



PORT of TOWNSVILLE

North Queensland

Section 5

Impacts on state and local economies and management of those impacts

Townsville Marine Precinct Project

Environmental Impact Statement





5. Impacts on state and local economies and management of those impacts

5.1 Description of existing economic character

Except where otherwise indicated, data for Townsville City is for the newly amalgamated Townsville City Local Government Area. Information in this section was developed by AECgroup on behalf of GHD. A full report of the findings is available from Appendix BB and a comprehensive extract follows.

Relevant catchment areas examined are the local South Townsville area (the SLAs of South Townsville and Railway Estate) between Ross Creek and Ross River, the Townsville City LGA, the Northern SD and Queensland. The characteristics of the existing economic environment are informed by:

- ▶ Consultation and data from local business and industry, key organisations, and State and local government;
- ▶ Data from the Australian Bureau of Statistics and Queensland Office of Economic and Statistical Research; and
- ▶ Economic profiling and modelling.

Much of the background information presented in the existing environment is sourced from the 2006 Census of Population and Housing. While it is acknowledged that the 2006 Census data is becoming dated, this data represents the most comprehensive, accurate and, for most topics examined in this section, up-to-date source of economic information available. As such it is considered appropriate to use this information to provide background context to the economic impact assessment. Where possible, this data has also been augmented with more recent data sets to provide the most up-to-date snap-shot of the catchment areas as possible.

5.1.1 Existing local economy

This section describes the existing economic environment of the project's catchment areas and the State of Queensland using the most recent and relevant available statistics. This section is intended to provide a baseline from which to measure the significance of the existing Ross River marine industry and the potential changes and impacts to the local, regional and State economies from the development of the TMPP.

5.1.2 Economy and development

The Northern SD economy historically developed based upon the value adding and trade of mineral and agricultural resources. Townsville developed as the export port for the broader region's primary and manufactured products, a role that it continues today.

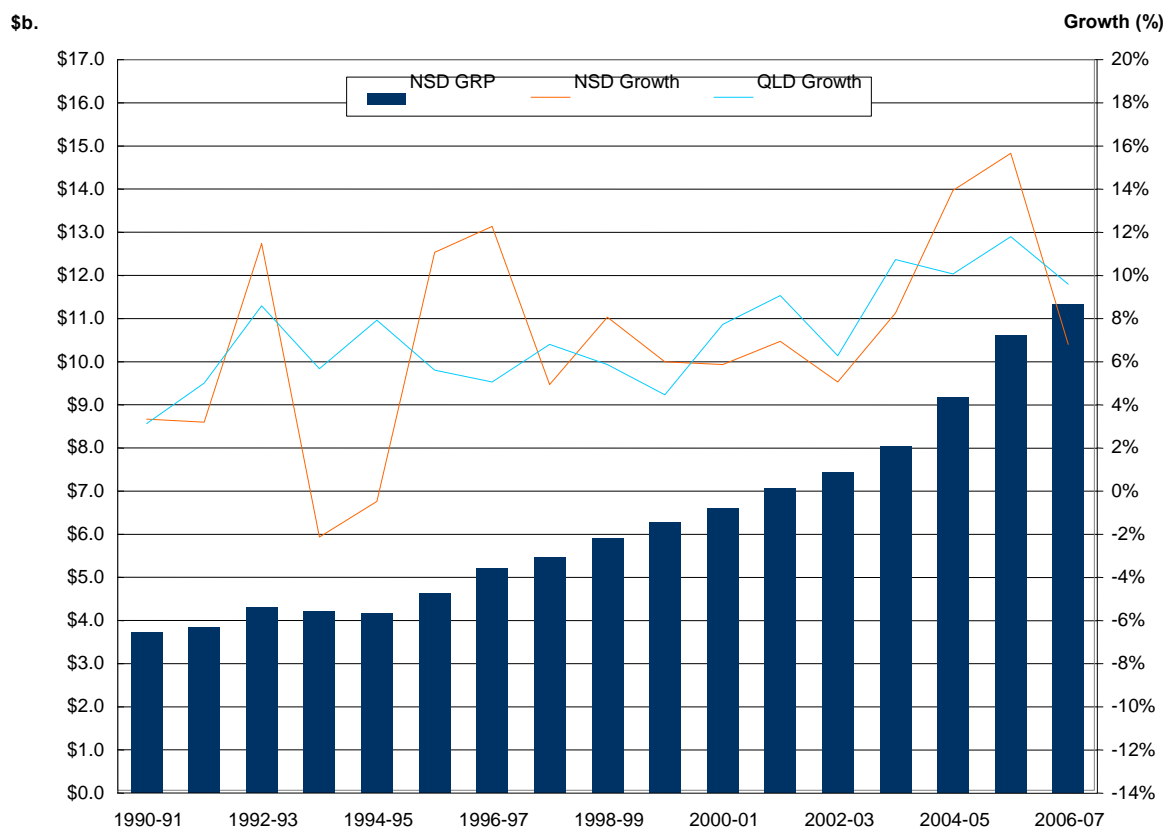
Today, the Northern SD economy is considered amongst the most diversified in regional Australia with strong contributions from the primary, secondary and tertiary sectors as well as high levels of both public and private sector activity.



5.1.3 Gross regional product

The Northern SD was estimated to have a Gross Regional Product (GRP) of \$13.2 billion in 2006-7, growing 7.8% from the previous year. Over the past ten years, the Northern SD has recorded average growth in GRP of 8.1% per annum, comparing with the 10-year average annual growth rate for Queensland of 8.2%. The Northern SD is the third largest economic region in Queensland behind the Brisbane and Moreton Statistical Divisions, and accounted for 7% of the State's Gross State Product (GSP) in 2006-07 (Figure 5-1)

Figure 5-1 Northern SD gross regional product

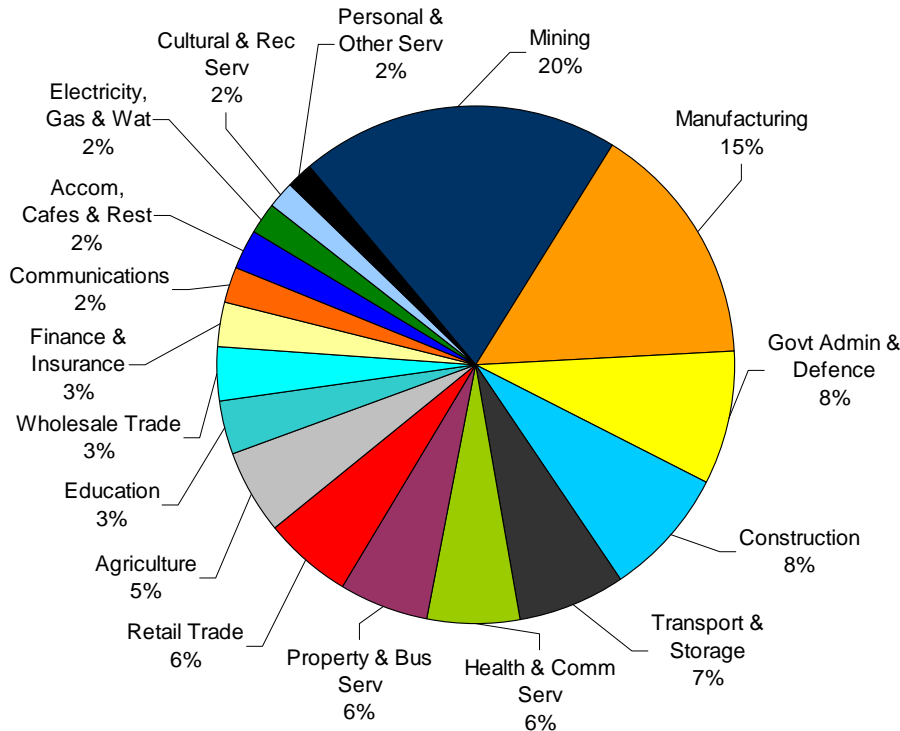


Source: AECgroup (refer Appendix BB)

