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EXECUTIVE SUMMARY

BACKGROUND

THE HUME REGION

The Hume Region, located in north eastern Victoria, extends from Melbourne's northern growth corridor through to the New South Wales border. The region is polycentric, with its population of 300,000 dispersed across many small, medium and large settlements. Shepparton and Wodonga are the two largest population centres in the region, which together are home to one third of the region's residents.

The Hume Region is characterised geographically by Victoria's High Country to the east of the region which, aligns predominantly with the Ovens Murray Partnership Area, and the Goulburn Valley to the south/west of the region which aligns the Goulburn Partnership Area.

The Hume Region is unique in the context of Australia, containing one of the very few alpine areas and one of Australia's largest and most productive food bowls in the Goulburn Valley.



2010-2020 HUME STRATEGY FOR SUSTAINABLE COMMUNITIES: BACKGROUND

The 2010-2020 Hume Strategy for Sustainable Communities was completed in July 2010, and provides a 10-year strategic plan to inform decision making and investment in the Hume Region.

The 2010-2020 Hume Strategy focuses on the key themes of community, environment, economy, transport and land use. The vision for the 2010-2020 Hume Strategy for Sustainable Communities is:

The Hume Region will be resilient, diverse and thriving. It will capitalise on the strengths and competitive advantages of the regions, to harness growth for the benefit of the region and to develop liveable and sustainable communities.

Urban Enterprise was engaged by Hume RDA to review the progress of 2010-2020 Hume Strategy for Sustainable Communities, with consideration of what has been achieved, what is still of relevance and what are the key considerations for the next 10 year planning horizon within the Hume Region.

Analysis of the Hume Region in this review has focused on the two Regional Partnerships Areas of Goulburn and Ovens Murray. Whilst the two regions are geographically diverse, the demographic and economic profile for both areas are quite similar.

HUME REGION - SELECTED INDICATORS AND TRENDS

The key indicators outlined show the growth and change being experienced in the Hume Region over the past 10 years, as well as into the future.

The Hume Region is often outperforming other parts of Regional Victoria, including having a higher projected population growth rate (25%) compared to Regional Victoria (15%) between 2016 to 2031.

Key health indicators show that Hume Region residents have the highest satisfaction with life of all Victorian regions, with 37% of adult residents indicating that their satisfaction with life is very high. High levels of home ownership also highlight the strong liveability credentials of the region.

There has been significant increase in the number of jobs in the region (+16,218 jobs between 2011 to 2016), as well as growth in tertiary education levels, particularly in Certificate attainment (16% growth between 2011 to 2016).

Infrastructure improvements such as telecommunications and road improvements have led to growth in internet use, and access and reduction in road accidents in the Hume Region.



289,257 (+17%) residents in 2017

350,434 (+25%) residents in 2031



+7% population ages 55+ (2006-16)



+16,218 new jobs (2011-2016)



+7,309 certificate qualifications attained, or 16% growth in certificate level attainment, in five years (2011-2016)



+9.7% home ownership (2006-16)



7.7 million visitors in 2017
Projected 9.7 million visitors in 2026



102% increase in no of people who have internet access, or +20,494 people (2006-16)



-30% road accidents (2014-2018)

2010-2020 HUME STRATEGY PROGRESS REVIEW

COMMUNITY THEME

The Hume Region has seen extensive population growth since the 2010-2020 Hume Strategy was prepared. Population growth for the Hume Region was 17.3% from 2010 to 2017, with this growth delivered predominantly through new residential estates in designated growth areas in Wallan, Shepparton, Wodonga and Wangaratta. Population growth is set to increase in the next 10 years with the completion of major growth area estates in the Beveridge and Wallan area to the south of the Hume Region.

Aging of the population has occurred since the preparation of the 2010-2020 Hume Strategy and new directions need to be put in place to curb this by focusing on resident attraction of young families.

Community health indicators show some areas in the Hume Region have high levels of socioeconomic disadvantage which also needs to be a focus over the next 10 years.

Liveability indicators for the Hume Region are strong, with growth in home ownership, education attainment and delivery of many new major community, health, recreation and sporting facilities projects.

Key community health indicators for the Hume Region include:

- Population growth of 17.3% from 2011-2017 across the Hume Region;
- Substantial growth in all segments of post-secondary education (109% growth in masters qualifications and 44% growth in degree qualifications 2006-2016);
- Access to internet has increased substantially;
- 48% decline in people with no access to the internet between 2006-2016;
- Home ownership has increased; growth of 9.7% for outright ownership and 11.6% for ownership with a mortgage between 2006-2016;
- Aging of the population between 2006 and 2016; the proportion of residents aged over 55 increased by approximately 7%;

- Increase in crime by 43% over the period 2008-2017. By contrast, population has only increased 11.5% over the same period; and
- Persons in need of assistance has grown 42% from 2006-2016.

ENVIRONMENT THEME

The Hume Region faces a number of environmental issues that are identified in the 2010-2020 Hume Strategy. This includes climate change, water resources, protecting habitat and harnessing renewable energy.

Climate change and associated water resources is a major issue for the region given the importance of both the agricultural and tourism sectors in the Region. Implementation of the Murray Darling Basin Plan has been a major step for the region in securing water for the future.

In addition to this, some of the key initiatives for habitat protection are also linked to the Murray Darling Basin Plan including the increase of environmental water flows and establishment of Winton Wetlands.

Major investment in renewable energy is now taking place, particularly in terms of large scale solar plants. In total there is over \$1 billion in solar energy plants that have received planning approval in the Hume Region that are either underway or commencing soon.

Tracking measurable environmental indicators at the Hume Region level is difficult, particularly given the broader climate patterns that are not influenced directly by what occurs in the Hume Region. Much of the analysis for the environment theme relates to programs that have been undertaken by stakeholders.

Key environment indicators for the Hume Region include:

- Predicted temperature growth of 0.9 degrees;
- Increased river flows in the Goulburn 2010-2017 compared to 2000-2010; and
- Increased rainfall.

ECONOMY THEME

The Hume Region's economy has experienced exceptional growth since the preparation of the 2010 Strategy. Gross Regional Product has increased from \$11.7 Billion in 2008 to \$16.7 Billion in 2017.

Economic growth has occurred across many industry sectors, with the following key sectors responsible for the greatest level of jobs growth:

- Construction (+3,829 jobs);
- Health Care and Social Assistance (+2,564 jobs);
- Accommodation and Food Services (+1,712 jobs);
- Agriculture, Forestry and Fishing (+1,620 jobs); and
- Education and Training (+1,572 jobs).

This is in line with Infrastructure Victoria's 'Growing Victoria's Potential' and 'Interregional Assessment' reports, which highlight current and projected employment growth in health care, education and training, and accommodation and food services sectors.

Residential growth has influenced some of the economic growth identified above, particularly its impact of construction, health care, social assistance and food services.

Of importance for the region is the growth of two sectors which are 'export' orientated: agriculture, forestry and fishing, and the visitor economy.

The manufacturing sector, whilst having experienced limited jobs growth, continues to be the key export sector for the region. Investment in robotics and technology over the past 10 years has helped secure the future of many of the food processors in the medium term, however these industries remain at threat from global economics.

Key economic indicators include:

- 42% growth in GRP between 2008 and 2017;
- Reduction of unemployment rate from 6.5% in 2014 to 4.9% in 2017;

- 20% growth in the number of medium sized businesses that have \$5 million to \$10 million turnover;
- \$9.9 Billion in exports in 2017;
- GRP per capita has grown from \$42,755 per person in 2008 to \$57,734 per person in 2017; and
- 46% increase in visitors to the Hume Region between 2008 and 2017.

TRANSPORT THEME

Transport across the Hume Region has seen various levels of investment, including major highway improvements and rail passenger services investment. It is a key priority for many of the Local Governments, particularly public transport investment whether it be rail or improved bus connections.

All levels of Government have invested in transportation plans, however lack of funding in some areas such as east west transport links remains one of the key areas that has led to sub-optimal delivery.

Whilst the State Government has invested significant funds in passenger rail in the Hume Region, it remains a class below the services being offered to Geelong, Ballarat, Bendigo and Latrobe Valley.

There has been continued growth in transport movements on all major highways, the most dramatic increase has been in the Mitchell corridor on the Hume Freeway. The impact of growing residential estates and industrial areas in the north of Melbourne is creating greater time travel for access to Melbourne for both domestic and commercial traffic. This is an issue that will need to be addressed over the next 10 years.

Road deaths have reduced significantly as a result of road improvements and barrier investment in the region.

LAND USE THEME

Following preparation of the 2010-2020 Hume Strategy, the overarching document that has provided clarity and direction in relation to land use planning is the Hume

Region Growth Plan. The plan is the key guiding document for land use in the region and provides land use directions for settlement and rural land use.

An extensive amount of land use planning has been undertaken in the Hume Region including CBD structure plans, housing strategies and rural land use plans.

These documents have led the way for investment in major growth area developments and CBD revitalisation plans such as Wodonga's CBD redevelopment, growth areas in Mitchell Shire and industrial and commercial land expansion to support jobs growth.

INFRASTRUCTURE INVESTMENT

Since January 2010, there has been \$537 million in State Government and private sector investment in projects that were identified as unlocking economic growth and supported by Regional Development Victoria. This includes \$200 million in public sector funding for the region and \$337 million in private sector investment. Key investments included:

- Water storage and water security projects to support residential and commercial expansion as well as environmental outcomes;
- Natural gas infrastructure to support industry development;
- Trails to support tourism and recreation growth;
- Gallery, cultural and visitor spaces to grow visitation and yield; and
- Modernising food processors to ensure long term viability.



WHERE TO FROM HERE ANALYSIS - FUTURE OF THE REGION

WHAT HAS CHANGED

The previous strategy highlighted the following areas for key focus:

- Communities lifelong learning, accessible services and infrastructure, strengthening resilience;
- Environment adapting climate change, water resource management, renewables, and habitat protection;
- Economy workforce capability, diversifying agriculture, innovation in key industries and enhanced energy infrastructure;
- Transport Integrated planning, investment in linking communities; and
- Land use directing growth to settlements, maximising existing infrastructure assets and efficient land use planning.

The context which the 2010-2020 Hume Strategy was written was vastly different from now, the region had experienced a decade of drought, effects from the global financial crisis were still being felt and bushfires had ravaged large parts of the region.

The 2010-2020 Hume Strategy was unlikely to have predicted the level of residential and economic growth experienced in the region over the past eight years. Much of the content in the previous strategy was focused around maximising existing assets and sustainable use of assets. However in order for the 2010-2020 Hume Strategy to maintain its current level of liveability for its community and to compete with other regions of Australia, major investment is needed in transport, services infrastructure, visitor economy infrastructure, township enhancement and health, community and education.

The 2010-2020 Hume Strategy has had a focus on directing growth to areas that can support larger populations. This is also supported by the Hume Regional Growth Plan. This has resulted in significant growth in major townships, however limited or no growth in areas of lower population. Stagnant or low population growth in areas

such as Murrindindi and Towong will need to be a focus for the next Hume Strategy to ensure that these areas remain sustainable.

RISKS AND DISRUPTORS

There are a number of risks and disruptors for the region, which need to be addressed in the next iteration of the strategy. These were identified through analysis of trends and also through consultation with stakeholders:

- Growing crime rate;
- Aging of the population;
- Youth engagement and isolation;
- Mental health issues:
- Drug and alcohol use;
- Family violence;
- Social isolation;
- Water trading and water availability;
- Climate change;
- Significant public sector investment needed for community facilities;
- Public transport needs including east west linkages;
- Local Government funding and resources; and
- Declining labour requirements due to modernisation and digital technology.

PLANNING FOR THE NEXT STRATEGY

Discussions with stakeholders have identified the preference for a new Hume Strategy to be more 'strategic' and high level with targeted delivery against strategies to follow. Measurable indicators are also needed to track the performance of the Strategy.

The approach for preparation of a new Hume Strategy should consider that lessor resources be applied to the preparation of the strategy, whilst greater resources are applied to delivery and evaluation of progress.



1. INTRODUCTION

1.1. BACKGROUND

The 2010-2020 Hume Strategy for Sustainable Communities was completed in July 2010 as a 10-year strategic plan to inform decision making and investment in the Hume Region.

The 2010-2020 Hume Strategy was underpinned by an extensive amount of work including community and economic profiles and community and business forums and surveys as well as ongoing engagement with stakeholders across the 12 member Local Governments.

The 2010-2020 Hume Strategy is now reaching the end of its lifecycle and Hume RDA has engaged Urban Enterprise to undertake a review of the 2010-2020 Hume Strategy, focusing on the following components.

2010-2020 HUME STRATEGY PROGRESS REVIEW

- What has been achieved to date?
- How well has progress gone and what is left to do that is still of relevance for the region?

WHERE TO FROM HERE ANALYSIS?

- What has changed?
- Is there something the region wants to do differently over the next ten years?
- What does the future look like if the region follows the same trajectory?
- What are likely disruptors for the region?
- What step changes are likely to occur?
- Recommendations on a preferred approach for the next version of the strategy.

1.2. METHODOLOGY

In order to address the requirements of the brief, Urban Enterprise has undertaken the following tasks:

- Review of data indicators including community, environment, economic, transport and land use data;
- Presentations and discussions with regional partnerships Goulburn Valley Regional Partnership and Ovens Murray Regional Partnership;
- Meeting with Local Government executives and stakeholders to discuss the 2010-2020 Hume Strategy;
- Surveying members of community leadership programs;
- Preparation of a draft report for feedback from Hume RDV/RDA; and
- Preparation of a final report, incorporating feedback from Hume RDV/RDA.

1.3. PROGRESS ASSESSMENT

The Hume Region's progress against each theme was assessed using the following method.



1.4. THE HUME REGION

The Hume RDA Region is highlighted on the following page. It contains the following two regional partnership areas and corresponding Local Governments:

- Goulburn Regional Partnership Mitchell Shire, Moira Shire, Murrindindi Shire,
 City of Greater Shepparton, and Strathbogie Shire.
- Ovens Murray Regional Partnership Alpine Shire, Benalla Rural City, Indigo Shire, Mansfield Shire, Towong Shire, Wangaratta Rural City, and Wodonga City.

1.5. 2010-2020 HUME STRATEGY

VISION

The Hume Region will be resilient, diverse and thriving. It will capitalise on the strengths and competitive advantages of the four sub regions, to harness growth for the benefit of the region and to develop liveable and sustainable communities.

The five themes and related key directions which form the framework for priority strategies and actions presented in the 2010-2020 Hume Strategy regional and sub-regional plans are identified below.

Communities

- Embracing learning for life;
- Providing appropriate and accessible social services and infrastructure;
- Developing innovative and flexible service delivery models; and
- Strengthening communities, increasing resilience and enhancing liveability.

Environment

- Anticipating and adapting to the effects of climate change;
- Managing our water resources sustainably;

- Protecting native habitat and biodiversity; and
- Harnessing renewable energy sources, reducing greenhouse gas emissions and pursuing innovative waste management approaches.

Economy

- Strengthening a capable workforce;
- Adapting and diversifying agriculture in an environment of change;
- Facilitating research and innovation in tourism, manufacturing and industry to encourage new and evolving business; and
- Developing ICT and energy infrastructure that builds on existing competitive advantages.

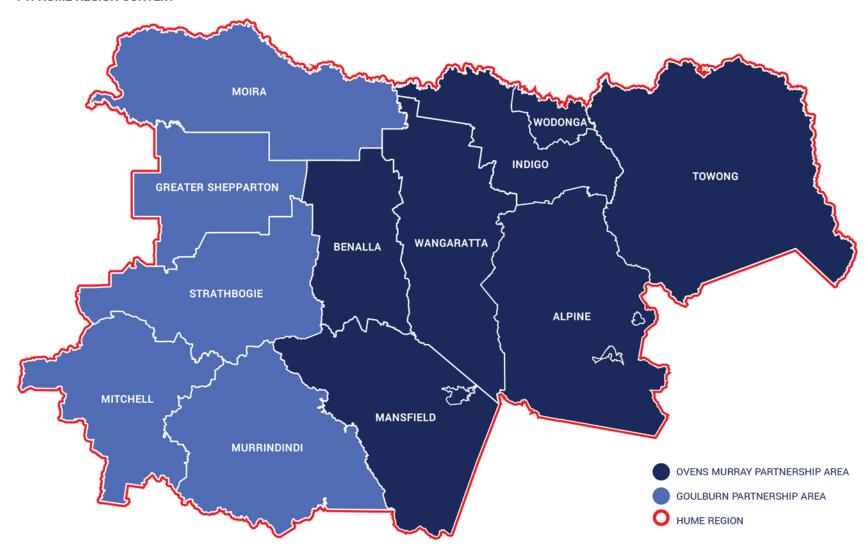
Transport

- Enhancing integrated planning for mobility;
- Developing a proficient land transportation network;
- Linking communities through improved public transport and transport linkages;
 and
- Strengthening the sustainability of the transport system.

Land Use

- Directing future population growth to settlements with the greatest capability to accommodate it;
- Maximising the use of existing infrastructure and services and facilitating strategic investment in future infrastructure and services;
- Retaining productive rural land for agriculture and other compatible rural uses;
 and
- Ensuring efficient use of land use planning resources in the region

F1. HUME REGION CONTEXT



2. COMMUNITIES

2.1. INTRODUCTION

This section provides information relating to the community theme in the 2010-2020 Hume Strategy.

This section includes an analysis of relevant historic community profile data and analysis of key activities undertaken in the region that align to the community theme.

2.2. THE 2010-2020 HUME STRATEGY

The 2010-2020 Hume Strategy provides a goal for communities in the region, which is supported by key directions, priority strategies and actions. The goal is to strengthen communities through the enhancement of liveability and connectedness. Opportunities, such as access to services and facilities, are recognised as ways to achieve "healthy, vibrant and resilient" communities in the region.

The key directions to achieve this goal are:

- 1. Embracing learning for life;
- 2. Providing appropriate and accessible social services and infrastructure;
- 3. Developing innovative and flexible service delivery models; and
- 4. Strengthening communities, increasing resilience and enhancing liveability.

The goal has been developed in response to current challenges facing the Hume Region, including the need for greater services such as health, community and education. The need for greater post compulsory education opportunities is also recognised in the Strategy, particularly to improve educational attainment levels in the region's workforce.

2.3. KEY FINDINGS

The Hume Region has seen extensive population growth since the 2010-2020 Hume Strategy was prepared. Population growth for the Hume Region was 17.3% from 2010 to 2017, with this growth delivered predominantly through new residential estates in designated growth areas in Wallan, Shepparton, Wodonga and Wangaratta. Population growth is set to increase in the next 10 years with the completion of major growth area estates in the Beveridge and Wallan area to the south of the Hume Region.

Aging of the population has occurred since the preparation of the 2010-2020 Hume Strategy and new directions need to be put in place to curb this by focusing on resident attraction of young families.

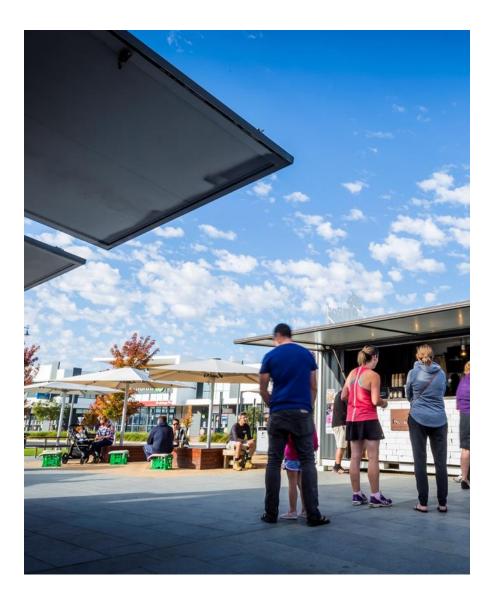
Community health indicators show some areas in the Hume Region have high levels of socioeconomic disadvantage which also needs to be a focus over the next 10 years.

Liveability indicators for the Hume Region are strong, with growth in home ownership, education attainment and delivery of many new major community, health, recreation and sporting facilities projects.

Key community health indicators for the Hume Region include:

- Population growth of 17.3% from 2011-2017 across the Hume Region;
- Substantial growth in all segments of post-secondary education (109% growth in masters qualifications and 44% growth in degree qualifications 2006-2016);
- Access to internet has increased substantially;
- 48% decline in people with no access to the internet between 2006-2016;
- Home ownership has increased; growth of 9.7% for outright ownership and 11.6% for ownership with a mortgage between 2006-2016;

- Aging of the population between 2006 and 2016; the proportion of residents aged over 55 increased by approximately 7%;
- Increase in crime by 43% over the period 2008-2017. By contrast, population has only increased 11.5% over the same period; and
- Persons in need of assistance has grown 42% from 2006-2016.



2.4. POPULATION INDICATORS

2.4.1. HISTORIC POPULATION TRENDS

The population of the Hume Region increased from 246,601 people in 2001 to 289,257 people in 2017. This represents a growth of 17.3% over this period.

Approximately 56% of the total population for the region lives in the Goulburn Regional Partnership Area, which had a total population of 162,475 people in 2017. The remaining 44% (126,782) of the Hume population lives in the Ovens Murray Regional Partnership Area.

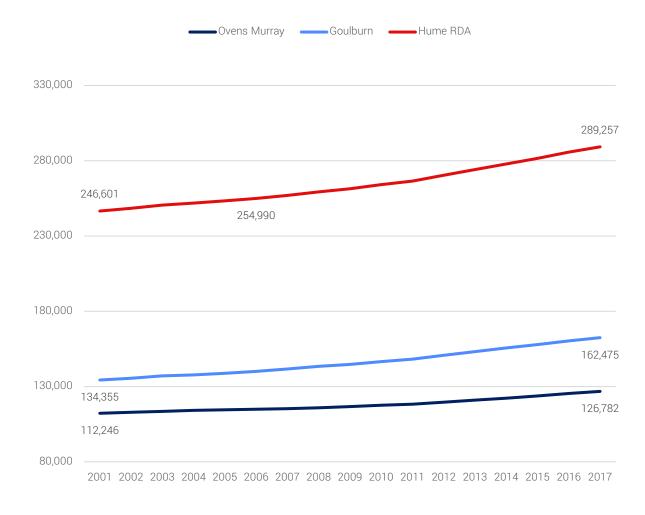
A large part of the growth in the Goulburn sub region has been the result of residential development around Wallan and Beveridge within Mitchell Shire. Figure F2 shows that Mitchell Shire had a growth rate of 55% from 2001-2017.

Other strong performing Local Governments were Wodonga with a growth rate of 27%, and Mansfield Shire with a growth rate of 30%, over the period 2001 to 2017.

BENCHMARKING WITH REGIONAL VICTORIA

Over the period 2011-2016 Regional Victoria had a population growth rate of 6%, by comparison the Hume Region had a population growth rate over the same period of 7.2%.

F2. HISTORIC POPULATION, BY SUB REGION, 2001 TO 2017



Source: Estimated Residential Population, ABS, 2017.

