



SHIRE OF
MURRAY

SUB-REGIONAL
ECONOMIC
OPPORTUNITY
ANALYSIS



The Peel Development Commission acknowledges Australia's Aboriginal and Torres Strait Islander community as Australia's first peoples, and the Bindjareb people as the traditional custodians of the Peel region.

We acknowledge their continuing connection to land, sea and community and pay our respect to their cultures and to Elders both past and present.

DISCLAIMER: *This document has been prepared using a range of evidence to provide stakeholders with a clear understanding of the Peel Development Commission's approach to delivering a progressive, prosperous and dynamic region with a culture of care by 2050. All information is provided to the best of our ability and within the limits of our knowledge and resources. All proposals resulting from this document will be further detailed and agreed to by relevant parties.*

Executive Summary

The Peel Regional Investment Framework (the Peel Framework) outlines the vision, objectives and strategies for the ongoing economic, social and environmental development of the Peel, setting goals to 2050. The need for sub-regional economic analysis is identified within the Peel Framework to aid the local government areas (LGAs) comprising the Peel to engage in actions that stimulate economic diversification and innovation, as well as meet the needs of the regions rapidly growing population. Prepared through careful analysis of demographic, economic and labour force data, the investigation of state, regional and local policies and meetings with local government representatives, this report provides sub-regional data and preliminary economic opportunity analysis for the Shire of Murray. The purpose of this report is to aid in the identification of development and growth opportunities within the LGA, as well as opportunities for collaboration across the wider Peel.

Murray's population is rapidly growing at an estimated annualised rate of 3.1%, adding a total of 5,389 residents over the last fourteen years and indicating the Shire is on track to grow according to the Western Australian Planning Commission's WA Tomorrow Population Projections. The Shire is noticeably ageing, with a median age of 44 and over 36% of residents being above the age of 55. Murray does not currently have the diversity in housing stock needed to cater for both a rapidly growing and ageing population. Over 94% of dwellings in the Shire are detached single homes, a figure that has been growing since 2006 and is not sufficient to promote housing affordability. There is strong evidence that identifies that creating aged friendly communities and universally accessible housing assists in allowing ageing in place within communities and for elderly persons, supporting strong communities and improved wellbeing outcomes. Given the ageing population of the Shire of Murray, this will be a key consideration for implementation moving forward, both for the public and private sector.

The Shire faces both rising unemployment and declining labour force participation when compared to the State and Peel averages for both metrics. The Shire has seen rising educational attainment levels, particularly at the Certificate III and IV level, however it lags behind both the State and Peel averages for residents with university degrees, influenced by the existing employment profile of the region which is primarily comprised of jobs requiring only vocational-level qualifications. This increase in educational attainment in the Shire has corresponded with an increase in more highly skilled employment in Education and Tourism. Approximately half of Murray's workers live in the Shire, with employment in most sectors aside from Manufacturing and Transportation observing relatively high levels of self-sufficiency, indicating there is a similar number of jobs to workers within the Shire for each industry sector.

Murray's economy is dominated by its manufacturing industry, which contributed approximately \$2.25 billion to the local economy in 2019, comprising over half the Shire's output. This sector is predominantly driven by Alcoa's operations at its Pinjarra Alumina Refinery, however other players, such as Murray Engineering, are developing a significant role in local employment and the development of local manufacturing capability. Opportunities to diversify the local economy lie in the Development WA and DPIRD-supported Peel Business Park and Western Australian Food Innovation Precinct (WAFIP) at Nambeelup, creating a place for agri-food and processing operators as well as general industry, as well as through the Shire's placemaking and trails tourism initiatives that intend to develop Murray as an attractive weekend getaway destination. Stage one of the Peel Business Park will provide 120ha of industrial land for development, with the intended footprint of future stages to total 1,000ha when fully complete. The expansion of Raceway and Paceway facilities in Pinjarra and

the development of an equine living precinct in Coolup provide an opportunity to facilitate the emergence of a local equine cluster in Murray, per the *Peel Equine Strategy*.

In order to serve a growing population, strengthening access to tertiary education providers, healthcare and aged care facilities requires additional consideration. Enhancing transport linkages for residents to access these services available in Mandurah will be key to improving amenity within the Shire in the medium-term, with a view to develop population services as the Shire of Murray reaches key population thresholds. The Shire contains ample land for residential development, predominantly centred around Pinjarra town centre as a transport-oriented development as well as amenity led residential development adjacent the Peel Inlet. The Shire of Murray also retains significant landholdings for industrial development and industrial development, centred around the 1,000ha Peel Business Park, and the Pinjarra Industrial Park.

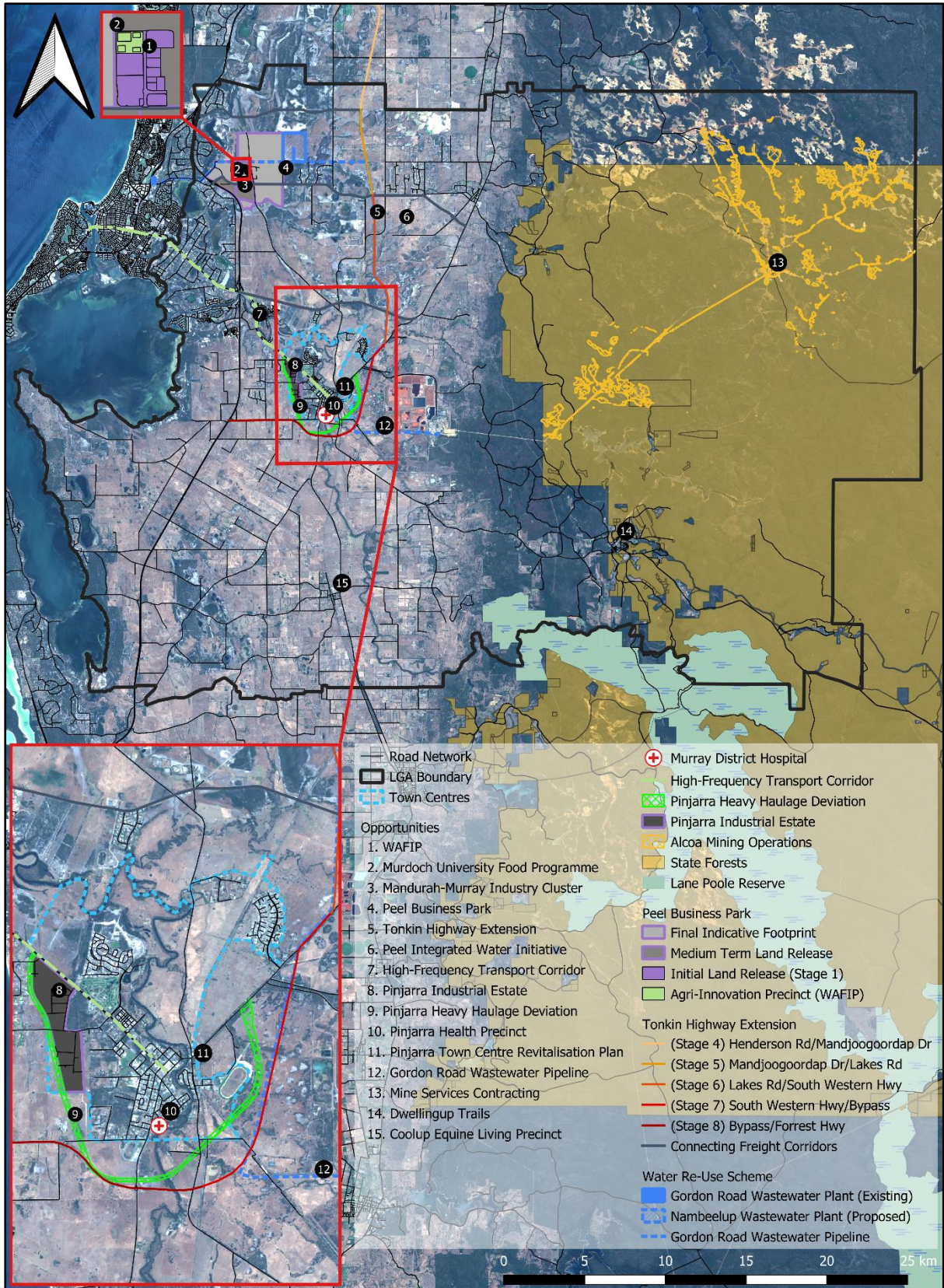
Several major projects have been proposed to stimulate the Shire's economic diversification, with each of these addressing one of the five key themes of the Peel Framework, as well as delivering regional infrastructure to both unlock and drive competitive growth long-term. These involve the stimulation of innovation through collaborative partnerships with tertiary institutions such as Murdoch University, the development of employment pathways for local school leavers and the revitalisation of the Shire's transportation network to better serve an ageing yet diversifying population. Understanding the key issues and opportunities that drive these actions through the lens of state, regional and local strategies is key to the development of an economic diversification and community development pathway in alignment with the overarching goals of the Peel Framework.

Leveraging expertise from economies that have undertaken similar economic diversification actions to those intended for Murray will allow the Shire to understand the critical applications of projects and policies proposed under economic diversification initiatives. The technological-based expansion of agricultural firms, development of innovation ecosystems and introduction of community transport initiatives pursued in localities such as Waroona, Waikato and Wimmera provide an important guide for initiatives within Murray such as the WAFIP and Pinjarra Town Centre Revitalisation Strategy. Whilst further exploration is required around the applications of these actions in a manner specific to Murray, this Sub-Regional Economic Analysis identifies the key contingencies and actions pursued that are applicable to the Shire's social, economic and environmental goals.

This Sub-Regional Economic Analysis identifies several pathways for Murray to diversify its economy, most notably:

- the intensification of agriculture in the form of the development of a high-tech innovation ecosystem (WAFIP) and overall agri-industry precinct;
- the growth of enterprise facilitation agreements between local manufacturers and mining companies operating in Peel such as Alcoa, South 32, Boddington Gold and Doral; and,
- the expansion of placemaking and trails initiatives to enhance the capacity of the Shire to deliver tourism excellence.

The report outlines key actions and goals proposed by State, Regional and Local bodies, as well as potential future actions to deliver economic diversification in these sectors according to the five key themes of the Peel Framework.



Map 1. Shire of Murray Opportunities

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1.0 Population & Demographics

The Shire of Murray has seen relatively strong population growth over the last decade, with the LGA's total population growing by **43%** over the period from 2006-2019. Murray's population grew at an average annual rate of **3.1%** over this period, slightly slower than the average for the Peel region yet **50%** faster than the average for Western Australia. Murray's population growth has been relatively 'stop-start' over the period, with slowdowns in growth around 2010 to 2011 and 2015-2016 coinciding with the aftermath of economic and employment downturns in the Shire.

Murray has an ageing population, evident in the increase in the proportion of Shire residents in the age brackets **above 65** and the LGA's high median age of **44**, which is similar to the median ages of Mandurah and Waroona at **43** and **45** respectively, yet drastically higher than Serpentine-Jarrahdale's median age of **32**. This is reflective of Murray's status as a 'treechange' retirement destination, boosted by the area's rural character, lifestyle and the community focused sense of place found within the Shire, as noted in Murray's Age-Friendly Communities Plan. Murray's ageing population may be further exacerbated by the outmigration of young adults in search of employment if the Shire does not successfully promote diversified career and education pathways.

The Shire of Murray's ageing population highlights the need to expand the level of services, jobs and infrastructure available in the Shire, particularly in the sectors of aged care, healthcare, housing and transportation. Expansion within these sectors will not only help support the **quarter** of residents **over the age of 65** but will also provide further diversification of the employment base, with additional jobs necessary to accommodate the expected **2,932** to **6,952** new residents in the Shire by 2031. Developing age friendly communities that are strategically linked through investment in these sectors as well as community infrastructure will leverage Murray's attractiveness as a "treechange" retirement destination into a long-term growth opportunity for the Shire, allowing the LGA to develop a sustainable employment base and helping to stem the outflow of younger residents to more attractive employment destinations.

Despite the Shire's ageing and growing population, Murray's housing stock lacks the diversity required to service the needs of a range of residents, particularly those of seniors and young adults. With respect to seniors, there is the identified need to provide universally accessible housing to enable ageing-in-place, and possibly alternative service and care package delivery models. For youths, additional housing diversity would also enhance housing affordability. Over **94%** of the Shire's housing stock is comprised of single detached homes, meaning new residents have limited choice of living arrangements beyond location. Given that both overall rates of home ownership have declined by approximately **5%** since 2006, and that the number of single parent and lone person households in Murray has risen by **2%** over the same period, the need for affordable housing is paramount to ensuring the Shire is able to develop a strong and resilient community long-term.

1.1 Population Growth

Murray (S) Estimated Resident Population, 2006-2019

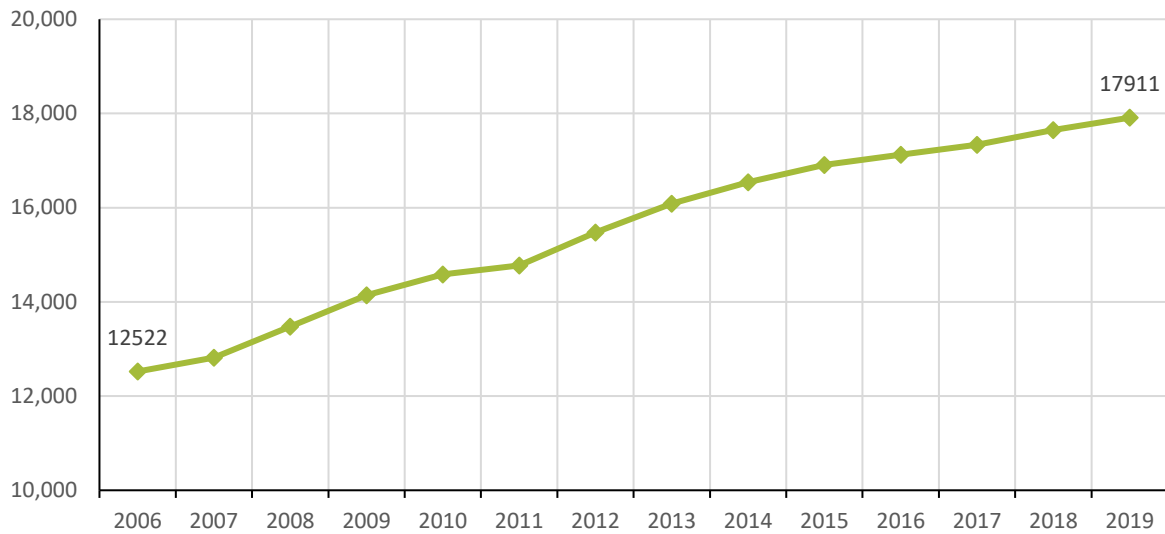


Figure 1. Murray Estimated Resident Population 2006-2019 (ABS, 2020a)

Peel Estimated Resident Population, 2006-2019

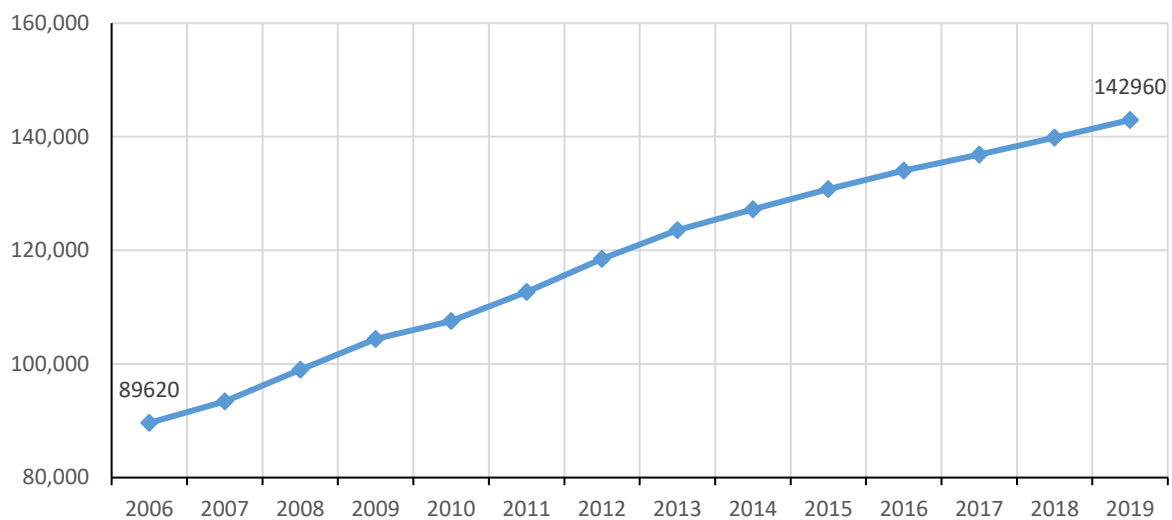


Figure 2. Peel Estimated Resident Population 2006-2019 (ABS, 2020a)

The Shire’s estimated resident population has grown by **43%** from 2006-2019, with population growth slowing around 2010 and 2011, picking up between 2012 and 2015 and slowing again towards 2017. Population growth in Murray has been steady since 2017. Peel’s estimated resident population has grown by **59.5%** over the same period, with growth rates slowing slightly toward 2013 and remaining steady from 2014 onwards.

ERP AAGR 2006-2016

Murray 3.1%

Peel 4.2%

WA 1.9%

Table 1. Estimated Resident Population Average Annual Growth Rates: Murray, Peel and WA (ABS, 2017a)

Murray (S) 'WA Tomorrow' Population Projections

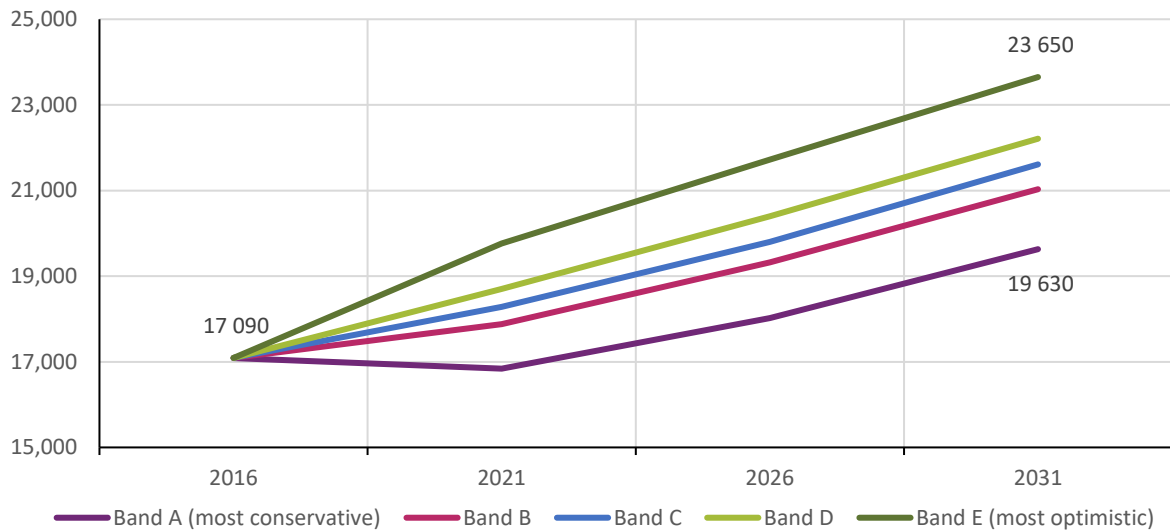


Figure 3. Murray 'WA Tomorrow' Population Projections (DPLH, 2017)

Peel 'WA Tomorrow' Population Projections

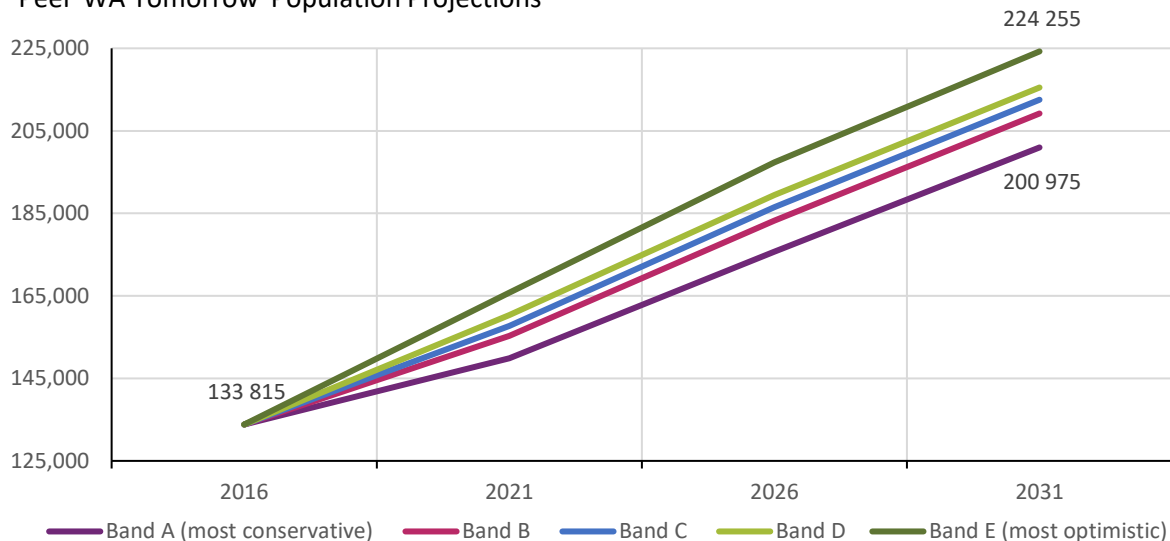


Figure 4. Peel 'WA Tomorrow' Population Projections (DPLH, 2017)

Murray is projected to have between **19,630** and **23,650** residents by 2031 according to the 'WA Tomorrow' population forecast. Peel is expected to have between **200,975** and **224,255** residents by the same year. This forecast is based on the existing trends for fertility, migration and mortality, offering five different scenarios to account for variation. Based on Murray's average annual growth rate of **3.1%** for its estimated resident population, the Shire can expect to exceed the most optimistic estimates of its 'WA Tomorrow' population forecast, should this growth rate continue toward 2031. Continuation of Peel's average annual ERP growth rate of **4.2%** will lead to the region having a population in line with the most optimistic 'WA Tomorrow' projections by 2031. It is worthwhile to note the impacts of the COVID-19 pandemic have not been considered. While this may affect the projections in the short-term, there is less likely to be major long-term impacts to these projections due to the Shire's position as a frontier for the continued urban growth of the Perth Metropolitan Area.

1.2 Age and Sex

Murray (S) Population Pyramid, 2016

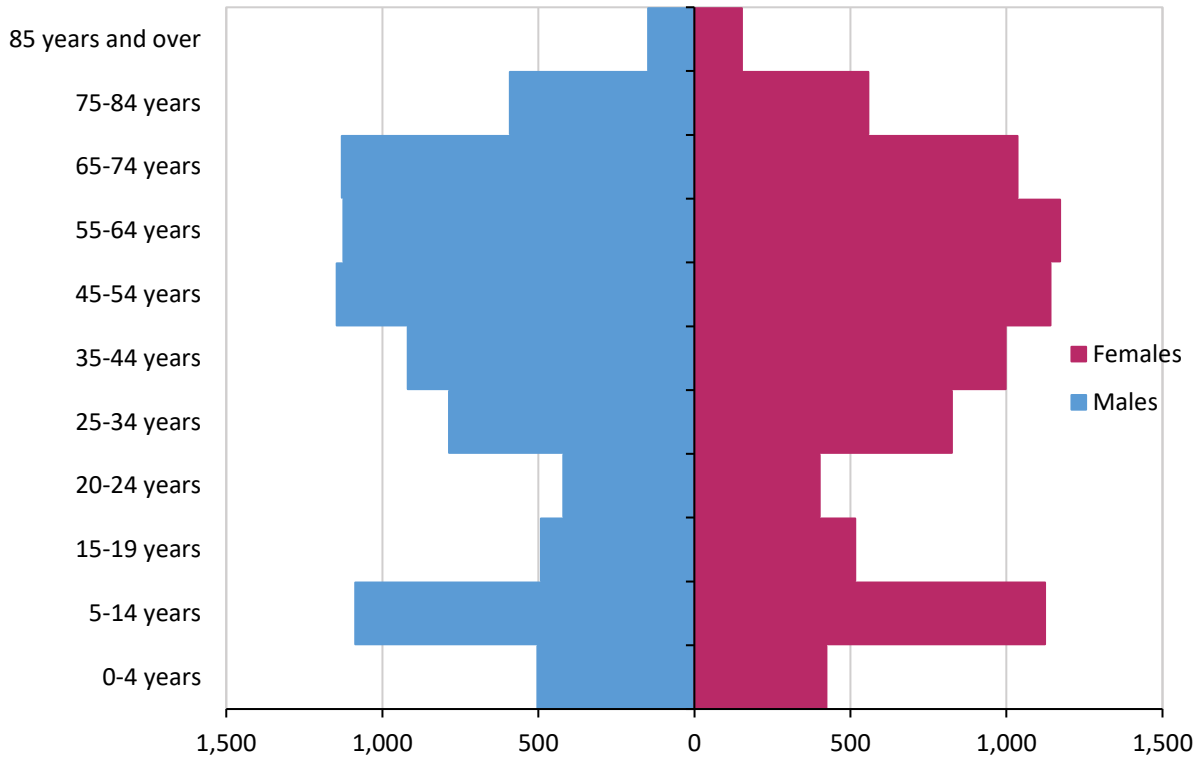


Figure 5. Murray Population Pyramid 2016 (ABS, 2017a)

Murray retains a predominantly balanced representation of gender across age cohorts and overall population, with **8,365** males to **8,335** females living in the Shire. The higher proportion of men living in the LGA, although negligible, may be due to the prevalence of men employed in the local manufacturing sector.

