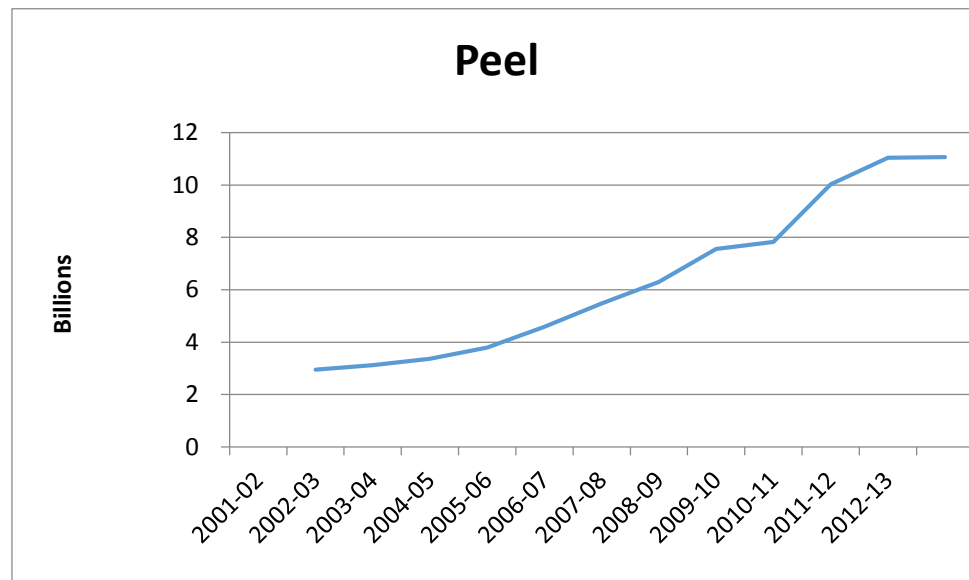


Peel Economy

Economic profile

Peel has experienced above-average economic growth in recent years. In the period since 2000, Peel’s Nominal Gross Regional Product (Nominal GRP) grew at an average annual rate of 15 per cent a year, compared to the Western Australia average of 11 per cent. The estimated value of gross regional product for the Peel region was \$11.1 billion in 2012-13. This equates to \$88,933 per Peel resident.

Graph E1 –Nominal Gross Regional Product 2012-13



Source: Department of Regional Development

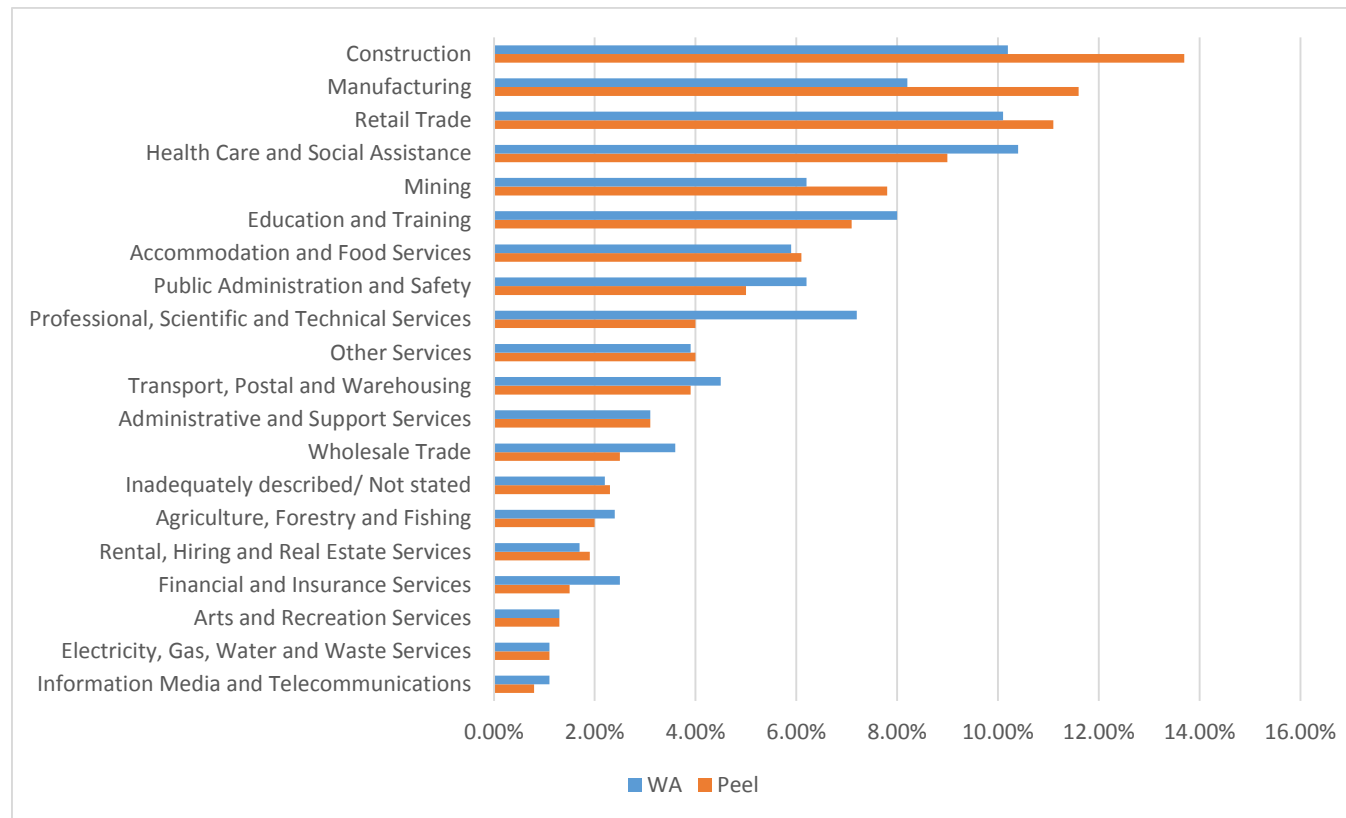
In 2012-13, the Peel’s mineral industry was valued at \$3.2 billion. Alumina production accounted for almost \$2 billion or 62 per cent of the region’s total mining production. Other higher level contributors to the Nominal GRP are Retail, Construction, Tourism and Agriculture.

