

Industrial Land Analysis: Supply, Demand and Precinct Planning Directions

City of Ballarat

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Contents

Executive summary	4
1. Introduction.....	10
1.1 Background to this strategy	10
1.2 Purpose of the study	10
1.3 Categorisation of industrial precincts	11
1.4 Study precincts	12
1.5 Study method	15
1.6 Contents	15
2. Strategic and economic context	16
2.1 Strategic planning context	16
2.2 Key economic trends and prospects in Ballarat	22
3. Precinct profiles.....	26
3.1 Regionally significant industrial precincts.....	26
3.2 Locally significant precincts	34
4. Demand-supply analysis of regionally and locally significant industrial land	52
4.1 Method.....	52
4.2 Regionally significant industrial land demand and supply	52
4.3 Locally significant industrial land demand and supply	56
5. Recommendations.....	61
5.1 Overarching directions and recommendations	61
5.2 Precinct recommendations	61
5.3 Precinct recommendations	64
 APPENDICES	
Appendix A: Industrial planning policy and strategy	69
Appendix B: Peer review of the ELR Method.....	80

Executive summary

Overview

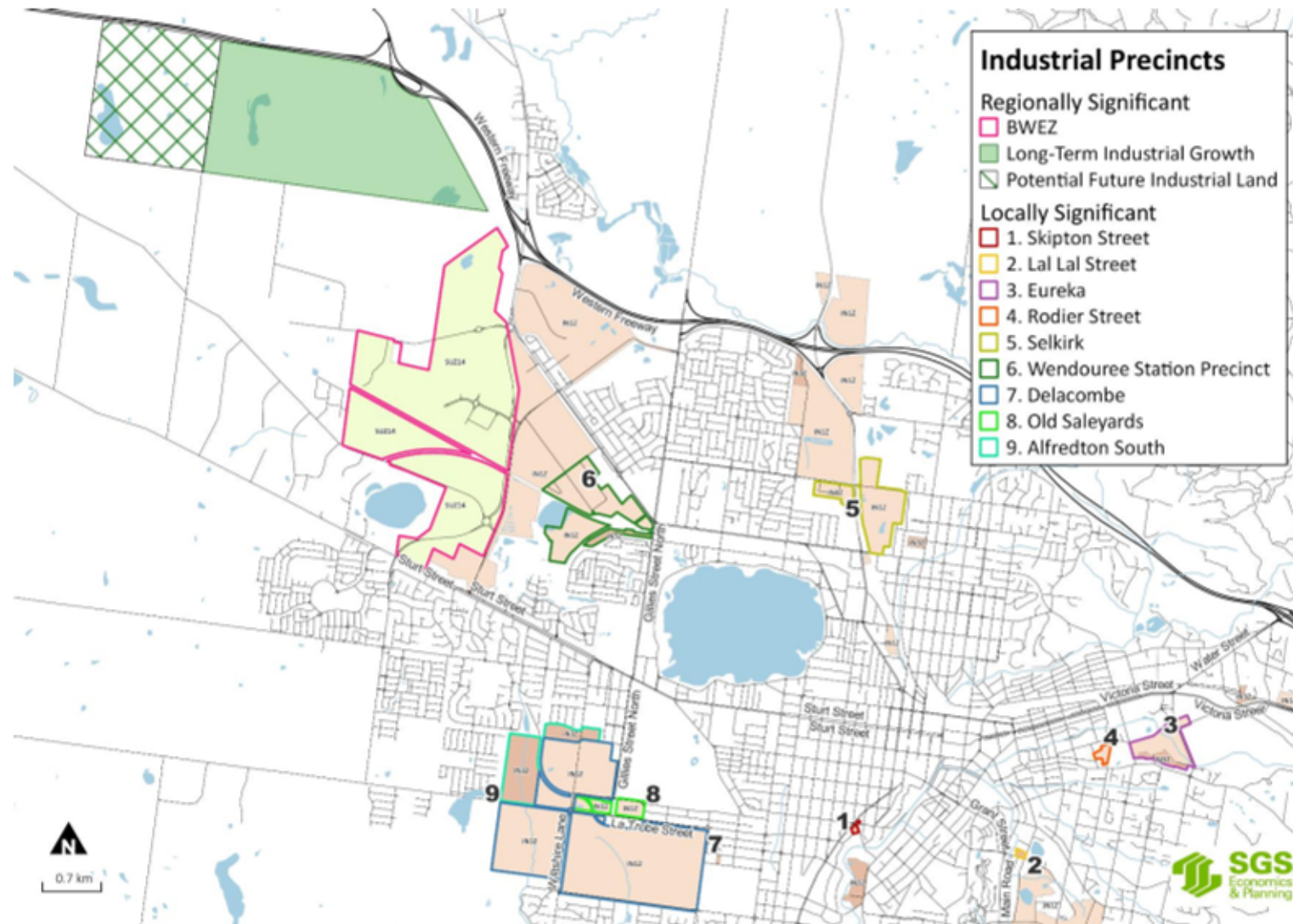
The City of Ballarat's *Employment Lands Review: Background Report* (HillPDA, 2021) (Background ELR) provides broad recommendations for decision making on the future of employment land in Ballarat to a nominal 2050 horizon. SGS Economics & Planning has been engaged to review future prospects for 10 selected industrial precincts identified in the Background ELR for additional investigation, and their potential for conversion to alternative uses, while also considering the need for additional 'greenfield' industrial land already identified in planning documents to the north west of Ballarat (see map of the study precincts overleaf).

The existing industrial sites need to be considered for alternative land uses in the context of future demand for industrial land and ensuring change won't compromise future land needs.

The approach to this review was to categorise the precincts as either 'regionally significant' or 'locally significant' industrial land. This recognises that the industrial precincts comprise different industrial activities, lot size requirements and market reach and connections. It also enables the demand and supply analysis to be segmented.

The Ballarat West Employment Zone is considered the only or principal 'regionally significant' industrial precinct in Ballarat. All other precincts are considered 'locally significant'.

STUDY PRECINCTS



Source: SGS Economics and Planning 2023

Regionally significant land demand scenarios

Three scenarios were considered for demonstrating future demand (take-up rates) for regionally significant industrial land.

- **Scenario 1** uses a land development method, based on the rate of development in BWEZ from 2021 to 2022, in the immediate post Covid period, estimated at around 4.5 hectares per year.
- **Scenario 2** uses a similar land development method to scenario 1 but considering development in BWEZ in the period from 2018-2020. This assumes that future development rates would return to pre-COVID-19 figures in future. This period of development gives a value of around 6.5 hectares per year.
- **Scenario 3** is based on land sales data provided by Council in June 2023, instead of development. Sales were occurring at around 11.5 hectares per year on average between 2014 and 2022.

The table below summarises the three demand scenarios compared to the existing (vacant) land supply drawing on the development and sales estimates for the only current regionally significant land supply at the Ballarat West Employment Zone.

BWEZ LAND CONSUMPTION SCENARIOS

	BWEZ vacant land (ha)	Assumed take-up rate (ha/year)	Years of remaining zoned land
1. Low Scenario (S1) (based on recent (2021-23 dev rate)	160 ha	4.5	36 (by 2061)
2. Medium Scenario (S2) (based on increasing dev rate, prior to covid impacts)	160 ha	6.5	25 (by 2048)
3. High Scenario (S3) (based on recent land sales rates)	83 ha	11.5	7 (by 2029) + 3-5 for development & use

Source: SGS Economics and Planning, based on data from the Ballarat West Employment Zone Master Plan (2021), LivingAtlas online satellite imagery (2014-2023), and Council provided land purchase data (2023)

While it is not typical practice to use land sales as the benchmark for estimating long range demand (as used in scenario 3) there are relatively unique circumstances in evidence here.

- Council has advised that a contract with Development Victoria for land sales in BWEZ contains a deadline for development within a relatively short time, that is 1-3 years, from settlement, and this constrains land-banking. When development doesn't occur in the agreed time the property is returned to DV who can then place it back on the market. The disincentive for a purchaser to not follow with development is clear. This arrangement does increase the likelihood of actual development 'tracking' sales more closely than might be the case in other industrial land precincts.
- Council also indicates a trend of requests for larger lot sizes in response to the strategic focus of its investment facilitation i.e. prioritising advanced manufacturing/innovation over lower employment

options such as warehousing. While the available evidence isn't definitive increasing demand for larger lot sizes will accelerate actual development take-up rates.

- The dynamics in the wider industrial land market should also be acknowledged. Strategic precincts such as BWEZ are increasingly attracting investors and end-users who in the past might have chosen a western Melbourne market. Using past rates of development take-up as an indicator of future demand may be conservative given this apparent integration between the Ballarat and Melbourne markets.

For these reasons it is reasonable to plan for future regionally significant land by reference to Scenario 3 as a 'high-side' prospect, recognising that there will be some lag in actual development and occupation rates, of typically perhaps 3 to 5 years. This would suggest that there is **10-12 years of land available at BWEZ**, though if the conversion of sold land to developed and occupied land accelerates then the stock of existing supply would be reduced sooner.

On this basis Ballarat could deplete regionally significant industrial land by the early 2030s. Growth opportunities need to be identified with planning underway well before this exhaustion point to provide a pipeline of zoned and serviced land ahead of demand. Furthermore, the take-up rates and assumptions should be regularly monitored.

Locally significant industrial land demand scenarios

The impact on the remaining Ballarat local industrial land supply needs to take account of the assumed rate of development for the regionally significant industrial Land. This can be achieved by subtracting the area of BWEZ (as regionally significant land) from the total available industrial land (local and regionally significant), and also subtracting the annual hectares of take up in BWEZ, from the Background ELR's take up assumptions.

This method leaves a figure for remaining years of local industrial supply at somewhere between 14 and 65 years, depending on which of the Background ELR scenarios is utilised. With a reduction in the forecast demand for local Industrial precincts (given a share of demand is now allocated elsewhere to 'regionally significant land'), there is greater scope to consider the conversion or rezoning of the land from industrial for residential or commercial uses.

Directions

The **directions** for Ballarat's industrial lands aim to consolidate, enhance and transform Ballarat's industrial land supply, as follows:

- Ensure Ballarat has appropriate supply of industrial land for at least 15 – preferably 20 – years to meet forecast demand.
- Make better use of well-located industrial land where it can support the emerging advanced manufacturing sector and Ballarat's role as an industrial and freight hub.
- Facilitate alternative land use and development outcomes where land is deemed to be non-strategic or inappropriate in its current industrial zoning.
- Seek alternative industrial land to safeguard Ballarat's industrial sector into the future.
- Support a precinct based approach for the development of industrial land.

Precinct recommendations

Recommendation 1: Plan to accommodate regionally significant industrial land uses over the short to medium term including accelerating planning for a future industrial precinct to the north-west of Ballarat (bounded by Western Hwy, McCartneys Rd, Draffins Rd).

- BWEZ will play a continuing crucial role in the short to medium term.
- Confirm and extend designation of north-west investigation area (bounded by Western Hwy, McCartneys Rd, Draffins Rd) and commence planning to secure for future industrial.

The **principles for protecting and creating new industrial land**, particularly in the greenfields, are as follows:

- Preserve the land through early designation to ensure it is preserved for future industrial land use, and in due course with appropriate rezoning and staged release.
- Avoid land fragmentation through minimum lot size and land subdivision requirements (avoid patterns that aren't flexible)
- Prohibit residential land uses in regionally significant industrial precincts so as not to undermine the economic opportunities.
- Considerations for transitioning greenfield land to industrial land use include:
 - Strategic purchase by the state and future governance to manage positioning / branding / clustering
 - Zoning, structure planning and local policy implementation including the extent of 'curation' to ensure particular uses or clusters in future
 - Infrastructure provision
 - Urban design and environment
 - Public space provision
 - Development of underutilised, catalyst and/ or vacant sites
 - Accessibility.

Recommendation 2: Strategically rezone select locally significant industrial precincts considered surplus and fragmented to alternative uses.

Precincts proposed to be rezoned to enable alternative land uses with appropriate analysis and integrated master planning are:

- Skipton Street
- Lal Lal Street
- Eureka
- Rodier Street
- Selkirk
- Wendouree Station Precinct
- Old Saleyards
- Alfredton South

Recommendation 3: Maintain and protect the locally significant industrial futures of 'core established' employment and industrial precincts.

A few key established precincts are crucial to the locally significant industrial land supply, as well as providing important opportunities for local economic development and diversification and accessible local jobs. Planning should be directed towards ensuring the effective operation of these areas into the future.

The Delacombe precinct is proposed to be strengthened as part of its designation as a 'core employment precinct'. This precinct has been divided as follows but should be planned as one:

- Delacombe – La Trobe Street
- Delacombe – Southwest
- Delacombe – Northwest

For areas where industrial uses are to be maintained key principles for future active planning include:

- Actively plan for appropriate use separation and buffers to surrounding uses
- Avoid uses in surrounding areas which are likely to compromise the effective operation of the industrial area or create conflicts
- Prioritise commercial vehicle access to these areas (and limit non-commercial vehicle road congestion by promoting public transport and alternative routes for commuter traffic)
- Discourage commercial and retail uses which could be located in commercial and town centre areas
- Promote co-location of like uses to maximise enterprise and economic synergies.

1. Introduction

1.1 Background to this strategy

The City of Ballarat's *Employment Lands Review: Background Report* (HillPDA, 2021) (Background ELR) provides broad recommendations for decision making on the future of employment land in Ballarat to a nominal 2050 horizon. The report quantifies industrial land demand and supply and classifies precincts by role and strategic importance to the Ballarat economy. The report also identifies industrial land precincts and parcels that may not be strategic for future demand and could be considered for alternative uses.

The Background ELR concludes that there is sufficient industrial land supply to meet projected demand (with supply in excess of the nominal target of 15 years industrial land supply), though emphasises a need to continually monitor the situation, and plan for future land release in advance of supply falling below the 15-year supply benchmark.

The Background ELR classifies industrial precincts as **“core employment precincts”** to be retained, **“employment investigation areas”** in transition to non-employment uses, and **“potential redevelopment areas”** with limitations or issues in performing an employment role. Some precincts with these latter two designations align with ‘urban renewal precincts’ identified in Clause 21.02 (Settlement and Housing) of the Ballarat Planning Scheme, where further investigation and feasibility work is a prerequisite for future development.

Further detail about the Background ELR recommendations and the relevant classifications of the study area are included in Chapter 2.1.

Since the Background ELR was finalised in 2021 the context for industrial land development has changed somewhat. The prospect of a future Commonwealth Games having a Ballarat focus, including a requirement for early consideration of athlete and residential villages and/or mixed-use precincts on existing or former industrial land has come and gone. More significantly the strongly performing Ballarat West Employment Zone, with a substantial share of the land sold or under contract for development, has highlighted the need for a focus on future regionally significant industrial land supply (that is, large lot, high amenity, highly accessible industrial precincts).

1.2 Purpose of the study

This study seeks to identify the potential for industrial growth and land use change in the select precincts identified in the Background ELR, and the implications for the Ballarat economy and the industrial land supply-demand ‘balance’.

The aims of the project are to:

- Identify the future role and functions of the precincts, including the potential for conversion to alternative land uses.

- Identify the impact on the amount of land available for industrial uses in the future given any change in the precincts to ensure long-term supply.
- Identify the impacts on the long-term economic development prospects for Ballarat from any change to these precincts.

This study informs further development of the recommendations identified in the Background ELR, by focusing on select industrial precincts. It refines the method used in the Background ELR and investigates the industrial precincts based on the classifications given in the Background ELR, while also extending the analysis to a category of 'regionally significant industrial land' recognising a strongly emerging qualitatively different category of industrial land demand.

It combines qualitative research (policy context, engagement with local stakeholders) and quantitative analysis (employment profiling, industrial land supply-demand analysis).

The approach taken, in a departure from the Background ELR method, is to examine demand and supply through the lens of 'regionally significant' and 'locally significant' land, to differentiate the market and on the one hand identify whether growing demand for strategically significant land can be accommodated in future, while also determining the scope for converting selected local industrial precincts to alternative uses.

1.3 Categorisation of industrial precincts

For this study, industrial lands across Ballarat have been split into two broad categories based on their different roles and market environments:

Regionally significant industrial land

- Incorporates a range of industrial and commercial uses with typically regional or national market reach; might integrate commercial, production and warehousing operations; could require a large site; requires connections to motorway / state transport infrastructure for rapid accessibility (to and from suppliers and end-users); importance of proximity to an appropriately skilled local workforce and support infrastructure; might be larger in investment value, scale and complexity. Areas may require targeted planning, infrastructure investment, curation and governance including minimising conflicts and disruptions from neighbouring areas.
- The Ballarat West Employment Zone is considered the principal precinct of regionally significant industrial land.

Locally significant industrial land

- Accommodates businesses that predominately have a local or district wide market, servicing local residents and other businesses through supply chain links (though doesn't exclude larger businesses with a wider market). These areas support local service trades, local warehousing, small-scale manufacturing and production and might include non-industrial dispersed activities of a quasi-retail or recreational nature. Many areas are long established in Ballarat and play an important role in the local economy. Generally, they should be retained for industrial or employment purposes unless now surplus to needs, inoperable due to unmanageable conflicts or demonstrably better suited to an alternate non-employment purpose.

The above distinction (not included in the Background ELR) has been identified for this study to enable the need for a potential future industrial area – which would be considered regionally significant – to be assessed.

1.4 Study precincts

Industrial precincts with conversion potential

Selected industrial precincts in Ballarat are considered to have potential to transition to alternative land uses with benefits for the community. Various reasons account for this; some sites have nearby residential development with impacts on residential amenity through for example noise and odour, some lack appropriate access and present traffic issues, some can be converted to support other strategic policy objectives. State and local policy (Clause 22.02 Industry) supports the transition of old and inappropriate industrial areas to more appropriate land uses, particularly where they are encumbered by surrounding sensitive uses (such as residential).

Several industrial precincts in Ballarat with the above potential for transition have been chosen to constitute the study area. Factors why other industrial precincts have not been chosen include the precinct is well established, the light industrial uses are generally appropriate in the setting and contribute to the 10 Minute City vision (Ballarat Strategy 2040) by providing employment/services close to homes.

BWEZ is designated as 'regionally significant industrial land' due to the availability of large lots and access to infrastructure, which sets it apart from other industrial areas in Ballarat.

An investigation into each study precinct is outlined in Section 3 of this report and includes an assessment of the opportunities and constraints for each precinct. Table 1 identifies the study precincts and outlines the differences in the naming convention of this report compared to that of the ELR to ensure there is less confusion between the two reports.

Future industrial land supply

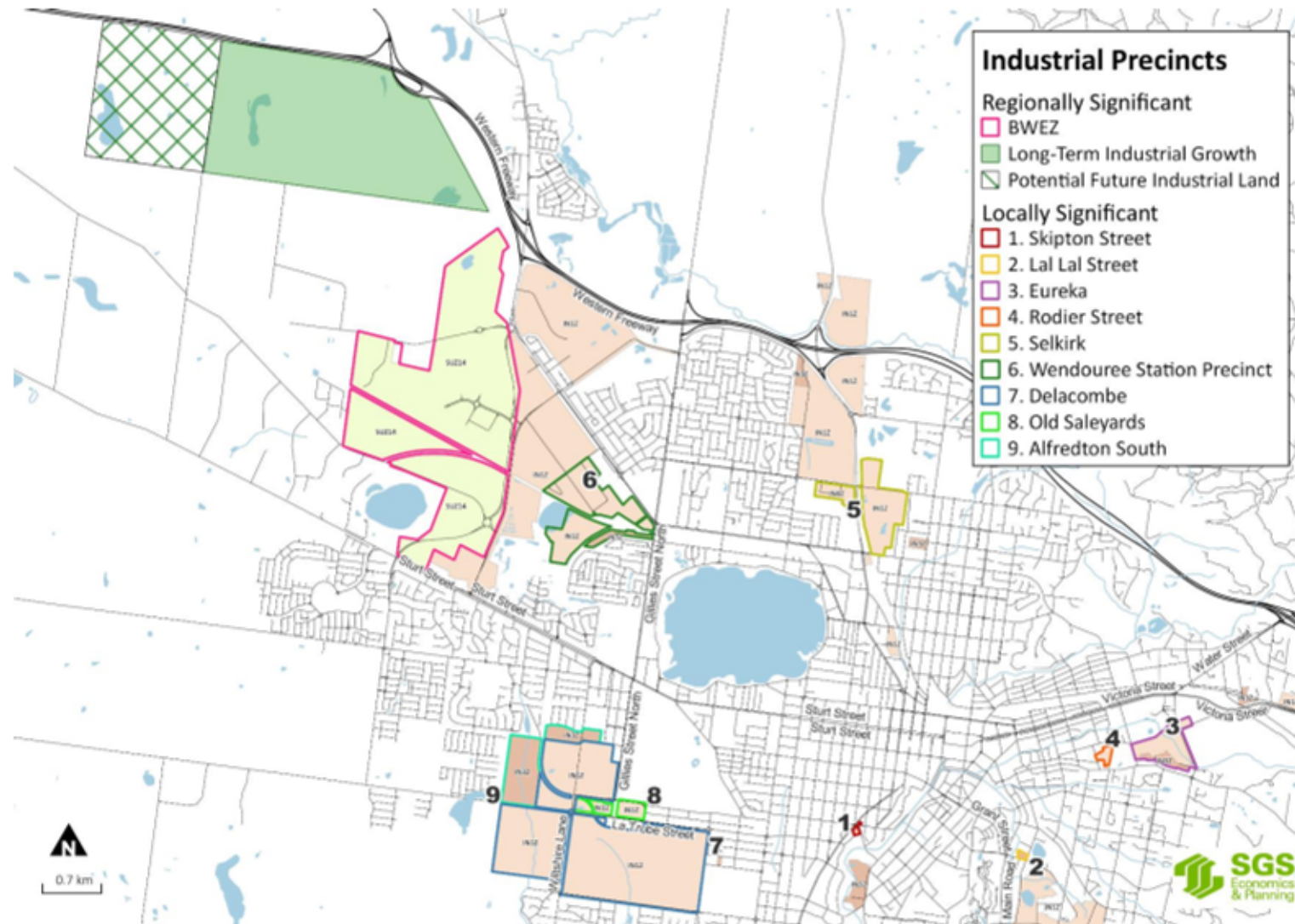
An area of greenfield land is identified for 'long term industrial growth' in Clause 21.07-4 (Industry) of the Ballarat Planning Scheme. This site is bounded by the Western Highway to the north, Sunraysia Drive to the east, McCartneys Road to the south, and Draffins Road to the west. It is located in close proximity to the Ballarat West Employment Zone, an industrial precinct that is being released in a staged manner to the open market.

