBD and around activity centres.
- 2.2 Support the development of accessible pedestrian routes (including shared paths) within 10 minutes of major destinations, including the creation of mid-block and through development connections to enhance permeability.
- 2.3 Ensure pedestrian networks are accessible to all users, including those with wheelchairs and prams.

Objective 3

To develop a comprehensive, safe and convenient cycling network.

Strategies

- 3.1 Establish and encourage ongoing development of a user focussed, safe and legible Ballarat Bicycle Network to link all major parks and commercial centres in Ballarat.
- 3.2 Ensure new development provides bicycle access and high quality, safe and secure end of trip cycle facilities.

Objective 4

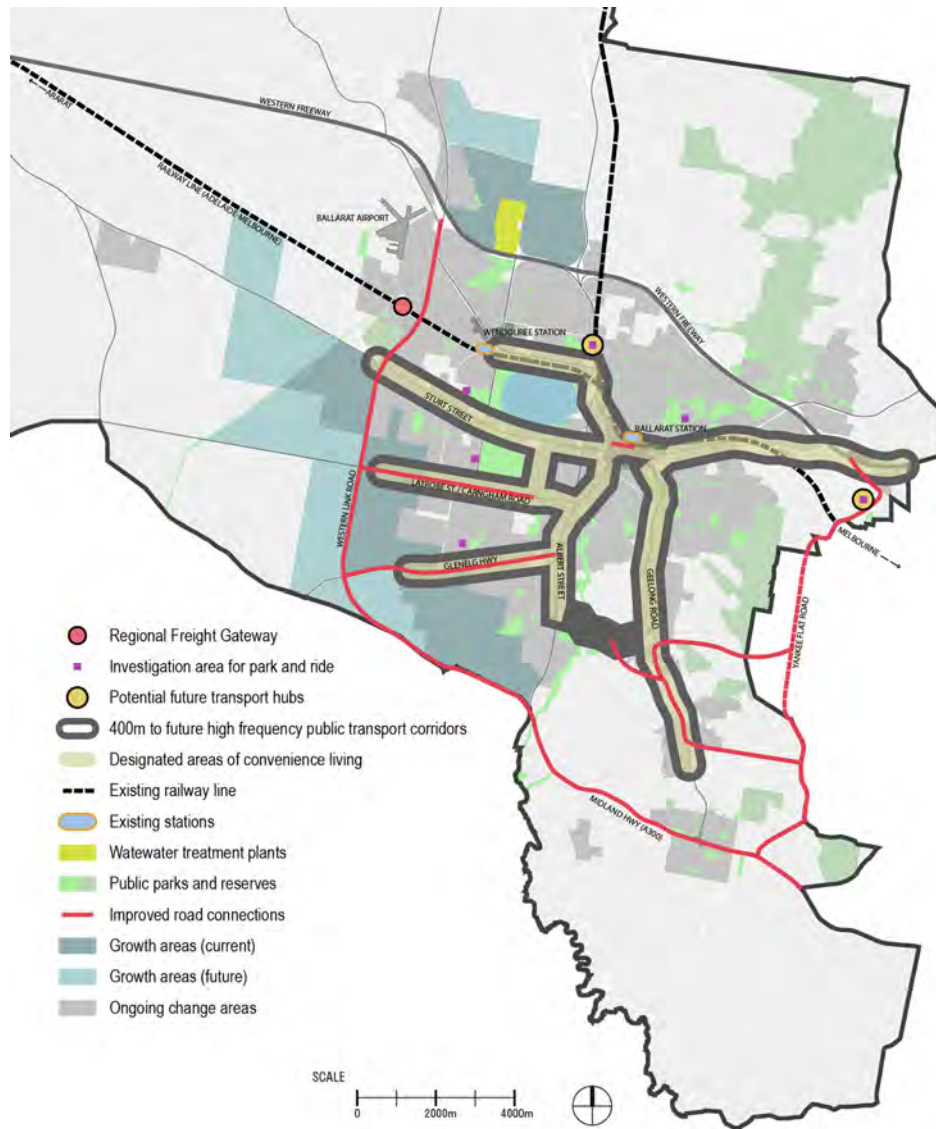
To ensure the major water and sewerage assets and treatment plants (including the Ballarat Water Reclamation Plant and Ballarat South Waste Water Treatment Plan) are protected from encroachment by sensitive uses.

BALLARAT PLANNING SCHEME

Strategies

- 4.1 Provide a buffer around the Ballarat Waste Water Reclamation Plant and Ballarat South Waste Water Treatment Plant to minimise encroachment by sensitive land uses.

Strategic Transport Plan



BALLARAT PLANNING SCHEME**Objective 4**

To encourage more efficient use of the road network.

Strategies

- 4.1 Provide for the use and development of land abutting roads included in the Road Zone and the Ballarat Western Link road in a manner which limits detrimental impact on the efficient operation of the road.
- 4.2 Discourage commercial ribbon development from occurring along main roads.

Objective 5

To enhance Ballarat's role as a key inland freight and intermodal hub.

Strategies

- 5.1 Support the sustainable development and efficient 24-hour operation of the Ballarat West Employment Zone and Ballarat Intermodal Freight Hub.
- 5.2 Facilitate the completion of the Ballarat Western Link Road, and other improvements between Ballarat and Geelong.

21.08-2

22/12/2016
C194

Ballarat Airfield

Ballarat Airfield is an important asset for a growing City and region. The recreational and charter use of the airfield will be maintained with special emphasis placed on promoting the complex's strategic function for police, ambulance and other emergency agencies. The encroachment of land uses and forms of development which could restrict the future use of the Airfield will be prevented. Upgrading the Airfield's main runway has the potential to enhance Ballarat as a tourism destination. A runway with the capacity to take 12,000kg aircraft would enable the airfield to receive small, regular public transport aircraft seating 30 passengers.

Objective 6

To provide for the continued operation and future upgrade of the Ballarat Airfield.

Strategies

- 6.1 Encourage the use of airfield land for airfield compatible purposes.
- 6.2 Discourage the use and development of airfield and surrounding land for purposes that would have a negative impact on the airfield's operation.
- 6.3 Discourage the establishment of residential and other sensitive uses on land under airfield flight paths.

21.08-3

22/12/2016
C194

Development Infrastructure

Transport infrastructure, drainage, reticulated sewerage and water, telephone, electricity and gas distribution networks infrastructure represent a significant public investment. Development must be planned in a way which protects existing infrastructure and recognises that existing infrastructure has a limited capacity.

Objective 7

To ensure new physical, social and economic infrastructure meets the needs of the community during the forecast population growth.

Strategies

- 7.1 Require appropriate development contributions to apply to future greenfield development areas, to assist with funding the required civil and social infrastructure.
- 7.2 Ensure development contributions are specified in Development Contributions Plans.
- 7.3 Strategy Integrate new or renewed community facilities with residential developments in order to provide the appropriate balance and mix of facilities.
- 7.4 Encourage the co-location of complementary facilities.
- 7.5 Ensure all future community facilities can accommodate multipurpose uses where appropriate and can be adapted to suit the needs of the community.

BALLARAT PLANNING SCHEME**21.08-4**22/12/2016
C194**Implementation**

The strategies in relation to Transport and Infrastructure will be implemented through the planning scheme by:

Further strategic work

- Consider applying the Design and Development Overlays to areas requiring specific design solutions.
- Review the Ballarat Car Parking Strategy as relevant to the Ballarat CBD to determine the requirement for a local planning policy or Parking Precinct Plan.
- Explore opportunities for increasing the supply of onstreet and offstreet public car parking within the Ballarat CBD in line with the City of Ballarat Car Parking Strategy.
- Review the buffer applied to the Ballarat North Wastewater Treatment Plant to ensure that it meets current and future needs.

BALLARAT PLANNING SCHEME**21.09 LOCAL AREAS**

Proposed C254ball

This clause provides local content to support Clauses 21.02 to 21.08 of the Local Planning Policy Framework. This clause provides detailed local area strategies.

21.09-1 CBD

Proposed C254ball

Well-designed, higher density residential and mixed-use development will be encouraged in the Ballarat CBD. The area will be managed as a key entertainment destination, a hub of knowledge sector, retail employment activities and inner city living precinct with street level and out of hours activation. Strong emphasis will be placed on a high quality public realm, pedestrian amenity and a people first approach to managing space.

Implementation strategies**Land use**

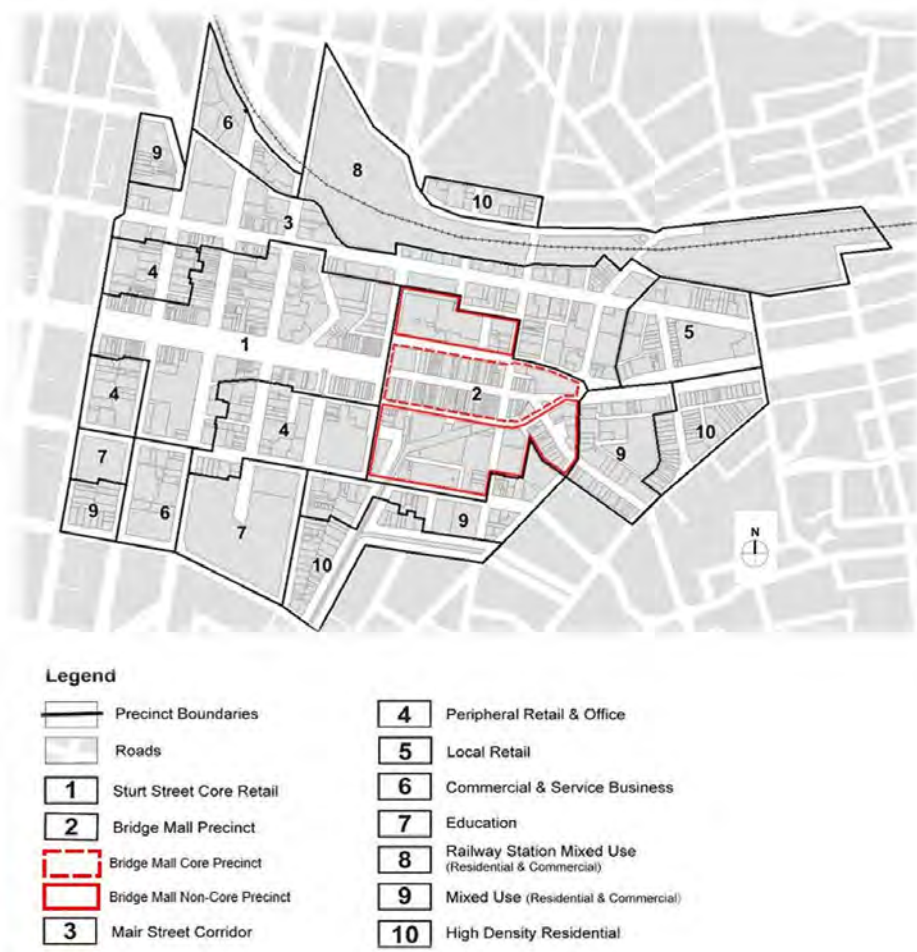
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| Strategy 1 | Facilitate higher density residential and mixed use development in the Ballarat CBD. |
| Strategy 2 | Facilitate the redevelopment of vacant upper floorspace within the Ballarat CBD for residential purposes. |
| Strategy 3 | Ensure that new development responds to the presence of heritage fabric on individual sites and heritage streetscapes within the CBD. |
| Strategy 4 | Encourage the provision of social and affordable housing in new, higher density residential and mixed-use developments. |
| Strategy 5 | Consider the objectives, strategies and actions of the CBD Strategy: Making Ballarat Central (2010). |

Environmental risk

- | | |
|------------|--|
| Strategy 1 | Facilitate appropriate CBD development within floodprone areas. |
| Strategy 2 | Support development within and adjoining the CBD on land which is flood prone, taking into account appropriate design responses to minimise the risk to life and property. |
| Strategy 3 | Work with local catchment management authorities to encourage appropriate development of vacant land within the CBD which may be impacted by flooding. |

BALLARAT PLANNING SCHEME

Ballarat CBD



21.09-2
22/12/2016
C194

Mair Street Medical Precinct

Ballarat is a significant regional provider of health and medical facilities. The majority of medical and health services are located in the Mair Street Medical Precinct to the north west of the Ballarat CBD, including the Ballarat Base Hospital and the St. John of God Hospital. Over many years a significant number of smaller medical centres and allied health professionals have established in these areas which have historically been zoned residential. Dwellings in this area are highly desirable due to their close proximity to the Ballarat CBD, schools and Lake Wendouree, as well as the relatively intact stock of heritage dwellings and streetscapes. The increasing number of non residential uses in the area has lead to a number of conflicts associated with, among other things, car parking difficulties for residents and patients. To balance these competing issues Council completed the *Ballarat Health Precinct Study 2006*.

Implementation strategies

Land use

- Strategy 1 Encourage the location of medical centres within the Precinct.
- Strategy 2 Encourage medical centre uses that provide regionally significant specialist services as identified by the *Ballarat Health Precinct Study 2006*.

BALLARAT PLANNING SCHEME

- Strategy 3 Discourage office, retail or industrial uses that do not require co-location with the hospital uses.
- Strategy 4 Discourage medical centre uses from locating in the residential areas surrounding the Mair Street Medical Precinct.
- Strategy 5 Promote the Mair Street Medical Precinct as the preferred location for specialist medical centre uses and other allied health professionals.
- Strategy 5 Encourage the provision of further car parking and other medical suites for Ballarat Base Hospital and St John of God Hospital.

Built form and amenity

- Strategy 1 Ensure the scale of buildings is consistent with building form and character of surrounding residential areas.
- Strategy 2 Ensure the surrounding residential areas' amenity is not reduced.
- Strategy 3 Restrict hours of operation where the use is located adjacent to residential dwellings.
- Strategy 4 Retain the existing building stock, especially where it is listed as an individual building in a heritage overlay or is recognised as a contributory building under the heritage overlay.
- Strategy 5 Require the provision of on site car parking to the rear of buildings.
- Strategy 6 Require areas between buildings and front boundaries to be landscaped.
- Strategy 7 Discourage removal of street trees when providing for a new access point to the land.
- Strategy 8 Restrict signage where a re-use of an existing building is proposed or the use is adjacent to a residential dwelling.

Infrastructure

- Strategy 1 Ensure car parking and access requirements are consistent with the requirements of the planning scheme or an approved parking precinct plan.
- Strategy 2 Support reductions in parking requirements only where on-street parking is underutilised or where justified by a parking precinct plan.

Mair Street Medical Precinct



21.09-3

22/12/2016
C194

Canadian Valley

The *Canadian Valley Outline Development Plan 2005* sets out the preferred form and principles of future development in the Canadian Valley. The plan recommends limiting residential development to areas that are already zoned for residential use and recognises the constraints imposed by native vegetation, landscape character and existing non-urban areas. Canadian Valley includes the existing towns of Mount Clear, Mount Helen and Buninyong and is the location of the University of Ballarat and the University of Ballarat Technology Park. Although most of Ballarat's population growth is to be directed towards the Ballarat West growth corridor, some

BALLARAT PLANNING SCHEME

will occur in the Canadian Valley in areas already designated for residential development. By 2021 the population of the Canadian Valley will grow by nearly 2,500 to over 11,000 people or an additional 1400 dwellings. Excluding land with vegetated areas and based on an average lot size of 800m² there is around 12 years supply of vacant residential land to accommodate this growth.

Implementation strategies

Land use

- Strategy 1 Consider the Canadian Valley Outline Development Plan –4 Overall Framework Plan for all applications.
- Strategy 2 Encourage the expansion of the tourism, retailing and economic role of Buninyong township based on preserving and enhancing its heritage and village character.
- Strategy 3 Encourage further commercial development at Buninyong in Warrenheip Street, north of the existing commercial area and in Learmonth Street, east of the council car park towards Inglis Street.
- Strategy 4 Ensure commercial uses within Buninyong which require large outdoor display and storage areas, locate within the Mixed Use Zone and are discouraged from locating within the commercial zoned areas unless storage areas are well screened and located away from the street.
- Strategy 5 Encourage in-fill development within the Buninyong crown township through the development of existing lots which can economically be provided with services and proper access.
- Strategy 6 Support the expansion of the University of Ballarat Technology Park, in a staged manner from its existing site to the east towards the University of Ballarat Mount Helen Campus, in a manner that is sympathetic to the landscape and environmental qualities of the Canadian Valley.
- Strategy 7 Encourage expansion of the University of Ballarat within the existing site and where it is free from environmental constraints.
- Strategy 8 Provide medium density housing at Mount Clear in close proximity to shopping and community facilities.
- Strategy 9 Promote infill residential development at Mount Clear that retains environmental features.
- Strategy 10 Provide a variety of residential lot sizes at Mount Clear ranging from 450m² to 2,000m², with larger lots in the native bush areas and alongside the Canadian Creek and Canadian Forest.

Built form and amenity

- Strategy 1 Ensure any future development outside the designated urban areas maintains a sense of rural landscape, especially as viewed from Geelong Road.
- Strategy 2 Ensure the direction of commercial development at Buninyong in Warrenheip Street, north of the existing commercial area and in Learmonth Street, east of the council car park towards Inglis Street reflects the existing commercial areas and the traditional linear form of commercial development in the township.
- Strategy 3 Promote infill development within Buninyong that respects existing development patterns.
- Strategy 4 Encourage new subdivision within the Buninyong crown township to follow a similar form to existing development being "straight/grid pattern"; rectangular lots and generally no cul-de-sacs.
- Strategy 5 Encourage further development of a linear open space/park system in Buninyong in a similar manner to that which has been developed in the vicinity of Forest Street.
- Strategy 6 Recognise and protect areas of crown land in Buninyong such as the Union Jack Reserve, from inappropriate development.
- Strategy 7 Ensure that any development which is located adjacent to crown land areas should be at a low density and should aim to protect any existing vegetation.
- Strategy 8 Utilise open space subdivision requirements in conjunction with the existing and planned park system in Buninyong.
- Strategy 9 Require extensions to the existing linear park system in Buninyong where this can be achieved through subdivision approvals.
- Strategy 10 Provide opportunities for increased residential development along the ridge alignment of the Ballarat-Buninyong Road and its adjoining tree canopy that can be screened, provided environmental values are not diminished.
- Strategy 11 Require development adjoining the Canadian Creek at Mount Helen to contribute to improvements to the condition of the waterway.
- Strategy 12 Provide an open space system at Mount Clear linked by pedestrian cycle access and which links the State Forest with the Creek and with the existing Mount Clear activity centre.
- Strategy 13 Require areas previously affected by mine workings at Mount Clear to be the subject of an environmental audit prior to use for sensitive purposes.
- Strategy 14 Encourage lots abutting Hocking Avenue and Recreation Road at Mount Clear to have wider frontages to minimise access points onto these roads, or to front side streets where possible.

BALLARAT PLANNING SCHEME

- Strategy 15 Contain residential development in Buninyong to within the existing residential area, unless guided by specific local planning.

Environment

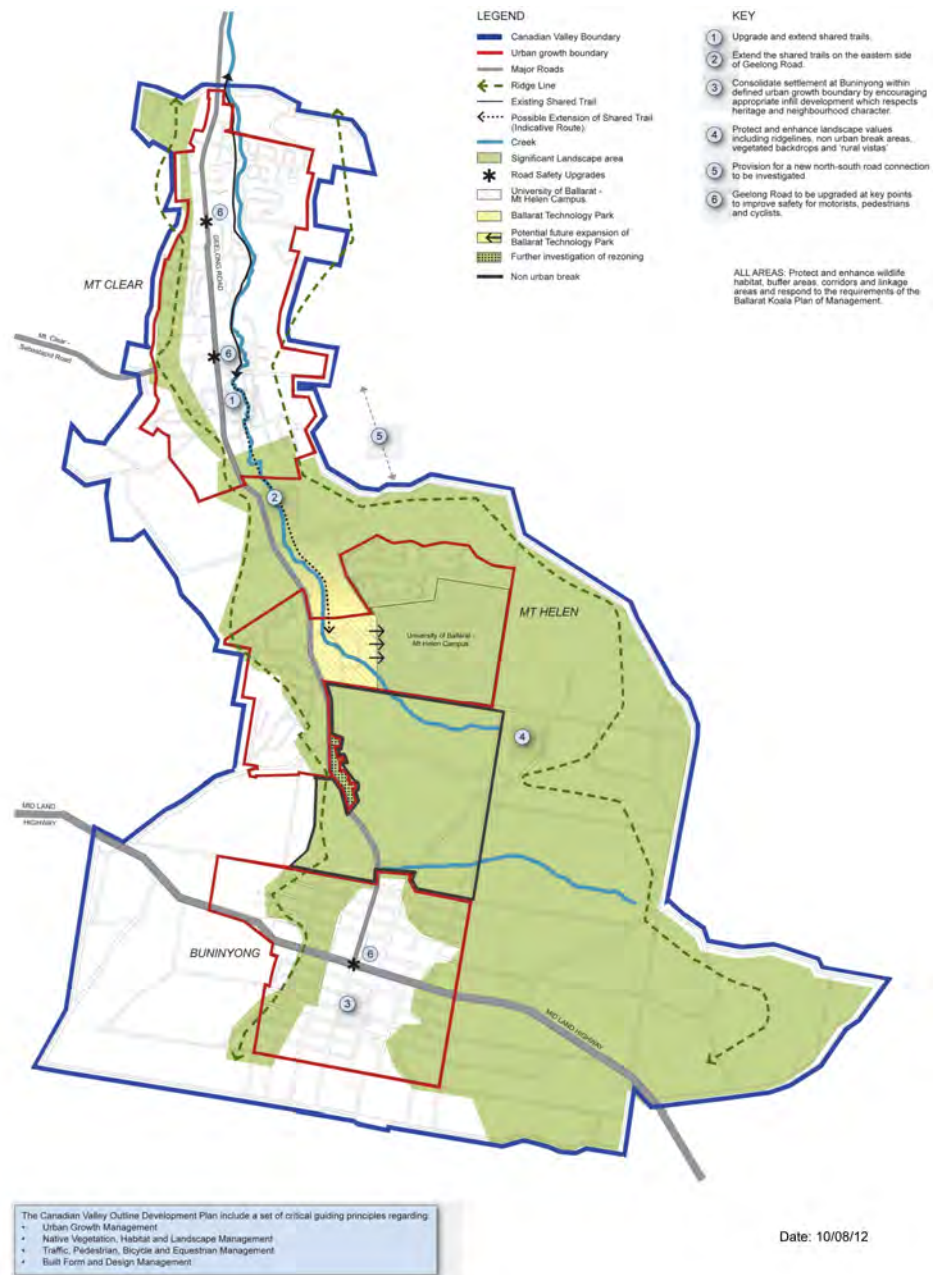
- Strategy 1 Provide an open space network in Buninyong that forms a corridor for the movement of flora and fauna.
- Strategy 2 Ensure new development along watercourses and the former railway reserve in Buninyong respects the need to preserve any existing native and exotic vegetation and amenity.
- Strategy 3 Protect and enhance natural and landscape values in the Canadian Valley including ridgelines, vegetated backdrops, non-urban breaks and open rural landscape vistas.
- Strategy 4 Ensure that non urban breaks are maintained, particularly as viewed from Geelong Road.
- Strategy 5 Maximise the retention of the 'green space' between the communities along the corridor.
- Strategy 6 Ensure development of the University of Ballarat and University of Ballarat Technology Park enhances and improves habitat links and recreational areas for the community.

Infrastructure

- Strategy 1 Improve infrastructure and links for sustainable transport modes, including the extension and enhancement of the shared trail network, particularly the proposed link along Canadian Creek.
- Strategy 2 Maximise opportunities to increase the provision of public transport and increased walking and cycling as alternatives to the motor vehicle.
- Strategy 3 Utilise unused roads in Buninyong as part of the open space system and as linkages for pedestrians and cyclists.

BALLARAT PLANNING SCHEME

Canadian Valley



BALLARAT PLANNING SCHEME**Other Implementation Actions**

Develop a Town Structure or Local Area Plan for Buninyong.

Applications covered by the Canadian Valley Outline Development Plan must provide a Site Specific Design Plan which includes an evaluation of:

- Native vegetation significance;
- Landscape contribution; and
- Habitat qualities including linkage areas for koalas.

Site Specific Design Plans must demonstrate (where appropriate) how development will:

- Retain, protect, manage and enhance native vegetation and habitat values;
- Respond to the requirements of the Ballarat Koala Plan of Management;
- Reflect contemporary needs including diversity of lot sizes and dwelling styles and sizes and ecologically sustainable development principles;
- Contribute to the extension, enhancement and rehabilitation of the existing shared trail network, particularly along creeks and watercourses;
- Integrate with adjoining developed and undeveloped areas in terms of traffic and road management, wildlife corridors and habitat linkages, drainage works and the shared trail network;
- Provide for useable open space areas;
- Utilise cluster planning on partially vegetated residentially zoned land, to protect native vegetation and provide for high quality increased density development in unconstrained areas of the site;
- Retain the rural appearance;
- Maintain clear open views of vegetated areas, ridgelines and skylines from Geelong Rd providing for large open areas in the foreground with a backdrop of native vegetation;
- Remove environmental weeds and rehabilitate environmentally degraded sites;
- Include water sensitive urban design principles into any development;
- Retain land subject to flooding and inundation in public ownership and rehabilitate the land so as to minimise the risk of downstream flooding and inundation; and
- Where residential development of pine plantations is proposed:
 - provide for a vegetated and visual buffer between the existing residential area and the new residential area, and
 - provide for revegetation of native species in open space areas.

21.09-4

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C194

Woodmans Hill

Woodmans Hill is located at the eastern entrance to the City of Ballarat. The area extends approximately 3 kilometres along both sides of the Western Highway, between the eastern municipal boundary of the City of Ballarat and the first major highway turnoff into Ballarat.

VicRoads plan to undertake significant road works to realign the Western Highway within the Woodmans Hill Gateway Precinct. The extent of the realignment will impact on the majority of land holdings within the Precinct and as such, future land use planning must allow for a smooth and sustainable transition.

Of particular importance is the need to develop a gateway precinct, that announces entry into Ballarat and that minimises ad-hoc development that may otherwise compromise the appearance and appeal of the area. It is also of importance to ensure that any new retail and industrial development does not conflict with the intent of Council's retail and industrial strategies.

BALLARAT PLANNING SCHEME

The *Woodmans Hill Gateway Precinct Master Plan (January 2015)* recognises the Woodmans Hill Gateway as one of the major entry points to the City, and highlights the opportunity to improve the entry experience, both visually and from a land use perspective. The Woodmans Hill Precinct is recognised for its high quality agricultural soils, particularly on the north side of the Western Highway. The precinct also contains sites of koala habitat and native vegetation protection.

Council must therefore provide guidance towards establishing a desired land use framework for the Precinct that will ensure the ongoing protection of these attributes. In this regard it is important to facilitate an appropriate mix of land uses and high quality development to improve the entry experience, as reflected in the *Woodmans Hill Gateway Precinct Master Plan (January 2015)*.

The objectives for the Precinct include:

- | | |
|-------------|---|
| Objective 1 | To provide a distinctive entrance to Ballarat that will enhance the image and reflect the nature, history and culture of the Municipality, including through the provision of a major entrance feature/public art element. |
| Objective 2 | To achieve use and development that is respectful to the valued landscape and natural environmental elements of the area, including view lines, vegetation retention, landscaping and defined koala habitat. |
| Objective 3 | To encourage high quality sustainable built form. |
| Objective 4 | To achieve land use outcomes that add to the overall economic diversity of Ballarat without compromising the economic viability of Ballarat's Activity Centres, in particular the Ballarat CBD and the Ballarat West Employment Zone. |
| Objective 5 | To achieve a land use mix that has a focus on highway related functions, with ancillary retail and support for existing tourism uses that capture passing economic activity that contributes to the Ballarat economy. |

Implementation strategies

Land use and development

- | | |
|------------|---|
| Strategy 1 | Consider land use and development proposals generally in accordance with the <i>Woodmans Hill Gateway Precinct Master Plan (January 2015)</i> . |
| Strategy 2 | Restrict commercial use and development within the Precinct to land within the Mixed Use Zone. |
| Strategy 3 | Ensure an appropriate interface/buffer between the commercial and rural, rural living and residential areas of the precinct as appropriate. |

Design

- | | |
|------------|---|
| Strategy 1 | Consider the design objectives contained in the <i>Woodmans Hill Gateway Precinct Master Plan (January 2015)</i> . Ensure redevelopment of the freeway and land abutting the freeway through Woodmans Hill incorporates design of landscape elements consistent with the vision for the entrance. |
| Strategy 2 | Minimise the impact of new development on view lines, natural landscapes and landforms within the precinct. |
| Strategy 3 | Discourage the proliferation of advertising signage. |
| Strategy 4 | Ensure that development addresses the design principles set out in the <i>Woodmans Hill Gateway Precinct Master Plan (January 2015)</i> . |
| Strategy 5 | Ensure that the design of new development incorporates environmentally sustainable design principles. |

Application requirements

Applications for land uses adjacent to the Western Highway are required to:

- Specifically address how the proposal capitalises on the access and visual exposure to the highway.
- Demonstrate why the use requires access and visual exposure to the highway for the economic viability of its operations.
- Demonstrate how the built form, layout, use, access arrangements and buffering are planned to ensure an appropriate interface with surrounding sensitive land uses on rural living and low density residential land and protect the existing rural character of the area. a

BALLARAT PLANNING SCHEME

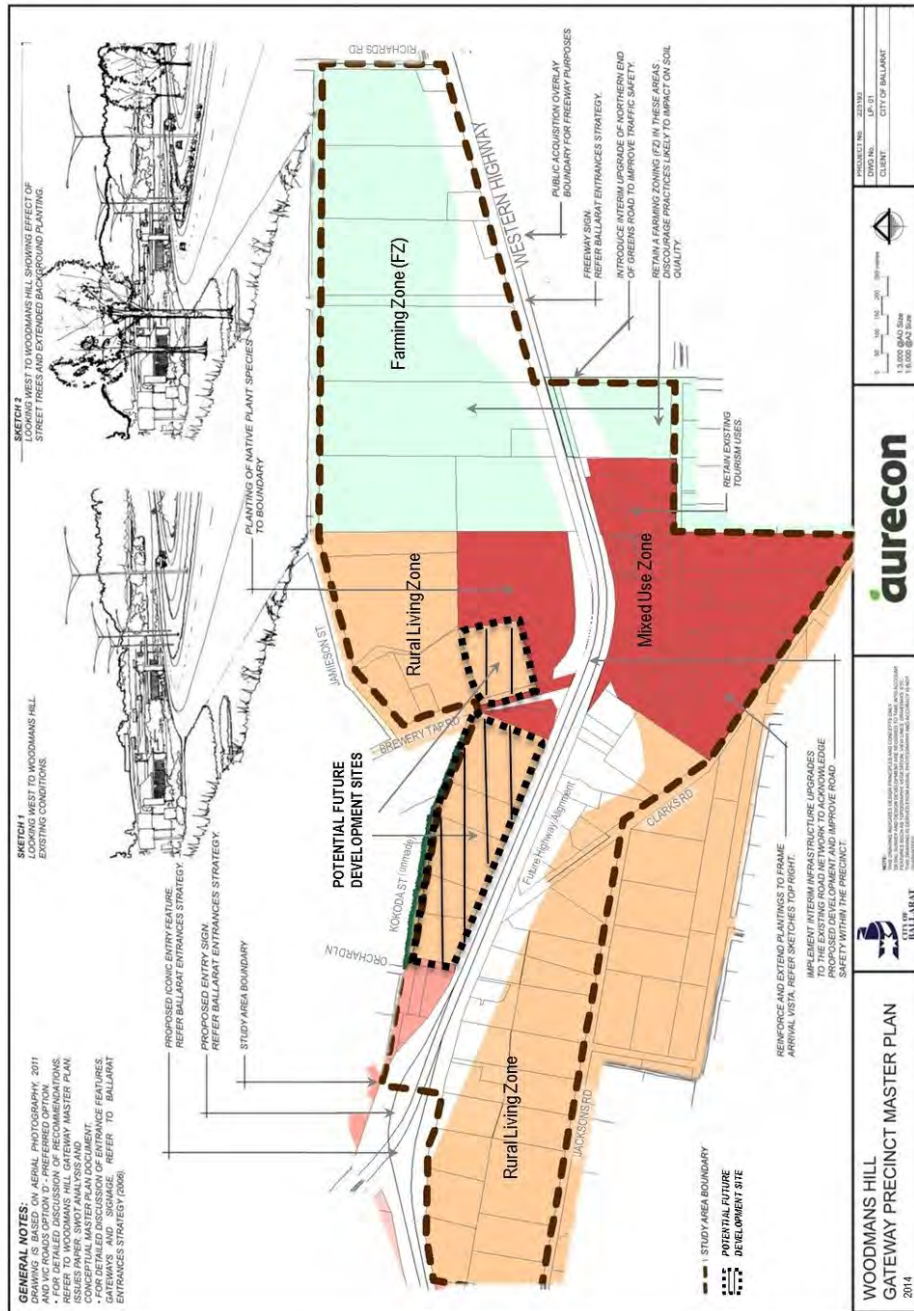
- Demonstrate that safe and appropriate access is provided, consistent with the Woodmans Hill Gateway Precinct Master Plan (January 2015).

Reference document

Woodmans Hill Gateway Precinct Master Plan (January 2015).

BALLARAT PLANNING SCHEME

Woodmans Hill Gateway Precinct Master Plan



BALLARAT PLANNING SCHEME**21.09-5**14/11/2023
C235ball**Miners Rest**

The Miners Rest township is located to the north of Ballarat, separated from the main urban area by the Western Freeway. Miners Rest is characterised by the original township area located to the north of Cummins Road and the new residential estates located south of Cummins Road towards the Western Freeway. The area has significant constraints on development such as flood prone land and airport flight paths.

Implementation strategies**Land use and development strategies**

Support future infill residential development that respects the existing township character of Miners Rest North and Miners Rest South to suit lifestyle choice and assist ageing in place.

Support higher density residential, commercial, retail, service and community uses in the existing mixed use town centre precinct.

Protect Aboriginal Cultural Heritage and post-European contact heritage significance.

Protect rural land for agricultural, farming and equine related activity.

Protect the long-term operation of the Ballarat Airport.

Discourage the expansion of the Miners Rest Quarry to the east.

Support the continued operation of the equine industry / Dowling Forest Equine Precinct and development of associated businesses.

Support the growth of the Miners Rest Primary School through relocation and / or redevelopment.

Support the development of a sports facilities hub.

Support a direct pedestrian access / link between the quarry site and Creek Street / Miners Rest centre, as part of any potential future development, subject to consideration of potential engineering constraints.

Open space strategies

Support the provision of public open space, particularly on land adjacent to the Burrumbeet Creek that would otherwise not be developed due to environmental constraints.

Encourage landscape planting, including boulevard tree planting along main streets.

Provide pedestrian, cycling and horse-riding links through or around the town, including in new subdivisions.

Environmental Strategies

Protect the environmental and biodiversity values of Burrumbeet Creek.

Policy document

- *Miners Rest Township Plan* (City of Ballarat, November 2019)

BALLARAT PLANNING SCHEME

Miners Rest Framework Plan



Further strategic work

Undertake additional historical analysis of pre and post European contact sites to better understand the cultural significance and history of development of Miners Rest and determine if any formal heritage protection is warranted.

Develop a creek rehabilitation and environmental protection and management program in collaboration with the community, landowners, Wadawurrung Traditional Owners Aboriginal Corporation, DELWP and Glenelg Hopkins Catchment Management Authority.

Work in partnership with Glenelg Hopkins Catchment Management Authority to update flood mapping for the Burrumbeet floodplain around Miners Rest.

Prioritise opportunities to create an open space corridor and facilitate a public access shared trail along the length of Burrumbeet Creek.

Undertake a rural landscape assessment to determine if any key rural / landscape views within and surrounding Miners Rest require formal protection.

Support the upgrade of the Miners Rest Primary School facility to maximise the provision of off-street parking to meet the school's needs.

Investigate the potential for the development of the quarry site for alternative uses, subject to further analysis including an aircraft noise study, bushfire risk assessment and land contamination assessment.

Undertake a strategic review of planning controls in the area between the Northern Growth Area and the equine industry / Dowling Forest Equine Precinct, identified in Figure 1 'Land subject to further strategic review' of the Miners Rest Township Plan, including further analysis of aircraft noise, bushfire risk and land contamination.

Develop a framework plan and design guidelines for the town centre, including the land zoned Mixed Use and General Residential.

BALLARAT PLANNING SCHEME

Develop a strategic flood mitigation plan, and associated implementation plan, with consideration of an integrated solution that includes creek rehabilitation, open space and beautification.

Undertake a review of the planning controls surrounding Dowling Forest racecourse, including Special Use Zone - Schedule 13 (SUZ13) and Farming Zone A & B.

Ensure that airport planning controls are considered to protect and safeguard the long-term operation of the airport.

BALLARAT PLANNING SCHEME

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SCHEDULE TO CLAUSE 72.08 BACKGROUND DOCUMENTS

1.0

-/-/-/-/
Proposed C254ball

Background documents

Name of background document	Amendment number - clause reference
Ballarat Housing Strategy (2024)	C254ball
Ballarat Growth Areas Framework Plan (2024)	C254ball

BALLARAT PLANNING SCHEME

21.01 MUNICIPAL OVERVIEW

~~22/12/2016~~
~~G494 Proposed C254ball~~

21.01-1 Context

~~22/12/2016~~
~~G494 Proposed C254ball~~

Ballarat is a city of communities, home to many diverse peoples, each contributing their own culture, ideas and aspirations to Ballarat's identity.

Ballarat's natural heritage was formed over 500 million years ago while its rich cultural heritage began over 40,000 years ago, extending over parts of the Wadawurrung and Dja Dja Wurrung peoples' country which is the ancestral land of modern indigenous people who remain connected to these places today. Ballarat's urban heritage and diverse community is much more recent. The city was born out of the hunt for gold and one of the most important international mass migrations of people in the 19th century: the 1850's gold rushes.

Today Ballarat exemplifies the natural, cultural and historical values of the Central Victorian Goldfields region. Its extensive and highly intact built heritage, landmark buildings, parks, lakes and gardens, statues and cultural and public institutions are a lasting legacy of this golden era.

As a regional centre, Ballarat's service catchment extends beyond its borders and encompasses major retail, health and education facilities. People from surrounding rural areas, particularly to the west, are attracted to Ballarat for employment and education purposes as well as its significant history, character and lifestyle. Ballarat also attracts many people from the Melbourne metropolitan area, including families seeking more affordable housing with good access to employment opportunities and better lifestyle choices. People also come to Ballarat as visitors and Ballarat is a key tourism location in the distinctive Central Victorian Goldfields region.

Ballarat encompasses an urban core, outlying townships and a large agricultural base across approximately 740 square km. The population in ~~2014~~2021 was approximately ~~100,000~~115,000 people. It is forecast to grow to approximately ~~160,000 by 2040~~170,000 by 2041 making Ballarat one of Australia's fastest growing inland centres. Ballarat is also a significant source of jobs for regional Victoria.

There are shared boundaries, connections and relationships with Hepburn Shire to the north, Moorabool Shire to the east, Golden Plains Shire to the south, and Pyrenees Shire to the west. It also has a strong relationship to the Central Victorian Goldfields region due to its shared history and character. Ballarat's relative proximity to Melbourne, being just 110 kilometres to the west of the Capital, makes it a crucial part of the Victorian growth story.

21.01-2 Community vision

~~22/12/2016~~
~~G494 Proposed C254ball~~

The input from Ballarat's biggest-ever community conversation, 'Ballarat Imagine', led to the development of *Our Vision for 2040* which outlines what the community values about Ballarat now, the collective hopes for Ballarat's future (the vision), and how it is going to achieve the vision (the key principles). The community's vision guides the *Ballarat Strategy* (2015) which in turn ~~is the basis to~~ informs sections of this MSS. The Ballarat Strategy ~~is fundamental to, and more recent work in the Ballarat Housing Strategy (2024) and Growth Areas Framework Plan (2024), are fundamental pieces of work that inform~~ Council's approach to managing future change and guiding new growth in Ballarat ~~to the year 2041~~.

By 2041, Ballarat will be:

~~■ 'Our Vision for 2040' outlines that Ballarat will be:~~

- A diverse and successful community that has built its future on its beautiful city and great lifestyle.
- A proud community that has retained its unique sense of identity.
- A desirable city that we love to live and work in, with excellent facilities and services.

BALLARAT PLANNING SCHEME

- A friendly city where the sense of community is a daily cornerstone of our life.
- A healthy and safe community that supports and values its residents.

21.01-3 Land use vision

^{22/12/2016}
^{C194} Proposed C254ball The *Ballarat Housing Strategy (2015)* applies the community values and key principles as a 2024) sets out the long-term strategic direction for Ballarat towards 2040/2041. It outlines the shared community vision for a greener, more vibrant and connected Ballarat, embracing the following concepts:

The ~~10-Minute~~ Compact City

The ~~'10 Minute City'~~ concept in Ballarat reflects community aspirations to maintain existing levels of access to destinations and services even when the city grows over time. Compact City is a city that is developed in areas that have access to existing services, infrastructure and sustainable, accessible transport networks, and with varying levels of density (change areas).- It supports the ability for all residents of Ballarat to be able to do more of their day to day shopping, accessing of services and business in local neighbourhood centres. It also promotes the improvement of walking and cycling connections in local neighbourhoods so residents find it easier to move around and reduce the need to use the car for short-journeys. It will help guide growth and change in Ballarat so in 2040 it is a place which has:

- Compact city form.
- Complete and accessible local neighbourhoods.
- Land uses and precincts supporting jobs, productivity and efficiency.
- High quality local connections.

The City in the Landscape

The 'City in the Landscape' concept reflects Ballarat's enviable physical, cultural and historical location within its landscape. It will help guide growth and change in Ballarat so in 2040/2041 it is a place which:

- Supports urban areas linked and embedded with natural values and biodiversity.
- Manages change in ~~its Historic Urban Landscape~~ a city rich in history and cultural diversity.
- Undertakes integrated local planning as vital for local communities.
- Builds upon the mixture of urban and rural areas, which contribute to Ballarat's identity.
- Recognises and responds to a changing climate, and is resilient to environmental impacts and risks.

21.01-4 Key Issues

^{22/06/2023}
^{G296ball} Proposed C254ball As an outcome of the above profile and vision, Clauses 21.02 to 21.09 provides strategic directions for the following key issues:

Settlement and Housing

- Accommodating a projected population of ~~about 160,000~~ approximately 170,000 people by 2040/2041.
- Ensuring a sufficient long-term (minimum 15 years) supply of land for residential development.
- Maintaining a compact settlement form ~~as part of Ballarat's '10 Minute City'~~.
- Encouraging significant higher density residential growth in the CBD and Urban Renewal Areas.
- Encouraging greater densities along key transport corridors. Facilitating higher density development in urban renewal areas.

BALLARAT PLANNING SCHEME

- ~~Facilitating urban renewal in areas with potential for higher density development~~ Providing a diversity of housing that responds to changing community needs and household types and sizes.
- Identifying ~~and protecting long-term growth opportunities~~ opportunities and planning for social and affordable housing.
- Providing a greater proportion of infill housing in established residential and substantial change areas.
- Recognising community values and infrastructure limitations unique to townships.
- ~~Encouraging a variety of housing opportunities to respond to diverse community needs and aspirations for housing.~~
- Providing quality open space as essential for community health.
- Ensuring that new development incorporates ESD (Environmentally Sustainable Design) principles.

Environmental and Landscape Values

- Protecting and creating new connections between remnant vegetation and areas of high biodiversity value.
- Greening the urban area as an urban forest to improve biodiversity, manage heat, improve amenity and enhance Ballarat's rural identity.
- Protecting and enhancing the distinctive sense of place, cultural identity and the natural, cultural and historic landscape across the Ballarat municipality.

Environmental Resilience

- Minimising greenhouse gas emissions.
- Ensuring new development adopts best practice approaches to minimising energy, resource and water use, reuse and recycling.
- Protecting the community from the economic, social and environmental risks associated with flooding.
- Discouraging residential development in areas prone to bushfire risk.

Natural Resource Management

- Protecting productive agricultural land.
- Preventing ad-hoc and inappropriate use of productive agricultural land for non-agricultural uses, particularly lifestyle housing.
- Avoiding decision-making which creates long-term conflict with farming operations.
- Maintaining natural environmental processes within water catchments.
- Minimising the impacts of development on water catchments.
- Managing water demand including the impact of development and population growth.
- Managing the impact of climate change and below average rainfall.

Built Form, Heritage and Design

- Improving the presentation of built areas and entrances.
- Improving the design, siting and landscaping of development.
- Minimising the impact of advertising signage on visual amenity.
- Managing change as part of a ~~historic urban landscape~~ city rich in cultural diversity and heritage assets.

BALLARAT PLANNING SCHEME

- Protecting significant areas and features of the built and natural environment.
- Ensuring infill development enhances the cultural significance and ~~character of historic~~ identified heritage areas. |

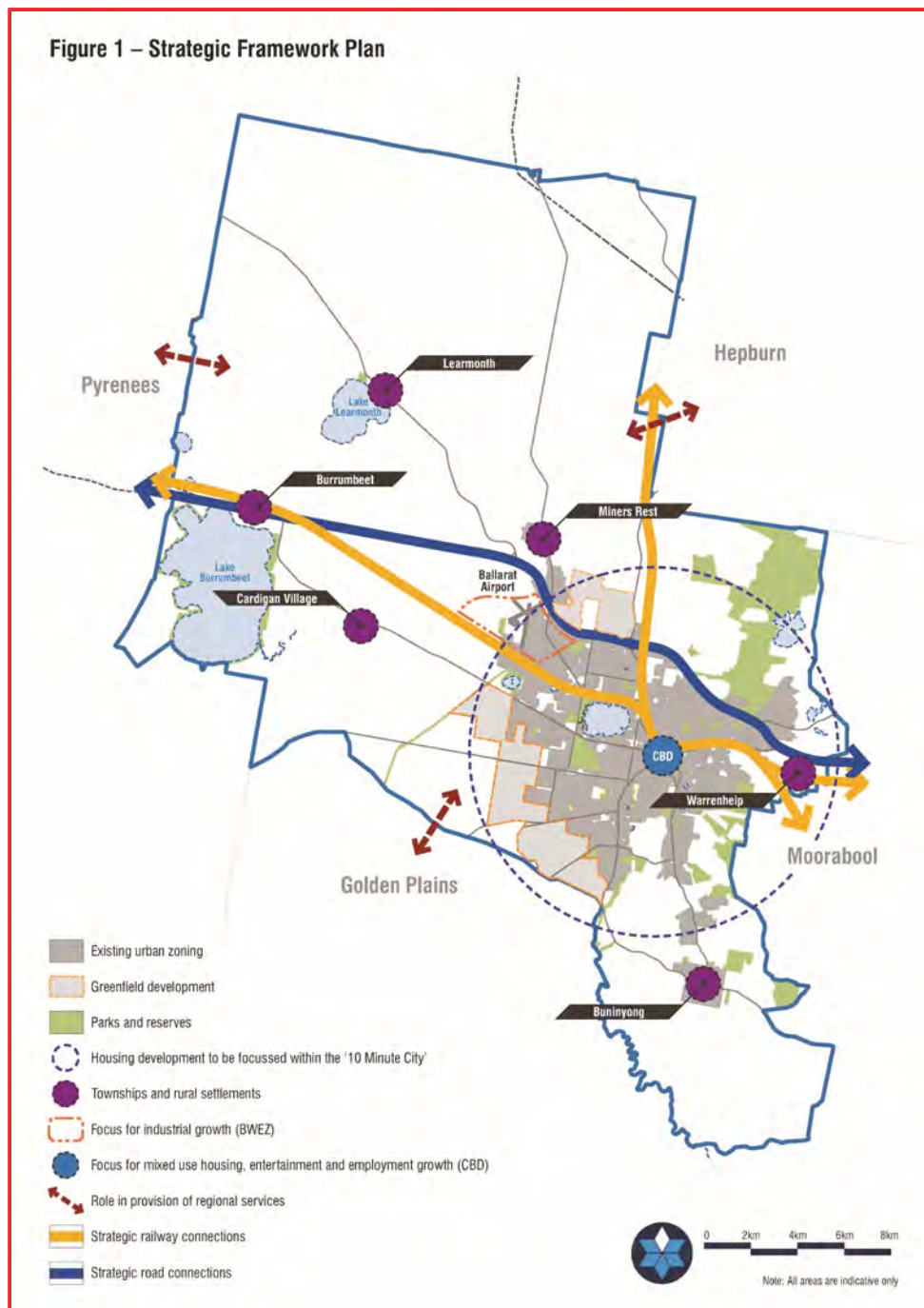
Economic Development

- Planning for sufficient land supply for economic growth.
- Supporting the agglomeration of key businesses and industries.
- Enabling innovation in key businesses and industries.
- ~~Supporting the~~ Enhancing the role of the CBD as the ~~primary~~ principal activity centre in Ballarat. |
- Providing sufficient land for industrial growth and expansion.
- Encouraging a cohesive built form and high quality landscaping in industrial areas.
- Ensuring industrial precincts are protected from intrusion by inappropriate land uses which put pressure on lawful existing industrial activities.
- Supporting growth in the tourism industry in Ballarat.
- Ensuring the urban realm contributes to a high quality visitor experience.
- Supporting growth in the racing industry in Ballarat.
- Minimising long-term impacts on the racing industry from new development.
- Minimising the potential harms associated with gaming.
- Identifying and encouraging the redevelopment of urban renewal precincts.

Transport and Infrastructure

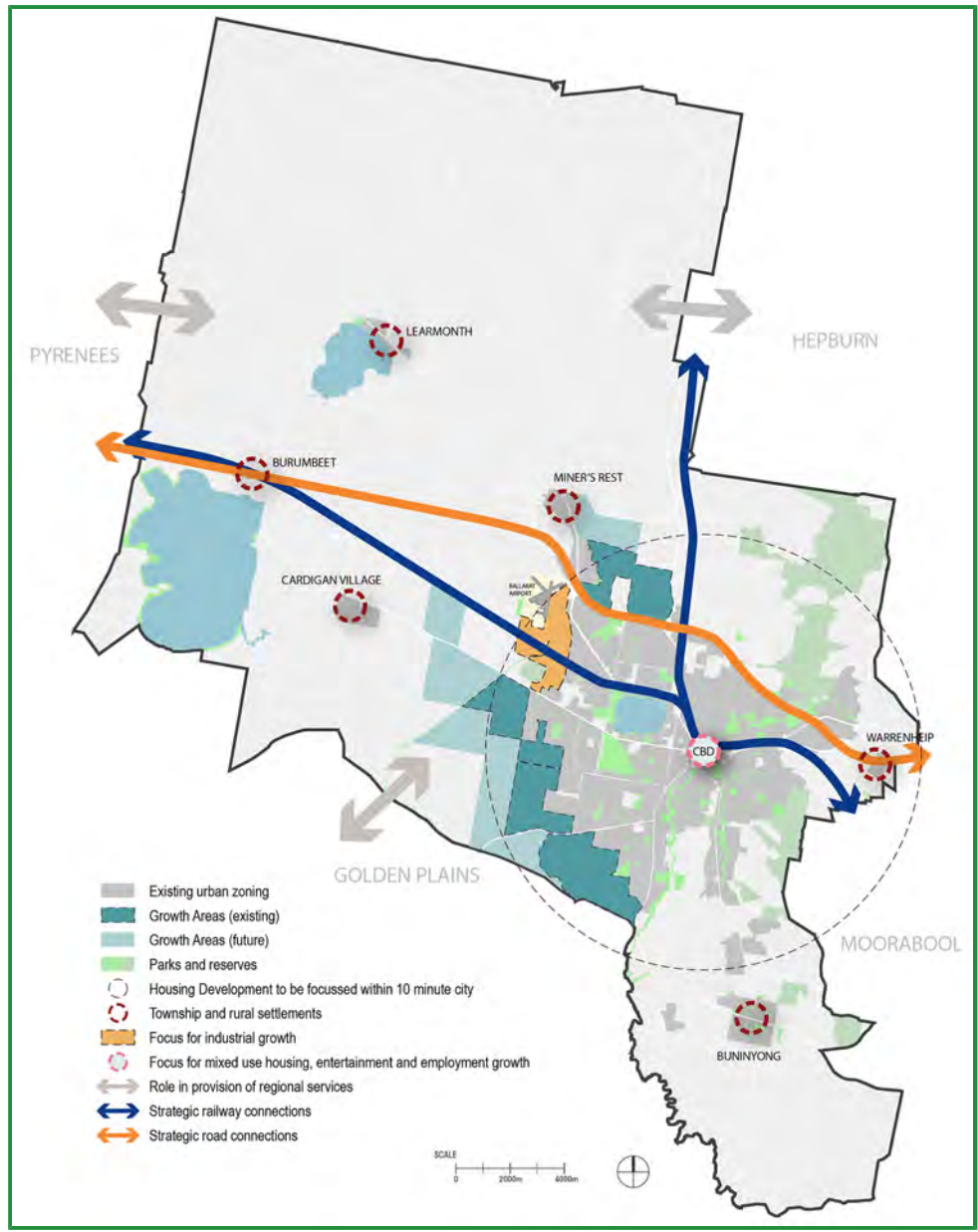
- Transitioning Ballarat towards a more sustainable transport system.
- Supporting a less car dependent community.
- Improving the connectivity and quality of walking and cycling networks.
- Improving the efficiency of moving freight and people.
- Ensuring infrastructure provision keeps pace with population and housing growth.

BALLARAT PLANNING SCHEME



Strategic Framework Plan

BALLARAT PLANNING SCHEME



BALLARAT PLANNING SCHEME

21.02 SETTLEMENT AND HOUSING

~~22/12/2016~~
~~6494~~ Proposed C254ball This clause provides local content to support Clause 11 (Settlement) and Clause 16 (Housing) of the State Planning Policy Framework.

~~Clause 21.09 (Local Areas) provides local content for individual suburbs and towns.~~

21.02-1 Urban Housing growth

~~22/12/2016~~
~~6494~~ Proposed C254ball *The City of Ballarat will contain a variety of dwelling types, designs and lot sizes which meet the needs of residents. High quality contemporary housing is embraced that responds to our heritage and neighbourhood character. More people will have access to services and employment without using a car and affordable housing allocated in the most accessible areas for people that need them most. New homes will be built in areas that do not compromise our native flora and fauna.*

Ballarat is forecast to grow significantly towards 170,000 people by 2041, an increase of approximately 55,000 people that will be accommodated in approximately 29,000 new dwellings.

~~Ballarat is forecast to grow significantly towards 160,000 people by 2040. Most~~ A significant proportion of this increased population is planned to be accommodated through infill development in established areas, convenience living close to public transport, residential areas, urban renewal precincts, the Ballarat CBD and in properly planned greenfield growth areas such as Ballarat West. ~~In areas dislocated from good public transport access, and outside these designated precincts, change should be incremental and to an appropriate scale~~ well-planned and sequenced Growth Areas.

Maintaining a compact, efficient and productive settlement form is crucial to Ballarat's long-term future as a 10 Minute City sustainable, accessible and liveable city. Specific guidance is provided on change in the following areas (as identified in Figure 2 on the Housing Framework Plan):

- ~~Areas of convenience living.~~
- ~~Urban renewal precincts.~~
 - ~~Strategic investigation~~ Growth areas.
 - ~~Prioritised completion of the Ballarat West Growth Area~~ Established residential areas.
 - Minimal change
 - Incremental change
 - ~~Longer-term greenfield investigation~~ Substantial change areas.
 - Urban renewal precincts
 - The Ballarat CBD
- Townships.
- ~~Ongoing change areas.~~

Objective 1

To ~~support a pattern of growth which reinforces the '10 Minute City'~~ reinforce a compact city form.

Strategies

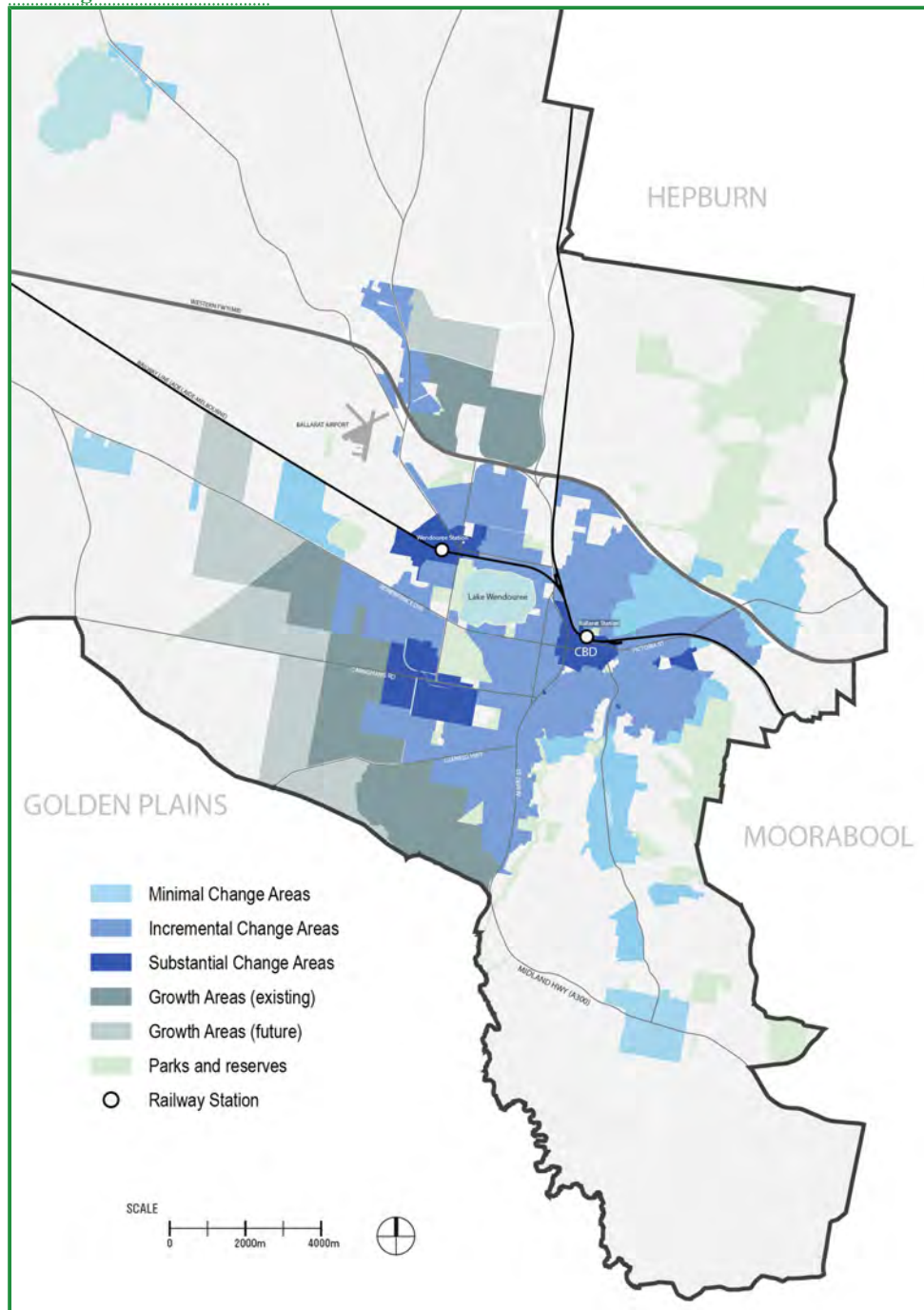
- 1.1 Encourage ~~significant~~ design excellence in new mixed use development in the CBD which supports the knowledge sector and ~~retail employment opportunities, more inner city living and street level and out of hours activation~~ education, commercial and retail opportunities, and higher density residential development.
- 1.2 ~~Facilitate~~ Encourage higher density infill housing in ~~areas of convenience living, substantial change areas~~ (urban renewal precincts and the Ballarat CBD).

BALLARAT PLANNING SCHEME

- 1.3 ~~Facilitate laneway housing where laneways already exist in the urban fabric of residential~~ Provide increased densities of housing in areas identified as incremental and substantial change areas.
- 1.4 Limit the outward expansion of Ballarat's urban area and ensure that Growth Areas are well serviced by accessible, frequent public transport.
- ~~1.4.5 Discourage increased development density in fringe areas, particularly those that are more than walking distance from activity centres~~ dwelling density in minimal change areas.

BALLARAT PLANNING SCHEME

Housing Framework Plan



21.02-2 **Areas of convenience living Growth areas**

22/12/2016
6194 Proposed C254ball The Ballarat West, Alfredton West and Northern Growth Areas are the current areas that provide for greenfield housing development in the short to medium term.

Areas of Convenience Living (as identified in Figure 2 - Housing Framework Plan) are areas of housing close to public transport and services where growth in density and diversity of housing supports the long-term potential for a rapid-transit style public transport network in Ballarat. More

BALLARAT PLANNING SCHEME

residential development along defined corridors is a pre-requisite to viable high frequency public transport services. Ballarat’s future growth areas include the Western and North Western Growth areas and are subject to future Precinct Structure Plan preparation as per the *City of Ballarat Growth Areas Framework Plan (2024)*.

Ballarat’s growth areas should be sustainable, self-sufficient communities that support integrated transport, physical and community infrastructure, activity centres and sustainable initiatives.

Objective 2

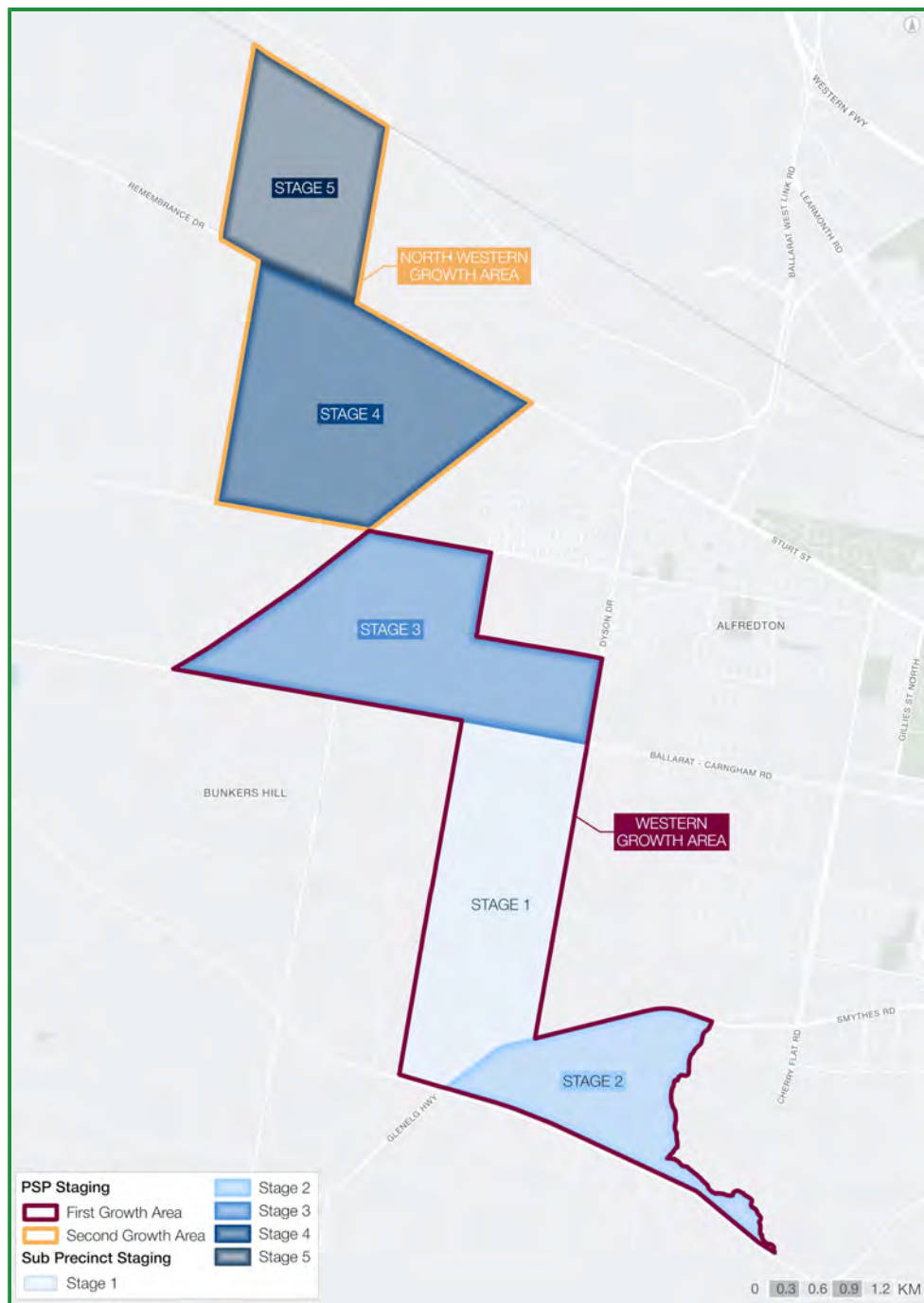
To establish a sufficient number of residents in convenience living corridors to support a high frequency public transport network ensure that Ballarat’s future growth areas are delivered in a logical and sequential manner to support orderly planning - ...

