

17. Economic environment

This section of the EIS details the existing economic environment and the potential economic impacts and benefits associated with the construction and ongoing operation of the proposed MLARP.

In addressing the economic issues for the Project it is recognised that the greater Gladstone region and the state of Queensland is already benefiting from the existing export coal tonnages being moved by rail to the Port of Gladstone. The Project will significantly enhance the coal logistics chain and the ability of existing and prospective coal mine owners to achieve production and revenue targets.

The character and basis of the local and regional economies which are influenced by the coal rail export task includes the following:

- Existing economic base and economic activity
- Types and numbers of businesses
- Availability and prices of goods and services
- Large scale industrial developments that are the beneficiaries of improved rail access to the Port and their effects in the region

The general economic benefits from the Project which are described and assessed in this section include:

- The relative significance of this proposal in the local and state economic context
- The short and long-term beneficial (eg job creation) and adverse (eg competition with local small business) impacts that are likely to result from the development
- The need for any additional infrastructure provision by government to support the project
- Implications for future development in the locality (including constraints on surrounding land uses and existing industry)
- The extent to which local and other Australian goods and services will be used.

17.1 Existing coal industry economic environment

17.1.1 Coal demand and exports

The coal industry, the Gladstone region and the state of Queensland will be the main beneficiaries of the Project. The Project will provide export access via the proposed WICT as well as improve efficiencies on the Blackwater and Moura rail systems.

Queensland's coal tonnage has grown from 96 Mt (1997/98)¹ to approximately 176.9 Mt in 2006/07². Coal is the state's biggest export at an estimated \$20 billion in export earnings in 2006/07.

Figure 17.1 shows overseas exports of coal for Queensland ports from 1988-89 to 2006-07 as a percentage of the total value of exports. In consensus with total exports movement and strong demand for minerals from China and India, coal exports have increased significantly over the last four years.

¹Connell Hatch (2007) Moura Link – Aldoga Rail Project. Initial Advice Statement. September 2007, page 1.

²QR Annual Report 2006/2007, page 12 and 16. Website http://www.corporate.qr.com.au/Images/QR_AR_06_07_web_v2_tcm15-19868.pdf and website http://www.freight.qr.com.au/freight_services/coal/coal.asp.

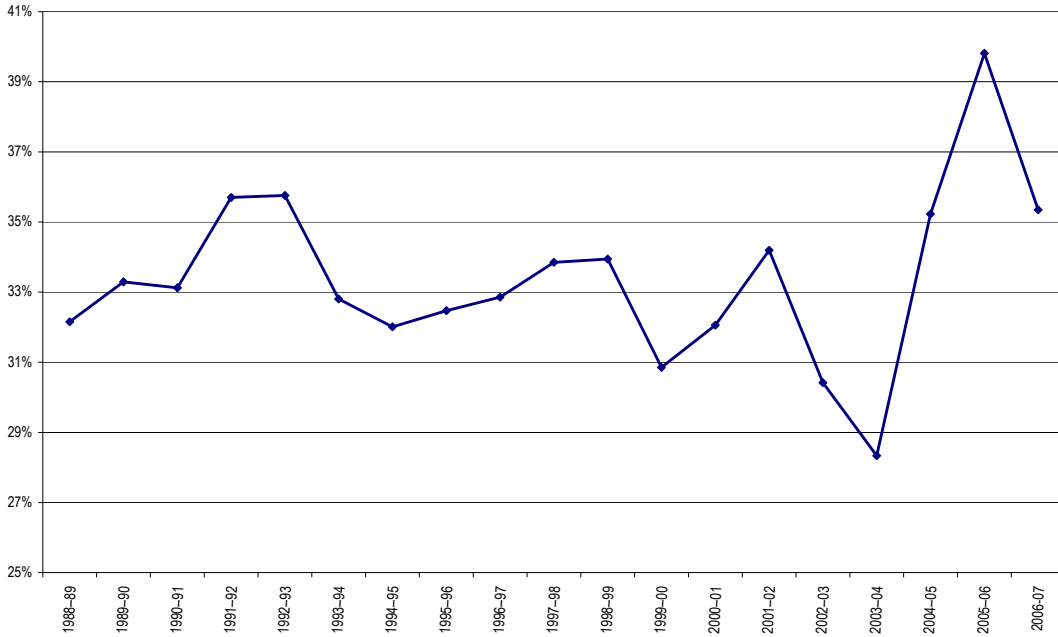
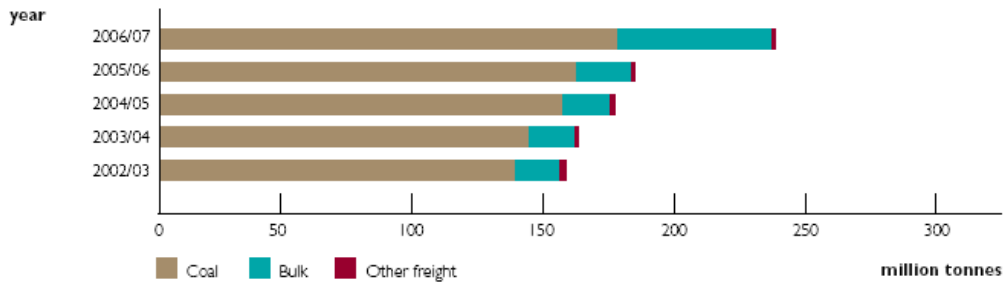


Figure 17.1 Coal as a percent of overseas exports by commodity for Queensland ports from 1988-89 to 2006-07

Source: Australian Bureau of Statistics, Foreign Trade (unpublished data). Prepared by: Office of Economic and Statistical Research (OESR), Overseas exports by commodity, Queensland ports, 1988-89 to 2006-07

Projections show an increase of coal exports in Queensland to 240 Mt by 2010³. QR's total freight tonnage of the past five years and the significant rise of coal rail tonnages are shown in the Figure 17.2.