2.4.2. HISTORIC POPULATION TRENDS - LGAS

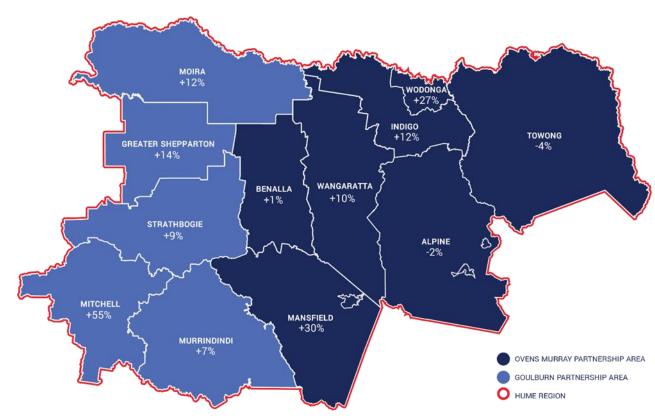
Figure F3 provides an overview of historic population growth from 2001-2017 for Hume Region Local Governments.

In addition to Mitchell Shire attracting a substantial amount of growth leveraging from its proximity to Melbourne, a number of the large regional centres within the Hume Region have performed well in relation to population growth, including Shepparton, Wangaratta and Wodonga.

The delivery of growth area estates in these centres has been critical to the attraction of residents, providing new dwellings at property costs much lower than Melbourne.

Surprisingly, Murrindindi, which is wedged between two high growth municipalities, has experienced much slower growth. This is partly due to the impacts of the Black Saturday Bushfires, but also due to its geography making it difficult to access from Melbourne, compared to Mitchell Shire.

F3. POPULATION GROWTH BY LGA 2001-2017



2.4.3. POPULATION PROJECTIONS

It is forecast that the population of the Hume Region will be 350,434 in 2031, growing by 25% between 2016 and 2031 (refer Figure F4).

Goulburn will account for the majority of this growth, growing by 55,401 people between 2016 (158,341 people) and 2031 (213,742 people).

By 2031, the population of Goulburn will account for approximately 61% of the total Hume Region population.

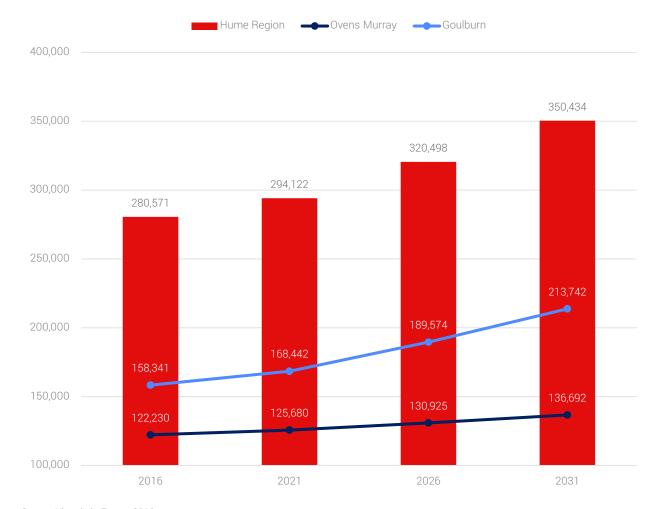
In comparison, the population of Ovens Murray is forecast to grow by 14,462 people between 2016 and 2031, and will account for approximately 39% of the total Hume Region population.

A large part of this growth will be driven by Mitchell Shire, which is expected to double its population over the period.

BENCHMARKING WITH REGIONAL VICTORIA

The Hume Region is projected to grow by 25% over the period 2016-2031, with Regional Victoria by comparison expected to grow by only 15% over the same period.

F4. PROJECTED POPULATION 2016 TO 2031, BY REGION



Source: Victoria in Future, 2016.

2.5. POPULATION PROJECTIONS - LGAS

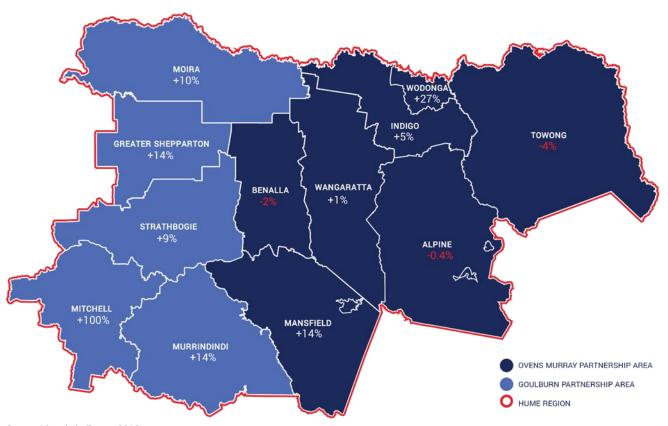
Figure F5 provides population projections for the Hume Region Local Governments, sourced from Victoria in Future. It shows that a number of the Local Governments are in threat of decline over the period 2016-2031.

The Local Governments which have historically performed well are identified to continue with high levels of growth.

Discussions with each of the Local Governments in the Hume Region show that population growth for Benalla, Alpine and Towong could be stronger than predicted, given that:

- Benalla has been identified to attract a number of major job boosting projects which will strengthen population growth and housing demand:
- Towong has potential to strengthen as a commuter location to Wodonga with the attraction of residential development; and
- Alpine has potential to grow as a lifestyle destination similar to Mansfield Shire.

F5. POPULATION PROJECTIONS - LOCAL GOVERNMENTS 2016-2031



Source: Victoria in Future, 2016.

2.6. MIGRATION TRENDS

In 2016, 83% of Hume residents lived within the same LGA in 2016 and 68% lived within the same LGA in 2011 (Table T1). This is less than the Victorian average, with 88% of Victorian residents living in the same LGA one year ago and 77% five years ago.

This suggest that Hume residents have been more mobile than the average for Victoria and may also reflect Hume attracting a larger proportion of new residents to the region.

T1. MIGRATION TRENDS, BY REGION

Place of Residence	Ovens Murray	Goulburn	Hume Region	Victoria
Same LGA as 2015 (1 year ago)	84%	83%	83%	88%
Elsewhere in Australia	16%	16%	16%	10%
Overseas	0.4%	0.6%	0.5%	1.9%
Same LGA as 2011 (5 years ago)	68%	67%	68%	77%
Elsewhere in Australia	31%	31%	31%	16%
Overseas	1.2%	1.8%	1.5%	6.6%

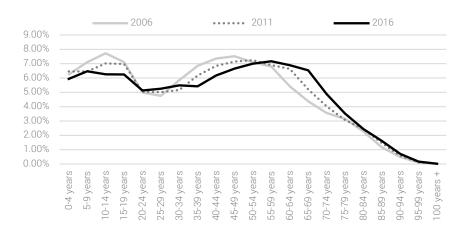
Source: Census, ABS 2016.

2.7. AGE INDICATORS

HUME REGION 2006-2016

The Hume Region is experiencing an aging population, with the proportion of residents aged over 55 increasing between 2006 and 2016 as shown in Figure F6. Over the 10 years between 2006 and 2016, the proportion of residents aged over 55 increased by approximately 7%, growing from 27% in 2006 to 34% in 2016. In comparison, the proportion of residents in Hume aged under 24 years has decreased by 3% between 2006 (33%) and 2016 (30%).

F6. HUME REGION AGE PROFILE 2006 TO 2016



Source: Census, ABS, 2006, 2011 and 2016.

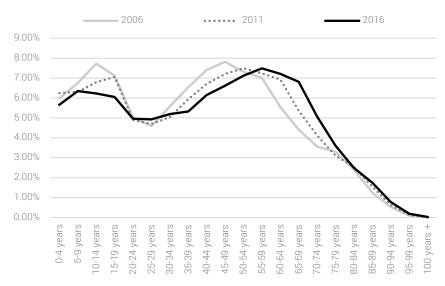
BENCHMARKING WITH REGIONAL VICTORIA

The age profile of Regional Victoria is similar to the Hume Region with an aging of the population experienced over 2006-2016.

OVENS MURRAY 2006-2016

The historic age profile of the Ovens Murray region reflects the overall trends occurring in the larger Hume Region, with the proportion of residents aged over 55 growing by approximately 7% between 2006 (28%) and 2016 (35%) (refer Figure F7).

F7. OVENS MURRAY REGION AGE PROFILE 2006 TO 2016



Source: Census, ABS, 2006, 2011 and 2016.

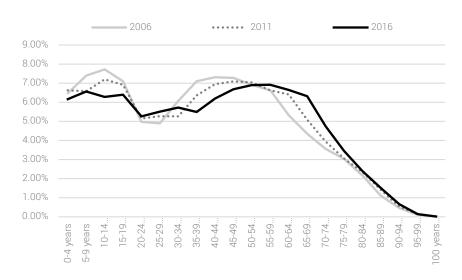
GOULBURN 2006-2016

The historic age profile of the Goulburn region also reflects the overall trends occurring in the larger Hume Region, with the proportion of residents aged over 55 growing by approximately 6% between 2006 (27%) and 2016 (33%) (refer Figure F8).

Goulburn has a slightly younger population than Ovens Murray, with 33% of residents aged over 55 years, compared to 35% of residents in Ovens Murray. Goulburn's younger age profile may be explained by a number of factors, including:

- The growth areas of Mitchell Shire and Greater Shepparton are attracting new families to the region; and
- Ovens Murray attracts aging residents (e.g. baby boomers) for lifestyle reasons, with Mansfield and Alpine Shires providing good examples of this.

F8. GOULBURN REGION AGE PROFILE 2006 TO 2016



Source: Census, ABS, 2006, 2011 and 2016.

2.7.1. AGE GROUP PROJECTIONS 2016-2031

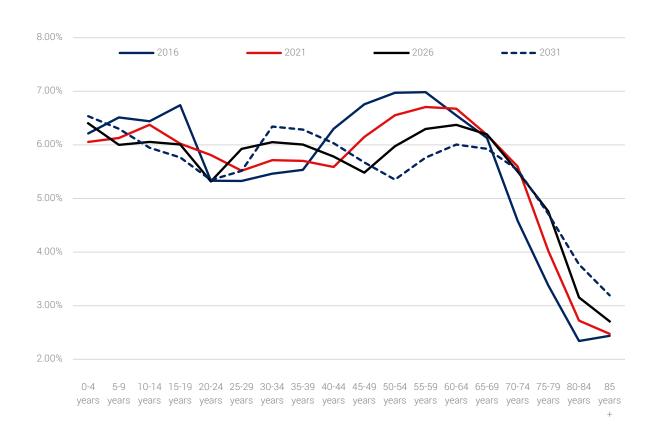
HUME REGION

It is projected that the population of the Hume Region will continue to age, with 3.2% of residents forecast to be aged 85 and over by 2031, an increase of approximately 0.8% from 2016 (refer Figure F9).

Conversely, the proportion of young families in the Hume Region is also projected to increase, with growth in the number of people aged 0-4, 30-34 and 35-39 years projected to grow to 6.5%, 6.3% and 6.3% respectively by 2031.

It will be important to attract young families to the region in order to continue to grow. It will also be important to provide adequate services for the aging population, with a focus on alternative service delivery such as e-health/telehealth services to access isolated residents.

F9. HUME REGION PROJECTED AGE PROFILE 2016 TO 2031

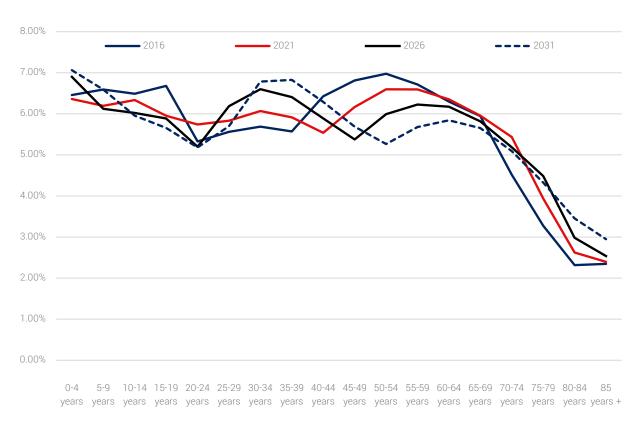


Source: Victoria in Future, State Government of Victoria, 2016.

GOULBURN REGION

Goulburn is forecast to follow the overall trends of the Hume Region, with the proportion of people aged over 85 years expected to increase by 0.5% to 2.9% by 2031 (refer Figure F10). The proportion of people aged 0-4, 30-34 and 35-39 years is also projected to increase in the region.

F10. GOULBURN PROJECTED AGE PROFILE 2016 TO 2031



Source: Victoria in Future, State Government of Victoria, 2016.

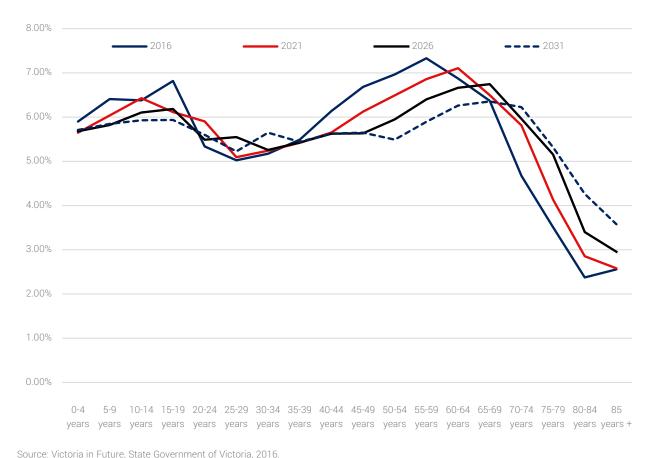
OVENS MURRAY

The projected age profile for Ovens Murray demonstrates a stronger aging population trend, with the number of people aged over 85 years expected to grow by 1.5% to 3.6% of the total population by 2031. The proportion of residents aged 65-69, 70-74, 75-79 and 80-84 years are also projected to grow by 2031 as identified in Figure F11.

In comparison to Goulburn, the proportion of residents aged between 0-4 years is expected to decrease by 0.2% by 2031.

By 2031, there will be a significant drop in the population aged between 0-19. This will be an important issue to address for rural LGA's such as Alpine, Benalla, Indigo, Mansfield and Towong, which are projected to have a decrease in overall population.

F11. OVENS MURRAY PROJECTED AGE PROFILE 2016 TO 2031



2.8. HOUSEHOLD INDICATORS

2.8.1. HOUSEHOLD COMPOSITION (FAMILY STRUCTURE)

The primary household type in the Hume Region is one family households, accounting for 53% of all household types in 2016. There is also a large proportion (22%) of lone person households in the Hume Region, as shown in Table T2 below.

T2. HUME REGION HOUSEHOLD COMPOSITION, 2006 TO 2016

	2006	2011	2016
One family household with only family members present	58%	56%	53%
Lone person household	20.6%	21.9%	22.1%
Other not classifiable	2.2%	2.4%	4.8%
Group household	2.2%	2.2%	2.1%
Visitors only	1.2%	1.4%	1.5%
One family household with non- family members present	1.1%	1.2%	1.3%
Two family household	0.6%	0.7%	0.8%
Three or more family household	0.01%	0.02%	0.02%
Not applicable	14.5%	14.8%	13.9%
Total	112,139	120,572	130,080

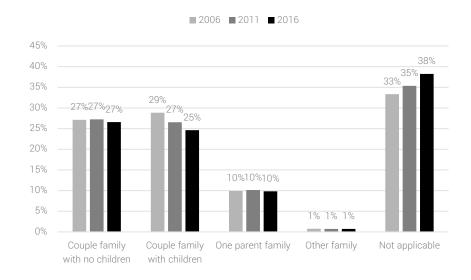
Source, Census, ABS, 2006, 2011 and 2016.

2.8.2. TRENDS

In terms of family composition, there is a large proportion of couple families in the Hume Region, with 27% of household couples with no children and 25% with children in 2016.

However, the proportion of couple families with children has decreased over the 10-year period between 2006 and 2016 by 4%, while the proportion of couple families with no children has remained consistent at 27%.

F12. HUME REGION FAMILY COMPOSITION, 2006 TO 2016



Source, Census, ABS, 2006, 2011 and 2016.

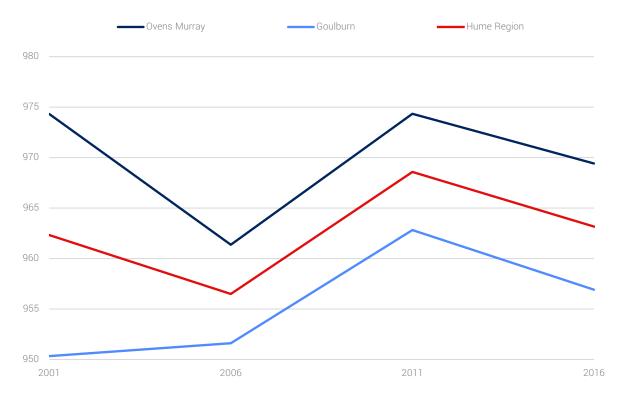
2.9. SOCIO ECONOMIC PROFILE

2.9.1. SEIFA INDEX BY REGION

The SEIFA index measures the level of relative disadvantage within a community. The SEIFA index in Hume has remained relatively consistent since 2001, increasing slightly from 962 in 2011 to 963 in 2016. Of the sub regions, Ovens Murray continues to have a higher level of advantage when compared to Goulburn, with an index of 969 compared with 957 in 2016.

In terms of growth, the index of Ovens Murray has decreased by 5 between 2001 (974) and 2016 (969). In comparison, the index of Goulburn has increased from 950 in 2011 to 957 in 2016. This indicates that the overall level of disadvantage is increasing in Ovens Murray and decreasing in Goulburn.

F13. SEIFA INDEX, BY REGION 2001 TO 2016



Source: SEIFA Index (Disadvantage/Advantage), ABS, 2001, 2006, 2011 and 2016.

2.9.2. SEIFA INDEX BY LGA

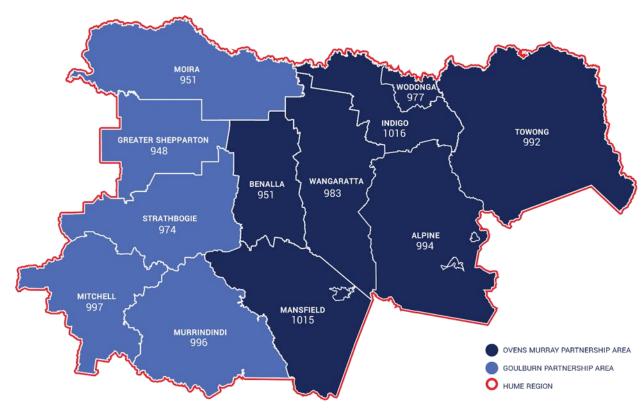
Figure F14 provides an overview of the SEIFA index by LGA across the Hume Region.

Mansfield Shire and Indigo Shire have recorded the highest SEIFA scores, both above the median for Victoria. This may be related to both of these areas successfully attracting new lifestyle residents. However, there are pockets of disadvantage when analysing these LGAs at an SA2 or SA1 level.

There are a number of LGAs in Hume that sit just below the median SEIFA index, these include Mitchell, Murrindindi, Alpine and Towong.

The Local Governments Areas which have large regional cities generally have a lower SEIFA Index reflecting higher levels of residents with disadvantage, including Greater Shepparton, Wangaratta and Wodonga. Other rural LGA's which have higher levels of disadvantage include Benalla and Moira.

F14. SEIFA INDEX BY LGA 2016



Source: ABS, Socio-Economic Indexes for Australia (SEIFA), 2016.

2.9.3. HOME OWNERSHIP

Home ownership in the Hume Region is growing, with the number of dwellings owned outright growing by 9.7%, and the number of dwellings owned with a mortgage growing by 11.6% between 2006 and 2016. The number of properties being rented in Hume Region is also increasing, growing by approximately 20% to 2016.

Despite this growth, the proportion of dwellings owned (either outright or with a mortgage), being rented, and the other home ownership types (as identified in Table T3), has remained consistent, with no material change occurring over the 10 year period.

BENCHMARKING WITH AUSTRALIA

As discussed above, the level of home ownership has increased in the Hume Region.

This is in contrast to levels of home ownership across Australia, effected primarily by the capital cities which have seen home ownership reduce significantly over the period 1991 to 2016 from 69% to 65%. This is predominately due to younger Australian's being priced out of the market in the capital cities, whilst the Hume Region has a large stock of well-priced residential property particularly in the key regional centres such as Shepparton and Wodonga.

T3. HOME OWNERSHIP 2006 TO 2016

	2006	2011			2016		Growth	
Owned outright	35,007	31%	36,455	30%	38,402	30%	3,395	9.70%
Owned with a mortgage	32,083	29%	34,329	28%	35,797	28%	3,714	11.58%
Rented	20,983	19%	23,610	20%	25,147	19%	4,164	19.84%
Being occupied rent- free	1,496	1%	1,426	1%	13,81	1%	-115	-7.69%
Other tenure type	479	0.4%	558	0.5%	539	0.4%	60	12.53%
Being occupied under a life tenure scheme	375	0.3%	339	0.3%	457	0.4%	82	21.87%
Being purchased under a rent/buy scheme	233	0.2%	209	0.2%	106	0.1%	-127	-54.51%
Not stated	5,289	5%	5,848	5%	10,122	8%	4,833	91.38%
Not applicable	16,212	14%	17,812	15%	18,095	14%	1,883	11.61%
Total	11,2139		120,580		130,063		17,924	15.98%

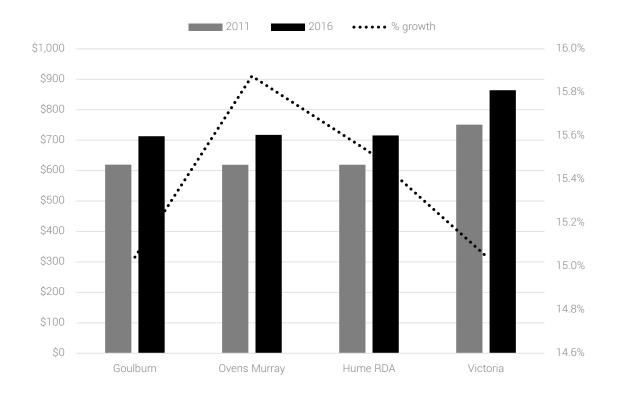
Source: Census, ABS, 2006, 2011 and 2016.

2.9.4. HOUSEHOLD INCOME

The median weekly household income in the Hume Region increased at a rate of 15.5% over the five years between 2011 and 2016, growing from \$619 to \$716.

Of the two sub regions, household incomes are greatest in Ovens Murray, with a median weekly household income of \$717, as compared to \$713 in Goulburn.

F15. MEDIAN HOUSEHOLD INCOME GROWTH 2011 TO 2016



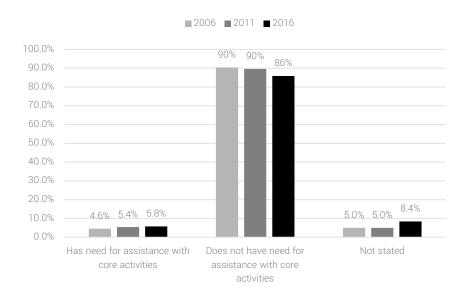
Source: Census, ABS, 2011 and 2016

2.10. HEALTH INDICATORS

2.10.1. NEED FOR ASSISTANCE

In 2016, 5.8% of Hume Region residents required assistance with core activities, an increase of 1.2% from 2006 (Figure F16). This may reflect the aging of the population over a similar period, highlighting increased demand for community assistance.

