

# Peel Profile June 2012



Peel Development Commission

The data contained in this publication is sourced mainly from State and Federal government agencies including the Australian Bureau of Statistics. A small amount is obtained from industry organizations, company publications and web sites. All data and information included is the most recent available. The Peel Profile is updated quarterly and released at the end of each quarter. For Census data, please be aware that non responders have not been excluded from totals.

# The Peel Region Map





## **What's New in this Edition**

Population

Labour Force

Apprenticeships and Traineeships

Business Registrations

Education

Crime

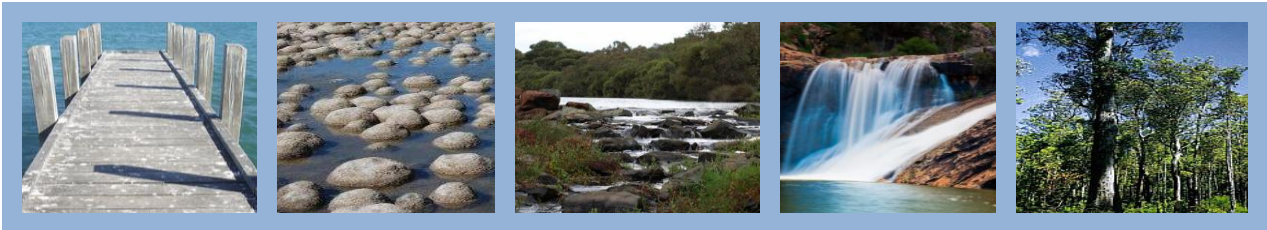
Housing

Cost of living



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## OVERVIEW

This publication presents a selection of interesting facts and figures relating to social, economic and environmental aspects of the Peel Region. Its purpose is to provide data and information to potential immigrants to the region, from both within Australia and overseas, students and educators, both private business and government organisations, and wider community members.

Peel is one of nine regions of Western Australia. It encompasses the five local government areas of Boddington, Murray, Serpentine-Jarrahdale and Waroona Shires and the City of Mandurah. Located 75 km south of Perth, it is Western Australia's smallest region geographically, covering 5,648 km<sup>2</sup>.

Peel's landscape is geographically diverse with urban, agricultural and horticultural land, a forested escarpment and plateau, a major flood plain (the palus plain), and 137 kms of inland waterways and 50 kms of coastline.

At 30 June, 2011 the Peel Region had an estimated resident population of 112,677 with the majority of the population (65.3%) concentrated in Mandurah City. Historically, Peel has been the one of the fastest growing regional populations in WA and the region continues to experience rapid growth. Between 2010 and 2011 Peel's population increased by 4.4% while the Western Australian population increased by just 2.4%. During this same time, Serpentine-Jarrahdale expanded by an incredible 7.2%.

In 2010-2011 the Peel Region's Gross Regional Product (GRP) was valued at \$10.7 billion (4.9% of the Gross State Product), representing a 26.6% increase over the previous year. Mining and construction are the leading contributors to the economy of the Peel Region



with manufacturing, retail, tourism, agriculture, fishing and forestry making valuable contributions. Manufacturing industries include fabricated metal products, transport equipment and food processing.

Bauxite, gold and copper are mined in the Peel Region. Bauxite from Alcoa's mines at McCoy (near Dwellingup) and Waroona along with Worsley's mine at Boddington provide the entire feedstock for Western Australia's total output of alumina which is refined at the Pinjarra, Wagerup, Kwinana and Worsley refineries. Gold and copper are mined at Newmont's Boddington Gold Mine which is expected to be the largest open cut gold mine in Australia when it reaches full production. The total value of mining in the Peel Region in 2010-11 was \$3.4 billion.

Building and construction accounted for 19.5% of the Peel economy in 2010-11. Building approvals totalled \$431.4 million for this period with residential approvals making up 92% of total approval values.

The value of retail trade continues to rise steadily in the Peel Region. The retail industry had an estimated turnover of \$1,022 million in the year ending June 2011, an increase from the previous year greater than that of any other region in Western Australia. In 2010 the tourism industry brought 380,800 visitors to the region contributing \$139.4 million to the Peel economy (averaged from 2008/09/10).

Despite a strong economy, the Peel Region has a long history of higher than State average unemployment. For the March quarter 2012, there were 49,591 people in the Peel's labour force and the unemployment rate was 5.5%. The State average for this time was 4.4%.



The Peel Development Commission continues to pursue projects to benefit the Peel Region including the *Peel Economic Development Initiative* - a focused program of strategic activities to create opportunities for investment-led growth in the region.



**Table 1 Facts at Glance**

Key Indicators	Peel Region	Western Australia
Area	5,648 km <sup>2</sup>	2.5 million km <sup>2</sup>
Estimated Population	112,677	2,352,215
Population Growth (Annual Average Growth 5 Years To 2011)	4.5%	2.7%
% Of Persons 65 And Over	17.9%	12.3%
% Persons Under 15	19.8%	19.7%
Labour Force (March 2012)	49,591	1,320,546
Unemployment Rate (March 2012)	5.5%	4.4%
Mean Taxable Income (2008-09)	\$62,460	\$60,001
Gross Regional Product	\$10,702.7 million 4.9% Gross State Product	\$216.6 million
Main Industries By Percentage Of GRP (2011)	Mining, construction, manufacturing	Mining, manufacturing, construction
Main Industries By Number Of Persons Employed 2006	Construction, manufacturing, retail trade	Retail trade, manufacturing, health care and social services
Estimated Visitor Numbers (Annual Average (2008/09/10))	380,800	5,988,100

Source: ABS: Department of Education, Employment and Workplace Relations; Tourism Western Australia; Government of Western Australia.



## POPULATION

The estimated resident population of the Peel Region as at June 30, 2011 was 112,677 representing 4.8% of Western Australia's population of 2,352,215.

The majority of the population is located in the City of Mandurah (65.3%) followed by the Shires of Serpentine-Jarrahdale (16.4%), Murray (13.0%), Waroona (3.2%) and Boddington (2.0%).

**Table 2 Peel: Estimated Resident Population at June 30, 2011**

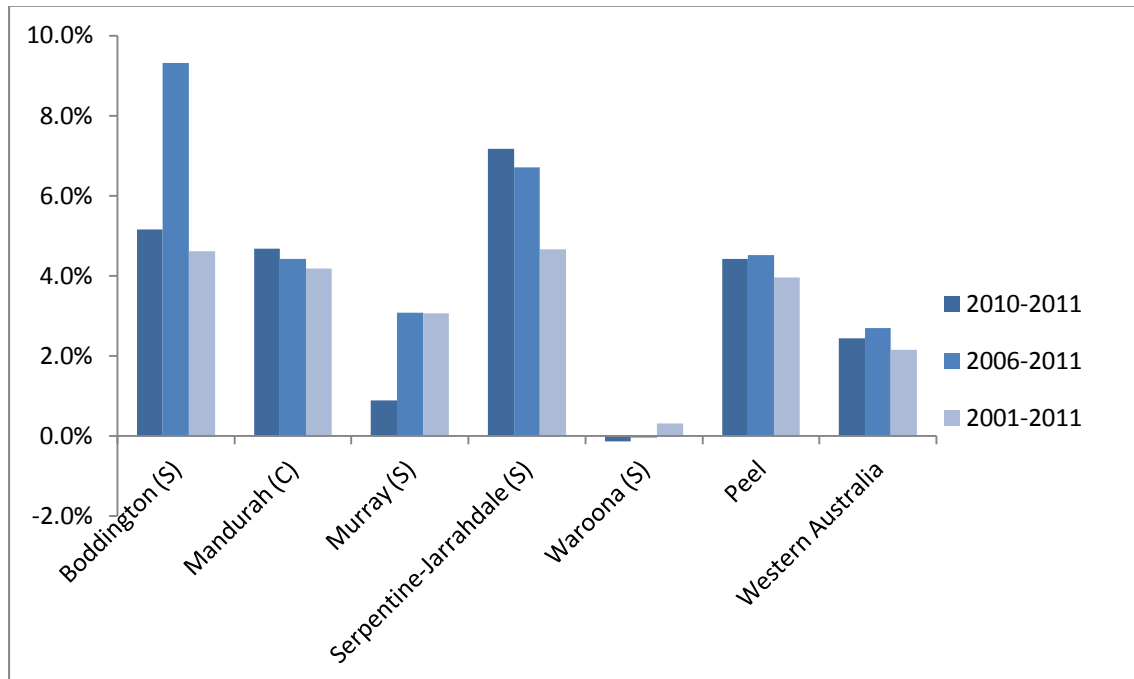
LGA	Population	% Peel
Boddington	2,261	2.0%
Mandurah	73,605	65.3%
Murray	14,700	13.0%
Serpentine-Jarrahdale	18,474	16.4%
Waroona	3,637	3.2%
<b>Total</b>	<b>112,677</b>	

*Source: ABS, Estimated Resident Population, 2011*

Peel has a rapidly growing population. The annual average growth rates for the Peel population have been 4.4% for the past year, 4.5% over the past five years and 4.0% over past ten years – figures that are significantly higher than the Western Australian growth rates which were 2.4% for the past year, 2.7% over the past five years and 2.2% over the last 10 years. Over this time, Peel has been the second fastest growing regional area in the State, second only to the Pilbarra.