Strategies

2.1	Manage the release of growth areas to ensure that infrastructure, services and facilities are provided in a timely and efficient way.
2.2	Ensure development proceeds in a logical, sequenced manner that maximises the efficient delivery and use of development and community infrastructure.
2.3	Ensure that planning for future growth areas has regard to the Ballarat Growth Areas Framework Plan (2024).
2.4	Ensure that when subdivision of land occurs, and no development is proposed, lots for diverse housing are to be nominated on a Housing Diversity Plan and secured through a suitable mechanism such as Section 173 Agreement on title or a Memorandum of Common Provisions before a Statement of Compliance is issued for the relevant stage of subdivision.

BALLARAT PLANNING SCHEME

Development Staging Plan



BALLARAT PLANNING SCHEME

Objective 3

To ensure that Ballarat’s future growth areas are compact, accessible communities that are well-designed, well-serviced and sustainable whilst creating a unique sense of place, character and identity.

Strategies

~~2-13.1~~ Support residential development within 400 metres of public transport services with larger scale and higher density infill located within convenience living corridors. Develop a transport network that enables road, walking, cycling and public transport options that connect the growth areas to existing areas within Ballarat.

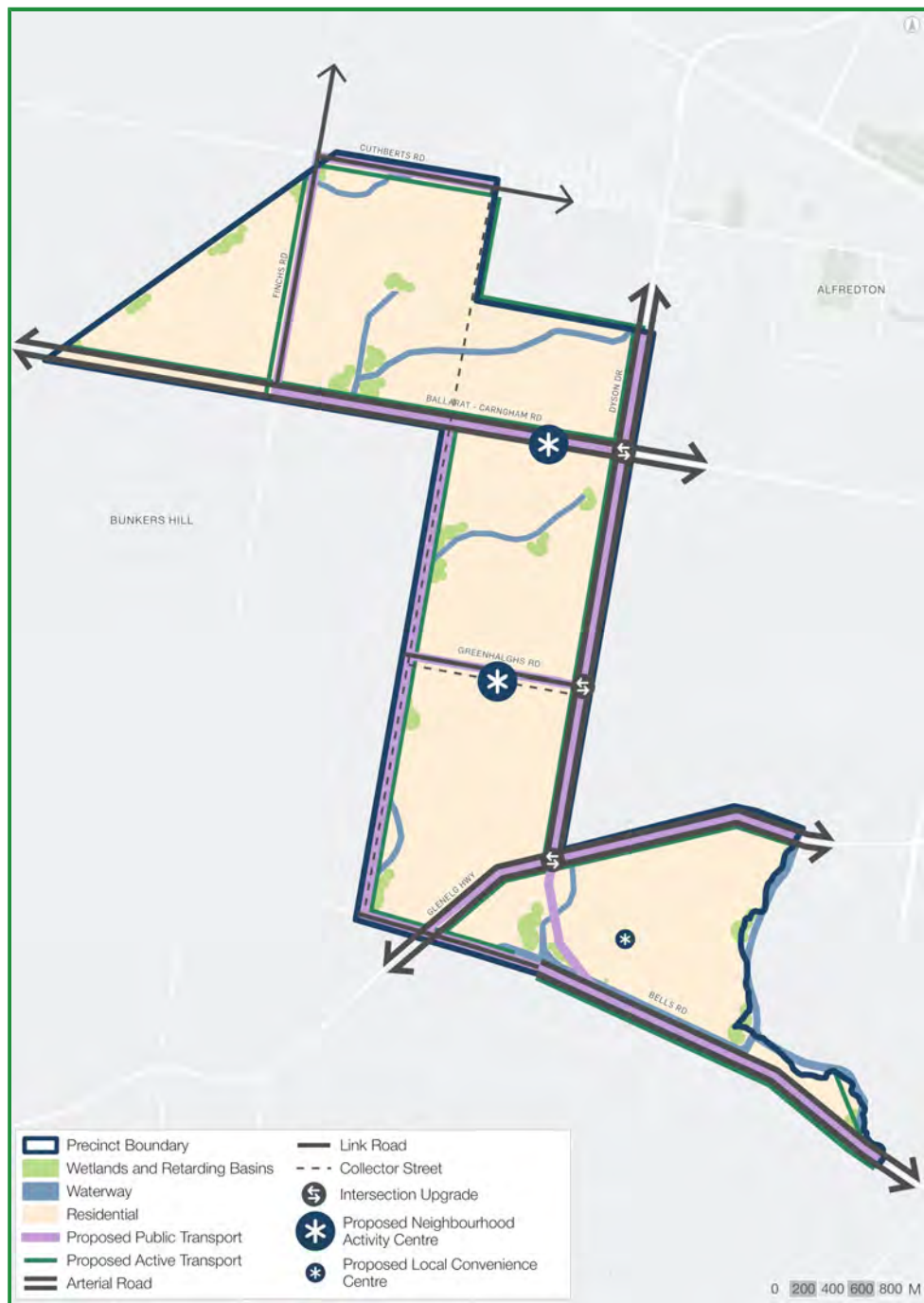
3.2	Develop an activity centre network that provides for the needs of residents and contributes to the existing activity centre network of Ballarat.
3.3	Encourage new development in growth areas to deliver a net zero future.
3.4	Ensure that development follows the staging set out within PSPs to ensure the efficient and orderly provision of infrastructure and services.
3.5	Provide an average density of 20 dwellings per hectare unless site specific constraints require a lower density.
3.6	Encourage increased densities in higher amenity locations supported by features such as activity centres, public transport, community facilities and open space.

~~2-23.7~~ Facilitate higher intensity and priority residential infill development within convenience living areas which are within 200m from an identified network of high frequency public transport corridors. Provide a range of dwelling types and sizes (including 1, 2 and 3 bedroom houses and townhouses) for subdivisions and/or development of 10 or more lots/dwellings.

~~2-33.8~~ Ensure appropriate design responses within areas of convenience living that are affected by heritage and design controls. Provide a mix of housing options including social and affordable housing.

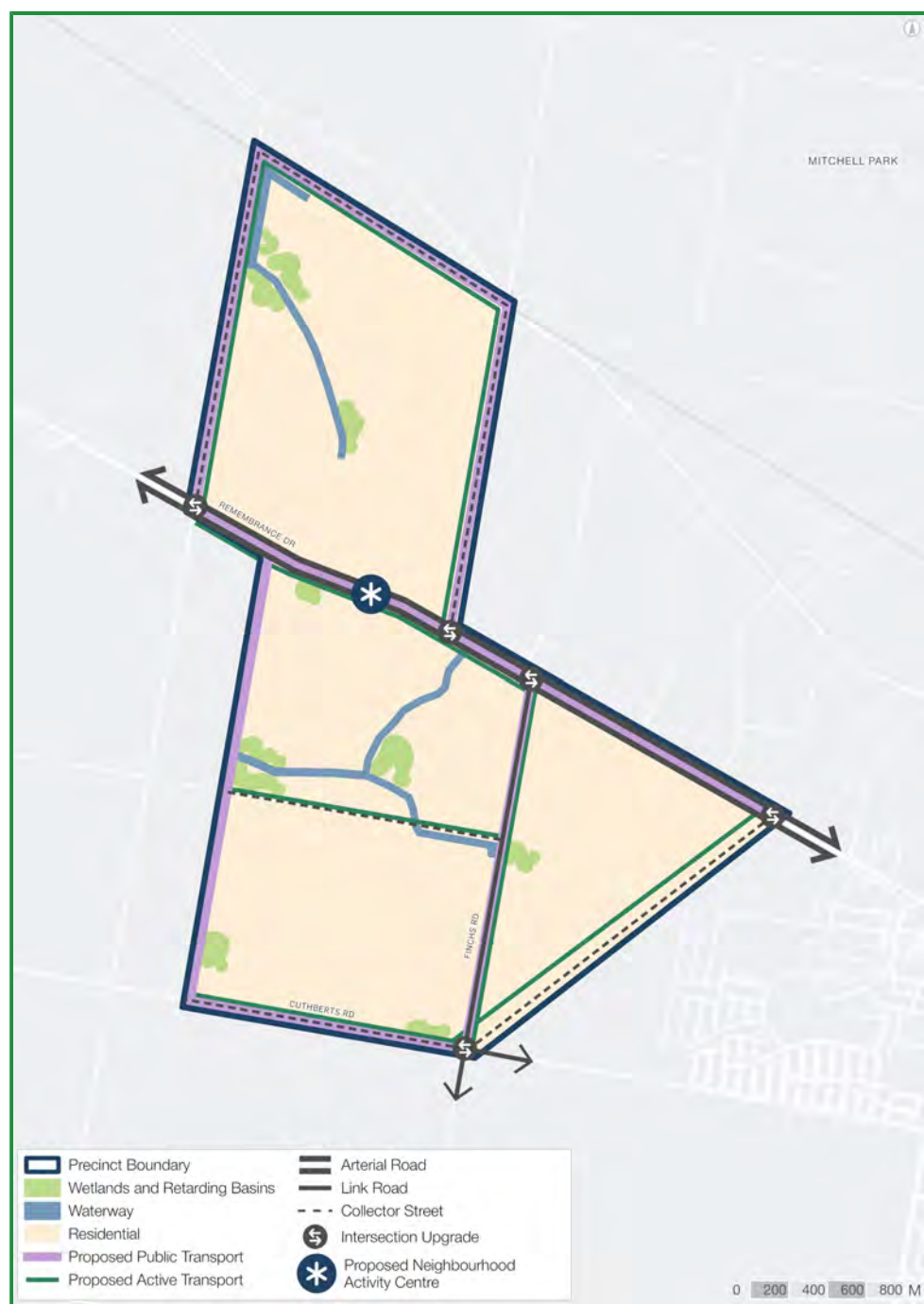
BALLARAT PLANNING SCHEME

Future Urban Structure (Western Growth Area)



BALLARAT PLANNING SCHEME

Future Urban Structure (North Western Growth Area)



21.02-3 Urban renewal precincts **Established residential areas**

Urban renewal precincts are sites or areas with significant potential for large-scale renewal and redevelopment. Further investigation and feasibility work is required to determine the extent of potential for change within each precinct. Structure, framework or master plans will be prepared for these precincts and incorporated into the planning scheme where appropriate to help facilitate development. The following are urban renewal precincts (as identified in Figure 2 - Infill)

BALLARAT PLANNING SCHEME

development is encouraged in established residential areas at a scale and density appropriate to the designated change category for that area (see Housing Framework Plan) and the preferred neighbourhood character.

Dwelling density in established areas should be relative to walking distances to public transport, activity centres, employment and taking into account the preferred neighbourhood character of the area.

Minimal Change Areas have limited capacity to accommodate future residential development and growth (increased density) based on a number of factors, including:

- **Scott Parade Precinct (inner city mixed use):**
The area is prone to bushfire (risk);
- **Creswick Road Precinct (CBD fringe mixed use):**
- **Selkirk Precinct (large-scale land use change opportunities whether integrated with or independently of the Eureka Stadium Sporting Precinct):**
The area is not accessible by a reasonably walkable distance to the nearest public transport stop or station; and
- **Wendouree Village:**
- **Ballarat Saleyards Site and Light Industrial Precinct (commercial / light industrial redevelopment):**
- **Delacombe Precinct (built form renewal in response to development of Glenelg Highway Major Activity Centre in Ballarat West growth Area):**
The area is not within walking distance of an identified activity centre.

In addition, there are some strategically important areas where the future use of the land is expected to change over the coming decades, but the final form is unclear. Incremental Change Areas encompass residential areas that will allow for increased housing consistent with the preferred neighbourhood character of the area and site-specific constraints. These areas require significant feasibility assessments to understand their potential future use are accessible by the public transport network.

Objective 4

To facilitate redevelopment of urban renewal precincts, encourage minimal change in areas which have limited capacity to accommodate future residential development and growth.

Strategies

4.1	Facilitate minimal change in areas that are prone to bushfire risk and areas that are not highly accessible (within an acceptable walking distance) of the public transport network.
4.2	Discourage increased housing density in locations that are bushfire prone and/or do not have plans for future infrastructure provision, including the public transport network, through a Precinct Structure Plan (PSP) and the Growth Areas Framework Plan (2024).

Objective 5

To facilitate incremental change in established residential areas, identified as such on the Housing Framework Plan, at a scale and dwelling density appropriate to the area, and in accordance with the preferred neighbourhood character

3-5.1 Facilitate land consolidation, master planning and other mechanisms to support redevelopment potential of urban renewal precincts. Encourage development at increased densities that responds to the existing neighbourhood character within established residential areas.

5.2	Provide medium density housing that contributes to neighbourhood character and responds to site context
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BALLARAT PLANNING SCHEME

~~3-25.3 Discourage new development with adverse amenity potential in urban renewal precincts which would compromise the long term potential for mixed use development~~ Ensure that development responds the heritage character and values of the area.

21.02-4 Greenfield investigation areas Substantial Change Areas

~~22/06/2023 Proposed C254ball~~ Substantial Change areas will provide for housing growth with increased densities and housing diversity in areas with high accessibility to public transport and services. This includes Urban Renewal Precincts and the Ballarat CBD.

~~The Ballarat West Growth Area is the primary greenfield development area for Ballarat. The Northern Growth Area provides for greenfield development in the short to medium term. Medium to long-term greenfield investigation areas (as identified in Figure 2 – Housing Framework Plan) are subject to more detailed strategic assessment and planning. Identification as an investigation area does not necessarily indicate strategic support for land use change potential. CBD will undergo urban design analysis and structure planning to identify and determine locations for more intense development whilst respecting and conserving the historic character of the buildings and streetscapes.~~

The following Urban Renewal Precincts are identified as Substantial Change Areas:

- Lal Lal Street Precinct
- 313 and 317 Skipton Street, Ballarat Central
- Wendouree Station Precinct
- Latrobe Street Saleyards Precinct
- Ballarat East Precinct (Eureka and Rodier Street)

Objective 4 Objective 6

~~To ensure that greenfield development is connected to the existing urban area~~ encourage substantial change in areas with high levels of accessibility to transport, shops and services.

Strategies Strategies

6.1	Undertake urban design frameworks and structure plans to provide more detailed direction on the future land use and development direction of substantial change areas.
4-16.2	Discourage rezoning of additional greenfield land, which would compete with Ballarat West, until the market requires additional supply Encourage and facilitate higher density development that responds to site location and context, and the direction of any relevant structure plan (or similar strategic plan).
4-26.3	Ensure that future greenfield development is focused within roughly an 8km arc from the centre of Ballarat. Ensure that development responds to the heritage values of the location and area.
4-36.4	Avoid ad-hoc and unplanned greenfield development Provide housing diversity in new development including the provision of one, two and three-bedroom apartments and townhouses.
4-46.5	Discourage disconnected or ‘leap frog’ development. Identify and plan for social and affordable housing opportunities.
4-56.6	Minimise the impacts of development on Ballarat’s historic urban landscape, the environment and Ballarat’s natural resource base Encourage social and affordable housing provision through the ability to vary height limits in built form controls (such as the Design and Development Overlay or similar).
4-66.7	Ensure the need for buffers to protect major water and sewerage assets and treatment plants from encroachment by sensitive land uses is taken into account as part of any greenfield investigation Ensure that the Environmental Audit Overlay (EAO) is applied when rezoning land that would allow sensitive uses, in accordance with Ministerial Direction No. 1 - Potentially Contaminated Land.

BALLARAT PLANNING SCHEME

21.02-5

22/12/2016
E194

Ongoing change areas

Ongoing change areas (as identified in Figure 2 – Housing Framework Plan) are residential areas that are valued for their existing suburban character and housing supply. Infill development is encouraged at a scale appropriate to their relative distance to high frequency public transport corridors, activity centres, employment and taking into account the neighbourhood character. In fringe areas, overall density should provide an important transition between urban areas and rural, lifestyle or other low density non-urban uses.

Objective 5

To facilitate limited incremental growth in ongoing change areas at a scale and density appropriate to the area.

Strategies

5.1	Encourage development that is in keeping with local scale and development intensity within ongoing changes areas.
5.2	Ensure consideration of the interface of areas abutting the urban fringe with adjoining land.

21.02-65

22/06/2023
G236ball Proposed C254ball

Townships

The townships of Buninyong, Burrumbeet, Cardigan Village, Learmonth, Miners Rest and Warrenheip and their surrounding communities provide an attractive lifestyle choice in a rural setting. These townships are valued by residents for their character, community and lifestyle. They represent a different style of living to urban Ballarat and contribute to the diversity of lifestyle and choice in the municipality. Services and infrastructure are unique to each township, as are local values and expectations. Significant land use changes should respond to local township character, and long-term community aspirations.

In some small towns and surrounding rural living communities there is a need for a clear long-term vision. Natural, engineering and cultural considerations place limitations on new growth and development opportunities. Structure and community plans are needed to provide a framework for informing land use planning decisions, directing future growth and development opportunities that respond to community needs.

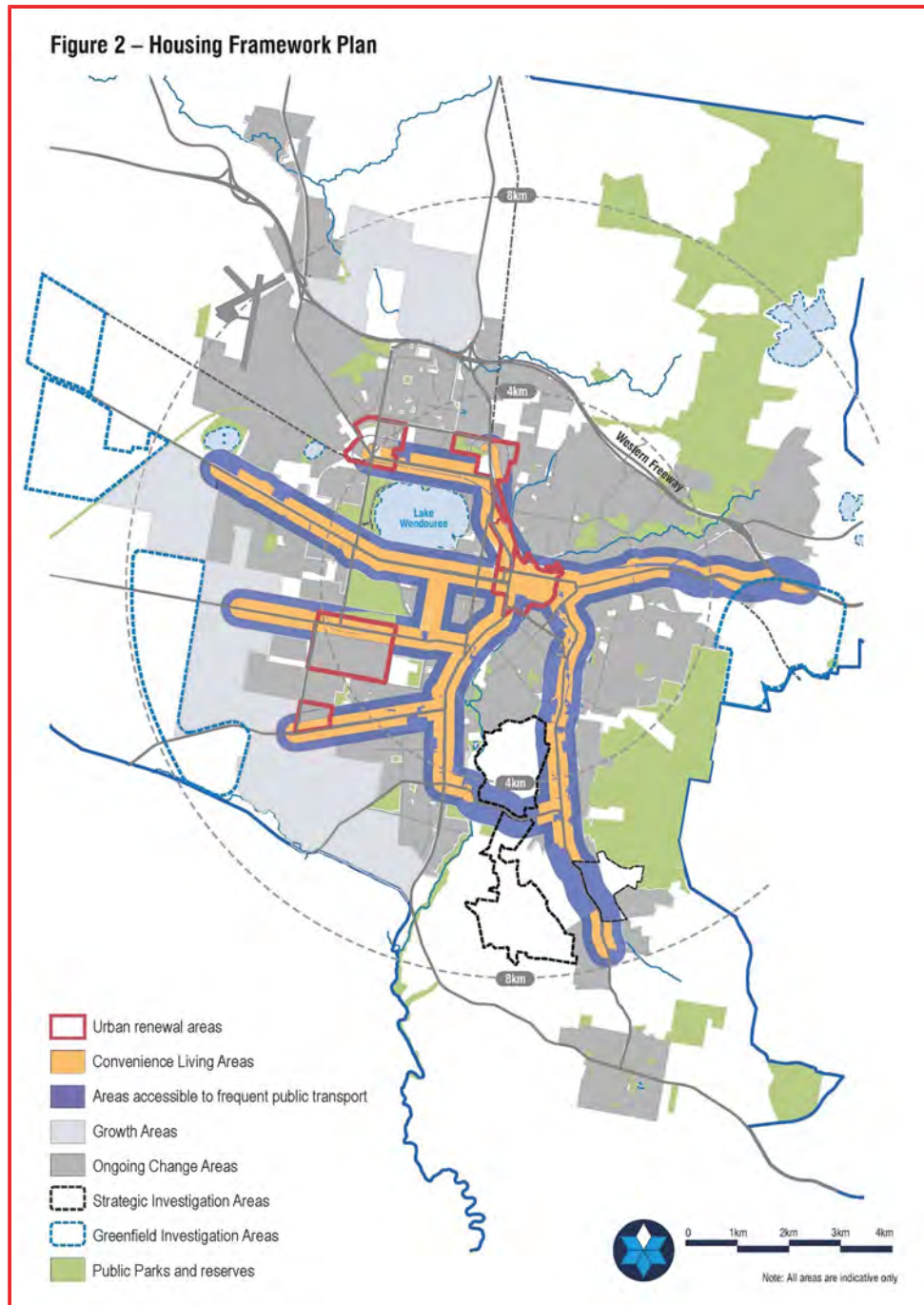
Objective 6

To facilitate development in township areas in accordance with local area planning and the long-term aspirations of the community.

Strategies

- 6.1 Reinforce the township atmosphere and valued local character when managing long-term change in township areas.
- 6.2 Maintain residential development to within existing township boundary.

BALLARAT PLANNING SCHEME



21.02-76 Housing diversity

22/12/2016
6/19/2016 Proposed C254ball

Social diversity is an important factor in the social health of the city. A diverse population needs a mixture of housing sizes and types. There is also a need to increase the proportion of **lower-cost accommodation**, **affordable housing**, social housing and housing for people of all abilities.

BALLARAT PLANNING SCHEME

Objective 7

To provide a range of ~~choices in housing design,~~ housing types in terms of design, size, location and density.

Strategies

- 7.1 Support a range of housing types and ~~options~~ sizes to meet diverse housing needs.
- 7.2 Encourage a range of lot sizes and densities within new residential ~~subdivisions~~ development in the growth areas.
- 7.3 Support the provision of well-designed and managed social housing, crisis accommodation, rooming houses and aged care facilities.
- 7.4 ~~Support the development of the Lake Federation Resort.~~ Encourage the provision of social and affordable housing in the growth areas and areas that will deliver increased dwelling density.

21.02-87**Open space**

~~22/12/2016
C194 Proposed C254ball~~

Publicly accessible open space in Ballarat includes Lake Wendouree, Victoria Park, Lake Learmonth and Mount Buninyong as well as smaller community open spaces. Each area contributes environmentally, as well as being important for the health and wellbeing of the community. Many significant natural environments, heritage and cultural features are preserved within the open space network.

Objective 8

To improve the provision and quality of open space.

Strategies

- 8.1 Ensure a variety of public open spaces meet the needs of the growing and ageing population for formal and informal outdoor recreation.
- 8.2 Encourage the development of linear reserves, habitat corridors and linkages between key open spaces and community destinations and along waterways, disused railway corridors or other crown land.
- 8.3 Reinforce the ~~'10 Minute~~ Compact City principle when planning for open space across the municipality.
- 8.4 Provide an integrated network of public open spaces in urban renewal and growth areas.
- 8.5 Protect and enhance the biodiversity and habitat value of parks, gardens, open spaces and waterways.
- 8.6 Ensure development and signage in and surrounding open space is appropriate to its context.

Objective 9

To improve the accessibility of open space.

Strategies

- 9.1 Encourage residential subdivision proposals to be linked with existing and proposed open space, pedestrian paths and bicycle trails.
- 9.2 Encourage residential development which abuts open space to provide appropriate frontage and passive surveillance to open space areas.
- 9.3 Encourage the co-location of open space with community infrastructure or facilities.
- 9.4 Encourage the design of open space areas to be inclusive for residents of all abilities, ages and interests.

21.02-9

~~14/11/2023
C235ball~~

Implementation

~~The strategies in relation to Settlement and Housing will be implemented through the planning scheme by:~~

Policy guidelines

- ~~Apply the Non-Residential Uses in Residential Areas Policy (Clause 22.01) to all applications for non-residential uses in the Neighbourhood Residential Zone, General Residential Zone and Residential Growth Zone.~~

BALLARAT PLANNING SCHEME

- Apply the Park Signage Policy (Clause 22.08) when deciding on applications for signage in the Public Park and Recreation Zone.
- Ensure that rezoning proposals include feasibility assessments, development master plans and development contributions arrangements to fund infrastructure.

Further strategic work

- Prepare structure plans for urban renewal areas, greenfield areas, infill corridors and convenience living corridors to facilitate greater population densities.
- Investigate the potential future uses of strategic investigation areas.
- Clarify the preferred long-term direction for greenfield investigation areas, following Ballarat West.
- Prepare local area plans or community plans for Buninyong, Burrumbeet, Cardigan Village, Learmonth and Warrenheip.
- Review the Mount Rowan area for the application of the Rural Activity Zone.
- Review the land between the urban areas of Mount Clear and Mount Helen, on the east side of the Geelong Road, to determine the most appropriate planning control.
- Develop an appropriate planning control that encourages the consolidation of sites within the Sebastopol North neighbourhood centre and prevents commercial development fronting Yarrowee Street.
- Investigate a policy to facilitate laneway housing where laneways already exist in the urban fabric of residential areas.
- Develop master plans for key areas of open space, including Lake Wendouree, Victoria Park, Yarrowee River and tributaries, high conservation roadsides, Sturt Street, Victoria Street, Eureka Stockade Reserve and Ballarat Botanical Gardens.
- Investigate appropriate means by which significant native vegetation and habitat on undeveloped land zoned Residential 1 can be protected.
- Prepare a Significant Landscape Overlay for the Canadian Valley corridor.
- Investigate application of the Rural Conservation Zone (RCZ) to areas of significant native grasslands and heavily vegetated privately owned land.
- Investigate the further application of the Environmental Significance Overlays Schedule 3, Water Catchment Areas (ESO3) to include all water catchment areas.

BALLARAT PLANNING SCHEME

21.08 TRANSPORT AND INFRASTRUCTURE

^{22/12/2016}
~~6494~~ Proposed C254ball This clause provides local content to support Clause 18 (Transport) and Clause 19 (Infrastructure) of the State Planning Policy Framework.

21.08-1 Integrated transport networks

^{22/12/2016}
~~6494~~ Proposed C254ball The layout, structure and connectivity of Ballarat is crucial to its economy, liveability, creativity and ecological footprint. A compact form with well connected and walkable centres has numerous benefits. An efficient road, rail and freight network is crucial to business competitiveness and prosperity.

Frequent High quality public transport corridors between centres enables a more effieieint efficient, accessible and sustainable municipality. An excellent walking network is necessary for the functioning of all the other modes. Cycling represents an affordable, enjoyable and efficient mode of transport for commuting or leisure, and has the potential for significant growth as a mainstream transport mode.

Objective 1

To integrate transport and urban growth.

Strategies

- 1.1 Support land use decisions which integrate and value add to major transport infrastructure.
- 1.2 Consolidate development with a mix of uses in areas of Convenience Living, along future high frequency bus corridors, around activity centres, in urban renewal areas and the CBD. Locate incremental and substantial housing growth areas in close proximity to the public transport network.
- 1.3 Ensure the development along the established boulevards of Victoria Street and Sturt Street maintains the prominence of their landscape character that development responds to the preferred neighbourhood character when increasing densities in sensitive areas.

Objective 2

To develop and maintain a comprehensive, safe, comfortable and convenient pedestrian network throughout the municipality.

Strategies

- 2.1 Give priority to pedestrian use in high volume pedestrian areas, particularly in the CBD and around activity centres.
- 2.2 Support the development of accessible pedestrian routes (including shared paths) within 10 minutes of major destinations, including the creation of mid-block and through development connections to enhance permeability.
- 2.3 Ensure pedestrian networks are accessible to all users, including those with wheelchairs and prams.

Objective 3

To develop a comprehensive, safe and convenient cycling network.

Strategies

- 3.1 Establish and encourage ongoing development of a user focussed, safe and legible Ballarat Bicycle Network to link all major parks and commercial centres in Ballarat.
- 3.2 Ensure new development provides bicycle access and high quality, safe and secure end of trip cycle facilities.

Objective 4

To ensure the major water and sewerage assets and treatment plants (including the Ballarat Water Reclamation Plant and Ballarat South Waste Water Treatment Plan) are protected from encroachment by sensitive uses.

BALLARAT PLANNING SCHEME

Strategies

- 4.1 Provide a buffer around the Ballarat Waste Water Reclamation Plant and Ballarat South Waste Water Treatment Plant to minimise encroachment by sensitive land uses.

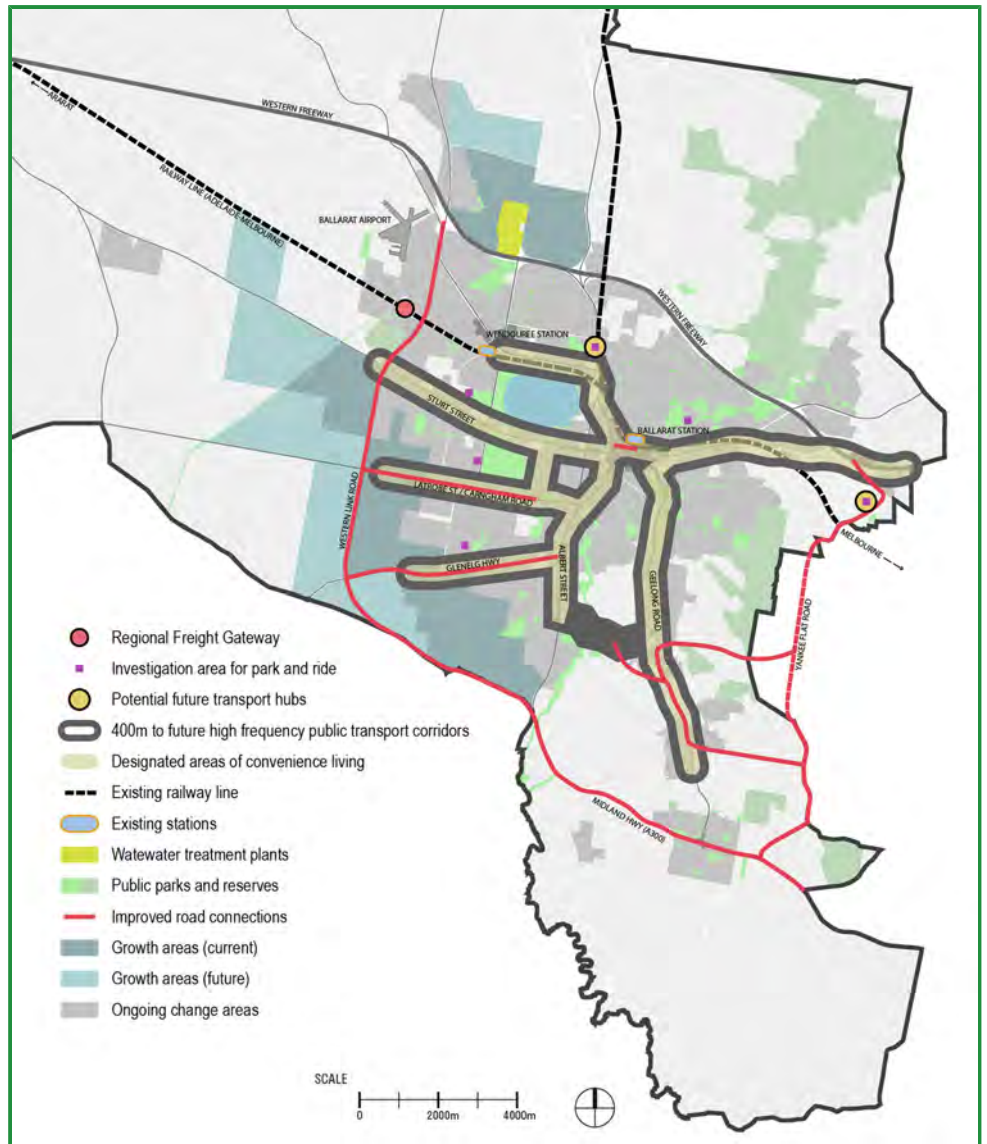
BALLARAT PLANNING SCHEME

Figure 7– Transport and Infrastructure Plan



Strategic Transport Plan

BALLARAT PLANNING SCHEME



BALLARAT PLANNING SCHEME**Objective 4**

To encourage more efficient use of the road network.

Strategies

- 4.1 Provide for the use and development of land abutting roads included in the Road Zone and the Ballarat Western Link road in a manner which limits detrimental impact on the efficient operation of the road.
- 4.2 Discourage commercial ribbon development from occurring along main roads.

Objective 5

To enhance Ballarat's role as a key inland freight and intermodal hub.

Strategies

- 5.1 Support the sustainable development and efficient 24-hour operation of the Ballarat West Employment Zone and Ballarat Intermodal Freight Hub.
- 5.2 Facilitate the completion of the Ballarat Western Link Road, and other improvements between Ballarat and Geelong.

21.08-2

22/12/2016
C194

Ballarat Airfield

Ballarat Airfield is an important asset for a growing City and region. The recreational and charter use of the airfield will be maintained with special emphasis placed on promoting the complex's strategic function for police, ambulance and other emergency agencies. The encroachment of land uses and forms of development which could restrict the future use of the Airfield will be prevented. Upgrading the Airfield's main runway has the potential to enhance Ballarat as a tourism destination. A runway with the capacity to take 12,000kg aircraft would enable the airfield to receive small, regular public transport aircraft seating 30 passengers.

Objective 6

To provide for the continued operation and future upgrade of the Ballarat Airfield.

Strategies

- 6.1 Encourage the use of airfield land for airfield compatible purposes.
- 6.2 Discourage the use and development of airfield and surrounding land for purposes that would have a negative impact on the airfield's operation.
- 6.3 Discourage the establishment of residential and other sensitive uses on land under airfield flight paths.

21.08-3

22/12/2016
C194

Development Infrastructure

Transport infrastructure, drainage, reticulated sewerage and water, telephone, electricity and gas distribution networks infrastructure represent a significant public investment. Development must be planned in a way which protects existing infrastructure and recognises that existing infrastructure has a limited capacity.

Objective 7

To ensure new physical, social and economic infrastructure meets the needs of the community during the forecast population growth.

Strategies

- 7.1 Require appropriate development contributions to apply to future greenfield development areas, to assist with funding the required civil and social infrastructure.
- 7.2 Ensure development contributions are specified in Development Contributions Plans.
- 7.3 Strategy Integrate new or renewed community facilities with residential developments in order to provide the appropriate balance and mix of facilities.
- 7.4 Encourage the co-location of complementary facilities.
- 7.5 Ensure all future community facilities can accommodate multipurpose uses where appropriate and can be adapted to suit the needs of the community.

BALLARAT PLANNING SCHEME**21.08-4**22/12/2016
C194**Implementation**

The strategies in relation to Transport and Infrastructure will be implemented through the planning scheme by:

Further strategic work

- Consider applying the Design and Development Overlays to areas requiring specific design solutions.
- Review the Ballarat Car Parking Strategy as relevant to the Ballarat CBD to determine the requirement for a local planning policy or Parking Precinct Plan.
- Explore opportunities for increasing the supply of onstreet and offstreet public car parking within the Ballarat CBD in line with the City of Ballarat Car Parking Strategy.
- Review the buffer applied to the Ballarat North Wastewater Treatment Plant to ensure that it meets current and future needs.

BALLARAT PLANNING SCHEME

21.09 LOCAL AREAS

^{22/12/2016}~~6194~~ Proposed C254ball This clause provides local content to support Clauses 21.02 to 21.08 of the Local Planning Policy Framework. This clause provides detailed local area strategies.

21.09-1 CBD

^{22/12/2016}~~6194~~ Proposed C254ball ~~Significant new mixed~~ Well-designed, higher density residential and mixed-use development will be encouraged in the Ballarat CBD. The area will be managed as a key entertainment destination, a hub of knowledge sector, retail employment activities and inner city living precinct with street level and out of hours activation. Strong emphasis will be placed on a high quality public realm, pedestrian amenity and a people first approach to managing space.

Implementation strategies**Land use**

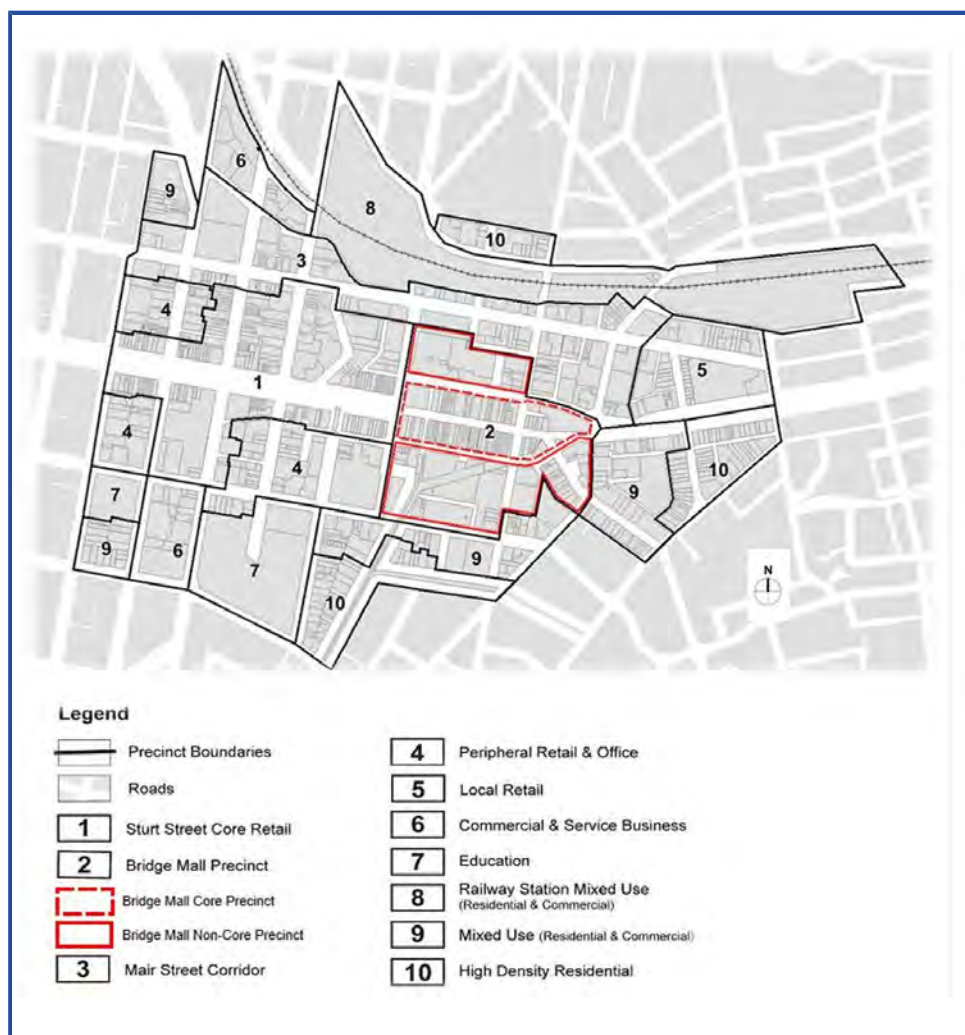
- Strategy 1 Facilitate ~~significant new~~ higher density residential and mixed use development ~~and redevelopment~~ in the Ballarat CBD.
- Strategy 2 Facilitate the redevelopment of vacant upper floorspace within the Ballarat CBD for residential purposes.
- | | |
|------------|---|
| Strategy 3 | Ensure that new development responds to the presence of heritage fabric on individual sites and heritage streetscapes within the CBD. |
| Strategy 4 | Encourage the provision of social and affordable housing in new, higher density residential and mixed-use developments. |
- Strategy 35 Consider the objectives, strategies and actions of the CBD Strategy: Making Ballarat Central (2010).

Environmental risk

- Strategy 1 Facilitate appropriate CBD development within floodprone areas.
- Strategy 2 Support development within and adjoining the CBD on land which is flood prone, taking into account appropriate design responses to minimise the risk to life and property.
- Strategy 3 Work with local catchment management authorities to encourage appropriate development of vacant land within the CBD which may be impacted by flooding.

BALLARAT PLANNING SCHEME

Ballarat CBD



21.09-2
22/12/2016
C194

Mair Street Medical Precinct

Ballarat is a significant regional provider of health and medical facilities. The majority of medical and health services are located in the Mair Street Medical Precinct to the north west of the Ballarat CBD, including the Ballarat Base Hospital and the St. John of God Hospital. Over many years a significant number of smaller medical centres and allied health professionals have established in these areas which have historically been zoned residential. Dwellings in this area are highly desirable due to their close proximity to the Ballarat CBD, schools and Lake Wendouree, as well as the relatively intact stock of heritage dwellings and streetscapes. The increasing number of non residential uses in the area has lead to a number of conflicts associated with, among other things, car parking difficulties for residents and patients. To balance these competing issues Council completed the *Ballarat Health Precinct Study 2006*.

Implementation strategies

Land use

- Strategy 1 Encourage the location of medical centres within the Precinct.
- Strategy 2 Encourage medical centre uses that provide regionally significant specialist services as identified by the *Ballarat Health Precinct Study 2006*.

BALLARAT PLANNING SCHEME

- Strategy 3 Discourage office, retail or industrial uses that do not require co-location with the hospital uses.
- Strategy 4 Discourage medical centre uses from locating in the residential areas surrounding the Mair Street Medical Precinct.
- Strategy 5 Promote the Mair Street Medical Precinct as the preferred location for specialist medical centre uses and other allied health professionals.
- Strategy 5 Encourage the provision of further car parking and other medical suites for Ballarat Base Hospital and St John of God Hospital.

Built form and amenity

- Strategy 1 Ensure the scale of buildings is consistent with building form and character of surrounding residential areas.
- Strategy 2 Ensure the surrounding residential areas' amenity is not reduced.
- Strategy 3 Restrict hours of operation where the use is located adjacent to residential dwellings.
- Strategy 4 Retain the existing building stock, especially where it is listed as an individual building in a heritage overlay or is recognised as a contributory building under the heritage overlay.
- Strategy 5 Require the provision of on site car parking to the rear of buildings.
- Strategy 6 Require areas between buildings and front boundaries to be landscaped.
- Strategy 7 Discourage removal of street trees when providing for a new access point to the land.
- Strategy 8 Restrict signage where a re-use of an existing building is proposed or the use is adjacent to a residential dwelling.

Infrastructure

- Strategy 1 Ensure car parking and access requirements are consistent with the requirements of the planning scheme or an approved parking precinct plan.
- Strategy 2 Support reductions in parking requirements only where on-street parking is underutilised or where justified by a parking precinct plan.

Mair Street Medical Precinct



21.09-3

22/12/2016
C194

Canadian Valley

The *Canadian Valley Outline Development Plan 2005* sets out the preferred form and principles of future development in the Canadian Valley. The plan recommends limiting residential development to areas that are already zoned for residential use and recognises the constraints imposed by native vegetation, landscape character and existing non-urban areas. Canadian Valley includes the existing towns of Mount Clear, Mount Helen and Buninyong and is the location of the University of Ballarat and the University of Ballarat Technology Park. Although most of Ballarat's population growth is to be directed towards the Ballarat West growth corridor, some

BALLARAT PLANNING SCHEME

will occur in the Canadian Valley in areas already designated for residential development. By 2021 the population of the Canadian Valley will grow by nearly 2,500 to over 11,000 people or an additional 1400 dwellings. Excluding land with vegetated areas and based on an average lot size of 800m² there is around 12 years supply of vacant residential land to accommodate this growth.

Implementation strategies

Land use

- Strategy 1 Consider the Canadian Valley Outline Development Plan –4 Overall Framework Plan for all applications.
- Strategy 2 Encourage the expansion of the tourism, retailing and economic role of Buninyong township based on preserving and enhancing its heritage and village character.
- Strategy 3 Encourage further commercial development at Buninyong in Warrenheip Street, north of the existing commercial area and in Learmonth Street, east of the council car park towards Inglis Street.
- Strategy 4 Ensure commercial uses within Buninyong which require large outdoor display and storage areas, locate within the Mixed Use Zone and are discouraged from locating within the commercial zoned areas unless storage areas are well screened and located away from the street.
- Strategy 5 Encourage in-fill development within the Buninyong crown township through the development of existing lots which can economically be provided with services and proper access.
- Strategy 6 Support the expansion of the University of Ballarat Technology Park, in a staged manner from its existing site to the east towards the University of Ballarat Mount Helen Campus, in a manner that is sympathetic to the landscape and environmental qualities of the Canadian Valley.
- Strategy 7 Encourage expansion of the University of Ballarat within the existing site and where it is free from environmental constraints.
- Strategy 8 Provide medium density housing at Mount Clear in close proximity to shopping and community facilities.
- Strategy 9 Promote infill residential development at Mount Clear that retains environmental features.
- Strategy 10 Provide a variety of residential lot sizes at Mount Clear ranging from 450m² to 2,000m², with larger lots in the native bush areas and alongside the Canadian Creek and Canadian Forest.

Built form and amenity

- Strategy 1 Ensure any future development outside the designated urban areas maintains a sense of rural landscape, especially as viewed from Geelong Road.
- Strategy 2 Ensure the direction of commercial development at Buninyong in Warrenheip Street, north of the existing commercial area and in Learmonth Street, east of the council car park towards Inglis Street reflects the existing commercial areas and the traditional linear form of commercial development in the township.
- Strategy 3 Promote infill development within Buninyong that respects existing development patterns.
- Strategy 4 Encourage new subdivision within the Buninyong crown township to follow a similar form to existing development being "straight/grid pattern"; rectangular lots and generally no cul-de-sacs.
- Strategy 5 Encourage further development of a linear open space/park system in Buninyong in a similar manner to that which has been developed in the vicinity of Forest Street.
- Strategy 6 Recognise and protect areas of crown land in Buninyong such as the Union Jack Reserve, from inappropriate development.
- Strategy 7 Ensure that any development which is located adjacent to crown land areas should be at a low density and should aim to protect any existing vegetation.
- Strategy 8 Utilise open space subdivision requirements in conjunction with the existing and planned park system in Buninyong.
- Strategy 9 Require extensions to the existing linear park system in Buninyong where this can be achieved through subdivision approvals.
- Strategy 10 Provide opportunities for increased residential development along the ridge alignment of the Ballarat-Buninyong Road and its adjoining tree canopy that can be screened, provided environmental values are not diminished.
- Strategy 11 Require development adjoining the Canadian Creek at Mount Helen to contribute to improvements to the condition of the waterway.
- Strategy 12 Provide an open space system at Mount Clear linked by pedestrian cycle access and which links the State Forest with the Creek and with the existing Mount Clear activity centre.
- Strategy 13 Require areas previously affected by mine workings at Mount Clear to be the subject of an environmental audit prior to use for sensitive purposes.
- Strategy 14 Encourage lots abutting Hocking Avenue and Recreation Road at Mount Clear to have wider frontages to minimise access points onto these roads, or to front side streets where possible.

BALLARAT PLANNING SCHEME

- Strategy 15 Contain residential development in Buninyong to within the existing residential area, unless guided by specific local planning.

Environment

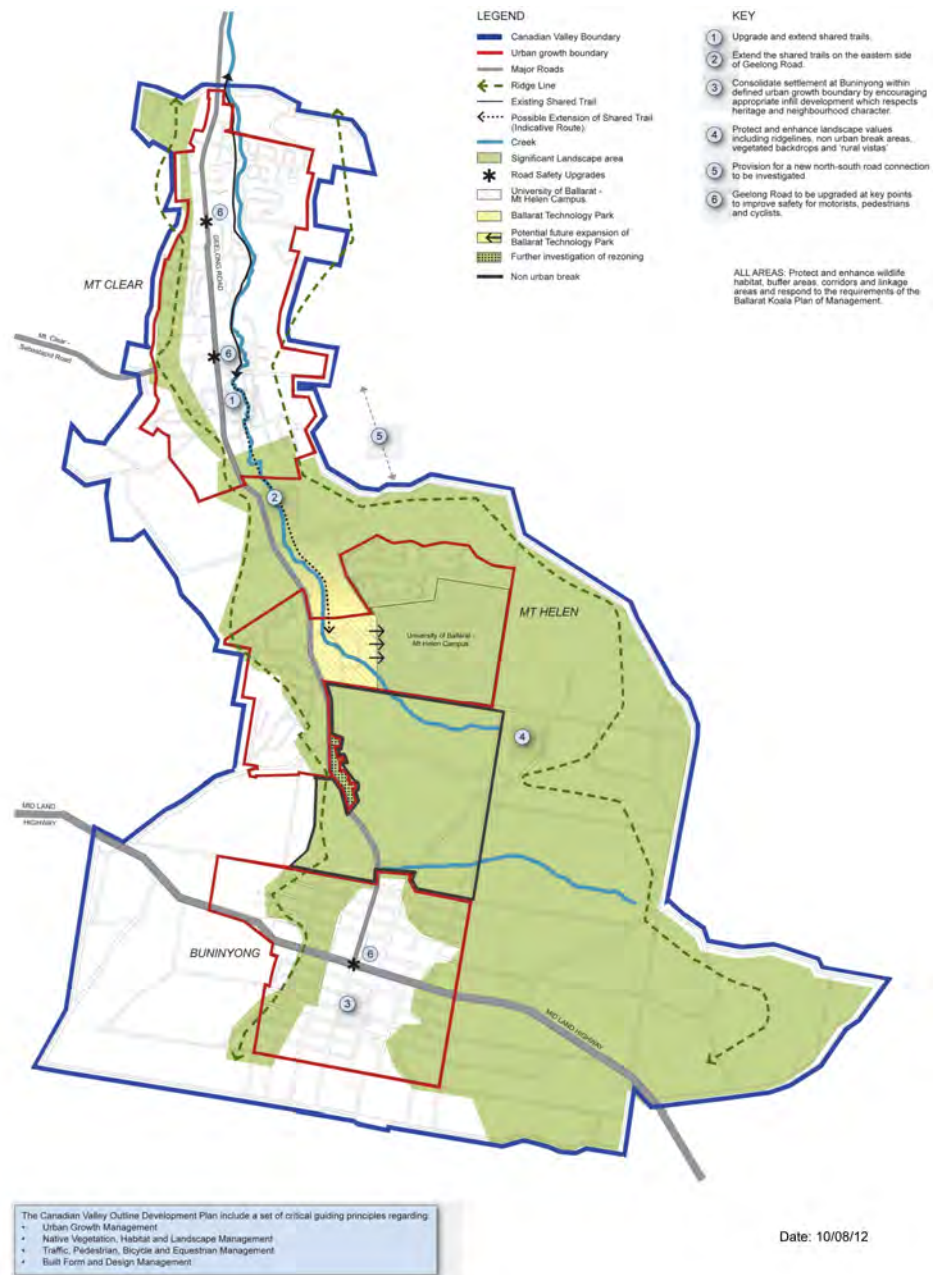
- Strategy 1 Provide an open space network in Buninyong that forms a corridor for the movement of flora and fauna.
- Strategy 2 Ensure new development along watercourses and the former railway reserve in Buninyong respects the need to preserve any existing native and exotic vegetation and amenity.
- Strategy 3 Protect and enhance natural and landscape values in the Canadian Valley including ridgelines, vegetated backdrops, non-urban breaks and open rural landscape vistas.
- Strategy 4 Ensure that non urban breaks are maintained, particularly as viewed from Geelong Road.
- Strategy 5 Maximise the retention of the 'green space' between the communities along the corridor.
- Strategy 6 Ensure development of the University of Ballarat and University of Ballarat Technology Park enhances and improves habitat links and recreational areas for the community.

Infrastructure

- Strategy 1 Improve infrastructure and links for sustainable transport modes, including the extension and enhancement of the shared trail network, particularly the proposed link along Canadian Creek.
- Strategy 2 Maximise opportunities to increase the provision of public transport and increased walking and cycling as alternatives to the motor vehicle.
- Strategy 3 Utilise unused roads in Buninyong as part of the open space system and as linkages for pedestrians and cyclists.

BALLARAT PLANNING SCHEME

Canadian Valley



BALLARAT PLANNING SCHEME**Other Implementation Actions**

Develop a Town Structure or Local Area Plan for Buninyong.

Applications covered by the Canadian Valley Outline Development Plan must provide a Site Specific Design Plan which includes an evaluation of:

- Native vegetation significance;
- Landscape contribution; and
- Habitat qualities including linkage areas for koalas.

Site Specific Design Plans must demonstrate (where appropriate) how development will:

- Retain, protect, manage and enhance native vegetation and habitat values;
- Respond to the requirements of the Ballarat Koala Plan of Management;
- Reflect contemporary needs including diversity of lot sizes and dwelling styles and sizes and ecologically sustainable development principles;
- Contribute to the extension, enhancement and rehabilitation of the existing shared trail network, particularly along creeks and watercourses;
- Integrate with adjoining developed and undeveloped areas in terms of traffic and road management, wildlife corridors and habitat linkages, drainage works and the shared trail network;
- Provide for useable open space areas;
- Utilise cluster planning on partially vegetated residentially zoned land, to protect native vegetation and provide for high quality increased density development in unconstrained areas of the site;
- Retain the rural appearance;
- Maintain clear open views of vegetated areas, ridgelines and skylines from Geelong Rd providing for large open areas in the foreground with a backdrop of native vegetation;
- Remove environmental weeds and rehabilitate environmentally degraded sites;
- Include water sensitive urban design principles into any development;
- Retain land subject to flooding and inundation in public ownership and rehabilitate the land so as to minimise the risk of downstream flooding and inundation; and
- Where residential development of pine plantations is proposed:
 - provide for a vegetated and visual buffer between the existing residential area and the new residential area, and
 - provide for revegetation of native species in open space areas.

21.09-4

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Woodmans Hill

Woodmans Hill is located at the eastern entrance to the City of Ballarat. The area extends approximately 3 kilometres along both sides of the Western Highway, between the eastern municipal boundary of the City of Ballarat and the first major highway turnoff into Ballarat.

VicRoads plan to undertake significant road works to realign the Western Highway within the Woodmans Hill Gateway Precinct. The extent of the realignment will impact on the majority of land holdings within the Precinct and as such, future land use planning must allow for a smooth and sustainable transition.

Of particular importance is the need to develop a gateway precinct, that announces entry into Ballarat and that minimises ad-hoc development that may otherwise compromise the appearance and appeal of the area. It is also of importance to ensure that any new retail and industrial development does not conflict with the intent of Council's retail and industrial strategies.

BALLARAT PLANNING SCHEME

The *Woodmans Hill Gateway Precinct Master Plan (January 2015)* recognises the Woodmans Hill Gateway as one of the major entry points to the City, and highlights the opportunity to improve the entry experience, both visually and from a land use perspective. The Woodmans Hill Precinct is recognised for its high quality agricultural soils, particularly on the north side of the Western Highway. The precinct also contains sites of koala habitat and native vegetation protection.

Council must therefore provide guidance towards establishing a desired land use framework for the Precinct that will ensure the ongoing protection of these attributes. In this regard it is important to facilitate an appropriate mix of land uses and high quality development to improve the entry experience, as reflected in the *Woodmans Hill Gateway Precinct Master Plan (January 2015)*.

The objectives for the Precinct include:

- | | |
|-------------|---|
| Objective 1 | To provide a distinctive entrance to Ballarat that will enhance the image and reflect the nature, history and culture of the Municipality, including through the provision of a major entrance feature/public art element. |
| Objective 2 | To achieve use and development that is respectful to the valued landscape and natural environmental elements of the area, including view lines, vegetation retention, landscaping and defined koala habitat. |
| Objective 3 | To encourage high quality sustainable built form. |
| Objective 4 | To achieve land use outcomes that add to the overall economic diversity of Ballarat without compromising the economic viability of Ballarat's Activity Centres, in particular the Ballarat CBD and the Ballarat West Employment Zone. |
| Objective 5 | To achieve a land use mix that has a focus on highway related functions, with ancillary retail and support for existing tourism uses that capture passing economic activity that contributes to the Ballarat economy. |

Implementation strategies

Land use and development

- | | |
|------------|---|
| Strategy 1 | Consider land use and development proposals generally in accordance with the <i>Woodmans Hill Gateway Precinct Master Plan (January 2015)</i> . |
| Strategy 2 | Restrict commercial use and development within the Precinct to land within the Mixed Use Zone. |
| Strategy 3 | Ensure an appropriate interface/buffer between the commercial and rural, rural living and residential areas of the precinct as appropriate. |

Design

- | | |
|------------|---|
| Strategy 1 | Consider the design objectives contained in the <i>Woodmans Hill Gateway Precinct Master Plan (January 2015)</i> . Ensure redevelopment of the freeway and land abutting the freeway through Woodmans Hill incorporates design of landscape elements consistent with the vision for the entrance. |
| Strategy 2 | Minimise the impact of new development on view lines, natural landscapes and landforms within the precinct. |
| Strategy 3 | Discourage the proliferation of advertising signage. |
| Strategy 4 | Ensure that development addresses the design principles set out in the <i>Woodmans Hill Gateway Precinct Master Plan (January 2015)</i> . |
| Strategy 5 | Ensure that the design of new development incorporates environmentally sustainable design principles. |

Application requirements

Applications for land uses adjacent to the Western Highway are required to:

- Specifically address how the proposal capitalises on the access and visual exposure to the highway.
- Demonstrate why the use requires access and visual exposure to the highway for the economic viability of its operations.
- Demonstrate how the built form, layout, use, access arrangements and buffering are planned to ensure an appropriate interface with surrounding sensitive land uses on rural living and low density residential land and protect the existing rural character of the area. a

BALLARAT PLANNING SCHEME

- Demonstrate that safe and appropriate access is provided, consistent with the Woodmans Hill Gateway Precinct Master Plan (January 2015).

Reference document

Woodmans Hill Gateway Precinct Master Plan (January 2015).

BALLARAT PLANNING SCHEME**21.09-5**14/11/2023
C235ball**Miners Rest**

The Miners Rest township is located to the north of Ballarat, separated from the main urban area by the Western Freeway. Miners Rest is characterised by the original township area located to the north of Cummins Road and the new residential estates located south of Cummins Road towards the Western Freeway. The area has significant constraints on development such as flood prone land and airport flight paths.

Implementation strategies**Land use and development strategies**

Support future infill residential development that respects the existing township character of Miners Rest North and Miners Rest South to suit lifestyle choice and assist ageing in place.

Support higher density residential, commercial, retail, service and community uses in the existing mixed use town centre precinct.

Protect Aboriginal Cultural Heritage and post-European contact heritage significance.

Protect rural land for agricultural, farming and equine related activity.

Protect the long-term operation of the Ballarat Airport.

Discourage the expansion of the Miners Rest Quarry to the east.

Support the continued operation of the equine industry / Dowling Forest Equine Precinct and development of associated businesses.

Support the growth of the Miners Rest Primary School through relocation and / or redevelopment.

Support the development of a sports facilities hub.

Support a direct pedestrian access / link between the quarry site and Creek Street / Miners Rest centre, as part of any potential future development, subject to consideration of potential engineering constraints.

Open space strategies

Support the provision of public open space, particularly on land adjacent to the Burrumbeet Creek that would otherwise not be developed due to environmental constraints.

Encourage landscape planting, including boulevard tree planting along main streets.

Provide pedestrian, cycling and horse-riding links through or around the town, including in new subdivisions.

Environmental Strategies

Protect the environmental and biodiversity values of Burrumbeet Creek.

Policy document

- *Miners Rest Township Plan* (City of Ballarat, November 2019)

BALLARAT PLANNING SCHEME

Miners Rest Framework Plan



Further strategic work

Undertake additional historical analysis of pre and post European contact sites to better understand the cultural significance and history of development of Miners Rest and determine if any formal heritage protection is warranted.

Develop a creek rehabilitation and environmental protection and management program in collaboration with the community, landowners, Wadawurrung Traditional Owners Aboriginal Corporation, DELWP and Glenelg Hopkins Catchment Management Authority.

Work in partnership with Glenelg Hopkins Catchment Management Authority to update flood mapping for the Burrumbeet floodplain around Miners Rest.

Prioritise opportunities to create an open space corridor and facilitate a public access shared trail along the length of Burrumbeet Creek.

Undertake a rural landscape assessment to determine if any key rural / landscape views within and surrounding Miners Rest require formal protection.

Support the upgrade of the Miners Rest Primary School facility to maximise the provision of off-street parking to meet the school's needs.

Investigate the potential for the development of the quarry site for alternative uses, subject to further analysis including an aircraft noise study, bushfire risk assessment and land contamination assessment.

Undertake a strategic review of planning controls in the area between the Northern Growth Area and the equine industry / Dowling Forest Equine Precinct, identified in Figure 1 'Land subject to further strategic review' of the Miners Rest Township Plan, including further analysis of aircraft noise, bushfire risk and land contamination.

Develop a framework plan and design guidelines for the town centre, including the land zoned Mixed Use and General Residential.

BALLARAT PLANNING SCHEME

Develop a strategic flood mitigation plan, and associated implementation plan, with consideration of an integrated solution that includes creek rehabilitation, open space and beautification.

Undertake a review of the planning controls surrounding Dowling Forest racecourse, including Special Use Zone - Schedule 13 (SUZ13) and Farming Zone A & B.

Ensure that airport planning controls are considered to protect and safeguard the long-term operation of the airport.

BALLARAT PLANNING SCHEME

--/--
Proposed C254ball

SCHEDULE TO CLAUSE 74.02 FURTHER STRATEGIC WORK**1.0****Further strategic work**

--/--
Proposed C254ball

- Prepare structure plans for urban renewal precincts and greenfield growth areas to provide land use and development direction in line with the recommendations of the Ballarat Housing Strategy (2024) and Ballarat Growth Areas Framework Plan (2024).
- Develop neighborhood character guidelines to inform the preparation of the new residential zones and overlays that will guide land use and development outcome.
- Review and apply new residential zones, overlays and other provisions, if necessary, in line with the recommendations of the Ballarat Housing Strategy (2024).
- Develop an integrated transport strategy to ensure efficient provision of transport infrastructure.
- Develop infrastructure plans to support housing growth.
- Develop an urban design framework plan and structure plan to guide development in the Ballarat CBD.
- Develop an affordable housing strategy to facilitate the delivery of housing diversity and affordability.
- Review local heritage planning provisions, including significant heritage trees in heritage precincts, to ensure heritage conservation values are considered.
- Review land use buffers and separation distances of industrial areas.
- Review the Mount Rowan area for the application of the Rural Activity Zone.
- Develop an appropriate planning control that encourages the consolidation of sites within the Sebastopol North neighbourhood centre and prevents commercial development fronting Yarrowee Street.
- Review environmentally focused planning controls.
- Review the application of the Significant Landscape Overlay.
- Review land use and development patterns along Howitt Street between the Wendouree Major Activity Centre and Doveton Street North and determine future direction of the area.
- Investigate the application of the Environmental Significance Overlay (ESO3)

6.4. BRIDGE MALL AMENDMENT C243BALL

Division: Development and Growth
Director: Natalie Robertson
Author/Position: Evan Burman – Principal Strategic Planner

PURPOSE

1. The purpose of the report is to:
 - a. Consider all submissions received to Planning Scheme Amendment C243ball (the Amendment) pursuant to section 22(1) of the *Planning and Environment Act 1987*.
 - b. Determine whether to split the Amendment into two parts being Planning Scheme Amendment C243ball Part 1 and Planning Scheme Amendment C243ball Part 2 based on the submissions received.
 - c. Determine whether to request the Minister for Planning appoint an Independent Planning Panel to consider submissions and Planning Scheme Amendment C243ball Part 1.
 - d. Consider endorsing a response to issues raised in submissions to form the basis of Councils position at the Panel hearing.

BACKGROUND

2. This report provides an update on the progress of Amendment C243ball, and a summary of the submissions received during the public exhibition phase, undertaken from 1 February to 1 March 2024.
3. The Amendment implements the recommendations of the Bridge Mall Built Form Framework (Urbis, 2023) by updating the Ballarat Planning Scheme to provide improved design and development guidance for new development proposals in the Bridge Mall and Bakery Hill Precinct.
4. The Amendment also amends the Heritage Overlay (HO176) boundary that applies to the Bridge Mall to exclude a non-contributory building, updates the Heritage Citation and Statement of Significance for the Bridge Mall and Bakery Hill Precinct (HO176), and proposes to revise heritage gradings, introducing a contemporary and compliant (Planning Practice Note 1 – Applying the Heritage Overlay) system of gradings.
5. In 2022, planning consultants (Urbis) were engaged to undertake a review of the built form and planning controls that apply to the Bridge Mall and Bakery Hill Precinct to support appropriate urban renewal in the Precinct.
6. The review found the current planning controls are highly restrictive and hampering investment opportunities within the area and recommended changes to the Design and Development Overlay Schedule 1 (Bridge Mall) (DDO1) to support a greater scope of infill development while ensuring the unique character of Bridge Mall will be respected.
7. As part of the project, heritage consultants (Landmark Heritage) were also engaged to review the significance of heritage buildings to ensure that they are appropriately identified and protected through the Ballarat Planning Scheme, through a revised Heritage Citation and Statement of Significance for the Bridge Mall and Bakery Hill Precinct (HO176).



8. The Amendment was submitted to the Department of Transport and Planning (DTP) in September 2023 and was authorised in early December 2023.

KEY MATTERS

Exhibition of the Amendment

9. The Amendment was exhibited from 1 February to 1 March 2024 in accordance with the requirements of the *Planning and Environment Act 1987*, which included:
- a. Letters to owners and occupiers within and outside of the Bridge Mall precinct (the land affected by the Amendment);
 - b. Notice published in the Ballarat Times newspaper;
 - c. Notice published in the Victorian Government Gazette;
 - d. The Amendment and information published on the MySay web page.

