



# DWELLINGUP FUTURES ROADMAP **2021-2036** AND BEYOND

**PART I – ECONOMIC DEVELOPMENT  
SCENARIO ASSESSMENT**



**DWELLINGUP**  
*where trails meet*

**WILD@HEART**



This report has been prepared by FAR Lane and Hatch Roberts Day on behalf of the Shire of Murray, Peel Development Commission and the Dwellingup Futures Group.

The Shire of Murray acknowledges Dwellingup's traditional custodians, the Bindjareb People of the Noongar Nation, their continuing connection to the land, waters and community and pay our respects to their Elders both past and present.

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# 1. INTRODUCTION

## A COMMUNITY EXPERIENCING CHANGE

Greater Dwellingup is a town experiencing a period of rapid change. Over the last 25 years it has evolved from a forestry and mining community that was a ‘secret spot’ to nature lovers, to a popular and accessible place that has a strong identity and value in the Western Australian community. This evolution has been driven significantly by investment, growth, and transformation across Greater Dwellingup’s key industries of mining, tourism, recreation, forestry, and natural resource management.

The local demographic is also shifting, influenced by regional population growth, tree change retirement, and the types and level of employment availability. Significant planned eastern expansion of the Pinjarra town site and establishment of a major industrial precinct between Pinjarra and Greater Dwellingup (provided for in State and Local planning frameworks<sup>1</sup>) presents potential regional employment and population implications that may impact upon the Greater Dwellingup community. A changing natural environment is bringing hotter weather and threatening the already fire-vulnerable Northern Jarrah Forest, a unique and sensitive ecosystem.

COVID-19 has brought significant demand for regional travel and short-stay accommodation to Greater Dwellingup. This, as well as the recently opened Dwellingup Trails and Visitor Centre, presents an exciting opportunity for local businesses and tourism development. Federal, State and Local Government jointly provided \$8.4million to helping the community realise its tourism potential through the Adventure Trails Project<sup>2</sup>. Strong ongoing demand for regional experiences is also a challenge for this small community in ensuring the rental market continues to cater for long term residents, and Greater Dwellingup continues to be a place to live, not just to visit.

These changes are having a significant impact on the small but passionate community of 720 residents who live in Greater Dwellingup and its surrounds as they seek to realise a resilient and thriving community that can take advantage of opportunities and mitigate threats presented by change.

<sup>1</sup>South Metropolitan Peel Subregional Framework

<sup>2</sup><https://www.dbca.wa.gov.au/news/dwellingup-a-trailblazer-for-mountain-biking>

# A ROADMAP FOR FUTURE GROWTH

To plan and manage for anticipated change and growth, the Shire of Murray, with the support of the Peel Development Commission (PDC), established the Dwellingup Futures Project and the Dwellingup Futures Group with the aim to develop a Roadmap outlining a vision and strategic intent for the future of Dwellingup. The goal of the Roadmap is to support Greater Dwellingup's community and key stakeholders, including Government and industry, to work towards a shared vision where convergent priorities are recognised, understood and acted upon and divergent points of view are able to be dealt with constructively. The Roadmap provides a critical resource, capturing the aspirations and priorities of the Dwellingup community. These will be used as a basis for community inputs into planning and statutory processes in the future. Importantly, the Roadmap itself is a strategic document that does not infer nor supersede any existing or future statutory rights or obligations.

The Roadmap is a two-part report that describes a vision for Greater Dwellingup's future and how the development of local key industries will influence to what extent that vision can be achieved. An implementation pathway that outlines the projects, partnerships and resources required to realise the community's goals is also included.

## Part I – Economic Development Scenario Assessment

- **Vision, goals and strategic priority areas** – An agreed vision and strategic intent for the future of Greater Dwellingup.
- **Dwellingup Futures Scenarios** – Three future scenarios that identify and describe challenges and opportunities while considering how different sectors, industries and land-uses in the Greater Dwellingup area can co-exist to the betterment of the town. Each scenario (detailed appendix 1) is supported by detailed social and economic modelling indicators relevant to the proposed vision and strategic intent for the future growth of Greater Dwellingup.
- **Findings** – A set of key findings that explore the outcomes of the scenario analysis against the community's goals and informs recommendations actions outlined in Part II: Implementation Pathway Report.

## Part II – Implementation Pathway Report

- **Implementation structures and principles** – A strong governance structure to guide the implementation of the Roadmap.
- **Priority programs** – Three core program areas within which key actions and projects are focused.
- **Detailed action plan** – An in-depth action-oriented document that steps out real world projects and initiatives and the partnerships, resources and time frames required to realise them.



# 2. DWELLINGUP FUTURES PROJECT

The Dwellingup Futures Project brings together the experience and expertise of a range of stakeholders and groups, ensuring the Roadmap captures a diverse range of perspectives and produces a robust vision that is genuinely reflective of community views. It is the culmination of extensive strategic, planning, engagement, and research activities, outlined in figure 1.

Figure 1 – Dwellingup Futures Project Timeline





Throughout the project, the stakeholders and groups outlined in figure 2 have been consulted with to understand their aspirations, develop and test assumptions and collect evidence. The Stakeholder Working Group (SWG - also known as Dwellingup Futures Group), supported by the Technical Advisory Committee (TAC) is the key group, chaired by the Peel Development Commission’s Chairperson. They are responsible for driving the actions and outcomes of the Dwellingup Futures Roadmap. The Community Visioning Working Group (CVWG), comprising of 12 people, was heavily involved in a range of consultation activities, and were selected based on agreed criteria, via an Expression of Interest process.

**Figure 2 – Dwellingup Futures Project Stakeholder Groups**

COLLABORATED		CONSULTED	
STAKEHOLDER WORKING GROUP	<ul style="list-style-type: none"> <li>Local groups and associations</li> <li>Government Agencies</li> <li>Alcoa of Australia</li> </ul>	COMMUNITY VISIONING WORKING GROUP	<ul style="list-style-type: none"> <li>Local interest groups</li> <li>Local businesses</li> <li>Local residents</li> <li>Local accommodation providers</li> </ul>
TECHNICAL ADVISORY COMMITTEE			

**Stakeholder Working Group Members**

- Peel Development Commission Chairperson (Chair)
- Shire of Murray President (Deputy Chair)
- Department of Biodiversity, Conservation and Attractions
- Department of Primary Industry and Regional Development
- Peel Development Commission
- Department of Mines, Industry Regulation and Safety
- Department of Jobs, Tourism, Science and Innovation
- Department of Local Government, Sport and Cultural Industries
- Department of Premier and Cabinet
- Department of Planning, Lands and Heritage
- Department of Water and Environmental Regulation
- Forest Products Commission
- Alcoa Australia
- Dwellingup Community Compact
- Dwellingup Protection Group
- Peel Harvey Catchment Council

**Technical Advisory Committee Members**

- Shire of Murray CEO (Chair)
- Peel Development Commission
- Alcoa Australia
- Department of Planning, Lands and Heritage
- Department of Water and Environmental Regulation
- Department of Primary Industry and Regional Development
- Department of Biosecurity, Conservation and Attractions
- Department of Local Government, Sport and Cultural Industries
- Department of Mines, Industry Regulation and Safety
- Department of Jobs, Tourism, Science and Innovation
- Peel-Harvey Catchment Council
- Forest Products Commission
- Scientist(s)

# THE STUDY AREA

Throughout the development of the Roadmap and associated reports, several study areas were utilised when considering Greater Dwellingup's economic performance and future aspirations. These included:

- Greater Dwellingup – the area encompassing Dwellingup, and the activities and infrastructure in surrounding areas that may have a direct bearing on Dwellingup's economic development characteristics and/or the value proposition of the Dwellingup Town Centre. This is reflected by the study area boundaries in Map 1: Dwellingup Futures Focus Area;
- Dwellingup Town – the boundaries of the Dwellingup town site as defined by the Western Australian Planning Commission
- Shire of Murray – the municipal boundaries of the economy that services, and benefits from economic activities in Dwellingup and surrounds; and
- Statistical Study Area – boundaries for major ABS data sets that provide the most accurate snapshot of economic development activities, statistics and trends.


For the purposes of this Roadmap, “Dwellingup” will refer to the “Dwellingup Town” area as defined above. “Greater Dwellingup” will refer to the area encompassing Dwellingup, and the activities and infrastructure in surrounding areas that may have a direct bearing on Dwellingup's economic development characteristics and/or the value proposition of the Dwellingup Town Centre. In the mapping utilised throughout the document, this spatial area will be referred to as the Greater Dwellingup Focus Area. For further information and maps that describe the above study areas, please refer to Technical Appendix 6 – Study Areas and Maps.

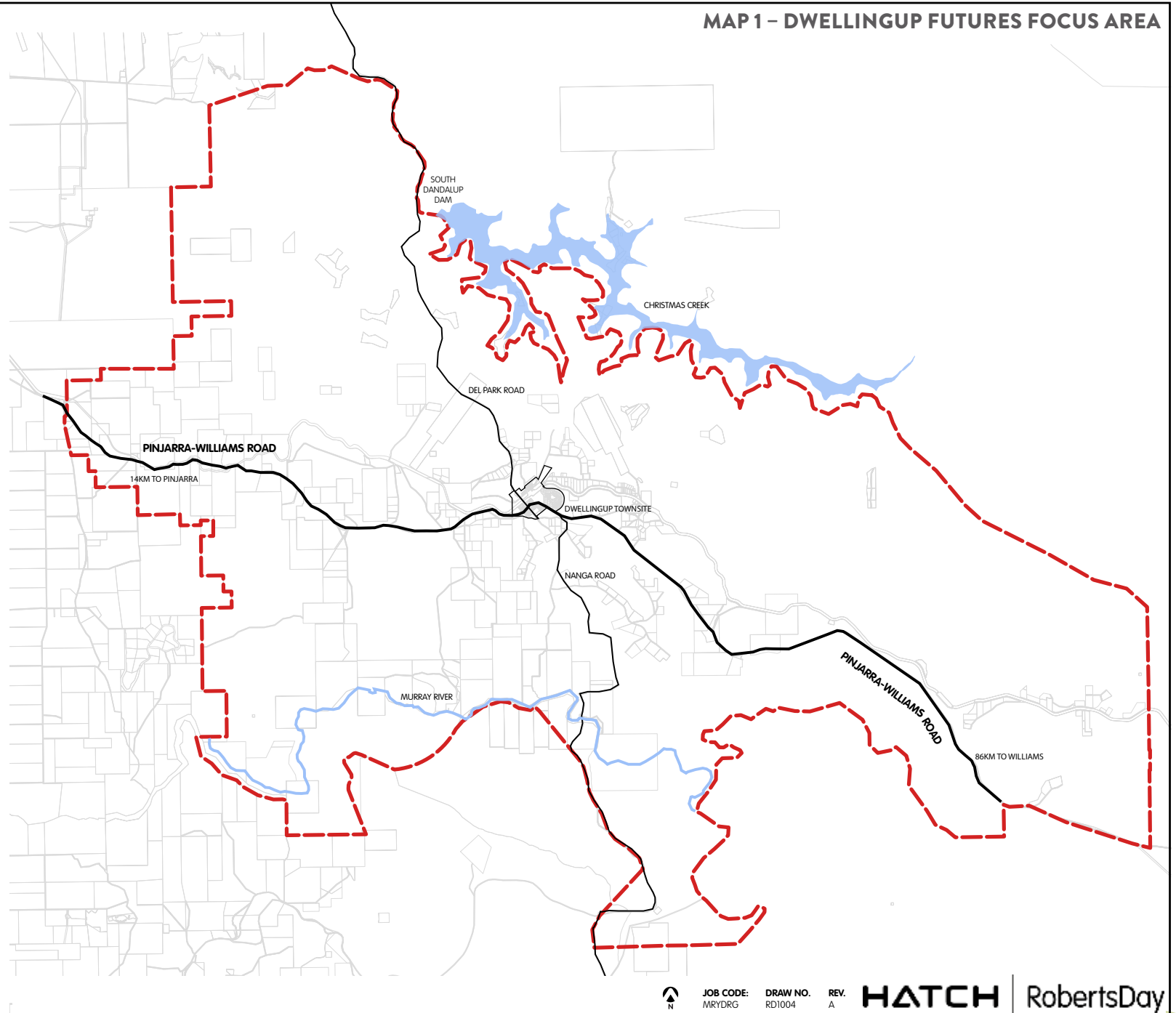




# MAP 1 – DWELLINGUP FUTURES FOCUS AREA

## LEGEND

 Dwellingup Futures Focus Area



DISCLAIMER: ISSUED FOR DESIGN INTENT ONLY. ALL AREAS AND DIMENSIONS ARE SUBJECT TO DETAIL DESIGN AND SURVEY



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**HATCH** | RobertsDay



## 3. DWELLINGUP 2021

Greater Dwellingup is located just over 1 hour south of Perth and situated in the natural beauty of the Darling Escarpment and is recognised as a sacred, spiritual dreaming place for the Bindjareb People of the Noongar Nation. Formally a major timber and milling centre of Western Australia, a forestry department was first established in Dwellingup in 1928 and was followed in 1952 by a Forestry Cadet School. A devastating bush fire in 1961 changed the profile the town. Greater Dwellingup has the charm of a historic country town but also attracts walkers and cyclists in large numbers as both the Munda Biddi and Bibbulmun Tracks pass through the community, while the surrounds are packed with hiking, mountain bike, 4-wheel drive and canoe trails.