F16. PROPORTION OF HUME NEED FOR ASSISTANCE RESIDENTS



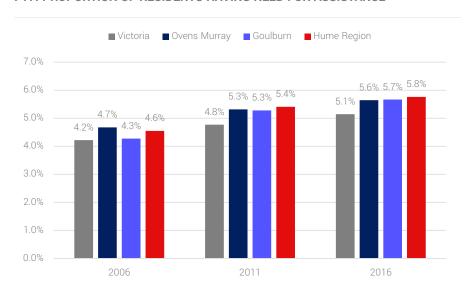
Source: Census, ABS, 2006, 2011 and 2016.

BENCHMARKING WITH VICTORIA

A greater proportion of Hume Region residents have need for assistance with core activities when compared to Victoria (refer Figure F17). 5.1% of Victorian residents have need for assistance, compared with 5.8% of Hume Region residents.

This highlights the need for higher levels of health and community service provision in the Hume Region per capita than the average across Victoria.

F17. PROPORTION OF RESIDENTS HAVING NEED FOR ASSISTANCE



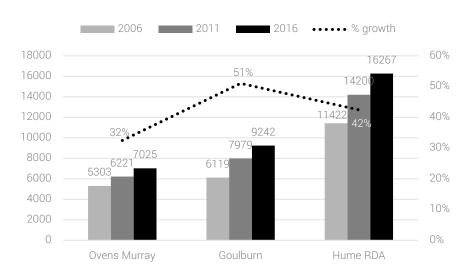
Source: Census, ABS, 2006, 2011 and 2016.

2.10.2. TRENDS IN NEED FOR ASSISTANCE

The number of residents in need of assistance has increased by 51% in the Goulburn sub region between 2006 and 2016. Ovens Murray residents in need of assistance have increased by 32% over the same period (see Figure F18).

This highlights the need for continued investment in services for those in need.

F18. GROWTH IN NUMBER OF NEED FOR ASSISTANCE RESIDENTS



Source: Census. ABS, 2006, 2011 and 2016.

2.10.3. SATISFACTION WITH LIFE

The Victorian Population Health Survey (2016) assessed a range of health indicators, as well as a range of self-assessed health indicators, such as satisfaction with life.

The Hume Region had the highest proportion of adult residents in the state who identified their satisfaction with life as being Very High (37%). When benchmarked with similar regions such as Loddon Mallee (32.5%) and Gippsland (29.3%), the proportion of adult residents who had a very high satisfaction with life was significantly higher in the Hume Region (Table T4).

T4. PROPORTION OF ADULTS, BY SATISFACTION WITH LIFE

		Very High (9-10)	High (7-8)	Medium (5-6)	Low (0-4)
Hume	9	37%	43.5%	13.9%	4.1%
Loddo	on Mallee	32.5%	47.5%	15.2%	4.3%
Gipps	sland	29.3%	51.8%	12.6%	4.6%

Source: Department of Health and Human Services, Victorian Population Health Survey, 2016.

Furthermore, the Victorian Population Health Survey indicates that 42.3% of males and 50.9% of females in the Hume Region reported their health as excellent or very good.

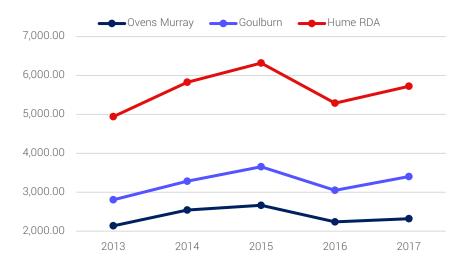
2.11. SOCIAL INCLUSION & ACCESS INDICATORS

2.11.1. GOVERNMENT BENEFITS

Within the Hume Region, 5,723 residents are recipients of government low income cards, including 3,403 living in Goulburn and 2,320 living in Ovens Murray (refer Figure F19). The total number of residents receiving low-income cards has been variable over the past five years, with the greatest number of low-income card recipients recorded in 2015 when 6,320 cards were received.

The number of Hume Region residents receiving low income cards has grown at a rate of 16% since 2013. Over this period, the year on year growth has been variable, with the greatest growth occurring in 2014, with the number of low-income card recipients increasing by 18% from 2013.

F19. LOW INCOME CARD RECIPIENTS, 2013 TO 2017

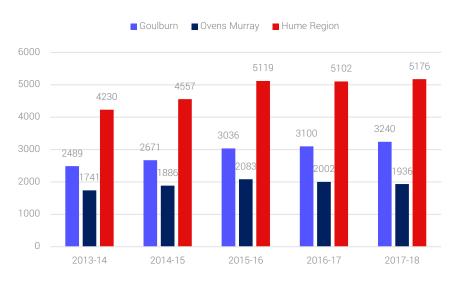


Source: Department of Social Services, 2017.

2.11.2. FAMILY VIOLENCE

There has been significant growth in the number of family violence incidents recorded in the Hume Region (22% growth or 946 incidents) between 2013-14 and 2017-18. This is driven mainly by the Goulburn region, which increased by 751 incidents, or 30%, over five years. This is an average annual growth rate of 5% for the Goulburn region.

F20. FAMILY VIOLENCE TRENDS, 2013/14-2017/18



Source: Victoria Police, Family incidents recorded by police region and local government area, July 2013 to June 2018

2.11.3. CRIME

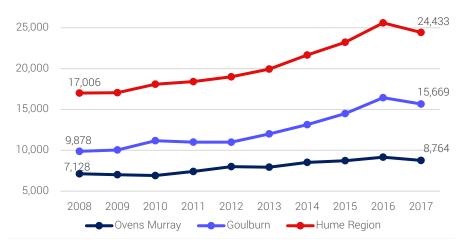
Figures F21 and F22 show the number of recorded criminal offences in the Hume Region between 2008 and 2017. Criminal incidents can be comprised of multiple criminal offences, alleged offenders and/or victims, with number of criminal offices therefore significantly higher than the number of criminal incidents (i.e. criminal events).

NUMBER OF RECORDED CRIMINAL OFFENCES

The level of crime occurring in the Hume Region has grown substantially between 2008 and 2017, with a 44% increase in the number of criminal offences recorded over the period. By contrast, the population has only increased by 11.5% over the same period.

The proportion of crime growth in is identical to Regional Victoria (44%).

F21. NUMBER OF RECORDED CRIMINAL OFFENCES 2008 TO 2017



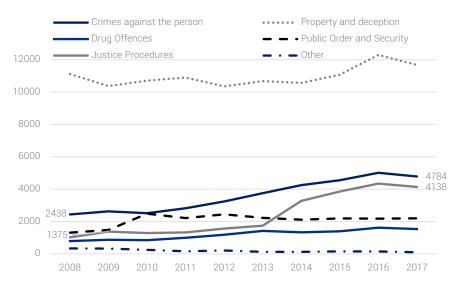
Source: Offences recorded and rate per 100,000 by offence type and LGA - January 2008 to December 2017, Crime Statistics Agency, 2018.

Investment in courts in the region has led to improved services to address the growing crime in the region. This includes the new Shepparton court complex, which is home to the Shepparton Koori Court and Family Court.

NUMBER OF RECORDED CRIMINAL OFFENCES BY TYPE

Figure F22 below shows the trends in recorded criminal offence type for the Hume Region. There has been high growth in the number of recorded justice procedure offences (4,138 in 2017) with the majority of these crimes being breaches of orders (3,427 in 2017). The proportion of justice procedure offences has remained constant since 2008, indicating that the rise in this type of offence is simply due to the generally higher crime rate. There has also been a rise in the number of crimes against the person (4,784 in 2017), which is dominated by assault and other offences (2,415 in 2017).

F22. NUMBER OF RECORDED OFFENCES BY TYPE OF EVENTS, 2008-17

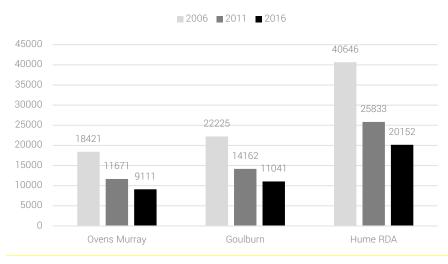


Source: Offences recorded and rate per 100,000 by offence type and LGA - January 2008 to December 2017, Crime Statistics Agency, 2018.

2.11.4. DIGITAL CONNECTIVITY

The digital connectivity of Hume Region is increasing, with the number of people with no internet access in Hume steadily declining since 2006. In Ovens Murray, the number of people with no internet access has declined by 9,310 people while in Goulburn the number of people with no access has declined by 11,184 people since 2006 (refer Figure F23). Approximately 20,000 people in Hume Region remain without internet access.

F23. NUMBER OF PEOPLE WITH NO INTERNET ACCESS, BY REGION 2006-2016



Source: Census. ABS, 2006, 2011 and 2016.

Although there has been significant improvement in digital connectivity, Victoria's Hume Region (also known as North Victoria), is still performing quite low comparatively. Table T5 shows the Australian Digital Inclusion Index (ADII) for North Victoria and Rural Victoria, compared to the Victorian, Melbournian and Australian averages.

The ADII measures three vital dimensions of digital inclusion: Access, Affordability, and Digital Ability. It shows how these dimensions change over time, according to

people's social and economic circumstances, as well as across geographic locations. Scores are allocated to particular geographic regions and sociodemographic groups, over a five-year period from 2014 to 2018. Higher scores mean greater digital inclusion.

On the basis of digital inclusion, North Victoria (Hume Region) scores 50.8, making it the third lowest ranked rural area in Australia and the lowest ranked rural area in Victoria.

T5. AUSTRALIAN DIGITAL INCLUSION INDEX

REGION	Australian Digital Inclusion Index
Australia	60.2
Victoria	61.4
Melbourne	63.6
Rural Victoria	53.3
West	63.8
North	61.2
Inner City	69.2
Central	65.1
Outer North East	63.6
Outer South East	61.5
West Victoria	52.8
North West Victoria	54
North Victoria	50.8
East Victoria	55.6
Geelong	58.7

Source: Measuring Australia's Digital Divide: The Australian Digital Inclusion Index, 2018.

2.12. EDUCATION INDICATORS

2.12.1. YEAR 12 COMPLETION

The proportion of people who did not complete year 12 was significantly higher in the Hume Region than the Victorian average. 60% of people did not complete year 12 in the Ovens Murray region, and a higher 62.5% of people did not complete year 12 in the Goulburn region (Table T6).

T6. PROPORTION OF PEOPLE WHO DID NOT COMPLETE YEAR 12, 2015

	Goulburn	Ovens Murray	Victoria
People who did not complete Year 12	62.5%	60.0%	43.7%

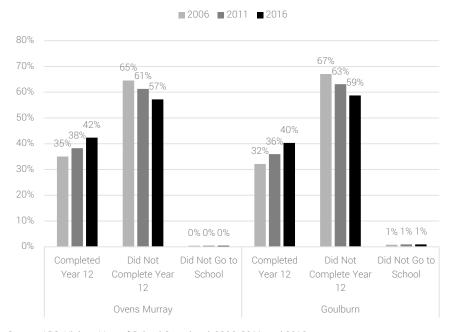
Source: Goulburn Area Profile and Ovens Murray Area Profile, Department of Health and Human Services, Victoria, 2017.

Within the region however, there has been a significant improvement in the number of students completing year 12, which increased by 7% in Ovens Murray and 8% in Goulburn (Figure F24). There has also been a significant reduction in the proportion of students who did not complete year 12.

However, there remains a significant number of people in the Goulburn Region (1,062 in 2016) who did not go to school at all. This represents a significant increase of 38% of people in the Goulburn region did not go to school, from 772 people in 2006 to 1,062 people in 2016.

This calls for a need to address socio-economic and social isolation issues, as well as a range of other socio-demographic issues that can cause a rise in the number of people not going to school.

F24. HUME REGION, COMPLETION OF SCHOOL



Source: ABS, Highest Year of School Completed, 2006, 2011, and 2016.

2.12.2. EDUCATIONAL ATTAINMENT TRENDS

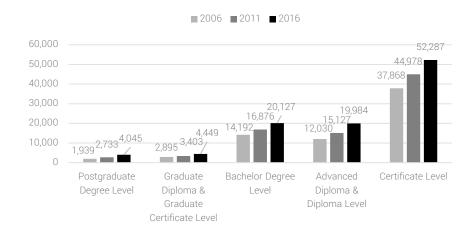
Hume Region residents are becoming more qualified, with the number of residents with a qualification increasing over the 10-year period between 2006 and 2016. This includes 20,127 residents who have a bachelor's degree, an increase of approximately 6,000 from 2006.

Figure F28 shows that when compared to Regional Victoria, the Hume Region has very similar proportions of each level of education attainment.

The highest growth has been seen in the certificate level attainment, which has grown from 18,152 to 24,120 between 2006-2016 in Ovens Murray, and from 19,715 to 28,167 for Goulburn over the same period.

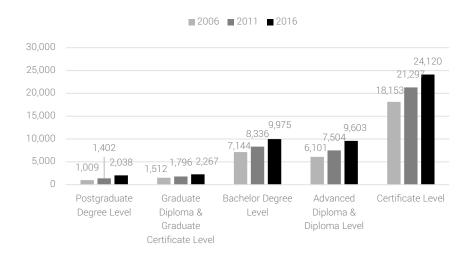
This highlights the need for a focus throughout the Hume Region on alternative skill development through TAFE and other upskilling programs, as well as a focus on developing pathways for those undertaking certificate level training to explore options to progress to further education i.e. degree level.

F25. HUME REGION LEVEL OF EDUCATIONAL ATTAINMENT



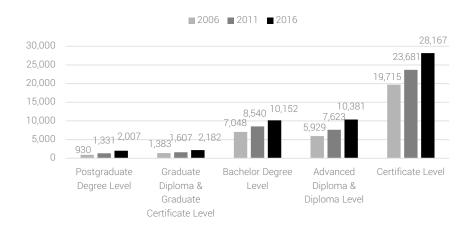
Source: Census, ABS, 2006, 2011 and 2016.

F26. OVENS MURRAY REGION LEVEL OF EDUCATIONAL ATTAINMENT

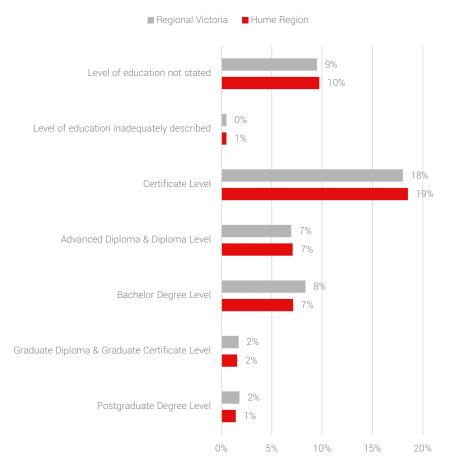


Source: Census, ABS, 2006, 2011 and 2016.

F27. GOULBURN REGION LEVEL OF EDUCATION ATTAINMENT



F28. HUME REGION LEVEL OF EDUCATIONAL ATTAINMENT, COMPARISON TO REGIONAL VICTORIA



Source: Census, ABS, 2016.

2.13. INVESTMENT AGAINST COMMUNITY THEME

Table T7 provides examples of projects delivered against community themes by stakeholders. Further detail on projects delivered by stakeholders is provided in Stakeholder Delivery and Progress Report.

T7. INVESTMENT AGAINST COMMUNITY THEME

Key Directions	Priority Strategies	Discussion	Delivery Examples
Embracing learning for life	Create 21st Century spaces for communities through growth and sharing of resources Provide opportunities for young people to engage with learning through multiple pathways and seamless transitions Foster a culture of excellence and aspiration	Growth in education attainment and in particular post-secondary qualifications has occurred in the Hume Region since 2010. This growth highlights the increased provision and accessibility of adult and post-secondary education for Hume Region communities.	 Latrobe University 2010: Latrobe University invested \$10.9 million in a state-of-the-art Campus in Shepparton, which opened in 2010 Munarra Centre for Excellence, Shepparton: \$23M investment, funded by State and Local Government Tallangatta Integrated Community Centre – Investment: \$2.2M State Government & \$400,000 Towong Shire Council
Providing appropriate and accessible social services and infrastructure	Build networked communities Expand service access pathways Develop and renew services and infrastructure Enhance participation in arts, culture, sport and recreation	There has been continued investment in social and community services infrastructure in the Hume Region. This includes libraries, community hubs, health care and justice precincts.	 Shepparton Law Courts 2018: \$73 million investment committed by the State Government, servicing a large regional catchment beyond Greater Shepparton Cube Wodonga 2012: State-of-the-art entertainment centre in Wodonga CBD, constructed at a cost of \$11.5 million with State and Local Government funding
Developing innovative and flexible service delivery models	Sub regional service and infrastructure planning Service coordination and resource sharing	Since the preparation of the 2010-2020 Hume Strategy, many Local Governments have embarked on sharing of resources. Examples of flexible and innovative service flexibility include: Sharing of building and planning services between Alpine and Towong Shires; Outsourcing of digital tourism services in Mansfield and Indigo Shires to Tourism North East; and	Climate Smart Agricultural Development (CSAD) Project - Joint GBCMA state funded project with 7 partner councils throughout the Goulburn Broken. Included development of a spatial assessment tool to model changes to regionally important agricultural commodities under the future impacts of climate change

Key Directions	Priority Strategies	Discussion	Delivery Examples
		Continuation of Goulburn Valley Libraries Services across, Greater Shepparton City Council, Strathbogie and Moira Shires. There is however a need for further improvement in this area in order to improve service levels and efficiency.	
Strengthening communities, increasing resilience and enhancing liveability	Engagement and capacity building of people and places	The Hume Region has improved its liveability over the past 10 years with major investment in sports, recreational, trails, arts and community facilities leading to higher levels of accessibility. Liveability includes indicators for: Walkability; Public transport; Public open space; Housing affordability; Employment; Food environment; and Access to sports, recreation and cultural services. The Hume Region has performed exceptionally well in terms of affordable housing indicators with growth in home ownership, whilst home ownership across Australia has declined.	 \$19M Maude St Mall Redevelopment, CBD Revitalisation investment by Federal, State and Local government \$37M Stage 1 investment, Shepparton Sports and Event Centre Shepparton Art Museum - \$49.9 million investment, with contribution from Federal, State and Local Governments

2.14. CASE STUDIES

CASE STUDY: LATROBE UNIVERSITY [2010]

Latrobe University invested \$10.9 million in a state-of-the-art Campus in Shepparton, which opened late 2010. The campus has provided much needed higher education in Shepparton which aligns with the growing needs of the community and industry.

The campus has grown to accommodate over 400 students, with expansion plans are underway to increase capacity.



CASE STUDY: SHEPPARTON LAW COURTS [2018]

The Shepparton Law Courts were officially opened Friday 23rd March 2018, and are the result of a \$73 million investment committed by the State Government of Victoria.

The Law Courts serve a large regional catchment beyond Greater Shepparton. The courts allow for the Supreme, County, Magistrates', Children's and Coroner's Courts, and the Victorian Civil Administrative Tribunal, to hold sittings locally.



CASE STUDY: CUBE WODONGA [2012]

The Cube Wodonga is a state-of-the-art entertainment centre in Wodonga's central business district, located at 118 Hovell St.

Owned and operated by Wodonga Council, Cube Wodonga is a community asset for all to benefit from, hosting touring bands and theatre shows, local community performances, film screenings, conferences, weddings and much more.

The complex was constructed at a cost of \$11.5 million, funded by State and Local Government.



2.15. PROGRESS REPORT – COMMUNITY THEME

The following progress report takes into consideration trend data, investments undertaken and stakeholder feedback with regard to delivery. This is shown below



Embracing learning for life, providing appropriate and accessible social services and infrastructure and strengthening and enhancing liveability all progressed well as individual directions.

Developing innovative and flexible service delivery models is one area that stakeholders identified as not meeting expectations with further opportunity for public sector agencies to share resources and collaborate better to reduce costs and improve service delivery.

T8. PROGRESS REPORT - COMMUNITY THEME

COMMUNITY THEME Rey Direction Level of Completion/Application by Stakeholders No Progress Embracing learning for life Providing appropriate and accessible social services and infrastructure Developing innovative and flexible service delivery models Strengthening communities, increasing resilience and enhancing liveability Total Community Theme

Areas where progress has been held back include:

- Access to education and training from isolated areas in the region;
- Investment in community, health and education facilities in secondary townships and remote areas;
- Expanding collaboration between Local Governments and sharing services to improve efficiencies and gain economies of scale across the region in service delivery;
- Growing levels of social disadvantage amongst some cohorts within the communities of the region; and
- Accessibility to community services, health and recreation in growth areas (e.g.: Wallan growth area).

3. ENVIRONMENT

3.1. INTRODUCTION

This section provides information relating to the environment theme in the 2010-2020 Hume Strategy.

This section includes an analysis of relevant historic environmental profile data and analysis of key activities undertaken in the region that align to the environment theme.

3.2. THE 2010-2020 HUME STRATEGY

The 2010-2020 Hume Strategy identifies growing environmental pressures facing the region, including loss of biodiversity due to urban development and the effects of climate change, including effects on water resources and temperature in the region. In response to these pressures and existing and future environmental conditions in the region, the 2010-2020 Hume Strategy outlines the goal to protect and enhance natural resources for current and future generations in the region.

This goal is supported by key directions, priority strategies and actions.

The key directions are:

- 5. Anticipating and adapting to the effects of climate change;
- 6. Managing our water resources sustainably;
- 7. Protecting native habitat and biodiversity; and
- **8.** Harnessing renewable energy sources, reducing greenhouse gas emissions and pursuing innovative waste management approaches.

Environment is a key consideration for the Hume Region given that more than a quarter (28%) of Goulburn Valley and over half (54%) of North East Victoria is public land, including State and National Parks. There are many ecosystems and species that are unique to the region and remain largely untouched.

The Goulburn Valley is one of Australia's major food bowls, producing about 25% of the value of Victoria's agricultural production. The environment is a key consideration for the long term sustainability of this area given the reliance on water availability and the impacts of climate change on rainfall.

Many of the region's urban centres are located within the floodplains of major rivers including Benalla on the Broken River, Shepparton on the Broken and Goulburn Rivers, Seymour on the Goulburn River, Wangaratta on the Ovens and King Rivers and Echuca and Wodonga on the Murray River. The health of these river systems is an important consideration for environmental sustainability.

3.3. KEY FINDINGS

OVERVIEW

The Hume Region faces a number of environmental issues that are identified in the 2010-2020 Hume Strategy. This includes climate change, water resources, protecting habitat and harnessing renewable energy.

Climate change and associated water resources is a major issue for the region given the importance of both the agricultural and tourism sectors in the Region. Implementation of the Murray Darling Basin Plan has been a major step for the region in securing water for the future.

In addition to this, some of the key initiatives for habitat protection are also linked to the Murray Darling Basin Plan including the increase of environmental water flows and establishment of Winton Wetlands.

Major investment in renewable energy is now taking place, particularly in terms of large scale solar plants. In total there is over \$1 billion in solar energy plants that have received planning approval in the Hume Region that are either underway or commencing soon.

Tracking measurable environmental indicators at the Hume Region level is difficult, particularly given the broader climate patterns that are not influenced directly by what occurs in the Hume Region. Much of the analysis for the environment theme relates to programs that have been undertaken by stakeholders.

Key indicators:

- Predicted temperature growth of 0.9 degrees;
- Increased river flows in the Goulburn 2010-2017 compared to 2000-2010; and
- Increased rainfall.

3.4. ENDANGERED SPECIES

In the North East Natural Resource Management region (NRM), there is a total of 49 threatened species or ecological communities listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), including 44 species and 5 ecologically communities¹.

In the Goulburn Broken NRM, there is a total of 50 threatened species or communities listed under the EPBC Act.

