CENTRAL COAST AND LAKE MACQUARIE

Regional Economic Development Strategy | **2018 – 2022**

SUPPORTING ANALYSIS

VISION

To grow the population and economy of an attractive region that is an important dormitory area with high liveability by attracting in – movers – including commuters – and to grow the visitor economy, while also building on the region's strengths and specialisations in the services sectors – especially health and age care – and in manufacturing and mining.

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.

Central Coast Council

Lake Macquarie City Council

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First published: June 2018

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Preamble

The economic development strategy for the Central Coast and Lake Macquarie Region is presented in the ‘Central Coast and Lake Macquarie Regional Economic Development Strategy 2018–2022’ (the Strategy). This document, the ‘Central Coast and Lake Macquarie 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 publically available 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.

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1. Introduction

The Central Coast and Lake Macquarie Regional Economic Development Strategy 2018–2022 (the Strategy) sets out a long term economic vision and associated strategy for the two local government areas (LGAs) of Central Coast and Lake Macquarie (the Region). It builds on the Region's endowments, core competencies, and existing economic strengths and specialisations to guide investment over the next four years[1]. Economic principles suggest that endowments and specialisations play a key role in the development of regional economies[2].

The Strategy aims to leverage the Region's endowments: its location and accessibility, lifestyle and amenity benefits, mineral and extractive resources, natural resources, healthcare and education infrastructure, labour resources and local institutions and leadership. These endowments are the basis of the Region's current specialisations in Healthcare (particularly Aged Care Residential Services), Tourism, Manufacturing (particularly Food Product Manufacturing) and Mining (particularly Coal Mining). These factors are key in attracting people to live in the Region, many of whom commute out of the Region to work.

These endowments and specialisations were identified through data analysis and subsequently confirmed through a community consultation process. The Strategy, which builds on the endowments, core competencies and specialisations, aims to:

- Facilitate commercial, manufacturing and mining development.
- Grow new industries and employment opportunities through improved transport links
- Realise economic opportunities in the health and aged-care sectors; and aims
- To be a highly liveable Region that is attractive to both commuters and visitors

The Strategy also takes account of regional risks and how they might be addressed.

This Strategy is the culmination of collaboration between the Central Coast Council, Lake Macquarie City Council, their respective communities, the NSW Government's Centre for Economic and Regional Development (CERD) and consultants AgEconPlus.

[1] Regional Economic Development Strategies, Centre for Economic and Regional Development (https://www.dpc.nsw.gov.au/programs_and_services/centre_for_economic_and_regional_development/projects)
[2] *Regional Economic Growth Enablers Report* (2017), Centre for Economic and Regional Development

1.1. Geographic Parameters

LGA boundaries define regions for administrative purposes. Often these borders are an artefact of history and bear little resemblance to the economic activity that now takes place in a region. A functional economic region is a concept that has been developed in the economic literature to more accurately reflect the boundaries of economic interaction and may include multiple LGAs[3]. These boundaries are informed by Australian Bureau of Statistics (ABS) data, such as residents' journeys to work, and a number of ratios that describe local labour market interactions. An iterative process then derives regions that are relatively self-contained for economic purposes.

For this Strategy, the functional economic region has been defined as the LGAs of the Central Coast and Lake Macquarie. Notwithstanding, the Strategy includes some analysis at the LGA level as well as for the Region as a whole.

Figure 1: Map of the Central Coast - Lake Macquarie Boundary and its constituent LGAs

Source: CERD

[3] For example, Productivity Commission 2017, *Transitioning Regional Economies*, Study Report, Canberra p.5

1.2. Regional Strategic Intent and Direction

A regional economic development strategy needs to identify the economic aspirations and goals of the region, and lay out a pathway that its residents, public agencies and businesses can follow in order to reach these objectives. As well as steering the Region towards its objectives, a successful strategy must take into consideration the Region's endowments, its existing economic strengths and weaknesses, as well as the capacity and capabilities of its industries, institutions and infrastructure. A successful strategy will identify actions that can foster these strengths whilst mitigating weaknesses, including regional risks. However, the economic fortune of a region does not rest entirely on its resource endowments, nor is it dependent entirely on the actions of its residents, businesses and public agencies. Exogenous factors, such as international and domestic megatrends, as well as the development of other parts of NSW with which the Region has interdependencies, can present both opportunities and challenges to a Region's development. For this reason, a strategy should be viewed as a living document and updated at appropriate intervals to take changes in the external environment into account.

1.3. Objectives

This Strategy sets out an economic vision for the Region over the next few decades and identifies the strategies and immediate actions that can be undertaken in the next four years to pursue this vision. The specific objectives are to:

- articulate a long-term vision that builds on existing sustainable strengths in the Region and enhances those strengths;
- identify new opportunities to enhance the development, performance and competitiveness of the Region; and
- list specific short-term actions that will set the Region on the path towards sustainable development.

1.4. Consultation Methodology

The Strategy was prepared for the Councils of the Central Coast and Lake Macquarie with the assistance of the CERD. In addition to detailed data analysis, a community engagement process involving regional stakeholders was conducted which comprised workshops, telephone and face-to-face interviews with businesses and members of the community. This supplemented documentation of recent community engagement undertaken for the development of each Council's Community Strategic Plan. Appendix A provides details of the consultation process.

1.5. Timeframe

The focus of the Strategy is the long term economic future of the Central Coast and Lake Macquarie Region. The main purpose of this document is to guide actions, policies and investment in the Region and its component parts – Central Coast and Lake Macquarie LGAs – over the next four years. The proposed strategies and associated Action Plan within the Strategy aim to set the Region on an achievable and sustainable path to long term economic prosperity.

1.6. Strategic Context

The Strategy has been designed to align with the NSW Government's '*Making it Happen in the Regions: Regional Development Framework*' 2016.

It also sits alongside and is informed by the Region's Integrated Planning Framework that comprises Community Strategic Plans for each LGA (which are the 'coordinating' plan that sets the vision, direction and framework for the Region for 20 years), and each Council's four year delivery plan and one year operational plan. It is also informed by the existing economic development strategies of Councils and the NSW Government's Regional Economic Development and Employment Strategy for the Central Coast.

2. Economic Audit

2.1. Regional Overview

The Region is 1,790 square kilometres and comprises the LGAs of Central Coast and Lake Macquarie.

The Central Coast Council area is located on the coast of New South Wales, between 60 and 90 kilometres north of the Sydney CBD, and about 80 kilometres south of the Newcastle CBD. It contains numerous towns and villages with the main urban centres being Gosford and Wyong. Key geographic features include an extensive coastline and coastal lagoons.

Lake Macquarie LGA is situated north of the Central Coast Council area, south of and adjacent to the city of Newcastle. Significant population centres include Belmont, Cardiff, Charlestown, Cooranbong, Glendale, Morisset, Mount Hutton, Swansea, Toronto and Warners Bay. The LGA's centrepiece is Lake Macquarie which is a vast blue water expanse, twice the size of Sydney Harbour.

In 2016, 88% of jobs were filled by those residing in the Region. Those who work in the Region, but live outside it, are predominantly from Newcastle LGA (7.0%), Maitland LGA (1.4%), Cessnock LGA (1.1%) and Sydney region (1.1%).

Table 1: Residential Location of Workers Employed in the Region

Category	No.	%
Live and work in the area	141,222	88%
Work in the area, but live outside	18,804	12%
Total workers in the area	160,026	100%

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

The labour force residing in the Region exceeds the number of jobs in the Region. 30% of the employed labour force residing in the Region commute to a work location outside the Region, which is high and indicates that the Region is part of the commuter belt of Sydney and of Newcastle—see Figure 2. For an additional 6% of the usual resident labour force, their work location was unknown. The main location of work for those commuting outside the Region is to Newcastle LGA (13.7%) and Sydney region (12.4%).

Table 2: Work Location of Employed Usual Residents of the Central Coast - Lake Macquarie Region

Category	No.	%
Live and work in the area	141,109	64%
Live in the area, but work outside	66,532	30%
Work location unknown	13,195	6%
Total employed residents	220,836	100%

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

Various self-containment ratios are summarised in Table 3. These confirm that the Region is not overly self-contained.

Table 3: Self-Containment Ratios

Descriptor	Ratio
Employment Self-Containment (ESC[4])	0.64
Job Housing Balance (JHB[5])	0.72
Employment Self Sufficiency (ESS[6])	0.88

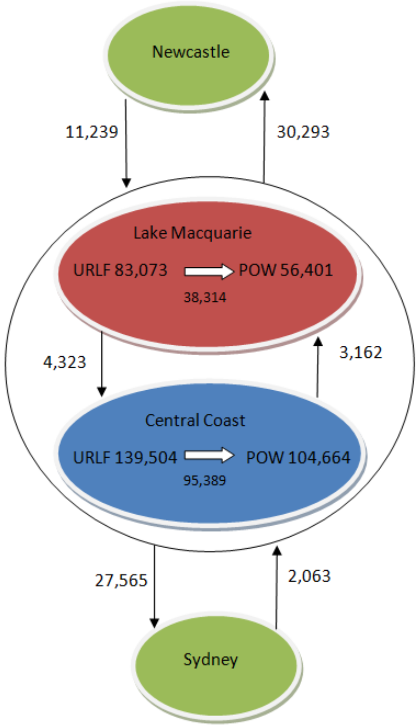
Source: Department of Premier and Cabinet (NSW), based on ABS 2016 Census of Population and Housing data

The main labour force interactions of the Region are shown in Figure 2. This indicates the influence of Sydney and Newcastle on the Region's usual resident labour force, where 14% of the usual resident labour force commutes to Newcastle for work and 12% commute to Sydney. Internally, there is a greater flow of labour from Lake Macquarie to the Central Coast than the other way round, but movement between the two LGAs is modest.

All of this makes the Region, to a significant degree, a dormitory place for workers in those large urban centres to the south and north.

[4] The percentage of employed residents who are employed within the boundaries of the Region.
[5] The number of jobs in area compared to employed local labour force.
[6] The percentage of local jobs that are filled by local residents for a given region.

Figure 2: Main Labour Force Interactions for Region



Source: AgEconPlus and Gillespie Economics based ABS Tablebuilder 2016 Census

Notes:

1. POW = Place of Work; URLF = Usual Resident Labour Force
2. there are some data inconsistencies in the ABS data with different flows of labour depending on whether the data source relates to exports of Labour from an LGA or imports of labour to an LGA.

2.2. Demographic Profile[7]

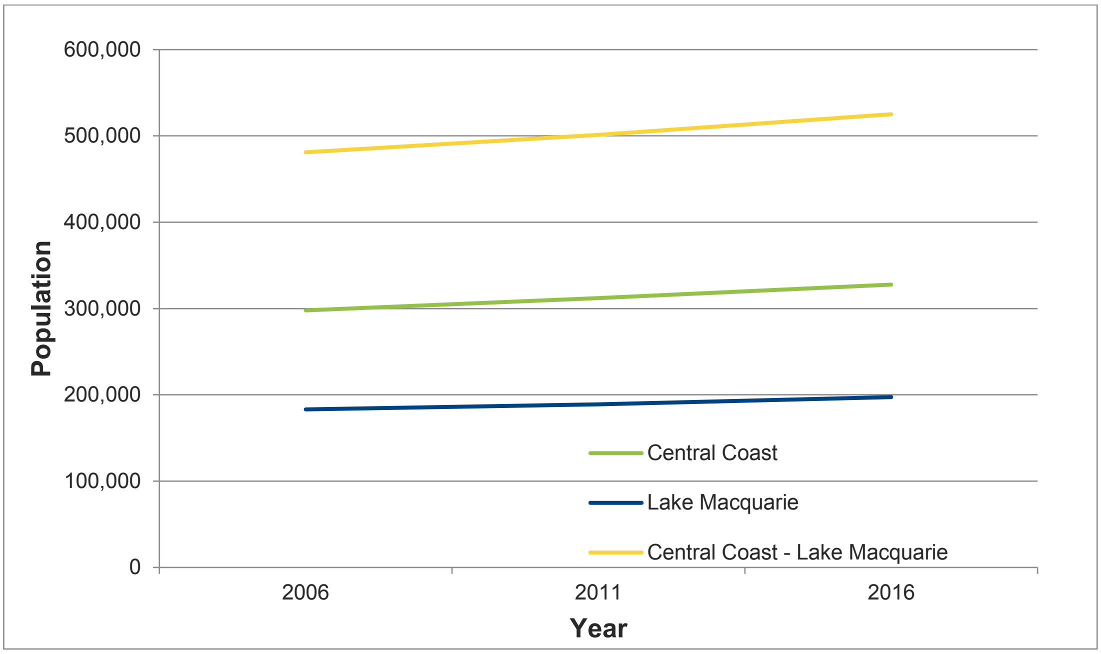
2.2.1. Population and Housing

The 2016 ABS Census of Population and Housing reported the combined population of the Central Cost and Lake Macquarie LGAs to be 525,097 in 2016. Of these, 327,726 resided in the Central Coast LGA and 197,371 resided in Lake Macquarie LGA.

According to the ABS, the population of the Region has been growing since 2006 as shown in Figure 3. During this period the growth rate was less than for NSW between 2006 and 2011 (i.e. 4.2% compared to 5.6%) and less than for NSW between 2011 and 2016 (i.e. 4.8% compared to 8.1%). The Central Coast LGA has experienced the greatest population growth over this period i.e. 4.8% between 2006 and 2011 and 5.0% between 2011 and 2016, compared to 3.2% and 4.4% for Lake Macquarie, respectively.

[7] The demographic profile relates to the Usual Resident Profile of the 2016 Census of Population and Housing unless otherwise stated.

Figure 3: Historical Population of the Region



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

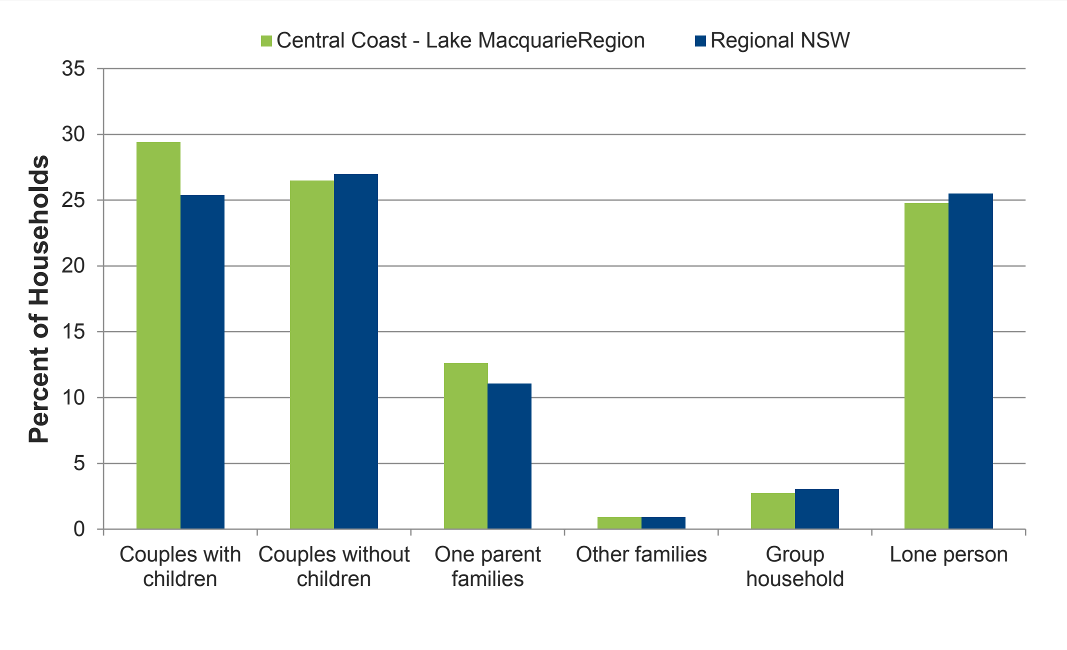
The 2016 Census of Population and Housing reported 224,698 private dwellings in the Region. Of these, 89.1% were occupied, similar to those occupied in NSW (90.1%) and Regional NSW (87.6%). This equates to an average of 2.5 people per household which was slightly below the State average of 2.6 and above that for Regional NSW (2.4).

Compared to Regional NSW, the Central Coast - Lake Macquarie Region had:

- a higher proportion of couple families with children (common in both LGAs);
- a lower proportion of lone person households (common in both LGAs);
- a lower proportion of couples without children (driven by Central Coast LGA);
- a higher proportion one parent families (common in both LGAs); and,
- a lower proportion of group households (common in both LGAs).

This is shown in Figure 4.

Figure 4: Household Composition for the Central Coast - Lake Macquarie Region and Regional NSW— %



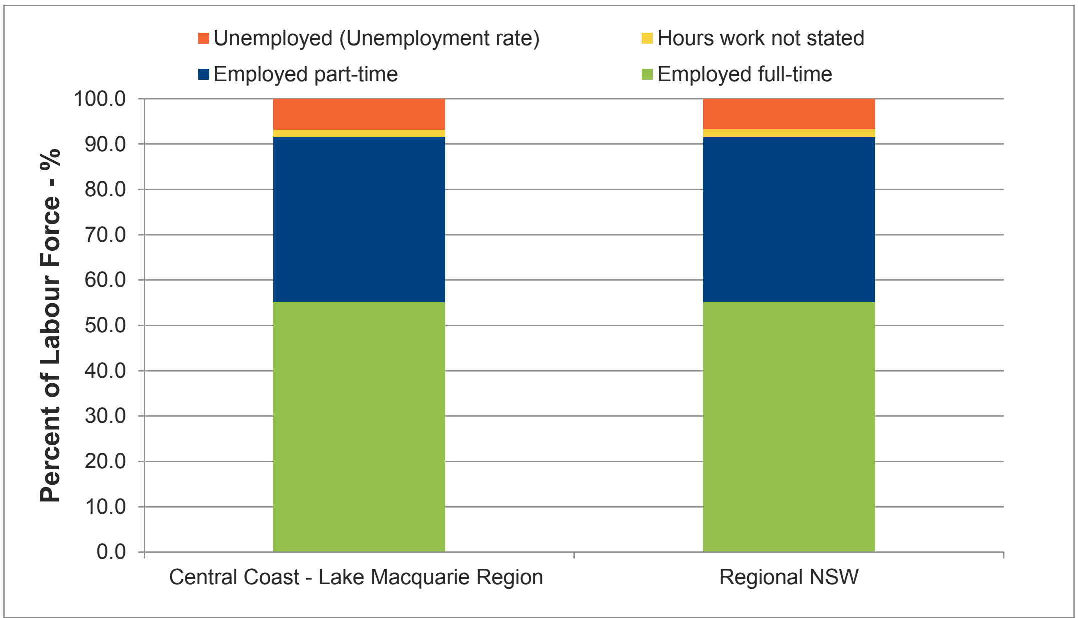
Source: ABS, 2016 Census of Population and Housing (Usual Resident Profile)

The weighted average median rent for the region was $340 per week, making it more affordable than the median weekly rent for NSW ($380). The highest median rents within the Region are in the Central Coast LGA ($350 compared to $320 for Lake Macquarie LGA).

2.2.2. Labour Force

Compared to Regional NSW, the Region has a similar proportion of the labour force employed (i.e. similar proportion unemployed) and a similar proportion of the labour force in full-time and part-time employment — see Figure 5. This is common to each LGA within the Region.

