Wingecarribee regional economic development strategy: Supporting analysis

AgEconPlus
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WINGECARRIBEE SHIRE COUNCIL

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Preamble

The economic development strategy for the Wingecarribee region is presented in the '*Wingecarribee Regional Economic Development Strategy 2018–2022'* (the Strategy). This document, the '*Wingecarribee Regional Economic Development Strategy 2018-2022: Supporting Analysis*' (Supporting Analysis), prepared by AgEconPlus, details the Strategy's methodology, evidence and development process. Both documents are available to the public at dpc.nsw.gov.au/cerd.

Both the Strategy and Supporting Analysis have been developed with the support of the NSW Government as part of the Regional Economic Development Strategies program to assist local councils and their communities in regional NSW.

For further information about the program please contact the Centre for Economic and Regional Development (CERD) on 02 6391 3025 or CERD@dpc.nsw.gov.au.

Contents

1. Geographic information

Wingecarribee LGA (the region) is located approximately 75 kilometres from the south western fringe of Sydney and 110 kilometres from the Sydney CBD. The LGA is bounded by Wollondilly Shire in the north, Wollongong City, Shellharbour City and the Municipality of Kiama in the east, Shoalhaven City and the Goulburn Mulwaree Council area in the south, and Upper Lachlan Shire in the west (see Figure 1).

Wingecarribee LGA is largely rural, with urban areas in numerous towns and villages. The main townships are Bowral, Mittagong and Moss Vale, with many smaller villages and townships. The LGA encompasses a total land area of approximately 2,700 square kilometres.

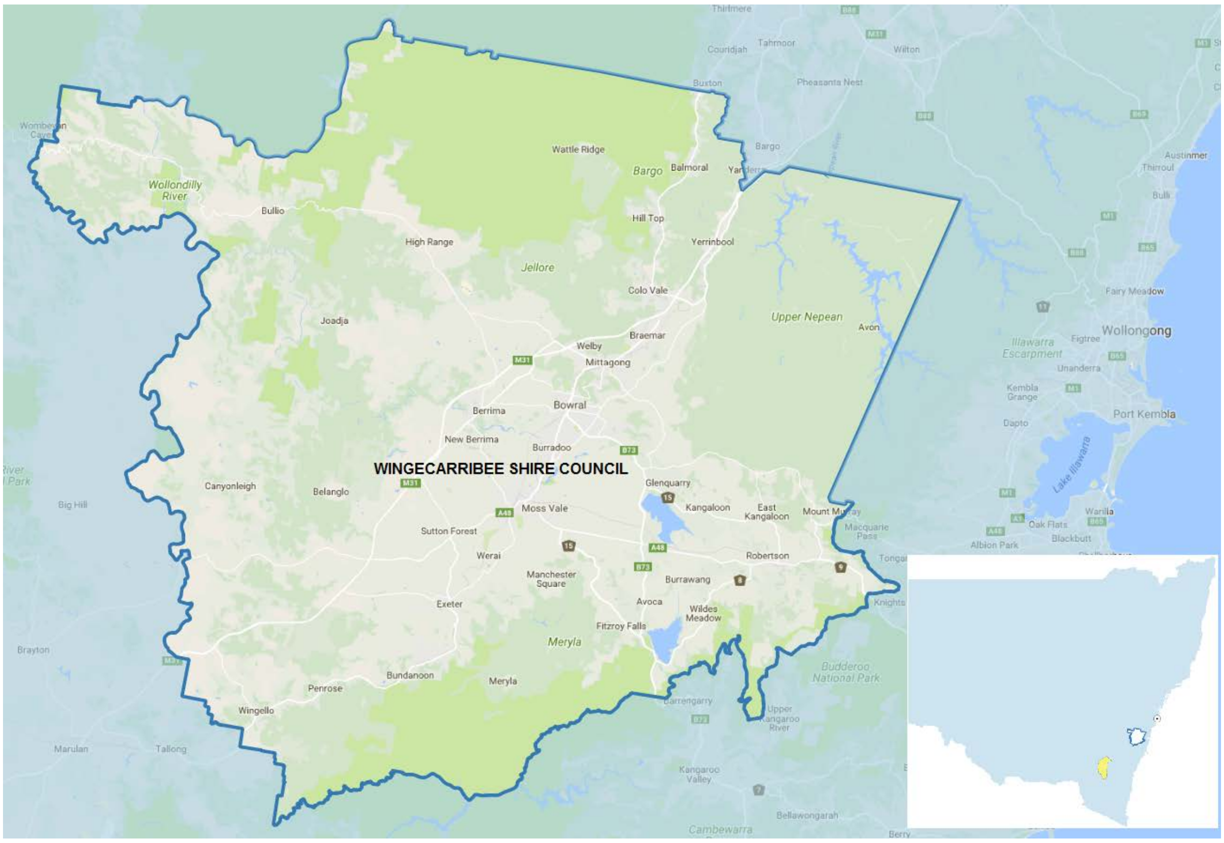
The region is a highly regarded rural locality due to its temperate climate, rich soils, proximity to Sydney and its reasonably reliable rainfall. The most common commercial land use in the LGA is Beef Cattle Farming. The next most significant agricultural activities are Horse Farming, Dairy Cattle Farming, Mushroom Growing and Nursery Production (Outdoors) and Vegetable Growing (Outdoors). There is a large number of smaller rural home sites and hobby farms.

The region contains a range of natural resources and features. It is rich in biodiversity with large areas of high conservation value including part of the World Heritage Greater Blue Mountains area and two declared wilderness areas. Environmental features include cold climatic conditions, rugged topography and significant areas of state forest, national park and other protected lands that form part of the Sydney water catchment area. Eastern parts of the LGA are bounded by the Illawarra escarpment and Morton National Park. The north abuts Nepean and Avon dam catchments and is rugged eucalypt bushland. In the west, the Wollondilly and Wingecarribee rivers flow through deep sandstone valleys which form part of the Warragamba dam catchment. Southern reaches of the LGA are bounded by Uringalla Creek and comprise sandstone plateau dissected by deep gorges.

Wingecarribee LGA also contains stocks of mineral resources, with access to commercial coal reserves due to its location in the Southern Coalfield of NSW. The main coal seam of economic significance in the region is the Wongawilli seam. Historically, the Berrima Colliery has operated in the region from as far back as 1867, although it was closed in 2013. Hume Coal is currently proposing an underground coal mine development in the Sutton Forest area.

Coal mines can provide a significant contribution to regional economies and are desirable for regional economic development, subject to them having acceptable environmental, social and cultural impacts.

Figure 1: Wingecarribee Functional Economic Region Boundary

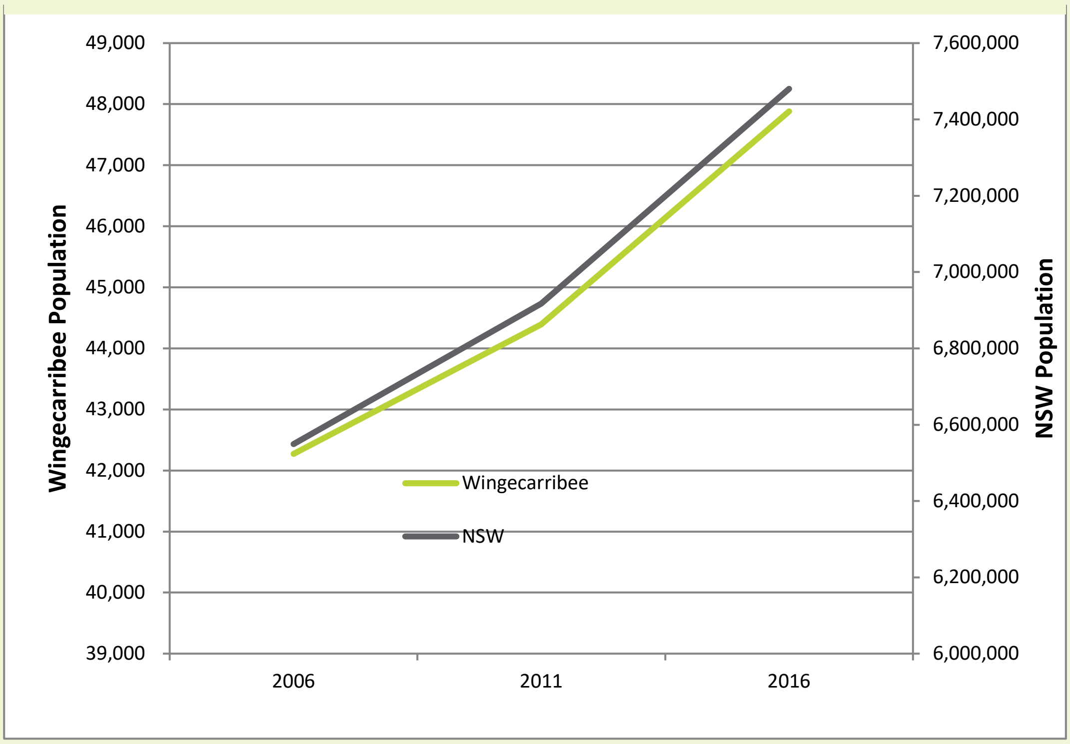


2. Demographic Profile

2.1 Population and Housing

The Australian Bureau of Statistics (ABS) 2016 Census of Population and Housing reported the population of Wingecarribee LGA was 47,882. According to the ABS, the population of Wingecarribee LGA has been growing strongly since 2006, as shown in Figure 2. The growth rate was similar but less than that of NSW between 2006 and 2011 (i.e. 5.0% compared to 5.6%) and less than NSW between 2011 and 2016 (i.e. 7.9% compared to 8.1%).

Figure 2: Historical Population of Wingecarribee LGA



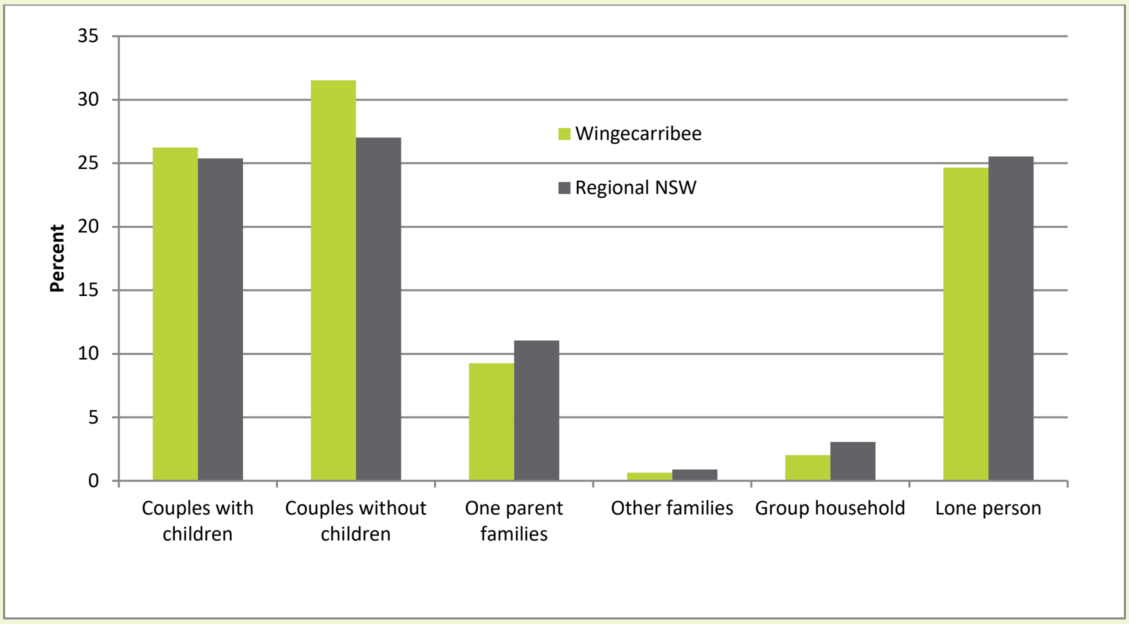
Source: ABS, 2016 Census of Population and Housing (Usual Resident Profile)

The 2016 Census of Population and Housing reported 21,617 private dwellings in the Wingecarribee LGA. Of these 87.1% were occupied, less than those occupied in NSW (90.1%) and Regional NSW (87.6%). This equates to an average of 2.5 people per household which was slightly below the State average of 2.6 and above that for Regional NSW (2.4).

Compared to Regional NSW, Wingecarribee LGA has a higher proportion of couple families with and without children and a lower proportion of one parent families, lone person households and group households (Figure 3).

The median rent for Wingecarribee LGA is $350 per week. This makes it more affordable than the median weekly rent for NSW or ACT (both $380) (ABS, 2016 Census of Population and Housing) (Usual Resident Profile).

Figure 3: Household Composition for Wingecarribee LGA and Regional NSW



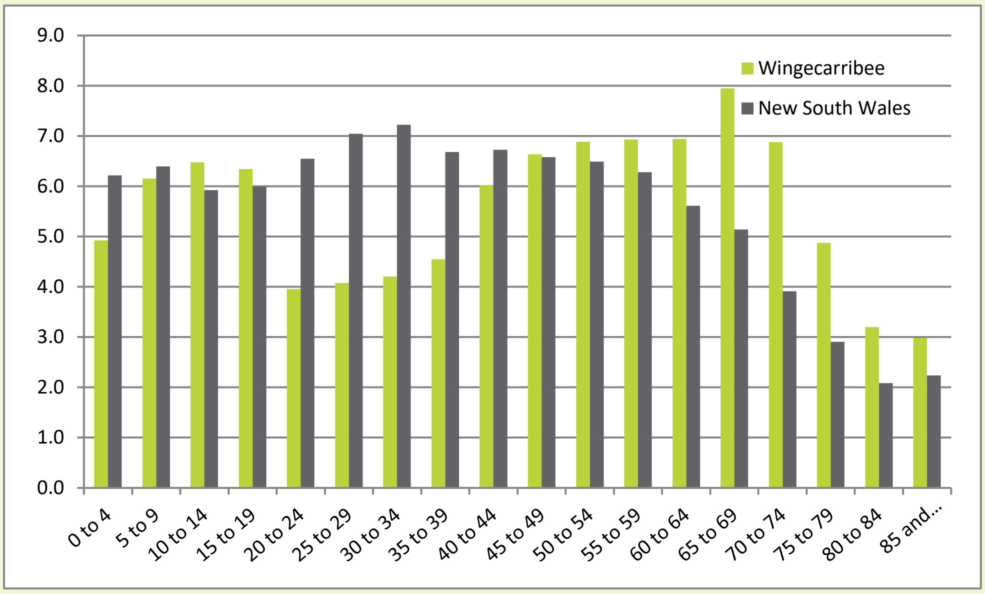
Source: ABS, 2016 Census of Population and Housing (Usual Resident Profile

2.2 Age Profile

According to the 2016 Census of Population and Housing, the median age in the Wingecarribee LGA was 47 while the median age of the NSW population was 38 years. Figure 4 compares the age distribution of the LGA with NSW. When compared to NSW as a whole, Wingecarribee LGA follows a similar pattern as Regional NSW, with a greater proportion of its population over the age of 45 and a smaller proportion of it population in the 20 to 44 age group – a 'hollowing-out' of the younger work-force population common across regional Australia.

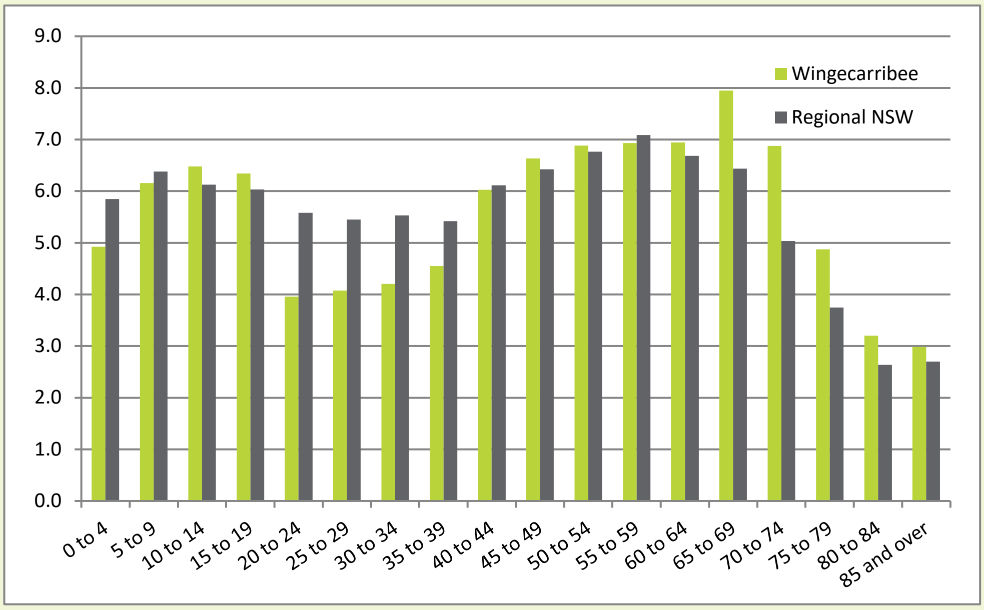
To take account of this systemic difference between regional NSW and NSW, the age profile of Wingecarribee LGA has also been compared to the age profile of Regional NSW, as shown in Figure 5. This indicates that there is a higher proportion of people in the 10 to 19 age group, 45 to 54 age group and 60+ age groups and a lower proportion of people in the 0 to 9 age group, 20 to 44 age group and 50 to 54 age group.

