

23 | Economics



Section 23 Economics

23.1 Introduction

Hancock Galilee Pty Ltd (HGPL), the Proponent, proposes to establish a 30 million tonnes per annum (Mtpa) capacity thermal coal mine in the Galilee Basin to the north of Alpha in Central Queensland. The Kevin's Corner Coal Project (the Project) involves the construction of an open-cut and underground longwall coal mine and processing plant and associated mine infrastructure. The Project has an expected mine life of 30 plus years. The Project will utilise the multi-user rail and port facilities proposed for the HCPL Alpha Coal Project.

This section of the Environmental Impact Statement (EIS) pertains to the economic environment within which 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 adjacent Alpha Coal Project, which incorporates open-cut mine, processing plant, railway and coal export terminal. It is anticipated that that coal mined at Kevin's Corner will be hauled via the Alpha Coal Railway.

23.2 Description of Economic Environment and Values

23.2.1 Regional Economy

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

The socioeconomic profile (ABS, 2006) highlights that the component statistical local areas (SLAs) of BRC are more mature relative to Queensland, with a high incidence of lone person households. The region is characterised by a high incidence of home ownership but lower average household incomes. The agriculture, forestry and fishing sector was the dominant industry of employment in Aramac SLA and Jericho SLA but the incidence of employment in this sector (ABS, 2006) has declined since the 2001 Census.

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.

In Central West SD, gross regional product decreased from \$629 million in 2000-01 to \$557 million in 2005-06 (OESR, 2008). In Central West SD, agriculture, forestry and fishing was the most significant sector in terms of gross value added.

Economic opportunities emerge from the presence of regional resources and capabilities that provide prospective industries with a locational advantage. The absence of suitable regional resources and capabilities for specific types of industries will limit their development and sustainability. The working population in Barcaldine RC declined between 2001 and 2006, principally due to rural decline. However, the recent spate of resource sector projects within the region present new opportunities in the primary industries, more so in mining than agriculture. In 2006, Barcaldine RC and Central West SD recorded a significant competitive advantage for primary industries relative to Queensland.

¹ Detailed analysis based on statistical local areas was also conducted for Barcaldine Regional Council.

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 BRC and its component SLAs has been consistently lower than the Queensland average (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, 2006-07). Agriculture, forestry and fishing was the dominant business type 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 \$93.40 million or 96.3% of total livestock slaughtered. Horticulture and cropping were not identified as significant agricultural industries in BRC.

Analysis contained in Volume 2, Appendix V suggests that the local and regional economic environments of BRC and Central West SD have improved considerably over the last 5 to 10 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 5 to 10 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, agriculture will face competition from the services sector.

23.2.2 Availability of Accommodation and Housing within 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) (ABS, various years). 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.

Data for the site occupancy rate of caravans in BRC were 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.

Between 2001-02 and 2009-10, there were 57 residential building approvals in Barcaldine RC, including 51 new houses. The total value of approvals was highest in 2009-10 in Barcaldine RC (\$11.4 million) and Central West SD (\$29.2 million) (ABS, 2009-10). According to various construction cost indices building prices in Central West SD are approximately 20% to 40% higher than Metropolitan Brisbane.

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.

Between 2001 and 2009, there were 154 vacant lands sales in Barcaldine RC. Within Barcaldine RC, the median sale price of vacant land was highest in Jericho SLA.

Alpha State Suburb is located within Jericho SLA and as of the 2006 Census recorded a population of 609 persons. Within the Alpha State Suburb, the number of households increased from 191 households in 2001 to 216 households in 2006. The number of households renting increased from 45 households in 2001 to 69 households in 2006. Average weekly rents decreased from \$73 in 2001 to \$61 in 2006.

Based on the paucity of rental bond data and the limited rental listings data, it is clear that the rental housing market in Alpha and Barcaldine is thin. Between July 2009 and February 2011, there were 20 rental listings in Alpha (generally between \$160 and \$180 per week) and three listings in Barcaldine (between \$200 and \$220 per week).

23.3 Potential Economic Impacts and Mitigation Measures

The purpose of 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. The economic assessment will entail 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.

Table 23-1 below describes the various impact measures used in economic impact assessment.