These threatened species and communities have either a recovery plan or conservation advice issued.

T9. NUMBER OF THREATENED SPECIES UNDER THE EPBC ACT

NRM	Threatened Species	Threatened Communities	Total
North East	44	5	49
Goulburn Broken	43	7	50

Source: Department of Environment, Commonwealth Government of Australia 2018.

http://maps.biodiversity.vic.gov.au/viewer/?viewer=NatureKit

¹ Protecting Victoria's environment - Biodiversity 2037

3.5. WATER

3.5.1. WATER RESOURCES

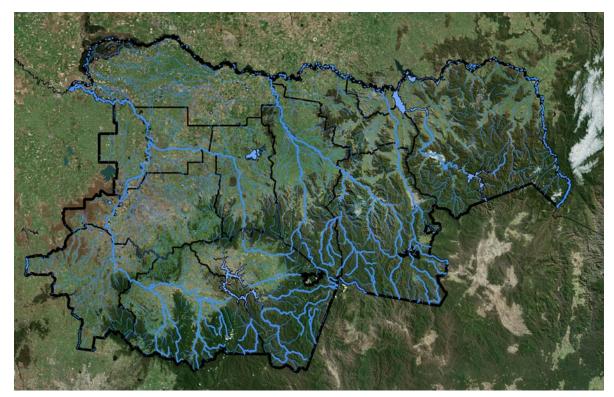
The Hume Region is home to the largest irrigation system in Victoria, located within the Goulburn Valley.

This system draws on water from Victoria's largest river, the Goulburn River, which has its source in the Victorian Alps. In addition to this, there are a number of other important river systems in the Hume Region including the Broken, King and Ovens Rivers.

Lake Eildon is the largest fresh water body in Victoria and is critical to the Goulburn Valley irrigation system, as well as being a valuable recreation asset.

The region is also connected to the Murray River system, with two major water storages in the north of the region, Lake Dartmouth and Lake Hume.

F29. WATER RESOURCES IN HUME



GIS, Water_WSM, 2018.

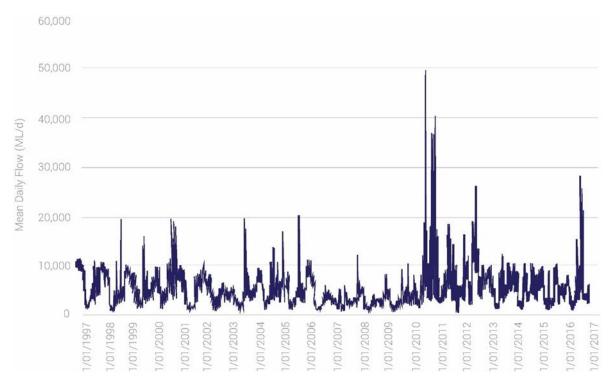
3.5.2. GOULBURN RIVER FLOWS

Over the last twenty years, conditions in the Goulburn catchment have been quite dry. After a wet year in 1997, there were thirteen drier than average years (including eight very dry years). In 2010/11 the millennium drought broke with floods and a very wet year. Since then, the climate had been getting progressively drier with 2011/12 and 2012/13 drier than average, 2013/14 and 2014/15 very dry, and 2015/16 one of the driest on record in the Goulburn catchment. In 2016/17 conditions changed and it was a very wet year with above average rainfall for most months between May and October (MDBA weekly report, 7 December 2016).

Inflows in the Goulburn catchment were very high and tracked in the above average to wet scenarios, with at least three distinct overbank flows during winter and spring.

Figure F30 shows that the only large overbank event that has occurred in the past 20 years at Seymour was in 2010/11. Other overbank flows occurred in winter 2012 and spring 2016, with flows at Seymour below 20,000 ML/day for all other years.

F30. MEAN DAILY FLOW - GOULBURN RIVER AT SEYMOUR 1997-2017



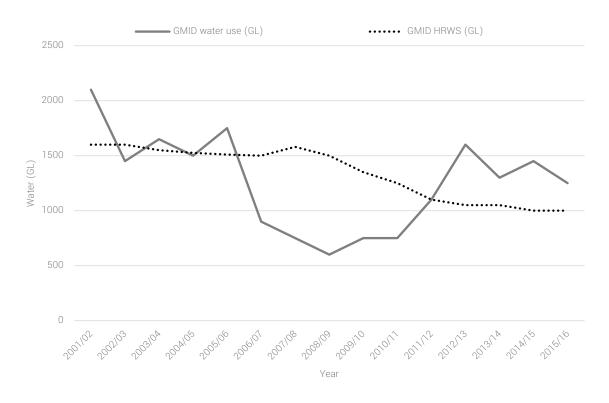
Source: Goulburn Broken Catchment Management, 2017.

3.5.3. WATER OWNERSHIP AND USE

The distribution of water use change across the GMID has been impacted by many complex and interconnected factors such as water availability, the price of allocation (temporary) trade water and seasonal conditions (e.g. Millennium drought) (Figure F31).

The percentage change of total water usage for 'pods' (a group of irrigation properties in a geographical area) showed most pods were declining, but some increasing between 2014/15 and 2015/16.

F31. GMID WATER USE VERSUS HIGH RELIABILITY WATER SHARE OWNERSHIP



Source: Goulburn Broken Catchment Management, Regional Irrigated Land and Water Use Mapping in the Goulburn Murray Irrigation District, Technical Report, 2017.

3.5.4. WATER QUALITY

DISSOLVED OXYGEN

Dissolved oxygen identifies the level and availability of oxygen molecules for water biota in a waterway and is an indicator of water quality. Table T10 identifies the percent attainment of SEPP Water of Victoria water quality objectives for dissolved oxygen in each CMA region in Victoria.

Overall, the level of dissolved oxygen in the North East and Goulburn Broken CMA regions has been rated as excellent, meeting 97% and 71% of SEPP Water of Victoria water quality objectives between 2010 and 2017.

T10. PERCENT ATTAINMENT OF SEPP (WOV) WATER QUALITY OBJECTIVES FOR DISSOLVED OXYGEN

CMA Region (average no. sites)	2010	2011	2012	2013	2014	2015	2016	2017
West Gippsland (27)	96	96	100	100	100	100	100	100
East Gippsland (17)	100	88	100	100	100	100	94	100
North East (24)	92	96	96	100	100	100	91	100
Glenelg Hopkins (16)	69	88	94	88	88	94	100	100
Corangamite (24)	67	75	88	83	83	83	79	75
Port Phillip & Western Port	62	85	84	80	81	77	72	68
Goulburn Broken (27)	45	81	80	84	86	68	63	59
Mallee (1)	50	0	100	100	100			
North Central (23)	38	55	77	87	75	71	64	71
Wimmera (5)	40	0	80	100	80	80	80	60

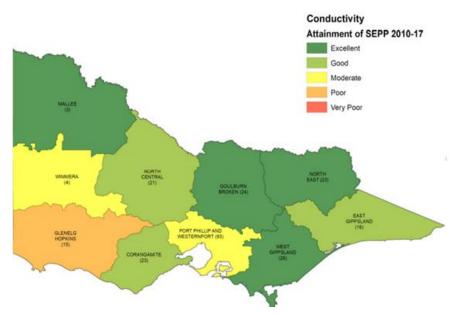
Source: State of the Environment: Scientific Assessments Report, Commissioner for Environmental Sustainability Victoria, 2018.

SALINITY

Salinity refers to the level of inorganic salts in soil or water and is an indicator of water quality. High levels of salinity can lead to a reduction in the diversity of fish, freshwater aguatic and riparian vegetation and macroinvertebrate.

Electrical conductivity is typically used as a measure for salinity. Overall, for electrical conductivity in North East and Goulburn Broken CMA regions have been rated as excellent, meeting 95% and 88% of SEPP Water of Victoria water quality objectives between 2010 and 2017.

F32. ATTAINMENT OF SEPP (WOV) WATER QUALITY OBJECTIVES FOR ELECTRICAL CONDUCTIVITY



Source: State of the Environment: Scientific Assessments Report, Commissioner for Environmental Sustainability Victoria, 2018.

TOTAL NITROGEN

Nitrogen is an important nutrient required for the production of aquatic ecosystems.

Overall, for total nitrogen, the North East CMA region has been rated as good meeting 64% of SEPP Water of Victoria water quality objectives between 2010 and 2017. Goulburn Broken CMA region has been rated as moderate, meeting 36% of SEPP Water of Victoria water quality objectives between 2010 and 2017.

T11. PERCENT ATTAINMENT OF SEPP (WOV) WATER-QUALITY OBJECTIVES FOR TOTAL NITROGEN

CMA Region (average no. sites)	2010	2011	2012	2013	2014	2015	2016	2017
East Gippsland (17)	82	59	59	88	59	76	69	94
North East (22)	55	55	59	68	64	82	50	77
West Gippsland (26)	44	26	30	37	41	52	41	41
Goulburn Broken (29)	14	28	38	41	44	50	27	45
Glenelg Hopkins (13)	15	8	23	15	15	38	23	23
North Central (22)	5	0	0	14	19	24	0	25
Port Phillip & Western Port (115)	4	5	5	8	9	9	2	4
Corangamite (23)	4	4	4	0	5	0	0	4

NOTE: No data was available for Wimmera or Mallee regions.

Source: State of the Environment: Scientific Assessments Report, Commissioner for Environmental Sustainability Victoria, 2018.

TURBIDITY

Turbidity is a key indicator of water quality and measures the number of suspended particulate matter within waterways. High levels of turbidity can be damaging to aquatic ecosystems due to decreased levels of photosynthesis and plant growth as well.

Causes of high levels of turbidity include the runoff of sediment from natural sources such as erosion and human activities such as mining and construction.

Overall, for dissolved oxygen, the North East CMA region has been rated as moderate meeting 41% of SEPP Water of Victoria water quality objectives between 2010 and 2017. Goulburn Broken CMA region has been rated as poor, meeting 17% of SEPP Water of Victoria water quality objectives between 2010 and 2017.

T12. PERCENT ATTAINMENT OF SEPP (WOV) WATER-QUALITY OBJECTIVES FOR TURBIDITY (AS AN INDICATOR OF WATER CLARITY)

CMA Region (average no. sites)	2010	2011	2012	2013	2014	2015	2016	2017
Glenelg Hopkins (15)	36	38	50	40	60	93	36	44
East Gippsland (17)	35	24	35	59	35	35	33	93
North East (23)	29	29	29	39	52	52	35	61
North Central (24)	8	23	42	25	35	30	16	46
Corangamite (23)	17	0	17	23	23	54	23	33
West Gippsland (26)	22	19	15	19	30	28	20	36
Goulburn Broken (28)	3	3	10	15	24	41	8	34
Port Phillip & Western Port (92)	18	6	5	14	31	24	6	19

NOTE: No data was available for Wimmera or Mallee regions.

Source: State of the Environment: Scientific Assessments Report, Commissioner for Environmental Sustainability Victoria, 2018.

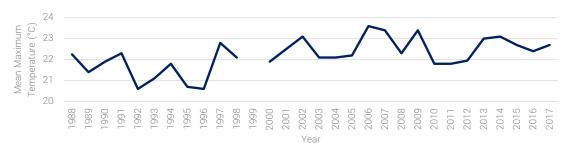
3.6. PAST CLIMATE INDICATORS

3.6.1. TEMPERATURE 1988-2018 - SELECTED LOCATIONS

The following three charts provide historic annual mean maximum temperature trends from 1988 to 2017 for Wangaratta, Falls Creek and Wallan.

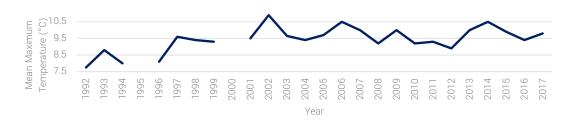
The data for all three locations clearly shows the mean maximum temperature has increased in the 2nd half of the period. This is consistent with forecasts for the North East Victoria region, and is expected to increase by 0.9 degrees Celsius by 2030.

F33. WANGARATTA ANNUAL; MEAN MAXIMUM TEMPERATURE 1988-2018



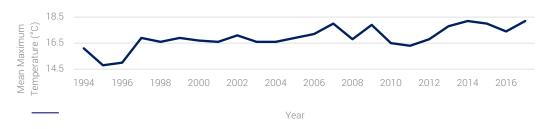
Source: Bureau of Meteorology, 2018.

F34. FALLS CREEK ANNUAL MEAN MAXIMUM TEMPERATURE 1998-2018



Source: Bureau of Meteorology, 2018.

F35. WALLAN ANNUAL MEAN MAXIMUM TEMPERATURE 1998-2018

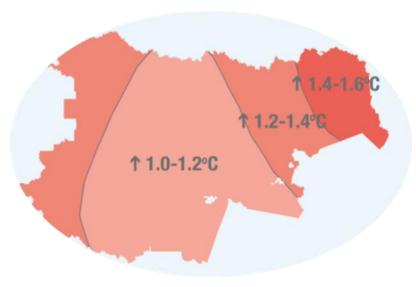


Source: Bureau of Meteorology, 2018

3.6.2. TEMPERATURE

Figure F36 shows recorded temperature change in the Hume Region since 1950. It shows that temperature change is more pronounced in the far east of the region around Towong Shire and less so in the Goulburn Valley area.

F36. TEMPERATURE CHANGE IN THE HUME REGION SINCE 1950

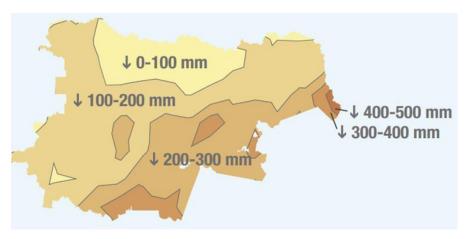


Source: Department of Environment, Land, Water and Planning, Climate Ready Hume, 2018.

3.6.3. RAINFALL

Rainfall has declined across the Hume Region since 1950. The reduction in rainfall is more pronounced in the Alpine Region, with a reduction of up to 400mm-500mm in areas to the far east of the region.

F37. RAINFALL CHANGE IN THE HUME REGION SINCE 1950



Source: Department of Environment, Land, Water and Planning, Climate Ready Hume, 2018.

These trends present a significant concern for the Alpine region, which is an important natural and economic asset for the Hume Region. The Alpine region is a unique drawcard for the region and is integral to the region's economy, therefore there will be a continued need to focus on the conservation and mitigation of climate change for the region.

3.6.4. SNOW DEPTH HISTORY

Most of Victoria's ski resorts are in the Hume Region, with the three largest being in North East Victoria: Mt Buller, Falls Creek and Mount Hotham.

The snow season is a key driver of visitation to the Hume Region and is a unique competitive strength for the region in the Australian context.

Snow charts have been provided by Falls Creek for the period between 2010-2018, to help understand the level of snow at Falls Creek and correspondingly the potential for snow-based tourism in the region.

Recent climate change reports have highlighted that the region is under threat from declining snow levels because of increased temperatures.

Within the period 2010-2018, snow levels have been variable, with some seasons barely having more than one metre of peak snow depth. In recent years, including 2017 and 2018, better snow depth has been observed.

There has been substantial investment in snowmaking facilities at all major resorts to counter predictions of decreased snow. This combined with good snow falls over the past eight years has seen strong growth in visitation to the snowfields overall. Focus on continued climate change mitigation across the entire Hume Region will be important to maintaining snow depth and cover in the Alpine region.

F38. SNOW DEPTH HISTORY - FALLS CREEK





Source: Falls Creek, 2018.

3.7. FUTURE CLIMATE PREDICTIONS

3.7.1. PREDICTED AVERAGE TEMPERATURE RISE

The Hume Region is forecast to become hotter over the next 50 years, with the average temperature across the region forecast to increase by between 0.9° and 0.96° by 2030 and 1.65° and 2.73° by 2070. The historic temperature records support some of this increase in temperature.

The increase in temperature will impact evaporation levels and also snowfall in the Alpine region, subsequently also impacting on availability of water.

T13. PREDICTED CHANGE TO AVERAGE TEMPERATURE

Level of Emissions	2030	2070
Low Emissions	0.9°	1.65°
High Emissions	0.96°	2.73°

Source: Climate Ready, State Government of Victoria 2018.

CLIMATE PROJECTIONS: LOW AND HIGH EMISSIONS

Predicted temperature rises will have impacts on evaporation, wind speed, relative humidity, solar radiation and soil moisture. Table T14 provides an overview of these impacts across low emissions and high emissions scenarios. All these factors are likely to continue to place higher demand on irrigated water supply.

T14. CLIMATE PROJECTIONS

	Low Emissi	ons Scenario	High Emissions Scenario		
	2030	2030 2070		2070	
Evaporation (%)	3.13	6.25	3.66	11.08	
Wind speed (%)	-0.52	-1.02	0.61	-0.10	
Relative humidity (% absolute)	-0.88	-1.08	-1.21	-2.33	
Solar radiation (%)	1.44	2.19	2.02	3.34	
Soil moisture (%)	-2.07	-3.59	-4.59	-7.40	

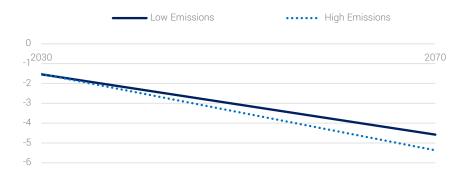
Source: Climate Ready, State Government of Victoria, 2018.

3.7.2. PREDICTED RAINFALL 2030-2070

The Hume Region is likely to become drier over the next 50 years, with the amount of rainfall in the region forecast to decrease by between 1.52% and 1.54% by 2030, and between 4.58% and 5.37% by 2070.

The reduction in rainfall projected for the Hume Region needs to be monitored closely with respect to impacts on agriculture, indicating reduced reliability of water resources and water infrastructure to supply irrigated agriculture and reduction of yields and diversity of crops that can be grown.

F39. PREDICTED CHANGE TO RAINFALL (%) 2030 TO 2070



Source: Climate Ready, State Government for Victoria 2018.

3.8. WASTE MANAGEMENT INDICATORS

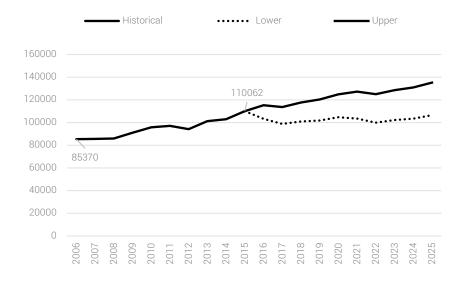
3.8.1. KERBSIDE WASTE

Kerbside waste collection has increased by 29% during the period from 2006 to 2015. This is greater than population growth for the Hume Region which is 13.4% for the same period.

This highlights growing levels of consumption and waste by the existing population and the need to deliver strategies to minimise waste and improve resource recovery.

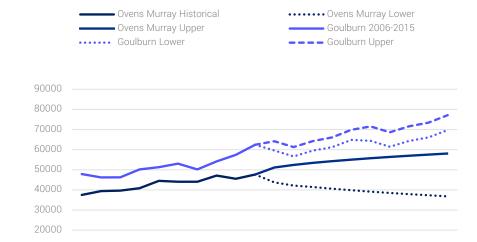
Modelling of future waste is provided for Ovens and Goulburn areas, in Figure F41. This modelling shows that in all but one scenario, kerbside waste collection will continue.

F40. HUME KERBSIDE WASTE COLLECTION (TONNES)



Source: Kerbside Waste Data, Sustainability Victoria, 2017.

F41. KERBSIDE WASTE COLLECTION (TONNES)



Source: Kerbside Waste Data, Sustainability Victoria, 2017.

3.9. ALTERNATIVE ENERGY

3.9.1. SUSTAINABILITY OPTIONS

Figure F42 on Page 48 provides an outline of energy sources available in Victoria. Solar, wind and hydro are the three areas that have opportunity to be developed further within the Hume Region.

WIND ENERGY GENERATION OPPORTUNITIES

The average wind speed across Victoria is 6.5 m/s. Due to Hume Region's inland location, it has below average yearly wind speeds for most of the region, averaging between 0-0.6m/s which is unfavourable for wind turbines.

There are however some locations which are suitable for wind turbines for energy production. This includes the Strathbogie Ranges in Strathbogie Shire and areas of the Alpine region in the Rural City of Wangaratta, Towong and Alpine Shires.

Very little investment has been recorded against wind energy since preparation of the 2010-2020 Hume Strategy.

SOLAR OPPORTUNITIES

Overall Victoria has good solar energy resources, particularly to the north-west. Annual solar exposure in Hume Region is approximately 18MJ/m2/day. Local Government Areas with the greatest solar energy potential are: Greater Shepparton, Wangaratta, Moira and Wodonga, which all range between 35 and 70 PJ/ year.

There are a number of proposals for major solar investment in the region that have planning approval and are likely to proceed to construction over the coming years.

HYDRO POWER OPPORTUNITIES

There are a number of locations that either have existing hydro power generation or are areas where this could be explored further. This includes the Rubicon area (Murrindindi Shire), Mt Beauty/Falls Creek (Alpine Shire), Dartmouth Reservoir (Towong Shire) and the Hume Weir (City of Wodonga).

3.9.2. SOLAR APPROVALS

There have been a number of solar approvals in the Hume Region over the past 10 years, and particularly in the last two years. Some large scale renewable energy projects that have received approval and planning permits are detailed below. There are also a significant number of large scale renewable energy proposals currently seeking permits in the Hume Region.

Winton Solar Farm

The Winton Solar Farm, 25km north east of Benalla, was recently announced as a successful Victorian Renewable Energy Auction Scheme (PDF, 371.0 KB) (VREAS) project.

The Winton Solar Farm is 250 ha and will have a capacity of 98.8 MW, producing enough energy to supply approximately 50,000 homes. This will avoid annual emissions of around 150,000 tons of CO2. Construction will commence in early 2019 and will be commercially operable by early 2020.

Numurkah Solar Farm

The construction of the 100MW (AC) Numurkah Solar Farm, 6 km south of Numurkah, is well underway. Approximately 255,000 megawatt hours (MWh) of clean, renewable electricity will be generated and the reduction in greenhouse gas emissions will be equivalent to taking either 75,000 cars off the road or planting 390,000 trees. The Nurmurkah Solar Farm will supply the Victorian Government with green energy to power Melbourne's trams.

Congupna Solar Farm

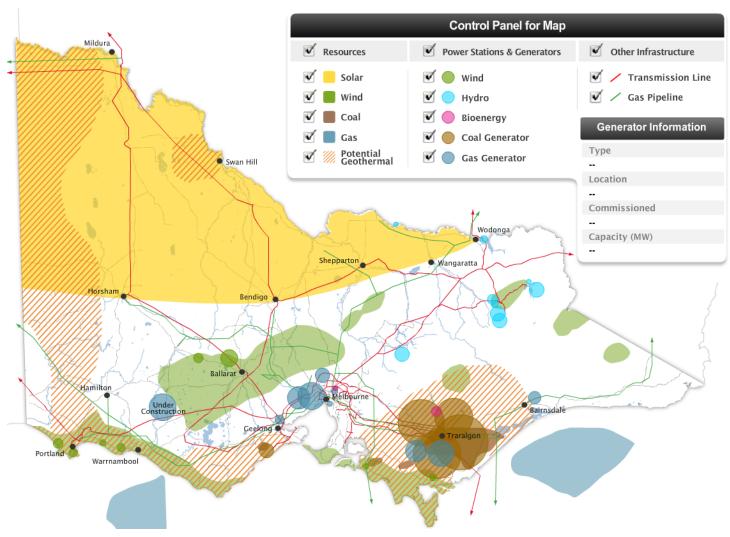
The Congupna Solar Farm proposal was recently approved, and will produce 68 MW of clean energy, create around 250 jobs and power approximately 22,600 homes. The project will be built on non-irrigated agricultural land and drive around \$38 million in capital expenditure.