Figure 4: Wingecarribee LGA Population Age Distribution vs NSW



Source: ABS, 2016 Census of Population and Housing (Usual Resident Profile)

Figure 5: Wingecarribee LGA Population Age Distribution vs Regional NSW

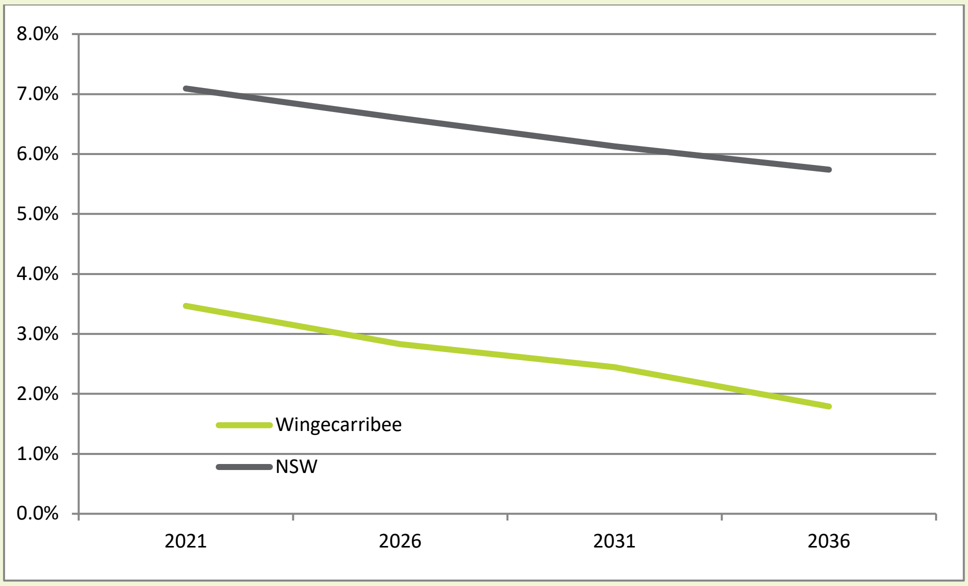


Source: ABS, 2016 Census of Population and Housing (Usual Resident Profile)

2.3 Population Forecasts

The NSW Department of Planning and Environment (DPE) projects that the population of the Wingecarribee LGA will continue to grow at a rate less than that for NSW as whole. They also project the growth rate will continue to decline from 3.5% between 2016 and 2021 to 1.8% between 2031 and 2036 - see Figure 6.

Figure 6: NSW Planning and Environment Population Growth Rate Forecasts



Source: NSW Department of Planning and Environment, Population Projections

2.4 Summary of Demographics

In summary statistics provided in the above section, reveal that:

- Over the past 10 years, the Wingecarribee region has been growing at a lower population growth rate than that of NSW; it is also projected (by DPE) to grow at a slower pace than NSW in the 2016-2036 period.
- Wingecarribee LGA has a higher age population with fewer people (as a proportion) aged 20-39 years old than both Regional NSW and NSW; this may indicate the lack of entry job opportunities/higher education opportunities inside the LGA.

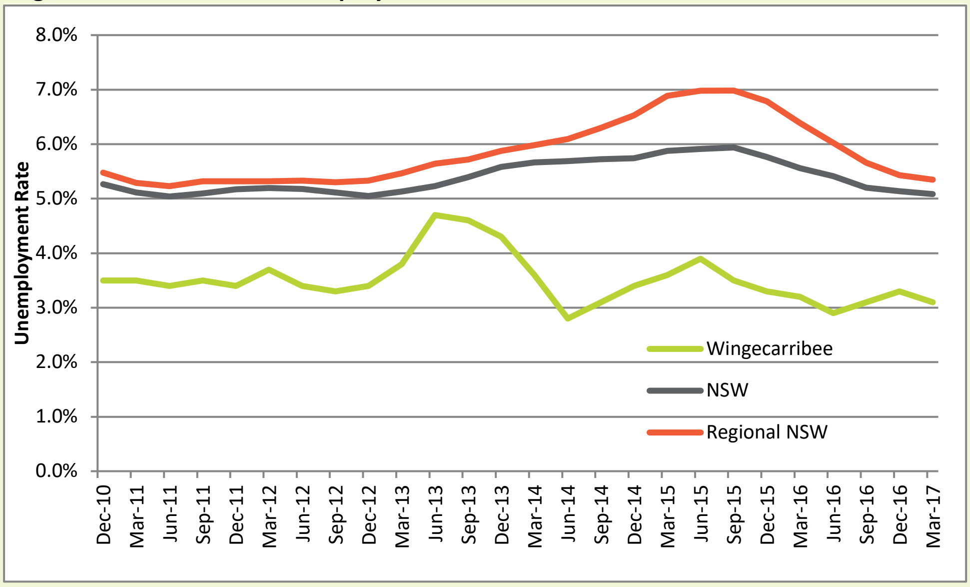
3. Education & Employment

3.1 Labour Force- Labour Force Status & Income

According to the 2016 Census, 20,644 people living in the Wingecarribee LGA were employed, at an unemployment rate of 3.8% in 2016, which was below the unemployment rates for Regional NSW (6.6%) and NSW (6.3%) (Figure 7).

The Department of Employment's Small Area Labour Markets publication has estimated that unemployment in the LGA has been consistently below that for NSW (which have been below that for Regional NSW), however with greater variability.

Figure 7: Small Area Labour Markets Estimate of the Wingecarribee, Regional NSW and NSW unemployment rate



Source: Department of Employment, Small Area Labour Markets (March 2017)[1]

[1] Estimates of individual LGA unemployment rates are highly variable and should be viewed with caution.

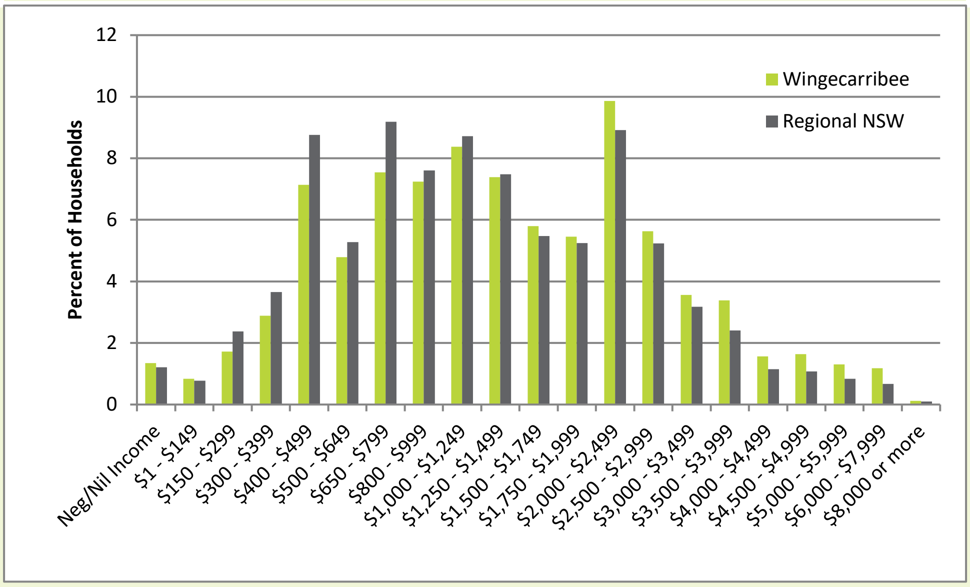
In 2016, the median household income in the Wingecarribee LGA was $1,335 compared to $1,486 for NSW. The overall difference in income may be explained by the lower proportion of working age residents in Wingecarribee LGA compared to NSW.

The distribution of weekly household income relative to Regional NSW is given in Figure 8.

This indicates that compared to Regional NSW in 2016, Wingecarribee LGA had a higher proportion of high income households (those earning $1,500 per week or more) and a lower proportion earning less than $1,500 per week.

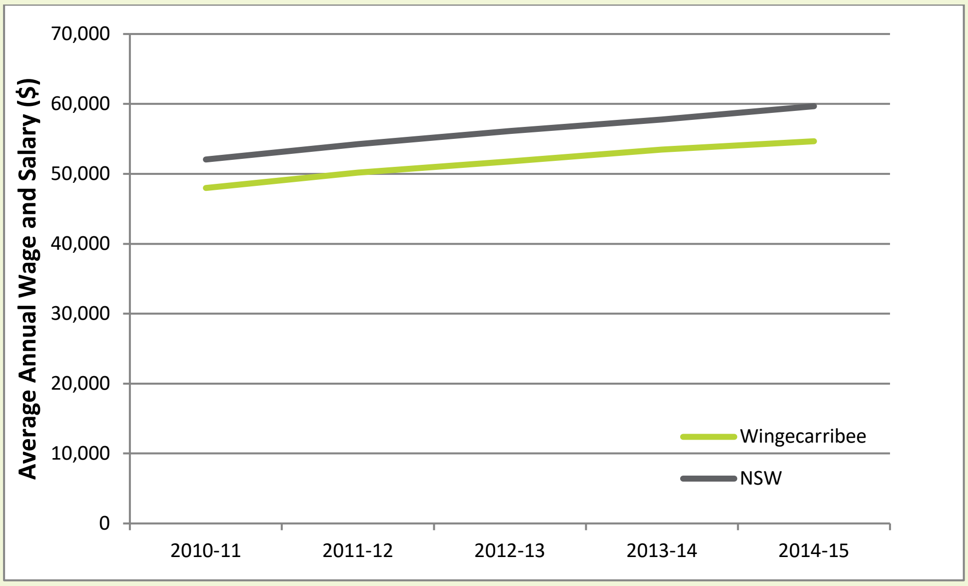
Historically, average wage and salary income in the Wingecarribee LGA has been below that for NSW but has grown in line with the NSW average.

Figure 8: Weekly Household Income Distribution



Source: ABS, 2016 Census of Population and Housing (Usual Resident Profile)

Figure 9: Average Annual Wage and Salary Income



Source: ABS, 2016 Census of Population and Housing (Usual Resident Profile)

3.2 Labour Force- Occupations

The 2016 Census of Population and Housing showed Wingecarribee LGA had a relatively higher proportion of its workers employed as Professionals, Managers and 'Technicians and Trades' compared to Regional NSW. It had a lower proportion of its workers employed in 'Community and Personal Service', 'Clerical and Administrative', 'Machinery Operators and Drivers and Labourers' (Figure 10).

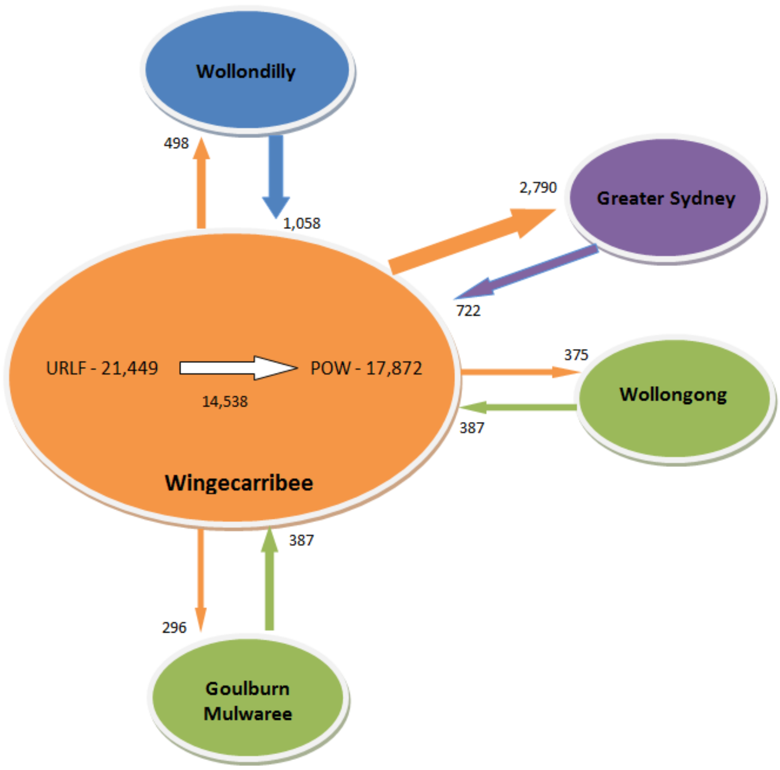
Figure 10: Occupations in Wingecarribee LGA and Regional NSW

Source: ABS, 2016 Census of Population and Housing (Usual Resident Profile)

3.3 Labour Force- Interactions

The main labour force interactions within and external to Wingecarribee LGA in 2016 are summarised in Figure 11.

Figure 11: Main Labour Force Interactions for Wingecarribee LGA



Notes: POW = Place of Work; URLF = Usual Resident Labour Force.

Source: AgEconPlus and Gillespie Economics

In 2016, 81% of the workers employed in the Wingecarribee LGA also resided in the LGA. The almost one-fifth who commuted from outside the LGA were predominantly from Wollondilly (5.9%), Sydney (4.0%), Wollongong (2.3%), Goulburn Mulwaree (2.2%) and Shellharbour (1.3%).

In 2016, the labour force residing in the Wingecarribee LGA exceeded the number of jobs in the LGA. Hence 23% of the employed labour force residing in the Wingecarribee LGA commuted to a work location outside the LGA, which is high. For an additional 6%, there was no fixed place of work. The main location of work for those commuting outside the region (where the location is known) was Sydney (13.5%), Wollondilly (2.4%), Wollongong (1.8%), Camden (1.5%) and Goulburn Mulwaree (1.4%).

Table 1: Residential Location of Workers Employed in Wingecarribee LGA

Category	No.	%
Live and work in the area	14,538	81
Work in the area, but live outside	3,334	19
Total workers in the area	**17,872**	**100**

Source: ABS, 2016 Census of Population and Housing (Place of Work Profile)

Table 2: Work Location of Employed Labour Force Residing in Wingecarribee LGA

Category	No.	%
Live and work in the area	14,538	71
Live in the area, but work outside	4,731	23
No fixed place of work	1,330	6
Total employed residents in the area	**20,599**	**100**

Source: ABS, 2016 Census of Population and Housing (Place of Usual Residence)

3.4 Educational Status

Compared to Regional NSW, in 2016 Wingecarribee LGA had a higher proportion of people who completed Year 12 or equivalent (Figure 13).

Compared to Regional NSW, in 2016 there was a higher proportion of people holding formal University qualifications (Bachelor or higher degree; Advanced Diploma or Diploma) (Figure 12). This implies that the residents of Wingecarribee are highly skilled in comparison to Regional NSW as a whole this is also reflected in the occupational shares.

Figure 13: Highest level of schooling

Source: ABS, 2016 Census of Population and Housing (Usual Resident Profile)

3.5 Summary of Education & Employment:

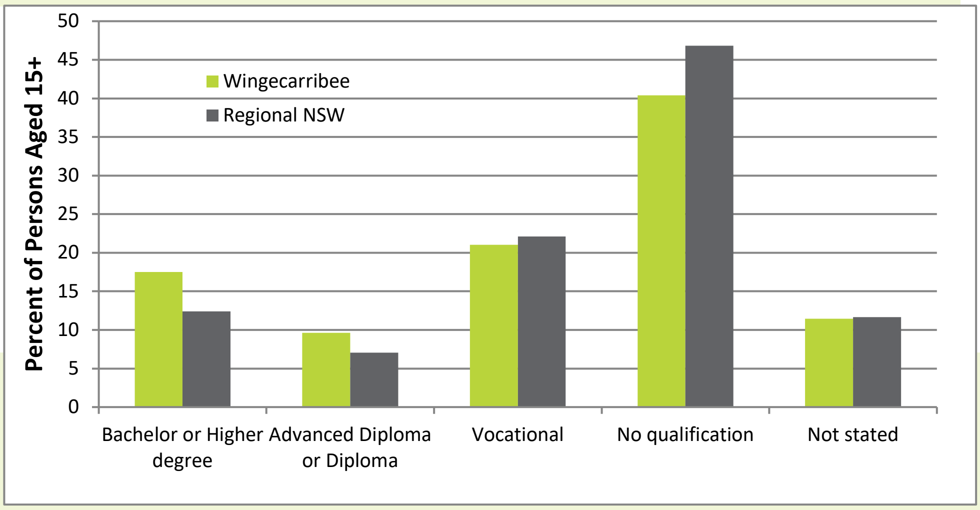
From the statistics provided in the above section, it can be said that:

- Wingecarribee has a low unemployment rate when compared to Regional NSW; it is an exporter of labour, with many of its workers going to the Greater Sydney Region.

- It is evident that there is a significant degree of commuting of workers both out of and into the region.

- Wingecarribee has a higher portion of residents in 'high-skill' operations, such as Managers and Professionals, when compared to Regional NSW as a whole. It also has a higher level of educational attainment when compared to Regional NSW as a whole.