Murray (S) Age Distribution (% of Population), 2006-2016

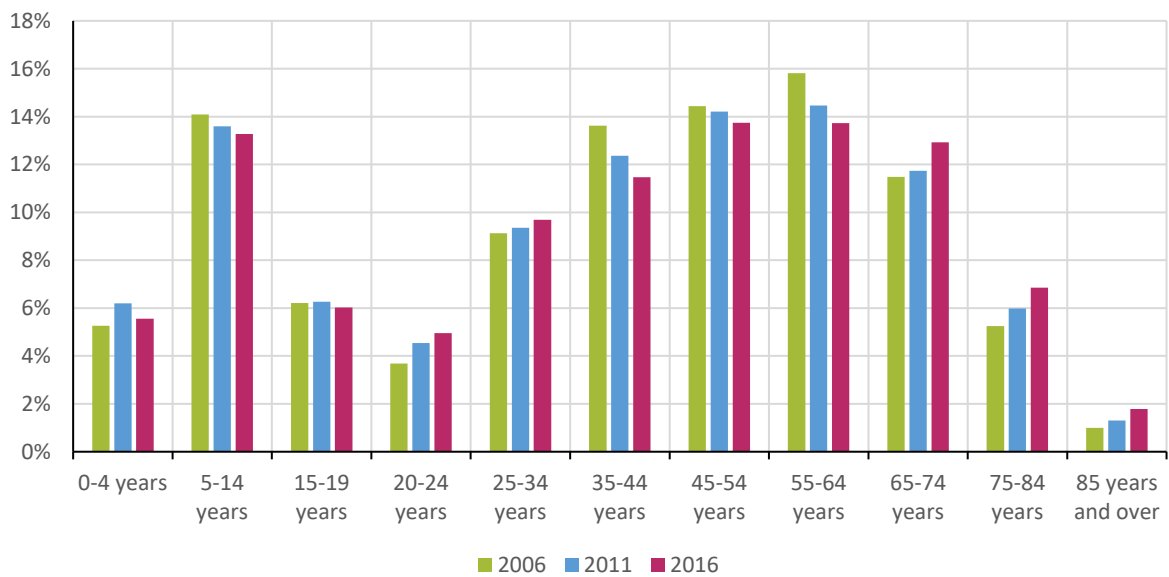


Figure 6. Murray Age Distribution 2006-2016 (ABS, 2017a)

The Shire has seen an increase in the proportion of residents in all age groups **above 65** between 2006 and 2016, indicating an ageing population. Murray has also seen a decline in the proportion of residents aged **19 and below**, as well as declines in the **35-44** and **45-54** age groups, perhaps indicating a relative decline in the proportion of families living in the Shire.

Murray (S), Peel & WA Age Distribution (% of Population), 2016

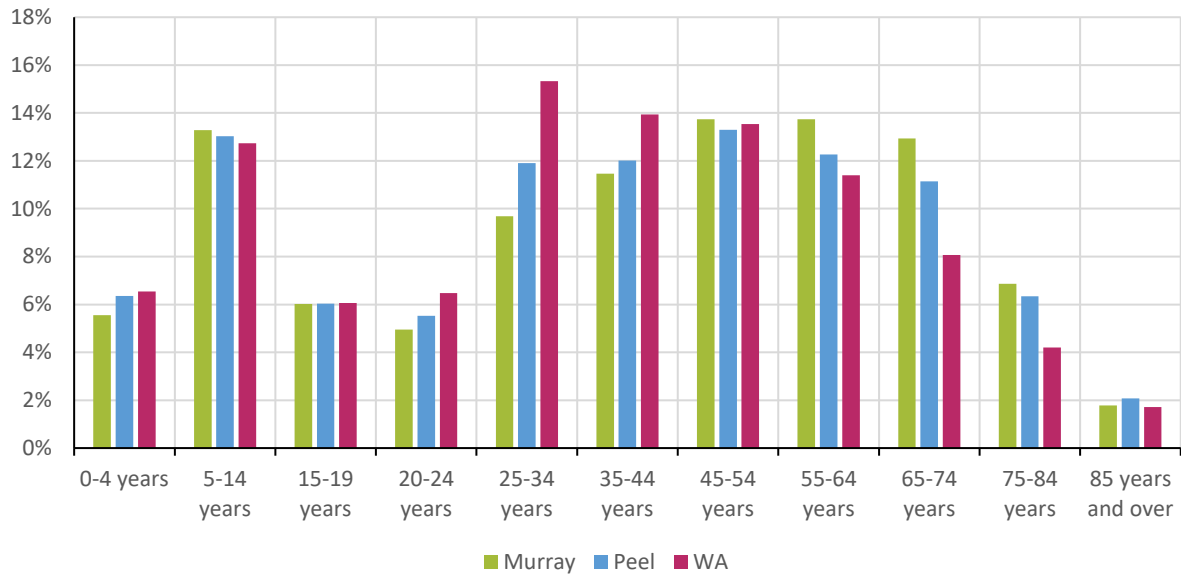


Figure 7. Murray, Peel and WA Age Distribution 2016 (ABS, 2017a)

Relative to Peel and WA as a whole, Murray has a much older population. The proportion of residents in the **65-74** age group is **5%** higher than WA and **2%** higher than Peel, whilst the proportion of residents in the **25-34** age group is **5.5%** and **2%** lower than WA and Peel, respectively. The relatively higher proportion of elderly residents living in Murray may reflect the Shire’s status as a “treechange” retirement destination.

Murray (S) Median Age, 2006-2016

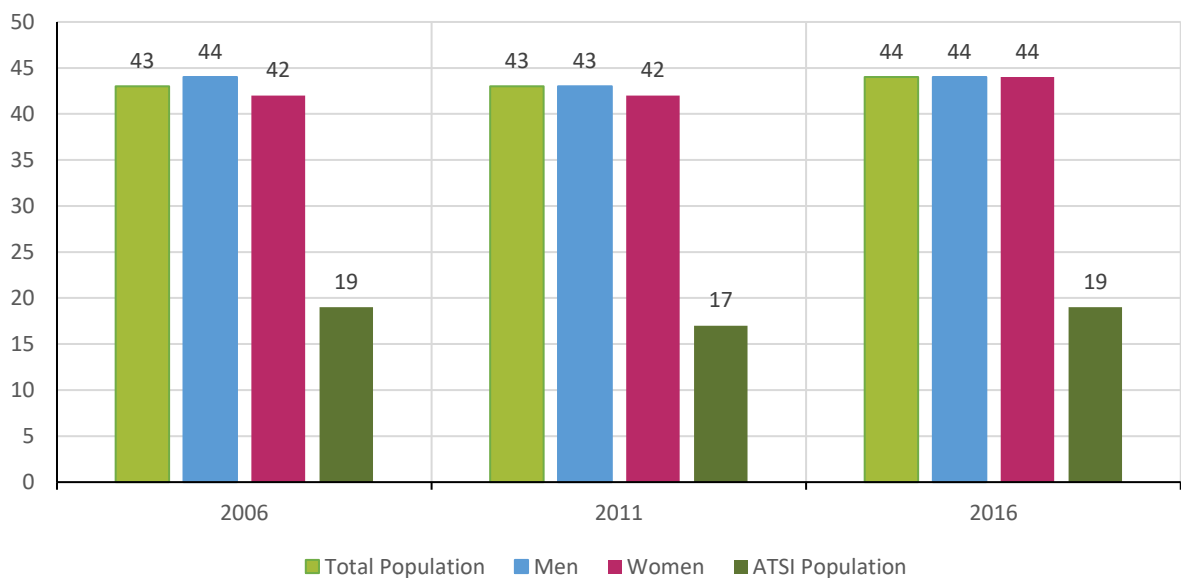


Figure 8. Murray Median Age 2006-2016 (ABS, 2017b)

The median age for Murray has been relatively static in the last decade, increasing from **43** in 2006 to **44** in 2016. The median age for men in the Shire recorded no change between 2006 and 2016, remaining at **44**, whilst for women has increased slightly from **42** to **44** over the same period. The median age of the Shire’s ATSI population has remained considerably lower, staying at **19** throughout the reported time period. The high median age of Murray residents, as well as the slight increase in median age are further indicators of an ageing population in the Shire.

1.3 Aboriginal and Torres Strait Islander People

Murray (S) & Peel Total ATSI Population 2006-2016

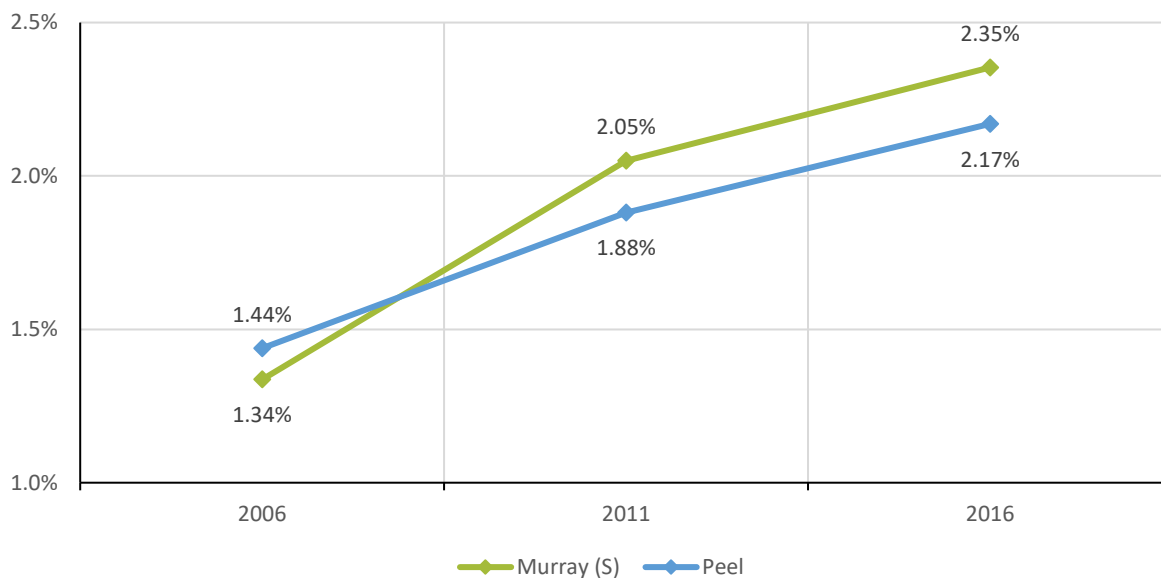


Figure 9. Murray and Peel Proportion of ATSI Population (ABS, 2017c)

ATSI Population AAGR 2006-2016

Murray 14.5% **Peel 12.9%** **WA 2.9%**

Table 2. ATSI Population Average Annual Growth Rate: Murray, Peel and WA (ABS, 2017c)

Murray contained **0.18% more** Aboriginal and Torres Strait Islander residents than Peel in 2016, however contained **0.1% less** ATSI residents in 2006. This is reflective of the Shire’s aggregate annual growth rate for its ATSI population of **14.5%**, which is **1.6%** higher than that of Peel and **11.6%** higher than that of WA.

Murray (S) ATSI Population Pyramid, 2016

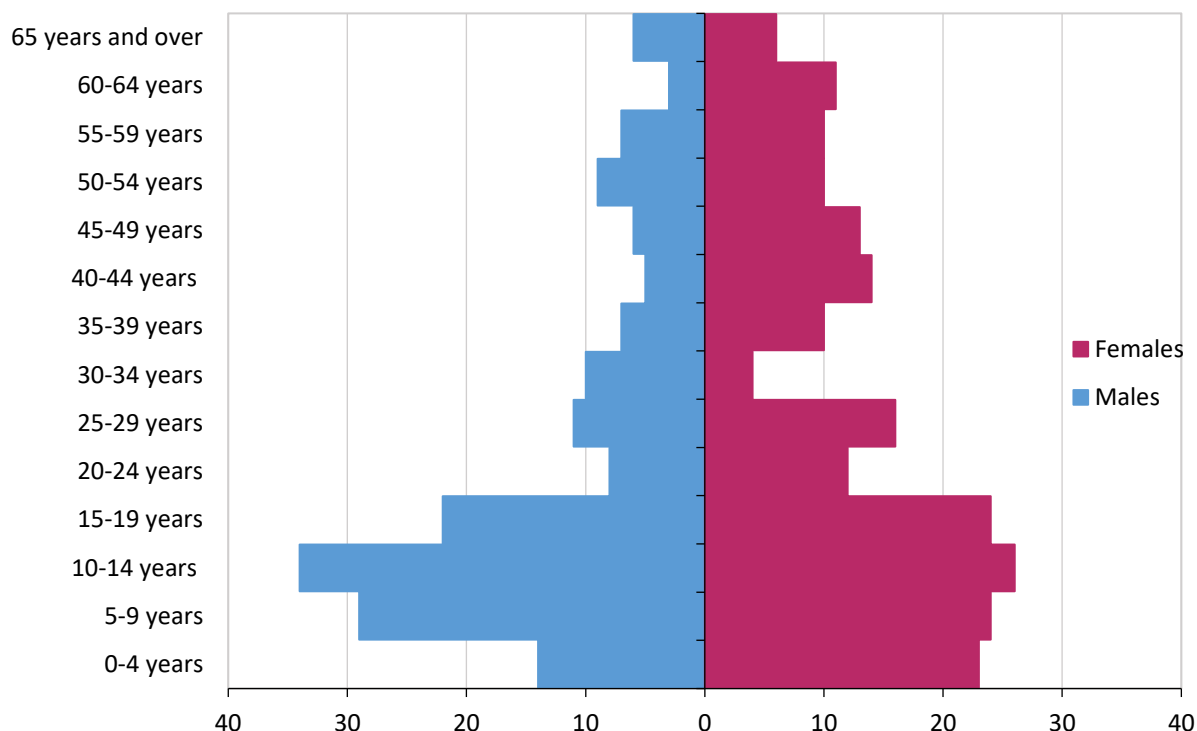


Figure 10. Murray ATSI Population Pyramid 2016 (ABS, 2017c)

Murray’s ATSI population contains a relatively higher proportion of women, with **203** ATSI women living in the Shire to **187** ATSI men. This difference is due to the higher number of ATSI women aged 40 and above, possibly due to higher life expectancy among ATSI women overall. Conversely, there is a higher proportion of male ATSI children, particularly in the **10-14-year** age bracket.

Murray (S) Age Distribution (%of ATSI Population), 2006-2016

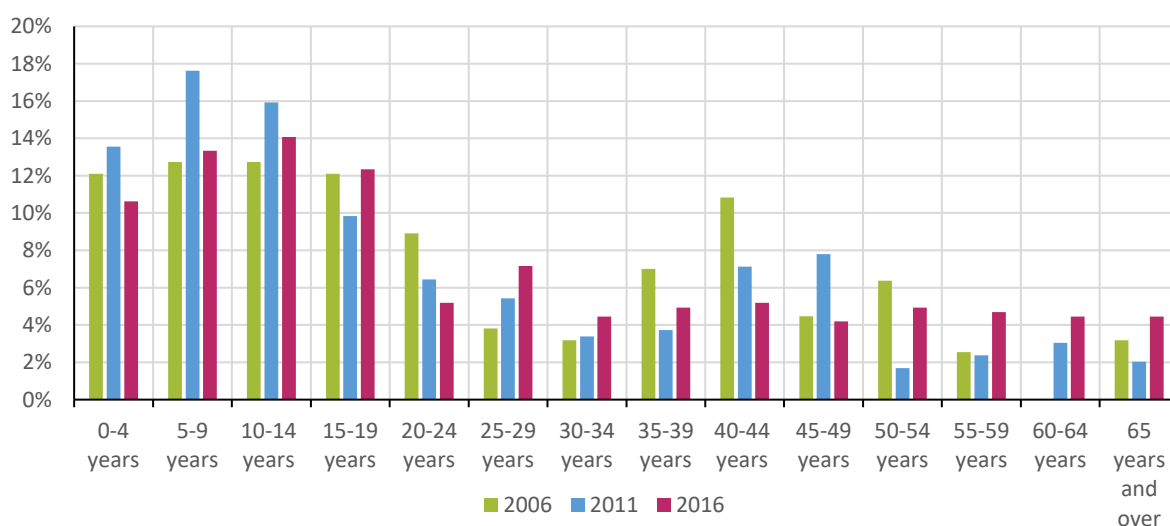


Figure 11. Murray Age Distribution of ATSI Population, 2006-2016 (ABS, 2017c)

The Shire had seen an increase in the proportion of younger ATSI residents in 2011, however this had been reversed by 2016, with some age brackets seeing a decline on 2006 numbers. The proportion of ATSI residents in the age brackets **above 55** saw increases, supporting the notion that Murray’s population is ageing.

Murray (S), Peel & WA Age Distribution (% of ATSI Population), 2016

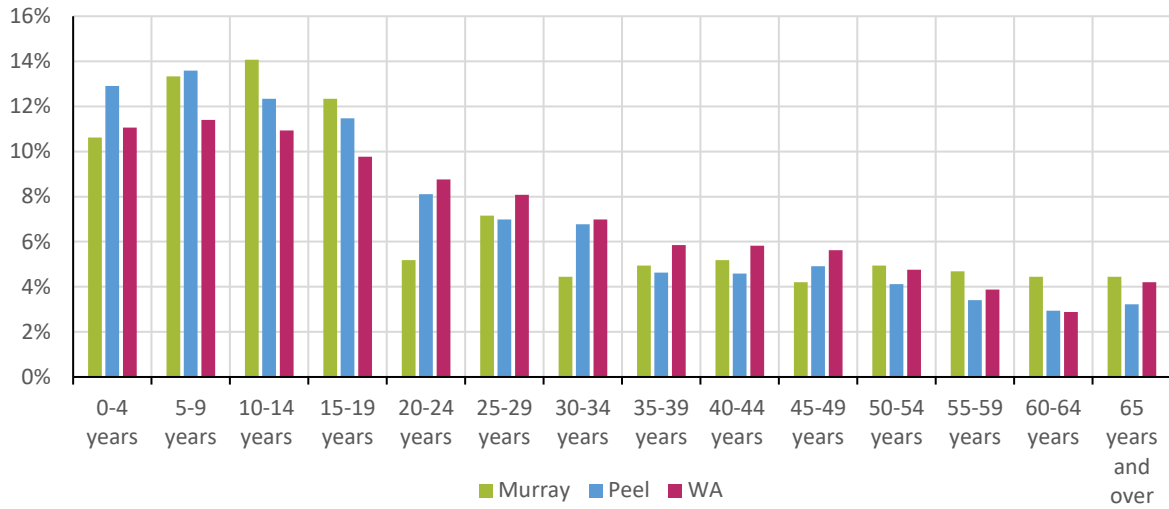


Figure 12. Murray, Peel and WA Age Distribution of ATSI Population, 2016 (ABS, 2017c)

The relative age of Murray’s ATSI population can be noticed when compared to WA and Peel, with the Shire containing approximately **1%** more ATSI residents above 50 than WA and **2%** more than Peel. Conversely, the Shire contains a much lower proportion of ATSI residents in the age brackets between 20 and 45, reporting a proportion of residents in the 20-24 age bracket that is **4%** lower than WA, for example.

1.4 Population Turnover

Population turnover measures the combined rate of both in and out-migration relative to the size of population, indicating the proportion of residents within a reporting period who are different people to those who were residents in the previous period. Population turnover can identify the changing demographic characteristics and needs of a region within the context of stable population growth.

Murray (S) & Peel Population Turnover 2006-2016

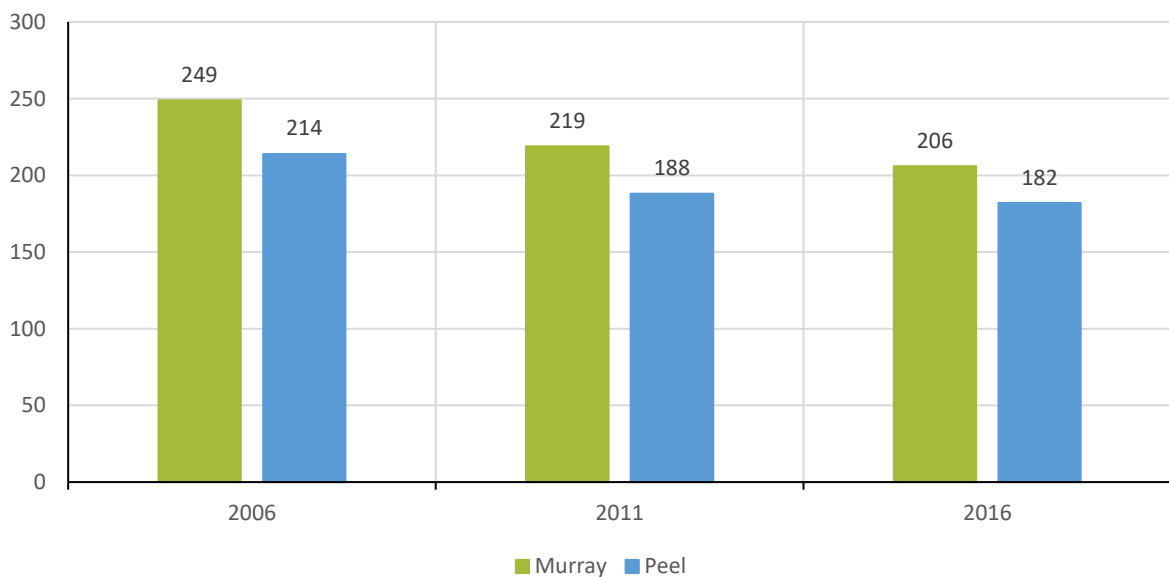


Figure 13. Murray and Peel Population Turnover (ABS, 2017d)

Murray has had a consistently higher rate of population turnover than Peel, however this has declined somewhat from **249 new residents per 1000** in 2006 to **206 per 1000** in 2016. This would indicate between **20-24%** of Shire residents are different in any given year and may be explained by a high outflow of residents in younger age brackets and high inflow of “treechange” retirees.

