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Section 22 Economics

22.1 Introduction

Hancock Prospecting Pty Ltd (HPPL) proposes to establish a 30 million tonnes per annum (Mtpa) thermal coal mine in the Galilee Basin to the north of Alpha. The Alpha Coal Project involves the construction of an open cut coal mine and processing plant, mine-to-port railway and the export of thermal coal.

This section of the Environmental Impact Statement (EIS) pertains to the economic environment within which the Alpha Coal Project (Mine) (the Project) sits and the economic impact of the construction and operation of the coal mine, processing plant and associated infrastructure. Separate assessments have been prepared for the railway and coal export terminal.

22.2 Description of Environmental Values

22.2.1 Regional Economy

The local and regional environments analysed were the Barcaldine Regional Council¹ (BRC) and Central West statistical division (SD).

The socio-economic profile (Australian Bureau of Statistics [ABS], 2006) highlights that the component statistical local areas (SLAs) of BRC are more mature relative to Queensland, with a higher incidence of lone person households. The region is characterised by a high incidence of home ownership but lower average household incomes. The population of BRC is projected to remain relatively stable until 2031, with Jericho SLA to record the highest growth rate of 0.1% per annum.

Agriculture, forestry and fishing are the dominant employment sectors in Aramac SLA and Jericho SLA, but the proportion of employment in this sector has declined since the 2001 Census (ABS, 2006). Over the past nine years, the size of the labour force has remained relatively steady throughout BRC, with the labour force participation rate averaging 77.8%. The unemployment rate in all SLAs within BRC has been consistently lower than the Queensland average (Department of Employment and Workplace Relations [DEWR], various years).

There were a total of 567 businesses identified in BRC as of June 2007, with Barcaldine SLA having the most with 210 businesses (ABS, 2007). Agriculture, forestry and fishing were the dominant business types across all SLAs within BRC, accounting for between 51.4% and 76.9% of total businesses. There were 15 businesses identified within BRC that employed over 20 persons, with 12 agriculture, forestry and fishing businesses and 3 accommodation, cafes and restaurant businesses.

Livestock was the major agricultural activity in BRC, with the total value of livestock slaughtered estimated at \$97 million in 2005-06 (ABS, 2007). The majority of livestock slaughtered were cattle and calves accounting for \$93.4 million or 96.3% of total livestock slaughtered. Horticulture and cropping were not identified as significant agricultural industries in BRC.

¹ Detailed analysis conducted for the statistical local areas (SLAs) within BRC.

The economic environments of the BRC and Central West SD have improved considerably over the last five to ten years, with labour force participation increasing and unemployment rates decreasing. However, livestock production, the region's most significant form of agricultural production, has experienced significant decline.

Agricultural production has traditionally been a foundation of the Barcaldine local economy. The region has faced challenging climatic conditions over the past five to ten years, including drought and extreme flooding. In the future, agriculture will face growing competition for labour from mining. Furthermore, as the local and regional economies grow, agricultural labour markets will face competition from the services sector.

22.2.2 Availability of Accommodation and Housing in the Regional Economy

The room occupancy rate of hotels, motels and serviced apartments with five or more rooms in BRC fluctuated between 30.1% (March quarter, 2005) and 57.2% (September quarter, 2009). Over the past five years room occupancy rates for hotels, motels and serviced apartments in BRC were generally lower than in the Outback tourism region (TR) and Queensland (ABS, various years).

Data for the site occupancy rate of caravans in BRC was unavailable due to the limited number of caravan parks. In the Outback TR, the site occupancy rate of caravans was highest in the September quarter 2009, at 59.2%. The average site occupancy rate over the past five years was 37.1% in the Outback TR, significantly below the Queensland average of 56.7%.

In BRC, the average number of vacant rooms / beds per night ranged between:

- 39-67 vacant hotel / motel rooms and serviced apartments; and
- 33-77 vacancies at caravan sites.

The volume of house sales in BRC accounted for approximately 25% to 32% of sales in Central West SD. The median price of house sales in BRC was consistently below Central West SD.

There were four to eight commercial property sales per annum in BRC, with the median sales price fluctuating between \$64 per square metre and \$180 per square metre.

There were limited data in regards to unit and townhouse and industrial property sales in BRC so it was difficult to determine the trend in prices over the past nine years.