**Figure 1 Population Growth Peel and WA**



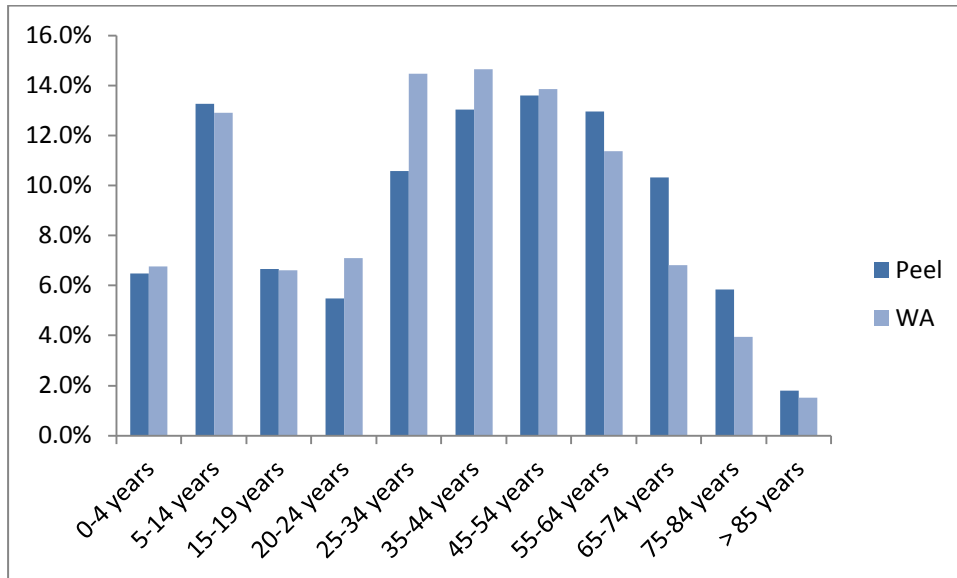
Source: ABS, Estimated Resident Population, 2011

Serpentine-Jarrahdale is experiencing particularly rapid population growth and from 2010 to 2011 increased by 7.2%.

The Peel Region has a higher proportion of older residents than the Western Australia average. Residents aged 65 or older represent 17.6% of the total Peel population, compared to 12.1% in this age group as a percentage for the total Western Australia population. The balance between males (49.7%) and females (50.3%) is fairly even.



**Figure 2 Age distribution: Peel and Western Australia**



Source: ABS, Estimated Resident Population, 2011

### Growth Forecasts

Population forecasts predict the number of Peel residents to increase steadily at around 3% over the next ten years to reach 137,598 in 2020.

**Table 3 Projected Population**

Year	Population	Growth from 2010	Annual Average Growth	Average Annual Growth rate
<b>2010</b>	104,877			
<b>2011</b>	107,971	1 year 3,370	3,370	3.2%
<b>2015</b>	121,331	5 years – 16,730	3,346	3.1%
<b>2020</b>	137,598	10 years – 32,997	3,300	3.2%

Source: ABS, Projected Resident Population by Age & Sex, 2007 to 2027



## ECONOMY

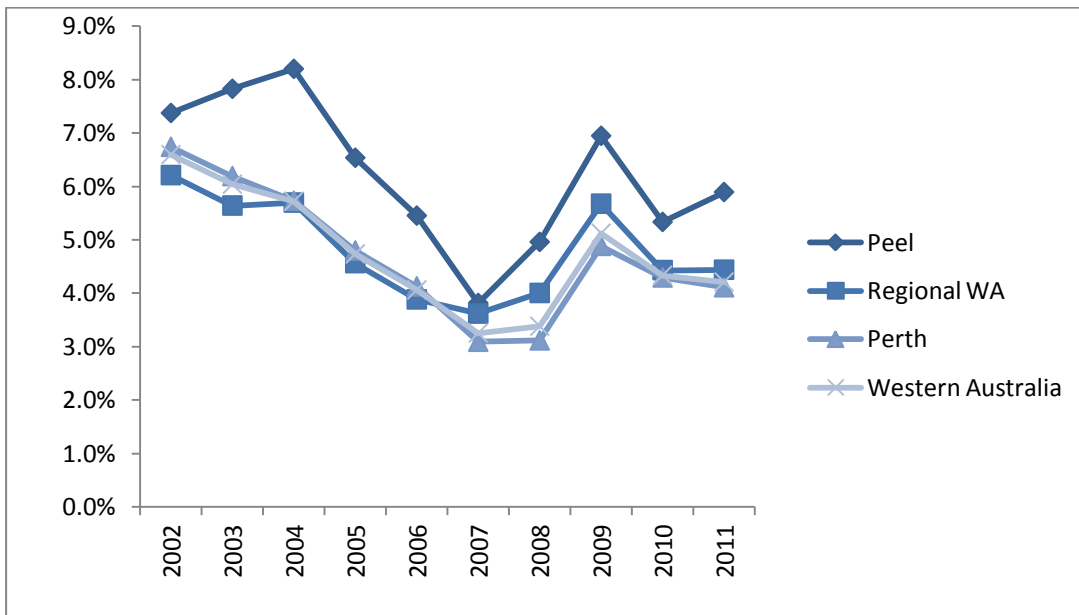
### Labour Force

The Peel Region's labour force stood at 49,591 persons for the March 2012 quarter. Mandurah (C) has the highest number of persons in the labour force with 30,894 persons representing 62.3% of the Peel labour force followed by Serpentine-Jarrahdale with 17.7% and Murray with 13.8%. Boddington and Waroona Shires had the lowest number of persons in the labour force with 1.8 % and 4.3% of the Peel labour force respectively.

### Unemployment

Historically, the Peel Region has had a higher unemployment rate than the Perth, Regional WA, and Western Australian average.

**Figure 3 Unemployment**



Source: Department of Education, Employment & Workplace Relations with additional estimates by the Department of Regional Development and Lands



As at March Quarter 2012, Peel’s unemployment rate was 5.5% as compared to Western Australia at 4.4%, Perth 4.6% and Regional Western Australia 3.7%. The Peel Region’s unemployment rate in March 2012 was down slightly (0.4%) on the same quarter in 2011. In this time the unemployment rate for Western Australia remained the same.

Mandurah (C) had the highest unemployment rate in the region at 6.2% while Serpentine-Jarrahdale (S) and Boddington had the lowest unemployment rates of the region each with 2.8%.

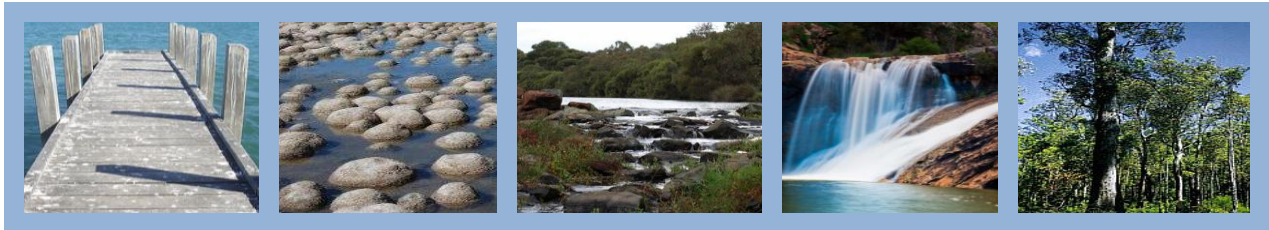
**Table 5 Unemployment March Quarter 2012**

	Number Unemployed	Unemployment Rate
Boddington	26	2.8%
Mandurah	1,926	6.2%
Murray	412	6.0%
Serpentine-Jarrahdale	242	2.8%
Waroona	108	5.1%
<b>PEEL</b>	<b>2,714</b>	

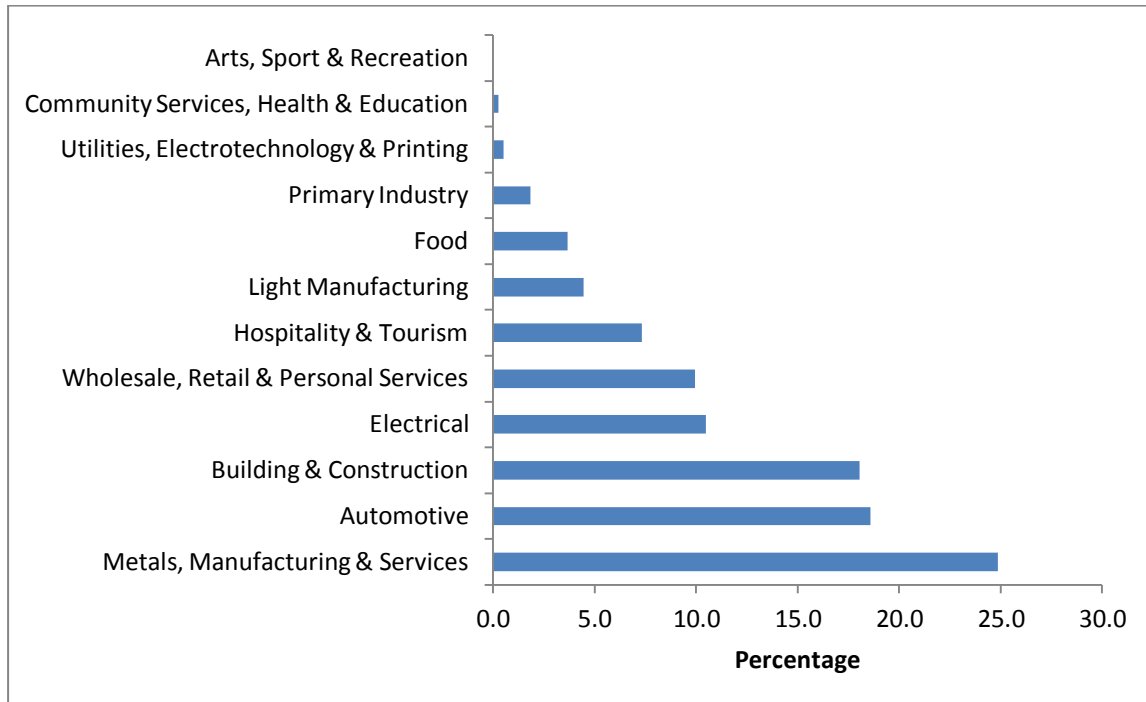
*Source: Department of Education, Employment & Workplace Relations with additional estimates by the Department of Regional Development & Lands*

### **Apprenticeships and Traineeships**

In 2011, there were 994 apprenticeship and traineeship commencements in the Peel Region. Of these, 382 were apprenticeships and 612 were traineeships. The majority of newly commenced apprenticeships were in the metals, manufacturing and service industries (24.9%), automotive (18.6%) and building and construction (18.1%).