TOTAL FREIGHT TONNAGES



QR's total freight tonnage jumped by 30% to 238 million tonnes due to the full-year contribution of ARG to the bulk business and a 9% increase in coal tonnages.

Figure 17.2 QR total freight tonnages

Source: QR Annual Report 2006/2007, page 16

³Connell Hatch (2007) Moura Link – Aldoga Rail Project. Initial Advice Statement. September 2007, page 1.

Almost 60 percent of Australian coal exports originate from Queensland with approximately 18% exported through the Port of Gladstone. In terms of volume, about 56 Mt or 31% of all coal exports through Queensland ports are being shipped via Gladstone⁴. In the 2006 Coal Rail Infrastructure Master Plan, Australian Bureau of Agricultural and Resource Economics (ABARE) stated that about 93% of Queensland's coal is exported with the remainder used for domestic consumption⁵. The following table provides export and domestic use coal tonnages by terminal at the Port of Gladstone and by rail system over the past five years.

Table 17.1 Existing coal tonnages through Port of Gladstone and Moura and Blackwater systems 2003/04 – 2007/08

	2003/04	2004/05	2005/06	2006/07	2007/08*
Export coal by terminal					
RGTCT	36.753	39.922	40.458	45.031	49.144
Barney Pt	4.537	3.986	5.337	6.485	6.5
Total	41.3	43.9	45.8	51.5	55.6
Total coal transported – Export + Domestic by rail systems					
Blackwater	39.115	42.470	45.122	49.150	56.300
Moura	10.152	10.225	10.047	11.865	12.900
Total	49.3	52.7	55.2	61.0	69.2

Table note:

* Data for 9 months from the current financial year data (up to March 2008) extrapolated for 12 months.

Source: Queensland Rail and 2007/08 Forecast extrapolated

The coal that is railed using the Blackwater and Moura systems, both for export and domestic usage, is currently estimated at 56 Mtpa and 12.9 Mtpa, respectively (refer Table 17.1). The Queensland government receives a royalty payment of 7% per tonne of coal which generated revenue of \$1.02 billion in 2006/07. For the coal exports through the Port of Gladstone this represents approximately \$350 million in government royalty earnings. Government also benefit from increased corporate, individual, GST and land rating taxation that the coal industry generates.

The coal industry and the coal logistics transport chain have played a significant role in the growth of the Queensland and Gladstone region economies over the past 25 years. This economic growth has been more pronounced over the past six years that have coincided with average coal prices rising to over US\$100 a tonne and the spot price achieving up to US\$300 a tonne when production of some southern Bowen Basin mines were adversely impacted by the January 2008 floods.

Similarly, the Gladstone Ports Corporation (GPC) major port revenues are coal terminal business and the port charges that are levied on the coal ships. Other port related activities that derive income from coal ships are pilotage, towage and bunkering.

17.1.2 Blackwater and Moura systems

The RG Tanna Coal Terminal and the Barney Point Coal Terminal at the Port of Gladstone are presently the export connections in the Port of Gladstone for coal. The facilities of both terminals have limited capacity and in order to maintain current economic growth and potential of the coal sector new export resources and infrastructure need to be developed. The planned WICT was initiated to provide the necessary additional capacity required by the Coal Industry.

⁴ABS Foreign Trade (unpublished data) Prepared by: Office of Economic and Statistical Research (OESR), Data based on December 2007 release. Overseas exports by commodity by port, volume, Queensland ports, 2006-07.

⁵QR 2006 Coal Rail Infrastructure Master Plan, page 17.

http://www.networkaccess.qr.com.au/Images/2006MasterPlanMainDocument_tcm10-13542.pdf.

There are two main rail systems servicing the Gladstone area. The Moura system connects the Surat Basin mines with Gladstone and the RG Tanna and Barney Point coal export terminals. The Blackwater system connects mines in the southern Bowen Basin, from Gregory to South Blackwater, to the export coal terminals. The Surat Basin Rail project, which is a proposed extension to the Moura system, is currently under investigation. The Joint Venture will link the southern end of the Moura System to the Surat Basin which will connect existing and proposed mines to Gladstone's coal port facilities, including the proposed WICT.

Both the Blackwater and Moura systems will benefit from the planned MLARP since the addition track capacity surrounding the rail yard will create efficiency gains on the systems. Efficient operations on the track systems and within the maintenance yard will extend to the proposed WICT. Rail haulage distances to port range from 190 km for the existing mines utilising the Moura system to around 370 m for the southern Bowen Basin mines in the Gregory region.

Blackwater system

The Blackwater system⁶ services coal mines in Central Queensland to carry products through to Stanwell Power Station, Gladstone Power Station and the Port of Gladstone. Most of the Blackwater system is duplicated track, between Callemondah and Rocklands, Westwood and Windah, Tunnel and Aroona and between Duaringa and Wallaroo, with the remainder being single line. The Blackwater rail system services a number of mines, for example the following:

- Gregory Mine
- Blackwater Mine
- Boorgoon Mine
- Gordonstone/ Kestrel Mines
- Koorilgah Mine
- Mines on the Boonal Loop - Boonal/Yarrabee/Jellimbah East mines
- German Creek Mine
- Oaky Creek Mine
- Ensham Mine
- Rolleston Mine
- Yongala Mine
- Curragh Mine
- Minerva Mine

The average coal train on the Blackwater system has a payload of 7,150 t. Figure 17.3 shows further details about the Blackwater rail system.