To account for potential future industrial growth beyond what is already identified in local policy, additional land between Dowling Road and Draffins Road is included ('Potential Future Industrial Land' in Figure 2). Further investigation will be required to justify future rezoning of this site however it is found to be in an ideal location as it is within proximity to a growing population in the Ballarat West Growth Area, has access to key routes via Ballarat Link Road, highway access, and absence of known environmental constraints that may otherwise inhibit development. Local policy direction at Clause 22.02 (Industry) supports the development of new industry that requires significant buffer distances to be accommodated in areas where there are relatively few operational constraints.

TABLE 1: STUDY PRECINCTS

Study precincts	Background ELR naming convention
<i>Regionally significant industrial land</i>	
Ballarat West Employment Zone (BWEZ)	[Unchanged]
<i>Locally significant industrial precincts</i>	
Skipton Street	Skipton Street at Hill Street
Lal Lal Street	[Unchanged]
Eureka	[Unchanged]
Rodier Street	[Unchanged]
Selkirk	Wendouree East - Selkirk Site
Wendouree Station Precinct	Wendouree West – Station Precinct Note: precinct includes select sites within the Wendouree Station Precinct Master Plan
Delacombe Sub precincts: 1. La Trobe Street 2. Northwest 3. Southwest	[Unchanged] Note: Split into three sub precincts for the purposes of this study
Old Saleyards	Saleyards Delacombe - Old Saleyards
Alfredton South	Saleyards Delacombe - Alfredton South

FIGURE 1: STUDY PRECINCTS



Source: SGS Economics and Planning 2023

1.5 Study method

The approach to comparing industrial land demand and supply involves the following steps:

- **For regionally significant industrial land**
 - Isolate and consider the existing supply – in Ballarat BWEZ is considered the only regionally significant industrial precinct.
 - Estimate potential future demand (take-up rates) - three potential demand scenarios are identified and considered, with a preferred demand scenario chosen.
 - Compare to the existing supply at BWEZ.
 - Identify and consider future supply potential (the greenfield investigation area and then adjacent extension area) in light of the demand and supply analysis.
- **For locally significant land**
 - Restate the ELR supply estimate and demand scenarios.
 - 'Establish the locally significant industrial land supply (by 'removing' the regionally significant land from the ELR supply and demand analysis, as well as commercial and mixed-use land.)
 - Recalculate the demand and supply estimates to identify the surplus or gap.
 - Identify the implications on the supply of locally significant industrial land from 'converting' selected industrial precincts.

Precinct level analysis

The following qualitative analysis was undertaken to inform the precinct profiles and recommendations:

- Planning policy and strategic document review.
- Stakeholder consultation with Council's economic development team and local real estate agents.

This research was triaged to develop the precinct recommendations regarding potential for conversion to alternative land uses and redevelopment.

1.6 Contents

Chapter 2 provides the strategic planning context and the key economic trends to support future planning for industrial land in Ballarat. A more detailed summary of the planning policy is included in **Appendix A**. **Chapter 3** comprises a precinct-by-precinct analysis, including the current planning status, current challenges for industrial land use, and potential future growth directions. **Chapter 4** assesses the supply and future need for 'regionally significant' and 'locally significant' industrial land. **Chapter 5** brings together the analysis in the preceding chapters to make recommendations for the future planning of each study precinct.

2. Strategic and economic context

This chapter provides an overview of strategic documents relevant to the future of industrial land in Ballarat. It also provides an overview of key economic trends and prospects in Ballarat, including industry sectors contributing to Ballarat's growth. A summary of the implications links this policy context analysis back to the industrial precincts that are the focus of this study.

2.1 Strategic planning context

The below table summarises the relevance of key planning policies and strategic planning documents to the study area and purpose of this study.

The Background ELR is of particular relevance and further details on this study is included below.

The Ballarat Planning Scheme guides the strategy for industrial development through the local policy and incorporates land use and development requirements for individual properties through the zones and overlays. An overview of this policy is included in **Appendix A**. The precinct profiles in **Chapter 3** includes the current planning status of each precinct.

TABLE 2: SUMMARY OF STRATEGIES – INDUSTRIAL LAND SUPPLY IMPLICATIONS

Strategy	Implications for industrial land supply
Central Highlands Regional Economic Development Strategy (REDS) (Department of Jobs, Precinct and Regions, 2022)	The REDS emphasizes the innovation economy, as well as a transition to renewable energy, both of which rely upon a sufficient supply of appropriate industrial land. An innovation economy focuses on advanced manufacturing, research, and entrepreneurship.
Ballarat Economic Development Plan (BEDP) 2021-25	The BEDP highlights a focus on advanced manufacturing, which could drive the need for industrial land. Additionally, urban renewal efforts within this plan might repurpose some existing industrial land for other uses.
Ballarat West Employment Zone (BWEZ) Master Plan 2012	The industrial land available in the BWEZ has been in high demand since it was released to market. This land supply is well connected to industrial utilities, such as freight and waste disposal.
Ballarat Activity Centres Strategy (BACS) (HillPD 2012)	BACS promotes clustering knowledge-based businesses in activity centres, which could lead to the consolidation of industrial land in these areas plus more mixed use development. It discourages small industrial sites surrounded by residential land.

Ballarat Regional Council Budget 2022-23	The budget highlights the need for responsible industrial land use practices, encouraging eco-friendly and efficient land use. This underscores a balance between economic development and environmental sustainability, by grouping similar land uses to enhance the efficiency of transport, waste disposal, and other investments.
Proposed Ballarat Housing Strategy (BHS)	The BHS will consider rezoning and converting select industrial areas for residential use to address housing needs.
Proposed Western and North Western Growth Areas Framework Plan 2022	Will emphasise rezoning and urban renewal to accommodate growth, highlighting the importance of efficient use of existing sites.
Proposed Ballarat North Precinct Structure Plan (NPSP) 2023	Aims for residential development with green spaces and sustainable practices, linked to improved transport infrastructure.
Victoria's Commercial Land Use Zoning – Productivity Reform Case Study, Canberra 2020	Highlights the importance of zoning to maintain liveability by minimizing the negative impacts of incompatible land uses.

City of Ballarat's Employment Land Review – Background Report (Background ELR) (HillPDA, 2021)

The Background ELR was prepared by HillPDA in 2021. It provides broad recommendations for decision making on the future of industrial employment land in Ballarat to a nominal 2050 horizon. The report quantifies demand and supply futures, and classifies precincts by role and strategic importance to the Ballarat economy. The report also identifies land parcels that are not strategic in their current form and could be considered for alternative uses.

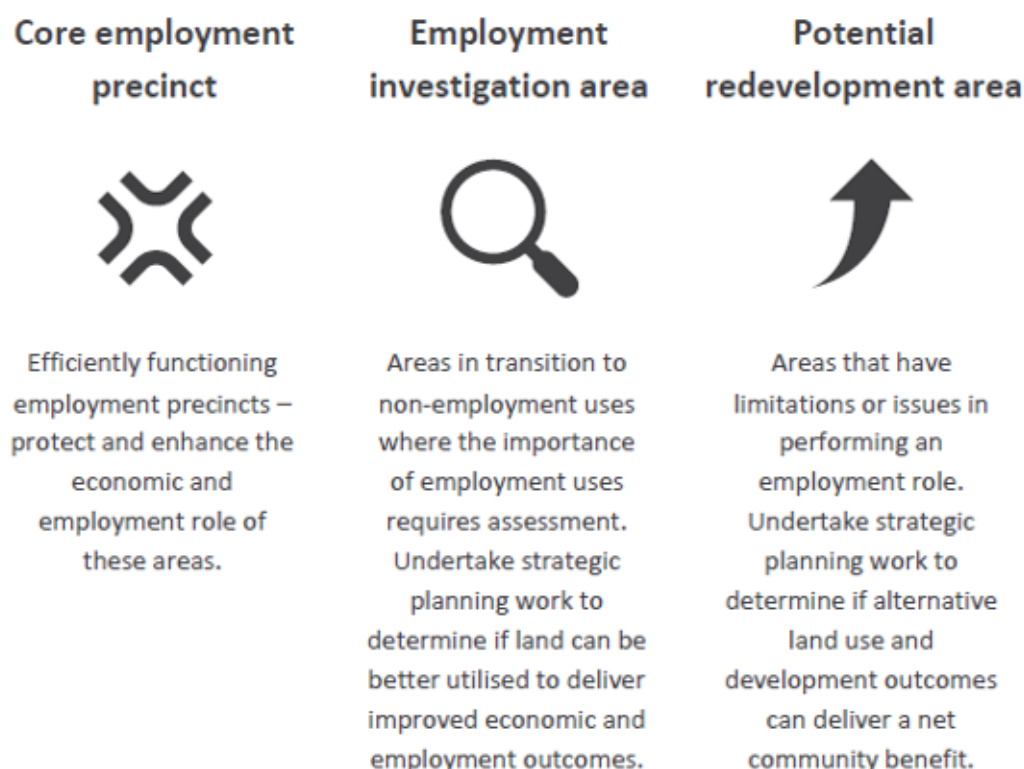
In the Background ELR, employment lands are classified based on their function, performance against the planning provisions, economic and employment indicators, and relationship to surrounding residential areas.

Of the 83 industrial precincts in Ballarat, 70 are identified as 'core employment areas', 6 are 'employment investigation areas' in need of further analysis, and 7 are 'potential redevelopment areas', meaning they are considered suitable for redevelopment or rezoning.

The relevant classifications of the industrial precincts that form part of the study area are outlined in Table 3.

These classifications are defined in the Background ELR, as shown in Figure 2.

FIGURE 2: BACKGROUND ELR PRECINCT CLASSIFICATION DEFINITIONS



Source: Employment Lands Review: Background Report, HillPDA Consulting 2021

TABLE 3: BACKGROUND ELR PRECINCT CLASSIFICATIONS

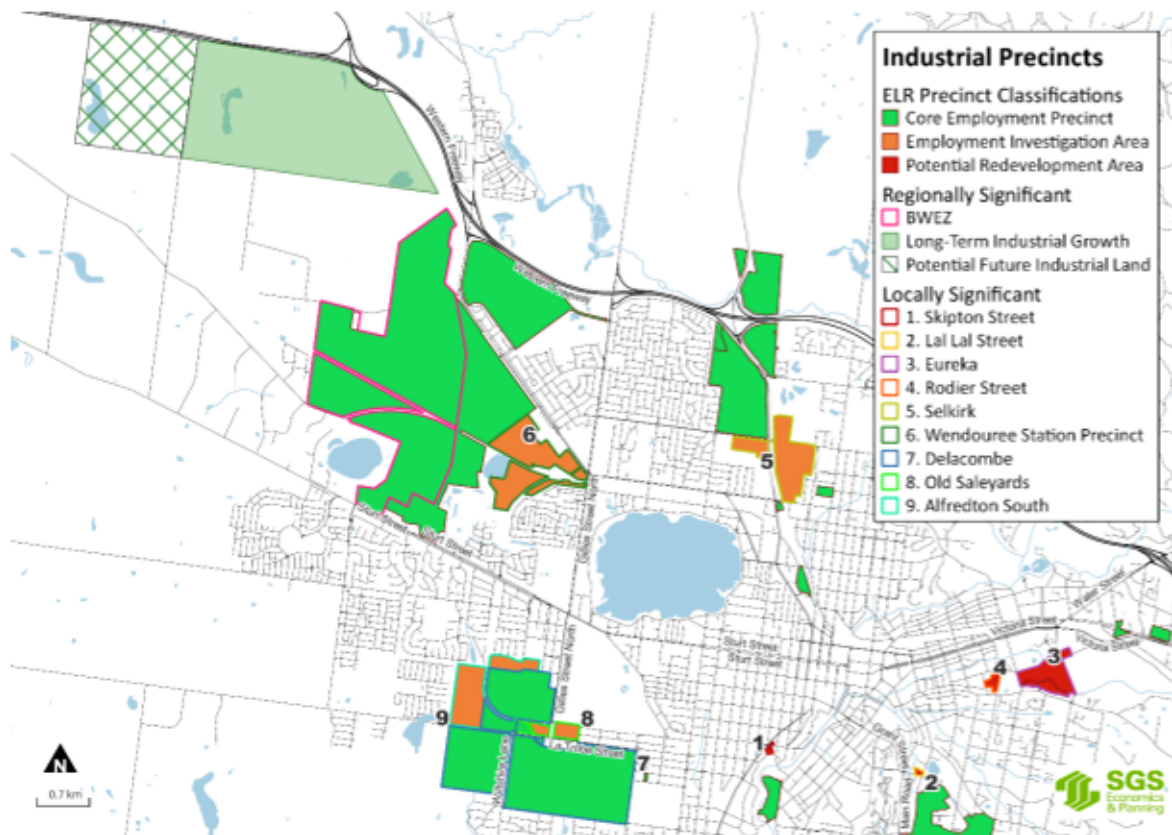
Precinct	Classification	Recommendations/discussion
BWEZ	Core employment precinct	Protect and enhance to meet objectives of existing planning controls (page 98). 2014-2030 development horizon, focusing on industrial, wholesale, logistics, construction. Competitive advantage: cheapest and most well serviced industrial zoned land in Ballarat and wider region. (page 108)
Possible greenfield industrial land	N/A	Land identified as greenfield industrial land supply to 2050 (Urban Development Program 2009) – 427ha. (page 80) For employment land in Ballarat, the majority of the new floorspace is likely to be developed on vacant greenfield land. As such, infill development on occupied land is likely to represent only a minor portion of land supply in the future to augment greenfield land supply. (page 78)

		Rezoning of greenfield land to increase the supply of small and medium sized lots to complement development in BWEZ may be needed within approximately five years on the basis of a high growth scenario shown in this report. The land need is likely to be based on small and medium sized businesses in order to offer a point of difference to existing land supply at BWEZ, potentially similar to the typologies present in the Alfredton and Saleyards Delacombe precincts. (page 96)
Skipton Street at Hill Street	Potential redevelopment area	Consider/investigate rezoning (page 99). Adjacent to general residential area which limits further industrial uses (page 122).
Lal Lal Street	Potential redevelopment area	Consider/investigate rezoning (page 99). Buffer requirements limit the range of permissible industrial uses, adjacent to residential land (page 114).
Eureka	Potential redevelopment area	Consider/investigate rezoning and incorporating Development Plan Overlay. Identify in policy as strategic site (page 99). Underutilised, constrained by adjacent residential and community uses (page 110).
Rodier Street	Potential redevelopment area	Consider/investigate rezoning (page 99). Underutilised, constrained by adjacent residential and community uses (page 119).
Wendouree East - Selkirk Site	Employment investigation area	Consider/investigate rezoning and incorporating Development Plan Overlay, Development Contributions Plan. Identify in policy as strategic site. Revise Clause 21.07 Economic Development (page 98). Identified as potential for significant urban renewal opportunity (page 125).
Wendouree West – Station Precinct	Employment investigation area	Consider/investigate rezoning and incorporating Development Plan Overlay, Development Contributions Plan. Identify in policy as strategic site. Revise Clause 21.07 Economic Development (page 98). Businesses build on a small portion of the site and leave room for potential expansion. Significant amount of vacant englobo land and capacity for expansion of existing properties. This precinct is competing with BWEZ which has cheaper land; this could slow down the take up rate for larger development types.

		(page 127)
Saleyards Delacombe	Core employment precinct	Protect and enhance to meet objectives of existing planning controls (page 98). Hosts a wide range of industrial uses. Significant amount of englob industrial land. Interfaces with residential land. significant opportunity for new, well serviced land in DPO4 area in the centre of Delacombe (page 120). Largely under Development Plan Overlay 4 (Undeveloped Industrial Land), offers opportunities for well-serviced land.
Saleyards Delacombe - Old Saleyards	Employment investigation area	Consider/investigate rezoning and incorporating Development Plan Overlay (revise DPO4) (page 98). Vacant crown land. Given its interface with Victoria Park, and significant undeveloped land, it has potential for renewal towards new commercial, light industrial or other uses (page 25).
Saleyards Delacombe - Alfredton South	Employment investigation area	Consider/investigate rezoning. Identify in policy as strategic site (revise Clause 21.07 Economic Development) (page 98).

Source: Employment Lands Review: Background Report, HillPDA Consulting 2021

FIGURE 3: BACKGROUND ELR RECOMMENDATIONS FOR STUDY PRECINCTS



Source: SGS Economics and Planning, 2023

The Background ELR investigates the overall supply and demand for employment land using three methods, as shown below. A comparative review of the supply-demand method used is included in Appendix B.

TABLE 4: BACKGROUND ELR SUPPLY AND DEMAND ANALYSIS

Method	Years of Supply	2021 – 2051 Demand (ha)
Method 1: Land Take Up	41	270.3
Method 2: Population Growth	21	529.8
Method 3: Floorspace Growth	32	347.4

These methods are used to forecast how long the current supply of employment land will last given alternative demand scenarios as follows:

1. **Land Take Up Method:** Uses the average land take-up rate across all precincts from 2012-2021.
2. **Population Growth Method:** Assumes that the total employment land supply will grow proportionate to population growth (at 86sqm per person).

3. **Floorspace Growth Method:** Similar to Method 1 but based on the past rate of the growth of the floorspace of buildings, not the rate of land used or absorbed.

The report concludes that even in the most land intensive scenario, Ballarat has 21 years of land supply, indicating a degree of flexibility for Ballarat in managing the stock and how it uses the industrial precincts, while considering and acting upon the four main objectives of the report:

- *Ensuring Ballarat maintains an appropriate supply of employment land to meet a range of business needs and property market segments for at least 15 years on an ongoing basis.*
- *Protecting and enhancing core employment precincts.*
- *Where possible, making better use of employment land that has spatial capacity for more investment.*
- *Where possible, facilitating alternative land use and development outcomes where land is deemed to be non-strategic in its current employment land zone.*

2.2 Key economic trends and prospects in Ballarat

Demand for industrial land

Council has indicated increasing demand for industrial land. Industrial land of a range of lot sizes has been selling strongly in the last 2-3 years. A total of 26 planning and building applications for warehouses (generally between 25sqm to 100sqm) were made by 17 unique developers between July 2021 to April 2023, demonstrating a lively industrial land market.

Ballarat is in a prime position, with direct access to the Intermodal Freight Hub at the Ballarat West Employment Zone (BWEZ) and good road access to Melbourne Airport and Avalon Airport via the Western Freeway and Midland Highway. Ballarat has excellent access to a growing labour market, in the expanding residential areas in Ballarat and Western Melbourne.

Outside Ballarat in the western context of the Greater Melbourne area, appropriate sites for industrial land use (especially larger sites) are becoming scarcer, they are competing with residential land, and land is becoming more expensive. Ballarat is becoming a more desirable option for industrial land users, who might otherwise have considered a Western Melbourne location.

A key priority for the City of Ballarat is to facilitate investment in jobs that generate high levels of employment, which includes the skilled workforce and the advanced manufacturing and innovation sector. These land uses require lot sizes starting at 3-4ha. There is a need to accommodate larger industrial lot users, as shown in the enquiries received by the City of Ballarat over the last 2-3 years, seeking 5-20ha and 40-50ha lots. Such property enquiries have come from Melbourne businesses that have outgrown their current facilities with no room to expand and/or are being pushed away due to land cost. Interstate businesses are also looking to relocate to Ballarat for reasons such as supply chain, logistics and existing complementary industry. International businesses are considering Ballarat as a base to service Australia and South East Asia.

Employment trends

The broad economic trends of Ballarat are distinct from the rest of Victoria. Through the COVID-19 pandemic, Ballarat's population continued to grow, along with other regional centres, while the overall population in Victoria shrunk. Some of the key trends seen across Ballarat were:

- Rapidly increasing population relative to Melbourne (2.8% p.a.)
- Rapidly growing business sector
- Increasing council investment in local infrastructure and businesses (19.5% in 2021/22)
- More renewable and clean projects, building towards a circular economy
- Shrinking unemployment (6% in 2016, 4% in 2022)
- An increasingly educated population (from 2016 to 2021, the proportion of Ballarat's population with a diploma or above increased by 4 per cent)

Consultation interviews were held with key planning authorities in the region, including Ballarat City Council and Regional Development Victoria. The key planning directions identified for Ballarat are to:

- Attract higher value investment / jobs such as advanced manufacturing.
- Address the projected undersupply of industrial land at the LGA level.
- Provide more residential development opportunities closer to Ballarat CBD through the renewal of existing underutilised industrial sites.

Ballarat Council is seeking 10-years supply of zoned, developable and readily serviced industrial land to meet future demand, as outlined in Clause 22.01 (Municipal Overview) of the Ballarat Planning Scheme. However, a nominal target of 15 years supply has been set in the Background ELR.

Economic profile of Ballarat

Location quotient (LQ) analysis is a statistical method used to identify the concentration of a particular industry or occupation in a specific geographic area, in relation to its concentration in a larger area (in this case regional Victoria). LQ analysis is particularly useful to identify the sector competitive advantages a region has (see Figure 4).