Industry profile

Industry structure

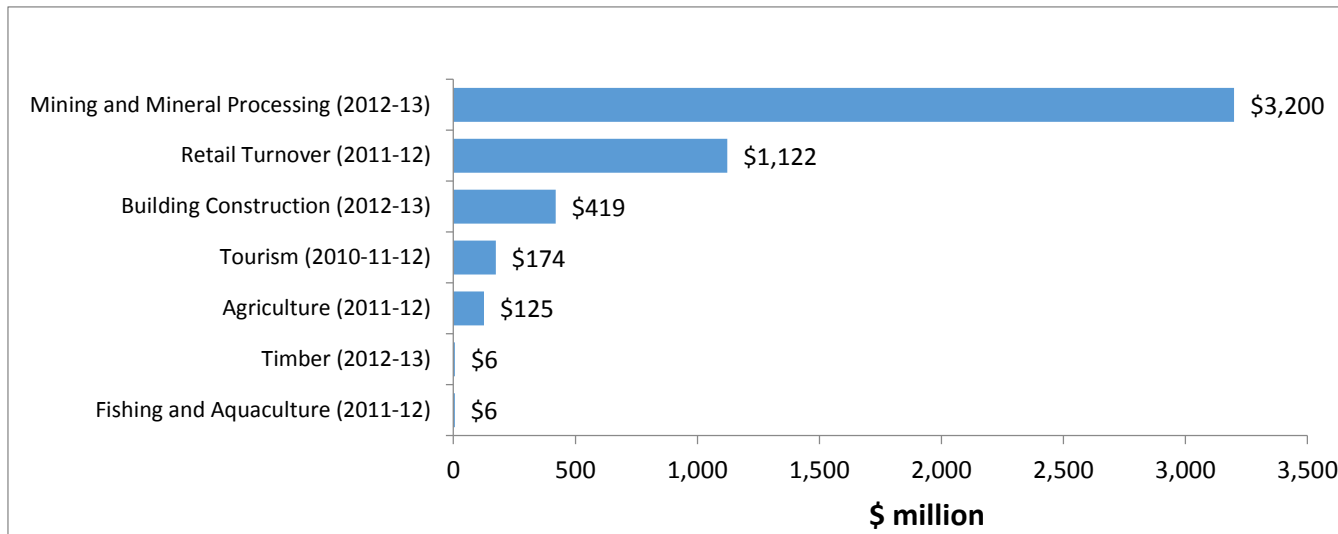
The Peel employment market consisted of almost 30,000 jobs at the time of the 2011 Census. Construction, retail trade and manufacturing were the biggest employers, accounting for 36 per cent of the regions industry employment. Compared to jobs across Western Australia, Peel has a higher proportion of employees in retail, manufacturing, health care, accommodation and food services. The region has a relatively low proportion of people working in professional services; transport, postal and warehousing; and wholesale trade.

Graph E2– Distribution by Employment by industry 2011



Source: ABS Census 2011 – Population and Housing Census- Place of Usual Residence.

Graph E3 - Value of Industry Activities



Source: Department of Regional Development. Note: Industry activity is an estimate of the gross value of production.

Comparison of the value of industry within the Nominal GRP (Sourced through the Department of Regional Development) and the percentage of employment within the sector (sourced through the ABS Census 2011) has enabled conclusions to be drawn around the value of the industry sector to the region's employment. This analysis does not reflect flow on effects nor benefits attributed to the industry sectors analysed.

Despite its 5th place ranking in the distribution of employment, the mining and mineral processing industry represents the Peel region's highest production value, with an estimated \$3.2 billion, of the state's \$102 billion earned from the resource industry's gross value of production in the financial year 2012-13.

In comparison, the region's largest employment industry, construction, has an estimated production value of \$419 million despite representing a significant proportion of the workforce in the region. Also of note is the high production value of the agriculture industry which, despite only employing less than 2% of the region's workforce, had an estimated value of \$125 million.

Industry profiles and growth

In the years between 2006 and 2011, Peel experienced jobs growth slightly lower than the Western Australia average, that is, 3.8 per cent a year against 4.1 per cent – although the region’s growth was still significantly higher than the national average.

A few growth industries have provided a significant proportion of new opportunities. In the five years to 2011, jobs in the mining sector tripled. This growth can be partially attributed to the opening of the Newmont Boddington Gold Mine plus broader growth across the sector. A growing population also fuelled employment growth in health care and social assistance, education and training, accommodation and food services.

Table E1 - Industry Employment Comparison 2006:2011

Industry of Employment	2011	2006
Construction	13.7%	13.6%
Manufacturing	11.6%	13.5%
Retail Trade	11.1%	12.4%
Health Care and Social Assistance	9.0%	8.4%
Mining	7.8%	5.2%
Education and Training	7.1%	6.4%
Accommodation and Food Services	6.1%	5.6%
Public Administration and Safety	5.0%	4.7%
Real Estate, Administrative and Support Services	5.0%	5.4%
Other Services	4.0%	3.7%
Professional, Scientific and Technical Services	4.0%	3.7%
Transport, Postal and Warehousing	3.9%	3.8%
Wholesale Trade	2.5%	2.7%
Agriculture, Forestry and Fishing	2.0%	3.2%
Financial and Insurance Services	1.5%	1.6%
Arts and Recreation Services	1.3%	1.3%
Electricity, Gas, Water and Waste Services	1.1%	1.0%
Inadequately described/not stated	2.4%	2.9%
Information Media and Telecommunications	0.8%	1.0%

Source: ABS 2011 and 2006 Census of Population and Housing; usual residence

The number of jobs in Agriculture, Forestry and Fishing declined over the same period, in step with Western Australia and national trends for the sector, where increasing wage pressures have led to increased automation.