### COMMUNITY<sup>1</sup>

- Total population of 721 (Greater Dwellingup).
- Town site population 354 .
- The population has remained approximately the same over recent years.
- The median age of residents is 46, two years older than the Shire of Murray and 10 years over the Greater Perth and Western Australia median age.
- The median weekly household income is \$1,200, approximately \$400, or 25% lower than Greater Perth and Western Australia.

<sup>1</sup> More detailed demographic analysis and evidence is available in technical appendix 1 Dwellingup Land Use Review, technical appendix 2 Dwellingup Futures Literature Review, and technical appendix 3 the Economic Trends and Land Use Analysis report.

## AGE PROFILE<sup>2</sup>

- High proportion of adults aged between 40 and 70.
- Low proportion of young adults (aged) 15-30.
- High proportion of children (aged less than 15).

Young adults tend to move away from Greater Dwellingup for education and employment, whilst older adults and dependent children are more likely to reside in Greater Dwellingup.

## THE NATURAL ENVIRONMENT<sup>3</sup>

- Greater Dwellingup is located within the Darling Escarpment and is home to a diverse range of flora and fauna.
- The Dwellingup town site is surrounded by State Forest in which fragmented areas of rural zoned farmland are present.
- The area is prone to drought and bushfires during dry seasons.
- The Northern Jarrah Forest is one of the most vulnerable ecosystems in Australia and requires careful management to ensure its survival.
- The balance between industry and environment has been relatively successful. However, negative impacts include dieback, the growth of non-native species and changes in soil quality in post-activity lands.

## HOUSING AND LAND USE

- Median house sale price in August 2020 is \$340,000, a 3% decline from August 2016<sup>4</sup>.
- 24.8% of houses are rented, 37.6% are owned outright, and 33.2% are purchased<sup>5</sup>.
- In recent years there has been a general small to moderate decline in house prices<sup>6</sup>.
- In the year ending August 2020, 13 dwellings were sold, with all sales occurring between June and August.
- Sales per annum since 2017 has remained stable at over 10 Dwellings, with 2018 and 2019 having lower sales volumes of less than 10 Dwellings.
- There were 390 dwellings as of 2016<sup>7</sup>, 299 of these were reported to be occupied on Census night.
- Many properties have been recorded as currently being underdeveloped or underutilised<sup>8</sup>.

<sup>2</sup> More detailed demographic analysis and evidence is available in technical appendix 1 Dwellingup Land Use Review, technical appendix 2 Dwellingup Futures Literature Review, and technical appendix 3 the Economic Trends and Land Use Analysis report.

<sup>3</sup> Dwellingup Protection Group Position Statement Technical Report

<sup>4</sup> CoreLogic RP Data 2020

<sup>5</sup> ABS Census 2016

<sup>6</sup> Roberts Day – Land Use Review 2020

<sup>7</sup> ABS Census 2016

<sup>8</sup> Roberts Day – Land Use Review 2020

## LOCAL POPULATION SERVICES

- St John Ambulance Volunteer Post.
  - Dwellingup Primary School.
  - Dwellingup Police Station.
  - Australia Post Dwellingup.
- .....

## ECONOMY

### The majority of jobs based in Greater Dwellingup are in<sup>9</sup>:

- Mining - 35%, predominately in metal ore mining.
- Accommodation and food services – 14%, predominately in food and beverage service.
- Manufacturing, 11%.
- Tourism, 9%.

### Greater Dwellingup's employed residents mostly work in<sup>10</sup>:

- Mining - 16%, predominantly metal ore mining.
- Accommodation and food services – 13% (predominately in food and beverage services).
- Manufacturing, 10%.

## KEY INDUSTRIES

### MINING <sup>11</sup>

Alcoa Australia has been operating as an integrated bauxite miner and alumina producer in the south-west of Western Australia since 1963 with bauxite mines (Huntly, Willowdale) and alumina refineries (Kwinana, Pinjarra, Wagerup). Alcoa Australia produce approximately 45% of Australia's alumina, the feedstock for aluminum. Alcoa's Huntly Bauxite Mine is the sole feedstock for the nearby Pinjarra Alumina Refinery as well as its Kwinana Refinery. As bauxite forms in shallow pods, a constantly moving mining footprint occurs followed by progressive rehabilitation. Huntly mining is currently located at Myara to the east of North Dandalup. The proposed next Huntly mining areas are Myara North and Holyoake. Studies are undertaken prior to mining to identify and (where appropriate) protect important environmental, cultural, and social values. Alcoa do not mine in gazette national parks, nature conservation reserves, Old Growth Forest, or other areas of high conservation value. Of the areas cleared, 77% have been rehabilitated and this work is ongoing. Historically bauxite mining has occurred near Dwellingup, both to the north and south, and is expected to do so in the future.

Future mining is subject to EPA assessment. Alcoa are currently seeking to modernise the environmental approvals for their Huntly Bauxite Mine and Pinjarra Alumina Refinery. In doing so they have submitted plans for environmental assessment by both the State and Commonwealth. Huntly currently mines about 27 Mtpa of bauxite with more than 90% supplied to the Pinjarra and Kwinana refineries.

<sup>9-10</sup>, ABS Census, 2016.

<sup>11</sup> Information provided by Alcoa Australia.

Pinjarra refinery currently produces about 4.7 Mtpa of alumina and has approval to produce up to 5 Mtpa. Production is expected to reach 5 Mtpa in coming years due to efficiency and operational improvements. Approval to produce up to 5.25 Mtpa will enable continued improvements over time. There are no plans for a major refinery upgrade.

## TOURISM

Tourism plays an important role within the Town, driven primarily by Greater Dwellingup's proximity to popular outdoor recreation sites that include hiking, mountain bike trails and water sports. Greater Dwellingup has a range of infrastructure that can support future tourism and visitation in the Town. This includes the development of the National Trails Centre and visitor centre, a 25km network of new mountain bike trails near Lane Poole reserve, the Dwellingup Gap Trails Project, the suspension bridge over the Murray River near Lane Poole, upgrading of key access roads, canoe launching and retrieval facilities at Lane Poole, 4wd trails and associated marketing and promotion.

Twenty-nine people were employed in arts and recreation services in Greater Dwellingup in 2016, reflecting 9% of the labour force<sup>12</sup>. These figures also indicate significant growth from 2011. In 2011 approximately 8% (9 people) of the labour force were employed in arts and recreation, with 2% (14 jobs) of Greater Dwellingup and surrounding areas<sup>13</sup>.

This reflects growth in outdoor recreation more generally and the associated employment benefits of this. In 2016, 130 people were employed in Arts and Recreation in the Shire of Murray reflecting 2% of the population<sup>14</sup>.

<sup>12-15, 17-18</sup> ABS Census 2011 & 2016

<sup>16</sup> <http://www.swdc.wa.gov.au/our-region/statistical-data/timber.aspx>

In 2011, 113 people were employed in arts and recreation services in the Shire of Murray, representing 2% of the labour force<sup>15</sup>. This reflects a marginal decline in employment.

## FOREST PRODUCTS

Forestry was historically the primary industry of the area and maintains a significant level of activity within the Greater Dwellingup region. In Greater Dwellingup, timber is primarily harvested from state-managed forests and reserves as opposed to plantation timber that is often used in the forestry industry.

While there is no available forestry product data for Greater Dwellingup and Peel, as a broad indication South West Region log production has been relatively constant over the last decade. Marginal increases occurred between 2014 and 2017<sup>16</sup>. As a product of Greater Dwellingup's historical ties with forestry, there is a significant amount of land and infrastructure associated with historic mill activities which are now surplus to need.

Consultation with stakeholders identified that land could potentially be utilised for tourism experiences that interface with the Forest Discovery Centre and provide a foundation for Greater Dwellingup to re-establish woodwork education facilities.

The 2016 Census place of work data set identifies that approximately 19 people were employed in agriculture, forestry, and fishing within Greater Dwellingup and the surrounding areas, reflecting 6% of the labour force<sup>17</sup>. This is similar to 2011, where 17 people were employed, representing 3% of the labour force and does not suggest any significant changes in employment over this time period<sup>18</sup>.



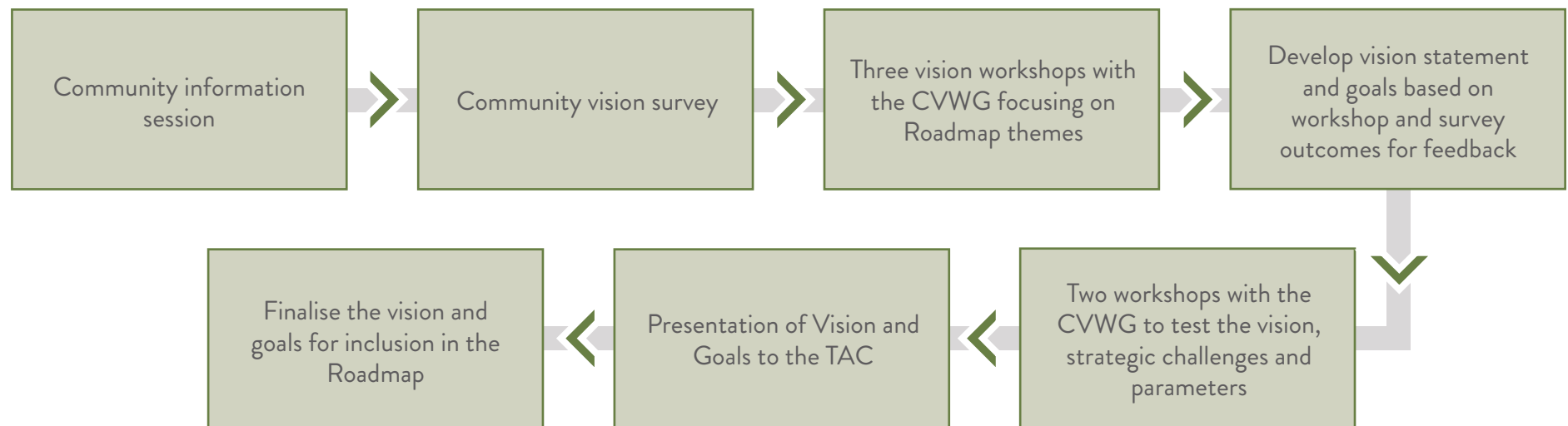
# 4. A VISION FOR DWELLINGUP'S FUTURE

## THE VISIONING PROCESS

Capturing a diverse range of perspectives was essential in developing a robust vision that genuinely reflected community views. A comprehensive engagement program (outlined in figure 3) was conducted with community that included:

- Appointment of a 12-member Community Visioning Working Group (CVWG), comprising invited key stakeholders, Shire staff, as well as special interest groups, businesses and residents that were selected based on agreed criteria, via an Expression of Interest process; and
- A combination of community outreach activities, virtual focus groups and in-person meetings that involved interactive and structured questions and discussions to develop a vision and identify the goals and associated strategic challenges.

**Figure 3 - The visioning process**



Through this process, community members and stakeholders were able to discuss and explore what made Greater Dwellingup inherently unique, what changes were desirable or not, and how they wished for future change, growth, and development to impact the Town and surrounds. The process included some robust conversations where differences of opinion were heard, and assumptions were tested.

The group arrived at a consensus around the following three key elements of a vision for the future of Greater Dwellingup, which are explored further on the following pages.

- **Vision statement** – an over arching statement as to what will characterise future growth in Dwellingup.
- **Goals** – Broad aspirations that need to be achieved if the vision statement is to be realised.
- **Strategic Priorities** – Specific outcomes that need to be realised to support attainment of goals.



## VISION

Future growth in Greater Dwellingup will emanate from making the most of our best assets – enhancing our natural resources, sharing our cultural heritage, supporting our people, and maintaining our small-town charm.

## GOALS

1. Maintain our small-town charm so Greater Dwellingup will be an attractive, interesting place that is self-sufficient and sustainable in the services it offers families.

2. Grow a diverse and resilient economy, offering more pathways for local jobs and career opportunities.

3. Protect and enhance Greater Dwellingup's environment by sensitively managing diverse land-use activities (such as mining, forestry, tourism, agriculture and recreation).

4. Protect and capitalise on our assets through education, creativity, cultural awareness and a scientific approach.

5. Community, Government and Industry cooperatively work together to achieve the objectives of the Dwellingup Futures Roadmap.

## STRATEGIC PRIORITIES

Building a case for investment in community-oriented infrastructure, focusing on improving the quality of life of Greater Dwellingup residents.

Ensure small-town charm is retained whilst supporting growth required to support delivery of education, health, aged care, arts, creative and retail services within Greater Dwellingup.

Realise the capacity to grow population through housing supply that maintains and enhances the charm and unique character of Greater Dwellingup.

Ensure that economic activities complement Greater Dwellingup's small-town charm whilst providing local jobs and career opportunities to support population growth.

Proactively plan and manage economic activities that could impact each other (i.e. mining, tourism, training, education and the knowledge economy and natural resource management).

Increase availability of commercial land that might be required to accommodate additional mixed-use business type activities.

Ensure local business is equipped to take advantage of and service increased tourism visitation.

Develop a shared understanding of environmental risks and priority assets for protection.

Build a wider recognition of the role that the environment plays in Greater Dwellingup's economy, community, and culture.

Where possible, work on a negotiated outcome to proactively manage land-use conflicts.

Build an understanding of the roles that natural resources and industry play in supporting the Greater Dwellingup community.