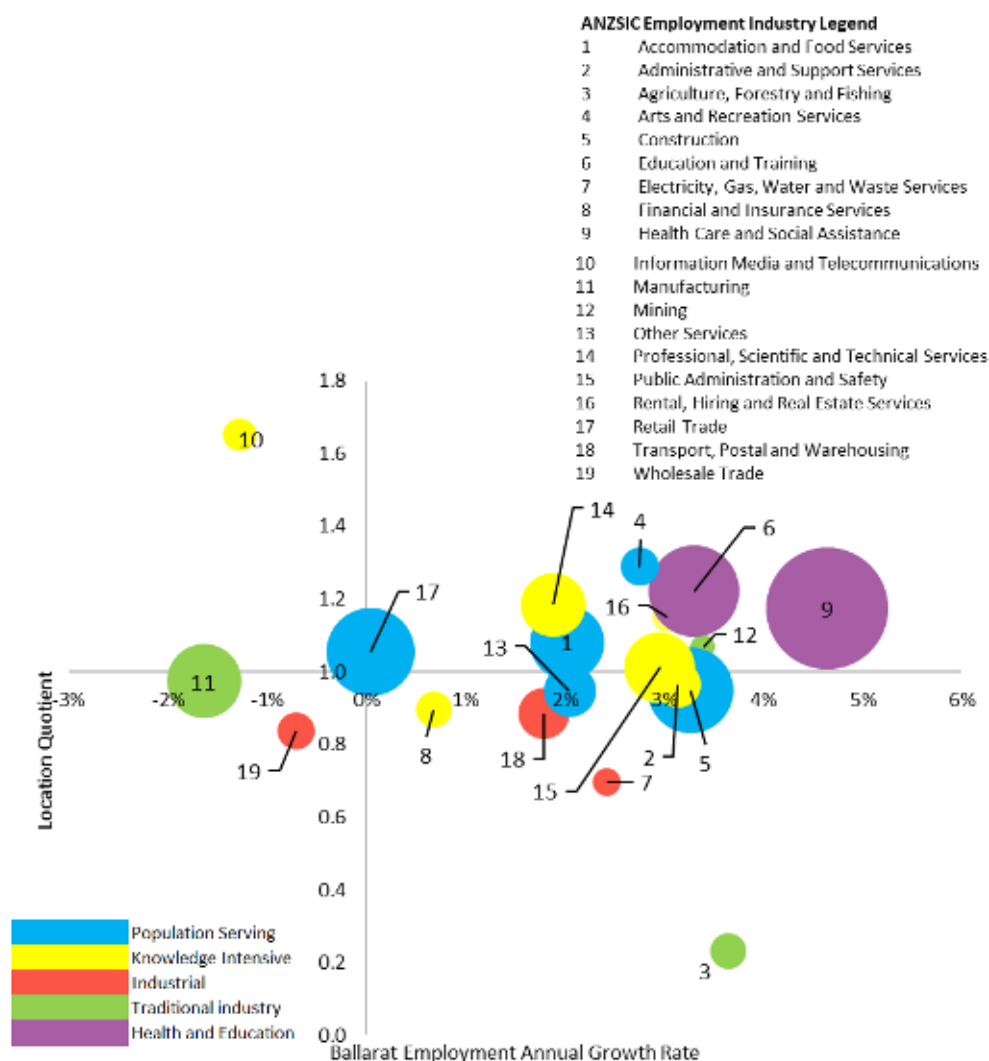
The key findings in the analysis include:

- Overall, Ballarat's **industry sectors are growing**, with emerging strengths relative to regional Victoria as a whole, highlighting its increasing diversity and focus for the wider western Victorian region.
- **Expanding sectors with a traditional strength:** Health Care and Social Assistance; Education and Training; Arts and Recreation; Professional, Scientific and Technical Services; Accommodation and Food Services; Rental, Hiring and Real Estate Services – **reflecting both a regional population serving role, particularly the major health and education functions, as well as strengths in the visitor economy.**
- **Emerging sectors:** Administrative and Support Services; Transport, Postal and Warehousing; Financial and Insurance Services; Electricity, Gas, Water and Waste Services; Transport, Postal and Warehousing; Agriculture, Forestry and Fishing – **reflecting a diversity of strengthening activity.**

- **Industries with a traditional strength but no growth:** Information Media and Telecommunication; Retail Trade; Manufacturing – **with retail and manufacturing still significant employers.**
- **Industries without comparative advantage and stable and declining:** Wholesale Trade.

Perhaps the key implication from this analysis for industrial lands is the performance of manufacturing. While employment in the sector has declined somewhat, in keeping with other regions, it remains a relative strength or at least at parity when compared to regional Victoria, with an LQ of about 1.

FIGURE 4: LQ ANALYSIS



Summary

- There is strong evidence of increasing demand for industrial land in Ballarat, including from investors and users who might otherwise have chosen a Melbourne location. Ballarat's strategic industrial land with large lot sizes and excellent highway access to freight and distribution hubs (e.g. Melbourne airport and port) and other Melbourne and interstate businesses, appears to be increasingly part of a broader western Melbourne region market. With prudent planning the City of Ballarat can accommodate this growth and attract additional investment and economic activity.
- Ballarat's economy is diversifying. Service and 'knowledge sectors' are growing and the city is consolidating its pre-eminent role in western Victoria with strong health and education sector growth and an increased share of employment in these areas.
- Traditional 'industrial' sectors remain important, and manufacturing in particular is stable and remains a key driver of the local economy.
- Advanced manufacturing is a key aim of local economic policy. This is expected to lead to 'cleaner' and more intense use of industrial land. Opportunities to consolidate and repurpose unsuitable industrial land precincts should be considered, as additional longer term supply needs to be available to replace converted precincts. A grouping of similar facilities together in well designed precincts would be beneficial for local stakeholders to achieve their targets and goals, such as the 'cleaner waste management' direction set in the REDS.

3. Precinct profiles

This chapter profiles each precinct that are the focus of this study. Precincts are split between regionally and locally significant industrial land. For each precinct, the aim is to identify current land uses, current planning status, current constraints for use of the land for industrial activities, and the precinct's future potential if an alternative land use was sought. The future potential land uses fall into broad categories of residential, mixed-use community and retail uses, and could contribute to residential infill aims. A lot size assessment is included for each precinct, to help identify the appropriateness of potential alternative land uses.

3.1 Regionally significant industrial precincts

Ballarat West Employment Zone | 237 Ring Rd, Mitchell Park

BWEZ currently represents the only 'regionally significant' type of industrial land in Ballarat LGA, based on the definition provided in Chapter 1.3 'Categorisation of industrial precincts'.

BWEZ is 'surplus' Crown land owned by the State Government. While the BWEZ is outside the area of MICLUP (i.e. outside the Greater Melbourne area which MICLUP focuses on), it is roughly equivalent to a 'regionally significant industrial precinct', in terms of both size and scope. Strategically, it is identified by Council as a 'Regional Industrial Precinct' in the Ballarat Planning Scheme.

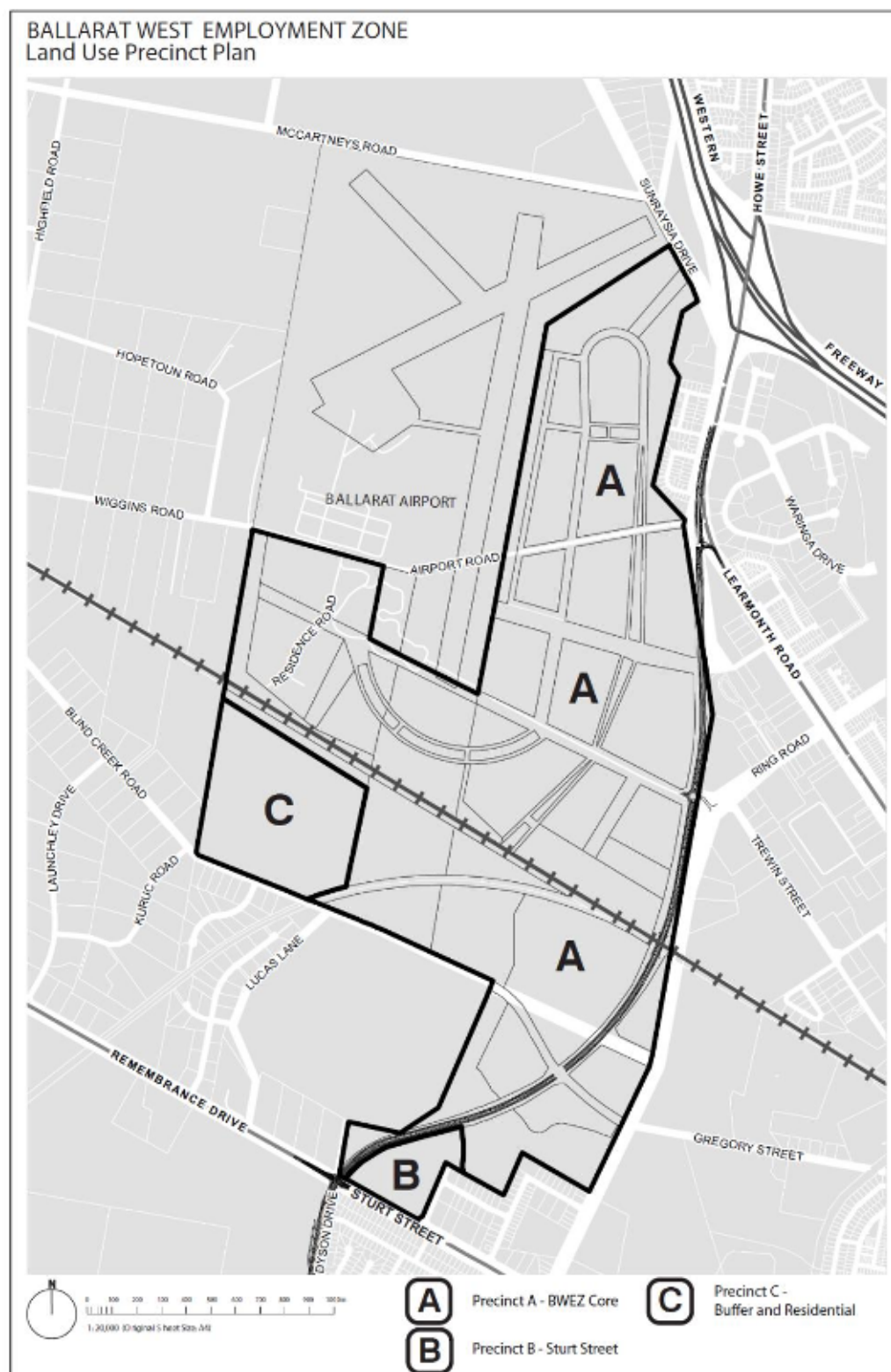
The broad land use plan is shown in Figure 5 and staging areas illustrated in Figure 6. Figure 7 and Table 5 provide data on current lot sizes.

Of the roughly 430 hectares of total land in the BWEZ, 186 hectares has been made available for industrial land uses. The discrepancy between total land area and available industrial land area is likely higher in BWEZ than would be in other similar precincts, because of the presence of new residential communities and the train line/freight hub.

Planning status	Current use & Future potential
Special Use Zone 14 - Facilitates the development of the BWEZ. - To provide for industry, research and development, freight hub and related transport activities, aviation-related uses, and support services in accordance with the Ballarat West Employment Zone Master Plan Document 2012. - Land uses encouraged: manufacturing, construction, transport and logistics, wholesale trade and enabling industries sectors (Precinct A – BWEZ Core Precinct). - Land uses to be limited: retailing, offices and warehouses.	<i>Current use:</i> A range of industrial, wholesale, logistics, construction, commercial and residential uses, including an Intermodal Freight Hub and aviation related businesses. Large land holdings on the Western Highway corridor. <i>Future potential:</i>

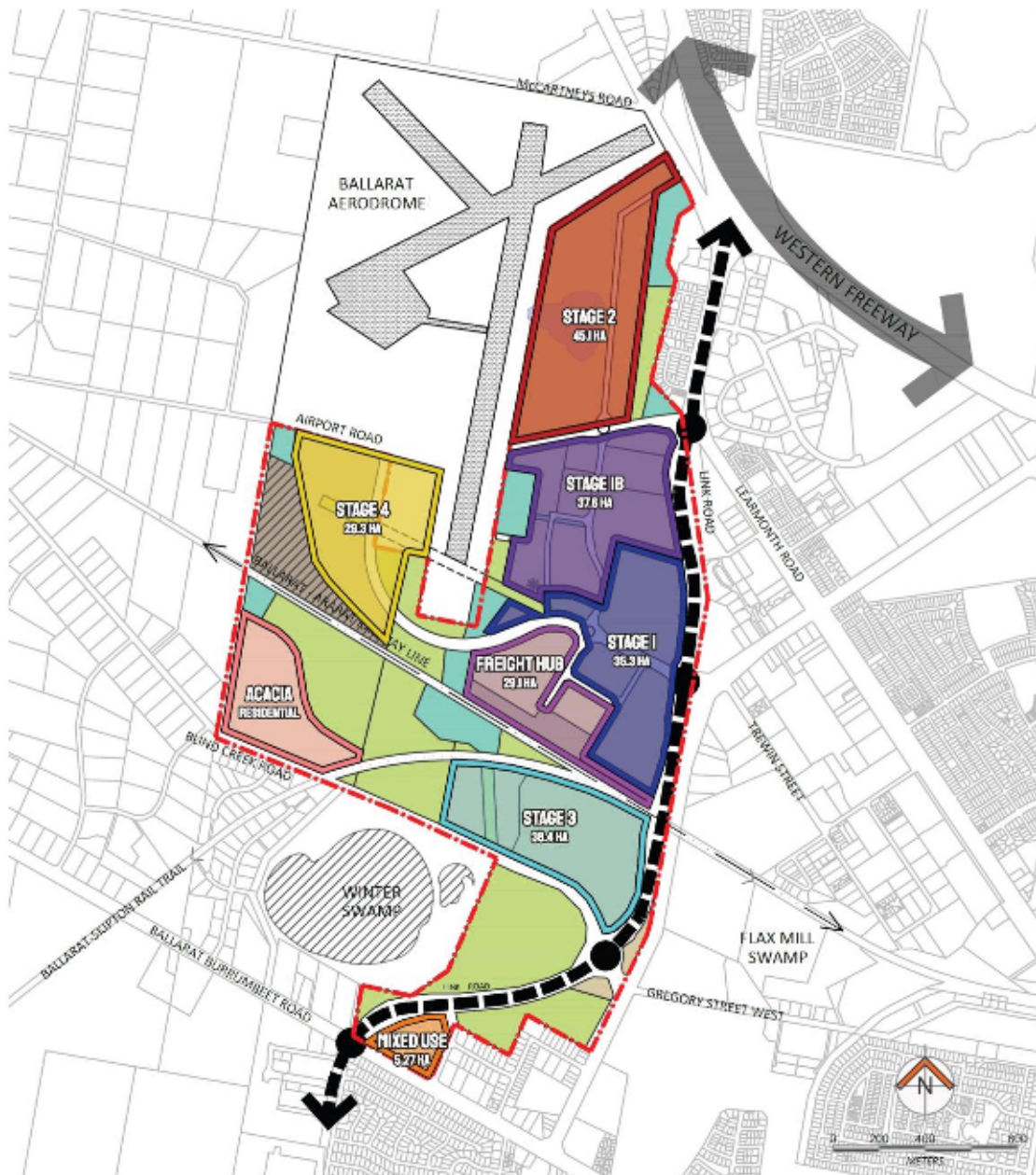
▪ Complementary land uses with minimal impacts on residential development (Precinct B – Sturt Street Precinct). ▪ Non industrial uses: provide for low-density residential development on lots which, in the absence of reticulated sewerage, can treat and retain all wastewater (Precinct C – Buffer and Residential Precinct). Overlays ▪ Airport Environs Overlay (AEO1 & AEO2) (partially affects the site). ▪ Design and Development Plan Overlay (DDO17 and DDO18) (partially affects the site). ▪ Development Plan Overlay (DPO10) – applies to the BWEZ, ensures development is consistent with the Ballarat West Employment Zone Master Plan Document 2012. Designated bushfire prone area (partially affects the site). Areas of Aboriginal Cultural Heritage sensitivity - Cultural Heritage Management Plan required. Clause 21.07-4 (Industry) of the Ballarat Planning Scheme ▪ <i>“Objective 7: To support the development of the Ballarat West Employment Zone as the primary industrial area and the preferred location for clean, advanced manufacturing, research and development, and ancillary services”</i> Clause 21.07-2 (Regionally significant precincts) of the Ballarat Planning Scheme: ▪ Identified as a ‘Regional Industrial Precinct’ in the regionally Significant Precincts Plan. In these precincts, the strategic direction is to <i>“Ensure industrial land is serviced, accessible and protected from encroachment so it can continue to support high-employing industrial businesses, which are critical to jobs in the Ballarat.”</i>	Industrial and economic development activities are focused on the BWEZ which has capacity for 9,000 jobs over the next 20 years. The precinct has airport, rail and freeway access. Land uses will include industrial activities, a freight hub, business support precinct, research and development centre. As ‘superlots’ are sold they will be further subdivided as developed (which will reduce the median lot size identified in the table below).
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FIGURE 5: BWEZ LAND USE PRECINCT PLAN



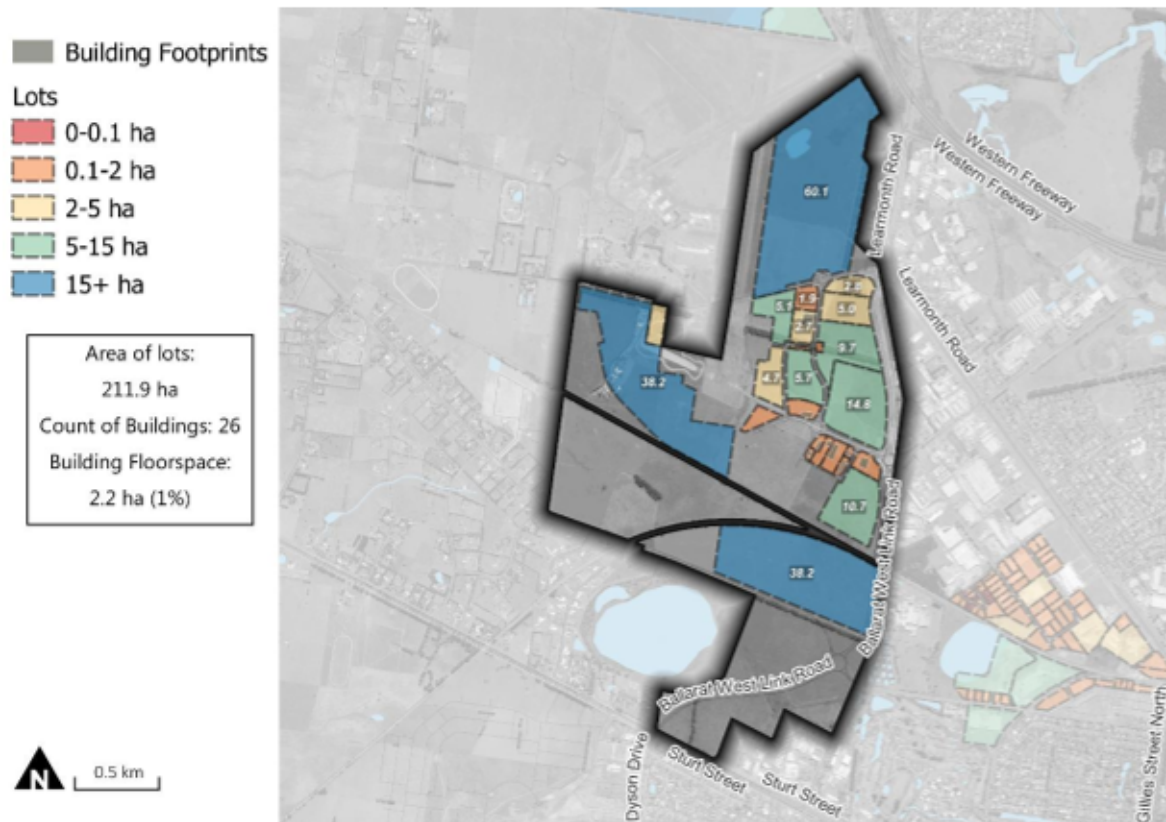
Source: Special Use Zone, Schedule 14 – Ballarat Planning Scheme. Included in the Ballarat West Employment Zone Master Plan Document (AECOM 2012).

FIGURE 6: BWEZ STAGING PLAN, 2022



Source: Ballarat West Employment Zone Resources, Development Victoria

FIGURE 7: BWEZ LOT SIZE ASSESSMENT



Source: SGS Economics and Planning 2023

TABLE 5: BWEZ – STATUS OF EXISTING LOTS AND AREA, 2023

	Number of lots	Median lot size (sqm)	Total GFA (sqm)	Land area (sqm)	Median developed lot FSR
BWEZ	26	18,600	22,000	1,860,000	13%

Development of the precinct began in 2014 and there have been progressive and strong land sales since. Advice from Council and Invest Victoria in 2023 has indicated the following:

- the first 70ha took approximately 5-6 years to sell,
- there are currently lots in Stage 2 and 3 and the Gateway Precinct which should have contracts executed in the short term, approximately 6-12 months.
- another 90ha will be sold in about 3 years
- the remaining 20ha (aviation land) is expected to be sold in the next 12 months.

This data on the size and sales status of land in the different parts of BWEZ, provided by Council in June 2023, is shown in the first four columns of Table 6. The fifth column is an extrapolation to establish the amount of land sold by relevant year.

TABLE 6: BWEZ – SALES STATUS (JUNE 2023)

Stage	EOI released	Hectares	Status	Sold (Ha) - SGS extrapolation
Stage 1	2014	35	All sold, one lot of 14Ha 'returned' to DV, being prepared to go back on market.	21
Stage 1B	2017?	37	All sold	37
Stage 2	Sept 2020	50	Approx 20Ha retained for potential aviation businesses. Only 2 small lots of remaining land are not currently settled or under negotiation	25
Stage 3A	Oct 2022	20	2 x 10Ha lots close to finalising contracts	20
Stage 3B	March 2023	10	Circular Precinct – applications being assessed by DV	Pending
Stage 4	Oct 2022	30	Applications being assessed by DV	Pending

Source: Ballarat Council and Invest Victoria

Future industrial land | Bound by Western Hwy, McCartneys Rd, Draffins Rd

A potential new industrial area has been identified to the north-west of Ballarat. This greenfield site, if required for industrial uses, could be planned, rezoned, serviced and released ready for development in the medium to long term. This area would be suited for development as a regionally significant industrial precinct.

The greenfield site is identified in the Ballarat Planning Scheme for 'long term industrial growth', however the section bound by Dowling Road and Draffins Road is not included in the policy – this extended area has been added to this study for further investigation.

Approximately **400 hectares** of the total site area of 679 hectares would be appropriate for industrial development. This is due to site constraints such as the presence of water courses. The share of the site 'utilised' for industrial would likely be higher than that of the BWEZ, as in comparison, there is no freight hub or residential land proposed to be accommodated (at this stage).