The Mining sector in the Northern SD contributed the largest proportion to GRP in 2006-07, accounting for 20% of industry value added activity; this was followed by Manufacturing (15%), Government Administration & Defence (8%) and Construction (8%). Over the past two years, the Mining sector has significantly increased in importance to the Northern SD economy, having increased from contributing 14% to GRP in 2004-05 to 20% in 2006-07, and has been an important driver of economic growth in the region. Other industry sectors have generally contributed stable proportions to GRP in this period, with the exception of the Agricultural sector that has declined from accounting for 8% of GRP in 2004-05, to 5% in 2006-07.

The existing Ross River marine industry's economic activity is distributed across the Manufacturing, Transport and Storage, Retail Trade, Agriculture (which includes Fishing and Forestry) and Wholesale Trade sectors.

Figure 5-2 Northern SD: industry contribution to GRP 2006-09



Source: AECgroup (refer Appendix BB)

5.1.4 Employment by Industry

The Retail Trade industry employs the largest share of the Northern SD labour force, with 14.6% of the labour force employed in this sector. The Health & Community Services sector (11.2%) and Government Administration & Defence (9.9%) respectively employ the second and third largest proportions of the labour force. The high level of employment in these industries is demonstrative of the strong presence of support services in the Northern SD, and Townsville's role as a service node to greater North Queensland.

In comparison to the Northern SD, South Townsville reports relatively lower levels of employees in the sectors of:

- ▶ Retail Trade (10.3% v 14.6% Northern SD); and
- ▶ Agriculture, Forestry & Fishing (1.2% v 4.3% Northern SD).

Conversely South Townsville area reports comparatively higher proportions of workers employed in the sectors of:

- ▶ Property & Business Service (9.2% v 7.8% Northern SD);
- ▶ Accommodation, Cafes & Restaurants (7.7% v 4.8% Northern SD); and
- ▶ Cultural & Recreational Services (2.4% v 1.7%).

The data displays a stronger presence of professional, personal and entertainment services employment of South Townsville residents in comparison to the broader Northern SD region.



This reflects that South Townsville has experienced revitalisation as an inner city suburb attracting a higher socio-economic demographic in recent years.

Data on employment in the marine industry in the Northern SD is scarce. According to the 2006 Census the Northern SD records:

- ▶ 106 employees in fishing, hunting and trapping (assumed primarily fishing); and
- ▶ 67 employees in water transport.

It is possible that these records are significant underestimates, however they are unlikely to be overestimates.

5.1.5 Labour market

The Northern SD labour force grew 3.0% in the year to the September Quarter 2008 to 118,759 workers (smoothed data series). Of these, 3.2% were reportedly unemployed, a figure comparable with the Queensland unemployment rate for the September Quarter 2008 of 3.7%.

The South Townsville labour force has a likewise recorded an increase of 4.3%, boosting the total labour force to 3,364 workers in the September 2008 Quarter. In comparison to the Northern SD, the South Townsville locality has a slightly higher rate of unemployment at 3.8% in the September Quarter 2008 compared to 3.2% for the Northern SD in the same period.

Employment in North Queensland has likely deteriorated considerably in late 2008 and early 2009 in the wake of the global financial crisis, as it has across Australia. There have been a number of published layoffs of workers in the region since the above unemployment estimates were produced. Unemployment rates in the Northern SD, Townsville and South Townsville have almost certainly risen since these unemployment estimates were released.

5.1.6 Cost of living

Prices in Townsville score similarly to the baseline measure of Brisbane (Brisbane base index is equal to 100.0), with relatively small differences between the two. In general, the relative cost of living in Townsville is slightly greater than in Brisbane for all categories, with the exception of clothing and footwear and financial and insurance services (refer Table 5-1).

Table 5-1 Index of retail prices in Townsville

Project Category	Value Range		Townsville
	Lowest	Highest	
Food	92.2	130.9	104.4
Alcohol and tobacco	92.5	119.2	100.6
Clothing and footwear	88.8	132.6	99.4
Housing	45.7	195.5	102.7
Household content and services	91.1	143.2	101.0



Project Category	Value Range		Townsville
	Lowest	Highest	
Health, education and communication	99.7	104.5	100.8
Transportation	88.7	108.0	101.8
Recreation	91.4	112.3	101.7
Financial and insurance services	95.4	100.5	98.2
All Items	90.5	123.8	101.9

The Townsville LGA has reported a relatively higher proportion of households renting in comparison to Queensland over the past three Censuses, with 34.5% of households renting in Townsville in 2006 compared to 31.1% in Queensland. The Townsville LGA also reported a higher proportion of households purchasing a home at 36.7% in 2006, compared to 33.8% for Queensland. Both of these figures reflect a younger and more itinerant population in Townsville compared to the Queensland average.

Living costs in the region were relatively lower than that recorded for Queensland in 2006 (refer Table 5-2), with the average monthly housing loan repayment being \$84 lower in Townsville than the State average, and the average weekly rent \$13 lower. This was in contrast to average weekly household income for the region which was \$64 higher in Townsville in comparison to the State average.

Table 5-2 Household Ownership and Finances in Townsville and Queensland

To	Townsville			Queensland		
	1996	2001	2006	1996	2001	2006
Household Finances						
% of households fully owning home	31.8%	29.7%	25.5%	38.7%	36.6%	31.6%
% of households purchasing home	26.4%	28.8%	36.7%	24.8%	25.8%	33.8%
% of households renting	36.0%	34.8%	34.5%	30.1%	30.1%	31.1%
Average weekly household income	N/a	\$942	\$1,254	N/a	\$885	\$1,190
Average monthly housing loan repayment	\$818	\$887	\$1,349	\$821	\$878	\$1,433
Average weekly rent repayment	\$124	\$150	\$198	\$131	\$156	\$211

Source: 1996, 2001 and 2006 Censuses

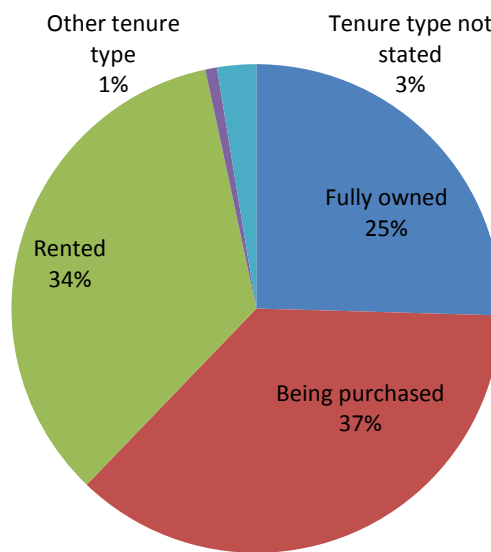


5.1.6.1 Rental accommodation

Residential

Townsville recorded a total of 53,464 private dwellings in the 2006 Census. Being raw data, it is likely that this figure was an underestimate of the actual number of dwellings. The composition of these dwellings by tenure type is displayed in Figure 5-3. An estimated 34% of the total housing stock in Townsville was rented at the time of the 2006 Census.