Figure 5: Labour Force Status



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

2.2.3. Occupations

The 2016 Census of Population and Housing showed that compared to Regional NSW, the Region had a relatively higher proportion of its workers employed as:

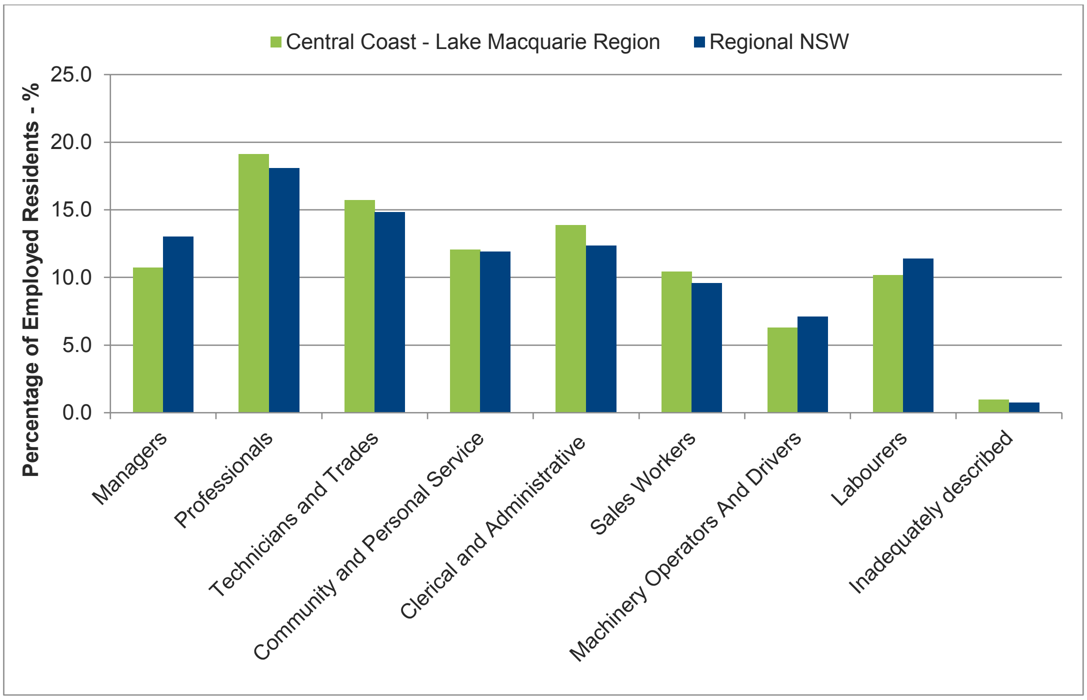
- Professionals (common in both LGAs);
- Technicians and Trade Workers (common in both LGAs);
- Clerical and Administrative Workers (common in both LGAs); and,
- Sales Workers (common in both LGAs).

Comparatively, the Region had a lower proportion of its workers employed as:

- Managers (common in both LGA's); and
- Machinery Operators and Drivers (common in both LGAs)—see Figure 6.

Compared to Regional NSW, the Region had a similar proportion of Community and Personal Service Workers (higher in Central Coast LGA and Lower in Lake Macquarie LGA).

Figure 6: Occupations in the Central Coast - Lake Macquarie Region and Regional NSW



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

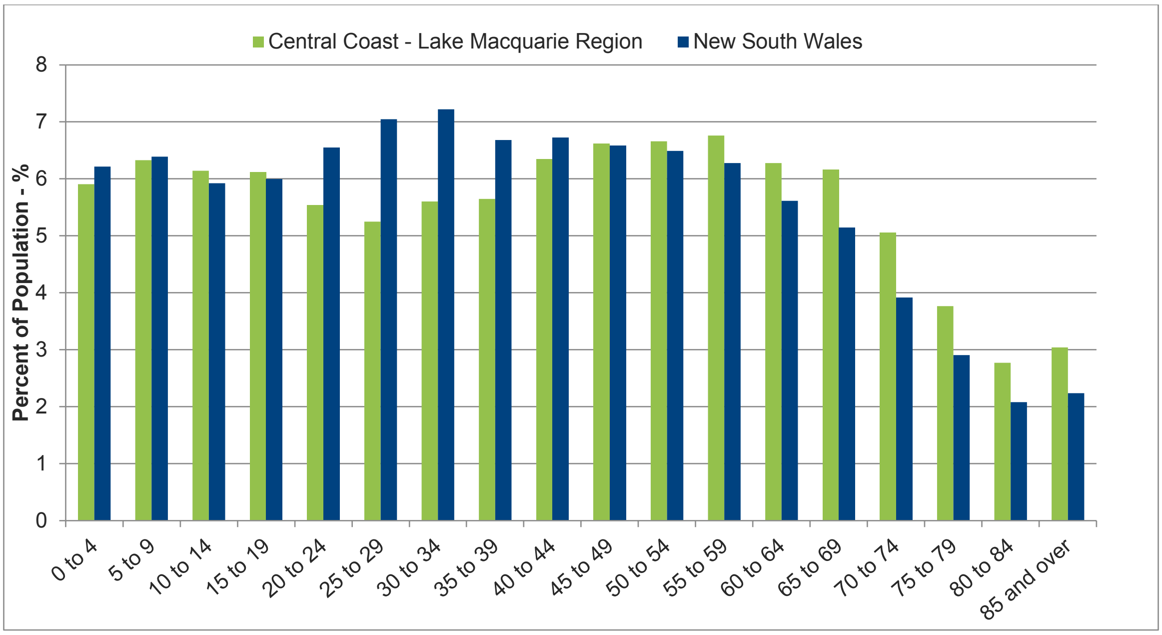
2.2.4. Age Profile

The median age of the Region was 42 according to the 2016 Census of Population and Housing while the median age of the NSW population was 38 years.

Figure 7a compares the distribution of the regional population with the distribution of the population across NSW. When compared to NSW as a whole, the Region follows a similar pattern as Regional NSW with a greater proportion of its population over the age of 45 years and a smaller proportion of the population in the 20 to 44 age group. This 'hollowing-out' of the work force age groups might reflect the out-migration of these workers to Sydney, and of younger adults in post-school education moving out of the Region. However, the Region also shows a smaller percentage of the population in the 0 to 9 age group and a higher proportion in the 10 to 19 age group. Notable is the greater incidence of aged persons in the population of the Region.

Figure 7: Central Coast - Lake Macquarie Region Population Age Distribution vs NSW & Regional NSW

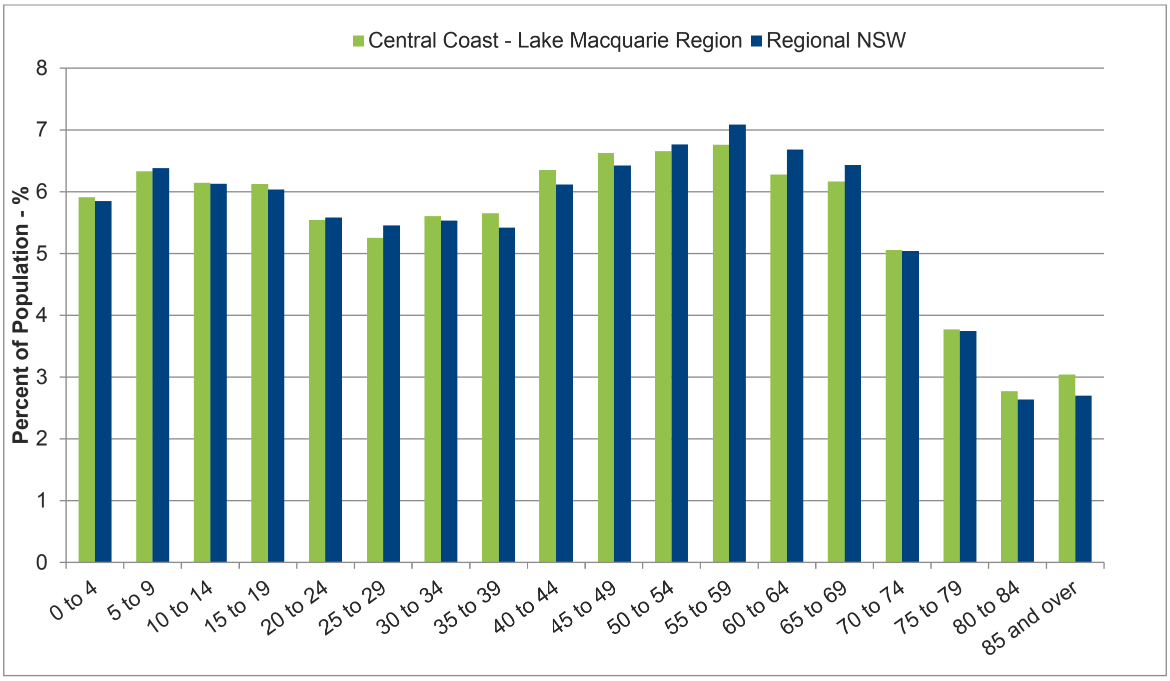
Figure 7a: Central Coast - Lake Macquarie Region Population Age Distribution vs NSW



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

To take account of this systemic difference between regional NSW and Sydney, the age profile of the Region has also been compared to the age profile of Regional NSW, as shown in Figure 7b. This shows that the Region has higher proportion of people in the 30 to 49 age groups and a lower proportion of people in the 50 to 69 years age group age groups. The age profiles of the two LGAs making up the Region are similar.

Figure 7b: Central Coast - Lake Macquarie Region Population Age Distribution vs Regional NSW

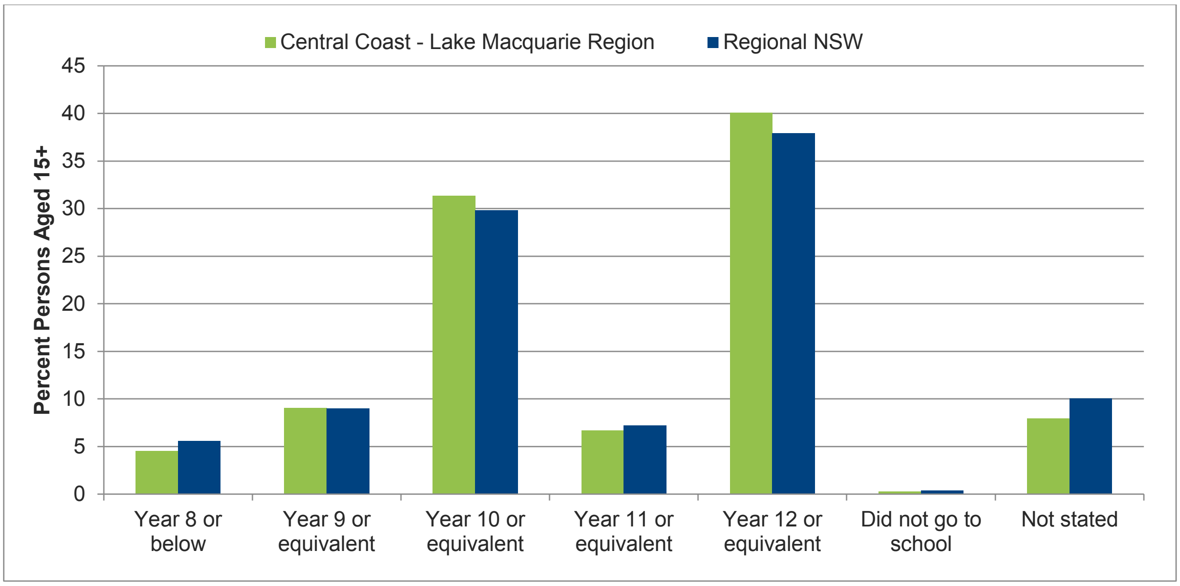


Source: ABS, 2016 Census of Population and Housing (Usual Resident Profile)

2.2.5. Education and Qualifications

Compared to Regional NSW, in 2016 the Region had a higher proportion of people whose highest level of schooling was Year 10 and a higher proportion of people whose highest level of schooling was Year 12 – see Figure 8. This is driven by both Central Coast and Lake Macquarie LGAs.

Figure 8: Highest level of schooling

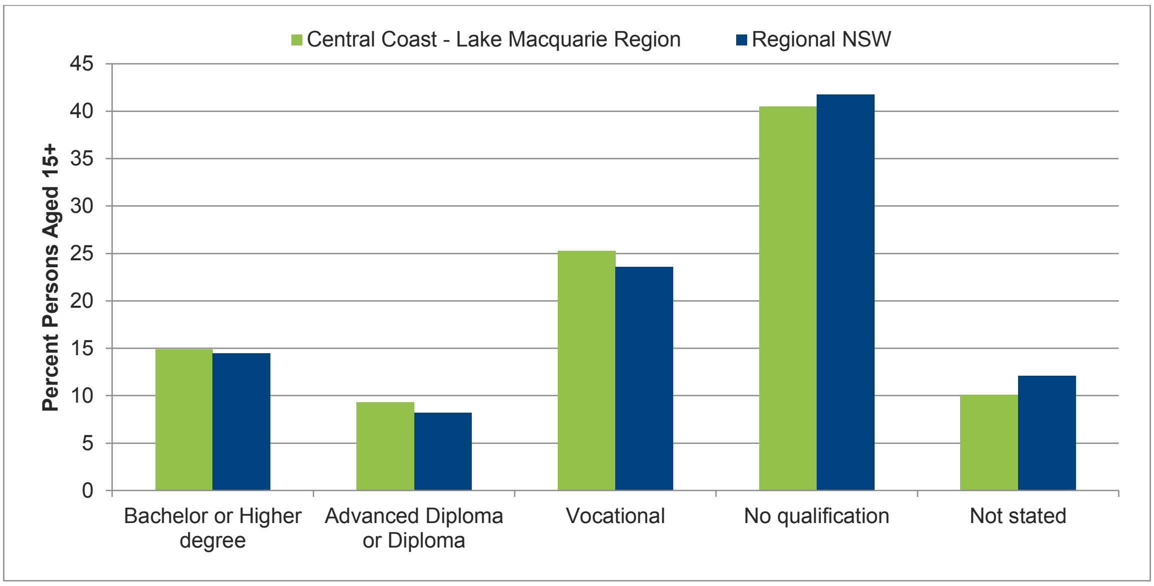


Source: ABS, 2016 Census of Population and Housing (Usual Resident Profile)

Compared to Regional NSW, in 2016 there was:

- a higher proportion of people holding a Bachelor or Higher Degree (driven by Lake Macquarie LGA);
- a higher proportion of people holding an Advanced Diploma or Diploma (common to both LGAs);
- a higher proportion of people holding vocational qualifications (common to both LGAs); and
- a lower proportion with no formal qualifications (driven by Lake Macquarie LGA) – see Figure 9.

Figure 9: Highest qualification

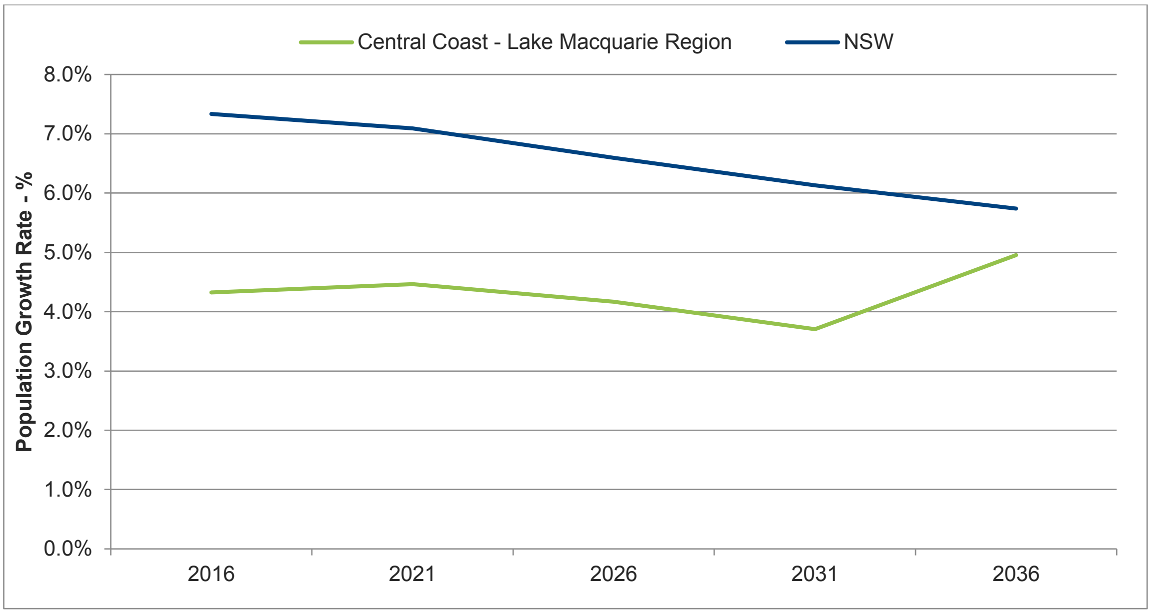


Source: ABS, 2016 Census of Population and Housing (Usual Resident Profile)

2.2.6. Population Forecasts

As identified earlier, the Region has experienced consistent population growth, although growth (in percentage terms) between 2011 and 2016 was less than that for NSW. The NSW Department of Planning and Environment (DPE) projects that the Region will continue to have a population growth rate less than that for NSW as whole and that the growth rate will increase between 2016 and 2021, then decline till 2031, and then increase again. The increase in population from 2016 to 2021 is driven by projections for Lake Macquarie LGA while the rapid increase in growth rate post 2031 is driven by forecasts for the Central Coast. Alongside this, the growth rate for Lake Macquarie LGA is also predicted to increase modestly at this time - see Figure 10. Thus, there is expected to be a significant upward trend in local household consumption into the near future, with a corresponding increase in demand for population-led services and housing.

Figure 10: NSW Planning and Environment Population Growth Rate Forecasts



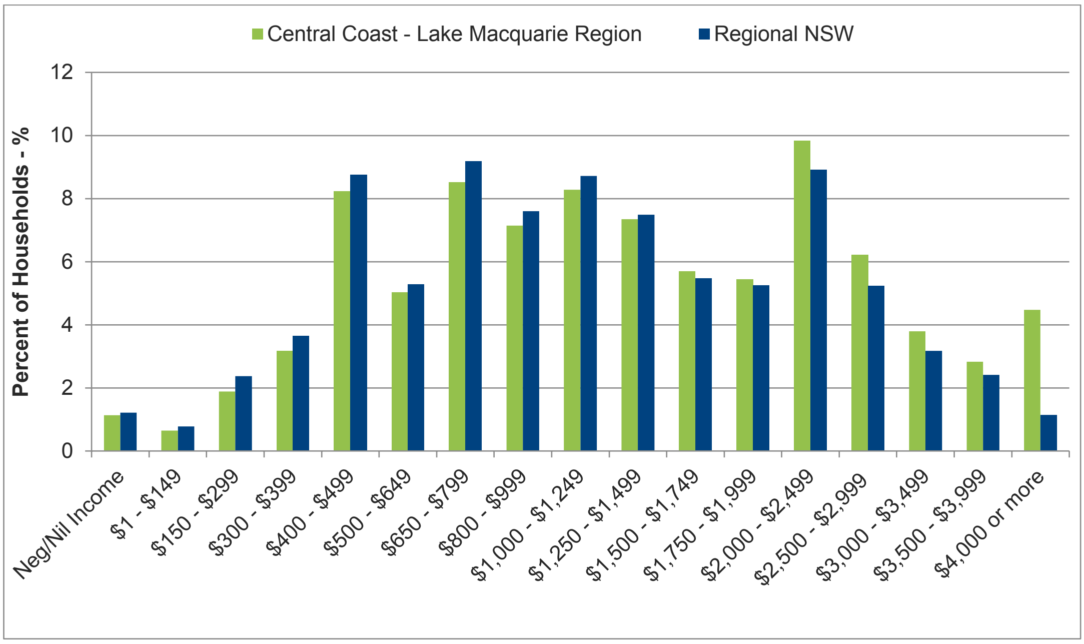
Source: ABS, 2016 Census of Population and Housing (Usual Resident Profile)

2.2.7. Income and Unemployment

The weighted average median weekly household income for the Region is $1,279, compared to $1,486 for NSW. However, there is variation within the Region, with households in Lake Macquarie LGA having the highest median weekly household income at $1,313, compared to $1,258 for the Central Coast LGA.

The distribution of weekly household income relative to Regional NSW is given in Figure 11. This indicates that compared with Regional NSW in 2016, the Region 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. This is common to both LGAs.