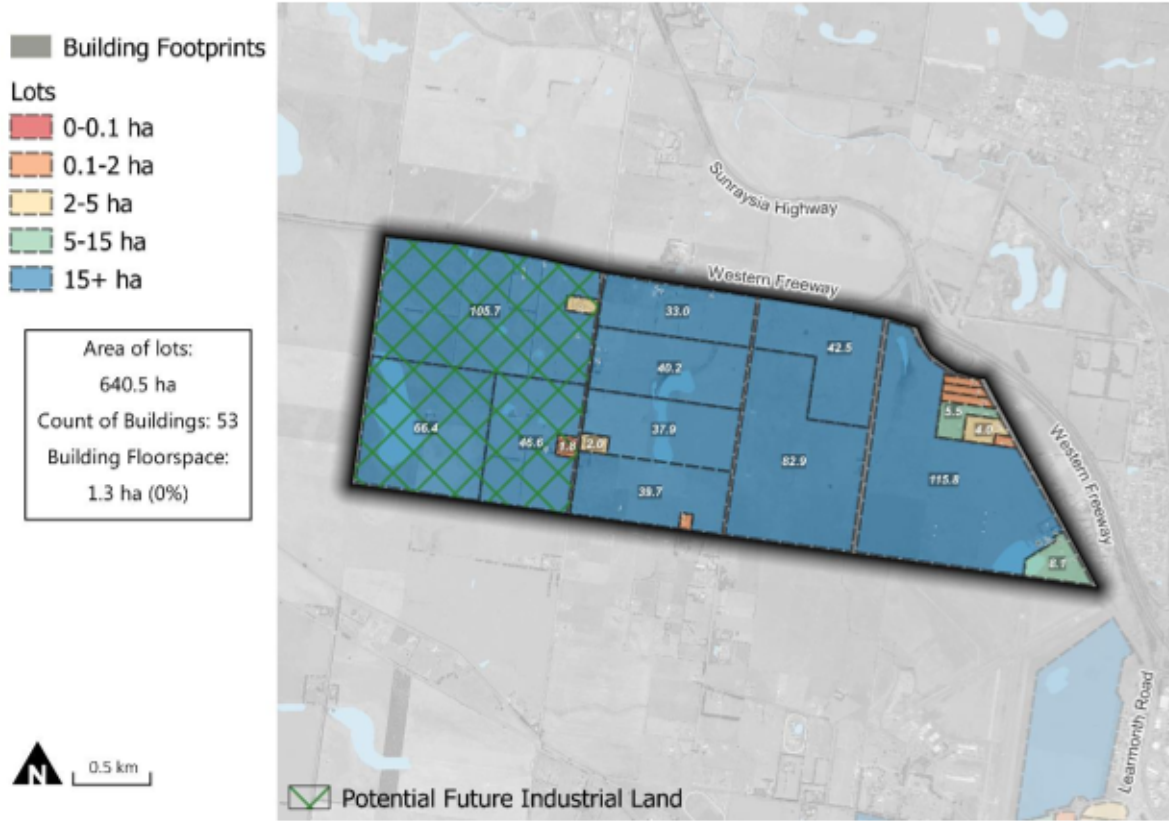
Planning status	Current use & Future potential
Farming Zone Airport Environs Overlay (AEO1 & AEO2) (affects southeastern corner of the site) Design and Development Plan Overlay (DDO17 and DDO18) (affects southeastern corner of the site) Floodway Overlay (affects the water courses running through the site) Designated bushfire prone area Clause 21.07-4 (Industry) of the Ballarat Planning Scheme Identified for 'long term industrial growth' (up to Dowling Road). No strategy/policy for section bound by Dowling Road and Draffins Road.	<i>Current use:</i> Largely vacant, some rural residential properties along the main roads. Potential future industrial precinct, to meet future demand for industrial land. Planning for infrastructure and staged development / master planning will be required to support future rezoning. The site is appropriate for industrial land use due to: - Overlays cause minimal encumberments for future development. - Generous buffer distances from sensitive land uses. - Access to arterial roads and rail network. - Potential for larger lots.

TABLE 7: FUTURE INDUSTRIAL LAND – STATUS OF EXISTING LOTS AND AREA, 2023

	Number of lots	Median lot size (sqm)	Total GFA (sqm)	Land area (sqm)	Median developed lot FSR
Future Industrial Land Supply	21	81,000	13,000	6,405,000	2%

Source: SGS Economics and Planning 2023

FIGURE 8: FUTURE INDUSTRIAL LAND SUPPLY – LOT SIZE ASSESSMENT



Source: SGS Economics and Planning 2023

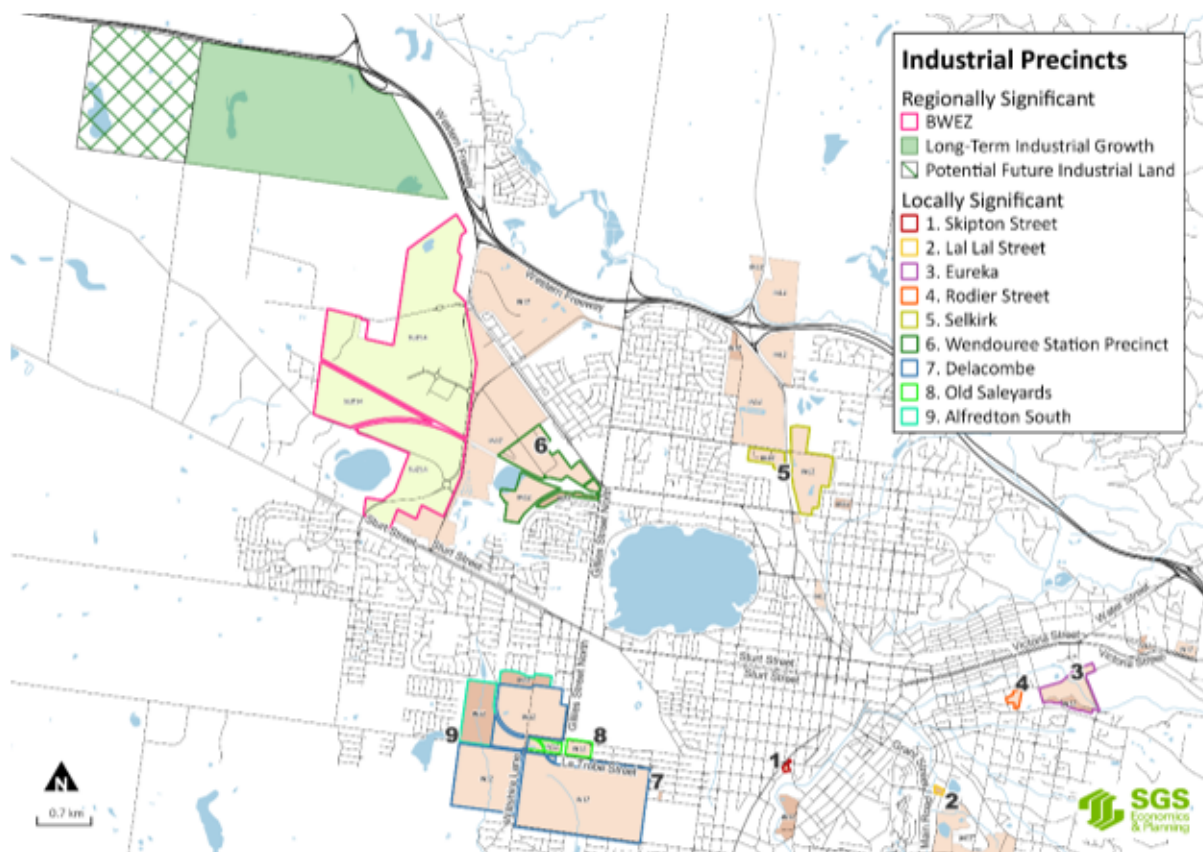
3.2 Locally significant precincts

Selected study precincts were identified in the Background ELR for investigation, potentially for conversion to alternative uses or adaptation in the short to medium term.

Precinct profiles for the following 'locally significant' precincts are included on the following pages. These profiles focus on the current challenges of continuing to use the industrial zoned land for industrial purposes, and the potential for future conversion to alternative land uses.

1. Skipton Street
2. Lal Lal Street
3. Ballarat East
4. Rodier Street
5. Selkirk
6. Wendouree Station Precinct
7. Delacombe (split into three sub precincts)
8. Old Saleyards
9. Alfredton South

FIGURE: 9 STUDY AREA



Source: SGS Economics and Planning, 2023

Planning status	Challenges for current use	Future potential
313 Skipton St (to the northeast): - Industrial 1 Zone - Heritage Overlay (HO168 – South Ballarat Heritage Precinct) 317 Skipton St (to the south): - Industrial 3 Zone - Areas of Aboriginal Cultural Heritage sensitivity (partially affects the site)	<i>Current use:</i> Automotive repairs, sheet metal manufacturing. Small lot sizes that are underutilised. Two separate landowners. Local traffic conditions. Surrounded by low density residential development (General Residential Zone). Limited allowance for buffer distances to surrounding sensitive land uses.	Alternative land uses that are compatible with the surrounding residential context. Well positioned for higher density residential and/or commercial development. Located close to Ballarat CBD. Good connectivity to Midland Hwy.

TABLE 8: SKIPTON ST – STATUS OF EXISTING LOTS AND AREA, 2023

	Number of lots	Median lot size (sqm)	Total GFA (sqm)	Land area (sqm)	Median developed lot FSR
Skipton Street	2	2,000	3,000	4,000	76%

TABLE 9: SKIPTON ST LOT SIZE ASSESSMENT



Source: SGS Economics and Planning, 2023

Planning status	Challenges for current use	Future potential
Industrial 3 Zone Heritage Overlay (HO172 – Creeks and River Channels Heritage Precinct)	<i>Current use:</i> Vacant. Previously used as an industrial scale bakery. Small lot size. Local traffic conditions. Surrounded by low density residential development (General Residential Zone). Limited allowance for buffer distances to surrounding sensitive land uses. Underutilised site.	Alternative land uses that are compatible with the surrounding residential context. Good access to amenity and services.

TABLE 10: LAL LAL ST – STATUS OF EXISTING LOTS AND AREA, 2023

	Number of lots	Median lot size (sqm)	Total GFA (sqm)	Land area (sqm)	Median developed lot FSR
Lal Lal Street	1	7,800	4,500	7,800	57%

TABLE 11: LAL LAL ST LOT SIZE ASSESSMENT



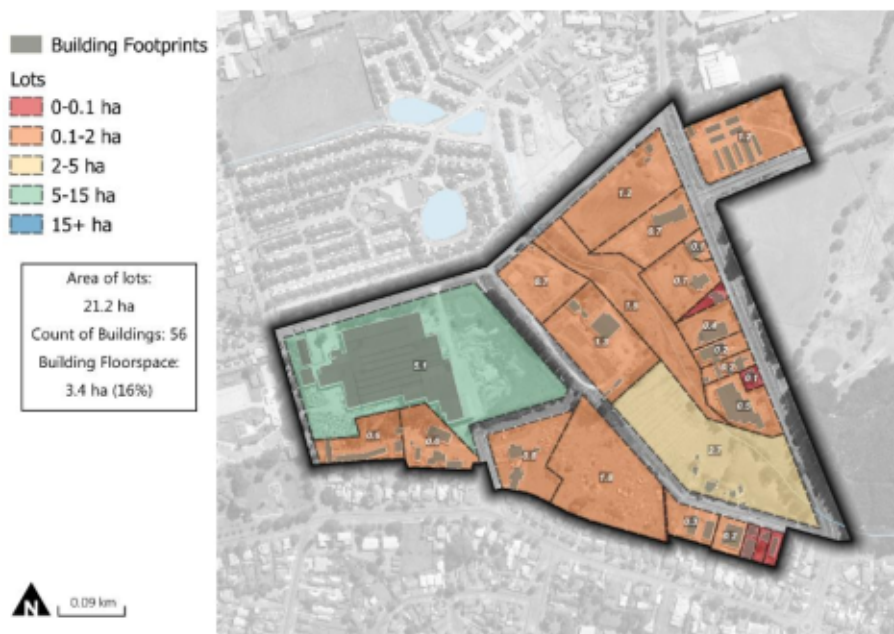
Source: SGS Economics and Planning, 2023

Planning status	Challenges for current use	Future potential
Industrial 1 Zone Industrial 3 Zone Bushfire Management Overlay (affects southeastern portion) Areas of Aboriginal Cultural Heritage sensitivity (partially affects the site) Designated bushfire prone areas	<i>Current use:</i> Multiple lots with different uses – - Low intensity industrial - general purpose warehouse, manufacturing. - Some detached dwellings. Small lot sizes that are underutilised. Separate landowners. Local traffic conditions. Surrounded by low density residential development (General Residential Zone) and public uses – swimming pool, golf course (Special Use Zone). Limited allowance for buffer distances to surrounding sensitive land uses.	Alternative land uses that are compatible with the surrounding residential context. Good access to amenity and services.

TABLE 12: BALLARAT EAST – STATUS OF EXISTING LOTS AND AREA, 2023

	Number of lots	Median lot size (sqm)	Total GFA (sqm)	Land area (sqm)	Median developed lot FSR
Ballarat East	31	5,500	34,000	212,000	21%

FIGURE 10: BALLARAT EAST LOT SIZE ASSESSMENT



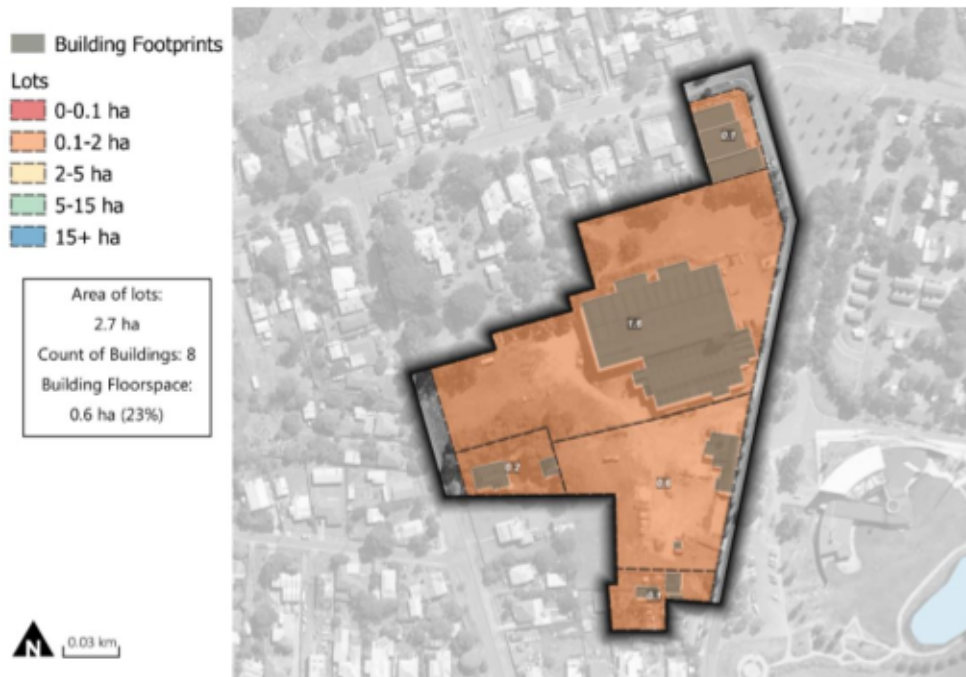
Source: SGS Economics and Planning, 2023

Planning status	Challenges for current use	Future potential
Industrial 1 Zone Heritage Overlay (HO179 – Eureka Street Heritage Precinct)	<i>Current use:</i> A total of 5 lots, comprising a rendering plant, factory, dwelling. Declining operations. Medium/small lot sizes. Separate landowners. Local traffic conditions. Surrounded by low density residential development (General Residential Zone) and public uses – swimming pool (Special Use Zone). Limited allowance for buffer distances to surrounding sensitive land uses. Underutilised sites.	Alternative land uses that are compatible with the surrounding residential context. Good access to amenity and services.

TABLE 13: BALLARAT EAST – STATUS OF EXISTING LOTS AND AREA, 2023

	Number of lots	Median lot size (sqm)	Total GFA (sqm)	Land area (sqm)	Median developed lot FSR
Rodier Street	5	5,500	6,000	33,000	25%

FIGURE 11: RODIER ST LOT SIZE ASSESSMENT



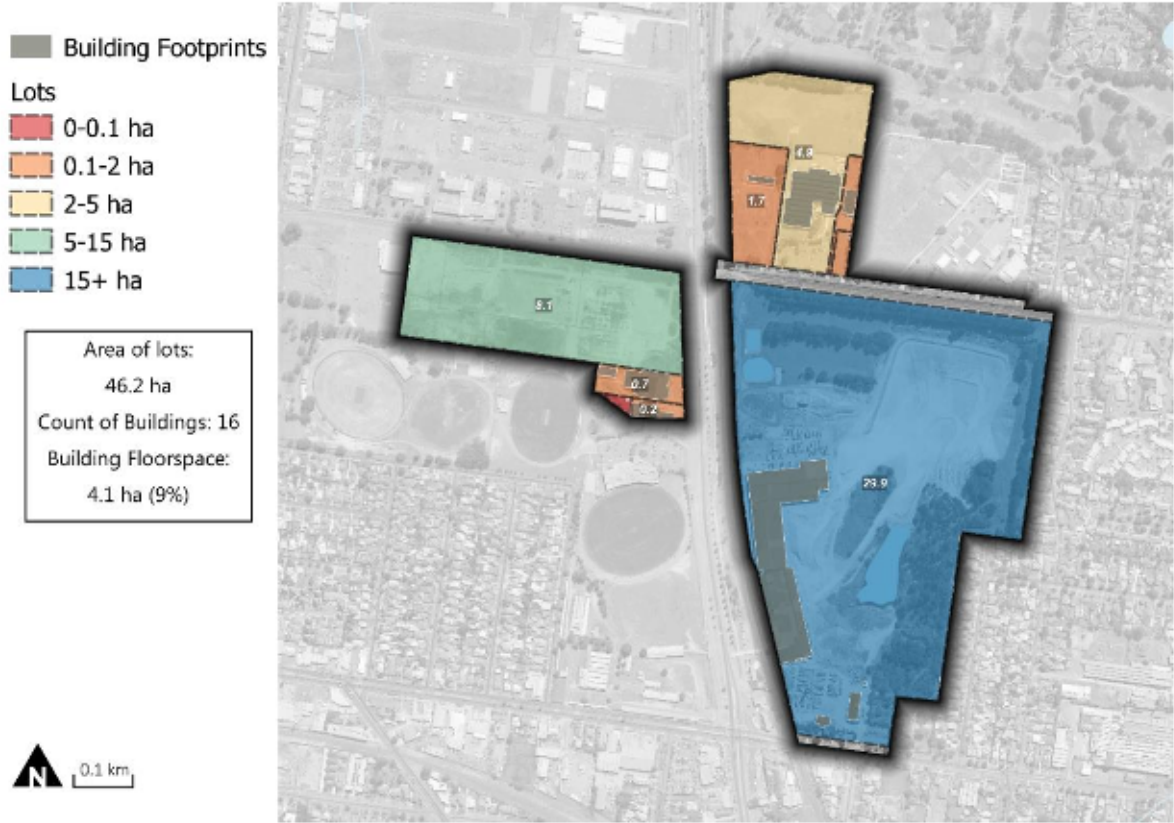
Source: SGS Economics and Planning, 2023

Planning status	Challenges for current use	Future potential
Industrial 1 Zone Clause 21.02-3 (Urban renewal precincts) of the Ballarat Planning Scheme: - Sites identified as an 'urban renewal area' (excluding 804-810 Norman St). - Sites identified as 'ongoing change area'. "Selkirk Precinct (large-scale land use change opportunities whether integrated with or independently of the Eureka Stadium Sporting Precinct)." - The policy seeks to facilitate redevelopment of urban renewal precincts. Clause 21.07-2 (Regionally significant precincts) of the Ballarat Planning Scheme: - Identifies 804-810 Norman St and 735 Creswick Rd as "existing industrial – protect from encroachment". - Identifies the Selkirk site as "existing industrial – interface with sensitive uses".	<i>Current use:</i> Extractive industry (quarry) and brick manufacturing in most of this precinct, some other industrial services on the other sides of the road to the north (804-810 Norman St) and west (735 Creswick Rd). Underutilised sites with good access to Ballarat Central. Sites to the east and south - limited allowance for buffer distances to surrounding sensitive land uses (residential – General Residential Zone and school – Public Use Zone).	630 Howitt St (Selkirk site) & 804-810 Norman St: Potential for owners of Selkirk site to move operations elsewhere. Progress/timing of sale of the site depends on decision of the consortium of landowners. The Quarry site is currently unfilled and will require time and resources to fill before it can be converted for other uses. Potential for 804-810 Norman St to be included as part of the 'urban renewal precinct'. Significant urban renewal opportunity for a mixed-use precinct. Opportunity to complement Eureka Stadium Sporting Precinct and Ballarat showgrounds. 735 Creswick Rd: Opportunity to complement surrounding sporting precinct to the west and south. Potential for new open space. Controls to reduce the impact of industrial activities (if included) on the surrounding residential land use and public amenity.