Figure 5-3 Composition of housing tenure in Townsville



Source: Census data 2006

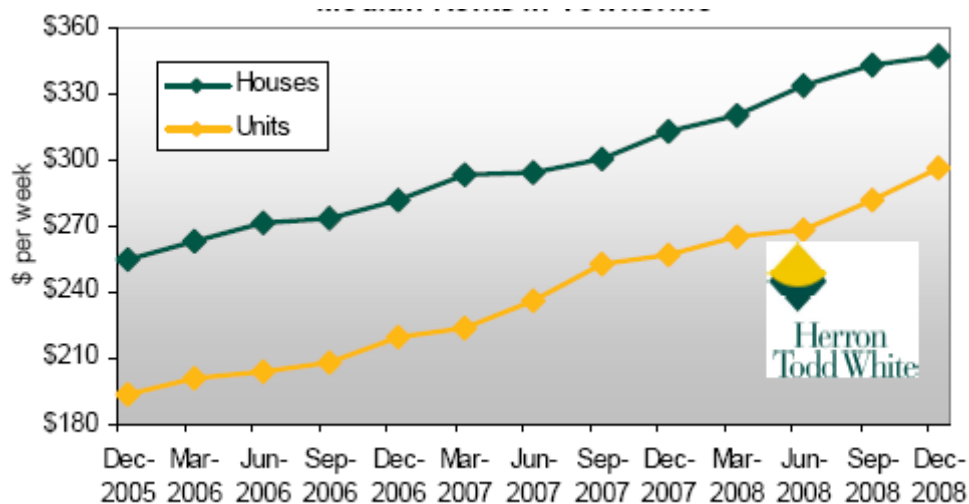
An estimated 5.5% of dwellings in Townsville are rented out under social housing schemes. The large majority of social housing stock is provided by the State Government (5.1% of total housing stock), with a small proportion provided by charitable organisations (0.4% of total housing stock).

Rental vacancy rates in Townsville have eased over the past year with preceding periods characterised by shortages of accommodation. February 2009 figures suggest vacancy rates in units have risen from 2.9% to 5.3% in one month. Herron Todd White's trend rental market indicator experienced a 3% increase in vacancy rates from January 2009 to February 2009. The recent increase in rental vacancy rates is attributable to recent additions to dwelling stock and softer demand.

Over the past three years, median rents in Townsville have recorded a consistent trend increase for both units and houses, despite the slowdown in demand for rental dwellings. Recent figures from Herron Todd White (2009) record median rents to be \$345 per week for houses, and \$290 per week for units in December 2008 (Figure 5-4).



Figure 5-4 Median rents in Townsville



Source: Herron Todd White (February 2009)

Short Term Accommodation

The Townsville LGA reported 59 short term accommodation establishments in the June Quarter 2008, the majority of which (38) comprised hotels, motels & serviced apartments with 15 or more rooms, followed by 11 caravan parks and 10 hotels, motels & serviced apartments with 5 to 14 rooms. These establishments were recorded as having 3,617 available rooms. Hotels with more than 15 rooms accounted for 61% (2,217) of rooms available, followed by caravan parks with 1,405 rooms/sites available, and small hotels with less than 15 rooms with 85 rooms in total.

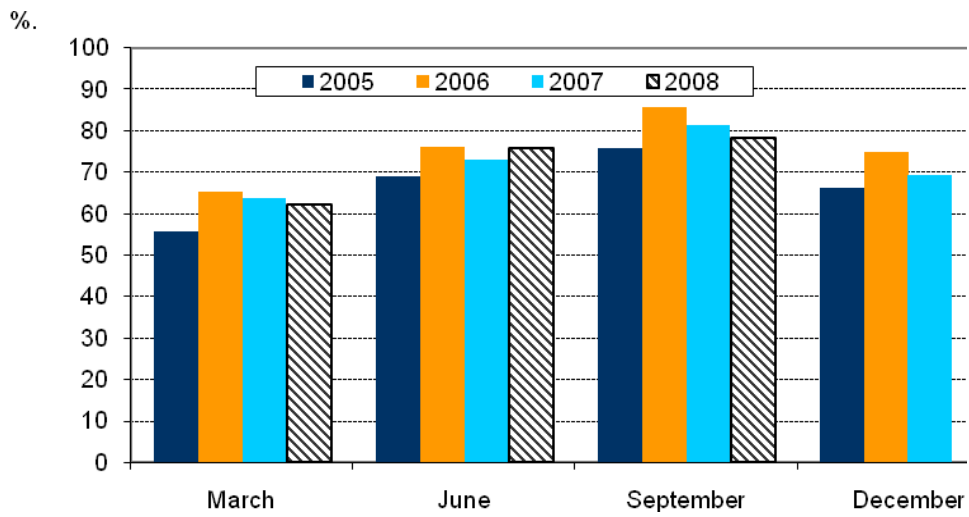
It should be noted that 304 of the 1,405 rooms available in caravan park establishments were occupied by long term guests, with a further 11 permanently reserved for private use.

Quarterly occupancy data for hotels, motels & serviced apartments with 5 or more rooms show a clear season 'high' in demand in Townsville during the September Quarter. June Quarter appears as having the second-highest level of demand, followed by the December Quarter, with the March Quarter reporting the lowest level of demand for hotel rooms in Townsville. Figure 5-5, below, illustrates this quarterly trend over the past four years.

Demand for hotel rooms in Townsville is strongly driven by the climate, with the relatively cool and dry June and September quarters favoured for visits. The March Quarter, which is the wettest and hottest, is avoided by many travellers.



Figure 5-5 Quarterly hotel room occupancy rate Townsville



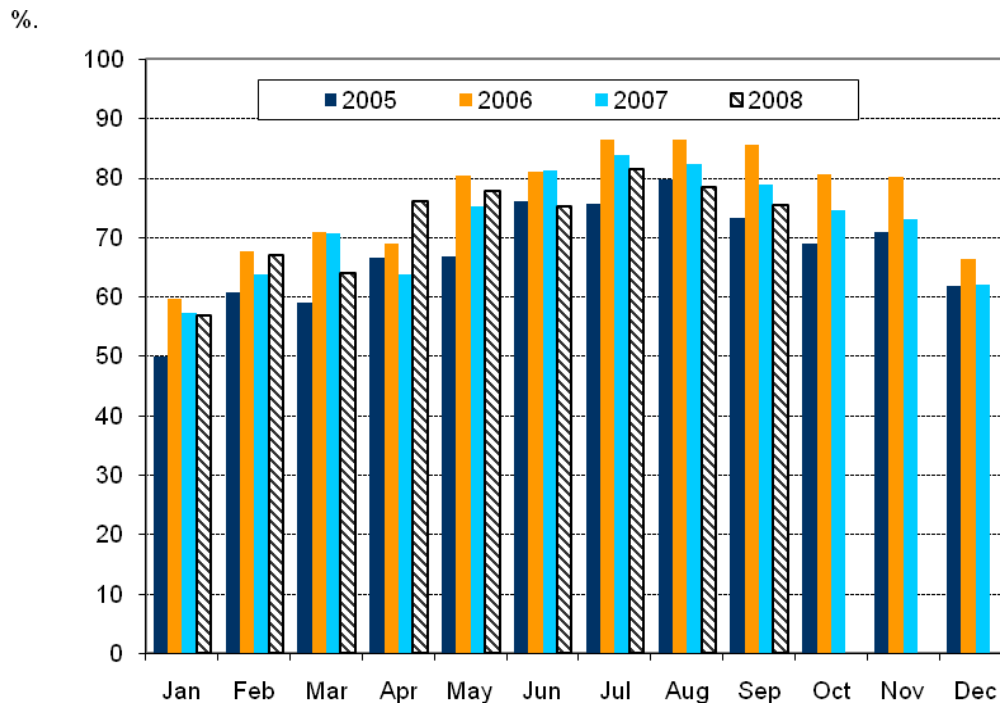
Note: Data is for the old Townsville LGA and for Hotels, Motels and Serviced Apartments with 5 or more rooms