1.5 Housing

Murray (S) Private Dwelling Composition, 2006-2016

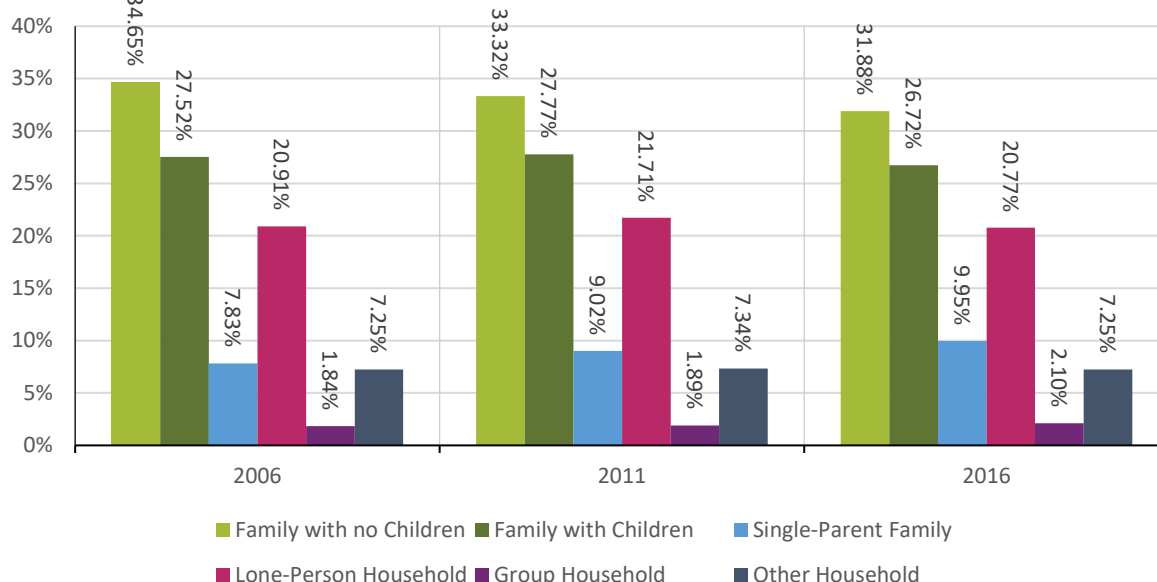


Figure 14. Murray Household Composition 2006-2016 (ABS, 2017e)

Between 2006 and 2016, Murray saw an increasing proportion of single-parent households, rising by **2.12%**, as well as a declining proportion of families with no children, falling by **2.77%**. The proportion of families with children and lone person households in the Shire remained relatively steady over this period, declining by only **0.8%** and **0.14%**, respectively.

Murray (S) Private Dwelling Tenure, 2006-2016

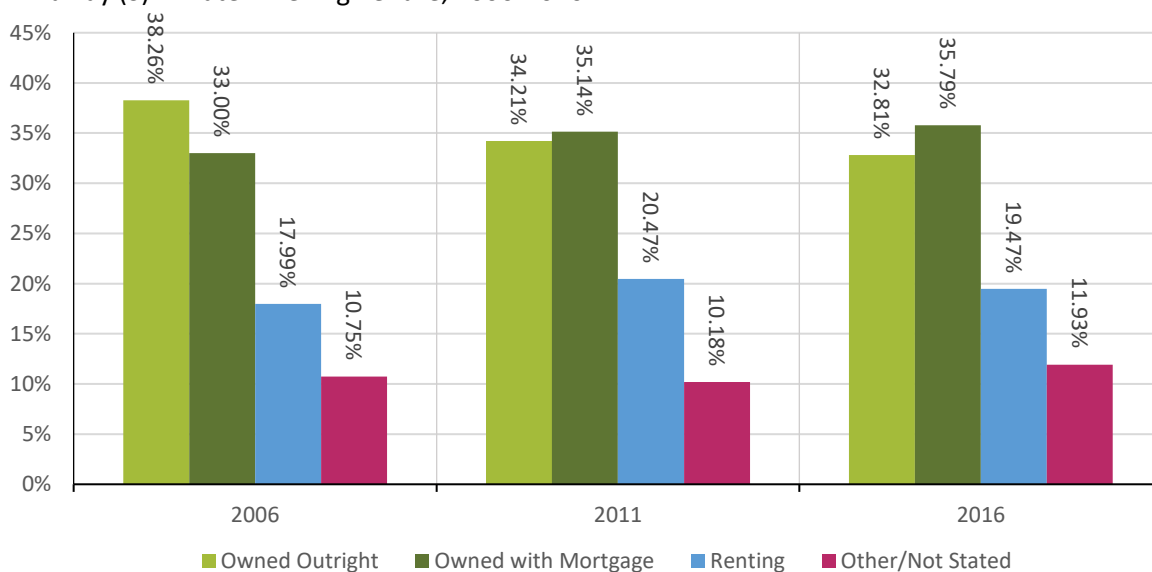


Figure 15. Murray Housing Tenure 2006-2016 (ABS, 2017e)

The Shire observed declining rates of home ownership over the period between 2006 and 2016, with the proportion of residents owning their home outright falling by **5.45%**. The proportion of residents owning with a mortgage and renting has risen by approximately **3%** and **2%**, respectively, corresponding with the decline in outright ownership. This decline in home ownership correlates with increases in the Shire’s unemployment rate over the period, indicating it may be a symptom of economic conditions, however the decline also reflects national trends in outright home ownership that have occurred since the turn of the century. Despite the decline observed during the 2006-2016 census period, the Shire is currently observing a boom in home and land package purchases in new subdivisions.

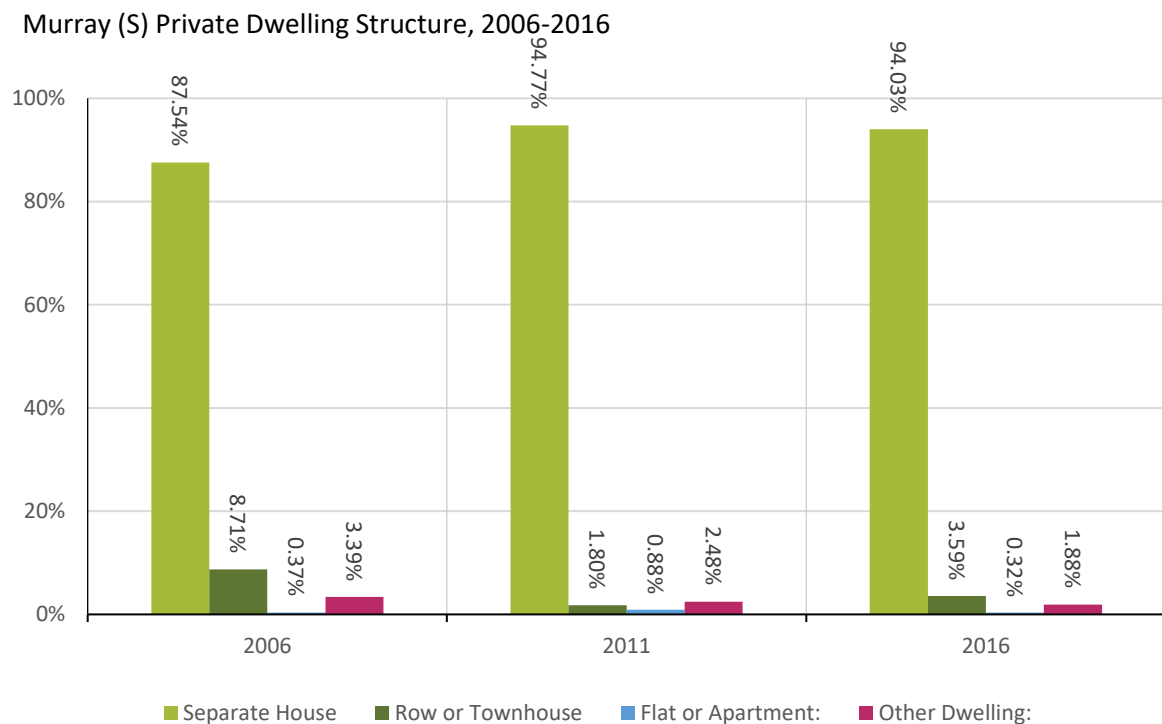


Figure 16. Murray Dwelling Structure 2006-2016 (ABS, 2017e)

Murray’s dwelling structure is overwhelmingly comprised of separate, detached homes, with the proportion of residents living in this housing type increasing by over **6.5%** between 2006 and 2016. During this period, the proportion of residents living in semi-detached townhouses declined by a corresponding **5.2%**. The high proportion of residents living in separate homes highlights a need for the Shire to improve the diversity of its housing mix in order to better cater for younger and older residents in the future. The development of generational housing may lead to improvements in youth migration, ageing in place as well as the overall strength and resilience of the Murray community, with these issues raised through community consultation for the Dwellingup Futures Strategy.

2.0 Workforce

Murray has a relatively weak labour market in comparison to Western Australia as a whole, typically seeing labour force participation rates **10-11%** lower than the State over the period of 2006 to 2016, however these are roughly in line with those of the rest of Peel. Unemployment and youth unemployment rates have moved in lockstep with those of the State and Peel over the same period, however unemployment rates have remained **1-2%** higher than the State overall. The low labour force participation observed in Murray is likely due to the Shire's ageing population, as well as the LGA's relative isolation from major job markets in the Perth Metro area. Tertiary and vocational educational attainment is slowly increasing in Murray, however the Shire's education profile is more heavily focused on Certificate-level qualifications relative to Western Australia as a whole. **42%** of Murray residents held a Certificate II or IV level qualification in 2016, whilst only **10.8%** held a bachelor's degree. The educational profile of Murray residents is, however, consistent with the type of jobs held, given the predominance of Manufacturing, Mining and Construction in local employment. These sectors typically provide jobs that do not require university-level qualifications, hence a reduced need for these qualifications amongst those living in the Shire.

Manufacturing is the largest employing sector in Murray, providing **25.51%** of workers in the Shire with jobs. However, the sector employs only **9.13%** of residents and saw its share of employment decline by **26.93%** between 2011 and 2016. Approximately **66.4%** of Murray's manufacturing workers reside outside of the Shire, with this proportion remaining consistent between 2011 and 2016 despite the overall decline in the number of those employed in the sector. This industry is predominantly driven by Alcoa's Pinjarra Alumina Refinery, which provided **1,100** of the **1,417 Manufacturing jobs** located in the Shire in 2019. The Mining sector has consistently been a large employer of both Murray residents and workers over the last decade, increasing its share of employment by **37.28%** between 2011 and 2016. Employment within this sector is driven by operations such as the Huntly and Willowdale Bauxite Mines, as well as the Newmont Gold Mine, all of which are located within the Shire of Murray or in neighbouring LGAs.

54.62% of Murray residents leave the Shire for work, a similar proportion to the **53.7%** of Shire workers that do not live in Murray. The majority of residents who worked outside of Murray were employed in the neighbouring Peel LGAs of Mandurah and Waroona, with these LGAs containing large employers such as the Peel Health Campus and Willowdale Bauxite Mine, respectively. Observation of Murray's self-containment statistics indicates there is a relatively similar proportion of residents working in each industry as there are to jobs available within the Shire, with notable exceptions. Facilitating innovation in existing sectors such as Mining and Manufacturing in combination with overall economic diversification will improve the resilience of the Shire of Murray's economy, leaving it less exposed to threats such as mine or refinery closures. Agriculture, centred around the Western Australian Food Innovation Precinct (WAFIP), as well as the Arts, Recreation and Tourism sectors, with the Shire's focus on equine, placemaking and trails development, present excellent opportunities for diversification.

2.1 Labour Market

Murray (S), Mandurah (C), Peel & WA Labour Force Participation Rate, 2006-2016

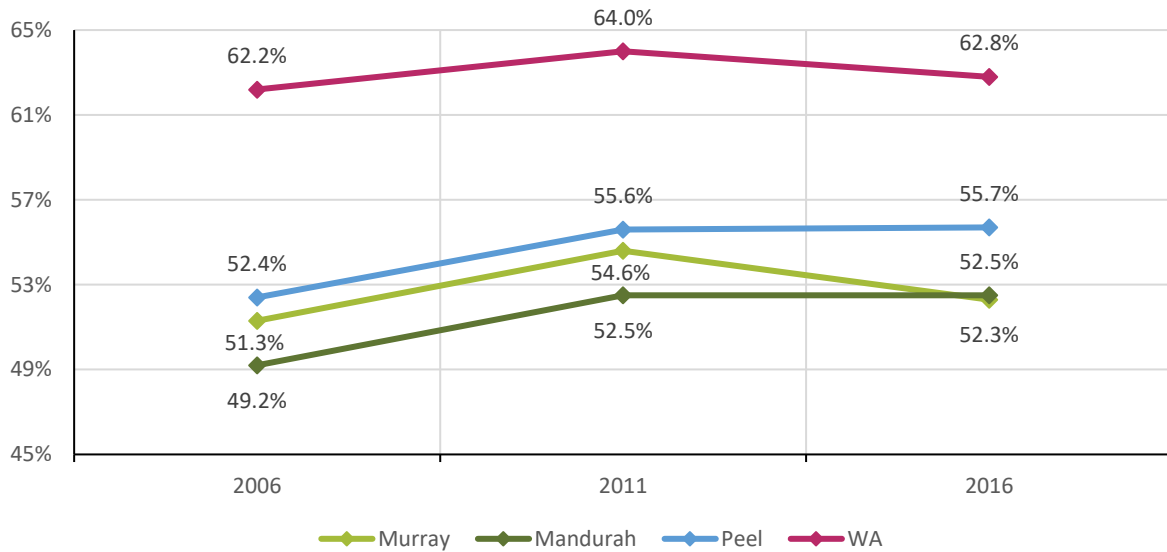


Figure 17. Murray, Mandurah, Peel and WA Labour Force Participation Rate 2006-2016 (ABS, 2017f)

Murray’s labour force participation rate has been consistently lower than that of Peel by approximately **1-2%**, and lower than that of WA by **10-11%** over the period of 2006 to 2016. The Shire’s participation rate increased from **51.3%** in 2006 to **54.6%** in 2011, before declining to **52.3%** in 2016. Murray’s participation rate was **2.1%** higher than Mandurah’s, a city with a similar age demographic, in 2006 and 2011 before falling to the same level in 2016. Whilst this drop in labour force participation was in line with economic trends seen across the State, this would indicate the Shire’s low participation rate is the result of older residents electing not to participate in the labour force.

Murray (S), Mandurah (C) Peel, & WA Unemployment Rate, 2006-2016

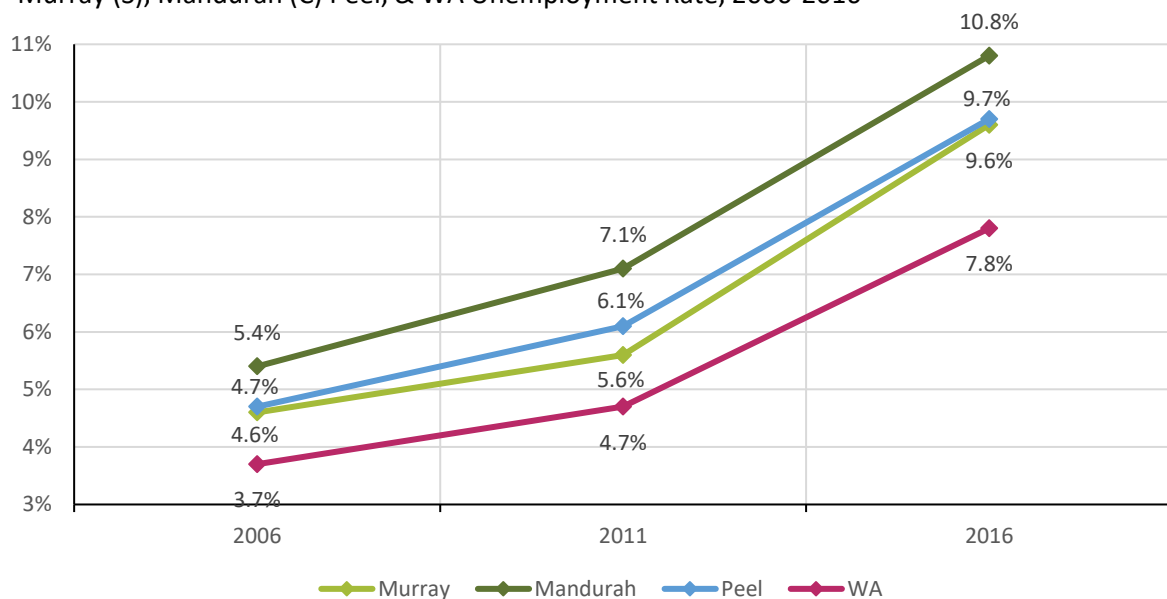


Figure 18. Murray, Mandurah, Peel and WA Unemployment Rate 2006-2016 (ABS, 2017f)

The Shire has seen a sharp rise in unemployment since 2006, rising from **4.6%** to **9.6%** by 2016. Murray’s unemployment rate has been roughly reflective of that of wider Peel, however, has been consistently **1-2%** higher than that of WA. The LGA’s unemployment rate has remained consistently **1-2%** lower than that of Mandurah, likely due to the presence of large mining operations run by Alcoa located within the Shire near Dwellingup. The rise in unemployment seen in both 2011 and 2016 are the probable after-effects of the 2008-10 Global Financial Crisis and the mining-induced downturn in the WA economy, respectively. Nevertheless, the expansion of trails and tourism opportunities in the Shire has led to recent job creation in the Arts and Recreation sector.

Murray (S), Mandurah (C) Peel & WA Youth Unemployment Rate, 2006-2016

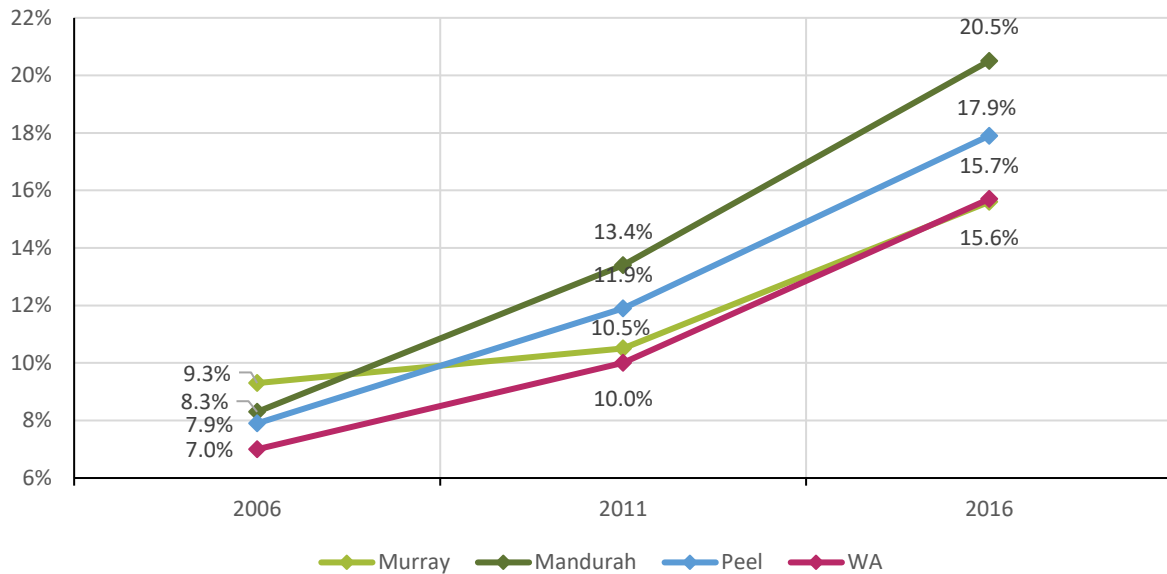


Figure 19. Murray, Mandurah, Peel and WA Youth Unemployment Rate 2006-2016 (ABS, 2017f)

Murray’s youth unemployment rose steadily from 2006 to 2011, before rising sharply toward 2016, in line with trends for both Peel and WA. The LGA had a youth unemployment rate approximately **1%** higher than Peel and **2%** higher than WA in 2006, however by 2016 matched the state’s youth unemployment rate, which was **2.2%** lower than that of Peel overall. The Shire’s youth unemployment was **1%** higher than that of Mandurah in 2006, however by 2016 was **5%** lower than the City’s, potentially due to the greater availability of employment in Alcoa’s mining operations for younger persons living in the Shire.

Murray (LGA) SALM Unemployment and Labour Force, 2016-2020

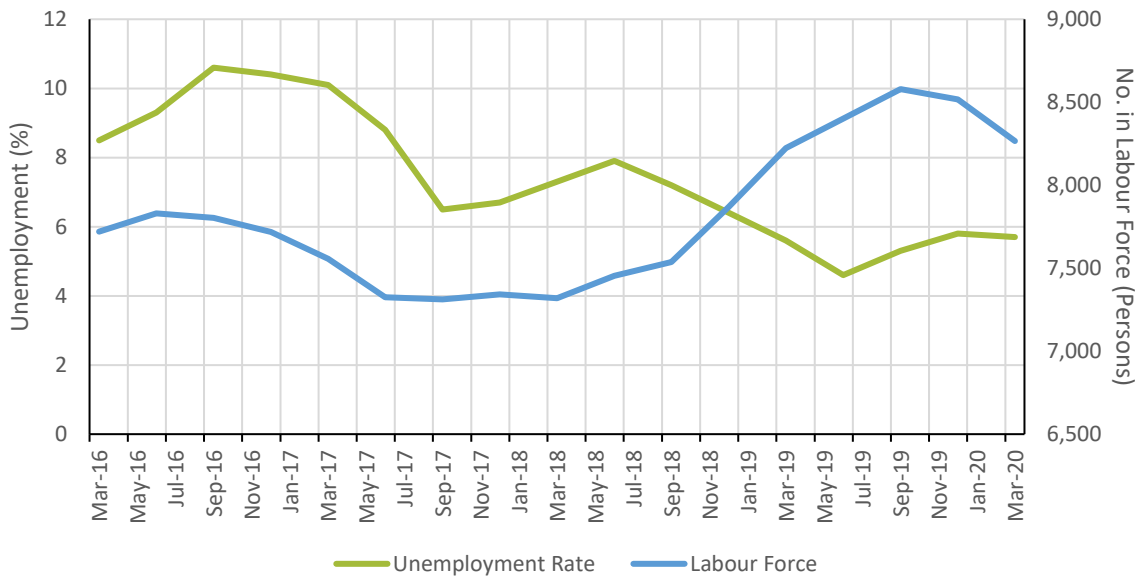


Figure 20. Murray SALM Unemployment and Labour Force 2016-2020 (DESE, 2020)

SALM Murray (S) March 2020

Unemployment (%) **5.7%** No. in Labour Force **8,267**

Yearly Change **↑ 0.1%** **↑ 43**

Table 3. SALM Murray Data (DESE, 2020)

In March 2020, Murray recorded an unemployment rate of **5.7%** across a total labour force of **8,267**. This represented an increase of **0.1%** in the Shire’s unemployment rate since March 2019, and an increase in the total labour force of **43 workers** over the same period. The Shire’s relatively low unemployment, particularly compared to its 2016 unemployment rate, may be attributed to the general economic recovery observed across the state since 2016 as well as a rebound in local mining employment.

2.2 Educational Attainment

Murray (S) Educational Attainment Level 2006-2016

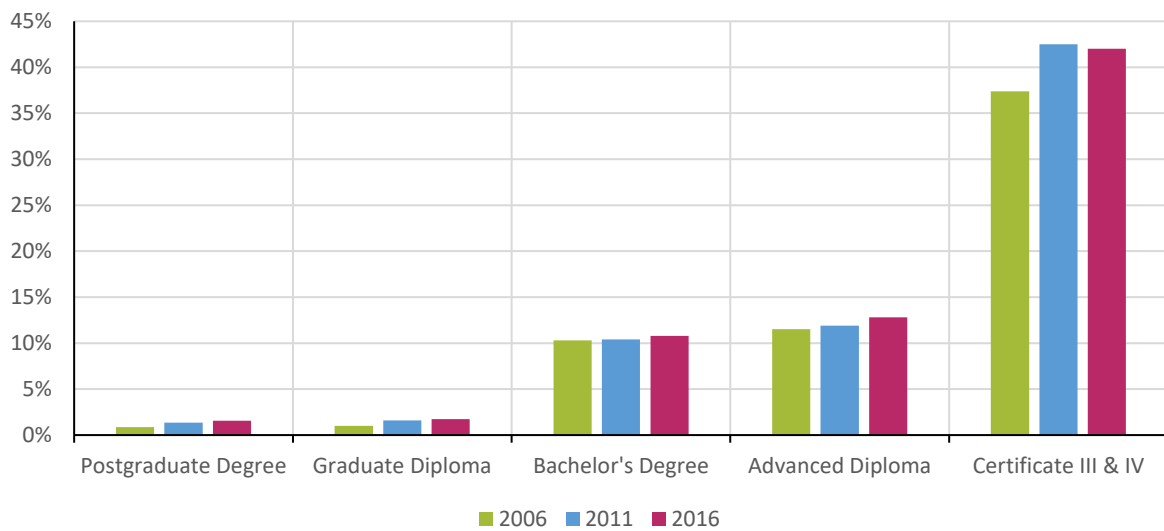


Figure 21. Murray Educational Attainment Level 2006-2016 (ABS, 2017g)

Between 2006 and 2016, Murray saw an approximately **1%** increase in the proportion of population holding an educational qualification across all levels of attainment, with the highest increase reported amongst those carrying a Certificate III or IV level qualification, increasing by **4.6%**.