22.3 Potential Impacts and Mitigation Measures

The purpose of this economic impact assessment is to understand the scale of the proposed development's economic impact and effect relative to the size of the Queensland economy. It involves an economic impact assessment to estimate the scale of output, income, employment and value-added impacts of the Project on the Queensland economy, identification of the Project's opportunity cost and the cumulative impacts of major projects within the region.

The various measures of economic impact used in this assessment are described in Table 22-1.

Table 22-1: Measures of economic impact

Impact Measure	Description
Output	The output impact measures the increase in gross sales throughout the entire economy by aggregating all individual transactions (direct and indirect) resulting from the economic stimulus. The output impact provides an indication of the degree of structural dependence between sectors of the economy. However, output impacts are regarded as overstating the impact on the economy as they count all goods and services used in one stage of production as an input to later stages of production, hence counting their contribution more than once.
Household income	The household income impact measures the additional wages, salaries and supplements paid to households associated with the industry under consideration and with other industries benefiting from the stimulus to the economy. It is important to note that the input-output tables on which this analysis is based relate to 2005-06. The input-output tables represent the structural dependence of industry sectors within the regional economy. Since 2005-06 there may have been changes in the composition of real wages. While the input-output tables have been augmented to reflect changes in relative incomes between industries, they have not been augmented such that they reflect relative differences between regions on an inter-industry basis.
Employment	The employment impact measures the number of full time equivalent (FTE) positions for one year created directly and indirectly by the stimulus ² . However, the short-term response to increased demand may be that existing employees work overtime. Consequently, actual levels of employment generated (in terms of persons employed) will tend to be lower than those estimated by the input-output analysis. This short-term employment response (of working additional overtime) will be more prevalent where the demand stimulus is likely to be temporary and short lived or where there is limited spare capacity in the economy (that is, when the economy is at or near full employment).
Value added	The value added or Gross Regional Product (GRP) impact measures only the net activity at each stage of production resulting from a stimulus. GRP is defined as the addition of consumption, investment and government expenditure, plus net exports (exports minus imports) from a region. The value added (or GRP) impact is the preferred measure for the assessment of contribution to the economy from a stimulus or impact, and as such should be used to describe the net impact of the event.

Source: Jensen, R. and West, G. (2001) Community Economic Analysis, Department of Primary Industries: Brisbane, Queensland

22.3.1 Construction and Capital Impacts

Construction and capital works associated with the Project will take place over a 33 year period finalising in 2045. HPPL will make significant foreign exchange Project purchases, equivalent to US\$2 billion and €145 million. Australian currency Project purchases will be equivalent to

² Therefore, if impacts are to be spread over a number of years, the FTE estimate (which relates to the annual equivalent) should be divided by the number of years over which the impact will be spread (in the absence of a clearly defined staging program) to provide an indicative ongoing employment estimate over the life of the impact.

A\$4.25 billion. Foreign exchange Project purchases represent imports, which have no impact on the domestic economy. Only Project purchases made in Australia will impact the domestic economy. The analysis assumes that all domestic Project purchases are made within Queensland.

A detailed breakdown of Project purchases by country of origin, type of purchase and year of purchase is provided in Volume 5, Appendix N. A summary of total construction and capital costs across the life of the Project are summarised in Table 22-2 below.

Table 22-2: Total construction and capital costs for Alpha Coal Project (Mine) (in millions)

Cost Component	US\$	Euro	A\$
Drill and Blast	68.97	0.00	47.06
Draglines	375.88	0.00	1,284.47
Prestrip Fleets	1,080.72	102.15	456.77
Coal Mining Fleets	311.51	43.56	108.27
Ancillary Fleets	141.07	0.00	252.72
Processing Plant	66.98	0.00	769.90
Access Road	0.00	0.00	209.88
Dams and Diversions	0.00	0.00	293.74
Infrastructure and Power	0.00	0.00	294.89
Accommodation Village	0.00	0.00	328.56
Other Infrastructure	0.00	0.00	212.04
Total Capital Costs	2,045.13	145.71	4,258.31

22.3.1.1 Output or Consumption Effects

The output (or consumption) impacts of construction and capital works associated with the Project are outlined in Table 22-3 and Table 22-4. The most significant output (or consumption) impacts associated with these works are anticipated to arise in 2014 and 2015. These two years account for approximately 31% of output (or consumption) effects resulting from the Project.