Develop a shared understanding of priority assets for protection and/or utilisation.

Build recognition of the role that indigenous and non-indigenous cultural heritage will play in its future.

Build the case for natural resource management, science, and research opportunities to attract interest and investment in infrastructure requirements from both government and private entities.

Ensure that infrastructure, resources, training and economic activity are aligned to support natural resources management, science and research opportunities.

Foster willingness to engage around areas where there is substantial disagreement between stakeholders.

Build the energy and focus required to realise outcomes where there is strong alignment amongst stakeholders.

Develop pathways for collaborative engagements and partnerships to discuss and resolve community issues.

Ensure that all voices are heard, valued and able to contribute.



1. Maintain our small-town charm so that Greater Dwellingup will be an attractive, interesting place that is self-sufficient and sustainable in the services it offers families.

2. Grow a diverse and resilient economy to offer more pathways for local jobs and career opportunities.

3. Protect and enhance Greater Dwellingup's environment by sensitively managing diverse land-use activities (such as mining, forestry, tourism, agriculture and recreation).

4. Protect and capitalise on our assets through education, creativity, cultural awareness and a scientific approach.

5. Community, Government and Industry cooperatively work together to achieve the objectives of the Dwellingup Futures Roadmap.

## KEY SUCCESS INDICATORS: BY 2036

1.1 Dwellingup's population has reached 1,306.

1.2 18 additional childcare places have been created for local families.

1.3 There will be sufficient demand for the provision of a primary school for 100 students.

1.4 The development of short stay accommodation infrastructure does not impact upon the supply rental and owner-occupier dwellings for residents.

1.5 Residents have access to a full time GP and remote nursing services.

1.6 Residents can access high quality aged care in Dwellingup.

2.1. There are an additional 130 FTE jobs within the Dwellingup economy (includes the additional 26 FTE in 4.1).

2.2. An additional 133m<sup>2</sup> of retail floorspace and 1,608m<sup>2</sup> of commercial floorspace\* has been identified and activated through new enterprises.

2.3. Visitors are spending \$31.59m per annum in Dwellingup.

2.4 Indigenous enterprises have been established and supported.

2.5 Dwellingup is recognised as a cultural and arts hub with a minimum of 15 arts-based enterprises making up the Dwellingup Arts Trail.

\*Commercial floorspace include Accommodation and Food Services, Arts and Recreation, Education and Training, and Professional, Scientific and Technical Services.

3.1. Support realisation of common objectives through the implementation of the Roadmap Action Plan.

3.2. There is a map that reflects a shared understanding and agreed aspiration put forward by the Dwellingup Community as to natural, heritage and community assets that they believe should be indefinitely protected from industry impacts within the Dwellingup Future Zone.

4.1. Natural resource management and nature-based tourism activities are contributing to the local economy through an additional 26 FTE direct jobs.

5.1. A fit-for-purpose Implementation Advisory Committee, chaired by the Shire of Murray is actively consulted and informing decision making around land use for Dwellingup's key industries



# 5. DWELLINGUP'S FUTURE

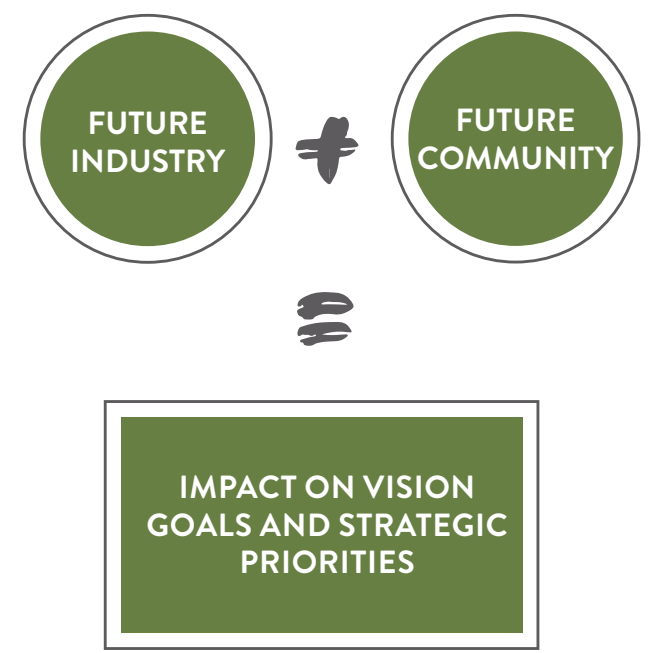
## APPROACH

Consistent in feedback across all visioning activities conducted throughout the Dwellingup Futures Project was the desire for Greater Dwellingup to be a self-sufficient place for families to live and where people have the access to the services they need (see Goal 1, page 16). The Dwellingup Futures Project required the consideration of a range of alternative future scenarios for Greater Dwellingup and development of an understanding of the extent to which each future scenario would position the community to realise their ultimate vision and goals.

Three plausible economic development scenarios were developed and tested, describing Greater Dwellingup across a 16-year period between 2021 and 2036. The purpose of these scenarios was not to predict the future, but to explore the implications of a range of plausible economic development outcomes, identifying opportunities and challenges that may need to be realised or addressed if the vision is to be supported. The implications of the scenarios will continue to have a bearing beyond the 2036 time frame considered in the modelling. However the variability in plausible outcomes beyond 2036 limits the value of analytic findings beyond this time frame.

Like many Western Australian regional communities, the future prosperity, vibrance, sustainability and resilience of Greater Dwellingup will be the result of its key industries performance, the characteristics of its community and how these two elements ultimately interact with each other. Therefore, consideration of Greater Dwellingup's future through three different plausible scenarios needs to account for the implications of both elements, as outlined in Figure 4.

Figure 4 – Community and industry impacts logic



# SCENARIO DEVELOPMENT

Scenarios help us explore the future trajectories and characteristics of a place under a range of different circumstances by asking the question “How plausible is our vision if this future plays out?”.

For the purposes of the Dwellingup Futures Roadmap, Dwellingup’s future scenarios are based on the performance, interaction, and characteristics of its key industries:

- Bauxite mining;
- Tourism services (including recreation, hospitality, creative industries and retail); and
- Natural resource management, science and education.

Throughout consultation and research, these industries were identified as the most likely to have a significant influence on Greater Dwellingup and surrounds and impact the community’s articulated vision. Three unique scenarios, described in table 1, have been developed and tested to help us explore the potential influence of these industries.

Detailed scenario analysis (provided in appendix 1) was conducted to compare the three scenarios below. Analysis resulted in the identification of scenario three (diversified economy) as the scenario which provides the Dwellingup community with the best potential for achieving its vision, goals, and key performance indicators. As such, scenario three is the focus of the Roadmap and its recommendations.

**Table 1 - Scenario summaries**

 <p><b>SCENARIO 1 – BASE CASE</b></p>	<p>Greater Dwellingup continues to be a small country regional town, characterised by limited population growth, an ageing population, supported by traditional mining and forestry and a day trip visitor economy with limited expenditure within the Town.</p>
 <p><b>SCENARIO 2 – ADVENTURE TOURISM TOWN</b></p>	<p>Greater Dwellingup is recognised as Western Australia’s adventure tourism town (focusing on trails) because of a high visitor growth trajectory and ongoing and significant public and private sector investment into this sector.</p>
 <p><b>SCENARIO 3 – DIVERSE ECONOMY</b></p>	<p>Greater Dwellingup has experienced significant tourism growth, while also focusing on developing arts, education, natural resource management and research industries, leading to a more diverse local economy.</p>

# SCENARIO ASSESSMENT

To assess the impact of industry trajectories against the vision and goals (page 16 and 17) our analysis takes into consideration:

**People and place:** Resident population characteristics, particularly the provision of population services and employment opportunities.

**Enterprise and economy:** Industry activity particularly Greater Dwellingup's and Peel's economic structure, infrastructure, land use, and workforce requirements.

**Environment, culture and heritage:** The natural environment, and its value as a driver of visitation and role as a general economic asset.

## PEOPLE AND PLACE

Consideration of Greater Dwellingup's unique demographic structure and population characteristics is important for understanding the nature of impacts and changes the local population may experience across Greater Dwellingup's potential futures. Considerations include general demographic information, and the associated need for key services and amenities that support the wellbeing of Greater Dwellingup's resident population.

Greater Dwellingup's existing population characteristics were used in quantitative analysis to inform the nature of impacts that may arise from changes to future industries in the area. This includes:

- The ability for industry to provide employment for residents;
- The ability to retain existing Greater Dwellingup residents, and attract /accommodate new residents; and
- The ability to support sustainable population levels that drive the feasible provision of essential services.

The population projection analysis utilises the Shire of Murray's Forecast.id growth profile within the Rural South area as a baseline projection. Forecast.id's projection is based upon fertility rates and consultation with the Shire to determine the capacity for growth. To provide a more realistic representation of future population that accounts for likely growth resulting from industry, additional population derived from the estimated number of jobs driven by industry activity is included under each scenario (see technical appendix 4 for further details for how this is calculated).

A high-level target population was calculated to reflect estimated required population to support sustainable service delivery of the primary school. Based upon consultation outcomes, this is estimated to be 100 students. The model assumes 80% of primary school aged children in Greater Dwellingup would be enrolled in the primary school, therefore implying the population level needs to reflect 125 primary school aged children in Greater Dwellingup. Table 2 provides the estimated population and demographic characteristics in which outcomes from Greater Dwellingup's potential future scenarios are assessed.



**Table 2 – Target demographic and population characteristics Greater Dwellingup 2020 - 2036**

INDICATOR	2020	2026	2036
Total Population	721	980	1,306
Occupied Dwellings	299	402	542
Residents per occupied dwelling	2.43	2.43	2.43
0-14 (School Aged)	134	183	229
15-65 (Working Age)	463	629	791
65+	124	168	212
Aged Dependency Ratio	27%	27%	27%
Labour Force (% of total residents)	44.67%	44.67%	44.67%

Source: Forecast.ID 2020, FAR lane 2020

Table 3 (page 22) outlines the key population characteristics considered throughout the scenario analysis. This includes information on population characteristics, its relevance to Greater Dwellingup’s future, and the approach taken to evaluate and understand these characteristic within the context of Greater Dwellingup’s future.

It should be noted that any future town site expansion required to accommodate population growth would need to be considered through formal statutory process (Region Scheme Amendment), or would need to be considered by the Western Australian Planning Commission. Such a proposal would need to address the State Planning Framework, including the Sub-regional Planning Frameworks, State Planning Policies, and advice provided by environmental agencies and servicing authorities.

**Table 3. Treatment of resident population characteristics variables within the scenario impact assessment**

PEOPLE AND PLACE CONSIDERATIONS	RELEVANCE TO DWELLINGUP	IMPACT ASSESSMENT APPROACH
Future demographic and age profile	Understanding the age distribution and population size in Greater Dwellingup informs an understanding of the need for a range of population driven goods and services, as well as potential education, housing, and employment demands.	Shire of Murray population projections for Greater Dwellingup were used, and the number of individuals across key demographic groups were calculated. This acts to inform a range of subsequent analyses.
The need for and importance of childcare and primary schooling within Greater Dwellingup	Identified by the community and key stakeholders as a critical service to attract and retain local family-aged residents in Greater Dwellingup.	Estimates of demand for child care and primary education was based upon projected population scale and demographic profile of households. The development of a population target is based upon the population needed to sustain a vibrant local primary school with a sufficiently large school community. This acknowledges the key role it plays in both attracting and retaining families within Greater Dwellingup.
The provision of aged care and ageing in place services	Appropriate and accessible essential aged-related services are necessary to support and retain the growing aging population and maximise the wellbeing of the local population.	Estimates of demand for aged care and services was based upon projected population scale and demographic profile of target population.
Housing for current and future residents	Diverse owner-occupier and rental housing stock is important to attract and retain residents to Greater Dwellingup.	Estimates of demand for housing was based upon projected population scale and household characteristics.
Access to health services	Health services are important in ensuring the health and wellbeing of the resident population. Changing population characteristics into the future could potentially change the demand for local essential health services.	Estimates of demand for health services was based upon projected population scale and demographic profile.
Availability of local employment opportunities	The type and availability of local employment is essential in retaining and attracting a working-age population.	Estimates for local employment opportunities was based local jobs available across all industries compared to the number of local jobs assumed to be needed to support a target resident population.
The nature of local amenity	The scale, quality and type of local goods and services is a contributor to local amenity and influences the attractiveness of Greater Dwellingup as a place to live, work, visit and invest.	Estimates of potential demand and sustainability of local goods and services was estimated using projections of the total floorspace for local goods and services that could be sustained under each scenario.



## ENTERPRISE AND ECONOMY

Key industry trajectory (or activity) assumptions were developed via consultation with the project team and key stakeholders to inform the projected level of activity in each industry in terms of economic output and/or potential jobs.

The impact of differing industry trajectories is based upon:

- Profiling plausible variability and potential performance of key industries in terms of Greater Dwellingup and Peel regional employment (jobs) and regional output (\$m);
- Trends and characteristics that drive the industry activity, such as existing and planned projects, anticipated changes in technologies and supply chains, and external market trends; and
- Impact on Greater Dwellingup’s economy in terms of workforce and infrastructure requirements, land use considerations and requirements, the industry’s role and significance in the Regional economy, and the opportunities and constraints are likely to arise.