In contrast to Western Australia and national trends, Peel experienced a decline in jobs in Financial and Insurance Services and Real Estate, Administrative and Support Services categories.

Table E2 - Top three employing industries by LGA, 2011

Sub region	Top employing industries		
Boddington	Mining	Construction	Accommodation and food services
	40.1%	13.4%	6.1%
Mandurah	Construction	Retail trade	Manufacturing
	13.7%	12.3%	11.0%
Serpentine-Jarrahdale	Construction	Manufacturing	Retail trade
	13.8%	11.6%	9.9%
Murray	Mining	Construction	Retail Trade
	13.7%	13.4%	10.2%
Waroona	Manufacturing	Construction	Health care and social assistance
	19.3%	15.5%	9.2%

Source: Australian Bureau of Statistics 2011, Population and Housing Census

Industry specialisation

By analysing which industries Peel 'specialises in' relative to the rest of Western Australia, opportunities for growth can be identified.

These opportunities tend to be in areas of existing specialisation and/or those that are currently under-represented. These have been more thoroughly identified through regional consultation and have been captured in the strategy section of this report. Table 7 provides a summary of the relative specialisation of key employment sectors in Peel as measured by each sector's 'Location Quotient'.

Location Quotient (LQ)

A Location Quotient compares the relative concentration of employment in a region, against the concentration in the same sector in a broader region. In this case, Peel has been compared to Western Australia.

A location quotient of 'one' indicates that the local regional workforce is equivalent to the broader Western Australia workforce. A location quotient of 'over one' indicates the region has a higher proportion of workers than the State average. Conversely, a location quotient 'lower than one' means relatively fewer people in Peel are employed in that area compared to the Western Australia average.

Sectors that have a higher location quotient are typically export oriented, supporting a broader regional catchment for their outputs. This can be observed in Peel's concentration of manufacturing, retail, accommodation, arts and agricultural sectors, all of which service a broader population than local consumers.

Sectors with a relatively low location quotient are typically under-represented locally and may rely on the import of skills and services from outside the region to meet local demand. Examples include the high-value services sectors, such as professional services, financial and information media and telecommunications, as well as the bulky goods/ trade sectors of wholesale trade and transport and warehousing.

Compound Annual Growth Rate (CAGR)

The CAGR, entered in some of the tables below, has been included as a measure in industry sectors to 'smooth' out the growth rates for a particular industry between the Census data for the 2006 and 2011 years.

Table E3 – Industry Growth and Specialisation

Industry	2011	Location Quotient
Manufacturing	3,857	1.56
Retail Trade	4,009	1.33
Accommodation and Food Services	2,309	1.31
Arts and Recreation Services	476	1.18
Agriculture, Forestry and Fishing	836	1.16
Rental, Hiring and Real Estate Services	599	1.14
Education and Training	2,632	1.09
Health Care and Social Assistance	3,192	1.03
Other Services	1,174	1.00
Construction	2,972	0.96
Mining	1,840	0.96
Public Administration and Safety	1,567	0.83
Administrative and Support Services	767	0.82
Electricity, Gas, Water and Waste Services	245	0.71
Information Media and Telecommunications	211	0.66
Transport, Postal and Warehousing	806	0.59
Financial and Insurance Services	409	0.54
Wholesale Trade	536	0.50
Professional, Scientific and Technical Services	1,006	0.46
Total	29,443	

Source: KPMG using ABS Census 2006 and 2011

Construction

The construction industry in Peel has experienced significant growth from 2006 to 2011, at a CAGR of 2.6 per cent. This growth has been primarily driven by the heavy and civil engineering construction and construction services industries.