Cherry Tree Hill Wind Farm

The proposed Cherry Tree Wind Farm, located approximately 15 km south east of the Seymour township is expected to commence construction in early 2019 and reach commercial operation by Q2 2020. It will have up to 16 wind turbines (58 MW installed capacity) and could power approximately 37,000 average Victorian households, avoiding the emission of 200,000 tonnes of CO2 annually.



F42. ENERGY SUPPLY OPPORTUNITIES IN VICTORIA



Source: Department of Environment, Land, Water and Planning

3.10. INVESTMENT AGAINST ENVIRONMENT THEME

Table T15 provides examples of projects delivered against environment theme by stakeholders. The appendix of the document provides a detailed list of projects delivered against each theme.

T15. INVESTMENT AGAINST ENVIRONMENT THEME

Key Directions	Priority Strategies	Discussion	Delivery Examples
Anticipating and adapting to the effects of climate change	Reducing the Hume Region's carbon footprint Being informed about climate change Local leadership supporting local initiatives Harnessing opportunities Integrated planning approaches	The Department of Environment, Land, Water and Planning (DELWP) has a climate change agency that leads research and policy for climate change in Victoria. An initiative 'Climate Ready' Victoria has included research and directions specifically for the Hume Region which identifies issues facing primary production, infrastructure, tourism, health and the community and the environment. This initiative was undertaken in 2015. Historic temperature charts show general increase in temperature in three selected locations: Wangaratta, Falls Creek and Wallan. This is in line with the predicted increase of temperature by 0.9 degrees by 2030. There are a number of research papers and policy documents at the State and Local Government level which have been prepared over the past 10 years in response to climate change. Adapting to the effects of climate change is likely to be a continued focus for the Hume Region, given the importance of the agriculture and tourism industries which are intrinsically linked to water availability and climate.	 Climate Smart Agricultural Development (CSAD) Project Watts Working Better Project 2014 - 786 street lights in Benalla changed to energy efficient alternatives Mt Buller Snowmaking Infrastructure
2. Managing our water resources sustainably	A water view for the region Water management through innovation Water guiding planning outcomes Valuing ecosystem services of rivers, streams and wetlands	Water management is a major consideration for the region. This includes water for irrigation purposes, the environment and for residential use. One of the most significant changes that have occurred since 2010 was implementation of the Murray Darling Basin Plan. The Minister adopted the Basin Plan on 22 November 2012 and on 29 November 2012 it received bipartisan support in Parliament. This plan included major investment in irrigation infrastructure to reduce water loss and allow for greater levels of environmental water	Indigo Shire Lake Sambell Dam repair - Victorian Government grant for \$2 million, Council \$1.1 million Towong Shire conducted the Narrows Project Feasibility Assessment to provide more consistent water levels for Hume Dam at Tallangatta over peak tourist season (December to February), to provide recreation and tourism benefits to the town

Key Directions	Priority Strategies	Discussion	Delivery Examples
		flow. The other key area of the plan which has had a large impact on farming in the region is water trading. The Murray Darling Basin Plan was put into place primarily as a response to the millennium drought which also coincidently proceeded the preparation of the 2010-2020 Hume Strategy. Water flows of the Goulburn River, which is the major source of irrigation in the region have shown higher flow levels in the years 2010-2017, compared to the previous decade. The Murray Darling Basin Plan will result in healthy rivers, habitat and biodiversity, through delivery of greater levels of environmental flows. Rainfall loss is predicted to occur across the region in line with warming of the Hume Region. For this reason, management of water resources will need to be a continued focus for the Hume Region over the next 10 years and beyond.	
3. Protecting native habitat and biodiversity	Management of regional biodiversity Land use planning and biodiversity Protection and management of native habitat Education, incentives and community	There are many programs in the Hume Region that are delivered by Parks Victoria, Local Government and the community to deal with protection of native habitat and biodiversity. These include: Weed management programs by DELWP Land for wildlife program; and Local and regional parkland planting and habitat protection. It is difficult to determine the effectiveness of these programs for the whole of Hume Region, as many of these have localised impacts.	 Winton Wetlands - \$20 million investment into the establishment of a new wetlands Murrindindi Shire active partnership with the Upper Goulburn Landcare Network to implement a range of biodiversity improvement programs e.g. Ribbons of Remnant Roadside Program, Healthy Hectares Program, Biodiversity Offsets Program, Queensland Fruit Fly Monitoring Program, etc. Through RiverConnect, engage over 5000 people each year in environmental education In Greater Shepparton 150,000 indigenous plants planted in constructed wetlands and in native open space from 2011 to 2018
4. Harnessing renewable energy sources, reducing greenhouse gas emissions and pursuing innovative waste management approaches	Regional energy planning	Since the preparation of the 2010-2020 Hume Strategy there has been incremental growth in investment in renewable energy sources. Political instability on renewable energy targets and associated policy at the Federal Level have made investment difficult. However, advice by local Governments is that there are a number of major solar energy projects that have received planning approval and one very close to commencing construction in the region.	 Waste Management and Services Strategy 2018 – 2027: providing community education around waste management Shepparton City Council - Implementation of Green Organics (FOGO) roadside collection

3.11. CASE STUDIES

CASE STUDY: MT BULLER SNOWMAKING INVESTMENTS



In 2017 Mt Buller Ski Lifts purchased a SF220 Snowfactory from the European snowmaking company TechnoAlpin. At \$1.6 million, it is a significant investment and after installation and testing, Mount Buller unveiled the product on March 23, 2019.

This snow making investment allows

snow to be manufactured at temperatures well above freezing point and is one of many steps made by Mt Buller to ensure snow at the resort in the longer term. In addition, the resort has also attracted a \$7.5 million State Government Grant for a new 100 megalitre dam to assist with future snow making and firefighting capabilities.

CASE STUDY: WINTON WETLANDS



Winton Wetlands presents the largest environmental project that has occurred in the Hume Region since the development of the 2010-2020 Hume Strategy.

Since the decommissioning of Lake Moakon in 2010, over \$20 million has been invested in the establishment of the Winton Wetlands. This has allowed rebuilding of the ecological integrity of the wetlands, as well as the protection and reintroduction of threatened species on the site.

CASE STUDY: GV COMMUNITY ENERGY: LOW INCOME ENERGY EFFICIENCY PROGRAM



The Low Income Energy Efficiency Program (LIEEP) project was funded through the Australian Government. GV Community Energy engaged 2,750 households to assist in reducing their energy use. The project was delivered across the municipalities of Greater Shepparton, Benalla, Wangaratta, Moira, Campaspe, Strathbogie, Mitchell and Murrindindi.

A range of engagement methods were used, including 1000 Home Energy Assessments, facilitation of 60 Workshops (with over 1000 participants), and undertaking of surveys with 750 households who had previously been engaged in a Home Energy Assessment or other Renewable Energy project. GVCE delivered 1032 HEAs and 1024 retrofits. The HEA was successful in reducing electricity use for trial participants by an average 0.61 kWh per day, or 6% of their usage, generating a saving of \$62.55 annually

3.12. PROGRESS REPORT – ENVIRONMENT THEME

The following progress report takes into consideration trend data, investments undertaken and stakeholder feedback with regard to delivery. This is shown below.



Anticipating and adapting to the effects of climate change, managing our water resources sustainably and protecting native habitat and biodiversity all progressed reasonably well as individual directions.

Harnessing renewable energy sources, reducing greenhouse gas emissions is one area that stakeholders identified as not meeting expectations. There are however many investors that now have planning permits in place for delivery of large scale solar farms

T16. PROGRESS REPORT - ENVIRONMENT THEME

ENVIRONMENT THEME Key Direction Level of Completion/Application by Stakeholders No Progress Anticipating and adapting to the effects of climate change Managing our water resources sustainably Protecting native habitat and biodiversity Harnessing renewable energy sources, reducing greenhouse gas emissions and pursuing innovative waste management approaches Total Environment Theme

Areas where progress has been held back include:

- Recovering from bushfire and drought that affected the region;
- Prolonged effects of climate change and reduced rainfall trends and projections;
- Federal Government policy in relation climate change targets and support for renewables; and
- Lack of funding available for wastewater treatment in secondary townships and villages that are within designated catchment areas.

4. ECONOMY

4.1. INTRODUCTION

This section provides information relating to the economy theme in the 2010-2020 Hume Strategy. This includes an analysis of relevant historic economic profile data and analysis of key activities undertaken in the region aligning to the economy theme.

4.2. THE 2010-2020 HUME STRATEGY

The 2010-2020 Hume Strategy outlines the goal for the region's economy to:

- Be dynamic and thrive into the future through ensuring that competitive advantages, opportunities and strengths are capitalised on in the region;
- Support the competitive potential of commercial and industrial development through new and enhanced infrastructure;
- Support new business development through access to key transport corridors, the development of a skilled workforce is supported; and
- Have access to 'next generation' telecommunications technology that is accessible across settlements in the region.

To achieve this goal the key directions are:

- 1. Strengthening a capable workforce;
- 2. Adapting and diversifying agriculture in an environment of change;
- **3.** Facilitating research and innovation in tourism, manufacturing and industry to encourage new and evolving business; and
- **4.** Developing ICT and energy infrastructure that builds on existing competitive advantages.

This goal has been identified to ensure the competitive advantages of the Hume Region are supported into the future, including agriculture and location, and that opportunities are capitalised on including through collaboration between industry and government and the improvement of major transport corridors linking the region to capital cities such as Melbourne, Sydney and Brisbane.

4.3. KEY FINDINGS

The Hume Region's economy has experienced exceptional growth since the preparation of the 2010 Strategy. Gross Regional Product has increased from \$11.7 Billion in 2008 to \$16.7 Billion in 2017.

Economic growth has occurred across many industry sectors, with the following key sectors responsible for the greatest level of jobs growth:

- Construction (+3,829 jobs);
- Health Care and Social Assistance (+2,564 jobs);
- Accommodation and Food Services (+1,712 jobs);
- Agriculture, Forestry and Fishing (+1,620 jobs); and
- Education and Training (+1,572 jobs).

This is in line with Infrastructure Victoria's 'Growing Victoria's Potential' and 'Inter-regional Assessment' reports, which highlight current and projected employment growth in health care, education and training, and accommodation and food services sectors.

Residential growth has influenced some of the economic growth identified above, particularly its impact of construction, health care, social assistance and food services.

Of importance for the region is the growth of two sectors which are 'export' orientated: agriculture, forestry and fishing, and the visitor economy.

The manufacturing sector, whilst having experienced limited jobs growth, continues to be the key export sector for the region. Investment in robotics and

technology over the past 10 years has helped secure the future of many of the food processors in the medium term, however these industries remain at threat from global economics.

Key economic indicators include:

- 42% growth in GRP between 2008 and 2017;
- Reduction of unemployment rate from 6.5% in 2014 to 4.9% in 2017;
- 20% growth in the number of medium sized businesses that have \$5 million to \$10 million turnover;
- \$9.9 Billion in exports in 2017;
- GRP per capita has grown from \$42,755 per person in 2008 to \$57,734 per person in 2017; and
- 46% increase in visitors to the Hume Region between 2008 and 2017.



4.4. ECONOMY OVERVIEW

4.4.1. GROSS REGIONAL PRODUCT

Hume Region's economy has been growing steadily over the past 10 years to have a total GRP of \$16.7 billion in 2017. This represents around 44% growth over that period.

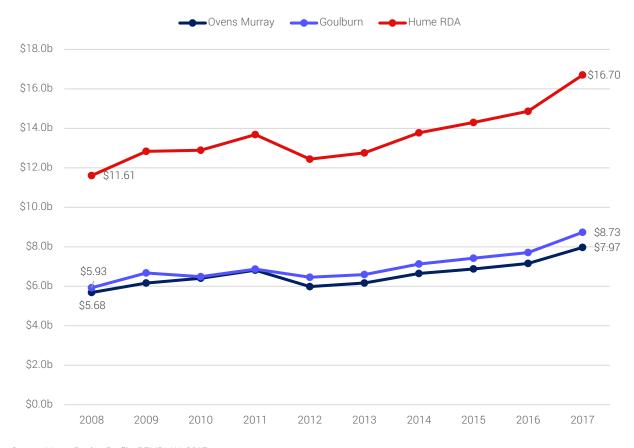
GRP per capita has grown from \$42,755 per person to \$57,734 per person.

Whilst both the Ovens Murray and Goulburn economies have similar levels of GRP the Goulburn economy is slightly greater than Ovens Murray, growing from \$5.93 billion to \$8.73 billion over the 10 years between 2008 and 2017. The Ovens Murray GRP, in comparison, has grown from \$5.68 billion in 2008 to \$7.97 billion in 2017.

BENCHMARKING WITH REGIONAL VICTORIA

Regional Victoria has experienced a 52% increase in Gross Regional Product over the period 2008 to 2017, slightly higher than the Hume Region.

F43. GROSS REGIONAL PRODUCT (\$ BILLION), BY REGION



Source: Hume Region Profile, REMPLAN, 2017.

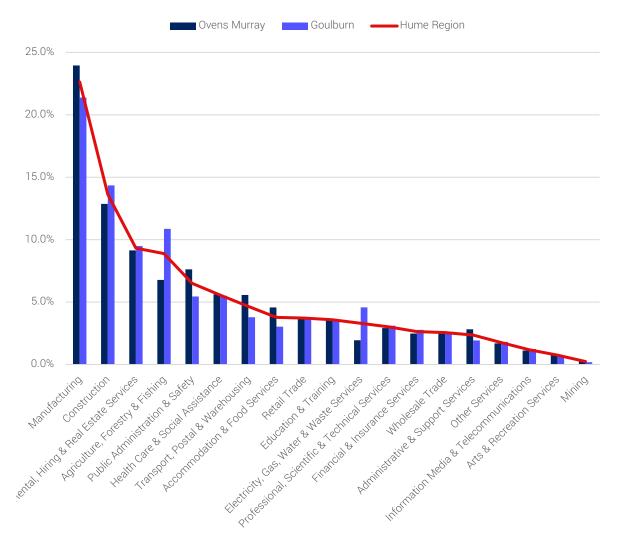
4.4.2. OUTPUT BY INDUSTRY SECTOR

The industry sectors contributing the most to the total output of the Hume Region's economy are manufacturing (23%), construction (14%), rental, hiring and real estate services (9.3%) and agriculture, forestry and fishing (8.9%).

Industry sectors contributing a greater amount to the total economic output of Ovens Murray than Goulburn are manufacturing (24%), public administration and safety (6.5%), transport, postal and warehousing (5.6%) and accommodation and food services (3.8%).

Industry sectors contributing a greater amount to the total economic output of Goulburn as compared to Ovens Murray are construction (14%), agriculture, forestry and fishing (6.8%) and electricity, gas, water and waste services (4.6%).

F44. OUTPUT BY INDUSTRY SECTOR, BY REGION (2017)



Source: Hume Region Profile, REMPLAN, 2017.

4.4.3. EXPORTS

Table T17 provides an outline of exports for industry. Manufacturing contributes 43% to exports for the Hume Region, followed by 15% for agriculture, forestry and fishing (15%). The Hume Region is well positioned for export growth with a strong agriculture and food processing sector.

T17. EXPORTS BY INDUSTRY DIVISION 2017

Industry	Hume Region	
	\$M	%
Manufacturing	\$4,350.677	43.92%
Agriculture, Forestry & Fishing	\$1,491.238	15.05%
Public Administration & Safety	\$914.980	9.24%
Construction	\$735.399	7.42%
Electricity, Gas, Water & Waste Services	\$496.083	5.01%
Accommodation & Food Services	\$414.698	4.19%
Transport, Postal & Warehousing	\$396.825	4.01%
Education & Training	\$251.849	2.54%
Administrative & Support Services	\$112.970	1.14%
Financial & Insurance Services	\$106.916	1.08%
Wholesale Trade	\$102.852	1.04%
Rental, Hiring & Real Estate Services	\$102.617	1.04%
Other Services	\$90.388	0.91%
Professional, Scientific & Technical Services	\$84.175	0.85%
Health Care & Social Assistance	\$82.287	0.83%
Information Media & Telecommunications	\$62.900	0.63%
Retail Trade	\$54.991	0.56%
Mining	\$36.459	0.37%
Arts & Recreation Services	\$18.638	0.19%
Total	\$9,906.942	100.00%

Source: Remplan, 2018.

4.4.4. IMPORTS

Table T18 shows that the key sectors responsible for imports are Manufacturing, Construction and Agriculture, Forestry and Fishing. Imports and exports also drive demand for the transport and logistics industry which is a key sector in the Hume Region.

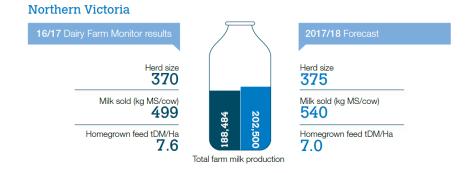
T18. IMPORTS BY INDUSTRY DIVISION 2017

Industry	Hume Region	
	\$M	%
Manufacturing	\$3,333.870	42.86%
Construction	\$704.002	9.05%
Agriculture, Forestry & Fishing	\$675.393	8.68%
Rental, Hiring & Real Estate Services	\$388.376	4.99%
Transport, Postal & Warehousing	\$340.405	4.38%
Accommodation & Food Services	\$339.371	4.36%
Public Administration & Safety	\$278.683	3.58%
Professional, Scientific & Technical Services	\$223.373	2.87%
Health Care & Social Assistance	\$218.834	2.81%
Retail Trade	\$176.017	2.26%
Wholesale Trade	\$168.681	2.17%
Electricity, Gas, Water & Waste Services	\$166.610	2.14%
Financial & Insurance Services	\$142.919	1.84%
Administrative & Support Services	\$142.125	1.83%
Other Services	\$140.063	1.80%
Information Media & Telecommunications	\$135.156	1.74%
Education & Training	\$116.831	1.50%
Arts & Recreation Services	\$63.245	0.81%
Mining	\$25.402	0.33%
Total	\$7,779.356	100.00%

Source: Remplan,2018.

4.4.5. DAIRY - NORTHERN VICTORIA

SUMMARY OF DAIRY FARMS 2016/17-2017-18 - NORTHERN VICTORIA



Source: 2017 Situation and Outlook Dairy Industry

TRENDS IN DAIRY FARM PERFORMANCE

Table T19 shows trends in Dairy Farm performance for Northern Victoria which includes the Goulburn Valley and Alpine Valleys areas within the Hume Region. The data shows exceptionally weak business performance as a result of the milk price crisis over the years 2015/16 and 2016/17. Performance in 2017/18 shows improvement for dairy farms.

T19. TRENDS IN DAIRY FARM PERFORMANCE

	2015/16	2016/17	2017/18
Gross farm income	6.0	5.9	6.4
Net farm income	-0.5	-0.3	1.0
Return on total assets	-0.5	-0.7	5.4

Source: Situation and Outlook Dairy Industry, 2017.

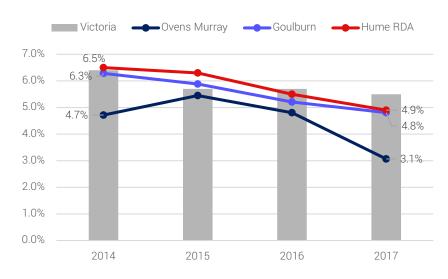
4.5. EMPLOYMENT

4.5.1. UNEMPLOYMENT

Hume Region had an unemployment rate of 4.9% in 2017, 0.6% lower than the 5.5% unemployment rate for Victoria and 0.4% lower than the Regional Victorian unemployment rate of 5.3%.

Of the two sub regions, unemployment is lowest in Ovens Murray, which has an unemployment rate of 3.1%. In Goulburn, the unemployment rate is 4.8%, significantly higher (+1.7%) than Ovens Murray.

F45. UNEMPLOYMENT RATE BY REGION 2014 TO 2017

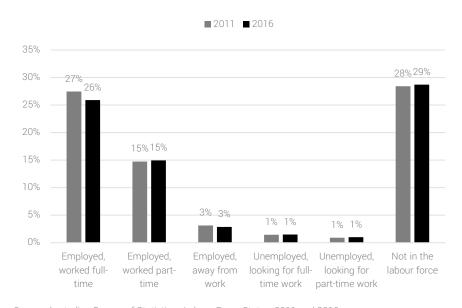


Source: Australian Bureau of Statistics, 2014-2017.

4.5.2. LABOUR FORCE STATUS

There has been a 2% reduction in the number of people employed full-time in the Hume Region between 2011 and 2016, and an increase of 1% of people not in the labour force. There have not been any other significant changes in the labour force status of the region.

F46. LABOUR FORCE STATUS, HUME REGION 2011 TO 2016



Source: Australian Bureau of Statistics , Labour Force Status, 2011 and 2016.

4.5.3. HUME REGION INDUSTRY OF EMPLOYMENT

There have been a total of 16,218 new jobs created in the Hume Region, in the five years between 2011 and 2016.

The largest employing sectors in the Hume Region are healthcare and social assistance (16,232 jobs), retail trade (11,830 jobs), manufacturing (11,339 jobs), and agriculture, forestry and fishing (10,564 jobs).

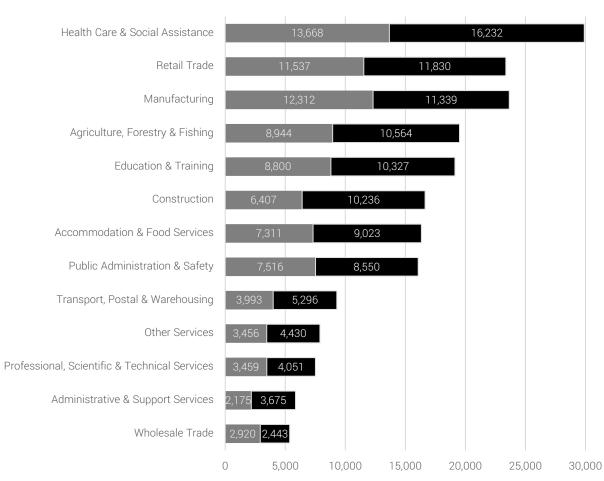
All sectors exhibited strong growth in employment except for manufacturing (-8%) and wholesale trade (-16%).

Manufacturing in the region has undergone substantial change with many larger processing businesses having invested in robotics to reduce labour requirements, resulting in a reduction of jobs. It however remains an important industry for the region.

In terms of overall gain in jobs the highest gains were made in construction (+3,829), health care and social assistance (+2,564 jobs), accommodation and food services (+1,712), and agriculture, forestry and fishing (+1,620).

F47. NUMBER OF JOBS BY INDUSTRY SECTOR IN HUME





Source: Hume Region Profile, REMPLAN, 2017.