In 2014, total output (or consumption) impacts of construction and capital works associated with the Project are estimated to be approximately \$1.35 billion, comprising \$512.39 million in direct output (or consumption) effects and \$840.59 million in indirect output (or consumption) effects. The manufacturing and construction sectors are anticipated to benefit from the greatest stimulus equating to approximately \$347.10 million and \$594.47 million, respectively. The significant stimulus to the manufacturing sector is generated by major purchases of vehicle fleets required as part of the construction phase of the Project. The significant construction related impacts are generated by the significant expenditure on roads and other infrastructure items.

In 2015, total output (or consumption) impacts of construction and capital works associated with the Project are estimated to be approximately \$1.83 billion, comprising \$729.94 million in direct output (or consumption) effects and \$1.1 billion in indirect output (or consumption) effects. The manufacturing

and construction sectors are anticipated to benefit from the greatest stimulus, equating to approximately \$710.58 million and \$569.95 million, respectively.

22.3.1.2 Household Income Effects

The household income impacts of construction and capital works associated with the Project are outlined in Table 22-3 and Table 22-4. The most significant household income impacts associated with these works are anticipated to arise in 2014 and 2015. These two years account for approximately 26% of household income effects resulting from the Project.

In 2014, total household income impacts of construction and capital works associated with the Project are estimated to be approximately \$294.30 million, comprising \$213.52 million in direct household income effects and \$80.78 million in indirect household income effects. The manufacturing and construction sectors are anticipated to benefit from the greatest stimulus equating to approximately \$113.56 million and \$60.76 million respectively.

In 2015, total household income impacts of construction and capital works associated with the Project are estimated to be approximately \$466.93 million, comprising \$285.43 million in direct household income effects and \$181.50 million in indirect household income effects. The manufacturing and construction sectors are anticipated to benefit from the greatest stimulus equating to approximately \$250.15 million and \$58.47 million respectively.

22.3.1.3 Employment Effects

The majority of Alpha Coal Project (Mine) construction employment is anticipated to arise during 2015 where on-site employment levels are anticipated to peak at approximately 1,060 workers in late 2015 and early 2016.

The total employment impacts of construction and capital expenditure associated with the Project are outlined in Table 22-3 and Table 22-4. The most significant employment impacts associated with these works are anticipated to arise in 2014 and 2015. These two years account for approximately 30% of employment effects resulting from the Project.

In 2014, total employment impacts of construction and capital works associated with the Project are estimated to be approximately 5,100 full time equivalent (FTE) positions, comprising direct employment effects of 3,448 FTE positions and indirect employment effects of 1,652 FTE positions. Employment effects are anticipated to be most significant in the manufacturing and construction sectors, where construction and capital expenditure is anticipated to generate 1,327 full FTE positions and 2,191 FTE positions, respectively.

In 2015, total employment impacts of construction and capital works associated with the Project are estimated to be approximately 7,230 FTE positions, comprising direct employment effects of 4,370 FTE positions and indirect employment effects of 2,860 FTE positions. Employment effects are anticipated to be most significant in the manufacturing and construction sectors, where construction and capital expenditure is anticipated to generate 3,011 FTE positions and 2,115 FTE positions, respectively.

22.3.1.4 Value Added Effects

The value added impacts of construction and capital works associated with the Project are outlined in Table 22-3 and Table 22-4, for 2013-2029 and 2030-2045, respectively. The most significant value added impacts associated with these works are anticipated to arise in 2014 and 2015. These two years account for approximately 28% of value added effects resulting from the Project.

In 2014, total value added impacts of construction and capital works associated with the Project are estimated to be approximately \$512.45 million, comprising \$369.58 million in direct value added effects and \$142.87 million in indirect value added effects. The manufacturing and construction sectors are anticipated to benefit from the greatest stimulus, equating to approximately \$147.35 million and \$148.08 million, respectively.

In 2015, total value added impacts of construction and capital works associated with the Project are estimated to be approximately \$749.54 million, comprising \$487.35 million in direct value added effects and \$262.19 million in indirect value added effects. The manufacturing and construction sectors are anticipated to benefit from the greatest stimulus, equating to approximately \$316.34 million and \$142.46 million, respectively.