Submissions to the Amendment

10. A total of nine (9) submissions were received that expressed concerns and opinions on the Amendment. The key issues raised included:
- a. Concern about increased building heights.
 - b. Concern about the impacts of new development on heritage character.
 - c. Questioning of the heritage status and grading of buildings Norwich Plaza (fronting Bridge Mall) and 3 Peel Street South (submissions 5 and 7).
 - d. Environmentally sustainable design in new buildings.
 - e. Intensifying development in a flood risk area (Corangamite Catchment Management Authority (CCMA)).
11. Officers acknowledge the concerns of submitters in relation to building heights and heritage character. The Amendment is intended to balance the competing objectives of urban renewal and growth with heritage character and preservation.
12. Council officers' response to submissions can be found in Attachment 1.

Further consultation with submitters

13. Council officers have contacted the nine submitters to provide updates and, where possible, seek to resolve the submissions.
14. A site visit was undertaken at 3 Peel Street South with the submitter (Submitter 7), heritage consultant (David Helms) and Council officers to provide clarity on the heritage grading of the building.
15. A video call was also undertaken with the submitter (Submitter 5) in relation to the proposed heritage grading of part of Norwich Plaza and a further site visit and inspection undertaken by David Helms, heritage consultant.
16. Submission 9 was from Heritage Victoria who did not object to the Amendment however provided information on the archaeological heritage within the Bridge Mall Precinct.
17. Further consultation undertaken by officers has not resolved the submissions.
18. The remainder of the submissions were not directly related to the revised heritage Statement of Significance or proposed gradings of buildings for HO176 – Bridge Mall and Bakery Hill Heritage Precinct.

Heritage Advice

19. David Helms (heritage consultant) has reviewed submissions 5 and 7 in relation to proposed heritage gradings that are challenged in the respective submissions.
20. The advice (attached to this report) states that:
 - (Submission 5) Despite modifications and works being undertaken to Norwich Plaza, the frontage to Bridge Mall should remain as 'Contributory', as it is an example of post-war development within the Bridge Mall and Bakery Hill precinct.
 - (Submission 7) The North Grant Hotel building at 3 Peel Street South should be 'Significant', as it is an example of a commercial building that is part of the precinct's development.
21. Minor changes have been made to the *Revised Bridge Mall and Bakery Hill Statement of Significance* to reflect David Helms' advice.

CCMA Submission and DTP Advice

22. The submission from the CCMA highlighted concerns about flood risk through the eastern part of the Ballarat CBD, directly affecting the Bridge Mall precinct.
23. Council officers have discussed the submission with the CCMA and DTP to seek clarification as to an appropriate way forward with the Amendment in relation to future buildings. The key issue is that increased building height limits allow for increased (population) density, in the event that apartment buildings are developed within the precinct.
24. Flood depths (or levels) above 0.3m (300mm) are considered high risk to human safety and future development should be designed and managed carefully in areas prone to flooding, to ensure human safety.

25. Currently, the City of Ballarat in conjunction with the CCMA has new flood modelling (mapping) that is undergoing a process of community education and engagement, before a planning scheme amendment process is undertaken that will apply appropriate flood overlays to flood prone areas of Ballarat including the Bridge Mall.
26. The Department of Transport and Planning (DTP) has advised City of Ballarat officers that the built form component of the Amendment should be postponed until such time that the flood amendment has been progressed and there is certainty around the controls that will be in place to manage flood risk.
27. The timeframe for public exhibition of the proposed planning scheme amendment to apply flood overlays to the flood prone areas, including the Bridge Mall, into the planning scheme will likely occur in mid-2025.

Options for Council

28. The submission from the CCMA and the advice from DTP have narrowed the options available to Council, with which to proceed with the Amendment.
29. Splitting the Amendment would allow the heritage component (Part 1) to proceed, and the submissions (2) related to Part 1 to be considered by an Independent Planning Panel.
30. An Independent Planning Panel would consider the unresolved submissions and provide recommendation to Council to consider. Under the *Planning and Environment Act 1987*, Council will then be required to consider the submissions and the panel report and determine whether to adopt the amendment, make changes to the amendment, or abandon the amendment.
31. The other component (Part 2 – the Design and Development Overlay) will either need to be abandoned or postponed until the planning scheme amendment to implement flood modelling into the Ballarat Planning Scheme has progressed more significantly.
32. The submissions relating to Part 2 (6) could be referred to the Independent Planning Panel to ensure that any submitter who wants to be heard in relation to the heritage component can make a representation to the panel, should they choose to.

OFFICER RECOMMENDATION

- 33. That the Planning Delegated Committee resolves to:**
- 33.1 Consider all submissions received to Ballarat Planning Scheme Amendment C243ball pursuant to section 22(1) of the *Planning and Environment Act 1987*.**
- 33.2 Acknowledge Council officers' response to issues raised in the objecting submissions received for Ballarat Planning Scheme Amendment C243ball.**
- 33.3 Split Ballarat Planning Scheme Amendment C243ball into two parts being:**
- **Part 1 – amends the Heritage Overlay (HO176) boundary that applies to the Bridge Mall to exclude a non-contributory building, updates the Heritage Citation and Statement of Significance for the Bridge Mall and Bakery Hill Precinct (HO176), and proposes to revise heritage gradings, introducing a contemporary and compliant system of gradings.**
 - **Part 2 - implements the recommendations of the Bridge Mall Built Form Framework (Urbis, 2023) by updating the Design and Development Overlay (DDO1 Bridge Mall) to provide improved design and development guidance for new development proposals in the Bridge Mall.**
- 33.4 Postpone further action on the Design and Development Overlay component of Ballarat Planning Scheme Amendment C243ball (Part 2) until the flooding project and associated planning scheme amendment has been through public exhibition.**
- 33.5 Request the Minister for Planning appoint an Independent Planning Panel to consider submissions in relation to Part 1 in accordance with Section 23 of the *Planning and Environment Act 1987*.**
- 33.6 Authorise the Director Development and Growth to undertake administrative changes that do not change the intent of the Amendments.**
- 33.7 Notify submitters of Council's resolution to split the Amendment and request the appointment of an Independent Planning Panel for Ballarat Planning Scheme Amendment C243ball Part 1 by the Minister for Planning.**

ATTACHMENTS

1. Governance Review **[6.4.1 - 2 pages]**
2. Amendment C243 ball (Part 1) Explanatory Report **[6.4.2 - 7 pages]**
3. SCHEDULE TO CLAUSE 43.01 HERITAGE OVERLAY Compare version **[6.4.3 - 28 pages]**
4. SCHEDULE TO CLAUSE 72.04 INCORPORATED DOCUMENTS Compare version **[6.4.4 - 2 pages]**
5. REVISED Bridge Mall Bakery Hill Precinct SoS HO176 FINAL (for Panel) **[6.4.5 - 9 pages]**
6. C243 PART 1 Statements of Significance HO163-HO181 INCORP DOC REVISED MAY 2023 **[6.4.6 - 12 pages]**
7. Ballarat Planning Scheme Heritage Control 2004 Incorporated Plan - Revised December 2023 **[6.4.7 - 16 pages]**
8. Ballarat C243 ball (Part 1) d-ho Map 23 Exhibition **[6.4.8 - 1 page]**
9. REVISED Bridge Mall Bakery Hill Precinct citation HO176 Final **[6.4.9 - 31 pages]**
10. C 243 ball Collated Submissions Redacted **[6.4.10 - 50 pages]**
11. C 243 ball response to heritage submissions (David Helms) **[6.4.11 - 21 pages]**
12. Am C243 ball Submissions Summary Table **[6.4.12 - 10 pages]**

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ALIGNMENT WITH COUNCIL VISION, COUNCIL PLAN, STRATEGIES AND POLICIES

1. This report aligns with Council's Vision, Council Plan, Strategies and Policies, in particular Goal 4 – A city that conserves and enhances our natural and built assets:
 - *4.2 Respect, conserve and celebrate our rich heritage*

COMMUNITY IMPACT

2. The amendment will have positive social and community impacts by seeking to protect and retain identified heritage fabric which has significant importance to the course or pattern of Victoria's cultural history, demonstrating the principal characteristics of a class of cultural places and objects and special association with the life or works of a person, or group of persons, of importance in Victoria's history.

CLIMATE EMERGENCY AND ENVIRONMENTAL SUSTAINABILITY IMPLICATIONS

3. This amendment does not raise any direct climate emergency issues or environmental sustainability implications.

ECONOMIC SUSTAINABILITY IMPLICATIONS

4. There are no economic sustainability implications identified for the subject of this report.

FINANCIAL IMPLICATIONS

5. The amendment process will not have any significant financial implications to Council with the exception of the usual cost associated with the planning scheme amendment process.
6. As the proponent is the Planning Authority, the City of Ballarat will be responsible for all amendment related costs including notification of landowners, planning panel hearing fees and engagement of legal representation and expert witnesses at a panel hearing.

LEGAL AND RISK CONSIDERATIONS

7. The amendment does not raise any legal risks or concerns of note.
8. Section 9(1) of the *Local Government Act 2020* states that a Council must - in the performance of its role - give effect to the overarching governance principles of the Act. Section 9(2) describes the following relevant overarching governance principles—
 - (c) the economic, social, and environmental sustainability of the municipal district, including mitigation and planning for climate change risks, is to be promoted,
 - (d) the municipal community is to be engaged in strategic planning and strategic decision making,
 - (f) collaboration with other Councils and Governments and statutory bodies is to be sought' and,
 - (g) the ongoing financial viability of the Council is to be ensured.

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9. The Amendment gives effect to the overarching governance principles by identifying land suitable for heritage protection subject to a robust assessment.
10. The Planning and Environment Act 1987 (the Act) sets out the framework for the use, development, and protection of land in Victoria in the present and long-term interests of all Victorians.
11. The Amendment seeks to identify land suitable for heritage protection and manage new development through the planning scheme controls to minimise impacts to the heritage fabric of the place.
12. Divisions 1 and 2 of Part 3 of the Act set out the procedure for planning scheme amendments and the relevant provisions in relation to the notification of planning scheme amendments including the process for public submissions and the consideration of those submissions by the planning authority or an appointed panel. The recommendations set out in this report are consistent with the Act.

HUMAN RIGHTS CONSIDERATIONS

13. It is considered that the report does not impact on any human rights identified in the Charter of Human Rights and Responsibilities Act 2006.

COMMUNITY CONSULTATION AND ENGAGEMENT

14. The amendment has been prepared and exhibited in accordance with the Planning and Environment Act 1987 which includes a requirement to give notice to all affected landowners, occupiers and prescribed Ministers, notices in the local newspapers and the Victorian Government Gazette.
15. Interested parties have had the opportunity to make submissions which will be considered by Council and referred to an Independent Planning Panel where submitters may present their submissions at a panel hearing.
16. Council officers have consulted with Traditional Custodians and resident groups during exhibition of the Amendment.

GENDER EQUALITY ACT 2020

17. There are no gender equality implications identified for the subject of this report.

CONFLICTS OF INTEREST THAT HAVE ARISEN IN PREPARATION OF THE REPORT

18. Council officers affirm that no general or material conflicts need to be declared in relation to the matter of this report.

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Planning and Environment Act 1987

BALLARAT PLANNING SCHEME

AMENDMENT C243ball (Part 1)

EXPLANATORY REPORT

Overview

The amendment implements the *Bridge Mall/Bakery Hill Precinct Statement of Significance* (GJM Heritage, revised by Landmark Heritage, March 2023), supported by the *Bridge Mall/Bakery Hill Precinct Heritage Citation* (GJM Heritage, revised by Landmark Heritage, March 2023), that ensures heritage elements in the Precinct are comprehensively considered and are accurately identified.

It does this by updating Clause 43.01 (Heritage Overlay) to include reference to the *Bridge Mall and Bakery Hill Precinct Statement of Significance* (GJM Heritage, revised by Landmark Heritage, March 2023); and by inserting the *Bridge Mall and Bakery Hill Precinct Statement of Significance* (GJM Heritage, revised by Landmark Heritage, March 2023) into the Schedule to Clause 72.04 (Documents Incorporated into this Planning Scheme). The amendment also revises the Heritage Overlay (HO176) boundary to exclude a Non-contributory building that is isolated from the rest of the Precinct.

Where you may inspect this amendment

The amendment can be inspected free of charge at the Ballarat City Council website at www.ballarat.vic.gov.au.

The amendment is available for public inspection, free of charge, during office hours at the following places:

Ballarat City Council
The Phoenix Building
25 Armstrong Street South
BALLARAT CENTRAL VIC

The amendment can also be inspected free of charge at the Department of Transport and Planning website at www.planning.vic.gov.au/public-inspection or by contacting 1800 789 386 to arrange a time to view the amendment documentation.

Submissions

Any person who may be affected by the amendment may make a submission to the planning authority. Submissions about the amendment must be received by close of business, 1 March 2024.

A submission must be sent to: strategicplanningsubmissions@ballarat.vic.gov.au

Panel hearing dates

In accordance with clause 4(2) of Ministerial Direction No.15 the following panel hearing dates have been set for this amendment:

- directions hearing: week of 23 September
- panel hearing: week of 14 October.

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Details of the amendment**Who is the planning authority?**

This amendment has been prepared by the Ballarat City Council, which is the planning authority for this amendment.

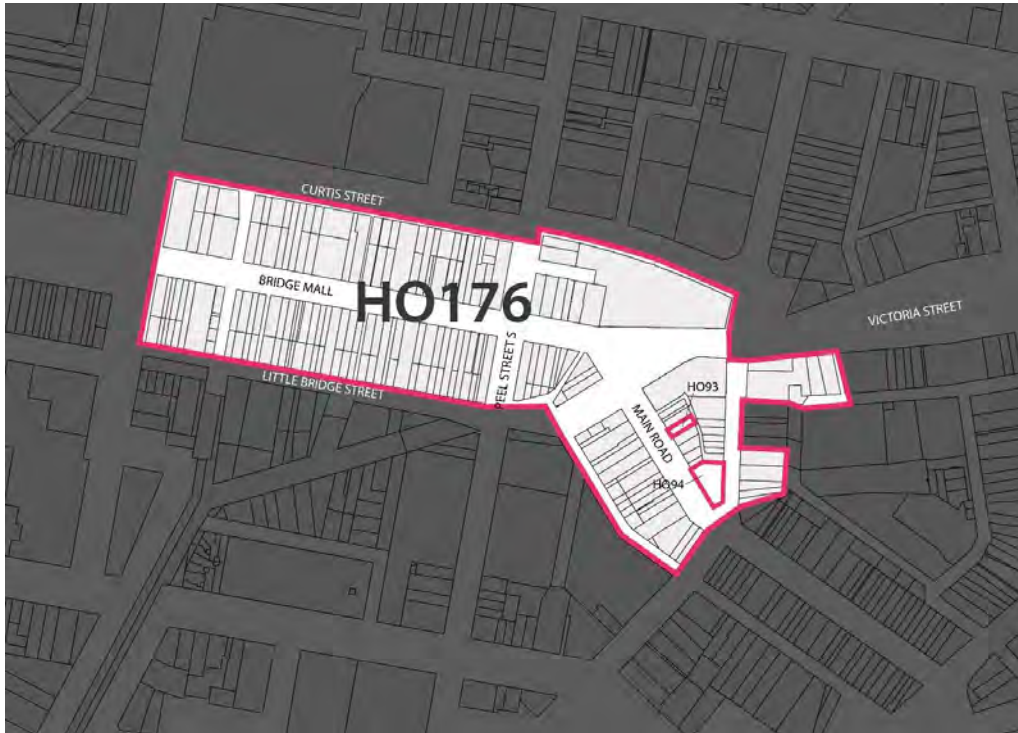
Land affected by the amendment

Figure 1: Bridge Mall and Bakery Hill Precinct (HO176)

The amendment applies to land generally within the “Bridge Mall and Bakery Hill Precinct”, currently zoned Commercial 1 Zone illustrated in Figure 1, including the following properties:

- 2-104 (even), 1-121 (odd) Bridge Mall
- 1-6 Coliseum Walk
- 22-54 Curtis Street
- 5-112 Little Bridge Street
- 2-50 (even), 11-21 (odd) Main Road
- Norwich Plaza (all properties)
- 3 Peel Street S, 4-6 Peel Street N
- 8-10 (even), 1-9 (odd) Humffray Street Sth.

Bridge Mall and Bakery Hill is located at the eastern end of Sturt Street, with Curtis Street to the north, Little Bridge Street to the south and Victoria Street to the west.

The Bridge Mall and Bakery Hill Precinct is affected by the Design and Development Overlay (DDO1) indicated by the red (dashed) line in Figure 1. The Heritage Overlay (HO176 – Bridge Mall and Bakery Hill Precinct) is shown as the solid black line.

What the amendment does

The amendment implements the *Bridge Mall/Bakery Hill Precinct Statement of Significance* (GJM Heritage, revised by Landmark Heritage, March 2023), supported by the *Bridge Mall/Bakery Hill*

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Precinct Heritage Citation (GJM Heritage, revised by Landmark Heritage, March 2023). The HO176 boundary is also amended to exclude a Non-contributory property.

Specifically, the amendment proposes the following changes:

Overlay maps

- Amends Planning Scheme Map No. 23 (HO176) to exclude the non-contributory property at 4-6 Peel Street North from the Heritage Overlay.

Planning scheme ordinance

- Amends the Schedule to Clause 43.01 (Heritage Overlay) to:
 - Insert the *Bridge Mall and Bakery Hill Precinct Statement of Significance* (GJM Heritage, revised by Landmark Heritage, March 2023).
 - Remove reference to tree controls that relate to the Ballarat Planning Scheme Heritage Control, 2004.
 - Remove (switch off) the external paint controls that currently apply to HO176.
- Amends the Schedule to Clause 72.04 (Documents Incorporated into this Planning Scheme) to:
 - Include Bridge Mall and Bakery Hill Statement of Significance (GJM Heritage, revised by Landmark Heritage, 2023) as an incorporated document.
 - Update the title of the incorporated document Ballarat Heritage Precincts - Statements of Significance 2006 (revised august 2014) to reflect the changes made that remove reference to the Bridge Mall/Bakery Hill Heritage Precinct (HO176) to be Ballarat Heritage Precincts - Statements of Significance 2006 (revised May 2023).
 - Update the title of the incorporated document Ballarat Planning Scheme Heritage Control 2004 (revised December 2023) to reflect the changes made that remove reference to tree controls.

Strategic assessment of the amendment**Why is the amendment required?**

The amendment is required to update the Statement of Significance for the *Bridge Mall and Bakery Hill Precinct*, and the Schedule to Heritage Overlay (in relation to HO176), to more accurately identify and describe the heritage elements of the precinct, ensuring that new development can be assessed against up to date heritage provisions.

The Heritage Overlay

A review of the heritage components of the Precinct was undertaken in 2021 by GJM Heritage to ensure the heritage elements are comprehensively considered. The review known as *Bridge Mall/Bakery Hill Precinct, Ballarat Central and Bakery Hill (HO176) Heritage Built Form Analysis* (GJM Heritage, March 2022) found that the existing documentation supporting the Heritage Overlay (HO176) required updating to be best practice and consistent with *Planning Practice Note 1 'Applying the Heritage Overlay'* (PPN1). This included establishing an individual Heritage Citation and Statement of Significance (SoS) for the Precinct. The existing SoS is currently located in the *Ballarat Heritage Precincts - Statements of Significance 2006* (revised august 2014) and is found to outdated, not best practice or in accordance with PPN1.

In 2023, Council engaged Landmark Heritage Pty Ltd to peer review the work previously undertaken by GJM Heritage. The peer review known as *Bridge Mall and Bakery Hill HO176 Precinct Heritage Peer Review* (Landmark Heritage, 27 March 2023) found that the existing HO176 boundary adequately protects the identified values and Contributory and significant properties in the Precinct however it recommended the grading schedules for buildings identifies as Contributory or Non-contributory should be reviewed and properties regraded in accordance with the significance of the Precinct (See Figure 2).

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These changes include:

- From Non-contributory to Contributory: 42, 46, 48 & 84 Bridge Mall; part 15-19 (garages) & 40 Main Road; part of Norwich Plaza (south-eastern corner).
- From Non-contributory to Significant: 77 Little Bridge Street (aka rear of 86 Bridge Mall).
- From Contributory to Significant: 86 & 100 Bridge Mall; 7 & 9 Humffray Street South; 38 Main Road and 3 Peel Street S.
- From Contributory to Non-contributory: 22, 28 & 33 Bridge Mall; 46 Main Road.

The review recommended the Heritage Overlay boundary is changed to remove the Non-contributory property known as 4-6 Peel Street North from the Precinct because it has little relation with the rest of the Precinct. While the inclusion of Non-contributory buildings in HO precincts is a useful tool to ensure that works to or redevelopment of them do not have a negative impact on the rest of the precinct, in this case the Non-contributory building is isolated from the rest of the Precinct.

Further enhancements to the Heritage Citation and SoS were made to support the heritage grading of most properties (those that do not have a site-specific HO).

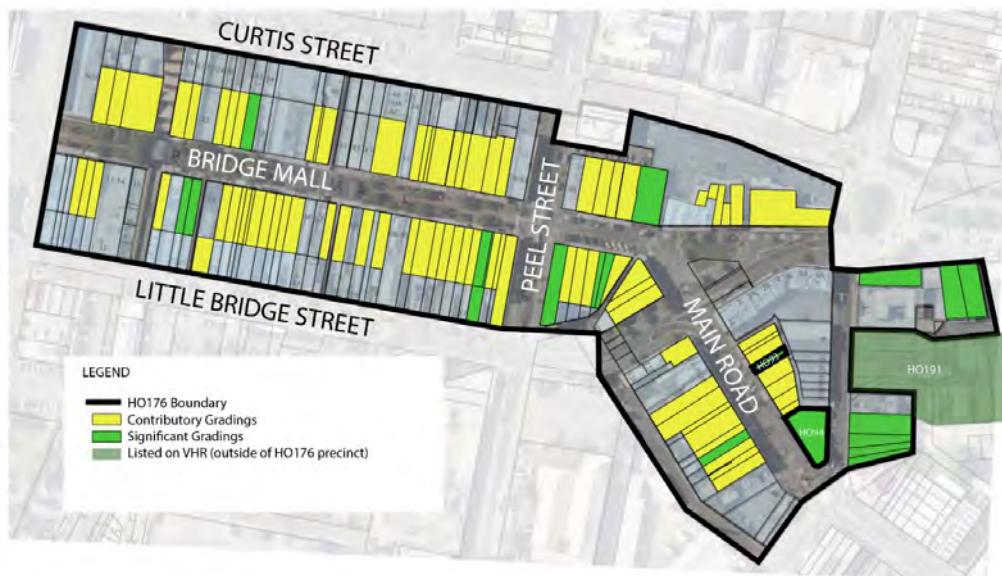


Figure 4: Recommended heritage gradings.

The amendment implements the recommended changes made by both heritage assessments including the recognition of the changes to which buildings are Contributory, Significance or Non-Contributory in the Heritage Citation.

How does the amendment implement the objectives of planning in Victoria?

The amendment is consistent with the objectives of planning in Victoria by encouraging and facilitating appropriate and considered change in the Bridge Mall Precinct. The Amendment implements the relevant objectives in Section 4 of the *Planning and Environment Act 1987* (the PE Act), in particular:

a) *Provide fair, orderly, economic and sustainable use, and development of land*

The amendment will result in fair, orderly, economic and sustainable use and development of land by enabling future development that addresses the needs of the future community of Ballarat, responding to the heritage character of the precinct.

b) *Conserve and enhance those buildings, area or other places that are of scientific, aesthetic, architectural or historical interest, or otherwise of special cultural value:*

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The amendment includes revised Statement of Significance for the Precinct that reinforces heritage protection whilst encouraging appropriate development within the Precinct.

c) Facilitate development in accordance with the objectives;

The amendment facilitates development in accordance with State, regional and local policy.

d) Balance the present and future interests of all Victorians:

The amendment will provide for sustainable development outcomes within the Ballarat CBD that aligns with the current future vision for the CBD area and the Precinct.

How does the amendment address any environmental, social and economic effects?

Environmental

The amendment considers potential effects on the environment. Higher density development in activity centres such as Ballarat's CBD reduces the need to travel by car due the high levels of access to public transport, walking and cycling networks, shops, jobs and services, therefore reducing the burden on the environment.

Social

The amendment will facilitate sustainable development outcomes that support an active public realm and passive surveillance of the street environment. Facilitating more street activity provides for positive social outcomes.

Economic

The amendment would have positive economic effects by facilitating development outcomes that increases activity and enhances the public realm. Facilitating higher density residential development within the Ballarat CBD would locate more people in close proximity to jobs, services, education, health and public transport services.

Does the amendment address relevant bushfire risk?

The amendment does not affect land within a bushfire prone area or Bushfire Management Overlay. It is not considered the amendment will increase risk to bushfire.

Does the amendment comply with the requirements of any Minister's Direction applicable to the amendment?

The amendment complies with the requirements of the Ministerial Direction - The Form and Content of Planning Schemes (section 7(5) of the PE Act).

Direction No. 11: Strategic Assessment of Amendments

The amendment complies with *Minister Direction No. 11 (Strategic Assessment of Amendments)* under section 12 of the PE Act. The amendment is consistent with this direction which ensures a comprehensive strategic evaluation of a planning scheme amendment and the outcomes it produces, which have been described in this Explanatory Report, in particular:

How does the amendment support or implement the Planning Policy Framework and any adopted State policy?

The amendment is consistent with the following clauses of the Planning Policy Framework and will assist in achieving objectives of the clauses:

Clause 11.01-1S – Settlement

The amendment is consistent with the objective of this Clause "to facilitate the sustainable growth and development of Victoria and deliver choice and opportunity for all Victorians through a network of settlements", as well as implementing several strategies by encourage a form and density of

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settlements that supports healthy, active and sustainable transport, limiting urban sprawl and direct growth into existing settlements, promoting and capitalise on opportunities for urban renewal and infill redevelopment, developing compact urban areas that are based around existing or planned activity centres to maximise accessibility to facilities and services and ensuring retail, office-based employment, community facilities and services are concentrated in central locations.

Clause 11.03-1S – Activity Centres

The amendment is consistent with the objective of this Clause to “encourage the concentration of major retail, residential, commercial, administrative, entertainment and cultural developments into activity centres that are high accessible to the community”, as well as implementing several strategies such as

building up activities centres as a focus for higher quality development.

Clause 11.03-6s – Regional and local places

The amendment is consistent with the objective of this Clause to “*facilitate integrated place-based planning*”. The amendment does this by integrating relevant planning considerations to provide specific direction for the planning of sites, places, neighbourhoods and towns.

Clause 15.03-1s – Heritage conservation

The amendment is consistent with the objective of this Clause “*to ensure the conservation of places of heritage significance*” by providing for the conservation and enhancement of those places that are of aesthetic, archaeological, architectural, cultural, scientific or social significance, encouraging appropriate development that respects places with identified heritage values, retaining those elements that contribute to the importance of the heritage place, encouraging the conservation and restoration of contributory elements of a heritage place and ensuring an appropriate setting and context for heritage places is maintained or enhanced. The amendment supports these by ensuring the Heritage Overlay is up to date and functional.

How does the amendment support or implement the Local Planning Policy Framework, and specifically the Municipal Strategic Statement?

The amendment is consistent with the following clauses of the Local Planning Policy Framework, and Municipal Strategic Statement and will assist in achieving objectives of the clauses as follows:

- The amendment recognises the importance of protecting the quality and character of Ballarat identity (Clause 21.06-1 – Urban Design) ensuring that the scale, bulk and quality of new development contributes to the character and amenity of the built environment and by maintaining important views and vistas within the Ballarat CBD including skyline views of spires and towers and the Yarrowee escarpment.
- The amendment recognises the importance of protecting the heritage values of Ballarat (Clause 21.06-2 – Heritage) by protecting, conserve and enhance areas, features, structures and sites of historic and cultural significance. It does this by ensuring the Heritage Overlay is up to date, which will conserve, protect, and enhance the fabric of identified heritage places and precincts and identify and protect heritage places, including maintaining the visual prominence of heritage buildings and landmarks.
- The amendment encourages new mixed-use development in the CBD in accordance with Clause 21.09-1 – CBD by providing provisions that facilitate the redevelopment of vacant upper floorspace within the Ballarat CBD for residential purposes.

OFFICIAL

Does the amendment make proper use of the Victoria Planning Provisions?

The amendment makes proper use of the Victorian Planning Provisions, consistent with *Planning Practice Note 1* (PPN1) the amendment inserts a separate Statement of Significance for the Bridge Mall and Bakery Hill Precinct and specifies certain tree controls.

The amendment also removes tree controls which were incorrectly included as a consideration under HO176, as the specific tree is located outside of the precinct.

How does the amendment address the views of any relevant agency?

The views of relevant agencies including Heritage Victoria were during public exhibition of the amendment and a submission received (for information only).

The Wadawurrung Traditional Owners have been consulted about the amendment however no concerns were raised.

Does the amendment address relevant requirements of the *Transport Integration Act 2010*?

The amendment would not have significant implications for the transport system and the precinct is well served by public transport and general transport infrastructure (such as roads and close proximity to Ballarat Station).

Resource and administrative costs**What impact will the new planning provisions have on the resource and administrative costs of the responsible authority?**

The amendment would have minimal (insignificant) resource and administrative costs associated with it, in addition to those already experienced by Ballarat City Council's statutory planning department.

BALLARAT PLANNING SCHEME

28/02/2019
GC117

SCHEDULE TO CLAUSE 43.01 HERITAGE OVERLAY

1.0

Application requirements

28/02/2019
GC117

None specified.

2.0

Heritage places

06/09/2023
G244ball
(Part 1)

The requirements of this overlay apply to both the heritage place and its associated land.



PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO1	Lauderdale 7 Prince Street, Alfredton	-	-	-	-	-	Yes Ref No H486	No	No
HO2	Beaufort House 9a Beaufort Avenue, Alfredton	Yes	No	No	Yes	No	No (On National Estate Register)	No	No
HO5	Ebenezer Presbyterian Church and Hall 212 Armstrong Street South, Ballarat Central	Yes	Yes	No	Yes	Yes - cast iron fence	No (On National Estate Register)	No	No
HO6	Former Ebenezer Manse 214 Armstrong Street South, Ballarat Central	Yes	Yes	No	Yes	Yes - cast iron fence	No	No	No
HO8	Synagogue 2-4 Barkly (Cnr Princes Street), Ballarat East	-	-	-	-	-	Yes Ref No H106	No	No
HO9	Former Ballarat East Free Library	-	-	-	-	-	Yes	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	25-29 Barkly Street, Ballarat East						Ref No H1493		
HO10	Lamp Post Barkly Street and East Street Intersection, Ballarat East and Bakery Hill	Yes	No	No	Yes	No	No	No	No
HO11	Ballarat East Fire Station 20-22 Barkly Street, Ballarat East	-	-	-	-	-	Yes Ref No H1001	No	No
HO12	Clowance 518 Barkly Street (Cnr Cameron Street), Golden Point	-	-	-	-	-	Yes Ref No H1898	No	No
HO13	Ballarat Botanical Gardens Gillies Street and Wendouree Parade, Lake Wendouree	-	-	-	-	-	Yes Ref No H2252	Yes	No
HO16	North View Villa 108 Burnbank Street, Lake Wendouree	Yes	No	No	Yes	No	No (On National Estate Register)	No	No
HO17	Former Police Station, Ballarat 15 Camp Street, Ballarat Central	-	-	-	-	-	Yes Ref No H1544	No	No
HO18	Former Court House Camp Street, Ballarat Central	Yes	Yes	No	Yes	No	No	No	No
HO20	Ballarat Trades Hall 24 Camp Street, Ballarat Central	-	-	-	-	-	Yes Ref No H657	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO21	Terraces 30-32 Camp Street, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO22	Colemans Spring and adjacent land 102 Caffrey Street and 201-203 Herriott Street, Buninyong	Yes for all	Refer specific area	Refer specific area	Yes	Refer specific area	No	Refer specific area	No
HO23	Former Ranger Barracks 1-61 Curtis Street, Ballarat Central	-	-	-	-	-	Yes Ref No H1949	No	No
HO24	Former South British Insurance Co. Ltd. 211 Dana Street (cnr Armstrong Street South), Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO25	Dana House, Former hostel 506 Dana Street (cnr Lyons Street South), Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO26	Primary School No. 33 Dana Street Primary School 401 Dana Street, Ballarat Central	-	-	-	-	-	Yes Ref No H1714	Yes	No
HO27	Former Wesleyan Church and Sunday School 101 Dana Street (Cnr Lydiard Street), Ballarat Central	-	-	-	-	-	Yes Ref No H1089	Yes	No
HO28	Former Chapter House 102 Dana Street, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO29	Ballarat Club	Yes	Yes	No	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	203 Dana Street, Ballarat Central								
HO30	Yarrowee Hall 1 Darling Street, Redan	-	-	-	-	-	Yes Ref No H1168	No	No
HO31	Former Congregational Church and Hall Dawson Street North and 503 Mair Street, Ballarat Central	-	-	-	-	-	Yes Ref No H995	Yes	No
HO32	Former Baptist Church 9/3 Dawson Street South, Ballarat Central	-	-	-	-	-	Yes Ref No H107	No	No
HO33	Lutheran Church 204A Doveton Street South, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO36	St John of God Hospital (Bailey's House) Drummond Street North, Lake Wendouree	Yes	No	No	Yes	Yes - fence	No	No	No
HO37	House 217 Drummond Street South, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO38	Former Ballarat-Buninyong Railway Land between Elizabeth and Forest Streets, Buninyong	Yes for all	Refer specific area	Refer specific area	Yes	Refer specific area	No	Refer specific area	No
HO39	Montrose Cottage	-	-	-	-	-	Yes	Yes	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	111 Eureka Street, Ballarat East						Ref No H108		
HO40	House 1104 Eyre Street, Newington	Yes	No	No	Yes	No	No	No	No
HO41	Former Water and Sewerage Authority Office 6 Grenville Street South (Lots 1-4 on PS 544004H) (South Western Cnr Grenville and Lewis Streets), Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO42	Manchester Unity Hall 9 Grenville Street South, Ballarat Central	Yes	Yes	No	Yes	No	No	No	No
HO43	Former Protestant Hall 10 Grenville Street South, Ballarat Central	Yes	No	No	Yes	No	No (On National Estate Register)	No	No
HO44	Former Ballarat Woollen & Worsted Mill 14 Hill Street (Cnr Humffray Street South), Mount Pleasant	Yes	No	No	Yes	No	No (On National Estate Register)	No	No
HO45	Former Myer Woollen Mills 502 Howitt Street, Ballarat North	Yes	No	No	Yes	No	No	No	No
HO46	Former Methodist Church 116-118 Humffray Street North, Brown Hill	Yes	No	No	Yes	No	No	No	No
HO48	House	Yes	No	No	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	328 Ligar Street, Soldiers Hill								
HO50	Christ Church Anglican Cathedral & Christ Church Hall 49 and 49A Lydiard Street South, Ballarat Central	Yes	No	No	Yes	No	No (On National Estate Register)	No	No
HO53	Gas Lamps In front of 10-16 Lydiard Street South and outside Craig's Royal Hotel, Ballarat Central	-	-	-	-	-	Yes Ref No H977	No	No
HO54	Ballarat School of Mines (Federation University Australia) 107 Lydiard Street South, Ballarat Central	-	-	-	-	-	Yes Ref No H1463	No	No
HO57	Former Ballarat Post Office 2-6 Lydiard Street North (NE Cnr Lydiard Street North and Sturt Street), Ballarat Central	-	-	-	-	-	Yes Ref No H1018	Yes	No
HO59	Ballarat Railway Complex 140 Lydiard Street North, Ballarat Central, 75 Humffray Street North, Bakery Hill, 60 Corbett Street, Ballarat East, 202 Lydiard Street North, Soldiers Hill, Scott Parade, Ballarat East and Nolan Street, Soldiers Hill.	-	-	-	-	-	Yes Ref No H902	Yes	No
HO62	Former National Mutual Building 2 Lydiard Street South, Ballarat Central	Yes	No	No	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO63	Former National Bank of Australasia 5 Lydiard Street North, Ballarat Central	Yes	No	No	Yes	No	No (On National Estate Register)	No	No
HO64	Former Union Bank Building 4-6 Lydiard Street South, Ballarat Central	-	-	-	-	-	Yes Ref No H109	No	No
HO65	Former Mining Exchange 8-14 Lydiard Street North, Ballarat Central	-	-	-	-	-	Yes Ref No H391	Yes	No
HO66	Former ANZ (also known as ES&A) Bank 9 Lydiard Street North, Ballarat Central	-	-	-	-	-	Yes Ref No H110	No	No
HO67	Craig's Royal Hotel 10-16 Lydiard Street South, Ballarat Central	-	-	-	-	-	Yes Ref No H111	No	No
HO68	Former Bank of New South Wales 13 Lydiard Street North, Ballarat Central	-	-	-	-	-	Yes Ref No H112	No	No
HO69	Old Colonists Association 16-24 Lydiard Street North, Ballarat Central	-	-	-	-	-	Yes Ref No H116	Yes	No
HO70	Her Majesty's Theatre Royal South Street Memorial Theatre, Academy of Music	-	-	-	-	-	Yes Ref No H648	Yes	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	17 Lydiard Street South, Ballarat Central								
HO71	George Hotel 25 Lydiard Street North, Ballarat Central	-	-	-	-	-	Yes Ref No H113	No	No
HO72	Alexandria Tea Rooms 26-34 Lydiard Street North, Ballarat Central	-	-	-	-	-	Yes Ref No H115	Yes	No
HO73	Counsel Chambers 26 Lydiard Street South, Ballarat Central	Yes	Yes	No	Yes	No	No	No	No
HO74	Furnival Chambers 28-36 Lydiard Street South, Ballarat Central	Yes	Yes	No	Yes	No	No	No	No
HO75	Chancery House 38 Lydiard Street South, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO76	Fine Art Gallery, Ballarat 38-48 Lydiard Street North, Ballarat Central	-	-	-	-	-	Yes Ref No H680	No	No
HO77	Former Neil W Jones Real Estate 50 Lydiard Street South, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO78	Land 53 Lydiard Street South, Ballarat Central	Yes	No	No	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO79	Shop 60 Lydiard Street North, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO80	Office (Former Union Trustee Building) 101-103 Lydiard Street North, Ballarat Central	Yes	No	No	Yes	No	No (On National Estate Register)	No	No
HO81	Former J J Goller & Co 114 Lydiard Street North, Ballarat Central	Yes	Yes	No	Yes	No	No	No	No
HO82	Former Warehouse 118 - 122 Lydiard Street North, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO83	Provincial Hotel 121 Lydiard Street North (Cnr Ararat Street), Ballarat Central	-	-	-	-	-	Yes Ref No H432	No	No
HO84	Former Reid's Coffee Palace 128 Lydiard Street North, Ballarat Central	-	-	-	-	-	Yes Ref No H469	Yes	No
HO85	St Patrick's Presbytery (3 Lyons Street South, Ballarat Central), and O'Collins Hall (8 Dawson Street South, Ballarat Central)	Yes	No	No	Yes	No	No	No	No
HO86	Ballarat Terrace 227-231 Lydiard Street North, Soldiers Hill	Yes	No	No	Yes	Yes - front fences	No	No	No
HO87	Former Terrace	Yes	No	No	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	18-20 Lyons Street South, Ballarat Central								
HO88	Ballarat Municipal Observatory 439 Cobden Street (Cnr Magpie Street), Mount Pleasant	-	-	-	-	-	Yes Ref No H936	Yes	No
HO89	Former Pratt's Warehouse 101-103 Mair Street (Cnr Camp Street), Ballarat Central	-	-	-	-	-	Yes Ref No H955	No	No
HO90	House 505 Mair Street, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO91	Verandah and Shop 805 Mair Street, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO92	Aquinas College 1200 Mair Street, Lake Wendouree	Yes	No	Yes	Yes	No	No	No	No
HO93	Former Titheridge and Growcott 15-19 Main Road, Bakery Hill	Yes	No	No	Yes	No	No	No	No
HO94	Ballarat East Post Office 21 Main Road, Bakery Hill	Yes	No	No	Yes	Yes	No	No	No
HO95	Nazareth House 218 Mill Street, Lake Wendouree	Yes	Yes	No	Yes	Yes - fence	No	No	No
HO96	House 411A Neill Street, Soldiers Hill	Yes	No	Yes	Yes	Yes - lantern	No	No	No
HO97	Cemetery, Chinese Section, Alter	Yes	No	No	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	1250 Doveton Street North, Invermay Park								
HO98	Cemetery, Chinese Section, Oven 1250 Doveton Street North, Invermay Park	Yes	No	No	Yes	No	No	No	No
HO100	Old Curiosity Shop 7 Queen Street, Ballarat East	-	-	-	-	-	Yes Ref No H1982	No	No
HO101	House 14 Seymour Crescent, Soldiers Hill	Yes	No	No	Yes	No	No	No	No
HO102	House 16 Seymour Crescent, Soldiers Hill	Yes	No	No	Yes	Yes - fence, retaining wall and plinth	No	No	No
HO104	Ballarat Town Hall 225 Sturt Street, Ballarat Central	-	-	-	-	-	Yes Ref No H978	Yes	No
HO105	Titanic Memorial Bandstand Sturt Street, Ballarat Central	-	-	-	-	-	Yes Ref No H971	No	No
HO106	Queen Alexandra Bandstand Sturt Street, Ballarat Central	-	-	-	-	-	Yes Ref No H972	No	No
HO107	St Patrick's Cathedral & Hall 501 Sturt Street, south-west corner of Dawson Street, Ballarat Central	-	-	-	-	-	Yes Ref No H997	No	No
HO108	Grandstand	Yes	Yes	No	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	City Oval, 1402-1406 Sturt Street, Lake Wendouree						(On National Estate Register)		
HO109	Union Hotel 11 Sturt Street, Ballarat Central	Yes	No	No	Yes	No	No (On National Estate Register)	No	No
HO110	Former The Log Tavern 23 Sturt Street, Ballarat Central	Yes	Yes	No	Yes	No	No	No	No
HO111	Camp Hotel 36-38 Sturt Street, Ballarat Central	Yes	No	No	Yes	No	No (On National Estate Register)	No	No
HO112	Former Chamber of Commerce 42-46 Sturt Street, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO113	Former State Savings Bank 48 Sturt Street, Ballarat Central	Yes	No	No	Yes	No	No (On National Estate Register)	No	No
HO114	Ballaarat Mechanics Institute 113-121 Sturt Street, Ballarat Central	-	-	-	-	-	Yes Ref No H987	Yes	No
HO115	Former Unicorn Hotel façade and verandah 127 Sturt Street, Ballarat Central	-	-	-	-	-	Yes Ref No H1911	No	No
HO116	Former ANZ Bank	-	-	-	-	-	Yes	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	200-202 Sturt Street, Ballarat Central						Ref No H114		
HO117	Myer (Mitchell's Building) 301-305 Sturt Street, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO118	St Andrews Uniting Church 502 Sturt Street, Ballarat Central	-	-	-	-	-	Yes Ref No H44	No	No
HO119	Former Broadwood Flats 608-608A Sturt Street, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO120	Former Ballarat City Fire Station 702 Sturt Street, Ballarat Central	-	-	-	-	-	Yes Ref No H2236	Yes	No
HO121	House 704 Sturt Street, Ballarat Central	Yes	No	No	Yes	Yes - fence, coach house/stable	No (On National Estate Register)	No	No
HO122	Former Residence 802 Sturt Street, Ballarat Central	-	-	-	-	-	Yes Ref No H529	Yes	No
HO123	St Peter's Church of England 1307 Sturt Street, Ballarat Central	Yes	No	No	Yes	No	No (On National Estate Register)	No	No
HO124	House and Garden	Yes	No	Yes	Yes	Yes - fence	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	1421 Sturt Street, Newington						(Garden on National Estate Register)		
HO125	Former Bishop's Palace 1444 Sturt Street, Lake Wendouree	-	-	-	-	-	Yes Ref No H413	Yes	No
HO126	Former Mary's Mount Convent (Loreto Abbey) 1600 Sturt Street, Lake Wendouree	-	-	-	-	-	Yes Ref No H1017	Yes	No
HO127	Former Primary School 602 Urquhart Street, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO129	Terrace Houses 21, 23, 25 Victoria Avenue, Lake Wendouree	Yes	No	No	Yes	No	No	No	No
HO131	House and garden 111 Webster Street, Lake Wendouree	Yes	No	Yes	Yes	No	No (Garden on National Estate Register)	No	No
HO132	Lakeview Hotel 22 Wendouree Parade, Lake Wendouree	Yes	No	No	Yes	No	No (On National Estate Register)	No	No
HO133	Ballantrae 7208 Midland Hwy, Buninyong	-	-	-	-	-	Yes Ref No H551	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO134	Buninyong Town Hall and Court House 313 Learmonth Street, Buninyong	-	-	-	-	-	Yes Ref No H758	No	No
HO135	Former Library 408 Warrenheip Street, Buninyong	-	-	-	-	-	Yes Ref No H488	No	No
HO136	Former Primary School No. 668 456 Remembrance Drive (Cnr Draffins Road), Windermere	-	-	-	-	-	Yes Ref No H763	No	No
HO137	Former Ballarat Shire Hall 326 High Street, Learmonth	Yes	Yes	No	Yes	No	No (On National Estate Register)	No	No
HO138	Barnfield Cottage and Barn 195 Kennedys Road, Miners Rest	No	No	No	Yes	No	No (On National Estate Register)	No	No
HO139	Progress Hall (Former Methodist Church) 24 Church Street (Cnr Hillcrest Road), Nerrina	Yes	No	No	Yes	No	No (On National Estate Register)	No	No
HO140	St James Church of England 120 Hillcrest Road, Nerrina	Yes	No	No	Yes	No	No	No	No
HO141	Primary School No. 2093 Little Bendigo State School 30 Monte Street, Nerrina	-	-	-	-	-	Yes Ref No H1632	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO142	Former St Joseph's Orphanage 208-240 Grant Street (Crown Allotments 2, 3 & 4, Section 35, Township of Sebastopol), Sebastopol	Yes, All face brick and stone buildings	Yes, ground floor entrance and stair hall (north end) and central passage of the former Orphanage building (building 2)	Yes, Front garden setting include the fir trees, and the rear cypress and pine trees forming part of the setting to the lake	Yes	Yes	No	No	No
HO143	Yuille Cairn, Yuille Station Park, 37 Vickers Street, Sebastopol	Yes, Yuille Cairn only	No	No	Yes	No	No	No	No
HO144	MUIOOF(Manchester Unity Independent Order of Oddfellows) Lodge (former Southern Star Mine Office), 113 Albert Street, Sebastopol	No	No	No	Yes	No	No	No	No
HO145	Sebastopol State School No. 1167 (former), 185-187 Yarrowee Street, Sebastopol	Yes	No	Yes, English Oaks, English Elms, Bhutan Cypress boundary plantings	Yes	No	No	No	No
HO149	Olympic Rings Lake Wendouree Foreshore, Lake Wendouree	Yes	No	No	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO151	Gnarr Creek Air Vent Tower Corner Creswick Road and Doveton Street North, Ballarat Central	Yes	No	No	Yes	No	No	No	No
HO153	Old Ballarat Cemetery 904 Macarthur Street (Cnr Creswick Road), Lake Wendouree	Yes	No	No	Yes	No	No	No	No
HO154	Avenue of Honour and Arch of Victory Including all memorial name plaques, the Memorial Cairn and Cross of Remembrance, the Memorial Rotunda and Roll of Honour, and the Memorial Wall. Ballarat-Burrumbeet Road, Alfredton, Cardigan, Windermere, Weatherboard, Burrumbeet and Lucas.	-	-	-	-	-	Yes Ref No H2089	No	No
HO155	Stone Mileposts Glenelg Highway (between Ballarat and Scarsdale), Smythes Creek and Delacombe	-	-	-	-	-	Yes Ref No H1701	No	No
HO156	Former Redemptorist Monastery 300 and 300B Gillies Street North, 1320 and 1322 Howitt Street, and 11-37 Monastery Drive (NE Corner Howitt and Gillies Streets), Wendouree	Yes	No	No	Yes	No	No	No	No
HO157	House 301 Wendouree Parade, Lake Wendouree	Yes	No	No	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO158	Buninyong Botanic Gardens Gong Reservoir 201-209 Scott Street and 705 Inglis Street, Buninyong	-	-	-	-	-	Yes Ref No H1826	No	No
HO159	Former Female Refuge Complex 183 Scott Parade, Ballarat East	-	-	-	-	-	Yes Ref No H1893	No	No
HO160	Eureka Historic Precinct 501-525 Eureka Street, Eureka	-	-	-	-	-	Yes Ref No H1874	No	No
HO161	Ballarat High School 25 Gillies Street North (Cnr Sturt Street West), Lake Gardens	-	-	-	-	-	Yes Ref No H1797	No	No
HO162	House 108 Pleasant Street North, Lake Wendouree	Yes	No	No	Yes	No	No	No	No
HO163	Lake Wendouree Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	No	No	Yes	Yes	No	No	No	No
HO164	West Ballarat Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	No	No	Yes	Yes	No	No	No	No
HO165	Victoria Park Heritage Precinct Incorporated plan:	No	No	Yes	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	Ballarat Planning Scheme Heritage Control 2004								
HO166	Central Ballarat Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	No	No	Yes	Yes	No	No	No	No
HO167	Sturt Street Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	Yes	No	Yes	Yes	No	No	No	No
HO168	South Ballarat Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	No	No	Yes	Yes	No	No	No	No
HO169	Waller Estate Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	No	No	Yes	Yes	No	No	No	No
HO170	Soldiers Hill Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	No	No	Yes	Yes	No	No	No	No
HO171	Lydiard Street Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	Yes	No	Yes	Yes	No	No (Ballarat Central Conservation	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
							Area on National Estate Register)		
HO172	Creeks and River Channels Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	No	No	Yes	Yes	No	No	No	No
HO173	Mount Pleasant / Golden Point Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	No	No	Yes	Yes	No	No	No	No
HO174	Black Hill Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	No	No	Yes	Yes	No	No	No	No
HO175	Humffray Street Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	No	No	Yes	Yes	No	No	No	No
HO176	Bridge Mall-/Bakery Hill Heritage Precinct Statement of Significance: Bridge Mall/Bakery Hill Heritage Precinct: Revised Statement of Significance, March 2023.	Yes No	No	Yes No	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	Incorporated plan: Ballarat Planning Scheme Heritage Control 2004								
HO177	Victoria Street Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	No	No	Yes	Yes	No	No	No	Yes VAHR 7622-0186
HO178	Ballarat East Civic Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	No	No	Yes	Yes	No	No	No	No
HO179	Eureka Street Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	No	No	Yes	Yes	No	No	No	No
HO180	Learmonth Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	No	No	Yes	Yes	No	No	No	No
HO181	Buninyong Heritage Precinct Incorporated plan: Ballarat Planning Scheme Heritage Control 2004	Yes	No	Yes	Yes	No	No	No	No
HO182	Eureka Memorials, Old Ballarat Cemetery	-	-	-	-	-	Yes Ref No H1007	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	904 Macarthur Street (cnr Creswick Road), Ballarat Central								
HO183	St Aidan's Heritage Precinct Incorporated plan: Ballarat Heritage Precincts Study Part A 2006	No	No	Yes	Yes	No	No	No	No
HO184	Colpin Avenue Heritage Precinct Incorporated plan: Ballarat Heritage Precincts Study Part A 2006	No	No	Yes	Yes	No	No	No	No
HO185	Dowling Street Heritage Precinct Incorporated plan: Ballarat Heritage Precincts Study Part A 2006	No	No	Yes	Yes	No	No	No	No
HO186	Old Showgrounds Heritage Precinct Incorporated plan: Ballarat Heritage Precincts Study Part A 2006	No	No	Yes	Yes	No	No	No	No
HO187	Creswick Road/Macarthur Street Heritage Precinct Incorporated plan: Ballarat Heritage Precincts Study Part A 2006	No	No	Yes	Yes	No	No	No	No
HO188	Barkly Street/Humfray Street South Heritage Precinct Incorporated plan:	No	No	Yes	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	Ballarat Heritage Precincts Study Part A 2006								
HO189	Scar Tree Lot S2 Cuthberts Road, Alfredton	No	No	Yes	Yes	No	No	No	Yes
HO190	Former Ballarat RAAF Base 1 Airport Access Road, Mitchell Park	-	-	-	-	-	Yes Ref No H2113	Yes	No
HO191	St Pauls Anglican Church 3 Humffray Street South, Bakery Hill	-	-	-	-	-	Yes Ref No H401	Yes	No
HO192	Regent Picture Theatre 49 Lydiard Street North, Ballarat Central	-	-	-	-	-	Yes Ref No H2221	Yes	No
HO194	Former Prince of Wales & Bonshaw Company gold mining site and residence 362 Albert St, Sebastopol	No	No	No	Yes	No	No	No	No
HO195	Former St. James Presbyterian Church 10 Creswick Street, Miners Rest	Yes	No	No	Yes	No	No	Yes	No
HO196	Selkirk House 436 Wendouree Parade, Ballarat	Yes	No	No	Yes	No	No	No	No
HO197	Gateway and curtilage including two mature trees (elm trees), driveway and four mature trees (three elm trees and a pine tree)	Yes	No	Yes	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	Arranmore, Howe Street, Miners Rest								
HO198	House 'Edale', 99 Albert Street, Sebastopol	No	No	No	Yes	No	No	No	No
HO199	Clontarn (former Southern Star Mine Managers Residence), 122 Albert Street, Sebastopol	No	No	No	Yes	No	No	No	No
HO200	Sebastopol Post Office (former), 176 Albert Street, Sebastopol	No	No	No	Yes	No	No	No	No
HO201	Melbourne House store, 186A Albert Street, Sebastopol	Yes	No	No	Yes	No	No	No	No
HO202	Bank of Victoria (former), 197 Albert Street, Sebastopol	No	No	No	Yes	No	No	No	No
HO203	Holy Trinity Church Complex (Church, Hall, Sunday School and trees), 227 Albert Street, Sebastopol	No	No	Yes 2 English Elms on rear property boundary	Yes	No	No	No	No
HO204	Ballarat South Uniting Church Mission Centre, 104-6 Albert Street, Sebastopol	No	No	No	Yes	Yes, low brick front fence and iron gates	No	No	No
HO205	Masonic Lodge, 173-175 Albert Street, Sebastopol	Yes	No	No	Yes	No	No	No	No
HO206	Sebastopol Town Hall Complex, 183-185 Albert Street, Sebastopol	No	No	Yes, English Elm fronting Wilson Lane	Yes	No	No	No	No
HO207	Row of 1920s Shops, 206, 206a-c Albert Street, Sebastopol	No	No	No	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO208	Carmel Welsh Presbyterian Church Complex, including former manse and trees, 261- 265 Albert Street, Sebastopol	No	No	Yes, All mature trees within the complex - English Oak, Giant Redwood and English Elms	Yes	Yes, Memorial entrance to church including brick piers; low brick fence to manse at 261 Albert Street.	No	No	No
HO209	Royal Mail Hotel, 288-290 Albert Street, Sebastopol	No	No	No	Yes	No	No	No	No
HO210	1940s Garage, 129 Beverin Street, Sebastopol	No	No	No	Yes	No	No	No	No
HO211	RSL Memorial Hall, 10 Birdwood Avenue, Sebastopol	No	No	No	Yes	No	No	No	No
HO212	Roxburgh Dairy Farm (former) 624 Glenelg Highway, Smythes Creek The curtilage contains the c1850s cottage, 1870s farmhouse, a pair of Canary Island Palms, a collection of farm outbuildings from the late 19 th C and early 20 th C and the archaeological site of a third farmhouse of c1890s on the east side of the entrance drive.	No	No	Yes, 2 Canary Island Palms	Yes	No	No	No	No
HO213	Smythes Creek State School No. 1504 (former), 606 Glenelg Highway, Smythes Creek	No	No	No	Yes	No	No	No	No
HO214	House, 4 Hertford Street, Sebastopol	No	No	No	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO215	Redan State School No. 1289, 32-48 Hertford Street, Sebastopol	No	No	Yes, Lawson's Cypress planted in 1953	Yes	Yes – Jubilee Gates (cnr. Hertford & Albert Streets)	No	No	No
HO216	Copernicus Hall, 26-28 Orion Street, Sebastopol	No	No	No	Yes	Yes	No	No	No
HO217	Ploughman's Arms Hotel (former), 300 Tait Street, Bonshaw The curtilage includes the extent of the fabric dating 1880s – 1920s including the larger timber building and rear timber extension and stables.	No	No	No	Yes	No	No	Yes	No
HO218	Interwar Bungalow Heritage Precinct 2: 90, 92, 94, 96, 98, 100 Albert Street, Sebastopol	No	No	No	Yes	Yes, All front fences	No	No	No
HO219	Cornish Row Heritage Precinct 363-377 Albert Street, Sebastopol	Yes, 371 & 373 Albert Street	No	No	Yes	No	No	No	No
HO220	Timber Mining Cottage Series: 133 Albert Street, Sebastopol 9, 37 & 49-51 Birdwood Avenue, Sebastopol 32 & 38 Charlotte Street, Sebastopol 21 & 23 Victoria Street, Sebastopol 10 Walker Street, Sebastopol 49 Wilsons Lane, Sebastopol	No	No	No	Yes	Yes	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	197 & 209 Yarrowee Street, Sebastopol								
HO221	Late Victorian Timber Residence Series: 77, 102, 155, 160, 168, 193, 208, 230, 240, 280 Albert Street, Sebastopol 140 Beverin Street, Sebastopol 3 Bridge Street, Sebastopol 100 & 114 Grant Street Sebastopol 1 & 7 Kent Street Sebastopol 101 & 103 Vickers Street, Sebastopol 62 & 73 Yarrowee Street, Sebastopol	No	No	Yes, three Canary Island Palms at 73, 160 and 168 Albert Street	Yes	Yes	No	No	No
HO222	Late Federation Residence Series: 166 & 226 Albert Street, Sebastopol	No	No	No	Yes	No	No	No	No
HO223	Redan Prince of Wales Store (former) 2 Albert Street, Sebastopol	No	No	No	Yes	No	No	No	No
HO224 Interim control Expiry date: 31 March 2021	Former Eureka Lead Gold Sluicing Company Pumping Site 113 Lofven Street and Crown Allotment 22C Section AA, Nerrina Statement of Significance: Former Eureka Lead Gold Sluicing Company Pumping Site Statement of Significance, 2019	No	No	No	Yes	No	No	No	No

BALLARAT PLANNING SCHEME

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO225	Ballarat Saleyards (former) 1020 La Trobe Street, Delacombe Statement of Significance: Ballarat Saleyards (former) - Statement of Significance, November 2019	Yes	Yes	No	Yes	Yes	No	No	No
HO232 Interim control Expiry date: 1 September 2024	Lintel Grange Homestead Complex 127 Edmonston Road, Addington	No	No	Yes - Mature Privet hedge, Mature Ash and Walnut tree and Weeping Nootka Cypress	Yes	Yes - Granite piers and slabs at entry, the pre 1900 outbuildings constructed of brick, bluestone, granite, galvanised iron and timber located to the north, east and south of the homestead.	No	No	No

BALLARAT PLANNING SCHEME

15/01/2024
VC249

SCHEDULE TO CLAUSE 72.04 INCORPORATED DOCUMENTS

1.0 Incorporated documents

15/01/2024
VC249 Proposed C243ball
(Part 1)

Name of document	Introduced by:
Alfredton West Precinct Structure Plan 2011	C150
Australian Standard AS2021-2015, Acoustics – Aircraft Noise Intrusion – Building Siting and Construction, Standards Australia Limited, 2015	VC107
Ballarat & Queen’s Anglican Grammar School Foundation Ltd, Lot 2 (PS622085) Gillies Road, Mount Rowan 9 April 2013	C169
Ballarat Base Hospital New Facilities Project, April 2013	C171
Ballarat GovHub Incorporated Document, January 2018	C209
Ballarat Heritage Precincts – Statements of Significance, 2006 (revised August 2014 <u>May 2023</u>)	C164
Ballarat Heritage Precincts Study Part A 2006 – Incorporated Plan (revised June 2014)	C182
Ballarat Heritage Precincts Study Part A 2006 – Statements of Significance	C107
Ballarat Line Upgrade Incorporated Document, August 2018	GC95
Ballarat Planning Scheme Heritage Control 2004 – Incorporated Plan (revised October 2015 <u>December 2023</u>)	E499C243ball (Part 1)
Ballarat Saleyards (former) - Statement of Significance, November 2019	C222ball
Ballarat Station Precinct Redevelopment Incorporated Document, August 2016 (Amended April 2021)	C229ball
Ballarat Strategy Plan 1998	NPS1
Ballarat Terminal Station Incorporated Document September 2017	C208
Ballarat Tourism Marketing Strategy 1995	NPS1
<i>Ballarat West Development Contributions Plan</i> (Urban Enterprise, December 2023)	VC249
Ballarat West Groundwater Supply Project - Incorporated Plan	C112
Ballarat West Native Vegetation Precinct Plan 8 March 2012	C158
Ballarat West Precinct Structure Plan October 2016	C203
Ballarat Western Link Road (Stage 2) Incorporated Document, September 2016	C170
<u>Bridge Mall/Bakery Hill Precinct: Revised Statement of Significance, March 2023</u>	<u>C243ball (Part 1)</u>
Burrumbeet Creek Catchment Local Floodplain Development Plan 2015 – Incorporated Document	C178
Central Victoria Livestock Exchange, Ballarat October 2015	C185
Eureka Stadium Upgrade Project Incorporated Document, March 2016	C197
Former Eureka Gold Sluicing Company pumping site Statement of Significance, 2019	C211ball
Goulburn-Murray Water Native Vegetation Code of Practice, February 2011	C153
Invermay Miniature Railway July 2002 - Incorporated Plan	C50
Invermay Regional Study and Land Management Plan 1991	NPS1
Koala Plan of Management - Koala Planning Map July 2006	C95

BALLARAT PLANNING SCHEME

Name of document	Introduced by:
Lake Federation Resort Draft Master Plan A C511 CP 055b, dated August 2004	C64
Lake Federation Resort Main Components Plan C511 CP 039c dated August 2004	C64
Lake Federation Resort Staging Plan C511 CP 037b dated August 2004	C64
Plan for the future development of the Western Freeway titled "Proposed Works Area" and dated 26/7/2000	C13

Bridge Mall / Bakery Hill Heritage Precinct:

REVISED Statement of Significance, July 2024

<p>Heritage place: Bridge Mall / Bakery Hill Heritage Precinct [Bridge Mall, Ballarat Central & Bakery Hill; Coliseum Walk, Ballarat Central; Curtis Street (part), Ballarat Central; Humffray Street South (part), Bakery Hill; Little Bridge Street (part), Ballarat Central & Bakery Hill; Main Road (part), Bakery Hill; Norwich Plaza, Ballarat Central; Peel Street South (part), Ballarat Central & Bakery Hill; Victoria Street (part), Bakery Hill.</p>	<p>PS ref no.: HO176</p>
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Looking west towards Bridge Mall from Bakery Hill (GJM Heritage, June 2021).

What is significant?

The Bridge Mall / Bakery Hill Heritage Precinct, Ballarat Central and Bakery Hill.

The precinct is bordered by Curtis Street to the north, Grenville Street to the west, Little Bridge Street and Porter Street to the south and properties on the eastern side of Humffray Street to the east. Properties at 1 and 14 Victoria Street, east of Humffray Street, are included within the precinct.

Elements that contribute to the significance of the place include (but are not limited to):

- Commercial buildings that demonstrate the precinct's development from the 1850s to the 1950s, including Victorian, Federation, Interwar and a small number of early Postwar buildings.

- Civic, institutional and residential buildings dating from the late nineteenth to the mid-twentieth century at the eastern end of the precinct.
- Original and remodelled facades, including those currently concealed by late twentieth-century metal overcladding, and early or original shopfronts and cantilevered awnings.
- Largely intact rear building elevations visible from the public realm, some featuring ghost signage and outbuildings.
- Largely intact roofscapes, including roof form and chimneys, which illustrate the era in which each building was constructed, including those whose front facades were remodelled during the interwar and early postwar periods, or more recently hidden behind metal overcladding.
- Intact bluestone lanes, channels and kerbs, including remnant fixing points on kerbs from past posted verandahs.
- The irregular subdivision pattern and street layout of the eastern part of the precinct, a legacy of gold mining activity and the unplanned nature of the early development.
- The alignment of the Yarrowee River expressed in the north-south link through the precinct.
- The archaeological potential where low-lying land around the Yarrowee River was infilled in the 1860s up to two metres deep, and the Main Road area where ground levels were raised multiple times (up to four metres in all) in the 1850s and '60s in response to a deluge of sludge from nearby gold diggings.
- Its location as the historic entry point to the City of Ballarat when travelling by road from Melbourne and Geelong.
- The connection of Bakery Hill to the 1854 Eureka Rebellion, as the site where miners met and organised prior to the uprising.
- Key views from within and through the precinct, including towards the significant civic landmarks on Sturt Street and Lydiard Street towards the west, and St Paul's Anglican Church and Mount Warrenheip to the east.