⁶Information from QR's website www.qr.com.au.

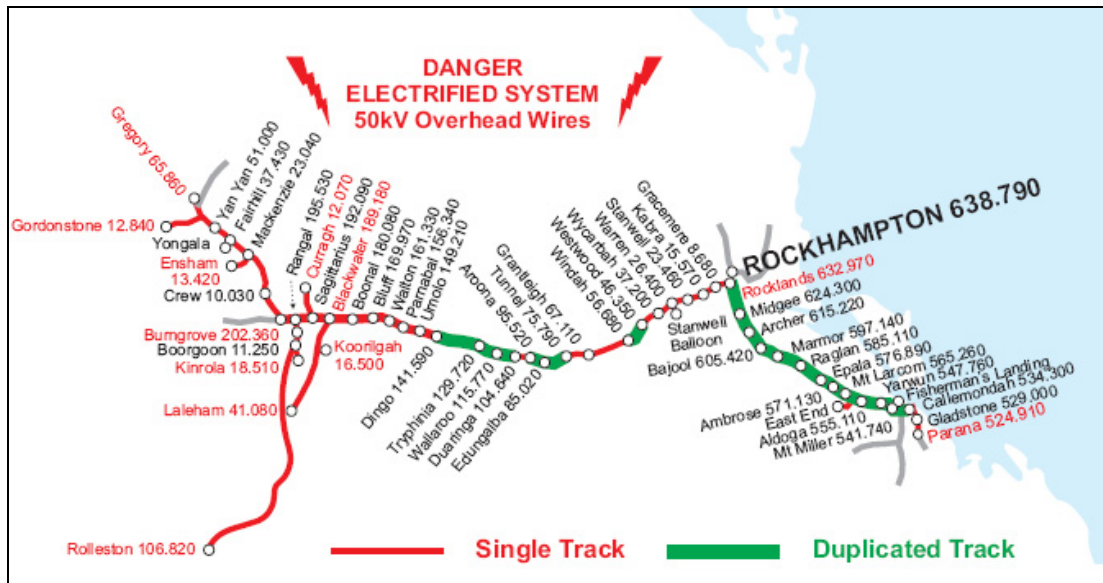


Figure 17.3 Blackwater rail system

Source: QR (2007) Information Pack. Blackwater System. Issue 2.1 - 26-02-07, page 6

QR's capacity modelling has identified the trigger points for incremental upgrades to the Blackwater system. For example, the Blackwater to Burngrove Duplication of 9 km tracks, together with additional trains, will increase the overall capacity and provide operation efficiency to the Blackwater system. Other sections which have recently been upgraded or will become a duplicated track in the near future are:

- Aroona and Duaringa
- Bluff and Blackwater
- Wallaroo and Tryphinia and Tryphinia to Dingo
- Westwood and Wycarbah
- Windah and Grantleigh

In 2006/2007, 49.2 Mtpa were railed on the Blackwater system which is approximately 28% of QR coal total⁷.

Moura system

One of the existing rail systems affected by the Project is the Moura system which is located in Central Queensland between Goolara and export facilities at Golding, Auckland Point and Barney Point and to intrastate destinations⁸. The Moura system services the industrial and rural areas of Dawson and Callide Valleys. It is a single line system with passing loops designed for trains hauled by diesel electric locomotives. There are a number of mines located along the Moura system such as:

- Moura/Moura West Mine
- Callide Mine
- Boundary Hill Mine
- Dawson Mine
- Theodore Mine
- Monto Mine

⁷ Website http://www.freight.qr.com.au/freight_services/coal/coal.asp.

⁸QR (2007) Information Pack. Moura System. Issue 3.1 – 02-03-07 from website

http://www.networkaccess.qr.com.au/Images/MouraSystem-Issue3%2E1-March2007_tcm10-2857.pdf.

The average coal train on the Moura system has a payload of 4,200 t. Figure 17.4 shows further details about the Moura rail system.

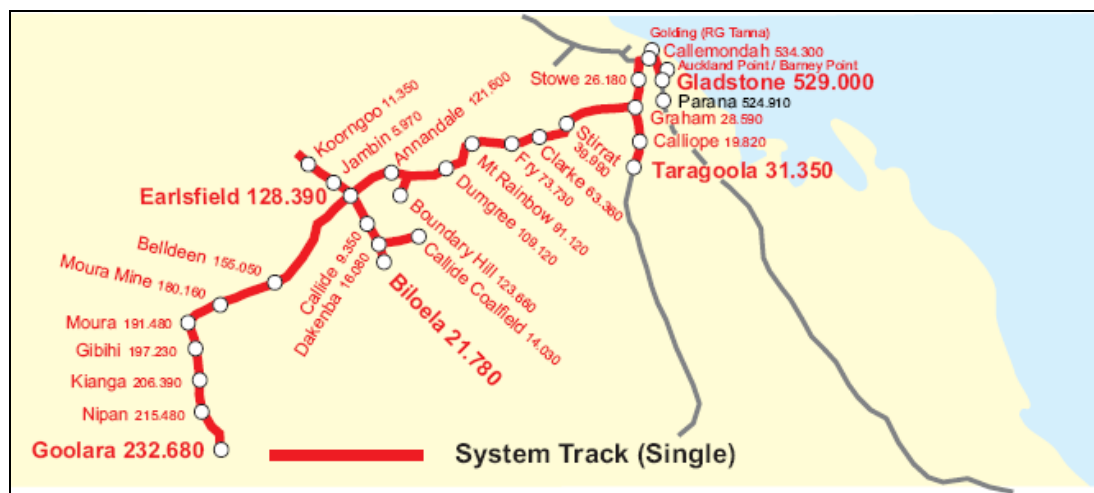


Figure 17.4 Moura rail system

Source: QR (2007) Information Pack. Moura System. Issue 3.1 – 02-03-07, page 6

In 2006/2007, 11.9 Mtpa were railed on the Moura system which is approximately 7% of QR coal total⁹.