Figure 12: Highest qualification



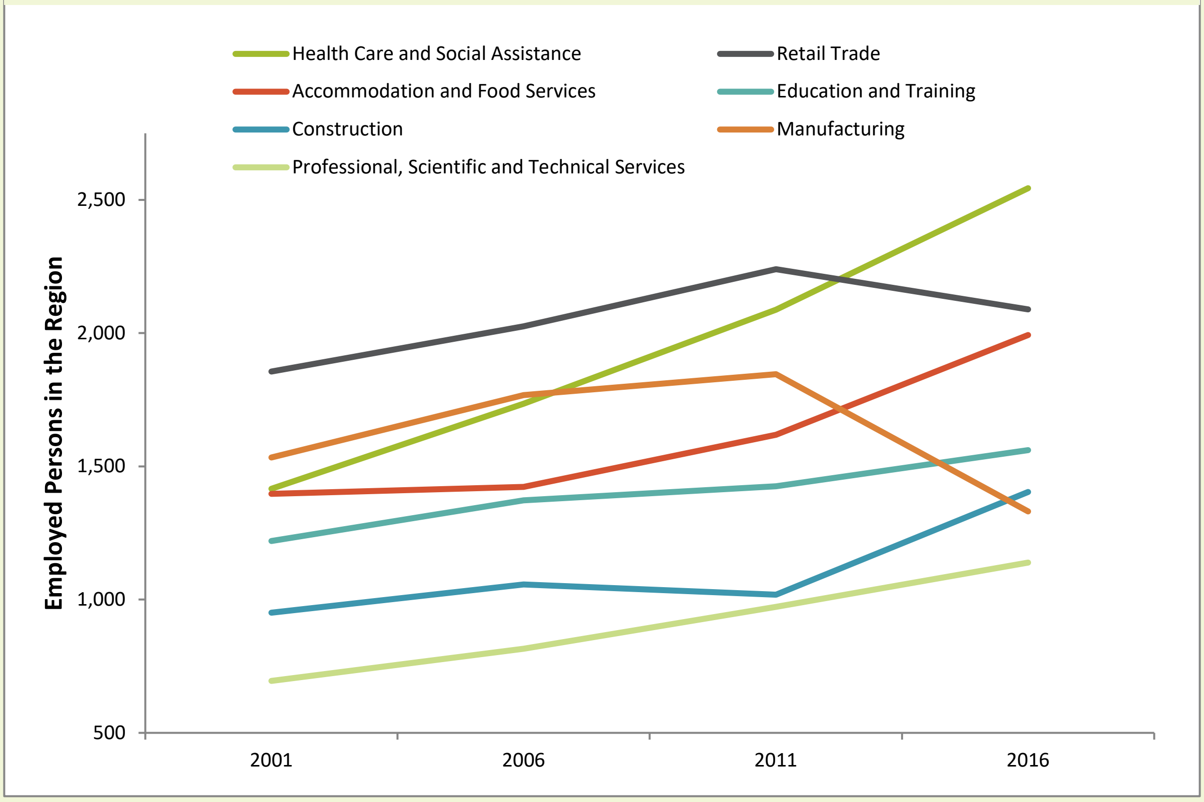
Source: ABS, 2016 Census of Population and Housing (Usual Resident Profile)

4. Industry Employment Share

Historically, the largest employing industries in Wingecarribee LGA have been Retail Trade and Manufacturing. As shown in Figure 14, in 2016 the most significant employing sectors in the Wingecarribee LGA were Health Care and Social Assistance and Retail Trade. Since 2011 there has been a significant decline in employment the Manufacturing sector. There has also been a decline in the Retail Sector although it remains the second employing sector in the economy. All of the other top employing sectors in the economy have grown between 2001 and 2016. The most rapidly growing sector has been Health Care and Social Assistance.

Employment in the region increased between 2011 and 2016 by 1,989. At the same time the number of the usual resident employed labour force increased by 1,378, this highlights the fact that the workforce commuting to outside the region did not grow during this period.

Figure 14: Historical Employment in Wingecarribee LGA



Source: ABS, 2016 Census of Population and Housing (Place of Usual Resident Profile)

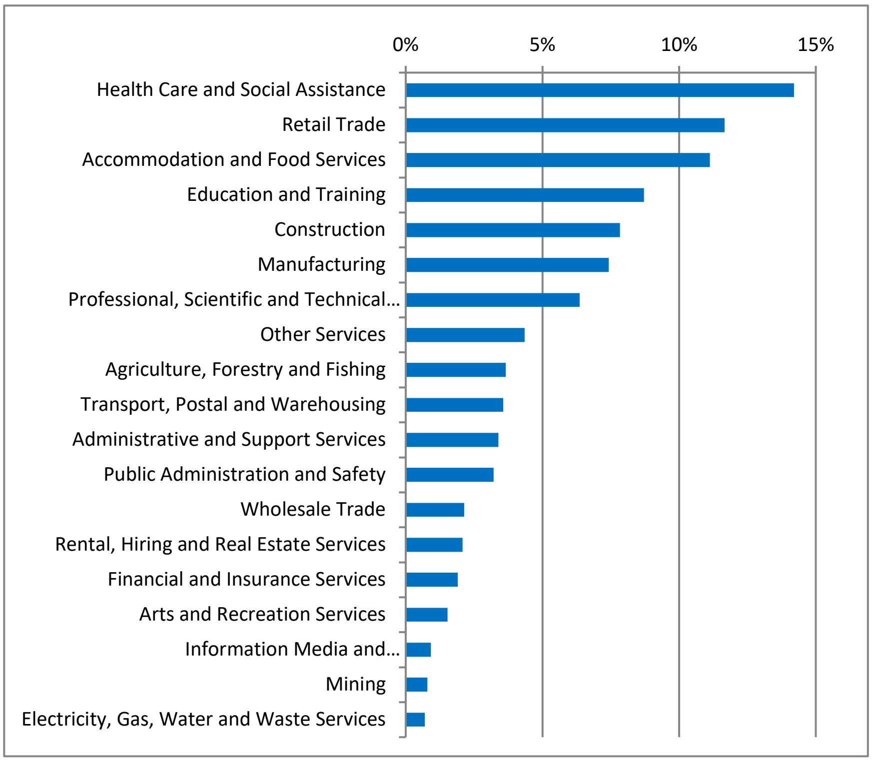
As illustrated in Figure 15, the largest employing industries in the region are:

- Healthcare & Social Assistance
- Retail Trade
- Accommodation and Food Services
- Education and Training
- Construction, and
- Manufacturing.

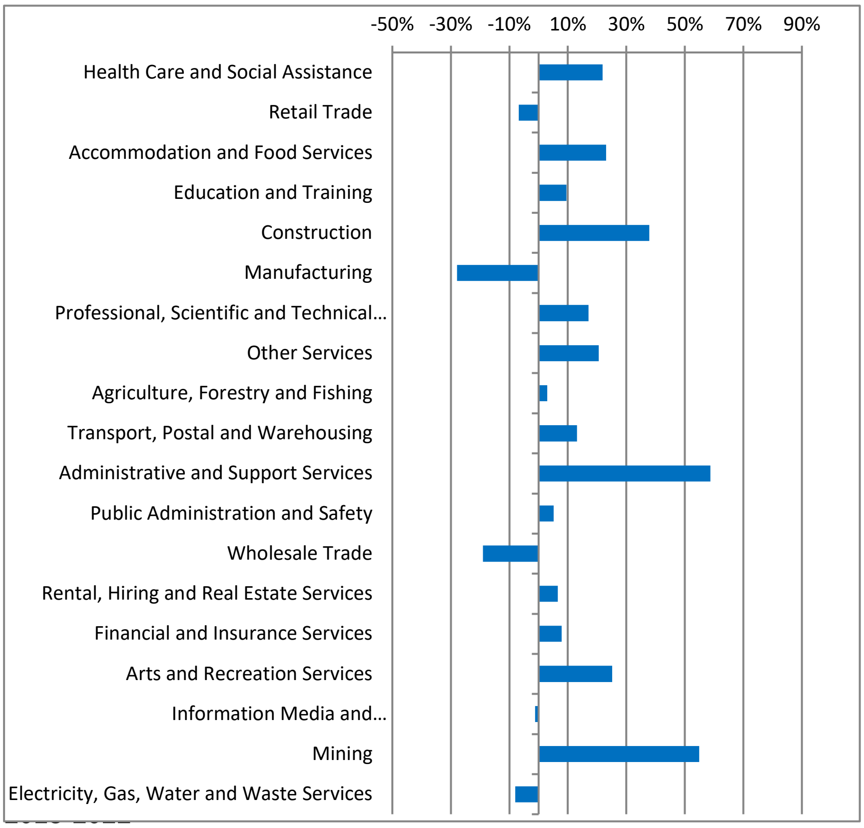
All of these sectors grew between 2011 and 2016, apart from Retail Trade and Manufacturing. Other growth sectors include Professional, Scientific and Technical Services, Other Services, Agriculture, Fishing and Forestry, Transport, Postal and Warehousing, Administrative and Support Services, Public Administration and Safety, Rental/Hiring and Real Estate Services, Arts and Recreation Services, and Mining.

Figure 15: Employed Persons in Wingecarribee

EMPLOYMENT PERCENT



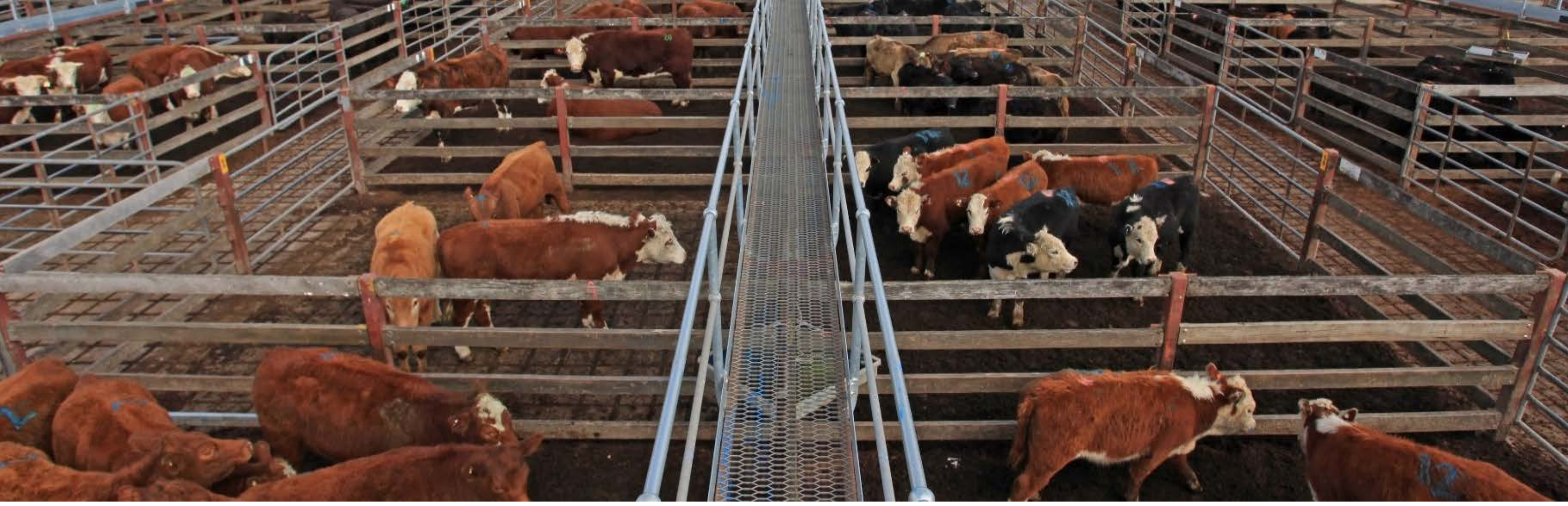
EMPLOYMENT PERCENT GROWTH (2011 – 2016)



Notwithstanding, there are a higher number of part-time and casual jobs in some sectors and wages differ between sectors. Income to employees provides another basis on which to compare employment between sectors. On this basis, the input-output table for the region indicates that the most significant sectors in the region are:

- Manufacturing
- Health Care and Social Assistance
- Education and Training
- Retail Trade, and
- Professional, Scientific and Technical Services.

The significance of Retail Trade declines due to the smaller comparative wages of this sector and higher number of part-time workers. The significance of Manufacturing and Professional, Scientific and Technical Services increased due the greater comparative wages. The Input Output table has not been updated for 2016 employment by industry data and may overstate the significance of the Manufacturing sector whose employment has declined significantly since 2011.



5. Specialisations

5.1 Gross Regional Product[2] and Gross Value Added

An Input-Output analysis for the region shows that the Gross Regional Product (GRP) of the Wingecarribee LGA was approximately $2,421 million for 2015-16. This represents approximately 0.4% of NSW Gross State Product (GSP) and $50,566 GRP per Capita. The highest value added industries in the Wingecarribee LGA in 2015-16 (based on the Input-Output industry classifications) were:

- retail trade ($160 million);
- education ($132 million);
- accommodation and restaurants ($122 million);
- professional/scientific/technical services ($119 million); and,
- finance ($114 million).

The Wingecarribee LGA is a net importer, with exports out of the region of $614 million and imports into the region of $987 million. Based on the Input-Output industry classifications, the largest exporting industries by value are:

- sheep, grain and beef ($82.5 million);
- equipment manufacturing ($71.4 million);
- accommodation and restaurants ($51.8 million), indicating a contribution to more than just the local residents i.e. tourism;
- coal mining ($45.2 million); and
- wholesale trade ($39 million).

In addition, the Wingecarribee LGA is increasingly becoming a commuting location for Sydney and other areas, and hence the region is essentially exporting labour.

Conversely, the largest importing industries in the region are:

- equipment manufacturing ($61.9 million);
- accommodation and restaurants ($37.1 million);
- professional/scientific/technical services ($29.3 million)
- mineral manufacturing ($28.3 million); and

[2] The economic profile is based on ABS Place of Work data.

- metal manufacturing ($27.3 million).[3]

The Retail Trade and Education Sectors had the highest value added of all the Input Output industry classifications. Combined, it was equal to approximately 13% of Wingecarribee regional economy.

Using the Input Output industry classifications, in terms of value added, it is estimated that the Retail Trade had the highest value added at 7.3% of GRP, followed by Education at 5.9% of GRP—see Table 3.

Table 3: Gross Value Added for the 5 Largest Industries in Wingecarribee regional economy (IO Sectors)

Industry	Gross Value Added ($m)	Proportion of Wingecarribee Regional Economy (%)	Proportion of Wingecarribee Regional Employment (%)	Per Capita Value Added ($)
Retail Trade	160	7.3	13.1	3,333
Education	132	5.9	6.5	2,745
Accommodation. Restaurants	122	5.6	1.2	2,553
Professional/Scientific/Technical	119	5.4	6.9	2,494
Finance	114	5.2	7.5	2,384

Source: NSW Department of Premier and Cabinet (2017)

Based on the ANZSIC One digit industry classification, it is estimated that the Manufacturing industry had the highest value added in the Wingecaribee regional economy in 2015-15.[4] Health Care and Social Assistance was the next most important for value added and contributed 13.6% of regional employment—see Table 4.

Table 4: Gross Value Added for the 5 Largest Industries in Wingecarribee regional economy (ANZSIC One Digit Sectors)

Industry	Gross Value Added ($m)	Proportion of Wingecarribee Regional Economy (%)	Proportion of Wingecarribee Regional Employment (%)	Per Capita Value Added ($)
Manufacturing	241	10.8	11.0	5,042
Health Care and Social Assistance	175	7.9	13.6	3,644
Retail Trade	160	7.3	13.1	3,333
Financial and Insurance Services	143	6.5	1.9	2,999
Professional, Scientific and Technical Services	135	6.1	6.0	2,770

[3] Although the household sector is the largest importer in the economy, it is not an industry Sector as such.
[4] The high value-added coming from high wages and profitability.

Source: NSW Department of Premier and Cabinet (2017)

5.2 Tourism

Key statistics are summarised in **Table 5**. Domestic day visitation is responsible for 62% of visitor numbers but domestic overnight visits are the responsible for the majority (58%) of expenditure. The main purpose of domestic overnight visitation was holiday and to visit family and relatives.

Tourism is not a specific sector in the Input-Output or ANZSIC frameworks. Rather it encapsulates final demand expenditure by visitors to a region on a range of sectors, including Retail, Accommodation, Food and Beverage Services etc. Using tourism visitation and expenditure data, CERD has used Input-Output modelling to estimate the direct impact of tourism on the Wingecarribee LGA regional economy. This modelling indicated that in 2015-16 tourism contributes $94 million in value-added (3.9% of regional economy), 1,003 FTE jobs (6.7% of regional economy) and $52 million in household income (wages) (4.8% of regional economy) in 2015-16.

Table 5: Destination NSW Visitor Profiles

Visitation	No.	%
Total Visitors (000's)	**541**	
International Overnight	*4*	*1%*
Domestic Overnight	*200*	*37%*
Domestic Day	*336*	*62%*
Total Nights (000's)	**441**	
International Overnight	*73*	*17%*
Domestic Overnight	*368*	*83%*
Total Spend ($M)	**83**	
International Overnight	*4*	*5%*
Domestic Overnight	*48*	*58%*
Domestic Day	*31*	*37%*

Source: Destination NSW (2016)

5.3 Employment Shift-Share Analysis

Shift Share Analysis is a technique used to analyse regional economies where there is a specific interest in the growth or decline in a particularly macroeconomic variable; most often employment. The interest in shift share analysis arises from its ability to partition employment change in a given region into three distinct components:

- Changes in regional employment resulting from changes in the state economy. That is, employment will increase or decrease as a result of broader economic conditions. This component is called the State Shift.
- Changes in regional employment that are a result of broad industry specific trends. For example, an increase in demand for agricultural products will result in an increase in employment in agricultural industries. This component is called the Industry Mix Shift.
- Finally, changes in employment which results from unique regional factors that are not related to broader economic and industry factors. This component is called the Regional Shift, and it is a reflection of the role of endogenous factors influencing the employment performance of the regional economy.

The total employment change in the region is the Total Shift.

Shift Share Analysis is concerned with the 'share' that each of these 'shifts' hold in the total change in employment (the Total Shift).

This relationship is also described by the following expression.

$$\text{Total Shift} = \text{State Shift} + \text{Industry Mix Shift} + \text{Regional Shift}$$

The Regional Shift component is of most interest to those involved in regional and economic development. This is the residual change for the region, after accounting for State Shift and Industry Mix Shift, and is attributed to characteristics or competitiveness unique to the region. This value may be positive or negative, and it is a proxy measure for the role of factors endogenous to the region. When this value is positive it means that the region is generating jobs over and above those due to the State and Industry Shift effects because of the competitive advantage of the region, whereas a negative score indicates that the region has characteristics that are not so conducive to jobs generation.

Table 6: Regional Shift between 2011 -2016 in Wingecarribee LGA for Largest Industries

Industry	Employed persons (2011)	Industry size (2011)	State Shift	Industry Mix Shift	Regional Shift	Total growth in employed Persons (to 2016)
Health Care and Social Assistance	2,088	13%	223	148	85	456
Retail Trade	2,240	14%	240	-195	-196	-151
Accommodation and Food Services	1,619	10%	173	82	119	374
Education and Training	1,426	9%	153	51	-69	135
Construction	1,019	6%	109	162	114	385
Manufacturing	1,846	12%	198	-640	-73	-515
Professional, Scientific and Technical Services	973	6%	104	15	47	166

Table 6 above shows the regional shift (number) in employment growth for all of the ANZSIC 1-Digit industries employing more than 5% of Wingecarribee workforce in 2011. The total growth in employed persons between 2011 and 2016 has been split into the three components: State Shift, Industry Mix Shift and Regional Shift. The Regional Shift component for Retail Trade, Education and Training and Manufacturing was negative during the period. In addition, the result is different at the various levels of the ABS industry classification (ANZSIC). Shift Share Analysis for employment by industry at the ANZSIC Division, Subdivision, Group and Class level for sectors contributing greater than 1% of employment was undertaken. Sectors at each level of analysis where the Regional Shift is positive, indicating growth due to some regional

This indicates that, after controlling for the growth in total employment and employment in these industries at the state and industry level, employment in these sectors grew slower in the region than in the rest of the state.