The following properties are individually Significant: 24-26, 31, 86, 95-99 & 100 Bridge Mall; 1A (VHR H401), 7 & 9 Humffray Street South; 77 Little Bridge Street; 2/15-19 (HO93), 21 (HO94) & 38 Main Road; 1-6/3 Peel Street South; and 10 & 14 Victoria Street.

Later buildings, street infrastructure, paving and alterations and additions to the properties are not significant.

How is it significant?

The Bridge Mall / Bakery Hill Heritage Precinct is of local historical, representative (architectural), aesthetic, and scientific (archaeological) significance to the City of Ballarat.

Why is it significant?

The Bridge Mall / Bakery Hill Heritage Precinct is of historical significance as the oldest commercial centre in East Ballarat and one of the oldest in the City of Ballarat. Developed from the 1850s as a result of gold discoveries in the area, the irregular subdivision pattern and street layout is a legacy of the unplanned development that took place as a result of the chaotic gold mining activities of the time, as well as being dictated by the crossing point for the Yarrowee River. The buildings and early street fabric within the Bridge Mall / Bakery Hill Heritage Precinct illustrate the key phases in the City of Ballarat's development – from the area's early gold mining activities, to the boom-era of the late nineteenth century, renewed prosperity and modernisation in the interwar era, and the slower development in the early Postwar period – and demonstrate the precinct's continuous and important role as a vibrant commercial centre for the City of Ballarat. The rear elevations and roofscapes illustrate changes over time, including the many Victorian buildings remodelled in the interwar period. The eastern end of the precinct (centred on Humffray Street) demonstrates the area's important civic and institutional role through the former East Ballarat Post Office,

St Paul's Anglican Church and Hall and the Australian Natives Association building. When travelling by road from Melbourne and Geelong, the precinct has served as the primary gateway to what is now the City of Ballarat since the mid-1800s. (Criterion A)

Bakery Hill is of historical significance for its association with the 1854 Eureka Rebellion, as the place where thousands of miners rallied during the Rebellion and as the location where Peter Lalor first raised the Eureka flag. (Criterion A)

The Bridge Mall / Bakery Hill Heritage Precinct is of significance for its research potential, due to major ground-raising in this area in the 1850s and '60s. Ground levels along Main Road were raised multiple times, to a combined four metres, in response to the influx of sludge runoff from nearby gold mining works. And there were engineering works carried out in the 1860s to raise the level of the street around the boggy Yarrowee River, by up to two metres. This indicates the possible survival of highly intact archaeological deposits, even buried ground floors of buildings in these two areas. (Criterion C)

The Bridge Mall / Bakery Hill Heritage Precinct is of significance as a substantially intact and visually cohesive representative example of a predominantly Victorian-era commercial centre, with some intact development and remodelled facades from the Federation, Interwar and early Postwar periods. Main Road and the eastern end of the precinct in particular demonstrate a high degree of uniformity in scale and form. Typical characteristics of such precincts – including a predominantly two-storey street wall (interspersed with some single and three-storey buildings), parapeted rendered or red brick facades with repetitive upper floor fenestration, some original or early ground floor shopfronts with some original cantilevered awnings or reconstructed posted verandahs and bluestone kerbs and channels – are displayed in the original forms, fabric and detailing of many of the buildings. (Criterion D)

The Bridge Mall / Bakery Hill Heritage Precinct is of aesthetic significance as a distinctive and irregularly planned precinct that contrasts markedly to the highly ordered street and subdivision patterns to the west of Grenville Street. The precinct features commercial and civic buildings of high design quality dating from the Victorian and Federation periods, with some refacing of Victorian shopfronts in the 1930s in a Moderne style, and a small number of restrained buildings from the early Postwar period. Key examples from the Victorian era include the Classical Revival Munster Arms Hotel at 10 Victoria Street designed by Henry R Caselli in 1864, the Venetian Gothic former East Ballarat Post Office at 21 Main Street (HO94), the three-storey Classical Revival building at 24-26 Bridge Mall, the Anglo-Dutch gabled shop at 31 Bridge Mall, the High Victorian former North Grant Hotel at 3 Peel Street South, and the former Titheridge & Grocott real estate office at 15-19 Main Road (HO93). While there are few Federation-era buildings in the precinct, they are of high quality, including the W Mew Gun herbalist shop at 38 Main Road, and the Federation bungalow at 9 Humffray Street South. Fine examples of interwar architecture include the Jazz Moderne remodelling and shopfront of the Walter Davis women's clothing store at 86 Bridge Road and the warehouse wing to the rear (77 Little Bridge Street), and the Jazz Moderne former State Savings Bank of Victoria at 95-99 Bridge Mall. Within the precinct there are highly intact shopfronts that feature details such as lead lighting, such as the ornate Gears' shopfront at 100 Bridge Mall. Many of the buildings have highly intact rear elevations, often visible from the public realm. In particular, buildings to the rear of 101-121 Bridge Mall form a picturesque collection of highly intact rear wings some with remnant historic signage. Within this group there are some sites that retain a Victorian rear wing while the front section has been rebuilt in the late twentieth century. (Criterion E)

The precinct forms an important part of the linear views from Sturt Street to Mount Warrenheip, St Paul's Anglican Church and the East Ballarat Fire Station tower. The Bakery Hill end of the precinct offers panoramic views of Central Ballarat and views of the grand landmark civic buildings located in the Sturt Street and Lydiard Street Precincts, including the former Ballarat Post Office, Ballarat Town Hall, St Andrew's Uniting Church, the former Ballarat Fire Station and Ballarat Railway Station. (Criterion E)

The Stone's Department Store at 2-4 Main Road had a long association with the Stone family, and in particular prominent local figure and designer Jessica Simon (née Stone; 1906-1982). Stone's Drapery Store first traded on the site in 1860 and became an enduring local landmark. By the mid-twentieth century Stone's

had evolved to become a 'select ladies dress shop' under the directorship of Jessica Simon. Jessica was a well-known local identity recognised as a fashion designer, philanthropist and local style icon, known for her media appearances and charity work in the local community. The store closed in 1966 and Jessica, with her husband Paul, continued to be prominent figures in the local community. In 1979 Jessica was awarded the British Empire Medal honouring her lifetime commitment to philanthropic work. (Criterion H)

Primary sources:

Ballarat Heritage Study Stage 2, by Hansen Partnership P/L, Wendy Jacobs et al., 2003

Review by GJM Heritage 2021

Peer review by Landmark Heritage 2023

Peer review by David Helms Heritage 2024

Gradings:

Address	Grading	Era	Comments
2 Bridge Mall	Non-contributory	Contemporary	
6 Bridge Mall	Contributory	Early postwar	6-8 are a pair of two-storey buildings
8 Bridge Mall	Contributory	Early postwar	6-8 are a pair of two-storey buildings
10 Bridge Mall	Contributory	Interwar	Designed by Clegg, Morrow & Cameron in 1928
12-14 Bridge Mall	Non-contributory	Contemporary	
16 Bridge Mall	Non-contributory	Contemporary	
17 Bridge Mall	Contributory	Interwar	Designed by H.L. Coburn in 1939
18 Bridge Mall	Contributory	Victorian	
22 Bridge Mall	Non-contributory	Contemporary	
23 Bridge Mall	Non-contributory	Contemporary	
24 Bridge Mall	Significant	Victorian	24-26 are a pair of three-storey buildings; retains painted ghost sign on west side elevation
25 Bridge Mall	Contributory	Victorian	
26 Bridge Mall	Significant	Victorian	24-26 are a pair of three-storey buildings; 26 has neo-Victorian shopfront
27 Bridge Mall	Contributory	Victorian	27-29 pair of Victorian two-storey shops
28 Bridge Mall	Non-contributory	Contemporary	
29 Bridge Mall	Contributory	Victorian	27-29 pair of Victorian two-storey shops
30 Bridge Mall	Contributory	Victorian	Façade hidden beneath post-war metal cladding
31 Bridge Mall	Significant	Victorian	1891 on parapet
32 Bridge Mall	Contributory	Interwar	
33 Bridge Mall	Non-contributory	c1960s	
34 Bridge Mall	Contributory	Victorian	
35 Bridge Mall	Non-contributory	Contemporary	
38-40 Bridge Mall	Contributory	Interwar	
2/40 Bridge Mall	Non-contributory	Contemporary	
42 Bridge Mall	Contributory	Victorian	Façade hidden beneath post-war metal cladding

Address	Grading	Era	Comments
43 Bridge Mall	Contributory	Victorian	
45 Bridge Mall	Contributory	Victorian	
46 Bridge Mall	Contributory	Victorian	Façade hidden beneath post-war metal cladding
47 Bridge Mall	Non-contributory	Contemporary	
48 Bridge Mall	Contributory	Victorian?	Façade hidden beneath post-war metal cladding
50 Bridge Mall	Non-contributory	Contemporary	
52 Bridge Mall	Non-contributory	Contemporary	
53 Bridge Mall	Contributory	Interwar	53-55 are a single building
54 Bridge Mall	Contributory	Victorian	Neo-Victorian shopfront
55 Bridge Mall	Contributory	Interwar	53-55 are a single building
56-58 Bridge Mall	Contributory	Victorian	
57 Bridge Mall	Non-contributory	c1960s	
59 Bridge Mall	Contributory	Victorian	Neo-Victorian shopfront
60 Bridge Mall	Non-contributory	Contemporary	
62 Bridge Mall	Contributory	Interwar	
62A Bridge Mall	Contributory	Interwar	62A appears to be the rear of No. 62
63 Bridge Mall	Contributory	Interwar	Former Coles Store No.22. 63-65 are a single building
64 Bridge Mall	Non-contributory	Contemporary	
65 Bridge Mall	Contributory	Interwar	Former Coles Store No.22. 63-65 are a single building.
66 Bridge Mall	Contributory	Victorian	
67-69 Bridge Mall	Contributory	Victorian	67-73 are a single building; only 73 intact
68-70 Bridge Mall	Non-contributory	Victorian	
71 Bridge Mall	Contributory	Victorian	67-73 are a single building; only 73 intact
72 Bridge Mall	Contributory	Victorian	
73 Bridge Mall	Contributory	Victorian	67-73 are a single building; only 73 intact
74 Bridge Mall	Contributory	Victorian	
75 Bridge Mall	Contributory	Victorian	75-77 are a single building
76 Bridge Mall	Contributory	Victorian	
77 Bridge Mall	Contributory	Victorian	75-77 are a single building
78 Bridge Mall	Contributory	Victorian	
79-81 Bridge Mall	Non-contributory	late 20th century	
80 Bridge Mall	Contributory	Victorian	
82 Bridge Mall	Contributory	Victorian	
83 Bridge Mall	Non-contributory	Contemporary	
84 Bridge Mall	Contributory	Early postwar	
85 Bridge Mall	Contributory	Interwar	Retains interwar or early postwar shopfront
85A Bridge Mall	Contributory	Interwar	85-85A are a pair; retains interwar or early postwar shopfront

Address	Grading	Era	Comments
86 Bridge Mall	Significant	Interwar	Fine Jazz Moderne building with elaborate original shopfront (Walter Davis women's clothing). Designed by H.L. Coburn. Shopfront installed by C.H. Ludbrook in 1923.
87 Bridge Mall	Contributory	Victorian	87-89 are a pair; retains early postwar shopfront; retains painted ghost sign on rear elevation
88 Bridge Mall	Contributory	Interwar	Designed by H.L. Coburn.
89 Bridge Mall	Contributory	Victorian	87-89 are a pair; retains early postwar shopfront; retains painted ghost sign on rear elevation
90 Bridge Mall	Contributory	Interwar	Retains part of fine quality Victorian building to rear, visible along Peel Street. Designed by H.L. Coburn.
91 Bridge Mall	Contributory	Interwar	91 & 93 are a pair
93 Bridge Mall	Contributory	Interwar	91 & 93 are a pair
94-96 Bridge Mall	Contributory	Victorian	
95 Bridge Mall	Significant	Interwar	95-99 a single building; original shopfront & awning
97 Bridge Mall	Significant	Interwar	95-99 a single building
98 Bridge Mall	Contributory	Victorian	
99 Bridge Mall	Significant	Interwar	95-99 a single building; original shopfront & awning
100 Bridge Mall	Significant	Victorian & Interwar	Grand Victorian shop (Gears ghost sign at top of parapet) with elaborate and intact c1910 shopfront
101 Bridge Mall	Non-contributory	Contemporary	neo-Victorian
103-107 Bridge Mall	Contributory (rear only)	Victorian	Two single-storey buildings: both have Non-contributory neo-Victorian front section and Contributory Victorian rear section
104 Bridge Mall	Contributory	Victorian	aka 102
109 Bridge Mall	Contributory	Victorian	Two 2-storey buildings in a terrace of three (with 113); neo-Victorian shopfronts
113 Bridge Mall	Contributory	Victorian	2-storey building in terrace with 103-107; neo-Victorian shopfronts. Two-storey rear wing (113A?) with hipped roof and corbelled eaves pre-dates the terrace at the front of the site
119-121 Bridge Mall	Contributory	Victorian	From west to east: single-storey doublefronted rendered building; Victorian single-storey timber building; terrace of 5 two-storey brick buildings (originally tuckpointed, now sandblasted); all have neo-Victorian shopfronts and verandahs

Address	Grading	Era	Comments
1 Coliseum Walk	Non-contributory	Contemporary	
4 Coliseum Walk	Non-contributory	Contemporary	
5 Coliseum Walk	Non-contributory	Contemporary	
6 Coliseum Walk	Non-contributory	Contemporary	
22-24 Curtis Street	Non-contributory	Contemporary	
28 Curtis Street	Non-contributory	Contemporary	
30 Curtis Street	Non-contributory	Contemporary	
32 Curtis Street	Non-contributory	Contemporary	
34 Curtis Street	Non-contributory	Contemporary	
46 Curtis Street	Non-contributory	Contemporary	
48 Curtis Street	Non-contributory	Contemporary	
Lv 1/50A Curtis Street	Non-contributory	Contemporary	
52 Curtis Street	Non-contributory	Contemporary	
54 Curtis Street	Non-contributory	Contemporary	
1 Humffray Street South	Non-contributory	Contemporary	
1A Humffray Street South	Significant - HO191/H401	Victorian	
5 Humffray Street South	Non-contributory	Post-war	
7 Humffray Street South	Significant	Victorian & interwar	Victorian gabled former church, behind 1920s ANA façade
8 Humffray Street South	Non-contributory	Contemporary	
9 Humffray Street South	Significant	Federation	Retains original concrete front fence posts
10 Humffray Street South	Non-contributory	Contemporary	
5 Little Bridge Street	Non-contributory	Contemporary	
7 Little Bridge Street	Non-contributory	Contemporary	
11 Little Bridge Street	Non-contributory	Contemporary	
Lv 1/11 Little Bridge Street	Non-contributory	Contemporary	
23 Little Bridge Street	Non-contributory	Contemporary	
25 Little Bridge Street	Non-contributory	Contemporary	
27 Little Bridge Street	Contributory	Victorian	former stables or coach house
33 Little Bridge Street	Non-contributory	Contemporary	
41 Little Bridge Street	Non-contributory	Contemporary	

Address	Grading	Era	Comments
45 Little Bridge Street	Non-contributory	Contemporary	
47 Little Bridge Street	Non-contributory	Contemporary	
59 Little Bridge Street	Non-contributory	Contemporary	
61 Little Bridge Street	Non-contributory	Contemporary	
77 Little Bridge Street	Significant	Interwar	Rear part of Walter Davis store (86 Bridge Mall), featuring leadlight windows
89 Little Bridge Street	Non-contributory	Contemporary	
110 Little Bridge Street	Non-contributory	Contemporary	
112 Little Bridge Street	Non-contributory	Contemporary	
2 Main Road	Contributory		Former Stones store; retains early post-war shopfront, cantilevered awning, and terrazzo entry floors
4 Main Road	Contributory		Former Stones store; retains early post-war shopfront, cantilevered awning, and terrazzo entry floors
11 Main Road	Non-contributory	1988	neo-Victorian
13 Main Road	Contributory	Victorian	Retains original Victorian timber shopfront
15-19 Main Road	Contributory	Victorian & c1940	Bluestone north wall; stained glass to front façade plus c1940 remodelling
1/15-19 Main Road	Contributory	Victorian	
2/15-19 Main Road	Significant, HO93	Victorian	Former Titheridge and Growcott real estate office; "1898" on parapet
2A/15-19 Main Road	Contributory	Victorian & c1940	
20 Main Road	Contributory	Victorian	
21 Main Road	Significant, HO94	Victorian	former East Ballarat Post Office
22-26 Main Road	Non-contributory	Contemporary	neo-Victorian timber two-storey buildings
28 Main Road	Contributory	Victorian	Retains original Victorian timber shopfront
30 Main Road	Contributory	Victorian	1892 on parapet
32A Main Road	Contributory	Victorian	
34-36 Main Road	Contributory	Victorian	
36A Main Road	Contributory	Victorian	
38 Main Road	Significant	Federation	Retains original shopfront; "W. Mew Gun" on parapet (a herbalist)
40 Main Road	Contributory	Early postwar	Intact shop with cream brick and glazed tiles, intact shopfront
42-44 Main Road	Contributory	Victorian	

Address	Grading	Era	Comments
46 Main Road	Non-contributory		carpark
48 Main Road	Non-contributory		carpark
50 Main Road	Non-contributory	Contemporary	
1-100 Norwich Plaza (part)	Contributory	Victorian & Early postwar	Row of 6 Vic shops given new façade. Former Morshead's Department Store c.1952 facade at south-eastern corner of Norwich Plaza addressing Bridge Mall.
1-100 Norwich Plaza (part)	Non-contributory	1962	Former Morshead's Department Store addressing Grenville & Curtis Streets.
1-6/3 Peel Street South	Significant	Victorian	Three-storey former North Grant (later Centenary and Ballarat) Hotel
2 Victoria Street	Non-contributory	1988	neo-Victorian
4 Victoria Street	Non-contributory	1988	neo-Victorian
2A Victoria Street	Non-contributory	1988	neo-Victorian
2B Victoria Street	Non-contributory	1988	neo-Victorian
6 Victoria Street	Non-contributory	1988	neo-Victorian
6A Victoria Street	Non-contributory	1988	neo-Victorian
6B Victoria Street	Non-contributory	1988	neo-Victorian
8 Victoria Street	Non-contributory	1988	neo-Victorian
10 Victoria Street	Significant	Victorian	1862 date on parapet
14 Victoria Street	Significant	Federation	1903 date on foundation stone



BALLARAT HERITAGE PRECINCTS
STATEMENTS OF SIGNIFICANCE 2006
(revised ~~August~~ May
20~~23~~14)

This document relates to the following Heritage Precincts in the Ballarat Planning Scheme Heritage Overlay:

Lake Wendouree	Map Ref	HO 163
West Ballarat	Map Ref	HO 164
Victoria Park	Map Ref	HO 165
Central Ballarat	Map Ref	HO 166
Sturt Street	Map Ref	HO 167
South Ballarat	Map Ref	HO 168
Waller Estate	Map Ref	HO 169
Soldiers Hill	Map Ref	HO 170
Lydiard Street	Map Ref	HO 171
Creeks & Rivers Channels	Map Ref	HO 172
Mount Pleasant/Golden Point	Map Ref	HO 173
Black Hill	Map Ref	HO 174
Humffray Street	Map Ref	HO 175
Bridge Mall/Bakery Hill	Map Ref	HO 176
Victoria Street	Map Ref	HO 177
Ballarat East Civic	Map Ref	HO 178
Eureka Street	Map Ref	HO 179
Learmonth	Map Ref	HO 180
Buninyong	Map Ref	HO 181

This document is to be used in conjunction with the draft *Guidelines for the Assessment of Heritage Planning Applications 2000*.

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- f* Hansen Partnership Pty Ltd.
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- f* Naga Services.
- f* Dr Jan Penney.
- f* Ms Vicki Johnson.

Ms Amanda Jean as the author of the revised Statements of Significance contained in this report. The Statement of Significance for the Victoria Street Precinct (HO177) was refreshed by Dr David Rowe following the recommendations in the Panel Report for Amendment C164 to the Ballarat Planning Scheme.

Table of Contents

Introduction	1
LAKE WENDOUREE HERITAGE PRECINCT	2
Lake Wendouree Heritage Precinct Statement of Significance	4
Buildings Not Significant to a Precinct.....	7
WEST BALLARAT HERITAGE PRECINCT	8
West Ballarat Heritage Precinct Statement of Significance	11
Buildings Not Significant to a Precinct.....	15
VICTORIA PARK HERITAGE PRECINCT	19
Victoria Park Heritage Precinct Statement of Significance	26
Buildings Not Significant to a Precinct.....	28
CENTRAL BALLARAT HERITAGE PRECINCT	29
Central Ballarat Heritage Precinct Statement of Significance	32
Buildings Not Significant to a Precinct.....	36
STURT STREET HERITAGE PRECINCT	43
Sturt Street Heritage Precinct Statement of Significance	45
Buildings Not Significant to a Precinct.....	48
SOUTH BALLARAT HERITAGE PRECINCT	50
South Ballarat Heritage Precinct Statement of Significance	53
Buildings Not Significant to a Precinct.....	57
WALLER ESTATE HERITAGE PRECINCT	69
Waller Avenue Heritage Precinct Statement of Significance.....	71
Buildings Not Significant to a Precinct.....	73
SOLDIERS HILL HERITAGE PRECINCT	74
Soldiers Hill Heritage Precinct Statement of Significance.....	77
Buildings Not Significant to a Precinct.....	80
LYDIARD STREET HERITAGE PRECINCT	88
Lydiard Street Heritage Precinct Statement of Significance	90
Buildings Not Significant to a Precinct.....	95
CREEKS AND RIVER CHANNELS HERITAGE PRECINCT	96
Creeks and River Channels Heritage Precinct Statement of Significance.....	114
Buildings Not Significant to a Precinct.....	115
MOUNT PLEASANT GOLDEN POINT HERITAGE PRECINCT	116
Mount Pleasant Golden Point Heritage Precinct Statement Of Significance	118
Buildings Not Significant to a Precinct.....	121
BLACK HILL HERITAGE PRECINCT	124
Black Hill Heritage Precinct Statement of Significance	126
Buildings Not Significant to a Precinct.....	128

HUMFFRAY STREET HERITAGE PRECINCT	129
Humffray Street Heritage Precinct Statement of Significance	131
Buildings Not Significant to a Precinct.....	134
BRIDGE MALL/BAKERY HILL HERITAGE PRECINCT	139
Bridge Mall/Bakery Hill Heritage Precinct Statement of Significance	141
Buildings Not Significant to a Precinct.....	145
VICTORIA STREET HERITAGE PRECINCT	147
Victoria Street Heritage Precinct Statement of Significance	150
Buildings Not Significant to a Precinct.....	153
BALLARAT EAST CIVIC HERITAGE PRECINCT	156
Ballarat East Civic Heritage Precinct Statement of Significance	158
Buildings Not Significant to a Precinct.....	161
EUREKA STREET HERITAGE PRECINCT	162
Eureka Street Heritage Precinct Statement of Significance	164
Buildings Not Significant to a Precinct.....	167
LEARMONTH HERITAGE PRECINCT	170
Learmonth Heritage Precinct Statement of Significance	173
Buildings Not Significant to a Precinct.....	177
BUNINYONG HERITAGE PRECINCT	179
Buninyong Heritage Precinct Statement of Significance.....	183
Buildings Not Significant to a Precinct.....	189

BRIDGE MALL/BAKERY HILL HERITAGE PRECINCT

Description / Precinct Boundaries

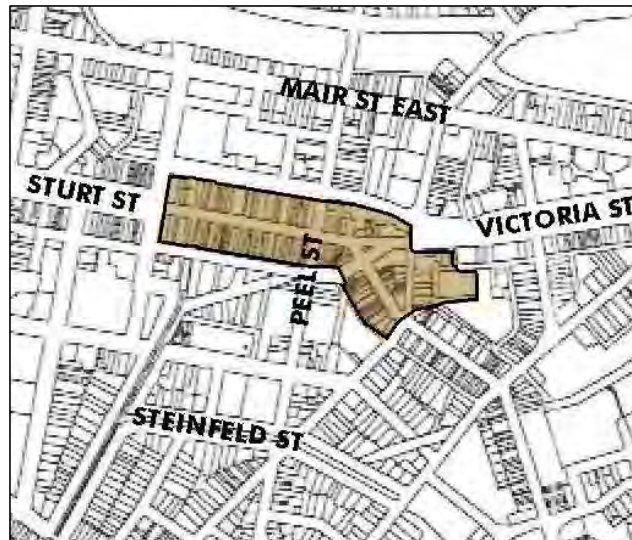


Figure 15 Bridge Mall / Bakery Hill Heritage Precinct Map, shown as "N" on the Proposed Ballarat Urban Heritage Precincts Map

Bridge Mall / Bakery Hill is a central Ballarat precinct comprising a predominantly built up commercial area with a few cultural/community and residential buildings.

The precinct focuses around Bridge Mall extending through to Curtis Street (which defines the northern border) and Little Bridge Street (which defines the southern border). The eastern section of the precinct includes the western ends of Porter Street, Main Road, Humffray Street South and Hopetoun Street (see map above). Grenville Street provides the western boundary.

Bridge Mall/Bakery Hill is one of the oldest commercial areas in Ballarat. The area was the main thoroughfare between the diggings in Ballarat Flat and the official township in Ballarat in the west. Bakery Hill played an important place in Australian history as being the meeting place for miners during the Eureka rebellion.

Buildings were known to exist along Main Road early as 1852. The first sale of land in Main Road occurred in February 1857. The government survey taken in 1857 shows mining activity occurring in this area.

Prior to 1862, Main Road extended to Grenville Street. The construction of the basic bridge over the Yarrowee Creek and the road became known as Bridge Street. The width of the bridge determined the narrow width of the road and traders built their premises in line with the road frontage. Regular flooding in the 1850's—1860's required the level of Bridge Street to be raised by six feet during that time.

The improved access Bridge Street afforded and improvements to Victoria Street encouraged traders to relocate from the further end of Main Road, consolidating Bridge Street as the main commercial focus. The horse drawn tram service and its

~~later electrification opened Bridge Street to the Ballarat west population. Public transport also enabled shopkeepers to relocate their families further out of the central Ballarat area.~~

~~By the 1960's Bridge Street had changed substantially and the verandahs were removed at this time and shopfronts altered. The pedestrian mall was created in 1981. Typically, the commercial and cultural/commercial buildings are 2 storey (some are 1 and 3 storey), constructed from brick or horizontal weatherboard, with hipped and/or gabled roof forms clad in galvanised corrugated iron; or tile and slate for cultural/community buildings. The buildings also feature dominant parapeted front facades, substantial clerestory rooflights, unpainted or rendered chimneys, early or original recessed shop fronts, timber or metal framed windows and individual detailing and decorations.~~

~~The key features of the precinct are the boulevard views west along Sturt Street and narrowed views east along Bridge Mall. Views to the rear of the buildings are seen from Little Bridge Street, Curtis, Victoria and Peel Streets. The precinct also retains some of the intact bluestone lanes, channels, gutters and kerbs. The kerbstones also important for the markings left in them by former verandah posts.~~

~~The precinct is architecturally important as it contains many original and early examples of Victorian, Federation and Interwar era commercial, cultural/community and residential buildings.~~

~~These include key landmark buildings such as the former Ballarat East Post Office, the former Munster Arms Hotel, the stepped series of brick buildings at 19–27 Victoria Street, the Bridge Mall Tavern, the former State Savings Bank of Victoria at 95–99 Bridge Mall and the 3 storey pair of buildings at 24–26 Bridge Mall.~~

BRIDGE MALL/BAKERY HILL HERITAGE PREICNCT STATEMENT OF SIGNIFICANCE

The Bridge Mall/Bakery Hill Precinct is **historically** significant at a **LOCAL** level (AHC criterion A & H.1).

A The place's importance in the course, or pattern, of Australia's natural or cultural history;

A.1 & H.1 Importance for association with events, developments, cultural phases and individuals which have had a significant role in the human occupation and evolution of the region.

The Precinct is historically significant as the oldest commercial retail area in Ballarat, located in the river flats of Yarrowee River. The Precinct was the narrow pivotal meeting point in the 1850s, between Main Road and the chaotic alluvial mining and commercial centre which spread over Ballarat Flats, Yarrowee Creek and Golden Point, and the official government township surveyed in 1851 and the police camp on the high basalt escarpment overlooking Yarrowee River to the west.

The Precinct is historically significant for its association with the early settlement of East Ballarat from the 1850s as a result of gold discoveries in the area, and with the early development of this particular area of East Ballarat as a focus of commercial and cultural/community activities in contrast with the contemporary government town that was being established under neoclassical auspices of hierarchy and axial ordering in West Ballarat.

The Precinct is historically significant for its association with Bakery Hill located on the high ground at the eastern end of the precinct, the site of the much analyzed place in Australian history as the meeting point for miners during the Eureka Rebellion, which took place on the Ballarat goldfields in November and December 1854. Defiant miners gathered at Bakery Hill in their thousands, in full view of the government camp, to air their grievances over mining licenses and corrupt officialdom. They stood together on Bakery Hill as Peter Lalor symbolically raised the Eureka Flag, with its design modeled on the stars of the Southern Cross. No physical evidence of this event remains at Bakery Hill, but the location nevertheless maintains its historical importance. Bakery Hill was also the site of an important deep lead, which although rich, was difficult to work due to high water levels.

The Precinct is historically significant for its association with the early un-planned area of East Ballarat that was subject to major flooding, noise, proliferation of mine shafts, pudding machines, debris, noxious fumes, polluted water and general environmental degradation associated with gold mining. A basic bridge was erected across Yarrowee River in 1862 to provide passage over this area. The width of the bridge is reported to have determined the width of Bridge Street and accordingly, storekeepers built the frontages of their shops to align with the bridge. Throughout the 1850s and 1860s, floods regularly harassed Bridge and Main Street retailers and in the 1860s engineering works were carried out to raise the level of the street, up to six feet in some places. The present day level of Bridge Street is considerably higher than it was during the 1850s and 1860s.

In particular the continuing commercial activities along Main Road are an important reminder of its early role as a flourishing commercial and retail thoroughfare in the

1850s. The commercial buildings in Main Road, Bridge Mall and Victoria Street are also associated with continuing commercial developments in the precinct from the 1860s and into the early decades of the twentieth century. Associations with the cultural/community developments in the precinct from the 1860s and into the early decades of the twentieth century are identified by St Paul's Anglican Church, its associated Parish Hall and the former ANA Hall, which was formerly a Seventh Day Adventist Church.

The Bridge Mall/Bakery Hill Precinct is **architecturally** significant at a **LOCAL** level (AHC criteria D.2, E.1).

(d) the place's importance in demonstrating the principal characteristics of: (i) a class of Australia's natural or cultural places; or (ii) a class of Australia's natural or cultural environments; (e) the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;

The Precinct is architecturally important because it demonstrates many original and intact historic architectural design qualities associated with the commercial and cultural/community development of the area between the 1850s and the late 1930s.

The commercial buildings in the Bridge Mall/Bakery Hill Precinct range in their period of construction from Victorian to Federation to Inter-war, although a number of 19th-century facades have been remodeled. There is an outstanding group of very early-19th-century two-storey shops in the eastern area, which may date to the 1850s/60s and which are a scarce example of a particular type of shop design that is no longer common. Although most of the commercial buildings are two-storey in height there are a number of historic single-storey buildings within the precinct. There is also a pair of notable semi-detached three-storey buildings at 24-26 Bridge Mall and the distinctive three-storey hotel at 92 Bridge Mall (on the corner of Peel Street). Many of the historic commercial buildings feature parapets, which are a dominant element in the streetscape. The dominant style of heritage buildings in this precinct is commercial Victorian erected from c.1865-c.1900. There is also a small number of commercial-Federation styled buildings erected from c.1890-c.1918 and a small number of commercial Inter-war styled buildings. Some of these were erected on the sites of earlier buildings from c.1920-c.1940 while others are nineteenth century buildings that have been substantially refaced.

The Precinct is architecturally important for the fine example of St Paul's Anglican Church in Humffray Street South, which forms a dramatic landmark on the skyline. Its architectural development is also important as an example of how the design and construction of buildings in this area were adapted to the risks associated with mining conditions of its site.

The Bridge Mall/Bakery Hill Precinct is **aesthetically** significant at a **LOCAL** level (AHC criteria D.2, E.1).

(d) the place's importance in demonstrating the principal characteristics of: (i) a class of Australia's natural or cultural places; or (ii) a class of Australia's natural or cultural environments; (e) the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;

The Precinct is aesthetically significant for its distinctive heritage visual qualities that assist in understanding the historical, cultural and architectural development of the area, particularly in contrast with Ballarat West, and contribute to the gold mining townscape of Ballarat. These views include the dramatic rear views of the buildings on the western basalt escarpment of Lydiard Street and Camp Street as well as internal rear views of the buildings within the precinct.

~~Most of these views originate from the distinctive topography of the Precinct whereby the rising ground in both directions provide enclosed vistas at each end and reinforce the sense of enclosure formed by the contrasting narrowness of Bridge Mall. These views include (but are not limited) to the confined commercial streetscape along Bridge Mall between Grenville Street and Peel Street South contrasted with the vista westwards up the wide boulevard of Sturt Street with its mature trees, memorials and dominant towers of the Town Hall and former Post Office on top of the escarpment; the views into and along Bridge Mall and Victoria Street from the eastern and western edges of the Precinct; the stepped facades of the significantly intact early buildings along the northern side of Victoria Street as it changes alignment from its intersection with Bridge Mall and inclines upwards towards the intersection with Humffray Street South; the complex vistas northwards along Humffray Street South and Main Road from the point where they intersect at a sharp angle on the south-eastern edge of the precinct; and the dynamic appearance of the rear facades of the commercial buildings throughout the Precinct, which can be seen from many locations both within and outside of the precinct, and comprise a variety of shapes, heights, sizes and building materials.~~

~~Other important aesthetic qualities are substantially demonstrated by the significant urban foci. Notably the distinctive former East Ballarat Post Office which forms a significant corner streetscape element at the south-eastern entry to the Precinct; St Paul's Anglican Church in Humffray Street South, which due to its position on the highest point of the precinct and its imposing tower, forms a dramatic landmark on the skyline and can be seen from many vantage points both within and outside of the Precinct; the Bakery Hill Tavern (the former Munster Arms Hotel) at 10 Victoria Street, and the stepped series of face brick buildings at 19-27 Victoria Street, which are both on prominent corner locations at the main eastern entry to the Precinct; the three-storey Bridge Mall Tavern (the former North Grand Hotel) at 92 Bridge Mall, which is also on a prominent corner location; the former State Savings Bank of Victoria at 95-99 Bridge Mall, which concludes the northern vista along Main Road; and the notable three-storey pair of buildings at 24-26 Bridge Mall, which can be seen from a number of vantage points both within and outside of the Precinct.~~

~~Further important aesthetic qualities are contributed by the well-detailed, stepped face brick retaining wall with a bluestone base and a rendered moulded capping and the short lengths of cast iron palisade fence with a bluestone plinth and piers of the former Ballarat East Post Office; and by the cast iron gates with heavy bluestone piers and the substantial and intricate cast iron palisade fence on a bluestone plinth of the St Paul's Anglican church site.~~

~~The Bridge Mall/Bakery Hill Precinct is **scientifically** significant at a **LOCAL** level (AHC criterion C.2).~~

~~*(c) the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history.*~~

~~*(f) the place's importance in demonstrating a high degree of creative or technical achievement at a particular period.*~~

~~The Precinct is of importance for contributing to a history of the infrastructure development of Ballarat East, as identified by the significantly intact bluestone lanes, channels, gutters and kerbs. The kerbstones are of additional significance for the markings left in them by former verandah posts.~~

The Bridge Mall/Bakery Hill Precinct is ~~socially~~ significant at a ~~LOCAL~~ level (AHC criterion G.1).

~~(g) the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;~~

~~The Precinct is recognized and highly valued by the local community for commercial and religious reasons.~~

Buildings Not Significant to a Precinct

The following buildings are considered to be 'not of heritage significance' to a heritage place ('the precinct') based on their period of construction. All other buildings within the area identified as the 'heritage precinct' are considered to be prima facie contributory to the significance of the heritage place.

The Statement of Significance for this heritage precinct identifies the period of construction that is of significance.

HO 176 BRIDGE MALL/BAKERY HILL PRECINCT

NO.	STREET NAME	SUBURB & POSTCODE
Rear 40	Bridge Mall	BALLARAT CENTRAL VIC 3350
Rear 34-40	Bridge Mall	BALLARAT CENTRAL VIC 3350
Rear 20-22	Bridge Mall	BALLARAT CENTRAL VIC 3350
Rear 34	Bridge Mall	BALLARAT CENTRAL VIC 3350
Rear 52	Bridge Mall (49 Bridge Street)	BALLARAT CENTRAL VIC 3350
Rear 54	Bridge Mall (49 Bridge Street)	BALLARAT CENTRAL VIC 3350
Rear 57	Bridge Mall (fronting Curtis Street)	BALLARAT CENTRAL VIC 3350
2-4	Bridge Mall	BALLARAT CENTRAL VIC 3350
14	Bridge Mall (extending to 11-15 Little Bridge Street frontage)	
16	Bridge Mall	BALLARAT CENTRAL VIC 3350
21	Bridge Mall	BALLARAT CENTRAL VIC 3350
23	Bridge Mall	BALLARAT CENTRAL VIC 3350
38-40	Bridge Mall (extending to Little Bridge Street frontage)	
47-49	Bridge Mall (extending to Curtis Street frontage)	BALLARAT CENTRAL VIC 3350
63-65	Bridge Mall	BALLARAT CENTRAL VIC 3350
79-81	Bridge Mall	BALLARAT CENTRAL VIC 3350
83	Bridge Mall	BAKERY HILL VIC 3350
Shop 3	Coliseum Walk	BALLARAT CENTRAL VIC 3350
Shop 5	Coliseum Walk	BALLARAT CENTRAL VIC 3350
26	Curtis Street	BALLARAT CENTRAL VIC 3350
28	Curtis Street	BALLARAT CENTRAL VIC 3350
30	Curtis Street	BALLARAT CENTRAL VIC 3350
32	Curtis Street	BALLARAT CENTRAL VIC 3350
34	Curtis Street	BALLARAT CENTRAL VIC 3350
22-24	Curtis Street	BALLARAT CENTRAL VIC 3350
58	Curtis Street	BALLARAT CENTRAL VIC 3350
102	Curtis Street	BALLARAT CENTRAL VIC 3350
46	Curtis Street (extending to a depth of 13 metres)	BALLARAT CENTRAL VIC 3350

NO.	STREET NAME	SUBURB & POSTCODE
1	Humffray Street	BAKERY HILL
8	Humffray Street	BAKERY HILL
5	Little Bridge Street	BALLARAT CENTRAL VIC 3350
23	Little Bridge Street	BALLARAT CENTRAL VIC 3350
26	Little Bridge Street	BALLARAT CENTRAL VIC 3350
28	Little Bridge Street	BALLARAT CENTRAL VIC 3350
30	Little Bridge Street	BALLARAT CENTRAL VIC 3350
32	Little Bridge Street	BALLARAT CENTRAL VIC 3350
33	Little Bridge Street	BALLARAT CENTRAL VIC 3350
45	Little Bridge Street	BALLARAT CENTRAL VIC 3350
47	Little Bridge Street	BALLARAT CENTRAL VIC 3350
110	Little Bridge Street	BALLARAT CENTRAL VIC 3350
112	Little Bridge Street	BALLARAT CENTRAL VIC 3350
25	Little Bridge Street	BALLARAT CENTRAL VIC 3350
11	Main Road	BAKERY HILL
CA1	Norwich Plaza Bridge Mall	BALLARAT CENTRAL VIC 3350
2	Victoria Street	BAKERY HILL
2A	Victoria Street	BAKERY HILL
4	Victoria Street	BAKERY HILL
6	Victoria Street	BAKERY HILL
6A	Victoria Street	BAKERY HILL
6B	Victoria Street	BAKERY HILL
8	Victoria Street	BAKERY HILL

**'Ballarat Planning Scheme Heritage Control 2004 –
Incorporated Plan (revised December 2023)
~~October 2015~~'**

This incorporated plan applies to all land in Heritage Overlay Map References:

- HO163 'Lake Wendouree Heritage Precinct',
- HO164 'West Ballarat Heritage Precinct',
- HO165 'Victoria Park Heritage Precinct',
- HO166 'Central Ballarat Heritage Precinct',
- HO167 'Sturt Street Heritage Precinct',
- HO168 'South Ballarat Heritage Precinct',
- HO169 'Waller Estate Precinct';
- HO170 'Soldiers Hill Heritage Precinct',
- HO171 'Lydiard Street Heritage Precinct',
- HO172 'Creeks and River Channels Heritage Precinct',
- HO173 'Mount Pleasant/Golden Point Heritage Precinct',
- HO174 'Black Hill Heritage Precinct',
- HO175 'Humffray Street Heritage Precinct',
- HO176 'Bridge Mall/Bakery Hill Heritage Precinct',
- HO177 'Victoria Street Heritage Precinct',
- HO178 'Ballarat East Civic Heritage Precinct',
- HO179 'Eureka Street Heritage Precinct',
- HO180 'Learmonth Heritage Precinct', and
- HO181 'Buninyong Heritage Precinct'.

It does not apply to any other heritage place listed in the Heritage Overlay.

No Permit Required

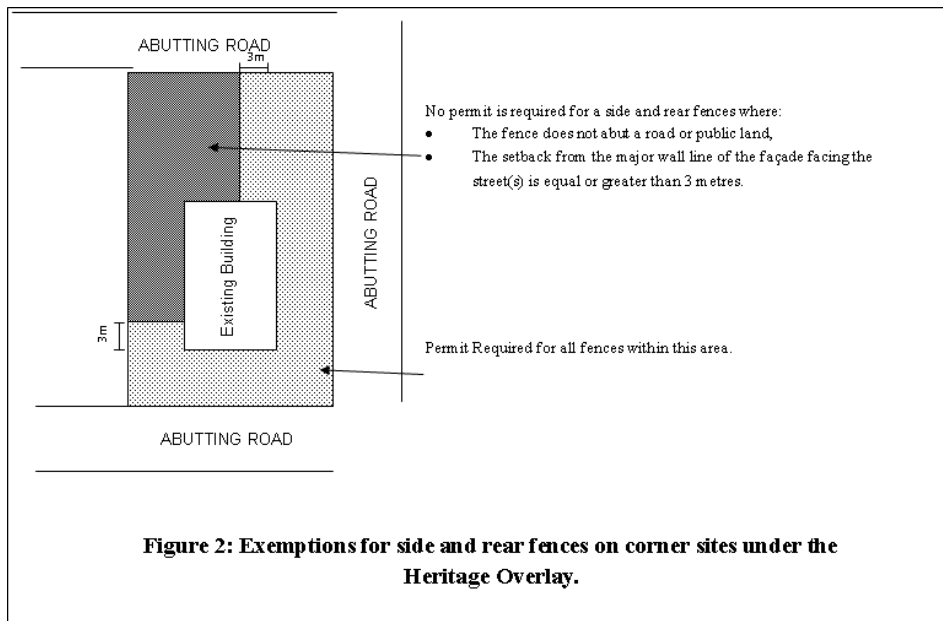
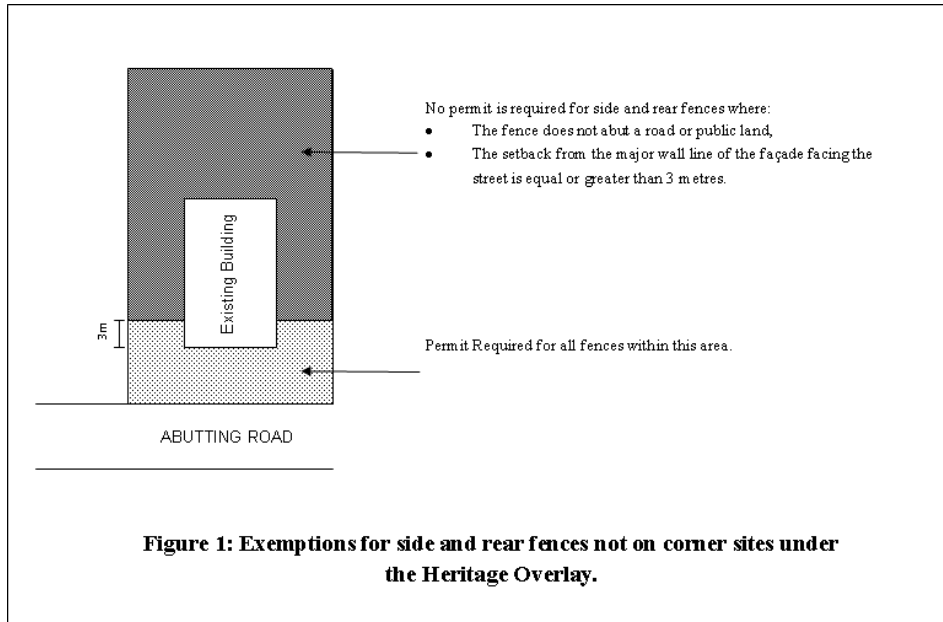
In addition to the provisions of 43.01-1 and 43.01-2, no permit is required to:

Demolition

- Demolish a building and associated outbuildings and fences within a site identified as being 'not of heritage significance' within the incorporated document Ballarat Heritage Precincts – Statements of Significance (2006).

Front Fences

- Construct a front fence 1.2 metres or less in height above footpath level except for the Waller Estate Precinct (HO169).



External Painting

- Externally paint a building* that:

- is located within that part of the Buninyong Heritage Precinct (HO181) identified within Map 1 to this incorporated plan.

*This plan does not exempt the need for a permit to paint an unpainted surface or to externally paint a building if the painting constitutes an advertisement.

Removal, lopping or pruning of trees

- Remove, lop or prune a tree in the following precincts with the exception of the following trees:

HO164 ‘West Ballarat Heritage Precinct’

Street trees of the following commonly named species:

Location	Tree Species
No specific location	Dutch Elm (<i>Ulmus x hollandica</i>)
No specific location	Silver Poplar (<i>Populus alba</i>)
No specific location	Lombardy Poplar
No specific location	Ash varieties
No specific location	Maple varieties
Alfred Street North - within the gravel shoulders on west side	Elms
Alfred Street South	Mature and juvenile Oak trees
Carlton Street - in grass/gravel shoulders on both sides	Mature trees and Oaks
City Oval - east, south and west sides	Mature trees including London Plane (<i>Platanus acrifolius</i>), English Oak (<i>Quercus robur</i>) Dutch, Elm (<i>Ulmus x hollandica</i>)
Crocker Street - in grass/gravel shoulders on both sides	Variety of semi mature trees including Oak, Plane, Maple, Ash, Elm
Eyre Street – both sides within the grass/gravel shoulders and later formed nature strips	Mature trees and Elms
Pleasant Street South - within grass/gravel shoulders of both sides	Plane
Russell Street - within road shoulders of on north east side	Oak

Privately owned trees of the following species:

- Canary Island Palms in private gardens in Balaclava Street.

HO166 ‘Central Ballarat Heritage Precinct’,

Street trees of the following commonly named species:

Location	Tree Species
Frank Street	Mature Elm, Oak and Plane trees
Gnarr Street	Mature Elm, Oak and Plane trees
Johnson Street	Mature Elm, Oak and Plane trees
Mair Street – west end	Mature Elm, Oak and Plane trees
Mair Street –north side west of Ripon Street	Mature conifers
Mill Street (to east of Drummond Street)	Mature Elm, Oak and Plane trees
Pleasant Street North – north section	Mature Elm, Oak and Plane trees
Webster Street	Mature Elm, Oak and Plane trees

HO167 ‘Sturt Street Heritage Precinct’

Street trees of the following commonly named species:

Location	Tree Species
Sturt Street	Mature Plane, Ash, Chestnut, and Oak species trees

HO168 ‘South Ballarat Heritage Precinct’

Street trees of the following commonly named species:

Location	Tree Species
No specific location	Mature Elm, Oak and Plane species trees
Skipton Street, Lyons Street South and Dawson Street South. (triangulated open space formed at the intersections of these streets)	Mature trees
Urquhart Street and Ripon Street South (South west corner)	Deodar Cedars (Cedurs deodar)
Western Oval Reserve	Mature pines and rows of mature elm

HO169 ‘Waller Estate Precinct’

Street trees of the following commonly named species:

Location	Tree Species
No specific location	Mature Elm, Plane, Ash and Silver Birch

	species trees
West end Muir Crescent – both sides	Silver Birch trees

HO170 ‘Soldiers Hill Heritage Precinct’

Street trees of the following commonly named species:

Location	Tree Species
Armstrong Street North (between Macarthur and Howard Streets)	Mature and semi mature trees including Elm, Oak and Plane species
Clarendon Street	Mature and semi mature trees including Elm, Oak and Plane species
Clissold Street (between Peel and Nicholson Streets),	Mature and semi mature trees including Elm, Oak and Plane species
Clyde Street	Mature and semi mature trees including Elm, Oak and Plane species
Crompton Street (between Howard and Brougham Streets)	Mature and semi mature trees including Elm, Oak and Plane species
Doveton Crescent,	Mature and semi mature trees including Elm, Oak and Plane species
Howard Street (west of intersection of Lydiard Street North) – within road shoulder	Mature native trees – predominantly Eucalypt species
Ligar Street (east side), north of its intersection with Seymour Street and Seymour Crescent	Mature conifers
Ligar Street, between Brougham and Howard Streets – within the central median strip	Semi-mature oak trees
Lydiard Street North (particularly between Macarthur and Brougham Streets)	Mature and semi mature trees including Elm, Oak and Plane species
Macarthur Street (between the railway line and Doveton Street North).	Mature and semi mature trees including Elm, Oak and Plane species
Neill Street (particularly between Clarendon and Macarthur Streets)	Mature and semi mature trees including Elm, Oak and Plane species
Peel Street – within nature strips	Native trees
Seymour Street (between Lydiard Street North and Neill Street)	Mature and semi mature trees including Elm, Oak and Plane species

Privately owned street trees of the following species:

- Two hoop Pines (*Araucaria cunninghamii*) at 16 Seymour Crescent.

- Weeping Elm (*Ulmus glabra* 'Camperdownii') at 108 Clarendon Street.

HO171 'Lydiard Street Heritage Precinct'

Street trees of the following commonly named species:

Location	Tree Species
Albert and Dana Street road reserve	Mature and young Elm trees
Camp Street – north section	Mature Elm trees
Doveton Street north near corner of Market Street	Mature deciduous trees
Shoppee Square, Sturt Street	Oak and Cedar species
Sturt Street – within centre median	Mature trees

HO173 Mount Pleasant/Golden Point Heritage Precinct'

Street trees of the following commonly named species:

Location	Tree Species
No specific location	Mature Elm and Plane trees
Steinfeld Street South – beside the Canadian Creek channel	Mature Elm and Plane trees

HO175 'Humffray Street Heritage Precinct'

Street trees of the following commonly named species:

Location	Tree Species
No specific location	Mature Elm, Plane and Ash trees
Eastern Oval – north, east and south perimeter	Mature elm and plane trees
Eastern Oval (north east of the grandstand)	Mature Dutch Elm (<i>Ulmus x hollandica</i>) known as the W G Grace Tree
Princes Street – nature strip on east side between Humffray Street north and Morres Street	Mature Elm and Plane trees
Scotts Parade - alongside from west side of Stawell Street towards Rice Street	Semi mature Elms
Scotts Parade - between King Street and Princes Street	Mature trees including Elms
Scotts Parade – between Queen Street and King Street	Ash trees

Scotts Parade – east of Queen Street	Mature elms
Scotts Parade – south side	Mature trees and in particular the Tasmanian Blue Gum (Eucalyptus globulus subsp. Globulus)
Scotts Parade – within reserve on located alongside the railway line between Queen and King Streets	Mature pines including Monterey Pines (Pinus radiata) and Corsican Pines (Pinus nigra var. Corsicana)
Scotts Parade (Reserve opposite 119 Scotts Parade)	largest specimen of Corsican Pines (Pinus nigra var. Corsicana)
Yarrowee Channel (along)	Mature Elms and Eucalypt trees

~~HO176 ‘Bridge Mall/Bakery Hill Heritage Precinct’~~

~~Privately owned trees of the following commonly named species:~~

- ~~• Single mature Elm Tree adjacent to the dwelling at the rear of St Paul’s Anglican Church, Humffray Street South.~~

HO177 ‘Victoria Street Heritage Precinct’

Street trees of the following commonly named species:

Location	Tree Species
No specific location	Mature trees English Oaks, Plane, Elm, Pin Oaks Claret Ash and other Ash varieties
Corbett Street - within the shoulders	Semi mature Ash trees
Dyte Parade - within grassed land between Dyte Parade and the railway line	Mature Oaks and native trees
East Street North – west side	Varieties of ornamental plum or pear species trees
Glazebrook Street – in the embankments north side between Queen, Otway and King Streets	Mature native trees, particularly mealeuca and eucalypt species
King Street North – east side within the shoulders	Semi mature Ash trees
King Street south – within grass/gravel shoulder east side (south of Hopetoun Street)	Mature trees, particularly Oaks
Mackenzie Reserve	Mature Lombardy Poplars, Plane tree and Ash trees
Oliver Street – within the grass/gravel shoulders	Semi mature Oak trees

Otway Street South - within the grass/gravel shoulders	Semi mature Oak and Elm trees
Pearse Street – within reserve adjacent to Pearse Street	Mature Tasmanian Blue Gum (Eucalyptus globulus subsp. Globulus)
Princes Street North – both sides	Mature and young Plane and Elm trees
Queen Street boundary of the former Ballarat east Primary School No. 1998	Mature Oak trees
Queen Street South - within the grass/gravel shoulders	Semi mature Oak and Elm trees
Rodier Street - within the grass/gravel shoulders	Semi mature Oak and Elm trees
Stawell Street South – east side within the grass/gravel shoulders	Mature trees, particularly Oaks
Trevor Street - nature strip of	Mature native trees, particularly mealeuca and eucalypt species
Victoria Street – adjacent to St Alipius Church.	Mature Maple and Conifer
Victoria Street - between East and Humffray Street	Mature English oaks
Victoria Street – between East Street and Princes Street	Mature English oaks
Victoria Street - between Princes Street and the bridge to the former Buninyong railway line.	Mature Plane, Elm and Pin Oak trees
Victoria Street – median strip between Princes Street and the bridge.	Semi mature Claret Ash, other Ash varieties, liquid ambers, Red Flowering Gums, Horse Chestnuts, ornamental Plums and Box Elders
Victoria Street – within grassed area between the railway reserve and Victoria Street near the divergence of Victoria Street.	Mature eucalyptus species

Privately owned trees of the following species:

- Mature Elm trees and Magnolia tree in the grounds of the former Ballarat Orphanage, 200 Victoria Street
- Mature Ash tree in front of the former Convent of the Sisters of Mercy

HO178 ‘Ballarat East Civic Heritage Precinct’

Privately owned trees of the following species:

- Mature Canary Island Pine associated with the Synagogue at 4 Barkly Street

- Mature Spanish Fir, Cedars and Oaks that remain as part of the former Ballarat East Town Hall gardens.

HO179 ‘Eureka Street Heritage Precinct’

Street trees of the following commonly named species:

Location	Tree Species
Bedford Street – west side	Semi mature Elm and Ash trees
Britannia Reserve (perimeter)	Mature exotic trees, predominantly Elm trees
George Street - south side within the grass/gravel shoulder	Mature Oak and Ash trees
Joseph Street – east side within the grass/gravel shoulders	Mature oak trees
King Street North – east side within the shoulder near the Specimen Vale channel	Mature Oak
Otway Street – both sides within shoulders	Oak trees
Queen Street South – both sides within nature strips	Semi mature Oak trees

HO180 ‘Learmonth Heritage Precinct’

Street trees of the following commonly named species:

Location	Tree Species
No specific location	Mature deciduous Elms, Plane and Oak trees
Learmonth Avenue of Honour, Sunraysia Highway – eastern approach to Learmonth township commencing at Queen Street and ends at the town signs at the Eastern end of Learmonth.	
ANA Avenue of Cypress trees along the Sunraysia Highway on the north western approach to town and the Redwood tree at the southern end of the Avenue.	Cypress and Redwood trees.

Privately owned trees of the following species:

- Monterey Cypress trees in the grounds of the All Saints Church of England.

HO181 ‘Buninyong Heritage Precinct’

Street trees of the following commonly named species:

Location	Tree Species
No specific location	Mature Elms, Oak and Ash trees
Learmonth Street – Avenue of Honour - west of Warrenheip Street, toward the golf course	Mature Silver Poplars, Oaks and Elms
Inglis Street – west side adjacent to the Uniting Church.	Mature Elms
Learmonth Street - east of Warrenheip Street between the service lanes and the main road within the grassed median strips	Mature oak trees
Learmonth Street – in front of former Shire Office and Court House	Mature Elms

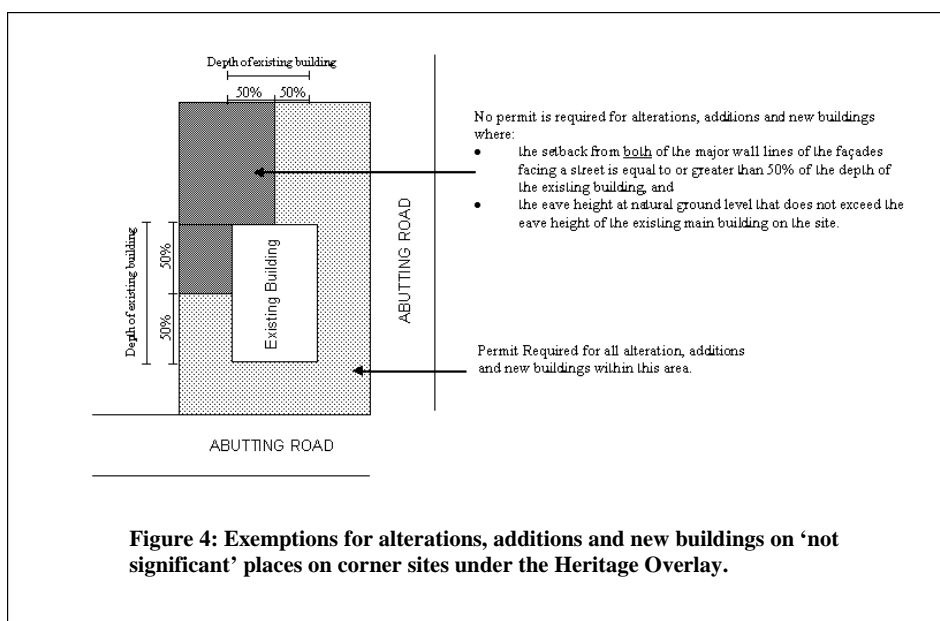
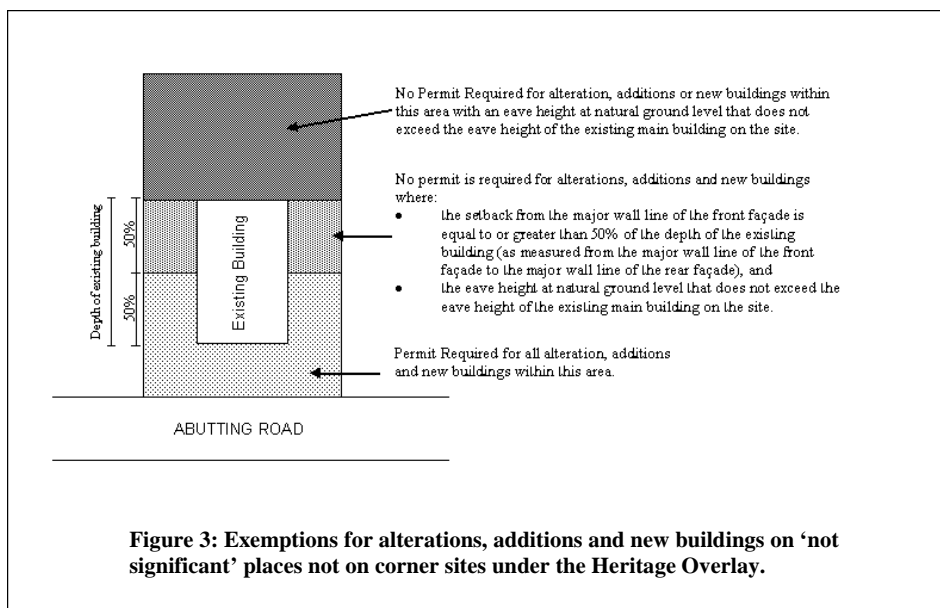
Privately owned trees of the following species:

- Mature Bunya Pine in the front garden of ‘Netherby’ at 606 Warrenheip Street.

Alterations, Additions and New Buildings on ‘Not Significant’ Places

- *Alterations* to the rear façade of the building or to those parts of the side facades which are a distance from the major wall line of the front façade which is equal to or greater than 50% of the depth of the existing building (see figures 3 and 4);
- *Additions* to the building which project beyond the major wall line of the rear façade of the building and which have an eave height no greater than the eave height of the existing building and/or which are set back from the major wall line of the front façade a distance that is equal to or greater than 50% of the depth of the existing building and which have an eave height no greater than the eave height of the existing building (see figures 3 and 4);
- *New buildings* setback beyond the major wall line of the rear façade of the building and which have an eave height no greater than the eave height of the existing building and/or which are set back from the major wall line of the front façade a distance that is equal to or greater than 50% of the depth of the existing building and which have an eave height no greater than the eave height of the existing building (see figures 3 and 4);

An abutting road shown in Figure 4 is also considered as a laneway.



New Outbuildings (carports/garages/sheds) on ‘Significant’ Places

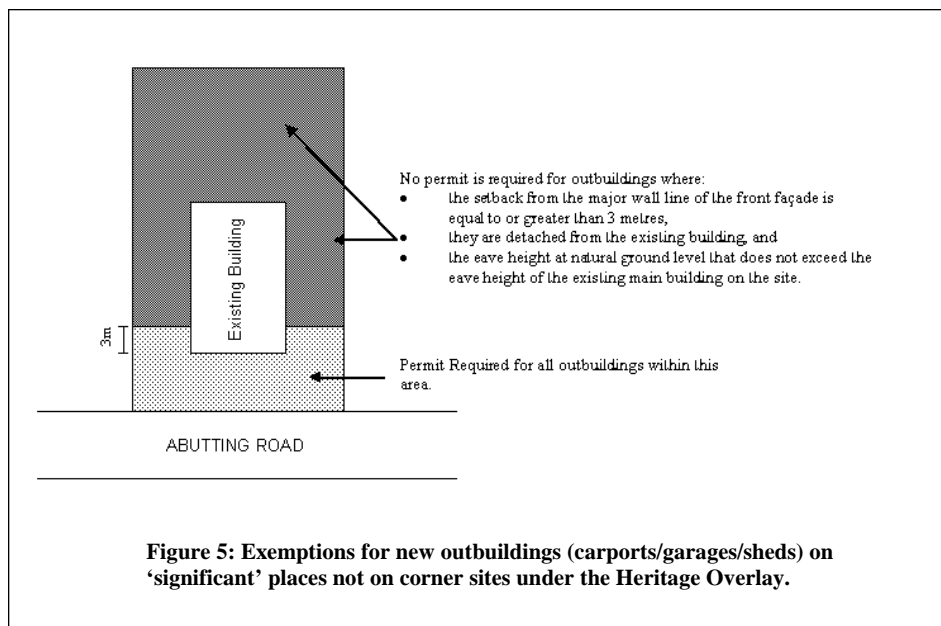
This exemption applies to all precincts with the exception of the Waller Estate Heritage Precinct (Ho169).

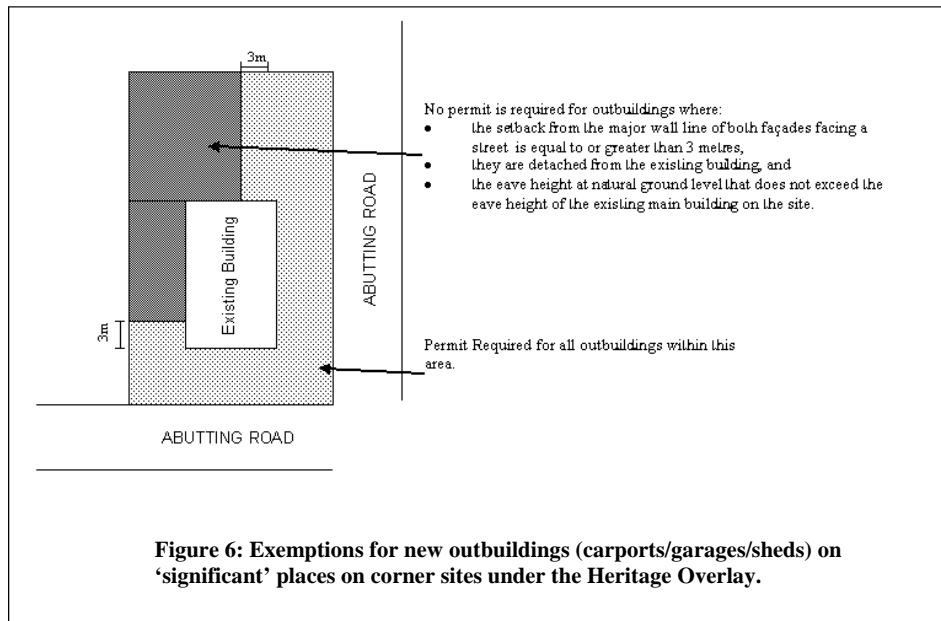
- Construct new *Outbuildings* where:

- the setback from the major wall line of the front façade is equal to or greater than 3 metres; and
- they are detached from the existing building; and
- the eave height at natural ground level does not exceed the eave height of the existing building on the site (see figures 5 and 6).