The Surat Basin Rail Project (SBR) will influence the Moura system in the future. As part of the project, a new railway from Wandoan to the Moura system will be developed so that mines of the Surat Basin have rail access to the Port of Gladstone¹⁰.

17.2 Existing economic base and economic activity in Gladstone region

17.2.1 Economic profile of Gladstone and surrounding towns

Gladstone City is a modern industrialised city located between the Calliope River and the Boyne River. Gladstone's deep water harbour lies between the two river mouths. As a hub for heavy industry and world class port facilities, Gladstone infrastructure facilities are vital for export of resources in particular coal in Central Queensland.

The Gladstone economy has undergone significant expansion following the introduction of large scale coal mining for export markets and the construction of major industrial processing facilities in the 1960s. The Queensland Alumina Ltd (QAL) refinery commenced operations in 1967. Several other significant related industrial processing facilities have subsequently been established in the Gladstone region, including the Boyne Smelter and the Gladstone Power Station in the early 1980s. The population of Gladstone has increased from around 7,200 persons in 1961 to an estimated 31,100 in 2006.

17.2.2 Amalgamation

As part of the Queensland Government amalgamation and the reduction of councils in Queensland from 157 to 73 as of the March 2008 council elections¹¹, Gladstone, Calliope and Miriam Vale Shires have merged to form Gladstone Regional Council. The new local government Gladstone Regional Council has about 10,488 km² and approximately 51,000 people with an expected population of about 90,000 by 2026.

⁹ Website http://www.freight.qr.com.au/freight_services/coal/coal.asp.

¹⁰ QR Annual Report 2006/2007, page 128.

¹¹ Information from the Website <http://www.strongercouncils.qld.gov.au/Overview/Reformprocess.aspx>.

One reason for the amalgamation is that larger and better resourced local governments are better able to manage large scale economic development such as port, road and rail transport infrastructure¹². The proposed MLARP and WICT are two current examples of major infrastructure projects and future economic development in the region.

17.2.3 Community profile

The current community profile of Gladstone and Calliope areas is detailed in Section 16. A summary of this information is provided below.

- The median age of persons in Gladstone is below the Calliope and Queensland average.
- Incomes in the area are higher than the Queensland average and household size in both areas is above the Queensland average.
- Approximately 65% percent of the employed persons in Calliope and Gladstone work full-time and about 23% work part-time.
- The unemployment rate for Calliope and Gladstone is slightly higher than the average Australian unemployment rate.

Based on 2006 ABS Census data, the sectors offering the most employment opportunities for persons living either in Gladstone or Calliope are shown in Figure 17.5. The main sectors are:

- Manufacturing
- Construction
- Retail trade
- Accommodation and food services
- Transport, postal and warehousing
- Education and training
- Health care and social assistance

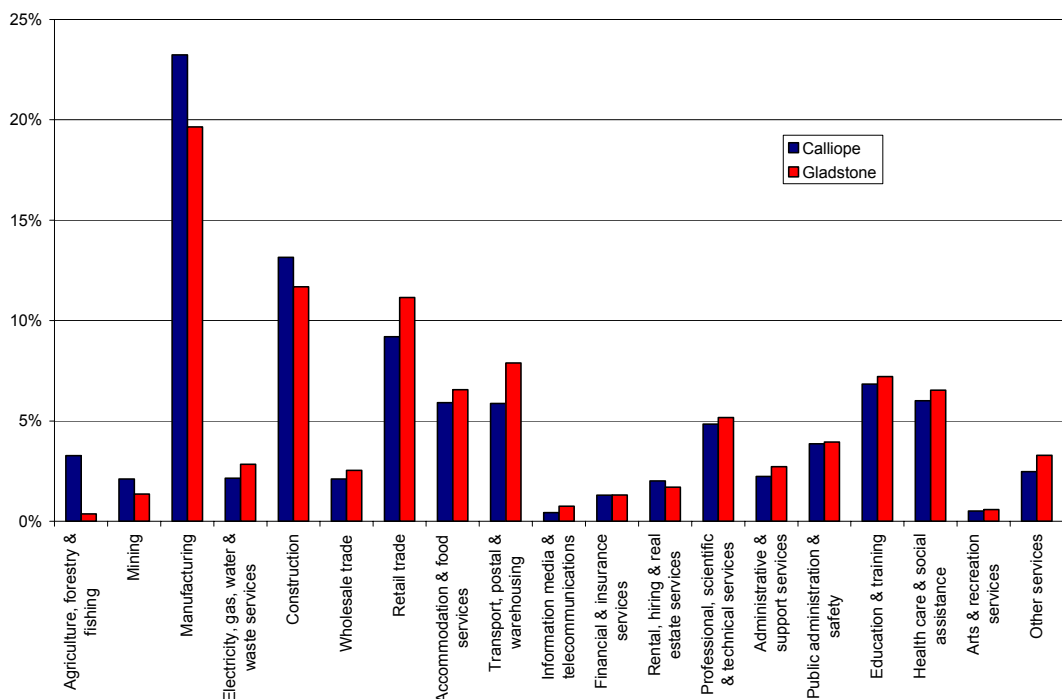


Figure 17.5 Employment by industry sector comparison: Gladstone and Calliope (in percent of total persons), 2006

Source: ABS 2006 Census Community Profile Series, Table B42c Industry of Employment by Age by Sex, excerpt

¹²Local Government Reform Commission (2008) Gladstone Regional Council. www.strongercouncils.qld.gov.au.

