Upper Hunter Economic Diversification Project

Report 1 of 3: Upper Hunter Regional Economy and Industry Report

Buchan

Business Strategy | Communication | Public Policy

Buchan Consulting

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Executive Summary

This report is part of the Upper Hunter Economic Diversification project, commissioned by the New South Wales Government and the six Councils in the Upper Hunter Region. The focus of the project is on examining the future of the region and the emerging business and employment opportunities over the next 20 -25 years.

This report is one of a series of outputs from the project, and provides an analysis of the regional economy, key industries and the major factors driving current performance. It also identifies key issues in each of the local government areas. The report is based on a detailed analysis of regional and industry reports and studies; an examination of Census data and other data; consultation with industry and government agencies; and workshops held in each of the LGAs.

The region had a population of 103,483 in 2009. An analysis of the regional economy shows that the LGAs can be clustered into sub-regions: Cluster 1: mining influenced LGAs of Singleton and Muswellbrook and the adjacent Upper Hunter LGA (agribusiness focus); Cluster 2: the inland rural areas of Dungog LGA and Gloucester Shire; and Cluster 3: the coastal economy of Great Lakes LGA (and its rural hinterland). While Great Lakes has been included in this study, it traditionally is not regarded as part of the Upper Hunter Region.
The LGAs differ in terms of their structure, economic drivers and current performance.

Key Features of the Upper Hunter Region LGAs

Cluster 1	Key Features	
	Mining Areas	
Singleton	Major centre for mining and mining support Defence base Agribusiness Workforce participation rate high Higher average incomes - due to mining wages	Low unemployment Significant number of families with children Growth in housing More jobs than employed residents Significant commute into region to mining jobs – from the Lower Hunter and adjacent LGAs Experiencing pressures of mining expansion – housing, skills, costs, congestion
Muswellbrook	Major centre for mining and now mining support Agribusiness Workforce participation rate high Higher average incomes - due to mining wages	Low unemployment Significant number of families with children More jobs than employed residents Significant commute into region to mining jobs – from the Lower Hunter and adjacent LGAs Experiencing pressures of mining expansion – housing, skills, costs, congestion
	Agribusiness	
Upper Hunter LGA	Major centre for equine industry Agribusiness is major activity (eg. beef, crops) Workforce participation rate is high Some mining exploration occurring	Low unemployment Manufacturing - food processing Workforce participation rate is high Increase in mining employees living in the LGA
Cluster 2	**Rural Areas**	
Dungog	Agribusiness and local services are the major activities Emerging tourism sector	Slow population growth Ageing population Declining local jobs High level of commuting to employment in Lower Hunter Region
Gloucester	Agribusiness and local services are the major activities Emerging tourism sector Some mining & gas activity	Slow population growth Ageing population High level of employment self-containment.
Cluster 3		
	Coastal Centre and Villages	
Great Lakes	Population services and tourism are major activities Fishing & aquaculture is a key sector. Agribusiness located in inland areas. Largest population in the region and fastest growing population. Growth driven by retirement living and lifestyle living.	Ageing population (one of oldest populations in NSW) Highest percentage of persons on age pension (20%) Lower average incomes – pensions and lower paid services jobs (incl. part time and casual jobs) Some commuting to jobs in other LGAs – Greater Taree, Newcastle and Port Stephens

The LGAs vary in population size with the largest (and fastest growing) being Great Lakes LGA (with 35,487 persons or 34% of the regional population in 2009). In the period between 1996 and 2006, the population of the Upper Hunter Region (including Great Lakes) increased by 10% or 9,100 (from 91,000 to 100,000), with almost 90% of this growth concentrated in two LGAs- Great Lakes (5,500 or 60%) and Singleton (2,700 or 30%). The period between 2006 and 2009 has seen some stronger population growth emerge in Muswellbrook LGA and Upper Hunter LGA.

There are different dynamics at play in each of the LGAs. Population growth in Great Lakes is being mainly driven by sea change moves to the coast for retirement and lifestyle; Singleton has the second largest population in the region and is experiencing growth, which has largely been associated with the expansion of jobs in mining in the Upper Hunter Region. Recent growth in the 2006-2010 period in Muswellbrook is largely due to similar factors. In the case of the Upper Hunter LGA, recent growth can be attributed to the continued expansion of the equine industry and some mining employees choosing to live in the LGA. In the smaller rural LGAs, population growth has been slower, due to industry restructuring in the agribusiness sector and some loss of local jobs.

Jobs in the Region

The structure of jobs in the LGAs reflects their economic base and the key industry sectors in each location. The jobs data is ABS Census 2006 data for the working population (ie. Jobs located in an area).There are some substantial differences in the structure of the local economies: Singleton is focused on mining (31% of jobs) and mining support activities and services; Muswellbrook is dependent on mining (17%) and power generation (8%), and services; Upper Hunter LGA has a large agribusiness sector (26% of jobs, including the equine and wine sectors) and services. Dungog (22% agribusiness) and Gloucester (19% agribusiness) are mainly involved in agribusiness and the provision of services for the local population. Major activities and jobs in Great Lakes are services (60% of jobs) –tourism-related services (accommodation & food services, 13%) and services for the local population (retail 16%) and construction (9%)[1] – reflecting the rate of housing construction.

Two of the LGAs, Singleton and Muswellbrook have more jobs than residents in employment and are the LGAs, where jobs have been growing with the mining expansion (in 2006 Singleton had 69% of regional mining jobs and Muswellbrook had 28% of jobs in this sector). There is substantial commuting to jobs in the mining sector, from both from the Lower Hunter Region and from parts of the Upper Hunter. In the case of the Upper Hunter, Dungog and Great Lakes there are fewer jobs than persons in employment, with a significant number of residents commuting to jobs in adjacent areas. (eg. Upper Hunter to Muswellbrook and Singleton; Dungog to Maitland, Cessnock and Newcastle; and Great Lakes to Greater Taree, Newcastle and Port Stephens). There is also some commuting into the LGAs by persons resident in adjacent areas.

Key Sectors

The key regional export sectors within region comprise coal, agribusiness and tourism. In total these regional export sectors account for around 22,000 jobs or 52% of jobs in the region.[2] The balance (48%) is mainly jobs that are servicing local populations in the LGAs.

The region is dominated by coal mining as the major regional export sector. It should be noted that the output value does not represent the value to the region, as most of this revenue accrues to global businesses that are located outside the region. The value to the region comprises the income earned by employees (mining employees and employees in mining support industries), who are resident in the Upper Hunter Region; the income earned by local businesses that are servicing the sector; and the multiplier impacts of the expenditure of local persons employed in the sector.

Value of Regional Export Industries

Upper Hunter Region	Estimates	Estimates	
Industry	Output Value	Employment	
Resources			
Coal	$6.2 billion (revenue)	11,000 direct & 5000 support	2010 Estimates
Agribusiness			
Equine Industry	$100 million (industry revenue)	886 < direct>	2009 Estimates
Other Agribusiness (and support) mainly beef, dairy and some crops	$248 million (farm gate value of production)	3753 <direct and support.	2009 Estimates
Wine (and grapes)	$45-55 million (revenue)	400 <direct>	2009 Estimates
Other			
Tourism	$418 million (total) - $353 million (overnight visitors) - $65 million (day visitors) - $243 million of total is in Great Lakes LGA (3/4 year average to June 2007).* - balance of $175 million is spread across the rest of the Upper Hunter Region. (visitor expenditure)	2029 <tourism based jobs>	2007/08 estimates

Source: Buchan Consulting Estimates based on analysis of ABS data and industry data. * Great Lakes Council indicates that recent data from Tourism Research Australia estimates the value of tourism at $136 million in 2010 for Great Lakes LGA.

1 Analysis of 2006 journey to work data indicates approximately 100-200 jobs in road construction and related areas for Great Lakes LGA, which accounts for one to two percentage points of the total 9.6% construction jobs in 2006.

2 For these calculations, the ABS Census shows 37813 jobs in 2006, for 2010 employment numbers additional mining jobs -4000 direct jobs and 2400 support jobs have been added for an estimated 42200 jobs in 2010).

Coal Mining
Coal mining has been expanding in the Upper Hunter. In 2006 a total of 5,500 mining jobs were in the region, with Singleton accounting for 70% of these jobs (3,794) and Muswellbrook for 28% of the jobs in the industry. When mining support activities are included then the dominance of mining for jobs in the region is highlighted. Estimates indicate that in 2006 there were a total of 7885 mining related jobs (direct + support) located in the two LGAs. By 2008 this had increased to around 12,000 jobs and by 2010 to around 15,000 jobs.

Power Generation
Muswellbrook and Singleton are the centre of NSW power generation capacity, with the Liddell and Bayswater power stations (Macquarie Generation) and the Redbank power station. The region is also the focus for clean energy projects, including solar (Kyoto Energy Park in the Upper Hunter LGA and a project in Singleton) and wind power. The Upper Hunter Renewable Energy Precinct includes the LGAs of Upper Hunter and Dungog.

Agribusiness
Agribusiness is spread across the region with some industries being more concentrated in several areas.

- Beef - the major concentrations are in Upper Hunter LGA; Gloucester, and Dungog with properties located in the other LGAs.
- Equine - is concentrated in Upper Hunter LGA (around Scone) and in Muswellbrook and employs almost 900 ongoing employees. Dairy - the sector is centred on Dungog and Gloucester has undergone major restructuring over the last decade, with falls in the number of dairy farmers but increases in scale. Forestry and timber - is mainly concentrated in Great Lakes LGA, with Dungog and Gloucester being affected by recent closure of milling operations.
- Wine - the wine sector is focused in the areas around Singleton and Muswellbrook, with some smaller operations in the other LGAs.
- Other agribusiness - there is some production grains (mainly Upper Hunter LGA), and some flower production across the LGAs. Vegetable production is concentrated around Singleton, however there have been initiatives in Upper Hunter LGA, Singleton and Gloucester to develop this production. Fisheries are located at Great Lakes (both offshore commercial fishing and aquaculture).

Tourism
The LGAs in the study are covered by two tourism regions – Hunter Tourism Region (5 of the Upper Hunter LGAs) and Mid North Coast Tourism Region (Great Lakes LGA).[3] The most recent tourism data from Tourism Research Australia for the six LGAs in the Upper Hunter shows that there was an average of 1.037 million domestic overnight visitors to the region each year (accounting for 3.132 million domestic visitor nights). Around half of these visits were to Great Lakes Shire (511,000 overnight visitors). In total Great Lakes received over 900,000 visitors, when day visitors are included.[4] These overnight visitors are estimated to have spent total of $353 million per year across the six LGAs during this time period. Singleton had the next highest domestic overnight visitors (144,000 visits for 327,000 room nights). Across the six LGAs the number of day visitors total around 1 million visitors.

There are some differences between tourism across the region. Great Lakes is the dominant location as a coastal destination, which captures the major holiday periods (December through to Easter and school holidays). As a result the average stay is longer (3.6 days). The inland LGAs tend to have both fewer visitors for shorter average stays.

Tourism accounted for over 2,000 direct jobs in the Upper Hunter Region or 5.3% of jobs in the region; the largest cluster was in Great Lakes with 745 jobs or 37% of Upper Hunter Region tourism jobs; Singleton was the next largest area with 480 tourist jobs, then Muswellbrook with 331 jobs.[5]

Services
By and large, the size of the in-person service sector is driven by the scale of the population. However in the region there is some leakage of retail spending from Singleton and Muswellbrook to Maitland and Newcastle for specialised retail and other services. There is also retail leakage to larger centres from the other LGAs.

Great Lakes is a service economy, as it has minimal mining jobs and no substantial manufacturing activity. In the Great Lakes LGA 72% of jobs were in services - with 60% in in-person services: comprising 16% in retail; accommodation and food services 13%; health care and social assistance 12%; and 8% education and training.

All of the LGAs have a relatively low share of jobs in knowledge and business services, with the major component being professional, scientific and technical services, which includes accounting, legal and consulting services. Some of these specialist services tended to be concentrated in Newcastle and other areas of the Lower Hunter.

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3 Hunter Tourism Region covers the following LGAs: Lake Macquarie, Newcastle, Maitland, Cessnock, Upper Hunter Shire, Singleton, Muswellbrook, Gloucester and Dungog. http://tourismhunter.com.au/about-us Mid North Coast Tourism Region covers: Coffs Coast, Bellingen, Nambucca Valley, Macleay Valley Coast, Greater Port Macquarie, Manning Valley, Great Lakes, and Port Stephens. http://www.midnorthcoasttourism.com.au/
4 Great Lakes Council indicate recent data from Tourism Research Australia for Great Lakes LGA estimates 549,620 overnight visitors in 2010 and a total of 996,662 visitors, when day visitors and international visitors are included.
5 TTF data indicates that 4.7% of the NSW workforce was employed in tourism jobs. (TTF National Tourism Atlas 2008 P3)

Current Assessment

The regional economy and industry analysis and the industry and community consultations highlight the diverse nature of the Upper Hunter Region and the challenges that the individual LGAs face. The LGAs differ in terms of population size, industry mix and current trends in population and the local economy.

The mining intensive LGAs of Muswellbrook and Singleton are experiencing the stresses and strains of significant ongoing growth in mining and mining support activities. The pressures are reflected in: housing prices and rental costs and rental availability; critical skill shortages and problems in recruitment for non-mining industries; cost pressures on the community (who do not work in mining) and regional infrastructure not keeping up. Industrial estates need to expand to secure mining support industries and other industrial activity. There are major local concerns about competing land uses and the impact of continued expansion of the mining sector on agribusiness and tourism in the region. Population is growing in the mining areas (particularly Singleton), with some growth in local jobs. The full benefits of the growth in employment are not being felt in terms of the development of these communities, due to the large number of workers who drive into the area, from the Lower Hunter and other areas. In terms of strategy, Singleton has a stronger industrial focus in terms of maximising the benefits gained through retaining and attracting mining support industries. The town centres is both LGAs are seen as requiring revitalisation.

Upper Hunter LGA has experienced growth in the equine sector and some emerging population growth with mine workers taking up residence in the area, and some movement in of persons (including families) seeking lifestyle changes. For the future there is a major emphasis on continued growth in the equine sector and other areas of agribusiness and developing the tourism and green energy sectors.

The rural LGAs with the smaller populations - Dungog and Gloucester have generally experienced flat conditions. There have been some losses in jobs from: industry restructuring; the impact of current price and cost pressures on traditional agribusiness; and the decline of the timber industry in the region. Population growth has been limited, with the main increase coming from retirees moving into the areas. However there are some indications of people making lifestyle changes and moving in. In the case of Dungog LGA this growth is occurring in those parts of the LGA that allow commuting to jobs in the Lower Hunter. Both LGAs want to develop new areas of agri-business and to develop their tourism sectors (by developing the product offer and through targeting specific market segments). While infrastructure needs to be improved, the LGAs are not experiencing the same growth strains as the mining areas.

The coastal LGA of Great Lakes has the largest population. Like many coastal areas it is experiencing continued population growth due to its attractiveness as a retirement location. The LGA is also a major regional coastal tourism destination. As a result of these two key drivers, the area has: much lower workforce participation rates; relatively low incomes; higher levels of part-time employment and is reliant on a narrow band of industries, including tourism and services (eg. health and aged care, retail and other population services). There are major concerns about the long term sustainability of this industry structure and there is a strategy focus on developing other industries.

There are a number of common themes that emerge from review and analysis of each of the LGAs and their economic base. These include: a need to ensure greater diversification in the local economy; the impacts of a fast growing mining sector on other industries and the community; concerns about the long term future beyond mining activity ; concerns in relation to competing land use and encroachment into key agribusiness zones; maintaining the environment; a need to develop larger resident communities; the state of regional infrastructure, especially roads; the need to develop industrial infrastructure including employment lands; and the pressures on local government in terms of its capacity to provide the infrastructure that is required in a growing region. These issues were generally recognised by businesses and other stakeholders. A common response across most of the LGAs (those with mining activity or in proximity to it) related to communities being able to access a share of mining royalties to provide the necessary funds to develop infrastructure and to provide a foundation for future diversification.

From a strategic perspective there was a desire by businesses for clear regional strategies to develop sustainable industries in each of the LGAs (often taking a broader regional approach). There was also a concern that the New South Wales Government had not developed a long term planning strategy for the Upper Hunter Region, similar to the strategies developed for other regions (eg. Lower Hunter, Mid North Coast and Central Coast).

Looking Forward

Looking over a 15-20 years, there are a number of factors and issues that will impact on the region and its industries.

Major Future Issues – Upper Hunter Region

Issue	
Industry	
Coal	Continuing coal mining in some areas. Rehabilitated areas becoming available – future uses. Decline in mining activity as mines reach the end of their life. Balance between coal and agribusiness in the region. Operations in a two speed economy.
Electricity generation	Upper Hunter continues as a major energy hub, with generation comprising a combination of: coal fired, gas fired, thermal-(base load); and renewables (wind and solar).
Agribusiness	Development of intensive agriculture and consolidation in traditional sectors of agriculture.
Tourism	Opportunities for growth in the sector but requires development of product and infrastructure and regional marketing.
Industrial Activities	Tendency for larger operations to cluster in major centres with good transport access and workforce / Areas of Upper Hunter in competition with Lower Hunter. Light industrial activities/services are linked to local population. Development of specialisation in centres within the Upper Hunter.
Population & Housing	
Demographic	All areas have ageing populations – particularly Great Lakes and Gloucester. There are declining populations in the younger age groups There is a need to increase population of the LGAs. Sustainable jobs will be important for attracting a diverse population. Larger populations will drive service industries in the region. A strong emphasis on environment and local amenity with the attraction of "sea changer" and "tree changers"
Housing	Changes in population location patterns as a result of higher transport costs (peak oil issues) and the shifting location of jobs. Need to develop housing options for older age groups (increased densities in town centres). Increasing urban development pressures (including rural residential) in areas with transport accessibility, available services (eg. Singleton) or access to employment in the larger centres of the Lower Hunter (eg. Dungog).
Employment	
Employment	Future changes in job locations due to industry change.
	Changing accessibility with F3 extensions (eg Branxton) impacting on business locations.
	Continued regional commuting to major employment centres (hubs).
	Many key services will continue to be regionalised and concentrated in larger population centres.
	Continued growth in home based employment (facilitated by broadband) and professionals moving to areas for lifestyle changes but still operating in their broader markets.
	Continued skill shortages in higher skill areas and for professionals. Regional education and training responses required to develop skills.
Transport	
Transport	Transport is a major issue for the future of the region. Improved accessibility is a strategic issue. There is a need for improved public transport linkages to Lower Hunter. Road infrastructure is a major issue. Rail improvements required (freight).
Environment	
	Climate change impacts and issues in relation to variability and water security.
	Maintaining the environment for agribusiness and tourism
	Competing land use – mining and agribusiness and the availability of productive land for agribusiness.
Education	
Education	Future of the region requires higher skill levels. The region on average has lower education and skill levels. Access to VET and higher education are major issues. Stronger integration of education with local industries will be needed

A major issue is that the industry specialisation in each of the LGAs tends to be narrow, which creates vulnerabilities with cyclical and structural changes in the sectors. In the case of the mining regions, there are substantial support industries that are servicing mining. At the same time there has been substantial change in employment locations, particularly with the strong industry and services growth in Newcastle and other areas of the Lower Hunter and the major expansion in mining in the Upper Hunter. The regional linkages between the Upper Hunter and Lower Hunter are becoming more important.

In response to these trends, employees are now operating in a broader regional labour market, with increasing commuting to employment opportunities. In some cases this is a result of: employees following the opportunities in their sector (eg. mining workers); lifestyle choices (a rural lifestyle while continuing to work in an industry or profession); and often due to a decline in local jobs or a narrow range of skilled jobs being available in their LGA. Some of the decline in local jobs has been driven by the regional consolidation of government and private services and the trend for larger industries to be attracted to the major centres (which can offer transport access, related industries and a large skilled workforce).

While there is a need to strengthen local economies, regional linkages between areas will become increasingly important over this longer term horizon. This also suggests a need for broader economic strategies and programs that operate at a regional level, rather than an individual LGA level.

The next steps in the project involve: the preparation of Report 2: Directions and Opportunities Report and preparation of Report 3: Upper Hunter Economic Diversification Strategy Report.

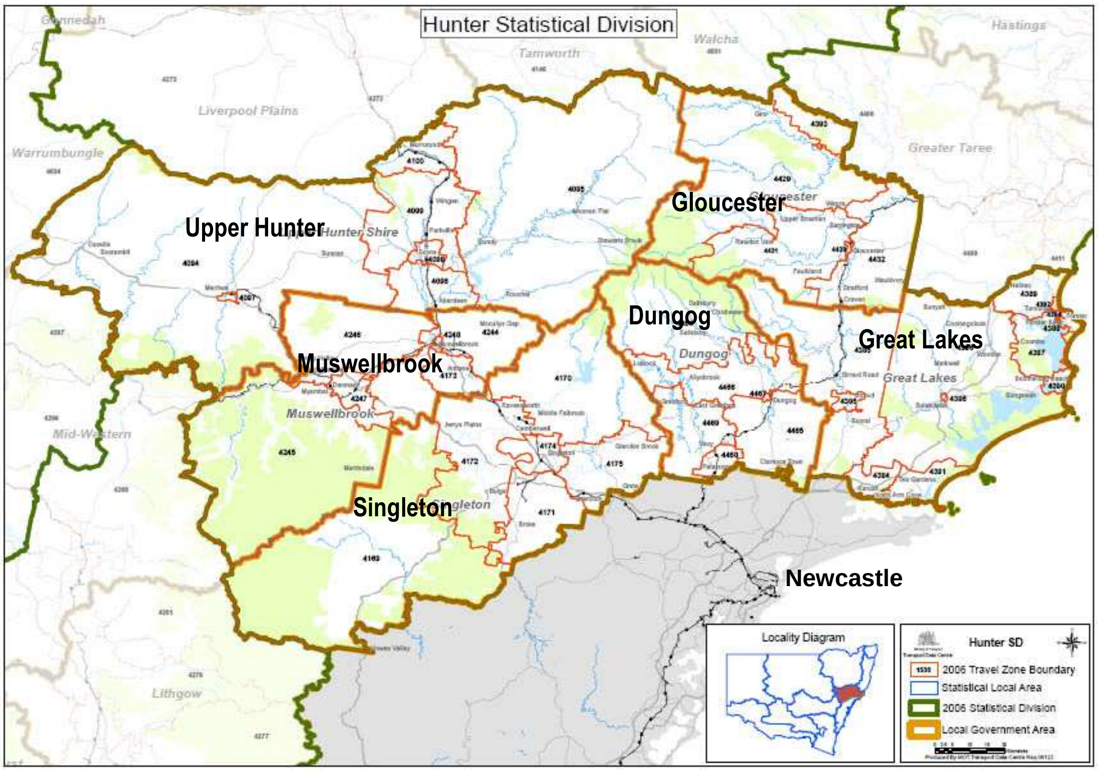
1 Introduction

This report is part of the Upper Hunter Economic Diversification project, which has been commissioned by the New South Wales Government and the six Councils (Singleton, Muswellbrook, Upper Hunter, Gloucester, Dungog, Great Lakes) in the Upper Hunter Region. The focus of the project is on examining the future of the region and the emerging business and employment opportunities over the next 20 -25 years.

The objectives of the project can be summarised as follows: an examination of the economic diversification of the regional economy, over the medium and long term; and an extension of the knowledge of the region potential new industries and their capacity to drive future economic development. The outcomes of the project are as follows:

- Outcome 1: An identification of new and emerging business and employment opportunities over the next 25 years;
- Outcome 2 An action plan to drive regional economic planning over the next 25 years, with a particular focus on those activities which need to occur in the next 5 years; and
- Outcome 3: Key stakeholder groups and industry champions identified in relation to the strategy.

This report is one of a series of outputs from the project. It provides an analysis of the regional economy, key industries and the major factors driving current performance. It also identifies key issues in each of the local government areas. The report is based on a detailed analysis of regional and industry reports and studies; an examination of ABS Census data and other information; consultation with industry and government agencies; and workshops held in each of the LGAs.

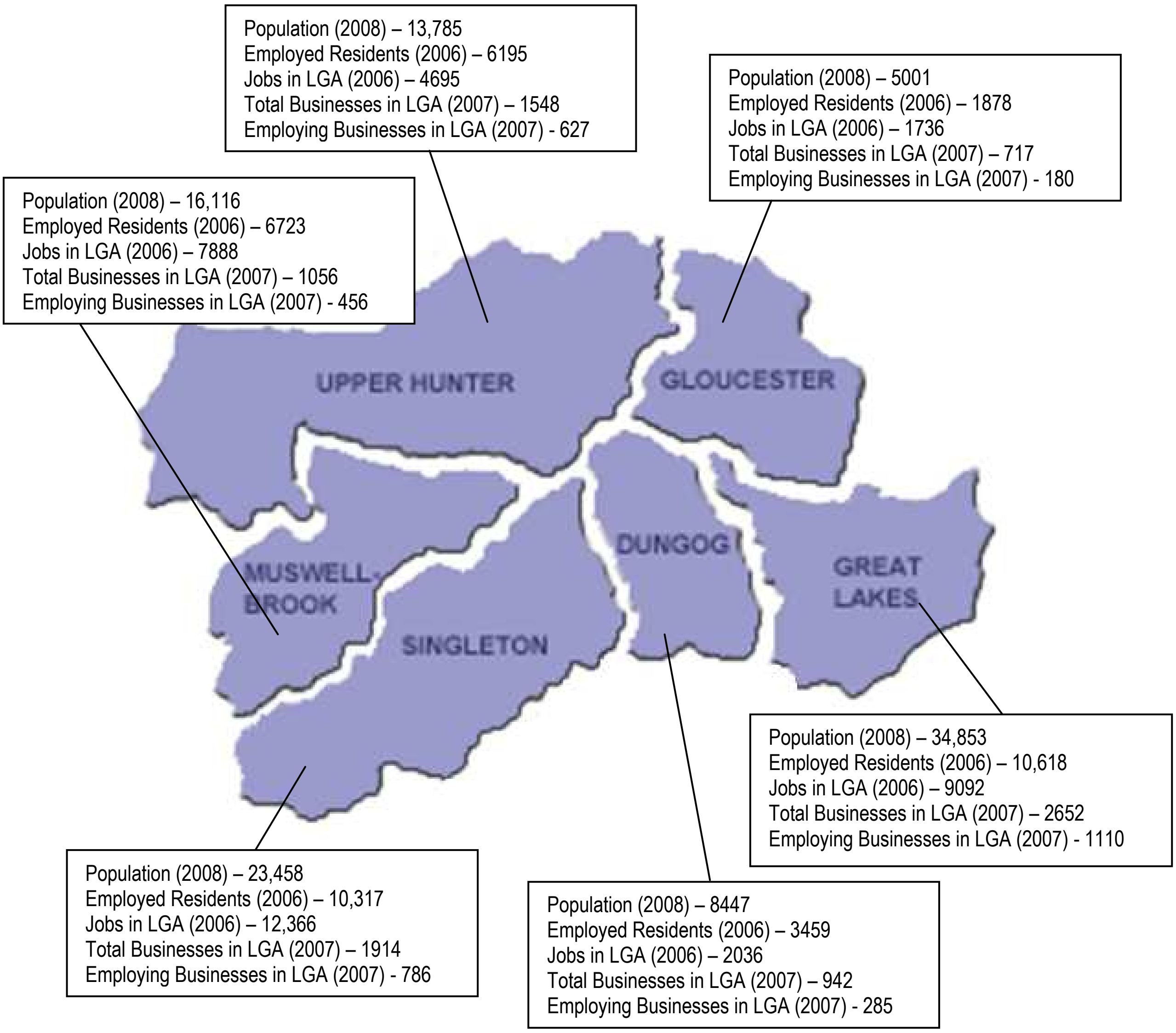


Source: NSW Department of Transport Website

2 Region and Economy

2.1 Overview

The following map provides an overview of the region in terms of population, businesses, jobs in each LGA and employed residents. The LGAs differ in terms of population size and trends, industry structure and performance of the economy.



The region had a population of 103,483 in 2009. An analysis of the regional economy shows that the LGAs can be clustered into sub-regions.

- Cluster 1: Mining influenced LGAs of Singleton and Muswellbrook and the adjacent Upper Hunter LGA (agribusiness focus).
- Cluster 2: The inland rural areas of Dungog LGA and Gloucester Shire.
- Cluster 3: The coastal economy of Great Lakes LGA (and its rural hinterland).

While Great Lakes has been included in this study, it traditionally is not regarded as part of the Upper Hunter Region as it is included in other planning strategies and tourism regions. The LGAs differ in terms of their structure, economic drivers and current performance.

Table 1. Key Features of the Upper Hunter Region LGAs

Cluster 1	Key Features	
	Mining Areas	
Singleton	Major centre for mining and mining support Defence base Agribusiness Workforce participation rate high Higher average incomes - due to mining wages	Low unemployment Significant number of families with children Growth in housing More jobs than employed residents Significant commute into region to mining jobs – from the Lower Hunter and adjacent LGAs Experiencing pressures of mining expansion – housing, skills, costs, congestion
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	Agribusiness	
Upper Hunter LGA	Major centre for equine industry Agribusiness is major activity (eg. beef, crops) Workforce participation rate is high Some mining exploration occurring	Low unemployment Manufacturing - food processing Workforce participation rate is high Increase in mining employees living in the LGA
Cluster 2	**Rural Areas**	
Dungog	Agribusiness and local services are the major activities Emerging tourism sector	Slow population growth Ageing population Declining local jobs High level of commuting to employment in Lower Hunter Region
Gloucester	Agribusiness and local services are the major activities Emerging tourism sector Some mining & gas activity	Slow population growth Ageing population High level of employment self-containment.
Cluster 3		
	Coastal Centre and Villages	
Great Lakes	Population services and tourism are major activities Fishing & aquaculture is a key sector. Agribusiness located in inland areas. Largest population in the region and fastest growing population. Growth driven by retirement living and lifestyle living.	Ageing population (one of oldest populations in NSW) Highest percentage of persons on age pension (20%) Lower average incomes – pensions and lower paid services jobs (incl. part time and casual jobs) Some commuting to jobs in other LGAs – Greater Taree, Newcastle and Port Stephens

2.2 Population Characteristics

2.2.1 Population Size

The LGAs vary in population size with the largest (and fastest growing) being Great Lakes LGA (with 35,487 persons or 34% of the regional population in 2009).

In the period between 1996 and 2006, the population of the Upper Hunter Region (including Great Lakes) increased by 10% or 9100 (from 91,000 to 100,000), with almost 90% of this growth concentrated in two LGAs - Great Lakes (5500 or 60%) and Singleton (2700 or 30%). The period between 2006 and 2009 has seen some stronger population growth emerge in the Muswellbrook and Upper Hunter LGAs.

There are different dynamics at play in each of the LGAs.

- Population growth in Great Lakes is being mainly driven by sea change moves to the coast for retirement and lifestyle living.
- Singleton has the second largest population in the region and is experiencing growth, which has largely been associated with the expansion of mining in the region. Recent growth in the 2006-2009 period in Muswellbrook is largely due to similar factors.
- In the case of the Upper Hunter LGA, recent growth can be attributed to the continued expansion of the equine industry and some mining employees choosing to live in the LGA.
- In the smaller rural LGAs, population growth has been slower, due to industry restructuring in the agribusiness sector and some loss of local jobs.

Table 2. Population of the Upper Hunter Region 1996-2009

Population					1996-2006			2006-2009		
LGA	1996	2001	2006	2009	1996-2006 change no.	% change 96-06	1996 - 2006 Share of change %	Change 2006-2009 (no.)	% change 06-09	share of change
Cluster 1										
Singleton	20,200	21,200	22948	23822	2,748	13.6	30.1	874	3.8	25.4
Muswellbrook	15700	15200	15937	16391	237	1.5	2.6	454	2.8	13.2
Upper Hunter	13400	13500	13589	14043	189	1.4	2.1	454	3.3	13.2
Cluster 2										
Dungog	7900	8400	8403	8646	503	6.4	5.5	243	2.9	7.1
Gloucester	5000	4900	4972	5094	-28	-0.6	-0.3	122	2.5	3.5
Cluster 3										
Great Lakes	28700	32200	34192	35487	5,492	19.1	60.1	1295	3.8	37.6
Total UH Region	**90,900**	**95,400**	**100041**	**103483**	**9,141**	**10.1**	**100.0**	**3442**	**3.4**	**100.0**

Source: ABS Census Data 1996-2006; 2009 ABS Estimates of Population by LGA

2.2.2 Age Structure

The follow tables show the differences in age structure of each of the LGAs. Great Lakes and Gloucester have the older populations. In 2006, Great Lakes (27% were aged 65 and over) and Gloucester (22% were 65+) had the highest percentage of the population over 65 years. This is compared with those with the lowest shares in this age group - Singleton (9%) and Muswellbrook (10%).

All populations are ageing, but Great Lakes and Gloucester will continue to have the oldest populations (due to retirees being attracted to the area and ageing in place of the existing population). In 2026 Great Lakes will have 37% of its population aged 65 years or over and Gloucester will have 31% in this age group. For Singleton and Muswellbrook, the shares of the population age 0-14 years and 25-39 will decline but will still account for over 50% of the population. Major declines in these younger age groups are projected for Gloucester and Dungog.

Table 3. Population by Age Groups 2006-2026

	Age Groups					Shares				
	0-14	15-39	40-64	65+	Total		0-14	15-39	40-64	65+
LGA						**LGA**				
Singleton						**Singleton**				
2006	5,600	8,000	7,300	2100	23000	2006	24.3	34.8	31.7	9.1
2011	5,500	8,500	7,900	2400	24300	2011	22.6	35.0	32.5	9.9
2021	6,000	9,100	8,500	3700	27300	2021	22.0	33.3	31.1	13.6
2026	6,300	9,300	8,800	4400	28800	2026	21.9	32.3	30.6	15.3
Muswellbrook						**Muswellbrook**				
2006	3,800	5600	4900	1600	15900	2006	23.9	35.2	30.8	10.1
2011	3,700	5600	5100	1900	16300	2011	22.7	34.4	31.3	11.7
2021	3,800	5600	5300	2500	17200	2021	22.1	32.6	30.8	14.5
2026	3,900	5500	5300	2800	17500	2026	22.3	31.4	30.3	16.0
Upper Hunter						**Upper Hunter**				
2006	2,700	4200	4600	2100	13600	2006	19.9	30.9	33.8	15.4
2011	2,600	4000	4500	2300	13400	2011	19.4	29.9	33.6	17.2
2021	2,500	3800	4300	2700	13300	2021	18.8	28.6	32.3	20.3
2026	2,500	3600	4200	2900	13200	2026	18.9	27.3	31.8	22.0
Dungog						**Dungog**				
2006	1800	2300	3100	1300	8500	2006	21.2	27.1	36.5	15.3
2011	1700	2300	3200	1400	8600	2011	19.8	26.7	37.2	16.3
2021	1800	2300	3200	1800	9100	2021	19.8	25.3	35.2	19.8
2026	1800	2300	3200	2100	9400	2026	19.1	24.5	34.0	22.3
Gloucester						**Gloucester**				
2006	900	1100	1900	1100	5000	2006	18.0	22.0	38.0	22.0
2011	800	1100	1900	1200	5000	2011	16.0	22.0	38.0	24.0
2021	800	1000	1700	1500	5000	2021	16.0	20.0	34.0	30.0
2026	800	1000	1700	1600	5100	2026	15.7	19.6	33.3	31.4
Great Lakes						**Great Lakes**				
2006	5,500	7400	12000	9300	34200	2006	16.1	21.6	35.1	27.2
2011	5,500	7900	13000	10800	37200	2011	14.8	21.2	34.9	29.0
2021	6,000	8200	14100	14600	42900	2021	14.0	19.1	32.9	34.0
2026	6,200	8300	14400	16800	45700	2026	13.6	18.2	31.5	36.8
Total Upper Hunter Region						**Total**				
2006	20,300	28,600	33,800	17,500	100200	2006	20.3	28.5	33.7	17.5
2011	19,800	29,400	35,600	20,000	104800	2011	18.9	28.1	34.0	19.1
2021	20,900	30,000	37,100	26,800	114800	2021	18.2	26.1	32.3	23.3
2026	21,500	30,000	37,600	30,600	119700	2026	18.0	25.1	31.4	25.6
New South Wales						**New South Wales**				
2006	1,333,200	2,387,300	2,174,900	920,600	6,816,100	2006	19.6	35.0	31.9	13.5
2011	1,357,200	2,479,100	2,307,600	1,042,800	7,187,000	2011	18.9	34.5	32.1	14.5
2021	1,460,400	2,628,800	2,451,800	1,398,700	7,939,800	2021	18.4	33.1	30.9	17.6
2026	1,511,100	2,701,000	2,514,800	1,596,000	8,322,800	2026	18.2	32.5	30.2	19.2

Source: New South Wales Statistical Local Area Population Projections, 2006-2036, Department of Planning March 2010

Another indicator of the age structure (and income structure) and incidence of retirees is the share of the population receiving age pensions. There were substantial differences, with 20% of the Great Lakes population and 16% of Gloucester residents being in receipt of an age pension, compared with only 6% for Singleton and 7% for Muswellbrook.

Table 4. Age Pension Recipients 2006 and 2009

LGA	Singleton	Muswellbrook	Upper Hunter	Dungog	Gloucester	Great Lakes
Age Pension - Centrelink 2009 (no)	1529	1203	1 514	781	795	6 955
Age Pension - Centrelink 2006 (no)	1409	1129	1 374	682	694	6 109
Change 2006-09 (no)	120	74	140	99	101	846
Share of Population receiving an aged pension 2009 (%)	6.4	7.3	10.8	9.0	15.6	19.6

Source: ABS Regional Indicators by LGA 2009

Reflecting the different structure of the populations in the LGAs, Singleton (43%) and Muswellbrook (39%) have a higher share of couple families with children under 15. In contrast, Great Lakes (24%) and Gloucester (29%) have a much lower share of families with these younger children.

Table 5. Families by Family Type – Upper Hunter Region 2006

LGA	Singleton		Muswellbrook		Upper Hunter LGA		Dungog		Gloucester		Great Lakes		Total UH	
Family Type	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Couple families with children under 15 and/or dependent students no	2501	42.9	1558	39.3	1257	35.3	808	36.0	402	28.8	2243	23.9	8769	33.2
Couple families with non-dependent children only no	513	8.8	281	7.1	251	7.1	184	8.2	95	6.8	551	5.9	1875	7.1
Couple families without children no	1983	34.0	1433	36.2	1522	42.8	953	42.5	726	52.0	5141	54.7	11758	44.6
One parent families with children under 15 and/or dependent no students	521	8.9	483	12.2	347	9.8	200	8.9	107	7.7	978	10.4	2636	10.0
One parent families with non-dependent children only no	245	4.2	168	4.2	144	4.0	78	3.5	51	3.7	403	4.3	1089	4.1
Other families no	63	1.1	41	1.0	35	1.0	19	0.8	15	1.1	87	0.9	260	1.0

Source: ABS Census 2006, Resident Population Data

2.2.3 Population Projections

There are two sets of recent population projections that have been prepared for the LGAs in the Upper Hunter Region. One is prepared by the New South Wales Department of Planning Centre and the other by the Hunter Valley Research Foundation.[6] Both sets of projections produce a similar outcome for the Upper Hunter Region, with the exception that the NSW Government projections have stronger growth for Dungog LGA.

In the case of the Department of Planning projections, Great Lakes accounts for an 11,500 increase between 2006 and 2026 or 58% of the total Upper Hunter increase of 19,500. The other areas with significant growth are Singleton and Muswellbrook. The three other LGAs are stable or have limited growth. However these are based on medium growth scenarios and there is potential for growth outside of these projections.

Table 6. Population Projections 2006-2026 Upper Hunter Region

Population Projections		Projections						
	2006	2011	2021	2026	Increase 2006-2026 No	2011-2026 change no.	2011-2026 Share of change %	Average annual growth rate 2006 – 2026 %
Upper Hunter								
Cluster 1								
Singleton	23000	24300	27300	28800	5800	4600	30.9	1.1
Muswellbrook	15900	16300	17200	17500	1600	1200	8.1	0.5
Upper Hunter LGA	13600	13400	13,300	13200	-400	-300	-2.0	-0.1
Upper Hunter Cluster 1	**52500**	**54000**	**57800**	**59500**	7000			0.6
Cluster 2								
Dungog	8500	8600	9100	9400	900	800	5.4	0.5
Gloucester	5000	5000	5000	5100	100	100	0.7	0.1
	13500	**13600**	**14100**	**14500**	1000			0.3
Cluster 3								
Great Lakes	34200	37200	42900	45700	11500	8500	57.0	1.4
Total Upper Hunter (C1-3)	**100,200**	**104,800**	**114,800**	**119,700**	**19,500**	**14,900**	**100**	0.9

Source: New South Wales Statistical Local Area Population Projections, 2006-2036, Department of Planning March 2010

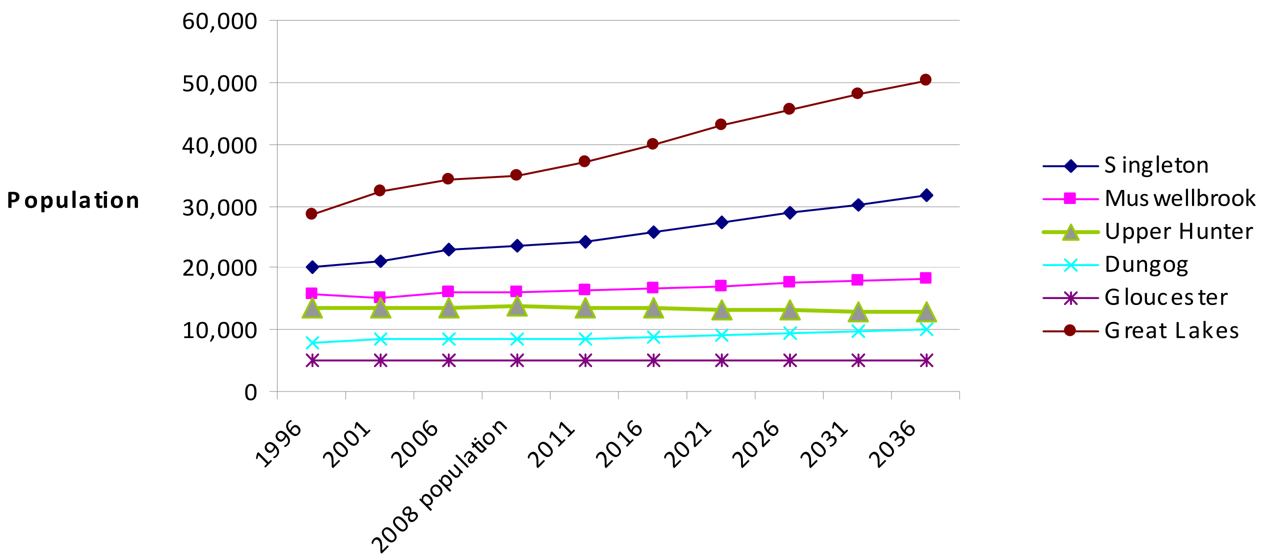
6 The HVRF projections were prepared in late 2008 as part of an assessment of the Tillegra Dam proposal undertaken for Dungog Council. The NSW Government projections are the latest released in the March 2010. New South Wales Statistical Local Area Population Projections, 2006-2036, Department of Planning March 2010.

Table 7. Medium Growth Population Projections, Hunter Local Government Areas, 2006 – 2026

Population Projections	Actual		Projections			
	2006	2011	2016	2021	2026	Average annual growth rate 2006 - 2026
Lower Hunter						
Cessnock	46,206	47,726	49,108	50,410	51,710	0.56%
Lake Macquarie	183,139	187,054	190,941	195,145	199,744	0.43%
Maitland	61,881	69,720	77,487	85,139	92,656	2.04%
Newcastle	141,752	147,143	152,380	157,428	162,332	0.68%
Port Stephens	60,484	66,360	72,212	78,212	84,369	1.68%
Lower Hunter Total	**493,462**	**518,003**	**542,128**	**566,334**	**590,811**	**0.90%**
Upper Hunter						
Cluster 1						
Muswellbrook	15,236	15,893	16,549	17,215	17,888	0.81%
Singleton	21,940	23,538	25,003	26,420	27,822	1.19%
Upper Hunter LGA	12,976	13,045	13,185	13,363	13,528	0.21%
Upper Hunter Cluster 1	**50,152**	**52,476**	**54,737**	**56,998**	**59,238**	**0.84%**
Cluster 2						
Dungog	8,062	7,964	7,831	7,713	7,621	-0.28%
Gloucester	4,800	4,876	4,966	5,086	5,205	0.41%
	12,862	**12,840**	**12,797**	**12,799**	**12,826**	-0.01%
Cluster 3						
Great Lakes	32,764	36,016	39,277	42,558	45,809	1.69%
Total Upper Hunter (C1-3)	**95,778**	**101,332**	**106,811**	**112,355**	**117,873**	**0.99%**
Hunter Region Total	**589,240**	**619,335**	**648,939**	**678,689**	**708,684**	**0.93%**

Source: Hunter Valley Research Foundation 2008, Prepared for Dungog Council as part of an assessment of the Tillegra Dam proposal

Figure 1. Population Analysis and Projections 1996-2036



Source: New South Wales Statistical Local Area Population Projections, 2006-2036, Department of Planning March 2010

Table 8. Population Analysis and Projections 1996- 2036 Upper Hunter Region

Population Projections LGA	1996	2001	2006	Population 2008	2011	2016	2021	2026	2031	2036
Cluster 1										
Singleton	20,200	21,200	22900	23,458	24200	25700	27200	28800	30300	31800
Muswellbrook	15700	15200	15900	16,116	16300	16700	17100	17500	17900	18300
Upper Hunter	13400	13500	13600	13,785	13500	13400	13300	13200	13000	12900
Cluster 2										
Dungog	7900	8400	8400	8447	8600	8900	9200	9400	9700	9900
Gloucester	5000	4900	5000	5000	5000	5000	5100	5100	5100	5100
Cluster 3										
Great Lakes	28700	32200	34200	34,853	37100	40000	42900	45600	48100	50400
Total UH Region	**90,900**	**95,400**	**100,000**	**101,660**	**104,700**	**109,700**	**114,800**	**119,600**	**124,100**	**128,400**

Source: New South Wales Statistical Local Area Population Projections, 2006-2036, Department of Planning March 2010

In the final report (Report 3) some alternative population scenarios will be developed.

2.3 Economic Structure

2.3.1 Key Industry Sectors

The following are the key regional export sectors within the Upper Hunter Region. These sectors comprise coal, agribusiness and tourism. In total these regional export sectors account for around 22,000 jobs or 52% of jobs in the region.[7] The balance of jobs (48%) is mainly those that are servicing a local population in the LGAs.

The region is dominated by coal mining as the major regional export sector. It should be noted that the output value does not represent the value to the region, as most of this revenue accrues to global businesses that are located outside the region. The value to the region comprises the income earned by employees (mining employees and employees in mining support industries), who are resident in the Upper Hunter Region; the income earned by local businesses that are servicing the sector; and the multiplier impacts of the expenditure of local persons employed in the sector.

Table 9. Value of Regional Export Industries

Upper Hunter Region Industry	Estimates Output Value	Estimates Employment	
Resources			
Coal	$6.2 billion (revenue)	11,000 direct & 5000 support	2010 Estimates
Agribusiness			
Equine Industry	$100 million (industry revenue)	886 < direct>	2009 Estimates
Other Agribusiness (and support) mainly beef, dairy and some crops	$248 million (farm gate value of production)	3753 <direct and support.	2009 Estimates
Wine (and grapes)	$45-55 million (revenue)	400 <direct>	2009 Estimates
Other			
Tourism	$418 million (total) - $353 million (overnight visitors) - $65 million (day visitors) - $243 million of total is in Great Lakes LGA (3/4 year average to June 2007).* - balance of $175 million is spread across the rest of the Upper Hunter Region. (visitor expenditure)	2029 <tourism based jobs>	2007/08 estimates

Source: Buchan Consulting Estimates based on analysis of ABS data and industry data. * Great Lakes Council indicate that recent data from Tourism Research Australia estimates the value of tourism at $136 million in 2010 for Great Lakes LGA.