These provisions also apply to 'significant places' abutting a rear laneway.

An abutting road shown in Figure 6 is also considered as a laneway.





Minor Development to 'Significant' Places

- Construct *Minor development** located beyond the major wall line of the rear façade of the building (see figures 7 and 8).

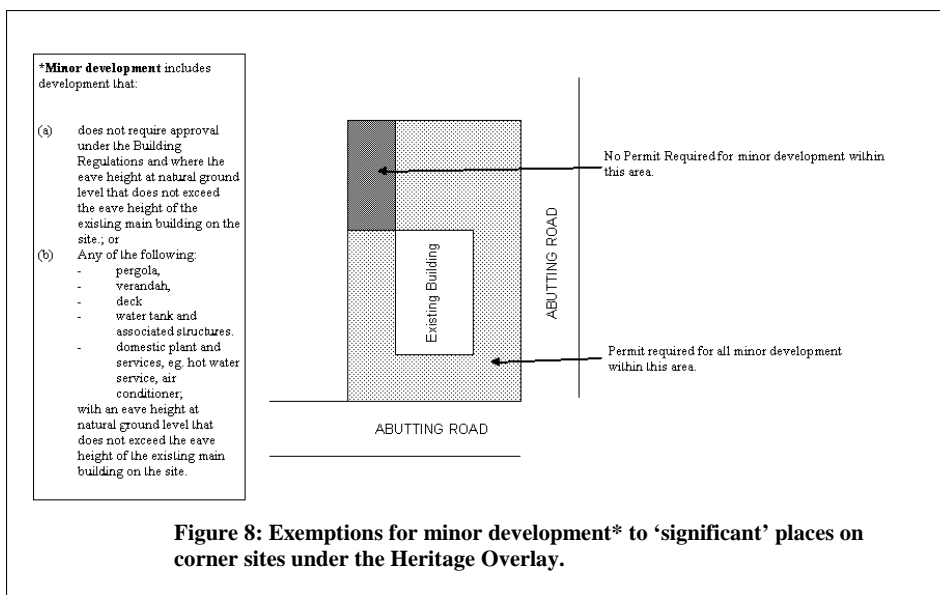
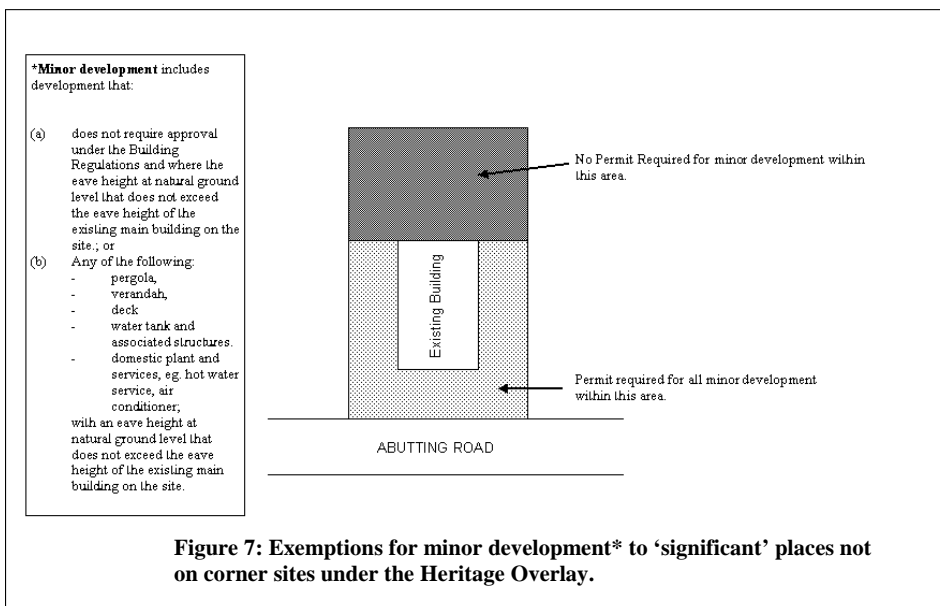
**Minor Development* includes development that does not require approval under the Building Regulations and where the eave height at natural ground level that does not exceed the eave height of the existing main building on the site; or

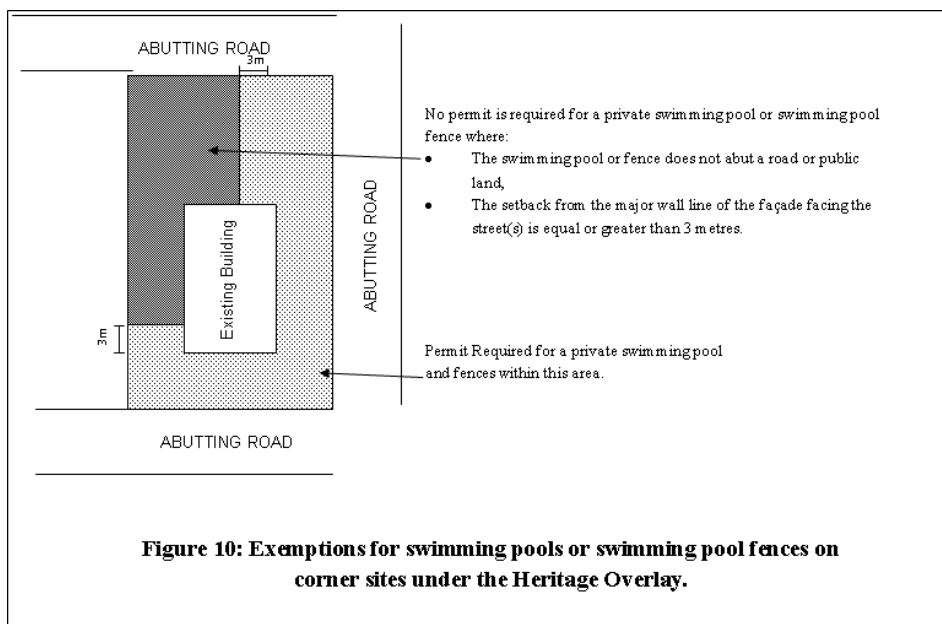
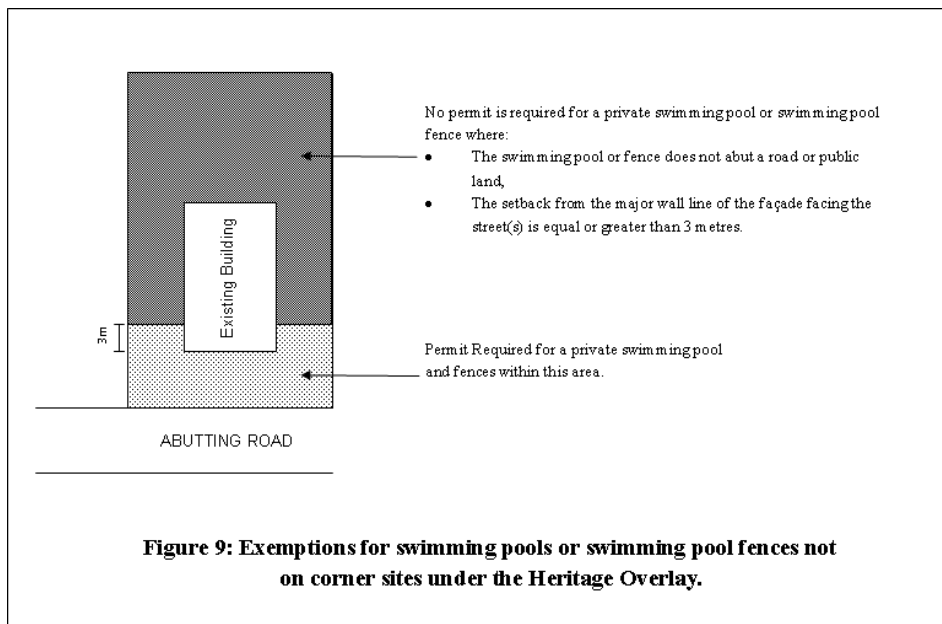
Any of the following:

- pergola,
- verandah,
- deck
- water tank and associated structures.
- domestic plant and services, eg. hot water service, air conditioner; with an eave height at natural ground level that does not exceed the eave height of the existing main building on the site.

These provisions also apply to 'significant places' abutting a rear laneway.

An abutting road shown in Figure 8 is also considered as a laneway.

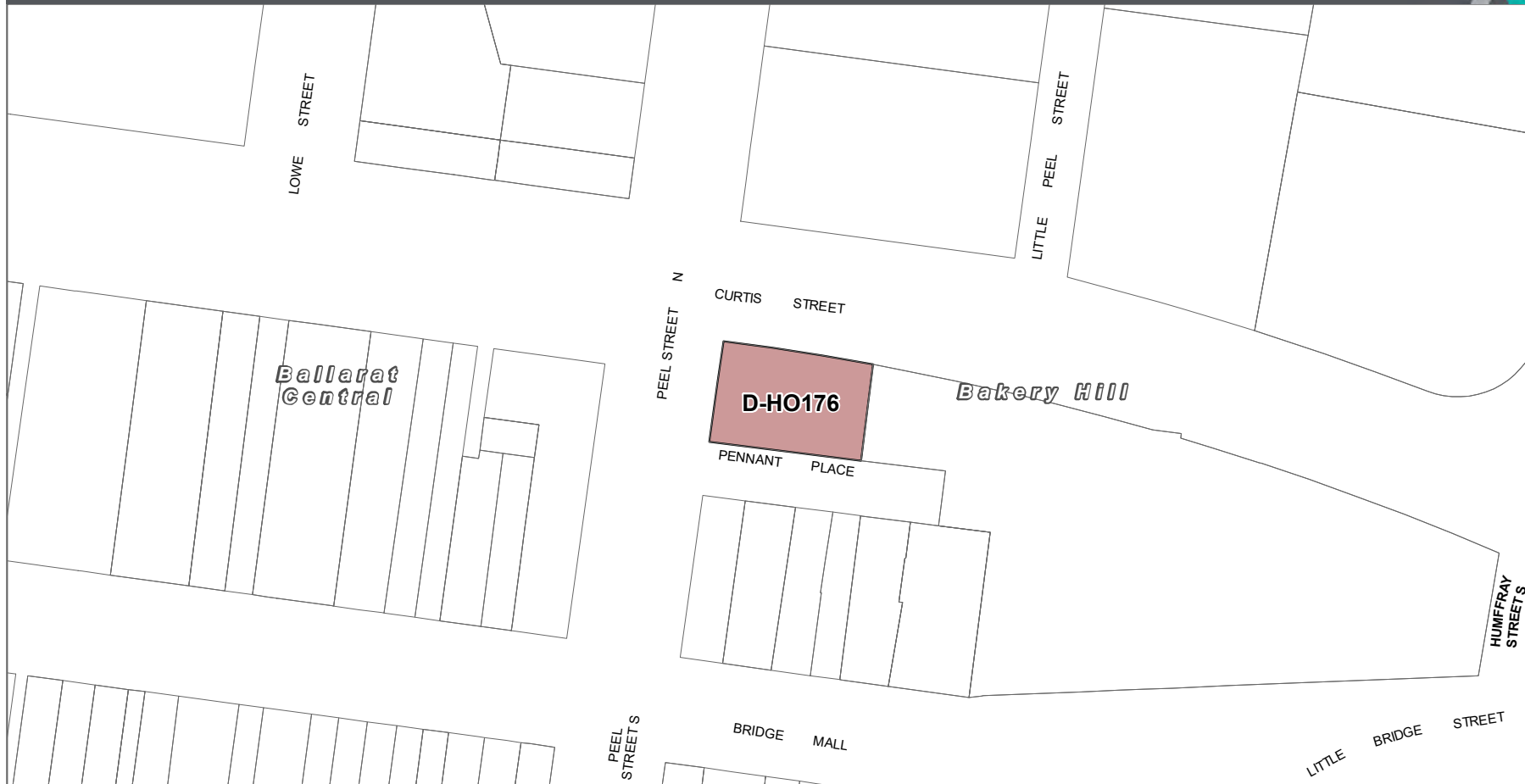






Map 1 Exemption Area for External Paint Controls within the Buninyong Heritage Precinct



**BALLARAT PLANNING SCHEME - LOCAL PROVISION
AMENDMENT C243ball (Part 1)**



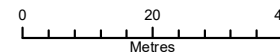
LEGEND

-  D-HO - Area to be deleted from a Heritage Overlay
-  Local Government Area

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Planning Group
Print Date: 28/06/2023
Amendment Version: 1



Part of Planning Scheme Map 23HO





REVISED HERITAGE CITATION:

Bridge Mall/Bakery Hill Heritage Precinct, Ballarat Central & Bakery Hill (HO176)



Figure 1. View looking west towards Bridge Mall from Bakery Hill (GJM Heritage, June 2021).

DATE: December 2021. Revised by Landmark Heritage PL March 2023. Revised by David Helms Heritage July 2024.

Bridge Mall / Bakery Hill Heritage Precinct, Ballarat Central & Bakery Hill (HO176)

Place type: Commercial Precinct	Architect: Various
Construction Date: Victorian, Federation, Interwar, early Postwar	Builder: Various
Recommendation: Retain in the Heritage Overlay with amendments	Extent of Overlay: See Figure 44

Locality History

The following is informed by the City of Ballarat and Victorian Places websites.

At least 40,000 years ago the Wadawurung and Dja Dja Wurrung Indigenous people called this country home. Their words 'balla arat' mean 'resting place' or 'bent elbow'.

The first European to move to the area was Archibald Yuille, who called his property 'Ballaarat' in 1837. Gold was discovered at Clunes and Buninyong in 1851 and within three years Ballarat had an estimated population of 25,000 as a result of the gold rushes, fast establishing itself as an important commercial centre.

The Eureka Rebellion, one of Australia's defining historic and democratic moments, took place in Ballarat. At daybreak on 3 December 1854 120 gold miners, who sought various reforms, clashed with government forces. The Eureka Stockade rising accelerated the enactment of reforms, which followed in 1855.

Ballarat was connected to Geelong by rail in 1862. The influx of people and revenue from gold mining activities enabled local institutions and grand civic buildings to be established in the decades following the discovery of gold, including the Ballarat Railway Station complex (1862-88), the School of Mines (1870), the Royal South Street Memorial Theatre (1874 and 1898), the Mining Exchange (1887) and the Ballarat Art Gallery (1887), to name a few.

Ballarat continued to maintain its position as Australia's most populous inland city until the time of the Second World War when the city began to experience a decline in population. In the postwar years Ballarat became home to a number of immigrant communities, and in recent years the city's population has continued to increase. A recognition of Ballarat's rich cultural heritage has driven the local tourism sector; the city's built heritage, Sovereign Hill and the Eureka Centre attract tourists specifically seeking cultural heritage experiences.

Precinct History

The following history is informed by the Ballarat Heritage Precincts Statements of Significance 2006 (revised August 2014) Incorporated Document, and the 2003 Ballarat Heritage Study Stage 2, by Hansen Partnership P/L, Wendy Jacobs et al and supplemented by original research.

The precinct comprises one of the oldest commercial areas in Ballarat. Bridge Mall (originally part of Main Road, later called Bridge Street; see Figure 3) was originally the main thoroughfare between the official township in Ballarat West, and the diggings in Ballarat Flat to the east. It was the intersection of Victoria Street (previously known as Melbourne Road), the main route from Melbourne, and Main Road, the main route from Geelong.

The western end of the precinct was originally located in the river flats of the Yarrowee River (now channelled underground), while the eastern end ascends to Bakery Hill. From the 1850s, this area was the commercial and civic centre for Ballarat East. As opposed to the ordered axial plan of Ballarat West, Ballarat East was

dominated by early haphazard development amongst the gold mining activity. Bakery Hill was the site of an important deep lead, Bakery Hill Lead, which although rich, was difficult to work due to high water levels.

Bakery Hill has an important place in Australian history as the rallying point for mass meetings of Ballarat gold miners in November 1854, during the Eureka Rebellion, which led to the Eureka 'uprising' in December 1854. Defiant miners gathered at Bakery Hill in their thousands, in full view of the government camp, to air their grievances over mining licenses and corrupt officialdom, seeking reforms. They rallied on Bakery Hill as Peter Lalor symbolically raised the Eureka Flag, with its design modelled on the stars of the Southern Cross. Plaques and flagpoles commemorate the Rebellion in nearby locations, outside of the precinct.

Ballarat West was surveyed in 1851, while the precinct area was officially surveyed in late 1857. Main Road (within the precinct; now Bridge Mall) existed prior to the official surveys, and originally extended to Grenville Street. The earliest buildings in the precinct are suggested to date to the early 1850s. The first official sale of properties fronting Main Road took place in February 1857.

Shopkeepers on Main Road were almost immediately beset with trouble from nearby diggings in Ballarat East, and the sludge run-off created when alluvial soil was dug up and washed to find gold. According to Lawrence and Davies (2019:19) the worst years were in the late 1850s, with so much sludge running onto the flats of the Yarrowee River valley that the road was raised several times and early timber shops were built on high stumps. The ground level was raised up to four metres in some locations. It was not until 1859 that the Ballarat Sludge Commission was charged with building channels to contain and direct the mining waste, but it was only when the sludge was redirected into the Yarrowee River that mining runoff ceased to impact Main Road.

Apart from the issues with sludge, the section of Main Road near Grenville Street was notoriously swampy, near Yarrowee River. A basic bridge was erected in the early 1860s to provide passage over this area, after which the name Bridge Street was applied. The width of the bridge reportedly determined the narrow width of Bridge Street, with traders building their premises in alignment. Throughout the 1850s and 1860s, flash floods regularly affected retailers in the low-lying portions of Bridge Street. In the 1860s engineering works were carried out to raise the level of the street, up to six feet (two metres) in some places.

Due to these two separate phenomena, it is possible that road raising along Main Road and Bridge Street has created well-preserved archaeological sites, comparable to the "buried block" phenomenon in Melbourne's CBD where early fill events in low-lying areas preserved the ground floors of early buildings along with rich artefact scatters (Alliance Archaeology, 2019). The precinct continued to develop as a retail centre, alongside mining and its associated activities, which remained active in the area in the 1860s.

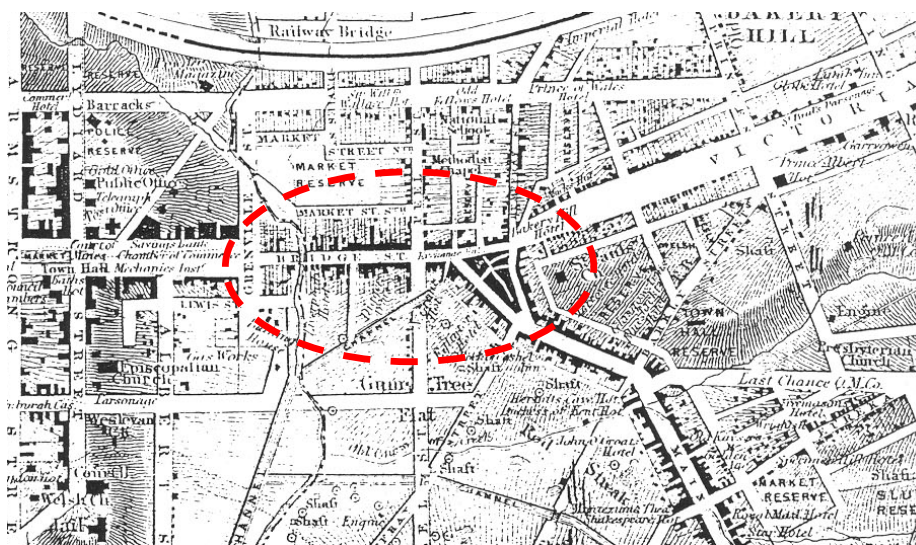


Figure 2. (above) Detail of an 1861 map of Ballarat. Building footprints illustrate the development along Bridge Street and Main Road by this date. The precinct area is indicated by the red circle (Source: J Brache, Map of Ballarat, 21 October 1861).

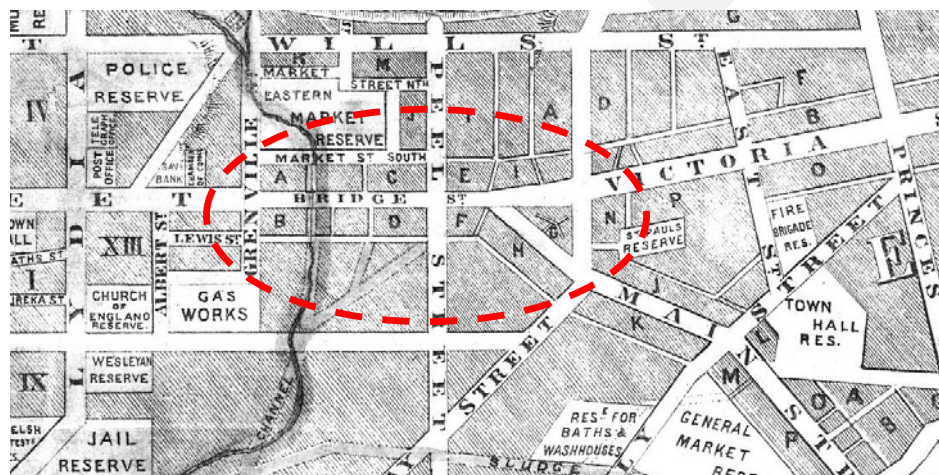


Figure 3. Detail of a c1860s plan of Ballarat. The precinct area is indicated by the red circle. Sludge channels are visible at the bottom. (Source: H Deutsch, Plan of Ballarat Municipalities, c1860s).

The improved access provided by the bridge over Yarrowee River, and the (primarily residential) development of Victoria Street to the east, encouraged retailers to relocate to Bridge Street from further down Main Road, consolidating it as the main commercial hub for the area. As development continued, brick buildings replaced many of the earlier wooden buildings along Bridge Street.

The key development of the precinct occurred during the Victorian period. Along Bridge Street (now Bridge Mall), narrow deep allotments extended to either Market Street South (now Curtis Street) to the north or the laneway to the south (now Little Bridge Street); today many of these lots provide two frontages or rear views, while some have been subdivided. Between some buildings walkways link to the parallel streets. The oldest buildings in the precinct are thought to remain at the eastern (Bakery Hill) end of the precinct, near the junction of Bridge Street, Main Road and Victoria Street.



On top of Bakery Hill, St Paul's Anglican Church (1861, 1864) dates from the early establishment of the area (HO191/VHR H0401; outside of the precinct). Its associated buildings are located within the precinct, including the rectory at 5 Humffray Street South (1963) and the Parish Hall at 14 Victoria Street (1903).



Figure 4. Bridge Street looking east towards Bakery Hill, c.1866 (SLV, ID 1769783).

Key examples of Victorian-period development include the Munster Arms Hotel at 10 Victoria Street (established 1862, rebuilt in 1864 to a design by architect Henry R Caselli; *Ballarat Star*, 17 Oct. 1864); the former North Grant Hotel at 3 Peel Street (formerly 92 Bridge Mall; 1893); the pair of 3-storey buildings at 24-26 Bridge Mall (1890); the former Ballarat East Post Office, 21 Main Road (HO94); the former Titheridge and Growcott real estate office, 15-19 Main Road (HO93); and the former stables at 27 Little Bridge Street.

Access to Bridge Street was improved following the establishment of the horse drawn tram service in 1887, and the electrification of the tram network in 1904. The initial network focussed on West Ballarat, but following electrification, a route was introduced along Bridge Street to Victoria Street. Public transport also enabled shopkeepers to relocate their families further out of the central Ballarat area.

Only a small number of buildings within the precinct date to the Federation period. Apart from the timber 1903 St Pauls' Church Hall, these include the two-storey shop at 38 Main Road and the Federation bungalow at 9 Humffray Street South.



Figure 5. Looking west down Bridge Street from Bakery Hill. On the right are the buildings currently occupied by McDonald's restaurant. Note bluestone kerbs with verandah posts fixed to them and wide bluestone channels along the street [photo undated, prior to Bridge Street tramline installed post-1904] (Source: Victorian Collections, ID 3323).



Figure 6. Looking west down Bridge Street, c1920s/30s (SLV, Rose Series P3165, ID 1768215).



Figure 7. Looking east up Bridge Street from Sturt Street, c1920s/30s (SLV, Rose Series P1711, ID 1763805).



Figure 8. Looking east up Bridge Street from Sturt Street, c1950s (SLV, Rose Series P10709, Image H32492/7418).

A second flush of wealth is apparent in Ballarat after World War I, making the interwar period the second most dominant in the precinct's architectural expression. Along Bridge Street this was mostly high-quality remodelling of Victorian buildings, giving them stylish new Moderne facades. Examples include the row at 86-90 Bridge Mall, which retains an outstanding Moderne shopfront at No. 86 as well as an intact rear warehouse

wing featuring leadlight windows. A more unusual example is the former Seventh Day Adventist Church, a Victorian gabled timber building at 7 Humffray Street South, given a new brick front wing when converted to an Australian Natives Association Hall. Most entirely new development of this period was seen at the east end of Bridge Street, including the standout Moderne State Savings Bank of Victoria at 95-99 Bridge Mall (1940). This string of remodellings continued into the early postwar period at a slower pace, for example the Moderne façades at 84 Bridge Mall, and at 6-8 Bridge Mall.

Later twentieth-century change tended to be of a lower quality. Shopfront verandahs were removed; though bluestone kerbs surviving in the eastern part of the precinct often show the former position of verandah structures. Many early shopfronts were replaced, and the upper levels of some front facades were covered with metal sheeting (30, 42, 46 & 48 Bridge Mall).

The main façade of the Stones Department Store at 2-4 Main Road was over-clad with stylish metal panels in the early 1960s. Stones is an enduring local landmark, first trading as a Stone's Drapery Store in 1860, it evolved to become a 'select ladies dress shop' under the directorship of Jessica Simon (née Stone; 1906-1982). Jessica Stone has been described as 'fashion director, clothing designer, philanthropist and local style icon in her own right', taking on media appearances and charity work in the local community; a 1956 newspaper story in *The Argus* reported that she had raised by that time £75,000 for local charities. The 1950s saw the creation of the inhouse 'Jessica' label, created and manufactured in the workroom above the shop. The store closed in 1966 and Jessica, with her husband Paul, continued to be prominent figures in the local community. In 1979 Jessica Stone was awarded the British Empire Medal honouring her lifetime commitment to philanthropic work. When 'Jessica of Stone's' died in 1982 her large collection of costumes, photographs, documents and ephemera were donated to the Ballarat Gold Museum.

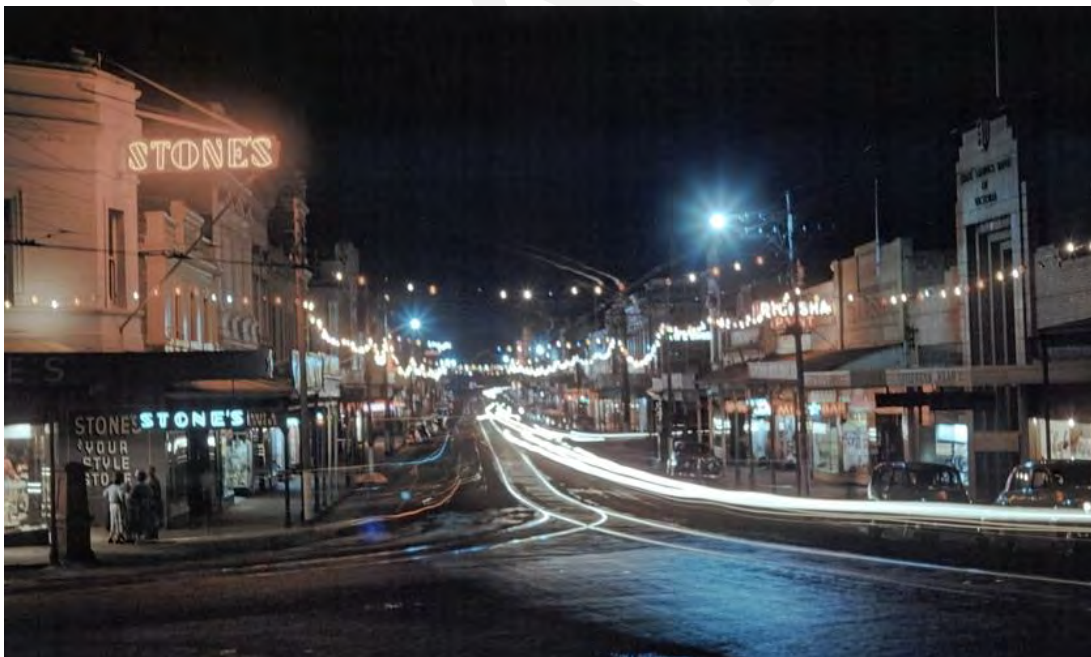


Figure 9. Looking west down Bridge Street from the intersection of Main Road, c. late 1950s. Left is Stone's Store, prior to the over-cladding of the façade (Source: Victorian Collections, ID Bon8).

In the 1970s the community took action to save key buildings in Bakery Hill. The McDonalds food chain proposed to demolish buildings at the top of Bakery Hill for a new restaurant in 1977. Community action

resulted in the chain converting existing historic buildings, which continue to be occupied by the chain today. At the same time, lobby groups sought to replace modern shopfronts with historical replicas, such as at 113 Bridge Mall.

Patronage of the Bridge Street retail strip reduced with the opening of the Wendouree Village shopping centre in 1978. In response, Bridge Street was closed to vehicular traffic and the pedestrian shopping mall was opened in 1981. East bound traffic was diverted to Curtis Street and west bound traffic to Little Bridge Street (which appear to have both been extended east of Peel Street to meet Victoria Street). Interestingly, the majority of the bitumen road surface of Bridge Mall was left in situ, other than the holes dug for trees, as were the tram tracks which ran through the area. New base and paving were laid over the top, and while bluestone kerbing was largely removed in the western part of the street, it was retained in the eastern portion.

More recent development within the precinct includes Norwich Plaza at the prominent site at the west end of Bridge Street, where a new façade was added to a previously altered Victorian building on the corner. This three-storey Victorian building (Figure 10) was refaced c1960s for Morsheads Department Store (Figure 11). A row of six two-storey Victorian buildings just to its east had been remodelled with a new façade in the early postwar period (c.1952), seen at the left in Figure 11. It was a larger version of the building across the road, at 6-8 Bridge Mall, with a band of windows divided by brick piers, set within an expanse of smooth white render. These commercial buildings on the prominent corner site were refaced with metal cladding c1980s to form Norwich Plaza. In 2023 this metal cladding was removed to reveal the Morshead's façade.



Figure 10. Looking east up Bridge Street, from Sturt Street, 1938. Left is the Victorian building occupied by Bean Son & Co., altered c1960s (as Morsheads Department Store) and c1980s to form Norwich Plaza (Source: Ballarat Revealed).



Figure 11. Morsheads Department Store, 1962, showing the new façade, and the row of two-storey shops with their late interwar or early postwar façade at right, prior to c1980s alterations to form Norwich Plaza (Source: Victorian Collections, ID CB_Photo_615a).

Description

The following includes information sourced from the Incorporated Document *Ballarat Heritage Precincts Statements of Significance 2006 (revised August 2014)*.

The Bridge Mall / Bakery Hill Heritage Precinct developed from the 1850s in conjunction with the local gold mining activity, serving as the commercial centre for Ballarat East and as the primary gateway to Ballarat West (now Ballarat Central) when travelling by road from Melbourne or Geelong.

Early gold mining activities in the Yarrowee River valley resulted in a haphazard subdivision and street layout in the eastern part of the precinct around Main Road. The narrow width of Bridge Mall can be attributed to the bridge that first crossed the Yarrowee River near Grenville Street. The precinct is bound by Curtis Street to the north, Grenville Street to the west, Little Bridge Street and Porter Street to the south and to the east includes properties on the east side of Humffray Street and south side of Victoria Street. The Bridge Mall and Main Street shopping strips provide the commercial spine, and present as a predominantly Victorian-era streetscape made up of commercial buildings of mostly two storeys, interspersed with some one- and three-storey buildings.

A small number of civic and institutional buildings are found at the eastern end of the precinct centred on Humffray Street, including the former East Ballarat Post Office (HO94), St Paul's Anglican Church (VHR H401) and Hall, and the Australian Natives Association (ANA) building. The former Post Office is a fine two-storey brick Venetian Gothic, on a prominent corner site. While St Paul's Anglican Church is not formally a part of the precinct, it is surrounded by the precinct to the north, south and west, and forms a landmark within it. It is a red brick Victorian Transitional Decorated and Perpendicular Gothic Revival church constructed in 1864 to a design by Victorian architect Leonard Terry. To its north, at 14 Victoria Street, is the Church Hall. It may have been built in two stages, with a timber body to the rear and a wide brick parapeted front featuring the date 1903 on its foundation stone. While relatively simple in design, with bay divided by engaged piers which surmount the parapet, the façade is distinguished by terracotta embellishment to the gable apex (a diaper pattern) and the tops of the piers (an Art Nouveau floral relief). A brick fence was constructed around the side

and rear at the same time, with curved brick coping. The ANA building was also built in two stages, with a steeply gabled timber body (originally a Seventh Day Adventist church). In the 1920s, the ANA added a new front room and façade of red brick in the Neo Grec style.



Figure 12. Looking north along Main Road. Right is the former East Ballarat Post Office [HO94] at 21 Main Road (GJM Heritage, June 2021).



Figure 13. (left) St Paul's Anglican Church Hall, 14 Victoria Street (Landmark Heritage, October 2022).



Figure 14. (right) ANA Hall, 7 Humffray Street South. (Landmark Heritage, October 2022).

The precinct demonstrates a number of architectural styles, owing to its development across a number of decades from the 1850s until the 1950s. This includes examples from the Victorian, Federation and Interwar periods with a small number from the early Postwar era.

During the Interwar period a number of shop facades were remodelled, with particularly fine examples seen at 86-90 Bridge Mall. This continued in the decades immediately following the Second World War. At first, the comprehensive remodelling of facades continued, as seen at 84 Bridge Mall where a Victorian building was given a Moderne façade c1946-49.

Later examples, however, sought to update earlier buildings by less expensive and less permanent methods, covering parapets and first floor facades with metal cladding that remains in place today. Most such overcladding efforts were of low architectural quality, such as Norwich Plaza and small shops at 30, 42, 46 & 48 Bridge Mall, though they are likely to conceal unaltered earlier facades beneath. A notable exception is the former Stone's Store at 2-4 Main Road, which is an example of metal overcladding that is of high design quality. In this case, the upper level of a Victorian building (visible in Figure 9) was overclad in the early 1960s with

profiled square metal panels and raised lettering signage across the east elevation. Earlier terrazzo flooring at the entrances and early postwar shop windows with stylish canted stallboards were retained.

Buildings within the precinct present as a visually cohesive streetscape of consistent scale, particularly in the Main Road and Bridge Mall shopping strips. Many of the rear elevations are visible from the public realm and remain intact, demonstrating key periods of development. A striking example of this can be seen at 90 Bridge Mall. Originally a two-storey Victorian building, its front façade was given a high-quality Jazz Moderne remodelling in the 1930s, while its single-storey side elevation to Peel Street retains a high level of Victorian detail, including rusticated walls and pilasters, incised enrichments, and a balustraded parapet. Other remnants of past uses are apparent in the survival of painted signage on rear and side elevations, naming past occupants. Such “ghost signs” are visible on the west side of the Victorian building at 24 Bridge Mall (word not legible), and on the rear of Victorian shops at 87 & 89 Bridge Mall (respectively, ‘Work Wear Specialists’ and ‘C.W. Pennant’). In other cases, raised lettering at the top of parapets indicates the former business, for example, ‘Gear’s’ chemist’s at 100 Bridge Mall.



Figure 15. (left) Intersection of Bridge Mall, Grenville Street and Sturt Street. Norwich Plaza to the centre left of image (GJM Heritage, June 2021).

Figure 16. (right) Former Stone’s Store, 2-4 Main Road (GJM Heritage, November 2021).



Figure 17. (left) Nos. 44-22 Main Road (left to right) (GJM Heritage, November 2021).

Figure 18. (right) Rear of Nos. 101-121 Bridge Mall. (GJM Heritage, November 2021).



Figure 19. (left) No. 90 Bridge Mall, showing Peel Street elevation (Landmark Heritage, October 2022).

Figure 20. (right) 86-90 Bridge Mall (Landmark Heritage, October 2022).

The public realm has also seen a number of changes over time; the Yarrowee River provides a north–south pedestrian connection through Bridge Mall where the river is channelled belowground. The conversion of Bridge Street to a pedestrian mall in 1981 necessitated the realignment of Little Bridge Street between Peel Street and Humffray Street to provide a through carriageway for westbound traffic, Curtis Street provides a similar function for eastbound traffic to the north of Bridge Mall.

Despite these changes, some nineteenth-century elements remain in the public realm. These include the north-south bluestone pitched Drury Lane (at 45-47 Bridge Mall) and another bluestone laneway next to 113-113A Bridge Mall. There is also extensive survival of bluestone kerbs and broad channels (up to six pitches wide) along Main Road, and bluestone kerbs along Bridge Mall between Peel Street South and Main Road. On both of these streets, the kerb blocks retain the impressions and sometimes fixings from the cast-iron verandah posts once affixed to them. In some cases circular indents were carved to allow drainage (from posts that doubled as downpipes), and in others there is a particularly large kerb block for fixing posts.



Figure 21. (left) Bluestone kerb and wide channel, Main Road (City of Ballarat, January 2023).



Figure 22. (right) Large kerb block with remnant marks where a verandah post was fixed (City of Ballarat, January 2023).

The topography of the precinct provides views to significant landmarks from within and through the precinct as the lower elevation of Bridge Mall allows for uninterrupted views of the grand civic and commercial buildings on Sturt and Lydiard streets to the west and conversely Mount Warrenheip can be seen from this vantage point when looking west and back towards the precinct.



Figure 23. (left) Coliseum Walk north-south pedestrian connection, the Yarrowee River here is channelled underground (GJM Heritage, June 2021).



Figure 24. (right) View from Bakery Hill looking west towards Bridge Mall and Sturt Street / Lydiard Street Precincts (GJM Heritage, June 2021).

Intact Victorian buildings that demonstrate high quality architectural design and aesthetic characteristics within the precinct include the Venetian Gothic former East Ballarat Post Office at 21 Main Street (HO94), the three storey Classical revival building at 24-26 Bridge Mall, Anglo-Dutch gabled shop at 31 Bridge Mall, and the High Victorian former North Grant Hotel at 3 Peel Street (formerly 92 Bridge Mall).



Figure 25. (left) 24-26 Bridge Mall (GJM Heritage, November 2021).



Figure 26. (right) 31 Bridge Mall (GJM Heritage, November 2021).



Figure 27. (left) Former North Grant Hotel, 3 Peel Street (GJM Heritage, November 2021).



Figure 28. (right) Former State Savings Bank, 95-99 Bridge Mall (GJM Heritage, November 2021).

The Munster Arms Hotel at 10 Victoria Street, the former Titheridge and Growcott shop, 15-19 Main Road (HO93), and the former stables, 27 Little Bridge Street, provide other intact examples of Victorian buildings to serve the commercial precinct. The two-storey Hotel stands on a corner, and has the foundation date “1862” recorded on its parapet. It has a simple Classical revival expression, with bay divided by giant-order pilasters, and arched window openings with heavy moulded surrounds. The parapet retains a dentilated cornice, but has otherwise been stripped of detail.

Only two original Victorian-era shopfronts to survive in the precinct, at 13 and 28 Main Road. They have timber-framed windows with deep lambs-tongue mouldings and panelled doors. No Victorian-era posted verandahs survive in the precinct. There are many reproductions of Victorian shopfronts and verandahs.





Figure 29. Munster Arms Hotel, 10 Victoria Street (GJM Heritage, November 2021).

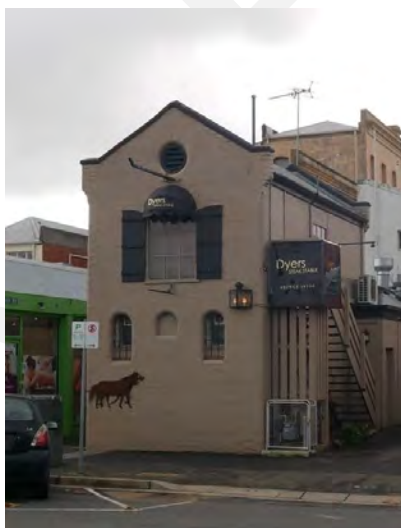


Figure 30. (left) Former Titheridge and Growcott real estate office, 15-19 Main Road [HO93] (GJM Heritage, November 2021).

Figure 31. (right) Former stables, at 27 Little Bridge Street (GJM Heritage, November 2021).

A small number of buildings within the precinct date to the Federation period. These include the shop at 38 Main Road, the Federation bungalow at 9 Humffray Street South. The two-storey shop at 38 Main Road was constructed for herbalist W Mew Gun, and it retains its original unpainted render finish, Art Nouveau leadlight windows, as well as an ornate shopfront featuring curves, tiles and leadlights. The Federation bungalow exhibits a form characteristic of the style, with a high hipped roof and Z-plan (projecting gables to two elevations with a return verandah between them), the verandah continuous with the main roof, terracotta roof cresting and finials, and corbel red brick chimneys. Walls are of face brick below the windowsills, and roughcast render above. The bungalow exhibits fine details such as Art Nouveau leadlight windows, Gothic-flavoured joinery to the front window hood, and concrete front fence posts.



Figure 32. 38 Main Road, which retains its original shopfront (Landmark Heritage, October 2022).



Figure 33. (left) ANA Hall, 7 Humffray Street (Landmark Heritage, October 2022).



Figure 34. (right) 9 Humffray Street (Landmark Heritage, October 2022).



Figure 35. (left) Shopfront of 86 Bridge Mall (Landmark Heritage, October 2022).



Figure 36. (right) 86-90 Bridge Mall (GJM Heritage, June 2021).

The Interwar period is better represented than the Edwardian, though many examples are in fact remodelled Victorian buildings. A notable example is the row at 86-90 Bridge Mall. Originally constructed in the nineteenth century, these three buildings were given fine Jazz Moderne facades in the 1930s, rendered with geometric relief decoration. The former Colin's News Agency (No. 88) features the stylised business name and open books indicating the original use. The former Walter Davis & Co Pty Ltd next door (No. 86, now the Salvos) features the same Art Deco font for its name. The original wares of this store are beautifully illustrated by its intact 1930s shopfront, which features silhouettes of eighteenth-century ladies in fine dress. The shopfront also retains deep display cases with black glass stallboards and a streamlined metal cornice, and a black and white terrazzo entrance floor with a geometric pattern.

In other cases, only the shopfront itself was replaced during the interwar period, with an unusual and highly intact example seen at 100 Bridge Mall. This double-width shopfront is framed by teal tiled piers (with Art Nouveau feature tiles), a band of leadlight highlights set in intricate Arts & Crafts joinery, a wide tiled entry, glazed timber doors, and drawn metal window frames. The leadlights feature the letter “G” in rondels, for “Gear’s” Chemist’s, as recorded in raised letters on the parapet. Another interwar shopfront is Messer & Opie designed by H.L Coburn in 1939 at 17 Bridge Mall.



Figure 37. (left) Shopfront at 17 Bridge Mall (Landmark Heritage, October 2022).

One of the finest interwar buildings in the precinct, and a new-build, is the Jazz Moderne former State Savings Bank of Victoria at 95-99 Bridge Mall. It features a stepped tower at its centre, clad in mottle brown terracotta veneer, with the date “1940” and a flagpole at the top. To either side is a shop with a stepped cream-brick parapet. Both shops retain their original shopfront, with mottle brown tiled stallboards, terrazzo entrance floor, glazed timber door, ribbed-glass highlights, and decorative pressed metal soffit to the awning.



Figure 38. (left) Shopfront at 100 Bridge Mall (Landmark Heritage, October 2022).



Figure 39. (right) Shopfront at 95 Bridge Mall (Landmark Heritage, October 2022).

During the early postwar period, the comprehensive remodelling of Victorian buildings continued, as seen at 6-8, & 84 Bridge Mall, and 40 Main Road. Stylistically, most have a restrained Moderne expression, with rendered facades, a horizontal emphasis created by bands of windows, incised lines and projecting hoods. No. 40 Main Road is unusual among them, with a façade finishes in cream bricks and brown tiles to the parapet and around the shopfront. As before, the Victorian origins of these buildings are generally only indicated by chimneys and original rear facades.



Figure 40. (right) 6-8 Bridge Mall (Landmark Heritage, October 2022).

The largest group of original shopfronts in the precinct survive from the late interwar and early postwar periods. They are found in the east end of the precinct, at 86, 85-89 & 95-99 Bridge Mall, and 2-4 & 40 Main Road. Interwar examples tend to have drawn-metal window frames above a tiled stallboard, terrazzo entry floors and glazed timber-framed doors (85-85A & 95-99 Bridge Mall). Later examples, from the 1950s, feature chrome frames to windows (91 Bridge Mall) and even chrome-framed doors (87 Bridge Mall), some with stallboards set at an angle (2-4 Main Road). Many shops built or remodelled in these periods also retain their original cantilevered awnings.

Key features:

- Commercial buildings that demonstrate the period of development from the 1850s to the 1950s, including Victorian, Federation, Interwar and a small number of early Postwar buildings.
- Civic, institutional and residential buildings dating from the late nineteenth to the mid-twentieth century at the eastern end of the precinct.
- Original and remodelled facades, including those currently concealed by late twentieth-century metal overcladding, and early or original shopfronts and cantilevered awnings.
- Largely intact rear building elevations visible from the public realm, some featuring ghost signage and outbuildings.
- Largely intact roofscapes, including roof form and chimneys, which illustrate the era in which each building was constructed, including those whose front facades were remodelled during the interwar and early postwar periods, or more recently hidden behind metal overcladding.
- Intact bluestone lanes, channels and kerbs, including remnant fixing points on kerbs from past posted verandahs.
- The irregular subdivision pattern and street layout of the eastern part of the precinct, a legacy of gold mining activity and the unplanned nature of early development.
- The alignment of the Yarrowee River expressed in the north-south link through the precinct.
- The archaeological potential where low-lying land around the Yarrowee River was infilled in the 1860s up to two metres deep, and the Main Road area where ground levels were raised multiple times (up to four metres in all) in the 1850s and '60s in response to a deluge of sludge from nearby gold diggings.
- Its location as the historic entry point to the City of Ballarat when travelling by road from Melbourne and Geelong.

- The connection of Bakery Hill to the 1854 Eureka Rebellion, as the site where miners met and organised prior to the uprising.
- Key views from within and through the precinct, including towards the significant civic landmarks on Sturt Street and Lydiard Street towards the west and St Paul's Anglican Church and Mount Warrenheip to the east.

Intactness/Integrity

Substantial redevelopment has occurred of a number of properties, particularly at the western end and at Curtis and Little Bridge Streets. Predominantly made up of long narrow lots, many have contributory buildings addressing Bridge Mall or Main Street with non-contributory structures addressing Curtis, Little Bridge and Porter Streets. Bridge Mall and Main Street retain a higher proportion of contributory buildings and have a high degree of visual consistency and scale.

Comparative Analysis

The Bridge Mall/Bakery Hill Precinct can be compared with other commercial and retail precincts within Ballarat and regional towns within the municipality.

The following precinct summaries are taken from Incorporated Document *Ballarat Heritage Precincts Statements of Significance 2006 (revised August 2014)*.

Lydiard Street Heritage Precinct HO171

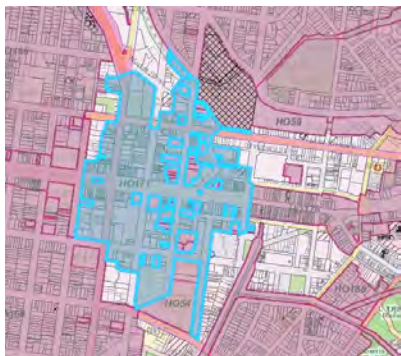


Figure 41. Lydiard Street Heritage Precinct [indicated by blue polygon] (Adapted from VicPlan, September 2021).

Lydiard Street Heritage Precinct includes Ballarat's significant civic, institutional, religious and commercial buildings and monuments, developed from the 1850's.

The Precinct is architecturally significant for the outstanding collection of 19th century civic and commercial buildings associated with the commercial life of Ballarat. The Precinct is architecturally significant for its high quality of substantially intact buildings with examples by notable contemporary architects from all periods ranging from 1860s-1950s. The predominantly symmetrical design of Renaissance Revival Victorian and Beaux Arts Federation architecture with elaborately ornate street verandahs, tree lined avenues, asphalt footpaths and 19th century engineering infrastructure have created an historic centre of great unity and visual coherence. The Precinct is aesthetically and architecturally significant as an excellent model representing 19th century neo-classical town planning based on a new order, hygiene and services that sharply distinguishes it from East Ballarat.

Sturt Street Heritage Precinct HO167



Figure 42. Sturt Street Heritage Precinct [indicated by blue polygon] (Adapted from VicPlan, September 2021).

Sturt Street Heritage Precinct demonstrates many original and intact urban design and fine architectural qualities associated with the ecclesiastical, civic, commercial and residential development of the Ballarat township between the 1850s and early 1900s.

The Precinct is architecturally important for its range of fine examples of Victorian and Federation styled buildings displaying many eclectic architectural motifs such as Jacobean, Gothic and Tudor detailing. The residential and commercial buildings are generally one to two storeys, with civic buildings contrasting in height and scale. The main civic buildings are unique in design and scale but are consistent in their use of stone for construction. The Precinct is historically important as it shows evidence of the creation of a grand elegant boulevard in the European tradition, within a rectilinear street layout pattern based on hierarchy and axial ordering. Sturt Street with its counterpart Victoria Street in East Ballarat, part of the former cattle stock route between Geelong and Adelaide, are the only surveyed roads in Ballarat that were substantially wider and longer than other streets.

HO173 Mount Pleasant/Golden Point Heritage Precinct



Figure 43. Mount Pleasant/Golden Point Heritage Precinct [indicated by blue polygon] (Adapted from VicPlan, September 2021).

Mount Pleasant/Golden Point Heritage Precinct features a mix of residential, commercial and cultural and community buildings in a range of styles from the 1850s to the 1940s including Victorian, Federation and Interwar periods. The Precinct is a significant, highly heterogeneous mix of mid-19th century to early 20th century residential, commercial and institutional buildings developed within an intensely worked gold mining area.

Precincts with a small number of commercial buildings, developed from the 1850s onwards, include:

- Victoria Street Heritage Precinct HO177
- Central Ballarat Heritage Precinct HO166
- Humffray Street Heritage Precinct HO175
- Eureka Street Heritage Precinct HO179.

Townships outside of Ballarat, which include commercial development:

Learmonth Heritage Precinct HO180

The rural precinct demonstrates many original and early design qualities associated with the residential, commercial, civic, and cultural/community development of the Learmonth Township between the 1850s and the 1930s. A defining characteristic of the Precinct is its small scale nature of the buildings and dominance of the tree lined avenue. Most of the buildings have similar massing, form, are single storey height and are of a traditional form.

Buninyong Heritage Precinct HO181

Buninyong Precinct is important for its collection of buildings, architecture and overall development associated with the early settlement of this area by squatters in the 1840s followed by gold diggers, and the subsequent development from the early 1850s of a formally surveyed grid street layout which preceded that of Ballarat. The Precinct demonstrates many original and intact design qualities associated with the commercial, civic, cultural/community and educational developments in the township between the 1850s and early decades of the 20th century.

Conclusion

While modest in its appearance and of smaller size, the Bridge Mall / Bakery Hill Precinct is comparable in historical significance to Lydiard Street Heritage Precinct [HO171]. Both precincts developed contemporaneously from the 1850s onwards in the former municipalities of East Ballarat and Ballarat, respectively. The precincts are comparable in function and development timeframe.

The Bridge Mall / Bakery Hill Precinct is primarily commercial and significantly differs to Lydiard Street and surrounds in its street layout and subdivision, a legacy of early gold mining activities centred around the Yarrowee River. It grew to serve the distinct area associated with these activities and is associated with the Eureka Rebellion. The precinct has seen changes to its built form and public realm over time, particularly to later alterations and additions to building facades. It continues to be a clearly legible as a shopping precinct dating from the 1850s to the mid-20th century and displays a high consistency of built form.

Assessment against Criteria

Following is an assessment of the place against the recognised heritage criteria set out in *Planning Practice Note 1: Applying the Heritage Overlay (August 2018)*.

Criterion A: Importance to the course or pattern of our cultural or natural history

The Bridge Mall / Bakery Hill Heritage Precinct is of historical significance as the oldest commercial centre in East Ballarat and one of the oldest in the City of Ballarat. Developed from the 1850s as a result of gold discoveries in the area, the irregular subdivision pattern and street layout is a legacy of the unplanned development that took place as a result of the chaotic gold mining activities of the time, as well as being dictated by the crossing point for the Yarrowee River. The buildings and early street fabric within the Bridge Mall / Bakery Hill Heritage Precinct illustrate the key phases in the City of Ballarat's development – from the area's early gold mining activities, to the boom-era of the late nineteenth century, renewed prosperity and

modernisation in the interwar era, and the slower development in the early Postwar period – and demonstrate the precinct's continuous and important role as a vibrant commercial centre for the City of Ballarat. The rear elevations and roofscapes illustrate changes over time, including the many Victorian buildings remodelled in the interwar period. The eastern end of the precinct (centred on Humffray Street) demonstrates the area's important civic and institutional role through the former East Ballarat Post Office, St Paul's Anglican Church and Hall and the Australian Natives Association building. When travelling by road from Melbourne and Geelong, the precinct has served as the primary gateway to what is now the City of Ballarat since the mid-1800s.

Bakery Hill is of historical significance for its association with the 1854 Eureka Rebellion, as the place where thousands of miners rallied during the Rebellion and as the location where Peter Lalor first raised the Eureka flag.

Criterion C: Potential to yield information that will contribute to understanding our cultural or natural history.

The Bridge Mall / Bakery Hill Heritage Precinct is of significance for its research potential, due to major ground-raising in this area in the 1850s and '60s. Ground levels along Main Road were raised multiple times, to a combined four metres, in response to the influx of sludge runoff from nearby gold mining works. And there were engineering works carried out in the 1860s to raise the level of the street around the boggy Yarrowee River, by up to two metres. This indicates the possible survival of highly intact archaeological deposits, even buried ground floors of buildings in these two areas.

Criterion D: Importance in demonstrating the principal characteristics of a class of cultural or natural places or environments

The Bridge Mall / Bakery Hill Heritage Precinct is of significance as a substantially intact and visually cohesive representative example of a predominantly Victorian-era commercial centre, with some intact development and remodelled facades from the Federation, Interwar and early Postwar periods. Main Road and the eastern end of the precinct in particular demonstrate a high degree of uniformity in scale and form. Typical characteristics of such precincts – including a predominantly two-storey street wall (interspersed with some single and three-storey buildings), parapeted rendered or red brick facades with repetitive upper floor fenestration, some original or early ground floor shopfronts with some original cantilevered awnings or reconstructed posted verandahs and bluestone kerbs and channels – are displayed in the original forms, fabric and detailing of many of the buildings.

Criterion E: Importance in exhibiting particular aesthetic characteristics

The Bridge Mall / Bakery Hill Heritage Precinct is of aesthetic significance as a distinctive and irregularly planned precinct that contrasts markedly to the highly ordered street and subdivision patterns to the west of Grenville Street. The precinct features commercial and civic buildings of high design quality dating from the Victorian and Federation periods, with some refacing of Victorian shopfronts in the 1930s in a Moderne style, and a small number of restrained buildings from the early Postwar period. Key examples from the Victorian era include the Classical Revival Munster Arms Hotel at 10 Victoria Street designed by Henry R Caselli in 1864, the Venetian Gothic former East Ballarat Post Office at 21 Main Street (HO94), the three-storey Classical Revival building at 24-26 Bridge Mall, the Anglo-Dutch gabled shop at 31 Bridge Mall, the High Victorian former North Grant Hotel at 3 Peel Street, and the former Titheridge & Grocott real estate office at 15-19 Main Road (HO93). While there are few Federation-era buildings in the precinct, they are of high quality, including the W Mew Gun herbalist shop at 38 Main Road, and the Federation bungalow at 9 Humffray Street South. Fine examples of interwar architecture include the Jazz Moderne remodelling and shopfront of the Walter Davis

women's clothing store at 86 Bridge Road and the warehouse wing to the rear (77 Little Bridge Street), and the former State Savings Bank of Victoria at 95-99 Bridge Mall. Within the precinct there are highly intact shopfronts that feature details such as lead lighting, such as the ornate Gears' shopfront at 100 Bridge Mall. Many of the buildings have highly intact rear elevations, often visible from the public realm. In particular, buildings to the rear of 101-121 Bridge Mall form a picturesque collection of highly intact rear wings some with remnant historic signage. Within this group there are some sites that retain a Victorian rear wing while the front section has been rebuilt in the late twentieth century.

The precinct forms an important part of the linear views from Sturt Street to Mount Warrenheip, St Paul's Anglican Church and the East Ballarat Fire Station tower. The Bakery Hill end of the precinct offers panoramic views of Central Ballarat and views of the grand landmark civic buildings located in the Sturt Street and Lydiard Street Precincts, including the former Ballarat Post Office, Ballarat Town Hall, St Andrew's Uniting Church, the former Ballarat Fire Station and Ballarat Railway Station.

Criterion H: Special association with the life or works of a person, or group of persons, of importance in our history

The Stone's Department Store at 2-4 Main Road had a long association with the Stone family, and in particular prominent local figure and designer Jessica Simon (née Stone; 1906-1982). Stone's Drapery Store first traded on the site in 1860 and became an enduring local landmark. By the mid-twentieth century Stone's had evolved to become a 'select ladies dress shop' under the directorship of Jessica Simon. Jessica was a well-known local identity recognised as a fashion designer, philanthropist and local style icon, known for her media appearances and charity work in the local community. The store closed in 1966 and Jessica, with her husband Paul, continued to be prominent figures in the local community. In 1979 Jessica was awarded the British Empire Medal honouring her lifetime commitment to philanthropic work.

Recommendations

The precinct is included in the Heritage Overlay of the Ballarat Planning Scheme as HO176.

Recommendations for the Schedule to the Heritage Overlay (Clause 43.01) in the Ballarat Planning Scheme:

External Paint Controls?	No
Internal Alteration Controls?	No
Tree Controls?	No
Outbuildings or Fences not exempt under Clause 43.01-3?	No
Prohibited Uses Permitted?	No
Aboriginal Heritage Place?	No

Gradings

The gradings of properties within the precinct are as follows:

Address	Grading	Era	Comments
2 Bridge Mall	Non-contributory	Contemporary	
6 Bridge Mall	Contributory	Early postwar	6-8 are a pair of two-storey buildings

Address	Grading	Era	Comments
8 Bridge Mall	Contributory	Early postwar	6-8 are a pair of two-storey buildings
10 Bridge Mall	Contributory	Interwar	Designed by Clegg, Morrow & Cameron in 1928
12-14 Bridge Mall	Non-contributory	Contemporary	
16 Bridge Mall	Non-contributory	Contemporary	
17 Bridge Mall	Contributory	Interwar	Designed by H.L. Coburn in 1939
18 Bridge Mall	Contributory	Victorian	
22 Bridge Mall	Non-contributory	Contemporary	
23 Bridge Mall	Non-contributory	Contemporary	
24 Bridge Mall	Significant	Victorian	24-26 are a pair of three-storey buildings; retains painted ghost sign on west side elevation
25 Bridge Mall	Contributory	Victorian	
26 Bridge Mall	Significant	Victorian	24-26 are a pair of three-storey buildings; 26 has neo-Victorian shopfront
27 Bridge Mall	Contributory	Victorian	27-29 pair of Victorian two-storey shops
28 Bridge Mall	Non-contributory	Contemporary	
29 Bridge Mall	Contributory	Victorian	27-29 pair of Victorian two-storey shops
30 Bridge Mall	Contributory	Victorian	Façade hidden beneath post-war metal cladding
31 Bridge Mall	Significant	Victorian	1891 on parapet
32 Bridge Mall	Contributory	Interwar	
33 Bridge Mall	Non-contributory	c1960s	
34 Bridge Mall	Contributory	Victorian	
35 Bridge Mall	Non-contributory	Contemporary	
38-40 Bridge Mall	Contributory	Interwar	
2/40 Bridge Mall	Non-contributory	Contemporary	
42 Bridge Mall	Contributory	Victorian	Façade hidden beneath post-war metal cladding
43 Bridge Mall	Contributory	Victorian	
45 Bridge Mall	Contributory	Victorian	
46 Bridge Mall	Contributory	Victorian	Façade hidden beneath post-war metal cladding
47 Bridge Mall	Non-contributory	Contemporary	
48 Bridge Mall	Contributory	Victorian	Façade hidden beneath post-war metal cladding
50 Bridge Mall	Non-contributory	Contemporary	

Address	Grading	Era	Comments
52 Bridge Mall	Non-contributory	Contemporary	
53 Bridge Mall	Contributory	Interwar	53-55 are a single building
54 Bridge Mall	Contributory	Victorian	Neo-Victorian shopfront
55 Bridge Mall	Contributory	Interwar	53-55 are a single building
56-58 Bridge Mall	Contributory	Victorian	
57 Bridge Mall	Non-contributory	c1960s	
59 Bridge Mall	Contributory	Victorian	Neo-Victorian shopfront
60 Bridge Mall	Non-contributory	Contemporary	
62 Bridge Mall	Contributory	Interwar	
62A Bridge Mall	Contributory	Interwar	62A appears to be the rear of No. 62
63 Bridge Mall	Contributory	Interwar	Former Coles Store No.22. 63-65 are a single building
64 Bridge Mall	Non-contributory	Contemporary	
65 Bridge Mall	Contributory	Interwar	Former Coles Store No.22. 63-65 are a single building
66 Bridge Mall	Contributory	Victorian	
67-69 Bridge Mall	Contributory	Victorian	67-73 are a single building; only 73 intact
68-70 Bridge Mall	Non-contributory	Victorian	
71 Bridge Mall	Contributory	Victorian	67-73 are a single building; only 73 intact
72 Bridge Mall	Contributory	Victorian	
73 Bridge Mall	Contributory	Victorian	67-73 are a single building; only 73 intact
74 Bridge Mall	Contributory	Victorian	
75 Bridge Mall	Contributory	Victorian	75-77 are a single building
76 Bridge Mall	Contributory	Victorian	
77 Bridge Mall	Contributory	Victorian	75-77 are a single building
78 Bridge Mall	Contributory	Victorian	
79-81 Bridge Mall	Non-contributory	late 20th century	
80 Bridge Mall	Contributory	Victorian	
82 Bridge Mall	Contributory	Victorian	
83 Bridge Mall	Non-contributory	Contemporary	
84 Bridge Mall	Contributory	Early postwar	

Address	Grading	Era	Comments
85 Bridge Mall	Contributory	Interwar	Retains interwar or early postwar shopfront
85A Bridge Mall	Contributory	Interwar	85-85A are a pair; retains interwar or early postwar shopfront
86 Bridge Mall	Significant	Interwar	Fine Jazz Moderne building with elaborate original shopfront (Walter Davis women's clothing. Designed by H.L. Coburn. Shopfront installed by C.H.Ludbrook in 1923.
87 Bridge Mall	Contributory	Victorian	87-89 are a pair; retains early postwar shopfront; retains painted ghost sign on rear elevation
88 Bridge Mall	Contributory	Interwar	Designed by H.L. Coburn.
89 Bridge Mall	Contributory	Victorian	87-89 are a pair; retains early postwar shopfront; retains painted ghost sign on rear elevation
90 Bridge Mall	Contributory	Interwar	Retains part of fine quality Victorian building to rear, visible along Peel Street. Designed by H.L. Coburn.
91 Bridge Mall	Contributory	Interwar	91 & 93 are a pair
93 Bridge Mall	Contributory	Interwar	91 & 93 are a pair
94-96 Bridge Mall	Contributory	Victorian	
95 Bridge Mall	Significant	Interwar	95-99 a single building; original shopfront & awning
97 Bridge Mall	Significant	Interwar	95-99 a single building
98 Bridge Mall	Contributory	Victorian	
99 Bridge Mall	Significant	Interwar	95-99 a single building; original shopfront & awning
100 Bridge Mall	Significant	Victorian & Interwar	Grand Victorian shop (Gears ghost sign at top of parapet) with elaborate and intact c1910 shopfront
101 Bridge Mall	Non-contributory	Contemporary	neo-Victorian
103-107 Bridge Mall	Contributory (rear only)	Victorian	Two single-storey buildings: both have Non-contributory neo-Victorian front section and Contributory Victorian rear section
104 Bridge Mall	Contributory	Victorian	aka 102
109 Bridge Mall	Contributory	Victorian	Two 2-storey buildings in a terrace of three (with 113); neo-Victorian shopfronts

Address	Grading	Era	Comments
113 Bridge Mall	Contributory	Victorian	2-storey building in terrace with 103-107; neo-Victorian shopfronts. Two-storey rear wing (113A?) with hipped roof and corbelled eaves pre-dates the terrace at the front of the site
119-121 Bridge Mall	Contributory	Victorian	From west to east: single-storey double-fronted rendered building; Victorian single-storey timber building; terrace of 5 two-storey brick buildings (originally tuckpointed, now sandblasted); all have neo-Victorian shopfronts and verandahs
1 Coliseum Walk	Non-contributory	Contemporary	
4 Coliseum Walk	Non-contributory	Contemporary	
5 Coliseum Walk	Non-contributory	Contemporary	
6 Coliseum Walk	Non-contributory	Contemporary	
22-24 Curtis Street	Non-contributory	Contemporary	
28 Curtis Street	Non-contributory	Contemporary	
30 Curtis Street	Non-contributory	Contemporary	
32 Curtis Street	Non-contributory	Contemporary	
34 Curtis Street	Non-contributory	Contemporary	
46 Curtis Street	Non-contributory	Contemporary	
48 Curtis Street	Non-contributory	Contemporary	
Lv 1/50A Curtis Street	Non-contributory	Contemporary	
52 Curtis Street	Non-contributory	Contemporary	
54 Curtis Street	Non-contributory	Contemporary	
1 Humffray Street South	Non-contributory	Contemporary	
1A Humffray Street South	Significant - HO191/H401	Victorian	
5 Humffray Street South	Non-contributory	Post-war	
7 Humffray Street South	Significant	Victorian & interwar	Victorian gabled former church, behind 1920s ANA façade
8 Humffray Street South	Non-contributory	Contemporary	

Address	Grading	Era	Comments
9 Humffray Street South	Significant	Federation	Retains original concrete front fence posts
10 Humffray Street South	Non-contributory	Contemporary	
5 Little Bridge Street	Non-contributory	Contemporary	
7 Little Bridge Street	Non-contributory	Contemporary	
11 Little Bridge Street	Non-contributory	Contemporary	
Lv 1/11 Little Bridge Street	Non-contributory	Contemporary	
23 Little Bridge Street	Non-contributory	Contemporary	
25 Little Bridge Street	Non-contributory	Contemporary	
27 Little Bridge Street	Contributory	Victorian	former stables or coach house
33 Little Bridge Street	Non-contributory	Contemporary	
41 Little Bridge Street	Non-contributory	Contemporary	
45 Little Bridge Street	Non-contributory	Contemporary	
47 Little Bridge Street	Non-contributory	Contemporary	
59 Little Bridge Street	Non-contributory	Contemporary	
61 Little Bridge Street	Non-contributory	Contemporary	
77 Little Bridge Street	Significant	Interwar	Rear part of Walter Davis store (86 Bridge Mall), featuring leadlight windows
89 Little Bridge Street	Non-contributory	Contemporary	
110 Little Bridge Street	Non-contributory	Contemporary	
112 Little Bridge Street	Non-contributory	Contemporary	

Address	Grading	Era	Comments
2 Main Road	Contributory		Former Stones store; retains early post-war shopfront, cantilevered awning, and terrazzo entry floors
4 Main Road	Contributory		Former Stones store; retains early post-war shopfront, cantilevered awning, and terrazzo entry floors
11 Main Road	Non-contributory	1988	neo-Victorian
13 Main Road	Contributory	Victorian	Retains original Victorian timber shopfront
15-19 Main Road	Contributory	Victorian & c1940	Bluestone north wall; stained glass to front façade plus c1940 remodelling
1/15-19 Main Road	Contributory	Victorian	
2/15-19 Main Road	Significant, HO93	Victorian	Former Titheridge and Growcott real estate office; "1898" on parapet
2A/15-19 Main Road	Contributory	Victorian & c1940	
20 Main Road	Contributory	Victorian	
21 Main Road	Significant, HO94	Victorian	former East Ballarat Post Office
22-26 Main Road	Non-contributory	Contemporary	neo-Victorian timber two-storey buildings
28 Main Road	Contributory	Victorian	Retains original Victorian timber shopfront
30 Main Road	Contributory	Victorian	1892 on parapet
32A Main Road	Contributory	Victorian	
34-36 Main Road	Contributory	Victorian	
36A Main Road	Contributory	Victorian	
38 Main Road	Significant	Federation	Retains original shopfront; "W. Mew Gun" on parapet (a herbalist)
40 Main Road	Contributory	Early postwar	Intact shop with cream brick and glazed tiles, intact shopfront
42-44 Main Road	Contributory	Victorian	
46 Main Road	Non-contributory		carpark
48 Main Road	Non-contributory		carpark
50 Main Road	Non-contributory	Contemporary	
1-100 Norwich Plaza (part)	Contributory	Victorian & Early postwar	Row of 6 Vic shops given new façade. Former Morshead's Department Store c.1952 facade at south-eastern corner of Norwich Plaza addressing Bridge Mall.