Murray (S), Peel & WA Educational Attainment Level 2016

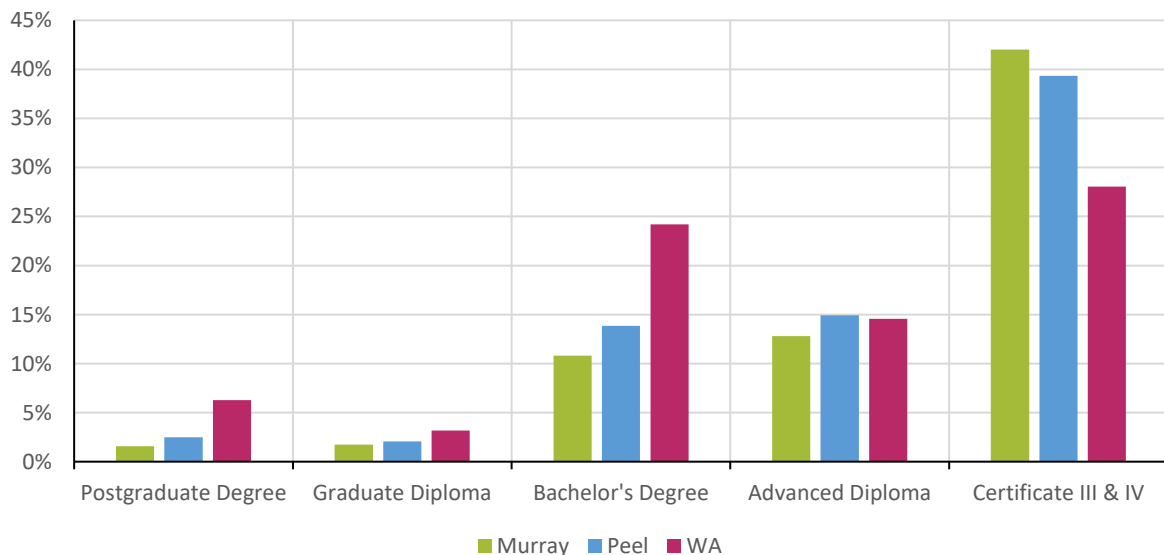


Figure 22. Murray, Peel and WA Educational Attainment Level 2016 (ABS, 2017g)

Murray has a significantly lower proportion of its population holding postgraduate and bachelor's degrees than WA, having **4.72%** and **13.6%** less residents attaining these qualifications, respectively. Conversely, **13.95%** more residents have attained a Certificate III or IV qualification in Murray when compared to WA. The proportion of people with an educational qualification in the Shire is similar to that of Peel, however slightly less residents have university-level qualifications and slightly more have Certificate III or IV qualifications in Murray when compared to Peel as a whole.

2.3 Industry of Employment

An area's employment profile can be assessed by counting those who usually reside in that area or counting those who work there. Assessing employment by place of usual residence will identify the workforce characteristics of residents, but not necessarily the jobs available within that particular area. Conversely, place of work data indicates the workforce characteristics of all workers in an area, providing an indication of the area's key economic drivers.

Murray (S), Peel & WA Employment by Industry (PUR), 2016

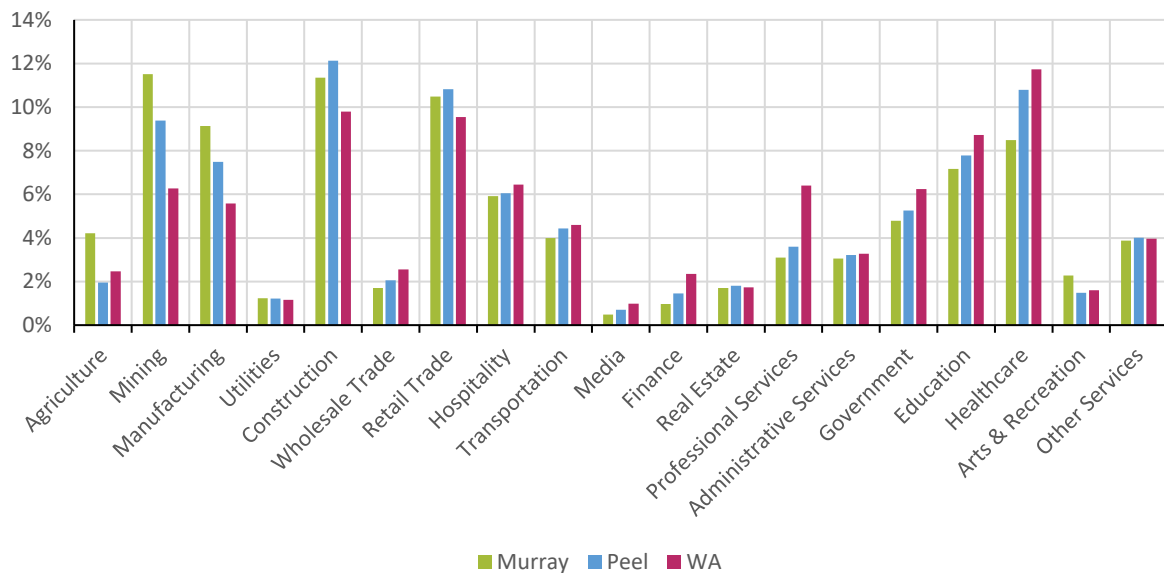


Figure 23. Murray, Peel and WA Employment by Industry (Place of Usual Residence) 2016 (ABS, 2017h)

The top three employing sectors for Murray residents are Mining, Construction and Retail Trade, providing a respective **11.51%**, **11.34%** and **10.49%** of residents with jobs. Murray has almost double the share of its population employed in the mining sector when compared to WA, however employment in the construction and retail industries are relatively in line with the respective shares for Peel and WA as a whole. The prevalence of mining employment amongst Shire residents can be attributed to the location Alcoa's Huntly and Willowdale Mines, Newmont's Boddington Gold Mine, South32's Worsley Alumina Mine and Doral's Mineral Sands operations in Keysbrook, all of which are either within or in direct proximity to the LGA.

Murray (S), Peel & WA Employment by Industry (POW), 2016

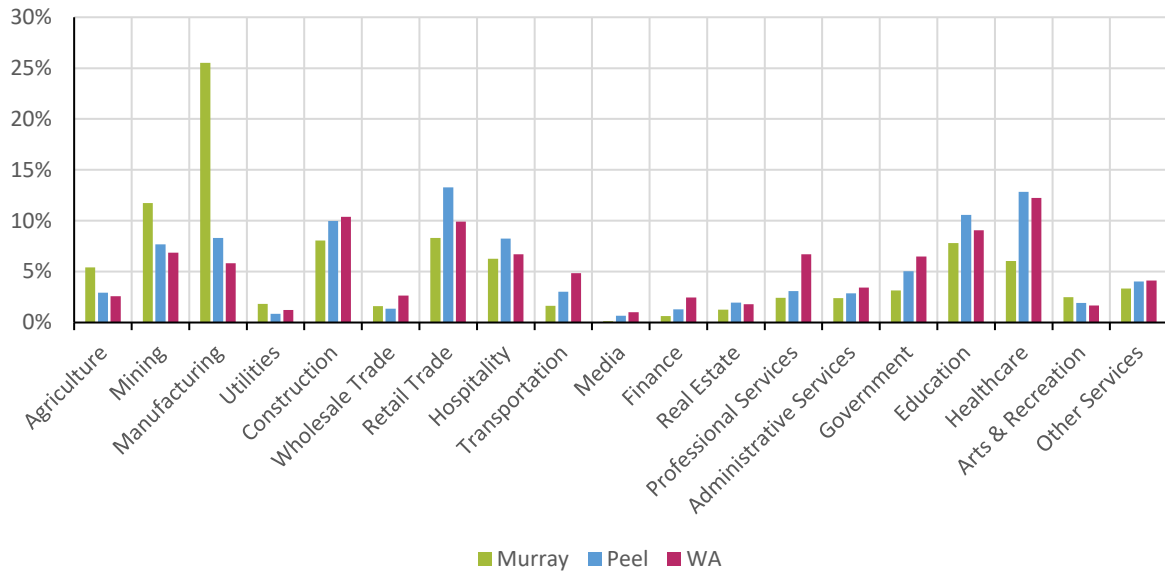


Figure 24. Murray, Peel and WA Employment by Industry (Place of Work) 2016 (ABS, 2017i)

Manufacturing, Mining and Construction are the largest providers of jobs located within Murray, representing **25.51%**, **11.74%** and **8.05%** of all employment located within the Shire, respectively. A significantly higher proportion of Murray’s workers are employed in Manufacturing and Mining when compared to Peel and WA, and a significantly lower portion employed in Retail Trade and Healthcare. The prominence of the local Manufacturing sector can be attributed to the Alcoa Alumina Refinery in Pinjarra, which provided **1,100** of the **1,417 manufacturing jobs** that were located in the Shire in 2019.

Murray (S) Industry Growth and Decline (PUR), 2011-2016

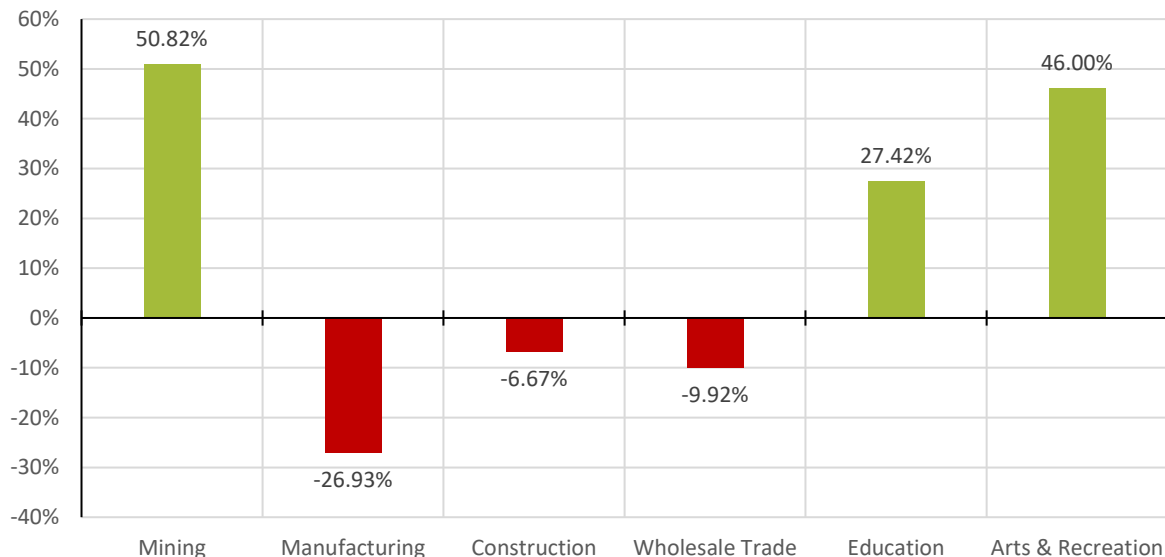


Figure 25. Murray Industry Growth and Decline 2011-2016 (Place of Usual Residence) (ABS, 2017h)

The number of Murray residents employed in the Mining, Arts & Recreation and Education sectors increased by a respective **50.82%**, **46%** and **27.42%**, representing the top three sectors for jobs growth in the Shire between 2011 and 2016. Conversely, the number of residents employed in the Manufacturing, Construction and Wholesale Trade sectors declined **26.93%**, **6.67%** and **9.92%**,

respectively. The increase in Arts & Recreation jobs reflects a continued push by the Shire to develop this sector as part of its placemaking and tourism strategy, whilst the decline in Manufacturing jobs may be a result of increased efficiencies and technological processes within the sector leading to a reduction in the amount of labour needed, as this decline was observed across Peel and WA.

Murray (S) Industry Growth and Decline (POW), 2011-2016

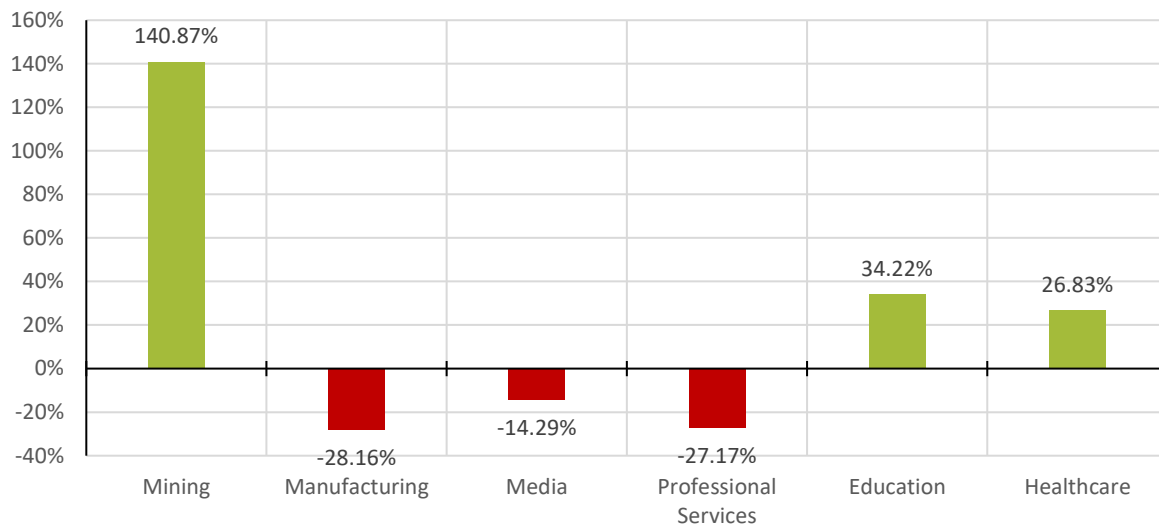


Figure 26. Murray Industry Growth and Decline 2011-2016 (Place of Work) (ABS, 2017i)

The Mining, Education and Healthcare sectors observed the largest increases in jobs located within the Shire of Murray, with respective increases of **140.87%**, **34.22%** and **26.83%** between 2011 and 2016. Conversely, the number of Manufacturing, Media and Professional Services jobs available within the Shire declined by **28.16%**, **14.29%** and **27.17%**, respectively. The significant growth in local mining employment over this period may be attributed to an increase in operations at Alcoa’s Huntly and Willowdale Bauxite mines, reflected by a corresponding increase in both output and revenue for these mines. The decline in Manufacturing jobs in the LGA was also observed across Peel and WA and is the likely result of improved efficiencies and technological processes leading to a reduction in the amount of labour required.

Employment changes in Manufacturing and Mining may have been statistically exacerbated by changes to standard industry classifications made between the 2011 and 2016 census, as well as changes made to the industry of employment question in the 2016 census, altering it from a mark-box format to a self-declared write-in format. This may have resulted in a greater number of people declaring their employment in the Mining industry and lesser number declaring their employment in the Manufacturing industry in Murray, given the mining-dominated nature of the Shire’s manufacturing sector.

Murray (S), Peel & WA Industry Share of Employment Change, 2011-2016

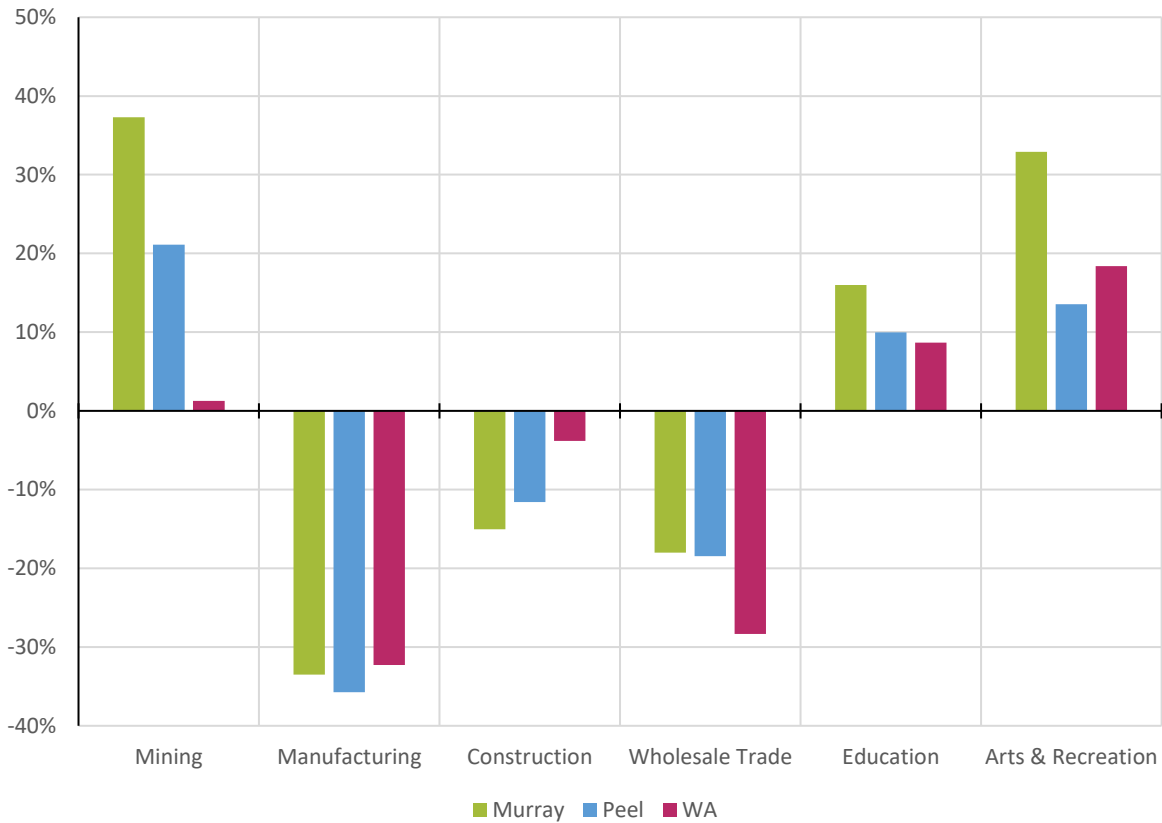


Figure 27. Murray, Peel and WA Industry Share of Employment Change 2011-2016 (ABS, 2017h)

Over the period from 2011 to 2016, Murray saw considerable declines in the share of its residents employed in the Manufacturing, Construction and Wholesale Trade sectors, yet saw increases in the share of employment held in the Mining, Arts and Recreation and Education sectors. The declines in Manufacturing, Construction and Wholesale trade observed within Murray are in line with trends across Peel and WA and can likely be attributed to sectorial downturns as a result. However, the rapid increase in the share of employment held in the Mining sector seen in Murray between 2011 and 2016 outstrips that of Peel by approximately **18%** and WA by **37%**, indicating localised factors are influencing this change.

2.4 Self-Containment

Murray (S) Resident's Place of Work, 2019

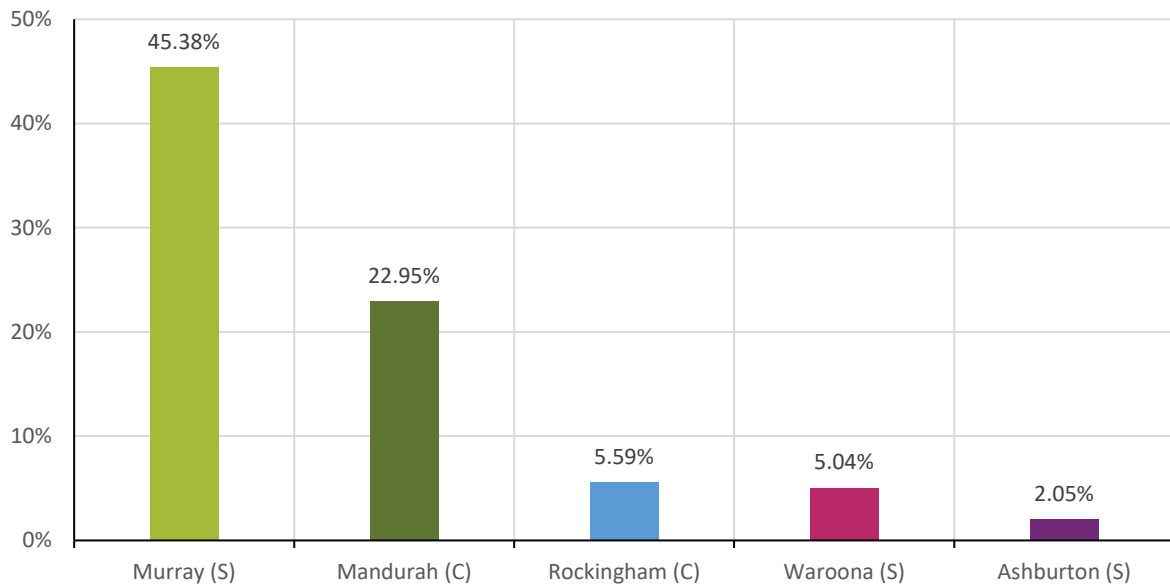


Figure 28. Murray Residents Place of Work 2019 (REMPPLAN, 2020a)

Close to half, or **45.38%**, of Murray residents work in the LGA, with the remainder working predominantly in the neighbouring Peel LGAs of Mandurah and Waroona, and smaller portions working in the Perth Metro LGA of Rockingham and Pilbara LGA of Ashburton as FIFO workers. Murray workers employed in Mandurah are more likely to hold jobs in the Healthcare and Retail Trade sectors, due to the higher availability of these jobs in the City.

Murray (S) Workers' Place of Residence, 2019

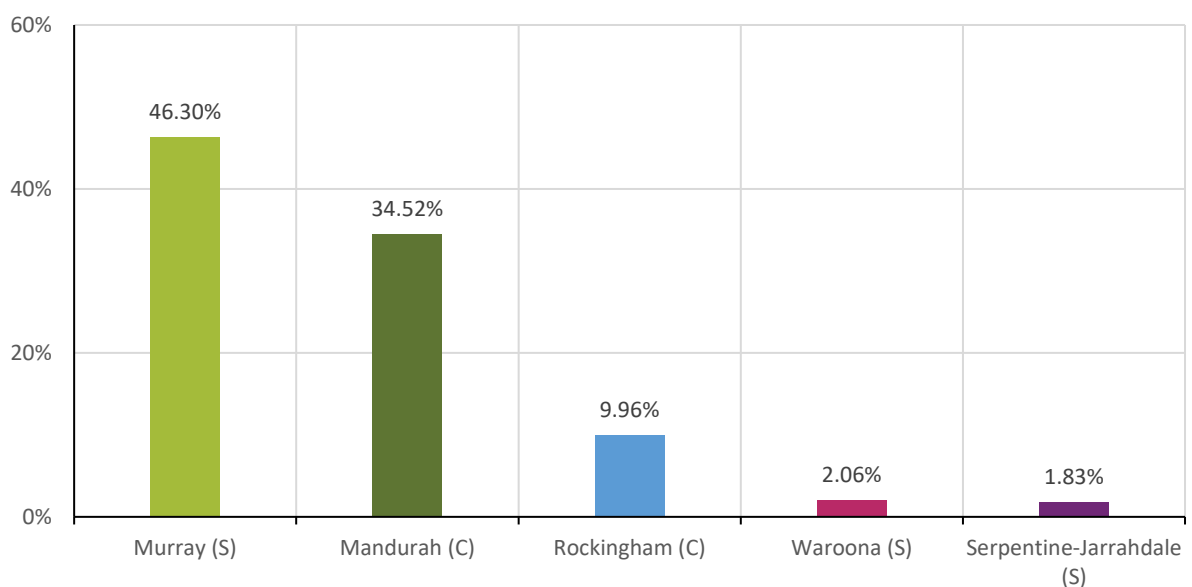


Figure 29. Murray Workers' Place of Residence 2019 (REMPPLAN, 2020a)

A similar proportion, **46.3%**, of Murray workers live in the LGA, with the remainder living in the neighbouring Peel LGAs of Mandurah, Waroona or Serpentine-Jarrahdale, as well as Rockingham. Given the roughly similar proportions of residents living and working within the Shire, it can be inferred that Murray has appropriate employment opportunities to meet the requirements of its population.