However, some caution should be exercised in the interpretation of these results as they are based on 'point in time' measures.

advantage, is summarised in Table 7. The first ANZSIC level that regional advantage occurs is in bold.

This indicates some regional competitive advantage in:

- Health Care and Social Assistance
- Accommodation and Food Services
- Construction
- Professional, Scientific and Technical Services
- Other Services
- Transport, Postal and Warehousing,
- Administrative and Support Services, particularly Building and Other Industrial Cleaning Services
- Wholesale trade
- Arts and Recreational Services
- Mining
- Adult, Community and Other Education
- Public Administration (Local Government Administration)
- Non-Metallic Mineral Product Manufacturing (Cement, Lime, Plaster and Concrete Product Manufacturing)
- Other Services (Repairs and Maintenance and Hairdressing and Beauty Services)

Table 7: Regional Shift (%) between 2011 and 2016 for Largest Industries (>1% Regional Employment)

ANZSIC Division (1 Digit)	RS (%)	ANZSIC Subdivision (2 Digit)	RS (%)	ANZSIC Group (3 Digit)	RS (%)	ANZSIC Class (4 Digit)	RS (%)
Retail Trade	(-9%)	*Other Store Based Retailing*	(-10%)	**Clothing, Footwear and Personal Accessory Retailing**	**2%**	Clothing Retailing	10%
Health Care and Social Assistance	**4%**	Residential Care Services	28%	Residential Care Services	28%	Aged Care Residential Services	26%
		Social Assistance Services	7%	Other Social Assistance Services	8%	Other Social Assistance Services	7%
Accommodation and Food Services	**7%**	Accommodation	6%	Accommodation	6%	Accommodation	6%
		Food and Beverage Services	10%	Cafes, Restaurants and Takeaway Food Services	7%	Takeaway Food Services	20%
				Clubs (Hospitality)	8%	Clubs (Hospitality)	9%
Construction	**11%**	Building Construction	25%	Residential Building Construction	28%	House Construction	25%
		Construction Services	8%	Other Construction Services	35%		
Professional, Scientific and Technical Services	**5%**	Professional, Scientific and Technical Services (except Computer System Design and Related Services)	4%	Architectural, Engineering and Technical Services	11%		
Other Services	**13%**						
Transport, Postal and Warehousing	**9%**						
Administrative and Support Services	**42%**	Administrative Services	68%				
		Building Cleaning, Pest Control and Other Support Services	23%	Building Cleaning, Pest Control and Gardening Services	21%	Building and Other Industrial Cleaning Services	36%

Note: Bold text indicates first level where a sector shows Regional Competitive Advantage.

ANZSIC Division (1 Digit)	RS (%)	ANZSIC Subdivision (2 Digit)	RS (%)	ANZSIC Group (3 Digit)	RS (%)	ANZSIC Class (4 Digit)	RS (%)
Wholesale Trade	**5%**						
Arts and Recreation Services	**12%**						
Mining	**53%**						
Education	(-5%)	**Adult, Community and Other Education**	**3%**	**Adult, Community and Other Education**	**3%**		
Public Administration and Safety	(-11%)	**Public Administration**	**9%**	**Local Government Administration**	**10%**	**Local Government Administration**	**10%**
Manufacturing	(-4%)	**Non-Metallic Mineral Product Manufacturing**	**4%**	**Cement, Lime, Plaster and Concrete Product Manufacturing**	**4%**		
Other Services		**Repair and Maintenance**	**9%**				
		Personal and Other Services	**17%**	**Personal Care Services**	**11%**	**Hairdressing and Beauty Services**	**13%**

5.4 Location Quotients

A simple form of analysis that can be used to gain an understanding of a region's competitive advantages[5] is the Location Quotient (LQ), which measures the employment concentration in industry sectors within a regional economy compared with the same sectors across NSW. In most situations, the higher the LQ, the more specialised a region is in that industry relative to the rest of NSW. For the purpose of this analysis, specialisations are determined by LQs, which are used as a proxy measure for those sectors and industries that represent a region's true competitive advantages.

Importantly, while LQs are used in this document for that purpose, they are only a partial measure of those competitive advantages. Hence, they have been considered alongside additional qualitative evaluations and data analysis using Input-Output analysis to arrive at the findings for the region.

Generally, a LQ greater than or equal to 1.25 is taken as initial evidence of regional specialisation and that the industry has potential to be classified as an exporter (i.e. servicing more than just the regional population). The greater the LQ, the higher the level of specialisation. Figure 16 to Figure 19 summarises LQs (2016), size (2016) and growth (2011 to 2016) for sectors (that represent more than 1% of employment in Wingecarribee LGA at each level of ANZSIC Industry Classification.

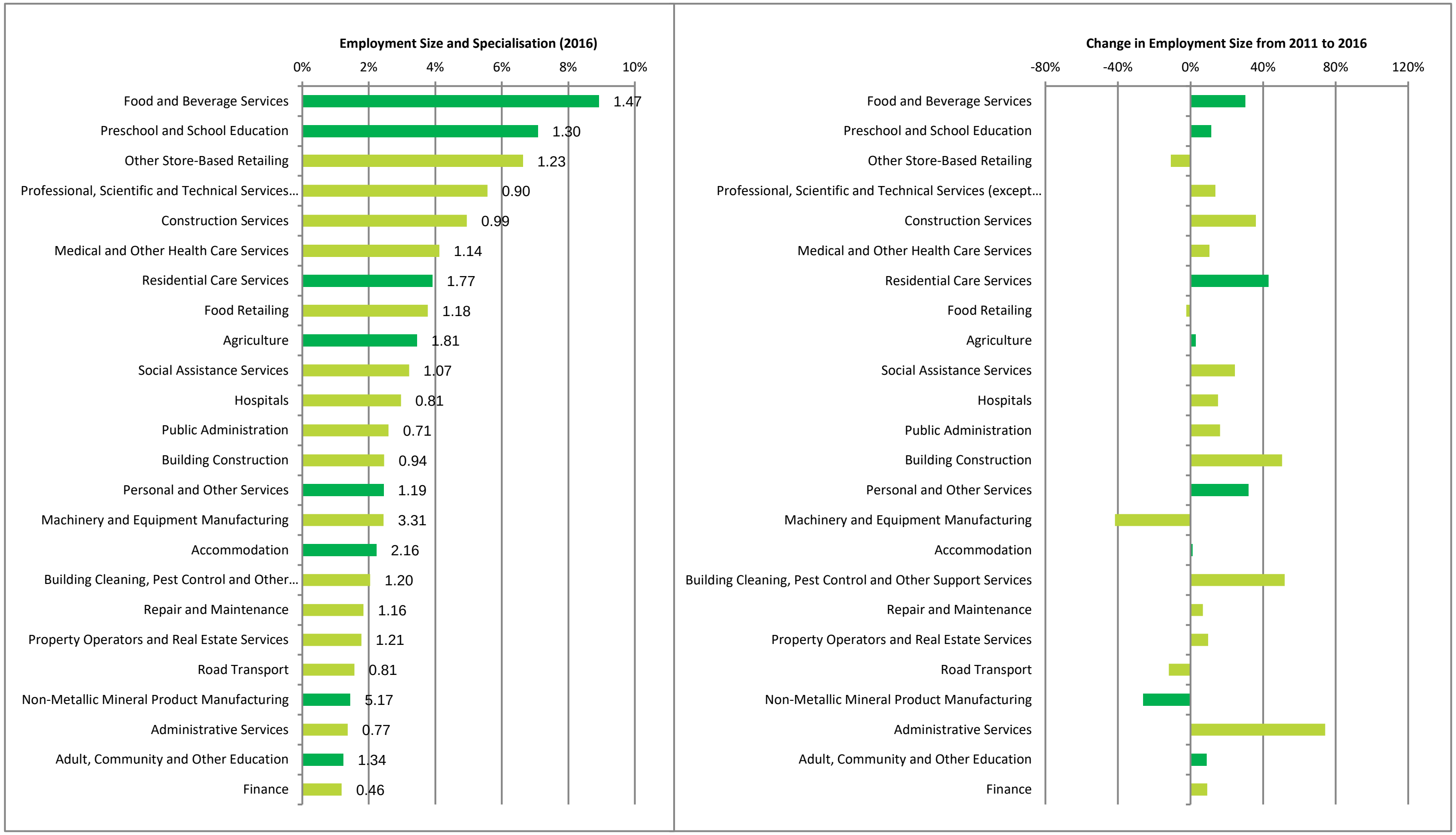
[5] A region's competitive advantage for an industry includes its ability to produce goods and services at a lower cost or differentiate its products from other regions, along with access to external factors which enhance business and operations/minimize risk (Stimson, Stough and Roberts, 2006)

Figure 16: ABS 1 Digit ANZSIC Level Industry Employment Size, Specialisation (LQ) and Change in Employment Size

Source: NSW Department of Premier and Cabinet (2017).

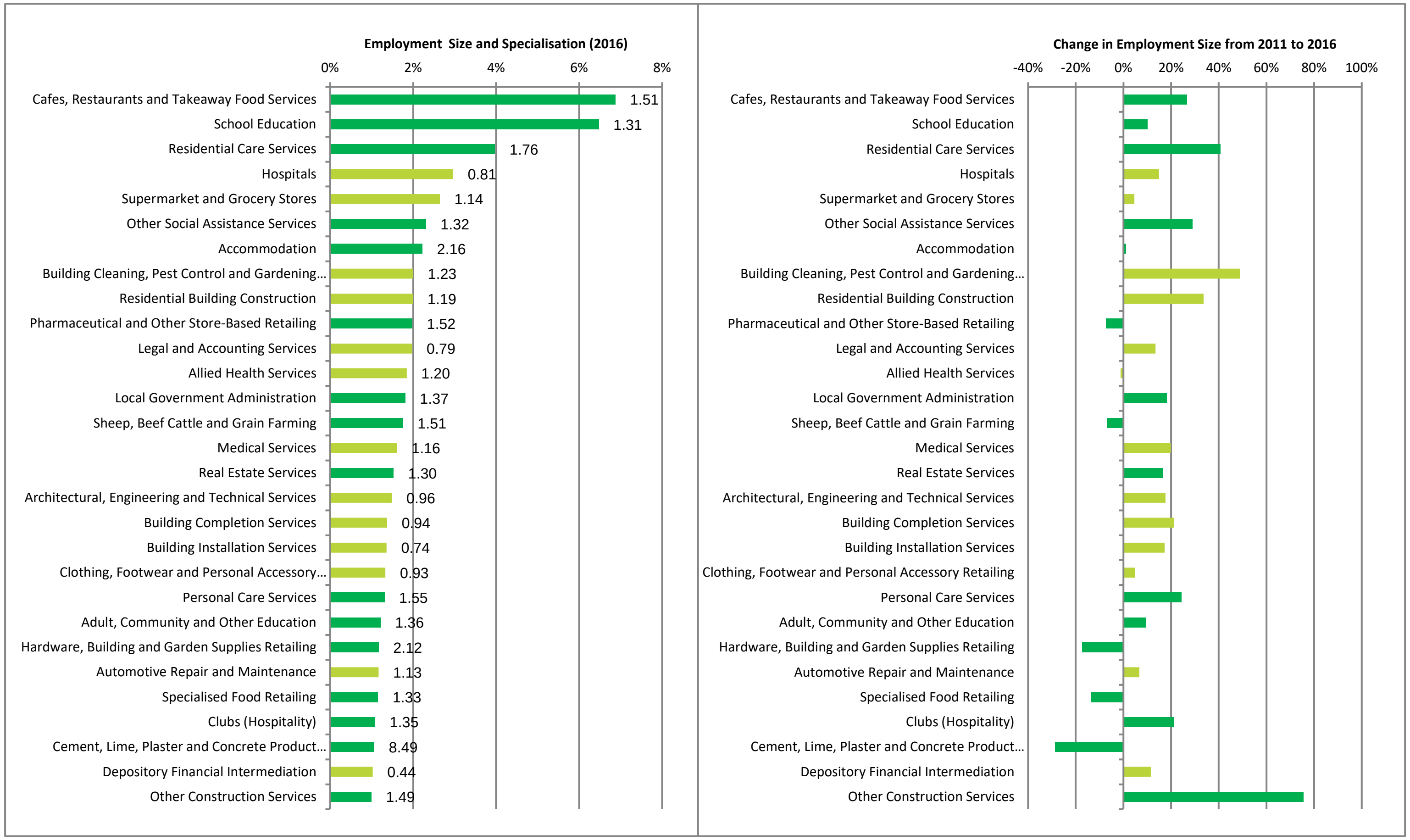
Note: Dark Green represents a sector with a specialisation. All other sectors are in light green. The LQ for each sector is provided at the end of each bar.

Figure 17: ABS 2 Digit ANZSIC Level Industry Employment Size, Specialisation (LQ) and Change in Employment



Source: NSW Department of Premier and Cabinet (2017)
Note: Dark Green represents a sector with a specialisation. All other sectors are in light green. The LQ for each sector is provided at the end of each bar.

Figure 18: ABS 3 Digit ANZSIC Level Industry Employment Size, Specialisation (LQ) and Change in Employment Size



Source: NSW Department of Premier and Cabinet (2017)

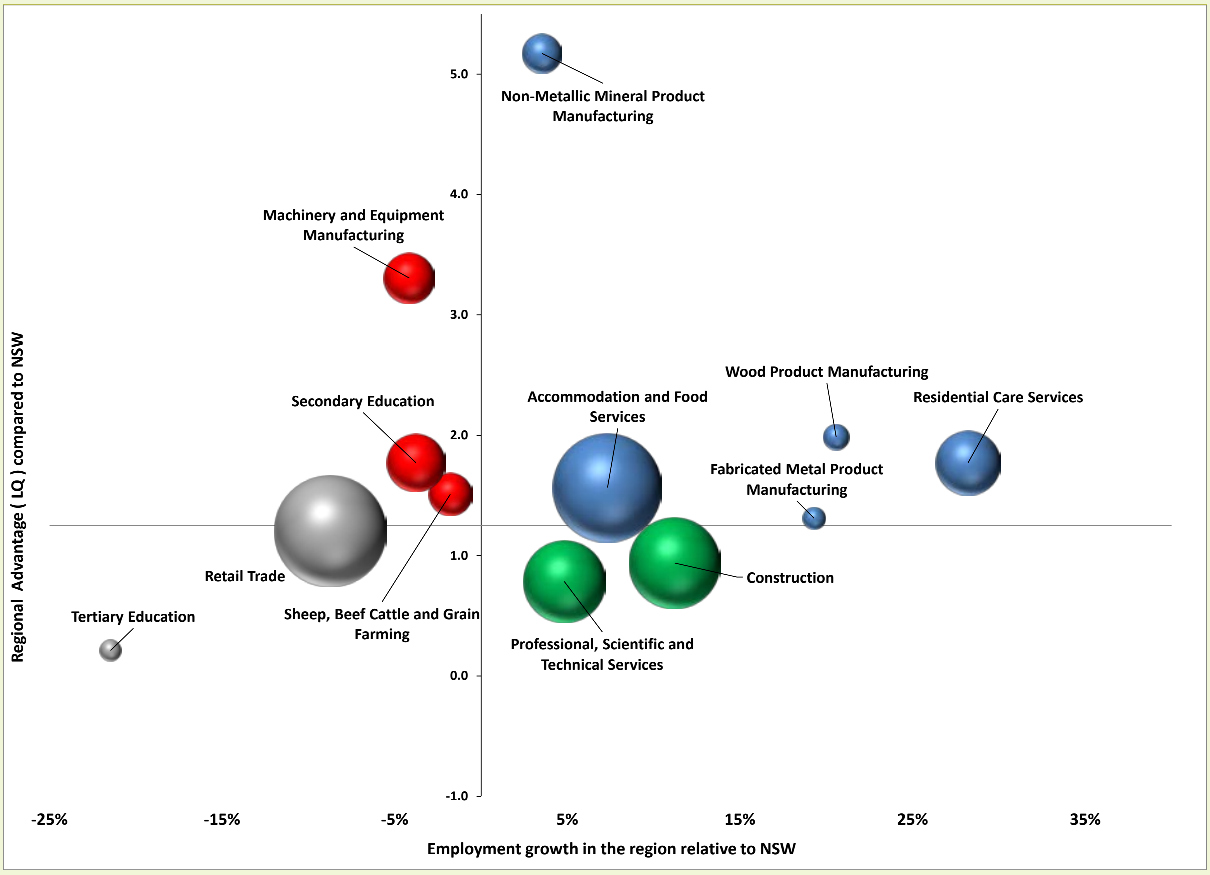
Note: Dark Green represents a sector with a specialisation. All other sectors are in light green. The LQ for each sector is provided at the end of each bar.

Figure 19: ABS 4 Digit Level Industry Employment Size, Specialisation (LQ) and Change in Employment Size

Source: NSW Department of Premier and Cabinet (2017)

epresents a sector with a specialisation. All other sectors are in light green. The LQ for each sector is provided at the end of each bar.

Figure 20: Location Quotients and Employment Growth for Industries in Wingecarribee



Source: CERD 2018.

Figure 20 charts the performance of some of the key industries in the Wingecarribee regional economy. The size of each bubble indicates the relative size of each industry in terms of employed persons in 2016. The vertical axis indicates the LQ for an industry, with those above the line indicating a specialisation when compared to NSW (i.e. a LQ greater than 1.25). The horizontal axis indicates the employment growth between 2011 and 2016 relative to the NSW average employment growth in those industries, with industries to the right of the axis growing faster or contracting slower in the Wingecarribee regional economy compared with NSW.