Table 23-1: 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. & West, G. (2001) Community Economic Analysis, Department of Primary Industries: Brisbane, Qld

23.3.1 Construction and Capital Effects

Table 23-2 below summarises the total construction and capital costs of the Kevin's Corner Coal Project. These costs will be expended throughout the life of the Project and comprise both initial and replacement capital costs.

The total construction and capital cost of the Project is approximately \$6,952.1 million, comprising approximately \$3,631.6 million in domestic expenditures and \$3,320.5 million in expenditure overseas. The economic impact of the proposed Project on the regional, state and Australian economies is limited to those generated by domestic expenditures.

A detailed breakdown of Project expenditures by year and type is provided in Section 5.1.2 of Volume 2, Appendix V of the EIS.

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.

Table 23-2: Total construction and capital costs for the Project (\$M)

Expenditure item	Domestic	Overseas	Total
Drill & Blast	\$2.5	\$3.8	\$6.3
Draglines	\$113.8	\$170.6	\$284.4
Prestrip Fleets	\$179.3	\$269.0	\$448.3
Coal Mining Fleets	\$75.1	\$112.7	\$187.8
Ancillary Fleets	\$61.0	\$142.4	\$203.4
Coal Handling and Preparation Plant (CHPP) and Mobile Equipment	\$470.2	\$470.2	\$940.4
Access Road	\$282.6	\$0.0	\$282.6
Infrastructure & Power	\$153.1	\$0.0	\$153.1
Accommodation Village and Airstrip	\$99.2	\$99.2	\$198.4
Other Infrastructure	\$46.5	\$46.5	\$93.0
Underground	\$2,006.2	\$2,006.2	\$4,012.4
Land Acquisition	\$20.3	\$0.0	\$20.3
BFS	\$99.0	\$0.0	\$99.0
Other	\$22.8	\$0.0	\$22.8
Total	\$3,631.6	\$3,320.5	\$6,952.1

Source: Economic Associates estimates

Output or Consumption Effects

The output (or consumption) impacts of construction and capital works associated with the Project are outlined in Table 23-3 and Table 23-4. The most significant output (or consumption) impacts associated with these works are anticipated to arise in 2013, 2014 and 2015. These three years account for approximately 29% of output (or consumption) effects resulting from the Project.

In 2013, total output (or consumption) impacts of construction and capital works associated with the Project are estimated to be approximately \$959.05 million, comprising \$386.76 million in direct output (or consumption) effects and \$572.29 million in indirect output (or consumption) effects. The construction and manufacturing sectors are anticipated to benefit from the greatest stimulus, equating to approximately \$313.96 million and \$176.25 million, respectively.

In 2014, total output (or consumption) impacts of construction and capital works associated with the Project are estimated to be approximately \$808.89 million, comprising \$340.88 million in direct output (or consumption) effects and \$468.02 million in indirect output (or consumption) effects. The manufacturing and construction sectors are anticipated to benefit from the greatest stimulus, equating to approximately \$345.38 million and \$150.56 million, respectively.

In 2015, total output (or consumption) impacts of construction and capital works associated with the Project are estimated to be approximately \$928.55 million, comprising \$399.07 million in direct output (or consumption) effects and \$529.49 million in indirect output (or consumption) effects. The manufacturing and construction sectors are anticipated to benefit from the greatest stimulus, equating to approximately \$413.50 million and \$126.93 million, respectively.

Household Income Effects

The household income impacts of construction and capital works associated with the Project are outlined in Table 23-3 and Table 23-4 below.

In 2013, total household income impacts of construction and capital works associated with the Project are estimated to be approximately \$232.05 million, comprising \$87.78 million in direct household income effects and \$144.27 million in indirect household income effects. The transport, postal & warehousing and manufacturing sectors are anticipated to benefit from the greatest stimulus, equating to approximately \$65.75 million and \$51.66 million, respectively.

In 2014, total household income impacts of construction and capital works associated with the Project are estimated to be approximately \$234.60 million, comprising \$112.69 million in direct household income effects and \$121.91 million in indirect household income effects. The manufacturing and transport, postal & warehousing sectors are anticipated to benefit from the greatest stimulus, equating to approximately \$122.35 million and \$37.18 million, respectively.

In 2015, total household income impacts of construction and capital works associated with the Project are estimated to be approximately \$279.40 million, comprising \$141.19 million in direct household income effects and \$138.21 million in indirect household income effects. The manufacturing and transport, postal & warehousing sectors are anticipated to benefit from the greatest stimulus, equating to approximately \$147.56 million and \$45.60 million, respectively.