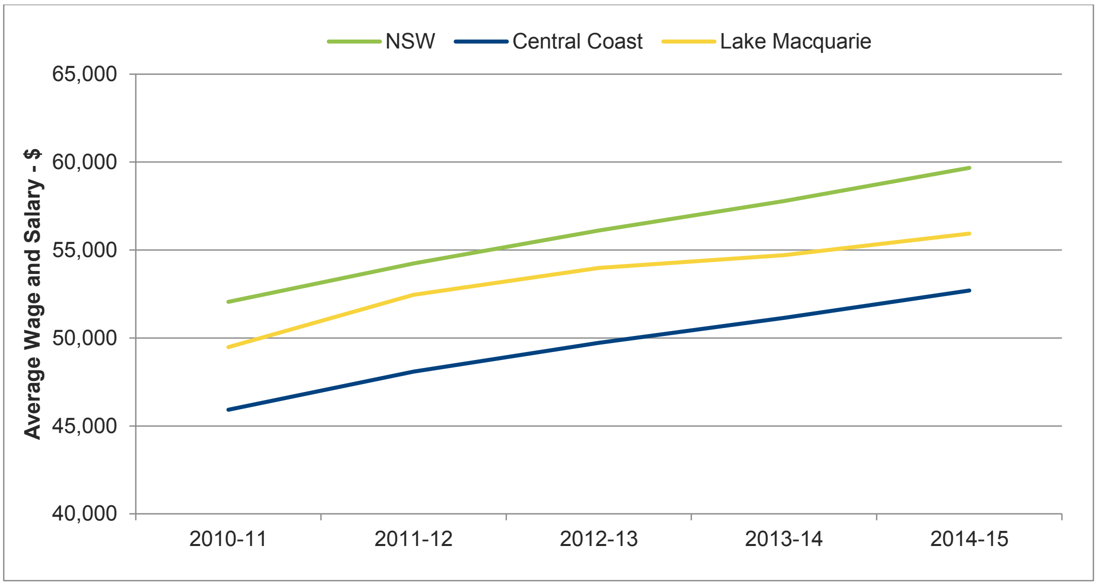
Figure 11: Weekly Household Income Distribution



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

Historically, average wage and salary income in the two LGAs of the Region have grown in line with the NSW average, although wages for both LGAs have been below that for NSW – see Figure 12.

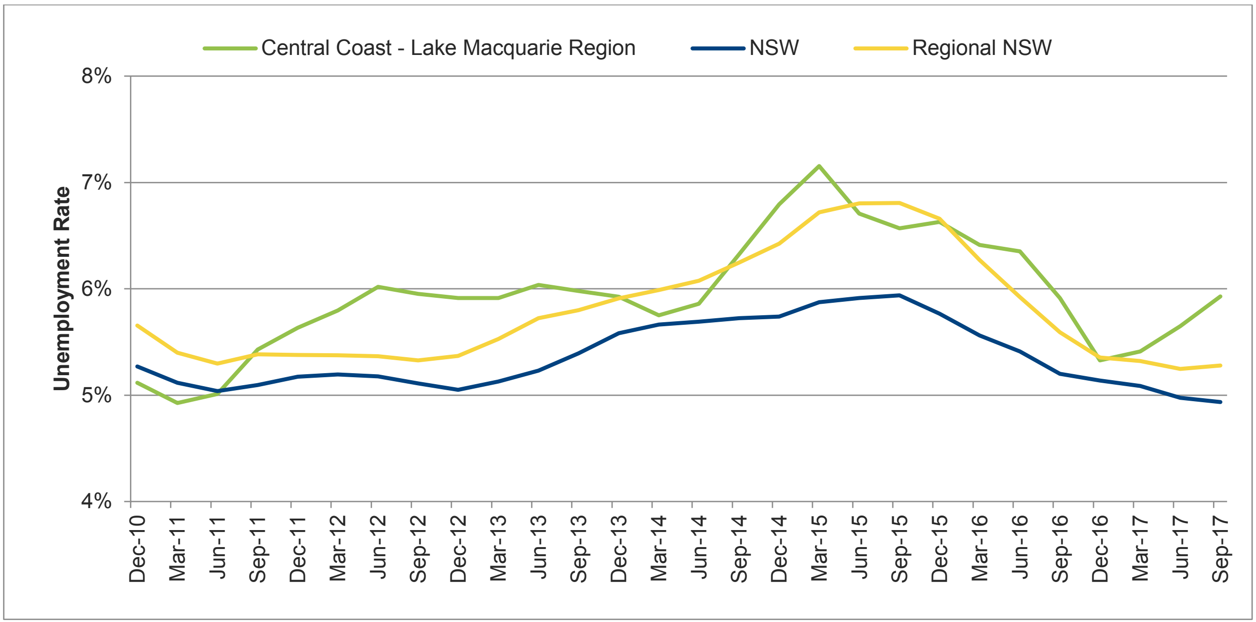
Figure 12: Average Wage and Salary Income



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

According to the ABS 2016 Census, unemployment in the Region was 6.8%, which was higher than the unemployment rates for Regional NSW (6.6%) and NSW (6.3%). Within the region, the unemployment rate was lowest in the Central Coast LGA (6.7%) and highest in Lake Macquarie LGA (6.9%). The Department of Employment's Small Area Labour Markets publication (see Figure 13) has estimated that unemployment in the Region has been more similar to that for NSW than Regional NSW, consistently being above that for Regional NSW. From 2010 to August 2014 the unemployment rate for Lake Macquarie was consistently below that for the Central Coast. However, since then there has been no consistent pattern.[8]

Figure 13: Small Area Labour Markets Estimate of the Central Coast - Lake Macquarie Region, Regional NSW and NSW unemployment rate



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

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

2.2.8. Summary of Demographics

Notable features of the Central Coast - Lake Macquarie demography which are of relevance to the Strategy include that the Region has:

- a low level of self-containment with 30% of the employed labour force that reside in the Region working outside the Region - particularly to Newcastle LGA and the Sydney region – thus generating substantial out-commuting with implications for transport infrastructure;
- been experiencing population growth at a rate that is less than that for NSW, but forecast growth of population into the future will be significant in aggregate terms generating increased demand for services provision and employment;
- a higher proportion of couple families with children and one parent households, relative to regional NSW;
- a similar proportion of the labour force employed (i.e. similar proportion unemployed) and a similar proportion of the labour force in full-time and part-time employment, relative to regional NSW;
- a higher proportion of workers employed as Professionals, Technicians and Trade Workers, Clerical and Administrative Workers, and Sales Workers, relative to regional NSW;
- a higher proportion of people in the 30 to 49 age groups and a lower proportion of people in the 50 to 69 years age group age groups, but a higher proportion of older people relative to regional NSW;
- a relatively educated population with higher proportion of people completed year 12 and a higher proportion holding university and vocational qualifications, relative to regional NSW;
- 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, relative to regional NSW; and
- has a high unemployment rate, relative to Regional NSW.

2.3. Economic Profile[9]

This section examines the economic structure of the Region using data from a number of sources, including from an Input Output table of the regional economy developed by CERD, and employment by industry data compiled by the NSW Department of Premier and Cabinet (DPC) from the ABS 2016 Census.

2.3.1. Economic Snapshot

The CERD has produced an Input Output table for the regional economy based on the ABS Input Output Tables for New South Wales. The Gross Regional Product (GRP) of the regional economy was estimated at $23.416 billion for the 2015-16 period. This represented approximately 4.3% of NSW Gross State Product (GSP) and $44,593 GRP per Capita (compared to $71,991 GRP per Capita for NSW).

The Central Coast - Lake Macquarie Region is a net importer, with exports out of the Region of $5,307 million and imports into the Region of $9,885 million. Using the Input Output industry classifications, the largest exporting industries by value are:

- Coal Mining ($1,519M);
- Wholesale Trade ($314M);
- Grain Mill and Cereal Product Manufacturing ($276M);
- Basic Non Ferrous Metals Manufacturing ($194M);
- Professional, Scientific and Technical Services ($189M).

Conversely, the largest importing industries in the region are:

- Coal Mining ($418M);
- Grain Mill and Cereal Product Manufacturing ($360M);
- Construction Services ($287M); and
- Professional, Scientific and Technical Services ($188M);
- Health Care Services ($183M).

The following analysis uses the Input Output table data but reports the findings in terms of both the Input Output industry classifications and the ANZSIC One digit industry classification.

Using the Input Output industry classifications, in terms of value added, it is estimated that Retail Trade, Health Care Services, Residential Care and Social Assistance had the highest value added, equal in total to 14.5 per cent of the Region, indicative of the importance of consumption/population-led service sectors in the Region’s economy (Table 4).

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

Table 4: Gross Value Added for the 5 Largest Industries in the Central Coast - Lake Macquarie Regional Economy (IO Sectors)

Industry	Gross Value Added ($M)	Proportion of Regional Economy (%)	Proportion of Regional Employment (%)	Per Capita Value Added ($)
Retail Trade	1,410	6.0%	13.6%	2,685
Health Care Services	1,066	4.6%	9.0%	2,030
Residential Care and Social Assistance Services	931	4.0%	7.5%	1,772
Primary and Secondary Education Services (incl. preschool and special schools)	929	4.0%	6.5%	1,769
Finance	921	3.9%	1.1%	1,754

Source: Department of Premier and Cabinet (NSW)

Based on the ANZSIC One digit industry classification, it is estimated that Health Care and Social Assistance had the highest Gross Value Added, and Manufacturing was the next most important industry for value added. Financial and Insurance Services was identified as being one of the largest industries in terms of Gross Value Added (Table 5), and reflects the metropolitan nature of the Central Coast and Lake Macquarie Region.

Table 5: Gross Value Added for the 5 Largest Industries in the Central Coast - Lake Macquarie regional economy (ANZSIC One Digit Sectors)

Industry	Gross Value Added ($M)	Proportion of Regional Economy (%)	Proportion of Regional Employment (%)	Per Capita Value Added ($)
Health Care and Social Assistance	1,997	8.5%	16.5%	3,803
Manufacturing	1,903	8.1%	9.6%	3,624
Financial and Insurance Services	1,507	6.4%	2.6%	2,870
Retail Trade	1,410	6.0%	13.6%	2,685
Construction	1,292	5.5%	6.8%	2,460

Source: Department of Premier and Cabinet (NSW)

Tourism data from Destination NSW is available for the Central Coast and Lake Macquarie Region. Key statistics are summarised in Table 6. Domestic day visitation is responsible for 72% of visitor numbers but domestic overnight visits are responsible for the majority of expenditure. The main purpose of domestic overnight visitation was to visit family and relatives and holiday.

Table 6: Destination NSW Visitor Profiles

	Central Coast LGA		Lake Macquarie LGA	Total Region
	No.	**%**		
Total Visitors (000's)	**4,600**		**1,121**	
International Overnight	*39*	*1%*	*9*	*1%*
Domestic Overnight	*1,259*	*27%*	*315*	*28%*
Domestic Day	*3,302*	*72%*	*797*	*71%*
Total Nights (000's)	**4,256**		**984**	
International Overnight	*674*	*16%*	*159*	*16%*
Domestic Overnight	*3,582*	*84%*	*825*	*84%*
Total Spend ($M)	**800**		**176**	
International Overnight	*35*	*4%*	*7*	*4%*
Domestic Overnight	*500*	*63%*	*88*	*50%*
Domestic Day	*265*	*33%*	*81*	*46%*

Source: Destination NSW (2016)

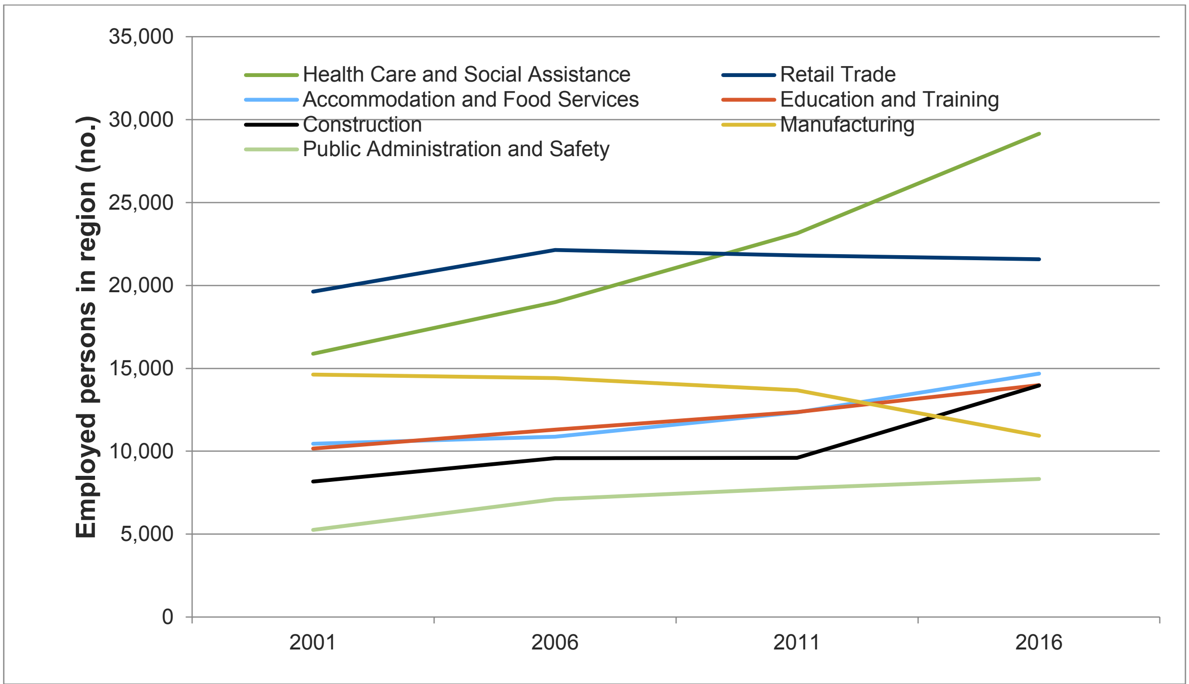
Tourism is not a sector in the Input-Output or ANZSIC frameworks. Rather it encapsulates final demand expenditure by visitors to a region on a range of sectors including Retail, Accommodation, Food and Beverage Services etc. Using tourism visitation and expenditure data, CERD has used Input-Output modelling to estimate the direct impact of tourism on the regional economy. This indicated that tourism contributes $441M in value-added (1.9% of regional economy), 4,648 full-time equivalent jobs (3.4% of regional economy) and $227M in household income (wages) (2.2% of regional economy).

2.3.2. Employment

Historically, the largest employing industries in the Region have been Retail Trade, Health Care and Social Assistance and Manufacturing. As shown in Figure 14, these are still significant employing sectors, however employment in Health Care and Social Assistance has overtaken Retail Trade and employment in Manufacturing has declined significantly. Manufacturing is now the sixth largest employing sector, overtaken by Accommodation and Food Services, Education and Training and Construction. This decline in Manufacturing is not unexpected given global trends in Manufacturing and the downturn in coal mining in the adjoining regions - a source of demand for Fabricated Metal Product Manufacturing and Machinery and Equipment Manufacturing.

Employment in the Region grew strongly between 2011 and 2016 (11%) by 15,175 (with growth strongest in the Central Coast LGA), at the same time that the number of the employed usual resident labour force increased by 10,253.

Figure 14: Historical Employment in the Central Coast – Lake Macquarie Region



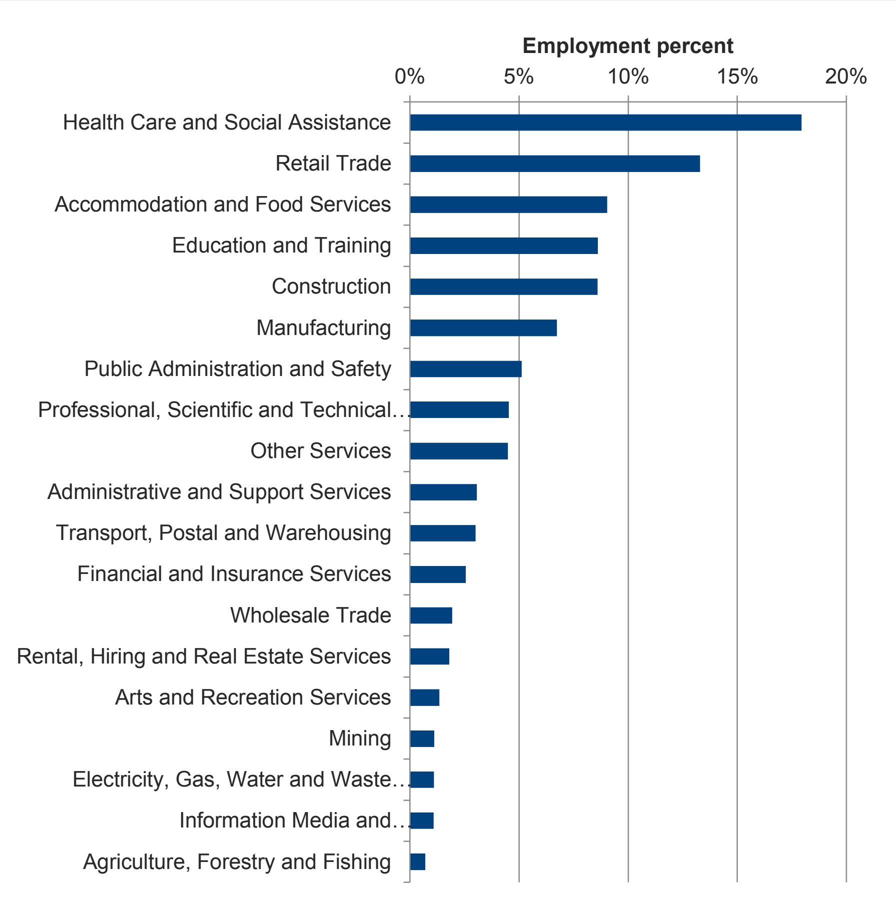
2.3.3. Industry Employment Share

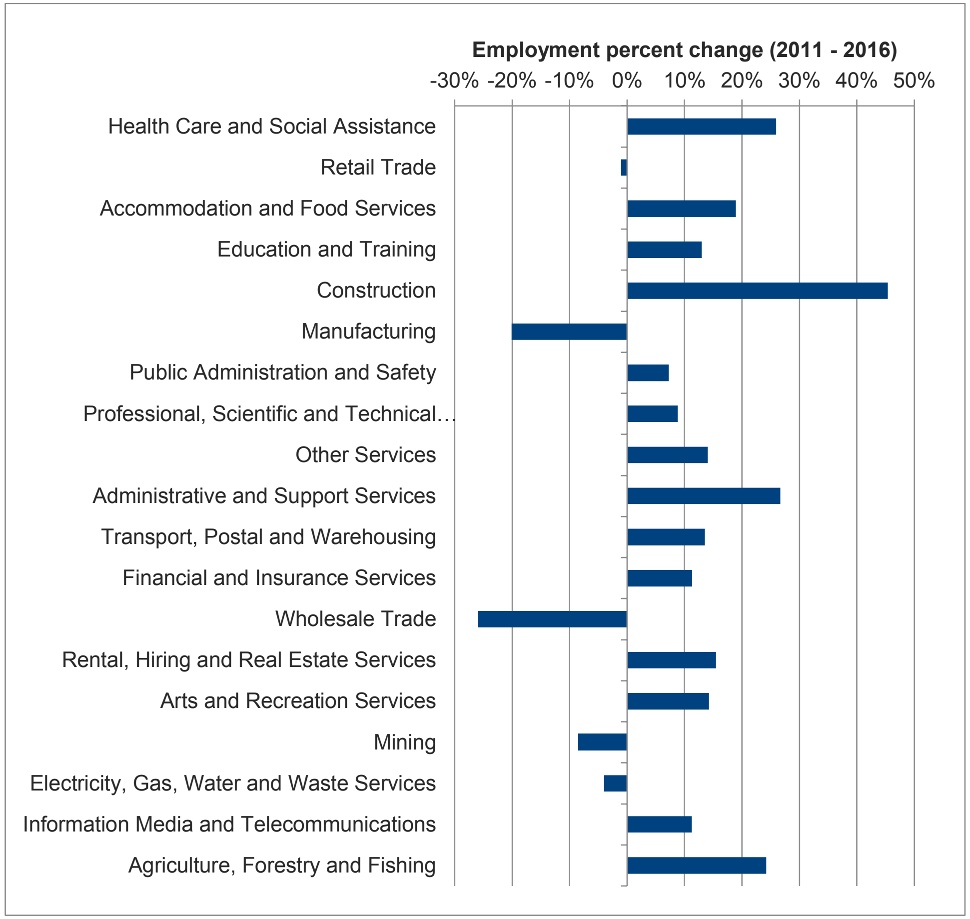
The ABS 2016 Census reports there were 156,074 people employed in the Region. As illustrated in Figure 15, the largest employing industries were:

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

All these sectors grew between 2011 and 2016, except Retail Trade which declined in employment. All other sectors in the regional economy grew, apart from Manufacturing and Wholesale Trade which both experienced a significant decline, and Mining and Electricity, Gas, Water and Waste Services which experienced smaller declines.