Table 22-3: Economic impact of construction and capital expenditure of the Project, 2013-2029

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Output (\$M)																	
Direct	263.11	512.39	729.94	237.87	279.18	121.92	226.66	36.71	52.69	8.22	188.79	190.02	6.41	12.79	176.22	186.35	10.21
Indirect	457.24	840.59	1,102.79	316.28	363.30	166.71	286.93	45.20	90.46	10.15	237.49	238.34	7.21	15.21	220.53	233.38	10.85
Total	720.35	1,352.98	1,832.74	554.15	642.49	288.62	513.59	81.91	143.15	18.36	426.28	428.35	13.63	28.00	396.75	419.73	21.06
Household Income (\$M)																	
Direct	114.66	213.52	285.43	82.59	97.45	44.02	77.40	11.94	22.73	2.50	64.13	63.79	1.87	3.90	59.79	62.79	2.86
Indirect	23.10	80.78	181.50	79.82	109.20	41.21	93.00	14.03	5.36	2.40	79.76	77.79	1.90	4.09	74.75	77.32	2.96
Total	137.76	294.30	466.93	162.42	206.65	85.23	170.40	25.97	28.09	4.90	143.89	141.57	3.76	7.98	134.54	140.11	5.82
Employment (FTEs)																	
Direct	1,917	3,448	4,370	1,165	1,337	630	1,041	159	378	34	854	850	25	53	795	836	38
Indirect	707	1,652	2,860	1,067	1,394	558	1,162	176	147	32	988	969	24	52	924	960	37
Total	2,624	5,100	7,230	2,231	2,731	1,187	2,203	335	525	66	1,842	1,819	49	105	1,719	1,796	75
Value Added (\$M)																	
Direct	200.41	369.58	487.35	144.76	162.36	74.46	128.58	20.94	39.70	5.10	106.95	108.64	3.37	7.28	98.69	105.60	4.93
Indirect	57.35	142.87	262.19	106.37	136.05	54.01	115.00	18.35	12.14	3.56	96.67	95.83	3.35	6.23	91.36	95.08	5.73
Total	257.76	512.45	749.54	251.13	298.41	128.47	243.59	39.29	51.84	8.66	203.62	204.48	6.72	13.51	190.05	200.69	10.66

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Table 22-4: Economic impact of construction and capital expenditure of the Project, 2030-2045

	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Output (\$M)																
Direct	181.61	62.40	212.11	27.05	39.10	197.11	44.86	19.30	14.56	29.30	52.31	76.01	16.26	8.85	21.74	0.21
Indirect	227.71	102.62	265.28	33.96	49.79	248.46	54.56	22.45	17.40	35.41	64.42	119.09	20.45	11.25	25.98	0.36
Total	409.33	165.02	477.39	61.01	88.90	445.58	99.42	41.75	31.96	64.72	116.73	195.10	36.71	20.11	47.72	0.57
Household Income (\$M)																
Direct	61.37	25.90	71.00	9.10	13.05	67.32	14.31	5.76	4.54	9.53	16.27	30.43	5.52	3.05	6.99	0.09
Indirect	75.89	8.94	86.46	11.06	14.40	83.48	16.36	6.00	5.00	11.43	17.13	14.63	6.78	3.73	8.32	0.02
Total	137.25	34.84	157.45	20.16	27.46	150.79	30.66	11.76	9.54	20.95	33.40	45.06	12.30	6.78	15.31	0.11
Employment (FTEs)																
Direct	817	420	946	122	178	898	192	77	61	127	220	480	74	41	93	2
Indirect	941	193	1,076	138	184	1,035	206	77	63	142	222	262	84	46	103	1
Total	1,758	613	2,023	259	362	1,933	397	154	124	269	441	742	158	87	196	2
Value Added (\$M)																
Direct	102.80	45.41	120.90	15.43	23.11	111.15	25.46	10.71	8.15	15.95	31.57	52.62	9.18	5.03	11.67	0.16
Indirect	92.89	16.79	107.25	13.67	18.59	101.37	22.37	9.62	7.30	15.40	23.92	24.22	8.33	4.51	11.55	0.05
Total	195.69	62.20	228.15	29.10	41.70	212.52	47.83	20.34	15.44	31.35	55.49	76.84	17.51	9.54	23.21	0.20

22.3.2 Ongoing and Operating Impacts

Operating costs are anticipated to commence in 2013 and run through to 2045. HPPL is anticipated to expend approximately \$30.6 billion in operating expenses throughout the life of mine (LOM). The most significant cost items in terms of total operating costs include:

- Operating labour costs (18% of total operating costs);
- Fuel and lubricant costs (19% of total operating costs); and
- Equipment maintenance consumables (13% of total operating costs).