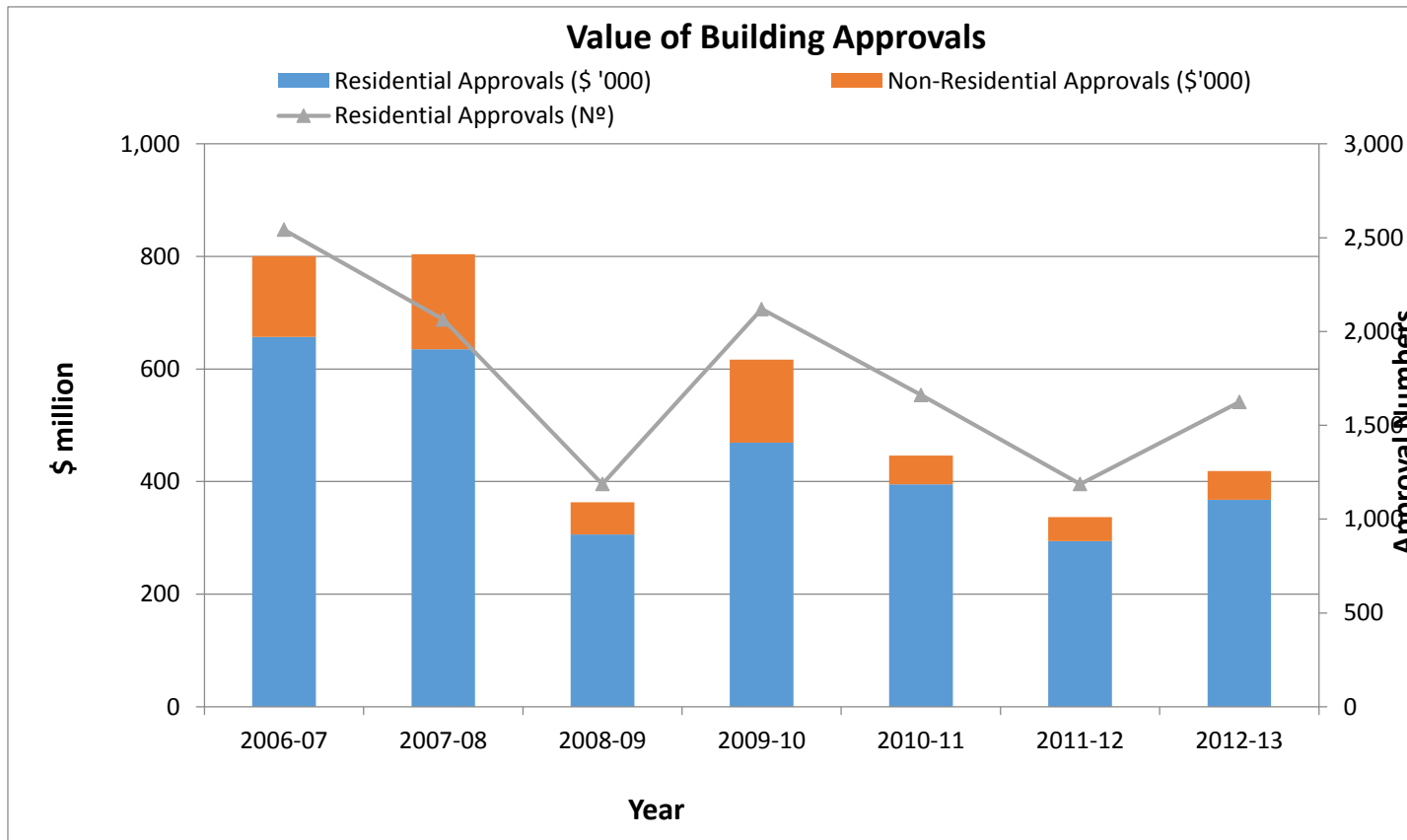
This industrial growth is closely aligned with the expansion of the Peel's resources sector and demand for new regional infrastructure. It is also noted that residential and building construction has declined over the period.

Table E4 - Construction Job Numbers growth and (decline): 2006-2011

Construction	LQ	2011	Change	CAGR
Building Construction	0.72	522	(101)	-3.5%
Heavy and Civil Engineering Construction	0.98	424	260	20.9%
Construction Services	1.12	1,944	204	2.2%
Construction, nfd	0.96	79	(10)	-2.4%
Total		2,969	353	2.6%

Source: KPMG using ABS Census 2006 and 2011; note – nfd – no further detail

Graph E4 – Value of Building Approvals



Source: Australian Bureau of Statistics

Building approval activity provides a strong insight into completed work and the dwelling commencement likely to follow. This activity acts as a strong indicator in the construction industry. On a national scale, Western Australia remained robust over the decade to 2012-13 in construction value and approval numbers. The total value of building approvals for the Peel was estimated at \$419 million in 2012-13, after fluctuating over the decade. There were over 1600 residential buildings approved for construction, at a value of \$368 million. The value of non-residential construction is estimated at \$51 million in 2012-13.

Tourism

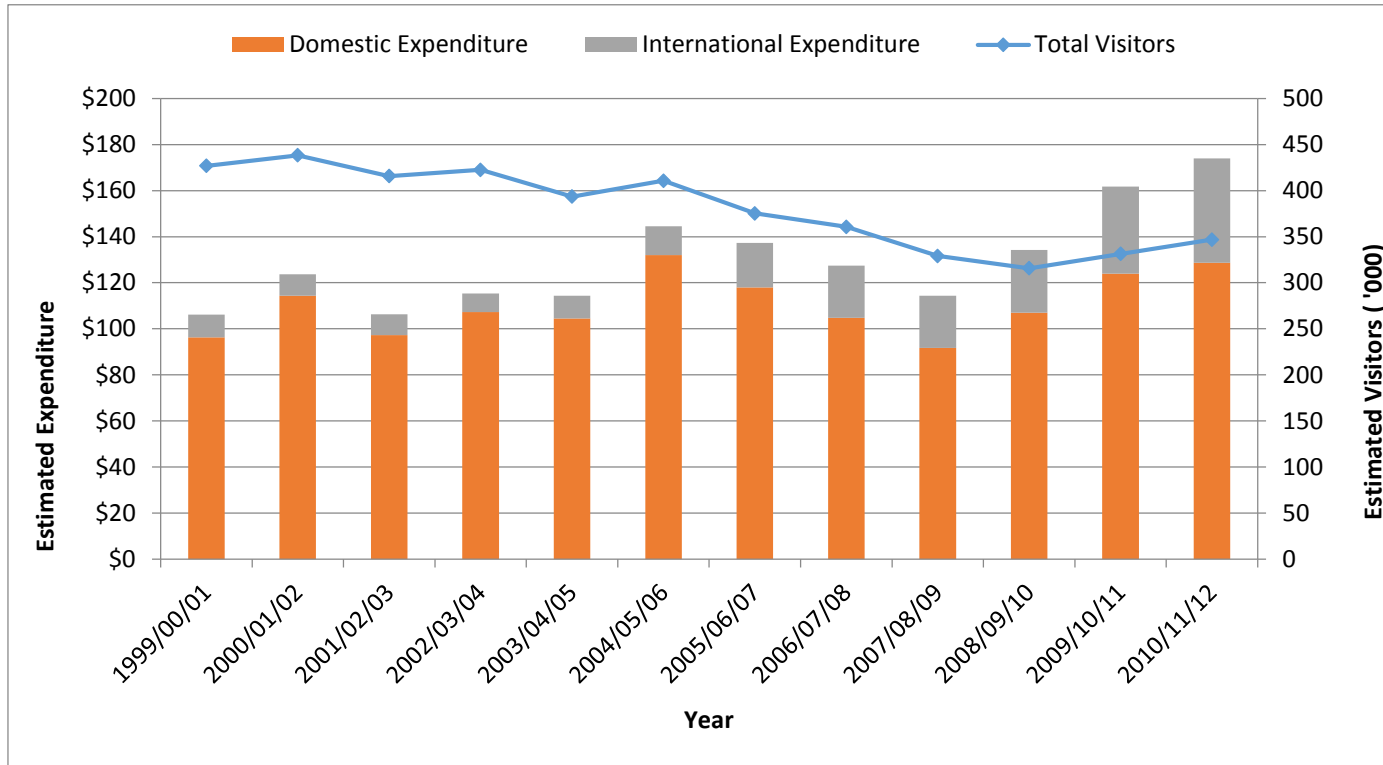
The strong increase in the accommodation and food services industry workforce suggests that the tourism sector in Peel is also experiencing economic growth. The food and beverage industry increased total jobs by 6.3 per cent annually over the five year period 2006 – 2011 while accommodation also grew at 2.2 per cent a year.