**Table 4 - Treatment of enterprise and economic activity considerations within the scenario impact assessment**

ENTERPRISE AND ECONOMY CONSIDERATIONS	RELEVANCE TO DWELLINGUP	IMPACT ASSESSMENT APPROACH
Quantifying the economic impact of tourism	Greater Dwellingup’s geography and natural assets support the local visitor economy and tourism. Changes in scale and the ability to harness opportunities and manage threats related to this industry will influence the future of Greater Dwellingup’s economy.	Estimates of economic impacts of tourism on local and regional economies was calculated based upon Greater Dwellingup’s future value proposition to visitors, and plausible market demand for services and products offered.  Impacts include estimates of employment and economic output, and the variability that could occur under each scenario.



ENTERPRISE AND ECONOMY CONSIDERATIONS	RELEVANCE TO DWELLINGUP	IMPACT ASSESSMENT APPROACH
<p>Quantifying the economic impact of mining</p>	<p>Alcoa Australia has been operating as an integrated bauxite miner and alumina producer in the south-west of Western Australia since 1963 with bauxite mines (Huntly, Willowdale) and alumina refineries (Kwinana, Pinjarra, Wagerup). Alcoa Australia produce approximately 45% of Australia's alumina, the feedstock for aluminum. Alcoa's Huntly Bauxite Mine is the sole feedstock for the nearby Pinjarra Alumina Refinery as well as its Kwinana Refinery. As bauxite forms in shallow pods, a constantly moving mining footprint occurs followed by progressive rehabilitation. Huntly mining is currently located at Myara to the east of North Dandalup. The proposed next Huntly mining areas are Myara North and Holyoake. Studies are undertaken prior to mining to identify and (where appropriate) protect important environmental, cultural, and social values. Alcoa do not mine in gazette national parks, nature conservation reserves, Old Growth Forest, or other areas of high conservation value. Of the areas cleared, 77% have been rehabilitated and this work is ongoing. Historically bauxite mining has occurred near Dwellingup, both to the north and south, and is expected to do so in the future.</p> <p>Future mining is subject to EPA assessment. Alcoa are currently seeking to modernise the environmental approvals for their Huntly Bauxite Mine and Pinjarra Alumina Refinery. In doing so they have submitted plans for environmental assessment by both the State and Commonwealth. Huntly currently mines about 27 Mtpa of bauxite with more than 90% supplied to the Pinjarra and Kwinana refineries</p> <p>Pinjarra refinery currently produces about 4.7 Mtpa of alumina and has approval to produce up to 5 Mtpa. Production is expected to reach 5 Mtpa in coming years due to efficiency and operational improvements. Approval to produce 5 Mtpa will enable continued improvements over time. There are no plans for a major refinery upgrade.</p>	<p>Estimates of economic impacts of mining on local and regional economies was informed by future production plans outlined in Alcoa of Australia Limited's Environmental Assessment Fact sheet (March 2021) regarding its current Environmental Protection Authority application<sup>16</sup> and consultation with industry. Input from Alcoa suggested that mining activity be considered constant across all scenarios:</p> <ul style="list-style-type: none"> <li>• Mining in the Myara North region is planned for 2025 – 2030<sup>17</sup>;</li> <li>• Mining in Holyoake expected to commence 2030 (pending PER - Public Environmental Review) and involve the relocation of 450 mining jobs into the Study Area;</li> <li>• Alcoa's production is expected to reach that 5 Mtpa limit, with potential to produce up to 5.25Mtpa if major upgrades take place;</li> <li>• Operations at Holyoake are estimated to relocate 450 existing jobs into the Study Area. This equates to a total of \$717 million of mining output per annum. Under a base case scenario, this represents approximately 18% of the Dwellingup's economic output This is largely due to mining having the highest output per job ratio of \$1.291m per job<sup>18</sup>.</li> <li>• Almost 30% of all mining workers in the Shire of Murray were aged 50 years old in June 2016<sup>19</sup>. Assuming a similar demographic profile at Holyoake, potential 130 employees at Holyoake could retire by 2036. Assuming jobs remain available - this presents an opportunity for up to 130 new employees to work at Holyoake. Scenarios will consider how these jobs could potentially cater new families if there is additional available housing supply within Greater Dwellingup.</li> </ul> <p>Plausible future economic impacts were estimated for local and regional employment, and economic output. Scenario assessment considers the interaction of mining with other industries.</p>

<sup>16</sup> Environmental Assessment Fact sheet Huntly Bauxite Mine & Pinjarra Alumina Refinery, Alcoa 2021

<sup>17</sup>Ibid, Alcoa of Australia Ltd.

<sup>18</sup>REMPLAN 2020

<sup>19</sup>ABS 2016

ENTERPRISE AND ECONOMY CONSIDERATIONS	RELEVANCE TO DWELLINGUP	IMPACT ASSESSMENT APPROACH
	<p>Alcoa of Australia operates under the Alumina Refinery Act 1961, Alumina Refinery (Pinjarra) Agreement Act 1969, and Alumina Refinery (Wagerup) Act and Acts Amendment Act 1978. Alcoa's Mineral Lease – Mineral Lease 1 State Agreement (ML1SA) is granted under the Alumina Refinery Act 1961. Alcoa's tenure and royalty rates are established in the State.</p> <p>The characteristics of Greater Dwellingup's interactions with mining is influenced by the types of activities, location and scale of exploration, extraction, logistics, processing and rehabilitation activities. Community support programs delivered by mining operators also acts as a significant input into local community and local economic development infrastructure.</p> <p>Map 2 provides an overview of Alcoa of Australia's planned activities in the Dwellingup Futures Zone.</p>	
Quantifying the economic impact of agriculture, forestry and fishing	<p>Important historic industries with current activities are still contributing to Greater Dwellingup's economy.</p> <p>Agriculture is a growing driver for day visitation, with Forestry operations and milling continuing in and around Greater Dwellingup.</p>	<p>Estimates of economic impacts of agriculture on local and regional economies were based on local production's role as a tourism and produce export asset.</p> <p>Estimates of economic impacts of forestry on local and regional economies were assumed to remain constant as suggested through consultation with the Forest Products Commission.</p>
Quantifying the economic impact of natural resource management activities	<p>Local assets, knowledge and products resulting from historic forestry, NRM, and rehabilitation activities was recognised by stakeholders as a significant opportunity to be leveraged.</p>	<p>Estimates of economic impacts of natural resource management activities on local and regional economies were based upon the leveraging of activities for relevant public administration and safety, scientific, tourism and education purposes.</p>
Changing workforce requirements and employment opportunities	<p>Under different futures for Greater Dwellingup, the type, scale and nature of the workforce is likely to vary. Understanding these potential impacts is important when considering Greater Dwellingup's future.</p>	<p>Estimates of future employment requirements to support a resident population are estimated under each scenario.</p> <p>Local employment requirements were disaggregated by industry to provide indications of industry specific employment impacts.</p>
Quantifying the economic impact of local goods and services within Greater Dwellingup	<p>The potential futures and changes that Greater Dwellingup may experience are likely to impact the scale of demand for local goods and services, and the type demanded. Understanding potential impacts in this area may support an appropriate response, maximising the performance of local businesses.</p>	<p>Estimates of economic impacts of natural resource management activities on local and regional economies were based upon the demand from goods and services resulting from projected local residents, visitors, workers and businesses.</p>

Map 2 provides a spatial representation of the economic and industry assets within the Dwellingup Futures Focus Area.

# MAP 2: DWELLINGUP FUTURES FOCUS AREA: ECONOMIC ASSETS

## LEGEND

Dwellingup Futures Focus Area

### REGION SCHEME RESERVES (PRS)

- Regional open space
- Rural
- Primary regional roads
- Industrial
- State Forests
- Urban
- Special Control Area No 1 - water catchments

### AGRICULTURAL ASSETS

Rural Zoning

### MINING ASSETS

- Holyoake Mine Study Area 2021 (Alcoa) <sup>1</sup>
- Transport Study Area (Alcoa)

### TOURISM ASSETS

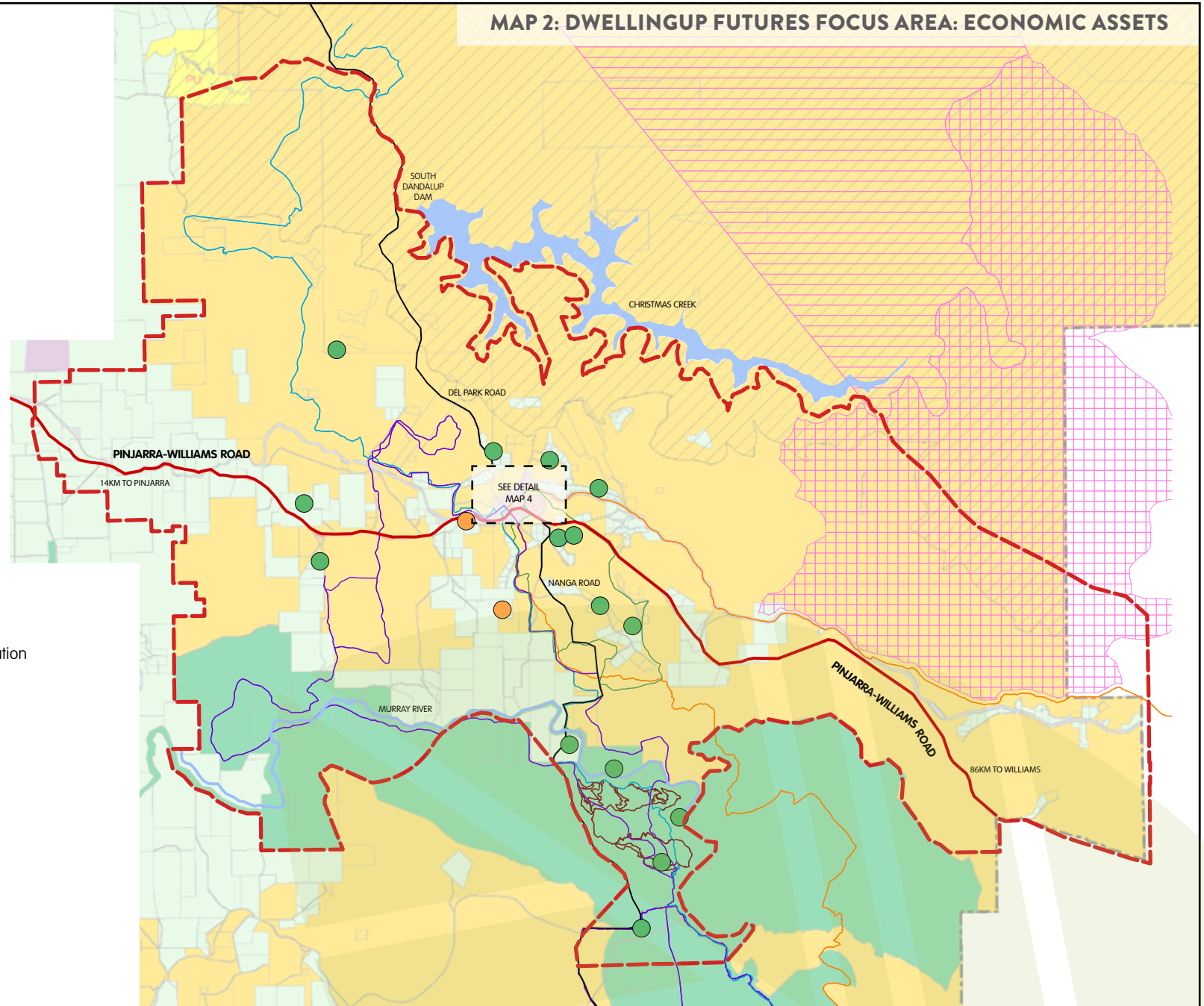
- Tourism activities and accomodation
- Food and Beverage

### DPaW Managed Tracks and Trails

- Bibbulmun Track
- Munda Biddi Trail
- Walk Trail
- Mountain Bike Trails
- Les Couzens Bridle Trail

### NOTES:

<sup>1</sup> The Holyoake Mine Study Area 2021 does not consider other potential future mining as part of the broader MLISA



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## ENVIRONMENT, ARTS, CULTURE AND HERITAGE

Quantifying the socioeconomic value of the natural environment is inherently complex. Assessment of environmental impacts within the scope of this Roadmap primarily focused on real and perceived risks associated with changes resulting from scenario parameters.

Particular challenges in evaluating the local environment included a lack of agreed data about changes the natural environment may experience in the future under different growth scenarios. Furthermore, whilst there is multi-generational value in retention and enhancement of environmental assets, it is not yet clearly reflected in market prices. It is important to note the Environmental Protection Act (1986) continues to be the statutory mechanism through which issues concerning the value of the natural environment need to be addressed. Table 5 presents some key environmental considerations and their overall relevance for the future of Greater Dwellingup:

**Table 5 - Treatment of natural environment considerations within the scenario impact assessment**

ENVIRONMENT, ARTS, CULTURE AND HERITAGE CONSIDERATIONS	RELEVANCE TO DWELLINGUP	IMPACT ASSESSMENT APPROACH
The value of Greater Dwellingup's natural environment for its contribution to brand and identity of Greater Dwellingup	<p>The natural environment has economic value in terms of attracting residents, visitors, and tourists.</p> <p>The natural environment also has value for consumers who choose to visit and 'use' Greater Dwellingup and surrounds.</p>	Judgement of the comparative risks of alternative scenarios associated with the natural value proposition of Greater Dwellingup to residents and visitors is considered in the impact assessment.
The cost and change in the inherent value of Greater Dwellingup's environment resulting from industry activities and future expansion	Degradation and changes to the local environment will present costs and impact the inherent value of the natural environment in Greater Dwellingup.	Assumption that this is considered via normal NRM, statutory planning and environment assessment processes (EPA 1986), as well as DBCA's Lane Poole Management Plan and Forest Management Plan, and therefore outside of the scope for assessment within the Roadmap.
The value of the natural environment for bushfire protection	Dwellingup is particularly vulnerable to bushfires. This presents risks and associated costs for Greater Dwellingup and its residents.	Assumption that this is considered via normal NRM, statutory planning and environment assessment processes (EPA 1986), as well as DBCA's Lane Poole Management Plan and Forestry Management Plan, and therefore outside of the scope for assessment within the Roadmap.