This analysis shows that the region has a specialisation in a number of manufacturing sectors including Non-metallic Mineral Manufacturing (LQ of 5.17) (which has linkages to Non-Metallic Mineral Mining and Quarrying), Machinery and Equipment Manufacturing (LQ of 3.31), Wood Product Manufacturing (LQ of 1.98) and Fabricated Metal Product Manufacturing (LQ of 1.31) with all, apart from Machinery and Equipment Manufacturing, performing better than NSW between 2011 to 2016.

The region has a specialisation in Residential Care Services (LQ of 1.77) with this sector growing at a much faster rate than across NSW.

Other specialisations in the region include Accommodation and Foods Services, Secondary Education, and Sheep, Beef Cattle and Grain Farming (mainly Beef Cattle) (LQs of 1.56, 1.77 and 1.51, respectively), comprising 11%, 3% and 2%, respectively, of total employment in the region's economy.

Retail Trade, Construction and Professional, Scientific and Technical Services are large sectors in the Wingecarribee LGA. Construction and Professional, Scientific and Technical Services grew between 2011 and 2016 relative to these sectors in the NSW economy. Although the major Retail Trade and Construction sectors each had an LQ less than 1.25, the region has a specialisation in their industry sub-sectors of Pharmaceutical and Other Store Based Retailing, Hardware, Building and Garden Supplies Retailing, Specialised Food Retailing, Other Construction Services and House Construction. The large Professional, Scientific and Technical Services sector in the region possibly reflects the region's residential location as a lifestyle choice, particularly being close to Sydney.

Coal mining is a small sector in the economy (1% of employment) and the region did not show a specialisation in it at the time of the 2016 census. However, between 2011 and 2016 employment in this sector experienced a 105% growth relative to NSW. This likely reflects work associated with the potential approval for the proposed Hume Coal Project. Few sectors in the regional economy did not exhibit growth between 2011 and 2016.

Table 8 arranges specialisation data in Figure 16 to Figure 19 to the ANZSIC Division, Subdivision, Group and Class. Specialisations are in bold. This is helpful as:

- it is possible for a region to have a specialisation in a sector at the ANZSIC Subdivision, Group or Class level but not at a higher level because this specialisation gets diminished as sectors are aggregated in the ANZSIC classification; and
- it indicates what sectors at the Subdivision, Group and Class are responsible for specialisation at higher levels of ANZSIC sector aggregation.

The retail trade sector's specialisation supports other specialisations e.g. pharmaceutical and other store-based retailing supports aged care residential services, while hardware, building and gardening supplies retailing supports tourism as well as the construction specialisations.

While the mining sector is currently a small part of the regional economy, it is noted that there is currently a proposal from Hume Coal to develop an underground coal mine in the Wingecarribee LGA.

Table 8: Industry Specialisation by ANZSIC Classification Level

ANZSIC Division (1 Digit)	ANZSIC Subdivision (2 Digit)	ANZSIC Group (3 Digit)	ANZSIC Class (4 Digit)
Health Care and Social Assistance	**Residential Care Services**	**Residential Care Services**	**Aged Care Residential Services**
	Medical and Other Health Care Services	*Medical Services*	**General Practice Medical Services**
	Social Assistance Services	**Other Social Assistance Services**	**Other Social Assistance Services**
Retail Trade	*Other Store Based Retailing*	**Pharmaceutical and Other Store-Based Retailing**	
		Hardware, Building and Garden Supplies Retailing	
	Food Retailing	**Specialised Food Retailing**	
Accommodation and Food Services	**Accommodation**	**Accommodation**	**Accommodation**
	Food and Beverage Services	**Cafes, Restaurants and Takeaway Food Services**	**Cafes and Restaurants**
			Takeaway Food Services
		Clubs (Hospitality)	**Clubs (Hospitality)**
Education and Training	**Preschool and School Education**	**School Education**	**Secondary Education**
	Adult, Community and Other Education	**Adult, Community and Other Education**	
Construction	*Construction Services*	**Other Construction Services**	
	Building Construction	*Residential Building Construction*	**House Construction**
Manufacturing	**Machinery and Equipment Manufacturing**		
	Non-Metallic Mineral Product Manufacturing	**Cement, Lime, Plaster and Concrete Product Manufacturing**	
Other Services	*Personal and Other Services*	**Personal Care Services**	**Hairdressing and Beauty Services**
Agriculture, Forestry and Fishing	**Agriculture**	**Sheep, Beef Cattle and Grain Farming**	**Beef Cattle Farming (Specialised)**
Public Administration and Safety	*Public Administration*	**Local Government Administration**	**Local Government Administration**

Rental, Hiring and Real Estate Services	*Property Operators and Real Estate Services*	**Real Estate Services**	**Real Estate Services**

* Sectors in Italics indicate no specialisation at this level of disaggregation but are included so that it is clear what Divisions, Subdivision and Groups a sector with a specialisation belongs to.

6.5 Strategy Focus

Industries can be categorised as engines of growth, enabling industries and population serving industries. Engines of growth are generally non-population serving industries that produce goods and services that are traded outside the region (i.e. exported), and have a reliance on local endowments. Engines of growth can also include population serving industries where they are servicing more than just the local population. Enabling industries provide specialised inputs to engine industries (e.g. repairs and maintenance etc.), while population serving industries generally service the retail and personal services needs of the population.

It is the sufficiently large (greater than 1% of employment) engines of growth sectors, that regions have a specialisation in (i.e. LQs greater than or equal to 1.25), that are likely to grow the most in response to government investment to address market failures in regional areas. Notwithstanding, potentially emerging industries (those not showing regional specialisation yet but with potential for growth) may also respond to investment to remove market failures.[6]

Based on the preceding analyses, the key engines of growth sectors in Wingecarribee LGA are considered to be:

- Tourism
- Manufacturing
- Education
- Health/residential care
- Agriculture
- Mining

In addition, Wingecarribee LGA is likely to increasingly become a dormitory area exporting labour to the Sydney region. Hence, actions that increase its attractiveness, liveability and access to Sydney will help the regional economy.

6. Institutional Audit

[6] In a competitive market, the price mechanism (interaction of demand and supply) will work to allocate resources in a way that maximises the welfare to the community. However, impediments to markets such absence of key infrastructure, inappropriate regulation etc. can result in a reduction in community welfare. Investment to remedy these market failures can improve outcomes for the community.

Institutions play a fundamental role in the economic development process, and they can have an enhancing effect or they can have a detrimental effect. Before a regional economic development strategy can be formulated, the local institutional capacity must be evaluated. A successful Economic Development Strategy for the Wingecarribee regional economy is one that capitalises on the institutional strengths that exist in the region. This section lists the key institutions in the Wingecarribee region as well as their:

- role in the economic future of the Wingecarribee regional economy;
- strengths and capacity; and
- important linkages to other institutions.

Table 9: Selected Institutions in the Region

Institution	Role in economic future of the region	Strengths and capacity	Important linkages to other institutions
Wingecarribee Shire Council (WSC)	As the local government, the Wingecarribee Shire Council plays a key regulatory, support and coordination role in the economic future of the region. This role includes the funding of an Economic Development Manager who is appropriately resourced to support, encourage and facilitate economic development in the region. The Economic Development Manager works with the community and has developed and executed strategy consistent with community aspirations	Maintains an active relationship with local businesses and plays a strong leadership role in the region.	• Southern Highlands Chamber of Commerce and Industry • Moss Vale and Rural Chamber of Commerce • Destination Southern Highlands.
Southern Highlands Chamber of Commerce and Industry (SHCCI) **Moss Vale and Rural Chamber of Commerce**	These organisations are the primary business network and advocacy groups in the region; both have a role to play in supporting and representing business interests when it comes to shaping the economic future of the region.	Southern Highlands Chamber of Commerce and Industry provides strong leadership for all sectors, especially tourism. Moss Vale and Rural Chamber of Commerce is active and well supported by its business community with a focus on tourism, lifestyle, business, infrastructure and agriculture.	• Wingecarribee Shire Council • Tourism Authorities and Associations • Destination Southern Highlands • SHCCI is aligned with the Illawarra Business Council.

Destination Southern Highlands	Has a vital role in organising and coordinating events and marketing in the tourism sector.	Receives State Government funding with support from local businesses and WSC.	• Southern Highlands Chamber of Commerce and Industry • Moss Vale and Rural Chamber of Commerce • Wingecarribee Shire Council.
TAFE Illawarra (College in Moss Vale)	TAFE NSW Moss Vale services the towns and villages of the Southern Highlands including Moss Vale, Bowral and Mittagong. It aims to provide innovative training aligned with job opportunities in the region.	TAFE NSW Moss Vale specialises in arts & media, business and administration, communication & media, electro-technology and engineering, general education, human services (aged care and child & family studies), information technology, rural & animal studies and tourism & hospitality. The University of Wollongong Access Centre is also located on campus.	• Strong links to the regional secondary education system and the university sector including the University of Wollongong. • Chevalier College Burradoo has VET training capacity and is looking to develop a partnership with TAFE • Links to major employers including hospital and aged care providers.
University of Wollongong Access Centre (Moss Vale)	Purpose built facility within the grounds of the Moss Vale TAFE, with teaching rooms, seminar room, computer lab, video conference facilities, and a common room with kitchen facilities.	Courses offered include humanities (community, culture and environment, English literature, history, Indigenous studies, sociology), business accountancy, management and education (masters of primary and secondary).	• TAFE Illawarra (College in Moss Vale) • Regional primary and secondary school system (e.g. Chevalier College) • Local businesses requiring employees.
Bowral and District Hospital	Bowral and District Hospital is the acute care public hospital servicing the Southern Highlands region. It provides a direct source of employment as well as playing an important role in attracting residents to the area.	Emergency department, high dependency unit, cardiac arrest unit, a paediatric ward, obstetrics centred on maternity, general medical and surgical beds. Patients requiring complex treatment are referred to South West Sydney.	• Training linkages with University of Wollongong and TAFE • Strong links with the region's aged care facilities.
Berrima Correctional Centre	The Berrima Correctional Centre re-opened September 2016 and accommodates 75	Potential source of low cost labour for implementation of regional development strategies.	• Courts in Southern NSW and Sydney.

	minimum security prisoners.		
Regional Development Australia (RDA) – Southern Inland	Commonwealth and state funded with, responsibilities for economic development of the Southern Inland. Role includes advisory, collaboration, awareness, promotion. RDA – Southern Inland has also produced a Strategic Plan 2017-20.	RDA – Southern Inland maintains good relationships with businesses and organisations involved in economic development across the broader Southern Inland region.	• Wingecarribee Shire Council • Other Southern Inland Councils (Goulburn-Mulwaree, Hilltops, Queanbeyan-Palerang, Snowy-Monaro, Upper Lachlan, and Yass Valley).
NSW Farmers (Region 11, South East NSW)	Represents farmers in south east NSW. Identify policy priorities in south east and channel these to NSW Farmers Head Office for government consideration.	Strong 'grass roots' support with capacity to be heard and considered by the NSW Government.	• NSW Parliament • NSW Government agencies • Landcare groups and other 'grass roots' organisations.

Review of institutions in the region reveals strong capacity, with appropriately trained people and adequate resources. No gaps in institutional coverage were identified. There are appropriate communication channels and linkages between organisations.

7. Infrastructure Audit

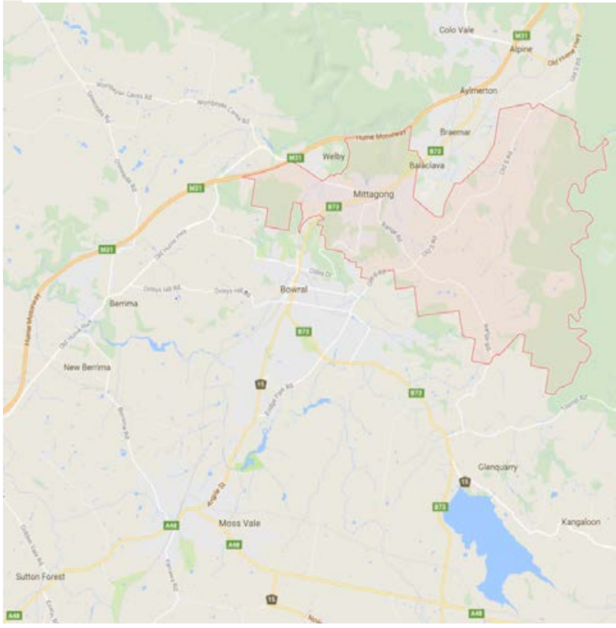
Infrastructure is an important enabler of economic activity and of economic development and growth. Customers and businesses rely upon the physical and organisational structures and facilities that exist in a region, or that link regions to other parts of the country or globe. Before a regional economic development strategy can be formulated, the infrastructure that the region relies upon must be evaluated. An Economic Development Strategy for the Wingecarribee regional economy must take into consideration the opportunities and limitations presented by the infrastructure in the region.

Transport

Highways

The town of Mittagong lies alongside the main north south highway linking Sydney and Melbourne (Hume Highway, M31) just over one hour from Sydney. Bowral and Moss Vale are linked to the M31 via a range of access points including the B73 through Mittagong. These roads are shown on the diagram below.

Figure 21: Roads Linking the WIngecarribee Region



Source: Google Maps, Accessed on 3 December 2017

The Hume Highway is the 'life blood' of the region providing quick access to Sydney for regional exports, the opportunity to commute for work or for visiting the region. With its link to the Federal Highway, the Hume also provides valuable fast access to Canberra and its international freight and passenger airport. Improved access to the Hume Highway at Welby south of Mittagong has been suggested as a catalyst for further economic development.

The Illawarra Highway connects Wollongong, Port Kembla and the Illawarra's industrial base to the Southern Highlands. Accident 'black spot' areas between Albion Park and Moss Vale require urgent attention.

Secondary Roads

Secondary roads link towns and villages within the Wingecarribee region and the region to other parts of NSW.

Local road congestion is an issue in Wingecarribee LGA. Congestion impacts the Bowral CBD, Bowral Road Mittagong and Argyle Street Moss Vale. Upgrade is made more complex by Roads and Marine Services (RMS) ownership of roads that are a local upgrade priority. Further work is required on the upgrade of Station Street Bowral and the Moss Vale Bypass. The Moss Vale Bypass would create a second major crossing of the Main Southern Railway Line to take industrial traffic away from Argyle Street. These upgrades are required to enhance traffic flow and management while improving visual amenity and providing a platform for economic growth.

Parking in Mittagong, Bowral and Moss Value is a problem on weekends with the influx of visitors.

Rail Links

Wingecarribee LGA is serviced by the main North-South rail line linking Sydney and Melbourne. The current service is inefficient and slow for both passengers and freight.

The regional economy would benefit from improved rail links, possibly including electrification of the Sydney to Canberra rail line, with retention of a station in the Southern Highlands or investment to increase the efficiency of the existing Sydney to Canberra line. It has been suggested that policy measures should be put in place to protect a Sydney to Canberra high speed rail corridor.

Underutilised rail stations in the Wingecarribee region provide opportunity for the creation of tourism assets.

Airports

Wingecarribee LGA is well serviced with airport infrastructure. The drive from Bowral to Sydney International Airport takes one and one quarter hours. The proposed Badgerys Creek Airport will be even closer to the Wingecarribee LGA. Canberra Airport, which provides both international passenger services and freight into Singapore, offers a potential export route for local agricultural produce and 'just in time' manufactured goods.

There is a private aerodrome in Mittagong and various private helipads throughout the region. However, these assets are not for commercial use. The region lacks access to a public heliport.

Utilities

Domestic water supply

Mittagong, Bowral and Moss Vale are appropriately supplied with reticulated water for domestic use. The Wingecarribee LGA is a major source of Sydney's drinking water and is serviced by State Water who supply bulk water to the retailer Sydney Water. Water supply is regarded as one of the region's endowments.

Sewerage

Mittagong, Bowral and Moss Vale all have access to sewage treatment plants (STPs). However, upgrade of the STPs in Bowral and Moss Vale is currently required. Stormwater infrastructure requires additional investment to prevent flooding in the region's main towns. STP overflow and pollution from agriculture have the capacity to impact the region and Sydney's drinking water quality.

While Council has set aside funds for Bowral and Moss Vale STP upgrade, additional investment has been suggested for effluent treatment and the creation of effluent reuse systems.

Power/energy

High energy prices are a current feature of the NSW economy. No shortfall in energy supply was identified during consultation. However, strong support was received for further development of the renewables sector in the region. Although, business stakeholders questioned during consultation noted that the Wingecarribee region land is too expensive for land intensive initiatives such as solar farms.

Telecommunications

A problem for many regional areas, the Wingecarribee LGA has significant blackspot problems with mobile phone and internet connections. Areas already connected to the NBN report that the service is slower than expected.

Industry Infrastructure

Agriculture

Infrastructure supporting large-scale agricultural irrigation is not relevant to the Wingecarribee region. The importance of on-farm bores and their ongoing protection from quality and quantity threats was noted during consultation. The regional saleyards at Moss Vale require further upgrade if they are to meet contemporary compliance requirements. There are no reported gaps in local agricultural services.

Industrial estates and land zoned commercial

Industrial and commercial land is expensive compared to other parts of regional NSW. The high value of land for hobby farms acts against its development for industrial and commercial purposes. There is a shortage of low cost, fully serviced industrial land. The cost of land, after taking into account Section 94 contributions is more than $100,000 per lot. Council's LEP limits industrial land supply.

Education Infrastructure

University

University of Wollongong campus in Moss Vale offers humanities, business and education qualifications. Stakeholders note that the University's positioning with TAFE requires long-term clarification and improved cooperation. Stakeholders also suggest expansion of the course offering to include degree based tourism and health/ aged care training.

TAFE

The TAFE College in Moss Vale provides training aligned to job opportunities in the region. Development and delivery of an aged care vocational course has been well received. Further opportunities exist to address the shortage of key trades including plumbing and construction. The present TAFE campus requires both upgrade and expansion.

Primary and Secondary Schools

The Wingecarribee LGA has a large number of both public and private primary and secondary schools. Stakeholders report over-population of public schools within the Wingecarribee region. Prestige private high schools attracting children from outside the region include Chevalier College, Frencham, Oxley College, St. Pauls International College and Southern Highlands Christian School.