Table E5 - Tourism Job Growth, 2006-2011

Accommodation and Food Services	LQ	2011	Change	CAGR
Accommodation	0.78	354	36	2.2%
Food and Beverage Services	1.05	1,957	514	6.3%
Accommodation and Food Services, nfd	0.82	3	3	0
Total		2,314	553	5.6%

Source: KPMG using ABS Census 2006 and 2011 Note: Small numbers may produce a '0' CAGR.

Graph E5 - Tourism trends, Estimated Expenditure and Number of Visitors



Source: Tourism western Australia and Department of Regional Development

Health and Community services

Health and community services is another key employer in Peel, providing almost 3,200 jobs in 2011. This sector experienced an annual job growth rate of 5.4 per cent over the 2006 - 2011 period, largely driven by residential care services and social assistance services. Residential care services remain one of the most specialised industries in Peel with a location quotient of 1.76. The growth of the health care sector is consistent with the broader population and economic growth of the region.

Table E6 - Health Care Job Growth, 2006-2011

Health Care and Social Assistance	LQ	2011	Change	CAGR
Hospitals	0.54	534	135	6.0%
Medical and Other Health Care Services	1.00	910	130	3.1%
Residential Care Services	1.76	961	259	6.5%
Social Assistance Services	1.10	682	176	6.2%
Health Care and Social Assistance, nfd	0.89	106	34	8.0%
Total		3193	734	5.4%

Source: KPMG using ABS Census 2006 and 2011

Retail

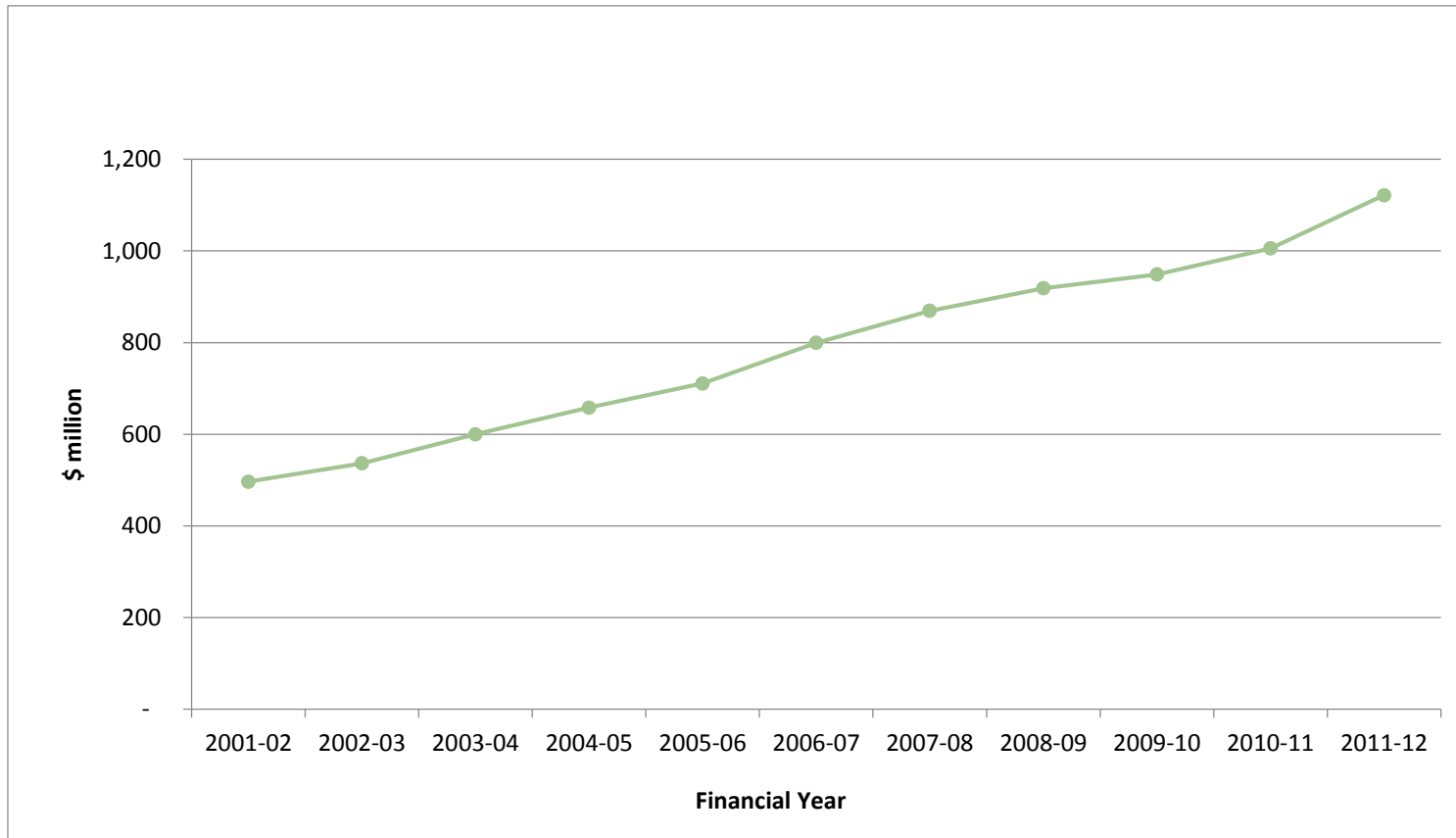
Retail is one of the Peel's top three employment sectors employer and has the second highest level of specialisation (location quotient of 1.33). The industry appears to be approaching a period of change judging by its relatively low compound annual growth rate (CAGR) of half a per cent.