Source: ABS 8635.3.

Monthly data obtained for hotel establishments with 15 or more rooms clearly demonstrate the high demand for hotel rooms from July through to September. January is recorded as the month with historically the lowest room occupancy rate, followed by December. The data strongly indicates that the autumn to winter season (April to September) attracts the highest level of visitors to the Townsville region (Figure 5-6).

Quarterly data for caravan park occupancy rates show a lower rate of occupancy in comparison to hotel data. However, occupancy of caravan parks follows the seasonal trend of hotels, with the September Quarter reporting the highest level of occupancy, followed by the June Quarter.

Figure 5-6 Monthly hotel room occupancy rate Townsville



Note: Data is for the old Townsville LGA and for Hotels, Motels and Serviced Apartments with 15 or more rooms
 Source: QRSIS (2008b), ABS 8635.3.

Residential Sales

The Townsville LGA reported 3,792 residential sales in 2007, of which 2,632 were house sales, 570 unit sales and 490 land sales. Over the past ten years; the LGA has recorded an average of 3,300 residential sales per year, with a high of 4,533 sales in 2003.

Over the past five years, the average house price has increased considerably, growing 99.3% from \$159,000 in 2002 to \$317,000 in 2006. Land and unit average sale prices have also increased over this period, with unit prices increasing 78.8% to \$276,000, and land prices increasing 111.5% to \$175,600 in 2006. The increase in house, unit and land prices suggests a strong demand for residential dwellings in the Townsville LGA.

The South Townsville locality reported 165 residential sales in 2007, comprising 151 single unit dwellings, ten multi-unit dwellings and four vacant urban land sales. Total sales in 2007 declined from 178 sales in 2006, due to a decline in the number of single unit dwelling and vacant urban land sales.

Over the past five years, the average multi unit dwelling sale price in the South Townsville locality has increased 106% to \$350,000 in 2008. There was also a notable spike in the average multi unit dwelling price in 2005, which was the result of the sale of several high-priced units in the locality. However, since 2005, the average sale price has returned to more 'stable' levels. Over this same period, single unit dwelling sales also increased, however at a relatively lower level of 54% to \$390,000 in 2008.



Meanwhile, the average vacant urban land price significantly increased from \$179,000 in 2004, to \$815,000 in 2005, \$1.3 million in 2006 to \$8.3 million in 2007. This is due to several large purchases of inner city land for unit developments along with few traditional residential lots being available over this period, which has significantly impacted the calculated average price per sale.

5.1.6.2 Residential building approvals

The Northern SD reports 751 building approvals (588 houses and 163 other residential) to date in 2008-09, falling by 74.4% from 2,939 building approvals in 2007-08. The average value of building approvals in the Northern SD was \$267,705 to date in 2008-09, falling slightly from \$274,253 in the previous year. The Northern SD has historically recorded a slightly lower average value of residential building approvals than Queensland, however 2007-08 saw the average value of building approvals in the Northern SD (\$274,000) grow to higher than the Queensland average value of building approvals (\$250,000).

The South Townsville area reported seven residential building approvals in 2008-09, comprising five house approvals and two other residential approvals, following 147 residential approvals in 2007-08. The massive drop in residential approvals is indicative of a very uncertain building market. Current global issues will have considerable effect on confidence within the construction and investment sectors. Historical building approvals data for the area is visibly staccato, due to the small size of the area and the influence of apartment buildings in the area, which result in several dozen units in one approval.

Notably, the average value per approval in the South Townsville region demonstrates four consecutive years of growth, demonstrating trend growth in the average annual value of approvals if not in the annual number approved. The average value per approval in South Townsville in 2007-08 was \$352,500, growing 42.6% from \$247,000 in 2006-07. This has since declined to date in 2008/09 due to a weakening regional property market. 2008/09 figures indicate a fall in the average value to \$331,500. The actual number of approvals shows no distinguishable trend. The relatively small size of South Townsville makes it difficult to be confident of trends in the data.

5.1.7 Business

5.1.7.1 Sector of Operation

The majority of businesses (by business count) in the Northern SD operate in the Property and Business Services sector (19.7%) although the proportion of businesses in this sector is notably lower than the Queensland average (19.7% v 24.2%, refer Table 5-3).

Other sectors of significance in the Northern SD in terms of business counts include the Construction, Agriculture, Forestry & Fishing and Retail Trade sectors. These sectors are typically dominated by small businesses and sole traders, providing for relatively high business counts. In contrast to the Property and Business Services sector the Northern SD records a higher proportion of businesses in these sectors than for the State average.



Table 5-3 Business Count Distribution: Northern SD, South Townsville, QLD

Northern	SD	South Townsville	QLD
Property and Business Services	19.7%	14.7%	24.2%
Construction	19.4%	25.3%	17.6%
Agriculture Forestry And Fishing	17.6%	4.0%	12.1%
Retail Trade	11.5%	7.3%	10.9%
Transport And Storage	6.3%	9.3%	5.9%
Health And Community Services	4.6%	6.0%	4.3%
Manufacturing	4.5%	4.7%	5.2%
Finance And Insurance	3.7%	2.7%	5.7%
Personal And Other Services	3.5%	4.7%	3.0%
Accommodation Cafes And Restaurants	2.7%	6.7%	2.7%
Wholesale Trade	2.7%	9.3%	3.9%
Cultural And Recreational Services	1.6%	4.0%	2.2%
Communication Services	0.8%	0.7%	1.1%
Education	0.7%	0.7%	0.8%
Mining	0.6%	0.0%	0.4%
Electricity Gas And Water Supply	0.1%	0.0%	0.1%
Total Businesses	16,074	450	404,457

5.1.7.2 Business Confidence

In line with the declining trend of the State, the Townsville Region has experienced declining business confidence since the March Quarter 2009, with a business confidence index of -10 in the March Quarter 2009. Despite significant declines in confidence for the region, general business confidence remains above the Queensland average level for the quarter.

5.1.7.3 Industry

AECgroup (2008) estimated 5,625 hectares of industrial zoned land in Townsville, of which approximately 4,868 hectares is occupied. An estimated 757 hectares of land remains vacant, of which 407 hectares is suitable for general industry and support industrial services. Additionally, an estimated 237 hectares of industrial land is available in the Port of Townsville area for future Port associated use.