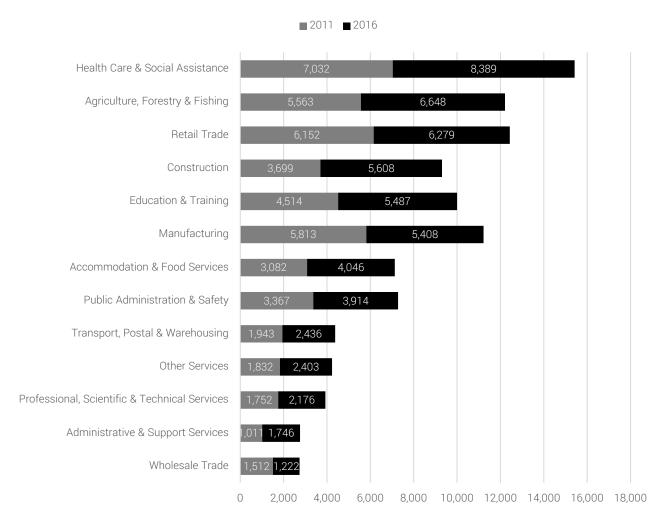
4.5.4. GOULBURN SUB REGION INDUSTRY OF EMPLOYMENT

The largest employing sectors in 2016 in the Goulburn sub region are health care and social assistance (8389 jobs), agriculture, forestry and fishing (6648 jobs), construction (5,608 jobs), education and training (5,487 jobs), and manufacturing (5,408 jobs).

Manufacturing and wholesale jobs were the only two industries that declined over the 2011-2016 period.

The industry sectors that attracted the largest jobs growth were: construction (+1909), health care and social assistance (+1357 jobs), agriculture (+1,085 jobs), and accommodation and food services (+964).

F48. NUMBER OF JOBS BY INDUSTRY SECTOR IN GOULBURN



Source: Hume Region Profile, REMPLAN, 2017.

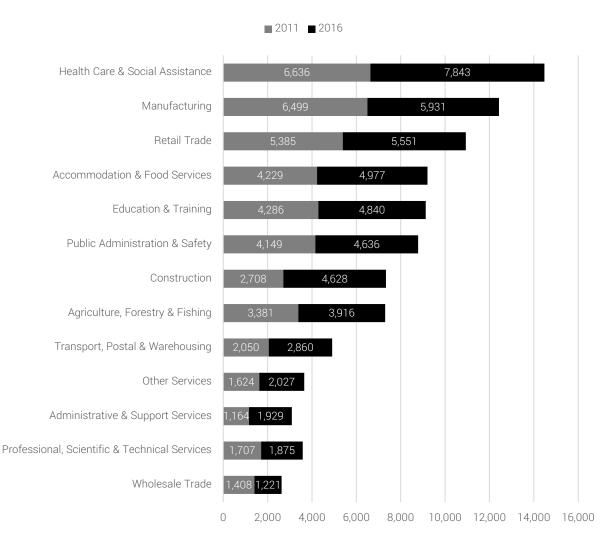
4.5.5. OVENS MURRAY SUB REGION INDUSTRY OF EMPLOYMENT

The largest employing sectors in 2016 in the Ovens Murray sub region are health care and social assistance (7,843 jobs), manufacturing (5,931 jobs), retail trade (5551 jobs), accommodation and food services (4,977 jobs), education and training (4840 jobs), public administration and safety (4,636 jobs) and construction (4,628 jobs).

Manufacturing and wholesale jobs were the only two industries that declined over the 2011-2016 period.

The industry sectors that attracted the largest jobs growth were: construction (+1920), and health care and social assistance (+1207 jobs).

F49. NUMBER OF JOBS BY INDUSTRY SECTOR IN OVENS MURRAY



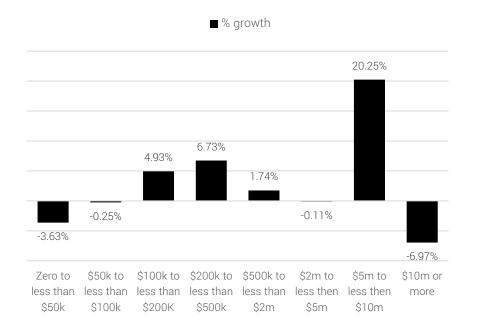
Source: Hume Region Profile, REMPLAN, 2017.

4.5.6. BUSINESS TURNOVER

The proportion of businesses with low turnover (less than \$50,000) and high turnover (\$10 million or more) have shown the largest decrease between 2015-17, of 3.6% and 7% respectively.

Businesses with a turnover of between \$50k to \$100k, and between \$2m and \$5m, have all experienced slight decline in business turnover, whilst the proportion of all other categories increased, as shown in Figure F50.

F50. BUSINESS TURNOVER GROWTH IN HUME, 2015 TO 2017



Source: Count of Australian Businesses, ABS, 2015-2017.



4.6. VISITOR ECONOMY

4.6.1. VISITATION TRENDS

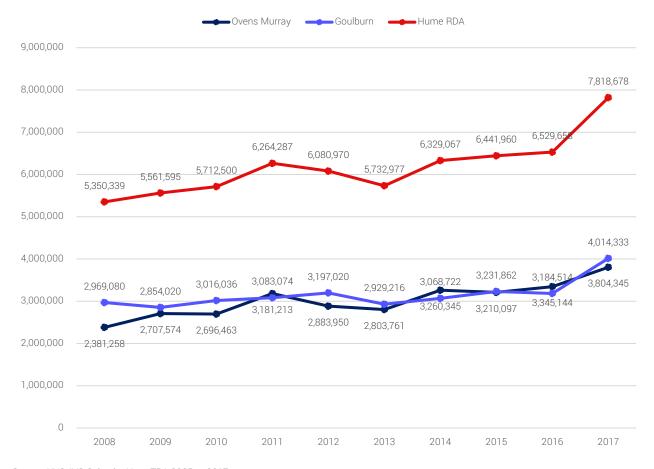
The Hume Region attracted 7.8 million visitors in 2017. This is an increase of 46% over the 2008 – 2017 period.

Both Ovens Murray and Goulburn grew in visitation over this period, with Ovens Murray growing by 60% and Goulburn by 35% to 2017.

BENCHMARKING WITH REGIONAL VICTORIA

Visitation growth in Regional Victoria over the 2008-2017 period was 41%. The growth in the Hume Region at 46% has outstripped the trends for Regional Victoria. A large part of this growth is attributed to the Ovens Murray which has performed exceptionally well over the 2008-2017 period.

F51. TOTAL VISITATION, BY REGION 2007 TO 2017



Source: NVS, IVS Calendar Year, TRA 2005 to 2017.

4.6.2. PROJECTED VISITATION

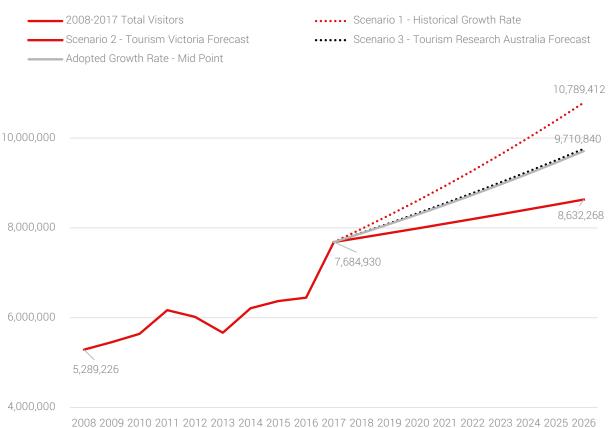
The following provides an understanding of future visitation growth scenarios, and demand for tourism product in the Hume Region.

Figure F52 shows the forecast growth scenarios for the Hume Region. This is based on historic growth rate and adopted Tourism Research Australia and Tourism Victoria forecasts.

All scenario's show that the Hume Region will attract some level of visitation growth over the next 8 years.

Using the midpoint scenario, visitation is projected to increase from 7.6 million in 2017 to 9.7 million in 2026.

F52. PROJECTED VISITATION



2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 Source: Urban Enterprise, 2018.

4.6.3. VISITOR EXPENDITURE

DAYTRIP VISITOR EXPENDITURE

The annual expenditure of daytrip visitors to Hume Region has grown at an average rate of 5.33% annually since 2002, growing from approximately \$200.4 million in 2002 to \$436.5 million in 2017. Visitor expenditure of daytrip visitors to Ovens Murray has grown at a greater rate than visitors to Goulburn. In Ovens Murray, daytrip visitor expenditure has grown at an average rate of 7.6% per year, from \$66.2 million in 2002 to \$197.8 million in 2017.

While daytrip visitation to Goulburn has grown at a lower rate than Ovens Murray (3.9%), the annual expenditure remains greatest in the region, with visitor expenditure \$238.7 million in 2017 as shown in Table T20.

T20. DAYTRIP VISITOR EXPENDITURE, 2002 TO 2017

Daytrips (\$000s)	2002	2007	2012	2017	% Growth	AAG
Ovens Murray	\$66,247	\$124,088	\$180,969	\$197,786	199%	7.56%
Goulburn	\$134,118	\$197,486	\$229,522	\$238,682	78%	3.92%
Hume Region	\$200,365	\$321,574	\$410,491	\$436,469	118%	5.33%

Source: NVS, Calendar Year, TRA 2001, 2007, 2012 and 2017.

On average daytrip visitors to Hume Region are spending less per visit, with the average spend per visitor decreasing by approximately \$3 since 2007. This is due to a significant decrease in the average spend per visitor in Goulburn which has decreased from \$99.2 in 2007 to \$90.7 in 2017.

In Ovens Murray, the average spend per daytrip visitor has increased by approximately \$3.5 since 2007 to \$107.2 in 2017.

T21. SPEND PER DAYTRIP VISITOR, 2007 TO 2017

Daytrips	2007	2012	2017
Ovens Murray	\$103.65	\$115.38	\$107.21
Goulburn	\$99.19	\$104.23	\$90.73
Hume Region	\$100.87	\$108.87	\$97.52

Source: NVS, Calendar Year, TRA 2001, 2007, 2012 and 2017.

OVERNIGHT VISITOR EXPENDITURE

The annual expenditure of overnight visitors to Hume Region has grown at an average rate of 3.55% annually since 2002, growing from approximately \$1.2 billion in 2002 to \$2.014 billion in 2017.

Visitor expenditure of overnight visitors to Ovens Murray has grown at a greater rate than visitors to Goulburn. In Ovens Murray overnight visitor expenditure has grown at an average rate of 3.68% per year, from \$802 million in 2002 to \$1.38 billion in 2017. In Goulburn, visitor expenditure has grown at a rate of 3.26% per year from \$391.8 million to \$533.9 million in 2017.

T22. OVERNIGHT VISITOR EXPENDITURE, 2002 TO 2017

Overnight (\$000s)	2002	2007	2012	2017	Growth %	AAG
Ovens Murray	\$802,479	\$702,330	\$1,009,229	\$1,380,321	72%	3.68%
Goulburn	\$391,755	\$384,803	\$397,239	\$633,891	62%	3.26%
Hume Region	\$1,194,234	\$1,087,133	\$1,406,468	\$2,014,212	69%	3.55%

Source: NVS, Calendar Year, TRA 2001, 2007, 2012 and 2017.

On average, overnight visitors to Hume Region are spending more, with the average spend per visitor growing by approximately \$92 since 2007. This is due to an increase in spending in both Goulburn and Ovens Murray. The average spend per visitor in Goulburn has increased by approximately \$76 since 2007, growing from \$390.5 in 2007 to \$466.4 in 2017. In Ovens Murray, the average spend per daytrip visitor has increased by approximately \$78 since 2007 from \$638.7 to \$717.5 in 2017.

T23. SPEND PER OVERNIGHT VISITOR, 2007 TO 2017

Overnight	2007	2012	2017
Ovens Murray	\$638.67	\$781.99	\$717.53
Goulburn	\$390.48	\$407.47	\$466.39
Hume Region	\$521.37	\$620.83	\$613.55

Source: NVS, Calendar Year, TRA 2001, 2007, 2012 and 2017.

INTERNATIONAL VISITOR EXPENDITURE

International visitor expenditure is also growing, with total expenditure growing at an average annual rate of 1.55% in Hume Region. This growth is despite a decrease in visitor expenditure in Goulburn of 12% since 2007. By contrast, international visitor expenditure is growing in Ovens Murray at an average rate of 3.55% (refer Table T24).

T24. INTERNATIONAL VISITOR EXPENDITURE 2007 TO 2017

International (\$000s)	2007	2012	2017	Growth %	AAGR
Ovens Murray	\$127,648	\$80,937	\$180,900	42%	3.55%
Goulburn	\$110,468	\$86,592	\$96,932	-12%	-1.30%
Hume Region	\$238,116	\$167,529	\$277,832	17%	1.55%

Source: IVS, Calendar Year, TRA 2007, 2012 and 2017.

On average international visitors to Hume Region are spending less, with the average spend per visitor decreasing by approximately \$240 since 2007. This is due to a significant decrease in the average spend per visitor in Goulburn which has decreased by \$806 since 2007. However, in Ovens Murray, the average spend per daytrip visitor has increased by approximately \$131 since 2007, with the average spend per visitor \$5,051 in 2017.

T25. SPEND PER INTERNATIONAL VISITOR, 2007 TO 2017

International	2007	2012	2017
Ovens Murray	\$4,920	\$3,250	\$5,051
Goulburn	\$4,769	\$4,334	\$3,963
Hume Region	\$4,849	\$3,732	\$4,609

Source: IVS, Calendar Year, TRA 2007, 2012 and 2017.

4.7. INVESTMENT AGAINST ECONOMY THEME

Table T26 provides examples of projects delivered against economy theme by stakeholders. The appendix of the document provides a detailed list of projects delivered against each theme.

T26. INVESTMENT AGAINST ECONOMY THEME

Key Directions	Priority Strategies	Discussion	Delivery Examples
Strengthening a capable workforce	Matching skills to employment needs Improving, expanding and retaining a skilled workforce Fostering links between schools, employers and post compulsory education providers Stimulating business and jobs growth	There has been extensive investment in education and up-skilling in the region since the preparation of the 2010-2020 Hume Strategy including establishment of new programs and investment in education facilities. Growth in education attainment demonstrates the establishment of a more capable workforce.	 Hume Region Workforce Development Plan, 2015 \$23M investment by State and Local Government - The Munarra Centre for Regional Excellence; new educational, sporting, cultural and community centre for local Aboriginal people Tallangatta Integrated Community Centre - \$2.2M Stage Gov investment and \$400,000 Towong Shire investment
Adapting and diversifying agriculture in an environment of change	Supporting the next generation of agricultural opportunities Ensuring the future viability and adaptability of productive rural land	The agriculture sector has seen large transition in the Hume Region since the preparation of the 2010-2020 Hume Strategy. The Murray Darling Basin Plan introduced water trading and growth in global demand has encouraged changes in agriculture practice particularly in the Goulburn Valley. Some of the outcomes of adaption and diversification include: Establishment of intensive agriculture and investment in hot houses; Establishment of feedlots and more intensive dairy farming; and Growth in fresh produce production.	 MRT Food Experience Masterclass Invitation - Supporting the next generation of agricultural opportunities Euroa Saleyards Upgrade Project - increased livestock capacity and modernisation of facilities; \$500,000 State Government investment and \$25,000 Strathbogie Shire Katunga Fresh was established in 2003 in Katunga (Goulburn Valley) and currently produces 7.3 million kilograms of tomatoes per annum

Key Directions	Priority Strategies	Discussion	Delivery Examples
Facilitating research and innovation in tourism, manufacturing and industry to encourage new and evolving business	Strengthening a tourism industry that builds on the competitive advantages of the Hume Region Facilitating leadership in innovation, research and development Identifying development capacity that will contribute to stimulating industry expansion	The tourism sector has grown significantly since the 2010-2020 Hume Strategy was prepared with total growth in visitation at 46% from 2008 to 2017. The tourism sector has attracted significant investment by the private sector in accommodation, food, wine and beer such as the Wodonga Quest, Mitchelton Winery and Christmont Winery Cellar Door. These investments have accommodated growth in visitation and increased expenditure in the region. The manufacturing sector over the last 10 years has attracted major investment in new technology to increase efficiency and reduce the reliance on labour in an increasingly competitive global market. Businesses including Univlever and SPC have spent over \$100 million in plant upgrades and robotics.	 North East Cycle Tourism Masterplan 2017 Goulburn River Valley Destination Management Plan 2013,2018 North East Tourism Destination Management Plan 2015 \$37M Stage 1 investment, Shepparton Sports and Event Centre Developed Murrindindi Tourism and Business Innovation Grants Program Investment in Mitchelton Winery Indigo Shire Digital Excellence Partnership 2018 - build online presence of regional tourism offerings and free for all businesses Towong: Council was granted \$2.65m to undertake the Destination Tallangatta project Indigo Tourism Game Changer Project 2018-2022
Developing ICT and energy infrastructure that builds on existing competitive advantages	Securing world class ICT infrastructure and services for the Hume Region	A number of large solar plants have planning permits in place and are progressing to construction phase. The investment climate for solar now appears to be right for these investments to occur. Over the next 10 years there is likely to be an increase in investment in solar and other renewable energy in the region.	Murrindindi: Launched Dindi Solar Bulk Buy Initiative - opportunity for residents to explore solar options for home energy needs

4.8. CASE STUDIES

WODONGA CBD REVITALISATION

There has been significant State Government investment into the revitalisation of the Wodonga CBD.

This includes:

- \$10 million investment by Federal Government;
- \$3 million for Junction Place Urban Renewal Initiative; and
- \$1.68 million for Wodonga Central Business Area (CBA) Enabling Road Infrastructure Project.



CASE STUDY: HUME REGION WORKFORCE DEVELOPMENT PLAN 2010

The Hume Region Workforce Development Plan was prepared in 2015 and provides a blueprint for developing skills across the following industries:

- Health, Aged Care and Community Services;
- Manufacturing;
- Agriculture; and
- Transport, Warehousing and Logistics.

CASE STUDY: KATUNGA FRESH GREENHOUSE INVESTMENT

Katunga Fresh was established in 2003 in Katunga (Goulburn Valley) and currently produces 7.3 million kilograms of tomatoes per annum. The production of tomatoes at Katunga Fresh is within greenhouses that ensure optimal water use and demonstrates state of the art production practices. Katunga Fresh has recently attracted grant funding from the Regional Jobs Fund which will support greater levels of production and lead to 40 new jobs.

MITCHELTON WINERY INVESTMENT



Mitchelton Winery, owned by the Ryan Family have recently invested substantially in a new \$16 million luxury hotel at the Winery. This is one of the largest single tourism investments in the Hume Region and one of the very few high end holiday/leisure accommodation investments in regional Victoria.

4.9. PROGRESS REPORT – ECONOMY THEME

The following progress report takes into consideration trend data, investments undertaken and stakeholder feedback with regard to delivery.



Strengthening a capable workforce, adapting and diversifying agriculture in an environment of change and facilitating research and innovation in tourism, manufacturing and industry to encourage new and evolving business all scored well as individual directions.

Developing ICT and energy infrastructure that builds on existing competitive advantages is one area that stakeholders identified as not meeting expectations. This is largely the result of NBN issues with regard to reliability and service and the level of investment in renewable energy over the past eight years.

T27. PROGRESS REPORT - ECONOMY

ECONOMY THEME Key Direction Level of Completion/Application by Stakeholders No Progress Strengthening a capable workforce Adapting and diversifying agriculture in an environment of change Facilitating research and innovation in tourism, manufacturing and industry to encourage new and evolving business Developing ICT and energy infrastructure that builds on existing competitive advantages Total Economy Theme

Areas where progress has been held back include:

- Slow take up of agricultural enterprises in modern farming practice;
- Impact of water trading on agricultural production; and
- Slow rollout of NBN and telecommunication blackspots still exist in the region.

5. TRANSPORT

5.1. INTRODUCTION

This section provides information relating to the transport theme in the 2010-2020 Hume Strategy.

This section includes an analysis of relevant historic economic profile data and analysis of key activities undertaken in the region that align to the transport theme.

5.2. THE 2010-2020 HUME STRATEGY

The goal for Transport outlined in the 2010-2020 Hume Strategy is for the region to have a high functioning, integrated network of transportation systems. This includes the development of integrated transport infrastructure and ensuring communities across the Hume Region have access to transport that is efficient, safe and affordable.

The key directions to achieve this goal are:

- 1. Enhancing integrated planning for mobility;
- Developing a proficient land transportation network;
- 3. Linking communities through improved public transport linkages; and
- **4.** Strengthening the sustainability of the transport system.

The goal for Transport in the Hume Region was developed in response to current opportunities and the projected usage of the network in the future. Into the future, greater freight, public and private transport will be required to meet future demand due to a growing population and increased freight movements in the region.

5.3. KEY FINDINGS

Transport across the Hume Region has seen various levels of investment, including major highway improvements and rail passenger services investment. It is a key priority for many of the Local Governments, particularly public transport investment whether it be rail or improved bus connections.

All levels of Government have invested in transportation plans; however funding remains one of the key areas that has led to sub-optimal delivery.

Whilst the State Government has invested significant funds in passenger rail in the Hume Region, it remains a class below the services being offered to Geelong, Ballarat, Bendigo and Latrobe Valley.

Freight continues to grow in the Hume Region and there is growing interest by Local Governments in providing freight rail solutions such as the Inland Rail Route, Logic, GV Link project for Shepparton and the Beveridge Freight and Logistics Precinct.

Key transport indictors include:

- Traffic volume in Hume Region is increasing by 1.65% annually, however, growth in traffic volume is occurring at a greater rate on the Hume Freeway (2.09%), Maroondah Highway (1.8%) and Murray Valley Highway (2.45%);
- 47% growth in train journey to work; and
- Total rail patronage increasing from 280,734 in 2011-12 to 309,935 in 2016-17.

5.4. ROAD NETWORK

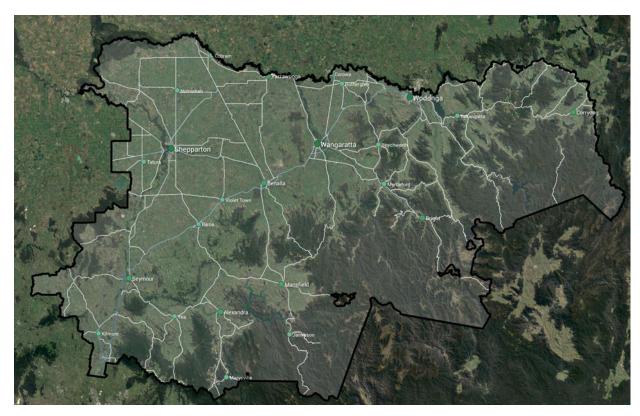
5.4.1. MAJOR ROAD INFRASTRUCTURE

Figure F53 shows the major road networks in the Hume Region.

Two corridors of national significance are the Hume Freeway and Goulburn Valley Highway.

Other key road networks in the region include the Maroondah Highway, Midland Highway and Murray Valley Highway.

F53. HUME MAJOR ROAD NETWORK



Source: Urban Enterprise, 2018.

5.5. TRAFFIC VOLUME TRENDS

The daily traffic volume of major roads in Hume Region is shown in Table T28. In total there is 3.34 million vehicles on the roads in the Hume Region daily, including approximately 1.37 million on the Hume Freeway.

On average, 18% of vehicles utilising roads in Hume Region are trucks (583,454 trucks). This percentage is higher on major roads including Goulburn Valley Highway (23%) and Hume Freeway (25%).

On average, traffic volume in Hume is increasing by 1.65% annually, however growth in traffic volume is occurring at a greater rate on the Hume Freeway (2.09%), Maroondah Highway (1.8%) and Murray Valley Highway (2.45%).