Self-containment is the proportion of residents working in an industry to the number of jobs available within that industry in a particular location. A self-containment level under 100% indicates there are not enough jobs available for all residents, and some must leave the area for work, whilst self-containment levels above 100% indicate a shortage of workers. Drastically low levels of self-containment indicate a low level of employment self-sufficiency in a particular location.

Murray (S) & Peel Self Containment by Industry, 2016

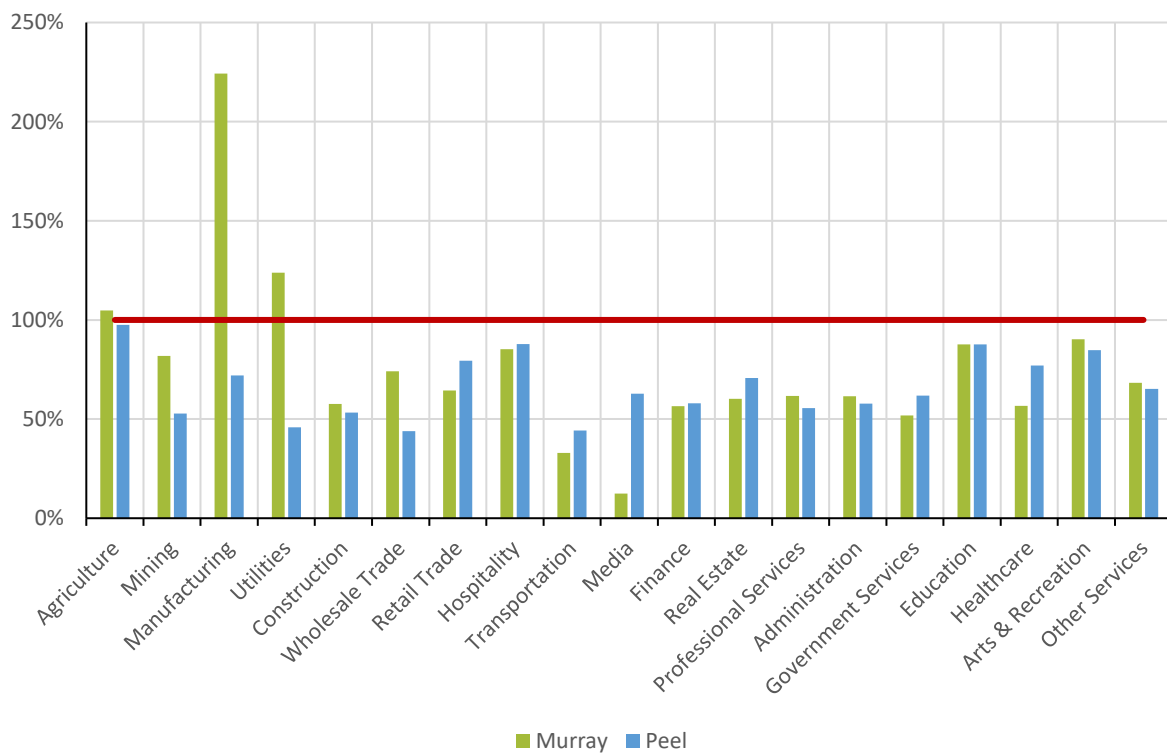


Figure 30. Murray and Peel Self Containment by Industry 2016 (ABS, 2017i)

Employment in Murray is relatively self-contained across all sectors except for Transportation and the Media sector, which have self-containment levels of **32.95%** and **12.5%**, respectively. However, the Shire’s Manufacturing sector observes extremely high levels of self-containment at **224.28%**, indicating almost **two-thirds** of these jobs are not held by residents. This disparity may present an opportunity for the Shire to foster industry partnerships with educational institutions to offer manufacturing-related VET courses in schools or develop school-to-work pipelines, providing local students with direct pathways to locally based employment. Self-containment levels for Murray generally sit around the **80%** to **100%** level for most other sectors, indicating there is a relatively adequate level of jobs within the Shire to meet the needs of the working population.

3.0 Economy

The local Manufacturing industry contributed approximately **\$2.252 billion** to Murray's local economy in 2019, comprising **over half** the Shire's output. Much of the remainder is provided by the Mining, Construction and Real Estate industries, generally in line with each sector's share of employment within the Shire. There is, however, a large disparity between Real Estate's share of employment and its total output, with much of this output derived from property services in the form of ownership of dwellings and rent imposition as opposed to being labour-based income. The Shire's top revenue and jobs generating industries generally reflect changes at the firm level, with mining giant Alcoa comprising a significant portion of the Shire's employment opportunities through their Pinjarra Alumina Refinery and the Huntly Bauxite Mine.

Location Quotients identify the most specialised sectors within an area when compared to another, usually larger, economy, in this case comparing Murray to Western Australia as a whole. Since 2011, location quotient data indicates that the Shire has become relatively more specialised in Mining and slightly less specialised in Agriculture, with the Utilities and Arts and Recreation sectors also increasing their respective location quotients. This would indicate the respective comparative advantage of these sectors within Murray is growing, presenting the Shire with an opportunity to diversify their employment base away from major employers such as Alcoa and provide a more stable labour market for the LGA's economy.

Manufacturing and Mining have typically been economically dominant within the Shire, providing a combined value-added income of **\$469 million** in 2019. Growth in the Mining industry has been expanding with enhanced operations at Alcoa's Huntly and Willowdale Bauxite Mines, however the Manufacturing sector in the Shire has been stagnant. The Arts and Recreation sector provides an opportunity for Murray to leverage its placemaking and tourism strategies into a sustainable employment base, boosting the LGA's pool of local talent.

Additional opportunities lie in the Agricultural sector through the construction of the WAFIP at the Peel Business Park. This precinct, in conjunction with the Transform Peel 'Food Zone' initiative, will provide Agricultural producers direct access to production facilities, resources and export markets, providing a significant new stream of revenue for the Shire. Development of the Shire's equine industry through initiatives such as the 'Equine Living Precinct' in Coolup may allow Murray to benefit from the creation of additional businesses such as veterinary services, with additional opportunities to collaborate the WAFIP in the production of equine supplements. The hosting of equestrian events at the Murray Regional Equestrian Centre may support the Shire's Arts and Recreation sector, with the possibility of leveraging events and day tourism into longer and repeat visits, with these also contributing to the emergence of an equine industry cluster within Murray.

3.1 Revenue

Murray (S) Share of Revenue by Industry

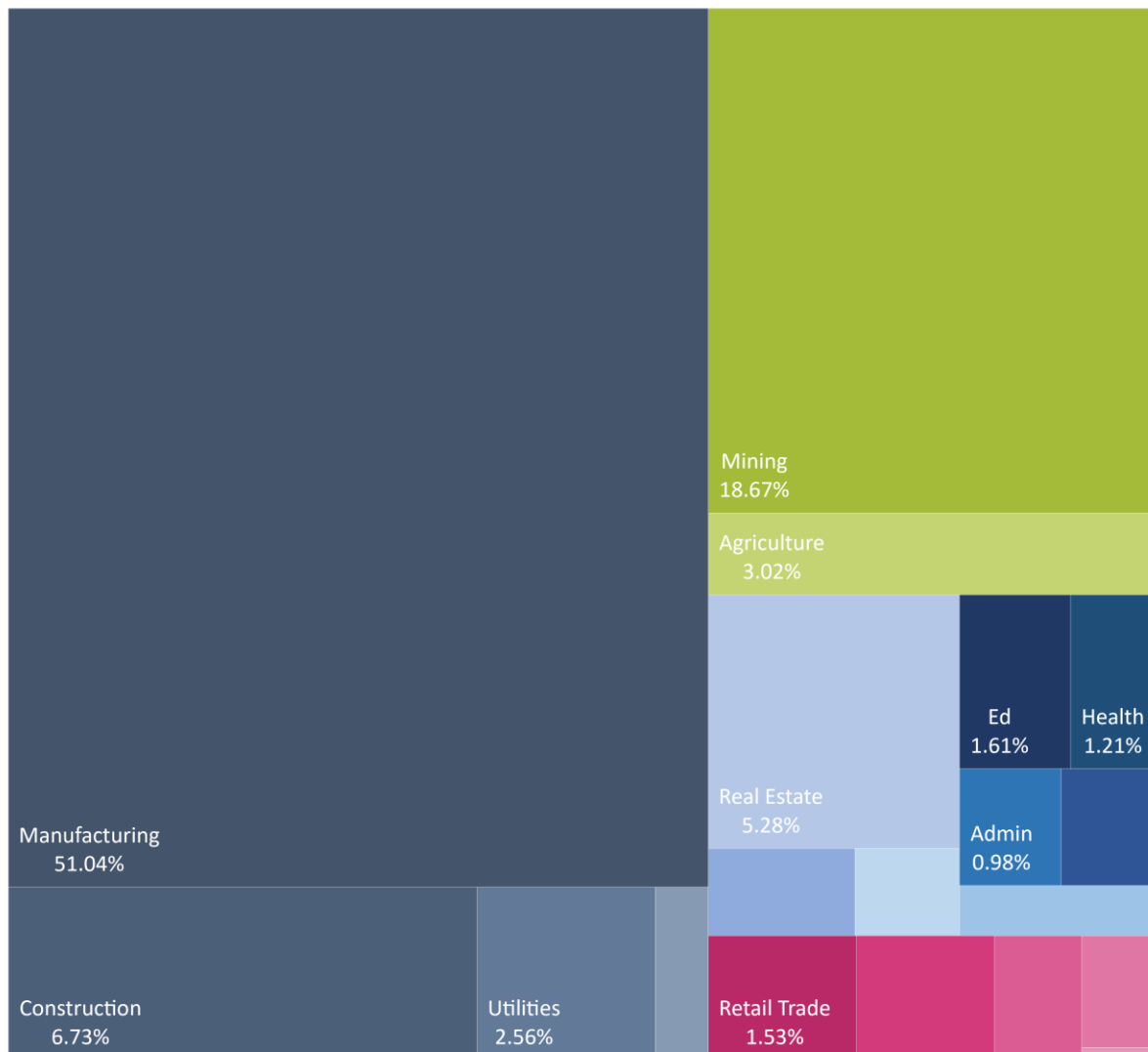


Figure 31. Murray Share of Revenue by Industry 2019 (REMPLAN, 2020b)

The Shire of Murray had an annual economic output of **\$4.412 billion** in 2019, representing **24.1%** of Peel's total output of **\$18.292 billion**. Manufacturing comprised over half of local economic activity in 2019, contributing **51.04%** of the Shire's total output. Almost all this output is generated through Metal & Metal Product Manufacturing via Alcoa's Pinjarra Alumina Refinery. Mining was the second largest contributor to Murray's economic output, generating **\$823.7 million** per year for the Shire, the majority of which is derived from Bauxite and Mineral Sands mining. The next largest revenue-generating sectors are the Construction and Real-Estate sectors, contributing a respective **\$296 million** and **\$233 million** to the local economy. Whilst revenue generated from construction in the Shire is in line with the proportion of workers employed in this sector, much of the revenue generated in the Real Estate sector is derived from home ownership and the imposition of rents, rather than from labour.

3.2 Jobs

Murray (S) Share of Jobs by Industry

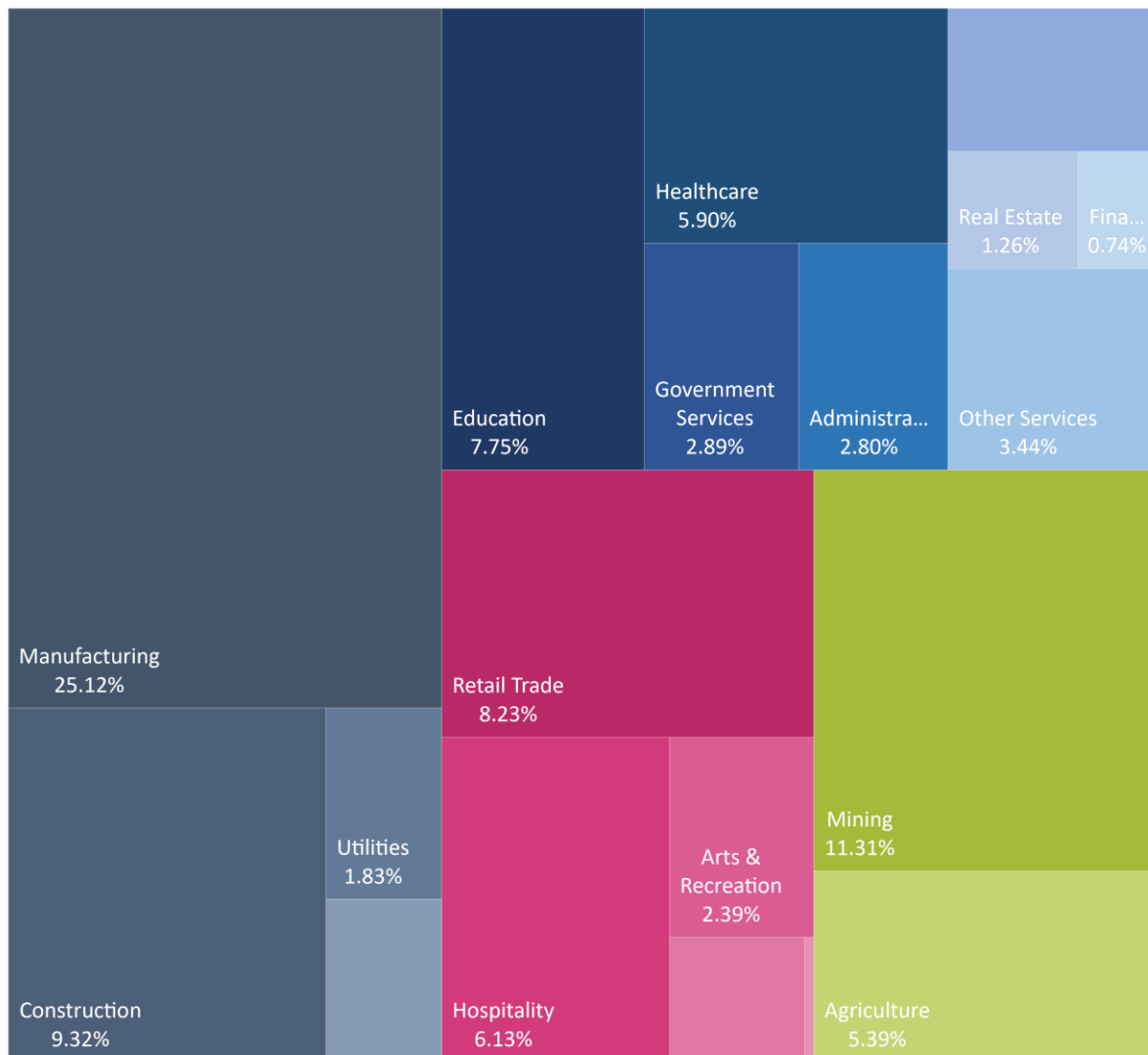


Figure 32. Murray Share of Jobs by Industry 2019 (REMPPLAN, 2020c)

Murray’s largest employing sector in 2019 was Manufacturing, providing **1,417 local jobs**, an increase of **7.4%** since 2016. The likely cause of this increase is the expansion of activity at the Alcoa Pinjarra Alumina Refinery, following an increase in mining activity in the area. Mining provided **638 local jobs** and was the second largest employing sector in 2019, with most of these jobs located at the Huntly Bauxite Mine near Dwellingup. A large increase in the number of mining jobs within the Shire was posted between 2011 and 2016, likely due expansion in Bauxite production over this period at local mine sites, with nameplate production capacity increased and a new Cogeneration Plant installed at the Pinjarra Refinery. Construction accounts for the third-largest number of jobs in Murray, with **377** of these jobs in construction services such as carpentry and electrical trades, with the remainder evenly split between residential building construction and heavy & civil engineering construction, most of which serves the development and maintenance needs of the Mining sector.

Murray (S) Proportion of Businesses by Number of Employees, 2006 - 2016

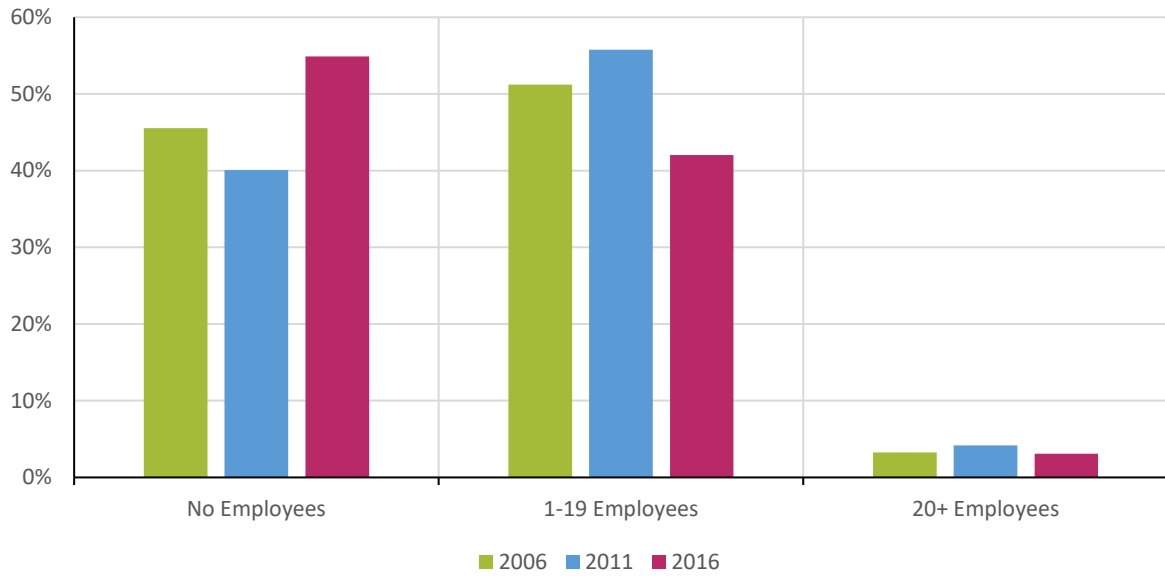


Figure 33. Murray (S) Proportion of Businesses by Number of Employees 2006-2016 (ABS, 2017j)

Murray (S), Peel & WA, Proportion of Businesses by Number of Employees, 2016



Figure 34. Murray, Peel and WA, Proportion of Businesses by Number of Employees 2016 (ABS, 2017j)

The proportion of businesses by number of employees is relatively consistent across Murray, Peel and WA as a whole. Between 2006 and 2016, the proportion of businesses in Murray with 1-19 and 20+ employees declined by **9.2%** and **0.2%**, respectively. Over the same period, the number of businesses with no employees other than the owner(s) increased by **9.3%**, whilst the total number of businesses active in the Shire declined from **918** in 2006 to **716** in 2016. This decline in the overall number of businesses is reflective of the increasing unemployment observed in Murray over the same period, revealing a need for the Shire and local industry to foster a positive entrepreneurial and investment climate to ensure the success of start-up and existing businesses in the long-term.

3.3 Location Quotient

An area's location quotient represents the proportional employment in the locality when compared to another, usually larger area. In this instance, both Peel and the Shire of Murray have been compared to WA as a whole. The higher a location quotient is, the more relatively specialised an area is in a particular sector.

Murray (S) & Peel Location Quotients by Industry, 2011

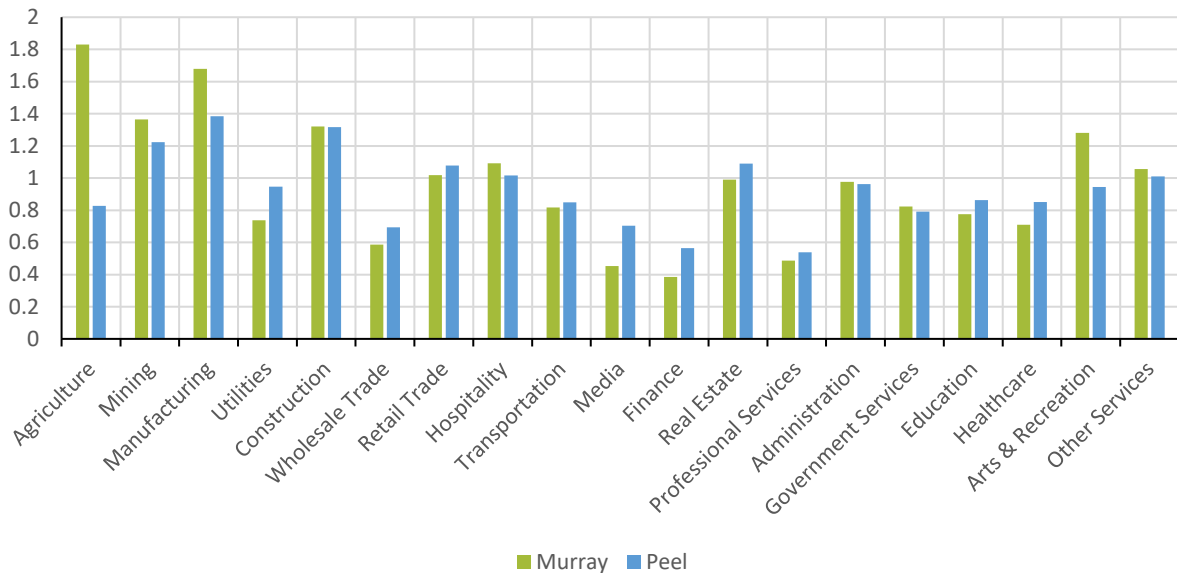


Figure 33. Murray and Peel Location Quotients by Industry 2011 (ABS, 2012)

Murray (S) & Peel Location Quotients by Industry, 2016

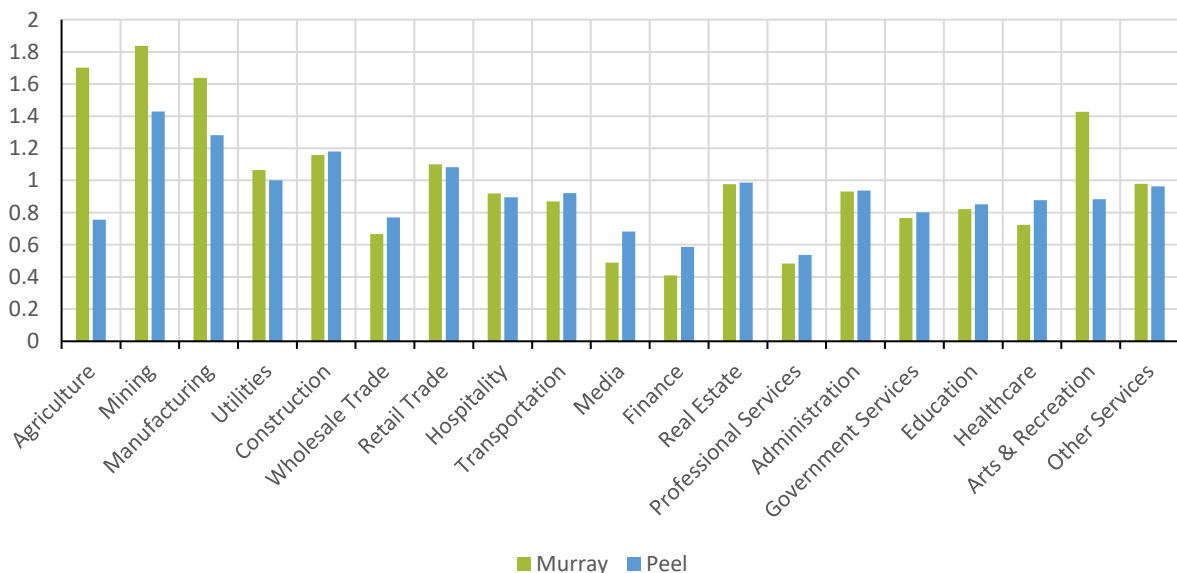


Figure 34. Murray and Peel Location Quotients by Industry 2016 (ABS, 2017i)

In 2016, Murray was most specialised in its Mining sector, which had a location quotient of **1.83**. This represents a significant change from 2011, where Agriculture was the Shire’s most specialised sectors. Relative to Peel, Murray has been consistently more specialised in Agriculture, Mining and Manufacturing, as well as Arts and Recreation. Given this, the Shire may benefit from investment in these sectors due to the competitive advantage it has developed over its neighbours in Peel.