Employment Effects

The total employment impacts of construction and capital expenditure associated with the Project are outlined in Table 23-3 and Table 23-4 below.

In 2013, total employment impacts of construction and capital works associated with the Project are estimated to be approximately 4,105 full time equivalent (FTE) positions, comprising direct employment effects of 1,802 full time equivalent positions and indirect employment effects of 2,303 full time equivalent positions. Employment effects are anticipated to be most significant in the transport, postal & warehousing and construction sectors, where construction and capital expenditure is anticipated to generate 1,254 full time equivalent positions and 1,163 full time equivalent positions, respectively.

In 2014, total employment impacts of construction and capital works associated with the Project are estimated to be approximately 3,553 full time equivalent positions, comprising direct employment effects of 1,748 full time equivalent positions and indirect employment effects of 1,805 full time equivalent positions. Employment effects are anticipated to be most significant in the manufacturing and transport, postal & warehousing sectors, where construction and capital expenditure is anticipated to generate 1,493 full time equivalent positions and 692 full time equivalent positions, respectively.

In 2015, total employment impacts of construction and capital works associated with the Project are estimated to be approximately 4,131 full time equivalent positions, comprising direct employment effects of 2,126 full time equivalent positions and indirect employment effects of 2,005 full time equivalent positions. Employment effects are anticipated to be most significant in the manufacturing and transport, postal & warehousing sectors, where construction and capital expenditure is anticipated to generate 1,807 full time equivalent positions and 849 full time equivalent positions, respectively.

Value Added Effects

The value added impacts of construction and capital works associated with the Project are outlined in Table 23-3 and Table 23-4 below.

In 2013, total value added impacts of construction and capital works associated with the Project are estimated to be approximately \$399.24 million, comprising \$142.45 million in direct value added effects and \$256.79 million in indirect value added effects. The transport, postal & warehousing and manufacturing sectors are anticipated to benefit from the greatest stimulus, equating to approximately \$90.75 million and \$78.42 million, respectively.

In 2014, total value added impacts of construction and capital works associated with the Project are estimated to be approximately \$359.84 million, comprising \$150.48 million in direct value added effects and \$209.37 million in indirect value added effects. The manufacturing and transport, postal & warehousing sectors are anticipated to benefit from the greatest stimulus, equating to approximately \$154.11 million and \$51.62 million, respectively.

In 2015, total value added impacts of construction and capital works associated with the Project are estimated to be approximately \$424.40 million, comprising \$185.38 million in direct value added effects and \$239.02 million in indirect value added effects. The manufacturing and transport, postal & warehousing sectors are anticipated to benefit from the greatest stimulus, equating to approximately \$185.42 million and \$63.30 million, respectively.

Table 23-3: Economic impacts of construction and capital expenditure, 2013-2028

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Output (\$M)																
Direct	\$386.76	\$340.88	\$399.07	\$192.60	\$244.56	\$198.18	\$189.08	\$160.28	\$108.09	\$29.05	\$43.92	\$89.92	\$40.77	\$68.52	\$51.07	\$104.33
Indirect	\$572.29	\$468.02	\$529.49	\$300.53	\$389.39	\$336.41	\$328.59	\$249.14	\$159.30	\$50.06	\$75.06	\$142.30	\$70.48	\$115.04	\$88.75	\$168.35
Total	\$959.05	\$808.89	\$928.55	\$493.13	\$633.94	\$534.59	\$517.68	\$409.42	\$267.40	\$79.11	\$118.98	\$232.22	\$111.24	\$183.56	\$139.82	\$272.68
Household Income (\$M)																
Direct	\$87.78	\$112.69	\$141.19	\$39.28	\$46.89	\$23.05	\$16.60	\$34.37	\$29.49	\$2.69	\$4.30	\$17.39	\$3.71	\$8.37	\$4.48	\$18.09
Indirect	\$144.27	\$121.91	\$138.21	\$76.55	\$99.54	\$84.78	\$82.40	\$63.92	\$41.41	\$12.55	\$18.79	\$36.34	\$17.66	\$28.95	\$22.25	\$42.85
Total	\$232.05	\$234.60	\$279.40	\$115.84	\$146.44	\$107.83	\$99.00	\$98.29	\$70.90	\$15.24	\$23.10	\$53.73	\$21.37	\$37.33	\$26.74	\$60.94
Employment (FTEs)																
Direct	1,802	1,748	2,126	737	856	576	508	585	443	79	120	313	110	201	137	348
Indirect	2,303	1,805	2,005	1,215	1,578	1,398	1,378	998	623	209	312	574	295	475	372	685
Total	4,105	3,553	4,131	1,952	2,435	1,974	1,886	1,583	1,066	288	432	888	405	676	509	1,034
Value Added (\$M)																
Direct	\$142.45	\$150.48	\$185.38	\$62.61	\$75.54	\$48.14	\$41.21	\$52.81	\$41.10	\$6.49	\$10.07	\$28.00	\$9.03	\$17.12	\$11.13	\$30.61
Indirect	\$256.79	\$209.37	\$239.02	\$133.06	\$171.48	\$147.67	\$144.03	\$110.23	\$70.69	\$22.02	\$33.13	\$62.92	\$30.96	\$50.75	\$38.90	\$74.24
Total	\$399.24	\$359.84	\$424.40	\$195.67	\$247.02	\$195.82	\$185.24	\$163.04	\$111.80	\$28.51	\$43.20	\$90.92	\$39.99	\$67.87	\$50.03	\$104.85