Sales of industrial land in Townsville are relatively low, with the September Quarter 2008 reporting no sales of industrial land. The December Quarter showed only small improvement with 2 units sold. The price of industrial land per square metre has however demonstrated a



trend increase since 2005, growing from approximately \$80 per square metre in the June Quarter 2005, to \$250 per square metre three years later in the June Quarter 2008.

5.1.7.4 Industrial land availability

The 2008 study by AECgroup found that Townsville has relatively good availability of industrial land at present and for the short to medium term future, with some notable gaps including land for future heavy industry and land-intensive manufacturing.

Industrial land with direct marine access is currently only available in Townsville at the Port of Townsville or at the currently occupied sites on Ross River and Ross Creek. There are no apparent new areas for development of industrial land with direct marine access in the foreseeable future.

5.1.8 Implications of the recent economic downturn

The global economy is currently experiencing one of the most severe economic shocks in decades. A collapse of lending standards in the world's major industrial economies, driven by a glut of cheap liquidity from some developing countries, has disrupted credit markets and the financial sector of these economies. This is now being transmitted to Australia and the rest of the world via export and financial linkages.

Global economic growth slowed sharply in 2008 and a further slowing is projected for 2009. In its latest update on the World Economic Outlook, the International Monetary Fund (IMF) forecasts global GDP to contract by 0.5% to 1.0% in 2009. This would be the poorest global GDP outcome since World War Two (International Monetary Fund, 2009).

The slowdown is expected to be most severe in the advanced economies where GDP is forecast to contract by 3.0% to 3.5% in 2009. This partly reflects a feedback between the financial sector and the real economy with slowing business activity and rising unemployment triggering more defaults on loans, posing further difficulties for already fragile financial institutions. Growth is also forecast to slow considerably in emerging economies due to falling export demand and constraints on funding from the advanced economies, however remain positive at 1.5% to 2.5% in 2009.

These forecasts from the IMF are considerably weaker than those prepared in late 2008 owing to (International Monetary Fund, 2009):

- ▶ Continued declines in asset values that are reducing household wealth;
- ▶ Further declines in business and consumer confidence; and
- ▶ Restraints on business and household investment caused by credit rationing.

The economic outlook for Australia has also deteriorated in the past few months. Some slowing in activity was always expected given the softer international environment. However, it was hoped the resources boom would create a softer landing in Australia than elsewhere. The resources boom has now clearly come to an end alongside slowing growth in China and other emerging economies. By the end of 2008 spot prices for iron ore, one of Australia's most valuable exports, had roughly halved from the peak achieved earlier in the year. Declines in spot coal prices have been similarly dramatic (Reserve Bank of Australia, 2009). More recently, there have been large scale layoffs by resources companies as they cut back production. The



Minerals Council of Australia estimates that around 9,000 jobs have been cut from Australia's mining industry since July (The Australian, 2009). Many of these cuts have been announced in January of this year.

The latest forecasts from the Reserve Bank of Australia (2008b) entail a slowing in GDP growth to 1.5% over the year to the June Quarter 2009 from growth of 2.7% over the year to June 2008. The unemployment rate is forecast to rise in the period ahead. It is likely these growth forecasts, prepared in November 2008, will be revised down to reflect the recent poor economic news.

5.1.9 Government investment

Government services are a large contributor to the Northern SD economy with Townsville also home to one of the largest Australian Army bases in Australia as well as the RAAF. In addition to this, the Army's Third Brigade is soon relocating to Townsville from Sydney, further adding to the region's demand for residential construction and enhanced infrastructure and amenities to support the increase in population.

A substantial number of public and private sector projects are under development in Townsville. In total, projects with a value equating to \$8.3 billion were underway in the Townsville Local Government Area (LGA), as of late 2007 with \$1 billion of these projects already completed. A list of projects is provided in Appendix BB.

5.1.10 Economic contribution of existing Ross River marine industries

The existing Ross River marine industry has the potential to be significantly impacted following the restriction of vessel access into the Ross River with the construction of the TPAR bridge in 2011. Hence the existing marine industry on the Ross River is an opportunity cost of not establishing the TMPP.

The following table (Table 5-4) summarises the estimated 2008-09 financial year output of the Ross River marine businesses and the proportion of that output estimated to be retained within the regional and State economies. Note that output from the trawlers has been accounted for in Seafood Processing and Seafood Trade. Retention in the regional and State economies has been estimated based on average industry import requirements as outlined in the regional and State industry transaction tables published by the Office of the Government Statistician (2001a and 2001b).

Table 5-4 Estimated Ross River marine industry output in 2008-09 (\$2009)

Industry	Output (\$M)	Retained in Northern SD		Retained in Queensland	
		%	\$M	%	\$M
Seafood Processing	\$48.0	80.7%	\$38.7	91.0%	\$43.7
Boat Building/ Manufacturing/ Maintenance	\$10.5	77.1%	\$8.1	78.6%	\$8.2



Industry	Output (\$M)	Retained in Northern SD		Retained in Queensland	
Seafood and Marine Retailing	\$5.0	79.0%	\$3.9	90.7%	\$4.5
Water Transport	\$18.2	77.3%	\$14.1	78.3%	\$14.2
Total (Average)	\$81.7	(79.3%)	\$64.8	(86.5%)	\$70.7

Note: Some totals may not sum due to rounding.

Source: EBC TMPP Consultation Reports, Office of the Government Statistician (2001a), Office of the Government Statistician (2001b), AECgroup.

The total estimated economic contribution of the Ross River marine industry to the Northern SD is estimated to be:

- ▶ Approximately \$113.0 million in output to the regional economy (\$64.8 million directly and \$48.2 million as flow on);
- ▶ Approximately \$43.3 million in value added activity, or Gross Regional Product (\$20.3 million directly and \$23.0 million as flow on);
- ▶ Approximately \$21.4 million in wages and salaries (\$11.6 million directly and \$9.8 million as flow on); and
- ▶ Approximately 504 FTE employment positions (234 FTE direct employment positions and 269 FTE flow on).

The economic contribution to the State economy is estimated as:

- ▶ Approximately \$143.0 million in output to the State economy (\$70.7 million directly and \$72.3 million as flow on);
- ▶ Approximately \$56.1 million in value added activity, or Gross State Product (\$21.5 million directly and \$34.6 million as flow on);
- ▶ Approximately \$29.2 million in wages and salaries (\$13.6 million directly and \$15.6 million as flow on); and
- ▶ Approximately 670 FTE employment positions (277 FTE direct employment positions and 393 FTE flow on).

A disaggregation of impacts by industry shows that, in addition to being a direct contributor to the Manufacturing, Transport & Storage and Trade industries, the Ross River marine industry provides significant flow-on activity to the industries of Agriculture, Forestry & Fishing (in particular commercial fishing), Finance, Property & Business Services, Trade, Transport & Storage and Manufacturing.

5.2 Value of ecosystem services to be lost or disturbed

There are approximately 32 hectares of subtidal sand / mud flat ecosystem within the footprint of the TMPP, which provides habitat for a range of species including sipunculids, yabbies and



crabs (refer Section 3.10). No seagrass or algae beds have been identified within the footprint of the TPAR corridor and TMPP, although there are some mangroves in the upper subtidal region. No species of conservation significance or protected species are observed within the footprint of the TMPP (Section 3.10, Appendix T).