ENVIRONMENT, ARTS, CULTURE AND HERITAGE CONSIDERATIONS	RELEVANCE TO DWELLINGUP	IMPACT ASSESSMENT APPROACH
The value of the local environment on broader and existing ecological systems	The natural environment also holds value in relation to the broader ecosystem and habitats that it contributes to. The Greater Dwellingup environment cannot be considered in isolation from the broader ecosystem.	Assumption that this is considered via normal NRM, statutory planning and environment assessment processes (EPA 1986), as well as DBCA's Lane Poole Management Plan and Forestry Management Plan, and therefore outside of the scope for assessment within the Roadmap.
The value of Indigenous heritage and cultural assets located in Greater Dwellingup	There is long standing but not well understood Indigenous cultural heritage assets within Greater Dwellingup that should be properly profiled, recorded, protected, and celebrated. The South West Native Title Settlement and the soon to be formed Noongar Regional Corporation, 'Gnarla Karla Boodja' can help underpin this transformation.	Assumption that this is considered via normal NRM, statutory planning and environment assessment processes (EPA 1986), as well as DBCA's Lane Poole Management Plan and Forestry Management Plan, and therefore outside of the scope for assessment within the Roadmap.


Map 3 provides a spatial representation of the Dwellingup Future's Focus Area's environmental and heritage assets. It should be noted that data relating to threatened flora and threatened fauna shape files are point data only and represent a location where a threatened species has been recorded. As this data is continually being updated and any future developments are likely to require a degree of threatened species survey prior to approval it is suggested by the Department of Biosecurity, Conservations and Attractions (DBCA) that this data is not displayed on the maps within the Roadmap.




# MAP 3: DWELLINGUP FUTURES FOCUS AREA: ENVIRONMENT AND HERITAGE ASSETS

## LEGEND

 Dwellingup Futures Focus Area


 Holyoake Mine Study Area 2021 (Alcoa) <sup>1</sup>


 Transport Study Area (Alcoa)


DBCA - Legislated Lands and Waters (DBCA-011)

 Gazetted

 Un-Official

 Un-Named

 Forest Disease Risk Areas (DBCA-024)

 Places of Heritage Value (Shire of Murray TPS No. 4)

 Aboriginal Heritage Places (DPLH)

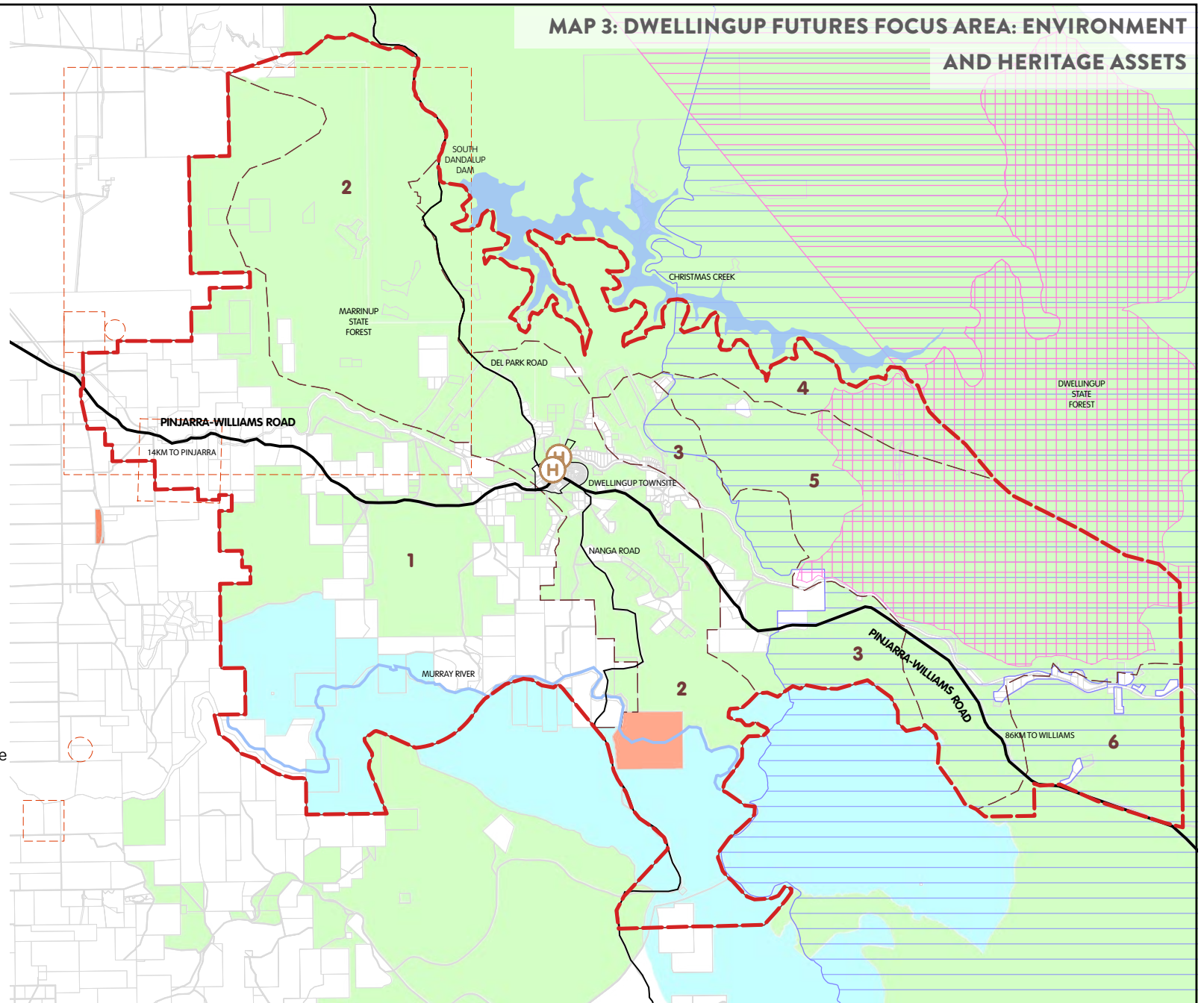
Dwellingup Protection Group's Proposed Dwellingup Discovery Forest Zones<sup>2</sup>

- 1 Water and Forest Conservation Zone
- 2 Recreation Zone
- 3 Wildlife Protection Zone
- 4 Drinking Water Protection Zone
- 5 Murray Basin Wilderness Zone
- 6 Timber Townsites Heritage Zone

NOTES:

<sup>1</sup> The Holyoake Mine Study Area 2021 does not consider other potential future mining as part of the broader ML15A

<sup>2</sup> DDF Zones do not have statutory recognition



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Photo courtesy of Josh Cowling

## 5.4 SCENARIO ANALYSIS OUTCOME SUMMARY

Table 6 provides a summary of the analysis conducted on all three scenarios based on the population, industry and environmental considerations described in this section. Detailed scenario analysis can be found in appendix 1 of this document.

**Analysis resulted in the identification of scenario three (diversified economy) as the scenario which provides the Dwellingup community with the best potential for achieving its vision, goals, and key performance indicators. As such, scenario three is the focus of the Roadmap and its recommendations.**

**Table 6 - Scenario analysis outcome summary**

	DESCRIPTION	IMPLICATIONS FOR DWELLINGUP	OUTCOME
 <b>SCENARIO 1 – BASE CASE</b>	<p>In 2036, uncoordinated and sporadic investment, and unmanaged growth capacity constraints mean that Greater Dwellingup continues to be a community that is characterised by limited population growth, an ageing population, supported by traditional mining and forestry and a day trip visitor economy with limited interactions with the town.</p>	<p>Under this scenario:</p> <ul style="list-style-type: none"> <li>• There is limited nor sustained public or private sector investment beyond current levels into local industry development, including tourism.</li> <li>• Greater Dwellingup is over reliant on a single industry (tourism) for growth, resulting in stagnant population growth that presents barriers to investment in social amenities and employment opportunities within Greater Dwellingup.</li> <li>• A lack of availability of housing stock constrains the number of new families that can be supported, limiting opportunities for population growth.</li> <li>• Increased visitation driven by high volume tourism offerings (i.e. trails and the Dwellingup Trails and Visitors Centre), are not translating into an increase in additional visitor expenditure capture that drives investment in the Town.</li> <li>• Mining continues to be a key industry providing significant local employment within Greater Dwellingup (32% of total employment).</li> <li>• Other key industries such as natural resources management, agriculture, forestry and arts and culture experience low or no growth due to limited investment and strategic focus.</li> </ul>	<p>Greater Dwellingup retains its small- town charm but does not realise the population and economic growth required to support local services and self-sufficiency.</p> <p>Post COVID-19</p> <p>Except for tourism (which experiences moderate growth), local industries experience low growth or stagnation.</p>



	DESCRIPTION	IMPLICATIONS FOR DWELLINGUP	OUTCOME
 <p><b>SCENARIO 2 – ADVENTURE TOURISM TOWN</b></p>	<p>In 2036, Greater Dwellingup is recognised as an International Trails Town, driven by high visitor growth and ongoing and significant public and private sector investment into this sector.</p>	<p>Under this scenario:</p> <ul style="list-style-type: none"> <li>• Small and medium sized enterprises are established in Dwellingup, capitalising on the thriving visitor economy.</li> <li>• There is sustained public and private sector investment into Dwellingup's tourism infrastructure and initiatives, including trails, accommodation and services.</li> <li>• Rapid and significant growth of adventure tourism (including land and water experiences) impacts Greater Dwellingup's ability to retain community oriented small-town charm and residents.</li> <li>• High demand for casual short-stay accommodation impacts availability of and owner-occupier housing for permanent residents (existing and future).</li> <li>• The scale of adventure tourism activity represents management challenges to mitigate negative impacts on the local natural environment (land and water).</li> <li>• Mining continues to be a key industry providing significant local employment within Greater Dwellingup (30% of total employment).</li> <li>• Other key industries such as natural resources management, agriculture, forestry and arts and culture experience low or no growth due to limited investment and strategic focus.</li> </ul>	<p>Greater Dwellingup becomes a vibrant adventure destination for regional, state, national and international visitation.</p> <p>Limited housing stock prevents Greater Dwellingup from realising any population growth required to support additional local services and self- sufficiency and negatively impacts the Town's character.</p> <p>Over time, there is an increased potential for conflict between tourism and mining activities as the footprint of the two industries begins to overlap.</p>
 <p><b>SCENARIO 3 - DIVERSIFIED ECONOMY</b></p>	<p>In 2036, Greater Dwellingup is recognised as an International Trails Town, while also focusing on developing a range of nature and creativity-oriented industries, leading to a more diverse and resilient local economy.</p>	<p>Under this scenario:</p> <ul style="list-style-type: none"> <li>• Small and medium sized enterprises are established in Dwellingup, capitalising on the thriving visitor economy.</li> <li>• There is sustained public and private sector investment into Dwellingup's tourism infrastructure and initiatives, including trails, accommodation and services.</li> <li>• Investment in agriculture and natural resources management activities and projects are strongly aligned with community vision.</li> <li>• Greater Dwellingup's tourism offer is diverse, and geared toward nature, education, arts and Indigenous-based tourism experiences.</li> <li>• Sustainable and managed growth allows the community to mitigate the risks of the demand for short stay accommodation overwhelming local housing stocks and eroding community character.</li> <li>• A more diverse food, retail, arts, and hospitality offer has grown and is attracting different visitor segments.</li> <li>• Mining continues to be a key industry providing significant local employment within Greater Dwellingup (28% of total employment).</li> </ul>	<p>With a diverse tourism offer acting as an anchor for a diverse local economy, Greater Dwellingup achieves an employment level sufficient to support a population likely to attract and retain local services.</p> <p>Moderate and sustainable economic growth and a proactive approach to housing development supports a growing population, while maintaining character, protecting natural assets, and creating jobs and business opportunities.</p>



# 6. PREFERRED SCENARIO



## SCENARIO 3 - DIVERSIFIED ECONOMY

Based upon research, analysis and consultation undertaken, the Roadmap process has identified that Scenario 3 - Diverse Economy will most plausibly support the realisation of the Roadmap's vision. Economic diversification is key to reducing over-reliance on particular sectors and industries. The broader the economy, the more resilient it is to shocks. It is also key to driving productivity growth and remaining competitive, and is better at securing quality, high paying jobs through increased investment.

Under Scenario 3, Greater Dwellingup is a highly liveable community that is growing sustainably, managing to strike a balance between visitors and residents. Proactive planning and development have resulted in housing no longer being a constraint to residential population growth. Place making activities have been oriented towards creating vibrancy, amenity, and services for the local population – making it a great place for people to live. The population of Dwellingup has grown to a point where it comfortably sustains the required community-oriented services such as child-care, schooling, aged-care and health care.