Gladstone employment profile is relatively stronger in the following industries:

- Electricity, gas, water and waste services
- Wholesale trade
- Retail trade
- Education and training
- Health care and social assistance
- Other services

The former Calliope Shire's employment profile is relatively stronger in the following industries:

- Agriculture, forestry and fishing
- Mining
- Manufacturing
- Construction

17.2.4 Types and numbers of businesses

There are approximately 2,100 businesses in Gladstone and approximately 1,100 businesses in the former Calliope Shire. Most of these businesses are small and medium size enterprises. In the former Calliope Shire most of the local businesses have less than 50 employees, over 80% are not employing or have less than five employees. In Gladstone about 75% of businesses are not employing or have less than five employees.

Over 60% of the businesses in Calliope operate in the agriculture, forestry and fishing sector and the construction sector as well as property and business services sectors. In Gladstone the most common sectors are property and business services sectors, construction and retail trade. The distribution of businesses across sectors in Calliope and Gladstone are shown in Figure 17.6.

The size and type of businesses found in Calliope are common for rural communities.

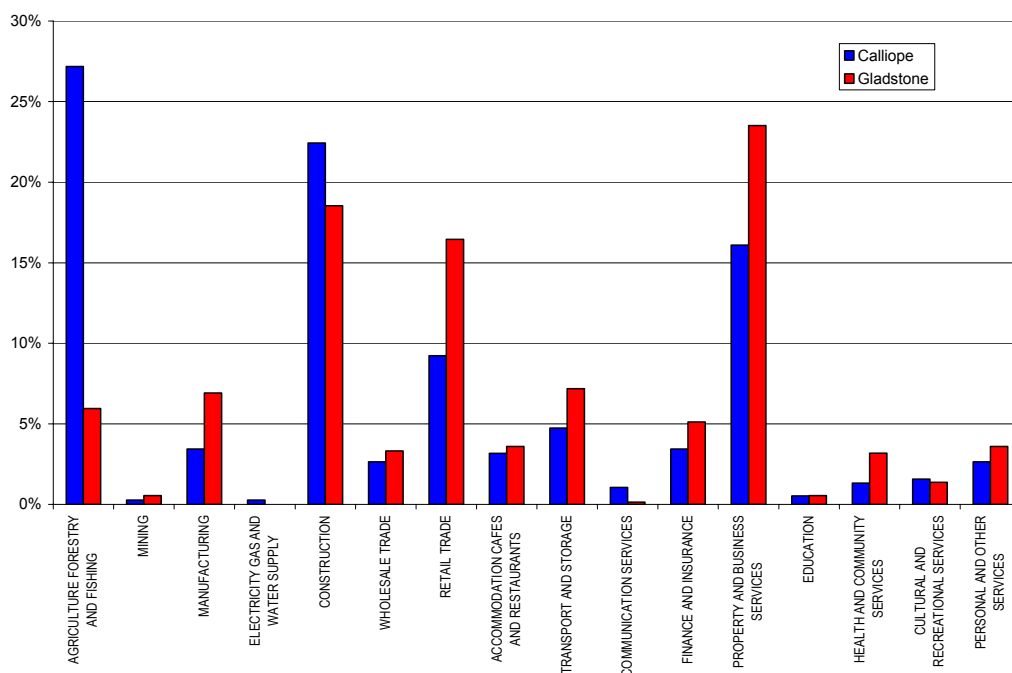


Figure 17.6 Businesses by industry

Source: ABS, Counts of Australian Businesses, including Entries and Exits, Jun 2003 to Jun 2007. Businesses by Industry Division by Statistical Local Area by Employment Size Ranges, 2007. Released at 11:30 am (Canberra time) 21 December 2007

About 20% of the businesses in Calliope and Gladstone have a turnover of between \$200,000 to \$500,000. However, there are more businesses in Gladstone with a higher turnover, and more businesses in Calliope with a lower turnover. Details of the annual turnover are shown in Figure 17.7.