Pre-school and childcare

Pre-schools and childcare centres operate across the region. Stakeholders report a shortage of pre-school spaces. The cost of childcare has also been identified as an issue.

Health Infrastructure

Hospitals

The Bowral and District Hospital is the largest public health facility in the Wingecarribee Region. Planning for the hospital's redevelopment has been completed and construction is due to start. The State Government has committed $50 million to redevelopment and priorities include inpatient (overnight) accommodation for all services, surgical services, maternity and paediatric services (South West Sydney Local Health District website, consulted 2 November 2017 https://www.swslhd.health.nsw.gov.au/bowral/redevelopment.html).

The region is also serviced by Southern Highlands Private Hospital which is operated by Ramsay Health Care.

Stakeholders identify palliative care and the development of a palliative care centre in the Wingecarribee LGA as being a high priority for economic development.

Aged care

The Wingecarribee region has a core competency in aged care and aged care services are well supplied within the region. The need for additional dementia care capacity was identified through consultation.

Sporting and cultural infrastructure

Recreation and sporting facilities

The Wingecarribee LGA is a long established region with ample recreation and sporting facilities. Some of these facilities are at the end of their economic life and require refurbishment and upgrade. There is opportunity to make better use of the underutilised sporting fields in Moss Vale and equip them with modern amenities. An indoor basketball facility is 'shovel ready' and could be used for multiple purposes including cultural and entertainment events.

The Wingecarribee region is an attractive area for equestrian events and offers pony clubs, polocrosse, polo, vaulting, trail rides, show jumping and dressage. Additional investment in supporting infrastructure, in the form of an equestrian centre has been proposed.

Cultural and entertainment

Cultural and entertainment infrastructure requires investment to upgrade structures and services in line with modern expectations and changing demographics. A new arts precinct might include conference and hotel facilities, a theatre space, a music auditorium (with different acoustic requirements to a theatre space), a regional art gallery, rehearsal facilities, studios and workshops, exhibition space (art, sculptures, technology) and capacity for large-scale concerts, festivals and events (300 seat plus), parking, food/beverage, ticketing and retail. A 300 seat auditorium is needed to access regional touring acts/events.

Accommodation infrastructure

There is an accommodation shortfall in the Wingecarribee region. The region's largest hotel has 75 beds and the region is limited to a single five star hotel. As a consequence, event organisers find it difficult to cater for the growing wedding industry, corporate events and conferences of any scale. Commercial accommodation providers are somewhat hamstrung by solid weekend bookings and limited bookings mid-week.

In addition, there is a shortage of low cost housing for workers including staff in the hospitality and aged care sectors.

8. Endowments

Endowments are tangible resources and strengths that a regional economy possesses and can capitalise on. Physical endowments include agricultural land, climate, mineral and water resources, aesthetic appeal and location relative to major trade routes. Built and institutional endowments include hospitals, educational facilities and heritage buildings, as well as public agencies and business networks, which may be the result of government decisions and/or private sector decisions. Human endowments include abundant labour, specialist skills and entrepreneurship. Economic principles suggest that endowments play a key role in the economic development of a region.

The Centre for Economic and Regional Development in its Regional Economic Enablers Report (2016) found that:

> *"the future of individual regional economies is inexorably linked to their natural endowments, and endowments and attempts to retain or establish industries without an underpinning endowment are unlikely to succeed".*

Thus, a region seeking to encourage economic development needs to concentrate on the growth enablers of endowment-based industries, as well as building local leadership capacity in order to capitalise on the opportunities that the region's endowments present.

Physical endowments

Topography, Water, climate and soil

The Wingecarribee LGA is a highly regarded rural locality due to its temperate climate, rich soils, proximity to Sydney and its reasonably reliable rainfall. The most common genuine rural land use in the LGA is Beef Cattle Farming. The next most significant agricultural activity is Horse Farming, Dairy Cattle Farming, Mushroom Growing and Nursery Production (Outdoors), cool climate vineyards and Vegetable Growing (Outdoors). There is a significant number of smaller rural home sites and hobby farms.

Natural Resources

The region is also endowed with a range of nature resources and features. The LGA is rich in biodiversity with large areas of high conservation value including part of the World Heritage Greater Blue Mountains area and two declared wilderness areas. Environmental features include cold climatic conditions, rugged topography and significant areas of state forest, national park and other protected lands that form part of the Sydney water catchment area. Eastern parts of the LGA are bounded by the Illawarra escarpment and Morton National Park. The north abuts Nepean and Avon dam catchments and is rugged eucalypt bushland. In the west, the Wollondilly and Wingecarribee rivers flow through deep sandstone valleys which form part of the Warragamba dam catchment. Southern reaches of the LGA are bounded by

Uringalla Creek and comprise sandstone plateau dissected by deep gorges.

Location to Sydney, Canberra and Wollongong

Wingecarribee LGA is strategically located at the geographic centre of Sydney, Canberra and the Illawarra. This enables accessibility of residents and businesses to the social and business infrastructure associated with major cities, while enjoying lower housing and land prices. This proximity is credited with the region becoming a popular destination for retirees and people wishing to leave large cities for a lifestyle change, while still maintaining access to the benefits of major cities. Wingecarribee is a 1 hour drive to the proposed Badgerys Creek airport.

The region's location, enables Wingecarribee LGA to act as a dormitory area, exporting labour to these major cities, particularly Sydney.

Mineral resources

Wingecarribee LGA is endowed with access to commercial coal resources. The LGA is located in the Southern Coalfield of NSW. The main coal seam of economic significance in the region is the Wongawilli seam. Historically, the Berrima Colliery has operated in the region from as far back as 1867, although it was mothballed in 2013, permanent with closure underway. Hume Coal is currently proposing an underground coal mine development in the Sutton Forest area. Coal mines can provide a significant contribution to regional economies and are desirable for regional economic development subject to them having acceptable environmental, social and cultural impacts.

Lifestyle benefits

Lifestyle is an important strength of the region. The region offers a rural lifestyle with close proximity to the major cities of Sydney, Canberra and Wollongong. Relatively affordable house prices, small community feel, numerous rural towns and villages and natural beauty were all referred to in consultations. All of these factors make Wingecarribee LGA a liveable region and attractive place to raise a family.

Built and institutional endowments

Aboriginal Heritage, Historic Heritage Towns and Villages

The region has a rich Aboriginal and European heritage. The original inhabitants of the area were the Gundungurra and Tharawal Aboriginal people and preservation of Aboriginal heritage is significant. Wingecarribee LGA is predominantly rural in character with agricultural lands separating towns and villages characterised by unique landscape and aesthetic appeal. The main towns are Bowral, Moss Vale, Mittagong and Bundanoon. As well, there are smaller villages including Hill Top, Yerrinbool, Colo Vale, Robertson, Berrima, New Berrima, Exeter, Burrawang, Penrose, Willow Vale, Alpine, Wingello, Sutton Forest, Fitzroy Falls and Balmoral Village. These towns and villages each have their own unique character and history and are within an easy drive of each other.

Proximity to Sydney, Badgerys Creek and Canberra Airports

Canberra Airport is located approximately one hour and 15 minute drive from Bowral. The arrival of international flights (with freight capacity) to and from Canberra Airport provides Wingecarribee LGA with expanded access to international markets. The realisation of direct flights to Asia and New Zealand will grow inbound tourism and facilitate the export of business services, produce and goods.

Sydney airport is a 1.5 hour drive from Wingecarribee and also provides access to the Wingecarribee LGA for inbound international tourism.

The proposed Badgerys Creek airport will be approximately an one hour drive from Wingecarribee region and also presents opportunities in relation to expanded access to international markets and employment opportunities.

Hospitals

Bowral & District Hospital is a major 94-bed Rural Hospital which provides a wide range of services, including general medical, obstetrics and gynaecology, paediatric, surgical, orthopaedics, ophthalmology, geriatric and emergency services. It is part of the South Western Sydney Local Health District, Bowral has close links with a range of Sydney's teaching and referring hospitals including Liverpool, Fairfield, Bankstown and Campbelltown hospitals.

Planning for the Bowral & District Hospital redevelopment is currently underway with enabling works started in 2017. The State Government has committed $50 million to the hospital and this funding will be used to address the local community's health care needs. South Western Sydney Local Health District has identified a number of clinical services to be addressed through the hospital redevelopment.

The top priorities are:

- Inpatient (overnight) accommodation for all services
- Surgical services
- Maternity and paediatric services.

As well as enhancing the liveability of the region, with an increasingly aging population and regional specialisation in aged care, the hospital is an important regional resource for aged care sector.

Road and Rail Access

The region is serviced by both road and rail access to the major cities of Sydney, Canberra and Wollongong. The Hume Highway (M31) provides quick access to Sydney and Canberra for regional exports, the opportunity to commute for work or visit the region for short breaks. The region is linked to Wollongong via the Illawarra Highway.

Wingecarribee LGA is serviced by the main north south rail line linking Sydney and Melbourne.

While there are limitations to these linkages (e.g. the rail needs electrification and better services for both passengers and freight) they are important endowments for the region that may be able to be leveraged to create benefits for the regional economy.

Education Facilities

The Wingecarribee LGA has a large number of both public and private, primary and secondary schools that attract children from outside the region. It also has a University of Wollongong Campus and TAFE. These endowments provide opportunities to address skills shortages in the region and retain and attract youth.

Local Institutions

The Wingecarribee LGA is well supported with a Southern Highlands Chamber of Commerce and Industry (SHCCI) and the Moss Vale and Rural Chamber of Commerce. In addition, the Council has strong relationships with businesses and economic development institutions.

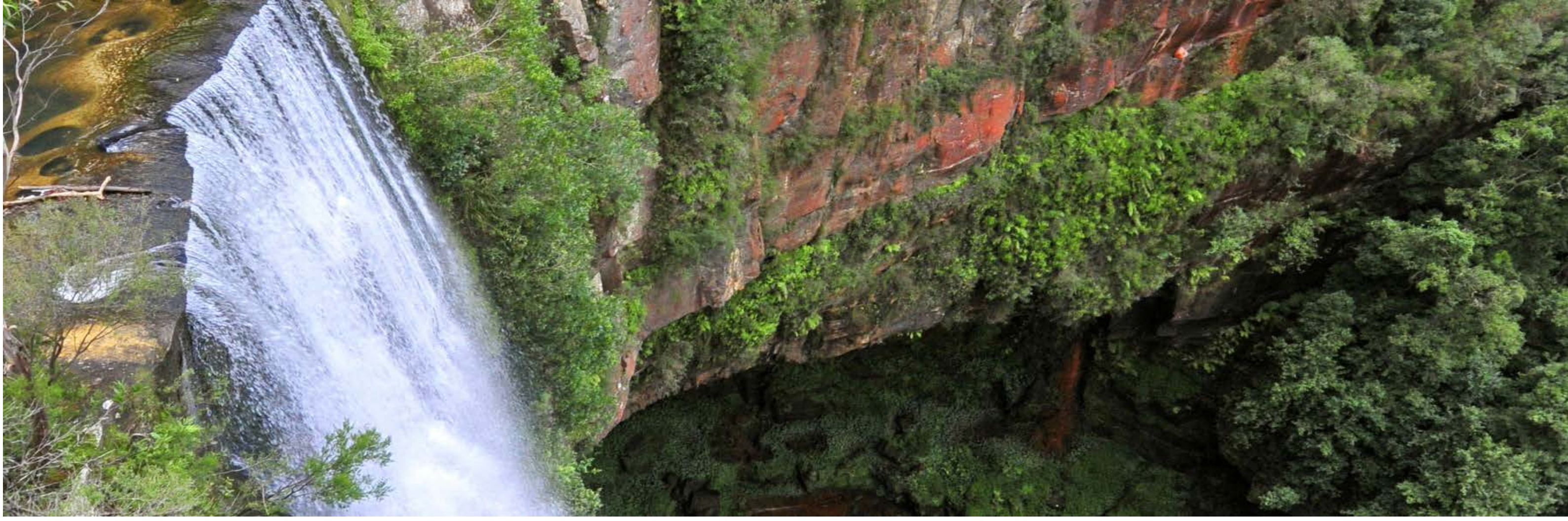
Human endowments

Labour supply

As identified in 'Education & Employment', the region has a substantial labour supply that well exceeds the internal demand for labour. Relative to Regional NSW, Wingecarribee LGA has a lower unemployment rate but a higher proportion in part-time work. Hence there is likely to be spare capacity in the labour force. Ongoing skills training is required to maximise the potential of this resource.

Specialist skills

As noted in 'Education & Employment', the region has a relatively high proportion of its workforce working in skilled occupations as Managers, Professional and Technicians and Trades compared to Regional NSW. In addition, the region has higher proportion of people who completed Year 12 or equivalent and a higher proportion of people holding formal University qualifications (Bachelor or higher degree; Advanced Diploma or Diploma).



9. Core Competencies

Core competencies represent the ability of a region to organise its resources (land, labour and capital) in order to produce goods and services, and they represent the economic strengths and specialisations of the region. Competencies refer to the set of skills, technology, resource applications and management unique to that region. Those competencies are identified both through the results gained from the data analysis that have been carried out and through qualitative assessments conducted through the engagement of key regional stakeholders.

The analysis of the region's core competencies involved an assessment of seven sectors of regional specialisation using 34 core competence criteria used by Roberts and Stimson (1998). The selected competency criteria were ranked as either Strong (S), Average (A) or Week (W). The ranking involved a subjective assessment, based on information derived from consultations, background reports, data analysis and industry knowledge. A weighting was then applied to the three selected competency criteria (a performance weighting score of 3 allotted to strong, 2 to average, and 1 to weak).

Next, the column score for each sector industry was summed, then divided, against a possible maximum score for each industry to derive a relative index of strengths and weaknesses for each sector. The maximum relative index score for any industry sector is 1. The row score for each core competency can be derived in a similar manner. From this analysis it is possible to develop a regional core competency index.

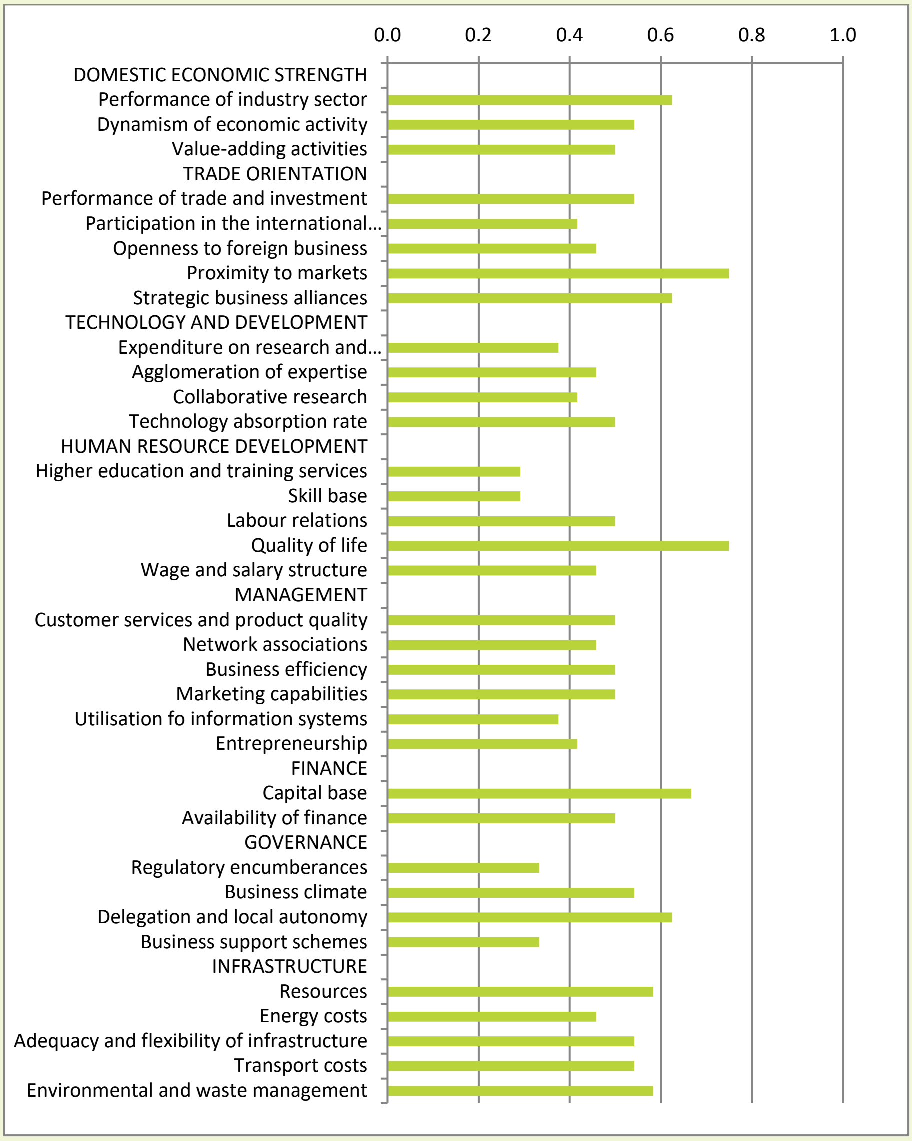
The regional core competency index shown in Figure 22 indicates that the region has significant strengths in proximity to markets, quality of life and capital base of key sectors and value adding.

The skills base of the region and access to higher education and training services particularly as it relates to the key industries of specialisation in the region, was identified as a weakness. This indicates that either:

- The subjective nature of the core competency affected scoring heavily; or
- While educational attainment in the LGA is high, there is a lack of targeted training and tertiary education services (in comparison to Greater Sydney)

Local, state and Commonwealth government regulations and processes were also viewed somewhat unfavourably.

Figure 22: Regional Core Competency Index



Source: AgEconPlus and Gillespie Economics based on consultations

Economic Future of the Region

Long term economic vision for the region

Regional economic development can take a variety of forms. The objectives of economic development are usually measured in terms of population growth, GRP growth, decreases in unemployment rates and improvements in quality of life. These measures are important for regional economic development. However, the Strategy for Wingecarribee region should be a reflection of the community's aspirations.