Table E7 - Retail Trade jobs growth and (decline), 2006-2011

Retail Trade	LQ	2011	Change	CAGR
Motor Vehicle and Motor Vehicle Parts Retailing	1.11	344	(36)	-2.0%
Fuel Retailing	1.05	145	(22)	-2.8%
Food Retailing	1.04	1,318	70	1.1%
Other Store-Based Retailing	0.97	2,066	124	1.2%
Non-Store Retailing and Retail Commission-Based Buying and/or Selling	1.23	26	18	26.6%
Retail Trade, nfd	0.69	102	(50)	-7.7%
Total		4,001	104	0.5%

Source: KPMG using ABS Census 2006 and 2011

Graph E6 - Estimated Retail Turnover 2001-02 to 2011-12



Source: Department of Regional Development

Retail trade is also an important contributor to the Peel’s economy. The industry was estimated at \$496 million in 2001-02, increasing at an average 8.5 per cent per year over the last 10 years. In 2011-12, trade was valued at \$1.12 billion, accounting for 3.8 per cent of the state’s turnover. Mandurah is the central commercial hub for retail facilities with large shopping centres, specialty outlets and localised centres/community shops. Activity is sustained through consistent population growth across the region.

Manufacturing

Manufacturing remains one of the most specialised and large employers in the Peel region. Over the 2006 - 2011 period, the industry grew at an annual rate of 1.7 per cent and had a location quotient of 1.56. This economic growth was primarily driven by chemical, plastic and machinery manufacturing. The foundation of the industry is primary metal and metal product manufacturing, which employs more than 2,520 people and has a very high location quotient of 4.24.

Table E8 – Manufacturing Job Growth (and decline), 2006-2011

Manufacturing	LQ	2011	Change	CAGR
Food Product Manufacturing	0.59	265	50	4.3%
Beverage and Tobacco Product Manufacturing	0.21	28	3	2.3%
Textile, Leather, Clothing and Footwear Manufacturing	0.57	66	3	0.9%
Wood Product Manufacturing	0.69	109	38	9.0%
Pulp, Paper and Converted Paper Product Manufacturing	0.09	3	(4)	-15.6%
Printing (including the Reproduction of Recorded Media)	0.33	35	4	2.5%
Petroleum and Coal Product Manufacturing	0.08	3	3	0
Basic Chemical and Chemical Product Manufacturing	0.26	54	23	11.7%
Polymer Product and Rubber Product Manufacturing	0.27	34	17	14.9%
Non-Metallic Mineral Product Manufacturing	0.46	98	(44)	-7.1%
Primary Metal and Metal Product Manufacturing	4.24	2,521	77	0.6%
Fabricated Metal Product Manufacturing	0.53	194	62	8.0%

Transport Equipment Manufacturing	0.34	87	7	1.7%
Machinery and Equipment Manufacturing	0.25	119	57	13.9%
Furniture and Other Manufacturing	0.38	67	6	1.9%
Manufacturing, nfd	0.44	175	8	0.9%
Total		3,858	310	1.7%

Source: KPMG using ABS Census 2006 and 2011; Note: Small numbers may produce a '0' CAGR.

Minerals and mining

Peel's minerals sector produces alumina, gold and copper and is, by value, the third largest mineral producing region in WA. This sector is the "strong base" of the region's economy in terms of money contributed to the area's gross regional product of \$11.1 billion.

The mining sector in Peel grew strongly over the 2006-2011 period (25.1 per cent compound annual growth rate). This was largely attributable to sustained growth in the metal ore mining industry, which remains one of the most specialised employers in the region.

Peel's major mining enterprises are well established and stable. At the 2011 Census, nearly eight per cent of regional employment was attributed to mining related activity.