2.3.2 Jobs in the Region

The following table highlights some of the differences between the LGAs. Singleton has 23% of the region's population and 33% of jobs are located in that LGA. Similarly Muswellbrook has 16% of the population and 21% of the jobs. In comparison, Great Lakes has 34% of the regional population and only 24% of regional jobs.

7 For these calculations, the ABS Census shows 37813 jobs in 2006, for 2010 employment numbers additional mining jobs -4000 direct jobs and 2400 support jobs have been added for an estimated 42200 jobs in 2010.

Two of the LGAs, Singleton and Muswellbrook have more jobs than residents in employment. This largely reflects the scale of the mining sector and the related support industries. There is substantial commuting to jobs in these sectors, from the Lower Hunter Region and other areas of the Upper Hunter Region. In the case of Upper Hunter, Dungog and Great Lakes, there are fewer jobs than persons in employment, with a significant share of residents commuting to jobs in adjacent areas. (eg. Upper Hunter – to Muswellbrook and Singleton; Dungog to Maitland, Cessnock and Newcastle; and Great Lakes to Greater Taree and Port Stephens). These labour market movements are discussed in more detail later in this report.

Table 10. Population and Employment

LGA	Population 2006	Share of population %	% of residents in employment	Employed Residents 2006 No.	Share of employed residents %	Jobs 2006 No	Share of Jobs%	Jobs - employed residents No.	Av employees per Employing Business No.
Cluster 1									
Singleton	22948	22.9	45.0	10,317	26.3	12,366	32.7	2049	15.7
Muswellbrook	15937	15.9	42.2	6723	17.2	7888	20.9	1165	17.3
Upper Hunter	13589	13.6	45.6	6195	15.8	4695	12.4	-1500	7.5
Cluster 2									
Dungog	8403	8.4	41.2	3459	8.8	2036	5.4	-1423	7.1
Gloucester	4972	5.0	37.8	1878	4.8	1736	4.6	-142	9.6
Cluster 3									
Great Lakes	34192	34.2	31.1	10618	27.1	9092	24.0	-1526	8.2
Total UH Region	100041	100.0	39.2	**39,190**	100.0	**37,813**	100.0	**-1377**	**11.0**

Source: 2006 ABS Census 2006; Resident Population Data and Working Population Data

Table 11. Population and Employment Ratio

LGA	Jobs in LGA	Population in LGA	Ratio: Jobs/Population
Cluster 1			
Singleton	12,368	22,948	0.54
Muswellbrook	7,887	15,937	0.49
Upper Hunter	4,697	13,589	0.35
Cluster 2			
Dungog	2,037	8,403	0.24
Gloucester	1,738	4,972	0.35
Cluster 3			
Great Lakes	9,093	34,192	0.27
Total UH Region	**37,820**	**100,041**	**0.38**

Source: 2006 ABS Census 2006; Resident Population Data and Working Population Data

The structure of jobs in the areas reflects their economic base and the key industry sectors in each location. There are some substantial differences in the structure of the local economies.

- Singleton is focused on mining (31% of jobs) and mining support activities and services.
- Muswellbrook is dependent on mining (17%) and power generation (8%), and services.
- Upper Hunter LGA has a large agribusiness sector (26% of jobs, including the equine and wine sectors) and services.
- Dungog (22% agribusiness) and Gloucester (19% agribusiness) are mainly involved in agribusiness regions and the provision of services for the local population.
- Major activities and jobs in Great Lakes are: services (60% of jobs) – for tourism (accommodation & food services -13%) and for the local population (retail 16%), and construction (9%), reflecting the rate of housing construction.

Table 12. Jobs by Industry Sector – Upper Hunter Region 2006

Regional Economy	Cluster 1						Cluster 2				Cluster 3			
	Singleton		Muswellbrook		Upper Hunter		Dungog		Gloucester		Great Lakes		Total	
Industry Sectors		Share		Share		Share		Share		Share		Share	Upper Hunter	Share
Goods Producing Industries														
Agriculture, forestry and fishing	533	4.3	515	6.5	1237	26.3	438	21.5	337	19.4	486	5.4	3546	9.4
Mining	3794	30.7	1522	19.3	45	1.0	7	0.3	92	5.3	39	0.4	5499	14.5
Manufacturing	866	7.0	541	6.9	432	9.2	98	4.8	160	9.2	510	5.7	2607	6.9
Electricity, gas, water and waste services	232	1.9	626	7.9	23	0.5	33	1.6	15	0.9	170	1.9	1099	2.9
Construction	604	4.9	540	6.8	228	4.9	129	6.3	80	4.6	864	9.6	2445	6.5
Total	**6029**	**48.7**	**3744**	**47.5**	**1965**	**41.8**	**705**	**34.6**	**684**	**39.4**	**2069**	**23.0**	**15196**	**40.2**
Goods Related Industries		**0.0**		**0.0**		**0.0**				**0.0**		**0.0**	**0**	**0.0**
Wholesale trade	393	3.2	234	3.0	121	2.6	41	2.0	47	2.7	163	1.8	999	2.6
Transport, postal and warehousing	357	2.9	216	2.7	176	3.7	109	5.3	67	3.9	263	2.9	1188	3.1
Total	750	6.1	450	5.7	297	6.3	150	7.4	114	6.6	426	4.7	2187	5.8
Knowledge and Business Services		**0.0**		**0.0**		**0.0**				**0.0**		**0.0**	**0**	**0.0**
Information media and telecommunications	60	0.5	44	0.6	13	0.3	14	0.7	15	0.9	62	0.7	208	0.5
Financial and insurance services	144	1.2	105	1.3	65	1.4	24	1.2	18	1.0	178	2.0	534	1.4
Rental, hiring and real estate services	210	1.7	140	1.8	36	0.8	24	1.2	23	1.3	283	3.1	716	1.9
Professional, scientific and technical services	461	3.7	326	4.1	178	3.8	89	4.4	65	3.7	336	3.7	1455	3.8
Administrative and support services	320	2.6	120	1.5	53	1.1	39	1.9	21	1.2	209	2.3	762	2.0
Total	**1195**	**9.7**	**735**	**9.3**	**345**	**7.3**	**190**	**9.3**	**142**	**8.2**	**1068**	**11.9**	**3675**	**9.7**
In-Person Services		**0.0**		**0.0**		**0.0**				**0.0**		**0.0**	**0**	**0.0**
Retail trade	1062	8.6	736	9.3	506	10.8	191	9.4	184	10.6	1425	15.8	4104	10.9
Accommodation and food services	604	4.9	503	6.4	299	6.4	170	8.3	124	7.1	1196	13.3	2896	7.7
Public administration and safety	766	6.2	354	4.5	209	4.4	132	6.5	94	5.4	465	5.2	2020	5.3
Education and training	543	4.4	390	4.9	402	8.6	220	10.8	128	7.4	692	7.7	2375	6.3
Health care and social assistance	559	4.5	520	6.6	387	8.2	155	7.6	187	10.8	1113	12.4	2921	7.7
Arts and recreation services	53	0.4	58	0.7	105	2.2	19	0.9	11	0.6	191	2.1	437	1.2
Other services	663	5.4	300	3.8	120	2.6	71	3.5	57	3.3	359	4.0	1570	4.2
Total	**4250**	**34.4**	**2861**	**36.3**	**2028**	**43.2**	**958**	**47.0**	**785**	**45.2**	**5441**	**60.4**	**16323**	**43.2**
Inadequately described/not stated	144	1.2	98	1.2	63	1.3	36	1.8	12	0.7	89	1.0	442	1.2
Total LGA	**12368**	**100.0**	**7888**	**100.0**	**4698**	**100.0**	**2039**	**100**	**1737**	**100.0**	**9004**	**100.0**	**37823**	**100.0**

Source: ABS Census 2006 Working Population Data

Overall Singleton accounted for 33% of jobs in the Upper Hunter Region, Great Lakes for 24% and Muswellbrook for 21%.

The specialisations of each of the LGAs and the dominant industries are apparent when the regional share of jobs is examined.

- Mining – Singleton had 69% of regional mining jobs and Muswellbrook had 28% of jobs in this sector.
- Agribusiness – Upper Hunter LGA accounted for 35% of agribusiness jobs in the region, with the other LGAs each accounting for 12-15% of sector jobs.
- Manufacturing – Singleton accounted for 33% of these jobs and Muswellbrook for 21%.
  Many of these jobs were linked to the mining sector and to power generation.
- Electricity Muswellbrook had 57% of jobs and Singleton 21% reflecting the location of the generators
- Construction – jobs were concentrated in the larger population centres: Great Lakes 35% of construction jobs, Singleton 25%, and Muswellbrook 22%
- Retail jobs are related to population size with Great Lakes accounting for 35% of retail jobs and Singleton 26% of retail jobs in the region.

- Health and education jobs are driven by population size and the location of major facilities.
- Accommodation and food services jobs are related to population size and to the tourism sector. Great Lakes accounted for 41% of regional jobs in this sector, Singleton for 21%, and Muswellbrook for 17%.

Table 13. Regional Share of Industry Jobs Upper Hunter Region 2006

Industry Sectors	Singleton	Share %	Muswellbrook	Share %	Upper Hunter	Share %	Dungog	Share %	Gloucester	Share %	Great Lakes	Share %	Total Upper Hunter Region	
Goods Producing Industries														
Agriculture, forestry and fishing	533	15.0	515	14.5	1,237	34.9	438	12.4	337	9.5	486	13.7	3,546	100.0
Mining	*3,794*	69.0	*1,522*	27.7	*45*	0.8	*7*	0.1	*92*	1.7	*39*	0.7	5,499	100.0
Manufacturing	*866*	33.2	*541*	20.8	*432*	16.6	*98*	3.8	*160*	6.1	*510*	19.6	2,607	100.0
Electricity, gas, water and waste services	*232*	21.1	*626*	57.0	*23*	2.1	*33*	3.0	*15*	1.4	*170*	15.5	1,099	100.0
Construction	*604*	24.7	*540*	22.1	*228*	9.3	*129*	5.3	*80*	3.3	*864*	35.3	2,445	100.0
Total	**6029**	39.7	**3744**	24.6	**1965**	12.9	**705**	4.6	**684**	4.5	**2,069**	13.6	15,196	100.0
Goods Related Industries														
Wholesale trade	*393*	39.3	*234*	23.4	*121*	12.1	*41*	4.1	*47*	4.7	*163*	16.3	999	100.0
Transport, postal and warehousing	*357*	30.1	*216*	18.2	*176*	14.8	*109*	9.2	*67*	5.6	*263*	22.1	1,188	100.0
Total	**750**	34.3	**450**	20.6	**297**	13.6	**150**	6.9	**114**	5.2	**426**	19.5	2,187	100.0
Knowledge and Business Services													0	
Information media and telecommunications	*60*	28.8	*44*	21.2	*13*	6.3	*14*	6.7	*15*	7.2	*62*	29.8	208	100.0
Financial and insurance services	*144*	27.0	*105*	19.7	*65*	12.2	*24*	4.5	*18*	3.4	*178*	33.3	534	100.0
Rental, hiring and real estate services	*210*	29.3	*140*	19.6	*36*	5.0	*24*	3.4	*23*	3.2	*283*	39.5	716	100.0
Professional, scientific and technical services	*461*	31.7	*326*	22.4	*178*	12.2	*89*	6.1	*65*	4.5	*336*	23.1	1,455	100.0
Administrative and support services	*320*	42.0	*120*	15.7	*53*	7.0	*39*	5.1	*21*	2.8	*209*	27.4	762	100.0
Total	**1195**	32.5	**735**	20.0	**345**	9.4	**190**	5.2	**142**	3.9	**1,068**	29.1	3,675	100.0
In-Person Services														
Retail trade	*1,062*	25.9	*736*	17.9	*506*	12.3	*191*	4.7	*184*	4.5	*1,425*	34.7	4,104	100.0
Accommodation and food services	*604*	20.9	*503*	17.4	*299*	10.3	*170*	5.9	*124*	4.3	*1,196*	41.3	2,896	100.0
Public administration and safety	*766*	37.9	*354*	17.5	*209*	10.3	*132*	6.5	*94*	4.7	*465*	23.0	2,020	100.0
Education and training	*543*	22.9	*390*	16.4	*402*	16.9	*220*	9.3	*128*	5.4	*692*	29.1	2,375	100.0
Health care and social assistance	*559*	19.1	*520*	17.8	*387*	13.2	*155*	5.3	*187*	6.4	*1,113*	38.1	2,921	100.0
Arts and recreation services	*53*	12.1	*58*	13.3	*105*	24.0	*19*	4.3	*11*	2.5	*191*	43.7	437	100.0
Other services	*663*	42.2	*300*	19.1	*120*	7.6	*71*	4.5	*57*	3.6	*359*	22.9	1,570	100.0
Total	**4250**	26.0	**2861**	17.5	**2028**	12.4	**958**	5.9	**785**	4.8	**5,441**	33.3	16,323	100.0
Inadequately described/not stated	144	32.6	98	22.2	63	14.3	36	8.1	12	2.7	89	20.1	442	100.0
	12368	32.7	**7888**	20.9	**4698**	12.4	**2039**	5.4	**1737**	4.6	**9,004**	23.8	**37823**	100.0

Source: ABS Census 2006 Working Population Data

Of the 37,820 jobs in the region, 16% or almost 6000 were owner/managers of businesses. This is an indicator of the importance of small business in the region. While Singleton has 36% of regional employee jobs it had 20% of owner/managers jobs and in the case of Great Lakes it had 21% of regional employee jobs but 34% of owner manager jobs. This difference largely reflects the structure of the Great Lakes economy – small enterprises, services and tourism (which comprises a large number of owner-operated businesses). Singleton has a significant number of larger employers, particularly in mining, mining support, and manufacturing and services.

Table 14. Jobs by Type of Employment Shares by LGA (Persons)

No of Jobs LGA	Employee not owning business	Share of UH Region Employees %	Owner managers of incorporated enterprises	Owner managers of unincorporated enterprises	Total Owner/Managers	Share of UH Region owner/managers %	Contributing family workers	Employment type not stated	Total	Total Persons Share
Cluster 1										
Singleton	10,947	35.9	530	651	1181	19.9	175	65	12,368	32.7
Muswellbrook	6,974	22.9	248	476	724	12.2	132	57	7,887	20.9
Upper Hunter	3,473	11.4	245	683	928	15.6	262	34	4,697	12.4
Cluster 2										
Dungog	1,281	4.2	184	421	605	10.2	136	15	2,037	5.4
Gloucester	1,148	3.8	126	333	459	7.7	119	12	1,738	4.6
Cluster 3										
Great Lakes	6,697	21.9	647	1,389	2036	34.3	291	69	9,093	24.0
Total UH Region	**30,520**	**100.0**	**1,980**	**3,953**	**5933**	**100.0**	**1,115**	**252**	**37,820**	**100.0**

Source: ABS 2006 Census Working Population Profile (e W02 Employment Type - employed persons aged 15 years and over)

The importance of small business is highlighted in the following table: in Muswellbrook and Singleton 88% of jobs were held by employees and 9% were owner/managers; in Great Lakes 74% were employees and 22% were owner/operators (reflecting owner operation of tourism businesses and small retail businesses). In the rural economies of Dungog and Gloucester, the employee share was just over 60% while the owner/manager share was between 26-30% and contributing family members was around 6%. This largely reflects the importance of owner operated agribusiness to these areas. Upper Hunter LGA, which is a major agribusiness economy, has a similar structure.

Table 15. Jobs Structure by LGA (Persons)

LGA	Employee not owning business	Employee Share %	Owner managers of incorporated enterprises	Owner managers of unincorporated enterprises	Total Owner/managers	Owner/ Manager Share %	Contributing family workers	Contributing family workers Share % share	Employment type not stated	Total	Total Persons Share %
Cluster 1											
Singleton	10,947	88.5	530	651	1181	9.5	175	1.4	65	12,368	100.0
Muswellbrook	6,974	88.4	248	476	724	9.2	132	1.7	57	7,887	100.0
Upper Hunter	3,473	73.9	245	683	928	19.8	262	5.6	34	4,697	100.0
Cluster 2											
Dungog	1,281	62.9	184	421	605	29.7	136	6.7	15	2,037	100.0
Gloucester	1,148	66.1	126	333	459	26.4	119	6.8	12	1,738	100.0
Cluster 3											
Great Lakes	6,697	73.7	647	1,389	2036	22.4	291	3.2	69	9,093	100.0
Total UH Region	**30,520**	80.7	**1,980**	**3,953**	**5933**	15.7	**1,115**	2.9	**252**	**37,820**	100.0

Source: ABS 2006 Census Working Population Profile (e W02 Employment Type - employed persons aged 15 years and over)

2.3.3 Employed Residents

The following table shows the key sectors that residents are employed in each of the LGAs. The areas of Upper Hunter, Dungog and Gloucester have agribusiness as the largest area of employment. Singleton and Muswellbrook have a significant share of residents employed in the mining sector and the electricity generation sector. These two sectors also tend to attract large numbers of their employees from other adjacent LGAs (in the Upper Hunter Region and from the Lower Hunter Region). This is particularly the case with the major expansion in mining which has occurred over the period since 2006.

Different industries have different characteristics.

- Mining is the highest paying sector in the region and employs mainly males and has longer working hours due to the shift arrangements.
- Many of the service sectors (eg. retail, education, health and aged care) tend to be female intensive; are characterised by a high levels of part time employment; and lower earnings compared with the industrial sectors.
- In the case of tourism, there is significant part-time employment; a large number of owner operated businesses and a seasonal dimension, which creates casual employment during peak periods.

Table 16. Employed Residents Major Sectors of Employment 2006

Summary Table	Singleton		Muswellbrook		Upper Hunter LGA		Dungog		Gloucester		Great Lakes		Total – Upper Hunter Region	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Agribusiness														
Agribusiness (included forestry & fishing)	824	8.0	939	14.0	1729	27.9	599	17.3	446	23.7	815	7.7	5039	13.2
Tourism														
Tourism	716	6.9	461	6.9	394	6.4	224	6.5	136	7.3	785	7.4	2717	7.1
Energy														
Mining Direct	2,177	21.1	1,151	17.1	455	7.3	82	2.4	90	4.8	80	0.8	3,955	10.4
Electricity	265	2.6	320	4.8	122	2.0	3	0.1	0	0.0	45	0.4	783	2.1
Services														
Health	359	3.5	264	3.9	260	4.2	182	5.3	152	8.1	682	6.4	1872	4.9
Aged Care	226	2.2	105	1.6	194	3.1	135	3.9	39	2.1	502	4.7	1,198	3.1
Education	519	5.0	370	5.5	372	6.0	264	7.6	117	6.2	682	6.4	2,300	6.0
Retail	1,010	9.8	680	10.1	594	9.6	324	9.4	182	9.7	1,475	13.9	4,198	11.0
All Employed Residents	**10316**	**100.0**	**6723**	**100.0**	**6195**	**100.0**	**3460**	**100.0**	**1879**	**100.0**	**10619**	**100.0**	**38134**	**100.0**

Source: Buchan Consulting Estimates based on ABS Census 2006 Resident Population Data

In general terms, the service jobs tend to employ local residents, with the major commuting being related to the expanding mining sector and to some professional jobs and other higher level services jobs. For example there is significant commuting of residents of Dungog to jobs in Maitland, Cessnock and Newcastle, and some residents of Great Lakes travel to Taree and Raymond Terrace.

The broader strength of the Hunter regional economy and the labour market in both the Upper Hunter (mainly mining growth) and in Newcastle and other parts of the Lower Hunter (more broadly based employment growth including professional services) has created opportunities for persons to live in rural lifestyle areas while commuting to jobs in adjacent areas.

Table 17. Jobs and Employed Residents 2006

	Singleton			Muswellbrook			Upper Hunter LGA			Dungog			Gloucester			Great Lakes		
Industry	Jobs	Employed residents	Jobs - Residents	Jobs	Employed residents	Jobs - Residents	Jobs	Employed residents	Jobs - Residents	Jobs	Employed residents	Jobs - Residents	Jobs	Employed residents	Jobs - Residents	Jobs	Employed residents	Jobs - Residents
Goods Producing																		
Agriculture, forestry and fishing	532	519	13	515	611	-96	1,237	1,256	-19	438	470	-32	337	367	-30	486	530	-44
Mining	3,794	2,055	1,739	1,522	1,092	430	45	446	-401	7	76	-69	93	76	17	39	60	-21
Manufacturing	866	759	107	541	475	66	432	522	-90	98	322	-224	160	155	5	510	654	-144
Electricity, gas, water and waste services	233	303	-70	626	351	275	23	145	-122	33	55	-22	15	13	2	170	163	7
Construction	604	619	-15	540	441	99	228	412	-184	129	340	-211	80	128	-48	864	1,308	-444
Total	**6,029**	**4,255**	**1,774**	**3,744**	**2,970**	**774**	**1,965**	**2,781**	**-816**	**705**	**1,263**	**-558**	**685**	**739**	**-54**	**2,069**	**2,715**	**-646**
Goods Related																		
Transport, postal and warehousing	357	343	14	216	217	-1	121	215	-94	109	195	-86	67	85	-18	263	386	-123
Wholesale trade	393	275	118	234	204	30	176	164	12	41	102	-61	46	46	0	163	215	-52
Total	**750**	**618**	**132**	**450**	**421**	**29**	**297**	**379**	**-82**	**150**	**297**	**-147**	**113**	**131**	**-18**	**426**	**601**	**-175**
Knowledge & Business Services																		
Information media and telecommunications	59	56	3	44	33	11	13	28	-15	14	36	-22	15	12	3	62	91	-29
Financial and insurance services	144	140	4	105	87	18	65	88	-23	24	50	-26	18	22	-4	178	192	-14
Rental, hiring and real estate services	210	182	28	140	114	26	36	57	-21	24	53	-29	23	27	-4	283	291	-8
Professional, scientific and technical services	461	413	48	326	275	51	178	232	-54	89	155	-66	65	73	-8	336	382	-46
Administrative and support services	320	300	20	120	153	-33	53	95	-42	39	66	-27	21	29	-8	209	312	-103
Total	**1,194**	**1,091**	**103**	**735**	**662**	**73**	**345**	**500**	**-155**	**190**	**360**	**-170**	**142**	**163**	**-21**	**1,068**	**1,268**	**-200**
In-Person Services																		
Retail trade	1,062	1,013	49	736	677	59	506	600	-94	191	314	-123	184	186	-2	1,425	1,465	-40
Accommodation and food services	604	665	-61	503	471	32	299	356	-57	170	200	-30	124	124	0	1,196	1,228	-32
Public administration and safety	766	626	140	354	254	100	209	280	-71	132	163	-31	93	96	-3	465	532	-67
Education and training	543	534	9	390	374	16	402	390	12	220	264	-44	128	121	7	692	709	-17
Health care and social assistance	559	632	-73	520	417	103	387	478	-91	155	345	-190	188	195	-7	1,113	1,254	-141
Arts and recreation services	53	39	14	58	64	-6	105	99	6	19	33	-14	11	18	-7	191	194	-3
Other services	663	582	81	300	251	49	120	163	-43	71	125	-54	57	60	-3	359	396	-37
Total	**4,250**	**4,091**	**159**	**2,861**	**2,508**	**353**	**2,028**	**2,366**	**-338**	**958**	**1,444**	**-486**	**785**	**800**	**-15**	**5,441**	**5,778**	**-337**
Inadequately described/not stated	145	261	-116	98	159	-61	63	172	-109	36	102	-66	13	45	-32	89	256	-167
Total	**12,368**	**10,316**	**2,052**	**7,888**	**6,720**	**1,168**	**4,698**	**6,198**	**-1,500**	**2,039**	**3,466**	**-1,427**	**1,738**	**1,878**	**-140**	**9,093**	**10,618**	**-1,525**

Source: ABS Census 2006: Jobs – Working Population Data, Employed Residents – Resident Population Data

The following table compares the top 10 employing industries of residents and the top 10 industries in each LGA.

Table 18. Top 10 Employing Industries in Each LGA 2006

Regional Economy	Singleton		Muswellbrook		Upper Hunter		Dungog		Gloucester		Great Lakes		Total UH Region	
Industry Sectors	**Jobs**	**Employed Residents**	**Jobs**	**Employed Residents**	**Jobs**	**Employed Residents**	**Jobs**	**Employed Residents**	**Jobs**	**Employed Residents**	**Jobs**	**Employed Residents**	**Jobs**	**Employed Residents**
Goods Producing Industries														
Agriculture, forestry and fishing	10	10	7	3	1	1	1	1	1	1	7	8	3	3
Mining	1	1	1	1		5	9		8				1	2
Manufacturing	3	3	4	4	3	3		2	4	4	6	6	6	7
Electricity, gas, water and waste services			3	9										
Construction	6	7	5	6	7	6	7	4	9	5	4	4	7	5
Goods Related Industries														
Wholesale trade					10			8		9		10		
Transport, postal and warehousing							8		10					
Knowledge and Business Services														
Information media and telecommunications														
Financial and insurance services														
Rental, hiring and real estate services														
Professional, scientific and technical services				10	9	10	10	10		10	10			
Administrative and support services														
In-Person Services														
Retail trade	2	2	2	2	2	2	3	5	3	3	1	1	2	1
Accommodation and food services	7	4	8	5	6	8	4	7	6	6	2	3	5	6
Public administration and safety	4	6	9		8	9	6	9	7	8	8	7	9	9
Education and training	9	9	7	8	4	7	2	6	5	7	5	5	8	8
Health care and social assistance	8	5	6	7	5	4	5	3	2	2	3	2	4	4
Arts and recreation services														
Other services	5	8									9	9	10	10
Inadequately described/not stated														
Total Employment in LGA	**12368**	**10316**	**7888**	**6720**	**4698**	**6198**	**2039**	**34766**	**1737**	**1878**	**9004**	**10618**	**37823**	

Source: ABS Census 2006: Jobs – Working Population Data, Employed Residents – Resident Population Data

2.3.4 Hours of Work

The following tables show the hours of work and the incidence of full time and part-time work in each LGA. The incidence of part-time work is much higher in Great Lakes and Dungog, and is lowest in Muswellbrook and Singleton.

Table 19. Number of Hours Worked by Employees in Jobs 2006 (persons)

	Number of hours worked									
	None(b)	1-15 hours	*16-24 hours*	*25-34 hours*	*35-39 hours*	*40 hours*	*41-48 hours*	*49 or more*	*Not stated*	*Total*
No of Jobs	**EMPLOYEE NOT OWNING BUSINESS**									
Cluster 1										
Singleton	**376**	**835**	**759**	**798**	**1,545**	**1,682**	**1,896**	**2,844**	**213**	**10,948**
Muswellbrook	**241**	**639**	**535**	**504**	**1,212**	**1,053**	**1,103**	**1,559**	**123**	**6,969**
Upper Hunter	**102**	**395**	**370**	**390**	**488**	**716**	**398**	**544**	**70**	**3,473**
Cluster 2										
Dungog	**39**	**228**	**164**	**161**	**242**	**197**	**87**	**140**	**20**	**1,278**
Gloucester	**38**	**162**	**111**	**111**	**221**	**194**	**107**	**180**	**22**	**1,146**
Cluster 3										
Great Lakes	**249**	**1,122**	**822**	**955**	**1,271**	**955**	**563**	**650**	**110**	**6,697**
Share of Jobs										
Cluster 1										
Singleton	**3.4**	**7.6**	**6.9**	**7.3**	**14.1**	**15.4**	**17.3**	**26.0**	**1.9**	**100**
Muswellbrook	**3.5**	**9.2**	**7.7**	**7.2**	**17.4**	**15.1**	**15.8**	**22.4**	**1.8**	**100**
Upper Hunter	**2.9**	**11.4**	**10.7**	**11.2**	**14.1**	**20.6**	**11.5**	**15.7**	**2.0**	**100**
Cluster 2										
Dungog	**3.1**	**17.8**	**12.8**	**12.6**	**18.9**	**15.4**	**6.8**	**11.0**	**1.6**	**100**
Gloucester	**3.3**	**14.1**	**9.7**	**9.7**	**19.3**	**16.9**	**9.3**	**15.7**	**1.9**	**100**
Cluster 3										
Great Lakes	**3.7**	**16.8**	**12.3**	**14.3**	**19.0**	**14.3**	**8.4**	**9.7**	**1.6**	**100**

Source: ABS 2006 Census Working Population Profile (W03 EMPLOYMENT TYPE BY HOURS WORKED (a) BY AGE Count of employed persons aged)

Table 20. Jobs by Type of Job (Full Time/ Part Time 2006)

	Employee not owning business								
	Males			Females			Persons		
	Employed, worked full-time:	Employed, worked part-time:	Total	Employed, worked full-time:	Employed, worked part-time:	Total	Employed, worked full-time:	Employed, worked part-time:	Total
No of Jobs									
Cluster 1									
Singleton	6,495	703	7,198	1,472	1,689	3,161	7,967	2,392	10,359
Muswellbrook	3,768	411	4,179	1,163	1,271	2,434	4,931	1,682	6,613
Upper Hunter	1,311	257	1,568	833	900	1,733	2,144	1,157	3,301
Cluster 2									
Dungog	429	120	549	231	439	670	660	559	1,219
Gloucester	468	94	562	236	292	528	704	386	1,090
Cluster 3									
Great Lakes	2,183	781	2,964	1,254	2,116	3,370	3,437	2,897	6,334
Total	14,654	2,366	17,020	5,189	6,707	11,896	19,843	9,073	28,916
Share of Jobs									
Cluster 1									
Singleton	90.2	9.8	100.0	46.6	53.4	100.0	76.9	23.1	100.0
Muswellbrook	90.2	9.8	100.0	47.8	52.2	100.0	74.6	25.4	100.0
Upper Hunter	83.6	16.4	100.0	48.1	51.9	100.0	65.0	35.0	100.0
Cluster 2									
Dungog	78.1	21.9	100.0	34.5	65.5	100.0	54.1	45.9	100.0
Gloucester	83.3	16.7	100.0	44.7	55.3	100.0	64.6	35.4	100.0
Cluster 3									
Great Lakes	73.7	26.3	100.0	37.2	62.8	100.0	54.3	45.7	100.0

Source: ABS 2006 Census Working Population Profile (Composite W04 EMPLOYMENT TYPE BY HOURS WORKED (a) BY AGE Count of employed persons aged 15 years and over)

2.4 Income in the Region

2.4.1 Wage and Salary Income

Average wage and salary income in a region is influenced by the industry and occupational mix of residents and by the wage rates in industries.

The latest wage and salary earner data from the ABS (2007-08) indicates that Singleton SLA had the highest average wages and salary income in non-metropolitan NSW (outside the Sydney Statistical Division (SD)) at $53,069 in 2007-08.[8] Muswellbrook was also in the top five non-metropolitan areas in NSW at $49,555 in 2007-08 (no. 4 in the top 5).

Table 21. Top 5 SLAs Wage and Salary Income Regions for NSW 2003-04 to 2007-08

		Average Annual Income					Average annual growth
		2003-04	2004-05	2005-06	2006-07	2007-08	
Top 5 SLAs(a)		$	$	$	$	$	%
Balance of NSW	Non-metro						
	Singleton (A)	45 226	46 072	48 918	51 804	53 069	4.1
	Queanbeyan (C)	40 966	44 040	45 455	48 213	50 599	5.4
	Cobar (A)	41 264	42 604	44 202	46 343	50 030	4.9
	Muswellbrook (A)	42 085	43 780	46 174	48 042	49 555	4.2
	Palerang (A)-Pt A	40 711	43 105	45 353	47 337	49 498	5.0
Sydney SD	Metro						
	Mosman (A)	82 001	88 300	93 645	106 397	109 491	7.5
	Woollahra (A)	66 611	72 418	75 520	85 225	85 462	6.4
	Hunters Hill (A)	64 293	72 529	78 225	77 798	77 873	4.9
	North Sydney (A)	62 997	66 534	68 788	72 939	75 055	4.5
	Ku-ring-gai (A)	61 943	65 452	67 516	71 371	73 484	4.4
Sydney SD		42 811	44 799	46 425	48 428	50 136	4.0
Bal NSW		33 360	34 774	36 307	37 717	39 114	4.1
NSW		39 648	41 433	43 032	44 850	46 513	4.1

(a) Top 5 SLAs exclude regions with less than 100 Wage and salary earners
Source: 5673.0.55.003 - Wage and Salary Earner Statistics for Small Areas, Time Series, 2003-04 to 2007-08, http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5673.0.55.003Main+Features32003-04%20to%202007-08?OpenDocument.
<This data was compiled from the Australian Taxation Office's (ATO) Individual Income Tax Return Database>

The table below shows the number of wage and salary earners in each LGA in the Upper Hunter Region and total wage and salary income. In 2007/08 (latest data) there were 41,017 wage and salary earners in the study area and these persons earned $1.782 billion in wages and salaries. Reflecting differences in industry wages and salaries: Singleton had 27% of wage and salary earners and accounted for 33% of total wages and salary income; and Great Lakes which is characterised by lower wage industries and a higher incidence of part-time jobs had 29% of wage and salary earners and accounted for only 22% of total wages and salary income.

8 5673.0.55.003 - Wage and Salary Earner Statistics for Small Areas, Time Series, 2003-04 to 2007-08, http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5673.0.55.003Main+Features32003-04%20to%202007-08?OpenDocument

Table 22. Upper Hunter Region Wage and Salary Income Earners and Income 2003-04 to 2007-08

LGA	Wage & Salary Earners (persons) 2003-04	2004-05	2005-06	2007-08	2007-08	Share 2007-08	Total Wage & Salary Income ($ millions) 2003-04	2004-05	2005-06	2006-07	2007-08	Share 2007/08
Cluster 1												
Singleton (A)	9,404	9,747	10,171	10,427	10,932	26.7	425.3	449.1	497.5	540.2	580.2	32.5
Muswellbrook (A)	6,538	6,577	6,795	6,945	7,236	17.6	275.2	287.9	313.7	333.7	358.6	20.1
Upper Hunter LGA (A)	5,313	5,421	5,589	5,705	5,997	14.6	189.1	199.7	219.0	233.0	258.4	14.5
Cluster 2												
Dungog (A)	2,916	2,943	2,989	3,035	3,156	7.7	97.8	103.6	110.4	117.4	124.2	7.0
Gloucester (A)	1,677	1,727	1,746	1,727	1,772	4.3	51.6	53.1	58.7	60.0	62.3	3.5
Cluster 3												
Great Lakes (A)	10,818	11,009	11,149	11,469	11,924	29.1	312.9	331.2	349.5	371.3	399.0	22.4
Total	**36,666**	**37,424**	**38,439**	**39,308**	**41,017**	**100.0**	**1,351.9**	**1,424.6**	**1,548.9**	**1,655.6**	**1,782.7**	**100.0**

Source: 5673.0.55.003 - Wage and Salary Earner Statistics for Small Areas, Time Series, 2003-04 to 2007-08, http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5673.0.55.003Main+Features32003-04%20to%202007-08?OpenDocument. This data was compiled from the Australian Taxation Office's (ATO) Individual Income Tax Return Database.

The table below provides data on average and median wage and salary income and growth rates. The two mining areas had higher average wages compared with the other LGAs.

Table 23. Median Wage and Salary Income 2003-04 to 2007-08 and Year on Year (YOY) growth rates

LGA	Average Wage & Salary Income ($) 2003-04	2004-05	2005-06	2006-07	2007-08	Median Wage & Salary Income ($) 2003-04	2004-05	2005-06	2006-07	2007-08	Average annual growth rate of average W&S income (%) 2003-04 to 2007-08
Cluster 1											
Singleton (A)	45,226	46,072	48,918	51,804	53,069	36189	37586	39651	41249	42,568	4.1
Muswellbrook (A)	42,085	43,780	46,174	48,042	49,555	34727	36192	38071	38889	40,112	4.2
Upper Hunter LGA (A)	35,594	36,839	39,179	40,839	43,095	30185	31223	33162	34270	35,957	4.9
Cluster 2											
Dungog (A)	33,548	35,205	36,944	38,683	39,367	29031	30262	31633	33243	33,213	4.1
Gloucester (A)	30,767	30,727	33,646	34,759	35,151	26032	26240	28689	30024	30,738	3.4
Cluster 3											
Great Lakes (A)	28,920	30,083	31,346	32,377	33,462	25116	25907	26927	27961	29,061	3.7
	% YOY	**% YOY**	**% YOY**	**% YOY**	**% YOY**	**% YOY**	**% YOY**	**% YOY**	**% YOY**	**% YOY**	
Cluster 1											
Singleton (A)	-	1.9	6.2	5.9	2.4	-	3.9	5.5	4.0	3.2	
Muswellbrook (A)	-	4.0	5.5	4.0	3.1	-	4.2	5.2	2.1	3.1	
Upper Hunter LGA (A)	-	3.5	6.4	4.2	5.5	-	3.4	6.2	3.3	4.9	
Cluster 2											
Dungog (A)	-	4.9	4.9	4.7	1.8	-	4.2	4.5	5.1	-0.1	
Gloucester (A)	-	-0.1	9.5	3.3	1.1	-	0.8	9.3	4.7	2.4	
Cluster 3											
Great Lakes (A)	-	4.0	4.2	3.3	3.4	-	3.2	3.9	3.8	3.9	

Source: 5673.0.55.003 - Wage and Salary Earner Statistics for Small Areas, Time Series, 2003-04 to 2007-08, http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5673.0.55.003Main+Features32003-04%20to%202007-08?OpenDocument. This data was compiled from the Australian Taxation Office's (ATO) Individual Income Tax Return Database.

The table and figure below indicate the distribution of income in the study area. Dungog, Gloucester and Great Lakes LGAs have a higher proportion of wage and salary earners in the under $13,000 income level (each above 20% of wage and salary earners). Singleton and Muswellbrook have higher proportions of people in the higher income brackets due to the influence of mining activity in these LGAs. Singleton and Muswellbrook have a higher proportion of persons in the higher income brackets from $67,600 and above (to $104,000 or more) compared to New South Wales and the national average.

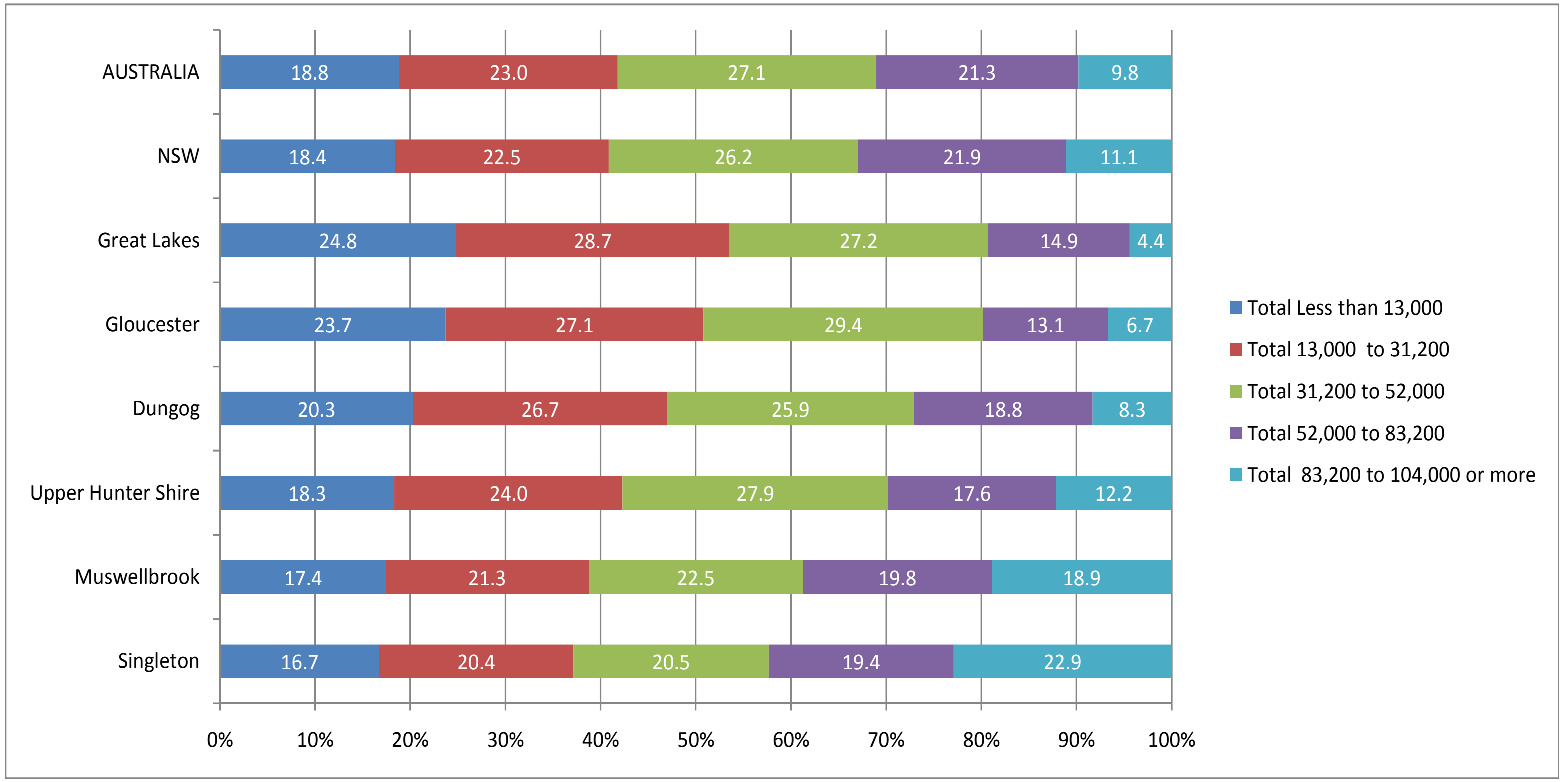
While the average wages and salary income is higher in the mining related LGAs, the distribution of wages is also important within these LGAs, as a large share of residents do not work in mining and mining related activities, and are on much lower wages and salaries. For example 39% of wage earners in Muswellbrook earned less than $31,200 per year. The comparable figures for other LGAs are: Singleton 37%; Great Lakes 53%; Dungog 47%; Gloucester 51%; and Upper Hunter 42%. In addition to this there were 6% of Singleton residents and 7% of Muswellbrook residents on aged pensions with much higher shares in other LGAs.

Table 24. Income Distribution for Upper Hunter Region 2007-08 (Wages and Salaries) Persons

	Singleton		Muswellbrook		Upper Hunter LGA		Dungog		Gloucester		Great Lakes		NSW		AUSTRALIA	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0 to less than 13,000	1,823	16.7	1,262	17.4	1,098	18.3	640	20.3	419	23.7	2,955	24.8	589,659	18.4	1,896,757	18.8
Total Less than 13,000	**1,823**	**16.7**	**1,262**	**17.4**	**1,098**	**18.3**	**640**	**20.3**	**419**	**23.7**	**2,955**	**24.8**	**589,659**	**18.4**	**1,896,757**	**18.8**
13,000 to less than 20,800	984	9.0	612	8.5	593	9.9	381	12.1	208	11.8	1,403	11.8	304,770	9.5	972,181	9.7
20,800 to less than 31,200	1,250	11.4	926	12.8	846	14.1	461	14.6	270	15.3	2,013	16.9	416,706	13.0	1,343,942	13.3
Total 13,000 to 31,200	**2,234**	**20.4**	**1,538**	**21.3**	**1,439**	**24.0**	**842**	**26.7**	**478**	**27.1**	**3,416**	**28.7**	**721,476**	**22.5**	**2,316,123**	**23.0**
31,200 to less than 41,600	1,324	12.1	954	13.2	1,009	16.8	496	15.7	324	18.3	1,980	16.6	452,222	14.1	1,471,194	14.6
41,600 to less than 52,000	919	8.4	673	9.3	667	11.1	322	10.2	197	11.1	1,265	10.6	388,559	12.1	1,262,558	12.5
Total 31,200 to 52,000	**2,243**	**20.5**	**1,627**	**22.5**	**1,676**	**27.9**	**818**	**25.9**	**521**	**29.4**	**3,245**	**27.2**	**840,781**	**26.2**	**2,733,752**	**27.1**
52,000 to less than 67,600	1,164	10.6	789	10.9	614	10.2	347	11.0	142	8.0	1,110	9.3	424,736	13.2	1,336,768	13.3
67,600 to less than 83,200	958	8.8	647	8.9	443	7.4	247	7.8	91	5.1	664	5.6	278,919	8.7	808,175	8.0
Total 52,000 to 83,200	**2,122**	**19.4**	**1,436**	**19.8**	**1,057**	**17.6**	**594**	**18.8**	**233**	**13.1**	**1,774**	**14.9**	**703,655**	**21.9**	**2,144,943**	**21.3**
83,200 to less than 104,000	1,010	9.2	573	7.9	339	5.7	147	4.7	75	4.2	332	2.8	170,249	5.3	478,881	4.8
104,000 or more	1,501	13.7	799	11.0	388	6.5	115	3.6	44	2.5	192	1.6	187,453	5.8	499,151	5.0
Total 83,200 to 104,000 or more	**2,511**	**22.9**	**1,372**	**18.9**	**727**	**12.2**	**262**	**8.3**	**119**	**6.7**	**524**	**4.4**	**357,702**	**11.1**	**978,032**	**9.8**
Total	**10,933**	**100.0**	**7,235**	**100.0**	**5,997**	**100.0**	**3,156**	**100.0**	**1,770**	**100.0**	**11,914**	**100.0**	**3,213,273**	**100.0**	**10,069,607**	**100.0**

Source: 5673.0.55.003 - Wage and Salary Earner Statistics for Small Areas, Time Series, 2003-04 to 2007-08, http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5673.0.55.003Main+Features32003-04%20to%202007-08?OpenDocument. This data was compiled from the Australian Taxation Office's (ATO) Individual Income Tax Return Database.

Figure 2. Income Distribution for Upper Hunter Region 2007-08



Source: 5673.0.55.003 - Wage and Salary Earner Statistics for Small Areas, Time Series, 2003-04 to 2007-08, http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5673.0.55.003Main+Features32003-04%20to%202007-08?OpenDocument. This data was compiled from the Australian Taxation Office's (ATO) Individual Income Tax Return Database.

The table below provides income distribution for the study area by sex. In Singleton (37%) and Muswellbrook (32%) around one third of males are earning in excess of $83,200 per year. This compares with only 7% of males in Great Lakes. The higher income jobs in these areas mainly employ males, while females tend to be in lower paid service jobs and often work part-time.

This overall income pattern reflects the higher wages in the male intensive sectors of mining and mining support in these LGAs. In Great Lakes, Gloucester and Dungog, a significant proportion of both males and females earn less than $20,800.