A long-term, economic vision for Wingecarribee, building on the vision in the Community Strategic Plan is:

> *Wingecarribee will be a region with sustainable development underpinned by its high liveability attracting residents and businesses and making strategic use of its unique endowments to grow the visitor economy and building on its strengths in agriculture and manufacturing, education and health care.*

This will involve steady population growth and attracting new residents to the region. While the region is increasingly a dormitory area for Sydney, exporting its labour, it is important that these new residents are bringing skills into the region and that the region can also expand its internal employment opportunities.

For this economic vision to be sustainable, it also must be based on enhancing and growing the existing economic strengths of the region. In the Wingecarribee LGA, this would involve leveraging the land capability, natural resources, location to Sydney, Canberra and Wollongong (including the road and rail access and Sydney, Badgerys Creek and Canberra airports), mineral resources, lifestyle advantages, towns and villages, education facilities, hospital, labour supply and specialist skills.

The Wingecarribee Strategy must therefore set out a road map for the region in the context of these endowments and the demographic and economic trends of the region.

Economic risks & opportunities for the Wingecarribee regional economy

Risks facing the region

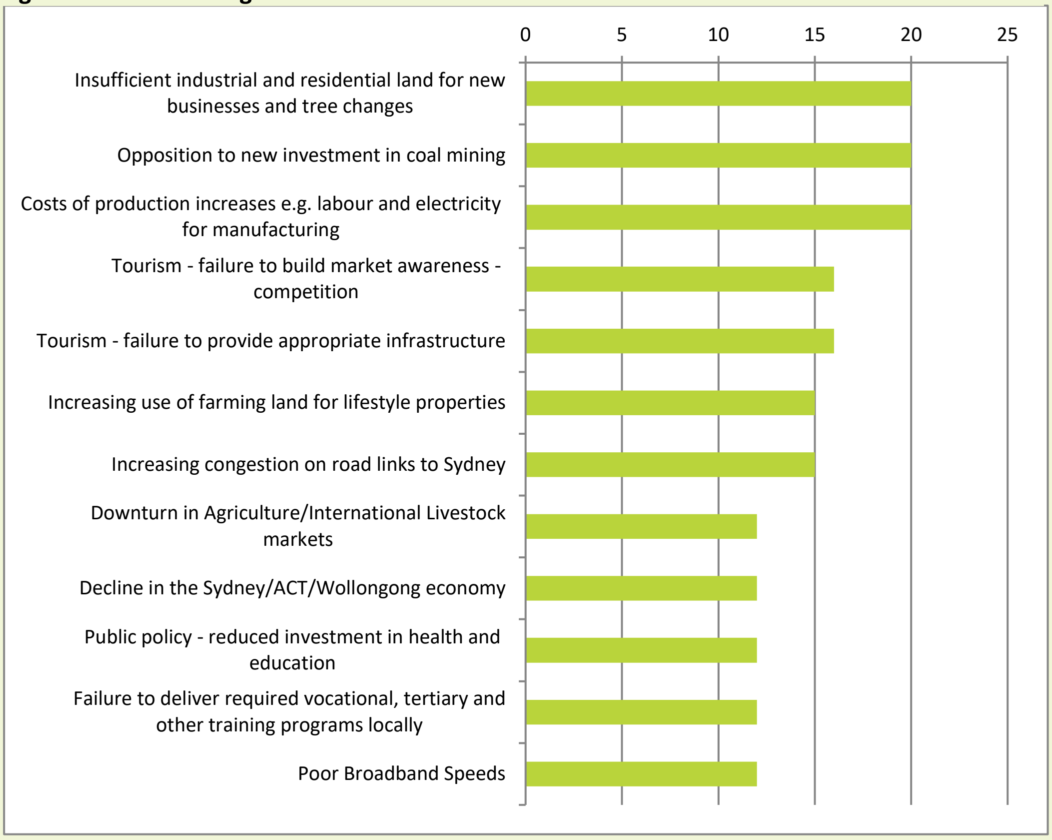
In developing a regional economic development strategy it is important that due attention be directed to identifying and understanding the implication of regional risks.

Risks identified during the consultations included those within the following broad categories:

- economic risks (relates to the impact of global markets, trade factors, inflation or transportation disruptions);
- production risks (relates to access to resources, profits, production costs, changes in energy prices, labour disruptions, production process failures);
- governance risks (relates to sovereign risk [not just domestic], regulatory environment);
- environmental risks (relates to resource depletion, pollution, natural and /or man-made disasters); or
- societal risks (relates to public liability claims against business, community attitudes toward development and pressure groups).

Figure 23 shows the relative impact of the risks for the region identified during consultations. This was generated using a 'likelihood and severity of the consequences' risk matrix approach. The figure indicates that economic risk associated with insufficient industrial and residential land, costs of production for manufacturing and failure to provide sufficient tourism infrastructure and build tourism market awareness pose the greatest risks to Wingecarribee LGA economy. In addition, because coal mining is known to provide significant economic activity to regional economies, opposition to the proposed coal mine poses a risk in terms of foregone potential economic activity to the region. Notwithstanding, any coal mining proposal would need to minimise, mitigate or compensate for any residual deleterious effects so as not to have impacts on other parts of the regional economy.

Figure 23: Relative Regional Risks

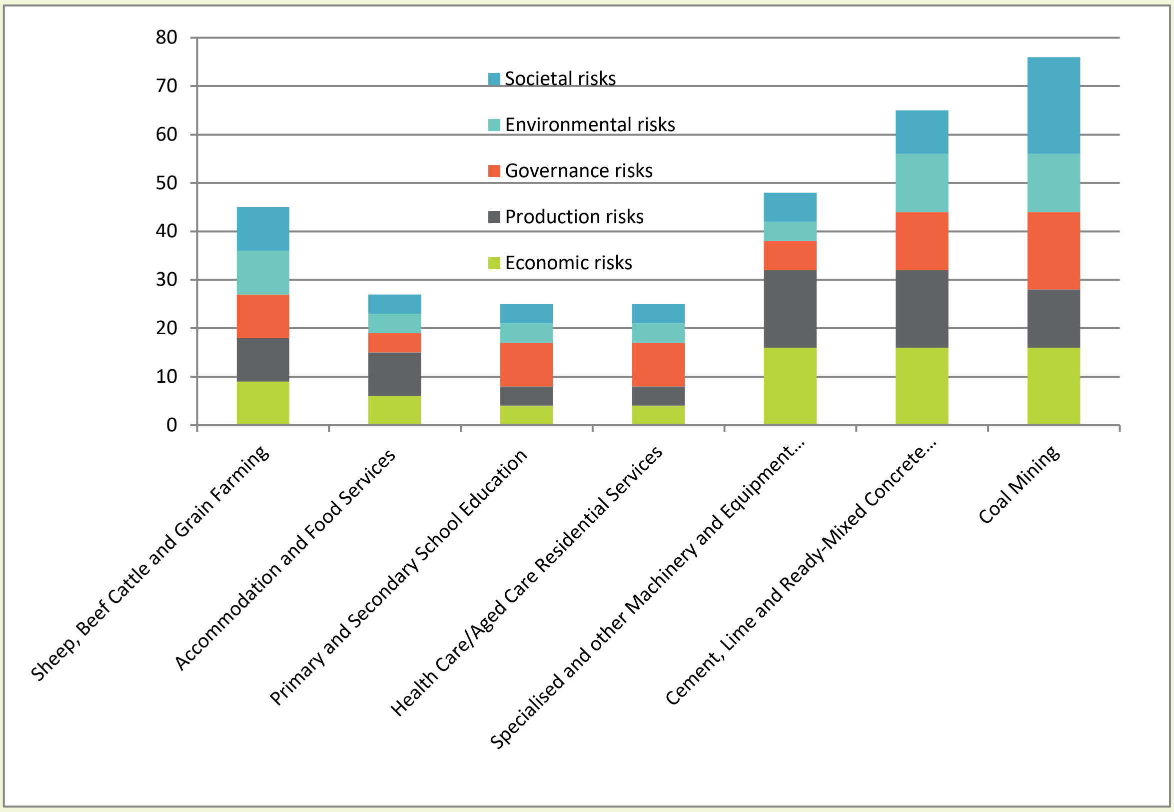


Source: AgEconPlus and Gillespie Economics

Figure 24 shows the risk impacts on each of the main regional specialisation sectors based on consultations and analysis. The figure shows Coal Mining faces the greatest risks followed by Cement, Lime and Ready-Mixed Concrete Manufacturing and Specialised and Other Machinery and Equipment Manufacturing. The Health Care/Aged Care Residential Services Sector and Primary and Secondary School Education faces the least risks.

Risk varies between sectors, with economic risk being important to Manufacturing and Coal Mining. Production Risks is significant for Manufacturing while governance risk is important to Coal Mining, Cement, Lime and Ready-Mixed Concrete Manufacturing, Primary and Secondary School Education and Health Care/Aged Care Residential Services. Environmental risk is most significant for Coal Mining, Cement, Lime and Ready-Mixed Concrete Manufacturing and Sheep, Beef Cattle and Grain Farming. Societal Risk is most significant for coal mining.

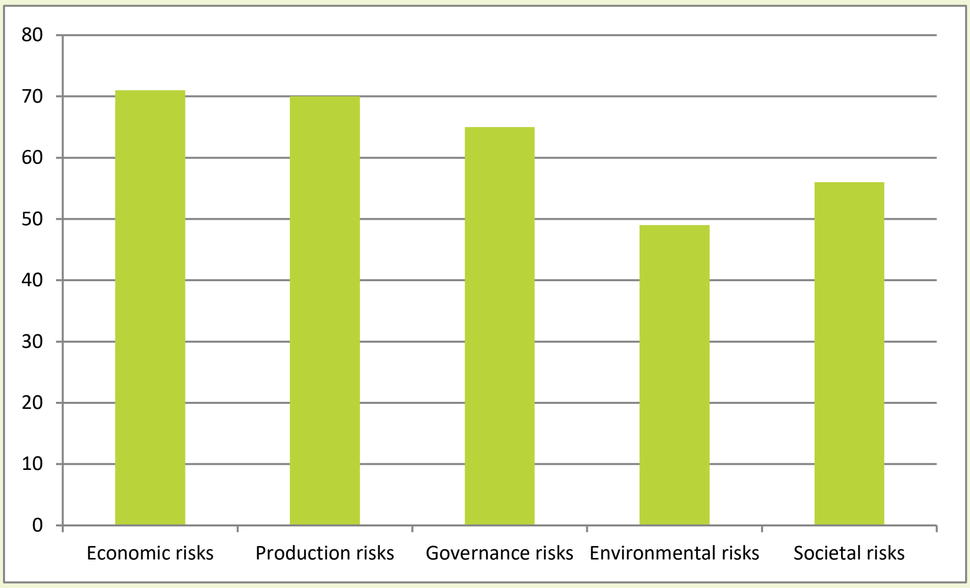
Figure 24: Industry Risks Impact for Wingecarribee LGA



Source: AgEconPlus and Gillespie Economics

Figure 25 indicates that the main category of risk facing the key sectors of specialisation in the regional economy are economic and production risks, as well as governance risks - both in terms of regulation of Coal Mining and Cement, Lime and Ready-Mixed Concrete Manufacturing but also policy decisions around Education and Health Care.

Figure 25: Main types of regional risks for specialisation sectors



Source: AgEconPlus and Gillespie Economics

Economic opportunities

Based on the local endowments, core competencies, inter-industry relationships and risks in Wingecarribee economy, the following economic opportunities have been identified for the region:

Table 10: Economic Opportunities for Wingecarribee

Opportunity	Relevant endowments and core competencies	Relevant sector (s)
Enhance the liveability of the Wingecarribee region to attract in-migration and visitors	• Natural resources – rural landscapes, national parks, waterfalls and waterways • Location close to Sydney, Wollongong and Canberra • Local lifestyle benefits • Historic heritage and villages • Airports – Sydney, Canberra and Badgerys Creek • Hospitals – public and private • Education facilities • Road and rail linkages • Manufacturing • Local institutions • Capital base	• Retail trade • Arts and recreational services • Public administration and safety • Private administrative and support services • Accommodation and food services • Construction
Facilitate the development of agriculture as a key strength and specialisation and grow the visitor economy based on food, wine and events	• Topography, climate, water and soil • Natural resources – rural landscapes, national parks and waterways • Location close to Sydney, Wollongong and Canberra • Road and rail linkages • Education sector (family visits)	• Beef cattle farming • Horse farming • Accommodation and food services • Retail particularly food retailing and takeaway food services • Rental, hiring and real estate services • Education and training

	• Labour supply • Infrastructure • Capital base	• Construction
Grow the education, health and aged care sectors	• Location close to Sydney, Wollongong and Canberra • Education – university, TAFE and prestige private schools • Aged care residential services • Hospitals and allied sectors • Labour supply • Finance (capital base) • Human resource development	• Education and training - school and adult education • Health care and social assistance • Residential care • Hospitals • Public admin and safety • Professionals • Scientific and technical services • Admin and support services
Strengthen the region's manufacturing base and monitor opportunities in the mineral resource sector	• Manufacturing cluster • Mining and construction machinery manufacture • Cement and lime manufacture • Mineral resource endowment • Location close to Illawarra and Port Kembla • Road and rail linkages • Infrastructure • Human resource development	• Road freight transportation • Warehousing • Non-metallic mineral mining and quarrying • Non-metallic mineral processing • Coal mining • Construction

10. Economic Development Strategies for Wingecarribee

Regional Economic Development Strategies are high level plans that identify actions required to achieve the long term economic vision for the region. For these strategies to be executable and sustainable, they must be based on the economic strengths and specialisations of the region, such as local endowments and core competencies. These strategies must also be developed in the context of the likely risks facing the region, and be adaptable and resilient enough to withstand these risks.

Four economic development strategies have been prepared for the Wingecarribee region:

1. Enhance the liveability of the Wingecarribee region
2. Facilitate the development of agriculture as a key strength and specialisation and cultivate the visitor economy based on food, wine and events
3. Grow the education, health and aged care sectors
4. Strengthen the manufacturing base and monitor opportunities in the mineral resource sector.

Enhance the liveability of the Wingecarribee region

Strategy overview:

This has been identified through the consultations with key regional stakeholders as an over-arching strategy and outcome to meet the strong aspirations of the community to be maintained and enhanced for the Wingecarribee region.

While the Wingecarribee region is favourably located close to the Sydney metropolitan centres and markets, it is also able to offer its residents an attractive lifestyle with a pleasant built environment, rural landscapes, national parks, waterfalls and waterways. To maintain these core advantages and retain its appeal for residents and visitors, and to attract in-migrants (including professionals and telecommuting) and grow tourism, it must continue to invest in actions and infrastructure that enhances regional liveability.

A more liveable region provides a cornerstone from which all other strategies are delivered. A liveable region is one that also attracts visitors and builds the local tourist economy. A liveable region draws people to the area for education, health and aged care. A liveable region is one where manufacturers will choose to locate their businesses and add to the strength of the region's economy. Community priorities to enrich the liveability of the region include improvements in local traffic flow, rail infrastructure, utilities and energy, digital connectivity, sport, recreation and cultural facilities.

A liveability region is one that offers enhanced employment opportunities.

Potential benefits of enhancing the liveability of the region:

- A more desirable place to live which sets up a virtuous cycle of growth and opportunity.
- Additional employment opportunity for young people in the region.
- A highly liveable region will attract in-migration and help build the visitor economy.

Challenges and other considerations:

- The strategy may be seen as a low priority when compared to traditional industries with more immediate and obvious job creation potential.
- Many of the initiatives require large amounts of capital and this may make funding of the entire strategy difficult.

Infrastructure priorities:

- **Agricultural infrastructure:** including 'fit for purpose' marketing and transport infrastructure.
- **Tourism infrastructure**: Prepare and communicate pre-feasibility material on viability of a new larger scale hotel as part of proposed arts precinct. Create a multi-purpose equestrian facility in the Wingecarribee region. Develop an indoor basketball facility for regional competitions and cultural events. Provide planning support for a new arts and conference precinct with hotel facilities, theatre space, and room for large scale events and festivals.
- **Local road infrastructure**: to enhance traffic flow and management while improving visual amenity for residents and providing a platform for economic growth.
- **Improved passenger rail services**: to better connect the region to Sydney and Canberra and provide additional opportunities for residents to commute for employment.
- **Sewerage infrastructure**: including planned STP upgrades, effluent reuse and stormwater management to enhance the liveability of the region.
- **Digital connectivity**: fast and reliable internet access (NBN rollout) as well as improved mobile reception in parts of the Wingecarribee region.
- **Sport and recreation infrastructure**: including upgrade of sporting fields, basketball facilities and the creation of a multi-purpose equestrian space.

- **Culture and entertainment infrastructure**: a new arts precinct with conference and hotel facilities, a theatre space, a music auditorium, regional art gallery space, arts conference precinct, rehearsal facilities, studios, workshops, exhibition space and capacity for large scale festivals and events.

Implications for stakeholders:

- The strategy will require close coordination between operators of the new infrastructure funded under the plan, existing players and Wingecarribee LGA Council.
- Care will be needed to ensure that any additional people attracted to the region through successful execution of this strategy do not compromise the lifestyles of current residents.

Facilitate the development of agriculture as a key strength and specialisation and grow the visitor economy based on food, wine and events

Strategy overview:

The Wingecarribee region's agriculture sector is a regional strength and existing specialisation producing high quality fresh horticultural produce and beef cattle. There is a growing opportunity to service and value add this produce locally, grow the cool climate wine, distilling and brewing sectors and meet the needs of an expanded visitor economy. A productive and profitable agricultural sector will explore new local marketing opportunities. Two types of market growth are proposed through this strategy – further development of the niche produce sector including horticulture and specialty goods and improved livestock marketing through upgraded and fully compliant livestock saleyards. Ongoing investment in the saleyards is needed to meet future compliance requirements and to capitalise on the loss of infrastructure in other parts of southern NSW.