TABLE 14: SELKIRK – STATUS OF EXISTING LOTS AND AREA, 2023

	Number of lots	Median lot size (sqm)	Total GFA (sqm)	Land area (sqm)	Median developed lot FSR
Selkirk	10	6,600	41,000	462,000	21%

FIGURE 12: SELKIRK LOT SIZE ASSESSMENT



Source: SGS Economics and Planning, 2023

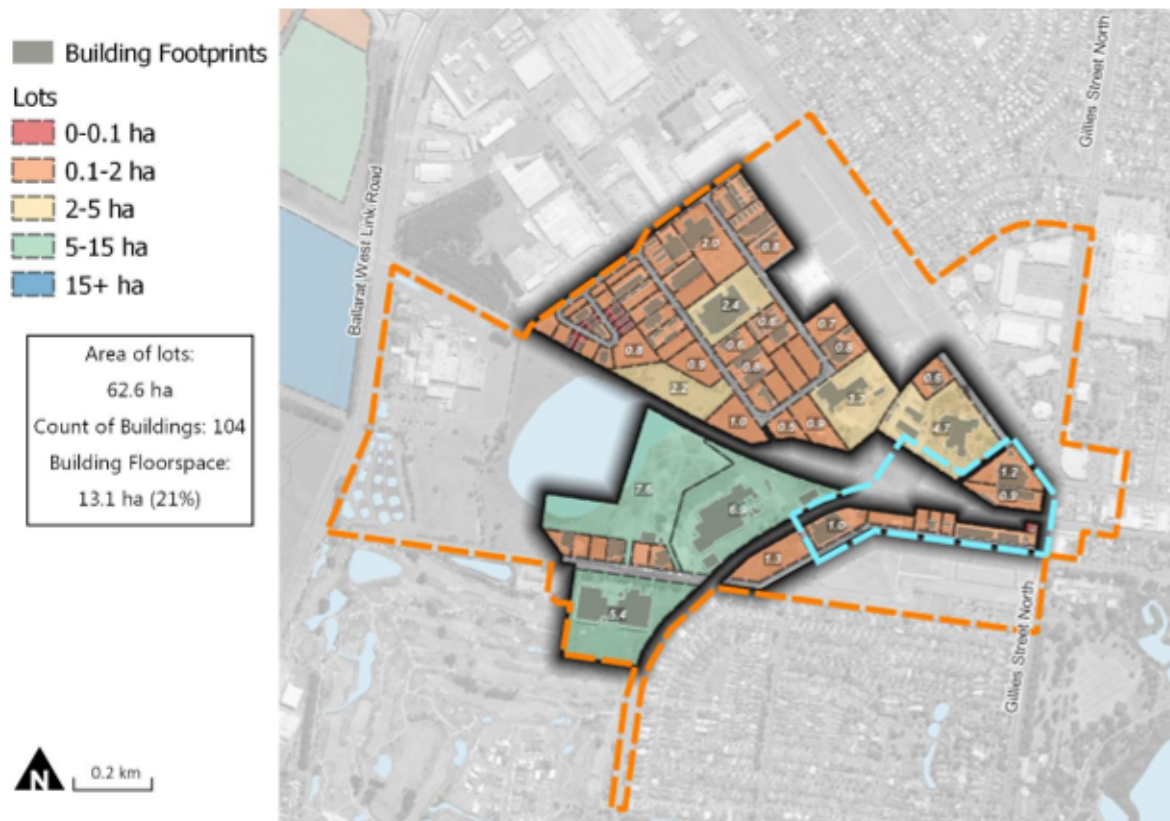
Planning status	Challenges for current use	Future potential
Industrial 1 Zone Industrial 3 Zone Areas of Aboriginal Cultural Heritage sensitivity (partially affects the site) Designated bushfire prone areas Clause 21.02-3 (Urban renewal precincts) of the Ballarat Planning Scheme: - Sites identified as 'urban renewal area' – 'Wendouree Village' and 'ongoing change area'. - The policy seeks to facilitate redevelopment of urban renewal precincts. - Identified as a regional transport gateway. Clause 21.07-3 (Activity Centres) of the Ballarat Planning Scheme: - Identified as a Major Activity Centre and Bulky Goods Centre. Clause 21.07-2 Regionally significant precincts) of the Ballarat Planning Scheme: - IN1Z area is identified as "existing industrial – protect from encroachment" in the 'Industry Plan'. IN3Z area not included. Wendouree Railway Station Precinct Master Plan: - Defines the Wendouree Station Precinct urban renewal area (outlined in the map below) and proposes alternative land uses.	<i>Current use:</i> Core industrial precinct hosting employment and population servicing uses for the north-west of Ballarat. Multiple lots ranging in size with different uses - - Industrial, commercial and large format retail uses. Includes vacant lots. - Walsh Estate, Warehouse. - Car dealership – Peter Amor Motors/Ballarat Holden, Isuzu. - Key logistics (Toll, StarTrack) and manufacturing (McCain, Mars) businesses. Underutilised sites with good railway access (via Wendouree Railway Station). Some lots interface with residential land - limited allowance for buffer distances to surrounding sensitive land uses (residential – General Residential Zone). Competing with BWEZ which has cheaper industrial land.	Opportunity to implement the recommendations from the Wendouree Railway Station Precinct Master Plan (SJB Urban, 2019) – convert select sites to alternative land uses (public open space retail, commercial, residential) and enhance the public realm (though property market advice suggests the industrial component is trading successfully). Part of a larger urban renewal area, with Commercial and Mixed Use zoning. Wendouree railway station provides transport access. Opportunity to strengthen mixed-use precinct – conversion of industrial land adjacent to the station, higher density opportunities e.g. retail uses. Improvements to public realm, to support presentation as gateway entry and visitor experience.

- Not yet implemented in the planning scheme.

TABLE 15: WENDOUREE STATION – STATUS OF EXISTING LOTS AND AREA, 2023

	Number of lots	Median lot size (sqm)	Total GFA (sqm)	Land area (sqm)	Median developed lot FSR
Wendouree Station	74	4,000	131,000	626,000	40%

FIGURE 13: WENDOUREE STATION LOT SIZE ASSESSMENT



Source: SGS Economics and Planning, 2023

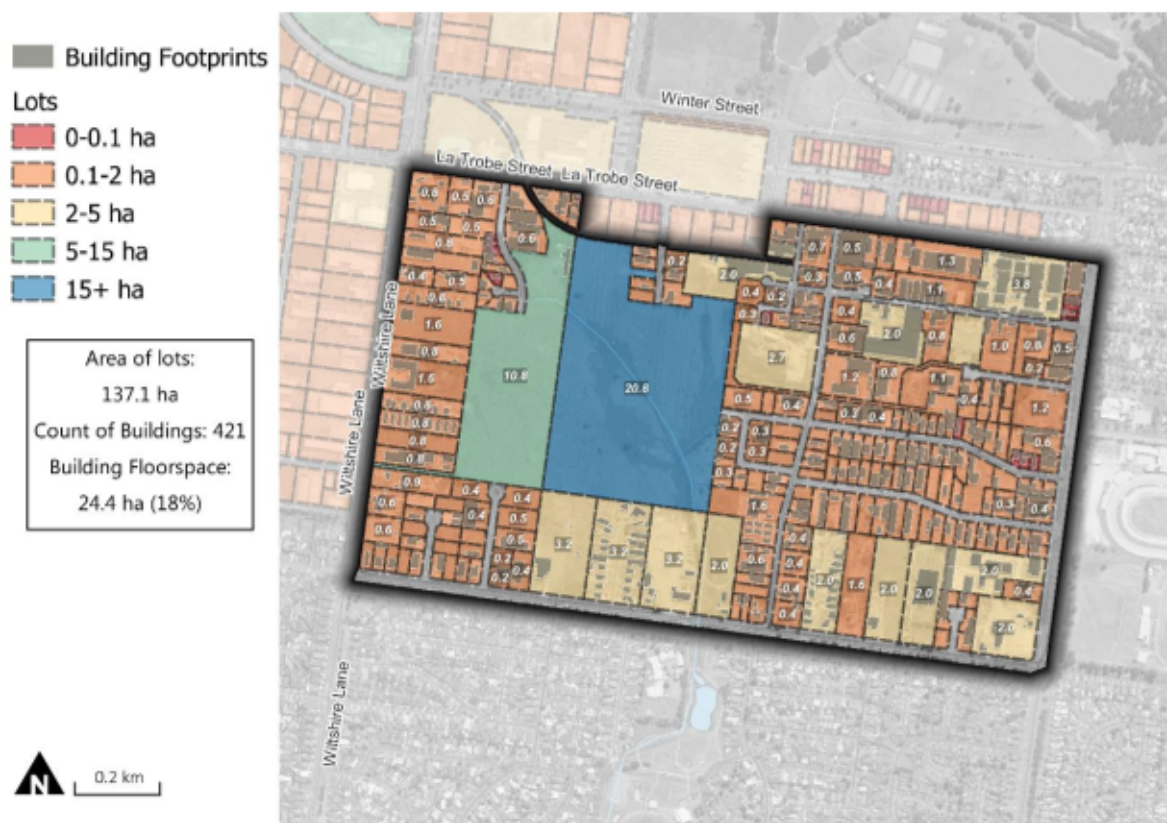
Note: The boundary of the entire Wendouree Station Precinct Master Plan is shown in orange outline, and the 'core' precinct in blue.

Planning status	Challenges for current use	Future potential
Industrial 1 Zone Development Plan Overlay 4 (applies to undeveloped industrial land) Areas of Aboriginal Cultural Heritage sensitivity (partially affects the site) Clause 21.02-3 (Urban renewal precincts) of the Ballarat Planning Scheme: - Identified as 'urban renewal area' and 'ongoing change area'. <i>"Delacombe Precinct (built form renewal in response to development of Glenelg Highway Major Activity Centre in Ballarat West growth Area)."</i> Clause 21.07-2 (Regionally significant precincts) of the Ballarat Planning Scheme: - Site identified as "existing industrial – protect from encroachment". Clause 22.02 (Industry) of the Ballarat Planning Scheme: - Seeks to accommodate small to medium sized industrial needs through provision of a range of lot sizes (1500sqm – 3ha) in the Delacombe Industrial Area.	<i>Current use:</i> Many small-scale industrial sites, some large, open council-owned spaces. Some retail and hospitality. Mix of government and privately owned sites. Small to large lot sizes. Potentially contaminated from industrial activities or other previous uses. Underutilised vacant sites.	Large area suited for 'locally significant' industrial activity over the medium to long term. New creative retail and hospitality to build upon the already growing success of like businesses in the precinct. Light industry and urban services to provide for the growing resident population. Potential for excellent transport access - train line runs through precinct.

TABLE 16: DELACOMBE (LA TROBE STREET) – STATUS OF EXISTING LOTS AND AREA, 2023

	Number of lots	Median lot size (sqm)	Total GFA (sqm)	Land area (sqm)	Median developed lot FSR
Delacombe – La Trobe Street	247	2,100	244,000	1,371,000	35%

FIGURE 14: DELACOMBE (LA TROBE STREET) LOT SIZE ASSESSMENT



Source: SGS Economics and Planning, 2023

Planning status	Challenges for current use	Future potential
Industrial 1 Zone Clause 21.07-2 (Regionally significant precincts) of the Ballarat Planning Scheme: - Site identified as “existing industrial – protect from encroachment”. Clause 21.02-3 (Urban renewal precincts) of the Ballarat Planning Scheme: - Identified as ‘urban renewal area’ and ‘ongoing change area’. “Delacombe Precinct (built form renewal in response to development of Glenelg Highway Major Activity Centre in Ballarat West growth Area).” Clause 22.02 (Industry) in of the Ballarat Planning Scheme: - Seeks to accommodate small to medium sized industrial needs through provision of a range of lot sizes (1500sqm – 3ha) in the Delacombe Industrial Area.	<i>Current use:</i> Many small-scale industrial sites. Some vacant lots. Mix of government and privately owned sites. Small to medium lot sizes. Potentially contaminated from industrial activities or other previous uses. Residential interface to the west and south (General Residential Zone). Limited allowance for buffer distances to surrounding sensitive land uses within these interfaces. Some underutilised lots.	Large area for ‘locally significant’ industrial activity. Light industry and urban services to provide for the growing resident population. Potential for excellent transport access - train line runs through precinct.

TABLE 17: DELACOMBE (SOUTHWEST) – STATUS OF EXISTING LOTS AND AREA, 2023

	Number of lots	Median lot size (sqm)	Total GFA (sqm)	Land area (sqm)	Median developed lot FSR
Delacombe - Southwest	138	3,500	77,000	604,000	30%

FIGURE 15: DELACOMBE (SOUTHWEST) LOT SIZE ASSESSMENT



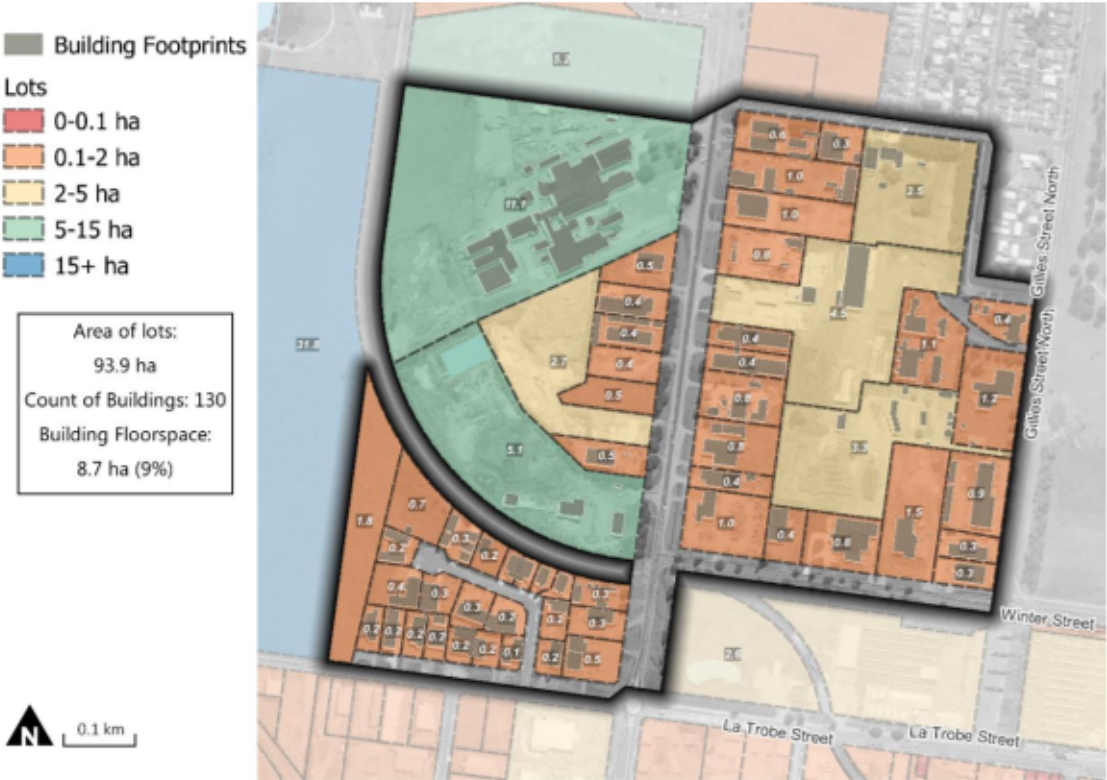
Source: SGS Economics and Planning, 2023

Planning status	Challenges for current use	Future potential
Industrial 1 Zone Designated bushfire prone areas Clause 21.07-2 (Regionally significant precincts) of the Ballarat Planning Scheme: - Site identified as “existing industrial – protect from encroachment”. Clause 21.02-3 (Urban renewal precincts) of the Ballarat Planning Scheme: - Identified as ‘urban renewal area’ and ‘ongoing change area’. “<i>Delacombe Precinct (built form renewal in response to development of Glenelg Highway Major Activity Centre in Ballarat West growth Area).</i>” Clause 22.02 (Industry) of the Ballarat Planning Scheme: - Seeks to accommodate small to medium sized industrial needs through provision of a range of lot sizes (1500sqm – 3ha) in the Delacombe Industrial Area.	<i>Current use:</i> Many small-scale industrial sites, some large, open council-owned spaces. Some vacant lots. Mix of government and privately owned sites. Small to medium lot sizes. Potentially contaminated from industrial activities or other previous uses. Interface with residential development to the northeast (General Residential Zone) and public open space (Victoria Park) to the east. Limited allowance for buffer distances to surrounding sensitive land uses within these interfaces. Some underutilised lots.	Large area for ‘locally significant’ industrial activity. Light industry and urban services to provide for the growing resident population. Potential for excellent transport access - train line runs through precinct. Residential land use opportunities for lots interfacing Victoria Park, and opportunity to extend existing residential zoned area along Gilles St.

TABLE 18: DELACOMBE (NORTHWEST) – STATUS OF EXISTING LOTS AND AREA, 2023

	Number of lots	Median lot size (sqm)	Total GFA (sqm)	Land area (sqm)	Median developed lot FSR
Delacombe - Northwest	57	4,200	87,000	939,000	29%

FIGURE 16: DELACOMBE (NORTHWEST) LOT SIZE ASSESSMENT



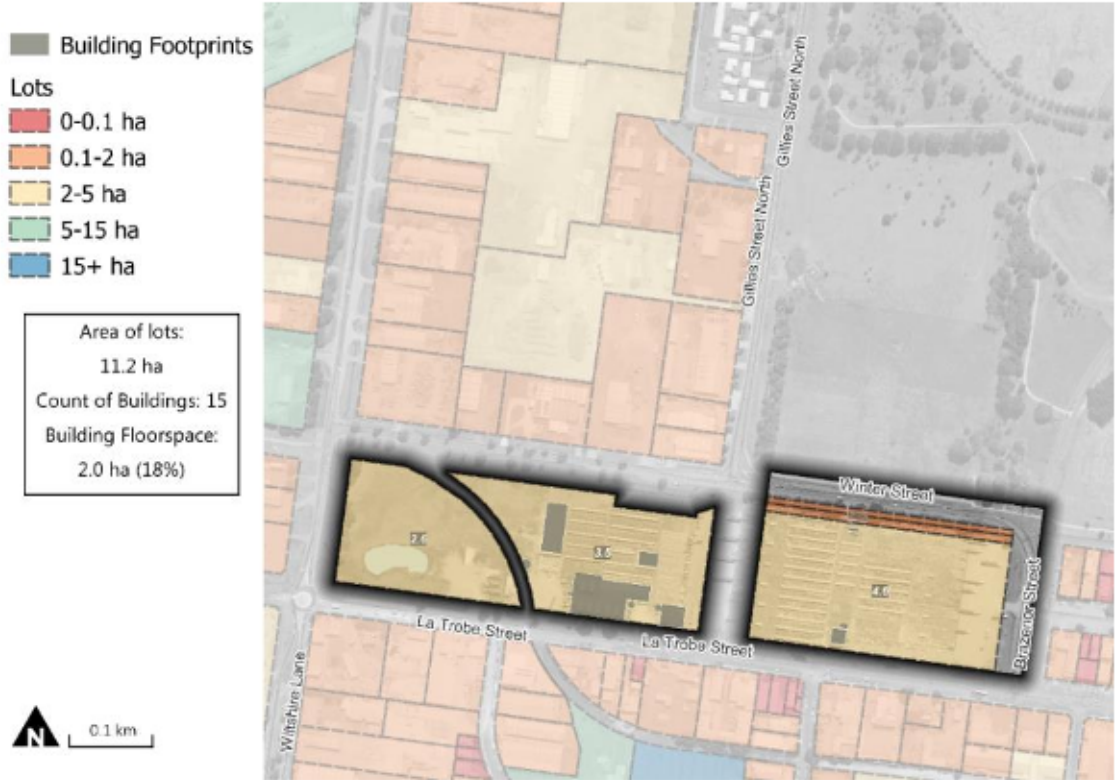
Source: SGS Economics and Planning, 2023

Planning status	Challenges for current use	Future potential
Industrial 1 Zone Transport Zone 1 Heritage Overlay (HO225 – Ballarat Saleyards) Clause 21.02 (Settlement and Housing) of the Ballarat Planning Scheme: - Site identified as an ‘urban renewal precinct’. Clause 21.07-2 (Regionally significant precincts) of the Ballarat Planning Scheme: - Site to the west is identified as “existing industrial – protect from encroachment”.	<i>Current use:</i> vacant. Heritage site. Underutilised site. Residential interface to the east - limited allowance for buffer distances to surrounding sensitive land uses. Site contamination due to previous use. Originally planned for use in the Commonwealth Games as the athletes’ village, though no longer the case.	Eastern end suitable for housing (western end not suitable for housing due to constraints with existing industrial buffers). Benefits from interface with Victoria Park – potential to extend residential development along Winter St. Kings caveat has been removed which allows the land to be developed for uses other than a saleyard. Council considering a structure plan for the wider La Trobe Street Precinct. Initial background work has been completed for the precinct.

TABLE 19: OLD SALEYARDS – STATUS OF EXISTING LOTS AND AREA, 2023

	Number of lots	Median lot size (sqm)	Total GFA (sqm)	Land area (sqm)	Median developed lot FSR
Old Saleyards	5	26,000	20,000	112,000	19%

FIGURE 17: OLD SALEYARDS LOT SIZE ASSESSMENT



Source: SGS Economics and Planning, 2023

Planning status	Challenges for current use	Future potential
Industrial 1 Zone Development Plan Overlay 4 (affects undeveloped industrial land) Clause 21.07-2 (Regionally significant precincts) of the Ballarat Planning Scheme: Not included in the 'Industry Plan'.	<i>Current use:</i> vacant land. Residential interface to the north and west - limited allowance for buffer distances to surrounding sensitive land uses.	Located adjacent to Delacombe core employment precinct. Residential opportunity – extend existing residential area. Large area for 'locally significant' industrial activity.

TABLE 20: ALFREDTON SOUTH – STATUS OF EXISTING LOTS AND AREA, 2023

	Number of lots	Median lot size (sqm)	Total GFA (sqm)	Land area (sqm)	Median developed lot FSR
Alfredton South	6	17,000	0	410,000	0%

FIGURE 18: ALFREDTON SOUTH LOT SIZE ASSESSMENT



Source: SGS Economics and Planning, 2023

4. Demand-supply analysis of regionally and locally significant industrial land

This chapter quantifies future demand for industrial land and compares this to the available supply. Regionally and locally significant land are considered separately.

4.1 Method

Our approach to comparing industrial land demand and supply involves the following steps:

- **For regionally significant industrial land:**
 - Isolate and consider the existing supply – in Ballarat BWEZ is considered the only regionally significant industrial precinct.
 - Estimate potential future demand (take-up rates) – three potential demand scenarios are identified and considered, with a preferred demand scenario chosen.
 - Compare to the existing supply at BWEZ.
 - Identify and consider future supply potential (the greenfield investigation area and an adjacent extension area) in light of the demand and supply analysis, including considering ‘macro’ and strategic elements of industrial land.
- **For locally significant land**
 - Restate the ELR supply estimate and demand scenarios.
 - ‘Establish the locally significant industrial land supply (by ‘removing’ the regionally significant land from the Background ELR supply and demand analysis).
 - Recalculate the demand and supply estimates to identify the surplus or gap.
 - Identify the implications on the supply of locally significant industrial land from ‘converting’ selected industrial precincts.

4.2 Regionally significant industrial land demand and supply

Existing supply

Table 21 shows the distribution of lots in the BWEZ, according to both lot size and their occupancy. The majority of the precinct is made up of large, vacant lots of 160 ha. Just eight lots account for 161 of the available 186 hectares (though these have further subdivision potential).