Address	Grading	Era	Comments
1-100 Norwich Plaza (part)	Non-contributory	1962	Former Morshead's Department Store addressing Grenville & Curtis Streets.
1-6/3 Peel Street South	Significant	Victorian	Three-storey former North Grant (later Centenary and Ballarat) Hotel
2 Victoria Street	Non-contributory	1988	neo-Victorian
4 Victoria Street	Non-contributory	1988	neo-Victorian
2A Victoria Street	Non-contributory	1988	neo-Victorian
2B Victoria Street	Non-contributory	1988	neo-Victorian
6 Victoria Street	Non-contributory	1988	neo-Victorian
6A Victoria Street	Non-contributory	1988	neo-Victorian
6B Victoria Street	Non-contributory	1988	neo-Victorian
8 Victoria Street	Non-contributory	1988	neo-Victorian
10 Victoria Street	Significant	Victorian	1862 date on parapet
14 Victoria Street	Significant	Federation	1903 date on foundation stone

Extent of the Heritage Overlay

To the extent of the property boundaries, as shown in Figure 44 below. Note that three properties with individual HOs are considered to contribute to the HO176 precinct, though they are not covered by HO176. These are HO93 – 15-19 Main Road (part), HO94 – 21 Main Road, and HO191/VHR H401 – 3 Humffray Street South.



Figure 44. Extent of HO176 [indicated by black line] (adapted from data.vic.gov.au).

References

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City of Ballarat, 'Entrance to Bridge Street', *Ballarat Revealed: Bridge Street corner, bottom of Sturt Street*, <https://ballaratrevealed.com/tour.php?action=view_tour&tour_id=3>, accessed November 2021. Image courtesy of Max Harris Image Collection, Ballarat Mechanics Institute.

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SUBMISSION 1

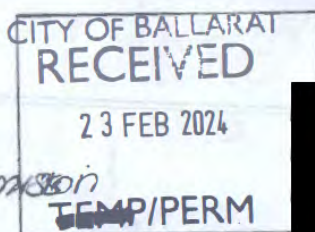
From: [REDACTED]
Sent: Wednesday, 7 February 2024 7:10 PM
To: Strategic Planning Submissions
Subject: Seven storey buildings in Bridge Mall

I am disgusted that the Ballarat City Council is thinking of passing up to seven storey high buildings in the Bridge Mall. I was very against the tall building opposite Gov Hub too. All will stick out amongst our beautiful street scapes. Ballarat is known as a Heritage City only the heritage aspect is being lost by poor decisions being made today. Please let common sense prevail. [REDACTED] Lake Gardens

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This email has been checked for viruses by Avast antivirus software.
www.avast.com

SUBMISSION 2



Ballarat Council
Strategic Planning Sub. mission
Bridge Mall Built Forms.

Please find my objection to this proposal. My apologies for writing my computer is out of action.

The Heritage statement for the Mall HO 176 any revision must retain the retention of all heritage elements within the Mall - no extra height, no extra signs, no buildings behind facades all walkways between buildings to be retained.

Heights limits should not be increased council should be guided by The Burra charter. Council should take a stand for Ballarat and not blindly follow state government policy with its flawed heritage outcomes.

It is also quite likely that any larger higher building will have undetected (at this time) problems given the .

(2)

site a former narrowway. There will be delays and further allowances required.

How is it possible to ~~peruse~~ ^{peruse} HUL at great expense to rate payers and do propose such an anti history/heritage program?

Yours faithfully.

[Faint, illegible text, possibly a signature or address]

SUBMISSION 3

From: Corangamite Catchment Management Authority
<floodinfo@ccma.vic.gov.au>
Sent: Thursday, 29 February 2024 9:05 AM
To: Strategic Planning
Subject: City Of Ballarat Vic 3350
Attachments: [CCMA-F-2024-00147.pdf](#)

Your attachments have been security checked by Mimecast Attachment Protection. Files where no threat or malware was detected are attached.

Attention: [REDACTED]

Please see attached response.

The Corangamite CMA has a new website, including new online forms for Flood Information and Works on Waterways requests. See the new forms here: <https://ccma.vic.gov.au/what-we-do/flood-advice-works-on-waterways/>

Regards

Floodplain Team

Corangamite Catchment Management Authority | PO Box 159 (64 Dennis St) Colac VIC 3250.

Phone: (03) 5232 9100

Email: floodinfo@ccma.vic.gov.au

Web: www.ccma.vic.gov.au



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I acknowledge the Traditional Owners of the land on which we work, and pay my respects to their Elders, past, present and future.

This message may contain confidential or legally privileged information. If you think it was sent to you by mistake, please delete all copies and advise the sender.



CMA Reference No: CCMA-F-2024-00147
Document No: 1
Date: 29 February 2024

Ballarat
Po Box 655,
Ballarat Vic 3353

strategicplanning@ballarat.vic.gov.au

Dear [redacted]

CMA Reference Number: CCMA-F-2024-00147
Re: S 19 - Notice of Planning Scheme Amendment
Location Street City Of Ballarat Vic 3350

I refer to your referral dated 13 February 2024, received at the Corangamite Catchment Management Authority on 13 February 2024 in accordance with the provisions of Section 19 of the Planning and Environment Act 1987.

Below is the Corangamite CMA's understanding of the application:

The applicant(s) propose the following:

Proposed Development Type: Overlay Only Amendment
Proposed Development Description: Amendment C243ball Bridge Mall Built Form Review
on the abovementioned proposed development location.

The Corangamite CMA's assessment indicates that the property is covered by the following Zones and Overlays in the Ballarat Planning Scheme:

Zone(s): General Residential Zone - Schedule 1, Commercial 1 Zone
Overlay(s): Heritage Overlay (Ho168)

*healthy and productive lands and waters
cared for by thriving communities*



OFFICIAL

SUBMISSION 3



The Corangamite CMA has assessed this application in accordance with its functions as the Floodplain Management Authority for the Corangamite Waterway Management District pursuant to Sections 201 to 212 of the *Water Act 1989*.

The Floodplain Management functions of the Corangamite CMA are described in Section 202 of the *Water Act 1989*:

- To find out how far floodwaters are likely to extend and how high they are likely to rise.
- to control developments that have occurred or that may be proposed for land adjoining waterways.
- to develop and implement plans and to take any action necessary to minimise flooding and flood damage.
- to provide advice about flooding and controls on development to local councils, the Secretary to the Department and the community.

Applications are assessed on their merits considering the flooding characteristics of each site. Applications are not assessed in comparison with other development applications within the area and existing precedence should not be used as an argument to allow new development to occur.

The [Guidelines for development in flood affected areas \(DELWP, February 2019\)](#) and [Floodplain Development Guidelines, guidelines for development in flood prone areas \(Corangamite CMA, 2022\)](#) outline the key principles used to assess development in floodplains.

The Corangamite Catchment Management Authority (the Corangamite CMA) understands this application relates to **Planning Scheme Amendment C243ball Bridge Mall Built Form Review** at City of Ballarat.

The amendment is required to guide built form development of the Bridge Mall and Bakery Hill Precinct by implementing the recommendations of the Bridge Mall Built Form Framework (Urbis, 2023).

The amendment proposes (amongst other things) to replace Schedule 1 to Clause 43.02 the Design Development Overlay (Bridge Mall) to be consistent with local planning policy (Clause 21.02 and 21.09) that encourages mixed use and higher density development, including residential uses, within the Ballarat Central Business District. From the Amendment’s explanatory report, it is understood that the amendment will include provisions that facilitate the redevelopment of vacant upper floorspace within the Ballarat CBD for residential purposes.

The Bridge Mall Precinct is subject to flooding from the Yarrowee River and associated drainage infrastructure during a 1% AEP flood event. Flood depths through much of the Bridge Mall Precinct exceed safe depths of 0.3 metres (refer to figure 1). This information comes from the Ballarat 11 Waterways Flood Mapping Update, 2023.

Whilst the Corangamite CMA recognises the existing commercial precinct and generally supports its continued development, the inclusion of residential development within the hazardous portion of the floodplain, albeit in some instance upper levels (refer to Figure 2) is not compliant with the objectives and assessment criteria as outlined in the [Guidelines for development in flood affected areas \(DELWP, February 2019\)](#).

In particular,

Objective 1: Protect human life and health and provide safety from flood hazard.	
Guiding Principle:	Site and access safety must not be compromised
General Assessment Criteria:	Development should not be allowed on properties where the depth and flow of floodwaters would be hazardous to people or vehicles entering and leaving the properties
*Assessment Criteria for intensification of residential areas	Residential intensification will not be supported where: <ul style="list-style-type: none"> • flood depth is greater than 0.3 metres and • flood velocity is greater than 2.0 m/s and • velocity x depth is greater than 0.3 m²/s).

*Residential development is assessed against more stringent safety criteria than commercial development in recognition that the risk is greater. If flooding occurs at night, there is a greater risk to residential occupants if they try to leave.

Considering the above information, the Corangamite CMA is unable to support the current proposal to facilitate residential development within the Bridge Mall Precinct on the following grounds:



1. *The proposal is discouraged within the Planning Policy Framework (Clause 13.03-1S) Floodplain management.*
2. *The proposal is not consistent with the Guidelines for Development in Flood Affected Areas (DELWP, 2019) and the Floodplain Development Guidelines, guidelines for development in flood prone areas (Corangamite CMA, 2022).*
3. *The proposal is not consistent with the Victoria Planning Provisions Practice Note Applying for a Planning Permit under the Flood Provisions (DEWLP, 2015).*
 - a. *It is likely to result in danger to life, health, and safety of the occupants due to flooding of the site.*
 - b. *It relies on low level access to and from the site.*
 - c. *It is likely to increase the burden on emergency services and risk to emergency personnel.*
4. *It would increase demand on the community infrastructure, emergency services and community recovery services.*
5. *It would result in long-term cumulative negative impacts.*

Please note that the Corangamite CMA has met with council to discuss this amendment and did identify that support for residential intensification could be considered in areas where the hazard was identified to meet the following criteria:

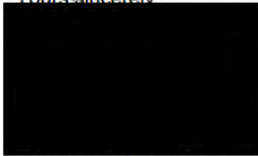
- flood depth is *less than 0.3 metres and*
- flood velocity is *less than 2.0 m/s and*
- velocity x depth is *less than 0.3 m²/s*.

Should council proposed to investigate reducing hazard in accordance with the above minimum hazard criteria, it would need to do so for both site and egress and ensure that no adverse off site hydraulic impacts occur to neighbouring properties and assets/infrastructure.

In accordance with Section 66 of the *Planning and Environment Act 1987*, please provide an electronic copy of the outcome of this proposal to the Corangamite CMA for our records.

Should you have any queries, please do not hesitate to contact our office at floodinfo@ccma.vic.gov.au. To assist the CMA in handling any enquiries please quote **CCMA-F-2024-00147** in your correspondence with us.

Yours sincerely



Manager, Floodplains

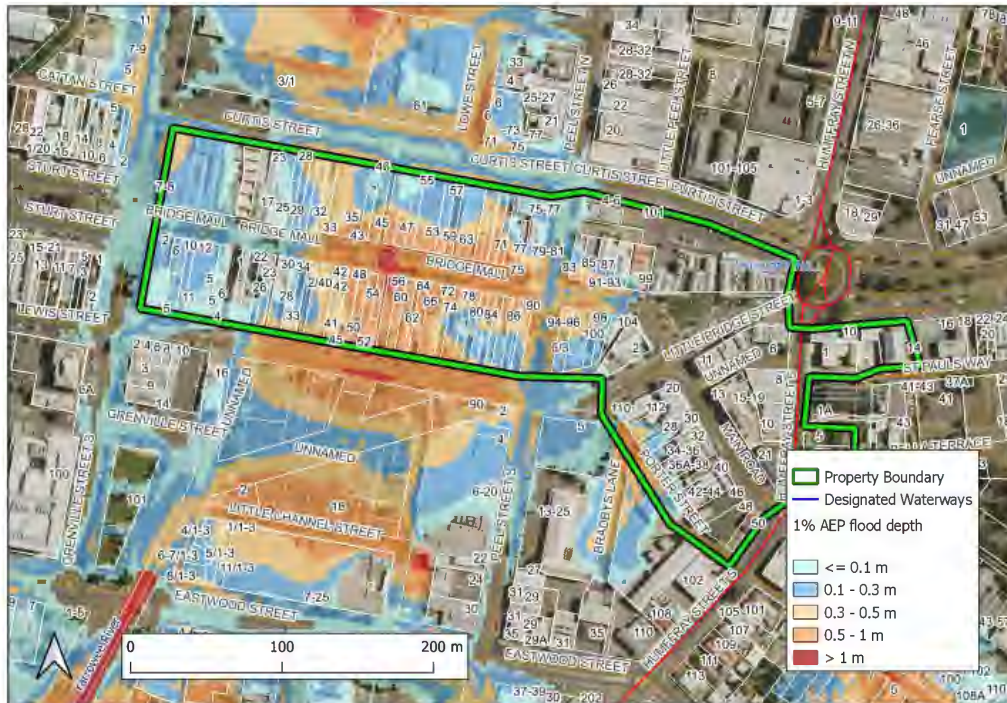


Figure 1. Subject property (green outline) showing the applicable 1% AEP flood depths

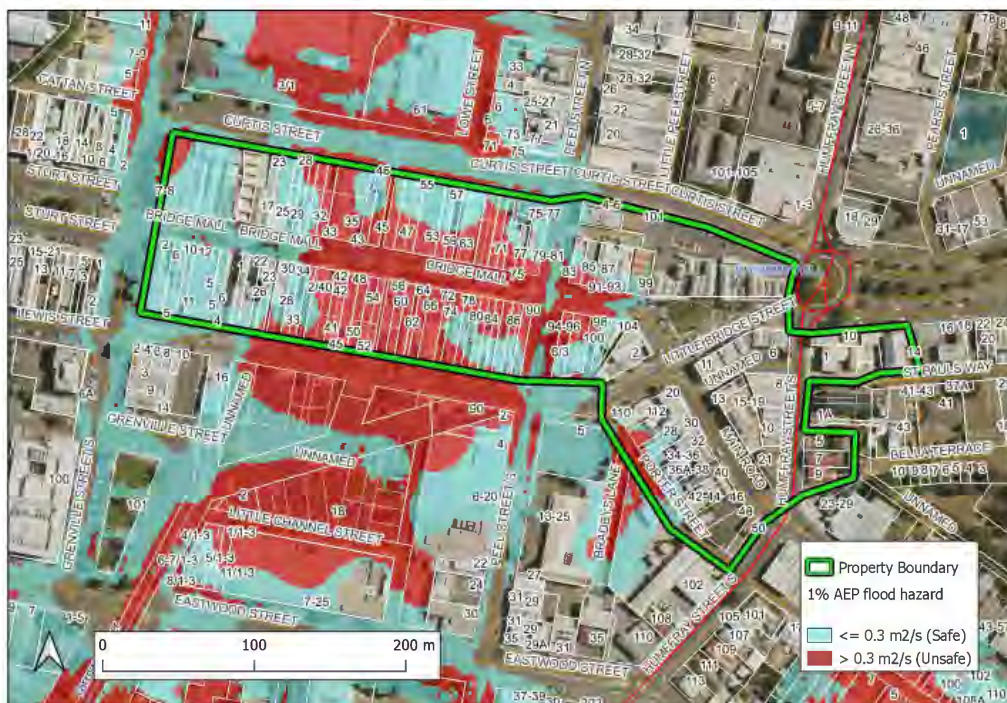


Figure 2. Subject property (green outline) showing the applicable 1% AEP flood hazard map.



Please Note:

- The 1% AEP flood is not the maximum possible flood. A flood larger in height and extent, than the 1% AEP flood, may occur in the future. Climate change is expected to result in significant changes in storm and flooding behaviour. The information currently available suggests that extreme rainfall events that drive major flooding are likely to increase in frequency and severity.
- The Corangamite CMA has not assessed this application in relation to stormwater management or impacts on the capacity of stormwater drainage infrastructure in the area. Council, as the drainage authority, is the responsible authority for managing stormwater flood risk, including applying the planning requirements of Clause 56 of the Victorian Planning Provisions' Practice Note 39 to ensure that new developments do not have significant third-party impacts due to increased runoff from impervious surfaces.

The information contained in this correspondence is subject to the disclaimers and definitions attached.

Definitions and Disclaimers

1. The area referred to in this letter as the 'proposed development location' is the land parcel(s) that, according to the Corangamite CMA's assessment, most closely represent(s) the location identified by the applicant. The identification of the 'proposed development location' on the Corangamite CMA's GIS has been done in good faith and in accordance with the information given to the Corangamite CMA by the applicant(s) and/or Council.
2. While every endeavour has been made by the Corangamite CMA to identify the proposed development location on its GIS using VicMap Parcel and Address data, the Corangamite CMA accepts no responsibility for or makes no warranty regarding the accuracy or naming of this proposed development location according to its official land title description.
3. **AEP** as Annual Exceedance Probability – is the likelihood of occurrence of a flood of given size or larger occurring in any one year. AEP is expressed as a percentage (%) risk and may be expressed as the reciprocal of ARI (Average Recurrence Interval).
Please note that the 1% probability flood is not the probable maximum flood (PMF). There is always a possibility that a flood larger in height and extent than the 1% probability flood may occur in the future.
4. **AHD** as Australian Height Datum - is the adopted national height datum that generally relates to height above mean sea level. Elevation is in metres.
5. **ARI** as Average Recurrence Interval - is the likelihood of occurrence, expressed in terms of the long-term average number of years, between flood events as large as or larger than the design flood event. For example, floods with a discharge as large as or larger than the 100 year ARI flood will occur on average once every 100 years.
6. **LIDAR** (Light Detection And Ranging) is an optical remote sensing technology which measures the height of the ground surface using pulses from a laser. LIDAR can be used to create a topographical map of the land and highly detailed and accurate models of the land surface.
7. No warranty is made as to the accuracy or liability of any studies, estimates, calculations, opinions, conclusions, recommendations (which may change without notice) or other information contained in this letter and, to the maximum extent permitted by law, the Corangamite CMA disclaims all liability and responsibility for any direct or indirect loss or damage which may be suffered by any recipient or other person through relying on anything contained in or omitted from this letter.
8. This letter has been prepared for the sole use by the party to whom it is addressed and no responsibility is accepted by the Corangamite CMA with regard to any third party use of the whole or of any part of its contents. Neither the whole nor any part of this letter or any reference thereto may be included in any document, circular or statement without the Corangamite CMA's written approval of the form and context in which it would appear.
9. The flood information provided represents the best estimates based on currently available information. This information is subject to change as new information becomes available and as further studies are carried out.

References



1. [Guidelines for Development in Flood Affected Areas, Department of Environment, Land, Water and Planning, 2019.](#)
2. [Floodplain Development Guidelines, Guidelines for Development in Flood prone areas, Corangamite CMA 2022.](#)
3. [Australian Rainfall and Runoff Revision Project 10 – Appropriate Safety Criteria for People April 2010.](#)
4. [Australian Rainfall and Runoff Revision Project 10 – Appropriate Safety Criteria for Vehicles February 2011.](#)
5. [Victorian Floodplain Management Strategy 2016](#)
6. [Corangamite Regional Floodplain Management Strategy 2018-2028](#)
7. [Ministerial-Direction-13-Managing-Coastal-Hazards.](#)
8. [Guidelines for Coastal Catchment Management Authorities: Assessing Development in relation to Sea Level Rise](#)
9. [Victorian planning schemes](#)

SUBMISSION 4

From: [REDACTED]
Sent: Thursday, 29 February 2024 2:34 PM
To: Strategic Planning
Subject: BRIDGE MALL PRECINCT BUILT FORM REVIEW Planning Scheme Amendment (C243ball)

Hello [REDACTED] & team,

You may recall that planning expert Professor Michael Buxton has paid a couple of visits to Ballarat, warning us to expect a 'tidal wave' of development with inappropriate tall buildings if adequate controls were not put in place. If the height limits in the Bridge Mall precinct are left as preferred rather than being mandatory, there is considerable risk that these limits would be incrementally increased over time with development pressure.

Bridge Mall is known as a bit of a wind tunnel already, how much more so if it has multi-storey buildings on other side.

Ballarat Heritage Watch made a detailed submission outlining concerns re building height and heritage. This submission and other community feedback provided re heritage and height concerns do not seem to have led to any substantive modification in the proposed amendment to the planning scheme. Hopefully there is yet time to give more weight to heritage concerns given Ballarat is nationally and internationally associated with heritage and derives so much benefit from it.

Thank you,

[REDACTED]
(Ballarat resident living in the neighbourhood of Bridge Mall)

SUBMISSION 5

From: [REDACTED]
Sent: Thursday, 29 February 2024 3:22 PM
To: [REDACTED] Strategic Planning
Cc: [REDACTED]
Subject: Amendment C243 - Submission - Norwich Plaza
Attachments: Mimecast Large File Send Instructions

I'm using Mimecast to share large files with you. Please see the attached instructions.

I'm using Mimecast to share large files with you. Please see the attached instructions.

Good afternoon [REDACTED]

Please find attached Tract's submission in relation to Planning Scheme Amendment C243 – Bridge Mall Precinct Built Form Review. This submission is made on behalf of [REDACTED] [REDACTED] Norwich Plaza. As you are aware, [REDACTED] [REDACTED] our client welcomes the opportunity to contribute to this strategic planning process.

Should you have any queries please don't hesitate to contact me.

Best regards,

[REDACTED]

29 February 2024

[REDACTED]
 City of Ballarat
 Wadawurrung Country
 25 Armstrong Street
 SOUTH BALLARAT VIC 3350
 via email: strategicplanning@ballarat.vic.gov.au

Dear [REDACTED]
 Submission to Planning Scheme Amendment C243ball

Tract Consultants [REDACTED] at
 2 Norwich Plaza, Ballarat Central ('Norwich Plaza').

We have reviewed the exhibited material relating to Planning Scheme Amendment C243ball ('The Amendment') and provide the below submission in relation to the Amendment. Our client requests to be included as a submitter in the process moving forward.

1 Subject Site and Existing Controls

[REDACTED] Norwich Plaza, Ballarat Central ('The Site'). The site is comprised of multiple parcels formally identified as Lot 1, 1A, 1B, 2, 2A, 3 and 3A on Title Plan 854494T. The Site is not impacted by any encumbering easements, covenants, caveats or restrictions under Section 173 of the *Planning and Environment Act 1987* or the *Subdivision Act 1988*. For the purposes of Section 48 of the *Planning and Environment Act 1987* [REDACTED].



Figure 1 - Aerial Image of Site and Surrounds

Tract Consultants Pty Ltd
 ACN: 055 213 842

ATF Tract Consultants Unit Trust
 ABN: 75 423 048 489

Quality Endorsed Company
 ISO 9001: Licence No. 2095

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 39 Cheringhap Street, Geelong VIC 3220

(03) 5221 0105
www.tract.com.au

1 / 4



Figure 2 - Revised Heritage Gradings Map

As approved under Planning Permit PLP/2023/201, the metal cladding mentioned has been removed and revealed pre-cast concrete panelling beneath, with no evidence of Victorian facades remaining. This is demonstrated in the images below.



Figure 3 – Existing Eastern portion of Norwich Plaza Southern façade

Furthermore, we note that the proposed works associated with the proposal under Planning Permit Application PLP/2023/464 will alter any remaining internal walls that reference the historic shops and will also necessitate the replacement of the current hipped roof forms with a continuous skillion roof across the entire Level 1. These works will remove the final remaining cues of the old shopfronts and we submit that given this there is insufficient grounds to elevate the categorisation of Norwich Plaza to contributory.

Our client submits that the categorisation of Norwich Plaza should remain non-contributory, as the 'contributory' fabric identified within the statement of significance has been removed during one of the buildings previous renovations and no evidence of the façade remains. It is also submitted that the revised Bridge Mall and Bakery Hill Statement of Significance be amended accordingly.

We respectfully request to be included as a submitter in any correspondence moving forward in relation to the proposed Planning Scheme Amendment C243. Should you wish to discuss this submission further, please contact [REDACTED] via the email address provided below.

Yours sincerely

[REDACTED]

Associate Town Planner
Tract

[REDACTED]

SUBMISSION 6

From: [REDACTED]
Sent: Thursday, 29 February 2024 9:19 PM
To: Strategic Planning
Subject: BRIDGE MALL PRECINCT BUILT FORM REVIEW

G'day [REDACTED]

The MYSAY page is easily accessible and contains all of City of Ballarat's Planning documents for residents to examine and to form an opinion to convey to Strategic Planning their considerations for the Bridge Mall Precinct.

In these documents there are tragic omissions to what will ultimately determine whether the Precinct continues its death roll or leads to beautiful city structures that residents from all over the municipality visit to enjoy and engage.

As in the Neighbourhood and Housing Strategies, strategic planning considerations omit critical and vital references to the LG Act 2020. This Act mandates that *all* decisions of Council address and align with the community principles stated in the Council Plan for that Council's term.

This Council's Principles state the key considerations to apply to all of Council's decision making to ensure the services, infrastructure and amenity that our community needs and expects are delivered and lead to better outcomes for *all* residents.

What is relevant here is the stated Principle of *Environmental Sustainability* which is translated as Council leading in sustainable practice.

None of the Form Review documents relate to how the planning prescriptions can and will achieve/promote a sustainable structured environment in which humans live and flourish. Considerations regarding bulk, height, ornament, fractals, context, contrast, biofilia, structure preserving transformations, wholeness, etc. all impact positively/negatively on humans viscerally and affect their sustainability!

These prescriptions must go further than planning formulations in order to sustain us as humans: they must relate to us as feeling human beings, as social human beings and healthy human beings both mentally and physically.

The Land & Environment Act 1987 from which Planning formulations and concomitant prescriptions arose was promulgated to protect, prevent and develop land. The then analyses, synthesis and evaluations of the theory and practice of land management that led to this legislation were ignorant of the theory and evidence now available to manage land usage better to sustain us. (refer to the Council Plan Principle of *Innovation*: approaching challenges with a curious and creative approach...) Similarly, the education of City Planners about this legislation was irrelevant to the theory and practise of current urban densification and sustainability.

This recent sustaining theory and evidence has been presented to Council since July 2023 [REDACTED] so that both an awareness and working knowledge of its application to sustain us may be presented to residents in a professional and responsible way so they too may come to properly deliberate on the details of what will sustain us.

Not to do this is longer misfeasance but malfeasance in public office.

Of relevance to this submission is a further Council Plan principle to drive decisions: *Purposeful decision-making* – described as making *informed* decisions based on the best available evidence and strong community engagement.

Strong community engagement does not come from the likes of the MYSAY and submission processes. Both of these processes fail the other Council Plan principle of *Accountability*: they are not transparent about Planning decisions; i.e. Form Review submitters are not aware of each others' submissions; nor are they involved in the deliberative process between Planners over these submissions.

Lastly, to reiterate the above discussion of ensuring that the design/form of structures addresses the human needs of residents to connect with the built environment that will sustain them, the Council Plan principle of *Inclusion*: improving the *social* outcomes for our community cannot escape serious consideration and deliberation.

[REDACTED]

SUBMISSION 7

**Submission: BALLARAT PLANNING SCHEME AMENDMENT
C243ball**

Submitter: [REDACTED]

Date: 01032024

REV A

Please accept my submission to proposed Amendment C243ball.

I reserve the right to submit further on matters arising and amend this submission as required.

Please confirm receipt of this submission.

Regards

[REDACTED]

Introduction

This submission responds to the range of documents that make up Amendment C243ball and include comments on:

- A. SUMMARY OF KEY ISSUES
- B. EXPLANATORY REPORT
- C. SCHEDULE1TOCLAUSE43.02DESIGNANDDEVELOPMENTOVERLAY
- D. SCHEDULETOCLAUSE43.01HERITAGEOVERLAY 1.
- E. BRIDGE MALL / BAKERY HILL HERITAGE PRECINCT: REVISED STATEMENT OF SIGNIFICANCE, MARCH 2023
- F. 'BALLARAT PLANNING SCHEME HERITAGE CONTROL 2004 INCORPORATED PLAN (REVISED DECEMBER 2023) OCTOBER 2015'
- G. BRIDGE MALL BALLARAT BUILT FORM FRAMEWORK MAY 2023 FINAL

A. SUMMARY OF KEY ISSUES

Built Form: Fully support the built form review and the need to allow for sensible development in the area to enable renewal of the Bakery Hill Precinct. Concerned that heritage matters are often over stated as the first and most important criteria and the BFR brings sensibility to this issue – congratulations.

Significance Gradings: Believe that building owners who are the subject of an upgraded rating should be consulted directly to ensure they are fully aware of the issue/implications. Believe that 3 Peel St is not of “significant status” given changes over time.

Building Names: Clarity on “nomenclature” for buildings – concerned that referencing very old names that have not been in use for many years and are not part of the language should not be used as the “identifier”. It confuses things and the same heritage rhetoric keeps rolling through these amendments unchallenged.

Complexity: Given the complexity of the BRF and the range of documentation included in the amendment – concerned about contradictions/conflicts. Need to be sure about consistency across all the elements.

Existing Building Heights: Concerned that existing building heights are not accurately reflected in the documentation and recommend site confirmation now as part of the review or at least a provision for proponents to challenge/confirm it as part of any application.

Tree Controls: Don't believe that tree controls as prescribed in the BALLARAT PLANNING SCHEME HERITAGE CONTROL 2004 INCORPORATED PLAN are of any value and actually work against tree preservation because they:

- were initiated prior to the \$1m exemption post Black Saturday 2009 to void PLP liability for Council and are now irrelevant;
- focus on **street trees** which are protected anyway;
- **DO NOT** protect private trees in heritage areas/streetscapes;
- are being wrongly interpreted.

B. EXPLANATORY REPORT

Summary of land affected

Land affected by amendment - #3 Peel St not referenced

The amendment applies to land generally within the "Bridge Mall and Bakery Hill Precinct", currently zoned Commercial 1 Zone illustrated in Figure 1, including the following properties:

- 2-104 (even), 1-121 (odd) Bridge Mall
- 1-6 Coliseum Walk
- 22-54 Curtis Street
- 5-112 Little Bridge Street
- 2-50 (even), 11-21 (odd) Main Road
- Norwich Plaza (all properties)
- 4-8 Peel Street
- 8-10 (even), 1-9 (odd) Humffray Street Stn.

Proposed Summary of Amendments

Agree w amendments generally as proposed to enable renewal of the Bakery Hill precinct

- Amends the Schedule to Clause 43.01 (Heritage Overlay) to:
 - o Insert the *Bridge Mall and Bakery Hill Precinct Statement of Significance* (GJM Heritage, revised by Landmark Heritage, March 2023)
 - o Remove (switch off) the tree controls that currently apply to HO176. ✓
 - o Remove (switch off) the external paint controls that currently apply to HO176. ✓

Tree Controls

Agree to switch off tree controls – noting this should be extended across all the precincts where "Tree Controls" apply.

Notes re Tree Controls:

- only favour trees listed which are predominantly **street trees** which are already protected and cared for without planning "controls"
- tree controls are being wrongly interpreted on the basis that trees not listed are therefore not protected.
- Tree controls were developed pre \$1m exemption post 2009 fires to void council on PLP requirements for tree removal in road reserves. Tree controls for street trees are therefore no longer valid or required.
- Trees are living organisms and the controls do not keep pace as trees prosper, senesce and succumb to storm damage.

Agree DDO is limiting and needs modernisation

The Precinct is one of the most significant strategic opportunity sites within Ballarat and redevelopment of the Precinct will play a vital role in Ballarat's next wave of growth. An opportunity exists to renew the Precinct whilst maintaining a balance that preserves the unique history. To do this, the current, limiting planning controls in the DDO1 must be modernised.

Building Heights

Strongly encourage sensible building heights to enable development potential but concerned that proposed arrangements lack the subtlety and nuances that exist across existing buildings. Recommend an out option such as "subject to site confirmation of building height". Note as example 3 Peel St (see below) is a 3 storey building with frontage (F) Bridge St and sidage (S) to Peel St. Also building 3 Peel St is approx. 15.5mH w exceeds proposed limits. Allowing for existing wall ht + 45degree it would still be possible to add building height set back from street wall and not visible by normal viewing from the street. And potentially achieve 22mH. And should this not inform same height options for buildings to the east of 3 Peel St given that the street wall height is already established at 15.5m?



Frontage and Sidage

The recommendations do not distinguish between frontage and sidage – clarification required. There is confusion across the documentation regarding terminology for wall height in respect of "frontage".



Building at 3 Peel St ex ht approx. 15.50m from footpath to parapet. Note is not the “frontage” Bridge Mall (Bridge Mall) and the “sidage” Peel Street (west elevation)?

Proposed Significance Grading – 3 Peel St

Question “significance” grading for 3 Peel St given the damage to the lower corner section and façade render and corbelling during modernisation in the 1960’s. Additionally the building has a recent office addition (2014) further challenging its significance. The building is not a hotel and has not been such since it was subdivided into 6 units in 2006. The building is regularly referred to as the “North ~~Grand~~ Grant Hotel” which was the name of the original timber inn burnt down in the 1890’s. The current building continued as “North Grant Hotel” from its construction in 1892/93 until the Barmaid Murder in 1933 at which time it was rebranded as the Centenary Hotel. It still bears this name (see below) and has carried such for the longest continuous period of approx. 90 years. If it is to be named of its past surely it should be referred to as the “Centenary Hotel”. It is now know as 3 Peel Street or the “old pub on the corner of Peel St/Bridge Mall”.



3 Peel St not listed in the summary of changes

These changes include:

- From Non-contributory to Contributory: 42, 46, 48 & 84 Bridge Mall; part 15-19 (garages) & 40 Main Road; part of Norwich Plaza (south-eastern corner).
- From Non-contributory to Significant: 77 Little Bridge Street (aka rear of 86 Bridge Mall).
- From Contributory to Significant: 86 & 100 Bridge Mall; 7 & 9 Humffray Street South; 38 Main Road.
- From Contributory to Non-contributory: 22, 28 & 33 Bridge Mall; 46 Main Road.



Figure 4: Heritage building classifications within Precinct Sub Areas.

Upgrading of Building Significance

If the heritage status of a building is to be upgraded should not the owners of the buildings be contacted directly by the Responsible Authority so that the full exploration of the issues/impacts of the changes can be explained? I think this a fair and reasonable request so that they are informed. There is much information to wade through and difficult for people to engage.

C. SCHEDULE 1 TO CLAUSE 43.02 DESIGN AND DEVELOPMENT OVERLAY

Shown on the planning scheme map as DDO[1].

Frontage v Sidage

There is confusion across the documentation as to the definition of "frontage" in respect of street wall. Clarity required.

Street wall is the façade of a building at or closest to any street boundary, or if the existing heritage building is set back from the street boundary, the adjacent wall.

Street wall height is the height of the street wall measured by the vertical distance between the footpath at the centre of the **frontage** and the highest point of the building, parapet, balustrade or eaves at the street edge or in the case of a heritage building if it is set back from the street from the centre of the **building frontage** to the highest point of the building, parapet, balustrade or eaves.

Street numbering

Street numbering is confusing – 3 Peel St not included in Sub Area 3

Table 3: Sub-Area 3 – Height and Setback Provisions

Street frontage	Preferred maximum Street-wall height	Preferred minimum setback above street-wall	Preferred maximum height
Bridge Mall	9m	6m	12m
Curtis Street	9m	3m	12m (15m at corner Peel Street)
Little Bridge Street	9m	3m	15m
4-6 Peel Street	15m	3m	15m
All other frontages	9m	3m	

3 Peel ?

D. SCHEDULE TO CLAUSE 43.01 HERITAGE OVERLAY 1.

Agree w removal of controls and recommend deletion of Solar Limits also

CONTROL ZONE	Area	Yes	No	No	No	No	No
HO175 Bridge Mall / Bakery Hill Heritage Precinct Statement of Significance Design-Attributes & Elements Precinct-Visual Character of Significant Works				X No	No	No	No

Rooftop Solar Panels/Renewables

Solar panels should be allowable even if they are visible. It is complete absurdity and contrary to City of Ballarat ESD Principles and the desires of others to reduce our carbon load and transition to renewable energy. We should also allow for other forms of alternate energy generation (eg roof top wind turbines). Visibility should not be the primary concern/criteria. Indeed investment in rooftop renewables should be visible and celebrated!!

E. BRIDGE MALL / BAKERY HILL HERITAGE PRECINCT: REVISED STATEMENT OF SIGNIFICANCE, MARCH 2023

Correction "North Grand Grant Hotel"

storey Classical Revival building at 24-26 Bridge Mall, the Anglo-Dutch gabled High Victorian former **North Grand Hotel** at 3 Peel Street South, and the former estate office at 15-19 Main Road (HO93). While there are few Federation-era are of high quality, including the W Mew Gun herbalist shop at 38 Main Road, at 9 Humfray Street South. Fine examples of interwar architecture include 1 and shopfront of the Walter Davis women's clothing store at 86 Bridge Road a rear (77 Little Bridge Street), and the Jazz Moderne former State Savings Bank

Significance Gradings 3 Peel Street

Gradings – the assessment needs to make proper consideration of site conditions

- 1/3 Peel is completely bugged and cannot be considered "significant"
- 6/3 has a recent extension that is not "significant either"
- Best case scenario 3 Peel St has 4 of 6 remnant elements that might be considered "contributory"

50 Main Road		Non-contributory	Contemporary	
Norwich Plaza (part)		Contributory	Victorian & c1940s	Row of 6 Vic shops given new façade c1940, now beneath metal cladding at south-eastern corner of Norwich Plaza
Norwich Plaza (part)		Non-contributory	1980s	See precinct map for details
1/3 Peel Street South	Skin Ski and Surf	Significant	Victorian	Part of three-storey former North Grant Hotel
2/3 Peel Street South	Row 66	Significant	?	Part of three-storey former North Grant Hotel
3/3 Peel Street South		Significant	?	Part of three-storey former North Grant Hotel
4/3 Peel Street South	Uniting Way - Church	Significant	?	Part of three-storey former North Grant Hotel
5/3 Peel Street South	Dickson Hearn Pty Ltd (Surveyors)	Significant	?	Part of three-storey former North Grant Hotel
6/3 Peel Street South		Significant	Victorian	Part of three-storey former North Grant Hotel

F. 'BALLARAT PLANNING SCHEME HERITAGE CONTROL 2004 INCORPORATED PLAN (REVISED DECEMBER 2023) OCTOBER 2015)'

Tree Controls favour trees listed which are predominantly street trees and are already protected and cared for without planning "controls" these controls are being wrongly interpreted on the basis that trees not listed are therefore not protected. We have examples of this where beautiful trees in front yards in HO have been removed because they weren't listed on the schedule. Yet they should have been considered in context as significantly contributing to the heritage character of the streetscape.

These schedules were established prior to the \$1m PLP exemption for works (established post Black Saturday 2009) to void Council the need to apply for PLP to remove trees in streets under HO requirements. The Schedules are now used counter to the original intent with undesirable outcomes. The schedules in respect of specific tree protection of street trees should be removed or at the very least the use of these needs to be better understood. If the schedules are to remain they need to be revised to reflect more inclusive tree care and current tree status. On that basis tree controls should be updated annually to keep pace with changing tree health/condition. And if tree controls are to remain the onus of proof should still lie w the proponent to prove tree removal needs.

~~HO176 'Bridge Mall/Bakery Hill Heritage Precinct'~~

~~Privately owned trees of the following commonly named species:~~

- ~~• 'Single named Elm Tree adjacent to the dwelling at the rear of St Paul's Anglican Church, Hunt Way Street South.'~~

HO177 'Victoria Street Heritage Precinct'

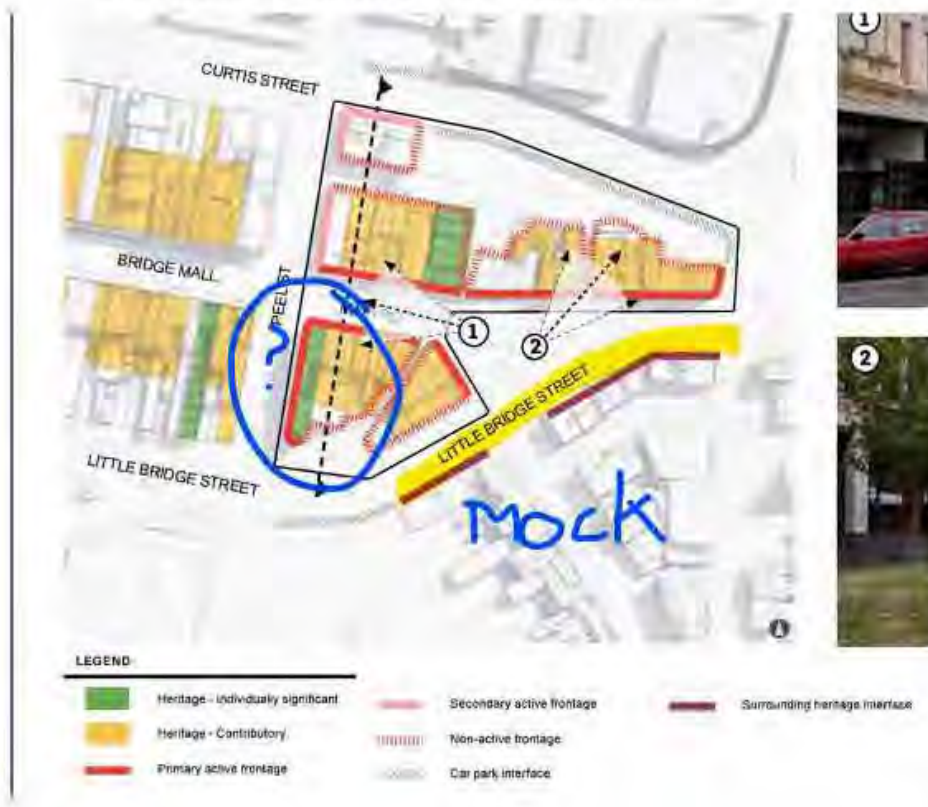
Street trees of the following commonly named species:

Location	Tree Species
No specific location	Mature trees English Oaks, Plane, Elm, Pin Oaks Claret Ash and other Ash varieties
Corben Street – within the shoulders	Semi mature Ash trees
Dyke Parade – within grassed land between Dyke Parade and the railway line	Mature Oaks and native trees
East Street North – west side	Varieties of ornamental plum or pear species trees
Glazebrook Street – in the embankments north side between Queen, Olway and King Streets	Mature native trees, particularly melaleuca and eucalypt species
King Street North – east side within the shoulders	Semi mature Ash trees
King Street south – within grass/gravel shoulder east side south of Huntway	Mature trees, particularly Oaks

G. BRIDGE MALL BALLARAT BUILT FORM FRAMEWORK MAY 2023 FINAL

Sub Area 3

- Contest significance grading because of modifications to 3 Peel Street. Refer previous.
- Buildings along Lt Bridge are mock heritage constructed in the 70's/80's as part of the Lt Bridge acquisition and road construction for the Bridge Mall project. "Surrounding Heritage Interface" as listed below for these buildings is not appropriate. The only heritage building for this section of Lt Bridge St is the cnr building on Main Rd.



Existing Conditions at 3 Peel St

3 Peel St is approx.. 15.5mH – need to amend to reflect site conditions

Sub-Area 3: Bakery Hill has a higher proportion of recent heritage buildings than the other sub-areas.

There is a large, single-ownership site at the southeast of the sub-area with clear development potential. Any new development in the sub-area should respond to the area's topography and heritage. The built form should also respond to the identified key views towards the Bakarat CBD and skyline. The built form response within the Sub-Area 3: Bakery Hill aims to:

- Retain all heritage buildings within the sub-area.
- Respond to the presence of largely intact heritage buildings throughout the precinct.
- Provide active frontages that address the public realm.
- Respond to the development opportunity at of the northeast corner of the sub-area through high-quality architecture that provides a suitable built form outcome given the site's context. This includes providing an appropriate design response to the rear of heritage buildings, fronting the car park.

Figure 57 and 58 illustrates typical cross sections showing existing and potential built form within the sub-area.

The following key built form approaches are recommended to achieve the desired character for the sub-area:

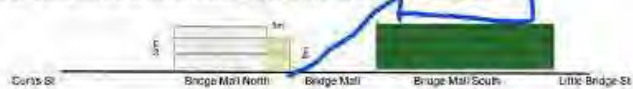
STREET WALL HEIGHTS

- The street wall height of future development fronting Bakery Hill within Sub-Area 3: Bakery Hill is to be a maximum of 2 storeys (9m).
- The elevated topography of the eastern end of the sub-area warrants a more moderated street wall height for future development. (The street wall height)

Figure 57 Existing built form section for Sub-Area 3: Bakery Hill - Section E



Figure 58 Built form test of street wall, setback and upper level heights- Section E



RECOMMENDED PREFERRED MAXIMUM BUILT FORM ENVELOPE

The following view illustrates the recommended preferred built form envelope for Sub-Area 3: Bakery Hill.

Figure 65 Recommended preferred maximum built form for Sub-Area 3: Bakery Hill



DEVELOPING THE BUILT FORM FRAMEWORK

Contradiction Ex Building Heights

Note contradiction re existing building heights in schedule below.

<p>Upper level built form</p>	<p>design response that demonstrates minimal impact on key view lines to historic buildings in the east and Mount Wellington to the west district east.</p> <p>Provides a firm setback from the street wall heritage (whether heritage or not) heritage for the upper levels of new development along Bridge Mall.</p> <p>Upper level above 5m to be set back a minimum of 2m from Bridge Mall heritage</p> <p>If additional height beyond the recommended envelope is proposed, the proposal needs to demonstrate a clear community benefit, provide view line assessments that demonstrate negative impacts are mitigated, achieve an exceptional sustainability rating, and provide an assessment that demonstrates that the proposal fits, meets, exceeds, and addresses impacts. A contextual 3D model is also suggested as a requirement for all development proposals.</p> <p>Minimum development setback of 5m for upper level above street wall along Corner Street, Little Bridge Street, and Glenview Street.</p> <p>Upper level development of the 100m wide Bridge Mall Gateway is recommended to have a maximum height of 10m.</p>	<p>Building heritage on the opposite side of Bridge Mall.</p> <p>Upper level setbacks for the built form respecting Bridge Mall for simple, straight heritage shall follow similar setbacks as the top-story setbacks along Bridge Mall.</p> <p>Upper level built form along Little Bridge Street and Corner Street to be no more than a 45-degree plane taken from the balance of the street wall. This principle establishes a consistent upper level built form and assists in avoiding the overshadowing of southern windows.</p> <p>New development shall minimise the number of setbacks (to 2) if a wall is used to define upper setbacks.</p> <p>Minimum upper level set back of 2m above street wall along Corner Street and 1m for Little Bridge Street.</p> <p>New, taller development shall have a maximum height of 12m.</p> <p>New development shall provide well-designed, quality built form that responds to the heritage character of Baking Hill. A well-scale is considered appropriate due to the topography and elevated key views towards the historic skyline.</p> <p>New development north of Bridge Mall shall have a maximum height of 12m. New development south of Bridge Mall height to be 12m or less, refer to Figure 6.7.</p>
<p>CA Contextual contribution</p>	<p>For sensitive areas, design assistance through additional resources, activation and amenity. Attract ground plane for both horizons.</p>	
<p>CA Accessible amenity</p>	<p>Provide for good views of upper level of built form provided access to sunlight for facades of the southern side of Bridge Mall (the part 3m from the southern front wall at the street boundary). Ensure other built form to be designed to avoid additional overshadowing of the southern facade of Little Bridge Street for a distance of 3.0 metres from the left/wharf measure of the street boundary.</p>	

78 Bridge Mall SUP Final Framework

Table 2 Summary of built form recommendations

End of Submission.

SUBMISSION 8

From: [REDACTED]
Sent: Friday, 1 March 2024 9:58 AM
To: Strategic Planning Submissions
Subject: Submission on Planning Scheme Amendment (C243ball) - Bridge Mall
Attachments: We sent you safe versions of your files; [annotated SCHEDULE 1 TO CLAUSE 43.pdf](#); [Submission on Planning Scheme Amendment C234Ball - Proposed DD01 by Ballarat Heritage Watch Inc.pdf](#)

Mimecast Attachment Protection has deemed this file to be safe, but always exercise caution when opening files.

Please find attached a submission in Response to the Bridge Mall Urban Built Form Framework and Proposed New DD01 for Planning Scheme Amendment (C243ball) on behalf of Ballarat Heritage Watch Inc.

I have also attached an annotated veriosn of the proposed DDO1 - Bridge Mall indicating our responses to particular clauses.

We would appreciate any opporunity to elaborate on our submission.

Regards,

[REDACTED]

[REDACTED] *Ballarat Heritage Watch Inc.*
PO Box 623W Ballarat West Vic 3350

[REDACTED]

SCHEDULE 1 TO CLAUSE 43.02 DESIGN AND DEVELOPMENT OVERLAY

Shown on the planning scheme map as DDO1.

BRIDGE MALL AREA

1.0 Design objectives

- To ensure that the design and scale of new development is ~~compatible~~ **compatible** with the preferred future role and character of the Bridge Mall.
- To facilitate urban renewal ~~and higher built form behind a lower scale street wall,~~ and encourage site consolidation to improve design and development outcomes.
- To retain the integrity and visual primacy of heritage fabric and ensure new built form comfortably integrates with existing heritage.
- To ensure that new development has regard to important landmarks and viewlines.
- To ensure development contributes to a high-quality public realm, including through exemplary architecture, high quality public realm interfaces and through protection of an appropriate level of solar access to key footpaths.

Commented [1]: Where and how is this defined?

Commented [2]: Higher Buildings behind street wall = facadism!!! Not supported.

Commented [3]: Support

Commented [4]: Support

2.0 Buildings and works

2.1 Definitions

- **Heritage building** refers to any building subject to a heritage overlay, graded as either *Contributory* or *Significant*.
- **Contributory, Not Contributory and Significant** refers to the heritage grading of individual sites within the Heritage Overlay.
- **Street wall** is the façade of a building at or closest to any street boundary, or if the existing heritage building is set back from the street boundary, the adjacent wall.
- **Street wall height** is the height of the street wall measured by the vertical distance between the footpath at the centre of the frontage and the highest point of the building, parapet, balustrade or eaves at the street edge or in the case of a heritage building if it is set back from the street from the centre of the building frontage to the highest point of the building, parapet, balustrade or eaves.
- **Upper level** is the development above the height of the street wall.
- **Upper level setback** is the setback of the upper level measured from the street wall (front façade) of the building.
- **Setback** is the shortest horizontal distance from a building, including projections such as balconies, building services and architectural features, to (or from) the property boundary.

2.2 General Requirements

The following requirements apply to an application to construct a building or carry out works and must be read in conjunction with the relevant precinct design requirements:

- Ensure that the height of any new proposed street wall achieves a **comfortable height** relationship with the height of any adjoining heritage fabric.
- Incorporate vertical articulation in the street wall that reflects the prevailing pattern of subdivision and buildings.
- Incorporate awnings over the footpath on commercial zoned land for the full width of the lot, continuous with any adjoining awning.
- A permit cannot be granted to vary a requirement expressed with the term 'must' or listed in a 'Mandatory' column of a table.

Commented [5]: How is this defined?

Commented [6]: Supported!

- Service equipment/structures including plant rooms, lift overruns, structures associated with green roof areas and other such equipment may exceed the preferred or mandatory height provided that each of the following criteria are met for the equipment or structure:
- Less than 50 per cent of the roof area is occupied by the equipment (other than solar panels).
- The equipment does not extend higher than 3.6 metres above the maximum building height.
- Projections such as balconies and building services should not intrude into a setback or upper level setback.

Commented [7]: Opposed! Larger items such as plant rooms, lift overruns should be included within maximum height limits. Especially if visible from public realm.

Commented [8]: Far too high!

Commented [9]: Support

2.3 Building heights and street wall height requirement

A building should not exceed the Preferred Building Heights (in metres and storeys) specified in the built form precinct provisions of this schedule, unless:

- The built form outcome as a result of the proposed variation satisfies the Design Objectives in Clause 1.0 and the relevant Sub-Area Design Requirements specified in this schedule.
- Sites less than (or equal to) 10m in width can be consolidated to achieve better design outcomes that achieve the design objectives for the precinct.

Commented [10]: We would prefer mandatory building height limits.

A permit cannot be granted to vary a preferred street wall height shown in Map 1 Built Form Framework Plan unless the proposal meets the Design Objectives in Clause 1.0 and the relevant Sub-Area Design Requirements specified in this schedule.

Commented [11]: Street wall heights should be mandated!

A permit cannot be granted to vary a requirement expressed with the term 'must'.

Commented [12]: Supported

2.4 Upper level design requirements

Upper level development should:

- Provide setbacks to ensure that upper level additions seen from the public realm do not diminish the appreciation of heritage buildings and heritage streetscapes.
- Avoid repetitive stepped built form at upper levels.
- Use materials at upper levels that are recessive in finish and colour.
- Include articulated side walls which read as part of the overall building design and avoid poorly finished and presented side walls at the mid to upper levels.
- Ensure balconies at upper levels do not dominate the visual appearance of buildings.
- Minimise the visual intrusion of equipment and services.
- Retain roofs, chimneys, parapets and other architectural features that contribute to the heritage character of the area.

Commented [13]: Supported

Commented [14]: Supported

Commented [15]: Supported

Commented [16]: Support

2.5 Building design requirements

New development should:

- Ensure corner sites are designed to address both street frontages with shopfront windows at street level.
- Be designed with floor to floor heights suitable to accommodate commercial activity at the lower levels of the building.
- Incorporate floor to floor heights suitable for commercial activity of at least 4 metres at the lowest two levels, where heritage elements are not a constraint.
- Activate pedestrian linkages between Bridge Mall and nearby off-street car parking and shopping areas.
- Generally provide active frontages at the lower levels of buildings.
- Respond to the heritage character of the streetscape in terms of the scale and rhythm of the street-wall.

Commented [17]: Support

- Incorporate vertical articulation in the street wall that reflects the prevailing rhythm and pattern of buildings in Bridge Mall.
- Incorporate an architectural expression distinct from but complementary to the heritage buildings.
- Ensure that façade treatments are simple and do not compete with, or detract from, the detailing of adjacent heritage building(s);
- Be articulated to reflect the fine grained character of the Bridge Mall streetscape.
- Incorporate awnings to Bridge Mall, Curtis Street and Little Bridge Street where possible and not detracting from heritage buildings.

Commented [18]: Support

Commented [19]: Support

Commented [20]: Support

2.6 Heritage building design requirements

Alterations and additions to heritage buildings must be designed to:

Commented [21]: Support all of this section

- Reinforce the fine grain character of heritage streetscapes and minimise the dominance of wide building frontages at ground and upper levels.
- Retain all visible features of the heritage building as viewed from the streetscape and primary frontages.
- Complement existing heritage buildings in form, scale, detailing, materials and colour.
- Be visually recessive and retain the primacy of the three-dimensional form of the heritage building as viewed from the public realm to avoid only retaining the heritage fabric;
- Retain the visual prominence of the return façades of buildings on corner sites;
- Retain solid built form behind retained facades and avoid balconies behind existing openings;
- Maintain the inter-floor height of the existing building and avoid new floor plates and walls cutting through historic openings;
- Utilise visually lightweight materials and finishes that are recessive in texture and colour and provide a juxtaposition with the heavier masonry of the heritage facades.
- Retain all identified, contributory and/or significant features of heritage buildings.

2.7 Vehicular access, car parking, and building design requirements

New development must:

- Avoid providing vehicle crossover onto Bridge Mall, wherever possible.
- Conceal the provision of car parking within the building or provide basement car parking if practical.
- Avoid recessed parking spaces at the ground floor level of buildings and onsite parking spaces at the front of properties.

Vehicle, Servicing and Pedestrian Access:

- Vehicle delivery and servicing access from Bridge Mall should be avoided where possible.
- Vehicle ingress and egress into development, including loading facilities and building servicing, should ensure a high quality standard of pedestrian amenity and limit potential conflict between vehicle movements and pedestrian activity.
- Pedestrian access to buildings, including upper level apartments, must be from a street or a shared zone. Where pedestrian access can only be provided from a laneway, the pedestrian entrance must be well lit to enable safe access.

2.8 Overshadowing and solar access (public realm) requirements

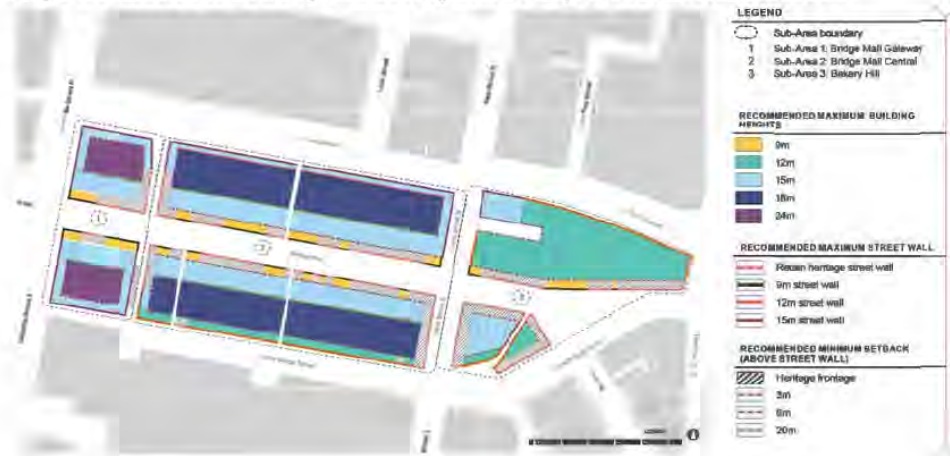
Development must not cast additional shadow on any part of the southern footpath (public realm) of Bridge Mall or Little Bridge Street to a distance of 3.0 metres from the property boundary between 10am and 3pm at 22nd September.

2.9 Sub-Area Design Requirements

The following Sub-Area specific design requirements apply in addition to the general design requirements outlined in Clauses 2.2-2.7. The Sub-Areas are defined as follows (as illustrated on Map 1: Built Form Framework Plan):

- Sub-Area 1: Bridge Mall Gateway
- Sub-Area 2: Bridge Mall Central
- Sub-Area 3: Bakery Hill

Map 1 to Schedule 1 to the Design and Development Overlay: Built Form Framework Plan



Commented [22]: Maximum heights should be mandatory and reduced as shown in amended Table 1

2.9.1 Sub-Area 1: Bridge Mall Gateway

Preferred character statement

New development should deliver:

- An area of contemporary, mid-rise development that creates a landmark 'gateway' to Bridge Mall.
- A prominent street edge that reflects the scale of previous (historic) built form within a contemporary design response.
- A vibrant, activated and pedestrian friendly precinct that connects the CBD from Sturt Street, with legible laneway connections to neighbouring car parks north and south of Bridge Mall.

Commented [23]: PPN 60 "terms such as "landmark", "gateway" and "iconic" should be avoided"

Design requirements

New development should:

- Respond to and address the prominent corner of Bridge Mall, Grenville and Curtis Streets, creating a strong address to each street frontage.
- Provide activation of all street and laneway frontages
- Adopt a consistent street wall height.
- Incorporate strong articulation of vertical and horizontal design elements at the lower levels of buildings.

- Ensure that the height and design of the street wall creates and reinforces a ‘human scale’ to diminish the perceived bulk of the buildings at upper levels.
- Ensure that adverse wind effects on the public realm are minimised through the design of the building and incorporation of fully integrated mitigation measures where necessary.
- Ensure that taller buildings are slender in form to avoid (or minimise) the obstruction of views to the Ballarat skyline from distant viewing locations and to sit comfortably as an element of the Ballarat skyline.

Commented [24]: Support

Table 1: Sub-Area 1 – Height and Setback Provisions

Street frontage	Preferred maximum street-wall height	Preferred minimum setback above street-wall	Mandatory upper-level Setback (above 4 storeys)	Preferred Maximum Height
Bridge Mall	9m	6m12m	20m	24m15m
Grenville Street	15m	6m0m	-	
Curtis Street	15m	6m3m	-	
Little Bridge St.	15m	6m3m	-	
All other interfaces	15m	6m	-	

Commented [25]: Mandatory height limit rather than preferred.