The completion of the Adventure Trails Project and COVID-19 resulted in an initial spike in travel to Greater Dwellingup - this has been capitalised on through ongoing public and private sector investment, and Dwellingup is established as an International Trails Town that enjoys strong and stable visitation. Most people are coming to the

region for day trips, however 42,000 of new annual visitors are staying overnight. They typically camp at Lane Poole Reserve or utilise short stay accommodation in the town. A focus on providing more bookable experiences is increasing the capture of visitor spend within Greater Dwellingup, resulting in an increased contribution of tourism to the local economy. Connectivity with Pinjarra is enhanced through increased rail connections and Hotham Valley Steam Train services.

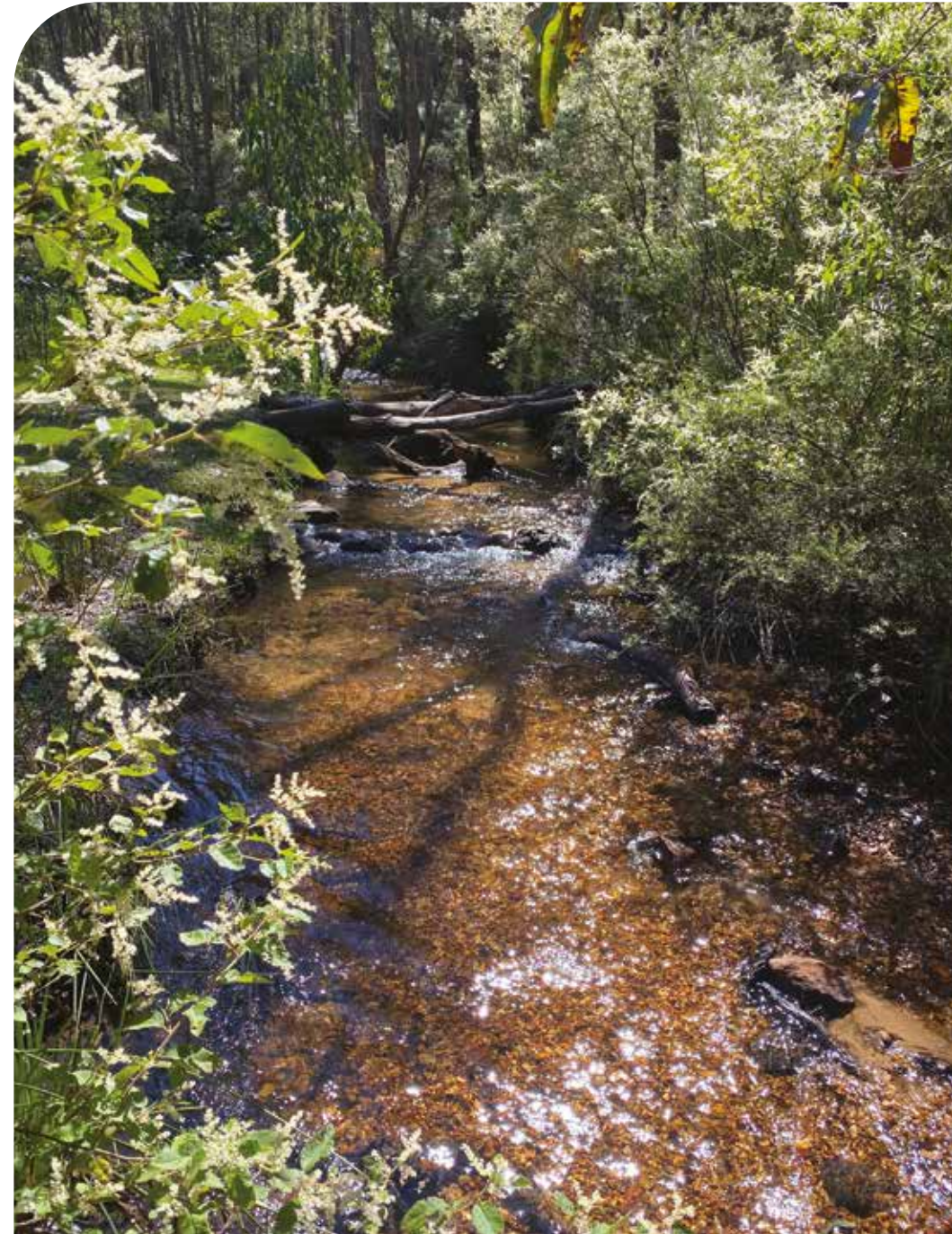
Tourism investment prioritises and celebrates Greater Dwellingup's natural resources, and creative culture, offering a unique combination of adventure, arts, science, education, and nature-based experiences. Visitors are coming to Greater Dwellingup for the day to experience Indigenous culture and history, as well as a booming arts scene which enhances the area's unique character and charm. A diverse tourism offer and increased visitation enables investment in new food and dining experiences that are putting the community on the map.

A strong focus on natural resource management has brought additional local research projects which are tied to the Bushfire Centre of Excellence, bush regeneration, post-mine futures and mine site rehabilitation. This has resulted in new jobs in professional, scientific, technical, public administration, safety, education and training sectors.

Greater Dwellingup's natural assets, Indigenous heritage and Western heritage are celebrated through experiential education products and services focused on school groups. These products also augment the outdoor education syllabus activities already undertaken in Greater Dwellingup.

Mining activities continue as described in table 4, page 25, and the local retail offer grows moderately based on increased visitor and permanent resident demand.

The key characteristics of scenario 3 are described in table 7. Assessment of the scenario against our three key analysis areas (resident population characteristics, industry activity and natural environment) is provided in tables 8, 9 and 10.



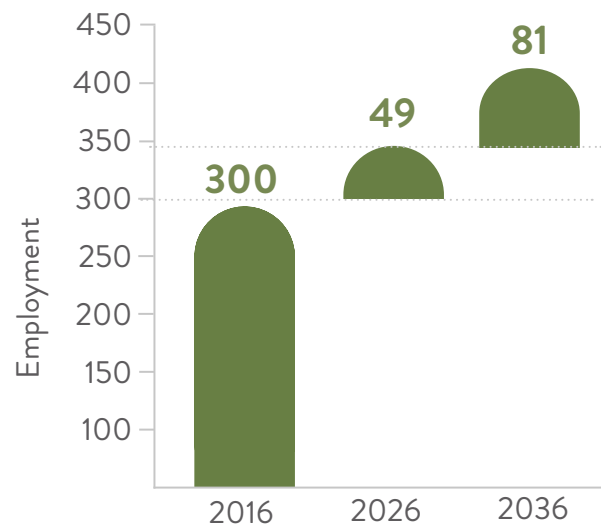
**Table 7 - Shire of Murray 2036 snapshot: Diverse economy**

POPULATION	MINING	TOURISM (OVERNIGHT)	TOURISM (DAY)	AGRICULTURE	FORESTRY	NATURAL RESOURCE MANAGEMENT	ARTS AND CULTURE	RETAIL AND SERVICES	OTHER INDUSTRIES
High growth	Constant production	Moderate growth	High growth	Constant production	Constant production	High growth	High growth	Low growth	Constant production
1306 (annual growth rate of 2.08% per annum).	As per table 4, page 25.	42,000 overnight visits per annum. Increase of 30,000 overnight visitors per annum.  Average overnight visitor spend \$101 (increase of \$12).	243,000 day trips per annum (increase of 63,000 day visits per annum).  Average day trip visitor spend \$63 (increase of \$9).	No additional jobs or output assumed.	No additional jobs or output assumed.	22 direct professional, scientific & technical services jobs FTE.  8 direct public administration & safety jobs FTE.  16 education and training jobs FTE.  Contributing a combined direct output of \$5.77m to the Shire of Murray.	24 additional direct jobs providing an additional \$4.7m of direct output to the Shire of Murray.	No additional jobs or output assumed; low growth is a result of tourism expenditure within Dwellingup.	All other industries are expected to remain as constants to reflect the relatively static nature of these industries as out-lined in the Economic and Land Use Trends Analysis Report.

Assumptions informing the descriptions of the diversified economy scenario (3) are based upon the trends and characteristics outlined in the Land Use Review, Literature Review, and Economic and Land Use Trends Analysis Report (Technical Appendix 2, 3 & 4).

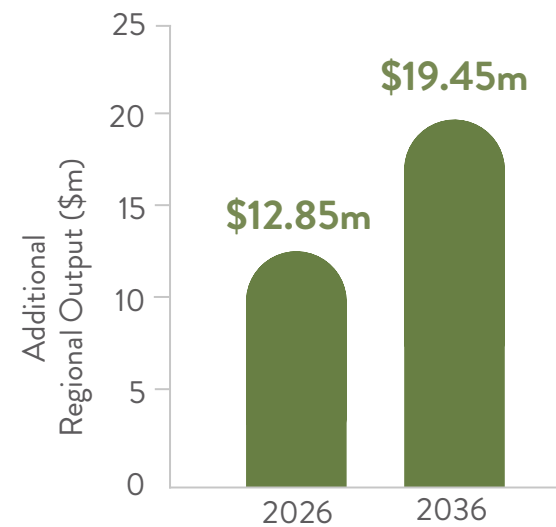
Figure 5 and Figure 6 illustrate that under a diversified economy scenario, the additional tourism activity may realise up to a further 130 jobs within Greater Dwellingup by 2036, and an extra \$19.45m of direct output to the Shire of Murray's economy. This is largely driven by entrepreneurial activities that realise additional jobs in arts and recreation services, and accommodation and food services to cater for the additional 41,400 visitors per annum and additional jobs education, natural resource management and research activities.

**Figure 5 – Additional local jobs driven by scenario 3**



Source: FAR lane 2020, REMPLAN 2020

**Figure 6 - Additional regional output under scenario 3**



Source: FAR lane 2020, REMPLAN 2020

**Table 8 - Assessment of Future Scenario 3 – Diverse economy- against vision and goals**  
**People and place considerations**

PEOPLE AND PLACE CHARACTERISTICS	FINDINGS	IMPLICATIONS FOR VISION AND GOALS
Future demographic and age profile	Scenario 3 population projection of 1,306 residents estimates a high growth population characterised by an increased school and working age population, under which community-oriented infrastructure is likely to be feasible.	Baseline population projection presents opportunities for building a case for investment in community-oriented infrastructure.
Housing for current and future residents (1)	<p>Currently there is a total of 299 occupied dwellings within the study area, implying an average of 2.41 residents per household.</p> <p>Under a scenario 3 population projection, an estimated additional 242 dwellings would be required to support the population growth (assuming the residents per dwelling was to be consistent with the 2020 rate of 2.41).</p> <p>Consultation indicated the housing stock is ageing and not appealing to new families and residents. Furthermore, additional housing is subject to bushfire risks and limited service infrastructure capacity to bring new stock on to meet a gap of 242 dwellings to realise this population.</p>	<p>Under the required population projection 542 dwellings, representing a gap of 242 required to support a population of 1,306 residents by 2036.</p> <p>On this basis, an additional 242 houses would be required to realise the capacity to grow a diversified economy population through housing supply, while maintaining and enhancing the charm and character of Greater Dwellingup. Under scenario 3, there is insufficient housing supply and available land for additional residential development to support the population projection.</p> <p>Due to bushfire risk, water infrastructure and infrastructure constraints there are likely to be challenges in developing additional residential dwellings.</p>
Housing for current and future residents (2)	<p>Under scenario 3 there is a moderate risk in Greater Dwellingup’s housing stock being utilised for accommodation and holiday house purposes. Current housing stocks in Greater Dwellingup (299 occupied dwellings) are already constrained, with limited available lands for future development.</p> <p>Demand modelling suggests potential for a total of 24 (4%) of the projected required 542 dwellings to be utilised exclusively for short stay accommodation. Assuming 2.41 residents per household, Greater Dwellingup would lose 57 residents, increasing the scenario 3 projected population in 2026 to 951 and 2036 to 1,249 residents.</p>	Under scenario 3, the growth of the tourism sector is moderately sustainable and provides the community with the opportunity to balance the demand for short stay accommodation with long term / permanent accommodation, minimising the constraints on population growth. As such, there is potential under this scenario for population growth to be accommodated locally to the extent that it underpins demand for local population services.