There are also approximately 2 hectares of subtidal ecosystem under the breakwater footprint, which also provides habitat to species such as snails, worms and some crabs / crustaceans (Section 3.10, Appendix T).

An additional 1.5 hectares of coastal scrub vegetation will also be removed between the service corridor development, TPAR development and the TMPP. While this area is a highly fragmented and disturbed habitat of little ecological significance (Section 3.10, Appendix S), to provide a conservative assessment the value of this land provides in terms of ecosystem services has been valued at 'Coastal scrub habitat' values.

Table 5-5 below outlines the original ecosystem values intertidal flat and coastal scrub habitats in US 1994 dollar terms from Costanza *et al.* (1997), which have been inflated to Australian \$2009 terms using the 1994 exchange rate of AUD\$0.69/ USD, and an inflation multiplier for 1994 to 2009 of 1.54 (Reserve Bank of Australia, 2009a and 2009b).

Table 5-5 Ecosystem value by habitat type in \$/Ha

Ecosystem Service	US\$1994 Value/ Ha	AU\$2009 Value / Ha
Intertidal flats, waterways and salt marshes	\$9,990	\$22,270
Coastal scrub habitat	\$232	\$520

Source: Costanza *et al.* (1997), Reserve Bank of Australia (2009a), Reserve Bank of Australia (2009b).

Based on the ecosystem values ascribed above, the annual environmental loss due to the development of the TMPP is valued as approximately \$757,960, as outlined in the table below (Table 5-6).

Table 5-6 Annual environmental loss from TMPP

Ecosystem Service	Ha	\$2009 Value / Ha	Annual Loss (\$2009)
Intertidal flats in TMPP footprint	32.0	\$22,270	\$712,640
Intertidal flats in breakwater footprint	2.0	\$22,270	\$44,540
Coastal scrub habitat	1.5	\$520	\$780
Total Ecosystem Loss	35.5	-	\$757,960

Source: Costanza *et al.* (1997), Reserve Bank of Australia (2009a), Reserve Bank of Australia (2009b).



5.3 Potential impacts and mitigation measures

5.3.1 Significance of the TMPP and Townsville Waterways Project on the Local and Regional Context

5.3.1.1 Construction impacts

Table 5-7 summarises the economic impact of the total \$133.2 million expenditure over nine years for the construction phase including the direct and flow on elements for the regional and State economies. The construction phase impacts outlined in the table indicate the total economic impact associated with the entire nine year construction phase in 2009 dollars without discounting. Annual impacts will be portions of these total impacts, including for employment.

Value added production in the Northern SD economy is modelled to increase by \$58.6 million, spread over the nine years, with an increase of \$76.9 million in Queensland. In net terms, the Northern SD economy is currently estimated at \$13.2 billion in 2006-07 (AECgroup). Even in the unlikely scenario of no further growth in the Northern SD economy a value added production of \$119 billion (\$2009) would be realised over the nine years of the construction phase, Hence the construction phase is not anticipated to result in a appreciable impact in business and industry activity at the Northern SD or Queensland economy level in comparison to a scenario where the TMPP does not proceed with the Gross Regional Product contribution over the period being in the order of 1/20th of a percent of the Northern SD economy.

This result should not be interpreted to discount the value that the construction activity will have to those firms that take on the business. As a result of the construction activities, the Construction, Finance, Property & Business Services and Manufacturing industries are estimated to experience the greatest impact from the construction phase. These three industries are estimated to record the following gross impacts over the nine years:

- ▶ An increase in value added activity in the Northern SD Construction industry of \$43.4 million directly;
- ▶ An increase in value added activity in Finance, Property & Business Services in the Northern SD of \$0.9 million directly and \$5.1 million as a result of flow-on activity; and
- ▶ An increase in value added activity in the Northern SD Manufacturing industry of \$2.0 million as a result of flow-on activity from the construction phase.

Table 5-7 Construction phase economic impacts, \$2009^(a)

Industry	Northern SD				Queensland			
	Output(\$M)	Value Add(\$M)	Income(\$M)	Emp(FTE)	Output(\$M)	Value Add(\$M)	Income(\$M)	Emp(FTE)
Construction of TMPP								
Direct	\$81.7	\$38.2	\$19.4	272	\$93.8	\$39.6	\$18.9	336
Indirect	\$28.7	\$12.1	\$6.8	138	\$65.9	\$26.3	\$14.4	239
<i>Total</i>	<i>\$110.4</i>	<i>\$50.3</i>	<i>\$26.2</i>	<i>410</i>	<i>\$159.7</i>	<i>\$65.9</i>	<i>\$33.3</i>	<i>575</i>
Construction of Townsville Waterways Redevelopment								
Direct	\$11.1	\$5.2	\$2.7	37	\$12.8	\$5.4	\$2.6	46
Indirect	\$3.9	\$1.7	\$0.9	19	\$9.0	\$3.6	\$2.0	33
<i>Total</i>	<i>\$15.1</i>	<i>\$6.9</i>	<i>\$3.6</i>	<i>56</i>	<i>\$21.8</i>	<i>\$9.0</i>	<i>\$4.5</i>	<i>79</i>
Marketing of Townsville Waterways Redevelopment								
Direct	\$2.2	\$0.9	\$0.5	8	\$2.5	\$1.0	\$0.6	13
Indirect	\$1.2	\$0.5	\$0.3	5	\$2.3	\$1.0	\$0.5	10
<i>Total</i>	<i>\$3.3</i>	<i>\$1.4</i>	<i>\$0.7</i>	<i>14</i>	<i>\$4.9</i>	<i>\$2.0</i>	<i>\$1.2</i>	<i>23</i>
Total								
Direct	\$95.0	\$44.3	\$22.5	318	\$109.1	\$46.0	\$22.1	394
Indirect	\$33.8	\$14.3	\$8.0	162	\$77.2	\$30.9	\$16.9	282
Total	\$128.7	\$58.6	\$30.6	480	\$186.3	\$76.9	\$39.0	676

Note: Some totals may not sum due to rounding. (a) This is the total economic impact experienced over the construction phase. Source: Office of the Government Statistician (2001a), Office of the Government Statistician (2001b), AECgroup.



5.3.1.2 Operating impacts

The existing Ross River marine industry is estimated to contribute \$113.0 million annually (\$2009, including direct and flow-on activity) in output to the Northern SD economy and \$143.0 million annually to Queensland.

The TMPP will eventually offer additional space for marine industry to expand and may offer an enhanced operating environment dependent on the final design and features. It is estimated that following the completion of the proposed Stage 3 of the TMPP in 2018 there will be potential to grow value added contribution of the marine sector above the existing Ross River marine industry by \$9.0 million annually (\$2009, including direct and flow-on activity) in the Northern SD economy and \$11.1 million annually in the Queensland economy. This would represent an increase from the existing Ross River marine industry's economic value-add in the Northern SD by 21% and employment by 24%. Given likely continued strong growth in the region's population and overall economy the proportional contribution of the TMPP to the Northern SD after 2018-19 may, however, be similar or less than its current contribution. These impacts will likely take time to develop after 2018-19 with business ramping up over time and new markets being developed.