Table E9 - Mining jobs growth, 2006-2011

Mining	LQ	2011	Change	CAGR
Oil and Gas Extraction	0.07	16	12	32.0%
Metal Ore Mining	1.56	1,528	1,145	31.9%
Non-Metallic Mineral Mining and Quarrying	0.39	27	2	1.6%
Exploration and Other Mining Support Services	0.37	156	51	8.2%
Mining, nfd	1.07	117	33	6.9%
Total		1844	1,1243	25.1%

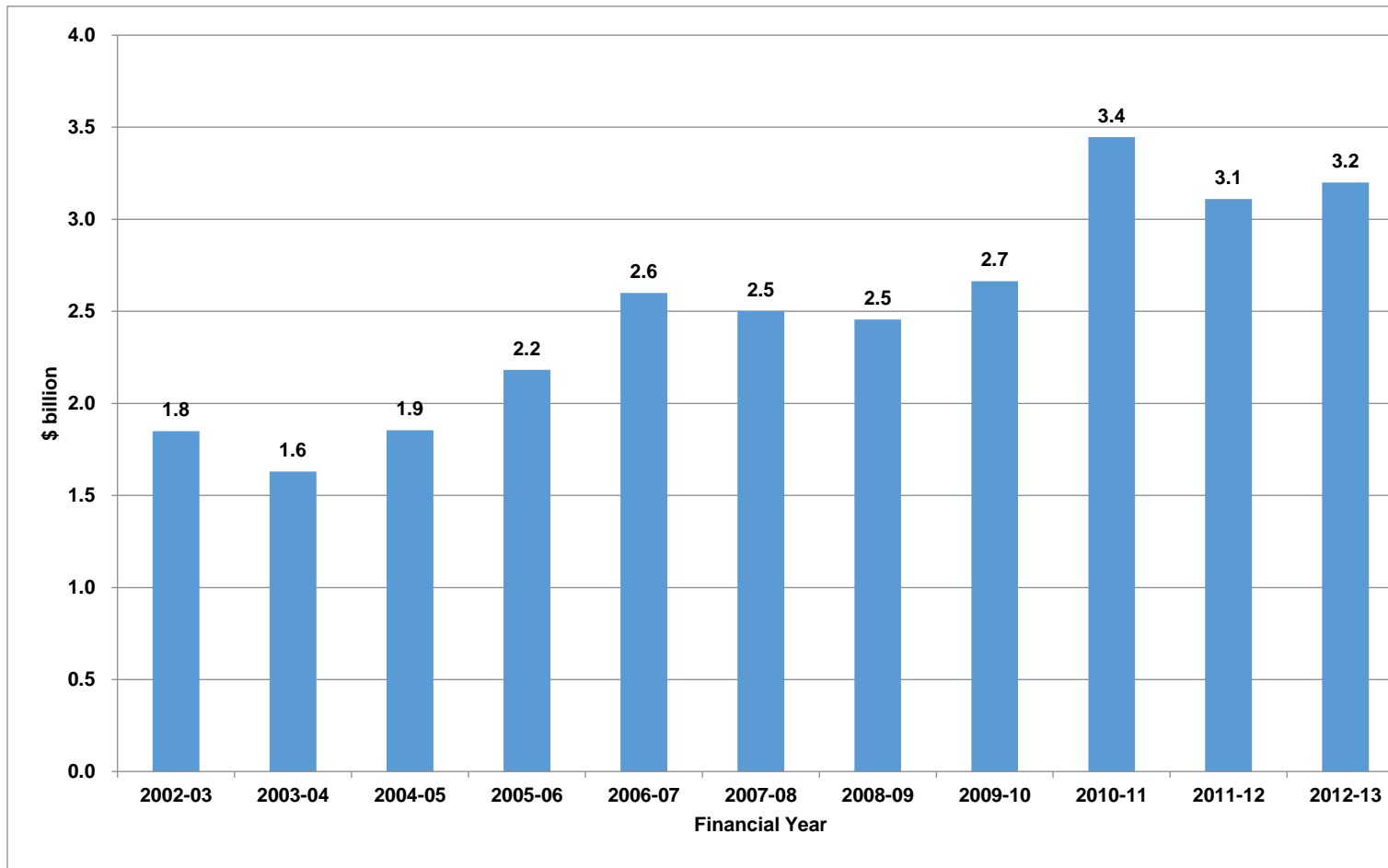
Source: KPMG using ABS Census 2006 and 2011

In 2012-13, the Peel's mineral industry was valued at \$3.2 billion. Alumina production accounted for almost \$2 billion or 62 per cent of the region's total mining production. The Peel produces all the state's current bauxite feedstock. The Huntly mine, located near Dwellingup, is the world's largest bauxite mine supplying bauxite ore to Alcoa's Pinjarra (Peel region) and Kwinana (Perth) refineries. Huntly bauxite production has doubled since 1990 and

currently produces around 23 million tonnes of bauxite per year. Alcoa's Willowdale bauxite mine supplies the Wagerup refinery, both located in the Shire of Waroona. BHP Billiton mines bauxite in the Shire of Boddington, supplying feedstock to its Worsley refinery in the Shire of Collie in the South West region.

The Newmont Boddington Gold Mine, owned and operated by Newmont Mining since July 2009, is expected to become Australia's largest open-cut gold mine once it reaches full production over the course of its operational life (estimated to 2050).