PEOPLE AND PLACE CHARACTERISTICS	FINDINGS	IMPLICATIONS FOR VISION AND GOALS
The need and importance of childcare and primary schooling within Greater Dwellingup (1)	Scenario 3 projections estimate that in Greater Dwellingup there will be 97 primary school aged children in 2026 and 168 in 2036. This implies 134 school enrolments could be realised.	<p>To support a local primary school of 100 students, a population base of 1,232 residents, or 134 children is required.</p> <p>The scenario 3 population projection suggests a population of 168 school aged children by 2036. Therefore, the population projection under a diversified economy is sufficient in supporting this service being provided locally with sufficient scale and community.</p>
The need and importance of childcare and primary schooling within Greater Dwellingup (2)	Scenario 3 projections estimate that in Greater Dwellingup there will be 58 children eligible for childcare in 2026, and 83 in 2036. This implies that 18 childcare placements could be demanded.	The scenario 3 population projection would therefore be sufficient to support this service being provided locally.
The provision of aged care and ageing in place services	<p>Scenario 3 population projection estimates Greater Dwellingup will have 104 residents over the age of 70 in 2026 and 119 over the age of 70 in 2036. This reflects an increase of 36 compared to 2020.</p> <p>Based on government aged care provision ratios, approximately 38 hours of home and community care and support should be made available per eligible recipient over the age of 70.</p> <p>Under scenario 3, approximately 4 full time direct carers would be required to service the ageing population.</p>	<p>The lack of existing aged care services does not currently enable the projected elderly population to age in place.</p> <p>To support the target population trajectory of 1,306, the demand for aged care would require up to 6 aged care workers in Dwellingup by 2036 to provide home and community care services. Despite the diversified scenario providing Greater Dwellingup with more residents than the target population, the age profile resulting from additional local induced population growth suggests the demand for aged care is likely to be 4 full time direct carers, similar to a base case scenario, where the population projection represents an ageing population profile.</p> <p>Considering Greater Dwellingup has a lack of aged care facilities and workers, significant investment would be required to support the population. A growing local workforce is likely to alleviate some of the risks to local operators.</p>
Access to health services	<p>There are very limited healthcare services within Greater Dwellingup.</p> <p>Under scenario 3, population estimates there could be demand for one GP for 3.59 days a week by 2026, and one GP for 4.8 days a week by 2036.</p>	<p>The projected population under scenario 3 is likely to demand one GP or remote nursing services to cater for a population of 1360.</p> <p>Under the scenario 3 there would be sufficient demand for a full time GP/remote nursing service within the Dwellingup town site.</p>

PEOPLE AND PLACE CHARACTERISTICS	FINDINGS	IMPLICATIONS FOR VISION AND GOALS
Availability of local employment opportunities	Scenario 3 estimates an additional 49 FTE jobs in Greater Dwellingup by 2026, and 81 by 2036. This provides a total of 96 jobs to the local economy by 2036.	<p>Approximately 95 local jobs need to be realised to support target residential population growth by 2036.</p> <p>Under scenario 3, there could be sufficient economic activity in supporting number of jobs required by the target population.</p>
The nature of local amenity (1)	<p>Greater Dwellingup's current retail floorspace is 860m<sup>2</sup>.<sup>19</sup></p> <p>Under scenario 3 population projections suggest at a high level an additional 133m<sup>2</sup> of population driven retail floorspace could be required to service a population of 1,360 residents in 2036. Therefore, the existing convenience retail offer may struggle to cater for the projected resident population.</p>	It is unlikely there is sufficient vacant commercial floorspace to accommodate 133m <sup>2</sup> of additional retail within Town to accommodate the projected population <sup>20 &amp; 21</sup> .
The nature of local amenity (2)	An additional 1,538m <sup>2</sup> of commercial floorspace for mixed business such as hospitality, retail and healthcare services could be demanded under this scenario.	<p>The Land Use Employment Survey (technical appendix 3) suggests there is an estimated 2,350m<sup>2</sup> NLA of commercial floorspace within the study area as of 2017. Approximately 70m<sup>2</sup> (3%) is vacant.</p> <p>Under scenario 3, there is insufficient current commercial land availability to support additional activity to service projected levels of economic and population growth.</p> <p>Unlocking supply of additional commercial land will be vital in accommodating a range of business that provide amenity to a growing population. This may include development of new supply, and/or taking the opportunity to repurpose existing floorspace.</p>

<sup>19</sup>DPLH Land Use Employment Survey 2017/18

<sup>20</sup>DPLH Land Use Employment Survey 2017/18

<sup>21</sup>Dwellingup Structure Plan 2012



**Table 9 - Assessment of Future Scenario 3 – Diverse economy- against vision and goals**  
**Enterprise and economy considerations**

ENTERPRISE AND ECONOMY CONSIDERATIONS	FINDINGS	IMPLICATIONS FOR VISION AND GOALS
Quantifying the economic impact of tourism	<p>Under scenario 3, a diverse and sustainable tourism sector is leveraging a strong creative arts and natural resource management sector to create unique experiences for visitors. This results in an increased visitor spend in the Shire of Murray of \$31.59m per annum by 2036 and is estimated to support:</p> <ul style="list-style-type: none"> <li>• Additional 30 FTE direct local employment.</li> <li>• Additional 40 FTE indirect local employment.</li> <li>• Additional 52 FTE jobs within the Shire of Murray</li> <li>• \$3.3m direct gross value added to local economy.</li> <li>• \$8.18m in direct output.</li> </ul>	Increased tourism visitation alone could almost provide a sufficient amount of jobs to support target population growth, providing a diverse range of bookable experiences and increasing the capture of additional visitor spend with Greater Dwellingup.
Quantifying the economic impact of mining	<p>Under all scenarios, mining at Holyoake has the potential to continue to make significant contributions to the regional and local economy. This equates to \$717m in output, supporting approximately 4,000 jobs throughout the region by 2036.</p> <p>For Greater Dwellingup, this equates to mining potentially supporting approximately 555 jobs, or \$717m of output by 2036.</p> <p>Currently (2020) compared to mining; tourism, education and training and scientific services contribute 3.88% of Murray’s regional output and 14.1% of employment compared with mining’s 18.67% of output and 11.31% of employment. For these industries to have a comparable economic impact to mining in terms of regional output, they would need to generate 4,400 jobs within the region by 2036.</p>	<p>Almost 30% of all mining workers in the Shire of Murray were aged 50 years and old in June 2016. Assuming a similar demographic profile at Holyoake, 130 employees could retire by 2036. Assuming jobs remain available, this presents an opportunity for up to 130 new employees to work at Holyoake. These new employees will not necessarily become Greater Dwellingup residents, considering existing housing constraints and amenity.</p> <p>Potential conflicts with proposed Holyoake Study Area (2020-2022) will be identified and considered through a statutory assessment process that continues outside of Roadmap activities. Further information, maps and consultation will take place in due course. Alcoa will continue to work with DBCA and other stakeholders as plans develop to minimise the risk of potential land use conflicts, where practical.</p>

ENTERPRISE AND ECONOMY CONSIDERATIONS	FINDINGS	IMPLICATIONS FOR VISION AND GOALS
Quantifying the economic impact of mining (continued)	Perceived conflicts between mining and the potential for tourism, natural resource management and disease risk management need to be considered in context of the potential to provide sufficient land to realise economic activity and employment within the study area.	In relation to mining impact with other uses, Alcoa has a standard practice for ongoing community consultation. A consultation forum will likely be established in due course, with broad community engagement. At this time, previously mined areas pose the least risk for future trails. Alcoa has recently (11/6/21) responded directly to DBCA following a review of the proposed Dwellingup Town Trails Project and Dwellingup Gap Project. This review provided specific feedback on each component based on currently available bauxite knowledge.
Quantifying the economic impact of agriculture, forestry and fishing	<p>There is currently limited evidence of industry growth or substantial future investment focused on agriculture, forestry and fishing industries.</p> <p>Additional activity on agricultural land is likely to fall under visitor services such as accommodation and food to reflect the trend of producers providing a hospitality-based tourism attraction.</p> <p>Based on this, scenario 3 estimates the following levels of economic activity in these industries within Greater Dwellingup by 2036:</p> <ul style="list-style-type: none"> <li>• 22 FTE direct local jobs.</li> <li>• \$1.89m in direct gross value added.</li> <li>• \$5.85m m in total output.</li> </ul>	<p>Scenario 3 continues the trend of limited additional future investment focused on agriculture, forestry and fishing industries.</p> <p>As such, low growth in these industries may not be a significant contributor to job creation in Greater Dwellingup.</p>
Quantifying the economic impact of natural resource management activities	<p>Under scenario 3, a strong focus on natural resource management has brought additional local research projects tied to the Bushfire Centre of Excellence, bush regeneration, post-mine futures and mine site rehabilitation. This has resulted in new jobs in professional, scientific, technical, public administration, safety and education and training sectors. Positive flow on effects are also experienced within the visitor economy through the growth of nature, education, and Indigenous based experiences.</p> <p>Based on this, scenario 3 estimates the following high growth in these industries by 2036 that equates to:</p> <ul style="list-style-type: none"> <li>• 26 additional direct jobs FTE.</li> <li>• \$3m of direct gross value added.</li> <li>• \$6m of additional output to the regional economy.</li> </ul>	Natural resource management and nature-based tourism focus is likely to enhance the role that environment and culture plays in Greater Dwellingup's heritage characteristics and will be a significant contributor to population growth and job creation in Greater Dwellingup.

**Table 10 - Assessment of Future Scenario 3 – Diversified economy- against vision and goals  
Environment, arts, culture and heritage considerations**

ENVIRONMENT, ARTS, CULTURE AND HERITAGE CONSIDERATIONS	FINDINGS	IMPLICATIONS FOR VISION AND GOALS
<p>The value of Dwellingup’s natural environment for visitation</p>	<p>Under scenario 3, Greater Dwellingup’s natural environment offer is not invested in beyond the current planned activities.</p> <p>Significant conflicts are likely to remain in multiple use State Forest areas that surround the town site, with competing demands between mining, tourism, and disease risk management areas.</p> <p>The proposed mine site at Holyoake could impact sites that could be utilised for natural resource management, including:</p> <ul style="list-style-type: none"> <li>• Etmilyn</li> <li>• Plavins</li> <li>• Amphion Chadoora</li> </ul>	<p>In scenario 3, Greater Dwellingup’s ability to make most out of its best natural assets may potentially be compromised by a lack of investment (beyond what is currently planned) in industries and activities supporting the natural environment. This includes the potential to drive additional visitation through nature and education-based tourism experiences, as well as Indigenous tourism experiences.</p>

It is important to note that the Environmental Protection Act (1986) continues to be the primary statutory mechanism through which issues concerning the environment will be addressed.

The diversified economy scenario represents a future where Greater Dwellingup is most likely to realise the vision set by the community, where small-town charm is maintained while self-sufficiency and sustainability are increased through the provision of community-oriented services (i.e. childcare, schooling, aged-care, health-care and dwellings for permanent residents).

This is largely due to growth in activities aligning with the vision statement, as well as a strong and diverse tourism sector that leverages opportunities to collaborate on creative arts, nature, education, and Indigenous based tourism experiences.

Growth experienced under scenario 3 provides an opportunity to mitigate the risks of the demand for short stay accommodation overwhelming local housing stocks. It also allows for more diverse food, retail, arts and hospitality offers to grow and attract different visitor segments. This suggests future projects need to be targeted towards ensuring Greater Dwellingup has the right tools to realise natural resource management and tourism could provide up to 130 additional jobs if 75% of the tourism expenditure is captured within the study area.



Photo courtesy of Josh Cowling



# 7. KEY FINDINGS

The following table outlines how and to what extent Scenario Three (the preferred scenario, diversified economy) aligns with the goals and key success indicators outlined on page 17 of this document. Map 4 which follows the key findings table, reflects a shared understanding between key community and industry stakeholders as to natural, heritage and community assets that will be indefinitely protected from industry impacts within the Dwellingup Future Zone.

**Table 11 – Key scenario analysis findings – alignment against goals and key success indicators.**

GOAL	KEY SUCCESS INDICATOR	DIVERSE ECONOMY
1. Maintain our small-town charm so that Greater Dwellingup will be an attractive, interesting place that is self-sufficient and sustainable the services it offers families.	1.1 By 2036, Dwellingup’s population has reached 1,306.	Under scenario three (diverse economy), this population growth is achievable by 2036.
	1.2. By 2036, 18 additional childcare places have been created for local families.	Under scenario three (diverse economy) there will be 83 children eligible for childcare by 2036.
	1.3. By 2036, there will be sufficient demand for the provision of a primary school for 100 students.	Under scenario three (diverse economy), there will be demand for a primary school to cater for Dwellingup’s 168 primary school-aged children.
	1.4. By 2036, the development of short stay accommodation infrastructure does not impact upon the supply rental and owner-occupier dwellings for residents.	Under scenario three (diverse economy), future planning will need to accommodate 242 new dwellings that cannot be utilised for short-stay accommodation. Bushfire risk, water infrastructure and general infrastructure constraints will need to be addressed to provide for this level of additional dwellings.
	1.5. By 2036, residents have access to a full time GP and remote nursing services.	Under scenario three (diverse economy), the local population size will support a full time GP and remote nursing services for the local community.
	1.6. By 2036, residents can access high quality aged care in-Dwellingup.	Under scenario three (diverse economy), six aged care workers will be required to service Dwellingup’s ageing population in line with population projections, to allow people to stay and receive care in the community.