The composition of Project operating costs indicates that the operation of the Project is likely to result in major stimulus to the mining and manufacturing sectors of Queensland.

These costs are anticipated to gradually increase throughout the LOM, from less than \$20 million per annum in the first two years of operation to:

- \$289.47 million in 2016;
- \$895.26 million in 2021;
- \$953.90 million in 2026;
- \$1,034.25 million in 2031;
- \$1,122.08 million in 2036;
- \$1,227.04 million in 2041; and
- \$1,476.93 million in 2045

22.3.2.1 Output or Consumption Impacts

The output (or consumption) impacts of operating expenditure associated with the Project are outlined in Table 22-5 and Table 22-6, for 2013-2029 and 2030-2045, respectively. As stated previously, the economic impacts resulting from operating expenditure increase from generally minimal impacts in the first two years of operation to significant impacts by 2019, after which impacts continue to increase until the final year of operation (2045).

In the first year of operation (2013), total output (or consumption) impacts of operating expenditure associated with the Project are estimated to be approximately \$28.55 million, comprising \$12.34 million in direct output (or consumption) effects and \$16.21 million in indirect output (or consumption) effects. At this stage of the Project, the manufacturing sector is the most significantly stimulated sector as a result of Project operating expenditure, with impacts of \$19.42 million. These impacts are associated with the purchase of various consumable items.

By 2026, total output (or consumption) impacts of operating expenditure associated with the Project are estimated to increase to approximately \$2.2 billion, comprising \$953.90 million in direct output (or consumption) effects and \$1.3 billion in indirect output (or consumption) effects.

In the final year of operation (2045), total output (or consumption) impacts of operating expenditure associated with the Project are estimated to increase to approximately \$3.5 billion, comprising \$1.48

billion in direct output (or consumption) effects and \$2 billion in indirect output (or consumption) effects.

22.3.2.2 Household Income Effects

The household income impacts of operating expenditure associated with the Project are outlined in Table 22-5 and Table 22-6, for 2013-2029 and 2030-2045, respectively. In the first year of operation (2013), total household income impacts of operating expenditure associated with the Project are estimated to be approximately \$7.67 million, comprising \$4.20 million in direct household income effects and \$3.47 million in indirect household income effects.

By 2029, total household income impacts of operating expenditure associated with the Project are estimated to increase to approximately \$431.46 million, comprising \$275.47 million in direct household income effects and \$155.98 million in indirect household income effects.

In the final year of operation (2045), total household income impacts of operating expenditure associated with the Project are estimated to increase to approximately \$645.53 million, comprising \$414.52 million in direct household income effects and \$231.01 million in indirect household income effects.

22.3.2.3 Employment Effects

Operational employment levels are expected to increase from approximately 340 workers in 2013 to approximately:

- 2,060 workers in 2016;
- 1,960 workers in 2021;
- 2,010 workers in 2026;
- 2,070 workers in 2031;
- 2,250 workers in 2036; and
- 2,380 workers in 2042.

The total employment impacts of operating expenditure associated with the Project are outlined in Table 22-5 and Table 22-6, for 2013-2029 and 2030-2045, respectively.

In the first year of operation (2013), operating expenditure associated with the Project is estimated to support 92 FTE positions, including 54 direct FTE positions and 38 indirect FTE positions.

By 2026, operating expenditure associated with the Project is estimated to support 5,487 FTE positions, including 3,597 direct FTE positions and 1,890 indirect FTE positions.

In the final year of operation (2045), operating expenditure associated with the Project is estimated to support 8,338 FTE positions, including 5,479 direct FTE positions and 2,859 indirect FTE positions.

22.3.2.4 Value Added Effects

The value added impacts of operating expenditure associated with the Project are outlined in Table 22-5 and Table 22-6, for 2013-2029 and 2030-2045, respectively. As stated previously, the economic impacts resulting from operating expenditure increase from generally minimal impacts in the first two

years of operation to significant impacts by 2019, after which impacts continue to increase until the final year of operation (2045).

In the first year of operation (2013), total value added impacts of operating expenditure associated with the Project are estimated to be approximately \$12.85 million, comprising \$7.34 million in direct value added effects and \$5.52 million in indirect value added effects. At this stage of the Project the manufacturing sector is the most significantly stimulated sector as a result of Project operating expenditure, with impacts of \$8.08 million.