Table 25. Income Distribution for Upper Hunter Region by Sex 2007-08

	Singleton (A)				Muswellbrook (A)				Upper Hunter LGA (A)			
Income	**M**	**% M**	**F**	**% F**	**M**	**% M**	**F**	**% F**	**M**	**% M**	**F**	**% F**
0 to less than 13,000	586	9.3	1,237	26.8	401	9.8	861	27.3	392	12.0	706	26.0
Total Less than 13,000	**586**	**9.3**	**1,237**	**26.8**	**401**	**9.8**	**861**	**27.3**	**392**	**12.0**	**706**	**26.0**
13,000 to less than 20,800	302	4.8	682	14.8	176	4.3	436	13.8	196	6.0	397	14.6
20,800 to less than 31,200	412	6.5	838	18.2	320	7.8	606	19.2	321	9.8	525	19.3
Total 13,000 to 31,200	**714**	**11.3**	**1,520**	**33.0**	**496**	**12.1**	**1,042**	**33.0**	**517**	**15.8**	**922**	**33.9**
31,200 to less than 41,600	533	8.4	791	17.1	406	9.9	548	17.4	530	16.2	479	17.6
41,600 to less than 52,000	522	8.3	397	8.6	377	9.2	296	9.4	417	12.7	250	9.2
Total 31,200 to 52,000	**1,055**	**16.7**	**1,188**	**25.7**	**783**	**19.1**	**844**	**26.8**	**947**	**28.9**	**729**	**26.8**
52,000 to less than 67,600	833	13.2	331	7.2	571	14.0	218	6.9	419	12.8	195	7.2
67,600 to less than 83,200	755	12.0	203	4.4	539	13.2	108	3.4	336	10.3	107	3.9
Total 52,000 to 83,200	**1,588**	**25.2**	**534**	**11.6**	**1,110**	**27.2**	**326**	**10.3**	**755**	**23.1**	**302**	**11.1**
83,200 to less than 104,000	931	14.7	79	1.7	526	12.9	47	1.5	293	8.9	46	1.7
104,000 or more	1,442	22.8	59	1.3	768	18.8	31	1.0	374	11.4	14	0.5
Total 83,200 to 104,000 or more	**2,373**	**37.5**	**138**	**3.0**	**1,294**	**31.7**	**78**	**2.5**	**667**	**20.3**	**60**	**2.2**
Total	**6,316**	**100**	**4,617**	**100.0**	**4,084**	**100**	**3,151**	**100.0**	**3,278**	**100**	**2,719**	**100.0**

	Dungog (A)				Gloucester (A)				Great Lakes (A)			
Income	**M**	**% M**	**F**	**% F**	**M**	**% M**	**F**	**% F**	**M**	**% M**	**F**	**% F**
0 to less than 13,000	249	14.8	391	26.5	171	18.0	248	30.3	1,234	20.4	1,721	29.4
Total Less than 13,000	**249**	**14.8**	**391**	**26.5**	**171**	**18.0**	**248**	**30.3**	**1,234**	**20.4**	**1,721**	**29.4**
13,000 to less than 20,800	129	7.7	252	17.1	82	8.6	126	15.4	542	9.0	861	14.7
20,800 to less than 31,200	188	11.2	273	18.5	125	13.1	145	17.7	831	13.7	1,182	20.2
Total 13,000 to 31,200	**317**	**18.9**	**525**	**35.6**	**207**	**21.7**	**271**	**33.1**	**1,373**	**22.7**	**2,043**	**34.9**
31,200 to less than 41,600	267	15.9	229	15.5	165	17.3	159	19.4	993	16.4	987	16.8
41,600 to less than 52,000	205	12.2	117	7.9	132	13.9	65	7.9	778	12.9	487	8.3
Total 31,200 to 52,000	**472**	**28.1**	**346**	**23.4**	**297**	**31.2**	**224**	**27.3**	**1,771**	**29.3**	**1,474**	**25.1**
52,000 to less than 67,600	225	13.4	122	8.3	106	11.1	36	4.4	770	12.7	340	5.8
67,600 to less than 83,200	180	10.7	67	4.5	59	6.2	32	3.9	451	7.5	213	3.6
Total 52,000 to 83,200	**405**	**24.1**	**189**	**12.8**	**165**	**17.3**	**68**	**8.3**	**1,221**	**20.2**	**553**	**9.4**
83,200 to less than 104,000	131	7.8	16	1.1	68	7.1	7	0.9	281	4.6	51	0.9
104,000 or more	105	6.3	10	0.7	44	4.6	0	0.0	173	2.9	19	0.3
Total 83,200 to 104,000 or more	**236**	**14.1**	**26**	**1.8**	**112**	**11.7**	**7**	**0.9**	**454**	**7.5**	**70**	**1.2**
Total	**1,679**	**100**	**1,477**	**100.0**	**952**	**100**	**818**	**100.0**	**6,053**	**100**	**5,861**	**100.0**

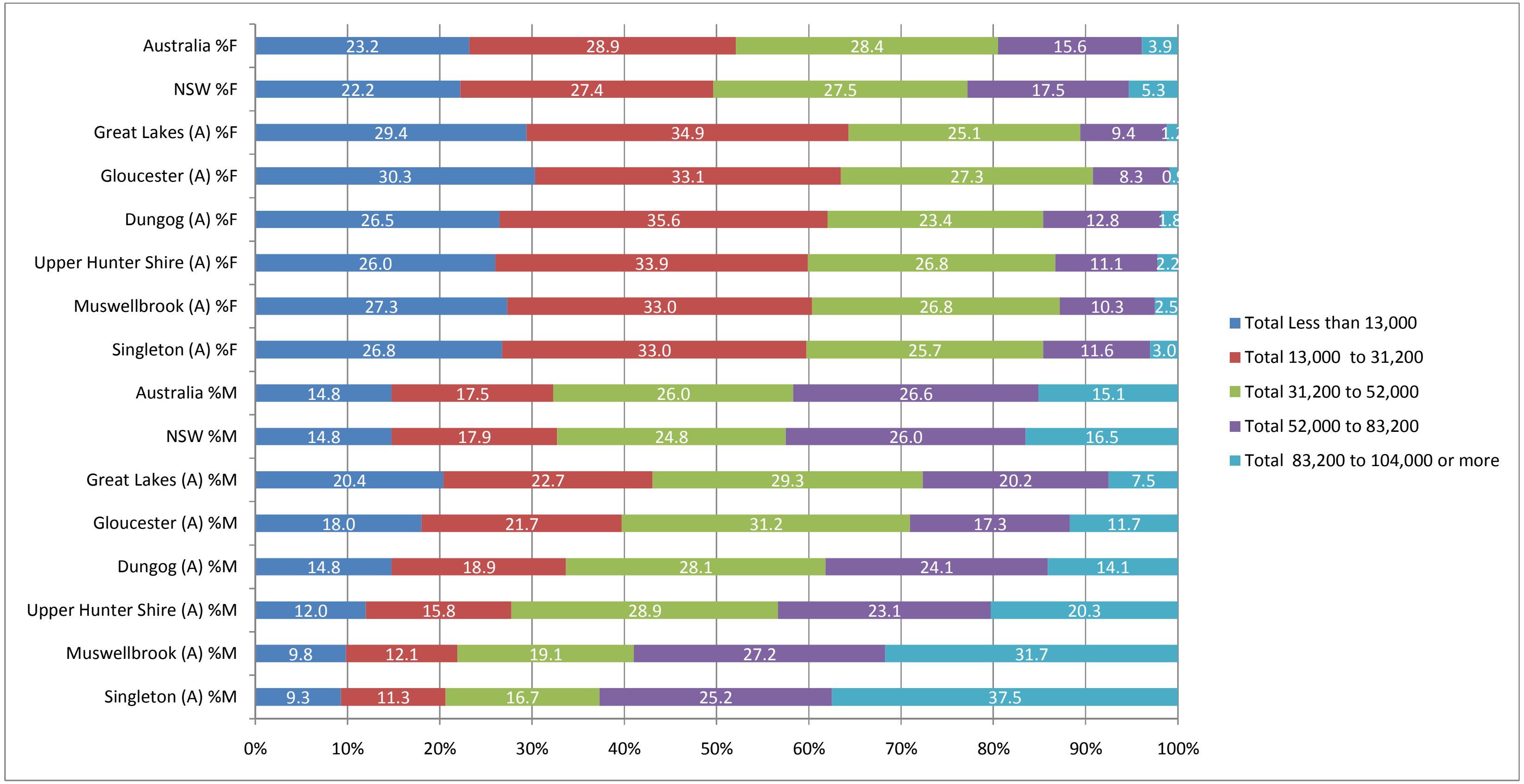
Source: 5673.0.55.003 - Wage and Salary Earner Statistics for Small Areas, Time Series, 2003-04 to 2007-08, http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5673.0.55.003Main+Features32003-04%20to%202007-08?OpenDocument. This data was compiled from the Australian Taxation Office's (ATO) Individual Income Tax Return Database.

Table 26. Income Distribution for NSW and Australia by Sex 2007-08

	NSW				AUSTRALIA			
Income	M	% M	F	% F	M	% M	F	% F
0 to less than 13,000	246,818	14.8	342,841	22.2	770,571	14.8	1,126,186	23.2
Total Less than 13,000	**246,818**	**14.8**	**342,841**	**22.2**	**770,571**	**14.8**	**1,126,186**	**23.2**
13,000 to less than 20,800	126,077	7.6	178,693	11.6	381,818	7.3	590,363	12.2
20,800 to less than 31,200	172,198	10.3	244,508	15.8	531,151	10.2	812,791	16.7
Total 13,000 to 31,200	**298,275**	**17.9**	**423,201**	**27.4**	**912,969**	**17.5**	**1,403,154**	**28.9**
31,200 to less than 41,600	207,749	12.4	244,473	15.8	671,999	12.9	799,195	16.5
41,600 to less than 52,000	207,636	12.4	180,923	11.7	684,788	13.1	577,770	11.9
Total 31,200 to 52,000	**415,385**	**24.8**	**425,396**	**27.5**	**1,356,787**	**26**	**1,376,965**	**28.4**
52,000 to less than 67,600	254,114	15.2	170,622	11.1	826,784	15.9	509,984	10.5
67,600 to less than 83,200	180,700	10.8	98,219	6.4	558,580	10.7	249,595	5.1
Total 52,000 to 83,200	**434,814**	**26**	**268,841**	**17.5**	**1,385,364**	**26.6**	**759,579**	**15.6**
83,200 to less than 104,000	124,766	7.5	45,483	2.9	372,541	7.1	106,340	2.2
104,000 or more	149,690	9.0	37,763	2.4	416,673	8.0	82,478	1.7
Total 83,200 to 104,000 or more	**274,456**	**16.5**	**83,246**	**5.3**	**789,214**	**15.1**	**188,818**	**3.9**
Total	**1,669,748**	**100**	**1,543,525**	**100.0**	**5,214,905**	**100**	**4,854,702**	**100.0**

Source: 5673.0.55.003 - Wage and Salary Earner Statistics for Small Areas, Time Series, 2003-04 to 2007-08, http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5673.0.55.003Main+Features32003-04%20to%202007-08?OpenDocument. This data was compiled from the Australian Taxation Office's (ATO) Individual Income Tax Return Database.

Figure 3. Income Distribution for Upper Hunter Region by Sex 2007-08



Source: 5673.0.55.003 - Wage and Salary Earner Statistics for Small Areas, Time Series, 2003-04 to 2007-08, http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5673.0.55.003Main+Features32003-04%20to%202007-08?OpenDocument. This data was compiled from the Australian Taxation Office's (ATO) Individual Income Tax Return Database.

2.4.2 Weekly Income

The following table shows the differences in income of persons employed in each of the Local Government Areas in 2006.

Table 27. Jobs in the LGAs by Gross Weekly Income of Employees 2006

Employees/Jobs	Singleton			Muswellbrook			Upper Hunter			Dungog			Gloucester			Great Lakes		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Number																		
Negative/Nil income	15	14	29	13	15	28	9	7	16	3	3	6	0	6	6	12	13	25
$1-$149	135	330	465	101	227	328	55	129	184	24	66	90	21	45	66	159	287	446
$150-$249	105	325	430	51	223	274	50	166	216	34	77	111	16	46	62	143	363	506
$250-$399	237	549	786	152	430	582	113	315	428	58	134	192	49	110	159	298	703	1,001
$400-$599	649	810	1,459	394	611	1,005	372	533	905	131	173	304	106	131	237	768	1,040	1,808
$600-$799	700	495	1,195	483	413	896	442	307	749	117	82	199	147	98	245	614	565	1,179
$800-$999	691	273	964	501	216	717	231	113	344	54	47	101	81	50	131	393	225	618
$1,000-$1,299	1,077	225	1,302	677	217	894	173	104	277	67	44	111	62	29	91	336	166	502
$1,300-$1,599	1,100	164	1,264	563	105	668	103	92	195	59	42	101	47	27	74	200	130	330
$1,600-$1,999	1,547	67	1,614	649	38	687	42	25	67	26	15	41	39	5	44	104	26	130
$2,000 or more	1,247	49	1,296	756	44	800	38	11	49	8	3	11	18	4	22	71	11	82
Individual income not stated	105	39	144	66	28	94	24	19	43	5	9	14	7	4	11	34	36	70
Total	**7,608**	**3,340**	**10,948**	**4,406**	**2,567**	**6,973**	**1,652**	**1,821**	**3,473**	**586**	**695**	**1,281**	**593**	**555**	**1,148**	**3,132**	**3,565**	**6,697**
Share																		
Negative/Nil income	0.2	0.4	0.3	0.3	0.6	0.4	0.5	0.4	0.5	0.5	0.4	0.5	0.0	1.1	0.5	0.5	0.4	0.4
$1-$149	1.8	9.9	4.2	2.3	8.8	4.7	3.3	7.1	5.3	4.1	9.5	7.0	3.5	8.1	5.7	5.7	5.1	8.1
$150-$249	1.4	9.7	3.9	1.2	8.7	3.9	3.0	9.1	6.2	5.8	11.1	8.7	2.7	8.3	5.4	5.4	4.6	10.2
$250-$399	3.1	16.4	7.2	3.4	16.8	8.3	6.8	17.3	12.3	9.9	19.3	15.0	8.3	19.8	13.9	13.9	9.5	19.7
$400-$599	8.5	24.3	13.3	8.9	23.8	14.4	22.5	29.3	26.1	22.4	24.9	23.7	17.9	23.6	20.6	20.6	24.5	29.2
$600-$799	9.2	14.8	10.9	11.0	16.1	12.8	26.8	16.9	21.6	20.0	11.8	15.5	24.8	17.7	21.3	21.3	19.6	15.8
$800-$999	9.1	8.2	8.8	11.4	8.4	10.3	14.0	6.2	9.9	9.2	6.8	7.9	13.7	9.0	11.4	11.4	12.5	6.3
$1,000-$1,299	14.2	6.7	11.9	15.4	8.5	12.8	10.5	5.7	8.0	11.4	6.3	8.7	10.5	5.2	7.9	7.9	10.7	4.7
$1,300-$1,599	14.5	4.9	11.5	12.8	4.1	9.6	6.2	5.1	5.6	10.1	6.0	7.9	7.9	4.9	6.4	6.4	6.4	3.6
$1,600-$1,999	20.3	2.0	14.7	14.7	1.5	9.9	2.5	1.4	1.9	4.4	2.2	3.2	6.6	0.9	3.8	3.8	3.3	0.7
$2,000 or more	16.4	1.5	11.8	17.2	1.7	11.5	2.3	0.6	1.4	1.4	0.4	0.9	3.0	0.7	1.9	1.9	2.3	0.3
Individual income not stated	1.4	1.2	1.3	1.5	1.1	1.3	1.5	1.0	1.2	0.9	1.3	1.1	1.2	0.7	1.0	1.0	1.1	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: ABS 2006 Census Working Population Profile (W06 EMPLOYMENT TYPE BY GROSS INDIVIDUAL INCOME BY SEX (a) Count of employed persons aged 15 years and over)

2.5 Housing Market

2.5.1 Housing Prices in the Region

This section examines housing prices in each of the local government areas. The analysis is based on the use of property data from RP Data and from the New South Wales Department of Housing.

Singleton LGA, Muswellbrook LGA, Upper Hunter LGA and Gloucester LGA experienced significant increases in median house prices during 2010. Dungog LGA and Great Lakes LGA experienced more moderate growth.

Consultation with real estate agents in Muswellbrook (during December 2010) indicated that a 3 bedroom dwelling, greater than 10 years old, sells within the range of $280,000 to $320,000 (depending on the features of the property) and that most demand for housing is close to the $300,000 price point. One real estate business stated that block sizes for Muswellbrook range from 650m2 to 950m2 with an average of 750m2. Another agent observed block sizes within the 750m2 to 850m2 range.

Table 28. Median House Sale Prices Upper Hunter Region

LGA	Price Ranges of Sales (Oct 2009-Sept 2010)	Median Sale Price Sept 2010	Median Sale Price Oct 2009	Average Growth Median Sale Prices 2010	Average Growth Median Sale Prices -5 years to 2006-2010
Cluster 1					
Singleton	320,000-380,000	360,000	345,000	10.7	5.3
Muswellbrook	260,000 - 320,000	264,000	277,500	10.2	5.1
Upper Hunter	260,000-340,000	318,000	277,500	13.2	5.9
Cluster 2					
Dungog	240,000-280,000	279,000	280,000	3.1	2.8
Gloucester	220,000-260,000	248,500	243,750	24.7	5.1
Cluster 3					
Great Lakes	320,000-380,000	367,500	406,000	6.1	-1.0

Source: myrpdata Profiles 2010 for LGAs RP Data December 2010

Table 29. Changes in Median House Sale Prices in Upper Hunter Region

Period	Singleton LGA	Muswellbrook LGA	Upper Hunter LGA	Dungog LGA	Gloucester LGA	Great Lakes LGA
2010	10.7	10.2	13.2	3.1	24.7	6.1
2009	1.8	-3.0	-3.6	10.4	-0.3	0.3
2008	-1.3	6.8	13.4	2.8	-17.9	-6.0
2007	3.7	9.1	-6.7	6.3	21.3	0.0
2006	11.7	2.2	13.0	-8.5	-2.4	-5.1

Source: myrpdata Profiles 2010 for LGAs, RP Data December 2010

Additional data from the NSW Department of Housing for the June quarter 2010 indicates that Singleton and Upper Hunter LGAs had the largest growth in median sale prices at 22% and 19% respectively for the year ending June 2010.

Table 30. Median House Sale Prices Upper Hunter Region June Quarter 2010

LGA		Change in Median		
	Median Price	Quarterly %	Annual %	Media Price June 2010 RP Data
Cluster 1				
Singleton LGA	384,000	0.5	21.9	375,000
Muswellbrook LGA	286,000	-3.1	12.2	272,500
Upper Hunter LGA	290,000	-7.9	19.1	310,500
Cluster 2				
Dungog LGA	325,000	n	13.4	284,000
Gloucester LGA	280,000	n	n	240,000
Cluster 3				
Great Lakes LGA	338,000	-3.3	13.5	365,000

Source: NSW Department of Housing, Housing Analysis and Research, Report No 93,
Median Sale Prices - Rural Local Government Areas - All Dwellings - June 2010

2.5.2 Rental Housing in the Region

This section analyses the rental market in the Upper Hunter Region. It utilises data from the NSW Department of Housing (Housing Analysis and Research Division). The data shows median rents for different types of dwellings.

The data indicates that Singleton and Muswellbrook generally have the higher rents in the Upper Hunter Region, and shows a strong increase in median rents for three bedroom dwellings in Singleton and Muswellbrook for the year to September 2010. Singleton (10%) and Muswellbrook (13%) had increases in median rents for their three bedroom dwellings. Muswellbrook also had a 15% increase in median rent for four + bedroom dwellings. Great Lakes LGA showed growth in median rents for three bedroom dwellings (8%) and four + bedroom dwellings (7%) over the 12 month period.

Table 31. Median Weekly Rents Upper Hunter Region and Selected LGAs - September Quarter 2010

	One Bedroom			Two Bedroom			Three Bedroom			Four + Bedrooms		
		Change			Change			Change			Change	
SSD and LGA	Median $	Qtly %	Ann %	Median $	Qtly %	Ann %	Median $	Qtly %	Ann %	Median $	Qtly %	Ann %
Study Area												
Singleton	195	n	n	253	3.1	5.2	330	0.0	10.0	418	4.4	n
Muswellbrook	137	n	n	200	n	n	295	5.4	13.5	390	0.0	14.7
Upper Hunter LGA	120	n	n	200	n	n	250	4.2	0.0	350	n	n
Dungog	-	n	n	-	n	n	260	n	n	-	n	n
Gloucester	-	n	n	159	n	n	225	n	n	-	n	n
Great Lakes	160	n	n	210	-4.5	5.0	280	1.8	7.7	330	3.1	7.3
Hunter SD Balance												
Hunter SD Balance	160	4.9	8.5	215	-2.3	7.5	290	3.6	8.4	370	0.0	12.1
Other areas												
Cessnock	150	0.0	7.1	230	-6.1	7.0	280	2.8	12.0	365	1.4	10.6
Maitland	170	6.3	9.7	250	0.0	8.7	320	6.7	10.3	395	0.0	9.7
Newcastle	193	1.6	7.2	301	0.3	5.6	360	0.0	2.9	420	0.0	9.7
Port Stephens	190	13.4	11.8	230	-4.2	4.5	300	0.0	7.1	370	-2.6	8.8

Notes: (s) 30 or less bonds lodged; (-) 10 or less bonds lodged; (n) not available due to small number.
Source: NSW Government Housing Analysis and Research. Rent and Sales Report, Issue 93- Rents, Rural Local Government Areas, sorted by Statistical Sub-Division; and Rent and Sales Report, Issue 93- Rents, Metropolitan Postcodes, sorted by Statistical Sub-Division, September Quarter 2010.

Consultations with real estate agents in Muswellbrook (during December 2010) indicate the rental market has been performing strongly in the LGA over the past 12 months. It was noted that weekly rent for a three bedroom house with a lock-up garage had increased from $260-280 per week to approximately $350 per week during 2010. The influx of mining workers and their families have impacted on other middle and lower income families in the region in terms of rental availability and affordability.

Real estate agents in Muswellbrook also indicated there was a mid-year surge in 2010 in demand for furnished rental properties at the price point of $500-$600 per week. One agent noted that this was a new development for the region and it was suggested that mining contractors (Mangoola) created the demand.

An online search for 3 bedroom rental properties in Singleton, Muswellbrook, Scone (Upper Hunter LGA), Dungog, Gloucester and Forster-Tuncurry (Great Lakes) was conducted in January 2011 on realestate.com.au. For comparison, the first ten 3-bedroom rental properties in the main towns of each LGA were included in the snapshot and the results are presented in the table below. The snapshot indicates that there were no 3-bedroom dwellings for rent in Scone at January 9 2010 and a limited number of 3 bedroom dwellings in Dungog and Gloucester at the time. Singleton had the highest median rent for a 3-bedroom dwelling at $368 per week followed by Muswellbrook at $320 per week and Forster-Tuncurry (Great Lakes) at $318 per week. This correlates with the NSW Government rental data presented above, where Singleton and Muswellbrook have the highest median weekly rents.

Table 32. Rents for 3-bedroom Houses, January 2011

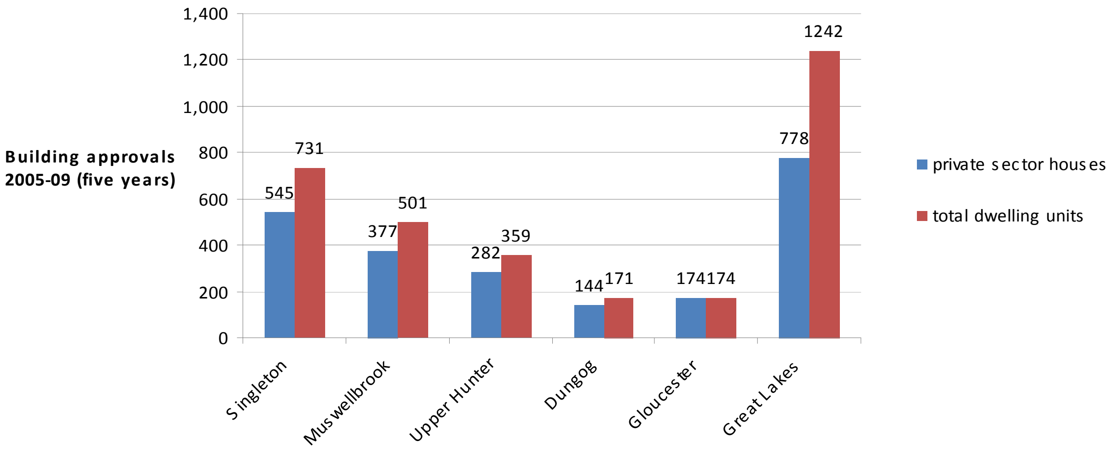
	Singleton	Muswellbrook	Scone	Dungog	Gloucester	Forster-Tuncurry
	$ / week	$ / week	$ / week	$ / week	$ / week	$ / week
Average	368	318	na	273	223	320
Median	368	320	na	265	225	318

Source: realestate.com.au, search Jan 9 2010, 3-bedroom not including surrounding suburbs, excluding fully furnished and large block rentals.

2.5.3 Building Trends

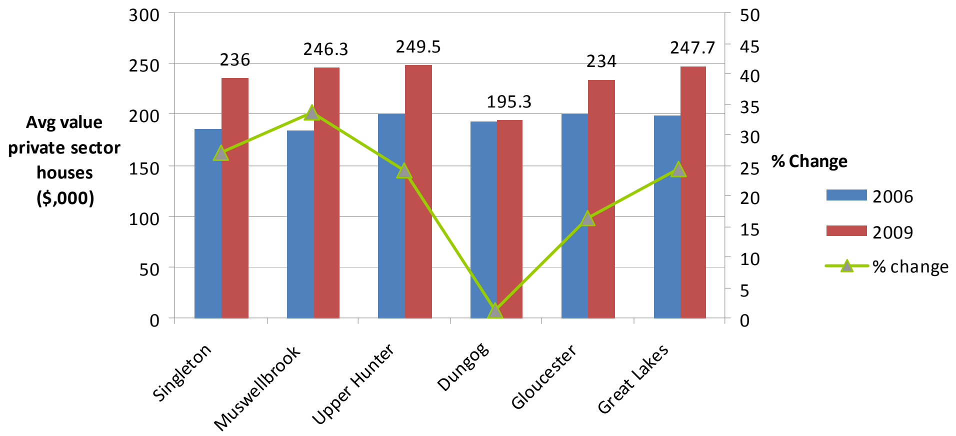
The following chart shows the number of dwellings approved for construction in each LGA over the 5 years from 2005-2009. The data shows that the approvals broadly aligned with the population size of the LGAs and its share of the regional population, with the highest number of approvals being in Great Lakes followed by Singleton and Muswellbrook.

Figure 4. Housing Market Approvals 2005-2009



Source: ABS Regional Data Profiles 2010

Figure 5. Value of Houses and % change 2006-2009



Source: ABS Regional Data Profiles 2010

Table 33. Building Approvals 2005-2009 Upper Hunter Region

Building Approvals- - 2005-09 (five years)	Singleton	Muswellbrook	Upper Hunter	Dungog	Gloucester	Great Lakes	Total U H Region
Population Share 2006:	22.9	15.9	13.6	8.4	5.0	34.2	100.0
Number of Approvals							
Building Approvals- 2005-09 (five years)							
Private sector houses no	545	377	282	144	174	778	2 300
Total dwelling units np	731	501	359	171	174	1242	3 178
Share %	23.0	15.8	11.3	5.4	5.5	39.1	100.0
Value of Buildings							
Value of total residential building $m	161.1	102.2	89.0	42.8	44.0	305.8	744.9
Share	21.6	13.7	11.9	5.7	5.9	41.1	100.0
Value of total non-residential building $m	106.2	53.7	42.6	13.6	7.1	137.0	360.2
Share	29.5	14.9	11.8	3.8	2.0	38.0	100.0
Total Value of Buildings $m	267.3	155.9	131.6	56.4	51.1	442.8	1105.1
Share %	24.2	14.1	11.9	5.1	4.6	40.1	100.0

Source: ABS Regional Data Profiles 2010

2.6 Unemployment

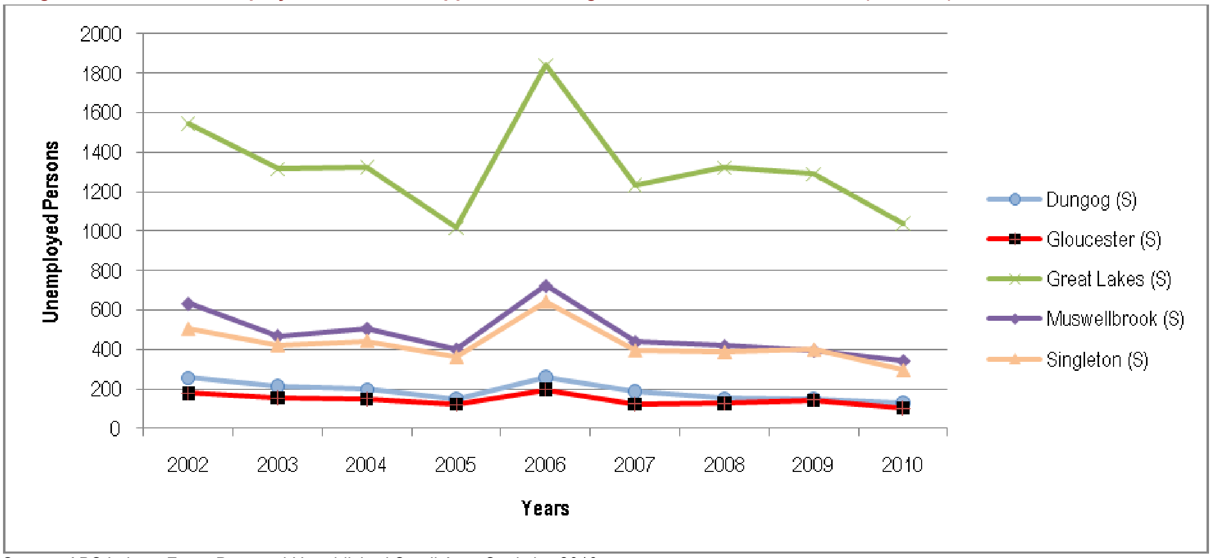
Unemployment rates differ between the LGAs, however the last decade has seen rates fall substantially. The table below shows the June unemployment rate for each LGA over the period 2002-2010. The data shows that unemployment rates have declined substantially over this period in all areas (with a major increase experienced in 2006). For example, over 10 years the unemployment rate in Great Lakes has declined from around 16% in 2002 to 7% in 2010.

Table 34. Unemployment Rates - Upper Hunter Region June 2002 to June 2010 (%)

LGA	2002	2003	2004	2005	2006	2007	2008	2009	2010
Dungog	7.5	6.4	5.2	3.5	6.6	4.1	3.6	3.4	2.7
Gloucester	8.5	8.0	7.0	5.0	8.8	4.8	5.3	6.1	4.0
Great Lakes	15.8	12.8	11.2	7.7	15.0	8.7	10.1	9.3	6.9
Muswellbrook	8.9	7.1	7.0	4.9	9.5	5.0	5.2	4.7	3.8
Singleton	5.3	4.4	4.1	3.0	5.7	3.0	3.2	3.1	2.1
*Upper Hunter Shire								2.8	2.3

* Unemployment data unavailable for Upper Hunter Shire prior to 2009
Source: ABS Labour Force Data and Unpublished Small Area Statistics 2010

Figure 6. Unemployed Persons - Upper Hunter Region June 2002 to June 2010 (Persons)



Source: ABS Labour Force Data and Unpublished Small Area Statistics 2010

3 Agribusiness

3.1 Overview

The major agribusiness sectors in the Upper Hunter Region are: beef, equine, dairy, poultry and wine. Taken together, these sectors account for over $400 million in annual production and employ over 5,000 persons or 13% of the regional workforce.[9]

Table 35. Overview of Agribusiness – Upper Hunter Region

Upper Hunter Region Industry	Estimates Output Value	Estimates Employment	
Agribusiness			
Equine Industry	$100 million (industry revenue)	886 < direct>	2009 Estimates
Agribusiness(other) mainly beef, dairy and some crops(not including fish)	$248 million (farm gate value of production)	3753 <direct and support.	2009 Estimates
Wine (and grapes)	$45-55 million (revenue)	400 <direct>	2009 Estimates

Source: Buchan Consulting Estimates based on analysis of ABS data and industry data

The broader Hunter Region has traditionally been an important agricultural region, with production in wheat, sorghum, barley and other grain cereals, vegetables, grapes, olives, sheep, cattle, pigs, horses, poultry, eggs and milk. Output from the total Hunter Region has been estimated at around $1 billion per year.[10] Along with the traditional areas of agribusiness, some niche businesses have emerged and these include: goat milk, goat and rabbit meat, native and fresh flowers, herbs, chillies, exotic stud cattle, essential oils, viticulture, and Asian vegetables.[11] Many of these operators are developing export markets for their products.

Table 36. Value of Agriculture Production 2006

	Cluster 1			Cluster 2		Cluster 3	
Agriculture	Singleton	Muswellbrook	Upper Hunter	Dungog	Gloucester	Great Lakes	Total UH
Total gross value of agricultural production 2006 $M <Excludes equine and wine and fish>	37.1	34.0	71.6	41.7	23.8	39.9	248.1
Area of agric. Land 2006, ha'000	156	122	647	123	152	73	1 273

The following table shows employment in each sector in the LGAs.

- Beef - -the beef industry is centred on Scone, Muswellbrook, Merriwa, Singleton, Dungog and Gloucester.
- Equine - is concentrated in Upper Hunter LGA (around Scone) and in Muswellbrook and employs almost 900 ongoing employees. When seasonal employment is taken into account along with support activities, the equine industry is one of the main sectors in the area. In particular, the sector has continued to expand, with substantial investment occurring in properties in the region. This investment has been estimated at around $1 billion over the last 10 years.
- Dairy - the sector has undergone major restructuring over the last decade, with reductions in the number of dairy farmers, but holdings and herds becoming much larger due to consolidation among those continuing to operate in the sector. Dungog and Gloucester both experienced major reductions in the number of farm households, however the dairy industry is still centred on these areas.
- The lamb industry is mainly around Merriwa and Murrurundi.
- Forestry and timber is concentrated in Great Lakes LGA, with Dungog and Gloucester being affected by the closure of milling operations in recent periods.
- Wine - the wine sector is focused in the areas around Singleton and Muswellbrook, with some smaller operations located in the other LGAs.

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9 This includes fisheries and aquaculture, agribusiness support and food processing.
10 In 2005-06, livestock numbers for the Hunter Region included 262,399 sheep, 4,203,615 chickens for meat, 1,002,882 laying chickens, 266,246 turkeys, 447,371meat cattle, 49,060 dairy cattle, 7,654 goats and 3,475 pigs.
11 Brands include, Hunter Belle Cheese at Muswellbrook,- a producer of high-quality gourmet cheeses ; and the Gloucester Gourmet Foods Co-operative, markets high-quality beef grown in the Dungog/Gloucester area under the Barrington Beef label

- Other agribusiness - there is some production grains (mainly Upper Hunter LGA), and some flower production across the LGAs. Vegetable production is concentrated around Singleton, however there have been initiatives in Upper Hunter LGA, Singleton and Gloucester to develop this production.
- Fisheries are located at Great Lakes (both offshore commercial fishing and aquaculture).
- The poultry sector is located in Great Lakes and Dungog, with egg, chicken and turkey production at several facilities within Great Lakes and some meat poultry production in Dungog.

Table 37. Residents Employed in Agribusiness 2006 (Persons)

Sector	Singleton		Muswellbrook		Upper Hunter LGA		Dungog		Gloucester		Great Lakes		Total – Upper Hunter Region	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Agribusiness														
Beef	190	23.1	166	17.7	456	26.4	211	35.2	246	55.2	160	19.6	1265	25.1
Sheep	7	0.8	11	1.2	201	11.6	4	0.7	6	1.3	0	0.0	223	4.4
Dairy	112	13.6	81	8.6	43	2.5	121	20.2	69	15.5	37	4.5	416	8.3
Other Livestock	5	0.6	6	0.6	3	0.2	4	0.7	0	0.0	6	0.7	24	0.5
Equine	58	7.0	274	29.2	490	28.3	32	5.3	8	1.8	24	2.9	886	17.6
Poultry	5	0.6	23	2.4	9	0.5	52	8.7	3	0.7	67	8.2	156	3.1
Wine	160	19.4	171	18.2	44	2.5	15	2.5	3	0.7	10	1.2	400	7.9
Fruit & Vegetables	58	7.0	6	0.6	12	0.7	13	2.2	3	0.7	18	2.2	107	2.1
Grains	20	2.4	22	2.3	71	4.1	4	0.7	0	0.0	12	1.5	129	2.6
Flowers	14	1.7	10	1.1	3	0.2	10	1.7	6	1.3	17	2.1	60	1.2
Forestry & Timber	9	1.1	3	0.3	3	0.2	39	6.5	50	11.2	124	15.2	184	3.7
Fishing & Aquaculture	0	0.0	0	0.0	3	0.2	0	0.0	4	0.9	216	26.5	219	4.3
Other Agriculture	17	2.1	31	3.3	39	2.3	19	3.2	3	0.7	21	2.6	127	2.5
Agriculture Support	74	9.0	90	9.6	93	5.4	36	6.0	23	5.2	21	2.6	317	6.3
Food Processing	95	11.5	45	4.8	259	15.0	39	6.5	22	4.9	82	10.1	526	10.4
Total Agribusiness	**824**	**100.0**	**939**	**100.0**	**1729**	**100.0**	**599**	**100.0**	**446**	**100.0**	**815**	**100.0**	**5039**	**100.0**

Source: ABS Census 2006 Resident Population Data

Singleton

The LGA provides an example of the continued importance of agribusiness activity, even with the expansion in mining activity. Operations in the area cover agriculture, beef, dairy, vegetables, fruit and equine industries. There is major supporting infrastructure for the beef sector, including livestock markets at Singleton, Gloucester and Scone. There are meat processing facilities at Scone (Primo) in the Upper Hunter LGA and Singleton (Whittingham abattoir - beef export).

In the case of Singleton, despite the growth in mining and structural changes in agriculture, dairy, beef cattle remain important across the LGA. There has also been the development of some market gardens. Market gardening is undertaken on river flats with predominately vegetable crops grown. Grains and lucerne are also produced in some areas.

While the de-regulation of the dairy industry has seen the number of farms reduce significantly, those still operating are generally of larger capacity and the area still produces significant quantities of milk. Olives are grown extensively throughout Singleton LGA being processed primarily into oil and also table olives. Citrus crops are grown in the region (mainly Navel and Valencia) in the Bulga region. The mushroom industry is a new sector, with an operation producing substrate for growers along the East Coast and some growing operations.

Upper Hunter and Muswellbrook

Agricultural activities vary across the Upper Hunter LGA. Equine industries are located around the Scone and Aberdeen areas.[12] Dairying is confined to alluvial flats with irrigation potential, sheep grazing is predominant in the west and north of the LGA, and cattle enterprises occur throughout the area. Cereal growing is primarily located in the west of the LGA and on the Merriwa Plateau. Meat processing facilities are located at Scone (Primo). Muswellbrook also has a large equine sector with locations toward the north of the LGA. Cattle operations and wineries are also major areas of agribusiness activity in the area.

12 Upper Hunter Situation Analysis September 2007, the Planning Workshop.

Dungog and Gloucester and Great Lakes

In Dungog and Gloucester agriculture accounts for a major part of economic activity. The main activities are beef and dairy. Timber is undergoing a major restructure in the area with the locking up of forest areas and the closure of mills in both Gloucester and Dungog.

Beef is also a large sector for Great Lakes LGA with 160 residents working in the sector in 2006. Forestry and timber is a major sector for Great Lakes with most of the forestry activity across the Upper Hunter Region concentrated in Great Lakes (124 employed residents in 2006). Fishing and aquaculture employed over 200 persons in Great Lakes LGA, with oyster production and commercial fishing located around Forster-Tuncurry. Food processing and poultry are other segments of agribusiness in the area.

There are moves in Gloucester, through the *Gloucester Growers Cluster*, to develop specialist products in terms of vegetables, mushrooms and produce, such as cheese, wine, and condiments. These are being linked to the development of direct market routes through food and wine trails, the farmers market and farm gate sales.

Table 38. Employed Persons in Agribusiness, Upper Hunter Region 2006

Sector	Singleton			Muswellbrook			Upper Hunter LGA			Dungog			Gloucester			Great Lakes			Total – Upper Hunter Region		
	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P
Beef	121	69	190	109	57	166	309	147	456	150	61	211	164	82	246	110	50	160	799	466	1265
Sheep	4	3	7	8	3	11	143	58	201	4	0	4	6	0	6	0	0	0	159	64	223
Dairy	76	36	112	62	19	81	29	14	43	81	40	121	47	22	69	29	8	37	277	139	416
Other Livestock	5	0	5	0	6	6	0	3	3	0	4	4	0	0	0	3	3	6	8	16	24
Equine	27	31	58	145	129	274	265	225	490	14	18	32	0	8	8	6	18	24	457	429	886
Poultry	0	5	5	15	8	23	3	6	9	33	19	52	3	0	3	46	21	67	97	59	156
Wine	78	82	160	110	61	171	25	19	44	3	12	15	3	0	3	7	3	10	223	177	400
Fruit & Vegetables	41	17	58	6	0	6	9	3	12	7	6	13	3	0	3	14	4	18	77	30	107
Grains	15	5	20	16	6	22	54	17	71	4	0	4	0	0	0	6	6	12	95	34	129
Flowers	6	8	14	3	7	10	0	3	3	7	3	10	0	6	6	6	11	17	22	38	60
Forestry & Timber	9	0	9	3	0	3	3	0	3	36	3	39	44	6	50	120	4	124	171	13	184
Fishing & Aquaculture	0	0	0	0	0	0	3	0	3	0	0	0	4	0	4	183	33	216	186	33	219
Other Agriculture	13	4	17	22	9	31	23	16	39	13	6	19	3	0	3	15	6	21	86	41	127
Agriculture Support	56	18	74	66	24	90	72	21	93	24	12	36	20	3	23	8	13	21	226	91	317
Food Processing	62	33	95	32	13	45	181	78	259	18	21	39	16	6	22	48	34	82	341	185	526
Total Agribusiness	**513**	**311**	**824**	**597**	**342**	**939**	**1119**	**610**	**1729**	**394**	**205**	**599**	**313**	**133**	**446**	**601**	**214**	**815**	**3224**	**1815**	**5039**
All Employed Residents	6158	4158	10316	3954	2769	6723	3518	2677	6195	1922	1538	3460	1058	821	1879	5674	4945	10619	21226	16908	38134
Share	**8.3**	**7.5**	**8.0**	**15.1**	**12.4**	**14.0**	**31.8**	**22.8**	**27.9**	**20.5**	**13.3**	**17.3**	**29.6**	**16.2**	**23.7**	**10.6**	**4.3**	**7.7**	**15.2**	**10.7**	**13.2**

Source: ABS Census 2006 Resident Population Data

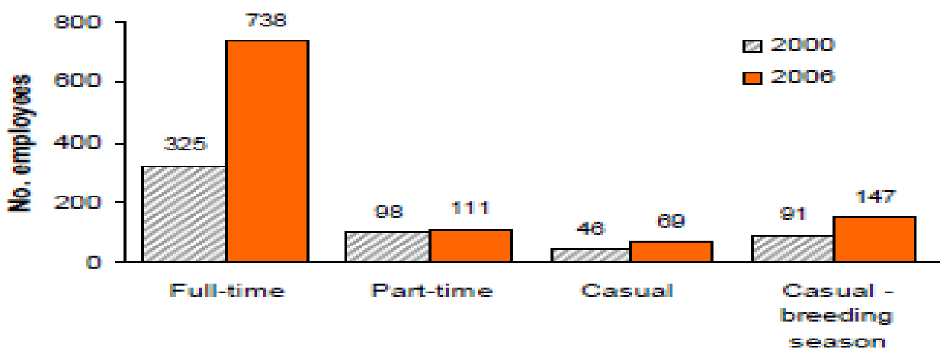
3.2 Equine Industry

The Hunter Region's equine industry is centred on Scone in the Upper Hunter and extends into Muswellbrook LGA and Murrurundi. The region produces racing thoroughbreds, quarter horses and stockhorses. This area produces around 70% of Australia's thoroughbred foals and accounts for over $100 million in yearling sales annually. This makes it one of the largest sectors in the Upper Hunter regional economy. With the continued growth it is now recognised as the second largest thoroughbred nursery outside of Kentucky in the USA.

Investment in the sector has been estimated at $1 billion, over the last decade. For example the Woodlands Stud at Denman was acquired for $460 million in 2008 to become part of the Darley global breeding operation. There are now around 65 studs located in the area include Alabama Stud (Aberdeen), Arrowfield (Scone), Coolmore Stud (Jerrys Plains), Craidon Park Stud (Wybong), Darley (Denman and Aberdeen), Emirates Park (Murrurundi), Widden Stud (Denman) and Yarraman Park (Scone).

The support infrastructure includes: training and racing facilities; the Hunter Valley Equine Research Centre at Scone; equine-related education facilities as part of Hunter Institute of TAFE; and a specialist veterinary hospital complex. Data in a 2006 industry study by the Hunter Valley Research Foundation indicated that the industry employed more than 900 full-time, part-time and casual employees (around 60% of employees live on the properties). There are strong industry linkages through supply chains covering: feed, veterinary services, machinery and equipment maintenance, farrier, fuel, transport and fertilisers.[13]

Figure 7. Employment - Upper Hunter Studs



Source: The Upper Hunter Thoroughbred Industry, 2006 HVRF Working Paper No: 1/06, The Hunter Valley Research Foundation P2

Table 39. Employed Persons in Equine Industry – Upper Hunter Region 2006

Sector	Singleton			Muswellbrook			Upper Hunter LGA			Dungog			Gloucester			Great Lakes			Total		
	M	F	P.	M	F	P	M	F	P.	M	F	P	M	F	P.	M	F	P	M	F	P
Equine Industry	27	31	58	145	129	274	265	225	490	14	18	32	0	8	8	6	18	24	457	429	886
Total Agribusiness	513	311	824	597	342	939	1119	610	1729	394	205	599	313	133	446	601	214	815	3224	1815	5039

Source: ABS Census 2006 Resident Population Data

This growth in the equine sector was reflected in a number of indicators:

- The number of properties increased significantly between 2000 and 2006, and this growth has continued since that period.
- The value of mares and foals owned or majority owned doubled in six years to 2006 to approximately $332 million. The estimated value of stallions owned by Upper Hunter studs increased to $191 million, while the value of yearlings and weanlings was calculated to be $133 million.
- Average annual income increased by approximately 37% from $68 million in 2000 to $93 million in 2006 and is now well over $100 million. This income is derived from stud services, mare sales, other horse sales, agistment, sales preparation and racehorse spelling.

13 HEDC Prospectus. 2009 P62

- The average annual expenditure by Upper Hunter thoroughbred studs increased from $59 million in 2000 to $270 million in 2006. Expenditure on service fees in 2006 was $198 million.[14]

Recent information from the *Hunter Valley Thoroughbred Horse breeders Association* indicates that there are now 77 thoroughbred stud farms located in the Hunter Valley. Direct employment on these thoroughbred studs is increasing, having risen from 560 in 2000 to 1065 in 2006. Other people are employed indirectly in the sector in support activities, including: growers of lucerne, horse transport, equipment providers and maintenance services. The equine sector is an export industry with 60% of studs selling to overseas buyers.[15]

The sector has major concerns about the expansion of mining and issued a major policy statement in 2007. The statement expressed concerns about the impact of mining on the equine industry, other agribusiness (including wine) and associated tourism activity. The statement indicated that the scale of proposed expansion of new coal mines in the Upper Hunter was having impacts on prime agricultural land and investment in agriculture in the region. The statement indicated that the horse breeding industry needs quality grazing land with reliable water and clean air.

> "The thoroughbred breeding industry relies on pleasant rural ambience to attract investors and buyers It co-exists with local grazing, dairy farming and winegrowing to provide a very appealing rural ambience to the Hunter that attracts a growing number of domestic and international horse buyers and tourists to the Region."
> Source: Hunter Valley Thoroughbred Horse breeders Association Statement on Mining 2007.