Source: Economic Associates estimates

Table 23-4: Economic impacts of construction and capital expenditure, 2029-2043

	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Output (\$M)															
Direct	\$56.21	\$74.62	\$71.88	\$53.57	\$49.48	\$119.15	\$49.12	\$53.49	\$58.15	\$109.33	\$109.15	\$88.58	\$36.14	\$25.12	\$30.49
Indirect	\$97.68	\$118.19	\$122.79	\$90.09	\$85.64	\$193.81	\$73.59	\$92.95	\$100.20	\$188.14	\$188.11	\$151.39	\$53.98	\$43.66	\$52.99
Total	\$153.89	\$192.82	\$194.67	\$143.67	\$135.12	\$312.96	\$122.70	\$146.44	\$158.35	\$297.47	\$297.25	\$239.98	\$90.11	\$68.78	\$83.48
Household Income (\$M)															
Direct	\$4.93	\$14.34	\$7.54	\$6.18	\$4.47	\$19.71	\$12.13	\$4.70	\$5.41	\$10.25	\$10.56	\$9.46	\$9.25	\$2.21	\$2.68
Indirect	\$24.49	\$30.17	\$30.85	\$22.61	\$21.47	\$49.27	\$18.97	\$23.31	\$25.11	\$47.14	\$47.22	\$38.07	\$13.96	\$10.95	\$13.29
Total	\$29.43	\$44.51	\$38.39	\$28.80	\$25.93	\$68.97	\$31.10	\$28.01	\$30.51	\$57.38	\$57.78	\$47.53	\$23.21	\$13.15	\$15.96
Employment (FTEs)															
Direct	151	259	202	154	134	391	191	144	158	297	301	251	140	68	82
Indirect	410	477	511	372	358	792	289	390	418	785	786	631	205	183	222
Total	561	736	713	526	492	1,182	480	534	576	1,082	1,087	881	346	251	304
Value Added (\$M)															
Direct	\$12.25	\$23.16	\$16.81	\$13.13	\$10.92	\$34.09	\$17.67	\$11.66	\$13.01	\$24.55	\$24.67	\$20.81	\$13.23	\$5.48	\$6.65
Indirect	\$42.81	\$52.27	\$53.99	\$39.85	\$37.60	\$85.37	\$32.80	\$40.74	\$44.07	\$82.80	\$82.55	\$66.48	\$23.97	\$19.14	\$23.22
Total	\$55.06	\$75.43	\$70.80	\$52.98	\$48.52	\$119.46	\$50.46	\$52.40	\$57.09	\$107.35	\$107.22	\$87.29	\$37.20	\$24.61	\$29.87

Source: Economic Associates estimates

23.3.2 Ongoing and Operating Effects

Operating costs associated with the Project are anticipated to commence in 2011. Total operating expenditure between 2014 and 2043 is estimated at \$22,895.9 million, with expenditure peaking in 2020 at \$946.9 million. Annual operating expenditure associated with the Project is anticipated to remain above \$800 million between 2019 and 2040, with operating costs declining in later years to reflect the wind-down of mining operations and transition to rehabilitation. Operating costs associated with the Project are outlined in Table 23-5 and Table 23-6 below.