Commented [26]: Mandatory height limit rather than preferred.

Commented [27]: Does this refer to laneways?

2.9.2 Sub-Area 2: Bridge Mall Central

Preferred character statement

New development should provide:

- An attractive, activated, fine-grain streetscape.
- A street-wall edge that reinforces the scale and character of existing heritage buildings.
- A prominent street wall to both Curtis Street and Little Bridge Street.

Design requirements

New development should:

- Reinforce the fine grain character of the heritage streetscape and avoid the dominance of wide building frontages through vertical and horizontal design elements.
- Respond to the historic streetscape character within Bridge Mall in terms of the design, scale and rhythm of the street wall façade.
- Ensure that the height and design of the street wall creates and reinforces a ‘human scale’ and provide visual interest at street level to both Curtis Street and Little Bridge Mall.

Commented [28]: Supported

Commented [29]: All Supported

Table 2: Sub-Area 2 – Height and Setback Provisions

Street frontage	Preferred maximum street-wall height	Preferred minimum setback above street-wall	Mandatory upper-level Setback	Preferred Maximum Height
Bridge Mall	9m	6m 12m	20m	18m 15m
Curtis Street	15m	3m	-	
Little Bridge St.	12m	3m	-	
Peel Street	15m	6m	-	

Commented [30]: Should be mandatory

2.9.3 Sub-Area 3: Bakery Hill

Preferred character statement

New development should provide:

- An improved “gateway” experience to Bakery Hill and the Ballarat CBD
- An attractive, fine-grained mixed use area.
- A low rise character with moderately taller built form on suitable sites, that are sensitive to its heritage and built form context.
- An improved public realm and built form interface to Curtis Street and pedestrian connections to Bridge Mall.

Design requirements

New Development should:

- Respond to the heritage character and topography of Bakery Hill.
- Where practical, maintain visual connections to the Contributory elements of heritage buildings within the area.

Table 3: Sub-Area 3 – Height and Setback Provisions

Street frontage	Preferred maximum street-wall height	Preferred minimum setback above street-wall	Mandatory upper-level Setback	Preferred Maximum Height
Bridge Mall	9m	6m 12m	-	12m
Curtis Street	9m	3m	-	12m
Little Bridge St.	9m	3m	-	12m
All other interfaces	9m	3m	-	-

Commented [31]: Should be Mandatory

3.0 Subdivision

None specified.

4.0 Application requirements

The following application requirements apply to an application for a permit under Clause 43.02, in addition to those specified elsewhere in the scheme and should accompany an application, as appropriate, to the satisfaction of the responsible authority:

A site analysis and urban design context report which demonstrates:

- How the proposal achieves the Design Objectives, preferred character statement and Design Requirements of this schedule.
- How the building contributes to the existing Ballarat Skyline through a considered design response.
- For all applications ~~15~~12 metres or greater in height, a 3D digital model of the building that shows:
 - How the building responds to and sits within the context of the site.

- How the building will be experienced from distant viewing locations (and within a broader contextual model of the city).
- How the built form has been articulated within the envelope to achieve maximum solar access internally and to the public realm, in addition to the shadow analysis.
- How the design (including building height and setbacks) responds to heritage buildings and key views.
- For applications above ~~15m~~12m, a wind assessment (report) setting out ground level impacts and, where necessary, mitigation measures to ensure a safe and comfortable pedestrian environment along surrounding streets. This report should inform the design response to the site.

Commented [32]: Generally supported

5.0 Decision guidelines

The following decision guidelines apply to an application for a permit under Clause 43.02, in addition to those specified in Clause 43.02 and elsewhere in the scheme which must be considered, as appropriate, by the responsible authority:

- Whether the development delivers design excellence, including but not limited to building siting, scale, massing, articulation and materials;
- Whether the design of the streetscape interface makes a positive contribution to an active, pedestrian-oriented street environment and/or public realm;
- Whether upper level development above the heritage street wall is visually recessive and does not dominate or visually overwhelm the heritage buildings;
- For development 15-12 metres or greater in height, an assessment of visual and off-site impacts demonstrated by the 3D massing model, provided under Clause 4.0.
- The impact of new development upon the consistency and prominence of the heritage street-wall.
- The visual prominence of upper level development within heritage streetscapes.
- Whether the proposal contributes to and improves the pedestrian environment and other areas of the public realm.
- The impact of development on key views between from Sturt Street towards Mt Warrenheip and from Bakery Hill towards the Ballarat Skyline.
- The wind effects created by the development.

Commented [33]: A Clause regulating signage should be added to the DD01



Ballarat Heritage Watch Inc.
PO Box 623W Ballarat West Vic 3350.

Response to the Bridge Mall Urban Built Form Framework and Proposed New DD01 for Planning Scheme Amendment (C243ball)

Submitted on behalf of Ballarat Heritage Watch Inc.

The members of Ballarat Heritage Watch have major concerns about some elements of the Urban Built Form Framework and the proposed DD01.

While we accept that there is much scope for renewal of this particular area of Ballarat, this should not be done at the expense of the existing heritage streetscape of one of Ballarat's earliest precincts.

Building Heights

In the main, our concerns relate to the removal of the mandatory height limits as defined in the existing DD01 and their replacement with discretionary heights which are far in excess of the current mandatory ones.

The existing DD01 has as one of its objectives *"To preserve the sky as an element in the street scene, and to prevent tall buildings from being erected which will obstruct the passage of sunlight and natural daylight into areas of pedestrian activity."*¹

It is clear that the current height limits were designed to achieve this objective.

- *On the southern side of the Bridge mall, no building may exceed 10.5 metres in height.*
- *On the northern side of the Bridge Mall, no building may exceed 8.7 metres in height.*

The proposed new DDO1 for Bridge Mall removes this objective – replacing it with *"Development must not cast additional shadow on any part of the southern footpath (public realm) of Bridge Mall or Little Bridge Street to a distance of 3.0 metres from the property boundary between 10am and 3 pm at 22nd September."*²

This change limits the requirement for sunlight to a thin strip along the southern edge of the pedestrian area of the Mall.

We are particularly opposed to the concept of a 'preferred' 24 metre height limit for Sub-Area 1 facing onto Grenville Street. The two sites on either side of Bridge Mall are highly visible for much of the length of Sturt Street. While the current buildings on these sites do little to enhance the streetscape, neither does their height greatly disturb the views of the many fine Victorian era buildings lining the lower end of Sturt Street. Allowing buildings on these sites with a height of 24 metres [or even more since the proposed DDO1 height limits will only be discretionary] would however completely overwhelm these streetscape views. A mandatory height limit of 15 metres would be far more appropriate for these locations.

¹ Schedule 1 To the [Current] Design and Development Overlay DDO1 - Clause 1

² Proposed Schedule 1 to Clause 43.02 Design and Development Overlay DDO1 - Clause 2.8

The former three storey building which existed on Grenville Street in the early part of the 20th Century formed a prominent climax to the views along Sturt Street. Its height of about 13 or 14 metres was comparable with that of the nearby two storey buildings in Sturt Street.



The Report on the Bridge Mall Built Form Framework prepared by URBIS claims that *“The DDO1 control is highly restrictive and is inconsistent with the current context and vision for the Bakery Hill and Bridge Mall area, as set out in the City of Ballarat’s strategic plans and local policy – particularly the Ballarat Strategy (2015), Making Ballarat Central - CBD Strategy (2017) and the Bakery Hill Urban Renewal Plan (2019)”*³

The existing DDO1 does have limitations in that the design objectives do not refer to uses other than retail - *“To promote the future use and development of the Bridge Mall as a safe, attractive, and functionally efficient shopping precinct.”*⁴

Presumably the major ‘restriction’ which the report found would be the mandatory height restrictions noted above. However despite the claims made, the proposal for ‘preferred’ height limits of up to 24 metres [seven storeys] is supported by neither the Bakery Hill Urban Renewal Plan nor Making Ballarat Central – CBD Action Plan 2017-21 each of which suggests buildings of three to four storeys in this area.

Making Ballarat Central - CBD Strategy has numerous references to Bridge Mall:⁵

Page 42 Precinct 2: Bridge Mall Core Retail

- 2.1 *Develop the area as a vibrant mixed use retail area.*
- 2.3 *Include commercial uses in upper levels.*
- 2.7 *Allow buildings of up to four storeys, subject to heritage considerations.*

Page 70 A13 *Encourage residential development around existing activity areas and retail hubs such as Bridge Mall.*

Regarding the CBD in general, Making Ballarat Central – CBD Action Plan refers to Ballarat’s heritage –

Page 91 D1 *Ensure landmark heritage buildings and Ballarat’s highly intact historic streetscape remain as the dominant features in the streetscape / vistas.*

- *Require sensitive design treatment of new buildings at the interface with heritage buildings, in accordance with Council’s heritage policy.*

³ Bridge Mall Built Form Framework [URBIS] MAY 2023 Page 5

⁴ Schedule 1 To the [Current] Design and Development Overlay DDO1 Clause 1

⁵ Making Ballarat Central - CBD Action Plan 2017-21

- Ensure conservation of existing public views to heritage, cultural and natural landmarks is incorporated in the design of all large development proposals, especially views to the clocktowers and spires

Page 92 **D5** Emphasise important sites, such as key redevelopment sites, and those located on prominent corners or adjacent to public spaces, through the quality of architectural design that reflects the distinctive architectural patterns of Ballarat's CBD.

D7 Design buildings of an appropriate scale and form to occupy important landmark sites throughout the CBD whilst ensuring that existing heritage buildings retain their visual prominence.

Page 93 **D14** Create a more consistent scale of buildings in the different parts of the centre, as appropriate to the precinct.

Within Bridge Mall and Victoria Street allow buildings up to three storeys in height with facade treatment demonstrating dominant heritage facade patterns. (Note that a contemporary three storey building will be the equivalent of a double storey heritage building.) This will ensure a 'pedestrian scale' within these areas and retain sight lines along Sturt Street.

Page 119 **2.7** Allow buildings up to parapet height of heritage buildings along the Mall and four storeys elsewhere, subject to heritage considerations.

D. STRATEGIES & ACTIONS



6

This plan on Page 95 of Making Ballarat Central - CBD Action Plan clearly shows that the Council's currently adopted strategy for the Bridge Mall area is for buildings up to 3 storeys.

The building heights envisaged by the proposed DDO1 are completely at odds with the strategy outlined by these statements.

The Executive summary of the report on the Bridge Mall Built Form Framework claims "An embedded project objective is to protect and celebrate the significant heritage within Bridge Mall. The Built Form Framework Plan supports a greater scope for urban infill, and includes guidance on recommended maximum street wall heights, building heights and minimum upper level setbacks. This Built Form Framework aims to retain heritage values whilst supporting a lively precinct with an appropriate scale of urban development."⁷

⁶ Making Ballarat Central - CBD Action Plan 2017-21- Page 95

The report describes the study area as *“Bridge Mall has a highly consistent two-storey street wall with significant heritage assets. It is generally a fine-grained, human-scale street with attractive and varied building forms. It is located within key view lines between the commercial and civic centre of Ballarat to the west and Mount Warrenheip to the east.”*

“Much of Bridge Mall streetscape is identified as having an important heritage character.

It is significant for the following reasons:

- *Early and largely intact streetscape of original and early Victorian, Federation and Inter-war era commercial buildings.*
- *Characteristically double storey scale, interspersed with some single and three-storey development.*
-
- *Visual connection to Sturt Street, Bakery Hill and the distant axial view of Mount Warrenheip to the east.”⁸*

However the proposed DDO1 is quite inconsistent with these statements. Allowing 24 metre [approximately seven storey] high buildings will do nothing to *“protect and celebrate the significant heritage within Bridge Mall”,* and will substantially diminish the impact of the *“fine-grained, human-scale street.”*

Form of Buildings

We are concerned that the proposed building envelopes with up to three height limits at various setbacks are likely to encourage buildings in the shape of ‘stepped pyramids.’ This is a building form which is totally foreign to Ballarat’s CBD.

Clause 43.02-6 of the Current Planning Scheme outlines decision guidelines for Design and Development Overlays and includes -

- *“Whether the bulk, location and appearance of any proposed buildings and works will be in keeping with the character and appearance of adjacent buildings, the streetscape or the area.*
- *Whether the design, form, layout, proportion and scale of any proposed buildings and works is compatible with the period, style, form, proportion, and scale of any identified heritage places surrounding the site.”⁹*

We believe that the building envelopes of the proposed DD01 are inconsistent with these decision guidelines and in particular that the proposed setback of upper storeys for the building forms facing onto Grenville Street is inappropriate as this stepped form of building is not currently found anywhere within Ballarat’s CBD and hence would not be in keeping with the ‘character and appearance’ of the streetscape or the area.

The **Making Ballarat Central – CBD Strategy** is quite clear in describing the form of buildings which should be constructed on prominent corner positions -

“D5 Emphasise important sites, such as key redevelopment sites, and those located on prominent corners or adjacent to public spaces, through the quality of architectural design that reflects the distinctive architectural patterns of Ballarat’s CBD.”¹⁰

Photographs of existing buildings on nearby corners illustrate the style of many existing buildings throughout Central Ballarat – and show that the ‘distinctive architectural pattern’ is overwhelmingly that of buildings of two or three storeys, usually with parapets concealing the roof structure.

⁷ Bridge Mall Built Form Framework [URBIS] MAY 2023 Page 3

⁸ Bridge Mall Built Form Framework [URBIS] MAY 2023 Pages 6 and 11

⁹ Ballarat Planning Scheme Clause 43.02-6

¹⁰ Making Ballarat Central - CBD Action Plan 2017-21- Page 92



Early photographs of the buildings which preceded the current buildings on the corners of Bridge Mall and Grenville Street show that they also conformed to this distinctive style.

The stepped style of building forms advocated in the Bridge Mall Built Form Framework is completely inconsistent with this style.

The development of the Curtis Street and Little Bridge Street frontages does offer an opportunity for slightly higher building forms, however these should be limited in depth and height so that they are not visible above the two [occasionally three] storey facades of the buildings facing onto Bridge Mall.

Conflict of Proposed DDO1 with Heritage Overlay

The revised Bridge Mall / Bakery Hill Heritage Precinct Statement of Significance lists a number of reasons why the Bridge Mall area is of heritage importance:

“Elements that contribute to the significance of the place include (but are not limited to):

- *Commercial buildings that demonstrate the precinct’s development from the 1850s to the 1950s, including Victorian, Federation, Interwar and a small number of early Postwar buildings.*
- *Civic, institutional and residential buildings dating from the late nineteenth to the mid-twentieth century at the eastern end of the precinct.*
- *Original and remodelled facades, including those currently concealed by late twentieth-century metal overcladding, and early or original shopfronts and cantilevered awnings.*
- *Largely intact rear building elevations visible from the public realm, some featuring ghost signage and outbuildings.*
- *Largely intact roofscapes, including roof form and chimneys, which illustrate the era in which each building was constructed, including those whose front facades were remodelled during the interwar and early postwar periods, or more recently hidden behind metal overcladding.*
- *Key views from within and through the precinct, including towards the significant civic landmarks on Sturt Street and Lydiard Street towards the west, and St Paul’s Anglican Church and Mount Warrenheip to the east.”*

The Statement of Significance also points out:

“The Bridge Mall / Bakery Hill Heritage Precinct is of historical significance as the oldest commercial centre in East Ballarat and one of the oldest in the City of Ballarat.”

“The Bridge Mall / Bakery Hill Heritage Precinct is of significance as a substantially intact and visually cohesive representative example of a predominantly Victorian-era commercial centre, with some intact development and remodelled facades from the Federation, Interwar and early Postwar periods. Main Road and the eastern end of the precinct in particular demonstrate a high degree of uniformity in scale and form. Typical characteristics of such precincts – including a predominantly two-storey street wall (interspersed with some single and three-storey buildings), parapeted rendered or red brick facades with repetitive upper floor fenestration, some original or early ground floor shopfronts

¹¹ Images from Google Earth

with some original cantilevered awnings or reconstructed posted verandahs and bluestone kerbs and channels – are displayed in the original forms, fabric and detailing of many of the buildings.”

“The precinct forms and [sic] important part of the linear views from Sturt Street to Mount Warrenheip, St Paul’s Anglican Church and the East Ballarat Fire Station tower.”¹²

The building heights and forms which would allowable under the proposed DDO1 for Bridge Mall would seriously threaten the heritage significance of this precinct as part of one of the oldest areas within Ballarat. Buildings of up to seven storeys would visually overwhelm the current two and three storey nature of the precinct and obscure or dominate the important views from Sturt Street towards Mount Warrenheip.

The **Ballarat Skyline and Views Study of 2021** refers to views towards Mount Warrenheip from several viewpoints.

Linear View 3 along the north lane of Sturt Street across Lydiard Street looking east clearly shows the mountain rising above the current two storey building on the corner of Bridge Mall and Grenville Street.

The study describes the view as

“The viewing location commands the crest of the Ballarat (Camp Street) escarpment with views down Sturt Street to a major landmark (Mount Warrenheip). Historic buildings on both sides of Sturt Street frame the view with the central gardens forming an important component of the view composition.”

“The aesthetic attributes of the view are defined by the consistent scale of buildings, the varied yet complementary architectural details and the channelled focus on Bakery Hill and Mount Warrenheip.”

Under View Management the study makes the following points:

“Notes to consider:

- *This location provides classic views of Bakery Hill and Mount Warrenheip beyond. The layout and scale of the streetscape remains intact and would be sensitive to major unsympathetic change, particularly to Mount Warrenheip and to views of St Paul’s Church (1864) on the site of an early timber church servicing Bakery Hill.*
- *Impact of development in Bridge Mall area, particularly the corner sites on Grenville Street – Norwich Plaza and Priceline, on the middle- and long-distance view.*
- *Impact of introducing street trees, particularly at the immediate junction with Lydiard Street and the initial section of Sturt Street down to Camp Street.*
- *Negative impact of street signage, particularly advertising hoardings on the sides of buildings.”*



¹² Bridge Mall / Bakery Hill Heritage Precinct: REVISED Statement of Significance, March 2023

¹³ Ballarat Skyline and Views Study 2021 pages 36 to 40

Advertising Signs

We note that the existing DD01 in section 3.0 has a number of essential clauses regulating advertising signs. These require a permit to construct or display a sign; require signs to be unobtrusive; limit the height of signs to no more than 6 metres above ground level; limit the total area of signs, particularly those above verandahs; and do not allow animated signs or sky signs.

The need for such regulation of signage is recognised in **Making Ballarat Central - CBD Action Plan**

2.11 Rationalise signage in this Precinct to reduce visual clutter, particularly large scale advertising signage at CBD entry points.¹⁴

The proposed new DD01 does not have any clauses relating to signage. This shortcoming needs to be rectified.

We would welcome any opportunity to elaborate on our submission.

An annotated copy of the proposed DD01 with detailed comments indicating our responses to particular clauses is also attached.

██████████
President, Ballarat Heritage Watch Inc.
PO Box 623W Ballarat West, Vic 3350

¹⁴ Making Ballarat Central - CBD Action Plan 2017-21 Page 42



SUBMISSION 9

██████████
Principal Strategic Planner and Urban Designer
PO Box 655
Ballarat VIC 3353
Email: ██████████

Dear ██████████

NOTIFICATION OF INCLUSION OF A HISTORICAL ARCHAEOLOGY SITE IN THE VICTORIAN HERITAGE INVENTORY, BRIDGE MALL, BALLARAT

I refer to your recent correspondence with Heritage Victoria regarding the notice of Amendment C243 Ball (Bridge Mall, Ballarat). As you are aware, Heritage Victoria manages the Victorian Heritage Register, and the Victorian Heritage Inventory (VHI). The following comments relate to potential VHI sites within the subject area.

The VHI is a list of approximately 7,200 known historical archaeological sites in the state. The *Heritage Act 2017* also provides a level of statutory protection for historical archaeological sites that have not been assessed by Heritage Victoria and are not currently included in the VHI. There are currently two VHI sites located in the subject area:

- **Bridge Street Mall Roadways Precinct (H7622-0470)**
- **Bridge Street Mall Culverts (H7622-0469)**

Heritage Victoria is currently progressing an archaeological assessment for this area, which is likely to lead to the addition of new VHI sites. Approximately 45 sites have been identified which are likely to contain historical archaeological remains. As part of the assessment, Heritage Victoria is researching plans of the historic city and other records and evaluating current site condition and levels of disturbance. The process of adding these sites to the VHI will take approximately two to four weeks. Property owners and the City of Ballarat will be notified when the process is complete, and the sites have been listed on the VHI.

It is necessary to obtain approval (in the form of a Consent) from the Executive Director, Heritage Victoria to authorise works that may affect historical archaeological remains at a VHI site. In most cases a Consent will be issued subject to the undertaking of a program of archaeological investigations or monitoring, recording, reporting and artefact management.

Additional information about Consents and the archaeology process can be found on Heritage Victoria's Website (<https://www.heritage.vic.gov.au/permits-and-approvals/archaeology-consents>).

Spatial information relating to the location and extent of VHI sites is available in VicPlan (<https://mapshare.vic.gov.au/vicplan/>). To turn on the heritage layers use the left-hand legend and tick on 'heritage'. The VHI sites are coloured light blue. Other site information (including site description, history and significance) is included on the Victorian Heritage Database (<https://vhd.heritagecouncil.vic.gov.au/>).

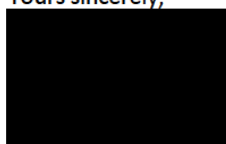
OFFICIAL

There are currently no places included in the Victorian Heritage Register within the area subject to Amendment C243 Ball (Bridge Mall, Ballarat) and the proposed amendment is unlikely to impact the following adjacent VHR places:

- H1949 - Ranger Barracks
- H0401 - St Pauls Anglican Church

Please contact Heritage Victoria's Historical Archaeology Team (email: archaeology.admn@delwp.vic.gov.au) if you have any questions in relation to the VHI or archaeology processes. If you require any further information please contact Laura Campbell, Project Archaeologist on (03) 8508 2894 or laura.m.campbell@delwp.vic.gov.au.

Yours sincerely,



Principal Archaeologist

Heritage Victoria

12 March 2024

(as delegate for [REDACTED], Executive Director, Heritage Victoria pursuant to the Instrument of delegation)

cc: [REDACTED] Manager Strategic Planning, City of Ballarat

[REDACTED] Project Support Officer, City of Ballarat

OFFICIAL

David Helms
HERITAGE PLANNING

8 July 2024

[REDACTED]
City of Ballarat
PO Box 655
BALLARAT VIC 3353

Dear [REDACTED]

Amendment C243bal - response to heritage issues raised by submissions

As requested, this letter provides my expert advice in relation to heritage issues raised by two submissions to Amendment C243bal (the Amendment), as follows:

- Submission 5, which relates to the property known as 12 Norwich Plaza (for the purposes of this report I refer to this site as the 'former Norwich Plaza'). This submission disputes the proposed Contributory grading to part of this property (specifically the section facing Bridge Mall containing approximately six former Victorian shops, remodelled c.1952). (Note: the submission identifies the address as 2 Norwich Plaza, but for this report I use 12 Norwich Plaza, which you have confirmed is the 'official' address used by Council's GIS system.)
- Submission 7, which relates to the property known as 3 Peel Street South. The submission disputes the proposed change in grading of the former North Grant (later Centenary) Hotel from Contributory to Significant, as it has been altered.

Both properties form part of the HO176 Bridge Mall/Bakery Hill Precinct.

In accordance with your instructions, the purpose is to review the submissions and Amendment and other relevant documentation and provide advice as to whether any changes to the Amendment are required.

In preparing this advice I have:

- Reviewed the Amendment and other relevant documentation in relation to heritage, including:
 - *The Revised heritage citation: Bridge Mall/Bakery Hill heritage precinct, Ballarat Central & Bakery Hill (HO176)*, December 2021, revised by Landmark Heritage PL March 2023 (hereafter referred to as the 'revised precinct citation').
 - *Bridge Mall/Bakery Hill heritage precinct: Revised Statement of significance*, March 2023 (the 'revised SoS').
 - *Ballarat Heritage Precincts – Statements of Significance 2006 (revised August 2014)*, which contains the current citation for the HO176 Precinct (the 'incorporated document').

PO Box 1225 Chapel Street, Windsor 3181
e: [REDACTED] m: [REDACTED]

AMENDMENT C243BAL HERITAGE ADVICE

- Reviewed the planning permit and endorsed plans recently issued for the former Norwich Plaza.
- Inspected both sites on 25 June 2024, accompanied by you and Charyn Symes, Strategic Planner, and one of the submitters for 3 Peel Street South. Both sites were inspected from the exterior only. Attachment A includes photos taken during the site inspections.
- Undertaken limited historic research, as required.

Response to Submission 5, former Norwich Plaza

The submission notes:

- The removal of metal cladding has revealed 'pre-cast panelling beneath, with no evidence of Victorian facades remaining'.
- The works associated with the current planning permit will 'alter any remaining internal walls that reference the historic shops and will also necessitate the replacement of the current hipped roof forms with a continuous skillion roof across the entire Level 1. These works will remove the final remaining cues of the old shopfronts and we submit that given this there is insufficient grounds to elevate the categorisation of Norwich Plaza to contributory'.

The current citation for the HO176 Precinct in the incorporated document includes the former Norwich Plaza, identified as 'CA1 Norwich Plaza Bridge Mall, Ballarat Central' in the list of 'Buildings Not Significant to a Precinct'.

The Amendment proposes to change the level of significance of the former Norwich Plaza to:

- Part Contributory, which would apply to the 'Row of 6 Vic shops given new façade c1940, now beneath metal cladding at south-eastern corner of Norwich Plaza', and
- Part Non-contributory, which would apply to the balance of the site as shown on the precinct plan (see below).



Boundary and gradings map for Bridge Mall and Bakery Hill Precinct (HO176)

Map showing the property gradings. The proposed 'Contributory' section of the Norwich Plaza in the top left corner is indicated by the red arrow (Source: Revised SoS with my annotation).

The justification for the proposed Contributory grading is the revised SoS:

- *What is significant?* includes the following (amongst other things):

Commercial buildings that demonstrate the precinct's development from the 1850s to the 1950s, including Victorian, Federation, Interwar and a small number of early Postwar buildings (as listed in the gradings table below).

Original and remodelled facades, including those currently concealed by late twentieth-century metal overcladding, and early or original shopfronts and cantilevered awnings.

- *Why is significant?* includes the following (amongst other things):

The buildings and early street fabric within the Bridge Mall / Bakery Hill Heritage Precinct illustrate the key phases in the City of Ballarat's development – from the area's early gold mining activities, to the boom-era of the late nineteenth century, renewed prosperity and modernisation in the interwar era, and the slower development in the early Postwar period – and demonstrate the precinct's continuous and important role as a vibrant commercial centre for the City of Ballarat. (part of the statement of significance for Criterion A)

The Bridge Mall / Bakery Hill Heritage Precinct is of significance as a substantially intact and visually cohesive representative example of a predominantly Victorian-era commercial centre, with some intact development and remodelled facades from the Federation, Interwar and early Postwar periods. Main Road and the eastern end of the precinct in particular demonstrate a high degree of uniformity in scale and form. Typical characteristics of such precincts – including a predominantly two-storey street wall (interspersed with some single and three-storey buildings), parapeted rendered or red brick facades with repetitive upper floor fenestration, some original or early ground floor shopfronts with some original cantilevered awnings or reconstructed posted verandahs and bluestone kerbs and channels – are displayed in the original forms, fabric and detailing of many of the buildings. (Criterion D)

Two planning permits were recently issued for the former Norwich Plaza:

- One for the removal for the metal cladding from the facades. This has been completed and has revealed the original c.1952 and c.1962 facades (see below).
- Planning Permit No. PLP/2023/464 for alterations, including part demolition, and additions to the building was approved and issued on 26 April 2024. These works are currently underway.

The plans endorsed with the latter permit show:

- The surviving c.1952 and c.1962 facades will be retained.
- The Victorian era hipped roofs behind the c.1952 section will be demolished.

The planning permit also includes the following Condition 3: Heritage (Demolition):

Demolition is only permitted to sections of the building(s) as identified in the approved demolition plan. The remainder of the building(s) must be retained in its (their) entirety. Only deteriorated and or unsound building elements (fabric) should be removed with as much of the original material retained as possible. No fabric of

retained portion(s) of building(s) is to be removed until assessed by the Responsible Authority and written approval is given.

Findings

The additional research, as well as historic information gathered as part of another current project (which includes a review of the neighbouring HO171 Lydiard Street heritage precinct) has revealed further information about the former Norwich Plaza (see Attachment B). This confirms the following:

- Morshead's established their first store at the west end of Bridge Street (now Bridge Mall) in 1908. Over the years, they expanded, occupying several shopfronts.
- In c.1952 the several shops were combined to create a single store, which included a new building front.
- In 1960 Morshead's became part of the Foy & Gibson retail organisation and in 1962 they opened a new £250,000 department store on the adjoining site at the corner of Grenville Street.

These buildings are shown in Figure 12 in the revised precinct citation.

The removal of the metal cladding from the former Norwich Plaza building confirms the c.1952 and 1962 upper-level facades remain largely intact. For the c.1952 section, facing Bridge Mall, this includes distinctive late Moderne form and detailing:

- The horizontal band of narrow windows separated by brick piers.
- The expressed corner bay that projects above the parapet and returns along the side elevation. This has an incised grid pattern, a 'M' monogram/logo (for Morshead's) in cast cement, and parapet capping with a shadowline detail.
- A section of glass bricks just above the shopfronts.

The 1962 section at the corner of Grenville Street is less intact. Several windows have been inserted into the first floor on both sides.

See Attachment A for historic and current photos.

On this basis, my findings are as follows:

- The Morshead family retail firm had a long and important association with the development of Bridge Street as one of Ballarat's most important shopping centres.
- The c.1952 and 1962 additions to the original Victorian era shops occupied by Morshead's provide evidence of the growth of the company and the historic importance of Bridge Street as a shopping centre into the post-war period.
- This is demonstrated by the c.1952 and 1962 facades and detailing, which in accordance with the recent planning permit will be retained.
- The loss of the Victorian-era roofs is not consequential in relation to the proposed Contributory grading of part of the former Norwich Plaza. The confirmation that the upper façade of the c.1952 building remains largely intact provides appropriate justification, as it contributes to the historic (Criterion A) and representative (Criterion D) significance of the precinct expressed in the revised SoS.

- In my opinion, the 1962 building is also historically significant and could be regarded as Contributory but based upon the revised SoS falls outside the key period of significance (up to the 1950s). It is also less intact.

In conclusion, the proposed Contributory grading of part of the former Norwich Plaza is supported, subject to the following changes to the Grading schedule in the revised SoS and revised precinct citation:

- Replace the era with 'Early postwar'
- Update the 'Comments' to reflect recent changes due to the removal of the metal cladding and correct the construction date.

The relevant sections of the history and description in the revised precinct citation should be updated to ensure consistency with the updated Grading schedule. A list of suggested changes is provided below.

Response to submission 7, 3 Peel Street South

The submission questions the Significant grading due to:

- Damage to the façade render and corbelling of the lower corner section (1/3 Peel Street).
- 6/3 Peel Street has a recent extension on the rooftop level.
- The building is not a hotel and has not been since it was subdivided into six units in 2006.

The submission also notes that 'North Grant' is misspelt as 'North Grand' in the revised SoS.

The current citation for the HO176 Precinct in the incorporated document includes a list of 'Buildings Not Significant to a Precinct'. Any building not included on this list, which includes the former North Grant Hotel at 3 Peel Street South 'are considered to be prima facie contributory to the significance of the heritage place'.

The Amendment proposes to change the level of significance of the former North Grant Hotel to Significant.

The justification for the proposed Significant grading is the revised SoS:

- *What is significant?* includes the following (amongst other things):

Commercial buildings that demonstrate the precinct's development from the 1850s to the 1950s, including Victorian, Federation, Interwar and a small number of early Postwar buildings (as listed in the gradings table below).

Original and remodelled facades, including those currently concealed by late twentieth-century metal overcladding, and early or original shopfronts and cantilevered awnings.

Largely intact roofscapes, including roof form and chimneys, which illustrate the era in which each building was constructed, including those whose front facades were remodelled during the interwar and early postwar periods, or more recently hidden behind metal overcladding.

Key views from within and through the precinct, including towards the significant civic landmarks on Sturt Street and Lydiard Street towards the west, and St Paul's Anglican Church and Mount Warrenheip to the east.

*The following properties are individually Significant: 24-26, 31, 86, 95-99 & 100 Bridge Mall; 1A (VHR H401), 7 & 9 Humffray Street South; 77 Little Bridge Street; 2/15-19 (HO93), 21 (HO94) & 38 Main Road; **1-6/3 Peel Street South**; and 10 & 14 Victoria Street. (my emphasis added)*

- *Why is significant? includes the following (amongst other things):*

The buildings and early street fabric within the Bridge Mall / Bakery Hill Heritage Precinct illustrate the key phases in the City of Ballarat's development – from the area's early gold mining activities, to the boom-era of the late nineteenth century, renewed prosperity and modernisation in the interwar era, and the slower development in the early Postwar period – and demonstrate the precinct's continuous and important role as a vibrant commercial centre for the City of Ballarat. (part of the statement of significance for Criterion A)

The Bridge Mall / Bakery Hill Heritage Precinct is of significance as a substantially intact and visually cohesive representative example of a predominantly Victorian-era commercial centre, with some intact development and remodelled facades from the Federation, Interwar and early Postwar periods. Main Road and the eastern end of the precinct in particular demonstrate a high degree of uniformity in scale and form. Typical characteristics of such precincts – including a predominantly two-storey street wall (interspersed with some single and three-storey buildings), parapeted rendered or red brick facades with repetitive upper floor fenestration, some original or early ground floor shopfronts with some original cantilevered awnings or reconstructed posted verandahs and bluestone kerbs and channels – are displayed in the original forms, fabric and detailing of many of the buildings. (Criterion D)

The Bridge Mall / Bakery Hill Heritage Precinct is of aesthetic significance as a distinctive and irregularly planned precinct that contrasts markedly to the highly ordered street and subdivision patterns to the west of Grenville Street. The precinct features commercial and civic buildings of high design quality dating from the Victorian and Federation periods, with some refacing of Victorian shopfronts in the 1930s in a Moderne style, and a small number of restrained buildings from the early Postwar period. Key examples from the Victorian era include the Classical Revival Munster Arms Hotel at 10 Victoria Street designed by Henry R Caselli in 1864, the Venetian Gothic former East Ballarat Post Office at 21 Main Street (HO94), the threestorey Classical Revival building at 24-26 Bridge Mall, the Anglo-Dutch gabled shop at 31 Bridge Mall, the High Victorian former North Grand [sic] Hotel at 3 Peel Street South, and the former Titheridge & Grocott real estate office at 15-19 Main Road (HO93). (part of the statement of significance for Criterion E)

Findings

The additional research has identified William Brazenor as the architect of the former North Grant Hotel. Brazenor designed several buildings in Ballarat during the late nineteenth and early twentieth centuries including the Prince Regent Hotel, Canadian.

During my inspection I observed the changes to original details at the ground floor corner, and elsewhere along the ground floor façade, and the rooftop addition.

On this basis, my findings are as follows:

- The former North Grant Hotel is a prominent building within the HO176. It has landmark qualities due to its imposing three-storey height, long side elevation and siting on a corner.
- The upper facades remain intact and are notable for the unusual, arcaded chimneys, ornate pediments to the splayed corners to Bridge Mall and Little Bridge Street, and other details including stilted segmental arches, string courses, hood moulding and rendered band work, which contribute to the aesthetic qualities of the building.
- The most significant change has been the replacement of the original windows at the Bridge Mall corner with large square openings and rendering of the surrounding brickwork. Other changes at the ground level include part removal of cornices and label moulds, and replacement of windows and doors within the original openings along Peel Street.
- The rooftop addition is visible from several vantage points, but it is concealed or substantially concealed from key views, including from Bridge Mall itself. It is setback behind original chimneys, which have been retained.
- In my opinion, while the alterations and additions have impacted upon the integrity of the building, it still justifies the Significant grading because of its aesthetic significance (Criterion E) as a prominent landmark with distinctive detailing.
- The separate listings for each unit (1/33 Peel Street South, 2/33 Peel Street South, etc.) in the Grading schedule in the revised SoS and revised precinct citation is confusing, as it suggests that each of the subdivided units within the building is of individual significance.

In conclusion, the proposed Significant grading of the former North Grant Hotel is supported.

However, to avoid potential misunderstanding the separate listings for each unit in the Grading schedule should be replaced with a single listing.

The incorrect spelling 'North Grand' should be corrected where relevant, and relevant sections of the history and description in the revised precinct citation updated to include the architect and further information about the key architectural features of the building.

Other findings

The additional research has identified the following information about specific buildings. While none of this information changes the gradings proposed by the revised SoS, it nonetheless provides additional context and it would be desirable to update the revised SoS and revised precinct citation, as required:

- Clegg, Morrow & Cameron designed the shop at 10 Bridge Mall in 1928.
- The Messer & Opie store at 17 Bridge Mall was designed by H.L. Coburn in 1939 and therefore is 'interwar' not 'early postwar' as described in the building schedule in the revised SoS and revised precinct citation.
- H.L. Coburn also designed the new facades to the buildings at 86, 88 and 90 Bridge Mall in 1934 and 1935. C.H. Ludbrook installed the elaborate shopfront at no.86 in

AMENDMENT C243BAL HERITAGE ADVICE

1923 for Walter Davis. This information (obtained from the City of Ballarat building register) could be added to the revised precinct citation.

- The building at 65 Bridge Mall was Coles Store No.22. Coles Store No.22 was opened in an existing building on this site in 1932. The present Moderne style building, which is typical of the interwar Coles Stores, dates from c.1935. This information could be added to the building schedule in the revised SoS, and the history, description and building schedule in the revised precinct citation.

Summary of recommended changes to the Amendment

No change to the gradings of the former Norwich Plaza or 3 Peel Street South is required in response to the submissions.

The Amendment documentation should be updated as follows:

- In the revised statement of significance in the statement for Criterion E under 'Why is it significant' replace 'North Grand Hotel' with 'North Grant Hotel'.
- Update the Grading schedule in the revised SoS (and revised precinct citation) as follows (new or amended text in italics and highlighted yellow):
 - Replace the multiple listings for 3 Peel Street with a single listing:

Address	Name	Grading	Era	Comments
<i>1/3, 2/3, 3/3, 4/3, 5/3 & 6/3 Peel Street South</i>		Significant	Victorian	Former North Grant (<i>later Centenary and Ballarat</i>) Hotel

- Update the information for Norwich Plaza (new or updated text is in italics):

Address	Name	Grading	Era	Comments
<i>12</i> Norwich Plaza (part)		Contributory	<i>Early postwar</i>	Former <i>Morshead's Department Store c.1952 facade</i>
<i>12</i> Norwich Plaza (part)		Non-contributory	1962	See <i>Boundary and gradings map</i> for details

- Update the information for three other places (updated text in italics):

Address	Name	Grading	Era	Comments
17 Bridge Mall	Messer and Opie	Contributory	<i>Interwar</i>	
63 Bridge Mall	Ghanda Clothing	Contributory	Interwar	<i>Former Coles Store No.22</i>

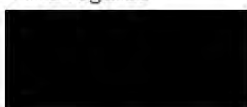
AMENDMENT C243BAL HERITAGE ADVICE

				64-65 are a single building
65 Bridge Mall	Aussie Disposals	Contributory	Interwar	Former Coles Store No.22 64-65 are a single building

3. Update the revised precinct citation to ensure consistency with the updated Grading schedule, and include additional contextual information, as set out in Attachment B.

Please contact me if you have any questions or require further information.

Kind regards



David Helms

attach

Attachment A – Morsheads Department Store historic and current images

Historic Images



Morshead's c. 1950s showing the c. 1952 facade (Source: (Source: Victorian Collections <https://victoriancollections.net.au/items/595f2b9ed0cdd325c0a4e53c>, accessed 7 July 2024)



Morshead's c. 1962 showing the new building at the corner of Grenville Street (Source: Figure 12 in the revised precinct citation)

Current Images



The c.1952 building looking west.



Detail of the c.1952 façade showing the original 'M' logo, incised grid pattern, parapet capping shadowline detail, and evidence of the original flagpole fastenings to the right.

AMENDMENT C243BAL HERITAGE ADVICE



View of the c.1952 building from the south side of Bridge Mall – note section of glass bricks above the shopfronts to the left.



View of the c.1962 building Bridge Mall elevation showing the windows inserted into the façade.

Attachment B – Recommended changes to the revised precinct citation

History

- Page 5. In the paragraph under Figure 5 in the brackets after the North Grant Hotel insert 'designed by William Brazenor in' before '1893' and 'renamed the Centenary Hotel in 1934' after '1893').
- Page 7. In the caption under Figure 9 add 'Note the replacement of the shops on the left in Figure 8 with the new Morshead's Department Store'.
- Page 7. In the final paragraph, insert 'and early postwar period'.
- Page 8. In the first paragraph after the sentence ending 'leadlight window' insert:
These remodellings and the new facade for the Messie & Opie store at 17 Bridge Mall were designed by Ballarat architect H.L. Coburn. Another Ballarat firm, Clegg, Morrow and Cameron, designed the remodelled shop at 28 Bridge Mall in 1928.
- Page 8. In the first paragraph replace the sentence beginning 'Most entirely new development' with:
New development included the Coles Store No.22, built c.1935 at 63-65 Bridge Mall (this replaced an early building Coles had occupied since 1932) and the State Savings Bank of Victoria at 95-99 Bridge Mall (1940), both in the fashionable Moderne style.
- Page 8. In the first paragraph delete the final sentence beginning 'This string of remodellings ...'
- Page 8. After the first paragraph, insert the following new paragraphs:
A significant remodelling in the early postwar period was Morshead's Department Store. W.R. Morshead Snr. established his first store at the west end of Bridge Street in 1908. Over the years, the store was expanded, occupying several shopfronts and became renowned for the window displays. In c.1952 the several shops were combined to create a single store, which was given a stylish late Moderne style facade to Bridge Street. By 1960 Morshead's had become part of the Foy & Gibson retail organisation and in 1962 they expanded further opening a new £250,000 department store on the adjoining site at the corner of Grenville Street (University of Melbourne).
Other early postwar remodellings occurred at 6-8 and 84 Bridge Mall.
- Page 9. Delete the last paragraph (which is replaced with the new paragraph, above), and replace the image in Figure 11 with the first of the three historic images in Attachment A, with the following caption:
Morshead's Department Store showing the c.1952 facade and their famous illuminated window displays (Source: Victorian Collections <https://victoriancollections.net.au/items/595f2b9ed0cdd325c0a4e53c>, accessed 7 July 2024)
- Page 10. Replace the caption for Figure 12 with:
Morshead's Department Store, 1962, showing the new store at the corner of Grenville Street, and the adjacent c.1952 building (Source: Victorian Collections, ID CB_Photo_615a).

- Page 34. Add the following to the list of References:
University of Melbourne: 'Foys Melbourne Central. News Service of the Month'. Vol. 4, No. 5, June 1962, <https://rest.neptune-prod.its.unimelb.edu.au/server/api/core/bitstreams/efc26db2-f8f9-547c-8ffa-77acfa57059f/content>, viewed 7 July 2024

Description

- Page 11. Delete the second to last paragraph beginning 'During the interwar period ...' and add the following to the preceding paragraph:

During the Interwar period a number of shop facades were remodelled, and this continued in the decades immediately following the Second World War.

- Page 11. In the final paragraph replace 'Norwich Plaza and' with 'the'.
- Page 13. In the final paragraph add the following sentence:

The former North Grant Hotel is an imposing three-storey building on a corner site with a narrow frontage to Bridge Mall and a long side elevation to Peel Street South. The upper facades remain intact and are notable for the unusual, arcaded chimneys, ornate pediments to the splayed corners to Bridge Mall and Little Bridge Steet, and other details including stilted segmental arches, string courses, hood moulding and rendered band work.

- Page 16. In the second last sentence of final paragraph replace '1930s shopfront' with '1920s shopfront'.
- Page 17. Insert the following after the second paragraph:

The former Coles Store is another interwar 'new build'. The Streamline Moderne detailing of the upper façade and the steel frame windows are typical of Coles stores of the period.

- Page 17. In the third paragraph replace the second part of the first sentence after the comma with "... as seen at 6-8 & 84 Bridge Mall, 40 Main Road and the c. 1952 former Morshead's Department Store at 2 Norwich Plaza", and insert the following immediately after the sentence beginning 'Stylistically, most have a restrained...':

The former Morshead's Department Store is a good example, with its asymmetrical massing featuring an expressed corner bay with an incised grid pattern that returns along the side elevation, an original 'M' logo in cast cement, and parapet capping with a shadowline detail.

Assessment against Criteria

- Page 22. In the text under Criterion E replace 'North Grand Hotel' with 'North Grant Hotel'.

Attachment C – Additional historical information


Morsheads Department Store

University of Melbourne:

'Foy's Melbourne Central. News Service of the Month'. Vol. 4, No. 5, June 1962,
<https://rest.neptune-prod.its.unimelb.edu.au/server/api/core/bitstreams/efc26db2-f8f9-547c-8ffa-77acfa57059f/content>, viewed 7 July 2024

North Grant Hotel

Source: Trove



News Service

OF THE MONTH

Circulated for
Foy's stores at . . .

CITY, PRAHRAN,
COLLINGWOOD
FOYS, CHADSTONE
Foy-Bilsons, Colac
Brights, Geelong
Myers, Bendigo
Bowings, Mildura
Partans, Dandenong
Morsheads, Ballarat

PUBLISHED AT GIBSONIA HOUSE, 226 SWANSTON STREET, MELBOURNE

VOL. 4, No. 5

JUNE, 1962

EDITORIAL

It's always been the policy of "News Service" to "break a lance" for any worthy Cause in which our organisation is taking more than a superficial interest. Readers will speedily agree that the Cause this month, is deserving of the utmost support.

Let's introduce the subject by quoting the remarks one often hears about fellow-employees who have retired and of whom, little is seen, or heard:

"Do you ever see Smithy, these days? I hear he's living by himself down at South Melbourne."

or

"I wonder how old Mrs. ——— is keeping now? She was pretty sick when she finished last year and the poor old dear was dreading the thought of retiring."

Maybe, the passing comment may not concern a former work-mate, but may be a conjecture about a neighbor, an old friend, or even an elderly relation.

All of these inquiries revolve around people who have become old, or sick, or lonely, or uncertain as to their future. In former generations such concern was thought to be the exclusive responsibility of the family itself, or religious bodies, or of a somewhat limited number of charitable organizations. It says much for Man's greater humanitarianism of today when kindly people of all types ARE concerning themselves with the problem, and problems, of the older people in the community.

Old-age, today, has become more than an individual responsibility. It's one of the great social conundrums of our time. One-eighth of our total population is in the "over-60, elderly" bracket; Science and Medicine will make this percentage even greater in the years to come. Most of us, please God, may expect to reach that age in due course, and our arrival will

certainly pose certain pressing questions. Amongst these will be numbered the following:—

Will I be alone?

If I fall into sickness, who will help me?

When I am lonely, can I find some activity with my fellows to ease the pangs?

To whom can I turn for advice in my necessities?

It will be agreed that family responsibilities frequently preclude that assistance to elderly forbears that is desirable. As a result we have in existence many organizations that strive to supply satisfactory answers to these, and other related questions. To each of these we pay a tribute of respect, and of sincere appreciation.

And — there is an organization called the Old People's Welfare Council of Victoria that seeks to cover many of the situations that many of our aged people find as sources of mental, physical, economic and personal worry today. The Council comprises men of goodwill from all classes. It has the support of leading figures in the community, and your own organization at Foy's is giving it practical, and personal support.

On Sunday, 29/7/1962, a "Call of Age" door-to-door Appeal will be conducted by the Old People's Welfare Council throughout the metropolitan area. Just give a thought to the Cause for which the Appeal is to be made. It won't require any further solicitation on our part to know that you, and your neighbor, will do their best to see that the results of the Appeal exceed the fondest expectations of those whose efforts have made it possible. Even if YOUR own municipality is well organised to answer the needs of the aged, maybe an adjoining suburb is not so well endowed. In Humanity's name, would it not repay YOU to give your never-failing assistance to a great cause.

PERSONALITY OF THE MONTH

Although this article is correctly featured under the monthly heading of Personality of the Month, it would probably be more appropriate to entitle it

PERSONALITIES OF THE MONTH

OR

THE HOUSE OF MORSHEADS, BALLARAT.

for we are presenting a brief history of two remarkable men, and the commercial edifice that their efforts were instrumental in creating.

Sustained effort forms the basis of many stories worth recounting. Our own nationwide organization is a vibrant example of this trait; when the sustained effort culminates in the realization of a long-planned objective, the story assumes an added drama. These two factors are woven into the history of Morsheads of Ballarat — one of the more recent, and certainly one of the most dynamic, additions to the mighty retail empire that is Cox-Foy's.

Two men have made massive contributions to the success that is Morsheads. These two are father and son — Mr. W. B. Morshead Senior, and Mr. W. B. Morshead Junior. As can be readily appreciated, both are respected citizens of the great provincial City of Ballarat, and both have made more than a small contribution to the progress, and commercial activities, of that flourishing centre.

Let's give a brief history of Mr. Morshead, Senior. Almost 54 years ago, a small store was opened in Bridge Street, Ballarat. It was a Menswear Store, and staff consisted of the founder himself, and one junior. The early history of the Store was one of struggle, but the enterprise prospered. It did not prosper because of some benevolent whim of Fortune, but because the founder of the firm possessed outstanding traits of courage, determination, efficiency, and a sound knowledge of the intricacies of the retail trade.

Prosperity saw the activities of Morsheads increase. Additional staff was employed and it is gratifying to learn that many present-day employees came straight to the shop from school and have remained there ever since. Over all of this progress the personality of Mr. Morshead, Senior, exercised a tremendous influence. Respected by all of the employees, and by his fellow-citizens, this gentleman occupies a justifiably-honored place in the estimation of all. At a later stage of this article we proposed to give some details of how the early struggles, the solid effort, and the eventual success culminated in the realization of a great objective. At this stage, it suffices to state that the honored founder of Morsheads — now a vigorous octogenarian — still shows the early enthusiasm that preface his career, and is a source of inspiration to his son and to the employees of the Store.

Now, let us give a brief history of that son —



Mr. W. R. MORSHEAD, JNR.
Managing Director, Morsheads Pty. Ltd.

A native of Ballarat, Mr. Morshead, Junior, is now in his early forties. He received his education locally — first, at the famous Pleasant Street State School and, later, at the equally-famous Ballarat Grammar School. With a father of the calibre of Mr. Morshead, Senior, it was inevitable that the original impulse, on leaving school, was to enter the retail trade. As a matter of fact, the young Morsheads first induction to the trade took place at the early age of 12 years with general assistance in the Store at "non-school" periods. When school education ceased, our PERSONALITY spent over two years as a salesman in different sections of the rapidly-developing Store. Later, he was accountant for a valuable period of two years.

In 1939, Morsheads acquired James Tyler and Coy, and the young man had the responsibility of managing, and re-organizing this new addition. In 1940, Mr. Morshead became Gunter Morshead of the 2nd A.I.F. He spent 5 years of active service with the Artillery, and served in many theatres of war.

On the cessation of hostilities, the young soldier returned to his peace-time activity with the firm, and steadily helped to build up the development of what was now regarded as a valuable factor in Ballarat's commercial life. In 1952, Morsheads became a Proprietary Company with Mr. Morshead, Senior, as Chairman, and Mr. Morshead, Junior, as Managing Director.

These years were periods of great activity. Internal dividing walls that had separated the original store from subsequent acquisitions were removed, a new front to the building was constructed, staff numbers, and trading figures increased and Morsheads was a force to be reckoned with in the retail life of the community.

In 1960, Morsheads became part of the Foy and Gibson organization. Today, the two Morsheads are justifiably proud of their association with the 94-year old firm whose reputation — of more mature vintage — matches their own in paths of durability and service.

To complete the personal picture of Mr. Morshead, Junior, let it be stated that he and his estimable wife devote their lives to the care of their family of four fine children — Joan (14 years), Bill (12 years), Elizabeth (11 years) and John (9 years). Leisure time is enjoyably spent on their country property, or at Point Lonsdale. In such pleasant avenues as these, do busy men find a respite from the strains, and stresses, of active commercial life.

We have referred to the culmination of an objective in the history of Morsheads. This occurred on Tuesday, 29/5/1962, when the new £250,000 store was officially opened at Ballarat. Some details of that edifice would not be amiss. These include:—

A frontage of 165 feet (the original Store had a 25 feet frontage).

Internal heating system.

An elevator between ground and first floors.

Provision for further extensions to conform to a plan that will eventually make the building the practical exposition of a £1,000,000 project.

Space precludes a technical summary of all of the features of the new building. It suffices to quote the published opinion of the Ballarat "Courier", which affirmed that "Morsheads new Store will give to the public of Ballarat a modern department Store ranking amongst the finest in the Commonwealth."

The official Opening was worthy of the great occasion. Despite inclement weather, hundreds of eager shoppers gathered to witness Mr. Morshead, Senior, perform the opening ceremony by cutting a broad blue ribbon stretched across the main entrance inside the glass doors. The pioneer retailer was introduced to the audience by Mr. J. N. Watt, and leading figures were present to adequately mark the function.

A day of unprecedented heavy trading followed, and many expressions of unsolicited praise were heard from the public at the facilities, lay-out, and merchandising scope of the new Morsheads.

The busy opening day was followed by an evening function at Craig's Hotel where 120 staff members (and it's *some* contrast to recall the increase from the original two staff of 1908 to the 120 of 1962) were entertained by the Management at Dinner. Again, many distinguished guests, such as His Worship the Mayor of Ballarat (Cr. A. D. Mason, J.P.) and Mr. G. A. Bitton, General Manager Cox Bros. (Aust.) Ltd., were present and a great night was experienced by all.

A number of laudatory speeches were made but "highlights" of the evening were undoubtedly the presentations by Mr. Watt to Mr. Morshead, Senior, of the inscribed scissors used at the opening ceremony, of the thoughtful gift to Mr. John Nolan for the excellence of the construction work in the new building, and to Mr. Morshead, Junior, who received a beautiful engraved tray to appropriately mark the occasion.

We should not overlook the speech made by Mr. Ted Thorne, who feelingly referred to the affectionate employee-employee relationship at Morsheads — a gesture which exemplifies the understanding that has always existed within the portals of the Ballarat enterprise — an understanding that stems from the founder, is carried on by the son, and which supplies much of the reason for the success that has marked the Store.

To the Morsheads, to the Store and to the Staff of the Company, "News Service" extends its felicitations and good wishes for a bright and successful future.

ENGAGEMENTS

Sincere congratulations are conveyed to the following staff members, whose engagements have been recently announced:—

Miss Yvonne Möriger, "Robere" Salon, City Store, to Mr. Brian Edward.

Miss Sandra Brockett, Babywear Department, City Store, to Mr. John Fry.

Miss Norma Cohen, Mr. Neville's Office, City Store, to Mr. Harry S. Hertz.

Miss Marilyn Whale, Knitting Wools Department, Bright and Hitchcocks, Geelong.

Miss Beverley Darter, China Shop, to Mr. Kevin Steen, Manchester Department, Bright and Hitchcocks, Geelong.

Miss Norma Butcher, Underwear Department, Myers (Bendigo) to Mr. Harry White.

MARRIAGES

Every good wish for future happiness, health, and prosperity to the following people who recently celebrated their marriages:—

Mr. Allan Crum, Boys' Clothing, City Store, and Miss Janet Dixon.

Miss Lois Foster, Tube Room, City Store, and Mr. John Burrell. Prior to her cessation, Lois received a handsome presentation from her fellow-employees in the Store.

Miss Barbara Nuttall and Mr. Leon Gleeson. The bridegroom is Manager, Gordon Hall Hairdressing Salon, Myers (Bendigo).

STORE NEWS

CITY

Hearty congratulations are proffered to our Managing Director (Mr. J. N. Watt) on his recent election as Vice-President, Retail Traders Association of Victoria. This honor is a reflection of the esteem in which Mr. Watt is held by all sections of the Retail Trade in this State.

Two recent Roof Top functions were very successful. The first was that held on Tuesday, 12th June, when the official technicolor film of the 1960 Olympic Games held in Rome was shown; the second was an address on 20/6/1962 by Mr. Watt to senior sales staff on the subject, "Employer-Employee Relations". The latter address was a repeat of the speech made to executive and managerial staff on 10th May, and the appropriate films were also shown. Good attendances were at both functions, and each item was very well received.

Mr. George Walker, Maintenance Staff, ceased duty on 15th June, after more than 25 years of continuous service with the Company. Appropriate presentations from Management and Staff were made to our friend at an Afternoon Tea held at the Roof Top Cafeteria on the eve of Mr. Walker's cessation. Mr. Watt made the presentations, and wished the gentleman very many years of happy retirement — a wish echoed by the numerous friends made by George during his long, and honored, employment with the Company.

An interesting appointment to City Store organization is that of Miss R. Solberg who has been appointed as a Supervisor. A hearty welcome to the lady, and every good wish for a successful career at Foys.

Miss Judy Hendry, Cosmetics Department, registered an excellent performance at a recent Max Factor Cosmetics School. In a large field of trainees she amassed a 93% pass. When it is recalled that the maximum pass was 96%, it will be conceded that the young candidate did a particularly good job. Our congratulations.

Glad to see the popular "Joe" Isaacs back on duty in the Despatch Department after his recent illness. All Joe's colleagues express the sincere hope that his recovery is speedy and complete.

A dancing class has been established at the City Store, at the Roof-Top, between the hours of 6 p.m.-8 p.m. on advertised nights. Mr. Charles Leasing, Supervisor, Footwear Group, who is also a prominent member of the F.N.A.T.D., is the competent instructor and a small charge of 2/6 is to be made for expert tuition in such intricacies as the waltz, foxtrot, rumba, samba, cha-cha, jive and old-time dancing. Those interested are requested to contact Mr. R. Harris, Secretary, Foys City Store Social Club.

The 64-dollar prize for the month will be awarded to the staff member who correctly names the lady, who recently went to lunch wearing one black, and one tan, shoe. Entrants must also state the reasons for this strange happening and members of the Confectionery Department staff are precluded from competing.

Suggestion box award winners for April and May were Misses V. Williams, L. McKernan, Mrs. Linke, and Messrs. J. Goldie, A. Keenan, G. Worthington, B. Coutts and K. Harris.

The May award for the Gibsonia Cup was won by Group 16 (Floor Coverings and Toys). Placegetters were Group 8 (Footwear), closely followed by Groups 5 and 12 (Some Ground Floor Departments and the Fashion Floor). The cup was duly presented by Mr. Watt at the Roof Top function held on 12/6/1962.

In response to a number of requests for news regarding our old

JUNE, 1962

FOYS NEWS SERVICE OF THE MONTH

PAGE THREE

friend "Jimmy" Graham, we wish to advise that "Jim" has returned to his son's home after a long sojourn in hospital, and is making slow, but sure, progress towards recovery. All his many friends convey to "Jim" their best wishes for the arrival of that happy day when he is fit, and well, again.

Mr. John Quinn, Supervisor, First Floor, retired on Thursday, 28/6/1962, and was the guest of the Management at Afternoon Tea. Mr. Watt made presentations to the retiring gentleman, who fittingly responded to the felicitations of the gathering. Mr. Quinn's retirement brings to a close over 52 years of association with the Retail Trade — an association interrupted by 4 years of active service with the first A.I.F. All staff unite in wishing this excellent officer many years of peaceful and happy retirement.

PRAHRAN

The visit by the staff to television station HSV-7 on Thursday, 3rd May, was a great success and it is rumored that arrangements are in hand for a similar type of outing to another such instrumentality in the near future. We'll hear more of this at the appropriate time.

Two female members of the staff are elated at the safe arrival of grandchildren in their respective families. The ladies are Mrs. P. Copley, Hosiery Department, who has a granddaughter (Linda Patricia); the other is Mrs. E. Cousins, Babywear Department, who also has a granddaughter (Robin Leanne). To the congratulations already given, we add our own.

A long spell of illness has, unfortunately, compelled the resignation of Mr. "Phil" Garlick, formerly of the Furniture Department. This gentleman was the recipient of a dressing-gown and slippers just prior to his cessation, and takes with him into retirement the good wishes of all with whom he has been associated.

COLLINGWOOD

Sickness has affected quite a number of the Staff at Collingwood. In addition to those suffering from the present surge of colds, influenza, etc., some of the personnel are on sick leave following recent operations. In such a category we mention Miss Nancy Di Salvo and Mr. Barry Barras, of the General Office. To them both — All the best for a speedy and permanent recovery.

Despatch staff are delighted with the recent recognitions given to drivers in the "Freedom from Accident" Review conducted by the National Safety Council. Fifteen drivers received either a Certificate for under 5 years without accident, and a Badge for 5 years, or more, without accident. Details are as follows:—

K. Glasscott, L. Holland, C. Robinson, W. Gregory, 2 years each; J. Warton, 3 years; J. Reece, 4 Years; L. Malcolm and D. Meagher, 5 years each; M. Forbes, 11 years; F. Bell and J. Burns, 17 years each; J. Brewer, 18 years; E. Cunningham, 25 years; A. Dodd and G. Moate, 26 years each. The fifteen men aggregated 161 years of trouble-free motoring and we believe that this record would certainly take some beating! Our congratulations to the recipients and the sincere hope that the records grows to even greater dimensions in the future.

Foys football team registered its first victory for the season on Sunday, 10th June, when it defeated Paynes by a comfortable margin. Best players for the victors were M. O'Shea and N. Smith.

Two employees with years of service to their credit retired recently, and were the recipients of appropriate presentations. Mr. Les Kild (12 years service) was farewelled by Mr. H. Letch on behalf of the organization, whilst Mr. W. Carey (20 years service) received his presentation from Mr. F. A. Houghton. To both gentlemen, "News Service" conveys every good wish for a happy and healthy retirement.

The Fancy Dress Ball, organized by the Travellers Social Club and held at the Dorchester on 26th May, proved to be a great success. In the galaxy of original and tasteful costumes worn by merry-makers, the following were considered to be outstanding:—

"Charleston Girl" — Best Fancy Dress (Mrs. Higgins),
 "Common Market" — Most Original (Mr. J. Mitchell) and,
 "Clown and Russian Dancer" — Best Dressed (Mr. Sydney Scott and partner).

COLAC

We have often referred to the amazing number of major successes that have followed the investment by members of the Foy and Gibson organization in that well-known, and highly-respected organization — Tattersalls! Well! It's happened again — but this time, at Colac! A syndicate rejoicing in the quite inappropriate

nom-de-plume of "5 Fools," and comprising Mesdames Heppell and Kester with Messrs. Bethune, Harding and Hutchins won the 2nd prize of £2000 in a recent consultation. Good luck to them all and may it be the fore-runner to other major successes for our staff investors. (Editor's Note: Not excluding my own syndicates, I hope!).

Two members of the staff will certainly remember the holiday week-end of June, 1962. Both were involved in motor-car accidents but, fortunately, neither suffered severe physical injury. The unfortunates were Miss Lorraine Grant who was returning from Torquay when her car was struck by a passing trailer; the other was Mr. Uly Paine who overturned his car on the return from Apollo Bay. The cars, in both cases, suffered extensive damage but the occupants emerged unharmed from the mishaps. Our commiserations to both good people on the damage to their cars.

Mrs. Margaret Stupkin (Soft Furnishings Department) and her husband have returned from a most enjoyable touring holiday in Queensland.

As this issue of "News Service" goes to press, the eagerly-awaited Staff Ball will have been held. The spirit of prophecy moves us to predict that the night of July 10th will be a "red letter" event in the history of the Store.

Several members of the Staff were most successful in the local Badminton Association Championships. Greg Spokes was a member of the team that won the "C" Grade mixed doubles. Patsy Lloyd occupied the same honored place in the "C" Grade women's doubles, whilst Geraldine Paatsch was in the runners-up team in the "D" Grade mixed doubles. Our congratulations to all concerned in these noteworthy feats.

The funds of the local Hockey Club benefitted considerably from the excellent attendance present at a most successful Far Parade held recently. Organised by Mr. Stephen Dattner, the Parade attracted very favorable comment and was voted a real winner by public, and staff, alike.

The sympathies of the staff are extended to Mrs. Lesley Sheedy, of the Grocery Department, and Mr. Bill Perkins, Carpet Department, on their recent illnesses. Although both are now out of hospital, the recuperation has not been speedy enough to ensure a return to duty. All wish the two invalids a speedy and permanent recovery.

BENDIGO

New employees welcomed to Store service during the month were Miss Marion Holt (Sportswear) and Mr. Max Rule (Boyswear). To the welcome already given, "News Service" adds its contribution.

Margaret Rule of the Layby Department registered a particularly fine performance with her vocal rendition of "A Date with Eight" — a Bendigo T.V. production. Also on the same programme, and with an equally good display was Tony Conolan, the talented violinist son of Mr. Ron Conolan, Electrical Department. Hearty congratulations to both young people.