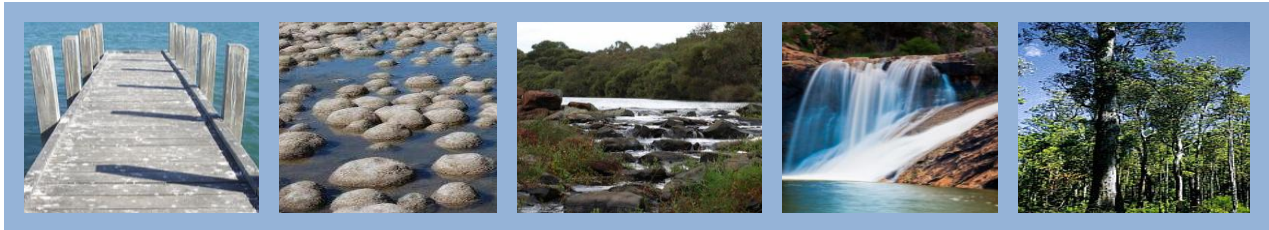
**Figure 4 Apprenticeship Commencements Peel 2011**



Source: Western Australian Department of Education and Training

Wholesale, retail and personal services (20.6%), finance, property and business services (20.1%) and Community Services, Health and Education (14.9%) comprised the majority of traineeships commencements.

Over the last 5 years there have been fluctuations in the number of apprenticeships and traineeships commenced in the region. From 2010 – 2011 there has been a decrease across apprenticeship commencements in the region by 12%. In this time the number of building and construction apprenticeship commencements decreased by 46%, food related apprenticeship starts were down by 30% and electrical apprenticeship commencements were down by 13%. Despite this, traineeships increased by 52% from 2010 – 2011 with large increases across most industry areas.



## Employment by Industry

The most recent data on employment by industry is from the 2006 Census, which showed that the highest proportion of the Peel labour force was employed in the construction (13.6%), manufacturing (13.5%) and retail trade (12.4%) industries. Mining, despite being a significant contributor to the Peel economy, employed only 5.2% of the labour force at the time of the 2006 census.

**Table 5 Employment by industry**

Industry	%
Construction	13.6%
Manufacturing	13.5%
Retail trade	12.4%
Health care & social assistance	8.4%
Education & training	6.4%
Accommodation & food services	5.6%
Mining	5.2%
Public administration & safety	4.7%
Other services	3.7%
Transport, postal & warehousing	3.7%
Professional, scientific & technical services	3.7%
Agriculture, forestry & fishing	3.2%
Administrative & support services	3.0%
Inadequately described/Not stated	2.9%
Wholesale trade	2.6%
Rental, hiring & real estate services	2.4%
Financial & insurance services	1.7%
Arts & recreation services	1.2%
Electricity, gas, water & waste services	1.0%
Information media & telecommunications	1.0%

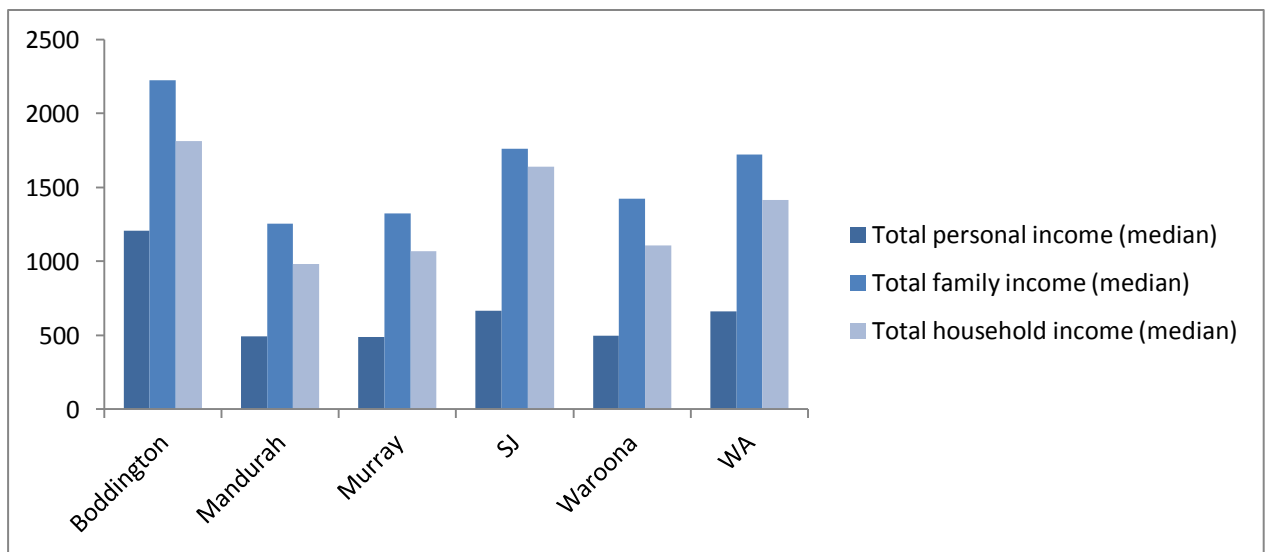
*Source: ABS, 2006, Census of Population and Housing*



**Income**

Census data from 2011 shows that, with the exception of Boddington and Serpentine-Jarrahdale, Peel’s local government areas had lower median personal, family and household incomes than for Western Australia.

**Figure 5 Median Personal, Family & Household Income Peel and Western Australia**



Source ABS Census 2011 B02

Boddington had the highest median incomes in the region across individuals, families and households most likely due to mining activity in the area. Serpentine-Jarrahdale had the second highest incomes in the region and this is a reflection of Serpentine-Jarrahdale’s low unemployment rates relative to the remainder of Peel.

As expected, incomes have increased since the 2006 Census. In Western Australia, median personal incomes increased by 32.4%. In this time, Boddington’s median personal income increased by 155.2% - most likely due to the opening of the Boddington Gold Mine.



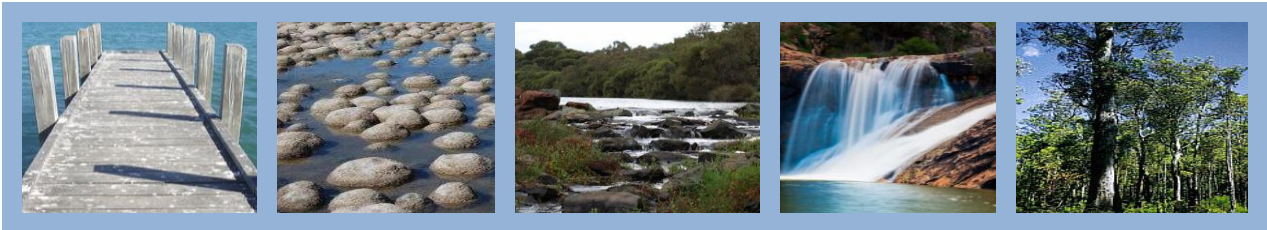
### Gross Regional Product

The Gross Regional Product (GRP) for Peel was valued at \$10.7 billion in 2011, representing 4.9% of the Gross State Product. Mining remained the leading contributor to the region’s economy growing its share of GRP by 7.4% to 36.8% due to increased output from Boddington Gold Mine. Construction increased to 19.5%, remaining the second largest contributor followed by manufacturing at 7.1%.

**Table 6 Gross Regional Product Share by Industry 2011**

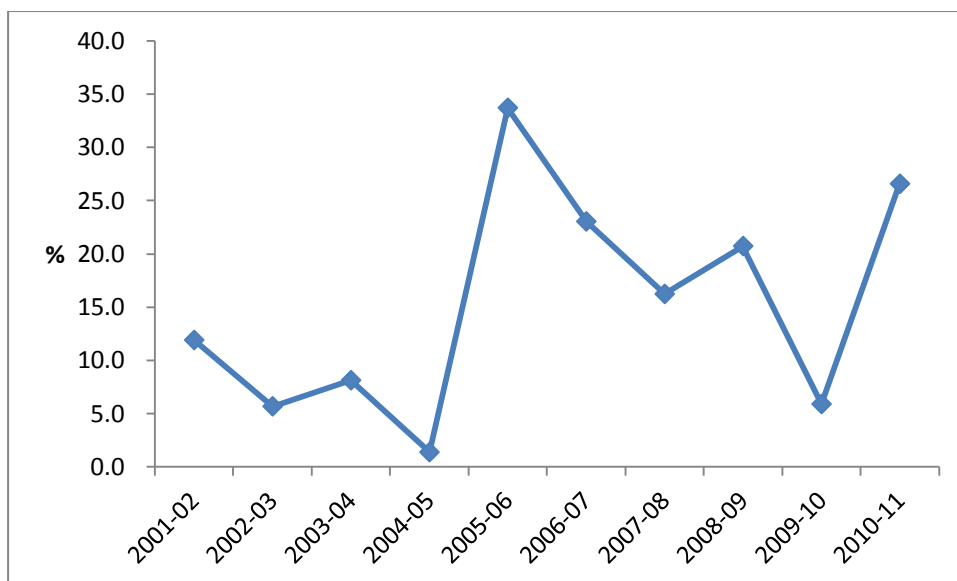
Industry	2010-11
Agriculture, Forestry and Fishing	1.1%
Mining	36.8%
Manufacturing	7.1%
Electricity, Gas and Water Supply	2.2%
Construction	19.5%
Wholesale Trade	1.4%
Retail Trade	2.4%
Accommodation, Cafes and Restaurants	1.2%
Transport and Storage	4.7%
Communication Services	0.9%
Finance and Insurance	2.4%
Rental, Hiring and Real Estate Services	1.6%
Professional, Scientific and Technical Services	3.1%
Administrative and Support Services	1.8%
Government Administration and Defence	2.3%
Education	2.3%
Health and Community Services	2.9%
Cultural and Recreational Services	0.3%
Personal and Other Services	6.0%

Source: Department of Regional Development & Lands



Nominal growth for the twelve months to June 2011 was 26.6%, well up on the previous year of just 5.9%. This is the second highest increase in ten years, the highest being in 2005-06 with 33.7%. The lowest growth was in 2005 with just 1.4%

**Figure 6 Peel Nominal Growth of Gross Regional Product**

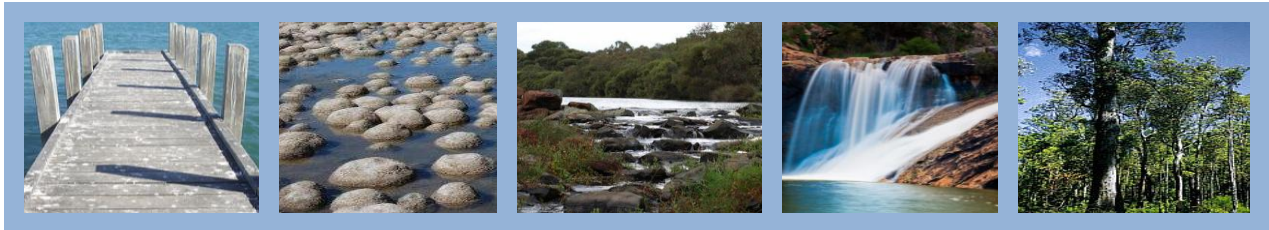


Source: Estimated by the Department of Regional Development and Lands

### Mining

In the 2010-2011 financial year the estimated value of the gold, copper and bauxite mined and processed in Peel was almost \$3.446 million. This represents a 29% increase over the previous year and is mainly due to increased production levels at the Boddington Gold Mine.