Table 23-5: Ongoing and operating costs of the Kevin's Corner Coal Project, 2014-2028

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Open-cut Waste Removal	0.0	88.8	111.8	130.6	132.3	128.0	147.3	75.8	73.8	70.6	71.2	68.6	71.4	71.3	68.5
Open-cut Mining	0.0	5.3	12.2	19.0	20.5	9.4	14.6	11.1	9.3	7.4	7.5	7.8	7.5	7.7	8.7
Underground Mining	0.0	6.7	166.7	359.6	398.9	476.6	552.7	553.8	556.1	563.9	546.0	556.8	541.2	541.0	545.8
CHPP	0.0	37.8	51.1	67.1	87.0	88.4	108.2	106.0	98.4	107.6	134.5	103.4	111.7	119.0	103.0
Overheads	0.0	29.9	37.2	39.0	39.3	37.5	34.9	26.8	27.4	25.2	26.1	25.0	25.1	25.1	25.3
Mine Infrastructure Area (MIA)	12.9	22.4	31.3	46.6	61.0	67.4	89.1	94.5	92.7	90.9	91.7	92.0	90.8	91.1	91.2
Total	12.9	190.9	410.3	661.8	739.0	807.3	946.9	868.0	857.8	865.6	877.1	853.6	847.7	855.2	842.6

Table 23-6: Ongoing and operating costs of the Kevin's Corner Coal Project, 2029-2043

	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Open-cut Waste Removal	67.0	89.8	103.7	95.4	100.0	93.8	131.8	127.1	128.0	127.8	121.6	128.3	108.9	128.7	69.3
Open-cut Mining	8.4	9.1	10.6	12.3	10.8	9.9	12.5	13.7	13.1	12.7	15.8	15.1	15.6	15.9	13.9
Underground Mining	526.5	537.2	531.2	527.7	519.8	509.8	468.2	469.0	463.6	474.1	465.3	462.3	413.8	421.4	282.7
CHPP	110.8	99.0	103.4	113.0	98.1	130.6	118.1	99.1	117.4	110.9	98.9	96.2	108.0	103.8	85.4
Overheads	25.6	27.4	28.2	27.7	28.3	28.6	31.2	31.5	31.3	31.2	31.8	31.5	31.4	31.0	20.8
MIA	89.8	91.4	93.9	94.2	93.5	92.5	90.8	91.7	89.6	89.7	92.1	90.9	88.1	84.6	73.3
Total	828.0	853.7	870.9	870.2	850.5	865.3	852.5	832.1	843.0	846.4	825.5	824.3	765.8	785.5	545.4



Output or Consumption Impacts

The output (or consumption) impacts of operating expenditure associated with the Project are outlined in Table 23-7 and Table 23-8 below. The economic impacts resulting from operating expenditure increase from generally minimal impacts in the first year of operation, peaking in 2020, and remaining significant for the remaining life of the Project.

In the first year of operation (2014), total output (or consumption) impacts of operating expenditure associated with the Project are estimated to be approximately \$35.04 million, comprising \$12.88 million in direct output (or consumption) effects and \$22.16 million in indirect output (or consumption) effects. The most significantly impacted sector at this stage of the Project is construction, accounting for over one-half of all direct impacts (\$17.97 million or 51% of total impacts).

By 2020, total output (or consumption) impacts of operating expenditure associated with the Project are estimated to increase to approximately \$1,997.79 million, comprising \$946.87 million in direct output (or consumption) effects and \$1,050.92 million in indirect output (or consumption) effects.

In 2031, total output (or consumption) impacts of operating expenditure associated with the Project are estimated to be approximately \$1,838.16 million, comprising \$870.93 million in direct output (or consumption) effects and \$967.23 million in indirect output (or consumption) effects.

In the final year of operation (2043), total output (or consumption) impacts of operating expenditure associated with the Project are estimated to be approximately \$1,154.95 million, comprising \$545.39 million in direct output (or consumption) effects and \$609.56 million in indirect output (or consumption) effects.

Household Income Effects

The household income impacts of operating expenditure associated with the Project are outlined in Table 23-7 and Table 23-8 below.