T28. HUME TRAFFIC VOLUMES BY ROAD, 2017

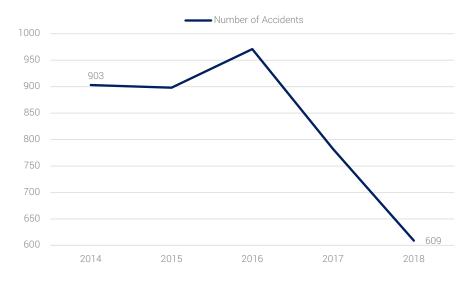
ROAD	Daily Median (Weds-Thurs)	Daily Traffic Volume	Daily Truck Volume	% of Trucks	Two way daily Volume	Annual Growth Rate
Goulburn Valley Freeway	56,900	60,200	13,782	23%	120,400	0.94%
Goulburn Valley Highway	113,054	119,864	18,912	16%	239,800	0.19%
Great Alpine Road	48,192	51,437	4,695	9%	102,900	1.48%
Hume Freeway (including Hume Hwy)	1,372,399	1,441,149	356,560	25%	2,832,860	2.09%
Maroondah	2,688	27,218	3,763	14%	54,600	1.80%
Midland	69,989	74,689	9,338	13%	150,200	1.29%
Murray Valley Highway	117,573	124,120	18,656	15%	248,420	2.45%
All roads Total	3,339,488	3,519,095	583,454	17%	6,979,550	
Average of all Roads	2,816	2,967	492	18%	5,885	1.65%

Source: Traffic Volumes for Freeways and Arterial Roads, VicRoads, 2018.

5.6. ROAD SAFETY

The number of road accidents in the Hume Region has decreased significantly between 2014-18, with a reduction by almost 30%.

F54. NUMBER OF ROAD ACCIDENTS IN HUME REGION



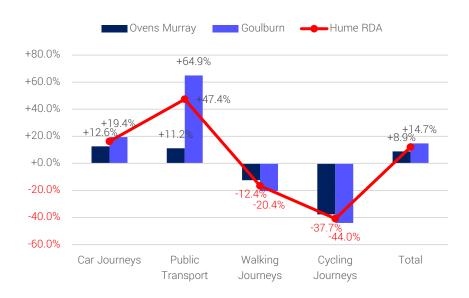
Source: VicRoads, Road Crashes last 5 years, 2018.

The number of alcohol related road accidents has also decreased significantly from 37 in 2014 to 23 in 2018.

5.7. JOURNEY TO WORK

The method of travel to work is changing in the Hume Region, with the number of workers using public transport growing by 47.4% and those using car to travel to work growing by 16.2% since 2006. By comparison, the number of workers either walking or cycling has decreased over the same period, at a rate of 16.6% and 40.8% respectively.

F55. TRANSPORT METHODS GROWTH RATES 2006 TO 2016, BY REGION



Source: Census, ABS, 2006, 2011 and 2016.

5.8. PUBLIC TRANSPORT

5.8.1. RAILWAY NETWORK

There are two major train routes within the Hume Region; the North East line and Shepparton line.

In addition there is a number of V/Line bus services across the region that link key centres, including linking to train services.

F56. LOCATION OF TRAIN STATIONS IN HUME



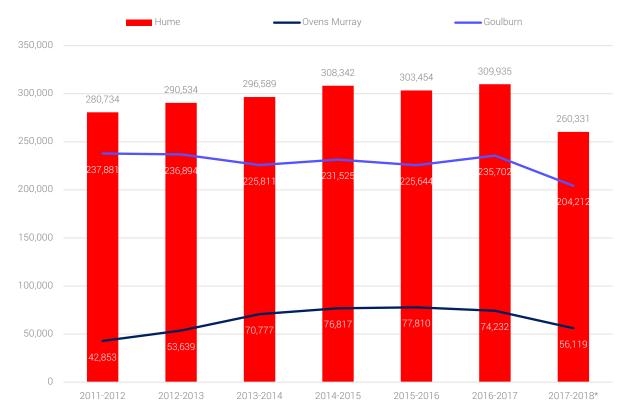
Source: Google Earth, 2018.

5.8.2. PATRONAGE

Patronage on public train services is increasing, with total patronage increasing from 280,734 in 2011-12 to 309,935 in 2016-17. A large proportion of total patronage is due to services in Goulburn, which accounted for over 80% of patronage in the Hume Region in 2016-17.

In Ovens Murray, the number of patrons also increased between 2011-12 and 2016-17, growing from 42,843 to 74,232.

F57. HUME REGION PATRONAGE, 2011 TO 2018*



Source. NOTE: 2017-2018 does not include May and June and therefore the total rail patronage is likely significantly higher, Department of Transport, Train Station Patronage, 2019.

5.9. INVESTMENT AGAINST TRANSPORT THEME

Table T29 provides examples of projects delivered against transport themes by stakeholders. The appendix of the document provides a detailed list of projects delivered against each theme.

T29. INVESTMENT AGAINST TRANSPORT THEME

Key Directions	Priority Strategies	Discussion	Delivery Examples
Enhancing integrated planning for mobility	Plan and advocate for a high- quality regional transport system Building an integrated transport system	There has been a significant of planning strategies for transport at both the regional and local level in the Hume Region. There remains further investment required to achieve a seamless integrated transport system.	 Wodonga Integrated Transport Strategy 2015 – developed to guide future transport network investment in Wodonga Euroa Station Concept Plan 2018 Shepparton: \$20M investment, Stage 1 GV Link, funded by Federal, State and Local Government
Developing a proficient land transportation network	Accelerating the completion of high quality standard road links Delivering important rail infrastructure Future-proofing existing transport routes by maintaining a high level of service	Ongoing investment has occurred in road improvements and establishment of new freeway links such as the Nagambie Bypass. One issue that remains in the region is the need for road and bridge upgrades to support High Performance Vehicles which are much larger and heavier than many secondary roads were designed for. Rail improvement and services have occurred however further investment is needed to bring the Hume Region in line with other Victorian regions with regard to passenger services.	 Indigo Shire Rutherglen Revitalisation Project 2015 – Upgrading road and pedestrian networks with funding: \$900,000 Federal Government, \$40,000 Rutherglen Estates and Tuileries Rutherglen, \$445,000 DELWP, \$49,000 Rutherglen Recreation Reserve Committee of Management, \$390,000 Indigo Shire Council Strathbogie Shire: \$75,000 State Government + \$138,000 Strathbogie Shire investment in pedestrian underpass project to improve pedestrian safety Shepparton: \$250M Stage 1 GV Highway Shepparton Bypass
Linking communities through improved public transport linkages	Enhance key transport linkages between settlements Provide safety upgrades of the region's land transportation system	Linkage between settlements remains an issue for the region. In particular linkages between smaller settlements with larger settlements.	 Shepparton: \$356M Passenger Rail Investment funded by State Government Fast Rail: Federal Government business case investment into Melbourne to Greater Shepparton Corridor
Strengthening the sustainability of the transport system	Develop travel options to increase public transport patronage	Sustainability of the transport system has a strong relationship with the level of demand and use. Use of the system is likely to increase if the level of service is improved.	 The Wangaratta Project CBD Masterplan 2016 - Improving sustainable transport methods by upgrading city-wide cycling infrastructure Murrindindi Shire: Developed Cycle Murrindindi map to encourage cycle tourism

5.10. CASE STUDIES

REGIONAL RAIL REVIVAL

Stage one of the \$356 million Shepparton Line Upgrade, which is now complete, included:

- Stabling upgrade at Shepparton Station; and
- 29 extra coach services between Shepparton and Seymour to connect with train services.

Stage two includes:

- Platform extensions at Mooroopna, Murchison East and Nagambie stations;
- Crossing loop extension near Murchison East;
- Upgrades to 59 level crossings between Donnybrook and Shepparton; and
- New stabling to house vlocity trains.

Stage three includes:

- Signalling and track upgrades to enable trains to travel at up to 130km/h
- Funding for a business case to finalise the scope and costs for delivering nine return services a day between Shepparton and Melbourne.



The Australian Rail Track Corporation (ARTC) will be delivering the \$235 million North East Line Upgrade, which includes:

- Track resurfacing;
- New ballast;
- New underground wires;
- Drainage improvements;
- Bridge upgrades;
- Mud-hole removal;
- Backup and solar power supplies; and
- Smoother track surface.

In addition, the Victorian Government will deliver new modern trains for the line.

NAGAMBIE BYPASS

The Nagambie Bypass Project was a \$188 million project to upgrade the Goulburn Valley Highway by extending the four-lane freeway route for 17kms to the east of Nagambie. The bypass opened to traffic in 2013.

STAGE 1 GV HIGHWAY SHEPPARTON BYPASS

\$208 million has been committed to deliver Stage 1 of the Goulburn Valley Highway bypass of Shepparton.

If construction funding is provided, a Shepparton bypass and river crossing will:

- Cater for long term growth of the area;
- Improve safety and accessibility for both local and through traffic;
- Provide relief for congested intersections in the city centre;
- Improve the urban centres of Shepparton and Mooroopna; and
- Create a more effective route for goods and produce travelling to market.

ACTIVE TRANSPORT: TRACKS AND TRAILS

There has been significant investment in walking and cycling tracks and trails in the Hume Region over the lifespan of the Hume report. Much of this has been driven by the Ride/Walk High Country marketing for cycling and walking as a key way of experiencing the region. This has been important for the development of cycle and hiking tourism in the region, but also increasingly important for sustainable transport methods throughout the region.

Key examples of significant state investment in cycling and walking infrastructure include:

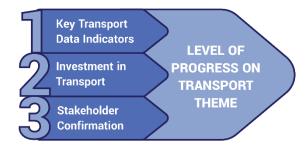
- \$3.94 million for Winton Wetlands and Surrounds Indigenous Trail;
- \$1.35 million for High Country Rail Trail Sandy Creek Bridge;
- \$1.15 million for Ride High Country 4-Year NEVCO Marketing Program; and
- \$1m for Strategic Trails in the Alpine Shire.

Investment into cycling and walking infrastructure will continue to play an important part in the sustainability of transport within the region, and will continue to promote health and wellbeing of residents.



5.11. PROGRESS REPORT - TRANSPORT THEME

The following progress report takes into consideration trend data, investments undertaken and stakeholder feedback with regard to delivery.



On average, the transport theme has progressed quite poorly. There has been adequate transport planning undertaken at the Local Government level, however the delivery of public transport infrastructure has not met community and stakeholder expectations, or improved liveability for residents.

T30. PROGRESS REPORT - TRANSPORT THEME

TRANSPORT THEME Key Direction Level of Completion/Application by Stakeholders No Progress Enhancing integrated planning for mobility Developing a proficient land transportation network Linking communities through improved public transport and transport linkages Strengthening the sustainability of the transport system Total Transport Theme

Areas where progress has been held back include:

- Lack of passenger regional rail services when benchmarked with other areas in Victoria;
- Limited intra-regional bus transport;
- Lack of public transport from small/ isolated townships to larger centres; and
- Low levels of active transport use.

6. LAND USE

6.1. INTRODUCTION

This section provides information relating to the land use and development theme in the 2010-2020 Hume Strategy.

This includes an analysis of relevant historic economic profile data and analysis of key activities undertaken in the region that align to the land use theme.

6.2. THE 2010-2020 HUME STRATEGY

The goal for land use for the region outlined in the 2010-2020 Hume Strategy is to ensure that land use and development in urban and rural areas is efficient and sustainable. This includes regions being serviced by regional cities and centres, which will be supported by smaller towns and provide the services needed by the community. The region will also have productive rural land and a healthy natural environment as well as strong economic, social, environmental and transport connections between regional cities and centres inside the region as well as regional cities/centres outside the region and Melbourne.

The key directions to achieve this goal are:

- 1. Directing future population growth to settlements with the greatest capability to accommodate it:
- 2. Maximising the use of existing infrastructure and services and facilitating strategic investment in future infrastructure and services;
- Retaining productive rural land for agriculture and other comparable rural uses; and
- **4**. Ensuring efficient use of land use planning resources in the region.

This goal has been identified in response to current and expected future land use. A key aspect of land use in the region is the network of settlements. This model of development will continue through investment in infrastructure linking settlements including transport linkages. The plan also outlines regional cities and centres should be supporting population growth and employment opportunities with support from smaller settlements.

6.3. KEY FINDINGS

Following preparation of the 2010-2020 Hume Strategy, the overarching document that has provided clarity and direction in relation to land use planning is the Hume Region Growth Plan. The plan has been the key guiding document for land use in the region and provides land use directions for settlement and rural land use.

An extensive amount of land use planning has been undertaken in the Hume Region including CBD structure plans, housing strategies and rural land use plans.

These documents have led the way for investment in major growth area developments and CBD revitalisation plans such as Wodonga's CBD redevelopment.

Key indicators for land use include:

- 66% growth in value of residential building approvals 2001-2017;
- Over 4,000 residential building approvals per annum in 2016, more than 800 greater than 2010;
- 29% growth in median residential dwelling value between 2007 and 2016, lower than the regional Victorian growth rate of 39%; and
- 100% growth in the value of non-residential building approvals between 2002 and 2016.

6.4. DWELLING TRENDS

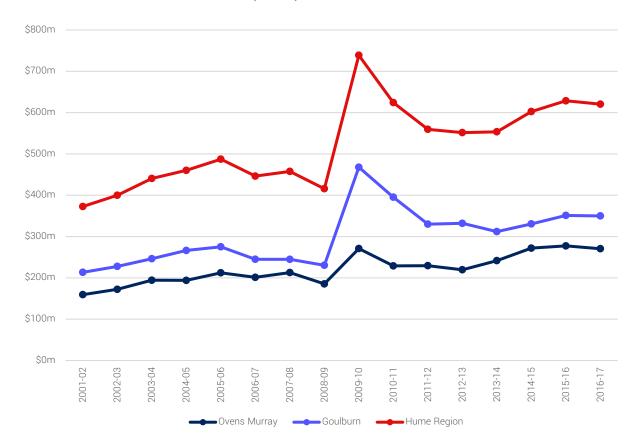
6.4.1. RESIDENTIAL BUILDING APPROVALS

The value of residential building in the Hume Region is growing, increasing from \$372.7 million in 2001-02 to \$620.5 million in 2016-17. This trend is reflected in both Goulburn and Ovens Murray, with the value of residential building approvals increasing from \$213.4 million in 2001-02 to \$350 million in 2016-17 in Goulburn and \$159.3 million in 2001-02 in Ovens Murray to \$270.5 million in 2016-17.

The value of residential building is greatest in Goulburn when compared to Ovens Murray, with Goulburn value approximately \$80 million more than Ovens Murray in 2016-17 as shown in Figure F58.

The growth in value of residential building approvals is largely driven by new greenfield residential estates in Wallan, Shepparton and Wodonga. There has also been greenfield residential development in secondary settlements such as Kilmore, Nagambie and Wangaratta.

F58. RESIDENTIAL BUILDING APPROVALS (VALUE) 2001 TO 2017



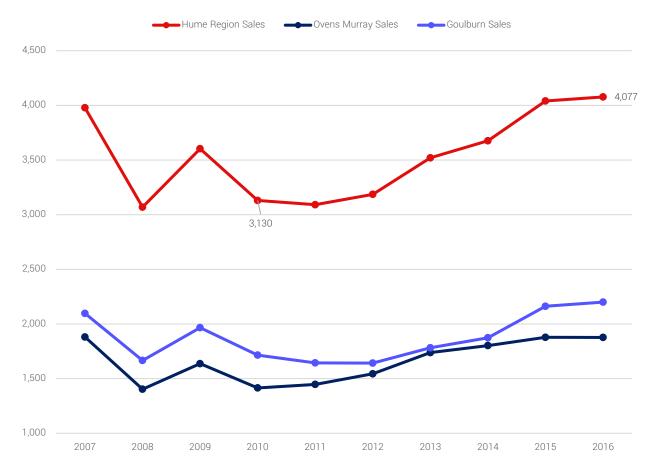
Source: Building Approvals, ABS 2001 to 2017

6.4.2. PROPERTY SALES

Property sales across Goulburn and Ovens Murray follow a similar trend and highlight macroeconomic influences on property purchases.

Overall the peak years saw 4,000 property sales occur in 2007 and again in 2015 and 2016.

F59. PROPERTY SALES BY REGION 2007 TO 2016



Source: REI

6.4.3. PROPERTY VALUES

Property values in the Hume Region are increasing, as evident by the growth in median property values in the region over the past 10 years.

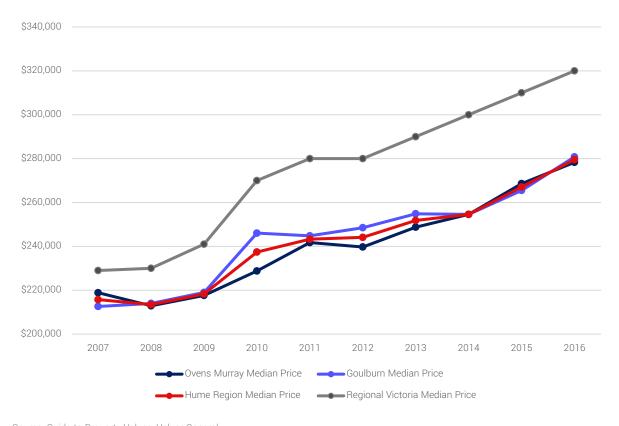
The value of property in Goulburn and Ovens Murray is almost identical, however the regions have different property markets. Goulburn is influenced more heavily by Melbourne prices to the south, whereas Ovens Murray has higher amenity property in areas such as Mansfield and Alpine Shire which inflates its property prices.

BENCHMARKING WITH REGIONAL VICTORIA

In 2016 the median price was \$320,000 in Regional Victoria compared to \$279,552 in Hume Region.

Overall the region presents excellent value for new residents migrating from capital cities.

F60. PROPERTY VALUES, BY REGION 2007 TO 2016



Source: Guide to Property Values, Valuer General

6.4.4. NON-RESIDENTIAL BUILDING APPROVALS

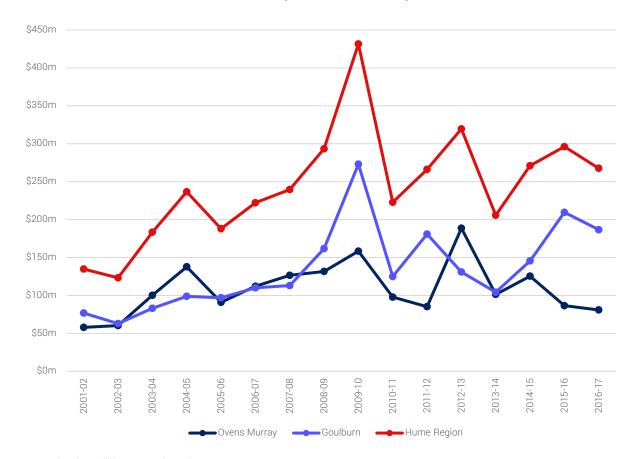
The value of non-residential building is increasing in the Hume Region as shown in Figure F61. Between 2001 and 2017, the value of building has increased from \$134.8 million to \$267.7 million in 2017 in the region, an increase of over \$132 million or 99%. This trend of growth is reflected in both Goulburn and Ovens Murray, in which the value of non-residential building has grown at a rate of 143% and 40% respectively.

The value of non-residential building is greatest in Goulburn when compared to Ovens Murray, with the region accounting for approximately 70% (\$186.7 million) of Hume Region's value as shown in Figure T31F61.

One of the reasons for the large value of non-residential building approvals in Goulburn relates to major investment by food manufacturers, with some investing over \$100 million in new technology.

Spikes in Ovens Murray building approvals may be influenced by the substantial investment in Wodonga's CBD.

F61. NON-RESIDENTIAL BUILDING APPROVALS (VALUE 2001 TO 2017)



Source: Victorian Building Approvals Register

6.5. AGRICULTURE

6.5.1. AGRICULTURAL LAND USE

Approximately 36% of land in Hume Region is used for agricultural purposes, with a total agricultural holding area of 1.47 million hectares, including 825,404 hectares in Goulburn and 640,625 in Ovens Murray (refer Table T31). Of Goulburn and Ovens Murray, a greater percentage of land is used for agriculture in Goulburn (50%) than in Ovens Murray (27%).

Of all agricultural land in the Hume Region, 346,168 hectares is used for crops, 787,406 hectares for cattle and 12,866 hectares for horticulture.

T31. AGRICULTURAL LAND USE IN HUME

	Ovens Murray Region	Goulburn Region	Hume
Area of holdings (ha)	640,625	825,404	1,466,029
Broadacre crops (ha)	41,088	163,649	204737
Total crops (ha)	82,604	263,564	346168
Cattle	421,608	365,797	787406
Horticulture (ha)	1,701	11,165	12866
Total area (ha)	2,416,200	1,655,100	4071300
% of area	27%	50%	36%

Source: Agriculture Victoria, 2018.

T32. AGRICULTURE: NUMBER OF FARMS AND % OF REGION

	Hume Region		Victoria	
Industry classification	Number of farms	% of region	Number of farms	Contribution of region to state total %
Beef Cattle Farming (Specialised)	1,443	50.4	5,642	25.6
Sheep Farming (Specialised)	372	13.0	2,795	13.3
Sheep-Beef Cattle Farming	209	7.3	1,283	16.3
Dairy Cattle Farming	193	6.8	3,928	4.9
Horse Farming	183	6.4	604	30.4
Grain-Sheep or Grain- Beef Cattle Farming	111	3.9	1,920	5.8
Other Grain Growing	106	3.7	2,320	4.6
Grape Growing	76	2.6	846	8.9
Other	168	5.9	2,522	6.7
Total agriculture	2,862	100	21,860	13.1

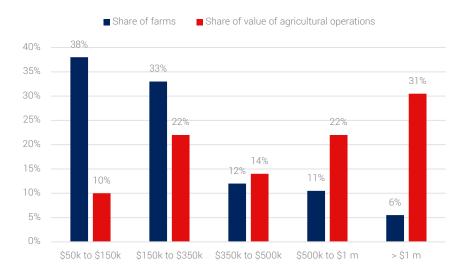
Note: Estimated value of agricultural operations \$40,000 or more. Industries that constitute less than 1 per cent of the region's industry are not shown.

Source: Agriculture Victoria, 2018.

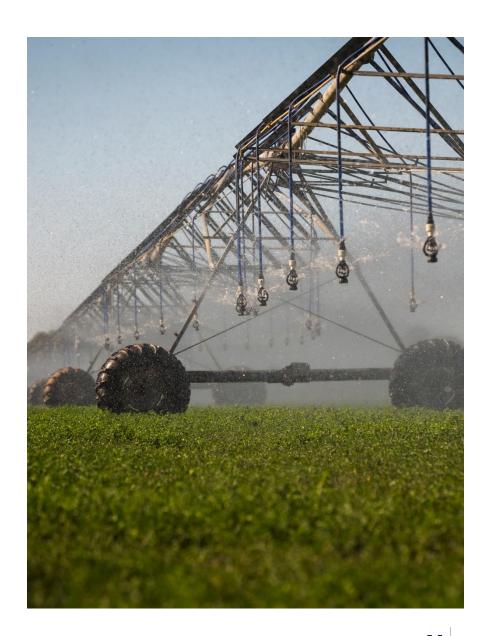
Figure F62 shows the proportion of farms compared to the value of their agricultural operations.

38% of farms are small scale, with agricultural operations valued between \$50,000 to \$150,000. Only 6% of farms performed at over \$1 million dollars each. These farms, however, contribute 31% of the value of agricultural operations in the Hume Region.

F62. FARM FINANCIAL PERFORMANCE



Source: Department of Agriculture and Water Resources, Farm financial performance - Victoria, 2018.