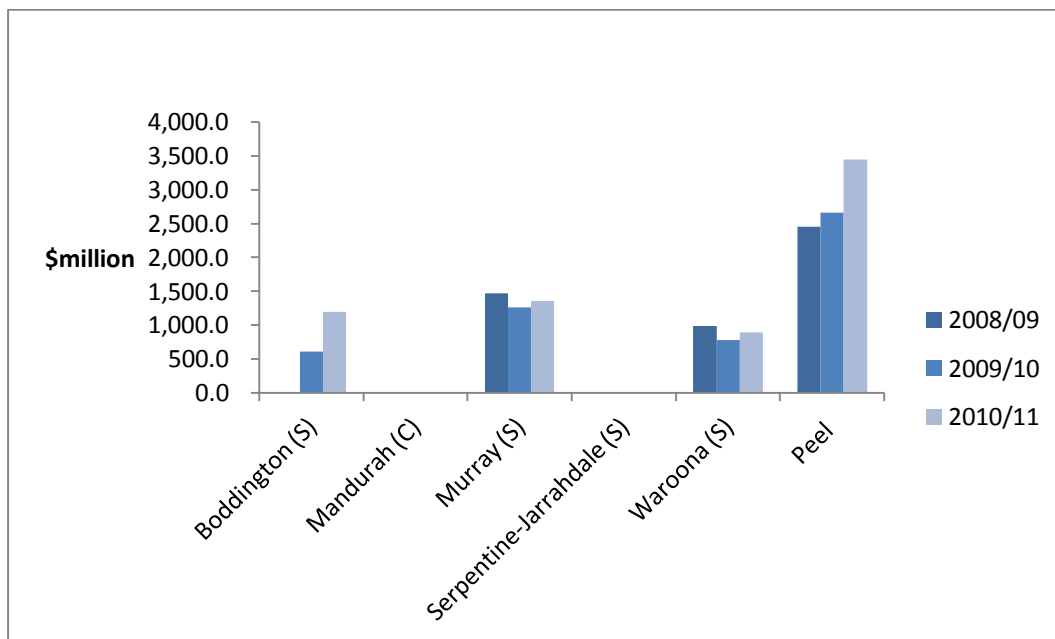
Boddington Gold Mine – now owned by Newmont – reopened in 2010 after a period of closure and is expected to be Australia’s largest gold producer when it reaches full production. The Boddington Gold Mine produced 22.3 tonnes of gold valued at \$1,194 million – 12% of the State’s gold value in the 2010-2011 period. During this time the mine



also produced 27,000 tonnes of copper.

Alcoa mines bauxite at the Willowdale mine in Waroona and the Huntly mine at McCoy near Dwellingup. Currently, Huntly Mine is the largest bauxite mine in the world. Output from these mines is processed into alumina at the Pinjarra and Wagerup refineries – both located inside the Peel Region, as well as the Kwinana Refinery. BHP’s Worsley has a bauxite mine in the Boddington Shire from which ore is transported overland via conveyer belt for processing at the Worsley refinery in the Shire of Collie. Together the Peel Region’s mines produce the total feedstock for WA’s alumina refineries.

**Figure 7 Peel Value of Minerals Production**



Source: Department of Mines and Petroleum

According to the Department of Mines and Petroleum approximately 6,800 people were employed in the mining industry in the Peel Region in 2011. Just over 4,100 of these were directly employed in mining bauxite and gold. A further 2,600 were employed in



processing refineries producing alumina.

### **Manufacturing**

The major manufacturing industries in the Peel include metal products, machinery and equipment and food processing. Income generated from Peel’s manufacturing industry contributed 7.1% to Peel’s Gross Regional Product.

### **Building and Construction**

Building and construction accounted for 19.5% of the Peel economy in 2010-11, the second highest contribution behind mining. For 2010-2011 there were 1663 residential approvals for the Peel Region valued at \$395.7 million dollars. This is 6.24% of total residential building approvals for WA.

55.4% of the value of residential approvals was for the City of Mandurah with 891 residential dwellings being approved and 29.2% was in the Shire of Serpentine-Jarrahdale with 528 dwellings being approved. The average value of a residential approval in Peel in 2010-2011 was \$237,945.

**Table 7 Residential Building Approvals 2010-2011**

	<b>Number</b>	<b>Average</b>	<b>Total Value</b>	<b>Peel %</b>
<b>Boddington (S)</b>	25	\$256,720	\$6.42	1.62
<b>Mandurah (C)</b>	891	\$246,216	\$219.4	55.4
<b>Murray (S)</b>	180	\$249,844	\$45.0	11.4
<b>Serpentine-Jarrahdale</b>	528	\$218,901	\$115.6	29.2
<b>Waroona (S)</b>	39	\$239,871	\$9.4	2.4
<b>Peel</b>	1663	\$237,945	\$395.7	100

*Source: ABS*



The Peel Region experienced a decrease of 3.8% in the value of its residential building approvals from the previous financial year. This is better than the corresponding decrease in residential building approvals of 6.7% for the whole of Western Australia.

While residential building dominates the region's construction activities, the value of non-residential approvals totaled \$50.8 million for the 2010-11 period. This represents a decrease of 65.6% from the previous financial year and is consistent with a decrease of 58% over the whole of WA.

Most recent data is from the September Quarter 2011. In this quarter Peel residential approvals totalled \$87.4 million, and non-residential approvals totalled \$19.6 million.



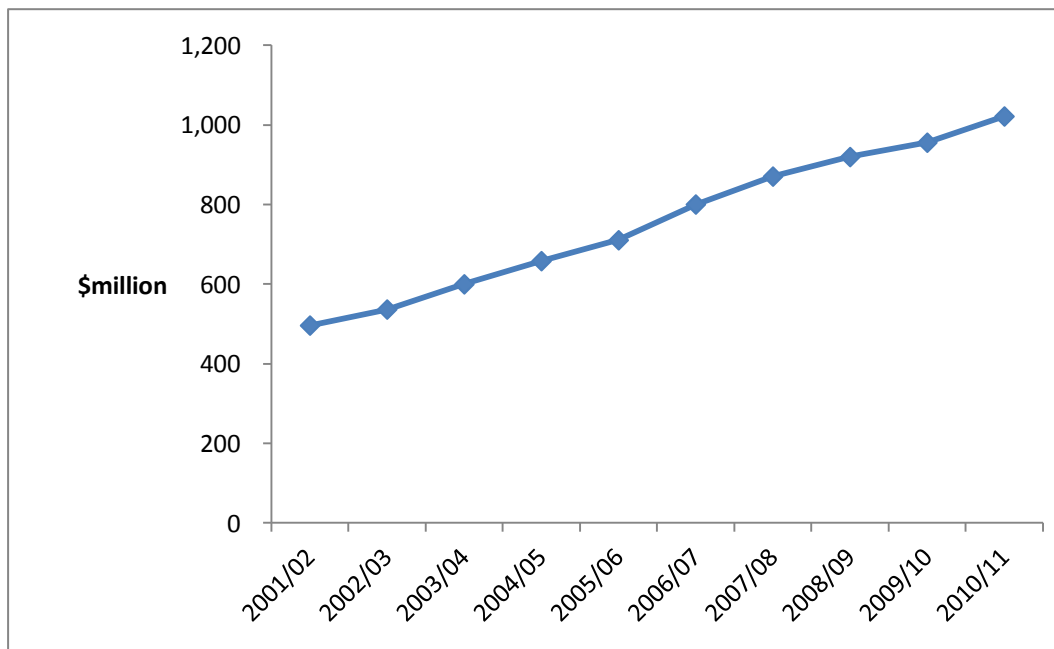


## Retail

The Peel Region has a broad range of retail facilities ranging from local community shops to major shopping centres. There are hundreds of speciality outlets and services with opportunities for many more as the population of the region grows. In 2010-2011 retail trade contributed \$1,022 million to the Peel economy and comprised 3.8% of the State's economy.

Retail trade has steadily been increasing in the Peel Region over the last decade, most likely due to its increasing population. From the 2010 to 2011 financial years the value of retail trade in the Peel Region increased by 6.9%. This is the largest increase in any region of Western Australia. The State's total retail turnover increased 4.0% during this time.

**Figure 8 Value of Retail Trade**



Source: ABS and Regional Development and Lands



## Tourism

Tourism Western Australia provides tourism data based on three year rolling averages and between 2008 and 2010 an annual average of 380,800 tourists visited the Peel Region including 358,400 domestic visitors and 22,400 international visitors.