By 2026, total value added impacts of operating expenditure associated with the Project are estimated to increase to approximately \$1,149.02 million, comprising \$734.28 million in direct value added effects and \$414.77 million in indirect value added effects.

In the final year of operation (2045), total value added impacts of operating expenditure associated with the Project are estimated to increase to approximately \$1,770.63 million, comprising \$1,115.79 million in direct value added effects and \$654.84 million in indirect value added effects.

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Table 22-5: Economic impact of ongoing and operating expenditure of the Project, 2013-2029

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Output (\$M)																	
Direct	12.34	17.67	94.98	289.47	511.69	681.55	818.85	902.56	895.26	894.56	967.99	976.60	964.88	953.90	1,018.54	951.87	971.51
Indirect	16.21	20.26	114.30	391.26	729.13	968.84	1,174.83	1,296.70	1,259.06	1,262.65	1,385.49	1,383.59	1,352.57	1,335.40	1,431.60	1,322.11	1,345.35
Total	28.55	37.93	209.28	680.73	1,240.82	1,650.39	1,993.68	2,199.26	2,154.32	2,157.21	2,353.48	2,360.19	2,317.45	2,289.31	2,450.14	2,273.98	2,316.85
Household Income (\$M)																	
Direct	4.20	5.21	24.76	79.88	146.01	195.06	235.72	260.41	255.55	256.01	279.00	279.85	275.54	271.81	291.02	270.68	275.47
Indirect	3.47	4.06	14.15	43.39	78.71	107.50	128.88	142.80	142.83	143.02	154.34	155.75	156.00	152.62	163.71	153.65	155.98
Total	7.67	9.27	38.91	123.27	224.72	302.56	364.59	403.21	398.37	399.03	433.34	435.60	431.54	424.43	454.73	424.33	431.46
Employment (FTEs)																	
Direct	54	67	323	1,063	1,931	2,578	3,113	3,438	3,378	3,384	3,686	3,700	3,647	3,597	3,852	3,588	3,650
Indirect	38	45	170	536	979	1,334	1,602	1,775	1,771	1,773	1,916	1,932	1,931	1,890	2,028	1,900	1,929
Total	92	112	493	1,599	2,910	3,912	4,715	5,213	5,148	5,157	5,602	5,632	5,578	5,487	5,880	5,487	5,579
Value Added (\$M)																	
Direct	7.34	9.22	60.28	213.83	404.69	536.29	652.10	719.61	693.88	696.28	767.34	763.96	743.28	734.26	787.70	723.94	736.57
Indirect	5.52	8.95	48.29	127.78	219.45	293.91	350.70	386.31	389.79	387.88	414.71	421.49	418.92	414.77	440.87	414.33	424.57
Total	12.85	18.17	108.57	341.62	624.13	830.20	1,002.80	1,105.92	1,083.67	1,084.16	1,182.05	1,185.45	1,162.21	1,149.02	1,228.57	1,138.26	1,161.14

Table 22-6: Economic impact of ongoing and operating expenditure of the Project, 2030-2045

	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Output (\$M)																
Direct	984.92	1,034.25	1,026.68	1,076.23	1,066.97	1,109.28	1,122.08	1,155.11	1,127.46	1,138.55	1,182.23	1,227.04	1,278.43	1,286.39	1,385.77	1,476.93
Indirect	1,372.61	1,403.27	1,402.36	1,464.32	1,451.32	1,511.40	1,538.34	1,570.41	1,539.64	1,567.47	1,621.93	1,699.98	1,791.12	1,820.08	1,954.48	2,032.69
Total	2,357.53	2,437.52	2,429.03	2,540.55	2,518.29	2,620.68	2,660.42	2,725.52	2,667.10	2,706.02	2,804.16	2,927.02	3,069.55	3,106.47	3,340.25	3,509.62
Household Income (\$M)																
Direct	280.80	289.18	288.60	301.45	298.84	311.83	316.44	323.65	317.01	321.56	332.37	346.86	363.64	368.10	394.72	414.52
Indirect	159.26	163.65	163.31	170.59	168.82	178.62	179.99	183.49	179.67	181.33	185.98	192.91	201.10	202.59	215.72	231.01
Total	440.06	452.83	451.91	472.04	467.66	490.45	496.42	507.14	496.68	502.88	518.36	539.77	564.74	570.70	610.44	645.53
Employment (FTEs)																
Direct	3,722	3,833	3,826	3,996	3,962	4,137	4,196	4,290	4,203	4,261	4,401	4,590	4,809	4,867	5,214	5,479
Indirect	1,969	2,021	2,018	2,108	2,086	2,205	2,223	2,266	2,219	2,241	2,299	2,387	2,491	2,511	2,675	2,859
Total	5,691	5,854	5,843	6,104	6,049	6,342	6,419	6,556	6,422	6,501	6,701	6,977	7,300	7,378	7,889	8,338
Value Added (\$M)																
Direct	751.96	764.89	765.13	798.70	791.48	823.10	839.50	855.89	839.70	857.02	887.39	932.79	986.11	1,004.64	1,079.90	1,115.79
Indirect	426.96	460.08	453.29	477.22	472.67	489.83	493.15	512.20	497.46	499.42	521.46	537.24	555.07	553.67	600.70	654.84
Total	1,178.92	1,224.97	1,218.42	1,275.92	1,264.14	1,312.92	1,332.64	1,368.09	1,337.15	1,356.44	1,408.85	1,470.03	1,541.18	1,558.31	1,680.60	1,770.63