The Wingecarribee Shire visitor economy has the potential for growth. It includes, but is not limited to, day trips, short stays, corporate conferences and private events such as weddings. Growth in all these sectors is possible. Access to airports provides opportunity to attract international visitors. Prestige private boarding schools provide an introduction to the area for the parents of students and there is opportunity to lengthen their visits to the region. Partnerships between schools and food, wine and accommodation providers may be possible. Wingecarribee Shire is an attractive area for equestrian events. With appropriate infrastructure, the Wingecarribee Shire could be part of the equestrian circuit which would further strengthen the regional visitor economy. Underutilised assets such as rail stations have scope for redevelopment as tourism assets.

Potential benefits of growing the visitor economy:

- Increased tourism spend leading to more jobs for local residents and profits for local businesses.
- Increasing the quality of life of current residents through improved recreational and cultural activities and facilities in the region.
- Improving communications between different sectors of the economy by strengthening relationships, leading to cross-selling opportunities.
- Increased visitation may lead to more people choosing to relocate permanently to the region, bringing new wealth and increasing the breadth and depth of the workforce.

Challenges and other considerations:

- Difficulty in convincing businesses in the region that they are not competing with each other. Instead, they must see the Wingecarribee LGA regional economy as competing with other regions in Australia.
- Promoting all attractions in the Wingecarribee LGA whilst maintaining authenticity with visitors e.g. avoiding the perception that hosts are acting as sales representatives for other entities.
- Engaging the retail and private school sectors with this strategy.

Infrastructure priorities:

- **Sport and recreation infrastructure**: including upgrade of sporting fields, basketball facilities, and the creation of a multi-purpose equestrian space. Improved sport and recreation infrastructure will attract visitor participants and spectators.
- **Culture and entertainment infrastructure**: a new arts precinct with conference and hotel facilities, a theatre space, a music auditorium, regional gallery space, rehearsal facilities, studios, workshops, exhibition space and capacity for large scale festivals and events.
- **Local road infrastructure**: to enhance traffic flow and management in the main streets of Southern Highland towns, improve visual amenity for visitors and provide a platform for economic growth.

Implications for stakeholders:

- Close coordination is required between Wingecarribee LGA Council, local tourism bodies and other important public and private sector organisations in the visitor economy.

Grow the education, health and aged care sectors

Strategy overview:

Nationally the services sector continues to grow and provide a range of skilled employment opportunities. Wingecarribee LGA has a core competency within the service sector in education, health and aged care services. This strategy targets growth in employment in these industries.

In the education sector, the University of Wollongong's physical and philosophical positioning with TAFE requires clarification. There needs to be improved cooperation and a shared long term plan for operation of the two institutions in the Wingecarribee LGA. Consultation revealed support for degree based tourism and health/aged care training at the University of Wollongong's Moss Vale campus. TAFE's vocational aged care training in the Wingecarribee LGA has been well received by both students and employers. Further, TAFE offerings for hospitality and key trades including construction and plumbing have been proposed. The present TAFE campus requires upgrade and expansion.

Stakeholders report strong growth in enrolment in primary schools, secondary schools and childcare. The result has been the emergence of some issues with overcrowding and difficulty in securing childcare places. Wingecarribee LGA has an endowment in prestige primary and secondary schools. There are opportunities to grow the regional economy through further linkages with these schools and the attraction of parents to the region.

Wingecarribee LGA has access to both a district hospital with a planned upgrade and a well-resourced private hospital. Aged care is a core sector in the Wingecarribee region. Economic growth and community service can both be satisfied with additional medical services. The region needs a palliative care centre and additional dementia care capacity.

Potential benefits of growth in the education, health and aged care sectors:

- Upskilling the regional labour force and providing high-income paths for local school leavers.
- Improved collaboration between the education sector and the health and aged care sectors resulting in additional economic growth in the region.

Challenges and other considerations:

- Research is needed to ensure suggestions for additional courses are consistent with numbers required for both a university and TAFE offering.

Infrastructure priorities:

- **Education infrastructure**: upgrade and expansion of the Moss Vale TAFE college to allow it to effectively deliver current course offerings as well as additional subjects consistent with regional core capabilities. Investigation of the need for low cost student housing. Childcare, primary school and secondary school infrastructure to address community concerns with overcrowding.
- **Health infrastructure**: including a new palliative care unit at the Bowral and District Hospital and additional dementia care capacity in the aged care sector.

Implications for stakeholders:

- Further detailed analysis is needed to confirm stakeholder feedback on infrastructure needs in both the education and health sectors.

Strengthen the manufacturing base and monitor opportunities in the mineral resource sector

Strategy overview:

Relative to the rest of NSW, Wingecarribee Shire retains a specialisation in a number of manufacturing sub-sectors, including the manufacture of mining and construction equipment, lime and cement products. The region's proximity to Sydney presents opportunities for relocation of other manufacturing industries. However, in utilising its endowment (locational advantage), Wingecarribee will need to act on its pre-existing problems in its lack of industrial land, rapidly rising electricity prices and improve connectivity-related infrastructure.

To support growth in manufacturing the shortage of low cost, fully serviced industrial land within the LGA needs to be addressed. The cost of industrial land after taking account of Council Section 94 contributions is not competitive with other regions equally close to major population centres.

To keep manufacturing competitive in the region ongoing improvement in the road network linking Wingecarribee LGA to input supplies and markets needs to be made. Improved access to the Hume Highway at Welby south of Mittagong has been suggested as a catalyst for further economic development in the region. Furthermore, the Illawarra Highway that connects Wollongong,

Port Kembla and the Illawarra's industrial base to the Wingecarribee region requires upgrade. Accident 'black spots' between Albion Park and Moss Vale require urgent attention to support safe and cost effective freight movement.

Linked to the Wingecarribee region's specialisation in the manufacture of mining and construction equipment is the neighbouring Illawarra region's specialisation in coal mining. The Illawarra coal seam that feeds the neighbouring region's economy is also present as an economic deposit in the Wingecarribee region. Mining provides a substantial immediate and long term boost to a region's employment and economic prospects. However, it must be consistent with the Wingecarribee LGA broader economic aspirations and at the moment it is not. For this reason this strategy suggests only a 'watching brief' on both opportunities in the mineral resource sector and the ongoing monitoring of the communities attitudes to this substantial economic opportunity.

Potential benefits of strengthening the manufacturing base of the region:

- Upskilling the regional labour force and provision of employment opportunities for school leavers.
- Broadening of the region's economic base with less overall reliance on traditional agriculture and services.
- Building on the region's core endowments of proximity to markets, a broad and deep capital base and a strength in machinery and cement manufacture.

Challenges and other considerations:

- Coal mine development is highly contentious in a buoyant services and tourism based economy. Only a watching brief is proposed for the four year duration of the Strategy's Action Plan.

Infrastructure priorities:

- **Hume Highway access:** to facilitate the expansion of manufacturing in the Wingecarribee region.
- **Illawarra Highway upgrade:** to more effectively link Wingecarribee to Wollongong, Port Kembla and the Illawarra's industrial base.

Implications for stakeholders:

- Implementation of this strategy will require a strong partnership between Wingecarribee LGA Council and the RMS

11. Regional Action Plan

Enhance the liveability of the Wingecarribee region

Early Stage Priority Action	Issue	Responsibility
Recognise the importance of the Wingecarribee region as a commuter location and invest to enhance commuting possibilities and telecommuting.	Large share of Wingecarribee residents (~20%) commute to Sydney, Camden, Wollondilly or Wollongong. Invest to shorten commuting times e.g. reduced rail travel times, road upgrades, teleworking.	Wingecarribee Shire Council NSW Government
Invest to enhance local traffic flow and management while improving visual amenity and providing a platform for economic growth.	Local road congestion is an issue in Wingecarribee. Congestion affects enjoyment of the main street areas of Mittagong, Bowral and Moss Vale and acts as a break on economic activity.	Wingecarribee Shire Council
Improve car parking facilities in each of Mittagong, Bowral and Moss Vale.	Lack of parking acts as a disincentive for residents and visitors to shop in the local area and a shortage of commuter car parking makes it difficult for those who work outside the region.	Wingecarribee Shire Council
Lobby for a better passenger rail service – electrification, efficiencies in the existing system and protection for a fast train corridor.	Slow rail passenger service limits employment opportunities for residents of the region who might otherwise commute to Sydney or Canberra.	Southern Highlands Chamber of Commerce and Industry, Wingecarribee Shire Council
Enhance waste water management with planned STP upgrades, effluent reuse & storm-water management.	Current treatment systems are at the limit of capacity and threaten the health and environment of Wingecarribee residents.	Wingecarribee Shire Council
Lobby government for provision of 4G towers and the NBN to ensure business, population connectivity.	Wingecarribee has blackspot problems with mobile phone and internet connections.	Wingecarribee Shire Council
Develop and implement a renewable energy plan for Wingecarribee.	A clear plan will assist the region to realise its potential in the generation of renewable energy.	Wingecarribee Shire Council.
Upgrade sporting fields in Moss Vale and equip them with modern amenities.	Improved facilities required for residents of the Wingecarribee Shire including young people.	Wingecarribee Shire Council.
Develop an indoor basketball facility.	Improved facilities required for residents and to attract regional events. Centre could also be used for cultural and entertainment events.	Wingecarribee Shire Council. Mossvale Basketball

Create a new arts precinct – conference/ hotel facilities, theatre space, auditorium, regional gallery space, rehearsal facilities, studios, workshops, exhibition space, large scale events/festivals.	Liveability of the Wingecarribee region would be improved with an appropriately equipped arts precinct.	Wingecarribee Shire Council.

Facilitate the development of agriculture as a key strength and specialisation and grow the visitor economy based on food, wine and events

Early Stage Priority Action	Issue	Responsibility
Prepare an up-to-date audit of relevant agricultural producers and value adders with an interest in local sales and supply to the visitor economy.	There is additional opportunity to value add local produce, grow the cool climate wine and brewing sector and meet the needs of an expanded visitor economy.	Wingecarribee Shire Council Food & Wine Association.
Secure the future of relevant agricultural infrastructure such as the Moss Vale Saleyards.	Moss Vale Saleyards require further investment to meet contemporary compliance requirements. These yards may benefit from additional throughput when the Camden facility is closed.	Wingecarribee Shire Council.
Develop a strategy to attract more mid-week visitors to Wingecarribee – longer stays, international visitors, Probus, etc.	Tourist assets are under-visited mid-week and over-crowded at the weekend. Inconsistent patronage limits profit and discourages investment in new assets.	Wingecarribee Shire Council.
Prepare and communicate to investors pre-feasibility material on the viability of a new larger scale hotel as part of a proposed arts precinct.	Growth of the events sector is constrained by lack of a hotel with more than 75 beds.	Wingecarribee Shire Council.
Create a multi-purpose equestrian facility in the Wingecarribee region.	Build additional tourist and recreation infrastructure. New centre may attract regional, state and national equestrian events.	Wingecarribee Shire Council.
Develop an indoor multi-purpose basketball facility.	Improved facilities required for residents and to attract regional events. Centre could also be used for cultural and entertainment events.	Wingecarribee Shire Council Mossvale Basketball.
Create a new arts precinct – conference/ hotel facilities, theatre space, auditorium, regional gallery space, rehearsal facilities, studios, workshops, exhibition space, large scale events/festivals.	A new arts precinct would draw visitors to the Wingecarribee region.	Wingecarribee Shire Council.

Grow the education, health and aged care sectors

Early Stage Priority Action	Issue	Responsibility
Develop a plan for long term collaboration between the University of Wollongong (UOW) and TAFE Illawarra, Moss Vale College.	Both institutions offer essential training in the Wingecarribee region and it would be a setback for economic development if either were to withdraw or limit services.	University of Wollongong TAFE Illawara
Work with UOW to determine willingness to expand local course offering to include degrees in tourism and health/aged care.	Local degree training in tourism and health/aged care would support the growth of two key regional employers.	Wingecarribee Shire Council.
Work with TAFE Illawarra to determine willingness to expand local course offering to include hospitality and key trades such as construction and plumbing.	Local vocational training in hospitality would support growth in the visitor economy while construction trades would support broader economic growth in the region.	Wingecarribee Shire Council.
Lobby government for additional primary and secondary school capacity in the Wingecarribee region	Stakeholders report overcrowding in state primary and secondary schools in the Wingecarribee region.	Wingecarribee Shire Council.
Work with childcare providers and the Council's own Family Day Care Service to identify additional childcare capacity.	Stakeholders report difficulty in securing childcare positions in the Wingecarribee region.	Wingecarribee Shire Council.
Work with prestige schools in the Wingecarribee Shire to promote Wingecarribee to parents and friends with an aim of increasing average length of stay and tourism expenditure.	Parents of boarding school children are an important segment in the local tourist market. Converting day trips and single night stays into longer 'experiences' would add to local economic activity and employment growth.	Wingecarribee Shire Council.
Lobby government for a Palliative Care Centre at the Bowral and District Hospital.	Wingecarribee is a centre for aged care and has a strong need for palliative care facilities.	Wingecarribee Shire Council.
Work with aged care providers and regional hospitals to deliver additional dementia care capacity.	Wingecarribee is a centre for aged care and has a strong need for additional dementia care facilities.	Wingecarribee Shire Council.
Investigate the need for student housing and low cost housing as the education, health and aged-care sectors expand.	In time, growth in the services sector will be limited by the supply of affordable housing. Sympathetic land use planning/zoning legislation may assist with low cost housing supply.	Wingecarribee Shire Council.

Strengthen the manufacturing base and monitor opportunities in the mineral resource sector

Early Stage Priority Action	Issue	Responsibility
Review the Wingecarribee Shire LEP and identify opportunities to increase the supply of industrial land.	There is a shortage of affordable serviced industrial land within the region.	Wingecarribee Shire Council.
Improve access to the Hume Highway at Welby south of Braemar.	Improved Hume Highway access would assist Wingecarribee region manufacturers with the cost of securing inputs and servicing markets.	Wingecarribee Shire Council.
Lobby for the upgrade of the Illawarra Highway between Albion Park and Moss Vale.	Removal of accident 'black spots' will help connect manufacturing in Wingecarribee to Wollongong, Port Kembla and the Illawarra's industrial base.	Wingecarribee Shire Council.
Maintain a 'watching brief' on community acceptability of coal mining in the Wingecarribee region and make planning decisions that do not 'sterilise' future mining opportunities..	Coal mining provides substantial immediate and long term employment and economic benefits but is currently not consistent with local community aspirations.	Wingecarribee Shire Council.

Implementation

This document sets out a vision for the Wingecarribee region as well as the strategies and actions that can enable the region to achieve this vision. This Strategy was formed in collaboration with the Wingecarribee Shire Council, the regional community, AgEconPlus and CERD.

The completion of this document is intended to be the first stage of an ongoing process where new actions to further progress towards the vision are identified through application of the Strategy framework. It is therefore recommended that an Advisory Committee made up of representatives from council, including the Economic Development Manager, and other groups such as business chambers be established to progress the actions listed in this Strategy, apply the Strategy's framework to identify new actions to be added to the Action Plan, develop key performance indicators and evaluate outcomes.

After two years, the Advisory Com.mittee will initiate the conduct of a formal review of the Action Plan and associated governance processes, producing a brief report card to be published as an addendum to the Economic Development Strategy. This will also provide an opportunity to update the Action Plan for new or modified actions in view of key economic, social, environmental and policy changes.

After four years, the Advisory Committee will also begin the process of updating or refreshing the Economic Development Strategy.

Consultation Process

An introductory meeting with Wingecarribee Shire Council (WSC) was facilitated by Nigel McKinnon, Regional Director, Illawarra and South East, NSW Department of Premier and Cabinet – Regional Development Section, 18 July 2017. In attendance at the meeting was Ann Prendergast, General Manager WSC, Mark Pepping, Deputy General Manager WSC and Noel Ferguson, Economic Development Manager WSC. Also present was Rhonda Lawrie, Business Development Manager, DPC – Regional Development Section and consultants Michael Clarke and Dr Rob Gillespie.

At the introductory meeting WSC expressed interest in the Regional Economic Development Strategy project, stressed the unique and standalone nature of Wingecarribee LGA and provided a briefing on current regional development initiatives. WSC stressed the need to integrate the Strategy with current work and consultation processes.

Taking on board this advice, a tailored consultation approach was developed for the Wingecarribee region. Central to the tailored consultation approach was the development, with the Council, of a Wingecarribee Strategy discussion paper and survey (Appendix 3).

The discussion paper and survey focussed on the requirements of the final Strategy document and included a summary of the economic audit, core competencies, endowments and economic drivers, an LGA focussed SWOT analysis, LGA focussed risk analysis, infrastructure audit, infrastructure priorities, opportunity to describe local strategies/actions and broader government policies/actions required for economic development. Consultation questions were embedded in the discussion paper.

The following consultation sequence was employed:

1. The WSC Economic Development Officer advised that WSC Economic Development Advisory Committee was already engaged in strategy formulation for the Southern Highlands and that a workshop would not be the best initial engagement tool.
2. Instead a list of 22 key stakeholders who were known to DPC Regional Development to think deeply about their region and economic growth opportunities was provided to the consultants. The list was drawn from community and business leaders and is reproduced in Appendix 3.
3. The discussion paper and survey was emailed by AgEconPlus to each of the 22 key stakeholders with a personal invitation to contribute. Contributions could be made by completing discussion paper survey questions and mailing back or by phoning AgEconPlus to discuss the discussion paper's contents.
4. Key stakeholders engaged in the process and a number of individuals forwarded both the invitation and the discussion paper to others within the Wingecarribee community. Additional survey responses were incorporated into consultation results.
5. Discussion paper feedback and survey completion was augmented with a program of face-to-face consultation in the Southern Highlands. Key interviews were completed with large current and potential employers (e.g. Hume Coal) and economic development leaders (e.g. Southern Highlands Chamber of Commerce).
6. Finally a workshop was completed with the WSC Economic Development Advisory Committee 25 September 2017. Attendees verbally provided their views and priorities for regional economic development for Wingecarribee LGA and were invited to provide subsequent more detailed written responses. Written feedback was also provided by Mark Pepping, Deputy General Manager WSC.

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