Murray (S) Change in Location Quotient, 2011-2016



Figure 35. Murray Change in Location Quotients by Industry 2011-2016 (ABS, 2012; ABS, 2017i)

Changes in location quotients can provide indications of industry sectors that are growing or declining within a locality. Sectors with a location quotient **over 1** that record increases over time may be considered strong performing industries, which would include the Mining and Arts and Recreation sectors in the Shire of Murray. Those with increasing location quotients that are **below 1** may be considered emerging industries and include the Shire’s Wholesale Trade and Education sectors. Investment in these sectors by the Shire will leverage the growth of these industries to maximise long-term opportunities, providing increasing returns to the LGA in the form of additional revenue and jobs. Conversely, contractions in the location quotients of Murray’s Agriculture, Construction and Hospitality industries were observed, indicating these sectors are in decline.

3.4 Key Industries

| | | | | | |
|--------------------|-------------|-------------------|---------------|-----------------------|-------------------|
| Growth Rate | Mining | Arts & Recreation | Healthcare | Wholesale Trade | Real Estate |
| Increasing LQ | Mining | Utilities | Media | Wholesale Trade | Arts & Recreation |
| Backwards Linkages | Agriculture | Utilities | Construction | Professional Services | Arts & Recreation |
| Employment | Mining | Manufacturing | Construction | Retail Trade | Education |
| Exports | Agriculture | Mining | Manufacturing | Utilities | Construction |
| Value-Add | Agriculture | Mining | Manufacturing | Construction | Real Estate |

Table 4. Murray Key Propulsive Sectors (REMPLAN, 2020d)

Mining has historically contributed the most to the economy of the Shire of Murray. The local mining industry is the LGA's second largest contributor to revenue and employment, providing **\$274 million** in value added income to the Shire in 2019. Growth in the Mining industry and its location quotient has remained strong, particularly in comparison to Peel as a whole. Manufacturing, whilst comprising **51.04%** of the Shire's economic output, has been in relative decline, recovering its share of employment in the Shire only slightly between 2016 and 2019 whilst exhibiting a declining location quotient. Neither of these sectors, however, involve strong backward linkages that result in money being spent in the local economy. This would indicate it is in the Shire's best interest to diversify its economy toward Agriculture, which has exhibited strong backward linkages, export potential and value add, as well as to emerging sectors such as Arts & Recreation.

| Key Industries | Secondary Industries |
|----------------|----------------------|
| Mining | Arts & Recreation |
| Manufacturing | Construction |
| Agriculture | Utilities |

Table 5. Murray Key and Secondary Industries (REMPLAN, 2020d)

The Arts and Recreation sector recorded strong employment and location quotient growth in Murray between 2016 and 2011 and involves key backward linkages that result in additional money being spent locally. Furthermore, boosting this sector is a priority of the Shire of Murray as part of tourism and placemaking initiatives, with existing events and facilities, particularly in the equine industry, intended to be leveraged to support an increased tourist spend. Investment in major electrical, water and transportation infrastructure proposed under *Perth and Peel @ 3.5 Million* presents an opportunity to expand employment and investment in the local utilities sector, supported by the development of this industry within Pinjarra Industrial Estate. This estate is home to light manufacturing producers such as Murray Engineering, as well as a significant Western Power depot.

The Agricultural industry, despite a decline in the location quotient for the sector, provides significant opportunities for the Shire in the form of the Agri-innovation precinct at the Peel Business Park. This precinct will allow Murray to expand its Agricultural production capacity and improve upon the **\$64.4 million** in value-added income the sector already brings to the Shire annually by increasing access to key export markets and clustering production. The innovation and research facilities proposed for WAFIP will support the development of niche products and manufacturing processes that will provide the Shire with a competitive edge in local, domestic, and international markets. An effective branding strategy for produce created at WAFIP will promote local goods both at home and abroad.

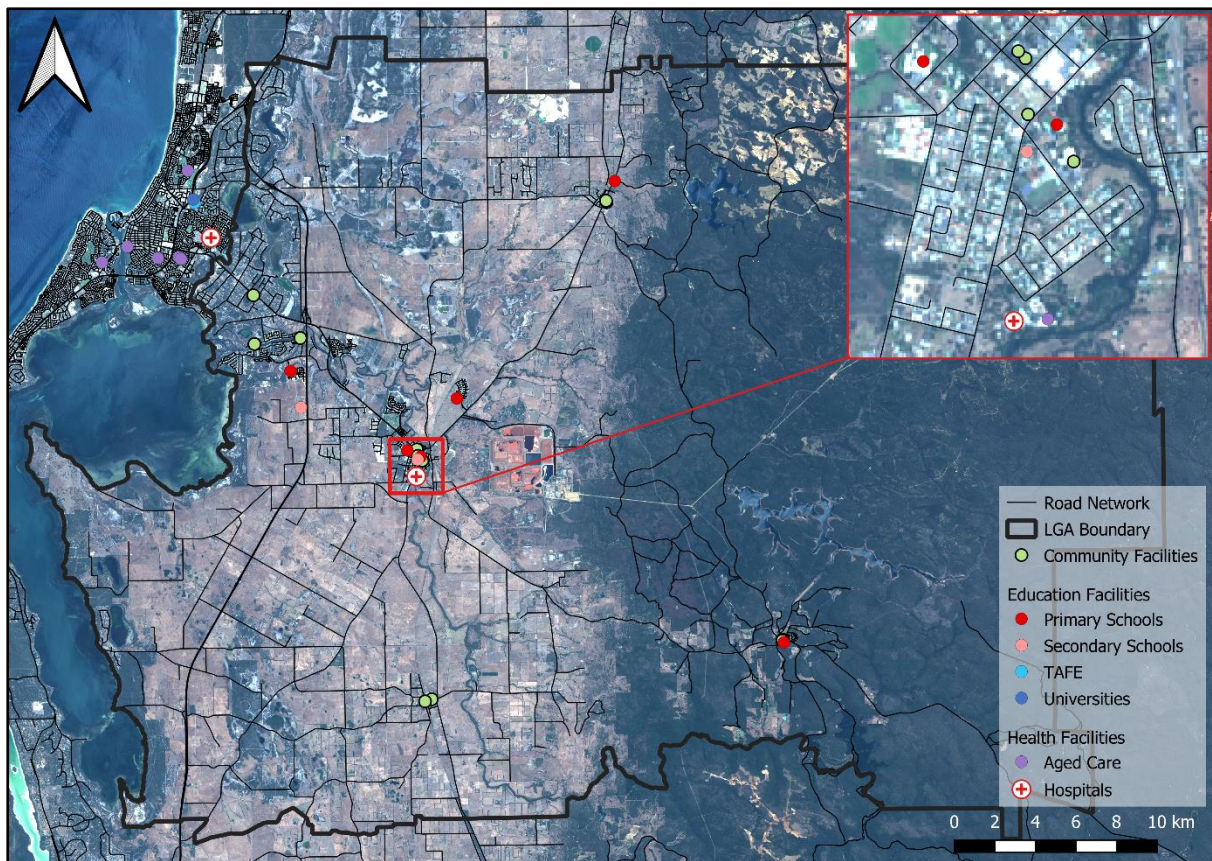
4.0 Infrastructure

The Shire of Murray's continuous growth, proximity to major population centres and its status as a future urban growth centre for the Perth Metro places significant infrastructure demands on the Shire into the long-term. Whilst the provision of services in the Shire is adequate for the current population in certain areas, there are some notable gaps, particularly in the education, healthcare and aged care services available to Shire residents. Existing support services will also require a place-based presence in the Shire into the future. Whilst Murray does not have a significant amount of publicly owned recreation facilities available for use, existing facilities do offer a large range of leisure and community-building opportunities. The Shire of Murray has expressed a desire to actively manage several tourism assets as part of its *Strategic Community Plan 2019-2030*, with this being evident in the Shire-led management of the Edendale Heritage Precinct as well as the recent restoration of Pinjarra Court House as an arts and crafts facility.

Large parcels of land are slated for future residential and industrial development in the WAPC's *Perth and Peel @ 3.5 Million* planning strategy, particularly around Pinjarra, Ravenswood and the Nambelup area. The Shire wishes to intensify the residential density of Pinjarra Town Centre to enable a more diverse housing market to emerge, particularly given the demographic profile of the Shire. Industrial development will be powered by the presence of Alcoa's Alumina Refinery as well as Peel Business Park into the future, with existing and new agri-tech and industrial businesses leveraging these assets to expand the number of locally available economic opportunities.

Perth and Peel @ 3.5 Million also provides for a significant expansion of utilities infrastructure across the Shire into the future, largely to serve the emerging industrial precincts at Peel Business Park and Pinjarra as well as expanded operations at Alcoa's Alumina Refinery. Water infrastructure proposed as part of the Peel Integrated Water Initiative such as the Gordon Road wastewater effluent pipeline and the development of a Managed Aquifer Recharge System supporting increased agricultural and industrial activity in Murray. Transportation infrastructure development in the Shire is centred around the development of a High-Priority Transport Corridor between Pinjarra and Mandurah, the construction of the Pinjarra Heavy Haulage Deviation and future stages of the Tonkin Highway Extension.

4.1 Services



Map 2. Murray Community, Education and Healthcare Facilities

Education

| Facility | Service | Regional Administration |
|--|------------------|---|
| Austin Cove Baptist College | K – Year 12 | Association of Independent Schools of Western Australia |
| Carcoola Primary School | K – Year 6 | South Metropolitan |
| Dwellingup Primary School | K – Year 6 | South Metropolitan |
| North Dandalup Primary School | K – Year 6 | South Metropolitan |
| Pinjarra Primary School | K – Year 6 | South Metropolitan |
| Pinjarra Senior High School | Year 7 – Year 12 | South Metropolitan |
| St Joseph’s Catholic Primary School Pinjarra | K – Year 6 | Catholic Education WA |

Table 6. Education Facilities in Murray (S)

There are several primary schooling options within the Shire of Murray, with four public primary schools and two private primary schools located within the Shire and shown in Map 2. Local secondary students may attend Pinjarra Senior High School or Austin Cove Baptist College, however a number of local students, particularly those who live in the western areas of the LGA, attend public and independent secondary schools in Mandurah.

A lack of tertiary education opportunities within Murray has been identified as a key issue for the Shire. There is no Departmental proposal or State Government mandate to develop a tertiary or vocational education campus within Murray. In lieu of this, facilitating connections via public transportation to nearby tertiary campuses in Mandurah, fostering tertiary and business collaboration through the WAFIP and Mandurah-based Hospitality and Tourism Training Centre that is yet to be built, as well as improving remote-learning access and facilities in-shire will expand post-secondary education opportunities to Murray residents.

Healthcare

| Facility | Services Provided |
|--------------------------|---|
| Clinipath Pathology | Cancer Screening, Pathology Services |
| Forrest Medical Group | General Practitioner Services, Immunisations, Vaccinations |
| Murray District Hospital | General Practitioner Services, Inpatient Medical Care, Medical Imaging, Palliative Care |

Table 7. Healthcare Services in Murray (S)

Murray is served by a district hospital, located in Pinjarra as shown in Map 2. Private medical providers supplement the services offered by this hospital and include Clinipath Pathology and Forrest Medical Group. Most health services located within the Shire are near Murray District Hospital. It is the Shire's desire per the Pinjarra Activity Centre Plan to develop a 'health precinct' in this area. For emergencies and major surgery, Shire residents are reliant on the Peel Health Campus and metropolitan health services. Facilitating access to the Peel Health Campus via on-demand and public transportation options is a necessity for the Shire, with this benefiting senior residents in particular.

Aged Care

| Facility | Service |
|---------------------|-------------------------------------|
| Bedingfield Lodge | At-Home Care, Residential Aged Care |
| Peel Community Care | At-Home Care, Meals on Wheels |

Table 8. Aged Care Services in Murray (S)

Two aged-care providers are currently located within the Shire, with additional providers such as Bethanie and Silver Chain located in Mandurah and operating at-home care services within Murray. The only residential aged care facility within the Shire, Bedingfield Lodge, is located within the Murray District Hospital 'health precinct' and has recently been expanded to include a 25-bed high care dementia wing. Due to the relatively high proportion of seniors living in the LGA, the adequacy and capacity of existing aged care facilities should be reviewed on a regular basis to ensure demand is met.

Sport and Recreation

| Facility | Service |
|-------------------------------------|--|
| Dwellingup Trails & Visitors Centre | Café, End-of-Trip Facilities, Equipment Hire, Information Centre, Shuttle Bus Service, |
| Edenvale Heritage Complex | Arts & Craft Facilities, Gardens, Museum, Tea Rooms |
| Murray Aquatic & Leisure Centre | Basketball Courts, Creche, Fitness Classes, Gymnasium, Swimming Pool |
| Murray Library | Library Facilities, Social Activities, Tech Support |
| Pinjarra Bowling & Recreation Club | Clubrooms, Lawn Bowls Courts, Kitchen Facilities |
| Pinjarra Civic Centre | Auditorium Hall, Catering Facilities, Clubrooms, Function Space |
| Yunderup Sport & Recreation Club | Clubrooms, Fitness Classes, Lawn Bowls Courts, Social Activities, Tennis Courts |

Table 9. Community Facilities in Murray (S)

The Shire of Murray operates and leases several facilities designed to provide leisure and recreational opportunities for both Shire residents and visitors, identified in Map 2. Some of these Shire-owned facilities, notably the Dwellingup Trails & Visitors Centre and the Edenvale Heritage Complex are designed to provide business opportunities to local entrepreneurs via artist-in-residence programmes as well as hospitality and retail leasing. Entrepreneurship facilitation is a key tenet of the Shire's placemaking strategy and is intended to be continued through projects such as the redevelopment of Pinjarra's Exchange Hotel. The redevelopment of the Exchange Hotel also provides an opportunity for a local producer and makers co-operative to establish a 'shopfront' for the sale of WAFIP produce, potentially collaborating with proposed restaurant facilities on the site.

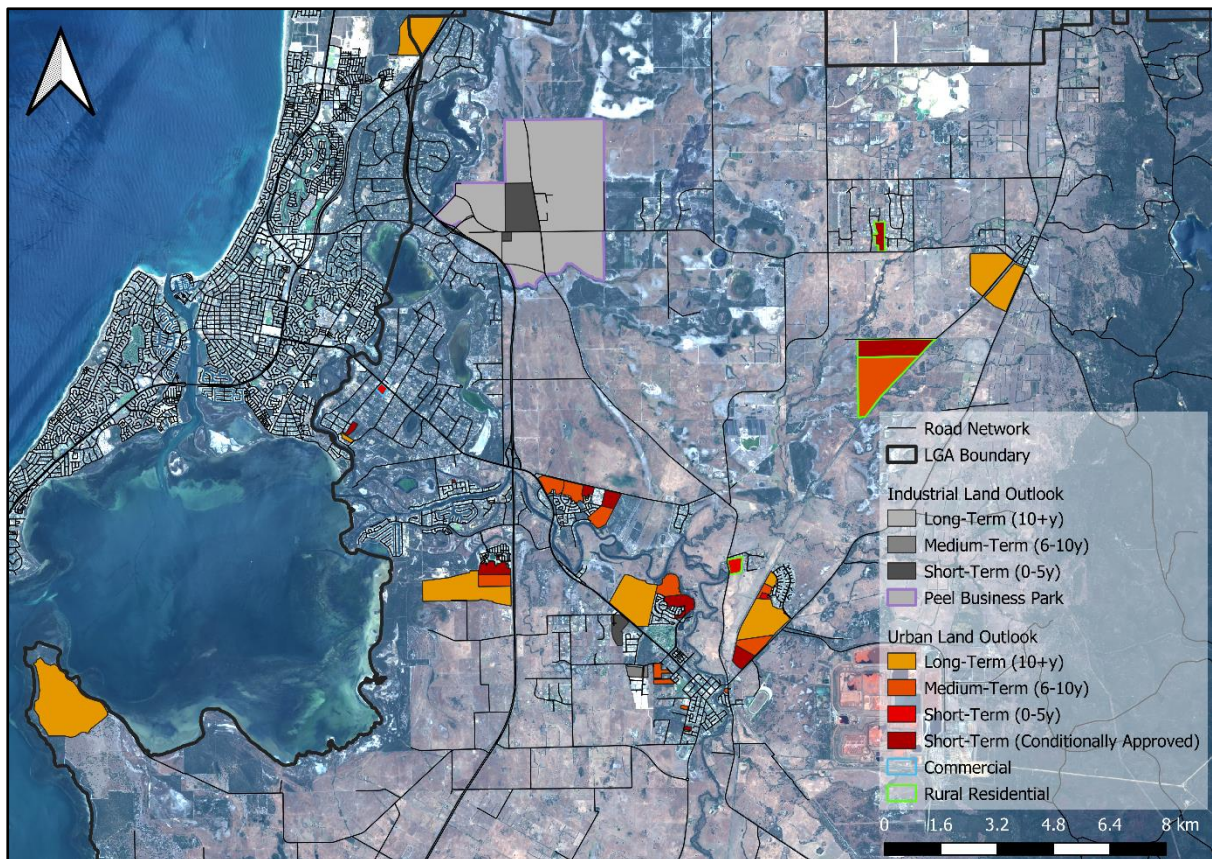
Family and Domestic Support

| Service | Provision Status |
|------------------------------|------------------|
| Child and Adolescent Health | Based in Shire |
| Department of Human Services | Phone/Online |
| Family Support Service | Based in Shire |
| Peel Youth Services | Visit Area |
| Victim Support Unit | Lacking |

Table 10. Family and Domestic Support Services in Murray (S)

A number of family and domestic services are located within the Shire or available to residents via home and community visitation or phone/online access. Services not based in or accessible to the Shire, including Victim Support services, are located nearby in Mandurah, hence the importance of developing transportation linkages between the City and the Shire of Murray.

4.2 Land Use



Map 3. Murray Land Development Outlook

Residential Development

Murray's Local Planning Scheme identifies ample land for residential development along the Pinjarra Road corridor between Mandurah and Pinjarra, particularly around the localities of Yunderup, Ravenswood, and the Pinjarra Town Centre as shown in Map 3. The Pinjarra Town Centre Revitalisation Strategy and Activity Centre Plan indicates a desire from the LGA to increase residential density and mixed-use zoning within the Town Centre to stimulate economic activity and provide a diversity of housing stock to Shire residents. Greater residential density will likely increase the efficiency of and demand for public services within the town, including healthcare, recreation facilities, education and transportation. This plan has not yet been endorsed by the WAPC, however, despite the WAPC's desire for increased infill development in the area.

Industrial Development

Perth and Peel @ 3.5 Million's South Metropolitan and Peel Sub-Regional Framework identifies **20.8ha** of land for industrial expansion around the existing Pinjarra Industrial Estate, identified in Map 3. This has been reflected in the Shire's Local Planning Scheme. Pinjarra Industrial Estate currently provides **26 lots** within **90ha** of industrially zoned land near the town centre, with additional expansion underway. This expansion will provide an additional **16 lots** from sizes of **2097m²** and is intended to facilitate light and medium industry, including engineering services, logistics and warehousing. The estate is anchored by major tenants such as Murray Engineering and a Western Power depot. Upgrades to Munday Avenue and the completion of the Pinjarra Heavy Haulage Deviation from Forrest Highway to Pinjarra-Williams Road will improve the freight connections to this site and catalyse further industrial development.

Industrial Expansion at Nambeelup is intended to cater for the future expansion of the existing Peel Business Park, leveraging synergies with the Bushfire Centre of Excellence and the Western Australian Food Innovation Precinct (WAFIP). The Peel Business Park will focus on agricultural, food and beverage technological innovation as well as general industries that support these functions. When complete, the Peel Business Park will provide approximately **1,000ha** of industrial land with direct access to major freight routes along Forrest Highway as well as connections to a solar microgrid. The first stage of this development offers **120ha** of land with lot sizes ranging from **3,000 to 25,000m²**, anchored by the now-complete Bushfire Centre of Excellence and WAFIP. DevelopmentWA taking expressions of interest for land sales within stage two of this precinct.

4.3 Utilities

Water

The Shire's potable water supply is largely derived from the Water Corporation's Integrated Water Supply System (IWSS) comprising a blend of sources of surface water, groundwater and desalination. Existing treatment, reservoir and pump infrastructure exists in the Pinjarra-Ravenswood corridor and to serve the Alcoa Alumina Refinery. Additional storage, pumping and reservoir facilities will be necessary in the medium-term around Nambeelup and Pinjarra. *Perth and Peel @ 3.5 Million* indicates a wastewater treatment main is to be constructed connecting Nambeelup and Peel Business Park with the Gordon Road Wastewater Treatment Plant. There is also a long-term requirement for a new wastewater treatment plant in Nambeelup itself.

Much of the land-area within the Shire of Murray is covered under the Peel Integrated Water Initiative project, which aims to carry out technical analysis to identify innovative non-potable water supply options that can provide water security for the Transform Peel initiatives and intensified agricultural production in the long-term. This scheme intends to identify and commercialise additional non-climate dependent water sources as well as improving the management and use of existing resources. Options such as Managed Aquifer Recharge (MAR), water license trading and wastewater recycling have been proposed for the region as part of this initiative and modelling of surface water drainage has shown up to **2GL per annum** is available for harvesting in the medium term, recommended for use at Peel Business Park.

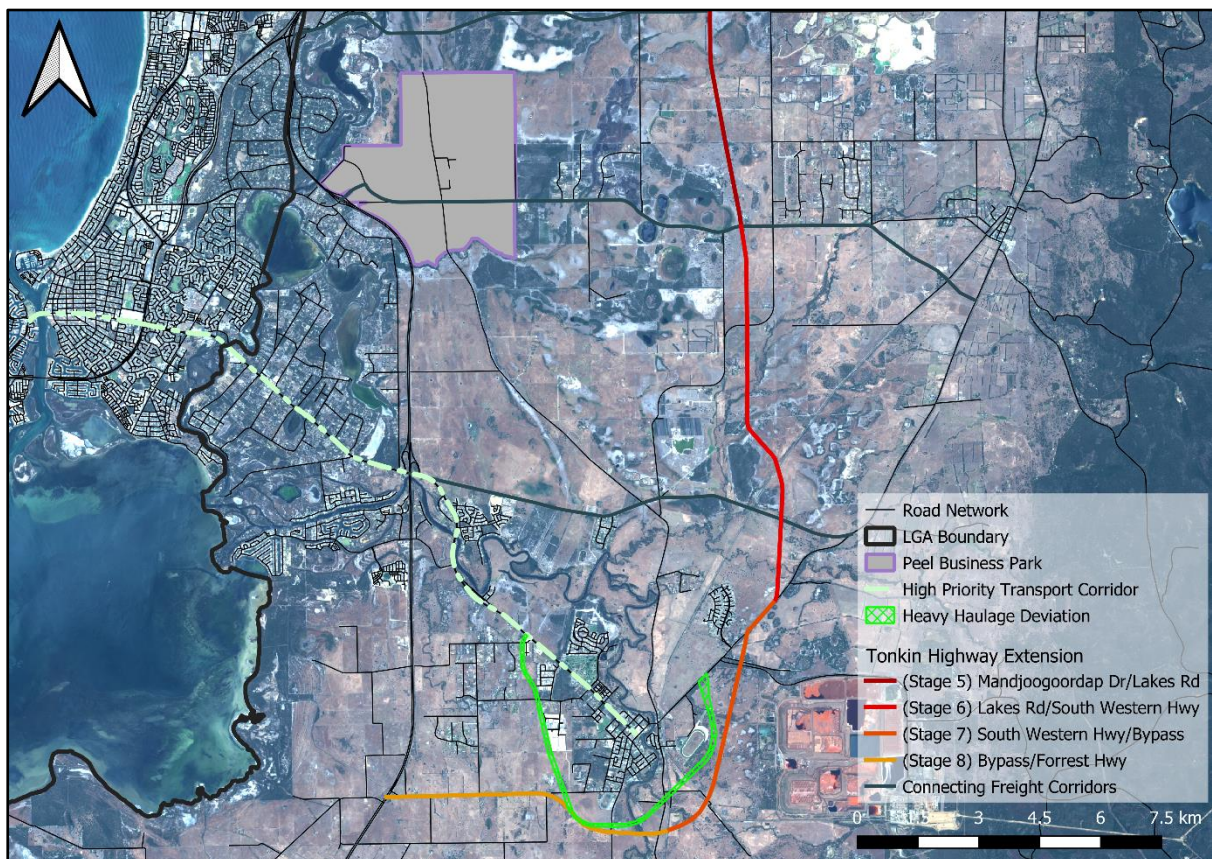
Power

Power is supplied to the Shire via terminals at Pinjarra, Ravenswood, and Alcoa's Alumina Refinery. An additional terminal is to be constructed at Ravenswood to meet future demand, with additional sub-stations to be constructed at North Dandalup, West Pinjarra and Yunderup. New 132kV overhead transmission lines are to connect the Peel Business Park to the wider South-West Integrated Service (SWIS) network. Construction of a Western Power depot facility was completed in Pinjarra Industrial Estate in November 2020. This depot intends to provide a dedicated area for high voltage testing, fleet maintenance, operational workshops, and environmental management.