TABLE 21: BWEZ – STATUS OF EXISTING LOTS AND AREA, 2023

	Lots		Area	
	Count	Percentage	Hectares	Percentage
Small Lots (<1 ha)	5	22%	2	1%
Medium Lots (1<5 ha)	10	43%	23	12%
Large Lots (>5 ha)	8	35%	161	87%
Occupied Lot Area	12	48%	26	14%
Vacant Lot Area	11	52%	160	86%

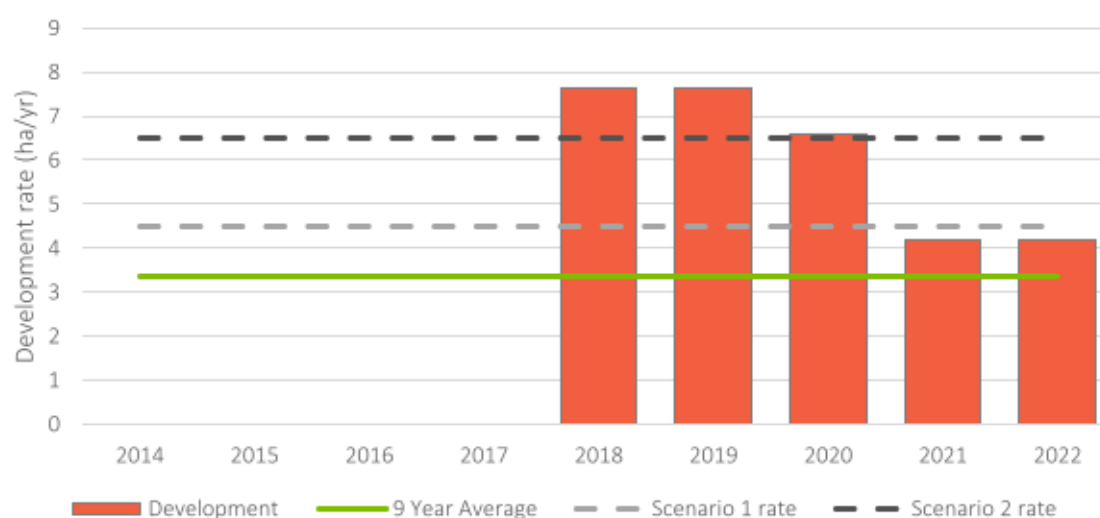
Source: SGS Economics and Planning, based on data from the Ballarat West Employment Zone Master Plan (Echelon Planning 2021), and LivingAtlas online satellite imagery (2014-2022)

Potential future demand

Three scenarios for potential future demand have been identified. The first two are based on observed development or take-up rates since the first year of development in 2018. As a comparator, the third references land sales rates.

Figure 19 shows the recent take-up rates. These were generated by comparing aerial photos and satellite imagery, from 2014 to 2022. Any development of the site, such as a concrete slab, was treated as the entire site becoming 'developed'. Using this approach indicates a total of 26.19 ha has been developed to 2022 (though not all occupied). The development rate over the whole period was **3.5 ha per year**.

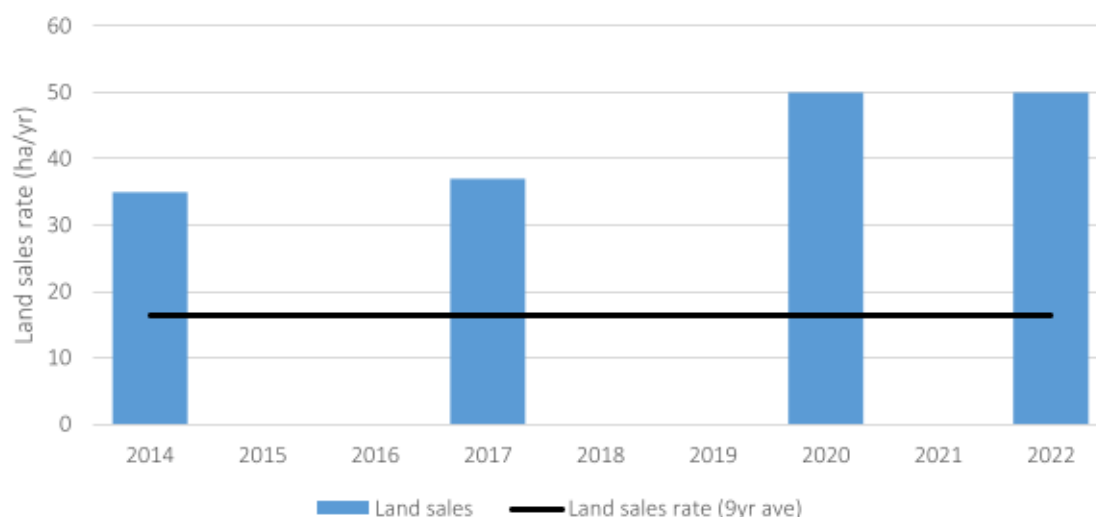
FIGURE 19: BWEZ DEVELOPMENT RATES, 2014-22



Source: SGS Economics and Planning, 2023

Figure 20 below shows the land sale rates by year summarised in Table 6 for use in scenario 3. The structure of the staged land releases in BWEZ leads to the 'lumpy' data seen below. Council reports that strong sales have continued during 2023, following those reported here.

FIGURE 20: BWEZ SALES RATES, 2014-22



Source: Invest Victoria, 2023

Given the COVID-19 pandemic disruption, three scenarios are generated:

1. **Low Scenario (S1)** - based on post-Covid 2021-22 development rates of **4.5 ha per year**
2. **Medium Scenario (S2)** - based on a higher development rate observed in 2018-20 prior to and during Covid of **6.5 ha per year**.
3. **High Scenario (S3)** – the average land sales rate was **11.5 hectares per year** from 2014 to 2022.

While it is not typical practice to use land sales as the benchmark for estimating long range demand (as used in scenario 3) there are relatively unique circumstances in evidence here. Council has advised that a contract with Development Victoria for land sales in BWEZ contains a deadline for development within a relatively short time, that is 1-3 years, from settlement, and this constrains land-banking. It's a breach of contract to not develop within the timeframe. When development doesn't occur in the agreed time an ensuing process sees the property returned to DV who can then place it back on the market. There has been one example of a purchaser not meeting this obligation and that property has been returned to market. The disincentive for a purchaser to not follow with development is clear.

This arrangement does increase the likelihood of actual development 'tracking' sales more closely than might be the case in other industrial land precincts.

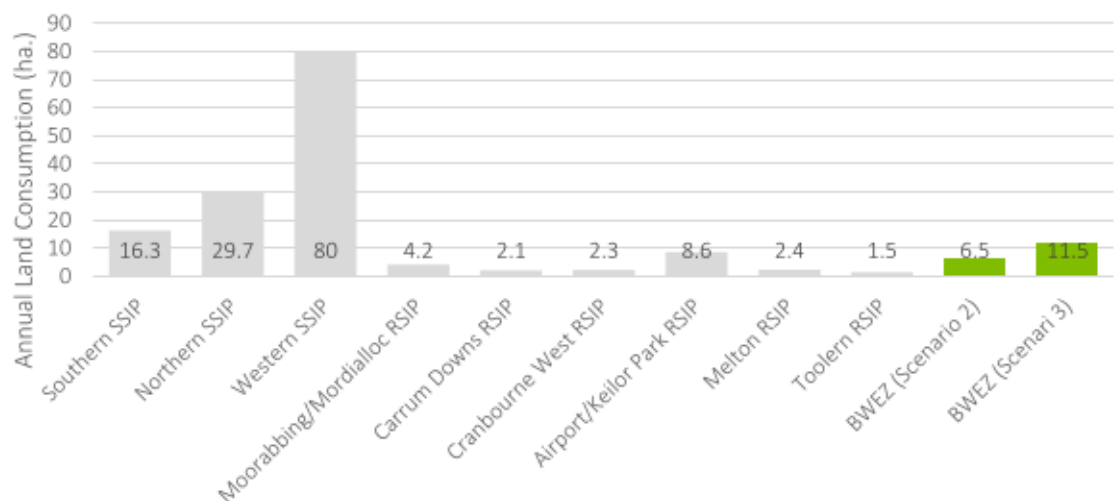
Council also indicates a trend of requests for larger lot sizes in response to the strategic focus of its investment facilitation i.e. prioritising advanced manufacturing/innovation over lower employment options such as warehousing. While manufacturing property requests start at the 3-4Ha size the list of enquiries shows requests for 5-20Ha over the last 2-3 years as well as requests for 40-50Ha. While the available evidence isn't definitive increasing demand for larger lot sizes will accelerate actual development take-up rates.

The dynamics in the wider industrial land market, discussed earlier, should also be acknowledged. If strategic precincts such as BWEZ are increasingly attracting investors and end-users who in the past might have chosen a western Melbourne market this might not ‘show up’ in past take-up rates that are projected forward.

For these reasons it is reasonable to plan for future regionally significant land based on Scenario 3, recognising that there will be some lag in actual development and occupation rates, of perhaps 3 to 5 years.

The take-up rates of regionally significant industrial precincts found in Melbourne are shown in Figure 21. While BWEZ is not placed within the hierarchy of Metropolitan Industrial and Commercial Land Use Plan (MICLUP), it might be expected to approach the take up rates of the largest, state significant precincts if it becomes increasingly integrated with the Melbourne market. The comparison suggests that scenario 3 (11.5 ha per year) is not unrealistic (though somewhat higher than other regionally significant precincts most of which don’t have BWEZ’s significant attributes), while scenario 2 (6.5 ha per year) looks readily achievable, particularly given the anecdotes of its increasing attractiveness. These scenarios place BWEZ at the high end of or above take-up rates of other regionally significant industrial precincts, but still less than the state significant precincts in Melbourne.

FIGURE 21: COMPARISON TAKE UP RATES (HA/YEAR) FOR SSIP AND RISP



Source: Urban Development Program, DELWP 2021

Compare to existing supply at BWEZ

Table 22 below summarises the three scenarios for regionally significant industrial land and compares this to the existing (vacant) land supply at BWEZ.

TABLE 22: BWEZ LAND CONSUMPTION SCENARIOS

	BWEZ vacant land (ha)	Assumed take-up rate (ha/year)	Years of remaining zoned land
1. Low Scenario (S1) (based on recent (2021-23 dev rate)	160 ha	4.5	36 (by 2061)
2. Medium Scenario (S2) (based on increasing dev rate, prior to covid impacts)	160 ha	6.5	25 (by 2048)
3. High Scenario (S3) (based on recent land sales rates)	83 ha	11.5	7 (by 2029) + 3-5 for development & use

Source: SGS Economics and Planning, based on data from the Ballarat West Employment Zone Master Plan (2021), LivingAtlas online satellite imagery (2014-2023), and Council provided land purchase data (2023)

Scenario 3 is considered a reasonable benchmark for future take-up, for the reasons mentioned, though accounting for a lag of 3-5 years until full development and occupation remains prudent. This would suggest that there is **10-12 years of land available at BWEZ**, though if the conversion of sold land to developed and occupied land accelerates then the stock of existing supply would be reduced sooner.

The analysis suggests that Ballarat could deplete regionally significant industrial land by the early 2030s. Growth opportunities need to be identified with planning underway well before this exhaustion point to provide a pipeline of zoned and serviced land ahead of demand. Furthermore, the take-up rates and assumptions should be regularly monitored.

Identify future supply potential

An area of greenfield land currently zoned Farming Zone to the north-west of the LGA has been identified for an additional future industrial precinct (refer to the precinct profile at 3.1 for detail).

Its total area of 679 hectares could accommodate an estimated 350 hectares of industrial land, accounting for 'wastage' from bodies of water, necessary roads and other miscellaneous land uses.

4.3 Locally significant industrial land demand and supply

Restate the ELR supply estimate and demand scenarios

As mentioned earlier, HillPDA's method for estimating future industrial land take up in the Background ELR has three approaches. These are shown (with extrapolations) in Table 23:

TABLE 23: HILLPDA DEMAND AND SUPPLY SCENARIOS

Method	Occupied supply (ha)	Vacant supply (ha)	Total supply (ha)	Take-up rate (ha, p.a.)	Years of supply	2021 – 2051 Demand
Method 1 – Land take up	978	370	1348	9	41	270
Method 2 – Population growth	978	370	1348	18	21	529
Method 3 – Floorspace growth	978	370	1348	12	32	347

Source: Employment Lands Review: Background Report, HillPDA Consulting 2021

These are all reasonable measures for employment land use, though in some instances they fail to capture the context of the sites they are considering. The most important example of this is the BWEZ site, which has an assumed industrial area of 156 hectares in the Background ELR, however the Infrastructure Victoria website reveals an actual planned land area of 186 hectares.

There is also the matter of zoned land types. The Background ELR considers not only industrial land, but also commercial and mixed-use land. Analysing the cadastre property layer using GIS software, isolating only industrial land (IN1Z, IN3Z, SUZ14) brings the total land supply down from 1348 hectares to 1093 hectares.

In addition, for this study a qualitative distinction between industrial areas and related demand has been included. The Background ELR considers demand for land in BWEZ for example to be interchangeable with demand for land in any of the smaller industrial precincts. The large lots and access to infrastructure that are the basis of the regionally significant industrial land categorisation set BWEZ apart from the rest of Ballarat's industrial areas.

Establish the locally significant industrial land supply

After 'removing' the 156 hectares BWEZ precinct from the Background ELR estimates, and the 'non-industrial' commercial and mixed use land, the locally significant industrial precincts in Ballarat (existing industrial zoned land) total 936 hectares, which includes 774 hectares of occupied industrial land.

Table 24 below shows a breakdown of the estimated current local industrial land supply.

TABLE 24: LOCALLY SIGNIFICANT PRECINCTS SUMMARY

	Occupied	Vacant	Total
Locally significant industrial land	774 ha	162 ha	936 ha

Source: Employment Lands Review: Background Report, HillPDA Consulting 2021

Recalculate the demand and supply estimates to identify the surplus or gap

The Background ELR methods for estimating future demand were applied to the local industrial precincts, after accounting on both the demand and supply sides for BWEZ using the scenario 2 future demand estimate (given this is based on development take-up and is directly comparable to the method used in the Background ELR). After removing this 'regionally significant' industrial land (assuming scenario 2 consumption of 6.5 ha/year) the future demand rate for 'locally significant' industrial land across Ballarat is adjusted downwards.

The Background ELR take-up figures do not distinguish between industrial, commercial and mixed use rates. The analysis below therefore includes the take up of commercial and mixed-use land though this will not distort the analysis significantly as it is likely to be a much smaller share of the take-up rate compared to that for industrial land.

This analysis indicates there is supply of at least 14 years of locally significant industrial land. This means there would still be between 0 to 125 ha of vacant land by the mid to late 2030s. These figures increase if we assume an even higher rate of development at BWEZ, as suggested by scenario 3.

TABLE 25: LOCAL INDUSTRIAL LAND CONSUMPTION SCENARIOS

Method	Land supply (ha)			Base take up rate (ha/year) (Background ELR)	Adjusted take up rate (ha/year)	Adjusted years of supply
	Occupied	Vacant	Total			
Background ELR Method 1 – (Land take up)	774	162	936	9	2.5	65
Background ELR Method 2 – (Population growth)	774	162	936	18	11.5	14
Background ELR Method 3 – (Floorspace growth)	774	162	936	12	5.5	29

Source: SGS Economics and Planning, based on analysis by HillPDA Consulting in Background ELR, 2021

Implications on the supply of locally significant industrial land from 'converting' selected industrial precincts.

Table 26 provides details on the selected precincts under investigation in this report. It shows these areas constitute 478 hectares, just over half of Ballarat's locally significant industrial land, and contain around 647,500 sqm of floorspace. The floor space ratio or percentage of site area occupied by buildings on developed lots is around 0.32 to 1, or 32%.

If all of the 478 ha of the investigation precincts were to be converted to alternative uses then the stocks of locally significant industrial land would be significantly diminished. This wouldn't be a sustainable outcome without supply replenishment.

To illustrate, the existing 647,500 sqm of floorspace ‘lost’ from this conversion would need to be accommodated elsewhere, requiring in the order of 202 hectares of vacant land if developed at the current FSR of developed lots of 0.32 to 1. While this is broadly comparable to the 162 ha of vacant land identified as available in Table 25 this latter figure includes vacant land in the selected precincts which would not be available after conversion. Furthermore, it doesn’t account for future growth in demand for locally significant industrial land.

TABLE 26: PRECINCT LEVEL LAND ANALYSIS

Precinct	Number of lots	Median lot size (sqm)	Total GFA (sqm)	Land area (ha)	Developed lot FSR
Eureka	31	5,500	34,000	21.2	21%
Lal Lal Street	1	7,800	4,500	0.78	57%
Old Saleyards	5	26,000	20,000	11.2	19%
Delacombe – NW	57	4,200	87,000	93.9	29%
Delacombe – La Trobe Street	247	2,100	244,000	137.1	35%
Delacombe – SW	138	3,500	77,000	60.4	30%
Selkirk	10	6,600	41,000	46.2	21%
Rodier Street	5	5,500	6,000	3.3	25%
Skipton Street	2	2,000	3,000	0.4	76%
Wendouree Station Precinct	74	4,000	131,000	62.6	40%
Alfredton South	6	17,000	0	41	0%
Total	576	NA	647,500	478	32%

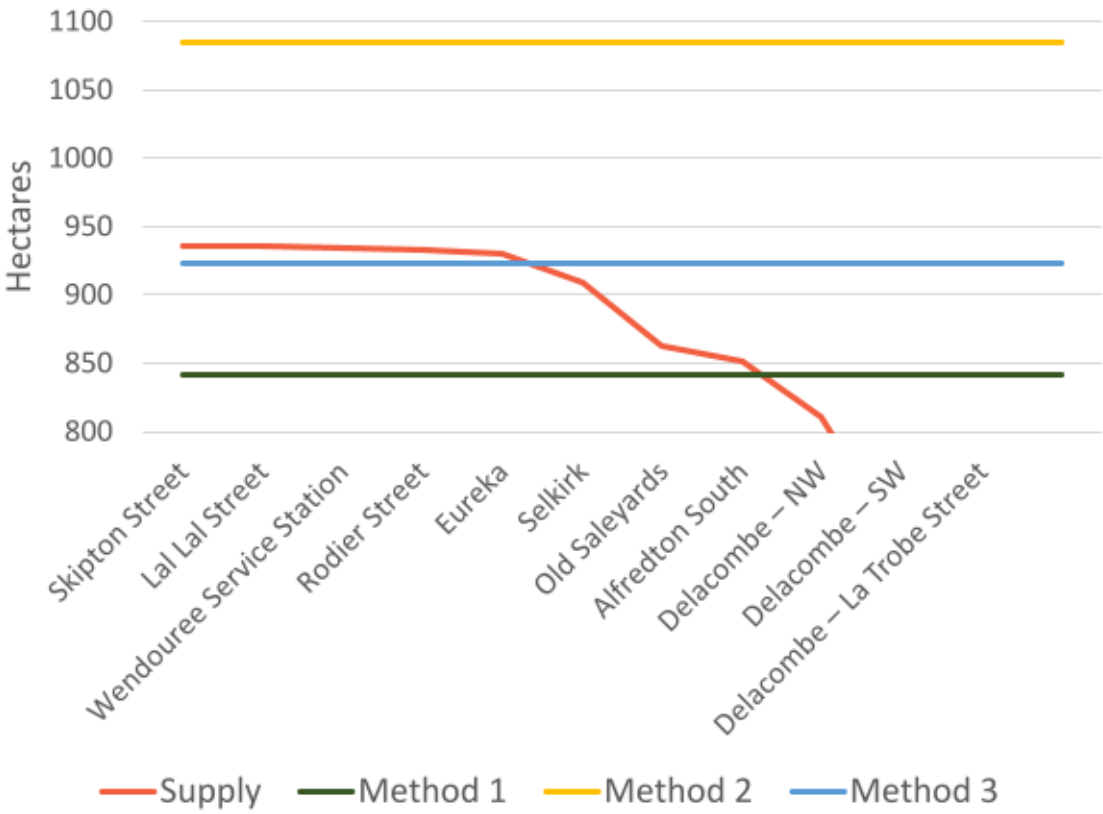
Source: SGS Economics and Planning, 2023

What the analysis does confirm however is that given the stock of vacant land, many of the smaller selected industrial precincts could be converted to other uses without apparently compromising the ability of Ballarat to accommodate locally significant industrial land use growth.

Figure 22 shows the three ‘adjusted’ demand requirements for locally significant industrial land at 2050 (the straight lines). Existing supply is about 950 hectares which is insufficient to meet the 2050 demand need of only Method 2 (originally based on a per capita rate of land growth in the ELR). The supply ‘curve’ is gradually reduced by the area of each precinct (generally in a possible order of priority but also starting with the smallest sites). Only after Selkirk is ‘converted’ does the supply fall below the

Method 3 2050 demand requirement, and only after Alfredton South is removed does supply fall behind the Method 1 demand requirement.

FIGURE 22: SUPPLY EROSION WITH PRECINCT CONVERSION AGAINST 2050 ADJUSTED DEMAND SCENARIOS FOR LOCALLY SIGNIFICANT INDUSTRIAL LAND



Furthermore, while a distinction has been made between regional and locally significant industrial land demand there is no ‘hard and fast’ boundary in where different uses might locate. Some ‘locally significant’ industrial uses could be accommodated in BWEZ and in any future industrial area expansion, even if notionally planned for regionally significant activities. As precincts are converted, planning for a future area release could be brought forward.

5. Recommendations

This chapter sets out the strategy for the selected industrial precincts considered in this study. It includes the broad recommendations for 'regionally significant' and 'locally significant' industrial land, and precinct specific recommendations, implementation actions, and revised classifications.

5.1 Overarching directions and recommendations

The **directions** for Ballarat's industrial lands are to consolidate, enhance and transform Ballarat's industrial land supply, as follows:

- Ensure Ballarat has appropriate supply of industrial land for at least 15 – preferably 20 – years to meet forecast demand.
- Make better use of well-located industrial land where it can support the emerging advanced manufacturing sector and Ballarat's role as an industrial and freight hub.
- Facilitate alternative land use and development outcomes where land is deemed to be non-strategic or inappropriate in its current industrial zoning.
- Seek alternative industrial land to safeguard Ballarat's industrial sector into the future.
- Support a precinct-based approach for the development of industrial land.

As the precincts are converted to alternative land uses, or current industrial uses are intensified, it will be crucial to implement planning policy tools to guide their development sustainably, while ensuring the amenity of the sites and surrounding area including sensitive residential land uses are maintained.

It is acknowledged that the future development of the precincts will largely be landowner led, while council has an important role to play in working with landowners to make the relevant sites available for conversion through support for appropriate rezoning processes.

5.2 Precinct recommendations

The recommendations promote a precinct-based approach to industrial land development, while ensuring the precincts meet overall forecast demand for industrial land in the municipality. Regionally and locally significant industrial land are considered in two separate categories regarding supply-demand considerations.

Recommendation 1: Plan to accommodate regionally significant industrial land uses over the short to medium term including accelerating planning for a future industrial precinct to the north-west of Ballarat (bounded by Western Hwy, McCartneys Rd, Draffins Rd).