Figure 15: Employed Persons in the Central Coast – Lake Macquarie Region





Source: Department of Premier and Cabinet (NSW)

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 most significant sectors in the Region are:

- Health Care and Social Assistance;
- Manufacturing;
- Education and Training;
- Retail Trade; and
- Public Administration and Safety.

The significance of Retail Trade, Accommodation and Food Services and Construction declines due to the smaller comparative wages of these sectors, while the significance of Manufacturing and Public Administration and Safety increases.

2.4. Industry Cluster Analysis

2.4.1. Regional Specialisation

Identifying the largest employing industries in a region provides a good overview of the local economy. However, such analysis typically emphasises traditionally labour intensive, non-basic industries like Retail Trade. A more useful way to understand a region's economy is to compare the proportion of local people employed in industries with the equivalent proportions in the state or nation.

Location Quotients (LQs) provide a useful measure of industry specialisation in the Central Coast – Lake Macquarie regional economy compared with industry specialisation at the State level. LQs measure the ratio of the share of regional employment in a particular industry and the share of employment for that industry across NSW. Generally a LQ greater than 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 the Central Coast - Lake Macquarie Region at each level of ANZSIC Industry Classification. Table 7 arranges specialisation data in Figure 16 to Figure 19 to the ANZSIC Division, Subdivision, Group and Class. The first level that specialisation occurs is in bold. This is helpful as:

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

From Table 7, the Region has a regional specialisation in:

- Health Care and Social Assistance, particularly Aged Care Residential Services;
- Retail Trade;
- Accommodation and Food Services, mainly Food and Beverage Services;
- School Education - most likely a function of the numerous urban centres and hence schools within the Region
- Food Product Manufacturing;
- Other Services – Automotive Repairs and Maintenance and Hairdressing and Beauty Services (reflecting high aged care and numerous centres across the Region).
- Local Government Administration (associated with the Region having three Councils - two of which are now amalgamated).

In addition, more capital intensive sectors that provide less than 1% of regional employment but exhibit a large regional specialisation include:

- Coal Mining; and
- Wood Product Manufacturing;
- Fabricated Metal Product Manufacturing; and
- Electricity Supply.

The concentration of tourism employment in the Region falls short of the criteria for a specialisation but growth in the specialisation and growth in the Accommodation sector and Food and Beverage Services, relative to NSW, points to a potential tourism specialisation.

Table 7: Industry Specialisation by ANZSIC Classification Level

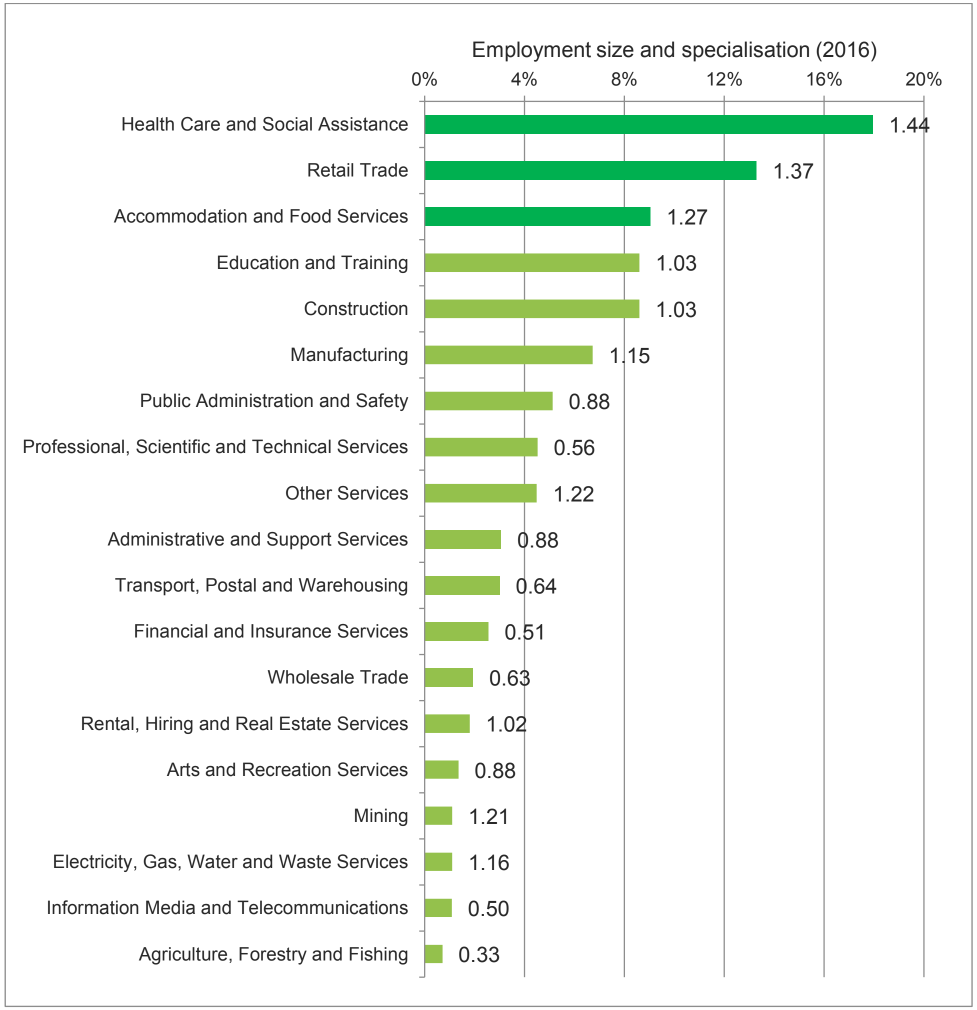
ANZSIC Division (1 Digit)	ANZSIC Subdivision (2 Digit)	ANZSIC Group (3 Digit)	ANZSIC Class (4 Digit)
Health Care and Social Assistance	Medical and Other Health Care Services	Allied Health Services	
		Medical Services	General Practice Medical Services
	Residential Care Services	Residential Care Services	Aged Care Residential Services
	Social Assistance Services	Other Social Assistance Services	Other Social Assistance Services
Retail Trade	Other Store-Based Retailing	Pharmaceutical and Other Store-Based Retailing	Pharmaceutical, Cosmetic and Toiletry Goods Retailing
		Department Stores	Department Stores
	Motor Vehicle and Motor Vehicle Parts Retailing		
	Food Retailing	Supermarket and Grocery Stores	Supermarket and Grocery Stores
Accommodation and Food Services	Food and Beverage Services	Cafes, Restaurants and Takeaway Food Services	Takeaway Food Services
		Clubs (Hospitality)	Clubs (Hospitality)
Education and Training	**Preschool and School Education**	School Education	Primary Education
			Secondary Education

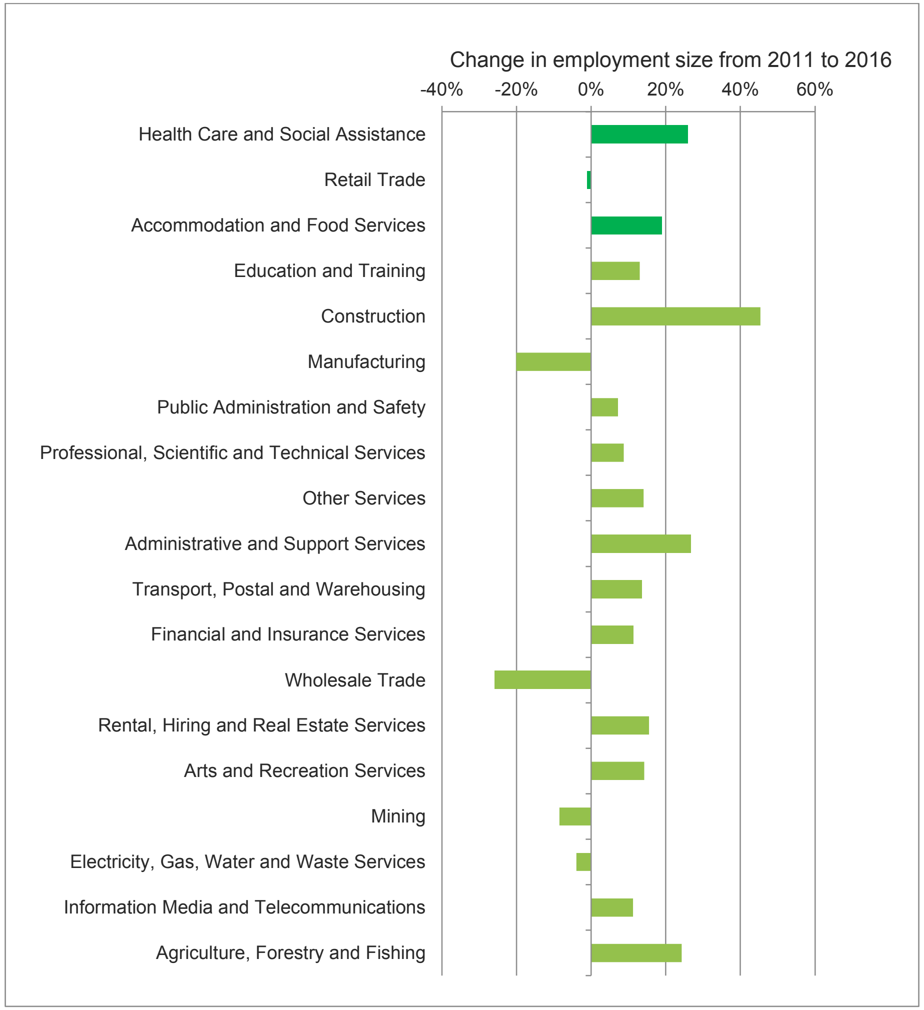
ANZSIC Division (1 Digit)	ANZSIC Subdivision (2 Digit)	ANZSIC Group (3 Digit)	ANZSIC Class (4 Digit)
Manufacturing	**Food Product Manufacturing**		
Public Administration and Safety	*Public Administration*	**Local Government Administration**	Local Government Administration
Other Services	*Repairs and Maintenance*	**Automotive Repair and Maintenance**	
	Personal and Other Services	**Personal Care Services**	Hairdressing and Beauty Services

Source: Department of Premier and Cabinet (NSW)

* 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. Sectors in bold indicate the first level that a specialisation occurs.

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

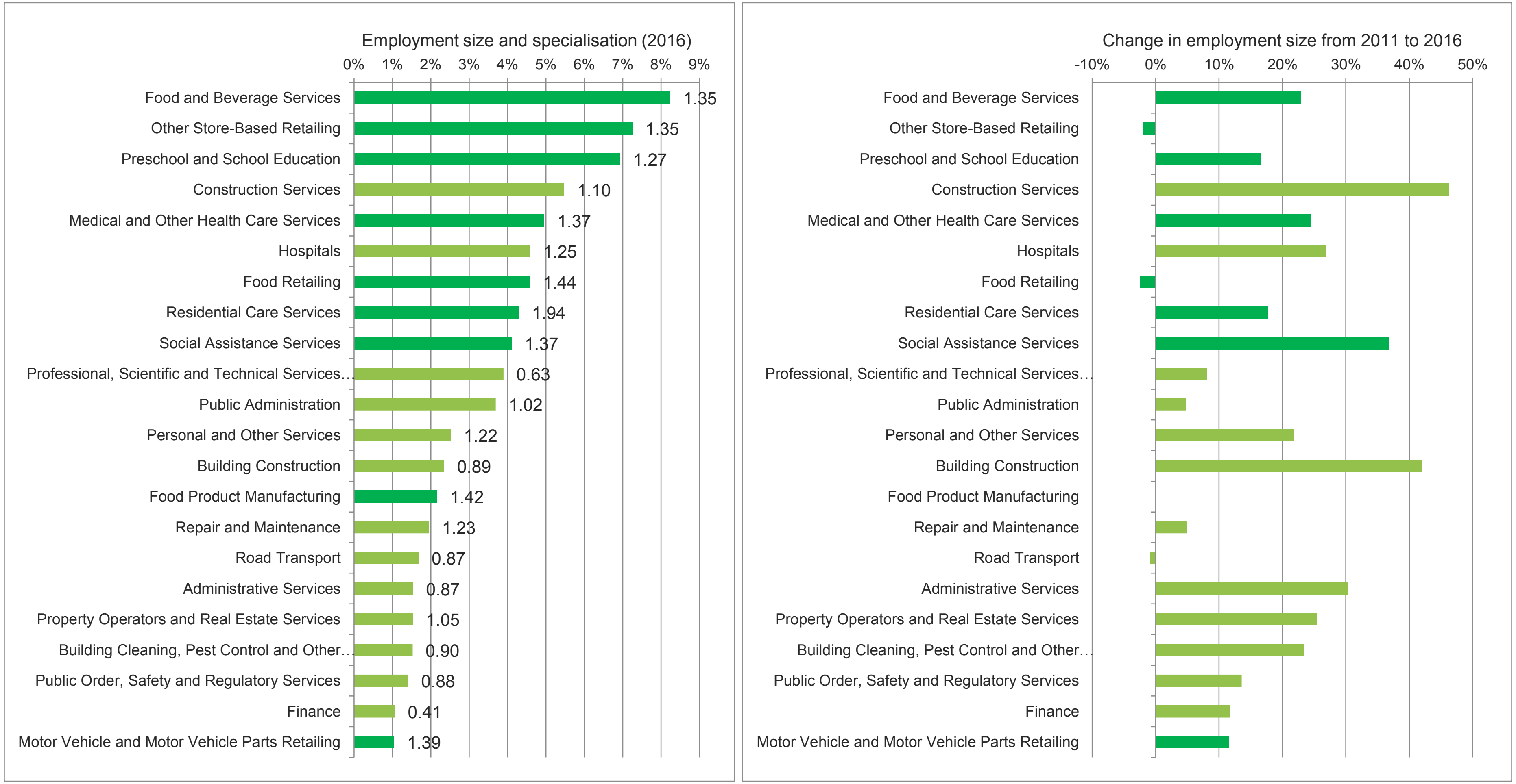




Source: Department of Premier and Cabinet (NSW)

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

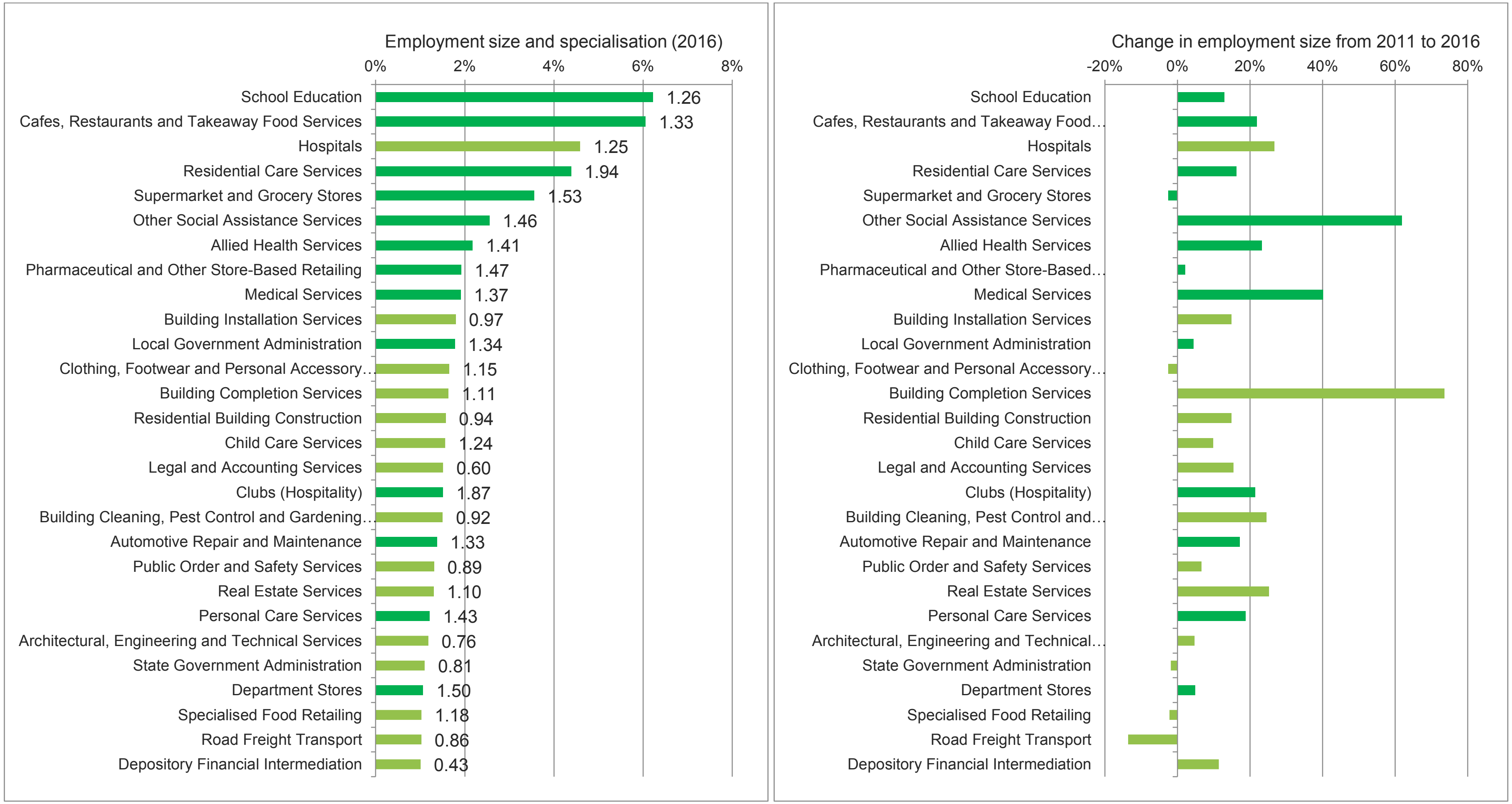
Figure 17: ABS 2 Digit ANZSIC Level Industry Employment Size, Specialisation (LQ) and Change in Employment Size



Source: Department of Premier and Cabinet (NSW)