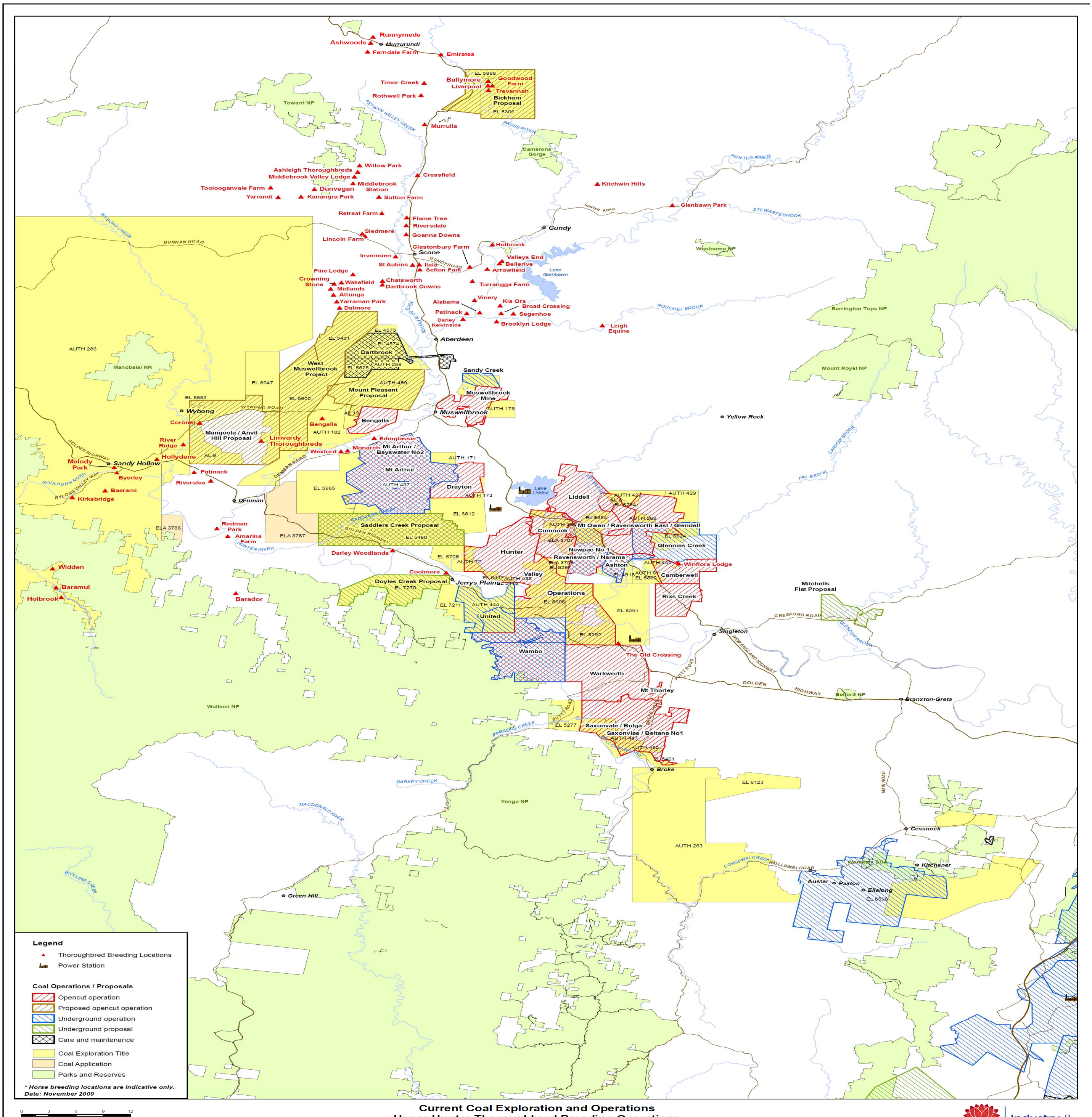
There were major concerns that the scale of the development will threaten the sector.

> "The Upper Hunter horse breeding industry, like the local winegrowers, needs a critical mass of operators to maintain recognition, investment, research and visitation. The expansion of coal mining into the Upper Hunter is jeopardising this critical mass, as winegrowers, horse breeders and farmers are being displaced by mining."
> Source: Hunter Valley Thoroughbred Horse breeders Association Statement on Mining 2007.

The statement indicated that balanced development is needed to maintain the economic and social diversity and ecologically sustainability in the Hunter Region.

The following map shows the location of equine properties in the Upper Hunter.

14 The Upper Hunter Thoroughbred Industry, 2006 HVRF Working Paper No: 1/06, The Hunter Valley Research Foundation P2
15 Hunter Valley Thoroughbred Horsebreeders Association Statement on Mining 2007.



Current Coal Exploration and Operations
Upper Hunter Thoroughbred Breeding Operations
Upper Hunter Coalfields

3.3 Wine Industry

The Hunter Valley is one of Australia's major wine producing regions, with around 4,500 hectares of vineyards. In the Lower Hunter the wine sector is centred on Pokolbin, near Cessnock and in the Upper Hunter is mainly located in the Singleton and Muswellbrook areas, with some wineries located in the other LGAs.[16]

Many of the larger labels have been based in the Hunter Region: including Tyrrell's, McWilliams, Lindemans, McGuigan, Draytons, Brokenwood, Wyndham Estate and Rothbury Estate. There has been a clustering of smaller wineries and these clusters include: the Broke - Fordwich Wine Region vineyards group; and in the Upper Hunter, a cluster centred on the Denman - the Upper Hunter sub-region. There are also some wineries located in other areas, including Gloucester, Great Lakes and Dungog.

Wine tourism is of major importance to the wine sector in the region. This is evidenced by the extent of cellar door sales, with the overall business viability of many vineyards and wineries being based on these visitors.

Table 40. Employed Persons in Wine Sector - Upper Hunter Region 2006

Sector	Males	Females	Persons
Singleton			
Wine Sector	78	82	160
Total Agribusiness	513	311	824
Muswellbrook			
Wine Sector	110	61	171
Total Agribusiness	597	342	939
Upper Hunter LGA			
Wine Sector	25	19	44
Total Agribusiness	1119	610	1729
Dungog			
Wine Sector	3	12	15
Total Agribusiness	394	205	599
Gloucester			
Wine Sector	3	0	3
Total Agribusiness	313	133	446
Great Lakes			
Wine Sector	7	3	10
Total Agribusiness	601	214	815
Total UH Region			
Wine Sector	223	177	400
Total Agribusiness	3224	1815	5039

Source: ABS Census 2006 Residential Population Data

16 The Hunter Region Wine Industry: 2003-04 Estimates of Grape and Wine Production the Value of the Industry to the Regional Economy", Hunter Valley Research Foundation 2005

3.4 Beef Industry

3.4.1 Overview

Beef cattle remains a major industry in the Upper Hunter Region (and the Mid North Coast). Many of the beef cattle holdings in the Hunter Region tend to be smaller as a result of rural subdivision, the higher cost of land and the popularity of cattle for owners of small, rural lifestyle lots.

Beef production in the Hunter Valley Region has a number of different production systems due to the region's diverse topography and variations in both rainfall and soil type.[17] Production systems range from large-scale breeding operations for the production of store cattle, through to smaller properties focused on finished cattle production, based on irrigated alluvial river and creek flats. The sector also supports a number of farm support businesses in the region.

The major concentrations of beef properties are in are around Scone, Muswellbrook, Singleton, Dungog and Gloucester. Consultations with the beef cattle sector indicate that, while there are still a significant number of small scale producers in the region, the majority of producers now average 200 head of cattle and there are now larger producers operating with 600-700 head.

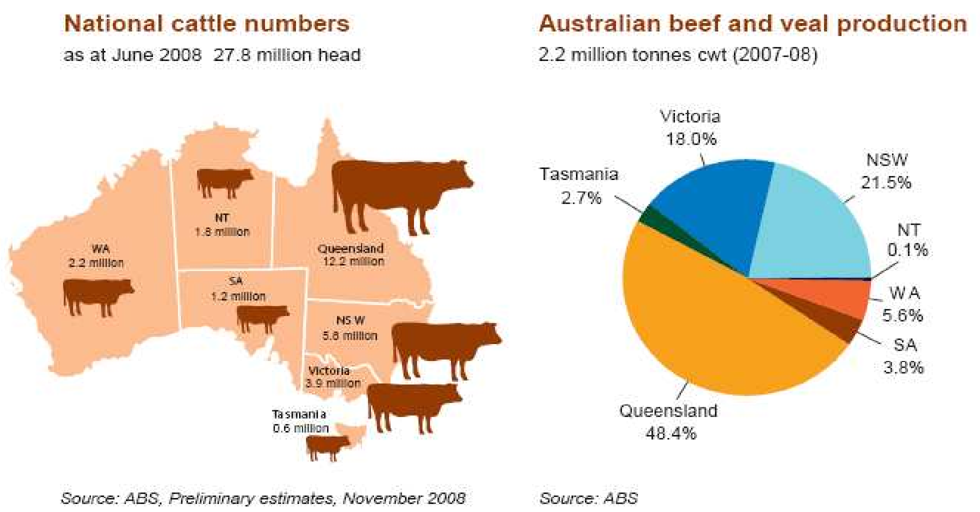
The major assets of the region are land quality, rainfall and the existing operations and a reputation as a clean green area; and proximity to the Newcastle market and metropolitan markets. There have been some efforts to develop regional brands (eg. *Barrington Beef* brand in Gloucester).

The market current situation of the industry includes: squeezes on margins with input costs rising but beef prices not increasing to the same extent; and some market fluctuations in demand levels.

3.4.2 Industry Structure

The Australian red-meat and livestock industry comprises producers, lot feeders, processors, retailers and exporters, who supply red meat and livestock to domestic and international markets. The sector has total production of $15.8 billion. Around 120,000 properties carry beef cattle (28 million head), sheep (83 million head) or goats. Beef and cattle exports totalled $5 billion (sheep $1.6 billion). Combined, these represent around 23% of total Australian farm exports. Over 70% of red meat production is exported to 110 countries worldwide.[18]

Figure 8. Cattle Numbers and Beef and Veal Production (June 2008)



Source: Australia's Red-Meat and Livestock Industry Meat Industry Strategic Plan 2010-2015, Red Meat Advisory Council, August 2009 P41

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17 Recent beef production and management system trends in NSW, Lloyd Davies, NSW Department of Primary Industries, Released/reviewed: 23 Jan 2006, http://www.dpi.nsw.gov.au/agriculture/farm-business/budgets/livestock/beef/info/production-trends, accessed 24 June 2010

18 Australia's Red-Meat and Livestock Industry Meat Industry Strategic Plan 2010-2015, Red Meat Advisory Council, August 2009,

3.4.3 Future of the Sector

The long term outlook for the beef sector is positive, with growth in world consumption and growth in the markets supplied by Australia. Growth in both world population and incomes is expected to drive higher meat consumption, including beef.[19]

The major future issues for the region are maintaining the sector and improving its long term sustainability.

The sector sees competing land uses in the region, with the expansion of mining leases and the increase in lifestyle blocks and hobby farms (small producers). This land use issue impacts on the capacity to scale up the size of operations, due to both availability of land and the land price increases that have occurred. Like other regional areas and agribusiness sectors, there are issues in relation to recruiting farm labour.

Small-scale beef enterprises (with less than 40 head of cattle) face higher unit cost of inputs (eg. fertiliser, drenches, farm equipment); higher costs per head for pasture improvement; and have limited capacity to negotiate prices or to access more profitable cattle markets. Recent analysis for the sector shows that while there has been an increase in income, this has tended to be squeezed by rising input costs (particularly for small producers).[20]

Department of Primary Industries NSW has identified a number of requirements for improved profitability and sustainability of cattle enterprises. These requirements included: increased productivity from better management of pastures and herds; increased returns by producing cattle for higher value markets, or by direct sale to retailers; increased operating efficiency and reduced unit costs through economies of scale (larger herds); increasing the number of holdings; leasing farm land and equipment; realising returns on land through sale to larger operators. Other options included diversifying income sources (eg. farm forestry, managing other properties, contract farm work, eco-tourism, value added farm enterprises and income from work not related to farming).[21]

The rationalisation of abattoirs has increased the distances that stock has to travel and associated transport costs. The current abattoirs for the Hunter are: Woy Woy, Kurri and Scone abattoirs which cater for the local markets of Newcastle and Sydney. Export licensed plants at Tamworth (Cargil); Ipswich, Queensland (AMH); Singleton (Throsby); Wingham (Nippon); and Scone (Primo Australia) continue to source a significant share of their livestock requirements from the Hunter Region.[22] Breeding and growing steers specifically for the feedlot demand is still at early stages in the area, but growing demand and the returns from this activity mean that it is a future growth area in cattle production.

The diversity in beef production suggests that there will be a range of opportunities for the beef cattle producers in the region. A 2006 report on beef stocking rates and farm size in the Hunter Region (DPI NSW) indicated the following advantages for the region's beef industry: suitability of the climate, pasture types and landscape; available service suppliers (eg. produce merchants, contractors); proximity to infrastructure (abattoirs, saleyards, transport etc.) and a range of markets; potential for higher returns from group marketing activities; increasing adoption of industry standards, such as *Meat Standards Australia (MSA)* grading (tool for producers to identify and differentiate their products); good international and domestic market prospects; and the opportunity for professional beef producers to increase productivity and become more competitive.[23]

Organic beef may offer opportunities due to the clean/green nature of farming in the region. The NSW DPI research on organic sales channels indicate: 52% of organic producers sell their products

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19 Much of the world's population growth is predicted to take place in Asia, which provides a rapidly growing consumer base located within close proximity to Australia. The *Food and Agriculture Organisation (FAO)* forecast that increased incomes and population growth will support a 55 million tonne (20%) in global meat consumption from 2005 to 2015, with the consumption of beef forecast to grow by around 12 million tonnes (18%).

20 Source: Australian beef - Financial performance of beef cattle producing farms, 2007–08 to 2009–10, ABARE , June 2010 P10

21 Beef stocking rates and farm size—Hunter Region, NSW Department of Primary Industries, June 2006.

22 Generally these cattle are heavier than 240 kg carcase weight. The exceptions are Tamworth, which kills the lighter-weight export cattle for Cargil and supermarket cattle for Woolworths, and Primo Australia at Scone, which kills mainly domestic-weight cattle, with small numbers of stock for the small goods sector.

23 Beef stocking rates and farm size—Hunter Region, NSW Department of Primary Industries, June 2006. In the report the Hunter Region includes the local government areas of Upper Hunter, Muswellbrook, Singleton, Cessnock, Maitland, Lake Macquarie, Newcastle, Port Stephens, Dungog, Great Lakes and Gloucester.

to processors/wholesalers; 19% sell directly to retailers; 10% sell through a cooperative or organic products association; 9% sell directly to consumers; 4% process or value-add to their own products; and 6% utilise some other form of distribution. There is increasing interest in organic products by the two major supermarket chains.

3.5 Dairy Industry

3.5.1 Overview

The Upper Hunter Region has a history in dairy. Deregulation during the 1990's has resulted in decline in the number of operators and consolidation into much larger holdings and herd sizes. There are some limitations on further consolidation due to constraints on land availability (due to mining leases and lifestyle blocks/hobby farms). There is a squeeze on margins due to the combination of milk prices and rising input costs.

3.5.2 Industry Structure

Australia's dairy industry had a farm gate value of $4 billion in 2008/09 and ranks third behind the beef and wheat industries. Dairy ranks fourth in agricultural exports (with exports of $2.9 billion). It is estimated that approximately 40,000 people are directly employed on dairy farms and manufacturing plants.
The number of dairy farms has halved over the past two decades to 7,920 in 2009 with herd sizes increasing from an average herd size of 85 cows in 1980 to over 200 in 2008/09. A 2008 survey showed that 8% of farms had herd sizes above 500 cows and these accounted for 25% of total Australian production.[24] Improvements in genetics, pasture management and supplementary feeding regimes have seen yield per cow double from 2,850 litres a year to around 5,750 litres over the last 30 years. The combination of increased yields per cow and large herd sizes has seen the average annual milk production per farm increase from 247,000 litres to 1,185,000 litres over this period.[25]

In 2008/09 there were 860 registered dairy farms in NSW down from 2220 in 1988/90.

Table 41. Trends in the Dairy Sector

At June 30	1980	1990	2000	20009 (p)
Milk Production (million Litres)	5,432	6,262	10,847	9,388
Dairy cows ('000)	1,880	1,654	2,171	1,600
Farm numbers	21,994	15,396	12,896	7,924
Vale of farm production* ($M)	3,114	2,903	3,676	3,981
Value of ex-factory production* ($m)	7,976	7,169	11,047	11,960
Estimated value-added* ($m)	1,942	2,142	2,477	2,035
Per capita consumption (milk equiv)	239	244	274	301
Export value* ($m)	940	525	3,352	2,922
Export share of production	22%	31%	54%	45%

*Expressed in 2008/09 dollars. Source: Australian Dairy Industry in Focus 2009, Dairy Australia, P9.

All States have a dairy sector supplying drinking milk or milk for manufacturing. The New South Wales sector supplies 65% of its milk to the drinking milk market, while the Victorian sector supplies 92% of its output to the manufacturing market. The national split is 24% in drinking milk and 76% in manufactured products (eg. cheese, dairy spreads and yogurt).[26] Milk processors have a preference for reliable local supply to maximise shelf-life and to minimise transport costs

Victoria, Tasmania and South Australia account for 80% of the national output. The domestic dairy market accounts for around 55% of consumption of Australia's milk production with exports accounting for around 45% in 2009/10. Major impacts at retail level are private label brands, which now represent 52% of total supermarket milk volumes, up from around 25% in 1999/2000. In other segments it is 30% in cheese, 28% in dairy spreads, and 6% in the yogurt. Private brand products are considerably cheaper than branded products.

24 Dairy 2010 Situation and Outlook, Dairy Australia, May 2010 P11
25 Dairy 2010 Situation and Outlook, Dairy Australia, May 2010 P11
26 Imports account for 22% of domestic cheese consumption and 15% of domestic butter consumption in 2008/09

The dairy industry in the Southern & Central NSW Region employs around 1050 persons in 580 farms. Regional milk production was an estimated 590-600 million litres of milk in 2008/09 (around 6% of national milk output). The dairy industry directly employs 1,475 in the processing sector. The estimated value of farm milk production in the Southern & Central NSW Region in 2007/08 was $285 million.[27] The average size of a holding in the region is 316 cows on an average 140 ha.

Recruitment of farm workers is often a challenge in many regional areas. Employees are mainly farm hands or assistant farm hands, but also include farm supervisors and production managers.[28]

There are a number of factors affecting the industry and these include: water availability; rising land prices which impact on expansion; lifestyle and hobby farms encroaching on dairy regions. Other factors include: low growth in the drinking milk market; competition between dairy manufacturers for supply; retail level competition from house brands is affecting manufacturing margins and this is being reflected in contract prices and supply volumes. These market pressures and price volatility impact on younger farmers who have less equity in their farms.[29]

Table 42. Employed Persons in Dairy – Upper Hunter Region 2006

Sector	Males	Females	Persons
Singleton			
Dairy	76	36	112
Total Agribusiness	513	311	824
Muswellbrook			
Dairy	62	19	81
Total Agribusiness	597	342	939
Upper Hunter LGA			
Dairy	29	14	43
Total Agribusiness	1119	610	1729
Dungog			
Dairy	81	40	121
Total Agribusiness	394	205	599
Gloucester			
Dairy	47	22	69
Total Agribusiness	313	133	446
Great Lakes LGA			
Dairy	29	8	37
Total Agribusiness	601	214	815
Total			
Dairy	277	139	416
Total Agribusiness	3224	1815	5039

Source: ABS Census 2006 Resident Population Data

3.5.3 Processing Sector

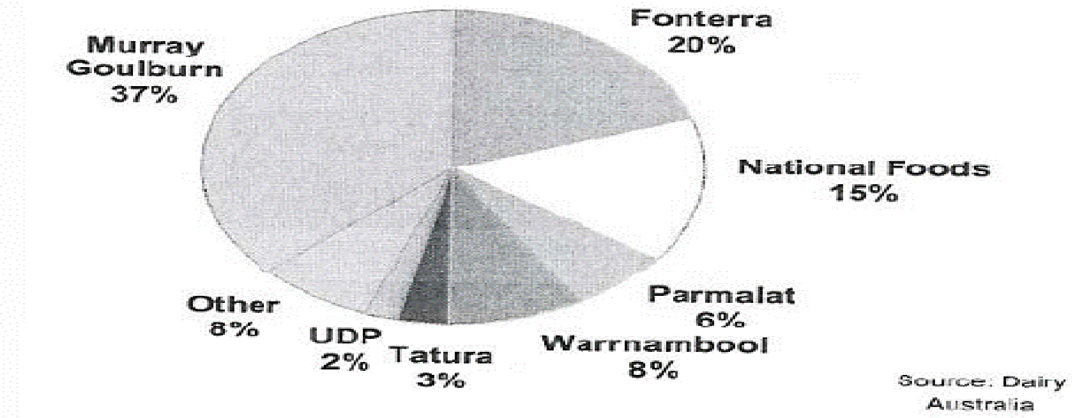
While processors have a preference for local produced milk to maximise shelf-life for fresh products, and to minimise logistics and handling costs, there have been closures of smaller plants at Gloucester and Muswellbrook.

The value of milk is determined by the following market factors: whether the final market destination is domestic or export; farm gate and marketplace competition within the region; and the sustainable cost of year-round fresh milk production.[30] There are two main buyers of milk in the Hunter Region: Norco and National Foods.

Fonterra and Murray Goulburn (a cooperative) are the two largest players in the manufacturing milk market. The industry is deregulated and farmers are subject to fluctuating prices and demand. In a deregulated market farm gate prices vary between manufacturers, and also vary depending on whether it is for the fresh market or the manufacturing market.

27 Dairy in Southern & Central NSW, Regional Profile from Dairy 2009: Situation and Outlook, Dairy NSW P2
28 Dairy 2010 Situation and Outlook, Dairy Australia, May 2010, P59.
29 Dairy in Southern & Central NSW, Regional Profile from Dairy 2009: Situation and Outlook, Dairy NSW P3
30 Fact Sheet: A snapshot of the Southern, Central and Coastal NSW dairy industry. Dairy NSW and Dairy Australia. July 2010, P1.

Figure 9. Market share of Milk Volume (2008-09)



Source: Senate inquiry into competition and pricing in the Australian dairy industry: milking it for all it's worth.
Senate Economics References Committee. May 2010. http://www.aph.gov.au/Senate/committee/economics_ctte/dairy_industry_09/report/c02.htm, accessed 16 July 2010.

In addition to the increased concentration, there has been rationalisation of plants and consolidation of manufacturing capacity. This included mothballing of plants and plant closures. This has involved Murray Goulburn in Victoria and National Foods (eg. closures of Gloucester, Muswellbrook and the future closure of Hexham).

A major issue that has been identified is the growth in private label milk and the potential for the supermarket chains to seek alternative supply arrangements (in addition to the two dominant processors) through regional private label packing contracts. Faced with two dominant processors, retailers may seek to reduce their sourcing risk and improve flexibility by seeking alternative supply arrangements – including regional private label packing contracts. Changes of this nature would have implications for processor facilities and milk sourcing, and could create some uncertainty for milk producers regarding their market access. There are major concerns that recent price reductions on home brand milk will lead to reduced prices for dairy farmers as processors margins are squeezed.

3.5.4 Current Market Situation

A recent dairy industry report identified a 2010/11, a "two speed" milk intake situation for 2010/11 with southern exporting manufacturers looking to increase intake to meet fast growing export demand, while domestic milk processors in fresh milk regions are focussed on matching slowly growing demand with secure year round regional supplies.[31] The report indicated that growth in world markets will lead to higher farm gate milk prices for southern region farmers in 2010/11. In the case of northern farmers, lower prices are expected in response to an oversupply of milk relative to local fresh milk market demand levels.[32]

3.6 Poultry Industry

3.6.1 Overview

Meat poultry activity in the Hunter Region is concentrated in the Great Lakes, Dungog and Port Stephens LGAs. Other poultry operations in NSW are located in the outskirts of the Sydney metropolitan area, Mangrove Mountain / Central Coast, Newcastle, Tamworth and Griffith areas and Byron Bay.[33]

The Beresfield processing plant in the Hunter (run by Baiada from July 2009) processes chickens and turkeys from various farms in the Hunter and the Central Coast and employs approximately 600-700 people.[34] Poultry processing plants are located close to markets for ease of access, to reduce transportation costs and available labour, with many plants adjacent to large metropolitan centres. Processing companies generally conduct breeding of the chickens but contract out growing

31 Australian Dairy Industry in Focus 2009, Dairy Australia P7
32 Australian Dairy Industry in Focus 2009, Dairy Australia P7
33 Australian Chicken Meat Foundation, http://www.chicken.org.au/page.php?id=3
34 The Newcastle Herald, http://www.theherald.com.au/news/local/news/general/30-jobs-lost-at-steggles-in-beresfield/1581842.aspx, Jul 30 2009.

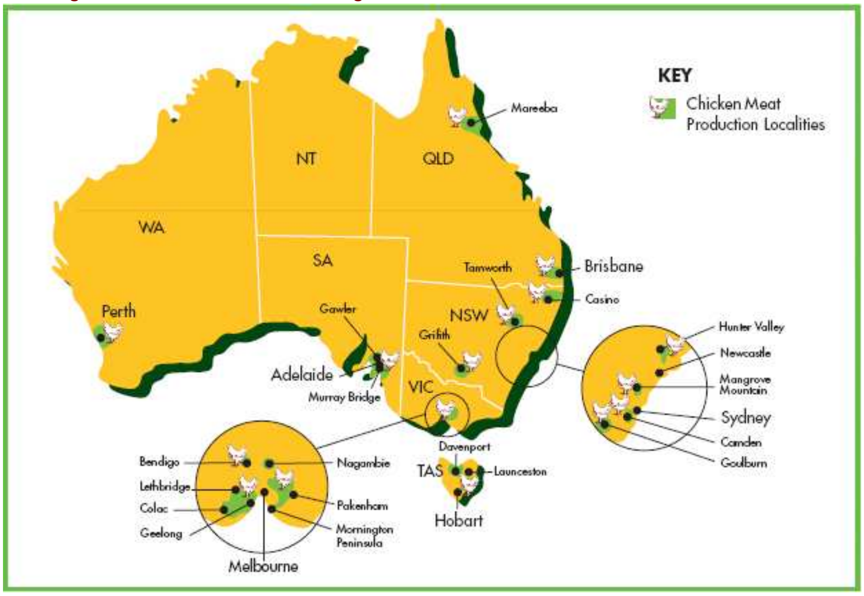
of the chickens. Subsequently chicken 'grow-out' farms, where chickens grow from day-olds until they are ready for processing, are generally within 100km of a processing plant. Companies supply day-old chicks, feed and veterinary care to contract growers and then buy the grown chickens within seven weeks.[35]

3.6.2 Industry Structure

The Australian Bureau of Agricultural and Resource Economics (ABARE) notes that the Australian poultry industry is divided into several sectors: chicken meat; egg industries; and turkey and game bird production on a smaller scale. The poultry industry is located mainly in rural-urban fringes for access to markets and labour.

ABARE notes that the Australian poultry meat and egg industries are heavily oriented toward the domestic market, and less than 3% of the poultry meat produced in 2005-06 was exported.[36]

Figure 10. Chicken Meat Regions in Australia



Source: Australian Chicken Meat Foundation, http://www.chicken.org.au/page.php?id=3

Chicken Meat

The chicken meat industry is predominantly vertically integrated meaning that individual companies own almost all aspects of production (eg. breeding farms, multiplication farms, hatcheries, feed mills, some broiler growing farms, and processing plants). Two large integrated national companies supply more than 70% of Australia's broiler chickens - Inghams Enterprises and Baiada (following their acquisition of Bartter/Steggles in July 2009).[37] Inghams and Baiada are privately owned, with farming and processing operations in most States. The balance of the market is supplied by another six medium-sized, privately owned companies, with each supplying between 3%-5% of the national market, and numerous smaller local processors.

Approximately 800 contract chicken growers produce 80% of Australia's meat chickens under contracts with the processing companies. Other meat chickens are produced on large company farms, or on farms owned and managed by 'intermediary' companies which own a number of farms, and who enter into contracts with processing companies to grow out chickens on a larger scale. Contract growers own the farm and provide the management, shedding, equipment, labour, bedding and other inputs to rear chickens. The processing company provides (and owns) the chickens and provides feed, medication and technical advice. The largest producing States are New South Wales (35% of production in 2004) and Victoria (29%) followed by Queensland (17%).[38]

35 Poultry industry growth more than chicken feed, ABC News, http://www.abc.net.au/news/stories/2011/02/24/3147500.htm
36 ABARE Poultry, http://www.abare.gov.au/interactive/ausNZ_ag/htm/au_poultry.htm
37 Structure and Ownership, ACMF, http://www.chicken.org.au/page.php?id=2
38 Geographical Distribution of Farms, ACMF, http://www.chicken.org.au/page.php?id=3

ABARE estimated Australian poultry meat production at 842,000 tonnes for 2006/07 with a Gross Value of Production (GVP) of $1.4 billion (chicken meat accounts for around 94% of this) and forecasted GVP for 2008/09 of $ 1.7 billion. The ACMF estimates industry's retail value at $4.5 billion.[39] The Department of Agriculture, Fisheries and Forestry (DAFF) indicates that poultry meat exports in 2005/06 were 22,000 tonnes ($21 million), or 3 % of total production. Major export markets are South Africa, the Philippines, Hong Kong and the South Pacific Islands. There is also a growing export market for Australian breeding stock.

ACMF notes that free range chicken meat accounts for 10-15% of chickens produced, with less than 1% of the total production also being organic. The main certifier of free range chicken meat in Australia is Free Range Egg and Poultry Australia Ltd (FREPA).[40]

Egg Production

The Department of Agriculture, Fisheries and Forestry (DAFF) notes that, based on ABARE and Australian Bureau of Statistics (ABS) figures, Australian chicken egg production in 2005-06 was approximately 195 million dozen eggs from an estimated 13 million egg laying hens.[41] The gross value of production for the egg industry in 2005-06 was estimated to be $340 million, up from $335 million in 2004-05 and there were an estimated 423 specialist egg farms in Australia. ABS figures indicate New South Wales as the largest egg producing State with 29% of production, followed by Victoria (28%), Queensland (21%), South Australia (9%), Western Australia (8%), and the balance made up by other States/Territories.[42] A 2006 employment survey indicated that the Australian egg industry directly employs around 2890 people in full and part time positions.[43]

DAFF notes that the Australian egg industry has benefited from the establishment of the AECL in recent years, which works in conjunction with the Australian Government to ensure the industry meets increasing consumer expectations in the areas of quality assurance, food safety, labelling and animal health and welfare.

Approximately 85% of eggs are sold in shell form through grocery/retail chains and wholesale to the food service sector, with the balance processed into liquid, frozen and dried egg products for use in the food service and processed food sectors. Reflecting the domestic focus of egg production, the value of exports in 2005-06 was only $4.3 million or 1% of GVP, mostly as processed egg products. Egg product export destinations are Singapore, the USA and the Philippines.

3.6.3 Future of the Sector

Meat Poultry

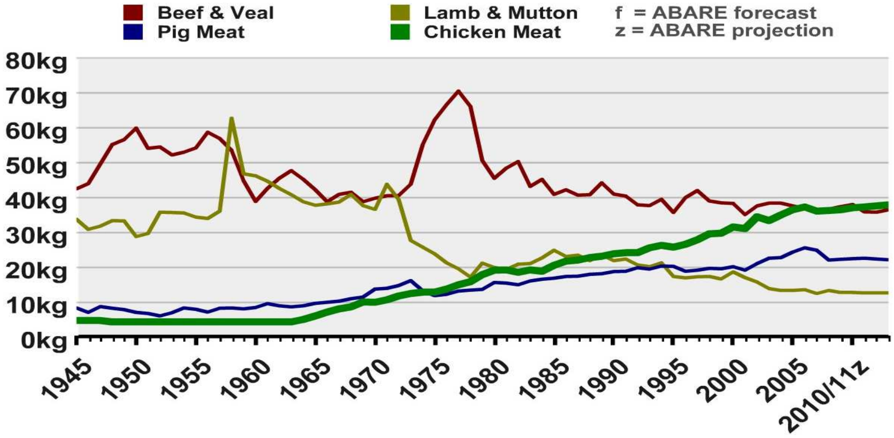
ABARE indicates that Australians consumed an average of 38 kilograms of chicken meat each per year in 2009/10, compared to 25 kilograms per person in 1990.[44] In terms of volumes consumed, chicken has overtaken beef as Australia's preferred meat[45], which ABARE attributes to the industry's success in reducing real (net of inflation) supply costs and hence prices to consumers, and through continuous product innovation.[46] The chicken meat industry has reduced supply costs by consistently raising both on-farm and off-farm productivity over several decades through a combination of better management, genetic improvement, economies of scale and mechanisation in processing.[47]

The chicken meat sector in Australia is focused on domestic consumption and the industry outlook is positive with forecasts by ABARE suggesting chicken consumption in Australia will continue to rise in the medium term. Poultry consumption is tipped to expand from 38kg per person per year in 2009/10 to 42kg pp/yr by 2014/15. Over the next 5 years retail prices for fresh whole chickens are

39 Industry Facts and Figures, ACMF, http://www.chicken.org.au/page.php?id=4
40 Growing Meat Chickens, ACMF, http://www.chicken.org.au/page.php?id=6
41 Australian Egg Industry – DAFF, http://www.daff.gov.au/agriculture-food/meat-wool-dairy/ilg/industries/australian_egg_industry
42 Australian Egg Industry – DAFF, http://www.daff.gov.au/agriculture-food/meat-wool-dairy/ilg/industries/australian_egg_industry
43 Australian Egg Industry – DAFF, http://www.daff.gov.au/agriculture-food/meat-wool-dairy/ilg/industries/australian_egg_industry
44 Australian Commodity Statistics 2009, ABARE, P154
45 Department of Agriculture, Fisheries and Forestry (DAFF), *Foodmap: a comparative analysis of Australian food distribution channels*, 2007, p. 38.
46 ABARE Poultry, http://www.abare.gov.au/interactive/ausNZ_ag/htm/au_poultry.htm
47 ABARE Poultry, http://www.abare.gov.au/interactive/ausNZ_ag/htm/au_poultry.htm

forecast to fall in real terms as lower production costs and increased supplies put downward pressure on prices.[48]

Figure 11. Consumption of Various Meats in Australia



Source: Industry Facts and Figures, ACMF, http://www.chicken.org.au/page.php?id=4

The Australian chicken meat industry benefits from the fact that it is relatively free from competition from imports.[49] One of the major threats to the chicken and egg production industries in Australia is Avian Influenza (Bird Flu). Other challenges for the industry relate to: main supermarket chains continuing to squeeze margins for both broiler chicken growers and processing companies; public perception in regards to the use of hormones and antibiotics in broiler chickens; and welfare issues revolving around housing standards, transportation and stocking densities in broiler sheds.[50]

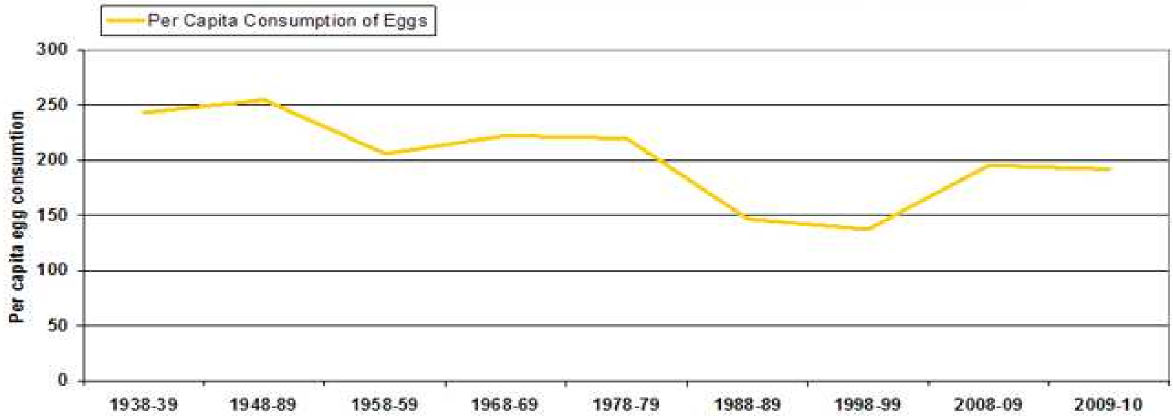
Eggs

The main market for eggs produced in Australia is the domestic shell egg market, accounting for around 80-85% of all eggs consumed, with most eggs being sold through retail chains.[51] Data from AECL indicates egg sales in Australia hit a record high in 2010 with AZTEC Synovate figures showing more than 122 million dozen eggs were sold in Australia during the year, an increase of 9 million dozen on 2009.[52]

The key driver for the Australian egg industry is per capita domestic consumption and figure below indicates decline in consumption between 1940's and 1990's of about 46 %. The fall was attributed primarily to the trend away from eggs in breakfast meals (due to changing social structures and a desire for convenient, ready-made meals such as cereals) and increased concerns about the health impacts of cholesterol.[53]

48 ABARE Outlook Conference – Summary, Commonwealth Bank, http://www.commbank.com.au/corporate/research/publications/commodities/agricultural-insights/080310-Agri_Updates_ABARE.pdf
49 Report of the ACCC inquiry into the competitiveness of retail prices for standard groceries, ACCC, Aug 2008, http://www.accc.gov.au/content/item.phtml?itemId=838251&nodeId=68210597d8c50ef39932cafa725a0469&fn=Grocery+inquiry+report,+chapters+11–20.pdf
50 Market Overview – The Australian Chicken Meat Industry, Independent Assessment November 2006, Australian Agribusiness Group, http://www.100percentinvesting.com.au/pdfs/aag_2007_marketoverview_chicken_meat.pdf
51 Victoria's Chicken Egg Industry Summer 2011, http://new.dpi.vic.gov.au/agriculture/animals-and-livestock/poultry/egg-industry
52 Record egg sales as Australians eat more eggs, AECL, Jan 19 2011 http://www.aecl.org.au/media-centre/record-egg-sales-as-australians-eat-more-eggs
53 Victoria's Chicken Egg Industry Summer 2011, http://new.dpi.vic.gov.au/agriculture/animals-and-livestock/poultry/egg-industry

Figure 12. Apparent Annual per Capita Consumption of Eggs and Egg Products



Source: Victoria's Chicken Egg Industry Summer 2011, http://new.dpi.vic.gov.au/agriculture/animals-and-livestock/poultry/egg-industry

Since 1995-96 the industry estimates that average consumption has increased to 192 eggs per year, due to industry marketing and education campaigns changing consumer perceptions of the health aspects of eggs, their versatility, ease of preparation and use as a cheap protein alternative to meat sources, as well as a change in advice on the health impacts of egg consumption on cholesterol levels. There has also been increased differentiation in the shell egg products available to consumers. This has included the development of new value added products, such as omega rich and organic eggs.

The Victoria DPI notes that the key change over the last decade has been the increasing influence of production methods in the decision making of consumers. While price remains the key influence (with caged eggs the cheapest), barn-laid and particularly free-range eggs have increased their share of the market in response to consumer perceptions and attitudes towards animal welfare. Caged eggs make up around 63% of sales in the supermarket sector, with barn laid 8%, free-range 27% and organic 2%.[54]

3.7 Emerging Areas

3.7.1 Crops for Hunter - Industrial Hemp Fibre

The Crops for Hunter program, a joint initiative across the Singleton, Upper Hunter and Muswellbrook LGAs, was established to support agricultural diversification in the Upper Hunter Region and support assessment of new crops for the region.[55]

A feasibility study of Fibre Hemp Production in the Hunter Valley was funded through the program's Farm Diversification Grant Scheme in August 2010. It found that the Hunter Valley has suitable soils, landscape, climate and irrigation water for the production of Industrial Hemp Fibre production.[56] Trial crops in the Hunter Valley were sown in 2009/2010 (80 acres by 10 farmers) and harvesting of the crop began in February 2011.[57]

In terms of downstream processing, agricultural company EcoFibre Industries Operations has indicated plans for a processing hub for the product in the Hunter Valley.[58] Fibre is made from the stems of the plant and used to create a range of products, similar to cotton and wool fibres. Uses include: bio-fibre in animal bedding; bio-fibre in erosion control; bio-fibre in oil spill containment;

54 Annual Report 2010, AECL
55 Upper Hunter Shire Council: Your Environment: Crops for Hunter Project, Aug 3 2010 http://upperhunter.local-e.nsw.gov.au/environment/2318.html
56 Crops for Hunter - Feasibility of Growing Industrial Hemp in the Hunter Valley, Neil Nelson Agvice Pty Ltd, September 2010, P4.
57 Farmers encouraged to give new crop a try, Hunter Valley News, Feb 23 2011, http://huntervalleynews.yourguide.com.au/news/local/news/general/farmers-encouraged-to-give-new-crop-a-try/2084853.aspx?storypage=1
58 Proposal for hemp crop in Hunter, Newcastle Herald, January 04 2011, http://www.theherald.com.au/news/local/news/general/proposal-for-hemp-crop-in-hunter/2038447.aspx

viticulture, as a soil rehabilitator and insulation; fibre in brake linings; replacement for Kevlar; and mixed with plastics to create a softer product (eg. car interiors).[59]

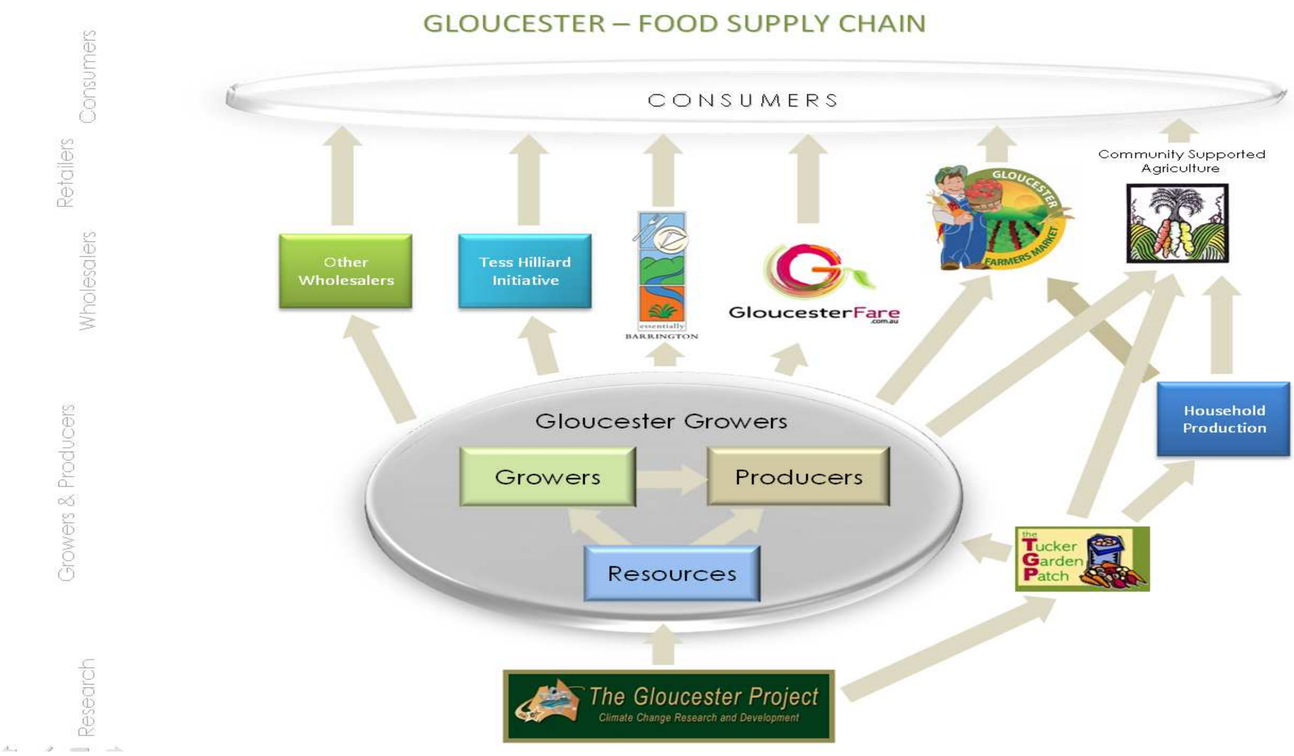
The company indicates that, based on the European market, the crop could yield an average of 13 tonnes per hectare at prices of between $150 and $180 per tonne. [60]

3.7.2 Gloucester Growers Cluster

Building on the work of the Gloucester Project, a Growers Cluster has recently been formed to develop diversified agriculture and to develop new food products. There are several components to the food strategy and this comprises: developing alternative agriculture in the region; developing new market channels for small producers; incubating new producers; creating a local food culture; and developing food trails as part of agri-tourism in the region.

The following diagram summaries the links in the local food supply chain. Funding has been secured from the *Strategic Business Clusters Program*, a NSW Government Program.

Figure 13. Gloucester Growers Operations



Source: Gloucester Council 2010

59 Heart of Hemp, Singleton Argus, January 04 2011, http://www.singletonargus.com.au/news/local/news/general/heart-of-hemp/2038879.aspx?storypage=1
60 Proposal for hemp crop in Hunter, Newcastle Herald, January 04 2011, http://www.theherald.com.au/news/local/news/general/proposal-for-hemp-crop-in-hunter/2038447.aspx

4 Tourism

4.1 Overview

The LGAs in the study are covered by two tourism regions - *Hunter Tourism Region* (5 of the Upper Hunter LGAs) and *Mid North Coast Tourism Region* (Great Lakes LGA).[61]

Tourism is a major contributor to the Hunter Region (covering both the Lower Hunter and Upper Hunter), with estimates of annual spending of $1.3 billion and 12,000 persons employed in the sector in the region.[62] The region had 2.09 million domestic visitors (5.64 million visitor nights) in the year ended September 2010.[63] Great Lakes is part of *Mid North Coast Tourism Region* and this tourism region had a total of 3.1 million domestic visitors (11.8 million visitor nights) in the year ended September 2010.[64]

4.2 Hunter Tourism

Tourism in the Hunter Region is built around beaches (Lower Hunter- Newcastle, Lake Macquarie) wine tourism (120 wineries, ranging from large producers to boutique wineries and restaurants) and nature tourism.[65] Due to the structure of the wine industry and current trends in supply, many of the wineries in the region are dependent on wine tourism for a significant part of their income.

The Hunter Region has good access to the Sydney market, air access through Newcastle Airport and is on the touring routes from Victoria and Queensland and from regional New South Wales. Activity is built around a number of attractions including galleries, cycle tours, golf, ballooning, sports events and concerts and festivals. [66]

Hunter Tourism estimates that over $1 billion in private sector investment has occurred in the sector since 2001 (in accommodation, resorts, and wineries).[67] Accommodation options cover backpacker hostels to motels, hotels, guest houses, bed and breakfasts and luxury resorts.

A large part of nature tourism in the Hunter Region is focused in the Upper Hunter Region and covers Barrington Tops National Park, State Forests and Wildlife Reserves. The main access to the Tops is through Gloucester and Dungog. The Tops provide opportunities for bush walking (short walks to overnight treks), with accommodation including camping, nature retreats, hotels and resorts.

4.3 Upper Hunter Tourism Regions

Tourism in the Upper Hunter Region is divided into two different marketing brands that encompass different areas: Upper Hunter Country and Barrington Tops.

Upper Hunter Country: Includes Singleton, Muswellbrook, Denham, Aberdeen, Scone, Murrurundi and Lake St Clair. This market promotes its potential to visitors for outdoor activities (including boating, water-skiing and fishing in the rivers), driving tours, vineyard and cellar door tours, horse activities (based in particular around Scone, which is designated the "*horse capital of Australia*".[68] The Upper Hunter Country site is http://www.upperhuntercountry.com.

Barrington Tops: Includes parts of Gloucester and Dungog LGAs. This visitor market is based around Barrington Tops National Park, an area of approximately 1200 km2, which includes an area

61 Hunter Tourism Region covers the following LGAs: Lake Macquarie, Newcastle, Maitland, Cessnock, Upper Hunter Shire, Singleton, Muswellbrook, Gloucester and Dungog. http://tourismhunter.com.au/about-us Mid North Coast Tourism Region covers: Coffs Coast, Bellingen, Nambucca Valley, Macleay Valley Coast, Greater Port Macquarie, Manning Valley, Great Lakes, and Port Stephens. http://www.midnorthcoasttourism.com.au/
62 Tourism Hunter (RTO) http://tourismhunter.com.au/about-us
63 Travel to the Hunter YE Sept 2010, Tourism NSW
64 See North Coast NSW Regional Tourism Plan 2004-2007; and Mid North Coast Tourism Strategic Business and Marketing Plan 2010/11 Mid North Coast Tourism Inc.Travel to Mid North Coast YE Sept 2010, Tourism NSW.
Year ended September 2010
65 Hunter Investment Prospectus 2009 HEDC
66 These events in the Hunter Region include Jazz in the Vineyards, Opera in the Vineyards, Newcastle Jazz Festival, Newcastle Blues Festival, Mattara Festival, Lovedale Long Lunch, Hunter Valley Steamfest, Dungog Rodeo, Dungog Film Festival, Timberfest, Surfest, Shakespeare Festival, Scone and Upper Hunter Horse Festival, Festival of the Fleeces, Port Stephens Whale & Environ Fest, Blue Water Country Music Festival.
67 Hunter Investment Prospectus 2009 HEDC P 64
68 http://www.horsecapital.com.au/

of World Heritage-listed wilderness. The focus is on nature tourism opportunities, such as bushwalks (short hikes and overnight hikes and camping. A particular emphasis is placed on a 3-4 hour loop walk that links three of the other dedicated walking paths (Antarctic Beach Forest Track, Gloucester Falls Track and River Track) together.[69]

Great Lakes LGA is part of the coastal tourism area of the *Mid North Coast Tourism Region*. The LGA provides attractions of a coastal environment, lakes, boating and national park areas.