Table 5-8 Economic value of additional \$28 million in boat maintenance expenditure (\$2009)

Phase Northern	SD				QLD			
	Output (\$M)	Value Added (\$M)	Income (\$M)	Emp (FTE)	Output (\$M)	Value Added (\$M)	Income (\$M)	Emp (FTE)
Boat Building/ Manufacturing/ Maintenance								
Direct	\$21.6	\$6.4	\$4.5	79	\$22.0	\$6.9	\$5.5	97
Flow on	\$6.2	\$2.6	\$1.6	42	\$11.4	\$4.2	\$2.5	63
Total	\$27.8	\$9.0	\$6.0	121	\$33.4	\$11.1	\$8.0	160

Note: Some totals may not sum due to rounding.

Source: Office of the Government Statistician (2001a), Office of the Government Statistician (2001b), AECgroup.



5.3.2 Economic impacts of the TMPP including distributional impacts

5.3.2.1 Construction impacts

The TMPP will result in the injection of approximately \$95.0 million into the Northern SD regional economy over the course of the construction phase, and \$109.1 million into the Queensland economy.

The initial expenditure from the reclamation phase will primarily support construction and related professional service industries in the local and State economies, as well as the manufacturing sector through flow-on business activity.

The construction phase will also provide incomes in the form of wages and salaries that will encourage additional consumer expenditure and activity. Household incomes are estimated to increase by approximately \$30.6 million in the Northern SD over the course of the construction phase with approximately \$39.0 million additional income in Queensland. This expenditure is effectively all new expenditure in the economy that would not otherwise occur if the TMPP does not proceed.

The expenditure will be positive for business confidence across a range of industry sectors due to the direct and indirect impacts of the reclamation phase expenditure, however quantitative impact may not be substantial due to the size of the project relative to the regional economy. Businesses directly involved in construction activities such as building contractors, businesses that support construction activity such as professional services and plant hire companies, and businesses that provide indirect support services to the construction sector, such as local accommodation providers and restaurants would all be expected to experience an increase in activity as a result of the TMPP. As the anticipated flow-on effects of the construction expenditure pass through the rest of the economy, sectors with no direct connection to the construction industry would also be expected to observe increased confidence from flow-on expenditure and consumption.

The increased traffic on Boundary Road associated with the construction activities may be of some benefit to those business on the road dependent on drive-past traffic for patronage.

Issues with current uncertainty regarding the potential relocation of existing marine businesses on Ross River are negative for business confidence and effect a large portion of Townsville's marine industry sector. Of the identified potential negative impacts to businesses, loss of leasehold improvements has been assessed as potentially of Very High impact, with loss of business and contract opportunities and costs of relocating and re-establishing businesses including opportunity costs of downtime experienced being assessed as potentially of High impact level.

Increases to activity and confidence in the construction and associated industries is of particular importance in the current economic climate. The majority of the project will, however, occur beyond the immediate term where the economy may have recovered the value of the stimulus not as high.

5.3.2.2 Operating impacts

During the operational phase of the development, marine industry worth \$43.3 million in Gross Regional Product to the regional economy per year (in \$2009) and directly or indirectly



accounting for 504 jobs will be preserved. Additionally, there is potential for further expansion following the completion of Stage 3 due to be operational in 2018-19 with the potential to grow to an additional contribution of \$6.4 million to the regional economy per year and account for an additional 121 direct and indirect jobs. Whilst a significant portion of this business is expected to be redirected from elsewhere in Queensland, some may represent new business to the State, or business that may have otherwise been lost to other States or overseas.

The TMPP has the potential to provide better quality facilities for existing marine businesses if they relocate from the Ross River. Of the identified benefits of the new facility the potential to develop new services / access new markets has been assessed as potentially of High impact level.

To the extent that businesses are along Boundary Street are dependent on drive-past traffic these businesses will benefit from any increases in traffic associated with the expansion of marine industry following 2018-19.

In the context of the Northern SD and Queensland, however, the quantitative impact of the TMPP, whilst anticipated to be positive is likely to be negligible. In gross terms, the operation phase of the commercial precinct of the TMPP is estimated to retain household incomes, through wages and salaries paid, of approximately \$21.4 million in the Northern SD and \$29.2 million in Queensland, with potential for an additional \$6.0 million in the Northern SD and \$8.0 million in Queensland to be generated by expansion of activity post 2018-19. In net terms, however, the commercial precinct is not expected to result in a significant material change in overall household consumption expenditure from what would be anticipated to occur if the project does not proceed.

5.3.3 Additional costs to government of infrastructure

5.3.3.1 Construction impacts

Commonwealth government costs

No net increase in costs to the Commonwealth Government is expected during to the construction phase of the development.

State government costs

As with the impact on the Commonwealth Government, it is unlikely that there would be a significant change in the level of State Government expenditure due to the development during the construction phase.

Local government costs

Townsville City Council has recently changed its developer contribution charges to represent the full cost of providing additional infrastructure. As such the TMPP and Townsville Waterways developments should not create a cost impost on Townsville City Council.



5.3.3.2 Operating impacts

Australian government costs

The loss of all the existing marine industry on Ross River would displace an estimated 504 direct and indirect FTE jobs. In the current economic climate a number of these displaced workers may have difficulty finding alternative work, and require Commonwealth Government unemployment and welfare assistance.

It is assumed that any loss of existing Ross River marine businesses would be offset by the establishment of new businesses at the TMPP or a transfer of their economic activity to elsewhere in Queensland, creating employment at the new locations. Hence the impacts on tax revenues and welfare payments at the net Commonwealth level may be minimal provided that marine business does not leave the country.

State government costs

The Port of Townsville Limited is a Queensland Government entity and any additional servicing costs for the TMPP would be borne by them. The Port of Townsville currently conducts dredging of the Ross River to ensure boat access.

Local government costs

The establishment of the TMPP will essentially result in a relocation or re-establishment of existing businesses with a transfer of council costs and revenues. Council will gain new residential rates from the establishment of the Townsville Waterways development and from likely increased valuations of land adjacent to the new residential area. Given that the development is likely to be a premium product it is assumed that the rates achieved will be more profitable for council than would be achieved if the future residents settled elsewhere in Townsville.

5.3.4 Implications for future development in the locality

The site of the TMPP is relatively disjointed from surrounding areas, being bounded by Benwell Rd and the Ross River. The site would not be suitable for other types of development.

5.3.4.1 Opportunity costs of the TMPP

The site on which the TMPP will be established has little alternative economic uses. The opportunity cost of proceeding with the project is represented by the ecosystems services of the area, valued as approximately \$757,960 in 2009 dollar terms, and any social values of the area that may be lost (refer Section 4).

There are three main opportunity costs identified in not proceeding with the TMPP given that the TPAR bridge will proceed. These are:

- ▶ An estimated \$113.0 million per annum (\$2009) in direct and indirect output from the existing Ross River marine industry. This would be the immediate opportunity cost of not proceeding with the TMPP and relocating the existing Ross River marine industry;
- ▶ An estimated up to \$140.8 million per annum (\$2009) in direct and indirect output from the TMPP once all three stages are completed (post 2018-19). This would be the long term annual opportunity cost of not proceeding with TMPP; and



- ▶ An estimated one-off \$128.7 million (\$2009) over 9 years (2009-2018) in direct and indirect output from the construction activities associated with the development of the TMPP and Townsville Waterways residential development.