GOAL	KEY SUCCESS INDICATOR	DIVERSE ECONOMY
<p>2. Grow a diverse and resilient economy to offer more pathways for local jobs and career opportunities.</p>	<p>2.1. By 2036, there are 130 FTE jobs within the Dwellingup economy.</p>	<p>Under scenario three (diverse economy), there will be sufficient economic activity across Dwellingup's industries to support the additional 96 FTE jobs required by the target population of 1,306.</p>
	<p>2.2. By 2036, an additional 150m<sup>2</sup> of retail floorspace and 219m<sup>2</sup> of commercial floorspace has been identified and activated through new enterprises.</p>	<p>Under scenario three (diverse economy), Dwellingup will need to identify, plan for and activate commercial land availability to support additional commercial activity to service high levels of population growth which will demand an additional 150m<sup>2</sup> retail and 219m<sup>2</sup> commercial floor space.</p>
	<p>2.3. By 2036, visitors are spending \$31.59m per annum in Dwellingup.</p>	<p>Under scenario three (diverse economy), the diversification and growth of the visitor economy allows for the potential capture of \$31.59m per annum of visitor spend in Dwellingup.</p>
	<p>2.4 By 2036, support the creation of 5 Indigenous enterprises.</p>	<p>Under scenario three (diverse economy), increased visitation leads to opportunities to utilise, retain, and enhance natural assets for interpretation activities.</p>
	<p>2.5 By 2036, Dwellingup is recognised as a cultural and arts hub with a minimum of 15 arts-based enterprises making up the Dwellingup Arts Trail.</p>	<p>Under scenario three (diverse economy), increased visitation, branding and place making initiatives, integrated with education activities oriented towards Dwellingup's natural and cultural heritage inspires and attracts artists through greater appreciation of Dwellingup's natural and cultural heritage.</p>
<p>3. Protect and enhance Greater Dwellingup's environment by sensitively managing diverse land-use activities (such as mining, forestry, tourism, agriculture and recreation).</p>	<p>3.1. There is support realisation of common objectives through the implementation of the Roadmap Action Plan.</p>	<p>Under scenario three (diverse economy), a fit-for-purpose implementation advisory committee will be an important consultation source as industry projects are developed and implemented, and as new information on environmental assets and impacts becomes available.</p>
	<p>3.2. There is a map that reflects a shared understanding and agreed aspiration put forward by the Dwellingup Community as to natural, heritage and community assets that they believe should be indefinitely protected from industry impacts within the Dwellingup Future Zone.</p>	<p>Under scenario three (diverse economy), this map will be an important consultation source as industry projects are developed and implemented, and as new information on environmental assets and impacts becomes available.</p>

GOAL	KEY SUCCESS INDICATOR	DIVERSE ECONOMY
4. Protect and capitalise on our assets through education, creativity, cultural awareness, and a scientific approach.	4.1. By 2036, natural resource management and nature-based tourism activities are contributing to the local economy through an additional 26 FTE direct jobs.	Under scenario three (diverse economy) natural resource management and nature-based tourism focus is likely to enhance the role that environment and culture plays in Greater Dwellingup's heritage characteristics and will be a significant contributor to population growth and job creation in Greater Dwellingup.
5. Community, Government and Industry cooperatively work together to achieve the objectives of the Dwellingup Futures Roadmap.	5.1. A fit-for-purpose implementation advisory committee, chaired by the Shire of Murray is actively consulted and informing decision making around land use for Dwellingup's key industries	Under scenario three (diverse economy), Dwellingup will have access to a larger population and a broader range of perspectives, experience and expertise within its local community and regional stakeholders. These voices will be critical for carrying forth a vision for Dwellingup which evolves with the communities' priorities, advantages, and opportunities, whilst retaining a commitment to its values.

Map 4 describes the following two zones that reflect the aspirations of key Dwellingup Futures Stakeholders within Greater Dwellingup:

- Dwellingup Futures Strategic Area; and
- Dwellingup Futures Investigation Area




The Dwellingup Futures Strategic Area encompasses a broad area where the majority of existing and planned community, tourism, agricultural and recreation assets are located, as well as the major entrances to the Dwellingup Townsite. The continued development and enhancement of this area in alignment with the Dwellingup Futures vision and goals is considered essential if the community's aspirations are to be realised.

The Dwellingup Futures Investigation Area represents an area where stakeholders have identified opportunities for a range of alternative land uses including natural resource management research, education and eco-tourism, as well as resource extraction, forestry and disease risk management. Clarity over the opportunities and challenges represented in this area will require further investigation, with oversight by the proposed Dwellingup Futures Implementation Advisory Committee. Initiatives that will support investigation of these areas have been identified within Part 2 - Dwellingup Futures Implementation Plan.










# MAP 4: DWELLINGUP FUTURES FOCUS AREA: COMMUNITY, INDUSTRY AND ENVIRONMENT INTERACTIONS


## LEGEND

-  Dwellingup Futures Focus Area
-  Dwellingup Futures Strategic Area
-  Dwellingup Futures Investigation Area



### REGION SCHEME RESERVES (PRS)

- |  |   |
|--|---|
|  Regional open space                          |  Industrial    |
|  Rural  |  State Forests |
|  Primary regional roads                       |  Urban         |
|  Special Control Area No 1 - water catchments |   |






### AGRICULTURAL ASSETS

-  Rural Zoning

### TOURISM ASSETS

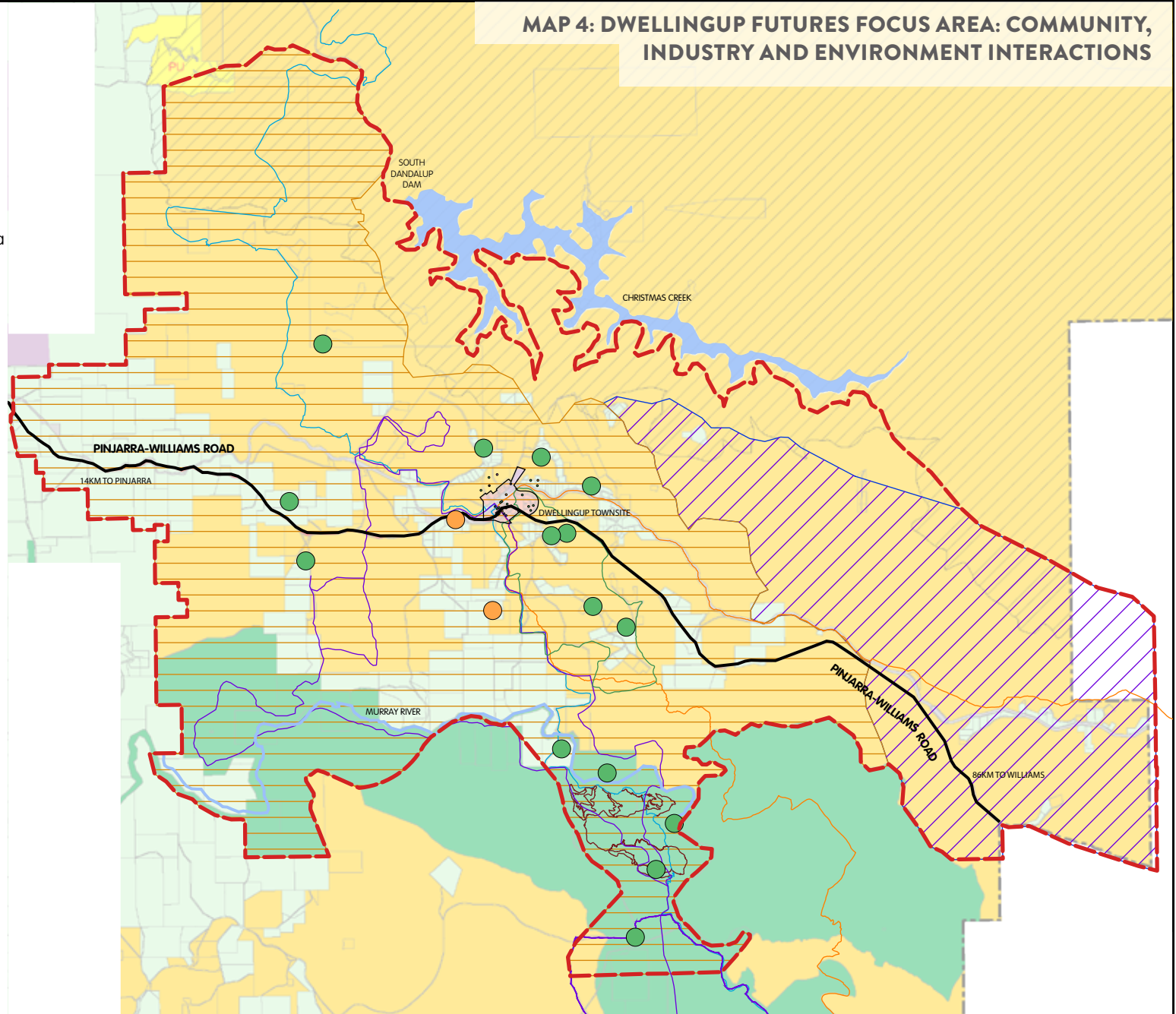
-  Tourism activities and accomodation
-  Food and Beverage

### DPaW Managed Tracks and Trails

-  Bibbulmun Track
-  Munda Biddi Trail
-  Walk Trail
-  Mountain Bike Trails
-  Les Couzens Bridle Trail

### NOTES:

- <sup>1</sup> Mining activities are not indefinitely precluded throughout the Dwellingup Futures Study Area, in line with MLISA
- <sup>2</sup> Forestry activities are undertaken throughout the State Forest in the Focus Area as per existing statutory processes



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# 8. GLOSSARY OF TERMS

CVWG	Community Visioning Working Group.
DBCA	Department of Biodiversity, Conservation and Attractions.
Direct employment	Refers to the employment impacts that result directly from a particular industry or business
DPLH	Department of Planning Lands and Heritage.
Dwellingup	Dwellingup as mentioned throughout the report, refers to the ‘Greater Dwellingup’ – see technical appendix 5.
Dwellingup futures group	Comprised of the Stakeholder Working Group (SWG) and the Technical Advisory Committee (TAC). A full list of members of this group is available on page 7.
Dwellingup Town	The boundaries of the Dwellingup town site as defined by the Western Australian Planning Commission – see technical appendix 5.
Economic growth	Refers to the increase in the amount and value of goods and services produced.
Economic impact	Refers to the impact or change resulting from specific activities, that include but are not limited to economic, business, industry and environmental activities.
Economic Output	Is the total value of goods and services produced within a particular geographic area.
Employed residents	Refers to employment of residents who live within Dwellingup.
Employment self-containment	Refers to the proportion of employed residents who work within the area in which they live.
Environmental Protection Agency	The Western Australian Environmental Protection Authority (EPA) was established in 1971 as an independent Board providing advice to the Minister for Environment.
Environmental Protection Act 1986	The Act provides for “the prevention, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected with the foregoing”.
FTE	Full time equivalent. Refers to the hours worked by an employee on a full time equivalent.
Goals	Broad aspirations that need to be achieved in order to meet Dwellingup’s Vision.

GP	General practitioner.
Greater Dwellingup	The area encompassing Dwellingup, and the activities and infrastructure in surrounding areas that may have a direct bearing on Dwellingup's economic development characteristics and/or the value proposition of the Dwellingup Town Centre.
Hedonic price impacts	Evaluates the benefits of non-market characteristics that may impact the market price of a particular asset.
Indirect employment	Refers to the employment impacts as a result of a particular industry or business that results in employment changes in other related industries.
Labour force	Those who are of working age (15-65), and are employed or actively seeking employment.
Local employment (jobs)	Refers to employment within Dwellingup, regardless of where to employee resides.
NRM	Natural resource management. The protection and improvement of natural resources, including land, water, plants, and animals.
NDIS	National Disability Insurance Scheme.
NLA	Net lettable area.
PDC	Peel Development Commission.
Scenario	Refers to a specific possibility, in reference to plausible futures for Dwellingup.
Shire of Murray	The municipal boundaries of the economy that services, and benefits from economic activities in Dwellingup and surrounds.
Social amenities	Refers to places, infrastructure and services that support the wellbeing of a particular community.
Statistical Study Area	Boundaries for major ABS data sets that provide the most accurate snapshot of economic development activities and trends.
Strategic Priorities	Specific outcomes that need to be realised to support attainment of goals.
SWG	Stakeholder Working Group related to the Dwellingup Futures Project.
TAC	Technical Advisory Committee related to the Dwellingup Futures Project.
Target population	Refers to population estimated to be necessary to support the sustainable provision of essential services in Dwellingup.
Value added	A quantitative measure of how productive or efficient and industry is at increasing the value of its inputs.
Vision Statement	An overarching statement as to what will characterise future growth in Dwellingup.

# 9. TECHNICAL APPENDICES LIST

NUMBER	TITLE	AUTHOR	DATE OF PUBLICATION
Technical Appendix 1	Detailed Scenario Analysis	FAR Lane	February 2020
Technical Appendix 2	Dwellingup Land Use Review	Hatch Roberts Day	February 2020
Technical Appendix 3	Literature Review – Dwellingup Futures Growth Management Roadmap	FAR Lane and Hatch Roberts Day	February 2020
Technical Appendix 4	Draft Dwellingup Futures Economic and Land Use Trends Analysis	FAR Lane and Hatch Roberts Day	July 2020
Technical Appendix 5	Scenario Impact Modelling Methodology	FAR Lane	November 2020
Technical Appendix 6	Study Areas and Maps	FAR Lane	November 2020
Technical Appendix 7	Alcoa of Australia Ltd Fact Sheet	Alcoa of Australia Ltd	June 2020
Technical Appendix 8	Dwellingup Discovery Forest – Zones and their key values. Map supplied by	Dwellingup Discovery Forest Working Group	August 2020
Technical Appendix 9	The Department of Planning Lands and Heritage Land Use Employment Survey Extract	Department of Planning, Lands and Heritage, extract formatted by FAR Lane	2017
Technical Appendix 10	Map - Alcoa's Mineral Lease – Mineral Lease 1 State Agreement (ML1SA)	Hatch Roberts Day, Alcoa of Australia Ltd	June 2021

Appendices have been provided as a separate report, and can be accessed via the Shire of Murray's Your Say Portal on the Shire of Murray website [www.murray.wa.gov.au](http://www.murray.wa.gov.au).