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

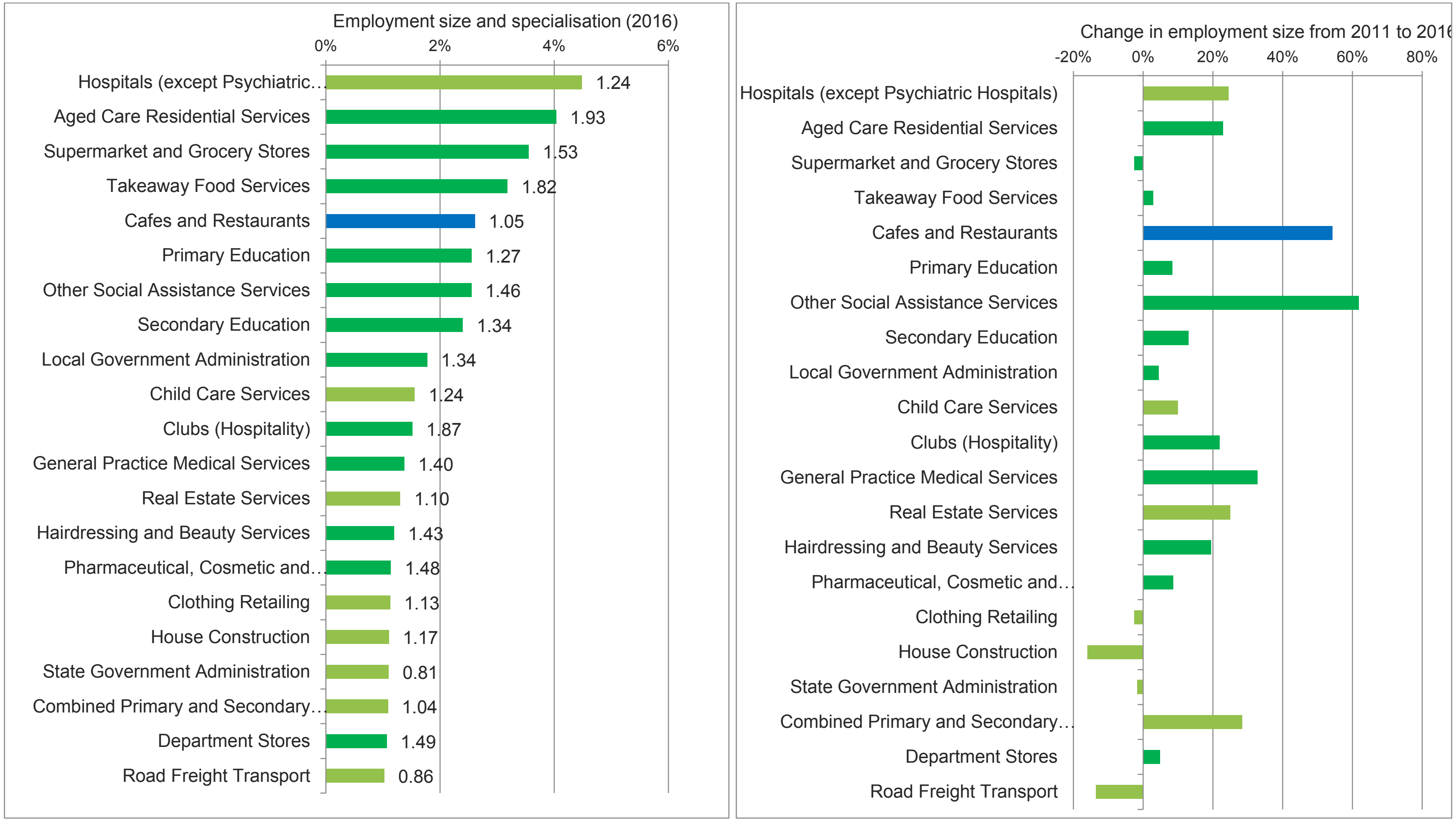
Figure 18: ABS 3 Digit ANZSIC Level Industry Employment Size, Specialisation (LQ) and Change in Employment Size



Source: Department of Premier and Cabinet (NSW)

Note: Green represents a sector with a specialisation. All other sectors are in blue. 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

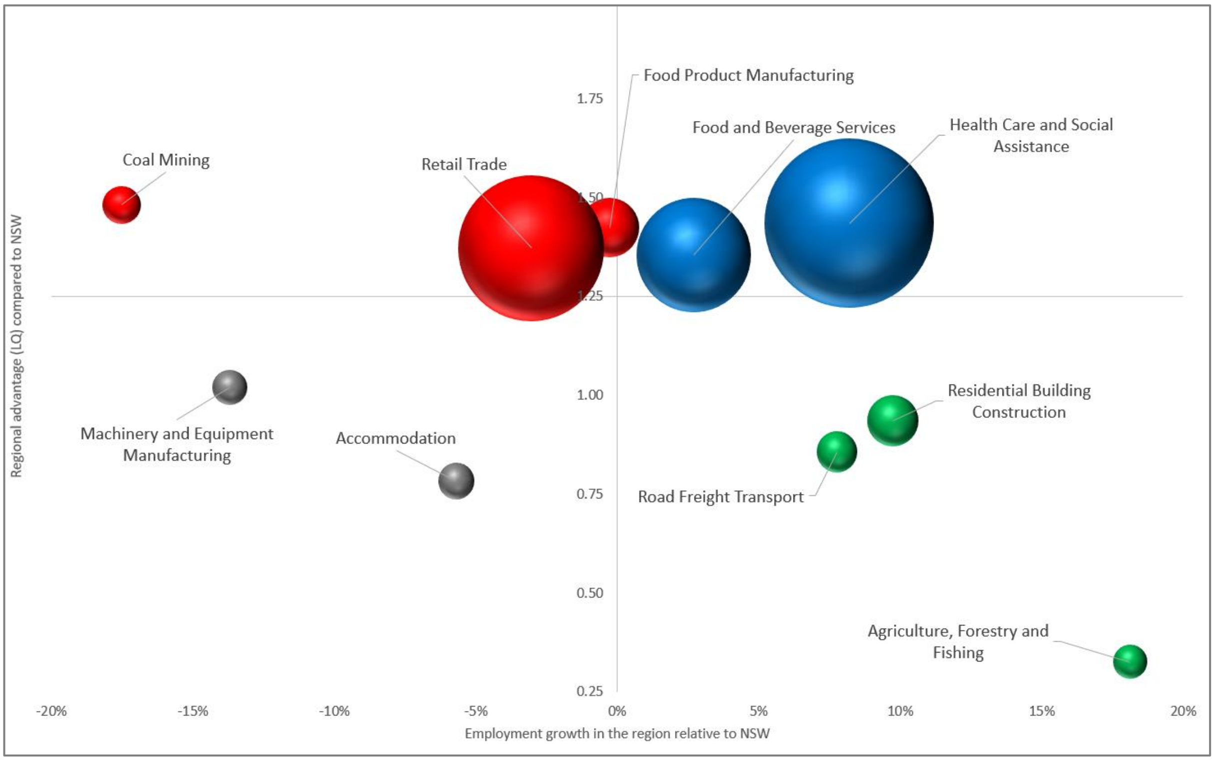


Source: Department of Premier and Cabinet (NSW)

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

Figure 20 charts the performance of some of the key industries in the 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. an LQ greater than 1.25). The horizontal axis indicates the industries growth between 2011 and 2016 relative to NSW, with those industries to the right of the axis growing faster or contracting slower in the regional economy than in NSW.

Figure 20: Location Quotients and Employment Growth for Industries in the Central Coast – Lake Macquarie Region



Source: Department of Premiers and Cabinet (NSW)

This analysis shows that Health Care and Social Assistance is a key industry in the Region, making up 18% of employment at the time of the ABS 2016 Census. The Region also has a high degree of specialisation in this industry with an LQ of 1.44, and from 2011 to 2016 employment in this sector grew at a greater rate than it did across NSW. Food Product Manufacturing, while not as large a sector also showed specialisation but contracted relative to this sector across NSW as a whole. Food and Beverage Services and Retail Trade (which to some extent reflect tourism) are also large specialisation sectors in the Region, with the Food and Beverage Services sector growing in employment relative to this sector across NSW, and the Retail Trade sector contracting relative to this sector across NSW. Coal Mining is a capital intensive sector that the Region has a specialisation in, but contracted faster than this sector across NSW as a whole. The recent approval of the Wallarah 2 Coal Project will further add to the specialisation of the Region in coal mining.

2.4.2. Shift-Share Analysis: The changing nature of employment

Shift-Share Analysis is a widely used technique 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 boarder 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 called 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:

Total Shift = State Shift + Industry Mix Shift + 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 competiveness unique to the Region. This value may be positive or negative.

Table 8 below shows the regional shift (number) in employment growth for all ANZSIC One Digit industries employing more than 5% of the regional 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 all these major industries, apart from Retail Trade and Education and Training was positive during the period. This indicates that, after controlling for the growth in total employment and employment in these industries at the state level, employment in these industries grew faster than in the rest of the state.

Table 8: Regional Shift between 2011 and 2016 in the Central Coast - Lake Macquarie Region 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	23,148	16%	2,477	1,641	1,897	6,015
Retail Trade	21,818	15%	2,335	-1,898	-663	-227
Accommodation and Food Services	12,354	9%	1,322	627	388	2,338
Education and Training	12,371	9%	1,324	442	-156	1,609
Construction	9,606	7%	1,028	1,524	1,807	4,359
Manufacturing	13,679	10%	1,464	-4,739	528	-2,747
Public Administration and Safety	7,766	6%	831	-275	5	561

Source: Department of Premier and Cabinet (NSW)

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

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 advantage, is summarised in Table 9. The first ANZSIC level that regional advantage occurs is in bold. This indicates some regional competitive advantage in:

- Health Care and Social Assistance;
- Food and Beverage Services;
- Residential Building Construction and Building Completion Services;
- Manufacturing;
- Other Services - Automotive Repair and Maintenance and Hairdressing and Beauty Services;
- Administration Services;
- Road Freight Transport;
- Information Media and Telecommunication; and
- Agriculture, Forestry and Fishing.

Table 9: 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 (%)
Health Care and Social Assistance	8%	Medical and Other Health Care Services	4%	Medical Services	10%	General Practice Medical Services	7%
				Allied Health Services	6%		
		Hospitals	9%	Hospitals	9%	Hospitals (except Psychiatric Hospitals)	9%
		Residential Care Services	3%	Residential Care Services	3%	Aged Care Residential Services	5%
		Social Assistance Services	19%	Other Social Assistance Services	40%	Other Social Assistance Services	40%
Retail Trade		**Motor Vehicle and Motor Vehicle Parts Retailing**	3%				
		Other Store-Based Retailing		Pharmaceutical and Other Store-Based Retailing	1%		
Accommodation and Food Services	3%	Food and Beverage Services	3%	Cafes, Restaurants and Takeaway Food Services	2%	Takeaway Food Services	10%
						Cafes and Restaurants	5%

ANZSIC Division (1 Digit)	RS (%)	ANZSIC Subdivision (2 Digit)	RS (%)	ANZSIC Group (3 Digit)	RS (%)	ANZSIC Class (4 Digit)	RS (%)
				Clubs (Hospitality)	9%	Clubs (Hospitality)	9%
Construction	19%	Construction Services	18%	Building Completion Services	40%		
		Building Construction	16%	Residential Building Construction	10%	House Construction	21%
Manufacturing	4%						
Public Administration and Safety		**Public Order, Safety and Regulatory Services**	3%	Public Order and Safety Services	3%		
Other Services	7%	Personal and Other Services	7%	Personal Care Services	5%	Hairdressing and Beauty Services	5%
		Repair and Maintenance	7%	Automotive Repair and Maintenance	10%		
Administrative and Support Services	10%	Administrative Services	24%				
Transport, Postal and Warehousing	9%	Road Transport	5%	Road Freight Transport	8%		
Financial and Insurance Services	5%						

ANZSIC Division (1 Digit)	RS (%)	ANZSIC Subdivision (2 Digit)	RS (%)	ANZSIC Group (3 Digit)	RS (%)	ANZSIC Class (4 Digit)	RS (%)
Professional, Scientific and Technical Services		*Professional, Scientific and Technical Services (except Computer System Services)*		**Legal and Accounting Services**	1%		
Education and Training		*Preschool and School Education*		*School Education*		**Primary Education**	1%
Arts and Recreation Services	1%						
Electricity, Gas, Water and Waste Services	2%						
Information Media and Telecommunications	9%						
Agriculture, Forestry and Fishing	18%						

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

2.5. Strategy Focus

Industries can be categorised as engines of growth, enabling industries and consumption/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 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[10].

Based on the preceding analysis, the key engines of growth sectors in Central Coast – Lake Macquarie Region are considered to be:

- Healthcare and Social Assistance, particularly Aged Care Residential Services – but it is also a population serving industry sector;
- Tourism;
- Manufacturing, particularly Food Product Manufacturing; and
- Mining, particularly Coal Mining.

In addition, the Central Coast – Lake Macquarie Region is likely to increasingly become a dormitory area exporting labour to the Sydney and Newcastle region. Hence, actions that increase its attractiveness, liveability and access to Sydney and Newcastle will help the regional economy particularly in growing value of output, and also employment, in population serving services sector activities.

[10] 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.

3. Institutional audit

Institutions play a fundamental role in the economic development process. Before a regional economic development strategy can be formulated, the local institutional capacity must be evaluated. A successful economic development strategy for the Central Coast - Lake Macquarie regional economy is one that capitalises on the institutional strengths that exist in the Region. This section lists the key institutions in the Region as well as their:

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

Table 10: Selected Institutions in the Region

Institution	Role in economic future of the region	Strengths and capacity	Important linkages to other institutions
Central Coast Council Lake Macquarie City Council	Local government plays a key regulatory, support and coordination role in the economic future of the Region.	Both Councils maintain an active relationship with local businesses and play a strong leadership role in the Region.	- Dantia - Central Coast Regional Development Corporation - Various business chambers.
Dantia – The Economic Development Company for Lake Macquarie City	Attract investment and new businesses to Lake Macquarie, promote the city, its businesses and community, develop partnerships with government and encourage policies that facilitate growth.	Capable permanent staff with a well-connected Board of Directors, Identify LM key industries as including engineering and manufacturing, logistics, tourism, retail and commercial, education, health and technology	- Strong linkages to State and Commonwealth Government agencies - Linked to LM City Council - Well connected to the University of Newcastle and the defence sector.

Institution	Role in economic future of the region	Strengths and capacity	Important linkages to other institutions
Central Coast Regional Development Corporation (CCRDC)	CCRDC is a State Government authority charged with accelerating growth, private investment, and development of the Central Coast.	Well-resourced and charged with delivery of major projects including Gosford's waterfront redevelopment, University Campus in Gosford and the Mt Penang Development.	➢ Other State Government agencies ➢ University of Newcastle ➢ Central Coast Council.
Central Coast NSW Business Chamber	The Central Coast NSW Business Chamber advocates for Central Coast businesses and maintains a dialogue with governments and authorities at local, State and Commonwealth levels.	Full time staff available to assist Central Coast business.	➢ Local chambers of commerce along the Central Coast ➢ Central Coast Council ➢ NSW and Commonwealth agencies.
The Business Centre – Newcastle, Lake Macquarie and Central Coast	Business training and support.	Provide a range of accredited and unaccredited training courses and mentoring programs for small businesses.	➢ Linked with government agencies and small businesses across the Region.
Office of Regional Development, NSW Premier and Cabinet	Leads the NSW Government's regional development activities. Focuses on making NSW regions a prosperous place to live, a place where people wish to live, have good jobs and businesses choose to invest and grow.	Capacity to invest in skills and education, research and innovation, gap analysis with employers and managing access to natural resources.	➢ The Office of Regional Development Hunter and Central Coast is well linked to all institutions concerned with regional development in the Region.

Institution	Role in economic future of the region	Strengths and capacity	Important linkages to other institutions
Regional Development Australia (RDA) – Central Coast and Hunter Region (including Lake Macquarie)	A Commonwealth and state funded organisation responsible for the economic development of the Central Coast and Lake Macquarie. The RDA – has an advisory, collaboration, awareness and promotion role in the economic future of the Region.	RDA maintains good relationships with businesses and organisations involved in economic development across the Central Coast and broader Hunter region.	➢ Central Coast Council ➢ Lake Macquarie City Council ➢ Other Hunter Councils (Cessnock, Dungog, Gloucester, Great Lakes, Maitland, Muswellbrook, Newcastle, Port Stephens, Singleton and Upper Hunter).
Hunter Trial Joint Organisation	Performs similar representation and lobbying roles as a Regional Organisation of Councils (ROC).	Lobbies for Hunter regional priorities.	➢ NSW Government Departments ➢ Federal Government Departments ➢ Includes Cessnock City Council, Dungog Shire Council, Gloucester Shire Council, Great Lakes Council, Lake Macquarie City Council, Maitland City Council, Muswellbrook Shire Council, The City of Newcastle, Port Stephens Council, Singleton Council and Upper Hunter Council.
Darkinjung Local Aboriginal Land Council (DLALC)	DLALC manages land on behalf of Aboriginal people. Has amongst other things a partnership with Barker College for the school education of Aboriginal children.	Major regional development projects with DLALC involvement include Blue Haven residential subdivision, Halekulani manufactured homes (caravan) estate, and objections to both the Calga sand quarry extension and Wallarah 2 coal mine.	➢ NSW Government Departments ➢ Federal Government Departments ➢ Local Government ➢ Private developers and project proponents.

Institutions serving the Region are effective and appropriate for the scope and reach of the Central Coast and Lake Macquarie community. There is ample regional capacity and capability available to deliver the Strategy.

4. Infrastructure audit

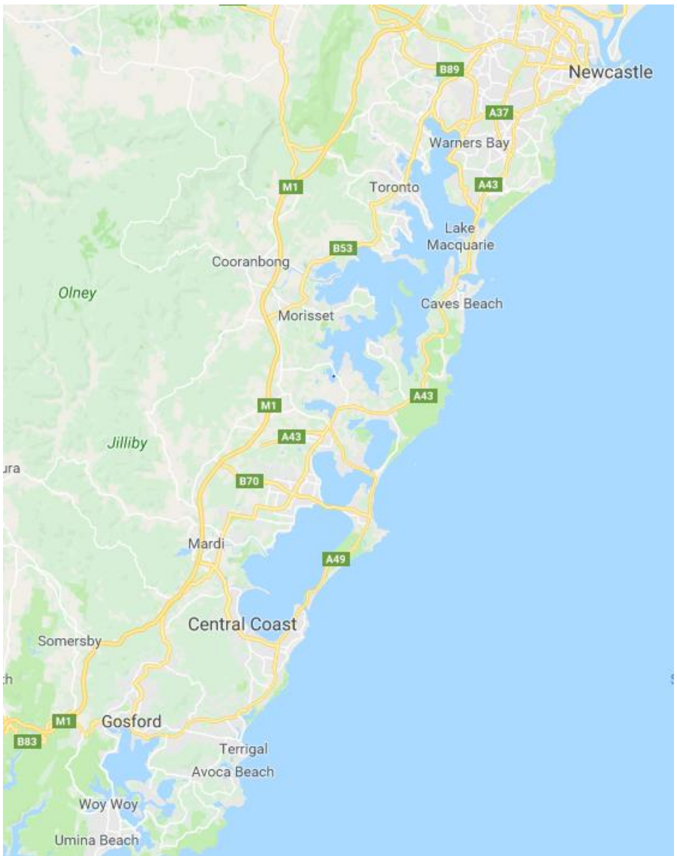
Infrastructure is an important enabler of economic growth. Customers and businesses rely upon the physical and organisational structures and facilities that exist in a region, or that link regions to other parts of the country or globe. Before a strategy can be formulated, the infrastructure that the Region relies upon must be evaluated. A strategy for the Central Coast - Lake Macquarie regional economy must take into consideration the opportunities and limitations presented by the infrastructure in the Region, including what will be needed to facilitate maintaining and expanding the level of commuting out of the Region as a dormitory area for the Sydney and Newcastle employment markets.

4.1. Roads

4.1.1. Highways

The Central Coast – Lake Macquarie Region is serviced by the main north south highway linking Sydney and Brisbane (Pacific Highway, M1). Main roads are shown on the diagram below.

Figure 21: Roads in the Central Coast – Lake Macquarie Region



Source: Google Maps, Accessed on 27 March 2018

The Pacific Highway is the 'life blood' of the Region providing quick access to both Sydney and Newcastle for regional exports, the opportunity to commute for work or to visit the region for short breaks.

4.1.2. Secondary roads

Secondary roads link the region internally and to other parts of NSW. Internal roads require upgrade to support economic growth. Examples include the Etna Street and Donnison Street Bridges whose upgrade would support traffic flow in the Gosford CBD. Upgrade of the Munibung Road and associated intersections and Pennant Street Bridge would activate the Cardiff Industrial Estate.