Graph E7 – Mining and Minerals Processing



Source: Department of Regional Development

Agriculture Sector

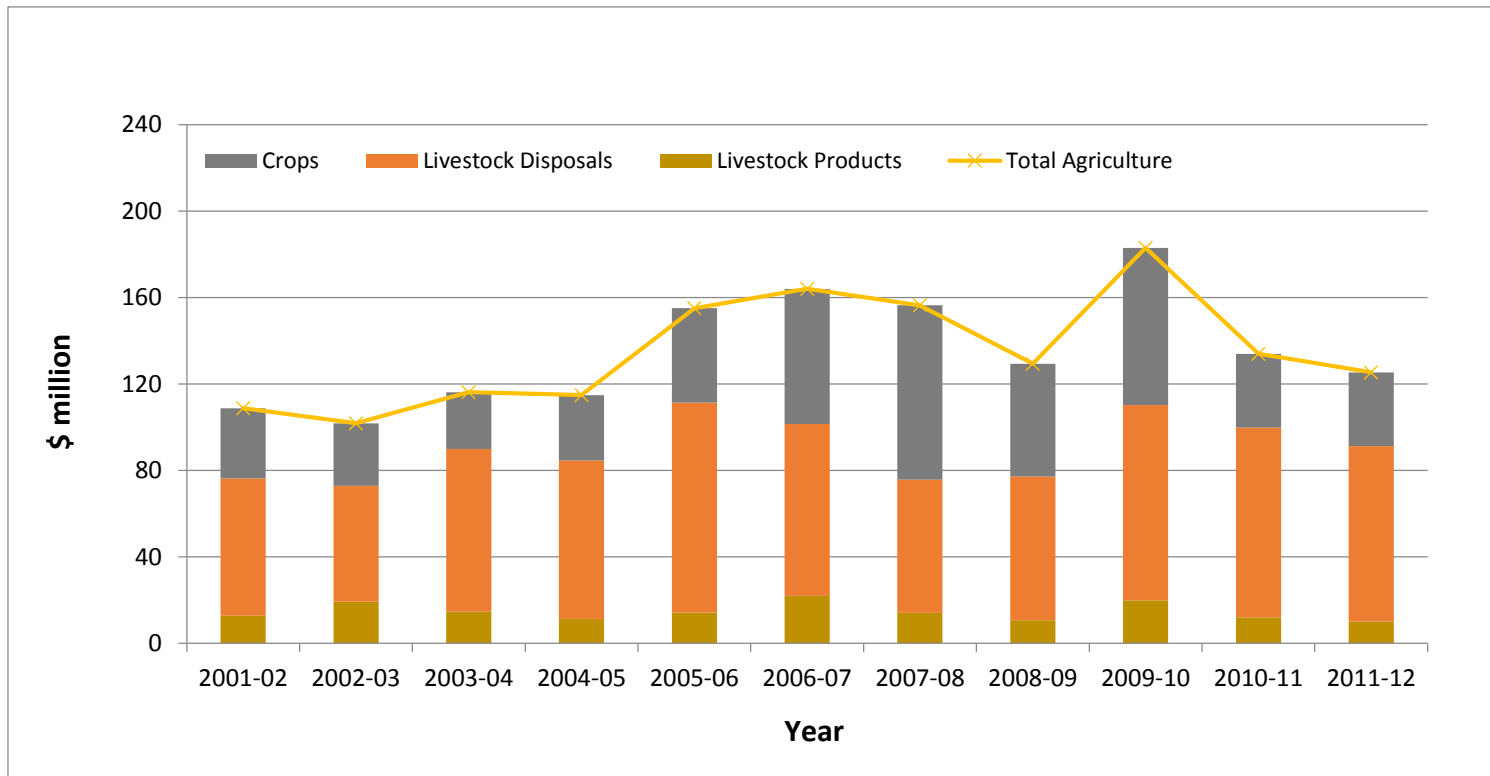
The agriculture, forestry and fishing sector currently contributes over \$125 million to Peel’s gross regional product. Just over three per cent of Peel’s total jobs are in the sector.

Table E10- Agriculture job (decline), 2006-2011

Agriculture, Forestry and Fishing	LQ	2011	Change	CAGR
Agriculture	1.02	744	(162)	-3.9%
Aquaculture	0.47	3	(3)	-12.9%
Forestry and Logging	0.67	13	(2)	-2.8%
Fishing, Hunting and Trapping	0.86	23	(5)	-3.9%
Agriculture, Forestry and Fishing Support Services	0.93	45	15	8.4%
Total		828	(157)	-3.4%

Source: KPMG using ABS Census 2006 and 2011

Graph E8 - Value of Agriculture 2001-02 to 2011-12



Source: ABS and Department of Regional Development

The agricultural sector is currently dominated by livestock production in cattle, sheep, chickens and related activities. There is also a small amount of intensive agricultural production in fruit, vegetables, flowers and turf.

In line with state-wide and national trends, the agriculture, forestry and fishing sector contracted over the 2006 - 2011 period. This decline in workforce was experienced across agriculture, aquaculture, forestry and hunting industries. Overall, jobs in the sector decreased at an annual rate of 3.4 per cent.

Fishing

The Peel's commercial fishing industry was valued at \$5.7 million in 2011-12 on the strength of the rock lobster industry, which returned revenue of \$4.4 million. The region's fishing industry operates sustainably and is internationally recognised for research practices and best management, ensuring industry longevity, however production has declined since 2003-04. Commercial trawl, dive and pot fisheries are used for small quantities of fish, crabs, prawns, molluscs, abalone and octopus.

Timber (Forestry)

State-owned forestry production for the Peel totalled 144,000 tonnes in 2013, valued at \$6.4 million. The Forest products Commission engages in commercial forestry activities in State-owned native forests and plantations, delivering economic and social benefits to the region. The Peel's production accounts for seven per cent of the State-owned forest production. The timber harvested from the Peel is primarily processed into high value products such as furniture, panelling, decking and structural products.

Equine industry

Peel is a major centre for the State's thoroughbred and harness racing industry.

In 2012, the Western Australian Racing Industry produced an *Economic and Social Impact Report* which found that the Peel's equine industry as a whole, not just the racing segment, contributed more than \$137 million a year to the Western Australia economy. With respect to the racing sector, Peel represents almost 14 per cent of the Western Australia racing industry's total economic value, being second only to Perth.

In recent years there has been substantial growth in the planning and development of special rural and equine estates across Peel.

There have also been a number of strategic initiatives, including expansion of the Residential and Stables Policy Area by the Shire of Serpentine-Jarrahdale; upgrading of facilities at Pinjarra Paceway and Pinjarra Park; and a recent proposal by the Shire of Murray to initiate the development of a regional equestrian centre in Coolup.