The majority of international visitors were travelling alone at 41% or as part of an adult couple at 38%. Domestic travel parties mainly comprised mostly adult couples at 29% followed by family groups at 25%. For both domestic and international visitors alike, at 55% and 51% respectively, the main reason for visiting was for holiday and leisure purposes.

Annual tourist expenditure for 2010 was estimated to be \$139.4 million – a decrease of 3.7% from the previous year.





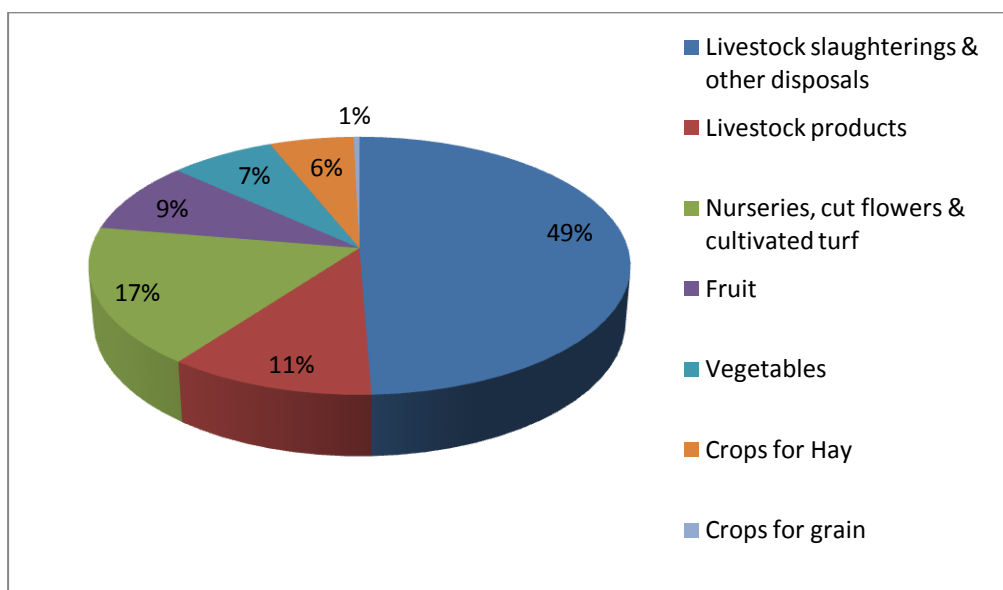
### Peel Agriculture

In the 2010 financial year, agricultural production contributed an estimated \$183 million to the Peel Region’s economy and represented 3.18% of the total value of agricultural production in the State. From the previous financial year, the value of agricultural production in Peel increased by 41.5%, while the value of agricultural production in WA declined by 20%.

In 2010 livestock disposals represented the largest part of the Peel’s agricultural economy with these forming 49.4% of the region’s agricultural value. The majority of this was from pig and poultry farming. Cumulatively livestock products including egg, milk and wool contributed 10.9% to the region’s agricultural economy.

Crops grown in the Peel Region include fruit, vegetables, grains, hay, turf and nursery products. Cultivated turf was the most valuable crop in the Peel Region in 2010 making up 6% of the agricultural value. Fruits grown include oranges, pears, apples, berries and grapes.

**Figure 9 Value of Agriculture**



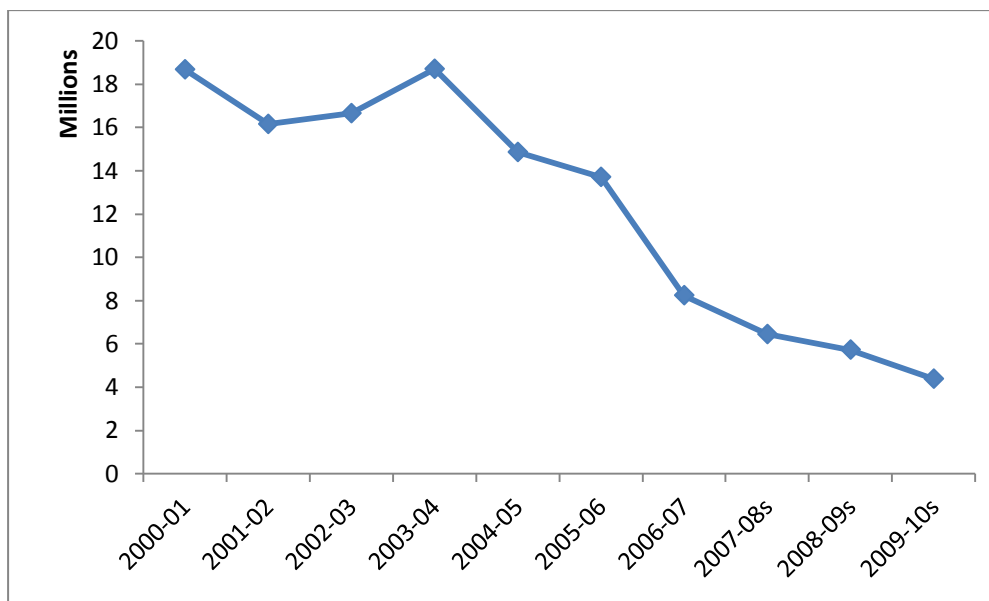
Source: ABS and Regional Development and Lands



## Fishing

In 2009-2010 the Department of Fisheries estimated that the Peel catch size was 339 tonnes and worth \$4.38 million. Rock lobsters represented 84% of the total catch value, fish 9% and crabs 6%. The value of fishing in the Peel Region has been steadily declining since 2003-04, down 76.6%. The value of fishing in Western Australia has increased by 7% in the same time period.

**Figure 10 Value of Fishing**



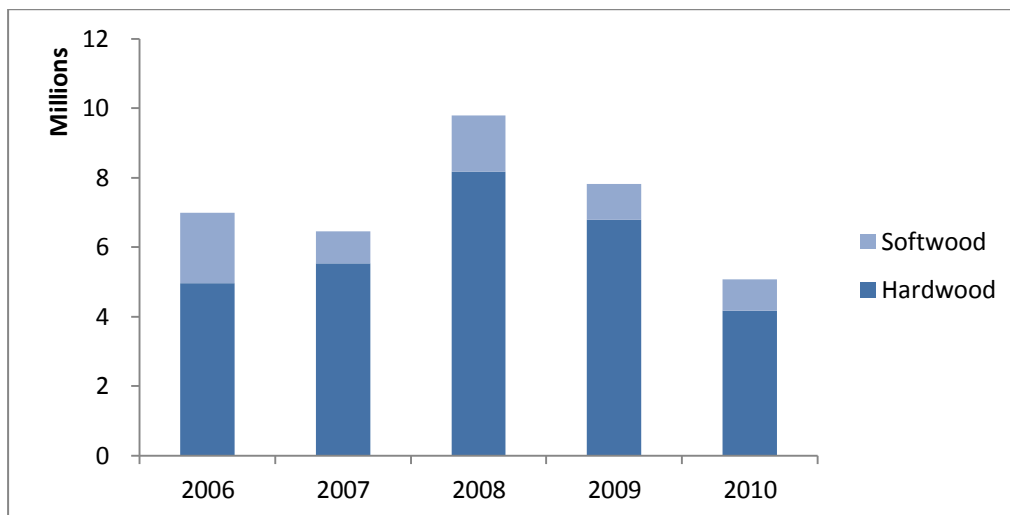
Source: Department of Fisheries and Regional Development and Lands



**Forest Products**

The total value of forest products for the Peel Region in 2010 was \$5.07 million. Hardwoods, including marri and jarrah, represented 82.4% of total value of forest products at \$4.2 million and softwood represented 17.6% of total forest products with a value of \$892,000. The Peel contributes 5.8% to the State’s total forest products. The value of forest products in the Peel Region declined by 35.2% from 2009-2010.

**Figure 11 Value of Forest Products**



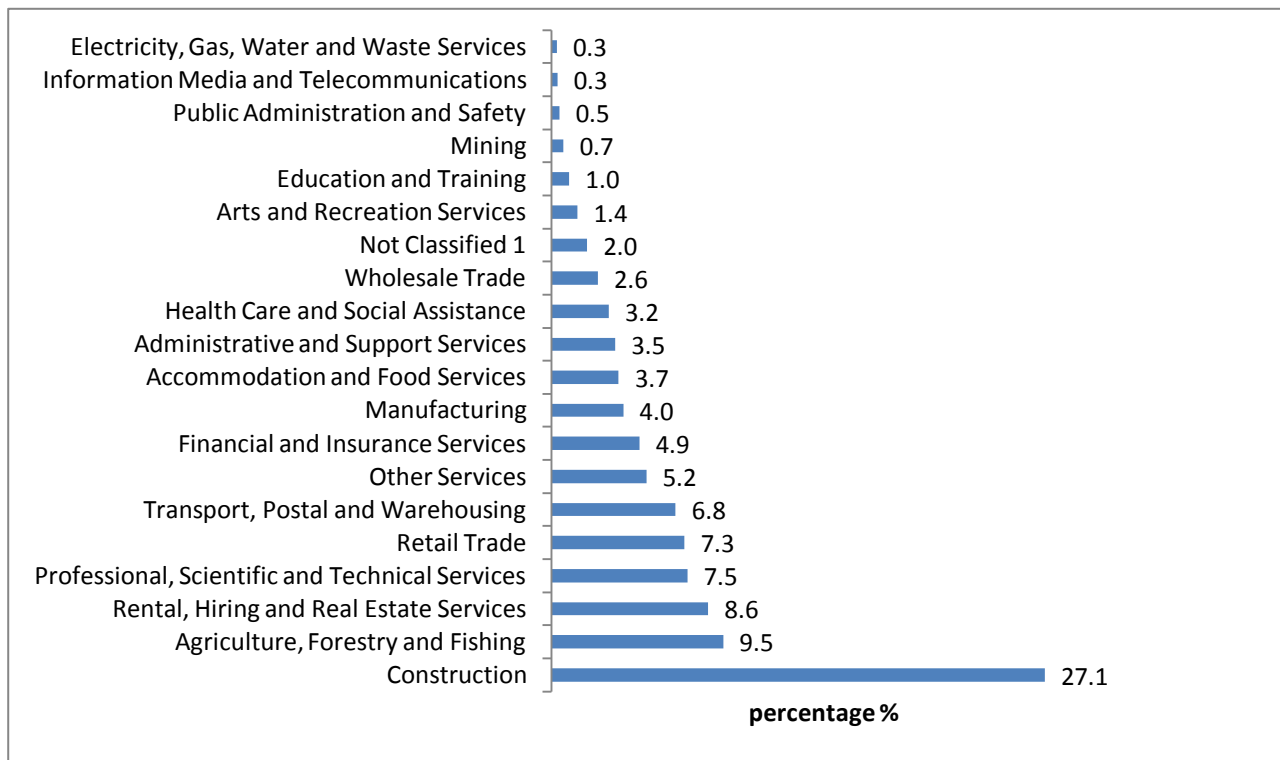
*Source: Forest Products Commission, Western Australia*

**Business Registrations**

In June 2011 there were 7,796 actively trading businesses registered in the Peel Region. The majority of these were construction related (27.1%). Businesses relating to agriculture, forestry and fishing represented 9.5% of all Peel businesses and retail trade made up 7.3% of Peel businesses.