5.3.4.2 Impacts on local property values

The site of the TMPP is relatively distant from existing residences, and is in an area that would generally be considered to have an industrial character. The precinct essentially represents a relocation of industry within the local area and as such will not be seen as a significant improvement in local employment prospects. There is little reason to believe that the TMPP development would have a significant impact, positive or negative, on local residential land values near the TMPP site.

Some of the existing Ross River marine industry is located close to existing residences and although the relocation of these industries may have a positive impact on the values on some of these residences, there is little to suggest that the existing residences are impacted by the marine industry.

The establishment of the proposed Townsville Waterways residential development is considered likely to be positive for residential property values in the adjacent areas given that it will be a premium, waterfront development.

5.3.4.3 Impact on local labour market

Construction phase

The total (direct and indirect) estimated additional labour force needs created by the construction activity for the TMPP and Townsville Waterways project are summarised in Table 5-9.

Table 5-9 Estimated Total Employment Impacts from the Construction Phases of the New TMPP

Year Addition	al Employment Generated (Northern SD)	Additional Employment Generated (Queensland)
2009-10	46	64
2010-11	56	78
2011-12	82	115
2012-13	41	58
2013-14	41	58
2014-15	77	110
2015-16	76	107
2016-17	51	71
2017-18	10	14

Source: AECgroup



At the time of writing the most recent estimate (September Quarter 2008) of the Northern SD labour force was 118,759 workers (smoothed data series, Queensland Regional Statistical Information System, 2008a). According to the 2006 Census the Northern SD was home to 8,492 persons employed in the construction industry (of a total estimated Northern SD workforce by the 2006 Census of 94,375 persons). The additional employment created by the construction and operating phases of the project should easily be met from within the region's existing labour force, particularly given the current easing in the jobs market due to the economic downturn. The skills requirements for the construction phase of the project are a relatively minor portion of the region's existing construction workforce.

The existing and proposed TMPP are located near to the CBD of Townsville and within easily commutable proximity for the majority of the region's labour force. There is no anticipated need for worker accommodation on site. The additional labour force needs are expected to be entirely or mostly met from existing residents of the region however if a portion of the workforce is temporarily required from elsewhere the size of the needs will not be of material concern to Townsville's existing accommodation capacity. A large number of similar or larger projects have been previously completed or are currently underway in Townsville without having placed significant stress on the accommodation capacity of the region.

Operating phase

Stage 3 of the TMPP is due to be completed by 2018-19. It is estimated that if, and when, marine industry expands to utilise this additional space that up to 160 additional operational jobs will be created in the marine industry.

The skills needs for any expansion of marine industry at the TMPP are more specialised and less abundant in the region and may take a period of time to acquire / develop post 2018-19.

There is also, however, potential for job losses from the non-quantified impacts on the existing Ross River businesses between 2009 and 2018. These job losses would occur if the affected businesses lost existing work due to uncertainties with the relocation or loss of functionality (including temporary). Additional costs expended by the businesses for relocation expenses etc may also require cost-cutting elsewhere, including through cuts to employment.

5.3.4.4 Mitigatory and enhancement strategies

Key mitigatory strategies for the development of the TMPP relate to the management of impacts on the existing Ross River marine industry. It is understood the Port of Townsville is in continued negotiations and planning for strategies to manage the impact on the Ross River marine industry. The results from these engagements and the final detailed design and operating structure of the Precinct will influence the most suitable mitigation measures.

Despite the significant challenges in managing the development of the TMPP with the existing Ross River marine industry there are a number of potentially positive operating impacts to be gained from the establishment of the TMPP. Potential measures to maximise these positive impacts that may be applicable are provided below in Table 5-10. Consideration to these measures should be given during detailed negotiations with the affected industries. The measures are not requirements but are potential opportunities to be managed through one-on-one negotiation with each business to obtain the most beneficial arrangement for each industry sector.



Table 5-10 Potential mitigating and enhancing measures that could be considered

Impact Type	Potential Mitigating / Enhancing Measures
<i>Negative Impacts</i>	
Loss of business and contract opportunities	<p>Rapid resolution of TMPP features, relocation terms and operating terms.</p> <p>Provision of Port of Townsville Limited letters of support / letters of intention to avoid service disruptions to Ross River marine industry to include in tender submissions / contract negotiations.</p> <p>Promotion of the TMPP and the planning for smooth transmission of operations.</p> <p>Direct compensation.</p> <p>Rent / lease holidays.</p>
Loss of financing opportunities	<p>Rapid resolution of TMPP features, relocation terms and operating terms.</p> <p>Provision of State / Port of Townsville Limited credit security backing for affected financing activities of Ross River marine businesses.</p> <p>Direct compensation.</p> <p>Rent/ lease holidays.</p>
Loss of leasehold improvements	<p>Direct compensation.</p> <p>Rent/ lease holidays.</p>
Costs from relocating and re-establishing businesses including opportunity costs of downtime experienced	<p>Direct compensation.</p> <p>Direct relocation assistance.</p> <p>Rent/ lease holidays.</p>
Costs of potentially operating between existing and new sites	<p>Direct compensation.</p> <p>Rent/ lease holidays.</p>
Potential increases in the cost of leasing or rents	<p>Direct compensation.</p> <p>Rent/ lease holidays.</p>
<i>Positive Impacts</i>	
Operational efficiencies from newer / better designed facilities	<p>Consultation with marine industry and refinement of plans for the TMPP.</p>
Operational efficiencies from better co-location with other marine businesses	<p>Consultation with marine industry with regarded to appropriate co-location business types.</p> <p>Efficient transport networks within the precinct</p>



Impact Type	Potential Mitigating / Enhancing Measures
Potential to develop new services / access new markets	Provision of space and features beyond like-for-like replacement of existing functionality. Promotion of the TMPP cluster to appropriate national and international markets.

Source: AECgroup

5.3.5 Economic impacts associated with potential relocation of existing marine industries

POTL engaged Ryder Levett Bucknall (RLB) to conduct a separate economic assessment of the impacts related to the potential relocation of industries currently occupying lands upriver to the TMPP prior to closure of the Ross River by the TPAR. The RLB report contains confidential information relating to each of the businesses involved and, accordingly, is not appended to this report which forms a public document. The report has been provided to the CoG office for consideration in accordance with this EIS. A summary of relevant information, protecting the confidential data, from the RLB report follows.

Under direction from POTL RLB undertook a study to develop cost estimates to recreate facilities in the Precinct for selected current Ross River industries. These industries included:

- ▶ Harbourside Coldstores (trawler wharf and walkway);
- ▶ Rosshaven Marine (all buildings, hardstands, quays and wharves);
- ▶ Townsville Ross River Marina (all buildings, parks, hardstands and wharves);
- ▶ Pacific Marine Group (all buildings, hardstands and quay);
- ▶ Water Police (building and pontoon); and
- ▶ Riverside Marine (all buildings, hardstands and barge ramp).

The gross overall cost estimate for relocating all of these industries to like for like facilities within the Precinct, summed across all of these industries, totalled approximately \$AUD43 million. POTL is engaged in ongoing negotiations with the various industry sectors that may choose to relocate to the Precinct, which may include industries other than those listed above. Negotiations will seek to provide greater definition to the required pavement area, infrastructure facilities and wharf space for each industry. Accordingly the ultimate refined cost to relocate groups to the Precinct will likely vary from that noted above and will be determined following those detailed negotiations.