4.2. Public Transport

The Central Coast – Lake Macquarie Region is serviced by the Main North railway line connecting the state's two largest cities, Sydney and Newcastle. The service runs from Central through to Broadmeadow on the Main North railway line to Newcastle Interchange on the Newcastle railway line, and services the Hawkesbury River region, the Central Coast and the city of Newcastle. The southern end of the Region is sufficiently close to Sydney to allow a daily commute and upgrades of this well patronised service are in the pipeline. Upgrades will need to address a commitment to a 60 minute commute from Gosford, improved parking at rail stations and the integration of rail with other forms of transport. Key Central Coast stations include Gosford, Ourimbah, Tuggerah, Wyong and Warnervale. A new station is proposed for Warnervale (Central Coast) and at Glendale (Lake Macquarie). Key train stations in Lake Macquarie include Wyee, Morisset, Fassifern and Cardiff. Country Link Express trains stop at Fassifern.

Public transport to connect 'where we live with where we work' is a priority. This includes additional bus routes and improved bus frequency. Cycle ways are also a priority.

4.3. Airports

The Region has ready access to scheduled flights via Sydney and Newcastle Airports. There is a general aviation airport at Warnervale with scope for further development of aviation support businesses. Lake Macquarie Airport, (formerly Belmont Airport) was home to Aero Pelican and is used for a range of private aviation functions including Matt Hall Racing, Airborne (fabrication and aircraft services), Westpac Rescue Services, and various sky diving and joy flight operations. A consortium of aviation companies privately owns the airport.

4.4. Utilities

4.4.1. Water supply

Domestic water supply is provided by both Central Coast Council and Hunter Water. Longer term there is a need to reconfigure the spillway on Mangrove Creek Dam to increase the dam's effective capacity. Hunter Water has no supply constraints. Project consultation reveals that there are gaps in coverage in areas that fall between Central Coast and Hunter Water networks.

There are gaps in water supply servicing industrial estates in both the Central Coast and Lake Macquarie ends of the Region.

4.4.2. Sewerage

Again there are gaps in the servicing of areas with reticulated sewerage that fall between the Central Coast and Hunter Water networks. There are also gaps in sewerage services in industrial estates in both the Central Coast and Lake Macquarie ends of the Region. There is a need to relocate the main sewer trunk line in the Gosford CBD to expedite business development.

4.4.3. Power/energy

The Region is appropriately supplied with electricity. There are no gaps in the domestic power/energy supply. Some industrial estates require the power supply to be connected and there is a 'first mover' problem in some areas where the first occupant of an estate is forced to pay the total cost of having power supplied. The distribution system associated with disused power stations and power stations themselves may have potential for the creation of renewable energy businesses.

4.4.4. Telecommunications

An effective internet and NBN service operates in the Region. Pre-existing work hubs/innovation hubs such as the Nexus Smart Hub in Wyong, the Gosford Smartwork Hub and the Dantia Smart Hub in Charlestown have proven to be successful, and these models might be replicated in other parts of the Region.

4.5. Industry infrastructure

4.5.1. Industrial land

There is ample industrial land in the Central Coast LGA but there are difficulties with securing water, sewerage, broadband, electricity and gas connections ('last mile issues'). First movers are forced to pay all infrastructure costs. Sparks Road, Somersby Intersection and the Highway Commercial Precinct provided by the community as examples.

As with the Central Coast, there is ample industrial land in the Lake Macquarie LGA. Some industrial land in Lake Macquarie requires better road access and road renewal.

4.6. Education infrastructure

4.6.1. University

University education is available in the northern part of the Region is available via a short commute to the University of Newcastle. The southern part of the Region has a University of Newcastle Campus that offers programs across a range of schools and faculties. It would be appropriate for courses offered to align with the Region's core strengths in health care, manufacturing, mining and tourism.

4.6.2. TAFE

TAFE provides a comprehensive range of colleges and courses throughout the Region. Colleges are situated in Gosford, Ourimbah, Wyong, Belmont and Glendale. Courses offered focus on hairdressing and beauty, administration, business, library and real estate, manufacturing and engineering, community health and fitness, information technology, transport and mining, animal and equine studies.

4.6.3. Primary and secondary schools

No gaps were identified in the primary and secondary school system.

4.6.4. Pre-school and childcare

Places in pre-schools and childcare centres are limited within the Region and it is difficult to secure a place for children in long day care.

4.7. Health infrastructure

4.7.1. Hospitals

Central Coast Local Health District provides public health services to the communities of Gosford and Wyong. Gosford Hospital is the principal referral hospital and regional trauma centre for the Central Coast. Wyong Public Hospital is a major metropolitan hospital while Woy Woy Hospital and Long Jetty Healthcare Centre provide sub-acute care. The Brisbane Waters Private Hospital is also located in this part of the region. Lake Macquarie is serviced by the John Hunter Hospital Newcastle and Belmont Hospital. There is a psychiatric hospital at Morisset and private health hospitals at Charlestown, Gateshead, Toronto and Warners Bay.

4.7.2. Aged care

The Region has a specialisation in aged care and no gaps have been identified in aged care infrastructure.

4.8. Sporting and cultural infrastructure

4.8.1. Recreation, sporting and cultural facilities

The Region is well supplied with recreation and sporting facilities. Some upgrade of these facilities is required to meet end of life issues, the needs of a growing population and increased community expectations. Priorities include improved sporting precincts, stadium enhancements for concerts and sport and coastal / lake walking trails. Examples provided by the Central Coast community include funding for Tuggerah Sporting Precinct Stage 3 and the Central Coast Regional Performing Arts/Conference Centre. Lake Macquarie examples include the Hunter Sports Centre and the Lake Macquarie Arts Hub.

4.9. Accommodation infrastructure

Existing tourist accommodation includes larger integrated resort hotels, niche five star luxury through to cabins, caravans and camping. More depth in the offering has been suggested to boost the visitor economy.

5. Endowments

Endowments are strengths that a regional economy possesses and can capitalise on. Economic principles suggest that endowments play a key role in the economic development of regions. The CERD in its *Regional Economic Growth Enablers Report* (2016) found that:

> *the future of individual regional economies is inexorably linked to their natural endowments and attempts to retain or establish industries without an underpinning endowment are unlikely to succeed.*[11]

A region seeking to encourage economic development should therefore concentrate on factors that enable the growth of endowment-based industries, as well as building local leadership and institutional capacity and capabilities to capitalise on the opportunities that a region's endowments present. Endowments can lead to opportunities from which commercial and industrial interests may leverage and develop specialisations.

Table 11. Endowments of the Region identified through analysis and community consultation.

Location and Accessibility	Lifestyle and amenity benefits
The Region is located on the NSW coast between the major urban centres of Sydney and Newcastle, with access north and south via the Main North railway line and the Main north south highway linking Sydney, Newcastle and Brisbane (M1). This enables accessibility of residents and businesses to the social and business infrastructure associated with major cities, while enjoying lower housing and land prices. It is also an important attribute in relation to tourism.	The Region's affordable house prices, rural and coastal lifestyle choices, smaller community feel, natural beauty, and diverse economy also make the Region liveable and an attractive place to raise a family, retire or semi-retire.

[11] *Regional Economic Growth Enablers Report* (2017), Centre for Economic and Regional Development

Mineral and extractive resources	Natural resources
The Region has unique geology containing coal seams at considerable depth and surface gravel, sand, sandstone and other construction material resources. These resources are associated with existing mining and extractive industry operations as well as recently approved projects.	The Region is also endowed with a range of nature resources and features including major rivers and estuaries, over 75 kms of beach and headlands, coastal lagoons and lakes, national parks and nature reserves. These are potentially important resources for regional tourism.
Healthcare infrastructure	**Education infrastructure**
The Region contains a range of healthcare infrastructure including a number of public and private hospitals. It also has ready access to major hospital in Newcastle and Sydney. As well as enhancing the liveability of the Region, the hospitals are an important regional resource for aged care sector.	The Region is home to a range of education facilities for all ages. Notably, the Region contains a campus of the University of Newcastle which offers programs across a range of schools and faculties. In addition, TAFE provides a comprehensive range of colleges and courses throughout the Region. These endowments provide opportunities to address skills shortages in the Region and retain and attract youth.
Labour resources/human capital	**Local institutions and strong leadership**
The Region has a substantial labour supply that well exceeds the internal demand for labour. This labour supply is well educated with a higher proportion working in skilled occupations.	The Region is well supported by an array of education, health, tourism and business institutions. In addition, the two Councils in the Region have strong relationships between them and with businesses and economic development institutions. Institutions serving the Region are effective and appropriate for the scope and reach of the Central Coast and Lake Macquarie community. There is ample regional capacity and capability available to deliver the Strategy.

5.1. Physical endowments

5.1.1. Location

The Region is located on the coast of NSW between the major urban centres of Sydney and Newcastle. Sydney CBD is located one hour and 10 minutes' drive from Gosford, while Newcastle CBD is located one hour and 20 minutes drive from Gosford. Notwithstanding, Lake Macquarie adjoins the Newcastle region.

This location 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 LGA 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. This location is also an important attribute in relation to tourism to the Region and enables it to export labour to Sydney and Newcastle.

5.1.2. Natural resources

The Region is endowed with a range of nature resources and features including Brisbane Waters, part of the Hawkesbury Nepean River, over 75kms of beach and headlands, coastal lagoons and lakes, including Tuggerah Lake, Lake Munmorah and Lake Macquarie, National Parks and Nature Reserves. These are important resources for regional tourism.

5.1.3. Mineral and extractive resources

The Region has unique geology containing coal seams at considerable depth and surface gravel, sand, sandstone and other construction material resources. The coal seams are associated with a number of existing mining operations such as Chain Valley Colliery, and the recently approved Wallarah 2 Coal Project. A number of areas of extractive resources are identified in Sydney Regional Environmental Plan No. 9 - Extractive Industry, as being of regional significance, and associated with existing operations such as Gosford Quarries.

5.1.4. Lifestyle benefits

The Region offers a relaxed lifestyle with services of a major regional centre, and road and rail access to the major centres of Sydney and Newcastle. Affordable house prices, small community feel, rural and coastal lifestyle choices, numerous distinct suburbs and towns each with their own characteristics and natural beauty were all referred to in consultations. All of these factors make the Central Coast - Lake Macquarie Region an attractive place to raise a family, semi retire or retire.

5.2. Built and institutional endowments

5.2.1. Health care facilities

The Region contains a range of health care infrastructure including Gosford Hospital, Wyong Public Hospital, Woy Woy Hospital, Long Jetty Healthcare Centre, Brisbane Waters Private Hospital, Lake Macquarie Private Hospital and Morriset Specialist Psychiatric Hospital. The Lake Macquarie area also has ready access to John Hunter Hospital Newcastle and Belmont Hospital.

As well as enhancing the liveability of the Region, the hospitals are an important regional resource for the aged care sector.

5.2.2. Road and rail access

The Region is serviced by the Main North railway line connecting the state’s two largest cities, Sydney and Newcastle, and by the main north south highway linking Sydney, Newcastle and Brisbane (Pacific Highway, M1). This access is important to export businesses within the Region and labour that commutes to Sydney and Newcastle.

5.2.3. Education facilities

The Region is home to a range of education facilities for all ages. With primary schools and high schools offering unique education for a range of needs to tertiary education and training for adults. Notably, the Region contains a campus of the University of Newcastle which offers programs across a range of schools and faculties. In addition, TAFE provides a comprehensive range of colleges and courses throughout the Region.

5.2.4. Local Institutions and Strong Leadership

The Region is well supported by an array of education, health, tourism and business institutions. In addition, the two Councils in the Region have strong relationships between them and with businesses and economic development institutions.

5.3. Human endowments

5.3.1. Labour supply

The Region has a substantial labour supply that exceeds the internal demand for labour. Relative to Regional NSW, the Region has a lower percentage of the labour force in full-time work and a higher proportion unemployed. Ongoing skills training is required to maximise the potential of this resource.

5.3.2. Specialist skills

The Region has a relatively high proportion of its workforce working as Professionals, Technicians and Trade Workers, Community and Personal Service Workers, Clerical and Administrative Workers and Sales Workers compared with Regional NSW.

In addition, relative to Regional NSW, the Region has a higher proportion of people who completed Year 12 or equivalent, a higher proportion of people holding formal University qualifications (Bachelor or higher degree; Advanced Diploma or Diploma), and a higher proportion holding vocational qualifications.

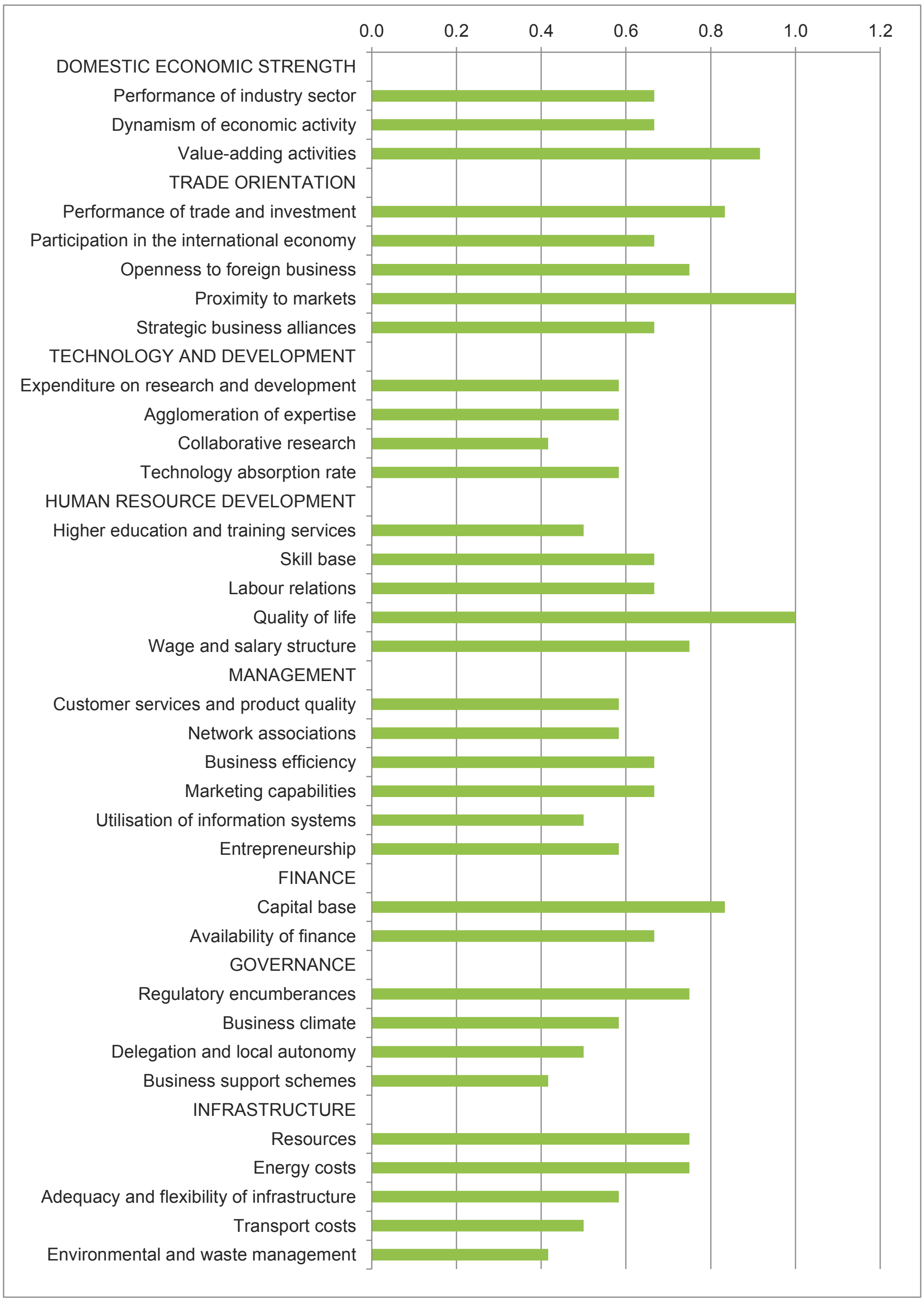
6. Core competencies

Core competencies represent the ability of a region to organise its resources (land, labour and capital) in order to produce goods and services. They refer to the set of skills, technology, resource applications and management unique to that region. The analysis of core competencies involved an assessment of four sectors of regional specialisation (Mining, Tourism, Healthcare and Manufacturing) using 34 core competency criteria employed by Roberts and Stimson (1998).

The selected competency criteria were ranked as either Strong (S), Average (A) or Weak (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 factors core competency index.

The regional core competency index shown in Figure 22 indicates that the Region has significant strengths in its proximity to markets, quality of life and capital base.

Figure 22: Regional Factors Core Competencies Index



Source: AgEconPlus and Gillespie Economics based on consultations

7. Economic future of the region

7.1. 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, lower unemployment rates and improvements in quality of life. These measures are important for regional economic development. However, a strategy for the Central Coast – Lake Macquarie Region should be a reflection of the community's aspirations.

A long-term, economic vision for the Central Coast – Lake Macquarie Region, building on the vision in the Community Strategic Plans and the NSW Government's Regional Economic Development and Employment Strategy for the Central Coast is:

To grow the population and economy of an attractive region that is an important dormitory area with high liveability by attracting in-movers – including commuters – and to grow the visitor economy, while also building on the region's strengths and specialisations in the services sectors – especially health and age care – and in manufacturing and mining.

This will involve steady population growth, attracting new residents to the Region and retaining existing residents. It is important that 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 the existing strengths of the Region. Economic theory suggests that unless the strategies are built upon the endowments of the Region, they will not be successful.[12] For the Central Coast – Lake Macquarie Region, this would involve leveraging the location and accessibility, lifestyle and amenity benefits, mineral and extractive resources, natural resources, healthcare and education infrastructure, labour resources and local institutions and leadership.

[12] Centre for Economic and Regional Development, *Regional Economic Growth Enablers Report (2016)*

7.2. Economic opportunities and risks for the Central Coast and Lake Macquarie regional economy

Broadly speaking, economic opportunities can be categorised as either 'stretch' opportunities or 'leverage' opportunities, or a mixture of both. Stretch opportunities refer to those that make use of the existing core competencies and endowments within an industry. Meanwhile, leverage opportunities refer to those that take advantage of presently unrealised opportunities to exploit the region's endowments. In practice, these two types of opportunities are not mutually exclusive and regional economic development generally relies upon a combination of inter-industry relationships in a region as well as regional endowments and core competencies. Strategies to capitalise on these opportunities must also take into consideration regional risks.

7.2.1. Inter-industry relationships

Table 12 depicts the main linkages associated with sectors reflecting areas of specialisation in the Region. It also shows the degree to which expenditure on inputs to production (i.e. on intermediate sectors) and wages paid to labour are captured by the regional economy. It is based on the Input Output model of the regional economy and hence uses the Input Output sector classifications that best align with ANZSIC sectors of specialisation in the regional economy.

Table 12 indicates that all sectors obtain a substantial value of inputs to production from outside the Region. This is greatest for the Grain Mill and Cereal Product Manufacturing sector, although this reflects the fact that grain based inputs are unavailable locally.

The sourcing of considerable inputs from outside the Region suggests some scope for exploration of potential local providers of inputs or attraction of businesses to the Region that supply required inputs. This is particularly the case where there is 'information failure' and businesses are unaware that there is a supplier locally who is at least as competitive as current suppliers outside the Region.

A high percentage of labour for sectors, reflecting regional specialisation, reside in the Region and hence leakage is minimised. The sectors with greatest percentage of labour located outside the Region, and hence wage leakage, are Coal Mining and Health Care Services. Greater use of local labour or encouragement of migration of externally located labour into the Region would benefit the regional economy.