**Figure 12 Peel Region Businesses by Industry**



Source: ABS Count of Australian Businesses

In the Peel Region 64.2% of businesses are non-employing where the sole employee is the business owner. Businesses which employ between 1 and 4 people make up 21.2% of businesses in the region. Businesses employing 5-19 employees make up 10% and 4.5% of businesses employ 20-199 employees. There are 6 businesses in the Peel Region which employ over 200 staff. In terms of turnover, 361 companies in the Peel Region have a turnover of over \$2 million dollars. Of these, 90 are construction related and 32 are manufacturing related. Regional businesses with a turnover of less than \$50,000 per annum make up 23.8 % of all Peel businesses.



## SOCIAL

### Education

The Peel Region has a number of education and training options available including schools, vocational education and training providers and university.

There are 43 schools in the Peel Region, offering pre-primary, primary and secondary education. Of these 12 are independent (private) schools, 31 are public. As at Semester 1, 2012, a total of 18,675 students were attending school in the Peel Region with 6,991 attending an independent school and 11,684 attending a public school.

From Semester 1 2011 to Semester 2 2012 student enrolments in the Peel Region increased by 12.1%, reflecting a rapidly growing population. Student numbers have increased by 3.6% at independent schools and 8.4% at public schools.

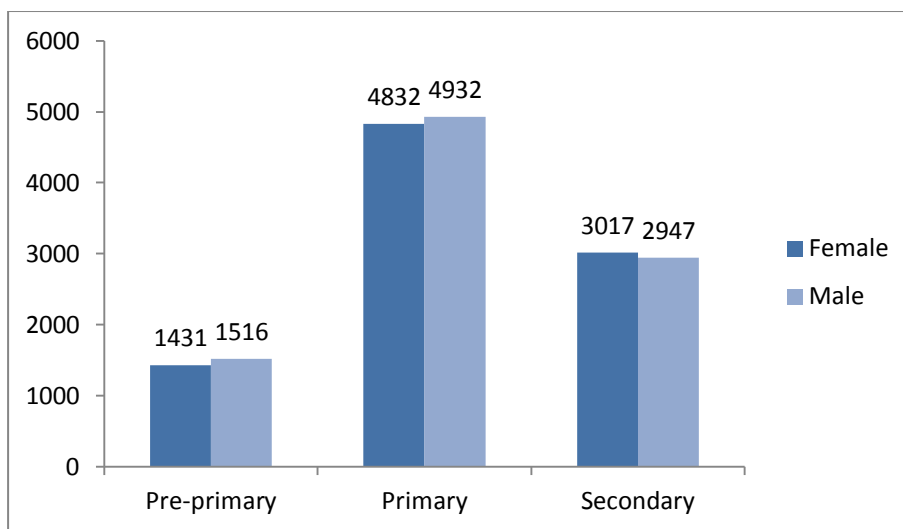
To accommodate increasing student numbers, more schools are opening in the region. The independent Austin Cove Baptist College opened in 2011 and Meadow Springs Primary School (public) opened in 2012. An additional two new public schools are under construction – a primary school at West Byford and a secondary school in Byford, both due to open in 2014. John Tonkin College opened in 2012 and was formed by the amalgamation of Mandurah Senior College and Mandurah High School.





The largest portion of school students in the Peel Region, 52.3%, are in primary school, 31.9% are in secondary school and 15.8% are in pre-primary school with a fairly equal balance between males and females.

**Figure 11 School Students Semester 1 - 2012**



*Source: Western Australian Department of Education and Training*

Aboriginal students make up 4.32% of the school student population in the Peel Region. Of the 805 students who identified as being aboriginal – 105 were in pre-primary, 445 were in primary and 204 were in secondary classes.

For post-secondary education, the Peel Region is serviced by the Peel Education Campus which is a multi-partnered complex comprising Challenger Institute of Technology (vocational education and training) and a campus of Murdoch University. John Tonkin Senior College is also a partner of the Peel Education Campus. This unique arrangement offers flexible learning pathways to students.

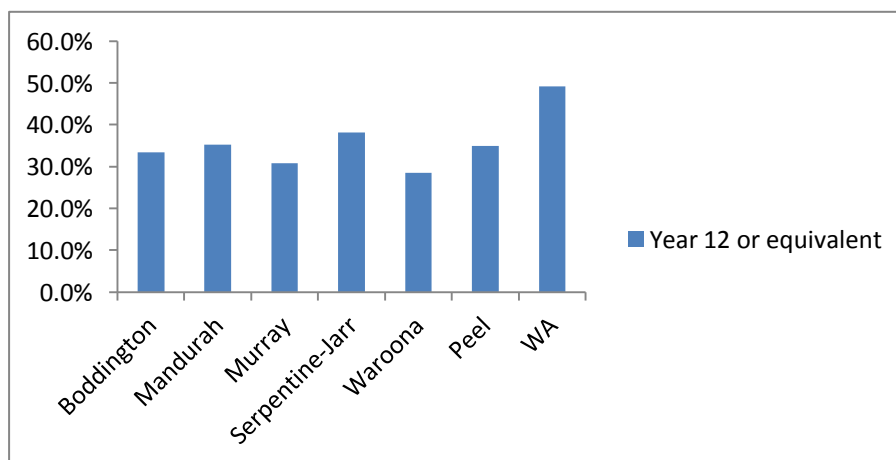


The Peel Campus of Murdoch University offers commerce and nursing qualifications as well as bridging courses. In 2011 the Peel Campus had a total of 402 students enrolled with 94% of these studying nursing programs. Of all students 90% were female and the median student age was 24.5 years. Six students identified as Indigenous, 21 disabled and 19 from a non-English speaking background. Significantly, 49% were of low socio-economic status.

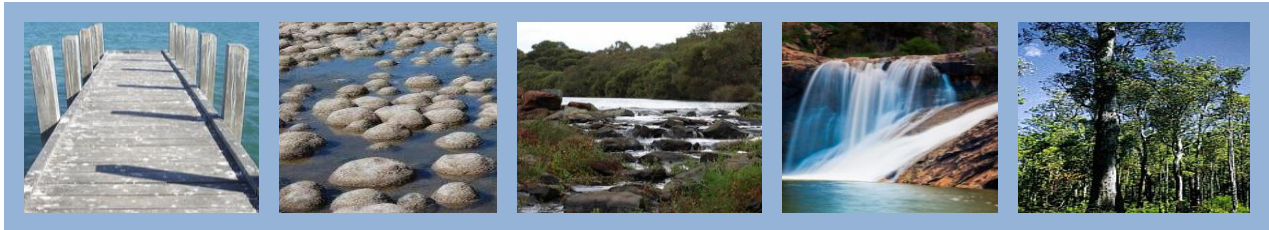
Challenger Institute of Technology offers a range of courses including community services, financial services, beauty therapy, visual arts, laboratory skills, metal fabrication and courses relevant to the construction industry. While its main site is at the Peel Education Campus, Access Centres have been established, in partnership with community learning centres in Boddington, Waroona, Pinjarra and Mundijong. There are also a number of private training providers who offer vocational education and training in the Peel Region.

Despite education and training options available in the region, Peel has a history of poor educational attainment. Data from the 2011 Census indicates just 34.9% of Peel residents have completed Year 12 which is significantly lower than for Western Australia at 49.1%.

**Figure 14 Highest Level of School Completed**



Source ABS Census



## Health

The Peel Region has hospitals, community health centres, child health centres, and GP clinics. There are also allied health professionals such as physiotherapists, dentists and psychologists working privately in the area.

Peel's major health care provider is the Peel Health Campus, which has been in operation since 1997. Peel Health Campus offers public and private hospital services and is managed by Health Solutions on behalf of the Western Australian government. Peel Health Campus has 208 beds. There is also a 12 bed hospital in Boddington and Pinjarra is home to the Murray Hospital which has 16 beds.



Child health clinics are located in all local government areas and major community health centres are located in Mandurah, Pinjarra and Boddington, with the Boddington facility having opened in 2011.

There are 96 general practitioners working in the Peel Region.