22.3.3 Value of Coal Exports

The Project will produce approximately 856 million tonnes (Mt) of coal for export from Queensland throughout the LOM. The value of these exports to the Queensland economy will be approximately \$83.6 billion. Once fully operational the coal mine will produce approximately 30 Mtpa of coal exports, equating to a value of \$2.9 billion per annum.

22.3.4 Opportunity Cost of the Project

Based on advice from the Proponent the mine site has an optimal stocking capacity of 13,430 head of cattle. In 2005-06, the cattle herd within Barcaldine Regional Council was approximately 86,700 head of cattle, which produced an annual slaughter value of approximately \$93.4 million, representing a slaughter value of approximately \$1,100 per head of cattle. Hence the annual slaughter value that the mine site could support is approximately \$14.8 million in annual agricultural output.

22.3.5 Summary of Impacts and Mitigation Measures

The Project represents a major potential stimulus to the regional, state and national economies. The Project will generate significant demand for labour in both development and operational phases.

A significant quantum of on-site employment is anticipated to be satisfied by a Project workforce accommodated in Project accommodation or transferred by fly-in fly-out / drive-in drive-out arrangements. However, a small proportion of the workforce is likely to choose to reside within the region. The demand for labour would not be exclusively limited to mine construction or operation. Mine-related expenditure will stimulate significant labour demand throughout Queensland.

The Project is likely to place pressure on local and regional labour and accommodation (both housing and commercial accommodation) markets. The local area and the region have experienced rising property costs associated with growing interest in the development of resource projects within the Galilee Basin.

The Project will generate significant positive economic impacts in the form of additional exports, increased employment, and demand for local and regional production. However, the Project will place growing pressure on local and regional social infrastructure and could result in localised inflation, particularly in relation to wages, housing and accommodation.

To encourage the development of local and regional industry capability, HPPL will develop an employment and procurement policy guided by industry standards and relevant government guidelines that will reflect:

- Maximising local employment (including work readiness if appropriate);
- Promoting Indigenous employment; and
- Employment of apprentices and trainees (including work readiness if appropriate).

Potential shortages in hard and soft social infrastructure that may result from increased local and regional population (facilitated by increased labour demand) are addressed in the social impact assessment (refer to Volume 2, Section 20).

22.4 Conclusions

The Project will result in substantial economic impacts throughout the region, Queensland and Australia. The overall level of economic activity resulting from mine construction and operation will induce significant output, household income, employment and value added effects throughout the Queensland economy. The major economic impacts of the Project include:

- Peak on-site construction employment of over 1,000 and peak on-site operational workforce in excess of 2,300 workers;
- Peak employment effects throughout the Queensland economy of 7,230 FTE positions (including 2,850 indirect FTE positions) during construction and 8,338 FTE positions (including 2,859 indirect FTE positions) in operation;
- Peak value added effects of \$749.54 million (including \$262.19 million in indirect value added effects) resulting from construction and capital expenditure, and \$1,770.63 million in value added effects (including \$654.84 million in indirect value added effects) resulting from ongoing and operational expenditure;
- Export of approximately 856 Mt of coal from Queensland throughout the life of the mine, with an export value of approximately \$83.6 billion; and
- Annual exports of approximately 30 Mtpa of coal (once fully operational) equating to a value of \$2.9 billion per annum.