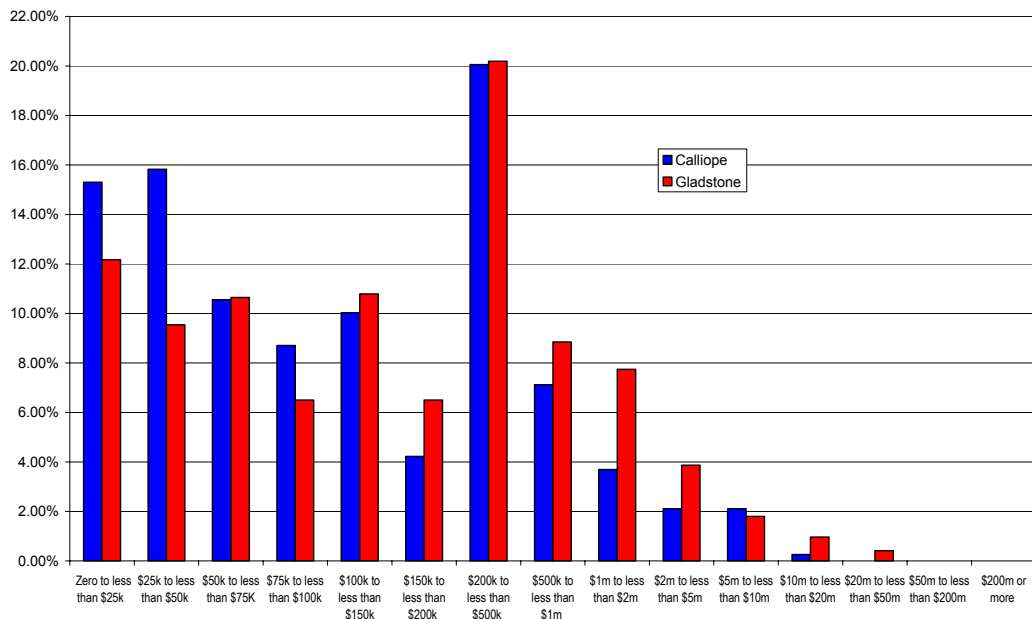


Figure 17.7 Annual turnover - businesses by industry 2007

Source: ABS, Businesses by Industry Division by Statistical Local Area by Annual Turnover Size Ranges, 2007. Counts of Australian Businesses, including Entries and Exits, Jun 2003 to Jun 2007. Released at 11:30 am (Canberra time) 21 December 2007

17.2.5 Availability and prices of goods and services

Consumer Price Index¹³ (CPI) for the period December 2006 to December 2007 shows an increase in prices particularly for housing, transport and financial and insurance services. The CPI rose over the period by 3%. The most significant contributors were automotive fuel (+7.3%), deposit and loan facilities (+2.7%), house purchase (+1.3%), rents (+1.6%) and other financial services (+1.9%). Brisbane's CPI was 3.9% higher than the weighted average of Australia's capital cities. In particular, housing rose above the Australian average. House purchases increased 3% in the December quarter.

¹³ABS, 6401.0 – Consumer Price Index, Australia, December 2007.

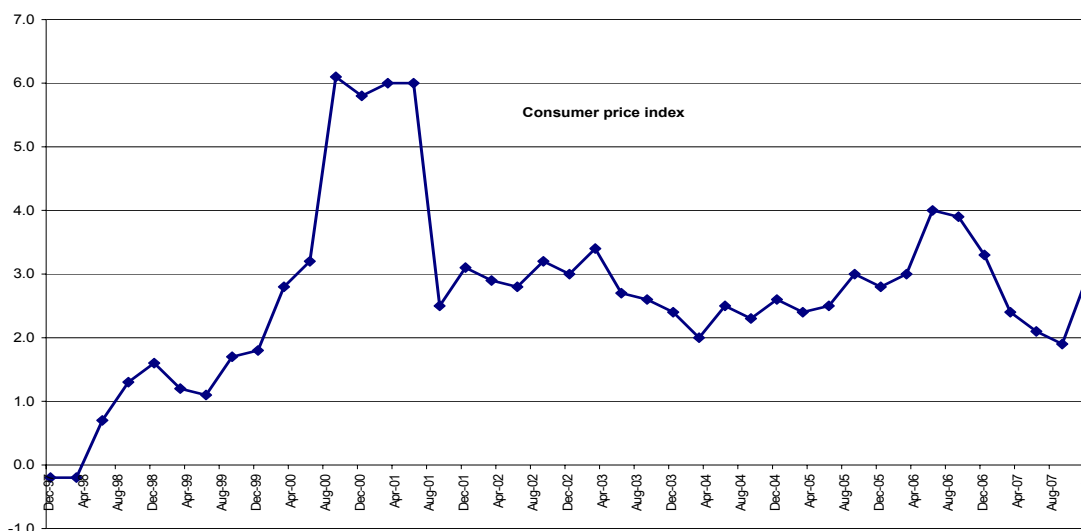


Figure 17.8 Consumer price index

Source: RBA, Measures of Consumer Price Inflation - Historical Data (Bulletin Table G01) and Trimmed Mean and Weighted Median Measures to Two Decimal Places, all groups, end of year percentage change, www.rba.gov.au

The Producer Price Index increased by 2.8% for final commodities (excluding exports), by 4.3% for intermediate commodities and by 4.7% for preliminary commodities in the period December quarter 2006 to December quarter 2007. Prices paid by manufacturers for material inputs increased by 7.9%, their output prices, however, increased only by 3.4%. The cost increase of materials used in the manufacturing industries was driven by an increase in prices for:

- Oil and gas extraction (+14.2%)
- Metal ore mining (+4.4%)

Materials used in house building rose by 2.9%, mainly driven by price increased for timber, board and joinery as well as metal products. The output price index in the construction industry has increased by 5.2%. The transport (freight) and storage industries index has increased by 1.4%. Further details are outlined in Table 17.2.

Table 17.2 Producer Price Indexes, December quarter 2006 to December quarter 2007, % change

Manufacturing Industries Producer Price Indexes			
Inputs¹	+7.9%	Outputs²	+3.4%
Oil and gas extraction	+14.2%	Petroleum refining (in particular, diesel, unleaded petrol)	+13.2%
Metal ore mining	+4.4%	Dairy product manufacturing	+10.5%
Iron and steel manufacturing	-5.5%	Other food manufacturing	+2.9%
Grain, sheep and beef farming	-0.6%	Non-ferrous metal manufacturing (in particular, nickel, copper, zinc and aluminium smelting)	-11.5%
Textile, fibre and woven fabrics	-3.0%	Non-ferrous basic metal product manufacturing (in particular, aluminium, copper bars, rods)	-14.5%

Construction Industries Producer Price Indexes			
House building	+2.9%	Outputs	+5.2%
• Timber, Board and joinery	+4.2%		
• Other metal products	+2.5%		
Transport (freight and Storage Industries Producer Price Indexes)			
Index			1.4%
• Road freight transport			+0.8%
• Rail transport			+2.1%
• Grain storage			+6.4%
• Coastal water transport			+4.3%
• International air transport			-3.7%

Table notes:

- 1 Prices paid by manufacturers for material inputs
- 2 Prices manufacturers received for their outputs

Source: ABS, 6427.0 – Producer Price Indexes, Australia, December 2007

The positive conditions of the labour market effect the labour price index and wages have increased over the past 12 months (December quarter 2006 to December quarter 2007) by 4.3% in private industries and 4.1% in the public sector. In particular, in the mining industry wages have increased above average by 5.1%.