## Crime

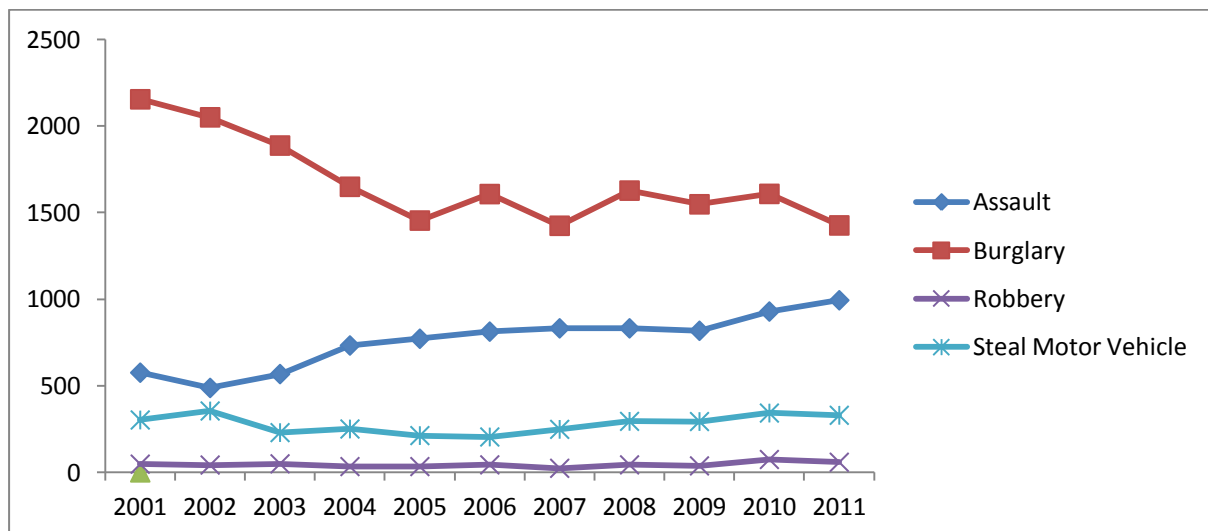
There are 145.1 full time equivalent (FTE) police officers in the Peel Region. This comprises of 110.6 in Mandurah, 14 in Mundijong, 8.5 in Pinjarra, 6 in Waroona, 4 in Boddington and 2 in Dwellingup. The Mandurah Police Service includes forensic officers, detectives, general, traffic and administrative staff.

WA Police provide information on "volume" crimes committed in various suburbs which



include assault, burglary, robbery, motor vehicle theft and graffiti. In 2011, home burglary was the most commonly perpetrated crime in the region with 1145 incidents. Despite this the rate of home burglaries decreased by 8.8% between 2010 and 2011. Motor vehicle theft remained constant from 2010-2011 with around 330 cars being stolen, robbery also remained unchanged. Graffiti offences appeared to decrease significantly between 2010 and 2011 however it has been suggested by a local government authority that this is due to people not reliably reporting graffiti offences. Unfortunately there was an increase in the number of assaults in the region in 2011 - up by 7.0% to 994 offences from the previous year.

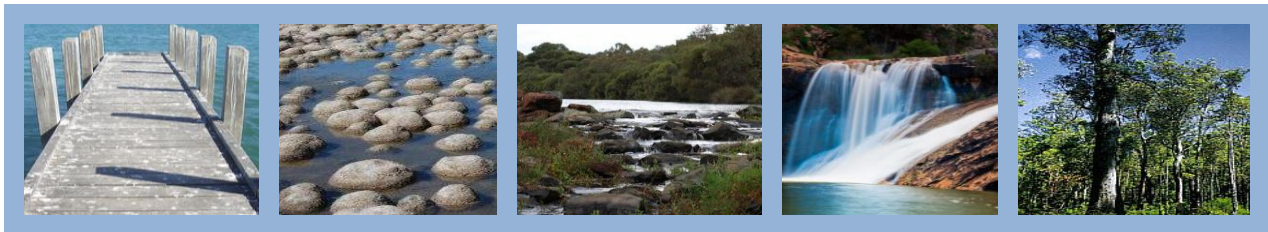
**Figure 15 Rates of Assault, Burglary, Robbery and Motor Vehicle Stealing in Peel**



Source: WAPOL

### Housing

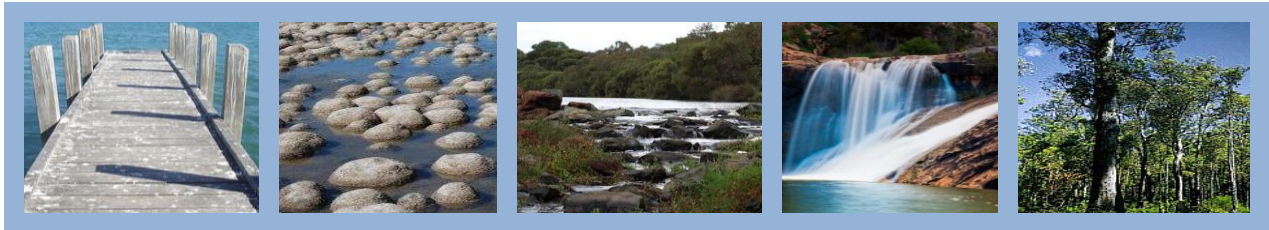
The homes in Peel are diverse and range from opulent residences on Mandurah’s stunning canals to cottages on rural blocks, to flats and units in town centres and family homes in suburban developments. The cost of housing in Peel varies considerably and the table below provides information housing costs in the region.



**Table 8 Peel Median House Prices and Rents**

Suburb	Local Government Area	Median House Price 12 months to March 2012	Median Rent March Quarter 2012
Boddington	Boddington	\$405,000	\$400
Bouvard	Mandurah	\$465,000	\$280
Coodanup	Mandurah	\$265,000	\$270
Dawesville	Mandurah	\$385,000	\$370
Dudley Park	Mandurah	\$390,000	\$350
Erskine	Mandurah	\$420,000	\$370
Falcon	Mandurah	\$355,000	\$303
Greenfields	Mandurah	\$290,000	\$300
Halls Head	Mandurah	\$409,500	\$360
Lakelands	Mandurah	\$376,500	\$370
Madora Bay	Mandurah	\$435,000	\$365
Mandurah	Mandurah	\$284,500	\$285
Meadow	Mandurah	\$385,000	\$360
San Remo	Mandurah	\$500,000	\$390
Silver Sands	Mandurah	\$437,500	\$320
Wannanup	Mandurah	\$408,500	\$360
Furnissdale	Murray	\$387,500	\$420
North	Murray	\$412,000	\$215
Pinjarra	Murray	\$305,500	\$338
Ravenswood	Murray	\$387,500	\$353
South	Murray	\$545,000	\$350
Dwellingup	Murray	\$329,000	\$320
North	Murray	\$277,500	\$525
Byford	Serpentine-	\$395,000	\$410
Cardup	Serpentine-	\$350,000	\$650
Jarrahdale	Serpentine-	\$383,000	\$425
Mundijong	Serpentine-	\$350,000	\$380
Oakford	Serpentine-	\$740,000	\$650
Serpentine	Serpentine-	\$535,000	\$430
Waroona	Waroona	\$292,500	\$260

Source: REIWA website



As at the 2011 Census there were 51,253 privately occupied dwellings in the region and most of these are separate houses with 85.8% of homes falling into this category. This is greater than for Western Australia which has a higher percentage of semi-detached properties and flats and where the percentage of separate houses is 80.6%.

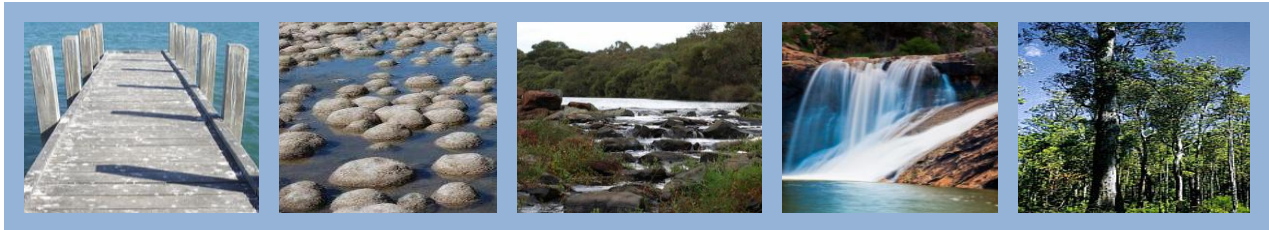
Most homes in the region are being purchased through mortgage at 36.1%, 31.3% are owned outright and 27.3% are rented. The highest rates of home ownership are in Murray and Waroona, while the highest rate of mortgaged properties is in Serpentine-Jarrahdale with 55.3% of homes falling into this category.

An indicator of housing stress is when housing costs are greater than 30% of gross household income. In Western Australia 8.9% of rented homes are experiencing housing stress while 10.2% of mortgaged homes fall into this category. Peel's local government areas fall below the values for Western Australia except for Mandurah where 12.2% of homes pay rent that exceeds 30% of the gross household income and Serpentine-Jarrahdale where 17.4% of homes have mortgages above this amount.

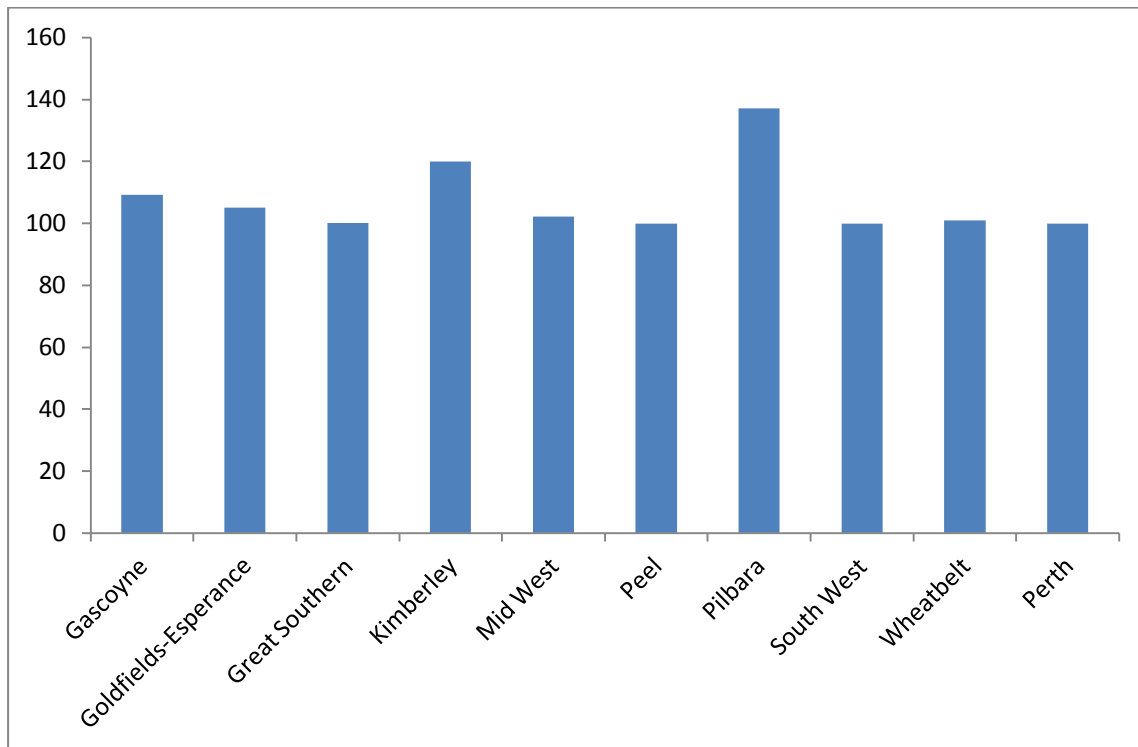
Most tenants – 51.1% - pay their rent to a real estate agent, while a further 8.8% pay their rent to State Housing. The percentage of Western Australians paying rent to a real estate agent is lower at 44.3% and there are more Western Australians in State Housing paying rent at 13.8%.