The analysis in Chapter 4 indicates that while a significant area of BWEZ is still to be fully occupied, land sale rates are strong with a shrinking number of lots still unsold. Contracts for sale commit purchasers to development which constrains prospects for land-banking. Based on land sale rates but including a factor for development it is estimated that the available 'supply' is in the order of 10-12 years. Short to medium term planning for additional regionally significant industrial land is therefore warranted. A few new very large lot users could accelerate take up rates in the existing areas, bringing forward the need for new areas. Furthermore, as selected 'locally significant' precincts are converted from industrial to other uses, this displaced demand will need new sites. There is no 'hard and fast' distinction between regionally and locally significant land and displaced activities may be attracted to new precincts, as well as vacant existing areas.

To address this recommendation BWEZ will play a continuing crucial role in the short to medium term.

An area of greenfield land has been identified for a future industrial precinct to the north-west of Ballarat (bounded by Western Hwy, McCartneys Rd, Draffins Rd) and with strategic characteristics, including accessibility to the Sunraysia and Western Highways and separation from conflicting uses.

The **principles for protecting and creating new industrial land**, particularly in the greenfields, are as follows:

- Preserve the land through early designation to ensure it is available for future industrial land use, and in due course with appropriate rezoning and staged release.
- Avoid land fragmentation through minimum lot size and land subdivision requirements (avoid future lot patterns that aren't flexible)
- Prohibit residential land uses in regionally significant industrial precincts so as not to undermine the economic opportunities.
- Considerations for transitioning greenfield land to industrial land use include:
 - Strategic purchase by the state and future governance to manage positioning / branding / clustering
 - Zoning, structure planning and local policy implementation including the extent of 'curation' to ensure particular uses or clusters in future
 - Infrastructure provision
 - Urban design and environment
 - Public space provision
 - Development of underutilised, catalyst and/ or vacant sites
 - Accessibility

Recommendation 2: Strategically rezone select locally significant industrial precincts considered surplus and fragmented to alternative uses.

Precincts proposed for rezoning to enable alternative land uses are:

- Skipton Street
- Lal Lal Street
- Eureka
- Rodier Street
- Selkirk
- Wendouree Station Precinct
- Old Saleyards
- Alfredton South

Having separated the demand and supply calculations for regionally significant land, the adjusted analysis suggests there is sufficient supply of locally significant industrial land for the medium to long term. The qualitative analysis also suggests that current industrial activities on selected sites are sometimes fragmented and inappropriate, or generating conflicts, given nearby uses. Some sites have significant potential to transition to alternative uses. Any proposed land use conversion should occur in a planned and targeted way, otherwise it would undermine all locally significant industrial land via market speculation. Rezoning for new industrial land as suggested by recommendation 1 will also expand opportunities for future industrial development, whether in regionally significant or local industrial categories (remembering that there is no 'hard' boundary between the two categories).

Recommendation 3: Maintain and protect the locally significant industrial futures of 'core established' employment and industrial precincts.

A few key established precincts are crucial to the locally significant industrial land supply, as well as providing crucial opportunities for local economic development and diversification and accessible local jobs. Planning should be directed towards ensuring the effective operation of these areas into the future.

The Delacombe precinct is proposed to be strengthened as part of its designation as a 'core employment precinct'. This precinct has been divided as follows:

- Delacombe – La Trobe Street
- Delacombe – Southwest
- Delacombe – Northwest

For these areas where industrial uses should be maintained key principles for future active planning include:

- Actively plan for appropriate use separation and buffers to surrounding uses
- Avoid uses in surrounding areas which are likely to compromise the effective operation of the industrial area or create conflicts

- Prioritise commercial vehicle access to these areas (and limit non-commercial vehicle road congestion by promoting public transport and alternative routes for commuter traffic)
- Discourage commercial and retail uses which could be located in commercial and town centre areas
- Promote co-location of like uses to maximise enterprise and economic synergies.

5.3 Precinct recommendations

The tables below provide specific recommendations for the potential transition of each precinct, that respond to the overarching recommendations detailed above.

The recommendations for each precinct are based on the quantitative and qualitative analysis, including the strategic planning review, supply-demand forecasts, precinct profiling, and stakeholder visions and aspirations.

The implementation actions include planning considerations, to provide guidance on the planning policy tools that are required to achieve the desired outcomes.

The timing for transitioning the precincts to alternative uses indicates a broad level of priority. The timeframes used are 'short-term' (0-3 years), 'medium-term' (2-5 years) and 'long-term' (4-8 years).

Recommendation 1: Plan to accommodate regionally significant industrial land uses over the medium to long term.

Precinct	Recommendation	Implementation considerations	Timing
BWEZ	Continue to support the growth of the BWEZ.	Monitor overall industrial land use to maintain 15-20 years supply.	Ongoing
Proposed future industrial precinct	Confirm and extend designation of north-west investigation area (bounded by Western Hwy, McCartneys Rd, Draffins Rd) and commence planning to secure for future industrial.	Preserve the section bound by Dowling Road and Draffins Road for future industrial use. Identify opportunities for state or local government purchase of the land to preserve future development opportunities. Undertake early planning to ensure future required investment and supporting infrastructure is available. For example: ▪ any key service issues (water/electricity/other services),	Ongoing (0 to 8 year timeframe for all actions)

Precinct	Recommendation	Implementation considerations	Timing
		- likely restrictions from proximity to Ballarat Aerodrome, - reserves required for connections to the freeway, - connections to BWEZ to the south of this area, and - protection from encroachment of adjoining developments that may compromise future site potential. Medium to long term: master planning to support subsequent rezoning for industrial land use.	

Recommendation 2: Strategically rezone select locally significant industrial precincts considered surplus and fragmented to alternative uses.

Precinct	Recommendation	Implementation considerations	Timing
Skipton Street	Convert to higher density residential and/or commercial land use , that will have minimal impact on surrounding sensitive land uses.	Facilitate conversion to alternative land use, that supports broader council strategy (for example, residential or commercial land use strategy). Consult with landowners and the community.	Short-term
Lal Lal Street	Convert to higher density residential / accommodation land use , that will have minimal impact on surrounding sensitive land uses.	Facilitate conversion to alternative land use, that supports broader council strategy (for example, residential land use strategy). Consult with landowners and the community.	Short-term
Eureka	Convert to higher density residential and/or	Facilitate conversion to alternative land use, that	Medium-term

Precinct	Recommendation	Implementation considerations	Timing
	commercial land use , that will have minimal impact on surrounding sensitive land uses.	supports broader council strategy (for example, residential or commercial land use strategy). Consult with landowners and the community.	
Rodier Street	Convert to higher density residential and/or commercial land use , that will have minimal impact on surrounding sensitive land uses.	Facilitate conversion to alternative land use, that supports broader council strategy (for example, residential or commercial land use strategy). Consult with landowners and the community.	Short-term
Selkirk	Facilitate development of a mixed-use precinct with high quality amenity and integrated land use development, including light industrial (with no adverse amenity potential), commercial, residential and open space uses.	Facilitate conversion to alternative land use, that supports broader council strategy (for example, housing, commercial or open space lands strategy). Include the site at 804-810 Norman St as part of the 'urban renewal precinct', in the Ballarat Planning Scheme, to preserve for future redevelopment that is cohesive with the rest of the precinct. Consult with landowners and the community. Consult with landowners and State Government to assess timing of land use conversion. Manage conversion and environmental effects of quarry site. Explore ways for light industrial or trade uses to be integrated into the precinct. Identify and manage potential environmental effects of previous industrial activity.	Medium-term

Precinct	Recommendation	Implementation considerations	Timing
		Undertake master planning to support subsequent rezoning for a mixed-use precinct.	
Wendouree Station Precinct	Facilitate the development of a mixed-use precinct with high quality amenity and integrated land use development with higher densities.	Consider appropriate planning mechanisms to implement the Wendouree Railway Station Precinct Master Plan. Facilitate further development of industrial land or conversion to alternative land uses, and public realm improvements, building on the recommendations in the Wendouree Railway Station Precinct Master Plan. Explore options to convert industrial land uses adjacent to the station to higher density land use opportunities, such as residential, commercial and retail. Consult with landowners and the community.	Short-term for commercial precinct near station Medium to long term for conversion elsewhere
Delacombe – Northwest Old Saleyards Alfredton South	Support a staged transition to alternative uses for these precincts north of Latrobe Street including medium density residential integrated with employment in the medium to long-term – In accordance with an integrated master plan for all three sub-precincts.	Explore potential to convert sites adjacent to Victoria Park to residential, including medium density residential. Investigate alternative tenures to maximise housing choice and social and affordable housing opportunities. Identify and manage potential environmental contamination from industrial activities. Manage off-site amenity impacts to surrounding sensitive land uses. Provide for improved amenity to create an attractive residential and business environment including for the	Medium to long-term

Precinct	Recommendation	Implementation considerations	Timing
		latter a mix of trades and enterprise activities.	

Recommendation 3: Maintain and protect the locally significant industrial futures of 'core established' employment and industrial precincts.

Precinct	Recommendation	Implementation actions	Timing
Delacombe – La Trobe Street Delacombe – Southwest	Maintain role as core employment precincts that support 'locally significant' industrial land uses and enables intensification of enterprise uses in the long term.	Preserve as a critical local employment precinct. Manage off-site amenity impacts to surrounding sensitive land uses. Maintain flexible planning policies to allow businesses to grow organically and to encourage subdivision and small lot activity.	Ongoing

Appendix A: Industrial planning policy and strategy

Linking back to Chapter 2.1, this appendix provides a summary of each relevant planning policy and strategy.

Ballarat Planning Scheme

STATE POLICY

Clause 11.01-1S Settlement

- Providing for appropriately located supplies of residential, commercial, and industrial land across a region, sufficient to meet community needs in accordance with the relevant regional growth plan.
- To ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses.

11.03-2S Growth areas

- Provide for significant amounts of local employment opportunities and in some areas, provide large scale industrial or other more regional employment generators.

13.07-1S Land use compatibility

- To protect community amenity, human health and safety while facilitating appropriate commercial, industrial, infrastructure or other uses with potential adverse off-site impacts.
- Avoid locating incompatible uses in areas that may be impacted by adverse off-site impacts from commercial, industrial and other uses.
- Protect commercial, industrial and other employment generating uses from encroachment by use or development that would compromise the ability of those uses to function safely and effectively.

17.03-1S Industrial land supply

- Provide an adequate supply of industrial land in appropriate locations including sufficient stocks of large sites for strategic investment.
- Identify land for industrial development in urban growth areas where: Good access for employees, freight and road transport is available.
- Appropriate buffer areas can be provided between the proposed industrial land and nearby sensitive land uses.

- Protect and carefully plan existing industrial areas to, where possible, facilitate further industrial development.
- Preserve locally significant industrial land for industrial or employment generating uses, unless long-term demand for these uses can be demonstrably met elsewhere.
- Avoid approving non-industrial land uses that will prejudice the availability of land in identified industrial areas for future industrial use.

17.03-2S Sustainable industry

- Ensure that industrial activities requiring substantial threshold distances are located in the core of industrial areas.
- Encourage activities with minimal threshold requirements to locate towards the perimeter of the industrial area.
- Minimise inter-industry conflict and encourage like industries to locate within the same area.
- Protect industrial activity in industrial zones from the encroachment of commercial, residential and other sensitive uses that would adversely affect industry viability.
- Encourage industrial uses that meet appropriate standards of safety and amenity to locate within activity centres.
- Support the retention of small-scale industries servicing established urban areas through appropriate zoning.
- Provide adequate separation and buffer areas between sensitive uses and offensive or dangerous industries and quarries to ensure that residents are not affected by adverse environmental effects, nuisance or exposure to hazards.
- Encourage manufacturing and storage industries that generate significant volumes of freight to locate close to air, rail and road freight terminals.

LOCAL POLICY

Clause 21.01-4 Key issues

- 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.
- Planning for sufficient land supply for economic growth.
- Supporting the agglomeration of key businesses and industries.
- Enabling innovation in key businesses and industries.
- Providing sufficient land for industrial growth and expansion.
- Identifying and encouraging the redevelopment of urban renewal precincts.

Clause 21.02-3 Urban Renewal Precincts

- Facilitate land consolidation, master planning and other mechanisms to support redevelopment potential of urban renewal precincts.
- Identifies 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. The following are urban renewal precincts

- *Scott Parade Precinct (inner city mixed use).*
- *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).*
- *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).'*

In these precincts, the policy seeks to:

- *'Facilitate land consolidation, master planning and other mechanisms to support redevelopment potential of urban renewal precincts*
- *Discourage new development with adverse amenity potential in urban renewal precincts which would compromise the long term potential for mixed use development.'*

The urban renewal precincts are shown (with a red border outline) in the Housing Framework Plan below.

Clause 21.07-4 Industry

- Promote Ballarat as a location for the establishment of high technology industry.
- Encourage appropriate infill development in existing industrial areas to maximise the use of existing infrastructure and services.
- Encourage new industrial development to take locational advantage of the transport and distribution opportunities provided by the Western Freeway, Western link Road, Ballarat Aerodrome, and rail services.
- Ensure an adequate supply of zoned, developable and readily serviced industrial land is available in a range of locations.
- Ensure a variety of lot sizes is provided to meet future demand for industrial land.
- Protect large holdings in strategically important long-term industrial growth areas for future industrial development.
- Ensure that new industrial lots are of sufficient size (generally having a minimum area of 1,500 square metres), to accommodate their intended use.

- Provide lot sizes between 1500 square metres and 3 hectares for small to medium sized industry in the Delacombe and Alfredton areas.
- Prevent land from being rezoned for industrial purposes where a detrimental amenity impact is likely to result on existing and proposed residential areas.
- Require new development to incorporate landscaping and other measures to soften the visual impact of industrial buildings and screen outdoor storage areas.
- Discourage industrial uses from locating in Mixed Use Zones where there is a potential for conflict with other uses.
- Support landowners in old and inappropriate industrial areas which interface with sensitive land uses to transition to other more complementary uses.
- Discourage new sensitive uses being located within the buffer of existing industrial sites.

Clause 21.07-2 regionally significant sites

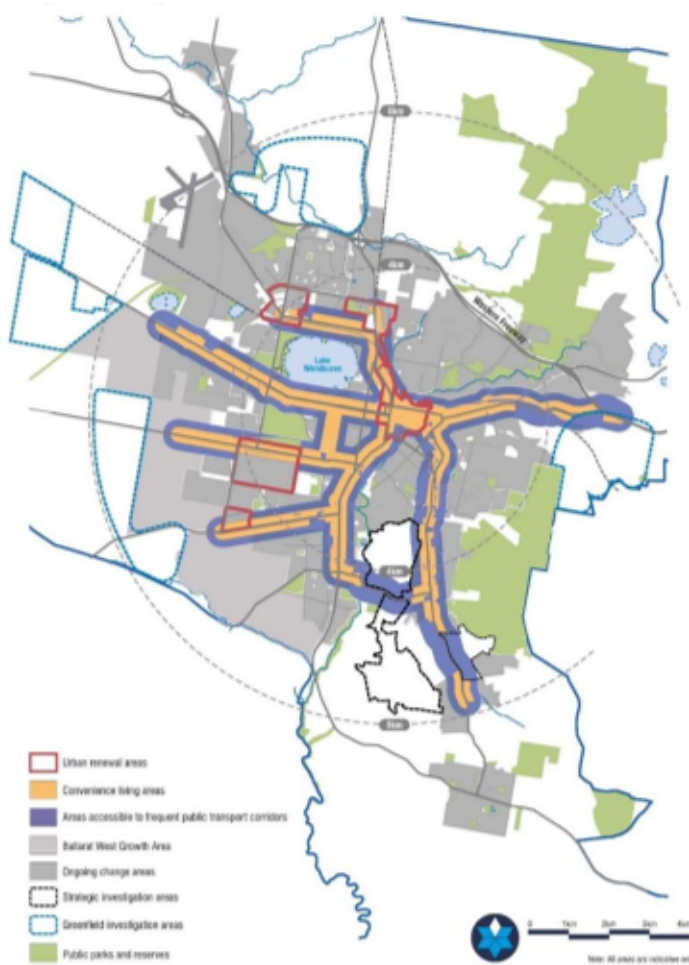
- Identifies BWEZ as a regionally significant precinct, that seeks to “ensure industrial land is serviced, accessible and protected from encroachment so it can continue to support high-employing industrial businesses, which are critical to jobs in the Ballarat.”

Clause 21.07-4 Industry

Incorporates the following objectives for industrial land:

- *To improve the long-term viability and security of industry.*
- *To support the development of the Ballarat West Employment Zone as the primary industrial area and the preferred location for clean, advanced manufacturing, research and development, and ancillary services.*
- *To protect and provide buffers for existing and new industry from the encroachment of sensitive uses and vice versa.*

FIGURE 23: HOUSING FRAMEWORK PLAN IN BALLARAT PLANNING SCHEME



Source: Clause 21.02-3 of the Ballarat Planning Scheme

STRATEGY

Regional Economic Development Strategy (REDS) 2022¹

The REDS was prepared by Regional Development Victoria, the Victorian Government's lead agency responsible for rural and regional economic development. Ballarat falls into the 'Central Highlands' key region in the REDS, which has 5 strategic directions:

1. **Enhance the Agri-Food supply chain.** This region is a major food producer in Victoria.
2. **Grow the Visitor and creative economies.** With a grand history of gold towns and a rapidly growing population, the region is situated to capitalise on creativity and visitation.
3. **Renewable energy and cleaner waste management.** The development of local renewable energies will allow the region to become more self-sufficient.

¹ Regional Development Victoria. (2022). Central Highlands Regional Economic Development Strategy (REDS) 2022: Summary. Retrieved from https://www.rdv.vic.gov.au/__data/assets/pdf_file/0010/2063890/Central-Highlands-REDS-2022-Summary.pdf

4. **Invest in health, education, care, and social assistance.** These are some of the fastest growing sectors and will only be more important with an aging population.
5. **Enhance the Innovation Economy.** Emerging opportunities in research, advanced manufacturing and entrepreneurship could provide many new high-wage jobs.

Directions 3 and 5 are of relevance to Ballarat's industrial land strategy. By rearranging industrial precincts to be close together, access to useful industrial infrastructure, such as waste disposal, transport and freight, government invested projects, and other organisations with similar purposes can all be accessed more efficiently by the companies in those precincts.

Ballarat Economic Development Plan (BEDP) 2021-25²

The BEDP, prepared by City of Ballarat, defines Council's economic plan for the next 5 years. In the plan, there are 6 strategic focus areas:

1. **Circular economy,** with a focus on renewable energy, particularly wind.
2. **Advanced manufacturing.** Use of the cutting edge of technology to increase the outputs of manufacturing.
3. **Knowledge-intensive business services.** Capitalising on the education pipeline already present in Ballarat.
4. **Creative/Cultural Industries.** Supporting entrepreneurship within the city
5. **Sustainable food sourcing.** Connecting with institutions across the state to capitalise on sustainable food sources, implementation of the circular economy.
6. **Urban renewal and community wealth building.** Increasing marketing and visibility to continue to grow the visitor economy.

Focus areas 1, 2, and 6 are of relevance to Ballarat's industrial land strategy. For areas 1 and 2, by rearranging industrial precincts to be close together, access to useful industrial infrastructure, such as waste disposal, transport and freight, government invested projects, and other organisations with similar purposes can all be accessed more efficiently by the companies in those precincts. Area 6 is directly linked to the renewal of ineffective industrial areas, as their renewal into residential, creative or community focussed precincts could be an innovative way to strengthen Ballarat's economy.

Ballarat Regional Council Budget 2022-23³

The Ballarat City Council produces an annual budget with economic directions for the municipality. It has 6 goals in which its spending amounts are categorised:

1. *An environmentally sustainable future.*
2. *A healthy, connected, and inclusive community.*
3. *A city that fosters sustainable growth.*
4. *A city that conserves and enhances our natural and built assets.*
5. *A strong and innovative economy and city.*

² City of Ballarat. (n.d.). Economic Development Plan 2021-2025. Unpublished document supplied by City of Ballarat.

³ City of Ballarat. (2022). Council budget 2022-23. Retrieved from https://www.ballarat.vic.gov.au/sites/default/files/2022-06/CoB%20Budget%202022-23_FINAL.pdf

6. *A council that provides leadership and advocates for its community.*

Goals 1, 3 and 5 are of relevance to Ballarat's industrial lands. By rearranging industrial precincts to be close together, access to useful industrial infrastructure, such as waste disposal, transport and freight, government invested projects, and other organisations with similar purposes can all be accessed more efficiently by the companies in those precincts.

Ballarat Housing Strategy 2023-2041 (BHS)⁴

The BHS is currently in development. In the preliminary discussion paper prepared by the City of Ballarat, the City recognises a need to streamline the construction of new housing to match the growing population of the region, and to better utilise established areas.

Many of the constraints identified in the paper relate to the location of housing, where many properties are located in higher risk areas, prone to flooding and bushfires. To combat these issues, housing infill and higher density development has been recognised as a cost-effective method, to reduce the environmental risks to property seen in the outer areas of Ballarat.

To ensure enough housing is delivered for the growing population of Ballarat, the BHS discussion paper suggests some residential infill strategies. This includes the rezoning of Commercial 1 zoned land and Rural Living zoned land, as a means for further housing development; assessing the suitability of underutilised mixed-use land, which can be converted to higher density housing; and converting underutilised and isolated Industrial zoned areas for residential use.

⁴ Ballarat City Council. (2021). Ballarat Housing Strategy Discussion Paper. Retrieved March 28, 2023, from <https://mysay.ballarat.vic.gov.au/ballarat-housing-strategy>

FIGURE 24: CURRENT KEY RESIDENTIAL ZONINGS IN CENTRAL BALLARAT

Source: Ballarat Housing Strategy 2023-2041 Discussion Paper

Ballarat West Employment Zone (BWEZ) Development Plan 2021⁵

The BWEZ is a state significant industrial precinct, located next to the Ballarat aerodrome, which is planned to have ongoing construction until 2030. Through investment from both public and private

⁵ Development Victoria. (n.d.). Ballarat West Employment Zone. Retrieved March 28, 2023, from <https://www.development.vic.gov.au/projects/ballarat-west-employment-zone?page=overview>

sources, the precinct has seen the majority of its lots of varying sizes sold in the first 3 stages of the project. As of October 2022 work has begun on the intermodal freight hub (stage 4). A circular economy is at the forefront the precinct's development, with a focus on renewables and clean manufacturing processes.