Great Lakes and Manning Valley: Includes areas of Great Lakes and Greater Taree LGAs. This market promotes its natural attractions in the form of beaches, bays and tidal lakes as well as its national parks (Crowdy Bay, Booti Booti, Wallingat, and Myall Lakes National Parks) and Ellenborough Falls, which is one of the longest single-drop waterfalls in the Southern Hemisphere. Promoted activities include surfing, boating, bushwalks, whale watching, events and tours.[70]

The Lower Hunter is covered by *"Australia's Hunter Valley"* and covers Maitland and Cessnock. This also covers parts of Singleton and Muswellbrook because of the location of wineries across the region.

Figure 14. Hunter Region Tourism Markets

Source: "Building Australia's premier tourism region – A vision for tourism development in the Hunter Region 2005-2008" P4

Tourism is important for the Upper Hunter. The key assets are based on the natural environment, rural lifestyle and agribusiness industries.

69 A full list of available walking tracks in the park, graded by length and difficulty, may be found at http://www.environment.nsw.gov.au/NationalParks/parkWalking.aspx?id=N0002.
70 http://www.greatlakes.org.au.

4.4 Tourism Activity

Industry and market data at a local government area level is limited to information published by *Tourism Research Australia (TRA)* and to special surveys commissioned by some Councils and tourist organisations. The latest data available from TRA was released in 2008/09.[71] While not covering more recent trends, the data enables an analysis of the structure of the industry and the relative scale of tourism within each of the LGAs in the Upper Hunter. Industry employment data has been estimated from ABS Census data.

The most recent tourism data from Tourism Research Australia for the six LGAs in the Upper Hunter shows that, over the three years to 2007:

- There was an average of 1.037 million domestic overnight visitors to the region each year (accounting for 3.132 million domestic visitor nights). Around half of these visits were to Great Lakes LGA (511,000 overnight visitors). In total Great Lakes received over 900,000 visitors, when day visitors are included.[72]
- These overnight visitors are estimated to have spent total of $353 million per year across the six LGAs during this time period.
- Singleton had the next highest domestic overnight visitors (144,000 visits for 327,000 room nights).

Day visitor data was only published for Singleton (188,000), Dungog (126,000) and Great Lakes (401,000). However across the six LGAs we would estimate day visitors to total around 1 million visitors. There are some differences between tourism across the region. Great Lakes is the dominant location as a coastal destination, which captures the major holiday periods (December through to Easter and school holidays). As a result, the average stay is longer (3.6 days). The inland LGAs tend to have both fewer visitors for shorter average stays.

Data relating to international visitors was only available for Great Lakes. It was estimated that for the three years to 2007, Great Lakes attracted an average of 14,000 international visitors per year, primarily from the United Kingdom and the United States.[73] These international visitors to Great Lakes stayed for an average of 3.3 nights and spent an average of $187 in the area per trip for a total spend of $2.6 million per year.

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71 Tourism Research Australia – Tourism Profiles for Local Government Areas in Regional Australia – New South Wales 2009
72 Great Lakes Council indicate recent data from Tourism Research Australia for Great Lakes LGA estimates 549,620 overnight visitors in 2010 and a total of 996,662 visitors, when day visitors and international visitors are included.
73 Great Lakes Council indicates there were 15,002 international visitors in 2010 for the LGA.

Table 43. Summary of Domestic Travel to Upper Hunter Region by LGA – Three Year Averages to 2007

	Singleton		Muswellbrook		Upper Hunter		Dungog		Gloucester		Great Lakes		Total UH Region
	Domestic overnight	Domestic day	Domestic overnight	Domestic day	Domestic overnight	Domestic day	Domestic overnight	Domestic day	Domestic overnight	Domestic day	Domestic overnight	Domestic day	Domestic overnight
Visitors ('000)	144	188	90	np	114	np	75	126	103	np	511	401	1,037
Visitor Nights ('000)	327	-	203	-	239	-	178	-	321	-	1864	-	3,132
Spend ($million)	44	16	19	np	24	np	24	5	28	np	214	29	$353
Average stay (nights)	2.3	-	2.3	-	2.1	-	2.4	-	3.1	-	3.6	-	
Average spend per trip ($)	307	84	214	np	210	np	343	43	270	np	419	72	
Average spend per night ($)	135	-	94	-	100	-	137	-	86	-	115	-	
State Average													
Average stay (nights)	3.5	-	3.5	-	3.5	-	3.5	-	3.5	-	3.5	-	
Average spend per trip ($)	433	99	433	99	433	99	433	99	433	99	433	99	
Average spend per night ($)	124	-	124	-	124		124	-	124	-	124	-	
National Average						-							
Average stay (nights)	3.9	-	3.9	-	3.9	-	3.9	-	3.9	-	3.9	-	
Average spend per trip ($)	500	94	500	94	500	94	500	94	500	94	500	94	
Average spend per night ($)	127	-	127	-	127	-	127	-	127	-	127	-	

Source: Tourism Research Australia – Tourism Profiles for Local Government Areas in Regional Australia – New South Wales 2009

Table 44. Estimated Visitors to LGA's in the Lower Hunter and Central Coast Region

LGA	Domestic Day Visitors	Domestic Overnight Visitors	International Visitors
Lower Hunter Region			
Newcastle	1,959,000	903,000	59,000
Port Stephens	612,000	617,000	27,000
Lake Macquarie	434,000	220,000	9,000
Cessnock	543,000	322,000	29,000
Maitland	395,000	151,000	np
Central Coast Region			
Gosford	2,078,000	848,000	25,000
Wyong	1,084,000	488,000	9,000

Source: Tourism Australia LGA Profiles NSW

The accommodation used varies between locations, reflecting the accommodation mix, the preferences of visitors and the nature of the areas.

- Great Lakes - 23% stayed in motels, 17% in rented houses or units, and 19% in caravan/camping areas. This reflects the longer holiday periods and the availability of rental apartments.[74]
- Upper Hunter LGA - 60% stayed with friends or relatives and 24% in motels/resorts. This reflects the more limited accommodation options in the area.
- Gloucester -35% stayed in caravan/camping areas and 25% in motels. This reflects the attraction to national park areas that are accessible through Gloucester.
- Singleton - 32% stayed in motels and 40% with friends and relatives. This pattern reflects the availability of motel accommodation.
- Muswellbrook - 34% stayed in motels. This pattern reflects the availability of motel accommodation.
- Dungog - 26% stayed in caravan/camping areas. This reflects the attraction to national park areas and the limited availability of other accommodation.

Table 45. Domestic Tourism Accommodation Use in Upper Hunter Region by LGA – 3-4 Year Averages to 2007

	Motel/Resort	Rented House/Unit	Friends/Relatives	Commercial Caravan/Campin g	Private Property Camping	Other
LGA	%	%	%	%	%	%
Singleton	32	np	40	np	np	np
Muswellbrook	34	np	44	np	np	np
Upper Hunter	24	np	60	18	np	np
Dungog	21	np	34	26	np	20
Gloucester	25	np	23	35	np	18
Great Lakes	23	17	26	19	7	9
NSW Average	**36**	**6**	**42**	**8**	**4**	**9**
Australian Average	**36**	**7**	**42**	**7**	**4**	**10**

Source: Tourism Research Australia – Tourism Profiles for Local Government Areas in Regional Australia – New South Wales 2009

A major issue in the mining areas of Singleton and Muswellbrook is the impact of *business tourism.* Motels and other accommodation in the areas have high occupancy rates due to the major expansion in mining activity and the large number of mine workers, mine contractors and construction contractors staying in this accommodation during week days.

4.5 Tourism Industry Structure

4.5.1 Tourism Employment

The following table provides estimates of employment in the tourism sector for each of the LGAs. It is based on estimation from employment data using tourism-intensity of various industries as reported in the *Tourism and Transport Forum's* most recent *National Tourism Employment Atlas*.[75]

The estimates take account of the direct areas of employment (eg. accommodation and restaurants etc.) and the tourist expenditure impacts on other sectors (eg. the retail spending of visitors). It indicates that: tourism accounted for over 2000 direct jobs in the Upper Hunter Region or 5% of jobs in the region; the largest cluster was in Great Lakes with 745 jobs (7% of employed residents) or 37% of Upper Hunter Region tourism jobs; Singleton was the next largest area with 480 tourist jobs; and Muswellbrook had 331 jobs.[76]

It should be noted that this data is based on the total number of jobs and includes both part-time and full time jobs. In addition jobs numbers are in mid-year and do not take account of casual seasonal employment during peak summer periods. This seasonal employment could add another 30% to job numbers (up to 600 jobs across the Upper Hunter Region) during the peak periods.[77]

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74 Great Lakes Council indicate that in 2010 for the LGA there were 26% VFR, 23 13% stayed in motels, 1722% in rented houses or units, and 1928% in caravan/camping areas.

75 TTF National Tourism Atlas 2008 P2.

76 TTF data indicates that 4.7% of the NSW workforce was employed in tourism jobs. (TTF National Tourism Atlas 2008 P3)

77 On an FTE basis this 600 casual jobs would translate into an additional 100-150 FTE or a regional total of around 2200 jobs.

Table 46.

Table 47. Estimated Tourism Jobs by Local Government Area

Sector	Singleton	Muswell brook	Upper Hunter LGA	Dungog	Gloucester	Great Lakes	Total UH Region	Tourism intensity - Share of Sector (%)
Agriculture	14.9	14.4	34.6	12.3	9.4	13.6	99.2	2.8
Manufacturing	24.2	15.1	12.1	2.7	4.5	14.3	72.9	2.8
Retail	81.8	56.7	39	14.8	14.2	109.7	316.2	7.7
Accommodation	105.3	60.5	52.7	44	24.4	272.7	559.6	78.6
Food and beverage services	132.5	119.3	65.4	32.1	26.2	239.4	614.9	28.2
Transport	35	21.3	17.2	10.7	6.6	25.8	116.6	9.8
Education and training	5.4	3.9	4	2.2	1.3	6.9	23.7	1.0
Arts and recreation	6	6.4	11.9	2.1	1.2	21.6	49.2	11.3
Personal services	74.9	33.9	13.7	7.9	6.4	40.6	177.4	11.3
Total Tourism Jobs	**480**	**331**	**251**	**129**	**94**	**745**	**2030**	
Total Employed Residents	10316	6723	6195	3460	1879	10619	38134	
Tourism Jobs Share (%)	4.7	4.9	4.0	3.7	5.0	7.0	5.3	
LGA Share of Regional Tourism Jobs (%)	**23.6**	**16.3**	**12.3**	**6.3**	**4.6**	**36.7**	**100.0**	

Source: ABS Census 2006 Working Population Data. Buchan Consulting Estimates using TTF tourism industry shares in National Tourism Atlas 2008 P2.

Another way of looking at tourism jobs is the occupation of residents, who are employed in tourism related occupations. This data shows a total of 2572 persons employed in these occupations (eg. 1008 in Great Lakes and 534 in Singleton). It should be noted that over 75% of hospitality workers are servicing the local population and this data does not take account of the number of retail jobs (eg. food related, supermarkets, takeaway, clothing etc.), which are influenced by levels of visitor expenditure.

Table 48. Employed Residents in Tourism Related Occupations - Upper Hunter LGA 2006

Occupation	Singleton	Muswell brook	Upper Hunter	Dungog	Gloucester	Great Lakes	Upper Hunter Region Total
Accommodation							
Accommodation and Hospitality Managers, nfd	3	4	0	0	0	11	18
Hotel and Motel Managers	33	19	33	17	8	60	170
Hotel Service Managers	3	0	0	0	0	8	11
Caravan Park and Camping Ground Managers	4	6	3	3	3	38	57
Other Accommodation and Hospitality Managers	24	4	10	6	3	27	74
Other Hospitality, Retail and Service Managers	30	22	28	6	3	53	142
Hospitality							
Bar Attendants and Baristas	63	64	**67**	38	23	166	421
Cafe and Restaurant Managers	24	8	17	12	6	68	135
Cafe Workers	13	11	12	4	3	24	67
Chefs	42	17	19	13	6	77	174
Cooks	58	38	55	16	12	94	273
Fast Food Cooks	36	28	15	6	6	51	142
Hospitality Workers, nfd	4	3	0	4	0	4	15
Other Hospitality Workers	6	3	0	3	0	4	16
Waiters	103	60	43	29	17	162	414
Transport							
Air Transport Professionals	0	3	3	0	0	3	9
Bus and Coach Drivers	36	32	31	24	13	52	188
Automobile Drivers	22	12	3	0	0	17	54
Marine Transport Professionals	3	0	0	3	3	14	23
Train Drivers	3	3	4	3	4	7	24
Activities and Events							
Amusement, Fitness and Sports Centre Managers	3	3	3	3	0	8	20
Conference and Event Organisers	6	0	5	0	0	11	22
Gallery, Museum and Tour Guides	5	3	3	3	3	9	26
Outdoor Adventure Guides	0	0	0	0	0	9	9
Travel Advisors							
Ticket Salespersons	3	3	3	0	0	6	15
Tourism and Travel Advisers	7	3	9	5	4	19	47
Travel Attendants	0	0	0	0	0	6	6
Total	**534**	**349**	**366**	**198**	**117**	**1008**	**2572**

Source: ABS Census 2006 Selected Occupations, Resident Population Data

4.5.2 Tourism Businesses

The Tourism Research Australia data indicates that there were a total of 2262 tourism businesses across the six LGAs in the Upper Hunter Region. In all, 44% were operated by proprietors (with no employees) and 30% employed between 1 and 4 persons. There were 129 businesses employing more than 20 persons, most of which were located in Great Lakes LGA, reflecting the importance of coastal tourism to this area.
Tourism directly supports cleaning, construction services, real-estate and property management businesses. It also impacts on education and contributes substantially to retail.

Table 49. Summary of Tourism Businesses in Upper Hunter Region by LGA as at June 2007

	Singleton		Muswellbrook		Upper Hunter LGA		Dungog		Gloucester		Great Lakes		Total UH Region		NSW Avg	Aust Avg
Tourism businesses	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**%**	**%**
Non-employing businesses	198	43	99	38	177	50	108	47	63	46	348	43	993	44	50	50
Micro businesses (1-4 employees)	150	32	90	34	96	27	75	33	36	26	240	29	687	30	29	27
Small businesses (5-19 employees)	87	19	45	17	72	20	39	17	33	24	177	22	453	20	15	16
Medium to large businesses (20 or more employees)	30	6	27	10	9	3	6	3	6	4	51	6	129	6	6	7
Total businesses	**465**	**100**	**261**	**100**	**354**	**100**	**228**	**100**	**138**	**100**	**816**	**100**	**2262**	**100**	**100**	**100**

Source: Tourism Research Australia, Tourism Profiles for Local Government Areas in Regional Australia New South Wales March 2008

5 Services Industries

5.1 Overview

Employment in services in each of the LGAs is largely driven by the size and characteristics of the population in each of the areas. The following shows employment data for 4 major industry sectors – Health, Aged Care, Education and Retail.

Table 50. Employment in Key Service Sectors Upper Hunter Region 2006 (Employed Residents)

Summary Table	Singleton		Muswellbrook		Upper Hunter LGA		Dungog		Gloucester		Great Lakes		Total – Upper Hunter Region	
	Persons	Share	Persons	Share	Persons	Share	Persons	Share	Persons	Share	Persons	Share	Persons	Share
Services														
Health	359	3.5	264	3.9	260	4.2	182	5.3	152	8.1	682	6.4	1872	4.9
Aged Care	226	2.2	105	1.6	194	3.1	135	3.9	39	2.1	502	4.7	1,198	3.1
Education	519	5.0	370	5.5	372	6.0	264	7.6	117	6.2	682	6.4	2,300	6.0
Retail	1,010	9.8	680	10.1	594	9.6	324	9.4	182	9.7	1,475	13.9	4,198	11.0
Total 4 Sectors	2114	20.5	1419	21.1	1420	22.9	905	26.2	490	26.1	3341	31.4	9568	25.0
All Employed Residents	10316	100.0	6723	100.0	6195	100.0	3460	100.0	1879	100.0	10619	100.0	38134	100.0

Source: ABS Census 2006, Resident Population Data (Employed Residents)

In the main, the size of the in-person service sector is driven by the scale of the population. However in the region there is some leakage of retail spending from Singleton and Muswellbrook to Maitland and Newcastle for specialised retail and other services. There is also retail leakage in the other LGAs to some larger centres.

Great Lakes is a service economy and it has limited mining jobs or no substantial manufacturing activity. In all, 72% of jobs were in services, with 60% in in-person services: comprising 16% in retail; accommodation and food services 13%; health care and social assistance 12%; and 8% education and training.

All of the LGAs have a relatively low share of jobs in knowledge and business services, with the major component being professional, scientific and technical services (which includes accounting, legal and consulting services). This professional component of jobs is driven by the scale of business in the region and the population size. Given the scale of the Lower Hunter Region, many of the specialist business and technical services are located in the major centres of Newcastle and Maitland.

Table 51. Service Jobs in the Upper Hunter Region 2006

Industry Sectors - Services	Singleton	Share %	Muswellbrook	Share %	Upper Hunter LGA	Share %	Dungog	Share %	Gloucester	Share %	Great Lakes	Share %	Total Upper Hunter Region	
A. Knowledge and Business Services														
Information media and telecommunications	60	0.5	44	0.6	13	0.3	14	0.7	15	0.9	62	0.7	208	0.5
Financial and insurance services	144	1.2	105	1.3	65	1.4	24	1.2	18	1.0	178	2.0	534	1.4
Rental, hiring and real estate services	210	1.7	140	1.8	36	0.8	24	1.2	23	1.3	283	3.1	716	1.9
Professional, scientific and technical services	461	3.7	326	4.1	178	3.8	89	4.4	65	3.7	336	3.7	1,455	3.8
Administrative and support services	320	2.6	120	1.5	53	1.1	39	1.9	21	1.2	209	2.3	762	2.0
Total	**1195**	**9.7**	**735**	**9.3**	**345**	**7.3**	**190**	**9.3**	**142**	**8.2**	**1,068**	**11.9**	**3,675**	**9.7**
B. In-Person Services														
Retail trade	1,062	8.6	736	9.3	506	10.8	191	9.4	184	10.6	1,425	15.8	4,104	10.9
Accommodation and food services	604	4.9	503	6.4	299	6.4	170	8.3	124	7.1	1,196	13.3	2,896	7.7
Public administration and safety	766	6.2	354	4.5	209	4.4	132	6.5	94	5.4	465	5.2	2,020	5.3
Education and training	543	4.4	390	4.9	402	8.6	220	10.8	128	7.4	692	7.7	2,375	6.3
Health care and social assistance	559	4.5	520	6.6	387	8.2	155	7.6	187	10.8	1,113	12.4	2,921	7.7
Arts and recreation services	53	0.4	58	0.7	105	2.2	19	0.9	11	0.6	191	2.1	437	1.2
Other services	663	5.4	300	3.8	120	2.6	71	3.5	57	3.3	359	4.0	1,570	4.2
Total	**4250**	**34.4**	**2861**	**36.3**	**2028**	**43.2**	**958**	**47.0**	**785**	**45.2**	**5,441**	**60.4**	**16,323**	**43.2**
Total Services (A+B)	**5445**	**44.0**	**3596**	**45.6**	**2373**	**50.5**	**1148**	**56.3**	**927**	**53.4**	**6509**	**72.3**	**19998**	52.9
Total All Jobs	**12368**		**7888**		**4698**		**2039**		**1737**		**9,004**		**37823**	

Source: ABS Census 2006 Working Population Data

Broadly the distribution of jobs in each sector largely reflected the relative population size of each LGA. However there were a few factors driving the service mix in the region.

- Singleton accounted for 32% of regional professional, scientific and technical services jobs and 42% of administrative and support services, which is largely due to the long term servicing role that the region has played for the mining sector.
- Great Lakes LGA had 41% of accommodation and food services jobs reflecting both population size and its role as a major tourism destination. Great Lakes has 38% of regional health care and social assistance jobs and this reflects the older age structure of a larger population.
- The two areas with the strongest growth in population had the highest shares in rental, hiring and real estate services- Great Lakes (39%) and Singleton 29%. This reflects the growth in housing and house sales in both these areas.

Table 52. Service Jobs in the Upper Hunter Region 2006 – Share across the Region

Industry Sectors - Services	Singleton	Share %	Muswell brook	Share %	Upper Hunter	Share %	Dungog	Share %	Gloucester	Share %	Great Lakes	Share %	Total Upper Hunter Region	
A. Knowledge and Business Services														
Information media and telecommunications	60	28.8	44	21.2	13	6.3	14	6.7	15	7.2	62	29.8	208	100
Financial and insurance services	144	27.0	105	19.7	65	12.2	24	4.5	18	3.4	178	33.3	534	100
Rental, hiring and real estate services	210	29.3	140	19.6	36	5.0	24	3.4	23	3.2	283	39.5	716	100
Professional, scientific and technical services	461	31.7	326	22.4	178	12.2	89	6.1	65	4.5	336	23.1	1,455	100
Administrative and support services	320	42.0	120	15.7	53	7.0	39	5.1	21	2.8	209	27.4	762	100
Total	**1195**	**32.5**	**735**	**20.0**	**345**	**9.4**	**190**	**5.2**	**142**	**3.9**	**1,068**	**29.1**	3,675	**100.0**
B. In-Person Services														
Retail trade	1,062	25.9	736	17.9	506	12.3	191	4.7	184	4.5	1,425	34.7	4,104	100
Accommodation and food services	604	20.9	503	17.4	299	10.3	170	5.9	124	4.3	1,196	41.3	2,896	100
Public administration and safety	766	37.9	354	17.5	209	10.3	132	6.5	94	4.7	465	23.0	2,020	100
Education and training	543	22.9	390	16.4	402	16.9	220	9.3	128	5.4	692	29.1	2,375	100
Health care and social assistance	559	19.1	520	17.8	387	13.2	155	5.3	187	6.4	1,113	38.1	2,921	100
Arts and recreation services	53	12.1	58	13.3	105	24	19	4.3	11	2.5	191	43.7	437	100
Other services	663	42.2	300	19.1	120	7.6	71	4.5	57	3.6	359	22.9	1,570	100
Total	**4250**	**26.0**	**2861**	17.5	**2028**	12.4	**958**	5.9	**785**	4.8	**5,441**	33.3	16,323	100
Total Services (A+B)	**5445**	**27.2**	**3596**	**18.0**	**2373**	**11.9**	**1148**	**5.7**	**927**	**4.6**	**6509**	**32.5**	**19998**	**100.0**
Total All Jobs	**12368**	**32.7**	**7888**	**20.9**	**4698**	**12.4**	**2039**	**5.4**	**1737**	**4.6**	**9,004**	**23.8**	**37823**	**100**

Source: ABS Census 2006 Working Population Data

6 Coal Mining

6.1 Overview

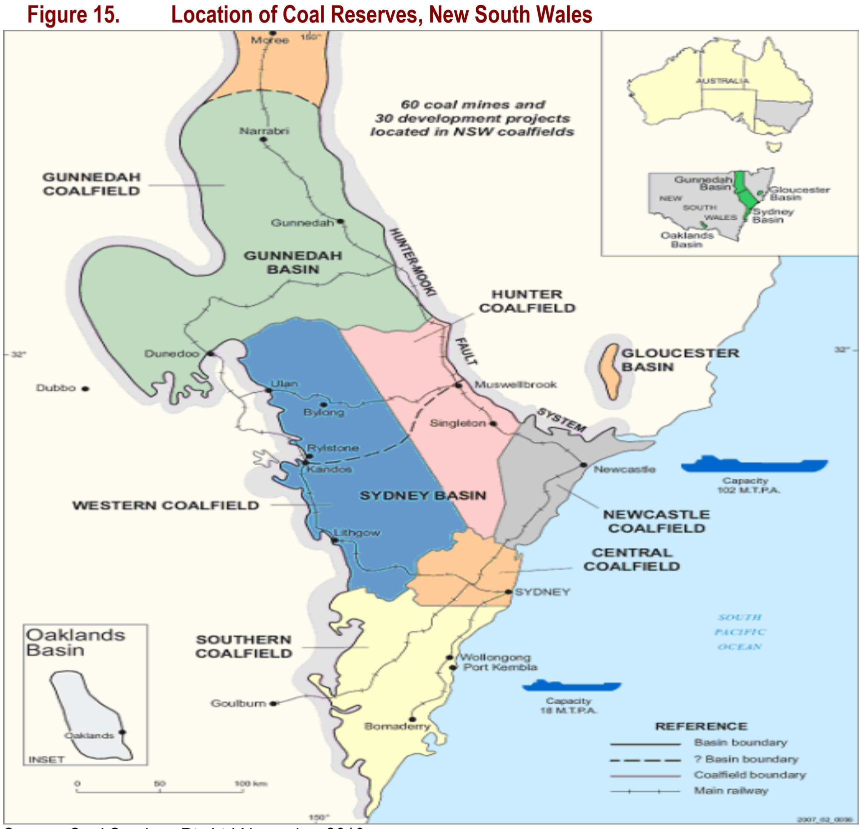
This chapter provides an analysis of employment in coal mining and mining support activities in the Upper Hunter Region.[78]

The Upper Hunter is an energy region, and has New South Wales' major concentrations of coal mining and electricity generation. This energy role will remain into the long term with some changes in the mix of energy sources for power generation.

Policy changes will have some impacts on the energy sector in the region. It is recognised that there will be a price on carbon emissions and new rules in future for emissions trading. A major issue will be the adjustment measures that are implemented for the mining and energy sectors nationally and the impacts of these policies on the Upper Hunter Region. In export markets, the coal will remain strong as there will be ongoing demand for the generation of peak load electricity in the major markets. Based on current production rates, the recoverable coal reserves in the Hunter and Gunnedah Coal Fields have an estimated life of 40-50 years.

Australia is a major exporter of coal. The major coal resources in New South Wales are located in the 500 km long, 150 km wide Sydney-Gunnedah Basin, which stretches from the south of Wollongong to the north of Newcastle, and north-west through Narrabri into Queensland.[79] There are five major coalfields in the Sydney-Gunnedah Basin.

Figure 15. Location of Coal Reserves, New South Wales



Source: Coal Services Pty Ltd November 2010

78 This data includes: ABS Census 2001 and 2006 data; Hunter Investment Prospectus 2009 HEDC;; Coal Services Pty Ltd Statistics Service; and NSW Coal Industry Profile 2009 DPI
79 Hunter Investment Prospectus 2009 HEDC

The Hunter Coalfield is the largest producing area in New South Wales and accounts for 4,493 million tonnes or 39% of recoverable coal reserves in NSW. There are significant coal reserves in the Hunter and Gunnedah fields (which are estimated to have a life of 40-50 years). Of the saleable coal sourced from this area, around 80% is exported, with the balance mainly being used by the power industry.

Table 53. Estimated Recoverable Coal Reserves, New South Wales 2008

Coalfield	Reserves (Mt)	Share of Total Reserves %
Hunter	4,493	39.0
Newcastle	1,648	14.3
Gloucester	29	0.3
Southern	786	6.8
Oaklands	1,280	11.1
Western	1,796	15.6
Gunnedah	1,488	12.9
Total NSW	**11,520**	100.0

Source: New South Wales Coal Industry Profile 2009, DPI NSW P3

Coal is shipped through the Port of Newcastle to major markets including: Japan, Korea, and Taiwan. Export demand levels will remain strong in the medium to long term (as there will continue to be demand from existing and new technology coal fired electricity plants). This long term export future is reflected in the major upgrades in coal loader capacity at the Port of Newcastle and improvements in rail infrastructure.

Similarly within medium to long term horizons, coal will continue to be required to meet NSW's base load electricity supply requirements. This will be progressively supplemented by a matrix of new gas-fired generation capacity (with several major gas pipeline projects underway) and some renewables.

Employment in the Coal Sector

Coal mining underpins the Hunter Region's economy. HEDC estimates indicated that in 2009, the sector accounted for around 9000 direct jobs and a total of 40,000 indirect jobs (mining support, suppliers and the multiplier impacts of persons employed in the sector) that extend from the Upper Hunter and Lower Hunter coalfields into Newcastle and other areas of the Lower Hunter.[80]

Major coal operators in the Hunter Region are: Coal & Allied Industries Limited (part of Rio Tinto Group) (Mt Thorley Warkworth, Hunter Valley Operations and Bengalla, Mount Pleasant Project); Xstrata Coal- Xstrata operates 13 coal mines (including Mt Owen, Ravensworth, Bulga and Beltana, Mangoola, Glendell); Centennial operates underground mines (at Awaba, Mandalong, Myuna, Newstan and Mannering in the Lake Macquarie area); BHP Billiton, operates the Mt Arthur Coal open-cut coal mine near Muswellbrook; Anglo Coal operates Drayton; White Mining Limited (Felix Resources) operates the Ashton Coal Project; and Gloucester Coal Limited has two mining operations (Stratford and Duralie in the Gloucester Geological Basin).[81]

Direct employment in mining comprises a number of occupations: skilled trades, professionals and semi-skilled occupations. Support services to the sector comprise: engineering, manufacturing, transport, construction, OHS services, employment services and research and development. These support services extend right through the Hunter Region and are also located in Newcastle. Many of the engineering support services and other mining support services, which need to be close to the mines, are located in industrial estates in the major Upper Hunter mining centres of Singleton and Muswellbrook.

- In 2006 a total of 5,500 mining jobs were in the Upper Hunter Region, with Singleton accounting for 70% of these jobs (3,794) and Muswellbrook for 28% of the jobs.

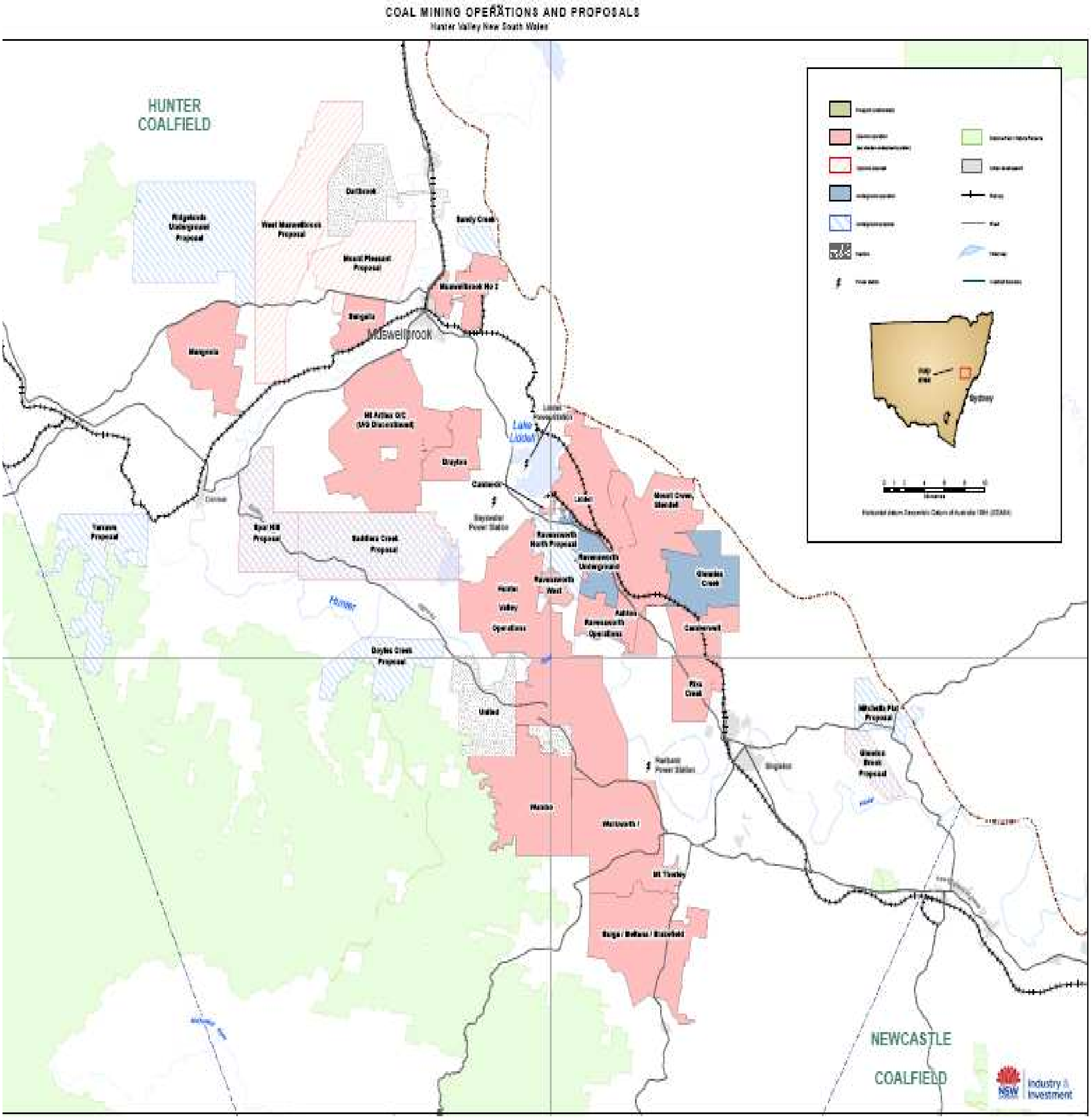
80 Hunter Investment Prospectus 2009 HEDC P51
81 Hunter Investment Prospectus 2009 HEDC P51

- When mining support activities are included, then the dominance of mining for jobs in the region is highlighted. An analysis was made of jobs data by industry and the key sectors that are providing mining support goods and services were identified.
- A detailed analysis of industry data shows that in Singleton an estimated 1583 jobs were involved in mining support activities, taking the total of mining related jobs to 5377 or 40% of total jobs in the LGA (in 2006). In the case of Muswellbrook, mining support jobs totalled an estimated 956 and meant that around 31% of jobs in the LGA were mining related (2478 mining jobs and support jobs). In total, the mining related jobs (direct + support) located in the two LGAs totalled 7855 jobs.
- Based on the increased number of mining jobs in the period since 2006, this would imply the following job numbers in the region. In June 2008, there were an estimated 8,384 mining jobs in the two LGAs, with an estimated 4024 additional jobs in mining support activities. By June 2010 direct mining employment in the Singleton North West Region had increased to 11,179 (around 10,500 in the two LGAs), with indirect support jobs likely to now be over 5000.

This growth in employment in mining sector has been accommodated by some increased recruitment of local residents, but mainly by a major increase in the mobile workforce, who commute from areas in the Lower Hunter (or from further afield and stay in the area during their shift periods). There is major competition for skilled labour in these areas and this is impacting on other industries that cannot pay the wage rates that are offered in mining.

6.2 Mines in the Region

Figure 16. Coal Mines and Proposals – Upper Hunter Region



Source: Coal Mining Operations and Proposals Hunter Valley NSW Map, Industry and Investment NSW November 2010

In 2008, there were a total of 18 mines operating in the Hunter Coalfield, as well as 6 proposed new mine sites. Raw coal production in the Hunter Coalfield totalled 112.49 million tonnes of which 80.44 million tonnes or 72% was saleable.

Almost 80% of this coal is exported, with the balance consumed primarily by the region's coal-fired power stations. There are four main generators supplying the National Electricity Market in the Hunter Region, all of which were government owned (prior to the sales in late 2010) and predominantly coal-fired. These generators are Macquarie Generation, Eraring Energy, Delta Electricity and Redbank Power Station.

Coal mining operations in the Upper Hunter are mainly concentrated in the LGAs of Singleton and Muswellbrook. The following table provides information on mine location, ownership, production and reserves. In addition, Gloucester Coal operates mines in the Gloucester Basin coal deposits. The largest open cut mines were Mount Arthur Operations (Muswellbrook), Hunter Valley Operations, and Mount Thorley Warkworth. Bulga/Beltana are the largest underground mines. All of these larger mines (other than Mount Arthur) are located in Singleton LGA.

Table 54. Mine Details - Upper Hunter Region 2009

Mines	Sole or Major Owner(s)	Type	Location	Raw Production (mt)	Saleable Production (mt)	Coal Reserves (mt)
Ashton	Felix Resources Ltd (60%)	OC & UG	Singleton	4.89	2.96	72.8
Bengalla	CNA Bengalla (40%) and Wesfarmers Bengalla (40%)	OC	Muswellbrook	6.83	5.35	190.0
Bickham Proposal	Big Ben Holdings (50%) and Winsian Investments (50%)	OC	Scone			36.3*
Bulga/Beltana	Saxonvale Coal (87.5%)	OC & UG	Singleton	14.51	9.48	272.7
Camberwell (Integra)	Vale Australia (61.2%))	OC	Singleton	3.92	2.26	6.4
Cumnock South	Cumnock Coal (100%)	OC	Singleton	1.22	0.87	3.2
Drayton	Anglo Coal Australia (74.75%)	OC	Muswellbrook	4.89	4.61	43.4
Glennies Creek	Vale Australia (61.2%)	UG	Singleton	2.94	1.57	66.7
Hunter Valley Operations	Coal and Allied (100%)	OC	Singleton	14.15	10.60	490.9
Liddell	Enex Liddell (35%)	OC	Singleton	4.32	2.95	104.3
Mangoola Proposal	Xstrata Coal (100%)	OC	Denman			138.0
Mitchell's Flat Proposal	Xstrata Coal (100%)	OC & UG	Singleton			272.5*
Mount Arthur Operations	Hunter Valley Energy Coal (100%)	OC	Singleton	14.31	11.75	851.0*
Mount Owen	Xstrata Coal (100%)	OC	Singleton	9.08	5.25	119.2
Mount Pleasant Proposal	Coal and Allied (100%)	OC	Muswellbrook			458.7
Mount Thorley Warkworth	Coal and Allied (100%	OC	Singleton	13.43	8.89	443.2
Muswellbrook	Idemitsu Australia (100%)	OC	Muswellbrook	1.45	1.23	13.7
Ravensworth/Narama	Xstrata Coal (100%)	OC	Singleton	4.15	4.15	29.9
Ravensworth U/G	Resource Pacific Holdings (100%)	OC	Singleton	1.10	0.69	73.0
Rix's Creek	Big Ben Holdings (100%)	OC	Singleton	2.2	1.3	60.1
Saddler's Creek Proposal	Anglo Coal (74.75%)	OC & UG	Muswellbrook			483.3*
Sandy Creek Proposal	Idemitsu Australia (100%)	UG	Muswellbrook			18.0
United	Abelshore Coal (95%)	G	Singleton	3.40	2.62	12.7
Wambo	Hunter Coal (75%)	OC & UG	Singleton	5.7	3.9	233.0
Stratford	Gloucester Coal	OC	Stratford	1.76	1.19	23.3
Duralie	Gloucester Coal	OC	Duralie	1.01	0.70	5.2
Total				**115.26**	**82.32**	**4521.5**

OC = Open Cut Mine, UGr = Underground Mine. *Resources, coal reserves not available

Source: Based on information obtained from HEDC Newcastle and the Hunter Region Prospectus 2008-2009 and the NSW Department of Primary Industries, New South Wales 2009 Coal Industry Profile P45 –72

Table 55. Other Mining Proposals in the Region (At November 2010)

Other Mining Proposals	
West Muswellbrook Proposal	Yarrawa Proposal
Spur Hill Proposal	Doyles Creek Proposal
Ridgelands Proposal	Ravensworth North Proposal
Glendon Brook Proposal	

Source: Coal Mining Operations and Proposals Hunter Valley NSW Map, Industry and Investment NSW November 2010

6.3 Mining Jobs in the Upper Hunter Region

6.3.1 Direct Mining Jobs

Most of the mining jobs in the Upper Hunter Region are located in the Singleton and Muswellbrook LGAs. In 2006 a total of 5,500 mining jobs were in the region, with Singleton accounting for 70% of these jobs (3,794) and Muswellbrook for 28% of the jobs.

- While there were a total of 5,500 jobs, there were 3,812 Upper Hunter Region residents occupying these jobs, with the balance of almost 1,700 employees commuting from other parts of the Hunter Region (including the Lower Hunter). Nevertheless mining is the major sector of employment for residents in both the LGAs of Muswellbrook and Singleton.
- The direct significance the mining industry has on these areas becomes apparent when it is considered that over 30% of total jobs in the Singleton LGA are direct jobs in the mining industry. Similarly, 19% of people jobs in Muswellbrook are direct jobs in the mining sector.
- When mining support activities are included then the dominance of mining for jobs in the region is highlighted. An analysis was made of jobs data by industry and the key sectors that are providing mining support goods and services were identified.

Table 56. Direct Employment in Mining: Upper Hunter Region LGAs (Employed Residents and Working Population) 2006

Industry	Muswellbrook		Share of UH Region	Singleton		Share of UH Region	Upper Hunter Region Remainder		Share of UH Region	Total Upper Hunter Region	
	Employed Residents	Jobs	%	Employed Residents	Jobs	%	Employed Residents	Jobs	%	Employed Residents	Jobs
Mining, nfd	76	75	32.9	104	153	67.1	38	0	0.0	218	228
Coal Mining	929	1,328	28.3	1,705	3,293	70.2	475	70	1.5	3109	4691
Oil and Gas Extraction	0	5	33.3	8	6	40.0	3	4	26.7	11	15
Metal Ore Mining	4	0	0.0	9	13	19.1	38	55	80.9	51	68
Non-Metallic Mineral Mining and Quarrying	11	8	15.4	11	14	26.9	38	30	57.7	60	52
Exploration and Other Mining Support Services	77	106	23.8	224	315	70.6	62	25	5.6	363	446
Total	**1,097**	**1,522**	**27.7**	**2,061**	**3,794**	**69.0**	**654**	**184**	**3.3**	**3812**	**5,500**

Source: Buchan Analysis of ABS Population Census (Place of Usual Residence) and ABS Population Census (Place of Work)

6.3.2 Mining Support Jobs

A detailed analysis of industry data shows that in Singleton an estimated 1583 jobs were involved in mining support activities, taking the total of mining related jobs to 5377 or 40% of jobs in the LGA (in 2006). In the case of Muswellbrook, mining support jobs totalled an estimated 956 and meant that around 31% of jobs in the LGA were mining related (2478 mining and support). In total, mining related jobs (direct + support) located in the two LGAs totalled 7855 jobs.

Table 57. Employment in Mining & Mining Support – Singleton and Muswellbrook 2006

Location	2006 Jobs in LGA	Share of total Jobs in LGA %
Singleton		
Mining Direct	3,794	30.7
Mining Support	**1583**	12.8
Total	**5377**	**40.3**
Muswellbrook		
Mining Direct	1,522	19.3
Mining Support	**956**	12.1
Total	**2478**	**31.4**
Total Singleton & Muswellbrook (Mining Direct)	5,316	26.2
Total Singleton & Muswellbrook (Mining Direct and Mining Support)	**7855**	**38.8**

Source: ABS Census 2006 (Working Population Data) and Buchan Consulting Estimates

Table 58. Mining and Mining Related Employment Estimates 2006

Industry	Singleton Jobs	Muswellbrook Jobs	Total Muswellbrook & Singleton Jobs
Mining			
Mining, nfd	153	75	228
Coal mining	3293	1328	4621
Oil and gas extraction	6	5	11
Metal ore mining	13	0	13
Non-metallic mineral mining and quarrying	14	8	22
Exploration and other mining support services	315	106	421
Total Mining (Direct)	**3794**	**1522**	**5316**
Mining Support Activities (estimated mining related jobs)			
Chemicals	75	22	96
Metals & Engineering	230	155	385
Heavy Construct & Services	201	205	406
Machinery & Equip Wholesale	65	42	106
Road Transport	166	97	263
Equipment Hire Services	56	32	88
Professional & Technical Services	257	181	437
Maintenance and Repair Services	268	104	372
Other Services	265	120	385
Total Mining Support	**1583**	**956**	**2539**
Total Mining and Support			
Direct Mining	3794	1522	5316
Total Mining Related Jobs - Support	**1583**	**956**	**2539**
Total Direct & support	**5377**	**2478**	**7855**
Total Jobs in LGA	**12368**	**7887**	**20255**
Total Mining Related Jobs as % of Total Jobs	43.5	31.4	38.8
Direct Mining %	30.7	19.3	26.2
Mining Support %	12.8	12.1	12.5

Source: ABS Census 2006 (Working Population Data) and Buchan Consulting Estimates

6.3.3 Total Mining Employment

According to ABS Census data, the mining sector employed 5500 people in the Upper Hunter Region in 2006, with 5316 of these jobs being in the two LGAs of Singleton and Muswellbrook. Coal Services Pty Ltd data for 2006 was also examined and this indicates that a total of 6173 people were employed at mines in the Hunter Coalfields.[82]

An analysis of the 2006 Census data shows that within the two LGAs, each direct mining job generated an additional 0.48 mining support jobs. The ratio was higher for Singleton and lower for Muswellbrook, this represents the different scale of mining activity in the two LGAs and the number of support activities located in Singleton.

Based on the increased number of mining jobs in the period since 2006, this would imply the following job numbers in the region. In June 2008, there were an estimated 8384 mining jobs in the two LGAs, with an estimated 4024 additional jobs in mining support activities. By June

82 New South Wales Coal Industry Profile 2009, NSW Department of Primary Industries.

2010 direct mining employment in the Singleton -North West Region had increased to 11,179 (around 10,500 in the two LGAs), with indirect support jobs likely to now be over 5000.[83]

Table 59. Coal Industry Employment NSW and Estimates for Upper Hunter Region 2002-2010

Coal Industry Employment	Employment 01/02	Employment 05/06	Employment 06/07	Employment 07/08	Employment 09/10
Mining Production Employees- New South Wales (A)	10,052	12,658	13,392	15,387	19,087
Upper Hunter Region					
Upper Hunter (B, C) Mining Production Employees	4,188	6,173	6,720	8,384	11,179 Singleton –North West (D)
Mining Support Jobs Ratio	0.48	0.48	0.48	0.48	0.48
Mining Support Jobs	2,010	2,963	3,226	4,024	5,366
Total	6,198	9,136	9,946	12,408	16,545

Source: A. Coal Services Pty Ltd Annual Report 2008/09 P10; B: ABS Census and C: New South Wales 2009 Coal Industry Profile; D: Coal Services Australia Statistics.

Occupational data was examined to assess the extent of mining employment (direct and support industries). It produced similar estimates of mining related employment (9143 based on industry estimates and 9208 on occupational estimates). In 2006 an estimated 3274 people were employed in mining related occupations in Muswellbrook (this amounts to 42% of total jobs in the area). Singleton had more reliance on the mining industry as a source of employment with almost half of its workers (5934) in mining related jobs.

Table 60.

Table 61. Mining Employment by Occupation Group - Estimates 2006

Occupation	Muswellbrook	Singleton	Total Singleton and Muswellbrook
Professionals			
Total Mining Related Professional Jobs	250	398	648
Trades Persons			
Total Mining Related Technician and Trade Worker Jobs	1,439	2,371	3,810
Machinery operators and drivers			
Total Mining Related Machinery Operators and Drivers Jobs	1,234	2,723	3,957
Labourers			
Total Mining Related Labourers Jobs	351	442	793
Total Mining & Related			
Total Mining & Related Jobs	**3,274**	**5,934**	**9,208**
Total Jobs in LGA	7,886	12,367	**20,253**
Mining & Related Jobs as % of Total Jobs	41.5	48.0	45.5

Source: ABS Census 2006 (Working Population data); Buchan Consulting Estimates

6.3.4 Employment Trends

Employment has continued to grow as mines have been developed and extended. In the period between 2001 and 2006 direct employment in mining rose by 31% in the Upper Hunter Region, from 4,188 to 5500. The growth comprised an increase in coal mining of 799 jobs and a major increase in services to mining (from 93 to 446 jobs). Most of the growth has occurred in Singleton and Muswellbrook - employment in mining in Muswellbrook grew by 49% in the 10 years to 2006 and mining employment in Singleton LGA grew by 30% over this same period.