The June Far Parade was a great success. Store models in the persons of Miss Judy Gerrard, Miss Lee Jones and Mrs. McQuillan played yeoman parts in the presentation. Although it's invidious to particularize, special mention must also be made of Judy's additional success on Channel 8, advertising bargains available at the Winter Sale. Which all goes to show that the Bendigo Store has more than its share of local talent.

As was the case with numbers of staff from other Stores, Bendigo was very well represented at the spectacular opening of the new Morsheads Store at Ballarat. All speak in the highest terms of the expanded venture.

GEELONG

Two social functions were held during the month and both were eminently successful. One was a most interesting film night when pictures on 10-pin bowling were shown. The Manager of the Geelong Bowling Alley (shortly to be opened) added some very explanatory details of this "booming" sport, and an excellent supper followed the screening. The second function was a visit by staff members to Melbourne where dinner was held at Pellegrini's, and was followed by a visit to the Chelsea Theatre to enjoy the spectacular "El Cid". Another success for the Social Club.

We've been advised that certain young ladies at the Geelong Store were recently married. It's not been possible to record the details in the appropriately-classified section of this periodical, as we haven't been acquainted with the names of the respective bridegrooms. However, we'll convey our sincere congratulations on the

important occasions to Beverley Bailey, Ann Harvey and Maureen Stevenson. A happy future to all three, and to their husbands.

In the "comings" and "goings" of staff during the month, we note the following:—

Resumptions: Mrs. Harvey (Glove Department) who is back at duty again after her recent accident.

Cessations: Mrs. Spencer, formerly of the General Office, who is retiring to private life.

Commencements: Barbara Fry (Maidswear), Helen Dye (Wools), Beverley Tyrrell (Office), Wendy Gaylard (Fancy Goods), Jennifer Wood (Despatch Office), Lynette Wragg (Laces), Gail Howard (Hats), Lou Jenkins (Carpets), Arthur Jelley (Boyswear), Ken Scott and Charles Preston (Men's Store).

The clash between football teams drawn from the staffs of Brights and from their friendly rivals Foy-Bilsons, Colac, took place recently and resulted in a convincing win for the Colac eighteen. Final scores were:— Colac, 13 goals 15 behinds—93 points; Geelong, 8 goals 5 behinds—53 points. Best players for Brights were Len Ash (Furnishings), Kevin Steen (Manchester), Noel Thompson (Accounts), Max Shetty (Geelong College Shop) and David Weeks (Domestic Hardware). David's performance was all the more meritorious when it is recalled that he was only equipped with one football boot!

Quite seriously, however, the event was most enjoyable for both the teams, and the very partisan spectators.

MILDURA

Many, and varied, are the places selected by staff as venues for their annual holidays. We instance:—

Mr. Leon Campbell, Grocery, who is motoring in Queensland.
Mr. W. Conquest, Liquor Department, who reports a most enjoyable holiday at Mount Buffalo.

Miss Margaret Vidovich, Upstairs Office, who is sojourning in the premier City of the Commonwealth (i.e. Melbourne), and Miss Joyce Williamson (Downstairs Office), who has chosen the Snowfields, and the said main City for her leave.

One takes a risk of a curt rejoinder if — in the course of a leisurely perambulation through the Store — there is a bodily collision between you — the innocent offender — and a staff member. The reason — most of the staff have received their annual 'flu injections and sore arms are the order of the day.

Two representatives from Melbourne were welcome visitors to the Store during the month. They were Mr. Stan Sanderson (Footwear Group) whose visit was associated with the Selby promotion, and Mr. Brian Carter (Floor Coverings Department). Both gentlemen proved to be "towers of strength" with their advice and assistance.

The famous Roof Top functions of the Melbourne Store have been imitated and introduced at the Mildura Store. The first of these events consisted of a Buffet Dinner served in the Valencia Room, and followed by a most interesting address by Mr. Theo De Jong on his recent overseas tour. The function was voted to be a grand night's entertainment.

The two table tennis teams from Bowings Social Club have acquitted themselves remarkably well in the Sunraysia Competition. At the present moment, they are in second and third place on the Premiership ladder, and there's no reason to doubt that both will figure prominently in the Finals. We hope so, and we convey our very best wishes for their continued success.

Staff members who acted as mannequins in recent Parades were Mrs. Pat Pike, Mrs. Margaret Rothwell and Miss Carol Cogoll. The Store has every reason to feel proud of the excellent performances registered by these three young ladies.

CHADSTONE

The Social Club recently conducted another successful bowling night. Competition was keen. Some good performances were registered and a repeat of the evening is promised for the near future.

Another function arranged by the Club was a visit to T.V. Station G.T.V.9. All participating spent an engrossing evening watching the intricacies of "In Melbourne Tonight" as compered by the inimitable Bert Newton.

Mr. Brian Gifford, Ladies Shoes Department, celebrated his 21st birthday on 13th June, 1962. To appropriately mark this important occasion, Mr. Durham, Store Manager, presented Brian with a cuff-links and tie-bar set. Hearty congratulations to the young man.

Mr. Ron Harris, from the City Store, has joined the staff of the Dress Material Department and, needless to state, Chadstone is glad to have this personal addition to its ranks.

A number of staff are incapacitated through illness at the present time. We convey our best wishes for speedy and permanent recoveries to Mrs. Baxter, Ladies Shoes Department, Mrs. Davis, Fashion, and Mr. Hauser of Furniture.

BALLARAT

As could be quite expected the big event in Morsheads history was the opening of the new £250,000 Store on 29/5/1962. This phase is amply covered by various references throughout this issue. In the meantime Morsheads takes this opportunity of saying a sincere "Thank you" to the many Kindred Stores in our organization for the heartening messages of goodwill received on the great occasion. In a similar strain, Morsheads expresses its heartfelt appreciation for the wonderful assistance given by staff from other Stores when the Store was duly opened.

A "Farewell" has been said to Miss Aldyth Angwin, formerly of the Advertising Department, who has left Morsheads to take up a tutoring profession. Every good wish for the future to this estimable lady.

DANDENONG

Mr. Ern Green, Store Manager, has returned to duty after a week's vacation, and exhibits every sign of a most beneficial rest for that period.

Another welcome return to Store service is that of Mrs. Reed (nee Frances Bourke), who has returned to duty in the Haberdashery Department after her recent marriage. All are glad to see Frances at Partons again.

A very welcome appearance at Dandenong was that of Mr. Ken Bandman, Display Controller. The columns of "News Service" has frequently referred to the achievements of this gentleman, and personal contact confirmed our high estimate of his outstanding quality.

Partons has acquired 50 tickets for admission to the presentation of "Sunside Up" on Friday, July 13th. All avid T.V. fans will be sure to witness the screening on that evening and the occasion is being eagerly awaited by staff at Dandenong.

We regret to report that Mrs. Handley, Ladies Wear Department, is on the sick list at the moment. All join in wishing the lady all the best for the future.

Mrs. Yates of the Office Staff recently celebrated her 19th wedding anniversary and we (and "News Service") join in the chorus of congratulation to this lady, and her husband, on the achievement. Many more years of married happiness to the couple.

OBITUARY

Our heartfelt sympathy goes to the relatives, and friends, of those whose deaths we record hereunder:—
Mr. Wilson, Senior, father-in-law of Mrs. E. Wilson, Roof Top, City Store.

Mrs. A. Jones, sister of Mrs. Clements, Frock Department, City Store.

Mr. Fred Chatto, cousin of Mr. Tom Chatto, Collingwood Office, and a former employee of the City Store.

Mr. Kennedy, father of Mr. Ken Kennedy, Soft Furnishings Dept., Prahran Store.

Mr. Livingstone, father of Mrs. Mavis Hore, Toy Dept., Prahran Store.

Mrs. V. Parker, mother of Mr. M. Parker, Hardware Dept., Prahran Store.

Mrs. Morrow, mother of Miss Jean Morrow, Materials Dept., Colac Store.

Mr. Duncombe, father of Mr. Frank Duncombe, Menswear Dept., Colac Store.

Mr. Dowell, brother of Mr. E. Dowell, Grocery, Colac Store.

Mr. McHugh, father of Mr. J. McHugh, Credit Office, Collingwood.

Mrs. Nance, mother of Miss E. Nance, Docket Office, Collingwood.

Mrs. Swift, grandmother of Miss Brennan, Frock Department, City Store.

The Misses Hendry, City Store, have asked "Service" to convey their sincere thanks for the many kind messages received during their recent sad bereavement. This intimation we duly convey to all.



Library Digitised Collections

Author/s:

Foy & Gibson

Title:

Foy & Gibson newsletters

Date:

1947-1967 (incomplete)

Persistent Link:

<http://hdl.handle.net/11343/21262>

Ballarat Star (Vic. : 1865 - 1924), Saturday 24 February 1894, page 1

THE NORTH GRANT HOTEL.

Mr Braz-nor, the well-known architect, has just completed, for Mr James Coghlan, a really elegant and commodious building, to replace the old North Grant hotel, at the corner of Bridge street and Peel street, which was partially destroyed by fire about ten months ago. The new hotel, which has a frontage of 24 feet to Bridge street and 145 feet to Peel street, is three storeys high, and is solidly built of red brick, with courses, in cement, and cornices upon a concrete foundation. The arched windows, over 50 in number, are set in bold and massive mouldings, and the architectural lines are so skilfully varied as to give the edifice a striking and attractive appearance. It towers far above the surrounding houses, and is at once a credit to its builders and an ornament to the busy thoroughfare in which it is situated. The internal arrangements are extremely good, the latest improvements in construction and disposition having been carefully adopted, while no expense has been spared to make the interior both elegant and comfortable. The basement is concreted and divided into three roomy cellars, with air shafts running the whole length of the building, and communicating with the external air by ventilators so situated as to maintain a continuous current. The ground floor has a handsome bar with two private parlors at the north end, and beyond in the Peel street frontage, is the lofty principal entrance, leading to a spacious vestibule finished in Minton tiles. This is flanked on the north by a large billiard room built for two tables and fitted with all the latest improvements, which has a separate entrance from the street. A private room for ladies also leads from the vestibule, and a massive staircase goes thence to the upper storeys. At the extreme north end is a second bar, with a large private parlor; a back staircase leading to the upper part of the house; and a lift going right to the roof, where there are laundries, coal shoots, and other accessories. The public dining-room, principal sitting rooms, and nine bedrooms occupy the first storey above the bar and billiard room, and the third or top floor has the kitchen with servants' rooms, store rooms, pantries, six bedrooms, and a front sitting room. All the most modern conveniences of every kind have been sedulously studied.

A long lease of the premises has been taken by the popular Melbourne caterer, Mr Straker, and that energetic gentleman is hard at work furnishing the house, which he expects to open before Easter.

ATTACHMENT 1 – Submissions Summary - Amendment C243ball (Bridge Mall & Bakery Hill Precinct)

Submission No	Summary	Key Issues	Officer Response
1.	Submission 1 expresses concerns that changes to the Ballarat Planning Scheme would allow for development up to seven storeys, and considers that this change is inappropriate in relation to the heritage character of the city centre (CBD).	Building heights Heritage	<p>The building heights are based on a robust built form and heritage analysis that supports an appropriate level of development for the precinct, that facilitates change in accordance with planning scheme policy at Clause 21.09-1.</p> <p>No change recommended.</p>
2.	Submission 2 expresses concern about the proposed maximum building heights and potential threat to heritage character if taller buildings are permitted through the amendment.	Building heights Heritage	<p>The building heights are based on a robust built form and heritage analysis that supports an appropriate level of development for the precinct, that facilitates change in accordance with planning scheme policy at Clause 21.09-1.</p> <p>No change recommended.</p>
3.	The CCMA does not support the amendment as it states that the amendment would facilitate use and development in areas identified as having an unacceptable flood risk (>0.3m) during a flood event.	Flood risk	<p>The concerns of the CCMA are welcomed and acknowledged in terms of the flood potential of the precinct and Council has been actively collaborating with the CCMA on flood modelling and mapping to inform a planning scheme amendment, to be undertaken later this year. Council will continue to work closely and collaboratively on any future planning scheme amendment and permit applications as they are received and referred to the CCMA.</p> <p>The issues raised in the submission (response):</p> <p>Firstly, three corrections to statements or facts put forward in the submission – 1. the entire precinct is zoned as Commercial 1 Zone, which allows for higher densities of residential development (currently); 2. the Heritage Overlay is HO176 (Bridge Mall and Bakery Hill Precinct); and 3. the amendment itself does not facilitate “the</p>

		<p>development of vacant upper floor space... for residential purposes” <u>as this can already occur under the current provisions</u> that apply to the Bridge Mall Precinct and more broadly across the Ballarat CBD. Therefore, this is not a change.</p> <p>Finally, this is not a development proposal but the submission is worded as if it was. The submission effectively treats the entire Bridge Mall Precinct in a “blanket” fashion and has not considered the variations in site conditions (and the CCMA’s mapping) and the potential to address flood risk on a case by case basis, as permit applications are received. The CCMA has acted as referral authority and provided advice on the following application in 2023:</p> <ul style="list-style-type: none"> • 102-108 Humffray Street S (A high-density mixed-use development which includes apartments and offices). <p>The application demonstrates that there is scope to assess and modify planning proposals on a site by site basis, in order to manage flood risk.</p> <p>The following points should also be noted in response to the submission.</p> <p>What the change (the amendment) allows:</p> <ul style="list-style-type: none"> • The proposed amendment proposes to increase building heights and therefore, the development potential of the precinct, which is intended to facilitate higher density residential development and also commercial and retail use. • The submission suggests that the amendment is allowing something to happen that can’t currently happen (residential development), but this is not the case as the Commercial 1 Zone (C1Z) already allows higher density residential use and development. • Upper levels can also currently be developed (or used) for residential purposes <u>within current height limits and the C1Z.</u>
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		<ul style="list-style-type: none"> • The current height limit of 10.7m on the southern side of Bridge Mall allows for up to 3 storeys – if a non-heritage site was developed on a larger site it could accommodate a medium to high density residential development, as properties are 50m deep. • Likewise, if sites were consolidated and developed, then more substantial development could occur with just a 3-storey height limit, <u>under the current provisions</u>. <p>Flood Mitigation and Areas of Risk</p> <ul style="list-style-type: none"> • The submission refers to a discussion had last year (between the CCMA and Council officers) where flood mitigation measures were discussed, that could reduce the risk (and flood levels) to acceptable levels. This is an ongoing discussion with the CCMA and Council will continue to explore mitigation options across the Ballarat CBD area. • Much of the precinct, according to current mapping, sits below the threshold that would cause concern (unacceptable risk) and the submission doesn't acknowledge those areas that are currently considered acceptable, including the Bakery Hill end of the Bridge Mall Precinct and vast majority of the Norwich Plaza site, and the block to the south (Sub-Precinct 1: Bridge Mall Gateway). • The mapping at this point in time, is still subject to further changes and has not been tested through an amendment process. The status of the mapping is unclear and should be verified. <p>Recommended Change to the Amendment</p> <p>Given that Council has demonstrated that individual permit applications (including 102 Humffray Street S) can be assessed and referred to the CCMA to enable appropriate development outcomes that manage flood risk, the amendment is proposed to be changed as</p>
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			<p>follows, to require applications to be referred to the CCMA under the provisions of DDO1:</p> <p>The addition of the following line is proposed for Schedule 1 – Design and Development Overlay (under Buildings and Works):</p> <p><i>Referral of applications</i></p> <p><i>An application must be referred in accordance with Section 55 of the Act to the referral authority specified in Clause 66.04 or a schedule to that clause.</i></p> <p><i>Decision Guidelines</i></p> <p><i>Whether the development meets the requirements and advice from the relevant catchment management authority (as specified at the Schedule to Clause 66.04).</i></p> <p>It is proposed then to also change the Schedule to Clause 66.04 that adds the following referral authority to be notified for all development applications under DDO1:</p> <ul style="list-style-type: none"> • <i>The Carangamite Catchment Management Authority (CCMA) (or relevant catchment management authority).</i>
<p>4.</p>	<p>Submission 4 highlights that Professor Michael Buxton has visited Ballarat (more than once) and expressed concerns that preferred height limits, rather than mandatory, will be incrementally breached over time (resulting in taller buildings).</p> <p>The submission also raises concerns about “wind tunnel” effects of taller buildings. Finally, the submission highlights the concerns also raised by Ballarat’s “Heritage Watch” group with regard to</p>	<p>Building heights Heritage</p>	<p>As with the response to other submissions raising similar concerns, there is a perception that new (and taller) buildings will undermine the heritage character of Ballarat.</p> <p>Again, the current planning scheme encourages some kind of intensification of the Ballarat CBD to facilitate economic and population growth. The amendment is intended to balance the competing objectives of growth and development with heritage character and preservation. The revised Statement of Significance provides a more up to date heritage provision that will assist planners to make decisions in relation to future planning applications and the new DDO1 schedule</p>

	building heights and heritage and the potential for the historic character to be threatened or lost.		also provides greater detail and guidance on the form of new development. No change recommended.
5.	<p>This submission relates to the proposed revised heritage grading of part of Norwich Plaza to Contributory, which is currently listed as non-contributory. The submitter challenges the proposed grading on the following basis:</p> <p><i>Our client submits that the categorisation of Norwich Plaza should remain non-contributory, as the 'contributory' fabric identified within the statement of significance has been removed during one of the buildings previous renovations and no evidence of the façade remains. It is also submitted that the revised Bridge Mall and Bakery Hill Statement of Significance be amended accordingly.</i></p>	Challenges heritage grading	<p>The Statement of Significance does identify the heritage fabric that has been revealed as follows:</p> <ul style="list-style-type: none"> The citation identifies as significant the corner brick building (c.1950 now revealed), the six Victorian shops (as demonstrated by the six individual roof forms) and the 1940s façade treatment which replaced the Victorian facades. <p>Therefore, it is recommended that no change to the amendment is made in response to this submission.</p>
6.	Submission 6 states that the proposed amendment and planning controls do not adequately address the issue of environmental sustainability in built form.	Built Form Environmental sustainability	<p>The submitter raises valid points and concerns in terms of how the planning system operates. However, the focus of this amendment is 1. A built form control (the Design and Development Overlay, which sits at Clause 43.02 of the Ballarat Planning Scheme); 2. Heritage Conservation (which is found at Clause 43.01 – the Heritage Overlay). These overlays have specific functions and are assessed together during the permit process.</p> <p>State planning provisions provide for the sustainable design and development of new buildings:</p> <ul style="list-style-type: none"> Clause 15.01 – Built environment Clause 15.02 – Energy and resource efficiency Clause 12 – Environmental and landscape values <p>In order to implement these clauses, Council adopted an ESD policy (not part of the Ballarat Planning Scheme) that is used to assess planning applications.</p>

			<p>Furthermore, Clause 58 (Better Apartment Design Standards) addresses matters related to the internal design and amenity of apartment buildings to ensure things like daylight and cross-ventilation are considered in the design of apartment buildings.</p>
7.	<p>Submission 7 is made in relation to 3 Peel Street South and highlights a number of issues and concerns with the amendment but agrees with the overall intent of allowing increased height throughout the precinct to enable development and growth within the area.</p> <p>Specifically, the submitter challenges (questions) the proposed Significant grading of 3 Peel Street S in terms of its heritage status, stating that the building has been modified over time, and is therefore not Significant.</p> <p>The submission also notes that the existing building is 15.5m high and the height limit is 12m.</p> <p>Highlights that 3 Peel St is not listed under the affected properties</p>	Challenges heritage grading	<p>3 Peel Street S has been identified as Significant because:</p> <p><i>The Bridge Mall / Bakery Hill Heritage Precinct is of aesthetic significance as a distinctive and irregularly planned precinct that contrasts markedly to the highly ordered street and subdivision patterns to the west of Grenville Street. The precinct features commercial and civic buildings of high design quality dating from the Victorian and Federation periods... Key examples from the Victorian era include... the High Victorian former North Grant Hotel at 3 Peel Street South.</i></p> <p>The property address for 3 Peel Street also appears as 92 Bridge Mall but is identified in the Statement of Significance. All of the owners and occupiers within the area (and beyond) affected by the amendment have been notified and informed of where to view the amendment material, which includes maps of the affected area. Clearly, this submitter has received the notice and followed up in order to understand the implications of the amendment. We have also received some phone calls from people wanting to ask questions about the amendment and they have been satisfied with the explanation.</p> <p>In relation to the building height and height limit, the building height framework plan (Figure 67 on page 77) and the height specified in the DDO schedule is 15m. This maximum height is still considered appropriate as it will maintain the prominence of 3 Peel Street S when future development occurs.</p> <p>Council officers acknowledge that planning scheme amendments are complicated processes and the MySay web page on Council's website provides a summary about the amendment, all of the amendment</p>

			<p>documentation and supporting material, and contact details to enable people to ask questions of Council officers with regard to the amendment.</p> <p>No change recommended.</p>
8.	<p>The submission from Heritage Watch highlights a number of issues in relation to building heights, heritage character and skyline and views.</p> <p>The submission raises concerns about changing the current mandatory height limits to discretionary and furthermore, the increase proposed in height limits and the effect this could have on the heritage character of the Ballarat CBD.</p> <p>The submission refers to the current DDO1 and its guidance on maintaining solar access to the public realm, stating that the revised DDO1 will increase overshadowing of Bridge Mall.</p> <p>There are also concerns that new buildings would block views from certain locations within the Ballarat CBD to important landmarks, including Mount Warrenheip to the east.</p>	<p>Building heights Heritage City view lines</p>	<p>Council officers welcome the submission from Heritage Watch and appreciate the concerns that are raised in the submission in relation to building heights and the preservation of heritage character within the Ballarat CBD.</p> <p>The current mandatory heights, and the height limits, are indeed considered restrictive and onerous within a CBD context where growth is encouraged by state and local planning policy. There is little scope for new development or investment under the current controls.</p> <p>The proposed DDO1 replacement has been developed based on a rigorous built form analysis that ensures that new development (and taller buildings) are set back from the street at upper levels, thereby eliminating the risk of overshadowing from upper levels. Shadows change throughout the year and Winter is the time when shadows are at their peak due to the low angle of the sun. Although the spring equinox is the standard measure, the proposed building heights and setbacks prevent overshadowing above and beyond the standard measure (prior to the spring equinox when the sun angle is approximately 52° in the sky), and more than a thin strip as suggested in the submission. To also be clear, shadows occur from the existing buildings, to some extent, noting that Bridge Mall is approximately 20m wide.</p> <p>Making Ballarat Central</p> <p>Although Making Ballarat Central is still a current strategic document, it was originally adopted in 2010 and since that time, the building heights have not been implemented into the Ballarat Planning Scheme. Therefore, they have no statutory weight and at this stage (fourteen</p>

		<p>years later) are out of date and not considered fit for purpose. Some of the guidance within Making Ballarat Central is non-specific and overly general – for example: “Buildings up to heritage parapet height” within the central part of the Ballarat CBD. That could mean single storey in some locations, and does not consider non-heritage sites.</p> <p>The reference to “D5 – emphasise corner sites” is one that officers do agree with, noting that it is also referring to key redevelopment sites (such as the western end of Bridge Mall).</p> <p>Council is in the early stages of developing a Draft Urban Design Framework and then Structure Plan for the Ballarat CBD which will be used to inform height controls for the Ballarat Planning Scheme. Importantly, the intention is to go through a standard amendment process to seek broad community views on building heights and other planning matters that relate to the CBD area.</p> <p>The scale proposed by DDO1</p> <p>An accepted approach to development along heritage streetscapes, particularly strip (activity) centres is to maintain the scale of the heritage street-wall, which is often two storeys, and to facilitate new development that is set back from the streetscape. The purpose of this approach is</p> <p>Finally, in responding to this submission, officers respectfully acknowledge the intent and concerns raised in the submissions to which from Council’s perspective, the amendment appropriately balances the policy objectives of the Ballarat Planning Scheme (Clause 21.09-1 CBD) which encourages: “<i>significant new mixed-use development and redevelopment in the CBD</i>”.</p> <p>Reference to the Ballarat Skyline and Views Study</p>
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			<p><i>The Bridge Mall Built Form Framework</i>, May 2023, provides analysis in response to selected viewpoints from the Skyline and Views Study (the Study) and most of the identified views can be managed and maintained. The views from Bakery Hill (PV2) and the corner of Sturt and Lydiard Streets (LV3) are challenging as <i>any</i> new development could impact the view and prevent development. As such, these views were considered impractical, but LV3 would still enable development at the Norwich Plaza site whilst maintaining some (if not all) of the view to Mount Warrenheip.</p> <p>The Study is a useful reference for identifying locations where key views might be experienced within the Ballarat CBD but it also has to be acknowledged that some view locations are more difficult (and restrictive) to manage and retain than others. For example, key views from further west along Sturt Street would remain unobstructed by the taller built form proposed. As one moves closer towards Bridge Mall (with the descending topography), the views do indeed start to diminish, and at some point are obstructed by the current buildings. There are numerous additional locations where views can be experienced, and this is one of the key considerations when making assessments against the Study.</p> <p>The Study is considered a reference and a guide only, to be used in more detailed contextual analysis of built form within the Ballarat CBD which has occurred within the current project and will continue to be used for broader built form analysis within the Ballarat CBD.</p> <p>No change recommended.</p>
<p>9.</p>	<p>Heritage Victoria</p> <p>Submission informs Council on places identified by Heritage Victoria for the Victorian Heritage Inventory and requirements in relation to obtaining permission</p>	<p>Archaeological heritage</p>	<p>The amendment is not seeking to facilitate or propose works and is simply related to the current Heritage Overlay (HO176)</p> <p>No change recommended.</p>

	<p>to undertake works. There are currently two VHI sites located in the subject area:</p> <ul style="list-style-type: none">• Bridge Street Mall Roadways Precinct (H7622-0470)• Bridge Street Mall Culverts (H7622-0469)		
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6.5. PLAN FOR VICTORIA - CITY OF BALLARAT SUBMISSION

Division: Development and Growth
Director: Natalie Robertson
Author/Position: Joanna Cuscaden – Executive Manager Development Facilitation

PURPOSE

1. The purpose of this report is to present a submission to the Planning Delegated Committee for adoption, which is in response to the Victorian Government's current public consultation process for the Plan for Victoria and the more recently released Housing Targets.

BACKGROUND

2. The Victorian Government's Housing Statement was released publicly in September 2023.
3. The Victorian Housing Statement introduced 'streamlined' pathways for certain housing related development assessments, a commitment to updating Plan Melbourne 2017-2050 with a new whole-of-Victoria focus, and further legislative reforms through a review of the *Planning and Environment Act 1987*.
4. In February 2024, the Victorian Government commenced the first stage of its consultation process on what a Plan for Victoria would look like. While yet to be developed, the Plan for Victoria is envisaged to be a blueprint to guide how Victoria grows, such as where new houses should be built and what types of homes would be needed. The government has announced that the new plan for Victoria will:
 - a. Focus on delivering more homes near transport, jobs, and essential services.
 - b. Ensure 70% of new homes will be built in established areas and 30% in growth areas.
 - c. Establish local government targets for where new homes would be built geographically.
5. In June 2024, the Victorian Government then released proposed housing targets for all councils. As part of these targets, the Victorian Government has predicted that the State's population will reach more than 10 million by 2051, setting a target to build 800,000 new homes over the next 10 years at an average rate of 80,000 each year.
6. The City of Ballarat has been set a proposed target of achieving an additional 46,900 new homes to 2051, averaging approximately 1700 dwellings each year.

KEY MATTERS

Plan for Victoria

7. The City of Ballarat strongly supports the need to establish a statewide planning and community framework which recognises and distinguishes the unique challenges and spatial characteristics of regional cities and towns.

8. It is acknowledged that housing supply is a critical challenge for Victoria.
9. The City of Ballarat is currently working on finalising its Housing Strategy and Growth Areas Framework Plan. In combination, these policies enable a long-term pipeline of housing supply that has the carrying capacity to meet the diverse housing needs of a growing population. The Growth Areas Framework Plan establishes how future growth areas should be rolled out to ensure the sustainable delivery of new communities alongside necessary infrastructure and facilities in a financially sustainable way.
10. State-wide planning policy and guidance is needed to better support regional councils navigate the spectrum of land development challenges, including protecting heritage contexts, addressing contamination, flood and bushfire risk, and maintaining buffers to protect important agricultural and other important commercial activity. Clear and implementable measures to encourage and accommodate key worker and social and affordable housing needs to be established, and infill housing, where appropriate, should be a focus in achieving this outcome.
11. Housing affordability is a growing problem for the City of Ballarat. Housing affordability, however, is a complex problem and there are many external factors, including market levers, government incentives or disincentives which can affect it.
12. Local government planners work diligently to facilitate high quality developments which will leave a longer-term legacy for current and future communities.
13. All levels of government are required to work collaboratively to try and facilitate greater levels of affordability, in addition to delivering specific stock of public, social and affordable housing needed to address our growing and changing community.
14. The City of Ballarat also considers that development and community infrastructure is critical to supporting sustainable growth and creating livable neighbourhoods, particularly in the greenfields context.
15. While greenfields development is critical to our local economy and being able to provide a diversity of housing, Councils are often left with the challenge of managing Development Contributions Plans shortfalls, in addition to the added and ongoing costs of managing new assets vested in Councils.

Housing Targets

16. Planners can only create the setting for new housing to be delivered. The planning system and, in particular, local councils, do not deliver housing. The planning system can however, provide the 'capacity' for housing to be directed to locations where future residents will have easy access to infrastructure and facilities.
17. Importantly, housing capacity targets need to be grounded in reality and maintain a level of flexibility, to ensure that any target is capable of being adjusted if circumstances change.
18. Housing targets can be effective if they are more than just numbers – planning needs to be able to create 'housing capacity' (ability to meet demand) and 'housing diversity' (establishes different types and sizes of housing, including affordability) targets within the planning system.

Conclusion

19. A draft of the Plan for Victoria submission has been prepared. The submission is based on Council's understanding of the information supplied by the Victorian government at the time of the submission's preparation.
20. The submission welcomes additional consultation on specific changes proposed to the planning system, recognizing local government's role as context and local experts in planning and growth. It is also essential that the City of Ballarat's Housing Strategy is aligned with the overall direction of Plan for Victoria.

OFFICER RECOMMENDATION

21. That the Planning Delegated Committee resolves to:

21.1 Adopt and submit the Plan for Victoria Submission to the Minister for Planning as attached.

ATTACHMENTS

1. Governance Review [6.5.1 - 1 page]
2. Plan for Victoria - COB Submission [6.5.2 - 10 pages]

OFFICIAL

ALIGNMENT WITH COUNCIL VISION, COUNCIL PLAN, STRATEGIES AND POLICIES

1. This submission aligns with Council's Vision, Council Plan, Strategies and Policies.

COMMUNITY IMPACT

2. This submission is based on the Ballarat Housing Strategy 2041 and the Social and Affordable Housing Action Plan which is intended to have positive social and community impacts.

CLIMATE EMERGENCY AND ENVIRONMENTAL SUSTAINABILITY IMPLICATIONS

3. This submission does not raise any direct climate emergency issues or environmental sustainability implications.

ECONOMIC SUSTAINABILITY IMPLICATIONS

4. This submission does not raise any economic sustainability implications at this time.

FINANCIAL IMPLICATIONS

5. This submission does not raise any financial implications to Council.

LEGAL AND RISK CONSIDERATIONS

6. This submission does not raise any legal risks or concerns of note.

HUMAN RIGHTS CONSIDERATIONS

7. It is considered that the report does not impact on any human rights identified in the *Charter of Human Rights and Responsibilities Act 2006*.

COMMUNITY CONSULTATION AND ENGAGEMENT

8. This submission is part of the Victorian State Government's community consultation and engagement process. Ballarat based stakeholders and interest groups have been encouraged to lodge their own submission.

GENDER EQUALITY ACT 2020

9. There are no gender equality implications identified for the subject of this report.

CONFLICTS OF INTEREST THAT HAVE ARISEN IN PREPARATION OF THE REPORT

10. Council officers affirm that no general or material conflicts need to be declared in relation to the matter of this report.

OFFICIAL



The Victorian Government’s Housing Statement, released in September 2023, introduces amongst other announcements, a commitment to updating Plan Melbourne 2017–2025 with a whole-of-Victoria focus, known as Plan for Victoria.

The Housing Statement also introduces new ‘streamlined’ pathways for new development assessments, including a greater Ministerial role and various changes to the *Planning and Environment Act 1987* (the Act) and more recently (June 2024) – introduced draft housing targets for each Local Government Area. Importantly, it is noted that this submission is written with limited understanding of what the Plan for Victoria will ultimately introduce by way of new/ amended planning controls and that new information on the Housing Statement might be introduced following the completion of this submission.

The City of Ballarat strongly supports the need to establish a statewide planning and community framework which recognises and distinguishes the unique challenges and spatial characteristics of regional cities and towns. It is acknowledged that housing supply is a critical challenge for the State of Victoria. A statewide plan must be able to establish a compelling long-term vision which provides greater support and understanding for the unique characteristics

for growing regional and rural cities. Growth and development across the state should be fair and equitable and be flexible to adapt to changing circumstances.

The covid-19 pandemic elevated the underlying stresses in regional housing markets and the economy. Increased development pressures in regional cities like Ballarat through 2020 to 2022 has resulted in unexpected impacts on housing affordability, environmental management, sequencing and infrastructure coordination, in addition to development activity which has inevitably added significant pressure on local council resources more broadly.

A plan for Regional Victoria must hold local government areas and interested stakeholders at the heart of implementation, recognising its role as context and local experts. The City of Ballarat looks forward to being proactively involved in any upcoming consultation process.



1. Housing Affordability and Choice

By 2041, City of Ballarat's population is forecast to grow by an additional 70,000 people and 29,000 houses are needed to meet this demand. Ballarat is experiencing supply challenges in all areas of the housing spectrum, from crisis and emergency accommodation through to affordable private rentals. People who are needing crisis accommodation cannot access these services, as the facilities remain occupied due to a lack of transitional accommodation; this continues on to social and community rental housing.

State-wide planning policy and guidance is needed to better support regional councils navigate the spectrum of land development challenges, including protecting heritage contexts, addressing contamination, flood and bushfire risk, and maintaining buffers to protect important agricultural and other important commercial activity. Clear and implementable measures to encourage and accommodate key worker and social and affordable housing needs to be established and infill housing, where appropriate should be a focus in achieving this outcome.

Housing targets

The Victorian government has recently released draft housing targets to 2051 for all Councils. It has been nominated for the City of Ballarat that an additional 46,900 dwellings are required to be added by 2051. This target was released without consultation and without a clear explanation of the methodology for how and where housing should be delivered. It must be acknowledged that there are clear distinctions between growth pressures and characteristics of metropolitan Melbourne and regional Victoria and that sustainable growth must be considered as part of any housing target. Without further information, this growth target would seem unachievable from the outset. Consultation with Councils on housing targets must ensure equitable distribution across regional Victoria, acknowledging the different challenges and pressures which face regional and rural Victoria.

Any housing target must also acknowledge the role that local government plays in the life cycle of development. The development and construction industry must also keep up with these targets each year. City of Ballarat has

issued planning permits which have not yet been acted upon due to current challenges in construction.

Partnerships with local government are imperative for solutions and actions which will meet the current and future needs of communities and plan for the amenity and local infrastructure needed to ensure well-connected and vibrant communities. While it is acknowledged that increasing housing stock across the housing spectrum is required, this must also be balanced with sustainable growth and investment in infrastructure.

Housing Diversity

An increasingly significant percentage of households in Ballarat are experiencing housing stress, and limited diversity in our housing supply has seen many households poorly matched to the dwellings they live in.

In addition to the number of dwellings, this should also be specific to the cohorts of the community most in need of housing. The higher costs of developing and delivering social housing in regional areas needs to be considered within funding models and the capacity of the community housing sector to deliver in these areas needs to be considered.

A recent Ballarat Diverse and Affordable Discussion Paper predicted a shortfall of 9,185 social and affordable housing dwellings across Ballarat by 2041 if current conditions continue. Victoria has committed to 2.24 million new dwellings by 2051, with 425,600 of these located in regional Victoria. It is essential that these new dwellings are affordable, well-located with access to services, and supported by upgrades to essential infrastructure and public transport.

Housing affordability is a growing problem for the City of Ballarat. It is acknowledged however that the problem is complex and there are many external factors, including market levers which can affect it. Council departments work diligently to try and

facilitate high quality developments which will leave a longer-term legacy for current and future communities. All levels of government are required to work collaboratively to try and facilitate greater levels of affordability, in addition to delivering specific stock of public, social and affordable housing needed to address the growing inequity of our community.

Community and development infrastructure

Development and community infrastructure is critical to creating livable neighbourhoods, particularly within greenfields development. Alignment of land use and infrastructure planning at both local and State level, including consideration of funding of infrastructure. The State government infrastructure priorities within each local area, should be aligned with each local council and aligned to settlement and development directions. The plan should provide firmer commitments to the timing and funding of State-delivered infrastructure for new residential development.

City of Ballarat currently has an adopted policy of achieving 50% infill and 50% greenfield development. Ballarat's greenfield development currently plays a strong role in the growth and development of the City, however there have been a few key challenges to rolling out livable communities with the delivery of necessary facilities and infrastructure. In particular, local governments need greater clarity and consistency in policies which support the roll out and coordinated sequencing for release of land, and greater financial support for councils and developers to 'forward fund' development infrastructure where it is needed to enable development to occur. Councils are often left with the challenge of managing DCP shortfalls, in addition to managing new assets which are vested in Councils.



Recommendations:

- 1 Support Councils through both resourcing and financial contribution to the strategic and statutory planning work required to deliver housing targets, including assistance through rezoning of land and preparation of Precinct Structure Plans.
- 2 Increased investment or support for local councils to negotiate investment in social housing by the private sector.
- 3 Investigate opportunities to apply an inclusionary levy, or financial support to councils to negotiate new social housing units where geographically appropriate.
- 4 Support local councils in establishing partnership arrangements to identify and undertake renewal of existing social housing where relevant.
- 5 Support councils in promoting a mixed and balanced community through integration of diverse housing (type, size, tenure) within existing social housing locations.
- 6 If housing targets are to be implemented, further consultation with councils will be required to ensure equitable and achievable targets can be nominated. Consider nominating equitable housing capacity targets and detailed guidelines for how to convert capacity targets to appropriate development controls in planning schemes to achieve consistency across the State.
- 7 Any target set for the split of future housing between greenfields and infill development must be achievable and align with the settlement strategy vision which councils can work towards achieving. If implemented, a housing split between new greenfield growth and infill development must be equitable across all council areas and achievable.
- 8 Greater consideration for promoting housing diversity (dwelling size/type etc.) consistently must be provided within the planning scheme to ensure compliance.
- 9 Increase housing density targets in growth area and urban renewal to make efficient use of urban land, reduce urban sprawl and create economies of scale for infrastructure.
- 10 Identify major residential growth precincts and provide clear principles for growth planning consistent and as regional relevant across regional Victoria.
- 11 Prepare regionally relevant policy guidance for sustainable neighborhood planning and development.
- 12 Enforcement of green wedge/urban growth boundaries to manage urban sprawl, protect agricultural lands and biodiversity.
- 13 Better support councils in delivering community and development infrastructure, particularly in managing developer contribution shortfalls and assisting with determining ongoing asset management for future infrastructure assets.
- 14 Align State Infrastructure Strategy with growth directions for regional strategies to ensure that infrastructure is delivered alongside urban growth.
- 15 Consult with local governments to address different ways to run developer and community infrastructure, particularly within the challenging environment of increasing construction costs, a cap on Community Infrastructure Levy, and rate capping.

2. Equity and jobs

In Ballarat currently there is consistent high-quality industrial demand with an increasing demand for larger industrial footprints. The issue is further exacerbated by the relocation of industry no longer considered suitable for their locations in a constrained urban context.

Ballarat has recognised the changing nature of employment away from traditional heavy industries to more advanced manufacturing – expected to lead to cleaner and more efficient use of industrial land and employment land that meet 21st century requirements in terms of quality and servicing is required. This will require review of the application of the current planning regime as it applies to industrial and employment lands.

Costs and efficiency for logistics is one of the top 4 questions for a business looking to be located in Ballarat, along with land availability, workforce and energy requirements and costs.

Currently, Ballarat has a mismatch between the housing needs of the workers required in a region and our current housing provision. Flexibility and provision pathways for key worker housing are essential with the State able to take a leading role through directives and policies on inclusionary zoning and expedited pathways for the use of public-owned land. (Recommendations on diverse and affordable housing can be found above under Housing Affordability and Choice).



Recommendations:

- 1 State-managed mapping of regionally-significant employment precincts and enforceable State policies to protect this land from loss and encroachment.
- 2 State-managed mapping of high-quality agricultural land and state policies protecting identified agricultural land from release to urban or other uses.
- 3 Reform and review of industrial zones required alongside the provision of updated guidance on the application of Industrial Zones to apply to a contemporary economic context.
- 4 State-led/ Regionally-based future workforce requirement assessments and development of applicable, regionally accessible training programs.

3. Liveable and thriving neighbourhoods

The Australian Urban Observatory reports a range of liveability indices for Ballarat from a low of 86 in the growth areas to above average levels of 111 in the established areas close to the city centre. Extensive service planning and infrastructure delivery will be required in our growth areas to ensure our community is not disadvantaged into the future. The liveability index is based on proximity to key community, health, educational and transport services plus housing affordability and local employment.

Access to quality open space is critical to supporting wellbeing, however there is currently a very inconsistent approach to applying the Open Space Levy across different Councils.

Similarly, the quality of design for medium and high-density developments is very inconsistent across metropolitan and regional areas. Density could be better designed and more consistent through establishing elevated standards for design guidelines to ensure better integration into existing communities and heritage areas.

Walkability in Ballarat has been measured using a mix of street connectivity and dwelling density in combination with daily living services. These elements of walkability influence how people move around their local neighbourhoods and undertake everyday activities highlighting the importance of access to supermarkets, public transport stops and health services.

The future of liveability in Victoria will also be highly linked to lower vehicle speeds and volumes across our streets. Current PSP, planning, design and other statewide frameworks remain preferential to vehicles over pedestrians. Leadership at a statewide level with regard to lower default speed limits in residential areas, for example, and higher expectations for priority pedestrian crossings, more ambitious separated cycling infrastructure and linear recreational corridors in new development areas will be crucial to a step-change in development outcomes. Current processes place too much emphasis on these outcomes being outside the minimum standard, and so put unnecessary onus on seeking that outcome rather than expecting it as a base level of development design.

The Walkability for Transport Index from the Australian Urban Observatory shows central areas of Ballarat have quite good walkability measures of 3.0 (where 0 is average). However, walkability drops significantly in most areas outside of the central suburbs with low socioeconomic populations in Sebastopol and Wendouree having a walkability level of -1.0, established areas including Mount Clear and Canadian having a level of -2.7 and growth areas having an index as low as -4.4, which is lower than the majority of growth areas outside of Melbourne.

The delivery of services to growth areas in regional cities such as Ballarat needs to keep pace with the growth areas of Melbourne to ensure health and social outcomes of the population are not adversely impacted.



Recommendations:

- 1 Provision of updated guidance for the quantity, quality and typology/ function of open space required for sustainable communities
- 2 Provide consistency in the quantity of open space, including the open space levy requirements across planning schemes to improve livability.
- 3 Improve design standards through issue of state-wide guidance for medium and high-density developments. For example: the UK Urban Design Compendium, Urban design for Regional NSW, NSW Apartment Design Guide
- 4 Require preparation by State agencies of detailed State growth infrastructure plans alongside land use plans to ensure access to services, facilities and key regional infrastructure
- 5 Undertake regular, responsive public transport service analysis and respond with prompt network changes in response to community requirements
- 6 Reform design and provision expectations to actively prioritise pedestrians in street layouts, expect priority pedestrian crossings, set default lower speed limits that increase liveability and safety, and set a minimum expectation for separated cycling infrastructure in new developments. Current aspirations have not been translated into the IDM for example, or relevant policy expectations from VicRoads/ RRV and other agencies that pedestrians and cyclists should be better designed for as a minimum standard.

4. Sustainable environments and climate action

Climate & Environment

Councils are on the frontline responding to climate change as communities across Victoria experience the compounding impacts of successive flood, storm, fire and heatwave events directly linked to the ongoing impacts of climate change. The risks that these climate-change related events pose to critical community assets, and to human health, safety and livelihoods, have been well documented by previous state and federal inquiries.

The financial and planning impacts of natural disasters on new and existing housing are increasing. Housing locations, types and materials will need to change to meet the changing climate. Planning is critical to mitigate climate impacts in different locations and the risk of disaster should be included in all state planning schemes.

Councils are already essential players in disaster planning, response and recovery and are well placed to foster resilience and guide environmental and behavioral change to support adaptation.

Ensuring that Environmentally Sustainable Development (ESD) principles are consistently applied to all new development, along with supporting other sustainability objectives need to be clearly articulated. Developments should be required to meet a minimum 6-star NatHERS energy rating, and provide year-round thermal comfort using environmentally efficient design and the use of green renewable energy.

City of Ballarat is also concerned by the upfront financial cost of residential sustainability infrastructure and retrofitting existing dwellings for our residents to better protect housing stock from the impacts of natural disaster and climate change more generally. The economic cost of climate change events is increasing and has implications for how local councils plan for future growth and must also be informed by an understanding of the compounding impacts of climate-related hazards, and the risks they pose to regional areas.

While Greenfields development is encouraged and provides housing choice for homebuyers at all levels, there is a need to ensure that greenfields development can still support ecological adaptation to climate change and to protect significant biodiversity which exist in these corridors.



Recommendations:

- 1 Support Councils in improving ESD targets by approving the Elevating ESD Targets Planning Policy Amendment or providing support for a similar ESD policy in planning schemes which provide higher ESD targets and/or future-proof new buildings to withstand climate change events.
- 2 Provide Cost off-sets via on-site renewable energy (Solar PV) and Rainwater tanks to reduce water & energy bills for tenants.
- 3 Planning controls consistently applied across the State which prioritize materials and landscapes that are more resilient to climate impacts.
- 4 Consider mandating new buildings to require thermal comfort and wellbeing for residents to future-proof against future extreme weather events.
- 5 Provide financial assistance for Councils to undertake asset risk assessments and improvements, with reference to future climate projections and risk modelling, particularly as they relate to housing.
- 6 Provide support for councils to implement the ESD Roadmap in full to optimise energy efficiency, support renewable energy in updating residential development standards, and implement other sustainability measures in the planning scheme as relevant.
- 7 Incorporate the recommendations of the Sustainable Subdivisions Framework trial into clause 56 Residential Subdivision and clause 15.01-3S Subdivision design of the Victoria Planning Provisions.
- 8 Protect, restore and enhance what remaining natural environments we have, and map priority ecological corridors across the state that reconnect existing patches of native vegetation to reduce fragmentation, increase connectivity and facilitate genetic diversity.
- 9 Acknowledge that cleared land can be restored, and before we see it as developable, consider whether we should revegetate it to connect two nearby patches.

5. Self-determination and caring for Country

The City of Ballarat will continue to work collaboratively with the Victorian Government and Traditional Owners to ensure that the Plan for Victoria will take a Caring for Country approach, connecting all humans and human activities to the land, truly acknowledging and appreciating our dependence on the ecosystem services that the Earth provides and showing the respect and due consideration all species deserves.



Recommendations:

- 1 Adopt a Caring for Country ethos throughout the Plan for Victoria 2050, as guided by Traditional Owners.

Image: Artwork by Dr Deanne Gilson a Wadawarrung Traditional Custodian and established artist. Located in the North Gardens Indigenous Sculpture Park, titled 'Murrup Laarr' which translates as 'Ancestral Stones' in Wadawarrung.

6.6. HERITAGE VICTORIA PERMIT APPLICATION P39923 - BALLARAT RAILWAY COMPLEX, CITY OF BALLARAT WRITTEN SUBMISSION

Division: Development and Growth
Director: Natalie Robertson
Author/Position: Annabel Neylon – Coordinator Heritage

PURPOSE

1. The purpose of this report is for the Planning Delegated Committee to determine a position on Heritage Victoria (HV) Permit P39923 regarding the Lydiard Street Intersector Gates and associated mechanisms and fabric.

BACKGROUND

2. On 30 May 2020, a V/Line passenger train was not able to stop approaching Ballarat Station and collided with the Lydiard Street North level crossing Interlocking Sector Gates which were, at the time, closed into the rail corridor.
3. Two gates, their posts and stays were destroyed and debris was scattered around the impact site. The Lydiard Street North level crossing could not function and was closed.
4. On 2 September 2020, Ballarat City Council considered the incident affecting the Lydiard Level Crossing Gates. The following resolution (R223/20) was made which:
 - i. Notes the established heritage importance of the Ballarat Station Railway gates and strong preference that they be reinstated if investigations conclude safety will not be compromised;
 - ii. Acknowledges that V/Line is the Responsible Authority for the restoration of the crossing at Lydiard St and calls for its opening to traffic as soon as possible; and
 - iii. Advise all relevant Ministers and stakeholders of this position.
5. HV Permit P34664, issued 7 October 2021, approved the temporary removal and storage of the gates' surviving parts. Mechanical boom gates were installed so the Lydiard Street North level crossing could re-open.



Figure 1. Part of a street view prior to 20 May 2020 looking northeast to the Lydiard Street North Interlocking Sector Gates showing location of gate parts.

6. V/Line Corporation have recently submitted an application to HV for a heritage permit. The permit seeks to permanently retain the existing mechanical boom gate. The permit proposes to relocate the two surviving gates with new posts and stays as fixed interpretative features on the Ararat side of Lydiard Street adjacent to the tracks. Conservation work is proposed for the two standing gate posts, the single posts severed by the incident, as well as all four gate wells.
7. This Heritage Permit application (P39923) is prompted by Condition 12 of P34664 (amended), which is as follows:

Within six (6) months of the receipt of the endorsed copy of the options paper required under Condition 11, a permit application is to be lodged with Heritage Victoria requesting approval for the return of the removed fabric to their substantive locations at the Lydiard Street North level crossing, or in an arrangement to the satisfaction of the Executive Director, Heritage Victoria.

8. In accordance with section 100 of the *Heritage Act 2017*, HV has referred the permit application to the City of Ballarat for comment.

KEY MATTERS

9. V/Line Corporation cites operational and safety concerns if the gates are re-installed to operate in their original locations. However, the cause of the collision was not that the gates malfunctioned, but that the train was unable to stop prior to entering Ballarat Station. The Australian Transport Safety Bureau (ATSB) report 28 October 2022, page iii, found that:

What the ATSB found

It was found that slippery rail conditions existed for at least the final 2.5 km of the approach to Ballarat Railway Station and probably the final 5 km. It was concluded that moisture from light rain was the primary environmental factor influencing the formation of very low levels of adhesion¹ at the contact between the train's wheels and the rail head. This substantially reduced the braking performance of train 8185.

It was found that the sanding system installed on train 8185 to improve adhesion in slippery conditions was ineffective at improving braking performance during this event. It was concluded that several factors potentially adversely influenced the effectiveness of the sanders.

https://www.atsb.gov.au/publications/investigation_reports/2020/rair/ro-2020-007

10. Approval of HV Permit P34664 in 2021 to salvage the gate parts included the preparation of an Options Paper for consideration by the Executive Director HV. The Ballarat Railway Complex (H0902) Lydiard Street North Sector Gates Options Paper, prepared for V/Line Corporation by Lovell Chen and dated July 2023, was endorsed under Condition 11 of P34664.
11. The Options Paper considered five options developed by V/Line, which included:
 - a) The new mechanical (boom) gates at the level crossing will be retained and the replica heritage gates will be displayed elsewhere within the Ballarat Station precinct. Supported by V/Line.
 - b) The new mechanical (boom) gates at the level crossing should be retained and the replica heritage gates should be placed in a static position at the crossing, running parallel to the train line. Supported by V/Line.
 - c) The replica heritage gates should be reinstated in a functional capacity. Considered by V/Line to be unviable.
 - d) Lydiard Street should be closed with the replica heritage gates returned to the crossing and placed permanently across the road. Considered by V/Line to be unviable.
 - e) The mechanical (boom) gates at the level crossing should be retained and the replica heritage gates should be placed in a static position at the level crossing, at varying angles, roughly perpendicular to the train line. Considered by V/Line to be unviable.

Proposed works

12. Permit Application P39923, currently being assessed by HV, involves the following (refer Fig 4 annotated plan below, source Heritage Impact Statement 2024):
 - Permanent retention of new mechanical (boom) gates at the level crossing.
 - The broken Gate Post 1 to remain in current location and subject to conservation and repair works, including the capping of the broken upper section.
 - The surviving Gate Post 2 to remain in current location and subject to conservation and repair works.
 - The salvaged Gate Post 3 to be relocated to Gate Well 4 to replace Gate Post 4 (destroyed by the accident), and subject to conservation and repair works.

This relocation enables safe maintenance access to the boom gate positioned at Gate Post 3).

- One surviving gate (2 or 3) to be positioned south of Signal Box B on new supports.
- One surviving gate (2 or 3) to be positioned on new supports, north-west of the level crossing and north of the retaining wall parallel to the rail line.
- The four gate stops, still in their original locations, to be relocated within the level crossing, in preparation for planned track realignment.
- Conservation of the four gate wells and their significant fabric and to allow future maintenance, such as providing new gate-well lids.
- Installation of two cast-iron gate posts (provided by V/Line, not from Ballarat Railway Complex) to support the two surviving gates (2 and 3) in their new display locations.
- Installation of an interpretive panel south-east of Signal Box B to communicate the interlocking sector gates' history which will replace the existing interpretation.
- Installation of a signpost with two signs 'DO NOT CLIMB' and 'SURVEILLANCE CAMERAS IN USE' between Signal Box B and the displayed sector gate by Ararat Street.
- Decommissioning of salvaged fabric not included in the design, not listed.

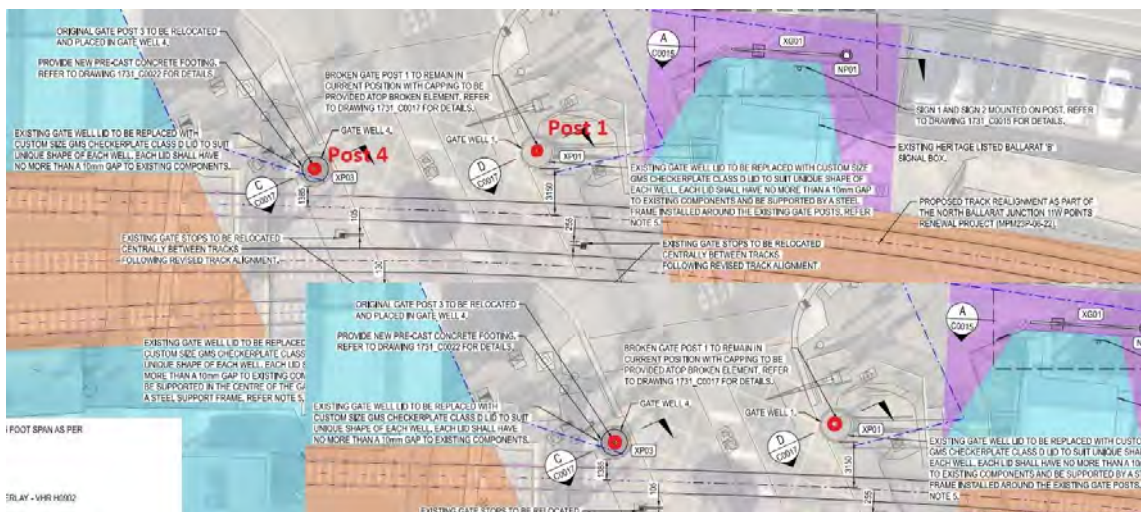


Figure 2. Plan of the proposal, annotated by author to highlight the original gate post locations referred to in the scope of work above. Source. Kinsley Group for Public Transport Victoria.

Heritage Significance

13. The Ballarat Railway Complex (H0902) is included on the Victorian Heritage Register (VHR). The Lydiard Street North Interlocking Sector Gates are identified as an element which contributes to the significance of the Ballarat Railway Station Complex.
14. Lovell Chen has prepared a Heritage Impact Statement (HIS) submitted with the permit application.

15. The HIS provides excerpts and information from a Conservation Management Plan (CMP) for the Ballarat Railway Complex currently being prepared by Lovell Chen. The document has not been formally approved by HV and is still in draft form.
16. The HIS asserts that the (draft) CMP considers that the gates are of representative significance, and that they perform a 'supporting role' in terms of their contribution to the heritage significance of the Ballarat Railway Complex.
17. However, the HIS also states that the interlocked installation and signaling system at Ballarat Station, which includes the Signal "B" Box, its contents, the Signal Gantries and the sector gates, is the largest surviving interlocked installation in Victoria and that the interlocking sector gate system is rare within the state. This is an important consideration in determining the significance of the gates and their associated mechanical system and elements.
18. Officers acknowledge the risks associated with vehicles potentially being stuck between the gates as per the HIS Executive Summary. This Executive Summary states that the new boom barriers and flashing light controls alleviate the danger of vehicles being trapped on the crossing by the manually operated gates. It was therefore considered in the HIS that the road crossing would be safer with boom barriers and that any reinstatement of the gates in an operational state would compromise safety. Given that this submission is a response to the heritage attributes of the gates, HV will need to take into consideration the safety and risk implications of the heritage swing gates when determining the permit application.

Conclusion

19. The VHR and heritage assessments for this proposal reaffirm that the Lydiard Street North Interlocking Sector Gates contribute to the significance of the Ballarat Railway Station Complex.
20. The gate system is an important part of the station's interlocked installation which is the largest surviving interlocked installation in Victoria. The gate system itself also appears to be a rare survivor in regional Victoria.
21. Noting the importance of the gate system, officers recommend that the whole Lydiard Street North Interlocking Section Gates should be repaired and rebuilt in-situ and returned to operation.

OFFICER RECOMMENDATION

22. That the Planning Delegated Committee resolves to:

22.1 Endorse and submit the written submission to Heritage Victoria as presented in the attachment to this report.

ATTACHMENTS

1. Governance Review [6.6.1 - 1 page]
2. Draft response to Heritage Victoria Permit P 39923 [6.6.2 - 2 pages]

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ALIGNMENT WITH COUNCIL VISION, COUNCIL PLAN, STRATEGIES AND POLICIES

1. This report aligns with Council's Vision, Council Plan, Strategies and Policies

COMMUNITY IMPACT

2. There are no negative community impacts identified for the subject of this report. This is a submission to Heritage Victoria who will ultimately decide on the application.

CLIMATE EMERGENCY AND ENVIRONMENTAL SUSTAINABILITY IMPLICATIONS

3. There are no environmental sustainability implications identified for the subject of this report.

ECONOMIC SUSTAINABILITY IMPLICATIONS

4. There are no economic sustainability implications identified for the subject of this report.

FINANCIAL IMPLICATIONS

5. There are no financial implications for the City of Ballarat as a result of the proposal. The proposal will be funded and delivered by the Victorian government.

LEGAL AND RISK CONSIDERATIONS

6. There are no legal and risk considerations relevant to the subject of this report.

HUMAN RIGHTS CONSIDERATIONS

7. It is considered that the report does not impact on any human rights identified in the *Charter of Human Rights and Responsibilities Act 2006*.

COMMUNITY CONSULTATION AND ENGAGEMENT

8. Community consultation and engagement is currently underway and is being delivered by the Victorian government. As a State driven project, the City of Ballarat is not responsible for the consultation and engagement process.

GENDER EQUALITY ACT 2020

9. There are no gender equality implications identified for the subject of this report.

CONFLICTS OF INTEREST THAT HAVE ARISEN IN PREPARATION OF THE REPORT

10. Council officers affirm that no general or material conflicts need to be declared in relation to the matter of this report.

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DRAFT LETTER IN RESPONSE TO HERITAGE VICTORIA PERMIT P39923

[email: [REDACTED]]

Dear [REDACTED]

RE: PERMIT APPLICATION P39923 - BALLARAT RAILWAY COMPLEX, 140 LYDIARD STREET NORTH BALLARAT CENTRAL AND 202 LYDIARD STREET NORTH AND NOLAN STREET SOLDIERS HILL AND SCOTT PARADE AND 60 CORBETT STREET BALLARAT EAST AND 75 HUMFFRAY STREET NORTH BAKERY HILL, BALLARAT CITY (H0902)

The City of Ballarat would like to thank you for your invitation on 11 July 2024 and would like to make this submission to Heritage Victoria (HV) for Permit (P39923) for work to the Lydiard Street North level crossing Interlocking Sector Gates within the Ballarat Railway Complex (HV Ref H0902).

Proposal

It is noted that this permit is as a result of a collision on 30 May 2020 when a V/Line passenger train collided with and damaged the Lydiard Street North level crossing Interlocking Sector Gates which were, at the time, closed into the rail corridor.

It is understood that the permit seeks to permanently retain the existing mechanical boom gates fitted in 2021. The permit also proposes to install the two surviving sector gates with new posts and stays as fixed interpretative features on the Ararat side of Lydiard Street adjacent to the tracks. Lovell Chen have prepared a Heritage Impact Statement (HIS) submitted with the application for this heritage permit. The HIS advises (p25) that the two standing gate posts and the single post severed by the collision will be managed as a ruin. Conservation work is proposed for the posts as well as all four gate wells.

Heritage Significance

The Lydiard Street North Interlocking Sector Gates are identified as an element which contributes to the significance of the Ballarat Railway Complex. The listing on the Victorian Heritage Register (VHR) advises that the Ballarat Railway Station Complex is of historical, architectural, social, and technological significance at a State level.

The HIS provides excerpts and information from a Conservation Management Plan (CMP) for the Ballarat Railway Complex currently being prepared by Lovell Chen. It is understood that the document has not been formally approved by Heritage Victoria and is still in draft form. The HIS advises (p11) that the draft CMP considers that the sector gates are of Representative significance, and that they perform a 'supporting role' in terms of their contribution to the heritage significance of the Ballarat Railway Complex. However, it also states (p6) that the interlocked installation and signaling system at Ballarat Station, which includes the Signal "B": Box, its contents, the Signal Gables and the sector gates is the largest surviving interlocked installation in Victoria, and that the interlocking sector gate system is rare within country Victoria. Ballarat City Council submits that this is an important consideration in determining the significance and the future of the gates and their mechanical systems and workings.

Conclusion

The VHR and heritage assessments reaffirm that the Lydiard Street North Interlocking Sector Gates contribute to the significance of the Ballarat Railway Station Complex. The gates contribute to the technological significance of the station as they are part of the 'largest surviving interlocked

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installation in the state. It appears that the gate system itself is also a rare survivor in country Victoria.

Ballarat City Council notes the importance of the whole Lydiard Street North Interlocking Section Gates, their historic use and role as part of Ballarat's interlocked and signaling system. Accordingly, Ballarat City Council submits to Heritage Victoria that the whole gate assembly should be repaired and rebuilt in-situ, with new elements to match existing, and be made operational again to maintain the important and rare original historical relationships evidenced in the whole interlocking assembly, including the Signal "B" Box, the sector gates and the Signal Gantries.

It is acknowledged that the Heritage Impact Statement identifies a risk associated with vehicles potentially being stuck between the gates as per the information provided in the Executive Summary. The Executive Summary states that the new boom barriers and flashing light controls alleviates the danger of vehicles being trapped on the crossing by the manually operated gates. It was therefore the Heritage Impact Statement's view that the road crossing would be safer with boom barriers than when the sign gates were in operation. Any reinstatement of these gates in an operational state would compromise safety. In the event that this is the case and a decision to support the boom gates is affirmed by Heritage Victoria, the City of Ballarat requests further and more particular details of this be provided to satisfy itself that the safety reasons outweighs the significant heritage elements.

Other Matters

Ballarat City Council notes the HIS' advice (p25) that proposal does 'not provide a heritage outcome in relation to the significance of the place, but that the relocation of the replica gates can be seen as one way of managing and conserving this fabric'. Keeping the surviving gate posts in their original positions as a ruin but then placing the two surviving sector gates with new posts and stays as fixed features separate and away from the intersection would create a meaningless arrangement that would not convey the assembly's function and movements which are a critical aspect of its technological significance. The whole assembly would be fragmented if the parts are placed away from their historic locations. This will end the important and rare original historical relationships between the whole interlocking assembly, being the largest surviving assembly in the state, especially, as the gates' have a very visible role in the assembly.

The Ballarat Railway Complex demonstrates significance under VHR Criterion G, a strong or special attachment with a present-day community for a social reason. However, the heritage assessments do not seem to have considered the Ballarat community's attachment to the operating gates as a conspicuous, familiar, if prosaic, piece of daily infrastructure in the heart of the City. There is vocal support in parts of the local community for the gates to be re-installed and to operate again which suggests that the gates may strongly demonstrate heritage significance under VHR Criterion G. There is concern that this consideration has not been included as part of a balance assessment of the merits of this proposal to date and its omission may undermine the validity of any determination of the proposal.

Ballarat City Council recommends that Heritage Victoria furnish itself with following information from the applicant and include it in its assessment of the proposal:

- the rarity of the gates' continuous historic use; and
- the Ballarat community's attachment to the operating gates which may strongly demonstrate heritage significance under VHR Criterion G.

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7. GENERAL BUSINESS - MATTERS ARISING FROM THE AGENDA

8. CLOSE