A 1MW ground-mounted solar array and battery storage microgrid are to be developed to power the WAFIP and by extension, the Peel Business Park, supplementing the SWIS network. Panels have now been installed ready for commissioning in March 2021. The microgrid is to be supplemented by rooftop solar installations developed as lease agreements for the WAFIP are finalised. This is expected to lead to a reduction in electricity costs of between **5-15%** for high intensity users engaging in agri-product and food processing.

Transportation

The Shire has major connections to Perth and Mandurah via Forrest Highway, Pinjarra Road, and the South-Western Highway. Forrest Highway connects the Shire via road to freight ports at Bunbury, Kwinana, and Fremantle, and will serve as a major road freight link to the proposed Westport Facility at Kwinana. Narrow Gauge freight rail connects both Pinjarra and the Alcoa Alumina Refinery north to Fremantle and Kwinana via Mundijong, as well as south to Bunbury via Waroona. The Australind passenger service also utilises this route with its daily service between Perth-Bunbury. A feasibility study into using this route for high-speed rail between Perth CBD and Bunbury has been jointly funded by the Department of Transport and Federal Government. A Transperth bus depot was completed in early 2020 at Harries Way in Pinjarra.



Map 4. Murray Proposed Freight and Public Transportation Infrastructure

The City of Mandurah, Department of Planning, Lands and Heritage and Shire of Murray have indicated a high-frequency, high-priority public transport corridor is desired along Pinjarra Road, between the Mandurah CBD to South-Western Highway, shown in Map 4. These are defined as corridors where “public transport services are available at a frequency of five minutes in peak times and 15 minutes out of peak times,” and “high frequency public transport is facilitated through the use of traffic signalling priority, queue jumps at traffic lights or dedicated lanes.” Such a service is designed to connect Murray residents to major education, employment and health precincts in Mandurah as well as the wider Perth Metro. Both a western and eastern heavy haulage deviation is required to be constructed around Pinjarra in the interest of townsite amenity, shown in Map 4. This will allow freight traffic to directly access the Pinjarra Industrial Estate without having to travel through the town centre, providing a more direct connection to key freight routes along Forrest and South-Western Highways.

5.0 Case Studies

Three case studies of Australian and International towns that have pursued economic diversification projects similar to those proposed for the Shire of Murray are presented below. Each has a similar economic profile to Murray, featuring a strong agricultural base complemented by a significant local industrial sector. The projects carried out within these towns provide a guide as to how diversification measures may be followed within the Shire to ensure a successful result.

Waroona, WA

The technological-based expansion pursued by agricultural firms in Waroona, particularly Capogreco Farms and Fruitico, provides a roadmap for similarly innovative agricultural intensification projects within the Shire of Murray.

Capogreco Farms received a \$210,000 Regional Economic Development (RED) grant from the State government in 2020 to construct a rapid cooling system at its Hamel property. This rapid cooling facility will help prolong the shelf life and quality of fruit grown for export to the Asian market. In addition, this facility has enabled:

- Improved storage capacity of produce sourced from regional suppliers in Broome and Kununurra;
- The doubling of grower input, representing around 1,700 tonnes of fruit annually; and
- The creation of four full-time equivalent positions, including two quality control inspectors and two warehouse operators.

The use of similar grant opportunities, such as the Innovation Voucher system proposed for WAFIP and the existing State government RED grant process, will enable farmers located within the Shire to develop technologies that facilitate enhanced production, increased export capacity and greater employment opportunities.

Fruitico's partnership with Fresh Produce Group in 2016 has enabled the firm to develop key international linkages that have allowed business to expand dramatically. The partnership has given Fruitico access to leading grape breeders to cultivate premium table grape genetics, providing the firm with a unique value proposition that has supported its expansion within the Chinese market. Due to demand from its newly cultivated export markets, Fruitico intends to expand its vineyards on an additional 42 hectares of land, supporting over 300 new seasonal jobs.

In addition, Fruitico has also partnered with SWAN Systems to improve water management at its Hamel vineyards. SWAN Systems collects ongoing data regarding soil moisture status, tracking and budgeting water usage at the Fruitico vineyards in the process. Collecting this and meteorological data guides the timing of vineyard irrigation for more efficient water management. This has led to both improved nutrient health, higher yield and a reduction in overall water cost for the farm's Hamel operations.

Developing similar partnerships in Murray, such as those proposed between CYOEFV and Melaleuka Farms in North Dandalup, may foster the creation of niche food products, development of new farming techniques or provide greater access to export markets in a manner that will boost economic activity and employment opportunities within the Shire.

Wimmera, VIC

The district of Wimmera in regional Victoria has a population of 54,000, spread out in small towns across a 30,000km² agricultural production region. Wimmera's geography presents significant challenges to economic development, particularly regarding transportation and access to services. To remedy chronically low local Vocational Education and Training (VET) enrolment levels influenced by the limited ability of younger adults to access transportation, the regional administration ran an on-demand bus service connecting several towns to the regional TAFE in Horsham.

The service was funded by local youth groups, grants from the department of education as well as local government, and was operated by the LGA in collaboration with a regional youth employment agency. Two routes were operated, with each serving roughly 180 passengers per day. Studies of students using the service found that:

- 80% of bus users would not have enrolled in VET programs without access to the bus service;
- Graduation and attendance rates amongst students in the years after this bus service was introduced increased dramatically; and,
- Students using the VET bus service felt a greater sense of place and attachment to the Wimmera community overall, being less likely to express a desire to migrate from the region.

The benefits brought by the Wimmera VET bus service allowed the Horsham Regional TAFE to increase the number and variety of classes available to students and led to a change of class start times to better align with bus arrival times due to the popularity of the service.

Two factors made the Wimmera VET bus service a feasible solution to the region's public transportation woes; the clustering of education facilities in Horsham town centre and the willingness of community members, businesses, educators and local and state governments to collaborate. The clustering of education facilities in Horsham meant that the bus service only had to operate a limited number of high-frequency routes to one location to maximise ridership and thus return on investment. The willingness of regional stakeholders to participate in this cross-organisational project and vocal desire from residents for improvements in local transportation enabled a 'critical mass' to spur action, with this cross-organisational collaboration being maintained long-term to ensure successful outcomes.

A similar solution to Murray's transportation woes may be feasible in the Shire, with the possible expansions to provide access to Peel Health Campus for the elderly. South West Metropolitan TAFE and Murdoch University are co-located in Mandurah near Mandurah Train station, meaning routes may be structured to not only provide access to education facilities but also directly connect to the Perth Metro via the existing public transportation system. Existing collaboration models, such as those developed between the Shire, State government and Murdoch University at WAFIP, may be extended to catalyse the creation of such a bus service in Murray.

Waikato, NZ

Waikato, an agricultural region on the urban periphery of Auckland in New Zealand, has developed a thriving innovation ecosystem that facilitates economic diversification by providing access to collaboration opportunities, new technologies and production processes as well as a progressive investment climate. Infrastructure such as the Waikato Innovation Park, TechGym and Mobile Test Kitchen enable entrepreneurs and existing local businesses to access a range of shared capital that would otherwise prohibit business development and expansion.

The Waikato Innovation Park serves as a regional hub for both start-ups and established businesses, offering open-use user-pay plant processing and spray drying facilities that are majority-owned collaboratively by the businesses located at the Park. The Park collaborates with the local University of Waikato, AgResearch Institute and Waikato Institute of Technology (WinTec) to operate the AgBioNZ cluster, which serves as a research and testing centre for agricultural and food innovations and genetic engineering, operating as an independent organisation within the wider Park structure. Waikato is also part of the wider New Zealand Food Innovation network, providing Park users access to resources and connections to export opportunities. A 'food-tech' directory which operates at the park is designed to aid in linking farm opportunities to the relevant resources and technical expertise, acting as a key tool for business-to-business communication.

WinTec's TechGym provides entrepreneurs, established businesses and members of the public access to industrial processing equipment through a subscription based "gym membership." Members have access to facilities that cater to craft, light and heavy industrial processing, packaging and printing, electrical and automotive engineering and 3D printing. A co-working hub is located adjacent to the TechGym, with membership providing access to this facility and allowing start-up businesses to gain access to offices, meeting rooms and software suites including CAD and ArcGIS.

The Test Kitchen, developed by Waikato Innovation Park, is a mobile commercial kitchen that allows artisan food businesses to test new products. This facility provides start-ups in the local food and beverage industry to test menu concepts on a temporary basis prior to opening on permanent premises. Given its mobility, the Test Kitchen serves a tourism function through its ability to cater for major events and allow tourists to 'try before they buy,' sampling local produce in a convenient location before making a more committed decision to purchase the same products from established businesses.

Waikato's innovation ecosystem provides an example for the Shire of Murray to follow, particularly regarding possible additional uses at WAFIP. The operations of the Waikato Innovation Park are similar to those proposed for WAFIP, particularly with regard to opportunities to collaborate with local universities for research purposes. However, the Waikato Innovation Park's co-operative ownership structure may serve as a roadmap for long-term collaboration in the Shire of Murray, providing local businesses with additional revenue streams and better opportunities to value-add. Similar facilities to Waikato's TechGym and Test Kitchen may be feasible at or associated with WAFIP, lowering barriers to start-up participation and providing opportunities for economic clustering in the agricultural, manufacturing, logistics and tourism sectors of Murray.

6.0 Regional Priorities

Six regional priorities have been considered as part of this report to guide the future development of the Shire of Murray. Five of these priorities directly address the five key themes of the *Peel Regional Investment Framework*, these being Agricultural Innovation, Strong and Resilient Communities, Capable People, Thriving Industry and Tourism Excellence. A sixth priority, Delivering Regional Infrastructure was developed to address major infrastructure projects as per the recommendations of *Perth and Peel @ 3.5 Million*. Goals and action items for each of these were ascertained through consultations with representatives of the Shire of Murray as well as analysis of local, regional, and state-level policies and strategies to ensure alignment with the *Peel Regional Investment Framework*.

Several of these priorities share common themes, most notably the development and use of the Western Australian Food Innovation Precinct (WAFIP) to foster industry intensification and develop cross-organisational partnerships between businesses, community groups and education providers. WAFIP will enable the development of niche food products and new methods of farming within the Shire of Murray, fostering agricultural innovation and developing thriving industry within the LGA. Partnerships between WAFIP and institutions such as Murdoch University will support the education of Murray's workforce and provide additional employment pathways for school leavers, addressing the Framework's third theme, Capable People.

Further priorities recognise the need for greater transportation within the Shire, particularly to cater for youths and ageing residents who may not have access to a car. The development of a high frequency transport corridor along Pinjarra Road will connect Shire residents to education and health services in the City of Mandurah and provide direct public transport connections to the Perth Metro Area via rail. Improving transportation linkages within and from the Shire will foster a strong and resilient community, enable opportunities for improved workforce capability and support the capacity of the Shire to deliver tourism excellence by providing direct linkages to the heart of Murray in Pinjarra town centre.

An understanding of the key issues and opportunities that catalyse the need for action within each of these six priorities is paramount to ensuring successful outcomes. This understanding is provided through the demographic and economic analysis discussed in earlier sections, with the key trends affecting each of the six priorities summarised in the tables below. Assessing local, regional and state strategies, as well as discussions with Shire representatives has allowed for key currently proposed actions, activities and projects to be identified. Additionally, the tables identify future potential initiatives to capitalise on the opportunities presented by economic trends and existing projects. These future potential initiatives will be discussed further with regional stakeholders to prioritise and allocate a project lead as deemed appropriate.

| Thriving Industry | |
|--|--|
| Goal: To develop new and expanded market opportunities that are globally competitive, building upon the existing comparative advantages of the Shire and driving its long-term economic diversification away from Manufacturing and Mining-dominant industries. | |
| Achieved By: | |
| <ul style="list-style-type: none"> • Clustering industry to create clear regional supply chain relationships. • Enhancing transportation linkages to the wider Peel, Perth Metro and South West regions. • Prioritising local content in purchasing and major infrastructure contracts. | <ul style="list-style-type: none"> • Developing a diversified local employment base. • Expanding the innovation capacity of local Small and Medium Enterprise. • Securing land for future community, commercial and industrial precinct development. |
| Key Issues: | Key Opportunities: |
| <ul style="list-style-type: none"> • Changes in the employment needs of Alcoa’s mining and refinery operations have the potential to severely impact employment within the Shire. • Current prevalence of out-of-Shire contractors in mine servicing agreements and operations limits opportunities for local industry and constrains growth. • Decline in relative Manufacturing employment and long-term shifts to automation may limit the Shire’s ability to grow this sector if new growth areas are not pursued. • Exposure of local Manufacturing and Mining employment to commodity cycles may impact revenue budgeting and investment attractiveness for the Shire. • Overreliance on Manufacturing and Mining operations for employment and export revenue may impact diversification efforts if not addressed in the short-term. | <ul style="list-style-type: none"> • Existing Mandurah-Murray economic strategies provide a framework for cross-regional collaboration between businesses, LGAs and state Government agencies. • Infrastructure expansion proposed under <i>Perth and Peel @ 3.5 Million</i> to improve freight connections and connectivity to utilities, improving the productive capacity of local industry. • Mine rehabilitation provides potential for new industries to develop, such as ‘green technology’ and construction. • Peel Business Park and Pinjarra Industrial Estate to improve the potential for local manufacturing clustering and supply chain creation. • Regional Comprehensive Economic Partnership to reduce tariff barriers on mineral and manufacturing exports, improve trade linkages with Asia. |
| Currently Proposed Initiatives: | |
| Planned and funded actions outlined in existing State, regional and local strategies, to be delivered as per relevant plans by key stakeholders. | |
| Future Potential Initiatives: | |
| Potential actions suggested by this report based on economic trends and expansion of existing actions, to be developed in conjunction with key stakeholders. | |
| Quick Wins (Less Than 1Yr): | Short Term (1-2Yr): |
| <ul style="list-style-type: none"> • Begin discussions with potential stakeholders (e.g. Alcoa, Doral, South 32, Boddington Gold) regarding mine servicing contract renegotiation to prioritise local content and enterprise facilitation. • Shire to negotiate with DevelopmentWA to attract additional anchor tenants to Pinjarra Industrial Estate, develop an investment prospectus for future land releases at the site. | <ul style="list-style-type: none"> • Explore opportunities to develop an industry co-ordination council with industrial businesses in Mandurah and Murray, encompassing Peel Business Park, Pinjarra Industrial Estate and Mandurah-Greenfields Light Industrial zone. • Identify opportunities to partner with educational institutions for research and employment purposes in the Manufacturing and Mining sectors. • Develop strategies to support the enhancement of local industrial businesses through the creation of a civil works pipeline programme focused on local content. |
| Short Term (1-2Yr): | Medium Term (2-5Yr): |
| <ul style="list-style-type: none"> • Shire to work with miners to explore economic opportunities for the rehabilitation of mine sites over the next 10 years as per Dwellingup Futures Strategy recommendations and as part of the Co-operative Research Centre for Transformations in Mining Economies (CRC-TiME). • WAPC to endorse Dwellingup Structure Plan, Shire to develop an implementation strategy and identify preferred proponents for delivery. | <ul style="list-style-type: none"> • Examine scaling and business relocation opportunities to better support the development of niche industrial clusters, e.g. Food Technology at Peel Business Park, General Industry at Pinjarra and Warehousing in Mandurah. • Industry council to develop a long-term strategic plan for future growth and gain endorsement from State and local Government, outlining projections for land availability vs. requirements, expected demand and external growth areas. • Industry council to develop a branding strategy and investment prospectus to market available industrial land. |
| Medium Term (2-5Yr): | Long Term (5+Yr): |
| <ul style="list-style-type: none"> • Progress upgrades to the Pinjarra Paceway and Pinjarra Park Raceway per the recommendations of the respective business cases for each, developing new training tracks, on-course stabling and additional infrastructure to support equine industry development. • Complete forward infrastructure works to make additional land available for sale at Pinjarra Industrial Estate. • Expand and formalise existing apprenticeship and cadetship programs between local industry (e.g. Alcoa, Murray Engineering) and education providers. • Investigate soil and water capture improvement measures at Doral’s Keysbrook mine to support rehabilitation opportunities. | <ul style="list-style-type: none"> • Progress stage 2 of proposed Murray Regional Equestrian Centre extensions to construct an undercover all-weather arena, Develop an equine living precinct in Coolup as per the <i>Southern Paulsplain Strategy</i> and <i>Peel Equine Strategy</i>. • Develop regional supply chain linkages across Pinjarra Industrial Estate, Peel Business Park and Mandurah Light Industrial Area. • Facilitate the emergence of an equine industry cluster around Murray Regional Equestrian Centre in Coolup, as per the Peel Equine Strategy. • Industry council to act as trade negotiator with investment and export partners. |
| Long Term (5+Yr): | |
| <ul style="list-style-type: none"> • Identify possible future industrial land uses for Alcoa’s Huntly Mine and portions of Doral’s Keysbrook Mine within Murray, developing a mine rehabilitation roadmap and negotiate land tenure agreements with industry stakeholders post-mine rehabilitation. • Transition Industrial Investigation areas to Industrial zoned land at Pinjarra Industrial Estate on land identified in the <i>Perth and Peel @ 3.5 Million</i> strategy per demand requirements, with WAPC to initiate planning amendments. | |

| Agriculture & Food Innovation | |
|--|---|
| Goal: To promote innovative and sustainable agriculture and food practices, improving Murray Agriculture’s capacity for growth and exports and developing linkages between firms within the Shire, across the wider Peel and to domestic and international markets. | |
| Achieved By: <ul style="list-style-type: none"> Cluster and intensify food production to minimise land footprint. Growing stakeholder relationships between producers, exporters and investors. Networking businesses with export, wholesale and local market opportunities. | |
| Key Issues: <ul style="list-style-type: none"> Agriculture in the Shire has been dominated by ‘traditional’ broad acre and livestock farming which is becoming unsustainable due to competition for available land between the residential, industrial and mining sectors. The sector is exhibiting relative industry share and location quotient decline. Environmental constraints, as well as floodplain and soil quality impacts diminish the productive value of land for agriculture. Current capacity for food processing, particularly packaging, is limited, restricts local producers’ ability to create high-value products and export goods and increases business costs. Production costs currently limit the earnings capacity of local farmers due to low product volume and value. | Key Opportunities: <ul style="list-style-type: none"> Developing education and research & development capacity. Improving the operational capacity of Agribusiness to deliver end-to-end production. Providing access to common-user technologies for food processing. Commitments by GrowHub and Murdoch University to co-locate at WAFIP will support workforce and business capability development in Murray’s agricultural sector. Enterprise support using existing relationships with Invest Peel and GrowHub will promote improved business linkages. Access to agricultural grants programs, including RED Grants and WAFIP’s Innovation Voucher system into the long term and across Murray will provide a stable investment base for agriculture in the LGA Creation of a ‘Murray-Waroona Food Network’ has established a base for intra-sector collaboration. Regional Comprehensive Economic Partnership to reduce tariff barriers on agricultural and food produce, improve trade linkages with Asia. |
| Currently Proposed Initiatives: Planned and funded actions outlined in existing State, regional and local strategies, to be delivered as per relevant plans by key stakeholders. | |
| Quick Wins (Less Than 1Yr): <ul style="list-style-type: none"> Commence SpaceCubed’s ‘Leap and Sprint’ program for businesses seeking engagement with the WAFIP. Formalise the Murray-Waroona Food Network and investigate opportunities to collaborate with Southern Dirt’s Peel Grower’s Hub Develop incentives for business relocation to WAFIP and the Peel Food Zone in line with Peel Business Park Transition Strategy recommendations Short Term (1-2Yr): <ul style="list-style-type: none"> Develop a branding strategy to promote produce developed at WAFIP and park affiliated businesses. Finalise lease agreements with anchor tenants at WAFIP, identifying floorspace and fit out requirements as well as common user technology terms of use. Engage upstream and downstream organisations to participate in the Enterprise Support Innovation Voucher Programme and commence its execution. Complete investigations into water supply/demand, drainage impact and alternative water options as per the Peel Integrated Water Initiative Medium Term (2-5Yr): <ul style="list-style-type: none"> Commence Murdoch University’s Bachelor of Food Science program and begin research programs associated with a Future Food Co-operative Resource Centre (CRC) at WAFIP Establish a producer + makers co-op at the redeveloped Exchange Hotel in Pinjarra together with key local farmers as a ‘shopfront’ for WAFIP produce. Development of GrowHub’s Digital Hub at WAFIP to enable high-technology food processing, common user meeting and conference facilities as well as leasable and co-working spaces for entrepreneurs. Long Term (5+Yr): <ul style="list-style-type: none"> GrowHub to develop flagship experiential store in Singapore to showcase Peel produce niche food innovation developed at WAFIP to export markets in Asia, WAFIP Business Management to assess the viability of this concept post-launch and determine opportunities to expand to additional markets such as Indonesia. Undertake irrigation and drainage works as per the recommendations of the Peel Integrated Water Initiative investigations, commercialise non-climate dependent water supply sources such as water license trading and wastewater recycling to support intensified agricultural production within the formerly proposed Peel Food Zone. | Future Potential Initiatives: Potential actions suggested by this report based on economic trends and expansion of existing actions, to be developed in conjunction with key stakeholders. |
| | Short Term (1-2Yr): <ul style="list-style-type: none"> Identify means to extend WAFIP’s enterprise support program long-term with a focus on WA producers. Examine opportunities to set up a local agricultural investment fund in collaboration with WAFIP to support businesses with grant opportunities. Support Capogreco and Fruitico to create potential education tools, such as masterclasses and webinars to support business capability amongst local firms. Medium Term (2-5Yr): <ul style="list-style-type: none"> Examine opportunities to leverage existing projects funded through existing Invest Peel frameworks. Develop a branding strategy for all produce made in the Peel region, with possible collaboration with WAFIP. Develop strategies and funding models for the creation of common-user technology to support private sector expansion. Long Term (5+Yr): <ul style="list-style-type: none"> Formalise relationships with GrowHub at the Shire level, establish delegations to additional trading partners such as Japan, Korea and Indonesia as part of the Regional Comprehensive Economic Partnership ratified in November 2020. Identify opportunities for companies not participating at WAFIP to access common user technology for production through a subscription based or pay per use model. WAFIP to serve as an educational and business model for other potential food innovation precincts, increase the capacity of the park to host international delegations for conferences and research, send delegations to participate in events that will raise the profile of WAFIP to potential investors and trading partners. |