83 Whitehaven Coal employs around 500 persons at two mines in the Narrabri area in the North West. It operates the Sunnyside Mine about 15km west of Gunnedah and the Rocglen mine 25km to Gunnedah's north. Expansion of coal mining is expected in the Caroona and Watermark areas 40km to Gunnedah's south east. BHP Billiton and China's Shenhua Energy have acquired exploration licenses (ELs) and expect to commence mining around 2012 - 2015. Each EL has an estimated coal reserve of about 500 million tonnes each, with both operations expected to be underground long wall mining.

Table 62. Employment in Mining: Upper Hunter Region (Working Population) 2001 - 2006

	Dungog		Gloucester		Great Lakes		Muswellbrook		Singleton		Upper Hunter LGA		Upper Hunter Region	
	2001	2006	2001	2006	2001	2006	2001	2006	2001	2006	2001	2006	2001	2006
Mining														
Mining, undefined	0	0	0	0	10	0	13	75	66	153	4	0	93	228
Coal Mining	0	4	109	38	3	12	965	1,328	2,775	3,293	40	16	3,892	4,691
Oil and Gas Extraction	0	0	3	0	0	0	6	5	0	6	-1	4	8	15
Metal Ore Mining	0	0	0	36	32	19	0	0	3	13	7	0	42	68
Other Mining	8	3	0	0	9	5	9	8	11	14	23	22	60	52
Services to Mining	0	0	6	19	0	3	27	106	57	315	3	3	93	446
Total	**8**	**7**	**118**	**93**	**54**	**39**	**1,020**	**1,522**	**2,912**	**3,794**	**76**	**45**	**4,188**	**5,500**

Source: Buchan Analysis of ABS Population Census (Place of Work) 2001-2006

The following table compares coal mining jobs data from Coal Services Pty Ltd and Census 2006 data (using the Coal Services Pty Ltd definition which includes transport to coal processing plants). It also shows that employment has continued to increase strongly from 2006 to 2008 and increased to 8384 in Singleton and Muswellbrook.

Table 63. Mining Employment Estimates Singleton and Muswellbrook 2006 -2008

Location	Employment 2006 (a)	Employment 2006 (Census Data) (b)	Employment 2007 (a)	Employment 2008 (a)
Singleton	4,886	3,988	5,351	6,537
Muswellbrook	1,287	1,635	1,369	1,847
Total Singleton & Muswellbrook	**6,173**	**5,623**	**6,720**	**8,384**

Source: (a) New South Wales 2009 Coal Industry Profile (employment covers employees and contractors working at mine sites and includes transport from mines to processing plants); (b) ABS Census Data – Buchan Consulting estimates

The following table shows mining employment from June 2004 to September 2010. Singleton and Muswellbrook are in the Singleton-North West Mining Region (and make up around 90% of mining jobs in this region). Singleton-North West Region comprises the Gunnedah and the Hunter Coalfields. The data shows that between June 2008 and September 2010 another 2500 mining jobs were created in the Singleton-North West Mining Region.

Table 64. Production Employment at New South Wales Coal Mines and CPPs by Region 2004-2010

	Singleton-North West	S-NW Share %	Newcastle	West	South	New South Wales
Underground Mines						
As at end of month:						
June 2004	1,044	20.7	1,213	1,012	1,785	5,054
June 2005	1,165	20.7	1,331	1,113	2,011	5,620
June 2006	1,238	18.9	1,634	1,180	2,489	6,541
June 2007	1,387	20.4	1,670	1,259	2,476	6,792
June 2008	1,570	21.0	1,790	1,473	2,636	7,469
June 2009	1,890	22.3	2,036	1,605	2,947	8,478
June 2010	1,937	22.2	2,110	1,614	3,080	8,741
September 2010	1,940	21.6	2,089	1,665	3,281	8,975
Open Cut Mines						
As at end of month:						
June 2004	4,533	91.7	268	143	0	4,944
June 2005	5,141	90.7	311	218	0	5,670
June 2006	5,587	91.3	311	219	0	6,117
June 2007	5,825	88.3	392	383	0	6,600
June 2008	7,139	90.2	387	392	0	7,918
June 2009	7,554	89.5	333	549	0	8,436
June 2010	9,242	89.3	326	778	0	10,346
September 2010	9,318	88.8	328	848	0	10,494
All Mines						
As at end of month:						
June 2004	5,577	55.8	1,481	1,155	1,785	9,998
June 2005	6,306	55.9	1,642	1,331	2,011	11,290
June 2006	6,825	53.9	1,945	1,399	2,489	12,658
June 2007	7,212	53.9	2,062	1,642	2,476	13,392
June 2008	**8,709**	**56.6**	**2,177**	**1,865**	**2,636**	**15,387**
June 2009	9,444	55.8	2,369	2,154	2,947	16,914
June 2010	**11,179**	**58.6**	**2,436**	**2,392**	**3,080**	**19,087**
September 2010	**11,258**	**57.8**	**2,417**	**2,513**	**3,281**	**19,469**

Source: Coal Services Pty Ltd, Data November 2010 (Sept 2010 data is preliminary)

The following table compares mining jobs in the Upper Hunter with the total mining jobs in New South Wales. The Upper Hunter Share has increased its share of NSW mining jobs from an estimated 42% in 2001/02 to around 55% of jobs in 2008/09 and 59% in 2009/10.

Table 65. Coal Industry Employment NSW and Upper Hunter Region

Coal Industry Employment	Employment 2001/02	Employment 2005/06	Employment 2006/07	Employment 2007/08	Employment 2009/10
Mining Production Employees (A) NSW	10052	12658	13392	15387	19087
Upper Hunter Mining Production Employees (B, C)	4188	6173	6720	8384	11179 Singleton –North West
	<ABS Census>				
Share (%)	41.7	48.8	50.2	54.5	58.6

Source: A. Coal Services Annual Report 2008/09 P10; B: ABS Census and C: New South Wales 2009 Coal Industry Profile, DPI

Jobs growth in the mining sector will continue. For example, the impact assessment report on the Mt Arthur Mine indicates that employment would increase from current numbers of 1000 to around 2600.[84]

84 Coakes Consulting – Mt Arthur Coal Consolidation Project Social Impact and Community Engagement Report August 2009 P8

6.3.5 Commuting to Mining Jobs

A major issue is the extent of commuting to jobs located in the two main Upper Hunter mining locations. The table below indicates that in 2006, in Singleton there were a total of 1733 persons commuting to jobs in mining and in Muswellbrook there were 425 commuters. These commuters mainly came from other adjacent LGAs in the Upper Hunter (eg. Upper Hunter LGA) and from the Lower Hunter (eg. Maitland and Cessnock). This is the pattern of employment over the lifecycle of mines, with workers moving to the next mine as specific mines reach the end of their life.

The tables below provide an indication of the extent of movement to jobs, within the broader Hunter Region. In 2006 there were a total of 3164 residents of three of the Lower Hunter LGAs, employed in the mining sector, but only 855 mining jobs located in those three areas. This indicates that 2309 persons were travelling to mining jobs, most of which would have been in the Upper Hunter.

Table 66. Commuting to Jobs in the Region 2006

Location Mining Jobs (Direct)	2006 Ming Jobs (a)	2006 Employed Residents (b)	Difference Commuters (Employees living outside the LGA)	Jobs in Transport (Mining Related)	Jobs 2006 Mine + Transport
Singleton	3,794	2,061	1,733	194	3,988
Muswellbrook	1,522	1,097	425	113	1,635
Other UH Region	184	654	-470	15	199
Total Upper Hunter Region	**5,500**	**3,812**	**1,688**	**322**	**5,822**

Source: (a) ABS Census2006 Working Population Data. (b) ABS Census2006 Resident Population Data

Table 67. Mining Jobs and Residents Employed in Mining – Lower Hunter 2006

LGA	Coal Mining Jobs	Total Mining Jobs (includes coal)	LGA Residents Employed in Mining	Difference (jobs – employed residents)
Maitland	138	*337*	1,183	-846
Cessnock	229	*286*	1,384	-1,098
Newcastle LGA	97	232	597	-365
Total	**464**	**855**	**3,164**	-2,309
Coal industry profile - shows mine employment in the above areas (2006)		1514 (a)		

Source: (a) ABS Census2006 Working Population Data. (b) ABS Census2006 Resident Population Data (c) NSW Coal Industry Profile 2009 DPI

When the mining support activities (located on the industrial estates in the two LGAs) are taken into account this travel to jobs in the two mining areas is even more substantial. With the continued growth in employment in the mining sector since 2006 and the growth in mining support activities, this commuting has continued to increase. There is also a substantial workforce from further afield, who stay in Singleton and Muswellbrook and this is reflected in occupancy rates for motel accommodation and for rental housing in both areas.

Based on the estimates of commutes of 31% in 2006, the number commuting to direct mining jobs in the region in 2010 could be up to 3500 (31% of 11,258 jobs). When commuting to jobs in mining support industries are taken into account, this number could be between 4500-5000 employees commuting into Singleton and Muswellbrook each day.

The mines generally have a policy of local recruitment (meaning the Hunter Region) for operational workforces. For example, BHP Billiton has a local recruitment policy, with 80% of employees being recruited locally (this has been the policy since 2002).[85] The pattern for construction workforces is different, with 20% of the construction workforce usually recruited locally and 80% being from outside the LGA.[86] As the mines in the Upper Hunter Region and Gunnedah Basin, continue to expand, these numbers will increase. This opens up opportunities for more employees to live in areas like Singleton and Muswellbrook and Upper Hunter LGA, providing that housing is developed.

85 Coakes Consulting – Mt Arthur Coal Consolidation Project Social Impact and Community Engagement Report August 2009 P9
86 Coakes Consulting – Mt Arthur Coal Consolidation Project Social Impact and Community Engagement Report August 2009 P9

6.3.6 Employment by Mine

The following provides information on employment in specific mines. The data has been derived from the New South Wales 2009 Coal Industry Profile.[87]

Table 68. Employment by Mine- Upper Hunter Region 2006 -2008

Mines	Sole or Major Owner(s)	Type	Location	Employment 2006	Employment 2007	Employment 2008
Singleton						
Ashton	Felix Resources Ltd (60%)	OC & UG	Singleton	64	126	350
Bulga/Beltana	Saxonvale Coal (87.5%)	OC & UG	Singleton	734	825	876
Camberwell (Integra)	Vale Australia (61.2%)	OC	Singleton	227	254	268
Cumnock South	Cumnock Coal (100%)	OC	Singleton	72	63	70
Mount Thorley Warkworth	Coal and Allied (100%)	OC	Singleton	1,003	877	1,170
Glennies Creek	Vale Australia (61.2%)	UG	Singleton	199	258	290
Hunter Valley Operations	Coal and Allied (100%)	OC	Singleton	1,083	1,193	1,530
Liddell	Enex Liddell (35%)	OC	Singleton	149	201	194
Mitchell's Flat Proposal	Xstrata Coal (100%)	OC & UG	Singleton			
Mount Owen	Xstrata Coal (100%)	OC	Singleton	521	546	611
Ravensworth/Narama	Xstrata Coal (100%)	OC	Singleton	111	120	138
Ravensworth U/G	Resource Pacific Holdings (100%)	OC	Singleton	180	273	262
Rix's Creek	Big Ben Holdings (100%)	OC	Singleton	117	106	106
United	Abelshore Coal (95%)	UG	Singleton	155	193	182
Wambo	Hunter Coal (75%)	OC & UG	Singleton	271	316	490
			Total	**4,886**	**5,351**	**6,537**
Muswellbrook						
Bengalla	CNA Bengalla (40%) and Wesfarmers Bengalla (40%)	OC	Muswellbrook	261	266	304
Drayton	Anglo Coal Australia (74.75%)	OC	Muswellbrook	342	342	425
Mangoola Proposal	Xstrata Coal (100%) <approved>	OC	Denman			
Mount Arthur Operations	Hunter Valley Energy Coal (100%)	OC	Singleton	582	643	993
Mount Pleasant Proposal	Coal and Allied (100%) <Under assessment>	OC	Muswellbrook	na	na	na
Muswellbrook	Idemitsu Australia (100%)	OC	Muswellbrook	102	118	125
Saddler's Creek Proposal	Anglo Coal (74.75%)	OC & UG	Muswellbrook			
Sandy Creek Proposal	Idemitsu Australia (100%)	UG	Muswellbrook			
Total			**Total**	**1,287**	**1,369**	**1,847**
Other Upper Hunter						
Stratford	Gloucester Coal	OC	Stratford	49	58	70
Duralie	Gloucester Coal	OC	Duralie	59	96	82
Total Singleton & Muswellbrook				**6,173**	**6,720**	**8,384**
Total Singleton & Muswellbrook & Other				**6281**	**6874**	**8536**

Source: New South Wales 2009 Coal Industry Profile (employment covers employees and contractors working at mine sites and includes transport from mines to processing plants)

87 The 2009 publication provides information up to 2008

7 Electricity Generation in Hunter Region

7.1 Generation Capacity

The power generation industry in the Hunter Region produces around 80% of New South Wales' electricity supply and employs around 2200 people. Within the Hunter and Central Coast regions, four generating companies operate six coal-fired power stations supplying power to the national energy market. [88]

Of the 98 million tonnes of saleable coal sourced from the entire Hunter Region, 78% is exported. The remainder is consumed primarily by the region's coal-fired power stations. Macquarie Generation is Australia's largest electricity generator (generating around 40% of New South Wales electricity). It owns and operates the Liddell and Bayswater power stations, located between the towns of Singleton and Muswellbrook in the Upper Hunter Region.

Macquarie Generation is also the largest domestic buyer of Hunter Valley coal and employs around 610 people, most of whom live in the Upper Hunter Region. The corporation is undertaking a range of developments aimed at meeting the increasing need for power, environmental improvements and the exploration of renewable energy options.[89]

Table 69. Electricity Generation in the Hunter Region

Operator	Power Station	Location	Capacity (MW)	Average Annual Output (GWhs)
Macquarie Generation	Bayswater Power Station	Singleton-Muswellbrook	2640	17000
	Liddell Power Station	Singleton-Muswellbrook	2000	10000
Eraring Energy	Eraring Power Station	Lake Macquarie	2640	17530
Delta Electricity	Vales Point Power Station	Lake Macquarie	1320	Not Available
	Munmorah Power Station	Lake Macquarie	600	Not Available
	Redbank Power Station	20kms from Singleton	151	

Source: Hunter Investment Prospectus 2009 HEDC P53

The NSW Government is in the process of the sale of energy assets, including: the retail arms of energy corporations Energy Australia, Integral Energy and Country Energy; seven power-station development sites; and the electricity trading rights for nine state-owned power stations. It was announced in December 2010 that the various assets are being acquired by two companies: TRUEnergy and Origin Energy.

The following table shows employment in the sector in 2006. There were 846 jobs in electricity supply, with most of these being in Muswellbrook (589) and Singleton (203 jobs). Most of those employed in the sector lived in the 3 LGAs of Muswellbrook, Singleton and Upper Hunter.

Table 70. Employment in Electricity, Gas and Water Supply: Upper Hunter Region (Employed Residents and Jobs)

Industry Electricity, gas, water and waste services	Singleton		Muswellbrook		Upper Hunter LGA		Dungog		Gloucester		Great Lakes		Total UH Region	
	Res	Jobs	Res	Jobs	Res	Jobs	Res	Jobs	Res	Jobs	Res	Jobs	Res	Jobs
Electricity Supply	**267**	**203**	**319**	**589**	**123**	**4**	**32**	**14**	**6**	**7**	**43**	**29**	**790**	**846**
Gas Supply	0	0	0	0	0	0	0	0	0	0	4	0	4	0
Water Supply, Sewerage and Drainage Services	23	20	17	25	18	12	14	12	4	5	64	70	140	144
Waste Collection, Treatment and Disposal Services	11	10	5	10	6	7	7	6	0	3	55	71	84	107
Total	**301**	**233**	**341**	**627**	**147**	**23**	**53**	**32**	**10**	**15**	**166**	**170**	**1,018**	**1,100**

Source: Buchan Analysis of ABS Population Census (Place of usual residence) and ABS Population Census (Place of Work)

88 Hunter Investment Prospectus 2009 HEDC
89 Hunter Investment Prospectus 2009 HEDC

7.2 Development Projects

Macquarie sites have been the subject of several proposed developments in recent years. As well as a $50 million water treatment plant upgrade at Bayswater and Liddell Power Stations, Liddell will also undergo a turbine upgrade to provide additional capacity and reduce greenhouse gas emissions. October 2008 also saw the proposed construction of pipelines to supply methane gas as supplementary fuel to Liddell Power Stations. This project would give Liddell the means to dispose of methane gas thereby reducing the greenhouse gas effect of the coal mining process. Macquarie would then have the ability to recycle this gas for further electricity generation thus eliminating 41 million tonnes of greenhouse gases by 2020. It would be the first known, large scale implementation of supplementary methane gas fuel in an Australian coal-fired power station. Other proposed developments are detailed below.

Table 71. Future Developments

Operator	Sites	Investment	Development	Purpose	Stage
Macquarie Generation	Bayswater	$50 m	Water treatment plant upgrade	Improved efficiency and reliability	Announced October 2006
	Liddell	$100 m	Turbine upgrade	Provide additional capacity and reduce greenhouse gas emissions	Under Development
	Antiene	$100 m	Rail unloading facility	Access to reserves of coal	Construction Commenced
	Liddell		Methane gas supply lines	Reduce greenhouses gas emissions and increase energy output	Announced October 2008
Eraring Energy	Eraring PS		Upgrade all four generating units Cooling water attemperation reservoir	Enhance contribution to supply security for NSW	Seeking Approval
Delta Electricity	Vales Point	$7 m	Water Recycling Scheme	Save 230 million litres of drinking water each year	Under Development
	Munmorah	$5 m	Pilot Carbon Capture Plant	Capture greenhouse gas emissions	Under Development
	Vales Point	$55 m	Installation of fabric filters	Reduce greenhouse gas emissions	Under Development
	Munmorah		New 660 MW capacity gas-fired power station	Increase energy supply	Announced May 2007

Source: Based on information obtained from Hunter Investment Prospectus 2009 HEDC

7.3 Renewable Energy

7.3.1 Clean Energy Projects

The response to environmental challenges in the region has seen investment in projects in energy efficiency; the development of renewables (wind and solar); the extension of gas fired generation; carbon capture; clean coal projects; biomass; geo-thermal; and hydro power.

A major focus in the region has been on clean energy projects. These comprise renewables, clean coal projects and carbon capture. Newcastle is home to CSIRO's Energy Centre, which has a research focus sustainable energy, the environmental impacts of energy and fossil fuel research and development. The University of Newcastle also has a focus on energy research. This provides a regional strength in alternative energy research and energy efficiency.

Table 72. Renewable Energy Projects Hunter Region

Project	Description
Carbon Capture Project (2008-10)	CSIRO and Delta Electricity - $5 million research scale pilot facility at the Munmorah Power Station. Trials will provide support for a large-scale $150 million post combustion capture and storage demonstration project in NSW, which should be operational. by 2013
Redbank Power Station	Use of beneficiated, watered coal tailings as the primary fuel.
Solar thermal project	Ausra Australia and Macquarie Generation is building Australia's largest solar thermal project at Liddell Power Station.
Liddell Power Station	$100 million has been invested in replacing the turbines in Liddell Power Station, to improve efficiency.
Mine Gas (supplementary methane gas fuel)	Macquarie Generation is investigating the use of waste mine gas as a supplementary fuel for its coal fired station. This is the largest scale implementation of this process in Australia.
Kyoto Energy Park (Pamada)	This project near Scone that will deliver up to 200 MW of clean energy through a combination of wind, solar-thermal and other technologies. The $200 million project also includes a tourist component.
Australian Solar Institute	$ 100 million institute to be based at CSIRO's Newcastle facility.
Geodynamics	Feasibility studies by Geodynamics on the potential for geothermal power plants.
Wind Energy Precinct	The Upper Hunter LGA has been designated as a wind energy precinct.

Source: HEDC Prospectus 2009 P53

Table 73.
Table 74. **Alternative Energy Sources in the Hunter Region**

Energy Source	Operator	Site	Development	Stage
Geothermal	Geodynamics Ltd	Muswellbrook/Bulga	Geothermal Energy Plant	Investigation Stage
Solar	CBD Energy Ltd	Port Stephens	Solar Farm and Manufacturing Plant	$20m grant has been approved by the Federal Govt.
	Macquarie Generation in association with Solar Heat and Power	Liddell Power Station	Integration of solar technology with a coal-fired power station	Under Development
Biomass	Macquarie Generation	Liddell Power Station	Biomass co-firing program	In service
	Delta Electricity	Vales Point Power Station	Biomass co-firing program	In service
Hydro	Macquarie Generation	Servicing Liddell and Bayswater Power Stations	Hydroelectric Generator	In service
	Delta Electricity	Chichester Dam	Hydroelectric Generator	In service
		Dungog Water Treatment Plant	Hydroelectric Generator	In service
Wind	Energy Australia	Kooragang Island	Wind Turbine	In service
Kyoto Energy Park	Pamada	Scone	Construction and operation of a renewable energy generating facility with a total generating capacity of up to 137 megawatts and associated infrastructure, including the following components: 42 wind turbines with a total generating capacity of up to 126 megawatts; 3-10 megawatt capacity solar photovoltaic array; 1 megawatt closed loop hydro plant. Includes a visitors centre.	Project Approved

Source: Based on information obtained from HEDC Prospectus 2009

7.3.2 Renewable Energy Policy

The NSW Government has taken action in response to the expanded national renewable energy target (RET) of 20% by 2020. It is expected that initially most of the renewable energy supply will be met by expansion of wind energy. Other policies include regulation and support for development and adoption of new technologies. As part of the reforms introduced to attract new investment in renewable energy:

- Projects with the capacity of 30 megawatts or more are deemed critical infrastructure and benefit from waived application fees until June 2011, and a commitment to manage planning approvals within four months (fast tracking). Dedicated renewable energy officers have been appointed to manage regional initiatives.
- Six Renewable Energy Precincts have been designated across NSW in areas with known wind resources: New England Tablelands, Upper Hunter, Central Tablelands, NSW/ACT Border Region, South Coast and Cooma-Monaro. The Renewable Energy Precincts will help streamline the planning and approval process for wind energy developers.[90]

In all, 11 wind farms with a total of 972 turbines have been approved in NSW since 2005.

The precincts strategy is focused on encouraging development in areas that are suitable for wind energy and to involve communities in this development. Advisers are located in each precinct to assist with stakeholder engagement and project development. This includes the formation of Precinct Advisory Committees to provide advice. The Upper Hunter Precinct comprises the LGAs of Upper Hunter, Dungog, and Warrumbungle.

Several studies have been undertaken on wind farms.[91] In all 95% of respondents to a recent survey on attitudes to wind farms in NSW agreed that wind power was a clean source of energy. However only 63% maintained that wind power was efficient and reliable. Upper Hunter residents were least inclined to agree with this.[92]

90 http://www.environment.nsw.gov.au/climateChange/renewableprecincts.htm
91 Estimating Greenhouse Gas Abatement from NSW Wind Farms', McLennan Magasanik Associates (SKM MMA); Preliminary Assessment Of The Impact Of Wind Farms On Surrounding Land Values In Australia', Preston, Rowe, Patterson. www.environment.nsw.gov.au/climatechange/reprecinctresources.htm
92 Community Attitudes to Wind Farms in NSW, NSW Dept. of Environment, Climate Change and Water.

Table 75. Renewable Energy Precincts

Region	Local Government Areas in Precinct
Precinct 1: New England Tablelands	Armidale Dumaresq, Glenn Innes Severn, Gunnedah, Guyra, Gwydir, Inverell, Liverpool plains, Moree plains, Narrabri, Tamworth, Tenterfield, Uralla, Walcha
Precinct 2: Upper Hunter	**Upper Hunter, Dungog, Warrumbungle**
Precinct 3: Central Tablelands	Bathurst, Blayney, Cabonne, Cowra, Lithgow, Mid-Western Regional, Oberon, Orange, Wellington
Precinct 4: Act/NSW Border Areas	Boorowa, Cootamundra, Goulburn Mulwaree, Gundagai, Harden, Junee, Palerang, Tumut, Upper Lachlan, Weddin, Yass, Young
Precinct 5: South Coast	Bega Valley, Eurobodalla, Kiama, Shoalhaven, Shellharbour, Wingecarribee
Precinct 6: Snowy-Monaro	Bombala, Cooma-Monaro, Snowy River, Tumbarumba

Source: www.environment.nsw.gov.au/climateChange/renewableprecincts.htm

The Renewable Energy Development Program under the NSW Climate Change Fund provides $40 million over five years to support projects which are expected to lead to large scale greenhouse gas emission savings in NSW by: demonstrating renewable energy technologies in NSW; and supporting the early commercialisation of renewable energy technologies. The program supports energy sourced from hydro, wind, solar, wave, tide and ocean, food waste and biomass and involves competitive proposals.

7.3.3 Green Jobs

The Department of Environment and Climate Change (DECCW) in partnership with other agencies is delivering green skills strategies and programs. A key focus is on ensuring that the necessary green skills for a lower carbon economy are developed. Major areas of skills requirements are in areas such as renewable energy and energy efficiency, and in fields including construction, building management, and planning.[93]

The key programs include: the *NSW Green Skills Strategy* and the *Energy Efficiency Training Program* to meet the growing demand for a skilled workforce necessary to improve business management and practices; the *NSW Energy Saving Scheme*; and creating a *Green Skills Taskforce* to advise on new training in green skills for tradespeople, engineers and designers. Other skills programs are: *Green Skills Business Incentives*; *Energy Efficiency Training Program*; *Green Skills NSW Business Guide* website; *Green Skills NSW Course Finder*; and resources and support for trainers.[94]

93 http://www.environment.nsw.gov.au/sustainbus/greenskills/

94 www.training.nsw.gov.au/programs_services/not_funded/greenskills/index.html\

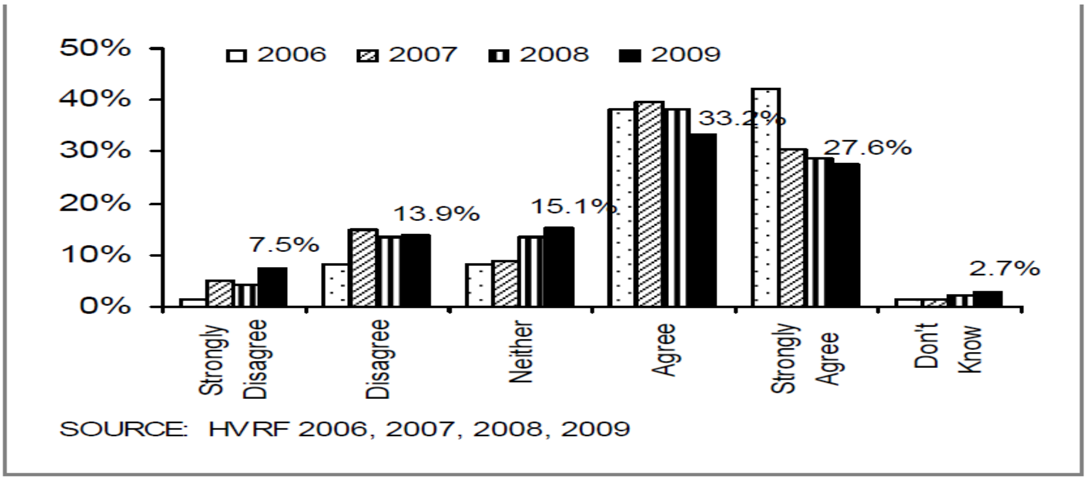
7.4 Environmental Issues

The Hunter Valley Research Foundation has undertaken a series of surveys since 2006 on environmental attitudes in the Hunter Region. The 2009 survey was released early in 2010. The survey covers attitudes to climate change, to the mining industry and responses to environment and covers all of the Hunter Region (Upper and Lower).[95]

7.4.1 Climate Change

Around 60% of respondents either *agreed* (33%) or *strongly agreed* (28%) that climate change would have a direct impact on their lives in the next 20 years.

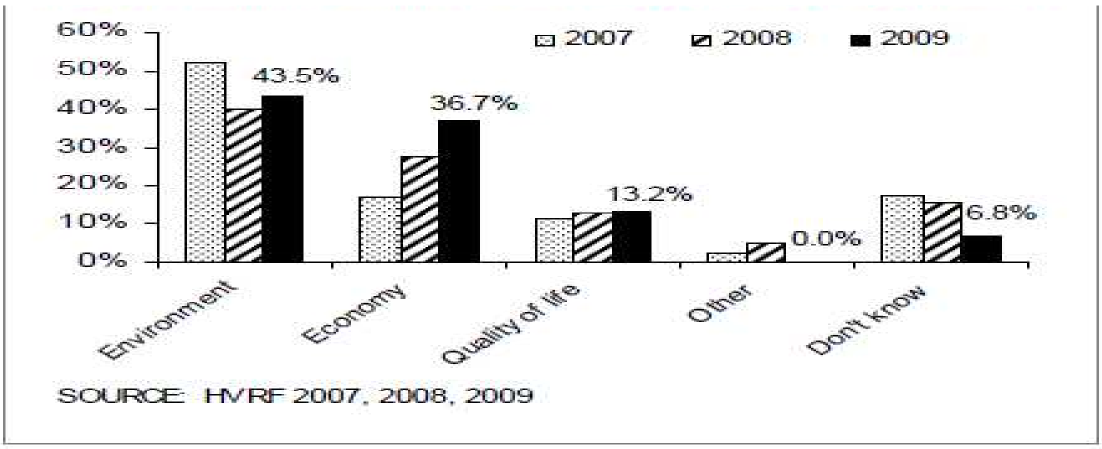
Figure 17. Climate Change will have a Direct Impact on my Life in Next 20 Years 2006-2009



Source: Hunter Region Environmental Attitudes Survey 2009-10, The Hunter Valley Research Foundation 2010 P4

Of those respondents who either *agreed* or *strongly agreed the major responses on the main impacts were:* increased cost of living (18%), increased temperatures or warmer weather (15%), changes in weather / extreme weather events (12%), increased energy/fuel costs (9%), and forced changes to lifestyle / behaviours (8%).[96]

Figure 18. Main Impact of Climate Change Grouped 2007-2009

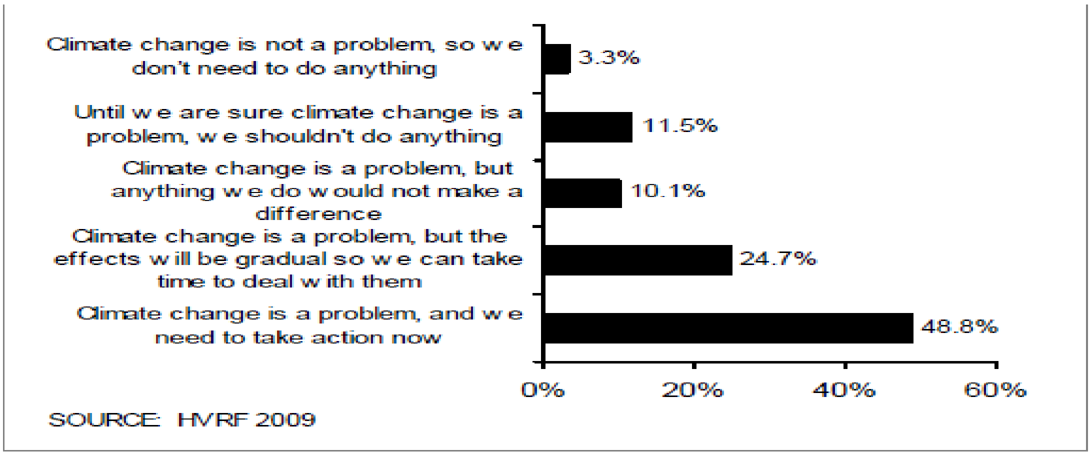


Source: Hunter Region Environmental Attitudes Survey 2009-10 The Hunter Valley Research Foundation 2010 P5

95 Hunter Region Environmental Attitudes Survey 2009-10 The Hunter Valley Research Foundation 2010
96 Hunter Region Environmental Attitudes Survey 2009-10 The Hunter Valley Research Foundation 2010, P5.

Around half indicated that action was required now on climate change, while 25% were of the view that impacts were gradual and there was time to respond.

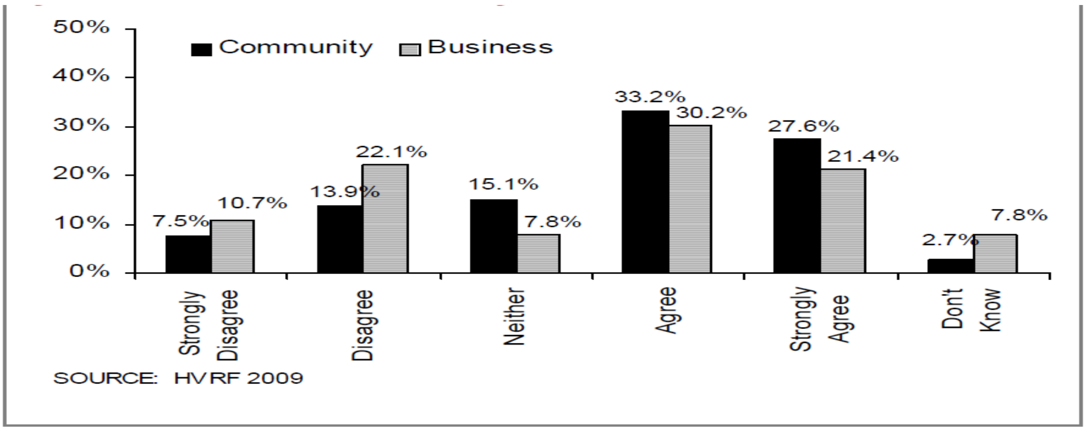
Figure 19. Need to Take Action on Climate Change - 2009



Source: Hunter Region Environmental Attitudes Survey 2009-10 The Hunter Valley Research Foundation 2010 P8

A survey of business was also conducted. The business survey showed that: slightly more than half of the business respondents either *agreed* (30%) or *strongly agreed* (21%) that climate change would have a direct impact on their business in the next 20 years. One-third either *disagreed* (22%) or *strongly disagreed* (11%) with the statement.

Figure 20. Climate Change – will have a direct impact on your life/business in next 20 years - 2009

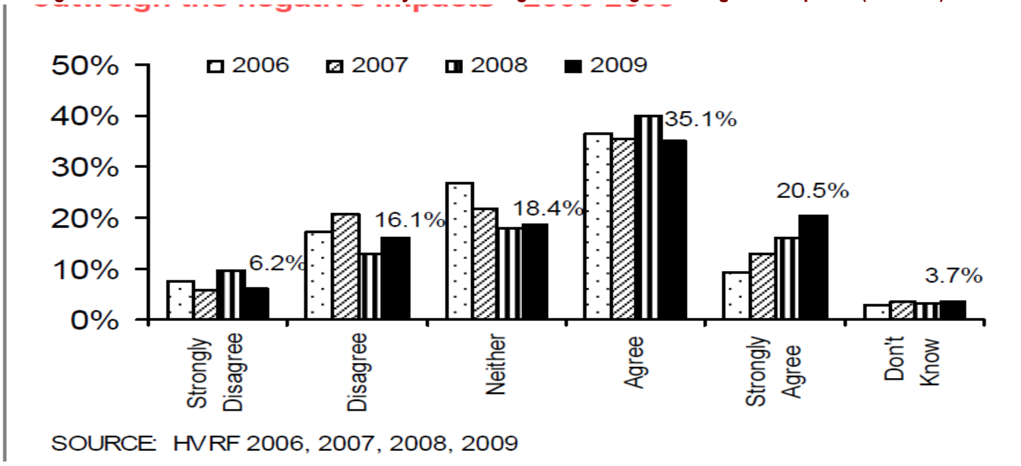


Source: Hunter Region Environmental Attitudes Survey 2009-10 The Hunter Valley Research Foundation 2010 P12

7.4.2 Coal Mining

The 2009 survey showed an increase in the share of the community who: believe the benefits to the Hunter Region of the coal industry outweigh the negative impacts (eg. 2006 - 46%; 2009 - 56%) When asked whether the *benefits of the coal industry for the Region outweighed the negative impacts*, more than half of the respondents either *agreed* (35%) or *strongly agreed* (21%) and 18% neither agreed nor disagreed.

Figure 21. Benefits of Coal Industry for Our Region Outweigh the Negative Impacts (2006-09)

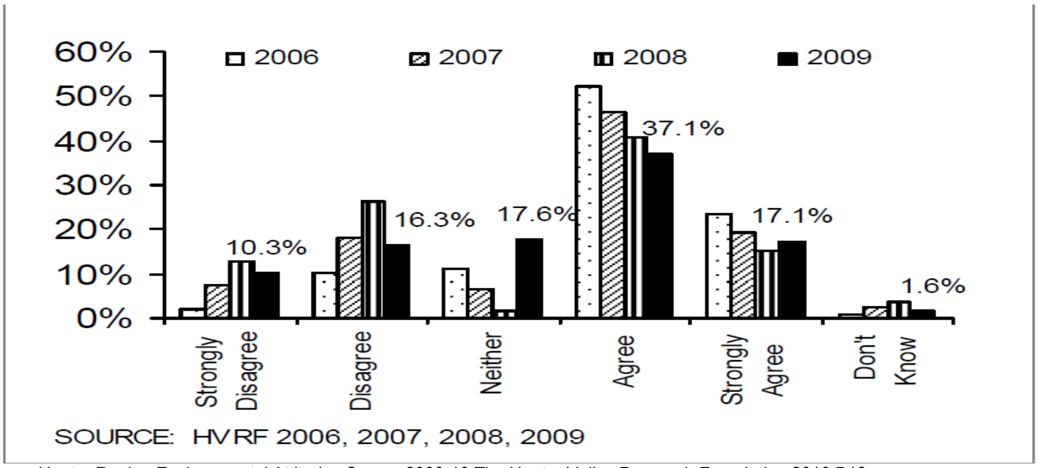


Source: Hunter Region Environmental Attitudes Survey 2009-10 The Hunter Valley Research Foundation 2010 P12

7.4.3 Green Power

Just over half of the community either agreed (37%) or strongly agreed (17%) that they would be prepared to pay more for electricity if it was generated from renewable sources such as solar or wind, also known as Green Power.

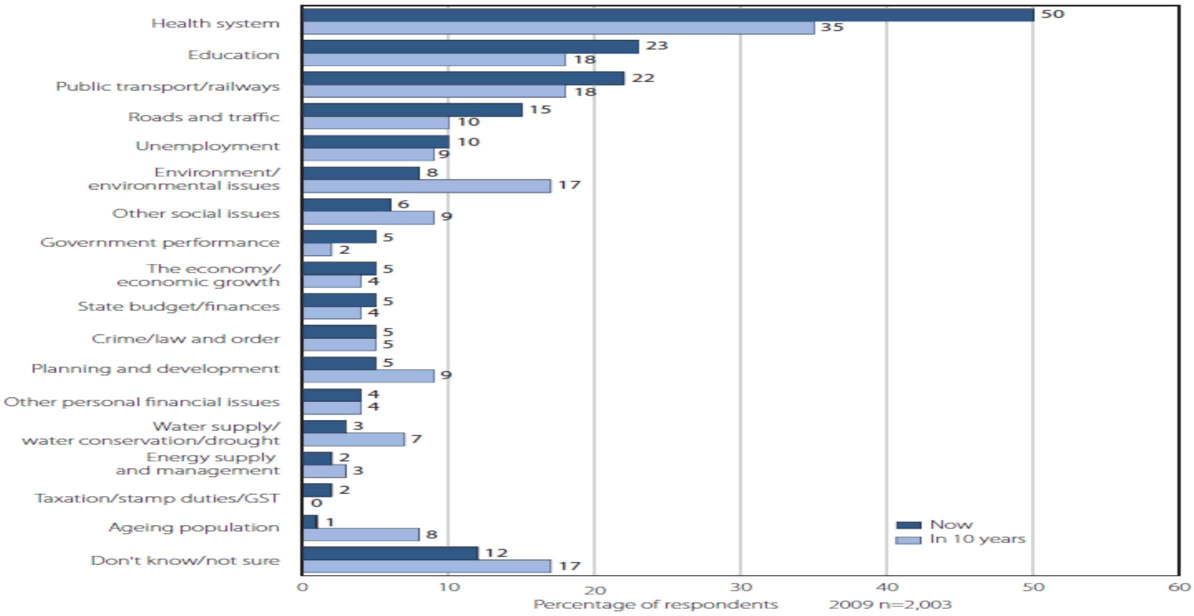
Figure 22. I would be prepared to pay more for electricity if it was generated from renewable sources (eg. Wind/Solar – 2006-09



Source: Hunter Region Environmental Attitudes Survey 2009-10 The Hunter Valley Research Foundation 2010 P12

DEECW also commissioned a state-wide environment survey.[97] The survey showed that the environment was in the top 5 issues of concern. However it was behind immediate concerns about health, education and public transport.

Figure 23. Two Most Important Issues for NSW : Now and In 10 years



Source: Who Cares about the Environment 2009, A survey of NSW people's environmental knowledge, attitudes and behaviours, DECCW Social Research Series Department of Environment, Climate Change and Water NSW February 2010 P12

In terms of environment issues, the major priorities were water (including supply, conservation and management and drought, and issues associated with climate change. In 2009, actions related to energy and greenhouse were the most nominated initiatives suggested for the NSW Government to protect and care for the environment (mentioned by 14% of participants in 2009, up from 9% in 2006).[98]

97 Who Cares about the Environment 2009, A survey of NSW people's environmental knowledge, attitudes and behaviours, DECCW Social Research Series Department of Environment, Climate Change and Water NSW February 2010

98 Who Cares about the Environment 2009, A survey of NSW people's environmental knowledge, attitudes and behaviours, DECCW Social Research Series Department of Environment, Climate Change and Water NSW February 2010 P14

8 Assessment of the Region

This chapter identifies the key issues impacting on the Upper Hunter Region now and in the future and examines the situation in each of the LGAs. It draws on industry and community consultations and analysis of key industry sectors in each area.

8.1 The State of the Region

8.1.1 Current Assessment

The regional economy and industry analysis and the industry and community consultations highlight the diverse nature of the Upper Hunter Region and the challenges that the individual areas face. The LGAs differ in terms of population size, industry mix and current trends in population and their local economy.

The mining intensive areas of Muswellbrook and Singleton are experiencing some stresses and strains associated with significant ongoing growth in mining and mining support activities. The pressures are reflected in: housing prices; rental costs; housing availability; critical skill shortages; problems in recruitment for non-mining industries; cost pressure on the community (who do not work in mining); and regional infrastructure not keeping up. Industrial estates need to expand to secure mining support industries and other industrial activity. There are major local concerns about competing land uses and the impact of continued expansion of the mining sector on agribusiness and tourism in the region. Population is growing in these areas (particularly Singleton and some emerging growth in Muswellbrook), with most of the growth in local jobs due to the expansion in mining. The full benefits of the growth in employment are not being felt in terms of the development of these communities, due to the significant number of workers who drive into the area, from the Lower Hunter and from other areas. In terms of strategy, Singleton has a stronger industrial focus on maximising the benefits gained through retaining and attracting mining support industries. The town centres in both areas are seen as requiring revitalisation.

Upper Hunter LGA has experienced significant growth in the equine sector and some emerging population growth as a result of persons working in the mining sector moving into the area to live, and some movement of persons (including families) seeking lifestyle changes. There is a major emphasis on developing the tourism sector, green energy and continued growth in the equine sector.

The rural LGAs with the smaller populations - Dungog and Gloucester have generally experienced flat conditions. There have been some losses in jobs from: industry restructuring; the impact of current price and cost pressures on traditional agribusiness; and the decline of the timber industry in the region. Population growth has been limited with increases mainly coming from retirees moving into the area. However there are some signs of people making lifestyle changes moving into the areas. In the case of Dungog this growth is occurring in those parts of the LGA that allow commuting to jobs in the Lower Hunter. Both Councils want to develop new areas of agribusiness and to develop their tourism sectors (by improving the product offer and through targeting specific market segments). While infrastructure needs to be improved, the smaller LGAs are not experiencing the same growth strains as the mining areas.

Great Lakes is the largest LGA in terms of population. Like many coastal areas it is experiencing continued population growth due to the attractiveness of the region as a retirement and lifestyle area. Great Lakes is also a major regional coastal tourism destination. As a result of these two key drivers, the area has a number of workforce characteristics including: much lower workforce participation rates; relatively low incomes; higher levels of part-time employment and is reliance on a narrow band of industries, including tourism and services (eg. health and aged care, retail and other population services). There are major concerns about the long term sustainability of this employment structure,, and there is a strategic focus by Council on developing other industries to strengthen and diversify the local economy.

8.1.2 Key Themes

There are a number of common themes that emerge from the review and analysis of each of the areas and their economic base. These include: a need to ensure greater diversification in the local economy; the impacts of a fast growing mining sector on other industries and the community; concerns about the long term future beyond mining activity; concerns in relation to competing land use and encroachment into some key agribusiness zones; maintaining the environment; a need to develop larger resident communities; the state of regional infrastructure, especially roads; the need to develop industrial infrastructure (including employment lands); and major pressures on local government in terms of a capacity to provide the infrastructure that is required in a growing region. These issues were generally recognised by businesses and other stakeholders.

A common response across most of the LGAs (ie. those with mining activity or in proximity to it) related to these communities being able to access a share of mining royalties to provide funding to develop infrastructure and to improve the communities.

From a strategy perspective, there was a desire by businesses for clear regional strategies to develop sustainable industries in each of the areas (often taking a broader regional approach). There was also a concern that the New South Government had not developed a long term planning strategy for the Upper Hunter Region, similar to the strategies that were developed for the Lower Hunter, Mid North Coast and the Central Coast.

8.1.3 Looking Forward

Looking over a 15-20 year period there are a number of issues that will impact on the region and its industries.

A major issue is that the industry specialisation in each of the LGAs tends to be narrow, which creates vulnerabilities with both cyclical and structural changes in the sectors. In the case of the mining regions, there are substantial support industries that are servicing mining (that will be affected in the longer term as mining winds down in specific areas).

At the same time there has been substantial change in employment locations, particularly with the strong industry and services growth in Newcastle and other areas of the Lower Hunter and the major expansion in mining in the Upper Hunter. The regional linkages between the Upper Hunter and Lower Hunter are becoming increasingly more important.

In response to these trends, many employees are now operating in a broader regional labour market, with increasing commuting to employment opportunities. In some cases this is a result of: employees following the opportunities in their sector (eg. mining workers); lifestyle choices (a rural lifestyle while continuing to work in an industry or profession); a decline in local jobs or a narrow range of skilled jobs being available in the LGA that they live in. Some of the decline in local jobs in specific sectors over the last decade has been driven by: the regional consolidation of government and private services; and the trend for larger industries to be attracted to the major centres (which can offer transport access, related industries and a large skilled workforce).

While there is a need to strengthen local economies, regional linkages between areas will become increasingly important over longer term horizons. This also highlights the need for broader economic strategies and programs that operate at a regional level, rather than an individual area level.