17.3 Description of large scale industrial developments and their effects in the region

The proposed enhancement of the coal rail system that impacts on the Gladstone region should also be considered in the context of other large scale economic development activity either occurring or proposed for the Gladstone region. The Gladstone Economic and Industry Development Board¹⁴ identifies about 25 different large scale projects which include a wide range of industry activities from developing and construction infrastructure such as a coal terminal, pipelines, substations, a refinery, a processing plant, a waste facility, as well as other mining related developments. Some of the projects were completed in 2007/2008 and others are in the planning stage. Overall, capital expenditure for the projects will amount to more than \$30 billion; the projects generate about 15,000 jobs in the construction phase and more than 8,000 jobs during operations. These numbers demonstrate that the region has benefit in the past years from strong economic activities which will continue in the future and a prospective workforce that can be sourced for large scale infrastructure projects.

17.4 General economic benefits from the Project

The MLARP is part of the rail network expansion which takes place over the next decade increasing the freight capacity, in particular the coal transport from the southern Bowen Basin and Surat Basins to export port facilities at RG Tanna and proposed Wiggins Island Coal Terminals. The Barney Point Terminal for coal exports will be phased out with the commissioning of WICT in 2013/14.

The southern Bowen and Surat Basins have considerable reserves of good quality coal product and are among the lowest cost producers of high metallurgical and thermal coal. A demand driven progressive development of these resources will need the provision of appropriate rail network infrastructure to connect to export facilities at the Port of Gladstone and other supporting civil infrastructure.

¹⁴Information retrieved from www.gladstoneregion.org.au and http://www.gladstoneindustry.org.au/documents/1203395595_dev_rev_matrix_february_2007_2.pdf.

The construction of the WICT is an important supplement to the current coal export capacity of the Port of Gladstone. WICT will be situated west of the existing RG Tanna Coal Terminal in Gladstone and will have a nominal export capacity of about 70 Mt per annum. The MLARP is an important infrastructure link between the coal fields and the export facilities of the Port of Gladstone. In addition to a rail line infrastructure, the Project will also provide a rail yard (Aldoga Rail Yard) to provision and maintain consists.

The freight capacity of the rail network and WICT will expand to its full potential if the SBR Project, a proposed 207 km railway between Wandoan and Banana, is developed. This railway will service the Surat Basin and allow thermal coal to be transported to the export port facilities. Table 17.3 provides forecast coal tonnage estimates for the period 2008/09 to 2024/25.

The synergy effects among the MLARP, WICT and the SBR will have positive implications for the future development of the region. Labour and materials, at least to some extent (depending on the availability at the time), will be sourced locally.

Steel for the railway is likely to be sourced from interstate.

Table 17.3 Forecast coal tonnages through Port of Gladstone and Moura and Blackwater systems 2008/09 - 2024/25 and beyond (Mtpa)

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Export coal by terminal									
RGTT	67.6	68.6	68.6	68.6	68.6	66.6	66.6	66.6	66.6
Barney Pt	7.0	7.0	7.0	7.0	7.0	-	-	-	-
Wiggins Is	-	-	-	-	-	35.5	53.0	67.0	85.0
Total	74.6	75.6	75.6	75.6	75.6	102.1	119.6	133.6	151.6
Total coal transported - Export + Domestic by rail system									
Blackwater	67.1	68.1	68.1	68.1	73.1	77.1	78.1	80.1	80.1
Moura	17.1	17.1	17.1	17.1	17.1	22.1	27.6	33.6	37.6
SML	-	-	-	-	-	17.5	28.5	34.5	48.5
Total	84.2	85.2	85.2	85.2	90.2	116.7	134.2	148.2	166.2
	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025-35
Export coal by terminal									
RGTT	66.6	66.6	70.6	71.0	71.1	71.4	71.7	72.0	72.0
Barney Pt	-	-	-	-	-	-	-	-	-
Wiggins Is	86.0	88.0	88.3	88.7	89.0	89.3	89.7	90.0	90.0
Total	152.6	154.6	159.0	159.6	160.0	160.7	161.3	162.0	162.0
Total coal transported - Export + Domestic by rail system									
Blackwater	80.1	80.1	81.4	81.8	82.0	82.3	82.6	83.0	83.0
Moura	38.6	38.6	38.8	38.9	39.1	39.2	39.4	39.5	39.5
SML	48.5	50.5	53.5	53.7	53.8	54.0	54.2	54.3	54.3
Total	167.2	169.2	173.7	174.3	174.8	175.5	176.2	176.8	176.8

Source: Queensland Rail

Figure 17.9 highlights the significant forecast increases in coal to be railed over the Blackwater and Moura systems post 2013/14.