| | |
|---|---|
| Tourism Excellence | |
| Goal: To increase long-term and repeat tourist visitation to the Shire, supporting a diverse array of competitive businesses in delivering high-value products and services, as well as the sustainable upkeep of the Shire's built and natural infrastructure. | |
| Achieved By: | |
| <ul style="list-style-type: none"> • Building upon existing adventure and 'Wild@Heart' brands to attract new tourist markets. • Developing towns and localities to reflect the character of the Shire. • Leveraging the natural assets of the Shire, including indigenous sites, trails and waterways. | <ul style="list-style-type: none"> • Creating a consistent sense of place in line with the Shire's heritage and natural assets. • Investing in enabling infrastructure, such as accommodation and transportation. • Marketing Murray in a manner enticing increased tourist spend and length of stay. |
| Key Issues: | Key Opportunities: |
| <ul style="list-style-type: none"> • Conflict between desire of Dwellingup residents to retain the existing rural sense of place of the town and a greater need for tourism infrastructure and services in the town, such as accommodation. • Environmental constraints on land use and infrastructure development around Pinjarra and Dwellingup limit land available for tourism purposes. • Lack of short-stay and long-term accommodation located in the Shire limits opportunities to maximise tourist stay duration and value-add. • Interstate and international travel bans limit large-scale investment in accommodation services due to market uncertainty. • Limited local public transportation options create an accessibility barrier for potential visitors to the region, increase infrastructure requirements in the form of car parking and roads. | <ul style="list-style-type: none"> • Existing interest in niche tourism, particularly for indigenous cultural experiences, trails and school camps, provides potential for expansion. • Existing events and facilities are already a drawcard for visitors and may be leveraged together with the area's proximity to Perth to attract longer stays. • Interstate and international travel bans have increased the visibility of local tourist destinations amongst West Australian residents. • Strong focus on placemaking and tourism in both the local community and Shire governance has led to the proactive development of key tourism assets. • State government support in achieving 'trails town' certification for Dwellingup will raise the profile of the region domestically and internationally. |
| Currently Proposed Initiatives: | Future Potential Initiatives: |
| Planned and funded actions outlined in existing State, regional and local strategies, to be delivered as per relevant plans by key stakeholders. | Potential actions suggested by this report based on economic trends and expansion of existing actions, to be developed in conjunction with key stakeholders. |
| Quick Wins (Less Than 1Yr): | Short Term (1-2Yr): |
| <ul style="list-style-type: none"> • Completion of Draft Dwellingup Futures Growth Management Roadmap. • Begin discussions with potential stakeholders regarding accommodation services. • Explore further opportunities to showcase local artists and produce at major events (e.g. Fairbridge Festival), particularly local indigenous content. | <ul style="list-style-type: none"> • Develop a pipeline of tourism projects, creating a local tourism roadmap for the Shire. • Completed the Dwellingup trails program to achieve recognition as national and potentially international standard trails. • Identify opportunities to partner with initiatives in neighbouring LGA's and begin development of experiential 'trails' that connect businesses across the Shire at-large. • Network local indigenous tourism operators with tourist information services and other Shire businesses to raise the visibility of services offered, integrate indigenous tours with local branding and marketing strategies. • Develop a social media strategy for 'trails' marketing that reflects the existing adventure tourism and Dwellingup 'Wild @ Heart' branding, engaging with high-reach platforms across multiple demographics. |
| Short Term (1-2Yr): | Medium Term (2-5Yr): |
| <ul style="list-style-type: none"> • WAPC to endorse Pinjarra Activity Centre Plan and Dwellingup Structure Plan, based on preferred recommendations from Pinjarra Revitalisation Strategy and Dwellingup Futures. • Develop a structure plan for the Pinjarra Railway precinct, exploring the possibilities for inclusion of accommodation services. • Commence the redevelopment of the Exchange Hotel site in Pinjarra, identifying preferred proponents and long-term land ownership options. | <ul style="list-style-type: none"> • Management structure for local tourism initiatives to be established and implemented, with a strategy for future growth to be developed by the Shire. • Formalise business partnerships and funding arrangements with local tourism operators and integrate experiences with a focus on adventure, gastrotourism and indigenous heritage. • Shire, in collaboration with the local indigenous community, to identify opportunities and suitable designs to redevelop the Pinjarra Massacre and Memorial site as a place of historic importance. |
| Medium Term (2-5Yr): | Long Term (5+Yr): |
| <ul style="list-style-type: none"> • Shire to partner with stakeholders (e.g. AirBnB, Fairbridge Village) to expand small-scale accommodation services in the Shire focused on Pinjarra. • Examine potential TransWA bus routes to link Pinjarra and Dwellingup with Mandurah and Armadale. • Develop the Hotham Valley Tourist Railway between Dwellingup and Pinjarra, incorporating trails and attractions and integrating with the proposed Pinjarra Railway Precinct. | <ul style="list-style-type: none"> • Identify proponents to supplement TransPerth and TransWA services to connect major town centres to additional locations such as WAFIP, Dwellingup Trails Centre and Lane Poole Reserve. |
| Long Term (5+Yr): | |
| <ul style="list-style-type: none"> • Increase TransWA train services to Pinjarra from Perth CBD via Byford, with Department of Transport to identify feasible options for future Perth-Bunbury rail services to connect Pinjarra with Perth and the South West, activate the Pinjarra Railway precinct as a transit-oriented development precinct and tourist 'hub.' • Implementation of the Mandurah – Ravenswood – Pinjarra 'High Priority Transit Corridor' along Pinjarra Road to connect the proposed Pinjarra Railway precinct and town centre with Mandurah Station and City Centre by buses with a <15-minute service frequency, per the recommendations of <i>Perth and Peel @ 3.5 Million</i>. • Shire to tender for expressions of interest to attract domestic and international hotel chains (e.g. Sofitel) to develop large-scale accommodation in the Shire, with the potential to collaborate with State and Federal governments to secure funding and/or land. | |

| Capable People | |
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| <p>Goal: To improve the economic productivity of the Shire and develop a highly capable workforce to attract business investment and ensure the Shire retains residents, skills and jobs in the long-term, supporting the development of Peel's human capital in the process.</p> | |
| <p>Achieved By:</p> <ul style="list-style-type: none"> Engaging younger residents with employment opportunities. Maximise value-add opportunities and stimulate local demand in town centres. Providing access to tertiary and vocational education and apprenticeships in-Shire. | |
| <p>Key Issues:</p> <ul style="list-style-type: none"> Relatively high youth unemployment when compared to WA, exacerbated by the COVID-19 pandemic, has the potential to lead to greater rates of youth disengagement in the long-term if not addressed proactively. Low labour force participation when compared to Peel and WA may indicate a mismatch between available jobs and skills. Ageing population indicates a greater share of workers will leave the workforce in the medium-term, leading to potential shortages of workers. Limited access to post-secondary education facilities due to poor transportation infrastructure, particularly for minorities and low-income students. No existing post-secondary education facilities in-Shire limits potential to expand local workforce capabilities. | <ul style="list-style-type: none"> Ensuring access to quality education in line with workforce needs. Partnering with local stakeholders to develop school-to-work pathways. Transitioning from population-driven to skills-based employment. |
| <p>Currently Proposed Initiatives: Planned and funded actions outlined in existing State, regional and local strategies, to be delivered as per relevant plans by key stakeholders.</p> | |
| <p>Quick Wins (Less Than 1Yr):</p> <ul style="list-style-type: none"> Undertake human capital research to identify disparities between workforce capabilities and requirements. Examine opportunities for the establishment of a local 'Virtual Hub' for students to improve access to and resources for online tertiary education. <p>Short Term (1-2Yr):</p> <ul style="list-style-type: none"> Feed into the Perth-South jobs task force serving the Shire as per the 'Local Jobs Program.' Develop local applications to access the Perth-South local recovery fund accessible to the Shire as per the 'Local Jobs Program.' Develop a post-2020 'Age Friendly Communities Plan' and 'Youth Strategy,' identifying measures to improve volunteering as well as community and workforce participation. <p>Medium Term (2-5Yr):</p> <ul style="list-style-type: none"> Commence Murdoch University's Bachelor of Food Science program at WAFIP. Work with local industry (e.g. Alcoa, Murray Engineering) to develop long-term apprenticeship and cadetship programs. Develop linkages with Mandurah-based Hospitality and Tourism Training Centre, and facilitate collaboration with Fairbridge College, Murdoch University and Future Food CRCs. <p>Long Term (5+Yr):</p> <ul style="list-style-type: none"> Establish a Shire-wide innovation ecosystem to support the development of local entrepreneurs and micro-SME businesses through training opportunities, physical infrastructure and networking events, building on established ecosystems developed at Peel Busines Park. Shire to work with stakeholders (e.g. SpaceCubed, WeWork) to establish coworking and incubator spaces for local entrepreneurs as well as a thriving innovation ecosystem, with the possibility of using expanded Shire facilities such as Pinjarra Library and the Court House for initial leases. | <p>Key Opportunities:</p> <ul style="list-style-type: none"> Remote working to reduce distance barriers to employment and education as well as enhance the collaboration potential available to educators and business groups. Commitment by Murdoch University to locate B. Food Sci classes at WAFIP, with the potential for this relationship to expand to support post-secondary education within the Shire via graduate programs. Enhancement of the Shire's human capital through development of a 'knowledge cluster' at WAFIP Funding, reskilling and upskilling of local workers through the Federal 'Local Jobs Program' and JobActive/ Jobs and Skills centre initiatives. Investment in initiatives such as the Bushfire Centre of Excellence and C-Wise's High School Agriculture programmes will provide residents with post-secondary education options. <p>Future Potential Initiatives: Potential actions suggested by this report based on economic trends and expansion of existing actions, to be developed in conjunction with key stakeholders.</p> <p>Short Term (1-2Yr):</p> <ul style="list-style-type: none"> Explore opportunities to develop an industry co-ordination council with industrial businesses in Mandurah and Murray. Engage Murdoch University to participate in student development programmes for WACE students at Pinjarra Senior High School to facilitate transitions to university. <p>Medium Term (2-5Yr):</p> <ul style="list-style-type: none"> Establish a place-based employment service focused on seasonal and specialist agricultural and industrial jobs across Murray, Mandurah and Waroona. Employment service and existing local businesses to deepen relationships with educational institutions to expand locally available scholarship and graduate program opportunities. Identify future business focus and scale of commercial activity for Pinjarra Town Centre, facilitating attraction of anchor tenants and key service providers. <p>Long Term (5+Yr):</p> <ul style="list-style-type: none"> Employment service to develop relief staffing system to manage employment demand, particularly for businesses with higher rates of seasonal employment, with professional development or alternate employment opportunities to be offered in the off-season. Identify opportunities to expand existing relationships with C-Wise to offer expanded agricultural and rural operations training to secondary students, as well as potential entry pathways to Murdoch Bachelors' programs located at WAFIP. Work with secondary, vocational and tertiary education providers to develop remote learning 'hubs,' that allow students to participate in courses remotely yet in the presence of other students, with a focus on maintaining student engagement and maximising collaborative learning opportunities. |

| Strong & Resilient Communities | |
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| Goal: To enhance the social cohesion of the Murray community, ensuring planning outcomes meet local needs and develop active engagement strategies with stakeholders to ensure community-focused and place-based service delivery. | |
| Achieved By: <ul style="list-style-type: none"> Developing public and community-focused transport options for youths and seniors. Expanding local secondary and tertiary education opportunities. Implementation of the Murray 'Age Friendly Communities Plan.' | |
| Key Issues: <ul style="list-style-type: none"> Relatively high and increasing proportion of residents over the age of 65 to increase the service requirements for the Shire to address in the medium-term. Relative decline in the number of 15-24-year-olds in the Shire may signal youth disengagement and lead to a 'brain drain' of entrepreneurial talent long-term. Lack of accessible public/community transportation options for youths and seniors' limits accessibility to services and has the potential to increase social isolation, with low income and minority residents hardest hit. Low population density and size of Shire increases the cost-of-service provision to cover a greater land area and reach isolated residents. Underinvestment in local (Shire-based) health initiatives and Murray District Hospital has limited expansion in locally based healthcare, meaning residents must travel to Mandurah to access services. | <ul style="list-style-type: none"> Diversifying housing stock to better cater for youths, young families and older residents. Improving service provision in the Shire in both a place-based and remote access manner. Investment in community infrastructure to provide social and business opportunities. |
| Currently Proposed Initiatives: Planned and funded actions outlined in existing State, regional and local strategies, to be delivered as per relevant plans by key stakeholders. | |
| Quick Wins (Less Than 1Yr): <ul style="list-style-type: none"> ProfileID to conduct demographic analysis to identify community needs and corresponding funding priorities. Conduct a review of community infrastructure within the Shire as per 'Age Friendly Communities Plan.' Completion of Bedingfield Aged Care expansion, hiring of additional Aged Care staff. Short Term (1-2Yr): <ul style="list-style-type: none"> Develop a post-2020 'Age Friendly Communities Plan' and 'Youth Strategy,' identifying measures to improve quality of life for seniors and retain younger residents. WAPC to endorse Pinjarra Activity Centre Plan and Revitalisation Strategy, Shire to begin implementation of necessary local planning amendments. Medium Term (2-5Yr): <ul style="list-style-type: none"> Shire of Murray to develop precinct plans for the Murray Hospital Health precinct as per Pinjarra Revitalisation Strategy. Department of Transport and Shire to examine opportunities for TransWA bus services to link Pinjarra and Dwellingup with Mandurah and/or Armadale. Shire to develop a Public Open Space Strategy focused on the creation of a 'Greenspace Network' of high amenity parks and sporting grounds per the Pinjarra Activity Centre Plan. Long Term (5+Yr): <ul style="list-style-type: none"> Implementation of the Mandurah – Ravenswood – Pinjarra 'High Priority Transit Corridor' along Pinjarra Road to connect the proposed Pinjarra Railway precinct and town centre with Mandurah Station and Mandurah City Centre by buses with a <15-minute service frequency, per the recommendations of <i>Perth and Peel @ 3.5 Million</i>. Increase TransWA train services to Pinjarra from Perth CBD via Byford, with Department of Transport to identify feasible options for future Perth-Bunbury rail services to connect Pinjarra with Perth and the South West. Shire to facilitate subdivision and development applications to focus mixed-use and high-density construction in the precinct surrounding the intersections of Pinjarra and McLarty Roads, offering incentives such as reduced rates and planning support where necessary, to support the town's future growth as a transit-oriented development precinct. | Key Opportunities: <ul style="list-style-type: none"> Ageing population to increase local demand for highly skilled Healthcare and Aged Care jobs. Commonwealth funding committed to Bedingfield Aged Care facility will expand the local aged care service offering and catalyse the development of the proposed health and wellbeing precinct in Pinjarra. Place-based services made available to Shire residents during the COVID-19 pandemic may be brought in on a permanent or semi-permanent basis. Remote working improvements reduce the perceived distance barrier for youths to remain in/relocate to Murray. The Shire's natural assets are a drawcard for both Senior/Young residents, providing expansive recreation options. The Shire's focus on placemaking initiatives has allowed the LGA to enhance its unique sense of place. Future Potential Initiatives: Potential actions suggested by this report based on economic trends and expansion of existing actions, to be developed in conjunction with key stakeholders. |
| | Short Term (1-2Yr): <ul style="list-style-type: none"> Develop relationships with key stakeholders to facilitate on-demand transportation links between Murray and Mandurah. Examine opportunities to facilitate volunteer-driven transport and rideshare (e.g. Uber, DiDi) expansion to Pinjarra and surrounding localities. Identify long-term strategies for social service and aged care provision. Identify opportunities for the expansion of remote learning support and facilities. Medium Term (2-5Yr): <ul style="list-style-type: none"> Facilitate co-operation between Peel Health Campus and Murray District Hospital to provide demand driven patient services in-Shire. Develop design guidelines and relevant Local Planning Policies which identify a need for diversity in housing stock to appropriately meet demographic needs, amending applicable r-codes in the Shire's Local Planning Scheme as required. Assess service requirements for Pinjarra Town Centre in the long-term, identify and facilitate the attraction of key services and anchor tenants for commercial property in the town centre. Long Term (5+Yr): <ul style="list-style-type: none"> Work with providers to expand semi-regular place-based services and 'roving' services to operate permanently in the Shire. Development of alternative/multi-generational housing in new estates and infill sites with potential DevelopmentWA support, using examples such as the Gen-Y village at White Gum Valley |

| Delivering Regional Infrastructure | |
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| Goal: To develop economic opportunities within the Shire via the implementation of major infrastructure projects, leveraging the existing built and natural assets of the Shire and creating linkages across the wider Peel. | |
| Achieved By: <ul style="list-style-type: none"> Amending local and state planning frameworks to facilitate infrastructure delivery. Co-operating with neighbouring local governments and state government agencies. Prioritising infrastructure that builds upon the Shire’s comparative advantages. | |
| Key Issues: <ul style="list-style-type: none"> Conflict between a need for urban consolidation to support service provision and a desire amongst residents to maintain a rural lifestyle. Environmental constraints on land use and infrastructure development around Pinjarra and Dwellingup limit the viability of potential land uses as well as the availability of land for agriculture, industry and housing. A historic underinvestment in local infrastructure, particularly for the Shire’s agricultural sector. Lack of accessible public/community transportation and dedicated freight linkages limits economic growth potential and access to employment. Population growth set to increase the need and demand for critical infrastructure as well as the maintenance costs for the Shire. | <ul style="list-style-type: none"> Completing strategic infrastructure works to stimulate industrial development. Creating a clear plan for the physical and economic development of the Shire. Rehabilitating landscapes affected by unsustainable mining practices and operations. |
| Currently Proposed Initiatives: Planned and funded actions outlined in existing State, regional and local strategies, to be delivered as per relevant plans by key stakeholders. | Key Opportunities: <ul style="list-style-type: none"> <i>Perth and Peel @ 3.5 Million</i> recognises a need for expanded infrastructure within the Shire to support higher-order services. Peel Integrated Water Initiative to develop pathways for future water infrastructure development, particularly supporting local agriculture and industrial businesses. Population growth set to increase the need and demand for critical infrastructure. Shire-led planning processes acknowledge regional priorities and foster cross-organisational partnerships such as the Mandurah-Murray Economic Strategy. Stage one of ‘Transform Peel’ has provided direct government investment and support for infrastructure initiatives, with future stages to outline pathways for long-term growth. |
| Future Potential Initiatives: Potential actions suggested by this report based on economic trends and expansion of existing actions, to be developed in conjunction with key stakeholders. | |
| Quick Wins (Less Than 1Yr): <ul style="list-style-type: none"> Prioritise community infrastructure projects according to local demand, developing a pipeline of works and upgrades to support socio-economic activity into the future. Reduce the application of nutrients (fertiliser and others) and improve water efficiency in public open spaces across the Shire to improve the management of diffuse and point source urban nutrients. Work with MainRoads to review the Pinjarra Road Access Strategy. Short Term (1-2Yr): <ul style="list-style-type: none"> Complete investigations (feasibility and business case) into water supply/demand, drainage impact and alternative water options as per the Peel Integrated Water Initiative and that align to the water demand and supply investigations undertaken in 2021 by consultants. Facilitate the adoption of local Nutrient Irrigation Management Plans as part of water licensing and planning approvals processes to reduce nutrient runoff from irrigated agriculture aligning with the recommendations of <i>Bindjareb Djilba</i>. MainRoads to commence construction of stage 1 of the Pinjarra Heavy Haulage Deviation between South West Highway and Pinjarra-Williams Road, commence planning for stage 2 of the extension. Shire to work with RACWA to create a development plan for Murrayfield Airport. Medium Term (2-5Yr): <ul style="list-style-type: none"> Investigate viability of extending wastewater mains from Alcoa’s Pinjarra refinery to Gordon Road Wastewater Treatment Plant per the Peel Integrated Water Initiative. Shire to develop a Transport Strategy that considers future planning and infrastructure initiatives as well as regional priorities for the wider Peel, focused around creating a transit-oriented development hub in Pinjarra. RACWA to undertake feasibility studies into potential upgrades for Murrayfield Airport to support improved capacity and facilities for general aviation as well as limited-service flights in support of local industry. Long Term (5+Yr): <ul style="list-style-type: none"> MainRoads to commence construction on stage 2 of the Pinjarra Heavy Haulage Deviation Project and Shire to develop a joint business case with Serpentine-Jarrahdale for the implementation of future stages of the Tonkin Highway Extension south from Byford to the Pinjarra Heavy Haulage Deviation. | Future Potential Initiatives: Potential actions suggested by this report based on economic trends and expansion of existing actions, to be developed in conjunction with key stakeholders. |
| Quick Wins (Less Than 1Yr): <ul style="list-style-type: none"> Prioritise community infrastructure projects according to local demand, developing a pipeline of works and upgrades to support socio-economic activity into the future. Reduce the application of nutrients (fertiliser and others) and improve water efficiency in public open spaces across the Shire to improve the management of diffuse and point source urban nutrients. Work with MainRoads to review the Pinjarra Road Access Strategy. Short Term (1-2Yr): <ul style="list-style-type: none"> Complete investigations (feasibility and business case) into water supply/demand, drainage impact and alternative water options as per the Peel Integrated Water Initiative and that align to the water demand and supply investigations undertaken in 2021 by consultants. Facilitate the adoption of local Nutrient Irrigation Management Plans as part of water licensing and planning approvals processes to reduce nutrient runoff from irrigated agriculture aligning with the recommendations of <i>Bindjareb Djilba</i>. MainRoads to commence construction of stage 1 of the Pinjarra Heavy Haulage Deviation between South West Highway and Pinjarra-Williams Road, commence planning for stage 2 of the extension. Shire to work with RACWA to create a development plan for Murrayfield Airport. Medium Term (2-5Yr): <ul style="list-style-type: none"> Investigate viability of extending wastewater mains from Alcoa’s Pinjarra refinery to Gordon Road Wastewater Treatment Plant per the Peel Integrated Water Initiative. Shire to develop a Transport Strategy that considers future planning and infrastructure initiatives as well as regional priorities for the wider Peel, focused around creating a transit-oriented development hub in Pinjarra. RACWA to undertake feasibility studies into potential upgrades for Murrayfield Airport to support improved capacity and facilities for general aviation as well as limited-service flights in support of local industry. Long Term (5+Yr): <ul style="list-style-type: none"> MainRoads to commence construction on stage 2 of the Pinjarra Heavy Haulage Deviation Project and Shire to develop a joint business case with Serpentine-Jarrahdale for the implementation of future stages of the Tonkin Highway Extension south from Byford to the Pinjarra Heavy Haulage Deviation. | Short Term (1-2Yr): <ul style="list-style-type: none"> Investigate opportunities to facilitate the development of native plant nurseries for green infrastructure development. Seek input into future mine rehabilitation strategies conducted by Alcoa, with possible collaboration from CRC TiME over the next 10 years. Identify opportunities for Hydrogen storage and energy use for industrial purposes, developing a feasibility study per the National Hydrogen Roadmap. Review the action plan for Peel-Harvey Estuary <i>Bindjareb Djilba</i> to identify opportunities for additional funding and initiatives that expand the scope of the plan beyond what is currently proposed. Medium Term (2-5Yr): <ul style="list-style-type: none"> Develop a renewable energy strategy, focused on the promotion of renewables, hydrogen and microgrid development. Identify ways to attract firms to develop renewable energy infrastructure in-Shire or leverage existing firms such as Murray Engineering and Synergy to focus on local generation of electricity. Prepare a new Local Planning Scheme and Strategy to facilitate future infrastructure initiatives and urban growth staging. Long Term (5+Yr): <ul style="list-style-type: none"> Develop infrastructure to support Managed Aquifer Recharge, wastewater recycling and water trading per the results of Peel Integrated Water Initiative feasibility studies to support water supply for future residential and industrial development. Position Murray and Peel Business Park as a renewable hydrogen ‘cluster’ for energy storage and hydrogen research, Shire to facilitate investment in this sector with possible collaboration with ATCO, FMG and the Minderoo Foundation. |

7.0 Conclusion

Leveraging information highlighted in this Sub-Regional Economic Analysis, case study examples from across Australia as well as internationally, and the goals of local, regional and State strategies has allowed for the identification of currently proposed and future potential initiatives for the Shire of Murray and associated stakeholders to implement, in accordance with the themes of the *Peel Framework*. These reflect the goals and intent of existing plans and strategies yet provide additional pathways to local economic growth and diversification that supplement key actions already committed by the private sector, Shire of Murray and State government.

These opportunities represent proactive steps that may be taken within the Shire to ensure its economic diversification is successful in the long-term in alignment with the overarching goals for the future of the wider Peel. Understanding these opportunities in the context of the demographic and economic analysis discussed in earlier sections will provide insight into how the Shire can respond to the challenges it faces. Addressing these challenges using carefully researched and exhibited measures that have been carefully adapted for use in Murray will ensure the goals and priorities of both local strategic plans and the *Peel Framework* are met.

The Peel Development Commission (the Commission) intends to support the Shire of Murray in delivering the outcomes of these initiatives to progress the wider economic development of the Peel as a whole. The Commission can aid the Shire in the facilitation of these initiatives through advocacy, access to State government networks and existing private sector relationships, grant funding, as well as policy support, particularly in key areas of interest where the goals of the Shire and Commission align. Ongoing co-operation between the Commission and the Shire is critical to ensuring the success of the initiatives identified in this Sub-Regional Economic Analysis as part of a regionally led process, maximising opportunities for collaboration and value-add across the wider region.

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