The following table summarises some of the key issues impacting on the future of the region. Key directions and opportunities will be examined in the next report of this project - <u>Report 2: Directions and Opportunities Report.</u>

Table 76. Major Future Issues – Upper Hunter Region

Issue	
Industry	
Coal	Continuing coal mining in some areas. Rehabilitated areas becoming available – future uses. Decline in mining activity as mines reach the end of their life. Balance between coal and agribusiness in the region. Operations in a two speed economy.
Electricity generation	Upper Hunter continues as a major energy hub, with generation comprising a combination of: coal fired, gas fired, thermal-(base load); and renewables (wind and solar).
Agribusiness	Development of intensive agriculture and consolidation in traditional sectors of agriculture. Development of value added processing.
Tourism	Opportunities for growth in the sector but requires development of product and infrastructure and regional marketing.
Industrial Activities	Tendency for larger operations to cluster in major centres with good transport access and workforce / Areas of Upper Hunter in competition with Lower Hunter. Light industrial activities/services are linked to local population. Development of specialisation in centres within the Upper Hunter.
Population & Housing	
Demographic	All areas have ageing populations – particularly Great Lakes and Gloucester. There are declining populations in the younger age groups. There is a need to increase population of the LGAs. Sustainable jobs will be important for attracting a diverse population. Larger populations will drive service industries in the region. A strong emphasis on environment and local amenity with the attraction of “sea changer” and “tree changers”.
Housing	Changes in population location patterns as a result of higher transport costs (peak oil issues) and the shifting location of jobs. A need to develop housing options for older age groups (increased densities in town centres). Increasing urban development pressures (including rural residential) in areas with transport accessibility, available services (eg. Singleton) or access to employment in the larger centres of the Lower Hunter (eg. areas of Dungog Shire).
Employment	
Employment	Future changes in job locations due to industry change.
	Changing accessibility with F3 extensions (eg Branxton) impacting on business locations.
	Continued regional commuting to major employment centres (hubs).
	Many key services will continue to be regionalised and concentrated in larger population centres.
	Continued growth in home based employment (facilitated by broadband) and professionals moving to areas for lifestyle changes but still operating in their broader markets.
	Continued skill shortages in higher skill areas and for professionals. Regional education and training responses required to develop skills.
Transport	
Transport	Transport is a major issue for the future of the region. Improved accessibility is a strategic issue. There is a need for improved public transport linkages to Lower Hunter. Road infrastructure is a major issue for the region. Rail improvements are required (freight).
Environment	
	Climate change impacts and issues in relation to variability and water security.
	Maintaining the environment for agribusiness and tourism industries.
	Competing land use – mining and agribusiness and the availability of productive land for agribusiness.
Education	
Education	Future of the region requires higher workforce skill levels. The region on average has lower education levels and qualification levels. Access to VET and higher education are major issues in the region. Stronger integration of education with local industries will be needed in future.

In a separate study by Regional Development Australia, a detailed investigation of regional infrastructure requirements in each LGA has been undertaken. The findings of this study will be considered in the assessment of future diversification opportunities and the development requirements for these opportunities.[99]

99 Upper Hunter Infrastructure Project Report , Regional Development Australia Hunter, October 2009

8.2 Singleton LGA

8.2.1 Overview

Singleton is a major centre for mining and mining support activity and for power generation in the Upper Hunter. Other key sectors include engineering, defence, agribusiness (beef cattle, dairy and viticulture). The LGA also provides a residential location for persons working in mines in adjacent Muswellbrook. The region has experienced significant jobs growth with the expansion of coal mining and this has continued over the last 4 years with the continued expansion of mining and associated support activities. However this growth has created skill shortages and cost pressures for other local industries and has impacted on the housing market.

8.2.2 Industry Structure

Singleton has a strong industrial base, which is linked to the mining sector. Coal mining activity is driven by strong continued demand from export markets, with 20 mines located in the LGA.[100] Industrial employment is a dominant area of employment the LGA, with direct employment in mining accounting for 31% jobs and a significant number of jobs in activities linked to mining..

Two of Australia's largest coal-fired power stations, Liddell and Bayswater, are located on the border of Singleton and Muswellbrook LGAs, and the Redbank Power Station is located in Singleton Shire. A pilot plant at Liddell is also trialling new solar thermal technology.

Defence is a major activity with the Singleton Infantry Centre employing around 300 permanent staff. Agribusiness covers: the cattle and dairy sectors; some market gardening, citrus growing and mushrooms; and viticulture.[101]

Tourism is expanding in the LGA and is linked to the wine sector. The extension of the F3 to Hexham will increase accessibility for visitors and for industry.

Due to the scale of the mining sector, Singleton has more jobs than employed residents, with persons commuting to jobs in the LGA from other areas in the Lower Hunter and Upper Hunter. Population growth in the area is being driven by the current strong employment growth associated with mining development in the broader region.

In 2006 there were a total of 12,368 jobs in the LGA, this represented an increase of 1487 jobs in the 5 years from 2001. The major growth in jobs was focused in mining, business services and tourism related services. The major declines in jobs were in agribusiness, retail and wholesale trade. Data on employed residents shows a similar pattern of growth. The major growth in employment was in industries employing males, though population growth was driving an increase in employment in services. Retail jobs experienced a decline due to the impacts of retail leakage.

Jobs growth in the LGA has continued over the last 4 years with the expansion of mining and mining support activities. However this mining growth has placed pressure on skills, workforces and costs in other local industries and has impacted on the housing market and on rental costs.

100 Economic Strategy Singleton - "A progressive community of excellence and sustainability". 2010 Singleton Shire Council
101 Hunter Investment Prospectus 2009 HEDC P90

Table 77. Jobs in Singleton LGA 2006

Regional Economy	LGA		Singleton		
Industry Sectors	Singleton		Share of UH Region	Total	
	no	Share %		Upper Hunter Region no	Share
Goods Producing Industries					
Agriculture, forestry and fishing	533	4.3	15.0	3546	9.4
Mining	3794	30.7	69.0	5499	14.5
Manufacturing	866	7.0	33.2	2607	6.9
Electricity, gas, water and waste services	232	1.9	21.1	1099	2.9
Construction	604	4.9	24.7	2445	6.5
Total	**6029**	**48.7**	39.7	**15196**	**40.2**
Goods Related Industries					
Wholesale trade	393	3.2	39.3	999	2.6
Transport, postal and warehousing	357	2.9	30.1	1188	3.1
Total	750	6.1	34.3	2187	5.8
Knowledge and Business Services					
Information media and telecommunications	60	0.5	28.8	208	0.5
Financial and insurance services	144	1.2	27.0	534	1.4
Rental, hiring and real estate services	210	1.7	29.3	716	1.9
Professional, scientific and technical services	461	3.7	31.7	1455	3.8
Administrative and support services	320	2.6	42.0	762	2.0
Total	**1195**	**9.7**	32.5	**3675**	**9.7**
In-Person Services		**0.0**			
Retail trade	1062	8.6	25.9	4104	10.9
Accommodation and food services	604	4.9	20.9	2896	7.7
Public administration and safety	766	6.2	37.9	2020	5.3
Education and training	543	4.4	22.9	2375	6.3
Health care and social assistance	559	4.5	19.1	2921	7.7
Arts and recreation services	53	0.4	12.1	437	1.2
Other services	663	5.4	42.2	1570	4.2
Total	**4250**	**34.4**	26.0	**16323**	**43.2**
Inadequately described/not stated	144	1.2	32.6	442	1.2
Total LGA	**12368**	**100.0**	32.7	**37823**	**100.0**

Source: ABS Census 2006 Working Population data

Table 78. Mining Sector Jobs – Upper Hunter Region 2006 (Estimates)

Industry	Singleton Jobs no	Muswellbrook Jobs no	Total Muswellbrook & Singleton Jobs no
Total Mining and Support			
Direct Mining	3794	1522	5316
Total Mining Related Jobs - Support	1583	956	2539
Total Direct & support	5377	2478	7855
Total Jobs in LGA	**12368**	**7887**	**20255**
Total Mining Related Jobs as % of Total Jobs	43.5	31.4	38.8
Direct Mining %	30.7	19.3	26.2
Mining Support %	12.8	12.1	12.5

Source: ABS Census 2006 Working Population data and Buchan Consulting estimates.

Table 79. Employment Trends 2001-2006 - Singleton LGA (Number)

	2001			2006			Change 2001-2006		
Industry	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Goods Producing									
Agriculture, forestry and fishing	414	233	647	332	200	532	-82	-33	-115
Mining	2,771	141	2,912	3,533	261	3,794	762	120	882
Manufacturing	742	173	915	688	178	866	-54	5	-49
Electricity, gas, water and waste services	96	12	108	217	16	233	121	4	125
Construction	487	88	575	524	80	604	37	-8	29
Total	**4,510**	**647**	**5,157**	**5,294**	**735**	**6,029**	**784**	**88**	**872**
Goods Related									
Transport, postal and warehousing	309	60	369	280	77	357	-29	17	-12
Wholesale trade	642	108	750	328	65	393	-314	-43	-357
Total	**951**	**168**	**1,119**	**608**	**142**	**750**	-343	-26	-369
Knowledge & Business Services									
Information media and telecommunications	45	25	70	29	30	59	-16	5	-11
Financial and insurance services	39	108	147	58	86	144	19	-22	-3
Rental, hiring and real estate services	62	47	109	128	82	210	66	35	101
Professional, scientific and technical services	211	127	334	267	194	461	56	67	127
Administrative and support services	110	117	231	140	180	320	30	63	89
Total	**467**	**424**	**891**	**622**	**572**	**1,194**	**155**	**148**	**303**
In-Person Services									
Retail trade	576	719	1,295	356	706	1,062	-220	-13	-233
Accommodation and food services	119	301	420	180	424	604	61	123	184
Public administration and safety	541	116	657	596	170	766	55	54	109
Education and training	112	323	435	121	422	543	9	99	108
Health care and social assistance	81	425	506	77	482	559	-4	57	53
Arts and recreation services	52	58	110	25	28	53	-27	-30	-57
Other services	83	115	198	487	176	663	404	61	465
Total	**1,564**	**2,057**	**3,621**	**1,842**	**2,408**	**4,250**	**278**	**351**	**629**
Inadequately described/not stated	65	28	93	104	41	145	39	13	52
Total	**7,557**	**3,324**	**10,881**	**8,470**	**3,898**	**12,368**	**913**	**574**	**1,487**

Source: Cat. No. 2068.0 – ABS Census 2006, Working Population Data. N.B. ABS Census 2001 data for Rental, Hiring & Real Estate Services, Administrative & Support Services, and Professional, Scientific & Technical Services has been adjusted based on assumptions from ABS Census 2006 data.

Reflecting the age structure of the population and the strong jobs growth, labour force participation rates are high in Singleton. Growth in jobs was strong between 2001 and 2006.

Table 80. Labour Force Singleton LGA 1996-2006 (Number)

	1996 Census			2001 Census			2006 Census		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Persons aged 15 years and over	7,762	7,058	14,820	7,915	7,338	15,253	8,696	8,007	16,703
Labour force status									
Employed, worked full-time	5,009	1,444	6,453	4,701	1,521	6,222	5,256	1,753	7,009
Employed, worked part-time	530	1,560	2,090	582	1,764	2,346	729	2,091	2,820
Employed, away from work	301	223	524	438	248	686	383	268	651
Unemployed, looking for work	346	319	665	277	272	549	203	252	455
Total labour force	*6,186*	*3,546*	*9,732*	*5,998*	*3,805*	*9,803*	*6,571*	*4,364*	*10,935*
Not in the labour force	1,358	3,319	4,677	1,586	3,201	4,787	1,678	3,240	4,918
% Unemployment	5.6	9.0	6.8	4.6	7.2	5.6	3.1	5.8	4.2
% Labour force participation	79.7	50.2	65.7	75.8	51.9	64.3	75.5	54.5	65.5
% Employment to population	75.2	45.7	61.2	72.3	48.2	60.7	73.2	51.4	62.8

Source: ABS Census 2006 Resident Population Data. (Based on persons aged 15 years and over)

Table 81. Employed Residents Trends 1996-2006 – Singleton LGA (Number)

	1996 Census			2001 Census			2006 Census			Persons Change		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	96-06	96-01	2001-06
Agriculture, forestry & fishing	489	226	715	401	227	628	326	195	521	-194.0	-87.0	-107.0
Mining	1,606	96	1,702	1,324	116	1,440	1,821	235	2,056	354.0	-262.0	616.0
Manufacturing	293	114	407	449	193	642	567	184	751	344.0	235.0	109.0
Electricity, gas, water & waste services	264	31	295	240	30	270	278	32	310	15.0	-25.0	40.0
Construction	508	80	588	507	94	601	540	87	627	39.0	13.0	26.0
Wholesale trade	347	81	428	406	97	503	217	64	281	-147.0	75.0	-222.0
Retail trade	214	512	726	287	539	826	296	705	1,001	275.0	100.0	175.0
Accommodation & food services	148	360	508	172	425	597	195	452	647	139.0	89.0	50.0
Transport, postal & warehousing	235	69	304	258	74	332	250	90	340	36.0	28.0	8.0
Information media & telecommunications	40	25	65	32	40	72	24	33	57	-8.0	7.0	-15.0
Financial & insurance services	36	109	145	34	113	147	35	101	136	-9.0	2.0	-11.0
Rental, hiring & real estate services	66	71	137	51	61	112	93	84	177	40.0	-25.0	65.0
Professional, scientific & technical services	172	134	306	184	160	344	230	201	431	125.0	38.0	87.0
Administrative & support services	51	124	175	107	156	263	122	172	294	119.0	88.0	31.0
Public administration & safety	797	185	982	630	132	762	615	186	801	-181.0	-220.0	39.0
Education & training	97	300	397	99	355	454	106	430	536	139.0	57.0	82.0
Health care & social assistance	90	456	546	73	462	535	74	547	621	75.0	-11.0	86.0
Arts & recreation services	15	17	32	31	34	65	22	22	44	12.0	33.0	-21.0
Other services	229	135	364	306	149	455	387	188	575	211.0	91.0	120.0
Inadequately described/Not stated	143	102	245	130	76	206	170	103	273	28.0	-39.0	67.0
Total	**5,840**	**3,227**	**9,067**	**5,721**	**3,533**	**9,254**	**6,368**	**4,111**	**10,479**	1412.0	187.0	1225.0

Source: ABS Census 2006 Resident Population Time Series Data (T25)

Table 82. Jobs and Employed Residents Singleton LGA 2006

Industry	Singleton Jobs no	Employed Residents no	Jobs – Residents no
Goods Producing			
Agriculture, forestry and fishing	532	519	13
Mining	3,794	2,055	1,739
Manufacturing	866	759	107
Electricity, gas, water and waste services	233	303	-70
Construction	604	619	-15
Total	**6,029**	**4,255**	**1,774**
Goods Related			
Transport, postal and warehousing	357	343	14
Wholesale trade	393	275	118
Total	**750**	**618**	**132**
Knowledge & Business Services			
Information media and telecommunications	59	56	3
Financial and insurance services	144	140	4
Rental, hiring and real estate services	210	182	28
Professional, scientific and technical services	461	413	48
Administrative and support services	320	300	20
Total	**1,194**	**1,091**	**103**
In-Person Services			
Retail trade	1,062	1,013	49
Accommodation and food services	604	665	-61
Public administration and safety	766	626	140
Education and training	543	534	9
Health care and social assistance	559	632	-73
Arts and recreation services	53	39	14
Other services	663	582	81
Total	**4,250**	**4,091**	**159**
Inadequately described/not stated	145	261	-116
Total	**12,368**	**10,316**	**2,052**

Source: ABS Census 2006 Working Population and Resident Population Data.

8.2.3 Key Issues

There are a number of key issues in the LGA and these are summarised below.

Major current issues relate to the impact of the mining boom on: skills availability, wage costs in other sectors and a commuting workforce. There are other impacts on housing prices and on the availability of rental housing. For non-mining industries in the LGA region, employers are competing against the mines (high wage) and with Newcastle industry. There are also problems in recruiting professionals to regional centres; key trade skills are in shortage; and there is significant turnover in jobs.[102]

102 Report to The Singleton Education Precinct 24 June 2009 Singleton Strategic Planning Project 2008 Singleton Shire Council

Table 83. Singleton LGA - Major Issues

Singleton LGA - Major Issues	
Mining	**Housing**
Mining is the dominant industry sector in the LGA, and a covers direct mining employment and a range of support industries.	There is a shortage of residential land and land costs are increasing. There is a need to develop more housing land.
There are 18 mines within a 15-20km of Singleton. The sector has expanded over the last 5 years.	Higher land costs are impacting on capacity to develop residential projects. With an ageing population there is a need to develop housing options for older persons.
A significant share of mining employees and contractors, live outside the area and commute from the Lower Hunter and other areas. This leads to significant traffic issues.	**Infrastructure**
Because of high housing prices (both purchase and rental), those in lower wage industries (such as education) often cannot afford to live in town and are forced to commute. This contributes further to traffic issues.	Major infrastructure development is required. This requirement is beyond Council capacity to fund. New model needed for use of mining royalties.
Skills – expansion of the sector has led to major impacts on the regional labour market.	**Education and Training**
Employment	Limited vocational education and training - with need to increase local deliver of vocational education and training
Due to the wage differential, it is hard for non-mining businesses to compete for labour	Need for local delivery of higher education.
Attracting skilled employees is difficult. There is a lack of qualified persons available in the Upper Hunter generally and in the Singleton area specifically.	**Advantages**
Outside of mining and mining support, the industry structure is narrowly based. This creates major issue post- mining	Singleton has an industrial base.
Major skill shortages in the area.	Industrial areas have been planned for growth.
Population	F3 extension will improve business prospects.
Population is growing but overall size is below the overall threshold level to have a stronger service sector.	**Tourism**
Singleton is competing with the larger centres in Lower Hunter (eg. Cessnock, Maitland).	There is a need to broaden the sector and its appeal. Activity is underway in terms of facilities, product and marketing.
While persons in mining sector have high incomes, there are a significant number of persons with low skills and low incomes. There are major pockets of social disadvantage.	**Agribusiness**
	Remains important to the region with opportunities to develop. This could include processing facilities.

A major focus of economic development action in the area has been on addressing skill shortages, development of the tourism sector, and ensuring industrial land is available. [103]

The focus on skills has been in a number of areas including: trade skills (*Boilermakers, Hydraulics, Carpentry, Plumbers, Electricians*, Electronics Technicians, Refrigeration Mechanics,); business skills (*Marketing, Business Planning, Financial Planning, Time Management, Accounting) and other professionals (*OH&S, Information Technology, Engineers, Nurses, Childcare, Chefs/Cooks); and frontline skills (eg. *Customer Service, People Management*).[104] There is also potential to develop Singleton as a regional hub for value added manufacturing, servicing, professional and technical services and education (knowledge intensives services).[105]

Key directions and opportunities are examined in the next report of this project - *Report 2: Directions and Opportunities Report*. Strategies and actions and infrastructure requirements are covered in the final report: *Report 3: Upper Hunter Economic Diversification Strategy Report*.

103 Economic Strategy Singleton - "A progressive community of excellence and sustainability". 2010 Singleton Shire Council
104 Report to The Singleton Education Precinct 24 June 2009 Singleton Strategic Planning Project 2008 Singleton Shire Council
105 Singleton Strategic Planning Project Report , November 2008, Cre8ting Growth

8.3 Muswellbrook LGA

8.3.1 Overview

Muswellbrook had a population of 16,391 in 2009. The major population centres are the towns of Muswellbrook (10,500) and Denman (1500), with the balance of the population located in and around smaller villages.

Traditionally the region was an agricultural economy (beef, dairy, wine) and over the last decade there has been significant growth of the equine sector. Agribusiness activity currently employs around 7% of the LGAs workforce.

Muswellbrook is the centre for New South Wales' power generation capacity. The area has also seen a major expansion of coal mining over the last 10 years. The expansion of coal mining has seen the development of support industries located in the industrial estate at Thomas Mitchell Drive Muswellbrook. There is also an industrial estate at Denman. [106]

There are major concerns in the area in relation to the impacts of continued mining expansion. These concerns include: competing land use and impacts on other industries (equine, viticulture and other agriculture); effects on housing costs; wage cost pressures on other industry sectors; other cost pressures on the community and on low income households; environmental effects and pressures; and the impacts on local infrastructure. These issues are seen as critical factors affecting the regional economy and its future prospects. There are concerns that Muswellbrook is now at the centre of a *two speed economy*.

8.3.2 Industry Structure

In 2006 the mining sector accounted for almost 20% of the jobs in the region, and this has increased further with the growth in the sector that has occurred in the last 5 years.

In the period between 2001-2006, jobs in the region increased by 896, with most of this growth being in mining jobs. There was growth in some other sectors including business services, and in-person services. This reflects a combination of some population growth and the growth in business activity associated with the mining expansion. Reflecting general regional trends and industry consolidation, jobs in agribusiness declined, even though output has generally increased.

106 Hunter Investment Prospectus 2009 HEDC P91

Table 84. Jobs in Muswellbrook LGA 2006

Regional Economy Industry Sectors	LGA Muswellbrook Jobs no	Share %	Muswellbrook Share of UH Region Jobs %	Total Upper Hunter Region Jobs no	Share %
Goods Producing Industries					
Agriculture, forestry and fishing	515	6.5	14.5	3546	9.4
Mining	1522	19.3	27.7	5499	14.5
Manufacturing	541	6.9	20.8	2607	6.9
Electricity, gas, water and waste services	626	7.9	57.0	1099	2.9
Construction	540	6.8	22.1	2445	6.5
Total	**3744**	**47.5**	**24.6**	**15196**	**40.2**
Goods Related Industries					
Wholesale trade	234	3.0	23.4	999	2.6
Transport, postal and warehousing	216	2.7	18.2	1188	3.1
Total	**450**	**5.7**	**20.6**	**2187**	**5.8**
Knowledge and Business Services					
Information media and telecommunications	44	0.6	21.2	208	0.5
Financial and insurance services	105	1.3	19.7	534	1.4
Rental, hiring and real estate services	140	1.8	19.6	716	1.9
Professional, scientific and technical services	326	4.1	22.4	1455	3.8
Administrative and support services	120	1.5	15.7	762	2.0
Total	**735**	**9.3**	**20.0**	**3675**	**9.7**
In-Person Services					
Retail trade	736	9.3	17.9	4104	10.9
Accommodation and food services	503	6.4	17.4	2896	7.7
Public administration and safety	354	4.5	17.5	2020	5.3
Education and training	390	4.9	16.4	2375	6.3
Health care and social assistance	520	6.6	17.8	2921	7.7
Arts and recreation services	58	0.7	13.3	437	1.2
Other services	300	3.8	19.1	1570	4.2
Total	**2861**	**36.3**	**17.5**	**16323**	**43.2**
Inadequately described/not stated	98	1.2	22.2	442	1.2
Total LGA	**7888**	**100.0**	**20.9**	**37823**	**100.0**

Source: ABS Census 2006 Working Population data

Table 85. Mining Sector Jobs 2006 Muswellbrook and Singleton LGAs (Estimates)

Industry	Singleton Jobs no	Muswellbrook Jobs no	Total Muswellbrook & Singleton Jobs no
Total Mining and Support			
Direct Mining	3794	1522	5316
Total Mining Related Jobs - Support	1583	956	2539
Total Direct & support	5377	2478	7855
Total Jobs in LGA	**12368**	**7887**	**20255**
Total Mining Related Jobs as % of Total Jobs	43.5	31.4	38.8
Direct Mining %	30.7	19.3	26.2
Mining Support %	12.8	12.1	12.5

Source: ABS Census 2006 Working Population data and Buchan Consulting estimates.

Table 86. Employment Trends 2001-2006 – Muswellbrook LGA (Number)

Industry	2001 Males	Females	Persons	2006 Males	Females	Persons	2001-2006 Change Males	Females	Persons
Goods Producing									
Agriculture, forestry and fishing	391	230	621	333	182	515	-58	-48	-106
Mining	961	59	1,020	1,389	133	1,522	428	74	502
Manufacturing	443	155	598	432	109	541	-11	-46	-57
Electricity, gas, water and waste services	555	65	620	555	71	626	0	6	6
Construction	367	72	439	474	66	540	107	-6	101
Total	**2,717**	**581**	**3,298**	**3,183**	**561**	**3,744**	**466**	**-20**	**446**
Goods Related							**0**	**0**	**0**
Transport, postal and warehousing	144	46	190	161	55	216	17	9	26
Wholesale trade	270	75	345	183	51	234	-87	-24	-111
Total	**414**	**121**	**535**	**344**	**106**	**450**	**-70**	**-15**	**-85**
Knowledge & Business Services							**0**	**0**	**0**
Information media and telecommunications	32	22	54	21	23	44	-11	1	-10
Financial and insurance services	20	82	102	24	81	105	4	-1	3
Rental, hiring and real estate services	55	30	85	83	57	140	28	27	55
Professional, scientific and technical services	132	108	241	191	135	326	59	27	85
Administrative and support services	39	51	89	57	63	120	18	12	31
Total	**278**	**293**	**571**	**376**	**359**	**735**	**98**	**66**	**164**
In-Person Services							**0**	**0**	**0**
Retail trade	388	570	958	244	492	736	-144	-78	-222
Accommodation and food services	77	219	296	145	358	503	68	139	207
Public administration and safety	107	81	188	188	166	354	81	85	166
Education and training	77	249	326	86	304	390	9	55	64
Health care and social assistance	81	388	469	78	442	520	-3	54	51
Arts and recreation services	54	41	95	31	27	58	-23	-14	-37
Other services	108	103	211	206	94	300	98	-9	89
Total	**892**	**1,651**	**2,543**	**978**	**1,883**	**2,861**	**86**	**232**	**318**
Inadequately described/not stated	30	15	45	81	17	98	51	2	53
Total	**4,331**	**2,661**	**6,992**	**4,962**	**2,926**	**7,888**	**631**	**265**	**896**

Source: Cat. No. 2068.0 – ABS Census 2006, Working Population Data. N.B. ABS Census 2001 data for Rental, Hiring & Real Estate Services, Administrative & Support Services, and Professional, Scientific & Technical Services has been adjusted based on assumptions from ABS Census 2006 data.

Reflecting the age structure of the population and the strong jobs growth, labour force participation rates are high in the LGA.

Table 87. Labour Force Muswellbrook LGA – 1996-2006 (Number)

	1996 Census			2001 Census			2006 Census		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Persons aged 15 years and over	6,078	5,404	11,482	5,813	5,292	11,105	6,135	5,558	11,693
Labour force status									
Employed, worked full-time(	3,481	1,158	4,639	3,090	1,154	4,244	3,434	1,235	4,669
Employed, worked part-time	470	1,119	1,589	377	1,172	1,549	470	1,353	1,823
Employed, away from work	173	134	307	278	157	435	252	181	433
Unemployed, looking for work	375	286	661	305	227	532	183	197	380
Total labour force	4,499	2,697	7,196	4,050	2,710	6,760	4,339	2,966	7,305
Not in the labour force	1,147	2,533	3,680	1,486	2,339	3,825	1,437	2,295	3,732
% Unemployment	8.3	10.6	9.2	7.5	8.4	7.9	4.2	6.6	5.2
%Labour force participation	74.0	49.9	62.7	69.7	51.2	60.9	70.7	53.4	62.5
% Employment to population	67.9	44.6	56.9	64.4	46.9	56.1	67.7	49.8	59.2

Source: ABS Census 2006 Time Series Data, Resident Population

Muswellbrook is one of the LGAs in the region, which has more jobs than residents in employment. In 2006 there were 7888 jobs in the LGA and 6720 residents in employment, a difference of 1168 jobs. This pattern is mainly driven by mining and electricity sectors, with persons holding jobs in the LGA being resident in adjacent LGAs (eg. Singleton or Upper Hunter LGAs) or commuting from areas in the Lower Hunter. With the growth in mining employment in Muswellbrook over recent years, the scale of the in-bound workforce has continued to increase.

Table 88. Jobs and Employed Residents Muswellbrook LGA 2006

	Muswellbrook		
Industry	Jobs no	Employed Residents no	Jobs – Residents no
Goods Producing			
Agriculture, forestry and fishing	515	611	-96
Mining	1,522	1,092	430
Manufacturing	541	475	66
Electricity, gas, water and waste services	626	351	275
Construction	540	441	99
Total	**3,744**	**2,970**	**774**
Goods Related			
Transport, postal and warehousing	216	217	-1
Wholesale trade	234	204	30
Total	**450**	**421**	**29**
Knowledge & Business Services			
Information media and telecommunications	44	33	11
Financial and insurance services	105	87	18
Rental, hiring and real estate services	140	114	26
Professional, scientific and technical services	326	275	51
Administrative and support services	120	153	-33
Total	**735**	**662**	**73**
In-Person Services			
Retail trade	736	677	59
Accommodation and food services	503	471	32
Public administration and safety	354	254	100
Education and training	390	374	16
Health care and social assistance	520	417	103
Arts and recreation services	58	64	-6
Other services	300	251	49
Total	**2,861**	**2,508**	**353**
Inadequately described/not stated	98	159	-61
Total	**7,888**	**6,720**	**1,168**

Source: ABS Census 2006 Working Population and Resident Population Data.

Table 89. Employed Residents Muswellbrook LGA - 1996-2006 (Number)

Muswellbrook Employed Persons	1996 Census			2001 Census			2006 Census			Persons change		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	96-06	96-01	01-06
Agriculture, forestry & fishing	424	228	652	429	238	667	396	218	614	-38	15	-41
Mining	1,015	53	1,068	732	57	789	985	117	1,102	34	-279	313
Manufacturing	339	151	490	383	149	532	375	116	491	1	42	-41
Electricity, gas, water & waste services	418	61	479	297	44	341	330	53	383	-96	-138	42
Construction	357	67	424	366	66	432	445	60	505	81	8	73
Wholesale trade	203	60	263	223	64	287	154	55	209	-54	24	-78
Retail trade	192	359	551	226	394	620	221	448	669	118	69	49
Accommodation & food services	140	277	417	134	306	440	133	340	473	56	23	33
Transport, postal & warehousing	174	53	227	164	59	223	168	56	224	-3	-4	1
Information media & telecommunications	43	30	73	23	19	42	18	22	40	-33	-31	-2
Financial & insurance services	31	92	123	11	64	75	16	69	85	-38	-48	10
Rental, hiring & real estate services	55	40	95	54	32	86	70	48	118	23	-9	32
Professional, scientific & technical services	141	90	231	99	84	183	171	126	297	66	-48	114
Administrative & support services	33	68	101	69	106	175	64	93	157	56	74	-18
Public administration & safety	175	89	264	139	97	236	142	124	266	2	-28	30
Education & training	80	211	291	80	254	334	83	295	378	87	43	44
Health care & social assistance	56	297	353	60	305	365	55	370	425	72	12	60
Arts & recreation services	31	27	58	25	20	45	38	27	65	7	-13	20
Other services	109	91	200	133	74	207	169	92	261	61	7	54
										0	0	0
Inadequately described/Not stated	108	67	175	98	51	149	125	42	167	-8	-26	18
										0	0	0
Total	**4,124**	**2,411**	**6,535**	**3,745**	**2,483**	**6,228**	**4,158**	**2,771**	**6,929**	**394**	**-307**	**701**

Source: ABS Census 2006 Resident Population Time Series Data (T25)

8.3.3 Key Issues

There are a number of major issues in Muswellbrook which relate to the impact of mining activity. Competing land use is a major concern, with pressure from mining expansion vis-à-vis land use for agricultural, equine, and wine industries. There are major concerns about the impact of mining on housing (prices and rents) and the increasing cost of living for low income earners, and the resulting 'two speed' economy in the area.

There are major concerns regarding mining being a finite industry in the longer term and the need to find a future beyond coal mining. This relates to the narrow economic base within the LGA and the need to preserve other sectors such as agribusiness. Underlying these issues is concerns about population growth, ageing of the resident population, persons exiting agriculture and young people leaving the area. The cumulative impact of mining on infrastructure and the town centre (eg. traffic and congestion) and the inability of local government to fund necessary infrastructure is also a concern.

Table 90. Muswellbrook LGA - Major Issues

Muswellbrook LGA Major Issues	
Industry Structure	**Mining Impacts**
Mining has become the major activity in the LGA– resulting in a dual speed economy.	Continued encroaching of mines – concern about moving through the buffers.
Short-term nature of mining compared with long term effects and impact of future contractions in mining.	Impacts on housing prices and rental stock, which squeeze out low income earners.
Future potential of rehabilitated mine sites. Determination of value and uses of land is required. Planning for use of voids to start now with community involvement.	Major skills shortages - acquiring suitable labour is a major issue. High wage impacts – industries competing for labour face major difficulties.
Retail and agricultural sector struggling to find/replace employees.	Impacts of continued mining expansion on infrastructure.
A need to protect other major industries – equine, wineries, and other agribusiness. Critical mass in these sectors needs to be maintained.	"Drive-in-drive-out" mine contractors and tradesmen (those who live outside town but commute to work) contribute to significant traffic congestion on access roads.
Preserving agriculture and exploring new crop opportunities will depend on water and alluvial land availability.	Environmental impacts - mining dust, and potential impact on the health, as well as the aesthetic quality/liveability of the area, is of particular concern. Concerns over discharges from mining into the river.
Loss of skills in agriculture and reluctance of young people to go into the sector.	Dual speed economy crowding out other activities.
Industry sees potential to develop mining support activities further.	People not in mining on low incomes bearing the cost pressures of mining growth (impacting real incomes), cost of living pressures increasing.
	Cumulative impacts of mining are a major concern: impacts on agribusiness long-term and on other future opportunities; dust and noise; perceptions of the region; and other industry sectors.
Tourism	**Population Issues**
Concerns about the contribution of business tourism compared to other tourism. Business tourism related to mining is the dominant form in the area at present. Accommodation is often full with mining workers mid-week.	Loss of young people to cities and other regions.
Tourism needs more promotion and development of product. Denman was viewed as good tourist town.	Housing development in the area is lagging – available land for development.
Need to preserve wine industry and develop tourism links	Hard to attract qualified people (eg. professionals) to move to area.
Competing Land Use	Job opportunities for women are limited.
Mining and agribusiness uses (eg. equine, wineries)	
Long term water availability in region – over- allocation issues	**Town Centre**
Uncertainty surrounding land use affects planning/development in other sectors (agribusiness).	Retail vacancies in main street.
State Government	Impact of traffic and truck movements.
State Government the authority for mining, zoning, rate revenue, planning and infrastructure.	Retail leakage to other major centres (eg. Maitland, Newcastle). Need for revitalisation.
Involvement of the State Government is key as it has responsibility for infrastructure and industry expansion.	**Infrastructure**
Roads related to mining should be handled by the State Government.	Major needs in the area covering road upgrades, industrial estates and other infrastructure.
A new model for mining royalties involving reinvestment in local areas should be developed.	Requirements are beyond the capacity of Councils in the region to fund.

The major emphasis in economic development is on supporting the agribusiness sector (wine and equine sector); avoiding future mine encroachment into agricultural land; and developing the Muswellbrook town centre. The Council has major concerns about the cost pressures being generated by the booming mining sector on the community, on business and on low income earners, in what is seen as a *"two speed economy*". There is a view that the region is experiencing the costs of this industry development but that the local returns are limited.

The CBD revitalisation program is a joint initiative of the Muswellbrook Chamber of Commerce and Industry and Muswellbrook LGA Council.[107] The aims of the plan are to increase business activity and social interaction in the town centre, through improvements in the retail mix, entrepreneurship, maintaining heritage buildings, improving amenity and upgrading infrastructure.

Key directions and opportunities are examined in the next report of this project - *Report 2: Directions and Opportunities Report*. Strategies and actions and infrastructure requirements are covered in the final report: *Report 3: Upper Hunter Economic Diversification Strategy Report*.

107 CBD Strategic Plan 2009, Muswellbrook Chamber of Commerce and Industry and Muswellbrook Shire Council, June 2009

8.4 Upper Hunter LGA

8.4.1 Overview

The Upper Hunter LGA includes the major centre of Scone with smaller townships of Merriwa, Murrurundi and Aberdeen. The economy of the LGA relies on agriculture (beef, grains, and sheep), meat processing, the equine industry and tourism, retail and services. The equine industry includes thoroughbred studs, horse events and infrastructure including an equine research centre and a TAFE campus specialising in rural and equine studies.

Major growth drivers in recent years have been: the growth in the equine sector; mining employees locating in the LGA; and residents attracted for lifestyle (tree changers). The area offers potential for continued growth, particularly in the area around Scone.

An Economic Development .and Tourism Strategic Plan 2010 (ED&TSP 2010) has been developed by Upper Hunter Council. The focus is on: building on the current reputation that Scone and the Upper Hunter enjoys as the "*Horse Capital of Australia";* and capitalising on the potential for green industries (energy park and support industries) and the natural environment, highly productive agricultural and clean air and plentiful water. [108]

8.4.2 Industry Structure

The LGA has experienced population growth due to the expansion of the equine industry in the LGA and the expansion of mining in the Muswellbrook area. Overall the LGA has affordable housing, but the growth in both these sectors has influenced housing prices and rents, particularly in Aberdeen and Scone. [109]

The Upper Hunter region is recognised as a "green" area for agricultural production and equine breeding. Agriculture is the key sector in the region and includes broad acre farming, intensive agriculture, livestock production (beef and sheep) and equine industries. Industry change has increased productivity but reduce the number of enterprises and employment, with a higher output.

Agribusiness accounts for 26% of jobs in the LGA and covers equine industry, beef cattle, sheep and some crops. A large meat processing facility (Primo) is located in Scone, and this is the major manufacturing activity in the LGA. Reflecting the scale of agribusiness, the LGA accounts for around 35% of total agribusiness jobs in the Upper Hunter Region. Other key sectors are in-person services (eg. retail, education and health) and professional services.

108 Draft Economic Development & Tourism Strategic Plan - Revised 8 September 2010, Upper Hunter Shire Council P4

109 Draft Economic Development & Tourism Strategic Plan - Revised 8 September 2010 Upper Hunter Shire Council P8; Upper Hunter Situational Analysis, the Planning Workshop September 2007

Table 91. Jobs in Upper Hunter LGA 2006

Regional Economy	LGA				
Industry Sectors	Upper Hunter		Share of Jobs in UH Region %	Total Upper Hunter Region	
	Jobs no	Share %		Jobs no	Share %
Goods Producing Industries					
Agriculture, forestry and fishing	1237	26.3	34.9	3546	9.4
Mining	45	1	0.8	5499	14.5
Manufacturing	432	9.2	16.6	2607	6.9
Electricity, gas, water and waste services	23	0.5	2.1	1099	2.9
Construction	228	4.9	9.3	2445	6.5
Total	**1965**	**41.8**	12.9	**15196**	**40.2**
Goods Related Industries					
Wholesale trade	121	2.6	12.1	999	2.6
Transport, postal and warehousing	176	3.7	14.8	1188	3.1
Total	297	6.3	13.6	2187	5.8
Knowledge and Business Services					
Information media and telecommunications	13	0.3	6.3	208	0.5
Financial and insurance services	65	1.4	12.2	534	1.4
Rental, hiring and real estate services	36	0.8	5.0	716	1.9
Professional, scientific and technical services	178	3.8	12.2	1455	3.8
Administrative and support services	53	1.1	7.0	762	2
Total	**345**	**7.3**	**9.4**	**3675**	**9.7**
In-Person Services					
Retail trade	506	10.8	12.3	4104	10.9
Accommodation and food services	299	6.4	10.3	2896	7.7
Public administration and safety	209	4.4	10.3	2020	5.3
Education and training	402	8.6	16.9	2375	6.3
Health care and social assistance	387	8.2	13.2	2921	7.7
Arts and recreation services	105	2.2	24.0	437	1.2
Other services	120	2.6	7.6	1570	4.2
Total	**2028**	**43.2**	**12.4**	**16323**	**43.2**
Inadequately described/not stated	63	1.3	14.3	442	1.2
Total LGA	**4698**	**100**	**12.4**	**37823**	**100**

Source: ABS Census 2006, Working Population Data.

There is no 2001 Census working population data available for Upper Hunter LGA (the Shire was formed in May 2004 from Scone Shire and parts of Murrurundi and Merriwa Shires). However an analysis of data on the employed residents shows an increase of resident persons in employment between 2001 and 2006. The major areas of growth were persons employed in mining and in manufacturing (mainly reflecting workers travelling to jobs in Muswellbrook and Singleton).

Table 92. Employed Residents 1996-2006- Upper Hunter LGA (Number)

	1996 Census			2001 Census			2006 Census			Persons Change		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	96-06	96-01	2001-06
Agriculture, forestry & fishing	915	388	1,303	978	441	1,419	822	429	1,251	-52	116	-168
Mining	344	15	359	282	12	294	403	28	431	72	-65	137
Manufacturing	438	148	586	267	94	361	395	127	522	-64	-225	161
Electricity, gas, water & waste services	145	18	163	115	8	123	134	8	142	-21	-40	19
Construction	254	27	281	325	43	368	370	51	421	140	87	53
Wholesale trade	134	46	180	192	58	250	118	44	162	-18	70	-88
Retail trade	153	251	404	193	342	535	215	370	585	181	131	50
Accommodation & food services	92	216	308	78	223	301	91	253	344	36	-7	43
Transport, postal & warehousing	161	50	211	172	59	231	173	45	218	7	20	-13
Information media & telecommunications	31	19	50	22	12	34	15	15	30	-20	-16	-4
Financial & insurance services	28	66	94	16	51	67	30	56	86	-8	-27	19
Rental, hiring & real estate services	30	23	53	28	26	54	31	25	56	3	1	2
Professional, scientific & technical services	70	80	150	63	110	173	88	136	224	74	23	51
Administrative & support services	24	57	81	50	67	117	49	56	105	24	36	-12
Public administration & safety	204	60	264	140	77	217	167	113	280	16	-47	63
Education & training	141	252	393	134	250	384	93	298	391	-2	-9	7
Health care & social assistance	57	332	389	54	359	413	65	396	461	72	24	48
Arts & recreation services	30	13	43	46	21	67	57	47	104	61	24	37
Other services	93	79	172	101	74	175	101	64	165	-7	3	-10
Inadequately described/Not stated	87	75	162	71	51	122	107	69	176	14	-40	54
Total	**3,431**	**2,215**	**5,646**	**3,327**	**2,378**	**5,705**	**3,524**	**2,630**	**6,154**	**508**	**59**	**449**

Source: ABS Census Data 2006 Time Series Resident Population Data (T25)

Reflecting the age structure of the population, the regional jobs growth and industry structure (the extent of agribusiness), labour force participation rates are high in the LGA.

Table 93. Labour Force Upper Hunter LGA – 1996-2006 (Number)

	1996 Census			2001 Census			2006 Census		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Persons aged 15 years and over	5,032	4,986	10,018	5,108	5,088	10,196	5,195	5,068	10,263
Labour force status									
Employed, worked full-time	2,787	1,078	3,865	2,699	1,116	3,815	2,852	1,263	4,115
Employed, worked part-time	445	1,024	1,469	393	1,100	1,493	466	1,220	1,686
Employed, away from work	199	113	312	235	162	397	205	151	356
Unemployed, looking for work	271	205	476	244	189	433	147	136	283
Total labour force	3,702	2,420	6,122	3,571	2,567	6,138	3,670	2,770	6,440
Not in the labour force	1,237	2,478	3,715	1,336	2,319	3,655	1,275	2,062	3,337
% Unemployment	7.3	8.5	7.8	6.8	7.4	7.1	4.0	4.9	4.4
% Labour force participation	73.6	48.5	61.1	69.9	50.5	60.2	70.6	54.7	62.7
% Employment to population(	68.2	44.4	56.4	65.1	46.7	56.0	67.8	52.0	60.0

Source: ABS Census 2006 Time Series Data, Resident Population

An examination of jobs data and employed residents shows that the LGA had 4698 jobs and 6196 residents in employment, and this indicates the substantial percentage of residents who commute to jobs in other areas. The major sectors for commuting were persons employed in mining, electricity generation and construction. There was also some commuting in areas of the services sector.

Table 94. Jobs and Employed Residents 2006 – Upper Hunter LGA (Number)

	Upper Hunter LGA		
Industry	Jobs	Employed residents	Jobs - Residents
Goods Producing			
Agriculture, forestry and fishing	1,237	1,256	-19
Mining	45	446	-401
Manufacturing	432	522	-90
Electricity, gas, water and waste services	23	145	-122
Construction	228	412	-184
Total	**1,965**	**2,781**	**-816**
Goods Related			
Transport, postal and warehousing	121	215	-94
Wholesale trade	176	164	12
Total	**297**	**379**	**-82**
Knowledge & Business Services			
Information media and telecommunications	13	28	-15
Financial and insurance services	65	88	-23
Rental, hiring and real estate services	36	57	-21
Professional, scientific and technical services	178	232	-54
Administrative and support services	53	95	-42
Total	**345**	**500**	**-155**
In-Person Services			
Retail trade	506	600	-94
Accommodation and food services	299	356	-57
Public administration and safety	209	280	-71
Education and training	402	390	12
Health care and social assistance	387	478	-91
Arts and recreation services	105	99	6
Other services	120	163	-43
Total	**2,028**	**2,366**	**-338**
Inadequately described/not stated	63	172	-109
Total	**4,698**	**6,198**	**-1,500**

Source: ABS Census 2006 Working Population and Resident Population Data.

8.4.3 Key Issues

The major economic focus for the region is on the "clean green" aspects of the area and continuing to develop the equine sector, to build the tourism sector and to develop opportunities in renewable energy.

A major feature is recent population growth which is being driven by a combination of mining and energy employees living in the LGA and travelling to work in Muswellbrook/Singleton and other people moving to the area for lifestyle changes.

There are major industry concerns about the future encroachment of mining activity, which is seen as conflicting with the large equine sector. Businesses in the area are experiencing the impacts of mining in terms of regional competition for employees and wage cost pressures.

Table 95. Upper Hunter LGA - Major Issues

Upper Hunter LGA Major Issues	
Industry Structure	**Mining Impacts**
The LGA remains the premium agribusiness region. Continuing to build the equine industry and support activities. Regional balance between agriculture and mining in the area is an issue. Concerns about short term nature of mining – compared with long term effects	Future encroachment and competing land use are the main concerns among businesses in Upper Hunter LGA.
Need to develop the tourism sector	Upper Hunter experiences some of the impacts of expansion in Muswellbrook (eg. impacts on housing rentals).
There is a need to develop professional services sector	Skills shortages - acquiring suitable labour is an issue for other industries:- - trained employees leave to work at coal mines; and - other industries cannot compete with mining sector wages.
	Concerns about visual impacts, which can affect tourism.
Infrastructure	**Population Issues**
Rail line through Scone and impact of coal trains. There is a need for an overpass.	Loss of young people to cities and to other regions for post school education and employment.
Passenger trains service needs to be improved.	Need to continue to grow the population - attraction for lifestyle change and for accessible business and employment opportunities. The region is attracting some professionals who are looking for a lifestyle change. Area has advantages for professionals because of airports.
Water is an issue- long term water availability in the Upper Hunter Region	Narrow employment basis impacts on the ability to attract families to the area.
Funding is required to improve regional roads.	Area has attracted mining sector workers.
Equine Industry	**Housing**
Need to continue to develop the sector. It provides a major growth industry for the LGA.	Housing development is lagging – there is available land for development
Potential to develop equine higher education centre.	There is a need to develop affordable housing.
Tourism	There is current problem of rental properties for workers (Primo).
Strategy has been developed to develop tourism product.	
Tourism needs more focused marketing to develop the identity of the Upper Hunter.	
Accommodation needs to be developed, including a hotel.	

The Council is taking a strategic approach to economic development, through an Economic Development and Tourism Strategic Plan 2010 (ED&TSP 2010). The focus of the plan is on:

- Building on the reputation that Scone and the Upper Hunter has as the "Horse Capital of Australia": The sector supports a range of services in the region. [110]
- Capitalising on the potential for green industries (energy park) and developing support industries
- Development of agribusiness based on highly productive agricultural land and water.
- Encouraging investment in housing and services targeted at the retirement market – seniors living.
- Tourism –promoting the Upper Hunter as a weekend destination and the experiences of Lake Glenbawn, National Parks, vineyards and horse studs.
- Accessibility – the area will be more accessible (with the extension of the F3 to Branxton), for visitors, for businesses and for person seeking a lifestyle change.[111]
- Increasing the resident population through attracting people working in adjacent LGAs and increasing the range of local jobs.