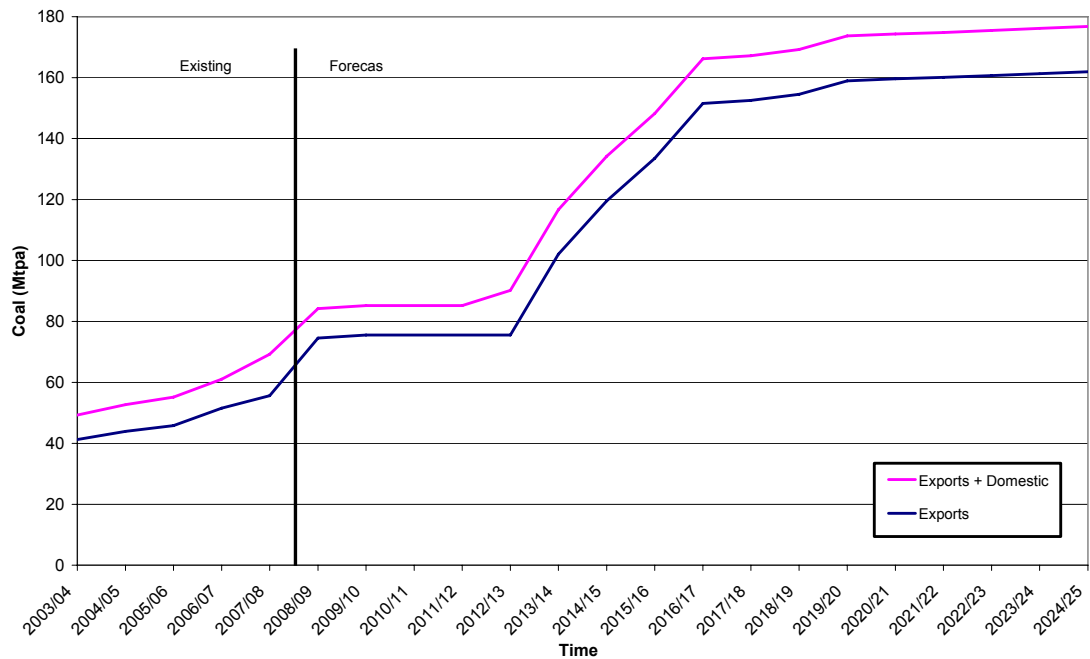


Figure 17.9 Forecast coal rail tonnages from southern Bowen Basin and Surat Basin Mines

Total coal transported by the rail system through the proposed MLARP is forecast to increase to 116.7 Mtpa in 2013/14 when WICT becomes operational. Over the proceeding decade the coal rail freight for the Blackwater and Moura systems (assuming the construction of the SBR) will increase from 116.7 Mtpa to an estimated 176 Mtpa.

The importance of the MLARP will be that this rail enhancement will contribute to improving track capacity leading to the coal terminals and therefore to the efficiency of this important coal transport chain to the export facilities at the Port of Gladstone.

Without the additional rail capacity linking to the RG Tanna and WICT, the coal logistics chain would become choked thereby restricting the development of new mines and most importantly adversely impacting on shipping incurring demurrage costs. The recent O'Donnell report into the Goonyella system highlighted total economic losses of around \$1 billion through the inefficient operation of the Goonyella chain and the inability of the chain to meet contracted tonnages.

It is important from an economic perspective that all operators in the coal supply chain have the ability to readily respond to increase demand thereby facilitating the coal mining proponents to capture the direct and indirect economic benefits that are associated with the opportunity to quickly respond to expanded levels of coal exports.

In this regard the Bureau of Transport Economics (BTE) *Regional Impact of the Port of Gladstone* (February 2001), identified that on average each ship call at the Port of Gladstone had a considerable economic benefit on the region. Escalating the 1999/2000 prices used in the study by 31% (ie CPI increases from June Quarter 2000 to March Quarter 2008) it is estimated in current prices that these benefits of a ship call would be as follows:

- \$314,000 of output
- \$195,000 of value added
- \$96,000 of household income
- Two full time equivalent jobs over a year

GPC reported that 460 coal ships (average tonnage per ship of 100,000 t) exported an estimated 45 Mt in 2006/07 through RG Tanna Coal Terminal. Similarly 105 coal ships (average net tonnage per ship of 60,000 t) exported an estimated 6.5 Mt from the smaller Barney Point Coal Terminal in 2006/07.

Using the above economic aggregates per ship call the economic significance of the export of coal to the region in 2006/07 would be in the order of:

- \$177 million of output
- \$110 million of value added
- \$54 million of household income
- 1,130 full time equivalent jobs over a year

When the coal exports reach their optimum forecast levels of an estimated 176 Mt in 2023/24 and assuming the average tonnages of each ship call is around 100,000 net tonnes (ie around 1,760 coal ships per year), the annual economic benefits in today's prices would be very significant and increase to the following:

- \$552 million of output
- \$343 million of value added
- \$169 million of household income
- 3,520 fulltime equivalent jobs over a year

Therefore, using the BTE approach, the above economic benefits between 2006/07 to 2023/24 would accrue on an annual basis and escalate in line with forecast coal exports.

In addition, with the forecast increase in coal tonnages to 176 Mtpa in 2023/24 from the southern Bowen Basin and the Surat Basin, the Queensland government's royalty payments would increase to an estimated \$1.2 billion from these mines in current prices. Other government economic benefits from increased corporate, individual, GST and land rating taxation and corporate dividends would also lead direct and flow-on impacts on a national, state and local basis.

QR and possibly other new rail operators would benefit from the increase in coal demand by the revenue generated from the raiing of export and domestic coal. In current prices, the optimum coal rail tonnage in 2023/24 would equate to around \$1.1 billion in rail operational revenues. Likewise, the GPC's major port revenues are coal terminal business and the port charges that are levied on the coal ships. Other port related activities that derive income from coal ships are pilotage, towage and bunkering.

Therefore with rising coal prices and prospective increases in coal mine development and productivity in the southern Bowen Basin and Surat Basin, the beneficial economic impacts on the government revenues, on the operating revenue of rail operators and GPC and the Gladstone region will be substantial.