### **Cost of living**

According to Regional Price Index data from 2011 where a set basket of goods and services is priced across various locations in the State, it is cheaper to live in Peel than Perth with Peel calculated to be 99.9 or 0.1 index points less than Perth. Peel was also the cheapest Regional area in which to live overall.



**Figure 15 Regional Price Index All Categories**



Source: *Regional Development and Lands*

The Regional Price Index basket of goods and services is made up of the following eight broad categories including food; cigarettes, tobacco and alcoholic drinks; clothing; housing; household equipment and operations; health and personal care; transportation; recreation and education.

Peel was cheaper than Perth for cigarettes, tobacco and alcohol as well as the housing and health and personal services categories. Further, Peel was the cheapest region in which to purchase cigarettes, tobacco and alcohol as well as clothing, household equipment and operations, health and personal services and transport.



## ENVIRONMENT

### Climate

The Peel Region experiences a climate that is best described as 'Mediterranean' with hot dry summers and cool wet winters. During summer hot dry easterly winds prevail. Normally there is little rain during summer, however occasional thunderstorms and remnant tropical cyclones can produce heavy rainfall. Winter usually brings consistent rainfall.

Temperatures average 29°C during summer, however can reach over 38°C. The summer minimum average temperature is 17.9°C. Winter temperatures range from a minimum of 9.4°C to a maximum of 17.5°C.

### Estuarine

The most significant environmental feature in the Peel Region is the Peel-Harvey Estuary which is fed by the Murray, Serpentine and Harvey Rivers. Together the Peel Inlet and Harvey Estuary form a large shallow basin, covering approximately 130 km<sup>2</sup>. This is more than two and a half times the size of the Swan River Estuary.

The Peel Inlet is a roughly circular lagoon with a diameter of approximately 10 km. It is connected to the ocean by a narrow inlet channel at Mandurah. The Harvey Estuary is narrow, approximately 20 km long and 2-3 km wide. It is connected to the ocean by a man-made channel at Dawesville. More than half the area of the Peel-Harvey Estuary is less than 0.5 metres deep.

A significant feature in the Peel Region is the thrombolite reefs of Yalgorup National Park. Thrombolites, one of the earliest known life forms, are a particular type of microbialite



that have a clotted internal structure. They were common 600 million years ago. The Lake Clifton thrombolites cover an area 6 kilometres long and 120 metres wide.

### **Ocean**

There are a number of reef systems off the Peel coast. The Murray Reef system runs from Warnbro Sound to Halls Head, approximately 5 nautical miles offshore. Murray, James Service and Horseshoe Reef are some of the notable reefs within this system. Approximately 3 nautical miles off the coast is Bouvard Reef. This system runs from Cape Bouvard to south of Preston Beach. There are several more reefs between Halls Head and Tim's Thicket.

All the local reefs are limestone covered with coral and weed. The water depth inside these systems averages 10 metres. Water depth increases from 17 metres to 25 metres approximately 7 nautical miles offshore at the five fathom bank

### **Water Resources**

Water is a significant feature of the Peel Region, with over one third of the coastal plain within 100 metres of an identifiable watercourse.

Dams in the Peel Region contribute more than 50% to the total capacity of the State's Integrated Water Supply System (IWSS).



The IWSS is the largest scheme managed by Water Corporation, with a total capacity of



622 GL, and supplies over 1.5 million Western Australians with water.

The three major dams are at Serpentine, South Dandalup and North Dandalup. North Dandalup is the smallest dam with a capacity of 75 GL and a surface area of 510 hectares when full. It has a catchment area of 153 km<sup>2</sup>. South Dandalup, the largest dam, has a capacity of 208 GL and has a surface area of 2100 hectares when full. Its catchment area is 311 km<sup>2</sup>. Serpentine has two dams, the Serpentine Dam and the Serpentine Pipe Head Dam. Together they have a capacity of 141 GL, a surface area of 1,128 hectares when full and a catchment area of 692 km<sup>2</sup>.

### **Vegetation**

A wide variety of flora can be found within the Peel Region. Tuart and jarrah are endemic to the coastal plain and are found in the open forest of the Spearwood Dunes, along with marri.

### **Coastal Vegetation**

The understorey of this region consists of banksia, peppermint, she-oak, hakea and acacia. Tuart, peppermint and acacia are also found along the Quindalup Dunes. Swamp she-oak and salt water paperbark are found along the Peel-Harvey Estuary shore line with samphire marshes occurring on the low lying flood prone areas.



The Darling Scarp and Pinjarra Plain have both been largely cleared for pasture; however



there are still remnant areas of marri, wandoo and jarrah. Ghost gums also appear on the Darling Scarp. Some pockets of banksia, she-oak and grass trees can still be found on the Pinjarra Plain.

Jarrah is the principal form of vegetation found on the mostly uncleared Darling Plateau. There are also scattered marri and an understorey of banksia and she-oak.

### **Fauna**

The Peel Region has a large bird population with over 130 species being identified. Although few birds breed in this region, it is a significant feeding area for native and migratory birds. Some birds, including the red-necked stint and the curlew sandpiper migrate from as far away as the northern hemisphere. Others such as musk and black ducks breed in other areas of Western Australia and migrate to the Peel waterways to feed in summer.

Birds found around the Peel waterways include black swan, fairy terns, cormorants, little egrets and pelicans.

A wide range of birds, including 28 parrots, kookaburras and splendid wrens can be found in the inland areas. Two out of the three species of cockatoo found in the area are endangered.

Two rare bird species, peregrine falcon and red-eared firetail finch have been identified in the area.

Mammal species of the region include brush wallaby, short-nosed bandicoot, mardo, echidna, pygmy possum, dunnart, western native quoll and grey kangaroo. Quokkas can



be found around stream and swamp areas.

Whiting, tailor, mulloway, cobbler and mullet can be caught in the waters of the Peel-Harvey Estuary, along with blue manna crabs and king prawns. Fresh water species found in the Peel Region are redfin, western pygmy perch, rainbow trout and western minnow. Marron is common in many rivers and dams.





### Further Information:

For more information please contact the Peel Development Commission (see back cover)  
or visit the following websites:

Australian Bureau of Statistics  
[www.abs.gov.au](http://www.abs.gov.au)

Australian Curriculum, Assessment and Reporting Authority  
[www.myschool.edu.au/](http://www.myschool.edu.au/)

Australian Taxation Office  
[www.ato.gov.au/](http://www.ato.gov.au/)

Department of Education  
[www.det.wa.edu.au](http://www.det.wa.edu.au)

Department of Education, Employment and Workplace Relations  
[www.deewr.gov.au](http://www.deewr.gov.au)

Department of Fisheries  
[www.fish.wa.gov.au/](http://www.fish.wa.gov.au/)

Department of Health  
[www.health.wa.gov.au](http://www.health.wa.gov.au)

Department of Mines and Petroleum  
[www.dmp.wa.gov.au](http://www.dmp.wa.gov.au)

Department of Regional Development and Lands  
[www.rdl.wa.gov.au](http://www.rdl.wa.gov.au)

Forest Products Commission  
[www.fpc.wa.gov.au/](http://www.fpc.wa.gov.au/)

Newmont Asia Pacific  
[www.newmont.com/asia-pacific](http://www.newmont.com/asia-pacific)

Peel-Harvey Catchment Council  
[www.peel-harvey.org.au/](http://www.peel-harvey.org.au/)



Real Estate Institute of WA  
[www.reiwa.com.au/Pages](http://www.reiwa.com.au/Pages)

Tourism Western Australia  
[www.tourism.wa.gov.au/](http://www.tourism.wa.gov.au/)

Water Corporation  
[www.watercorporation.com.au](http://www.watercorporation.com.au)

Western Australia Police  
[www.police.wa.gov.au](http://www.police.wa.gov.au)

# Peel Development Commission

The Peel Development Commission was established by the State Government on January 1, 1993 and operates under the *Regional Development Commissions Act (1993)*. It is one of nine regional development commissions in Western Australia.

The Commission is responsible to the Hon Brendon Grylls – Minister for Regional Development; Lands; Minister Assisting the Minister for State Development; Minister Assisting the Minister for Transport.

## Our Vision

“For Peel to be recognised as a uniquely beautiful and sustainable place to live, work and visit.”

The objectives of the Peel Development Commission are to:

1. Maximise job creation and improve career opportunities in the region
2. Develop and broaden the economic base of the region
3. Identify infrastructure services to promote economic and social development within the region
4. Provide information and advice to promote business development within the region
5. Seek to ensure that the general standard of government services and access to those services in the region is comparable to that which applies in the metropolitan area
6. Generally take steps to encourage, promote, facilitate and monitor the economic development in the region.

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Please note. This publication is available in alternative formats on application to the Commission.