Key directions and opportunities are examined in the next report of this project - *Report 2: Directions and Opportunities Report*. Strategies and actions and infrastructure requirements are covered in the final report: *Report 3: Upper Hunter Economic Diversification Strategy Report.*

110 Draft Economic Development & Tourism Strategic Plan - Revised 8 September 2010, Upper Hunter Shire Council P4
111 Draft Economic Development & Tourism Strategic Plan - Revised 8 September 2010 Upper Hunter Shire Council P5

8.5 Dungog LGA

8.5.1 Overview

Dungog is a rural LGA with a population of over 8000 persons. Dungog Township is the major centre with a population of 2098 and the area has several other villages and townships. There has been considerable recent analysis of the region and its economy undertaken, which was associated with the assessment of the Tillegra Dam.[112]

Major issues affecting the region and its future are: an ageing population; loss of some services (eg. health, education) due to centralisation; structural change in agriculture and forestry; loss of local jobs; water availability issues; limited public transport access; and the mismatch between current housing types and future requirements.

There has been a steady and substantial decline in agribusiness jobs and some small increases in population services and tourism related jobs. The LGA is very much a small business economy, with most businesses being owner operated or employing less than four people. The larger businesses are concentrated in health and community services, tourism (accommodation, cafes and restaurants), education and property and business services. Despite the sectoral changes, agribusiness remains the major area of employment for residents.

A major issue of concern has been the decline in local jobs in the region, which has been associated with changes in agriculture and forestry. There is a focus on revitalising agribusiness, developing the tourism sector and attracting some new business activities to the region (eg. the area is one of the Renewable Energy Precincts in the Hunter Region). There are an increasing number of persons travelling to jobs outside the LGA, particularly in the Lower Hunter, with many residents now being part of a broader regional labour market.

Table 96. Dungog LGA Population 2006 (Number)

Rural Precinct	Urban	Rural	Total
Gresford	289	546	835
Dungog	2098	1038	3136
Paterson	395	1636	1981
Clarence Town	794	1315	2109
Total			**8061**

Source: Tillegra Dam Situational Analysis, Planning Workshop Australia August 2008 P12

The recent situational analysis observed that:" The community is in transition from a detached rural community to an economy that is more integrated with regional growth."[113]

8.5.2 Industry Structure

Most businesses in the area are small business being owner operated or having 1-4 employees. The small number of medium sized businesses (5-19 employees) are mainly in agriculture, forestry; retail trade; accommodation, cafés and restaurants; transport and storage; and property and business services. The larger employers are in education, health and community services and local government.

In 2006 the LGA had a total of 2039 jobs, with 22% of these being in agribusiness and almost half of the jobs being in-person services (which are servicing the local population). An analysis of data between 2001 and 2006 shows that the LGA had a decline in jobs of 532. A major concern was that these falls in employment were spread across most sectors of employment, including agribusiness, local in-person services and professional services. Since

112 Tillegra Dam Situational Analysis, Planning Workshop Australia August 2008 P12
113 Dungog LGA Situation Analysis September 2008, planning workshop Australia P4

then there has been a further reduction in timber industry jobs and little jobs growth in other sectors.

The Dungog LGA has experienced a number of trends and these have included a decline in agribusiness employment mainly due to dairy regulation and to changes in the timber industry. With the shift in government services and other private services to other locations, there is now a growing tendency for people to travel outside of the region for both employment and services. There is also retail leakage to other major centres, due to lower prices. This current employment pattern has been generated by a decline in local employment and the strong growth in jobs in the Lower Hunter Region.

Table 97. Jobs in Dungog LGA 2006

Regional Economy	LGA				
Industry Sectors	Dungog		Share of UH Region jobs %	Total Upper Hunter Region Jobs no	
	Jobs no	Share %			Share %
Goods Producing Industries					
Agriculture, forestry and fishing	438	21.5	12.4	3546	9.4
Mining	7	0.3	0.1	5499	14.5
Manufacturing	98	4.8	3.8	2607	6.9
Electricity, gas, water and waste services	33	1.6	3.0	1099	2.9
Construction	129	6.3	5.3	2445	6.5
Total	**705**	**34.6**	4.6	**15196**	**40.2**
Goods Related Industries					
Wholesale trade	41	2.0	4.1	999	2.6
Transport, postal and warehousing	109	5.3	9.2	1188	3.1
Total	**150**	**7.4**	**6.9**	**2187**	**5.8**
Knowledge and Business Services					
Information media and telecommunications	14	0.7	6.7	208	0.5
Financial and insurance services	24	1.2	4.5	534	1.4
Rental, hiring and real estate services	24	1.2	3.4	716	1.9
Professional, scientific and technical services	89	4.4	6.1	1455	3.8
Administrative and support services	39	1.9	5.1	762	2.0
Total	**190**	**9.3**	5.2	**3675**	**9.7**
In-Person Services					
Retail trade	191	9.4	4.7	4104	10.9
Accommodation and food services	170	8.3	5.9	2896	7.7
Public administration and safety	132	6.5	6.5	2020	5.3
Education and training	220	10.8	9.3	2375	6.3
Health care and social assistance	155	7.6	5.3	2921	7.7
Arts and recreation services	19	0.9	4.3	437	1.2
Other services	71	3.5	4.5	1570	4.2
Total	**958**	**47.0**	**5.9**	**16323**	**43.2**
Inadequately described/not stated	36	1.8	8.1	442	1.2
Total LGA	**2039**	**100**	5.4	**37823**	**100.0**

Source: ABS Census 2006 Working Population Data.

Table 98. Employment Trends 2001-2006 – Dungog LGA (Number)

	2001			2006			Change 2001-2006		
Industry	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**
Goods Producing									
Agriculture, forestry and fishing	350	151	501	297	141	438	-53	-10	-63
Mining	11	0	11	7	0	7	-4	0	-4
Manufacturing	127	38	165	66	32	98	-61	-6	-67
Electricity, gas, water and waste services	20	3	23	27	6	33	7	3	10
Construction	140	30	170	109	20	129	-31	-10	-41
Total	**648**	**222**	**870**	**506**	**199**	**705**	**-142**	**-23**	**-165**
Goods Related									
Transport, postal and warehousing	105	32	137	79	30	109	-26	-2	-28
Wholesale trade	51	25	76	23	18	41	-28	-7	-35
Total	**156**	**57**	**213**	**102**	**48**	**150**	**-54**	**-9**	**-63**
Knowledge & Business Services									
Information media and telecommunications	9	12	21	3	11	14	-6	-1	-7
Financial and insurance services	19	20	39	12	12	24	-7	-8	-15
Rental, hiring and real estate services	18	15	33	10	14	24	-8	-1	-9
Professional, scientific and technical services	45	70	115	36	53	89	-9	-17	-26
Administrative and support services	27	23	50	22	17	39	-5	-6	-11
Total	**118**	**140**	**258**	**83**	**107**	**190**	**-35**	**-33**	**-68**
In-Person Services									
Retail trade	146	145	291	79	112	191	-67	-33	-100
Accommodation and food services	77	142	219	51	119	170	-26	-23	-49
Public administration and safety	70	47	117	81	51	132	11	4	15
Education and training	88	188	276	56	164	220	-32	-24	-56
Health care and social assistance	37	166	203	27	128	155	-10	-38	-48
Arts and recreation services	18	10	28	3	16	19	-15	6	-9
Other services	29	28	57	42	29	71	13	1	14
Total	**465**	**726**	**1,191**	**339**	**619**	**958**	**-126**	**-107**	**-233**
Inadequately described/not stated	18	21	39	20	16	36	2	-5	-3
Total	**1,405**	**1,166**	**2,571**	**1,050**	**989**	**2,039**	**-355**	**-177**	**-532**

Source: ABS Census 2006, Working Population Data Cat. No. 2068.0 – ABS Census 2006, Working Population Data. N.B. ABS Census 2001 data for Rental, Hiring & Real Estate Services, Administrative & Support Services, and Professional, Scientific & Technical Services has been adjusted based on assumptions from ABS Census 2006 data.

Over the period since 1996, labour force participation rates of males have declined, while that of females has increased. Most of the decline in jobs had tended to be in industries employing males and the growth in local services is often in areas that employ mainly females.

Table 99. Labour Force Dungog LGA – 1996-2006 (Number)

	1996 Census			2001 Census			2006 Census		
	Males	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**
Persons aged 15 years and over	2,885	2,905	5,790	3,038	3,046	6,084	3,069	3,166	6,235
Labour force status(									
Employed, worked full-time	1,461	604	2,065	1,365	543	1,908	1,420	614	2,034
Employed, worked part-time	240	587	827	316	689	1,005	296	819	1,115
Employed, away from work	86	69	155	111	103	214	143	85	228
Unemployed, looking for work	185	105	290	181	98	279	103	75	178
Total labour force	1,972	1,365	3,337	1,973	1,433	3,406	1,962	1,593	3,555
Not in the labour force	867	1,499	2,366	943	1,481	2,424	942	1,379	2,321
% Unemployment	9.4	7.7	8.7	9.2	6.8	8.2	5.3	4.7	5.0
% Labour force participation	68.4	47.0	57.6	64.9	47.1	56.0	63.9	50.3	57.0
% Employment to population	61.9	43.4	52.6	59.0	43.8	51.4	60.5	48.0	54.1

Source: ABS Census 2006 Time Series Data, Resident Population

Table 100. Employed Residents Dungog LGA 2006 (Number)

Dungog Employed Persons	1996 Census			2001 Census			2006 Census			Persons Change		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	96-06	96-01	2001-06
Agriculture, forestry & fishing	367	165	532	356	153	509	310	145	455	-77	-23	-54
Mining	43	0	43	35	0	35	61	10	71	28	-8	36
Manufacturing	221	57	278	196	40	236	257	53	310	32	-42	74
Electricity, gas, water & waste services	41	7	48	44	4	48	46	5	51	3	0	3
Construction	177	37	214	223	45	268	281	39	320	106	54	52
Wholesale trade	79	27	106	86	34	120	63	31	94	-12	14	-26
Retail trade	140	166	306	125	163	288	123	189	312	6	-18	24
Accommodation & food services	65	114	179	73	148	221	61	139	200	21	42	-21
Transport, postal & warehousing	128	33	161	133	35	168	143	50	193	32	7	25
Information media & telecommunications	22	15	37	20	14	34	12	18	30	-7	-3	-4
Financial & insurance services	11	36	47	16	38	54	16	37	53	6	7	-1
Rental, hiring & real estate services	19	20	39	20	17	37	25	28	53	14	-2	16
Professional, scientific & technical services	59	53	112	73	74	147	59	88	147	35	35	0
Administrative & support services	20	27	47	30	37	67	29	41	70	23	20	3
Public administration & safety	110	49	159	113	54	167	87	63	150	-9	8	-17
Education & training	95	174	269	80	179	259	74	187	261	-8	-10	2
Health care & social assistance	35	176	211	41	218	259	61	284	345	134	48	86
Arts & recreation services	11	7	18	12	4	16	11	22	33	15	-2	17
Other services	74	47	121	72	39	111	79	44	123	2	-10	12
Inadequately described/Not stated	70	49	119	44	39	83	58	45	103	-16	-36	20
											0	0
Total	**1,787**	**1,259**	**3,046**	**1,792**	**1,335**	**3,127**	**1,856**	**1,518**	**3,374**	**328**	**81**	**247**

Source: Dungog T25 INDUSTRY OF EMPLOYMENT (a) BY SEX FOR TIME SERIES Count of employed persons aged 15 years and over (excludes overseas visitors) based on place of enumeration 2006 Census Community Profile Series Dungog (A) (LGA 12700) Time Series Profile.

Jobs data for 2006 shows that there were 3466 employed residents in the LGA and only 2039 jobs, with over 1400 residents travelling outside the region for employment. This is a result of a combination of the decline in local jobs and the increasing number of persons living in the area for lifestyle reasons and being able to commute to jobs in areas of the Lower Hunter. Job commuting is concentrated in a number of sectors, including mining, manufacturing, transport and warehousing, professional and technical services, and health. A significant number of these commuters would be in professional occupations. It has been estimated that 90% of employed persons, who are resident in Clarence Town, Vacy and Paterson, commute to employment outside the LGA.

Over the last decade the overall population of the LGA has been static, the southern villages of Clarence Town and Paterson have experienced some growth in population (associated with lifestyle movements), Gresford and East Gresford have declined, and Dungog has been static. Loss of young people for education and employment remains an issue.

Looking to the future, there is some interest in rural residential land in the areas of Dungog LGA, which allow access to employment opportunities in areas like Newcastle Maitland, Raymond Terrace and Tomago. This demand is likely to grow with the expansion of activity around the RAAF Base at Williamtown. Some residents are also commuting to mining jobs in Singleton.

Table 101. Jobs and Employed Residents 2006 Dungog LGA (Number)

	Dungog		
Industry	**Jobs**	**Employed residents**	**Jobs - Residents**
Goods Producing			
Agriculture, forestry and fishing	438	470	-32
Mining	7	76	-69
Manufacturing	98	322	-224
Electricity, gas, water and waste services	33	55	-22
Construction	129	340	-211
Total	**705**	**1,263**	**-558**
Goods Related			
Transport, postal and warehousing	109	195	-86
Wholesale trade	41	102	-61
Total	**150**	**297**	**-147**
Knowledge & Business Services			
Information media and telecommunications	14	36	-22
Financial and insurance services	24	50	-26
Rental, hiring and real estate services	24	53	-29
Professional, scientific and technical services	89	155	-66
Administrative and support services	39	66	-27
Total	**190**	**360**	**-170**
In-Person Services			
Retail trade	191	314	-123
Accommodation and food services	170	200	-30
Public administration and safety	132	163	-31
Education and training	220	264	-44
Health care and social assistance	155	345	-190
Arts and recreation services	19	33	-14
Other services	71	125	-54
Total	**958**	**1,444**	**-486**
Inadequately described/not stated	36	102	-66
Total	**2,039**	**3,466**	**-1,427**

Source: ABS Census 2006 Working Population and Resident Population Data.

8.5.3 Key Issues

Major issues affecting the region and its future are: an ageing population; the loss of some services (eg. health, education) due to centralisation; structural change in agriculture and forestry; water availability issues; loss of younger people due to the narrow range of local jobs available ; limited public transport access; and a mismatch between current housing types and future housing requirements.

There is a recognised need to revitalise agribusiness and to strengthen the towns through growth in population and in tourism activity.

Rural LGAs like Dungog face major issues in terms of infrastructure, due to: large areas; small dispersed populations; and scattered land use patterns. A major issue is the quality of roads connecting the LGA to areas like Maitland and Raymond Terrace in the Lower Hunter Region. There are constraints on land availability for housing, industrial or commercial use in the Dungog Township. There is also limited housing for independent living of older persons in the town. The LGA has undergone substantial change and the recent situational analysis observed that: "*The community is in transition from a detached rural community to an economy that is more integrated with regional growth*."[114] From a strategy perspective, this changed employment dynamic places an emphasis on new housing, improved transport and roads to enable residents to link to regional opportunities. At the same time the region offers opportunities in sustainability covering, renewable energy, intensive agriculture and tourism.

Table 102. Dungog LGA - Major Issues

Dungog LGA Major Issues	
Economy	**Dam**
Major decline in local employment in the LGA. Agribusiness will still remain important for the region, through development of more intensive agriculture.	The Tillegra Dam development was a contentious local issue. There are some concerns by business about loss of construction workforce benefits and tourism opportunities associated with the dam development. There is a need for an active strategy to develop new opportunities.
Limited employment opportunities for younger people.	**Infrastructure**
Loss of services to larger centres. Recent closure of timber mill lead to a loss of 39 direct jobs and flow on impacts to other sectors.	The road network is inadequate. A need for upgrades of town infrastructure.
Problems in attracting large industries. Area is at a comparative disadvantage compared to areas like Maitland because of quality access road network.	Small LGA does not have the capacity to fund infrastructure improvements
Dairy deregulation and consolidation has reduced employment in the sector.	**Industrial Land**
Fragmentation of agricultural holdings – means that many smaller holdings are not sustainable without "off farm" income.	Shortage of commercial/industrial land. Various constraints (flooding, topography, environmental) limit capacity for development. Opportunities to develop further land are limited.
Average wage rates are low in the area (compared with other LGAs).	**Local Government**
Rate of commuting to Lower Hunter Jobs is continuing.	Concerns about future of LGAs with small populations.
Future opportunities are seen around sustainability – agribusiness, renewable energy and tourism.	Dungog LGA currently functions more as four villages rather than as a region.
Housing	**Population**
Housing affordability is becoming an issue, due to increase prices for rural properties. Much of the residential construction is for holiday and for future retirement properties. There is limited construction of housing for full time residents. There is a need for appropriately-sized lifestyle blocks (affordable). Currently there are limited rental properties in the LGA.	Overall growth in the LGA has been limited. Population growth has been focused on rural areas with access to jobs in Lower Hunter. Continued loss of younger persons for education and jobs. Some people moving in for retirement living.
Health and Aged Care	**Tourism**
Limited health services are limited. Aged care and related services is lacking.	Accommodation options are limited; there is a lack of a suitable Hotel/Motel accommodation. Caravan park requires substantial investment.
Broadband and communications	Decline in the number of tourism business (eg. B&Bs).
Need to improve broadband across the LGA.	Need to improve retail offer to tourists.
	National Parks/State Forests - need infrastructure investment for tourism purposes (public and private investment).

Key directions and opportunities are examined in the next report of this project - *Report 2: Directions and Opportunities Report*. Strategies and actions and infrastructure requirements are covered in the final report: *Report 3: Upper Hunter Economic Diversification Strategy Report.*

114 Dungog LGA Situation Analysis September 2008, planning workshop Australia P4

8.6 Gloucester LGA

8.6.1 Overview

As a regional economy, Gloucester maintains a specialisation in agribusiness and services for the Shire population. There has been growth in the mining and gas sector, associated with some extension of coal mining and coal seam gas. The region has a growing tourism sector that is focused on nature and adventure tourism and access to the Barrington Tops.

Population is growing slowly and is ageing and employment levels have largely been stable in recent years. Future economic development strategies for the Shire are focused on diversifying agribusiness, developing tourism and strengthening light industrial activities and the service sector. New investment in the retail sector will contribute to a revitalisation of the town centre.[115]

8.6.2 Industry Structure

Gloucester is one of the smallest economies in the Upper Hunter Region. In 2006 there were 1737 jobs in the Shire, with agribusiness accounting for almost 20% of jobs and manufacturing 8% of jobs. Over 45% jobs are servicing the local population with retail and health services being the major areas of local employment.

In the period 2001-2006 the number of jobs declined by 168, with almost half of this decline being in agribusiness. There was also a decline in retail jobs, which was largely offset by growth in other service jobs.

Table 103. Jobs Gloucester LGA 2006

Regional Economy Industry Sectors	LGA Gloucester no	Share %	Share of UH Region jobs %	Upper Hunter Region no	Share %
Goods Producing Industries					
Agriculture, forestry and fishing	337	19.4	9.5	3546	9.4
Mining	92	5.3	1.7	5499	14.5
Manufacturing	160	9.2	6.1	2607	6.9
Electricity, gas, water and waste services	15	0.9	1.4	1099	2.9
Construction	80	4.6	3.3	2445	6.5
Total	**684**	**39.4**	4.5	**15196**	**40.2**
Goods Related Industries					
Wholesale trade	47	2.7	4.7	999	2.6
Transport, postal and warehousing	67	3.9	5.6	1188	3.1
Total	**114**	**6.6**	**5.2**	**2187**	**5.8**
In-Person Services				**0**	**0.0**
Information media and telecommunications	15	0.9	7.2	208	0.5
Financial and insurance services	18	1.0	3.4	534	1.4
Rental, hiring and real estate services	23	1.3	3.2	716	1.9
Professional, scientific and technical services	65	3.7	4.5	1455	3.8
Administrative and support services	21	1.2	2.8	762	2.0
Total	**142**	**8.2**	3.9	**3675**	**9.7**
In-Person Services					
Retail trade	184	10.6	4.5	4104	10.9
Accommodation and food services	124	7.1	4.3	2896	7.7
Public administration and safety	94	5.4	4.7	2020	5.3
Education and training	128	7.4	5.4	2375	6.3
Health care and social assistance	187	10.8	6.4	2921	7.7
Arts and recreation services	11	0.6	2.5	437	1.2
Other services	57	3.3	3.6	1570	4.2
Total	**785**	**45.2**	4.8	**16323**	**43.2**
Inadequately described/not stated	12	0.7	2.7	442	1.2
Total LGA	**1737**	**100.0**	4.6	**37823**	**100.0**

Source: ABS Census 2006 Working Population Data.

115 Economic Development Strategy for Gloucester Local Government Area, Report 3: Economic Development Strategy, Buchan Consulting, December 2010.

A comparison of jobs and employed residents shows that Gloucester Shire has a relatively high level of employment containment, with most residents employed in local jobs and a relatively small number of residents commuting to jobs outside the Shire.

Table 104. Employment Trends 2001-2006 – Gloucester LGA (Number)

	2001			2006			Change 2001-06		
Industry	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**
Goods Producing									
Agriculture, forestry & fishing	267	143	410	226	111	337	-41	-32	-73
Mining	118	0	118	84	9	93	-34	9	-25
Manufacturing	148	28	176	127	33	160	-21	5	-16
Electricity, gas, water & waste services	7	0	7	15	0	15	8	0	8
Construction	98	11	109	71	9	80	-27	-2	-29
Total	**638**	**182**	**820**	**523**	**162**	**685**	**-115**	**-20**	**-135**
Goods Related									
Transport, postal & warehousing	60	21	81	46	21	67	-14	0	-14
Wholesale trade	38	26	64	33	13	46	-5	-13	-18
Total	**98**	**47**	**145**	**79**	**34**	**113**	**-19**	**-13**	**-32**
Knowledge & Business Services									
Information media & telecommunications	12	6	18	6	9	15	-6	3	-3
Financial & insurance services	11	15	26	3	15	18	-8	0	-8
Rental, hiring & real estate services	7	14	21	9	14	23	2	0	2
Professional, scientific & technical services	18	39	57	27	38	65	9	-1	8
Administrative and support services	10	7	17	14	7	21	4	0	4
Total	**58**	**81**	**139**	**59**	**83**	**142**	**1**	**2**	**3**
In-Person Services									
Retail trade	121	134	255	71	113	184	-50	-21	-71
Accommodation & food services	38	65	103	37	87	124	-1	22	21
Public administration & safety	43	25	68	70	23	93	27	-2	25
Education & training	37	87	124	37	91	128	0	4	4
Health care & social assistance	34	143	177	34	154	188	0	11	11
Arts & recreation services	13	3	16	8	3	11	-5	0	-5
Other services (and admin services)	19	21	40	39	28	57	20	7	17
Total	**305**	**478**	**783**	**296**	**499**	**785**	**-9**	**21**	**2**
Inadequately described/Not stated	11	8	19	5	8	13	-6	0	-6
Total	**1,110**	**796**	**1,906**	**962**	**786**	**1,738**	**-148**	**-10**	**-168**

Source: Cat. No. 2068.0 - ABS Census 2006, Working Population Data. N.B. ABS Census 2001 data for Rental, Hiring & Real Estate Services, Administrative & Support Services, and Professional, Scientific & Technical Services has been adjusted based on assumptions from ABS Census 2006 data.

Table 105. Jobs and Employed Residents Gloucester LGA 2006 (Number)

Industry	Gloucester Jobs	Employed residents	Jobs - Residents
Goods Producing			
Agriculture, forestry and fishing	337	367	-30
Mining	93	76	17
Manufacturing	160	155	5
Electricity, gas, water and waste services	15	13	2
Construction	80	128	-48
Total	**685**	**739**	**-54**
Goods Related			
Transport, postal and warehousing	67	85	-18
Wholesale trade	46	46	0
Total	**113**	**131**	**-18**
Knowledge & Business Services			
Information media and telecommunications	15	12	3
Financial and insurance services	18	22	-4
Rental, hiring and real estate services	23	27	-4
Professional, scientific and technical services	65	73	-8
Administrative and support services	21	29	-8
Total	**142**	**163**	**-21**
In-Person Services			
Retail trade	184	186	-2
Accommodation and food services	124	124	0
Public administration and safety	93	96	-3
Education and training	128	121	7
Health care and social assistance	188	195	-7
Arts and recreation services	11	18	-7
Other services	57	60	-3
Total	**785**	**800**	**-15**
Inadequately described/not stated	13	45	-32
Total	**1,738**	**1,878**	**-140**

Source: ABS Census 2006 Working Population and Resident Population Data.

Over the period 1996-2006 there has been an increase in the number of persons in part-time employment and a decline in the numbers working full time. The labour force participation rate has also been declining, which reflects the trend toward retirement living.

Over the 10 year period, 1996-2006 the number of residents in employment has largely been static (increasing by only 52 persons). This pattern has been similar for both males and females. The growth of employed persons that has occurred was mainly in services - health, education and local government (this growth was offset by declines in persons employed in agribusiness and manufacturing).

Table 106. Labour Force Gloucester LGA 1996-2006 (Number)

	1996 Census Males	Females	Persons	2001 Census Males	Females	Persons	2006 Census Males	Females	Persons
Persons aged 15 years and over	1,830	1,883	3,713	1,823	1,874	3,697	1,926	1,981	3,907
Labour force status									
Employed, worked full-time	901	356	1,257	812	357	1,169	795	346	1,141
Employed, worked part-time	126	336	462	168	358	526	203	411	614
Employed, away from work	58	52	110	69	57	126	75	51	126
Unemployed, looking for work	117	79	196	86	62	148	63	58	121
Total labour force	1,202	823	2,025	1,135	834	1,969	1,136	866	2,002
Not in the labour force	598	1,037	1,635	634	980	1,614	698	1,030	1,728
% Unemployment	9.7	9.6	9.7	7.6	7.4	7.5	5.6	6.7	6.0
% Labour force participation	65.7	43.7	54.5	62.3	44.5	53.3	59.0	43.7	51.2
% Employment to population	59.3	39.5	49.3	57.5	41.2	49.3	55.8	40.7	48.1

Source: ABS Census 2006 Resident Population Data.

Table 107. Employed Residents Gloucester LGA 1996-2006 (Number)

	1996 Census			2001 Census			2006 Census			Persons Change		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	96-06	96-01	2001-06
Agriculture, forestry & fishing	293	124	417	267	137	404	241	119	360	-57	-13	-44
Mining	69	9	78	76	3	79	70	9	79	1	1	0
Manufacturing	151	27	178	119	15	134	122	26	148	-30	-44	14
Electricity, gas, water & waste services	4	0	4	7	0	7	14	0	14	10	3	7
Construction	71	12	83	117	10	127	122	6	128	45	44	1
Wholesale trade	50	19	69	42	17	59	33	9	42	-27	-10	-17
Retail trade	95	96	191	81	108	189	76	109	185	-6	-2	-4
Accommodation & food services	41	85	126	42	85	127	36	85	121	-5	1	-6
Transport, postal & warehousing	69	20	89	54	21	75	67	19	86	-3	-14	11
Information media & telecommunications	10	9	19	7	13	20	12	7	19	0	1	-1
Financial & insurance services	11	23	34	8	18	26	4	19	23	-11	-8	-3
Rental, hiring & real estate services	3	7	10	5	13	18	10	18	28	18	8	10
Professional, scientific & technical services	22	29	51	25	33	58	36	36	72	21	7	14
Administrative & support services	17	10	27	16	24	40	19	13	32	5	13	-8
Public administration & safety	63	22	85	50	29	79	76	29	105	20	-6	26
Education & training	38	73	111	33	70	103	30	93	123	12	-8	20
Health care & social assistance	26	127	153	25	127	152	32	160	192	39	-1	40
Arts & recreation services	4	3	7	15	3	18	13	5	18	11	11	0
Other services	22	20	42	39	26	65	35	22	57	15	23	-8
										0	0	0
Inadequately described/Not stated	26	29	55	21	22	43	25	24	49	-6	-12	6
										0	0	0
Total	**1,085**	**744**	**1,829**	**1,049**	**774**	**1,823**	**1,073**	**808**	**1,881**	**52**	**-6**	**58**

Source: ABS Census Data Time Series - Resident Population Data (T25).

8.6.3 Key Issues

Key issues in Gloucester are: demographic factors include population growth and population ageing; continuing pressures on traditional agriculture; limited local employment growth; land issues - pressure on agricultural land due to land being taken up for mining leases or for lifestyle farms; a need to develop the tourism sector; and a need to revitalise the retail sector and the Gloucester town centre. Potential changes to the Gloucester Hospital, within the context of restructured regional health networks, were also a major concern.

There is a need to diversify the agribusiness sector and there has been action on this issue through the Gloucester Project and the Growers Cluster. Action has also been taken on shaping a new regional plan for tourism. A detailed analysis of these issues is contained in the Gloucester Economic Development Strategy.[116]

Table 108. Gloucester Shire - Major Issues

Gloucester Shire	Major Issues
Economy	**Population**
Major pressures on traditional agriculture (beef price/cost squeeze) and dairy restructuring of farms and processing sector.	Population is relatively small and needs to grow for a sustainable local economy.
Limited employment growth in the area.	Population is ageing due to current age structure and in-migration patterns.
Land availability – pressure on agriculture due to growth in hobby farms and mining leases.	Continued loss of young people from the area for education and jobs.
Need to diversify the agribusiness.	
Some skill shortages in the area.	
Tourism	**Health**
Tourism sector is underdeveloped but has potential for expansion.	Vulnerable to loss of hospital and health services.
Mining	
Some concerns about mining and gas industry expansion.	Concerns about future encroachment in and around town centre.
Retail Sector	**Town Centre**
Retail sector needs major revitalisation in the town centre.	Town centre needs to be revitalised.
Current lack of competition in the area.	

Key directions and opportunities are examined in the next report of this project - *Report 2: Directions and Opportunities Report.* Strategies and actions and infrastructure requirements are covered in the final report: *Report 3: Upper Hunter Economic Diversification Strategy Report.*

116 Economic Development Strategy for Gloucester Local Government Area, Report 3: Economic Development Strategy, Buchan Consulting, December 2010.

8.7 Great Lakes LGA

8.7.1 Overview

The Great Lakes LGA extends along the Mid North Coast, and is 200 kms north of Sydney and 70 kms north of Newcastle. The main population centres are Forster/ Tuncurry in the north and Tea Gardens/Hawks Nest in the south and the smaller inland villages of Stroud, Nabiac and Bulahdelah. As a coastal location it has developed as a retirement and lifestyle area and as a tourism centre.

The LGA has experienced strong population growth and this growth is projected to continue. Most of this growth has been driven by retirement and lifestyle living. The area has the oldest age structure in the Upper Hunter Region and there are major concerns about these demographics and a recognised need to broaden the business and employment base of the area.

From a regional planning perspective, Great Lakes is included in the NSW Government's *Mid-North Coast Regional Strategy 2008*, and is identified as a coastal area that will continue to experience population growth.[117] The regional strategy defines Forster - Tuncurry as a major town and Bulahdelah and Tea Gardens/Hawks are defined as towns. Stroud and Nabiac are defined as inland villages and all other centres (Green Point, Pacific Palms, Smiths Lake, Coomba Park) are defined as coastal villages.[118] Recent studies project continue growth, particularly in the major centre of Forster – Tuncurry.[119]

8.7.2 Economic Structure

Compared with the rest of the study region, Great Lakes has a much older population; lower workforce participation rates; and high incidence of part-time service industry employment. There is a relative narrow based of employment (agribusiness in the inland areas, services and tourism). Unemployment levels are higher than other areas of the Upper Hunter Region. The area currently lacks the broader mix of industries and job opportunities to attract younger families.

Tourism: Great Lakes has almost one million visitors each year with Council estimating the value at around $243 million[120] to the economy. Primary production: is focused in cattle farming, fishing and oyster production, and in wine. There has been some growth in specialist food products sold via local retail, farm gate sales and restaurants. Construction is a significant sector due to the continuing population growth and related housing development.

This pattern of growth has made the area a lifestyle region and has generated growth in population services and tourism. The dominant sectors of economic activity are education, health and community services, the retail trade, accommodation, cafes and restaurants, agriculture, fisheries and construction.

In 2006, there were over 9000 jobs in Great Lakes LGA, with in-person services accounting for 60% of jobs (mainly retail -16%, accommodation and food services -13% and health 12%). Agribusiness only accounted for 486 jobs or 5% of jobs, with manufacturing accounting for 6%. Due to the continued strong population growth and housing development – construction was one of the largest sectors, accounting for 864 jobs (10% of LGA jobs). Of the 10% of jobs in construction between around 2 percentage points are estimated to be civil and road construction during 2006, with a further increase in these numbers since 2006 with the

117 The strategy covers the eight local government areas of Clarence Valley, Coffs Harbour, Port Macquarie–Hastings, Greater Taree and Great Lakes.
118 Forster - Tuncurry Employment Land Implementation Strategy Hill PDA November 2009 P61
119 The employment lands study indicates that Foster – Tuncurry population is projected to increase from 18,372 in 2006 to 26,500 in 2031, Forster - Tuncurry Employment Land Implementation Strategy Hill PDA November 2009P11
120 Great Lakes Council indicates that recent data from Tourism Research Australia estimates the value of tourism at $136 million in 2010 for Great Lakes LGA.

upgrade of the Pacific Highway. Knowledge and business services accounted for 1068 jobs or 12%.

Forster - Tuncurry is the major centre of employment and accounted for almost 5800 jobs or 64% of all jobs in the LGA. In the twin towns, the major employment sectors were: Retail Trade (1,038 jobs or 19% of jobs); Accommodation and Food Services (704 or 12% of jobs); Health Care and Social Assistance (885 or 13% of jobs); Construction (416 or 7% of jobs); Education and Training (437 or 7% of jobs); and Public Administration and Safety (380 or 7% of jobs).

Table 109. Jobs in Great Lakes LGA 2006

Regional Economy Industry Sectors	LGA Great Lakes		Share of UH Region jobs	Total UH Jobs	
	Jobs no	Share %	Jobs %	no	Share %
Goods Producing Industries					
Agriculture, forestry and fishing	486	5.4	13.7	3546	9.4
Mining	39	0.4	0.7	5499	14.5
Manufacturing	510	5.7	19.6	2607	6.9
Electricity, gas, water and waste services	170	1.9	15.5	1099	2.9
Construction	864	9.6	35.3	2445	6.5
Total	**2069**	**23.0**	13.6	**15196**	**40.2**
Goods Related Industries					
Wholesale trade	163	1.8	16.3	999	2.6
Transport, postal and warehousing	263	2.9	22.1	1188	3.1
Total	426	4.7	19.5	2187	5.8
Knowledge and Business Services					
Information media and telecommunications	62	0.7	29.8	208	0.5
Financial and insurance services	178	2.0	33.3	534	1.4
Rental, hiring and real estate services	283	3.1	39.5	716	1.9
Professional, scientific and technical services	336	3.7	23.1	1455	3.8
Administrative and support services	209	2.3	27.4	762	2.0
Total	**1068**	**11.9**	29.1	**3675**	**9.7**
In-Person Services					
Retail trade	1425	15.8	34.7	4104	10.9
Accommodation and food services	1196	13.3	41.3	2896	7.7
Public administration and safety	465	5.2	23.0	2020	5.3
Education and training	692	7.7	29.1	2375	6.3
Health care and social assistance	1113	12.4	38.1	2921	7.7
Arts and recreation services	191	2.1	43.7	437	1.2
Other services	359	4.0	22.9	1570	4.2
Total	**5441**	**60.4**	33.3	**16323**	**43.2**
Inadequately described/not stated	89	1.0	20.1	442	1.2
Total LGA	**9004**	**100.0**	23.8	**37823**	**100.0**

Source: ABS Census 2006 Working Population Data.

In the period 2001-2006 an additional 1000 jobs were added (total jobs 2001- 8083; 2006 - 9093). Most of this growth in jobs was in population driven services including: health care and social assistance; construction; education and training; and accommodation and food service. There was also some growth in professional and technical services. Declines were seen in retail and agribusiness jobs.

Table 110. Employment Trends 2001-2006 – Great Lakes LGA (Number)

	2001			2006			Change 2001-2006		
Industry	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Goods Producing									
Agriculture, forestry and fishing	426	159	585	355	131	486	-71	-28	-99
Mining	51	9	60	39	0	39	-12	-9	-21
Manufacturing	400	112	512	398	112	510	-2	0	-2
Electricity, gas, water and waste services	47	9	56	143	27	170	96	18	114
Construction	528	112	640	727	137	864	199	25	224
Total	**1,452**	**401**	**1,853**	**1,662**	**407**	**2,069**	**210**	**6**	**216**
Goods Related									
Transport, postal and warehousing	169	47	216	201	62	263	32	15	47
Wholesale trade	163	71	234	114	49	163	-49	-22	-71
Total	**332**	**118**	**450**	**315**	**111**	**426**	**-17**	**-7**	**-24**
Knowledge & Business Services									
Information media and telecommunications	46	24	70	28	34	62	-18	10	-8
Financial and insurance services	57	96	153	67	111	178	10	15	25
Rental, hiring and real estate services	108	139	247	109	174	283	1	35	36
Professional, scientific and technical services	125	125	250	167	169	336	42	44	86
Administrative and support services	71	85	156	94	115	209	23	30	53
Total	**407**	**469**	**876**	**465**	**603**	**1,068**	**58**	**134**	**192**
In-Person Services									
Retail trade	774	923	1,697	593	832	1,425	-181	-91	-272
Accommodation and food services	385	523	908	493	703	1,196	108	180	288
Public administration and safety	198	127	325	270	195	465	72	68	140
Education and training	174	378	552	207	485	692	33	107	140
Health care and social assistance	152	696	848	228	885	1,113	76	189	265
Arts and recreation services	98	80	178	99	92	191	1	12	13
Other services	184	149	333	206	153	359	22	4	26
Total	**1,965**	**2,876**	**4,841**	**2,096**	**3,345**	**5,441**	**131**	**469**	**600**
Inadequately described/not stated	31	32	63	50	39	89	19	7	26
Total	**4,187**	**3,896**	**8,083**	**4,588**	**4,505**	**9,093**	**401**	**609**	**1,010**

Source: Cat. No. 2068.0 – ABS Census 2006, Working Population Data. N.B. ABS Census 2001 data for Rental, Hiring & Real Estate Services, Administrative & Support Services, and Professional, Scientific & Technical Services has been adjusted based on assumptions from ABS Census 2006 data.

Reflecting the population structure and the industry structure, relative to the Upper Hunter Region Great Lakes has a higher incidence of part-time employment (in-person services and tourism) and much lower workforce participation rates (due to the age structure and retirement living). This pattern is particularly evident in the major urban centre of Forster-Tuncurry. These trends have accelerated in the period from 1996, with labour market participation rates continuing to fall, particularly for males.

Table 111. Labour Force Great Lakes LGA 1996-2006. (Number)

	1996 Census			2001 Census			2006 Census		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Persons aged 15 years and over	11,306	11,724	23,030	12,563	13,136	25,699	13,472	14,082	27,554
Labour force status									
Employed, worked full-time	3,423	1,432	4,855	3,564	1,633	5,197	3,875	1,812	5,687
Employed, worked part-time	930	1,950	2,880	1,199	2,298	3,497	1,388	2,781	4,169
Employed, away from work	320	252	572	442	339	781	417	362	779
Unemployed, looking for work	1,014	493	1,507	793	466	1,259	640	455	1,095
Total labour force	*5,687*	*4,127*	*9,814*	*5,998*	*4,736*	*10,734*	*6,320*	*5,410*	*11,730*
Not in the labour force	5,420	7,423	12,843	6,121	7,845	13,966	6,420	7,876	14,296
% Unemployment	17.8	12.0	15.4	13.2	9.8	11.7	10.1	8.4	9.3
% Labour force participation	50.3	35.2	42.6	47.7	36.1	41.8	46.9	38.4	42.6
% Employment to population	41.3	31.0	36.1	41.4	32.5	36.9	42.2	35.2	38.6

Source: ABS Census Data 2006 Resident Population Data

Between 1996 and 2006 an additional 2323 residents were in employment. The major areas of employment growth for residents were health care (541); construction (629), education and training (189), retail (276) and accommodation & food services (282).

Table 112. Employed Residents 1996-2006 Great Lakes LGA

	1996 Census			2001 Census			2006 Census			Persons Change		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	96-06	96-01	2001-06
Agriculture, forestry & fishing	535	163	698	486	162	648	405	136	541	-157.0	-50.0	-107.0
Mining	103	7	110	70	6	76	47	3	50	-60.0	-34.0	-26.0
Manufacturing	496	156	652	507	184	691	518	138	656	4.0	39.0	-35.0
Electricity, gas, water & waste services	67	11	78	101	24	125	140	24	164	86.0	47.0	39.0
Construction	607	86	693	843	122	965	1,155	167	1,322	629.0	272.0	357.0
Wholesale trade	186	88	274	215	84	299	139	74	213	-61.0	25.0	-86.0
Retail trade	492	693	1,185	593	749	1,342	603	858	1,461	276.0	157.0	119.0
Accommodation & food services	421	519	940	431	637	1,068	504	718	1,222	282.0	128.0	154.0
Transport, postal & warehousing	209	64	273	266	73	339	301	80	381	108.0	66.0	42.0
Information media & telecommunications	69	40	109	43	41	84	45	46	91	-18.0	-25.0	7.0
Financial & insurance services	81	132	213	74	100	174	83	118	201	-12.0	-39.0	27.0
Rental, hiring & real estate services	110	109	219	121	149	270	117	171	288	69.0	51.0	18.0
Professional, scientific & technical services	113	96	209	156	157	313	186	196	382	173.0	104.0	69.0
Administrative & support services	103	93	196	149	139	288	154	148	302	106.0	92.0	14.0
Public administration & safety	293	123	416	294	159	453	322	210	532	116.0	37.0	79.0
Education & training	189	343	532	217	420	637	223	498	721	189.0	105.0	84.0
Health care & social assistance	140	572	712	181	742	923	244	1,009	1,253	541.0	211.0	330.0
Arts & recreation services	38	35	73	91	47	138	101	95	196	123.0	65.0	58.0
Other services	245	177	422	251	169	420	229	162	391	-31.0	-2.0	-29.0
Inadequately described/Not stated	176	127	303	116	106	222	164	99	263	-40.0	-81.0	41.0
Total	**4,673**	**3,634**	**8,307**	**5,205**	**4,270**	**9,475**	**5,680**	**4,950**	**10,630**	2323.0	1168.0	1155.0

Source: Great Lakes T25 INDUSTRY OF EMPLOYMENT (a) BY SEX FOR TIME SERIES Count of employed persons aged 15 years and over (excludes overseas visitors) based on place of enumeration 2006 Census Community Profile Series Great Lakes (A) Time Series Profile

A major feature of the region is that there is a significant commuting to jobs outside the LGA. This commuting tends to be to adjacent LGAs like Greater Taree, Port Stephens and Newcastle, and is concentrated in sectors like manufacturing, business services, health care and in construction (with the construction sector servicing a wider regional market).

The commuters are likely to be higher skilled persons (eg. professionals and tradespersons), as there is a narrow range of local jobs available in these sectors. The figures are a net movement of persons to jobs in or outside the LGA. There are also a number of people commuting into the area for jobs, predominately from the Taree area.

Table 113. Jobs and Employed Residents – Great Lakes LGA (Number)

	Great Lakes		
Industry	**Jobs**	**Employed Residents**	**Jobs - Residents**
Goods Producing			
Agriculture, forestry and fishing	486	530	-44
Mining	39	60	-21
Manufacturing	510	654	-144
Electricity, gas, water and waste services	170	163	7
Construction	864	1,308	-444
Total	**2,069**	**2,715**	**-646**
Goods Related			
Transport, postal and warehousing	263	386	-123
Wholesale trade	163	215	-52
Total	**426**	**601**	**-175**
Knowledge & Business Services			
Information media and telecommunications	62	91	-29
Financial and insurance services	178	192	-14
Rental, hiring and real estate services	283	291	-8
Professional, scientific and technical services	336	382	-46
Administrative and support services	209	312	-103
Total	**1,068**	**1,268**	**-200**
In-Person Services			
Retail trade	1,425	1,465	-40
Accommodation and food services	1,196	1,228	-32
Public administration and safety	465	532	-67
Education and training	692	709	-17
Health care and social assistance	1,113	1,254	-141
Arts and recreation services	191	194	-3
Other services	359	396	-37
Total	**5,441**	**5,778**	**-337**
Inadequately described/not stated	89	256	-167
Total	**9,093**	**10,618**	**-1,525**

Source: ABS Census 2006 Working Population and Resident Population Data.

8.7.3 Key Issues

The key issues listed below were derived from consultations with industry and businesses in the LGA. Some of the key issues relate to the characteristics of the region and its demographics and industry structure. These elements combine to create a regional economy with a narrow industry base, few regional export industries, and a vulnerability to seasonal factors and trends in the tourism sector.

The narrow industry base limits the capacity to attract families seeking a coastal lifestyle and secure employment and to retain younger people in the region. There is a need to broaden the employment base of the area, including knowledge workers and larger businesses servicing national markets.

Great Lakes LGA Major Issues	
Economy	**Population**
There is a reliance on micro businesses in the region and few larger businesses.	Population is growing strongly but most of the growth is in lower income retirees.
There is a high unemployment rate and part-time employment masks significant under-employment.	The region is being perceived as a retirement area.
Fishing/aquaculture remains important for the region as an industry and as a tourism feature. There is a need to maintain the sector. Fishing industry is concerned about the possible implementation of a marine park. Potential to value add to the sector and to link it to tourism.	The long term the population is not sustainable, due to ageing and the lack of demographic diversity.
Larger businesses are attracted to other areas, particularly in the Lower Hunter Region.	The population structure is exacerbated by loss of younger people, who continue to leave for education and employment.
The narrow structure of the regional economy means a lack of employment opportunities for young people and a narrow range of professional jobs in the region.	Currently the region does not have the jobs mix that is required to attract families to relocate.
There has been some growth in jobs – but most are lower paid service jobs, with many being part-time.	**Agribusiness**
For the future there is a need to focus on knowledge workers, expanded education and training and home based professional businesses.	This sector is still important to the LGA. Traditional areas under pressure and there is a need to diversify into more intensive activities (eg. food and wine products).
Tourism	**Industrial Land**
Tourism is a major industry in the region but tends to provide low skilled/ lower paid jobs. Tourism businesses are affected by tourism trends and by seasonality (limited activities in winter). There is a need to increase overall service level standards in the sector. There is a need for increased industry participation in the sector which to now has been driven by local government.	Need to speed up the process of developing industrial land. Rezoning process does not align with business location decision timings. There is a need to attract larger businesses that service regional, state and national markets.
There is a need to broaden the tourism market, through short breaks and conferences. The region has the potential to attract boutique conferences and potentially larger conferences (subject to availability of facilities).	There is a need for larger lot industrial land, as there is a tendency for businesses to outgrow the industrial area and then move to other LGAs. Highway and bypass will improve links to other major centres.
Some infrastructure is beginning to appear 'run down" and this impacts on the tourism sector. Not enough participative tourist activities and activities for families and young people. Activities are more nature-based.	**Education**
Infrastructure	Young people are accessing education elsewhere (eg. Newcastle, Armidale, Sydney, Port Macquarie). Development of higher education and extended TAFE is important for the future.
Forster-Tuncurry Crown Harbour Project: Integrated marina development; Marina, hotels, conference centre; Increased access for boats; and is a strategic project for the town. The project needs to attract developers.	**Health**
Road infrastructure a major constraint. Local government cannot fund these requirements.	Aging population requires health services. There is a possibility to develop healthy lifestyle focus with synergies between health and wellbeing, preventative health and natural therapies. Create strategic health focus for the area

From a strategic perspective, the recent Forster-Tuncurry Employment Lands Study has highlighted the concept of sustainability (economic, social and environmental sustainability) as a focal point for an economic development strategy for Forster - Tuncurry as a centre of excellence for sustainability.[121] This sustainability focus covers: tourism - natural environment and tours, accommodation options that make their visitors feel good about being on holiday; agriculture and aquaculture - local produce; health and lifestyle; the natural environment; built environment; industry clusters (research and innovation and education).[122]

Key directions and opportunities are examined in the next report of this project - *Report 2: Directions and Opportunities Report.* Strategies and actions and infrastructure requirements are covered in the final report: *Report 3: Upper Hunter Economic Diversification Strategy Report*.

121 Forster - Tuncurry Employment Land Implementation Strategy Hill PDA P23-27
122 See also Great Lakes 2030 Draft Community Strategic Plan, Great Lakes Council 2009, which has a focus on sustainability, lifestyle and innovation.

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