Table 12: Current Industry Linkages in Central Coast - Lake Macquarie Region

Sector	Main backward linkages from intermediate sector expenditure	Percent of intermediate sector expenditure captured in the Region	Percentage of wages to labour residing in the Region
Coal Mining	Railway Rolling Stock Manufacturing	60%	68%
	Coal Mining		
	Professional, Scientific and Technical Services		

Sector	Main backward linkages from intermediate sector expenditure	Percent of intermediate sector expenditure captured in the Region	Percentage of wages to labour residing in the Region
Grain Mill and Cereal Product Manufacturing	Grain Mill and Cereal Product Manufacturing	43%	92%
	Road Transport		
	Wholesale Trade		
Accommodation	Grain Mill and Cereal Product Manufacturing	70%	92%
	Building Cleaning, Pest Control and Other Support Services		
	Employment, Travel Agency and Other Administrative Services		
Food and Beverage Services	Non-Residential Property Operators and Real Estate Services	75%	92%
	Employment, Travel Agency and Other Administrative Services		
	Meat and Meat product Manufacturing		
Health Care Services	Employment, Travel Agency and Other Administrative Services	60%	85%
	Professional, Scientific and Technical Services		
	Wholesale Trade		
Residential Care and Social Assistance Services	Grain Mill and Cereal Product Manufacturing	66%	87%
	Employment, Travel Agency and Other Administrative Services		
	Non-Residential Property Operators and Real Estate Services		

Source: Department of Premiers and Cabinet (NSW)

7.2.2. Risks facing the Region

Risks impacting a region may be from factors that are endogenous to the region and from factors that are exogenous to the Region.

The 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).

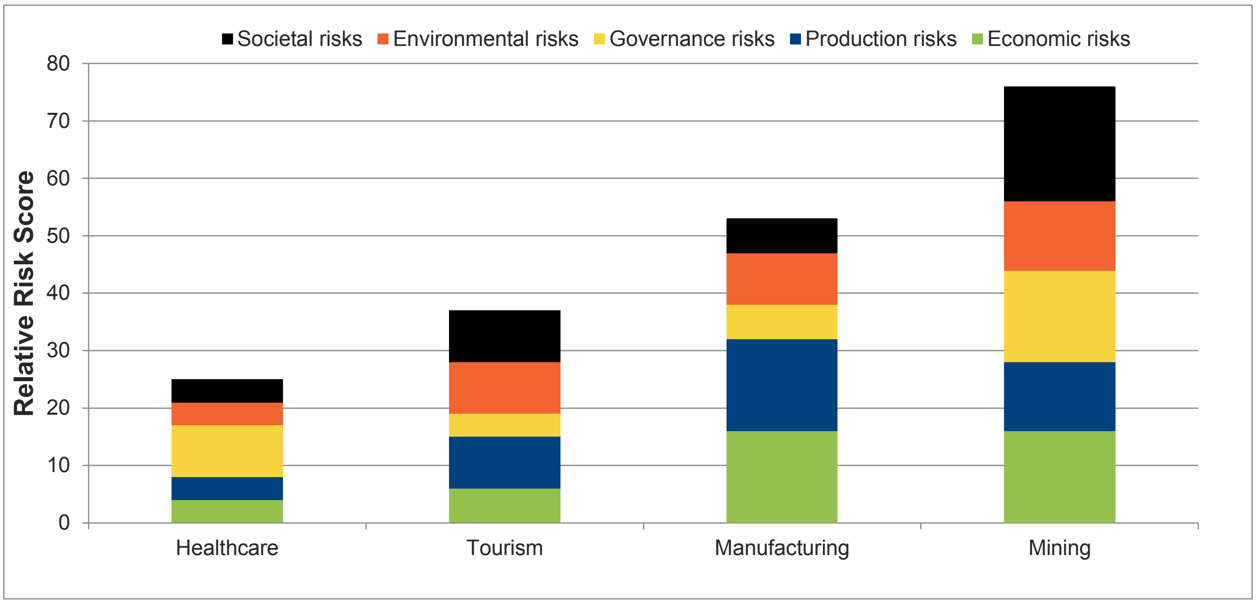
Figure 23 shows the relative impact of the risks for the Region identified during consultations. This was generated using a 'likelihood and severity of the consequences' risk matrix approach, where the score for impact is multiplied by the score for likelihood (refer to Appendix B). The higher the score the greater the relative risk. The figure indicates that risk associated with manufacturing competition from overseas, costs of product for manufacturing (e.g. electricity prices, barriers to rezoning, regulatory disincentives to coal mining, and failure to build market awareness and provide infrastructure for tourism), pose the greatest risks to the Central Coast - Lake Macquarie economy.

Figure 23: Relative Regional Risks for the Region

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 that the Mining sector faces the greatest risks followed by the Manufacturing sector. The Healthcare Sector faces the least risks. Risks vary between sectors with all risk categories being important to Mining, and economic risks and production risks being most important to Manufacturing. The significant risks to Healthcare are governance risks while the most significant risks to tourism are production risks and environment risks.

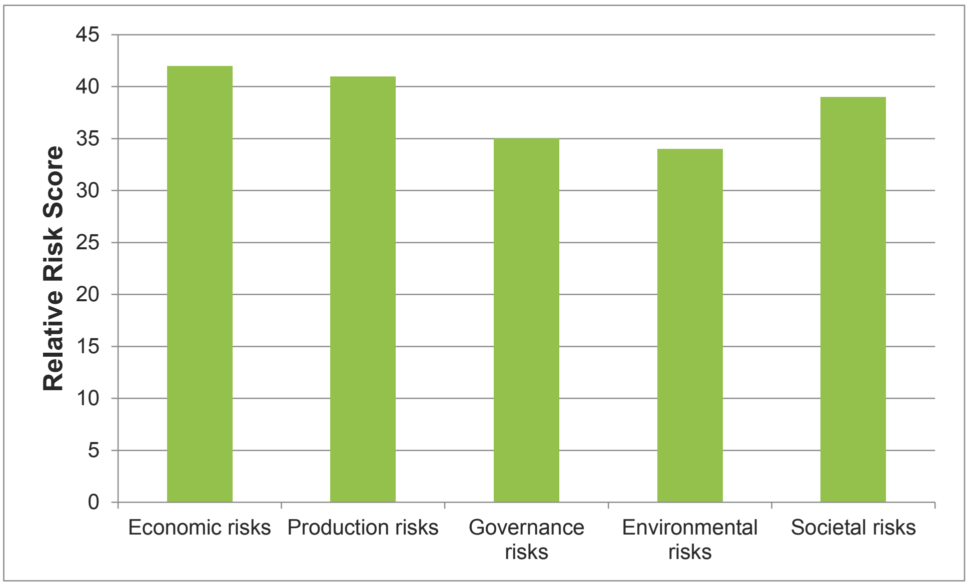
Figure 24: Industry Risk Impact for the Region



Source: AgEconPlus and Gillespie Economics

Figure 25 indicates that the main category of risk facing the key sectors of specialisation in the regional economy is economic risks – affecting trade exposed sectors of mining and manufacturing. Societal risks are also important, particularly around regulation/approval of mining projects.

Figure 25: Main types of regional risks for specialisation sectors



Source: AgEconPlus and Gillespie Economics

7.2.3. Sectoral opportunities

Based on the local endowments, core competencies, inter-industry relationships and risks in the Central Coast - Lake Macquarie Region, the following opportunities have been identified in Table 13.

Table 13: Economic Opportunities for Central Coast – Lake Macquarie Region

Opportunity	Relevant endowments and core competencies	Relevant sector (s)
To be a highly liveable region that is attractive to both commuters and visitors	➢ Beaches and lakes, natural beauty, coastal forest and national parks ➢ Location close to Sydney and Newcastle ➢ Local lifestyle benefits ➢ Hospitals – public and private ➢ Education facilities ➢ Local institutions ➢ Capital base	➢ Accommodation and food services ➢ Retail trade particularly food retailing and takeaway food ➢ Rental, hiring and real estate ➢ Arts and recreational services ➢ Construction
Realise economic opportunity in the health care and aged-care sectors	➢ Large public hospitals ➢ Numerous private hospitals ➢ Aged care facilities ➢ University of Newcastle ➢ TAFE ➢ Capital base ➢ Agglomeration of expertise	➢ Health care, social assistance ➢ Residential care ➢ Hospitals ➢ Public administration and safety ➢ Professionals ➢ Scientific and technical services ➢ Administration and support services ➢ Education and training - school and adult education ➢ Construction
Facilitate commercial, manufacturing and mining development	➢ Central Coast Food Innovation Centre ➢ Manufacturing cluster ➢ Mineral resources – highly prospective for minerals ➢ Close to Port of Newcastle ➢ Road and rail linkages ➢ Infrastructure ➢ Human resource development ➢ Capital base ➢ Skill base	➢ Services sector ➢ Food processing ➢ Mineral resources ➢ Construction

Opportunity	Relevant endowments and core competencies	Relevant sector (s)
Grow new industries and employment opportunities through improved transport links	➢ Multiple population centres ➢ Location close to Sydney and Newcastle ➢ Road, rail and sea port infrastructure	➢ Rail transportation ➢ Road transportation ➢ Construction

8. An Economic Development Strategy for Central Coast - Lake Macquarie Region

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 strengths 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.

The four Strategy elements for the Central Coast – Lake Macquarie Region derived through the process employed link directly to the opportunities presented by its endowments, core competencies and specialisations and also aim to address some key regional risks.

Strategy elements were derived from an analysis of the endowments that underpin the Region's strengths, followed by examination of current industry specialisations and emerging specialisations, identified in consultation with the community and councils.

Each element is accompanied by a set of early actions, which should be interpreted simply as example actions derived from the preliminary application of the Strategy's framework. It is therefore expected that there will be other actions capable of contributing to the attainment of the vision that are yet to be identified. Consequently, an action's alignment with the strategy is the preeminent strategic consideration rather than listing in this document, and all proposed actions will be subject to further qualitative and quantitative evaluative processes.

The four strategies for the Central Coast – Lake Macquarie Region are:

1. Facilitate commercial, manufacturing and mining development
2. Grow new industries and employment opportunities through improved transport links
3. Realise economic opportunity in the health and aged-care sectors
4. To be a highly liveable region that is attractive to both commuters and visitors

8.1. Facilitate commercial, manufacturing and mining development

8.1.1. Strategy overview

The Central Coast and Lake Macquarie Region has a core competency in manufacturing and mining. This strategy proposes to build on that competency and supply world class commercial and industrial precincts. Both parts of the Region are well supplied with industrial land but utilities require upgrade to meet the requirements of industry. The Region is well suited to further development of the building and construction industries and potentially, the relocation of aircraft servicing industries. Manufacturing strengths which provide a foundation for future growth include Food Product Manufacturing, Wood Product Manufacturing and Fabricated Metal Product Manufacturing. There is growth potential in the coal mining sector.

Actions associated with the strategy include the development of policy to address the barrier to business establishment caused by the biodiversity offset scheme, ongoing support for the development of the Central Coast Food Innovation Centre, the establishment of a Lake Macquarie Mine Subsidence Grout Fund, upgrade of services/utilities supplied to key industrial estates and upgrade the Gosford CBD water and sewer infrastructure. Internet connectivity is essential for development of regional businesses and actions have been formulated around co-working spaces and innovation hubs. The strategy targets development of the Warnervale Aerodrome as a centre for aircraft industries and the investigation of disused electricity infrastructure to support renewable energy businesses. To ensure that the Region captures maximum value from the ongoing presence and growth of the mining industry, it is proposed that the Region work with large miners and quarry operators to ensure localisation of supply chains.

8.1.2. Potential benefits of facilitating commercial, manufacturing and mining development

- A range of employment opportunities including both ‘starter’ jobs and higher paid, highly skilled employment.
- Opportunity for residents to work locally and avoid high transaction costs associated with the commute to Newcastle or Sydney.
- Capture of value locally from the capital intensive and export oriented mining sector.

8.1.3. Challenges and other considerations

- Communication of the benefits of co-working spaces and innovation hubs will require careful explanation to those who are new to these concepts.

8.1.4. Infrastructure priorities

- **Road infrastructure:** such as improved arterial and secondary roads to provide more efficient connections from employment lands to the Pacific Highway M1 and a transit bus/rail interchange to allow for the efficient commute of workers.
- **Communications infrastructure:** including co-working spaces and innovation hubs.
- **Utilities:** provide electricity, water and sewerage connections to industrial precincts and employment zones including, but not limited to, the Warnervale Employment Zone (Central Coast) and the Gilberts Road Industrial Precinct (Lake Macquarie). Relocate the Gosford CBD trunk sewer to facilitate city development.

Implications for stakeholders

- Actions in this strategy will require significant financial resources and coordination.

8.2. Grow new industries and employment opportunities through improved transport links

8.2.1. Strategy overview

The Central Coast and Lake Macquarie Region is strategically located between Sydney and Newcastle and regional population centres are within short arterial road drives of the Pacific Highway M1. The Central Coast and Lake Macquarie Region's geographic position provides it with core advantages for the location of industry and the housing of workers who are employed in Sydney and Newcastle. This strategy is consistent with the Central Coast and Lake Macquarie Region continuing to be a desirable residential area (Strategy 4). At the heart of this strategy is the need to move people and freight efficiently within the Region and to Sydney and Newcastle.

Actions associated with this Strategy include working with the NSW Government to deliver improved rail links and commuter services between the Central Coast and Sydney, developing and delivering transport solutions that better integrate train, bus, car and cycle systems, upgrade of key arterial roads to better service housing and employment activities in Lake Macquarie, upgrade of key sections of the Central Coast Highway, support for improved traffic flow through the Gosford CBD and construction of the Morisset town centre bypass. Upgrade of Cardiff road links are required to facilitate growth of its industrial estate and the Brisbane Water area requires dredging, wharves and an improved ferry service.

8.2.2. Potential benefits of improved transport linkages

- A more efficient region to do business in
- A more desirable place to live
- A better place to visit and explore.

8.2.3. Challenges and other considerations

- Implementation of this Strategy will require careful and ongoing consideration of priorities. It is unlikely that all of the actions suggested can be advanced within the next four years and some will require 'rolling over' to the next period.

8.2.4. Infrastructure priorities

- **Rail infrastructure:** such as improved rail links between the Region and Sydney and interchange hubs that deliver integrated, intermodal train, bus, car and cycle systems. Development of a freight rail bypass in western Lake Macquarie/Newcastle to help ameliorate current constraints.
- **Road infrastructure:** such as improved arterial roads, secondary roads and bridges to provide more efficient connections from employment lands to the Pacific Highway and better internal traffic movement across the Region. Bypasses for congested town centres such as Morisset.
- **Marine infrastructure:** including the dredging of regional waterways and the provision of improved wharf and ferry services in Brisbane Waters.

Implications for stakeholders

- Implementation of this Strategy will improve both the business base (Strategy 1 and Strategy 3) and liveability (Strategy 4) of the Region.

8.3. Realise economic opportunity in the health and aged-care sectors

8.3.1. Strategy overview

The Region is endowed with numerous healthcare infrastructure; Central Coast Local Health District provides public health services to the community. Gosford Hospital is the principal referral hospital and regional trauma centre for the Central Coast. Wyong Public Hospital is a major metropolitan hospital while Woy Woy Hospital and Long Jetty Healthcare Centre provide sub-acute care. The Brisbane Waters Private Hospital is also located in this part of the Region. Lake Macquarie is serviced by the John Hunter Hospital Newcastle and Belmont Hospital. There is a psychiatric hospital at Morisset and private health hospitals at Charlestown, Gateshead, Toronto and Warners Bay. The Health Care and Social Assistance sector shares linkages with both TAFE and the university sector.

This Strategy sets out to maximise economic activity and service provision stemming from the Region's core competency in health and aged care. Actions include zoning land for health care facilities, establishing precincts and planning for sector expansion, supporting the University of Newcastle's Gosford Health Campus, investigating opportunities to localise the health supply chain, publicising the Region's strength in aged care services and easing traffic congestion in the Gosford CBD to support a proposed hospital development.

8.3.2. Potential benefits of realising opportunity in the health and aged care sectors

- Opportunities in this sector are recession proof and do not rely on either a buoyant domestic or international economy.
- The Health Care and Social Assistance sector creates local employment in tertiary education (TAFE and university sectors) and offers a range of both skilled and unskilled employment opportunities.

8.3.3. Challenges and other considerations

- Opportunities in this sector are strongly linked to public policy considerations and it is important that local councils remain in touch with State government decision makers and are aware of any policy changes that may affect local employment.

8.3.4. Infrastructure priorities

- **Road infrastructure:** such as upgrade of Etna Street and Donnison Street Bridges in Gosford to support planned hospital development.
- **Retirement village infrastructure:** in order to continue to attract older people to the Central Coast and Lake Macquarie Region from other areas.

Implications for stakeholders

- Strong partnerships are needed between those responsible for implementing the plan and management in the health care and residential care sector.

8.4. To be a highly liveable region that is attractive to both commuters and visitors

8.4.1. Strategy overview

A buoyant and sustainable region is one that attracts visitors and retains residents. To maintain a buoyant and sustainable region the community must make the most of its assets and invest in infrastructure that attracts visitors and enriches the lives of residents. A core endowment of the Region is its beaches, lakes and protected natural areas. The Region has strength in providing lifestyle for those employed in both Newcastle and Sydney. The Region must build on this strength.

To improve liveability and attract visitors, the Region needs to develop and promote its unique identity, upgrade the streetscape of towns and industrial areas, further develop its calendar of events, build its arts infrastructure and 'night time' economy. Specific initiatives include further expansion of the University of Newcastle campus on the Central Coast, construction of the Charlestown swim centre, extension of the Hunter Sports Centre, further development of mountain bike facilities and regional cycle networks and upgrade of beach and lake foreshores and new walking tracks. Investment is required to address gaps in the supply of water and sewerage services.

8.4.2. Potential benefits of enhancing the liveability of the Region and growing its visitor economy

- Additional visitors add to regional employment and economic activity.
- A more desirable place to live sets up a virtuous cycle of growth and opportunity.
- Additional employment opportunity for young people in the Region.
- Driving tourism growth and enhancing liveability has few negative environmental impacts – carefully managed tourism does not diminish the natural environment.

8.4.3. 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.
- A number of the initiatives require large amounts of capital and this may make funding of the entire strategy difficult.

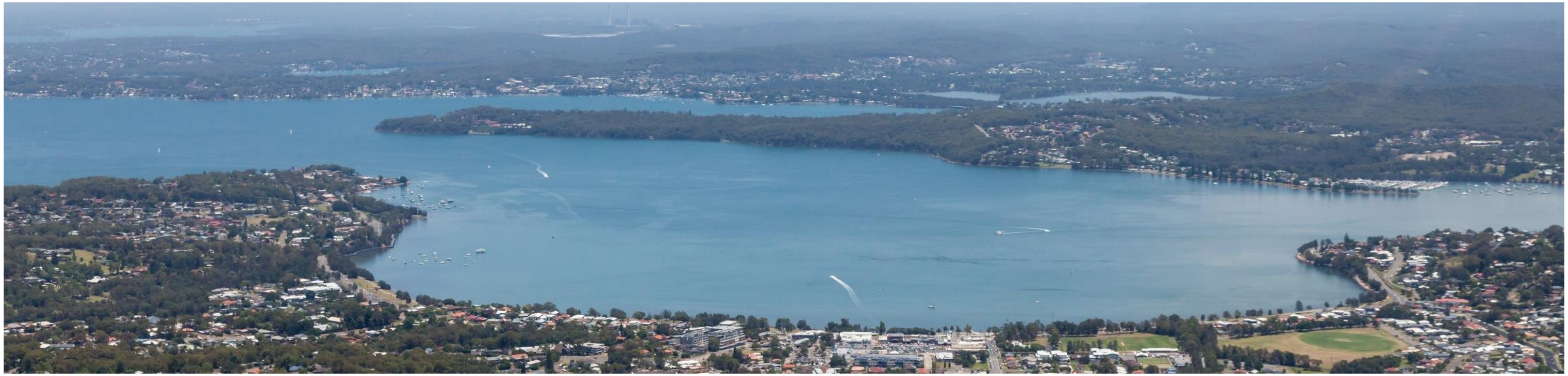
8.4.4. Infrastructure priorities

- **Civic infrastructure:** Morisset town square and community facilities.
- **Education infrastructure:** suitable buildings to accommodate an expanded University of Newcastle campus in Gosford.
- **Sport and recreation infrastructure:** such as new swim centre, new sport and trampolining centre, infrastructure to support a sailing academy and surfing championships, mountain bike facilities, cycle pathways and coastal walkways.
- **Culture and entertainment infrastructure:** such as the regional performing arts conference centre which is part of the Gosford waterfront redevelopment, the cultural conference centre at Lake Macquarie, stage 3 of the Lake Macquarie City Art Gallery, the Lake Macquarie City Arts Hub and the Aboriginal Cultural Appreciation Centre.
- **Water supply and sewerage infrastructure:** to improve the consistency of water supply (e.g. Mangrove Creek Dam spillway) and address gaps in the coverage of water supply and sewerage services between Central Coast Council and Hunter Water Corporation.