6.6. REGIONAL LAND CONSUMPTION

Table T33 provides an outline of land use cover in the Hume Region for each of the Local Government Areas. Key findings include:

- Almost half of the region's land area is consumed by rainfed pasture (47%);
- 18% of the Hume Region's land area is consumed by rainfed cropping;

- 7% of land is irrigated cropping and horticulture, whilst 2% is irrigated pasture;
- Urban areas make up only 1% of the land area;
- Moira Shire has the greatest land area 651 square kilometres, followed by Greater Shepparton – 356 square kilometres.

T33. LAND USE COVER OF HUME REGION 2017

	Region within Hume													
2017	Alpine	Benalla	Greater Shepparton	Indigo	Mansfield	Mitchell	Moira	Murrindindi	Strathbogie	Towong	Wangaratta	Wodonga	Total (km2)	Total (%)
Land Cover														
Extraction Sites	0	0	0	0	0	0	0	0	0	0	0	0	1	0%
Inland Waterbodies	1		0	3	18	0	2	2	1	17	0	4	48	2%
Salt Lakes	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
Irrigated Cropping	0	5	79	2	0	1	96	3	2	1	4	1	193	7%
Irrigated Pasture	0	0	26	0	0	0	31	1	0	1	2	0	62	2%
Irrigated Sugar	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
Rainfed Cropping	0	41	88	12	1	3	298	0	40	0	11	0	495	18%
Rainfed Pasture	27	119	125	103	67	114	148	87	196	99	148	30	1,263	47%
Rainfed Sugar	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
Wetlands	0	0	1	1	0	0	2	0	2	0	2	0	10	0%
Tussock Grasses Closed	1	3	5	1	1	5	11	1	14	1	2	0	47	2%
Alpine Grasses Open	4	0	0	0	0	0	0	0	0	0	0	0	5	0%
Hummock Grasses Open	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
Tussock Grasses Open	1	0	0	0	0	0	0	0	0	0	0	0	2	0%
Shrubs and Grasses Sparse-Scattered	0	0	0	0	4	0	0	1	0	3	0	0	9	0%
Shrubs Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
Shrubs Open	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
Trees Closed	26	6	1	5	12	2	1	22	2	30	11	0	118	4%
Trees Open	45	11	8	20	30	27	27	33	12	68	31	1	312	12%
Trees Scattered	0	0	0	0	0	0	0	0	0	0	0	0	1	0%
Trees Sparse	5	7	11	5	5	10	29	2	15	5	8	1	104	4%
Urban Areas	1	2	10	1	1	4	4	1	1	1	4	6	36	1%
Total	112	194	356	153	139	167	651	153	287	227	225	44	2,707	100%

Source: Australian National University; Australia's Environment Explorer

6.6.1. LAND USE COVER CHANGE 2010-2017

Approximately 65% of land in Hume is used for rainfed agriculture (cropping, pasture, sugar) with a total land use area of 1,757km². This is significantly higher than the proportion of land used for irrigated cropping (cropping, pasture, sugar) which is approximately 9% (refer to Table T34).

Key land use changes over the period 2010-2017 include:

- 1% increase in inland water bodies most likely explained by more water in Lake Eildon in 2017 than 2010;
- 1% increase in irrigated cropping;
- 1% increase in rainfed cropping and 2% increase in rainfed pasture most likely a result of improved rainfall; and
- -1% in trees closed and -4% in trees open most likely the result of large-scale harvesting of pine plantations in the North East.

T34. LAND USE COVER, 2010 AND 2017

Land Cover	Hume Region				
	2010	2017	Change (%)		
Extraction Sites	0%	0%	0%		
Inland Waterbodies	1%	2%	1%		
Salt Lakes	0%	0%	0%		
Irrigated Cropping	6%	7%	1%		
Irrigated Pasture	2%	2%	0%		
Irrigated Sugar	0%	0%	0%		
Rainfed Cropping	17%	18%	1%		
Rainfed Pasture	44%	47%	2%		
Rainfed Sugar	0%	0%	0%		
Wetlands	0%	0%	0%		
Tussock Grasses Closed	2%	2%	0%		
Alpine Grasses Open	0%	0%	0%		
Hummock Grasses Open	0%	0%	0%		
Tussock Grasses Open	0%	0%	0%		
Shrubs and Grasses Sparse-	0%	0%	0%		
Scattered					
Shrubs Closed	0%	0%	0%		
Shrubs Open	0%	0%	0%		
Trees Closed	6%	4%	-1%		
Trees Open	15%	12%	-4%		
Trees Scattered	0%	0%	0%		
Trees Sparse	4%	4%	0%		
Urban Areas	1%	1%	0%		

Source: Australian National University; Australia's Environment Explorer

6.7. INVESTMENT AGAINST LAND USE THEME

The table below provides examples of projects delivered against land use themes by stakeholders. The appendix of the document provides a detailed list of projects delivered against each theme.

T35. INVESTMENT AGAINST LAND USE THEMES

Key Directions	Priority Strategies	Discussion	Delivery Examples
Directing future population growth to settlements with the greatest	Facilitate and plan for growth in regional cities and centres as the key drivers for growth and service delivery in the region	The Hume Region Growth Plan provides strategic direction in relation to centres that have the greatest capability for growth. This has been a highly successful strategy and the key centres such as Shepparton, Wodonga, Wangaratta and Wallan have supported a large proportion of population growth in the Hume Region.	 Hume Region Growth Plan Northern Growth Corridor Projected Yield and Population 2017 Shepparton Mooroopna 2050 Regional City Growth Plan, underway by VPA and Greater Shepparton City
capability to accommodate it	Manage growth in small settlements	Some centres such as Seymour and Benalla, whilst capable of supporting growth have been less successful in attracting the same level of growth as the centres above due to lower levels of demand and complications with infrastructure capacity.	Council Northern Growth Corridor Development Sequencing 2016 (Mitchell Shire)
	Coordinate service delivery in strongly linked settlements	- The Hume Region Growth Plan 2013 included an in-depth analysis of	Euroa Saleyards Upgrade Project - \$500,000 State Government investment and \$25,000 Strathbogie
Maximising the use of existing infrastructure and services and facilities	Plan for growth in settlements within relatively close proximity to Melbourne	productive agriculture and identified areas that have strategic value as agricultural assets. The plan recognised that the Goulburn Valley is of National Significance for agricultural production and that areas such as the Alpine Valleys are of State Significance. In 2013 changes to the suite of Rural Zones were introduced which provide greater flexibility in relation to uses. This has allowed for greater productivity within rural zones and especially for tourism uses.	Shire - increased livestock capacity and modernisation of facilities Beechworth Railway Goods Shed Upgrade and Repair - \$230,000 Federal Government and \$230,000 local government investment to renovate and allow use as commercial space Benalla Airport Masterplan 2015 - Developing existing airport and identifying opportunities for non-aviation development
Retaining productive rural land for agriculture and other comparable rural uses	Manage land use in rural areas to sustainably accommodate all rural land uses	The Hume Regional Growth Plan included identification of areas of highest productivity. Rural zoning changes have supported the primacy of agriculture, however there are growing issues in the region in relation to intensive agriculture.	Shepparton: Regional Rural Land Use Strategy completed and implemented in 2012 Upper Murray 2030 Vision Plan

Ensuring efficient use of land use planning resources in the region	A regional / sub regional partnership approach to strategic land use planning	Many of the smaller Local Governments have acknowledged difficulty with attracting and retaining land use planners. There is some level of shared resourcing that has occurred such as that between Towong and Alpine Shire since the 2010-2020 Hume Strategy . This is an area which should be explored further	Climate Smart Agricultural Development (CSAD) Project - Summary Report for Moira - Joint GBGA state funded project with 7 partner councils throughout the Goulburn Broken Yarrawonga Framework Plan (residential and industrial growth framework) underway by Moira Shire Council in conjunction with VPA Merrifield North Employment/Wallan/Wallan East/Donny Brook/Woodstock Precinct Structure Plans underway by Mitchell Shire, in conjunction with VPA
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6.8. CASE STUDIES

CASE STUDY: HUME REGIONAL GROWTH PLAN

The Hume Regional Growth Plan has been the overarching plan for sustainable growth in the region. The plan has been highly successful in identifying the planning needs of the region and subsequent delivery of amendments and policy to support these needs.



CASE STUDY: GREATER SHEPPARTON HOUSING STRATEGY, 2011

The Greater Shepparton Housing Strategy has been an instrumental document in directing growth in Greater Shepparton and has led to the establishment of a number of successful growth areas. The delivery of a number of growth fronts in appropriate locations has led to highly competitive house prices in Shepparton which has had a substantial impact on liveability.

CASE STUDY: LOCAL GOVERNMENT INFRASTRUCTURE PROGRAM 2011-15

Over \$22 million in funding was provided by the State Government for infrastructure in the Hume Region as a part of the Local Government Infrastructure Program, between 2011 and 2015. This was provided to each Local Government Authority individually.

6.9. PROGRESS REPORT - LAND USE THEME

The following progress report takes into consideration trend data, investments undertaken and stakeholder feedback with regard to delivery.



Overall the Hume Region has delivered growth area planning as well as revitalisation of CBDs with significant investment made in these areas. There has been significant planning within the Hume Region, however limited delivery of some of these plans.

Further effort in ensuring efficient use of land use planning resources in the region is required.

T36. PROGRESS REPORT - LAND USE

LAND USE THEME **PROGRESS Key Direction** Level of Completion/Application by Stakeholders **High Progress** No Progress Directing future population growth to settlements with the greatest capability to accommodate it Maximising the use of existing infrastructure and services and facilitating strategic investment in future infrastructure and services Retaining productive rural land for agriculture and other compatible rural uses Ensuring efficient use of land use planning resources in the region **Total Land Use Theme**

Areas where progress has been held back include:

- Difficulty in attracting professional planning resources in the region; and
- Improved levels of sharing of planning professionals amongst Local Governments.



7. PLANNING FOR THE NEXT HUME STRATEGY

7.1. INTRODUCTION

This section provides a summary of considerations for future planning of the next regional strategic plan (Hume Strategy).

This includes what to keep from the 2010-2020 Hume Strategy, new themes, ideas, resources and delivery approach.

7.2. KEY FINDINGS

The 2010-2020 Hume Strategy is a detailed document and has more than adequately set the blueprint for the Hume Region over the past nine years. Delivery needs to be a greater focus for the next version of the Hume Strategy.

Discussions with stakeholders have identified the preference for a new Hume Strategy to be more 'strategic' and high level with targeted delivery against strategies to follow. Measurable indicators are also needed to track the performance of the strategy.

The approach for preparation of a new Hume Strategy should consider that lessor resources be applied to the preparation of the strategy, whilst greater resources are applied to delivery. It may be that specific working groups are established to focus on delivery of aspects of the next strategy.

The themes identified remain relevant, however further refinement of the strategies that sit below those themes will require some change to meet contemporary issues and opportunities facing the region.



7.3. WHAT HAS CHANGED

Testing of the themes and directions with stakeholders in the Hume Region has highlighted a number of changes in the region, as well as confirmed that many of these themes and directions are still relevant.

The following tables provide an outline of which directions and ideas should be kept for the next Hume Strategy, and new considerations for the preparation of the next Hume Strategy.

7.3.1. COMMUNITY THEME

Theme	Theme Inclusion in the Next Hume Strategy?			
Embracing learning for life Iabour (e.g.: manufacturing and		This will continue to be a focus given the changes in traditional industry requiring higher skilled labour (e.g.: manufacturing and agriculture). Broadening of this theme to focus on quality and access to education and training at all ages should be a focus for next Hume Strategy.	Attracting young families to the region to address aging population	
Providing appropriate and accessible social services and infrastructure	•	There has been substantial investment in community services and infrastructure in the past 10 years. Much of this investment has been directed to the larger centres and some of the smaller more isolated townships and centres in the region still require greater levels of funding support.	 Need for additional services to support aging population Attracting population 	
Developing innovative and flexible service delivery models	~	The introduction of rate capping has brought a focus to this in more recent years. There are examples of greater cooperation between Local Governments and other stakeholders. There remains further opportunity in this area in the next decade.	growth to Local Government Areas that have declined or are stagnant	
Strengthening communities, increasing resilience and enhancing liveability	~	Enhancing liveability has been a key focus for the region, particularly with regard to access to community and recreation facilities, job generation, access to arts and cultural activities and general township amenity.	 Addressing areas of socio-economic disadvantage Addressing youth unemployment 	

7.3.2. ENVIRONMENT THEME

Theme	Inclusion	on in the Next Hume Strategy?	OTHER CONSIDERATIONS	
Anticipating and adapting to the effects of climate change	V	Climate change will continue to be an issue for the region and adaptability in particular for the tourism and agriculture sector will need to be a focus.		
Managing our water resources sustainably	V	There has been substantial investment and policy change in this area. Given the forecast reduction in precipitation, this will remain an issue for the region.	Impact of climate change on habitat	
Protecting native habitat and biodiversity	~	There has been some species lost since the preparation of the 2010-2020 Hume Strategy, increasing urban area and changes to climate are likely to have the greatest impact on habitat and biodiversity over the next decade.	 Identification of measurable environmental indicators that are readily available Exploration of investment opportunities 	
Harnessing renewable energy sources, reducing greenhouse gas emissions and pursuing innovative waste management approaches	~	There has been a substantial amount of interest in renewables in the region, however investment was stalled since the previous 2010-2020 Hume Strategy due mainly to political instability in relation to carbon policy. The next 10 years will see major change in the renewable energy landscape in the Hume Region.	in wind, solar, hydro and potentially wind	

7.3.3. ECONOMY THEME

Theme	Inclusion In Next Hume Strategy?	OTHER CONSIDERATIONS		
Strengthening a capable workforce	This direction has linkages with the embracing 'learning for life' indicator and focuse on job ready initiatives and improving workforce capability. This will continue to be requirement over the next 10 years as industry adapts and changes considerin technology improvements and an increasingly global focus.	have greatest potential for growth, e.g.		
Adapting and diversifying agriculture in an environment of change	There has been much adaption of agriculture to the new water trading regime and a increasing focus on export opportunities. For the next Hume Strategy, the focus for agriculture will be on meeting potential export opportunities and supply chain linkages	Focus on export opportunities for key		
Facilitating research and innovation in tourism, manufacturing and industry to encourage new and evolving business	There has been much growth and change in tourism and manufacturing in the region For the next Hume Strategy, it needs to be acknowledged that these two industries factorized very different hurdles and opportunities and specific directions for each would need to be considered.	• Importance of population growth to drive		
Developing ICT and energy infrastructure that builds on existing competitive advantages.	The key change over the past 10 years has been the roll out of the NBN. Howeve many stakeholders would consider this has been substandard and the impacts of thi have been lower than expected due to bandwidth predictions not being met. Energ infrastructure still requires further investment. For the next Hume Strategy, ICT and energy infrastructure should not be in the sam direction, there is little relationship between the two.	Opportunity for decentralisation of Government departments/agencies for key centres		

7.3.4. TRANSPORT THEME

Theme	Inclusion	ı In The Next Hume Strategy?	Other Considerations		
Enhancing integrated planning for mobility	~	Most of the larger Local Government Authorities have integrated transport planning completed, however the delivery of aspects of integrated transport planning still needs attention. This is an area which may be better tackled at a partnership level rather than by individual municipalities.	•	Clearly identify the need for significantly improved passenger rail services	
Developing a proficient land transportation network			•	Strengthen the role of freight rail and infrastructure required to support this, especially given inland rail route	
Linking communities through improved public transport and transport linkages		The following three transport directions are all inter-related. The new Hume Strategy may look to having more specific recommendations in relation to the key gaps in service provision than the general statements included here.	•	Identify the need to improve the quality of secondary roads in the region to meet the needs of High	
Strengthening the sustainability of the transport system				Performance Vehicles	

7.3.5. LAND USE THEME

Theme	Inclusio	n In The Next Hume Strategy?	Other Considerations
Directing future population growth to settlements with the greatest capability to accommodate it	~	This has been addressed well over the past 10 years and the preparation of strategic planning policy has supported this. However, there are a number of municipalities that have either declined or have been stagnant with regard to population growth and this combined with an aging population is a key issue. This direction needs to include consideration of rural areas population policy as well as supported major growth centres.	Ensure all major townships have
Maximising the use of existing infrastructure and services and facilitating strategic investment in future infrastructure and services		It is difficult to determine the level of delivery against this direction. It includes mixed messages in that it encourages use of existing infrastructure and also calls on investment in new infrastructure. The direction is too broad and needs to be reconsidered for the next Hume Strategy.	structure plans which consider future growth Review and update of the Hume Regional Growth Plan Develop land use planning policy for renewable energy guidelines
Retaining productive rural land for agriculture and other compatible rural uses	~	The Regional Growth Plan identifies rural areas of strategic significance. Agricultural experts do not use the term 'productive' rural land as it is considered any rural land can be productive with the right 'ingredients'. Protection of areas of strategic significance should be a focus as well as consideration of rural amenity in the next Hume Strategy.	Take up opportunities for crown land use
Ensuring efficient use of land use planning resources in the region.		This direction is interlinked with innovative and flexible service delivery. Only one direction is needed in this area.	

7.4. RISKS AND DISRUPTORS

The key risks facing the region have been identified through consultation with stakeholders and analysis of data. These need consideration when developing the next Hume Strategy:

It is important to note that a lot of the risks are community and social health based, and to understand the significant correlation between these risks and other elements of the region's health. Importantly, transport, accessibility of services, job opportunities, health of the economy and health of the environment are important factors that will contribute to liveability of the region and will positively impact social and community risks.

- Water trading and water availability. Water trading across the region presents risks for agricultural production. Access to water for agriculture remains critical to the long term future of the region's economy.
- Labour force. Access to skilled and unskilled labour is a risk for business
 growth in the Hume Region. This is one area that must remain a focus for
 the next Hume Strategy in order for the region to continue its growth
 trajectory, through the following:
 - Matching skills to skill gaps in labour force; and
 - Focus on training/technical education, not just tertiary education.
- Investment in services infrastructure. Lack of investment in services
 infrastructure presents risks to development to support population and
 business growth, this includes reticulated water supply, sewer and drainage.
 Funding strategies for this will need to be considered in a new Hume
 Strategy.
- Climate change. Climate change presents risks to the visitor economy, agriculture sector and ecosystems.
- Renewable energy With government renewable energy targets in Victoria of 20% by 2020, 40% by 2025 and 50% by 2030, regional Victoria will see

significant roll out of renewable energy infrastructure. Commercial sector uptake of renewable energy will also play a major and growing part in the roll out of large scale renewable energy developments. The renewable energy infrastructure in the Hume Region will be a mix of rooftop solar panels and large scale solar, but could also include both large and small pumped hydro-electric schemes. Other critical infrastructure will be large scale battery storage to improve grid reliability and lower prices.

- **Investment in public transport**. Lack of federal and state government investment in public transport infrastructure will mean the region will not meet needs for transport provision.
- **Crime**. Crime rates in the region have increased according to crime statistics. This impacts on liveability and results in negative publicity for the region.
- Aging. Aging of the population and its impact on health and community services and labour.
- Youth engagement and isolation. This is particularly an issue in some for the smaller communities and also considers access to work, entertainment and education.
- Mental health. Stakeholders have identified this as a growing major issue across Australia and in particular in the region, which needs to be considered for the next strategy.
- Drug and alcohol use. There are increasing issues identified by stakeholders in relation to drug and alcohol use and the associated antisocial outcomes of this activity in the region.
- **Family violence**. Lower socio demographic segments and connection to drug and alcohol use have created an issue in some communities/areas within larger regional cities.

8. PLANNING FOR THE NEXT HUME STRATEGY

8.1. INTRODUCTION

This section provides an overview of the potential delivery and preparation options for the development of the next Hume Strategy.

8.2. DELIVERY OPTIONS FOR NEXT HUME STRATEGY

The following delivery options have been identified for the next iteration of the Hume Strategy:

- 1. A detailed Regional Strategic Plan similar to the 2010-2020 Hume Strategy incorporating extensive research, consultation as well as expert inputs. This plan will have detailed implementation strategies and actions.
- 2. A high level Regional Strategic Plan with vision and directions. The plan will draw on high level research and consultation with detailed delivery actions to be developed by specialist sub committees during implementation.
- **3.** A community vision and framework for the Hume Region. This plan will provide little detail on strategic implementation, however will be a community led plan representative of community aspirations.

Stakeholder feedback has indicated a preference towards the development of a plan with similar principals to *Option 2. A high level Regional Strategic Plan with vision and directions.*

This sentiment includes the desire for the plan to be high level and not too prescriptive, and developed by teams with specialist knowledge on each area of the strategy. A key preference from most stakeholders was the need to direct a greater proportion of resources and funding to implementation of strategic directions, rather than funnelling funding into the development of an extensive strategy.

Key considerations for the development of a new strategy from stakeholders include:

- Strong preference towards a community led process during the development of the strategy (i.e. strong community engagement to gauge key risks and disruptors);
- The need for experienced technical input and specialist knowledge;
- Need for the plan to have defined and measurable outcomes;
- Build on the existing body of work including the previous 2010-2020 Hume Strategy, and Hume Regional Growth Plan as a well as other strategic documents and policy rather than starting from scratch;
- Utilise the existing leadership programs including Fairley Leadership program and Alpine Valleys Leadership program as part of community engagement;
- Be clear about the investments required to support implementation of the plan;
- Must be strategic use community engagement to identify issues, but must also be big picture focused and strategic;
- Shift from focus on Hume Region to discussing shared problems across local areas:
- Clearly articulate how Hume is different to other region's in the issues that it is grappling with;
- Create a living plan that can be constantly and easily renewed over the life of the strategy;
- Clear prioritisation of effort;
- Needs to consider future issues and opportunities facing the region;
- Inclusion of a high level implementation plan; and

 Plan needs to be limited enough in its scope, as the plan cannot be all things to all people.

8.3. PREPARATION OF NEXT HUME STRATEGY

Below are key steps identified for delivery of the next Hume Strategy. These draw on feedback from stakeholders consulted through the process.

HUME STRATEGY PREPARATION

- 1. **Establish a steering committee.** This will include members of the Hume RDA committee, selected Government, business and community representatives.
- 2. Allocate delivery resources. The Hume Region will need resources to oversee delivery of the plan. Consideration should be made for an executive level appointment for a two-three year period.
- **3. Establish a project brief.** Under guidance from the steering committee, the project officer should prepare a brief for the development of the Hume Strategy. This should include consideration of the following:
 - **a.** Specialist reports under each agreed theme of community, environment, economy, transport and land use;
 - b. Engagement strategy and community strategy; and
 - **c.** Process and timeline for preparation of the strategy.
- **4. Experts.** Appoint expert consultants to assist with high level research and discussion papers for each theme.
- **5. Consultation and engagement.** Undertake consultation and engagement in line with plan.
- **6. Strategy preparation.** Appoint a strategy writer to bring together a high level concise strategic plan that draws on the various expert work.
- **7. Delivery plan.** Clearly articulate resources and responsibilities for delivery and performance measures against strategic directions.

DELIVERY

- 8. Actions plans. Appoint a project control group to each of the themes to commence drafting detailed action plans that will address the newly developed Hume Strategy. These groups will include stakeholders from each of the partnership areas.
- Resources for delivery. Identify resource allocation for delivery against each theme, this will need to be an ongoing resource to administer and oversee delivery of the Strategy.
- 10. Review. Ensure review points are included over the 10 year lifespan.