FIGURE 25: THE BWEZ PLAN



Source: Ballarat Planning Schemes online – Special Use Zone – Schedule 14

Western and North Western Growth Areas Framework Plan 2022⁶

Ballarat's current growth directions are to the North and West of the City, as outlined in the Growth Areas Framework Plan. These growth areas are crucial for accommodating Ballarat's future population,

⁶ City of Ballarat. (2022). Ballarat Growth Areas. Retrieved March 28, 2023, from <https://mysay.ballarat.vic.gov.au/ballarat-growth-areas>

as current projections show a need for a further 1000 houses built per year until 2040, with the current greenfield land supply set to run out by 2024-25.

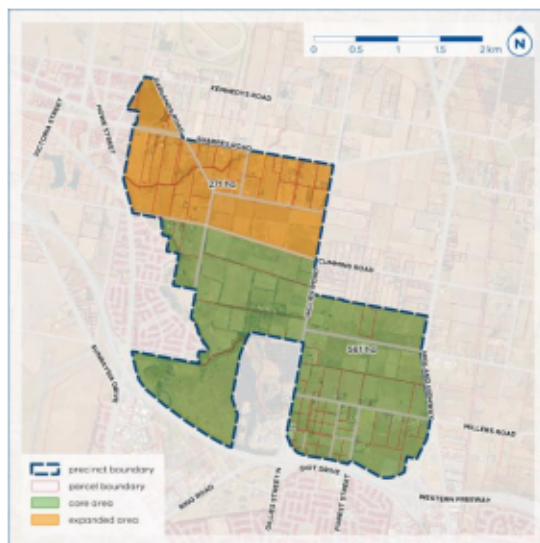
To maintain a supply of developable land, it is therefore imperative that there be some rezoning in the region. The Growth Areas Framework Plan is a structured process for overcoming this barrier to growth in Ballarat, and having already completed a consultation with the community, the plan should be able to come into effect before the greenfield land runs out.

The plan mentions the importance of urban renewal and infill development as a supplementary strategy for accommodating projected growth. It also acknowledges that newly zoned land requires greater investment of resources than the conversion of existing sites in established areas.

Ballarat North Precinct Structure Plan (NPSP) 2023⁷

The Ballarat NPSP is in the pre-commencement project scoping phase being prepared by the Victorian Planning Authority in conjunction with City of Ballarat. The subject area is one of the main development sites for Ballarat going forward. It is earmarked for residential development, and has a focus on green spaces, environmentally sustainable practices, and transport infrastructure to support a walkable and active lifestyle.

FIGURE 26: NPSP MAP



Source: Ballarat NPSP website

Ballarat Activity Centres Strategy (BACS) 2012⁸

The BACS outlines key principles for the activity centre planning in Ballarat. In order to reap the benefits of agglomerations of production, the document seeks to physically locate knowledge based businesses

⁷ Victorian Planning Authority. (n.d.). Ballarat North. Retrieved March 27, 2023, from <https://vpa.vic.gov.au/project/ballarat-north/>

⁸ HillPDA. (2012). Ballarat Activity Centres Strategy. <https://ballarat.vic.gov.au/sites/default/files/2019-04/Ballarat%20Activity%20Centres%20Strategy.pdf>

close together in clusters. It states that small sites or areas of industrial activity surrounded by residential land should be designed out of the urban structure and converted.

While the document is relatively dated, and does not directly pertain to the updated activity centres, its principles remain relevant, including:

Principle 9. *Encourage new retail and office development (other than local daily convenience shops) to locate in existing or planned Activity Centres, including bulky goods retailing.*

Principle 10. *Discourage new retail and office development (including bulky good retailing) from locating out of existing or planned Activity Centres.*

Principle 21. *Establish a pattern and distribution of Activity Centres throughout the urban area of Ballarat and the wider municipality that enhances the sustainability of the Ballarat urban areas.*

Isolated industrial lands in Ballarat should therefore be considered as they are consolidated.

Victoria's Commercial Land Use Zoning 2020⁹

In 2020, the Australian Productivity Commission reviewed the efficacy of Commercial land use zoning in Victoria. The report was not focussed on Ballarat specifically, but the principles of the paper are applicable across the state. One of the key takeaways from the report was the noted negative impacts of "incompatible land uses", such as positioning industrial zones next to residential zones, as the noise and sight pollution, traffic congestion and reduction of public facility access can impact liveability for residents.

⁹ Productivity Commission. (2019). Victoria's Commercial Land Use Zoning.
<https://www.pc.gov.au/research/completed/vic-commercial-zoning/vic-commercial-zoning.pdf>

Appendix B: Peer review of the ELR Method

Independent of the method used in the report to segment regionally and locally significant land demand and supply SGS generated separate overall demand scenarios to compare to (and 'sense check') those prepared in the Hill PDA Background ELR.

HillPDA Method in the Background ELR

HillPDA used three methods in the Background ELR to forecast demand and years supply. Across the methodologies, HillPDA used vacant land supply as their main metric for "available land", though this does not reflect the potential for increased use intensity of employment land. The results are summarised in Table 27.

TABLE 27: HILLPDA DEMAND AND SUPPLY

Method	Occupied supply (ha)	Vacant supply (ha)	Total supply (ha)	Take-up rate (ha, p.a.)	Years of supply	2021 – 2051 Demand
Method 1 – Land take up	978.42	370.3	1348.72	9.01	41	270.3
Method 2 – Population growth	978.42	370.3	1348.72	17.69	21	529.8
Method 3 – Floorspace growth	978.42	370.3	1348.72	11.58	32	347.4

Source: Employment Lands Review, HillPDA, 2021

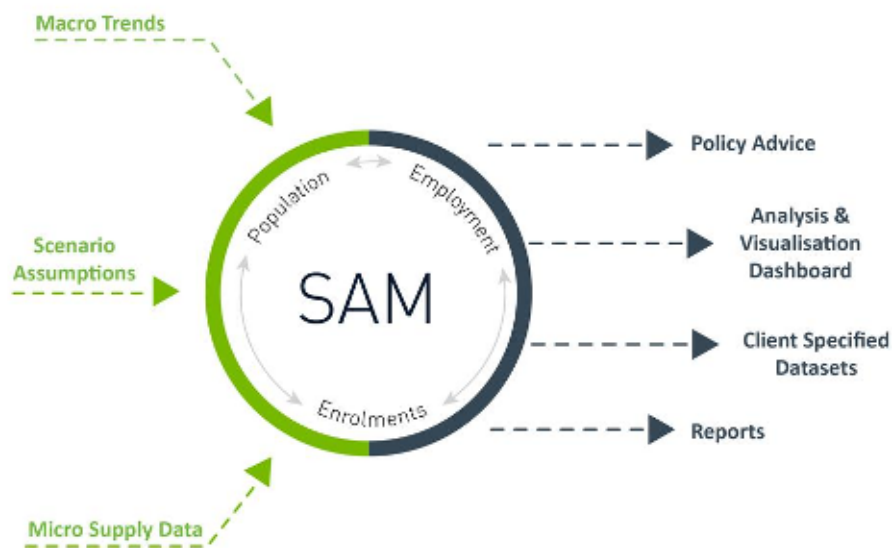
SGS Alternative Method

1. Identify industrial employment activity

SGS employed data from a 'small area model' (SAM) to forecast the employment activity, by ANZSIC category, occurring on industrial zoned land.

SAM forecasts are based on a suite of variables that combine 'top down' and 'bottom-up' methodologies. This produces forecasts that account for macroeconomic influences on micro spatial data and trends. Additionally, SAM can be disaggregated to a fine-grain spatial scale to allow for custom geographies.

FIGURE 27: SGS SMALL AREA MODEL (SAM)

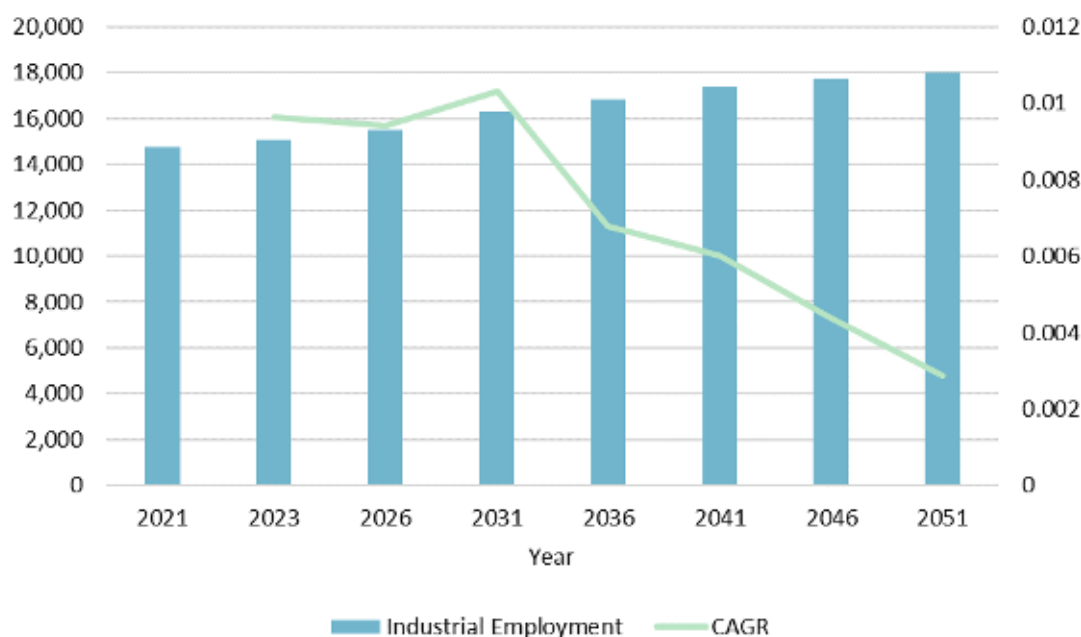


Source: SGS Economics and Planning

The modelling process projects employment across the whole LGA at a small area scale known as 'travel zone'. Using travel zones as building blocks, employment can be attributed to industrial areas, in alignment with land zoning, using a measure of 'best fit'. The approximate employment forecasts for industrial land, i.e. industrial employment activity are shown in.

The forecast predicts a declining growth rate in industrial employment for Ballarat LGA, which might equate to a slowing demand for industrial floorspace.

FIGURE 28: INDUSTRIAL EMPLOYMENT GROWTH, BALLARAT LGA



Source: SGS Economics and Planning, 2023

2. Identify demand for industrial land

To translate employment to industrial floorspace, a floor area to job ratio is applied (FAJR). A FAJR is the amount of floorspace “required” per full time equivalent worker (FTE). Industrial lands have higher FAJR’s as the employment density is low and the industry requires more land (for storage, trucks, machinery etc.).

Applying the FAJR to employment figures produces an estimate of ground floor demand which can then be translated to land demand based on a floorspace ratio (FSR). FSR is the ratio of building area to land. From the land audit in Ballarat, at a lot-by-lot level, the average FSR in industrial areas was found to be 0.3.

For modelling purposes, the FSR has remained constant but, to include sensitivity testing, SGS has chosen a range of FAJR. The changes in FAJR relate to assumptions around more dense industrial employment to more land intensive industrial employment (lower density). The density of employment will influence the type of employment activity which can occur as some industrial processes require more land.

Applying these assumptions to the employment forecasts results in the base case demand of industrial floorspace.

TABLE 28: EMPLOYMENT TO LAND CONVERSION ASSUMPTIONS

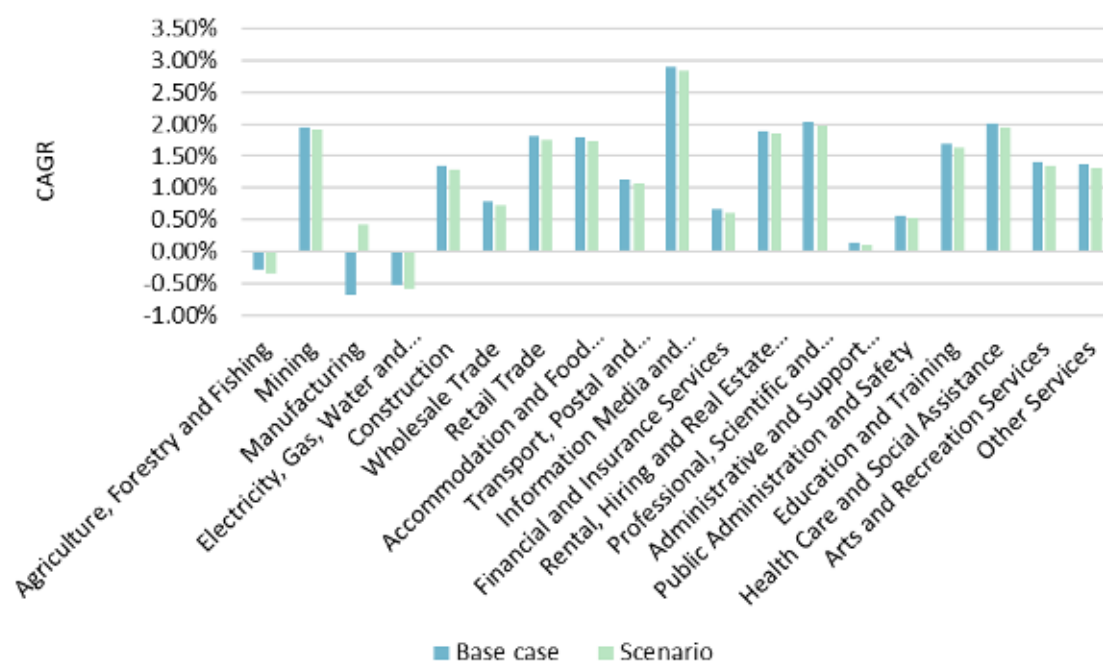
Range	FAJR (ha)	FSR (ha)
Low (dense employment)	180	0.3
Medium (lower density employment)	200	0.3
High (spread out employment)	220	0.3

Source: SGS Economics and Planning

Adjusted demand scenario: stronger industrial employment performance

SGS developed an adjusted demand scenario which focused on a sustained manufacturing operation, while the original forecast was based on a shrinking industrial employment growth rate. However, taking into consideration the strategic plans for the BWEZ, the adjusted scenario focuses on industrial employment growth primarily through the strengthening of manufacturing.

FIGURE 29: BASE CASE VS MANUFACTURING SCENARIO, 2021-51

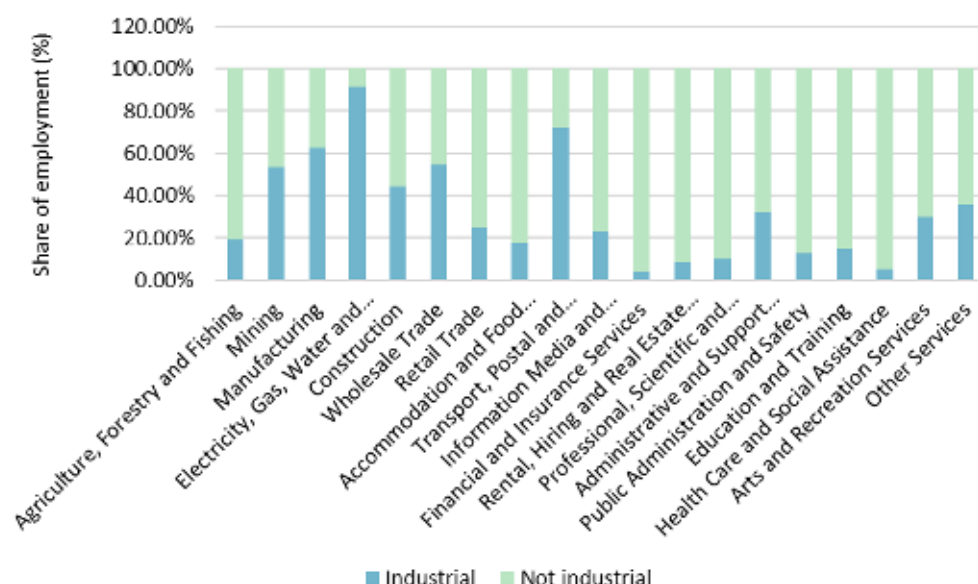


Source: SGS Economics and Planning, 2023

The base case showed a decline in the share of manufacturing from 7.46 percent (2021) to 3.94 percent (2051), the adjusted scenario assumes a more sustained manufacturing industry at 5.5 percent of total employment in 2051. This outcome for manufacturing employment is in line with the recent performance across the last five years (2016 – 2021 census employment data). In both cases total employment remains constant at 79,124 in 2051.

To translate what this scenario of stronger manufacturing means for industrial land demand, how employment in the LGA utilises industrial land was assessed. Using the land audit information, employment across 'industrial' and 'not industrial' land can be calculated or represented across Ballarat.

FIGURE 30: DISTRIBUTION OF EMPLOYMENT ON INDUSTRIAL LAND, 2021-51



Source: SGS Economics and Planning, 2023

This was used as the basis to distribute the scenario's employment as 'industrial' or 'not industrial'. Once industrial employment was isolated the same methodology was followed to convert to industrial floorspace and land demand.

Demand and supply comparison

Considering the adjusted employment values, SGS applied the range of FAJR and FSR to calculate demand. This was compared against the supply values provided by council to provide the expected years supply of industrial land with the assumed take up rate. SGS's results are shown, and a comparison of HillPDA's results are shown below.

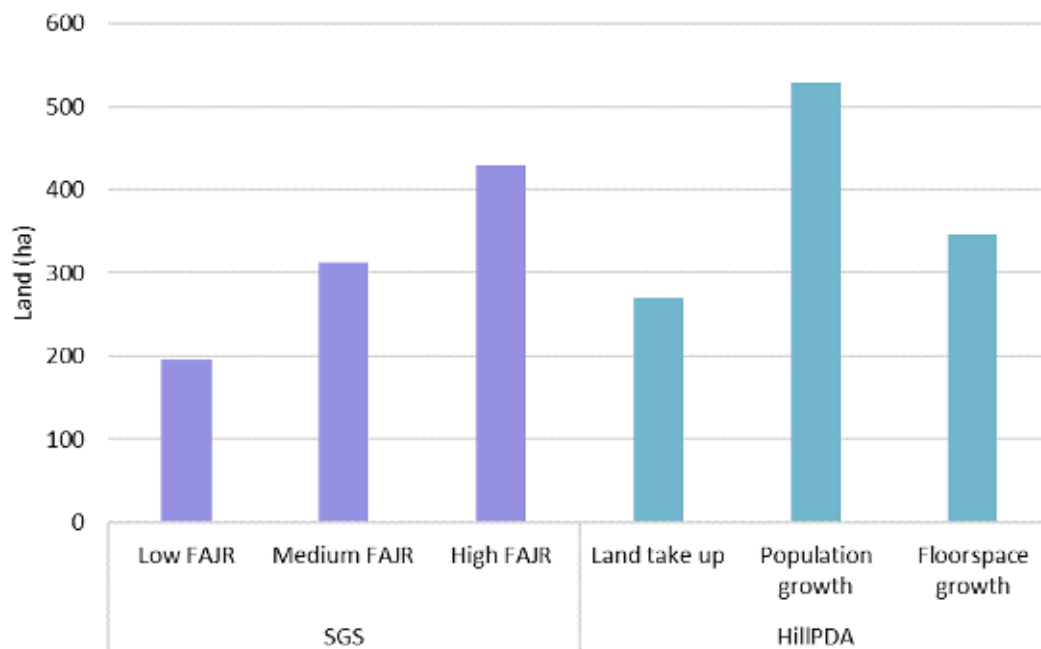
This indicates that both approaches yield future estimates of demand and 'years of supply' that are comparable, within similar ranges. Not unexpectedly perhaps, given the different forces and drivers at play between industrial land demand and population growth, the Hill PDA 'population growth' based scenario is perhaps the unlikely outlier.

TABLE 29: SGS SUPPLY AND DEMAND

Range	Occupied supply (ha)	Vacant supply (ha)	Total supply (ha)	Take-up rate (ha, p.a.)	Years of supply	2021 – 2051 Demand
Low FAJR (dense employment)	638	455	1093	6.5	70	195
Medium FAJR (lower density employment)	638	455	1093	10.4	44	312
High FAJR (spread out employment)	638	455	1093	14.33	32	430

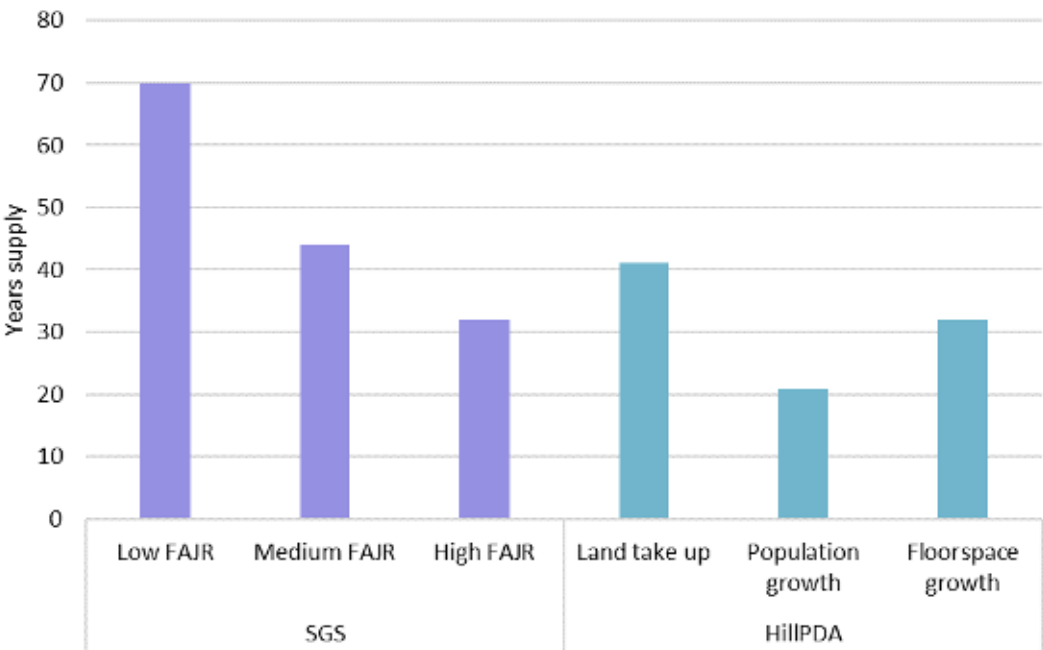
Source: SGS Economics and Planning, 2023

FIGURE 31: BALLARAT NET DEMAND 2021-2051, SGS AND HILLPDA METHODOLOGIES



Source: SGS Economics and Planning, 2023

FIGURE 32: BALLARAT INDUSTRIAL LAND YEARS SUPPLY, SGS AND HILLPDA METHODOLOGIES



Source: SGS Economics and Planning, 2023

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