Implications for stakeholders

- Care will be needed to ensure that the additional people attracted to the Region through successful execution of the strategy do not compromise the lifestyles of long term residents.

9. Regional Action Plan



9.1. Facilitate commercial, manufacturing and mining development

Initiative	Issue	Priority	Implementation	Timeframe	Responsibility
Develop policy to address the barrier to business and residential establishment on greenfield sites caused by the NSW biodiversity offset scheme	The scheme is effective for large and high value developments but for other smaller scale but critically important initiatives acts as a barrier to economic development in the region. Development of the WEZ is affected by this issue.	High	Central Coast Council Lake Macquarie City Council NSW Office of Environment and Heritage	2 years	Central Coast Council Lake Macquarie City Council

Initiative	Issue	Priority	Implementation	Timeframe	Responsibility
Support ongoing development of the Central Coast Food Innovation Centre	Centre provides research and strategic advice to cluster of Central Coast food manufacturers. Partners include University of Newcastle, the food industry and government.	High	Central Coast Council	2 years	Central Coast Council
Establish a Lake Macquarie Mine Subsidence Grout Fund	Uncertainty associated with the impact of past mining activity on potential development sites is a barrier to commerce and manufacturing. A $17M fund established for the Newcastle CBD would be the model and $6M is proposed for the Lake Macquarie LGA.	High	Lake Macquarie City Council	2 years	Lake Macquarie City Council
Upgrade the Wyong, Somersby and Tuggerah Employment Zones	The project includes enhancing connectivity to the employment zones, as well as provision of utilities to the employment zones. Investment will provide opportunity for growth in the business and manufacturing sectors.	High	Central Coast Council	3 years	Central Coast Council
Invest in establishment infrastructure for the Gilberts Road Industrial Precinct	Fragmented ownership of the precinct requires coordination and delivery of road improvements, sewer, water and electricity infrastructure with possible payback as development occurs.	High	Lake Macquarie City Council	3 years	Lake Macquarie City Council

Initiative	Issue	Priority	Implementation	Timeframe	Responsibility
Further activate Highway Commercial Precincts at Kariong Highway and Kangoo Road	Further development of these precincts will boost economic activity and jobs.	High	Central Coast Council	4 years	Central Coast Council
Upgrade the Gosford CBD water and sewer infrastructure to facilitate city development	Upgrades to water and sewer infrastructure will support commercial development in the Gosford CBD.	High	Central Coast Council	4 years	Central Coast Council
Construct the Lake Macquarie Transit Rail/Bus Interchange at Glendale	A new transit interchange at Glendale would unlock the growth potential of the Cardiff and Glendale industrial and business precincts.	High	Lake Macquarie City Council	4 years	Lake Macquarie City Council
Develop and execute a strategy to attract aircraft industries to the Warnervale Aerodrome	Longer term aviation industries currently based at Bankstown and Wedderburn Airports will be forced to relocate due to rising land costs. New bases for these businesses will be required close to within reasonable distance of Sydney and skilled labour pool.	High	Central Coast Council	4 years	Central Coast Council
Ensure the Lake Macquarie airport has the capacity to expand services	Protect airport infrastructure to retain its long term value as a regional airport, and ensure that current airport site is not rezoned for residential property use.	Medium	Lake Macquarie City Council	4 years	Lake Macquarie City Council

Initiative	Issue	Priority	Implementation	Timeframe	Responsibility
Investigate feasibility of using old electricity infrastructure to support renewable energy businesses	Investigate the feasibility of using the distribution system associated with disused power stations and the power stations themselves for the creation of renewable energy businesses.	Medium	Lake Macquarie City Council	4 years	Lake Macquarie City Council
Assess the feasibility of utilising biosolid and food product manufacturing waste to generate energy	The region currently specialises in Food Product Manufacturing. Generating electricity with associated waste may lower the overall cost of electricity generation and waste management.	Medium	Central Coast Council	4 years	Central Coast Council
Support intensive agricultural opportunities and niche commercial, tourist and recreational activities west of the M1	Although not a specialisation, employment in the Agriculture, Forestry and Fishing has increased at a pace faster than that of NSW as a whole. Supporting this industry may also boost the region's current specialisation in Food Product Manufacturing.	Medium	Central Coast Council	4 years	Central Coast Council

9.2. Grow new industries and employment opportunities through improved transport links

Initiative	Issue	Priority	Implementation	Timeframe	Responsibility
Collaborate with the NSW Government to deliver improved rail links and commuter services (including Wi-Fi) between the Central Coast and Sydney	Commitment under Rebuilding NSW (known as the Main Line Accreditation Program) to develop a program to reduce travel time from the Central Coast (Gosford) to Sydney from 1 hour 20 minutes to one hour. Ensuring Availability of Wi-Fi connections will allow people working in Sydney to fully utilise their commuting time, increasing productivity.	High	Central Coast Council Lake Macquarie City Council NSW Government	4 year	Central Coast Council Lake Macquarie City Council
Collaborate with the NSW Government to deliver a freight rail bypass in western Lake Macquarie/Newcastle to help ameliorate current constraints	Bypass would dramatically increase the efficiency of the rail freight system	High	Lake Macquarie City Council Newcastle City Council NSW Government	2 years	Lake Macquarie City Council
Engage in long term planning for a high speed East Coast rail link – potentially including a new route Gosford to Sydney and an integrated Brisbane to Melbourne service	Economic growth driven by improved commuter times and the increased accessibility of employment in Sydney.	Medium	Central Coast Council Lake Macquarie City Council	4 years	Central Coast Council Lake Macquarie City Council

Initiative	Issue	Priority	Implementation	Timeframe	Responsibility
Develop and deliver transport solutions that better integrate train, bus, (electric) car and cycle systems	Better linkages are required between place of residence and place of work. Key examples include Gosford CBD, the North Warnervale Transit Interchange, a new Warnervale train station, the Lake Macquarie Transit Rail/Bus Interchange at Glendale, a new rail station at Glendale and a road, cycle and footpath connection between Boolaroo and Teralba with similar infrastructure between Morisset and Warnervale via Wyee.	High	Central Coast Council Lake Macquarie City Council RMS	3 years	Central Coast Council Lake Macquarie City Council
Upgrade key arterial and other roads in the Lake Macquarie LGA (e.g. Edgeworth, Glendale and Rhondda Road)	Key road improvements include a new arterial road from Minmi Road Edgeworth to Frederick Street Edgeworth and a new arterial road from the Newcastle Link Road to Glendale Drive Glendale. An extension of Rhondda Road Teralba is also required to enable connections between the Wakefield and Killingworth areas for housing and employment activities.	Medium	Lake Macquarie City Council RMS	3 years	Lake Macquarie City Council
Upgrade key sections of the Central Coast Highway (e.g. The Entrance Road Long Jetty, Wamberal to Bateau Bay and The Avenue)	Reduced congestion, improved road safety and the generation of additional economic activity	Medium	Central Coast Council RMS	3 years	Central Coast Council

Initiative	Issue	Priority	Implementation	Timeframe	Responsibility
Upgrade key intersections in the Lake Macquarie LGA, including the Alliance Avenue and Wyee Road Intersection and Charlestown Intersections.	Upgrade of the intersection of Alliance Avenue and Wyee Road Intersections to facilitate employment growth in the adjacent industrial precinct. Upgrade of three T-intersections to be signalised along Smith Street to support residential employment growth within the Charlestown Strategic Centre.	High	Lake Macquarie City Council	2 years	Lake Macquarie City Council
Upgrade Fassifern rail underpass	Upgrade and install traffic signals at the Fassifern Rail overbridge	Medium	Lake Macquarie City Council	3 years	Lake Macquarie City Council
Support improved traffic flow in the Gosford CBD through bridge construction	Upgrade of Etna Street and Donnison Street Bridges to improve traffic flow in the Gosford CBD. Bridge passes over rail lines and upgrade would support planned hospital development.	Medium	Central Coast Council	3 years	Central Coast Council
Support construction of the Morisset Town Centre Bypass	To improve traffic flow and the liveability of the Morisset town centre. Project will require upgrade of Macquarie Drive, Awaba Street and Stockton Drive to form a western bypass.	Medium	Lake Macquarie City Council RMS	3 years	Lake Macquarie City Council
Upgrade road links to facilitate growth of the Cardiff Industrial Estate	Support improved traffic flow by connecting Stockland Drive and Pennant Street with a bridge to reduce traffic congestion. Upgrade Munibung Road. Improve road safety and generate additional economic activity.	Medium	Lake Macquarie City Council RMS	3 years	Lake Macquarie City Council

Initiative	Issue	Priority	Implementation	Timeframe	Responsibility
Upgrade waterways, wharfs and ferry services in the Brisbane Water	Maintenance dredging is required to support ferry and recreational boat activities. Wharf and ferry service upgrades will provide a more attractive offer for visitors.	Medium	Central Coast Council	3 years	Central Coast Council

9.3. Realise economic opportunity in the health and aged-care sectors

Initiative	Issue	Priority	Implementation	Timeframe	Responsibility
Zone land for health care facilities, establish precincts and plan for the expansion of this sector	Health facilities risk being undersupplied if appropriately zoned land is not available.	High	Central Coast Council Lake Macquarie City Council	1 year	Central Coast Council Lake Macquarie City Council
Support the expansion of the University of Newcastle Gosford Health Campus by providing planning advice	Campus provides training for local health care professionals and addresses the region's strength in this area.	High	Central Coast Council	1 year	Central Coast Council
Investigate opportunities to localise the health and social assistance supply chain	Councils in other areas (e.g. Goulburn-Mulwaree) have had success in working with local industry to identify their purchasing needs and marry them to local suppliers. This success might be replicated in the Central Coast and Lake Macquarie region with health/social assistance.	High	Central Coast Council Lake Macquarie City Council	1 year	Central Coast Council Lake Macquarie City Council
Publicise the region's strength in aged-care services to appropriate providers and developers	The region has a strength in aged care drawing residents from rural and remote areas and Sydney. Medium term demand for places is forecast to exceed supply.	Medium	Central Coast Council Lake Macquarie City Council	1 year	Central Coast Council Lake Macquarie City Council

Initiative	Issue	Priority	Implementation	Timeframe	Responsibility
Ease traffic congestion in the Gosford CBD to support proposed hospital development	Upgrade of Etna Street and Donnison Street bridges to improve traffic flow in the Gosford CBD. Bridge passes over rail lines and upgrade would support planned hospital development.	High	Central Coast Council	4 years	Central Coast Council.

9.4. To be a highly liveable region that is attractive to both commuters and visitors

Initiative	Issue	Priority	Implementation	Timeframe	Responsibility
Encourage the relocation of businesses, industry and government agencies to the region	New businesses will improve employment prospects in the region and diversification creates an even more robust regional economy.	High	Central Coast Council Lake Macquarie City Council	2 years	Central Coast Council Lake Macquarie City Council
Improve local access to university campuses on the Central Coast	Expand University of Newcastle presence in Gosford.	Medium	Central Coast Council	4 years	Central Coast Council
Investigate whether current DCP/DA processes unfairly favour residential at expense of tourism development	Community members claim that tourism business opportunities go unrealised as land use planning favours residential development.	Medium	Lake Macquarie City Council	3 years	Lake Macquarie City Council
Work with local tourist authorities to further develop the regional events calendar	A fuller regional events calendar would assist with smoothing accommodation peaks and troughs and increase the attractiveness of investment in new accommodation.	Medium	Central Coast Council Lake Macquarie City Council	2 years	Central Coast Council Lake Macquarie City Council

Initiative	Issue	Priority	Implementation	Timeframe	Responsibility
Facilitate development of the Central Coast Regional Performing Arts and Conference Centre	Build on current $12M funding commitment made by the NSW Government and deliver a centre for both performing arts and events and conferences in the southern part of the region. Centre will build help the region's 'night time economy'.	High	Central Coast Council Central Coast Regional Development Corporation	2 years	Central Coast Council Central Coast Regional Development Corporation
Conduct a feasibility study of the Lake Macquarie Conference Centre	Undertake pre-feasibility study and initial concept design and post construction operating plan for the centre which might include theatre, conference space, exhibition area as well as commercial uses.	Medium	Lake Macquarie City Council	2 years	Lake Macquarie City Council
Investigate the feasibility of an Aboriginal Cultural Appreciation Centre	Investigate the feasibility of converting the former jail for the criminally insane into an Aboriginal cultural interpretation centre with surrounding lands used for an eco-tourism experience.	Medium	Lake Macquarie City Council	4 years	Lake Macquarie City Council
Support the Morisset Regional Centre Revitalisation Project	Create a critical mass of community facilities around the proposed town square. A new building will accommodate current users of the Morisset Town Hall, Council's Customer Service Centre Staff, the Business Growth Centre and other training organisations and commercial tenants.	Medium	Lake Macquarie City Council	3 years	Lake Macquarie City Council

Initiative	Issue	Priority	Implementation	Timeframe	Responsibility
Construct a new Charlestown Swim Centre and extend the Hunter Sports Centre	For the Charlestown Swim Centre, demolish and replace existing swimming pool, add gym, amenities and a local library. The new centre would improve recreational opportunities for residents and attract major swim carnivals and events. For the Hunter Sports Centre, revitalise the existing venue to meet regional needs as well as establish a regionally significant venue to attract state and national events. The centre will improve recreational opportunities for residents and attract major gymnastic events.	High	Lake Macquarie City Council	3 years	Lake Macquarie City Council
Establish an Australian Sailing Academy	Establish a state training facility to capitalise on the natural assets of the lake and the presence of Olympic sailing champions in the community.	High	Lake Macquarie City Council Lake Macquarie Yacht Club	2 years	Lake Macquarie City Council
Further develop existing Mountain Bike Facilities in Heaton State Forest to attract visitors and for local use	A larger and more refined facility will benefit both the residents of the region as well as the visitor economy.	Medium	Lake Macquarie City Council	3 years	Lake Macquarie City Council.

Initiative	Issue	Priority	Implementation	Timeframe	Responsibility
Develop/upgrade coastal tourist attractions inside the Central Coast LGA (e.g., the Winney Bay Walkway, linking up the 5 Lands Walkway, upgrading the Avoca Beach Foreshore)	Further strengthen the coastal tourist attractions inside the LGA to support improved visitor access and attract additional visitors.	Medium	Central Coast Council	3 years	Central Coast Council.
Support the development of the region as a food destination	As mentioned in the Central Coast Food Innovation Initiative - this will allow the region to leverage its pre-existing strengths in Tourism and Food Product Manufacturing.	Medium	Central Coast Council	4 years	Central Coast Council
Address gaps in supply of water and sewerage services while investigating options to secure future water supplies	Address gaps in coverage in areas that fall between Central Coast and Hunter Water networks. Options to secure waters supplies may include reuse, redesign of spillway and dam well extension.	Medium	Central Coast Council Hunter Water Corporation	4 years	Central Coast Council
Support implementation of the Central Coast Bike, Pedestrian Access and Mobility Plans	Provision of safe, connected, inclusive and accessible transport methods/infrastructure will increase resident and visitor satisfaction.	Medium	Central Coast Council	4 years	Central Coast Council

9.5. Regional Action Plan Implementation Review Process

The effective implementation of the Strategy will involve the key stakeholders and regional community that contributed to its development, including all three councils as well as state government agencies and local entities.

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's framework. It is therefore suggested that an Advisory Committee, made up of representatives from each council and other groups such as business chambers and the Lake Macquarie Economic Development Company, 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. The Advisory Committee would meet every two months and would report progress on actions to each council. The two councils would also meet six monthly with the Regional Director, Central Coast, NSW Department of Premier and Cabinet. These meetings could also be used to check the Strategy's progress and review against current grant opportunities.

After two years, the Advisory Committee 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.

Appendix A. Consultation Methodology

An introductory meeting with both councils making up the Central Coast and Lake Macquarie Region was facilitated by the Regional Director – Hunter and Central Coast, Office of Regional Development, NSW Department of Premier and Cabinet, 28 September 2017. At these meetings council representatives expressed interest in the project and a willingness to work together. They also stressed the need to hold workshops in each LGA.

Adopting this advice, a tailored consultation approach was developed for each of the LGAs.

Central to the tailored consultation approach was the development, with councils, of a Central Coast and Lake Macquarie Strategy discussion paper and survey.

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.

A.1. Central Coast LGA

The following approach to consultation in the Central Coast LGA was adopted:

1. Central Coast Council advised through a preliminary meeting held 28 September 2017 that they would welcome the opportunity to contribute to the Strategy's development through a workshop.
2. A workshop invitation list was prepared by Tony Sansom NSW Department of Premier and Cabinet and reviewed by Central Coast Council. A total of 40 invitations were issued by Central Coast Council and RSVPs were received from 20 individuals who indicated a willingness to attend. A total of 27 people attended the workshop.
3. The workshop was held 8:45am, 18 January 2018 in the Central Coast Council offices, 2 Hely Street, Wyong. The workshop was attended by business representatives, chambers of commerce, community groups, other interested citizens and council staff.
4. The workshop provided a briefing on the Strategy process, a review of preliminary research findings, a regional SWOT analysis, identified and ranked infrastructure priorities and identified other actions required for economic development on the Central Coast and Lake Macquarie.

A.2. Lake Macquarie LGA

The following approach to consultation in the Lake Macquarie LGA was adopted:

1. Lake Macquarie City Council advised through a preliminary meeting held 28 September 2017 that they would welcome the opportunity to contribute to the Strategy's development through a workshop.
2. A workshop invitation list was prepared by Lake Macquarie City Council and council made contact with stakeholders. Approximately 50 invitations were issued by council and RSVPs were received from 35 individuals who indicated a willingness to attend. Thirty eight people attended the workshop.
3. The workshop was held 2:15pm 18 January 2018 in the Northern NSW Football Headquarters, 13 Park Road, Speers Point. The workshop was attended by business representatives, chambers of commerce, community groups, other interested citizens and council staff.

The workshop provided a briefing on the Strategy process, a review of preliminary research findings, a regional SWOT analysis, identified and ranked infrastructure priorities and identified other actions required for economic development on the Central Coast and Lake Macquarie.

Appendix B. Risk Approach

Table 1: Impact Descriptors

Score	Descriptor	Description
5	Very Strong or Very Significant	Total loss of assets or business
4	Strong or Significant	Prolonged shut/slowdown with setback to profitability
3	Moderate	Reduced output or performance for several months
2	Weak or Discernible	Inconvenience to business for short period
1	Insignificant	Minor inconvenience

Table 2: Likelihood Descriptors

Score	Descriptor	Description	Indicative return period*	Indicative probability
6	Almost Certain	The consequence expected to occur on an annual basis	Every year or more frequently	>0.9
5	Likely	The event has occurred several times or more in your career	Every three years	>0.3
4	Possible	The event might occur once in your career	Every ten years	>0.1
3	Unlikely	The event does occur somewhere from time to time	Every thirty years	>0.03
2	Very unlikely	Heard of something like that occurring elsewhere	Every 100 years	>0.01
1	Extremely unlikely	Have never heard of this happening	Every 1000 years	>0.001

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.