In the first year of operation (2014), total household income impacts of operating expenditure associated with the Project are estimated to be approximately \$6.84 million, comprising \$1.29 million in direct household income effects and \$5.55 million in indirect household income effects.

By 2020, total household income impacts of operating expenditure associated with the Project are estimated to increase to approximately \$546.78 million, comprising \$270.87 million in direct household income effects and \$275.90 million in indirect household income effects.

By 2031, total household income impacts of operating expenditure associated with the Project are estimated to be approximately \$500.90 million, comprising \$247.24 million in direct household income effects and \$253.66 million in indirect household income effects.

In the final year of operation (2043), total household income impacts of operating expenditure associated with the Project are estimated to be approximately \$309.24 million, comprising \$149.94 million in direct household income effects and \$159.30 million in indirect household income effects.

Employment Effects

The total employment impacts of operating expenditure associated with the Project are detailed in Table 23-7 and Table 23-8 below.

In the first year of operation (2014), operating expenditure associated with the Project is estimated to support 127 full time equivalent (FTE) positions, including 35 direct full time equivalent positions and 92 indirect full time equivalent positions.

In 2020, operating expenditure associated with the Kevin's Corner is estimated to support 7,258 full time equivalent positions, including 3,477 direct full time equivalent positions and 3,781 indirect full time equivalent positions.

In 2031, operating expenditure associated with the Kevin's Corner is estimated to support 6,664 full time equivalent positions, including 3,182 direct full time equivalent positions and 3,482 indirect full time equivalent positions.

In the final year of operation (2043), operating expenditure associated with the Project is estimated to support 4,160 full time equivalent positions, including 1,955 direct full time equivalent positions and 2,206 indirect full time equivalent positions.

Value Added Effects

The value added impacts of operating expenditure associated with the Project are detailed in Table 23-7 and Table 23-8 below.

In the first year of operation (2014), total value added impacts of operating expenditure associated with the Project are estimated to be approximately \$12.70 million, comprising \$2.96 million in direct value added effects and \$9.75 million in value added effects. The most significantly impacted sector at this stage of the Project is construction, accounting for over one-third of all direct impacts (\$4.47 million or 35% of total impacts).

By 2020, total value added impacts of operating expenditure associated with the Project are estimated to increase to approximately \$984.66 million, comprising \$510.10 million in direct value added effects and \$474.56 million in indirect value added effects.

In 2031, total value added impacts of operating expenditure associated with the Project are estimated to be approximately \$905.00 million, comprising \$468.15 million in direct value added effects and \$436.85 million in indirect value added effects.

In the final year of operation (2043), total value added impacts of operating expenditure associated with the Project are estimated to be approximately \$565.11 million, comprising \$289.82 million in direct value added effects and \$275.29 million in indirect value added effects.

Table 23-7: Economic impact of ongoing and operating expenditure of the Project, 2014-2028

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Output (\$M)															
Direct	\$12.88	\$190.94	\$410.31	\$661.84	\$739.04	\$807.30	\$946.87	\$867.99	\$857.76	\$865.56	\$877.09	\$853.61	\$847.74	\$855.21	\$842.56
Indirect	\$22.16	\$198.05	\$459.11	\$743.70	\$828.35	\$898.50	\$1,050.92	\$981.67	\$966.49	\$972.99	\$992.95	\$961.39	\$954.62	\$963.08	\$944.20
Total	\$35.04	\$388.99	\$869.41	\$1,405.54	\$1,567.39	\$1,705.80	\$1,997.79	\$1,849.66	\$1,824.25	\$1,838.55	\$1,870.04	\$1,814.99	\$1,802.36	\$1,818.28	\$1,786.76
Household Income (\$M)															
Direct	\$1.29	\$40.50	\$122.70	\$204.16	\$222.60	\$238.94	\$270.87	\$257.50	\$252.49	\$255.93	\$263.52	\$252.36	\$250.65	\$253.13	\$245.58
Indirect	\$5.55	\$50.82	\$120.76	\$196.15	\$218.01	\$236.33	\$275.90	\$258.20	\$254.06	\$255.93	\$261.43	\$252.84	\$251.07	\$253.32	\$248.09
Total	\$6.84	\$91.32	\$243.46	\$400.32	\$440.61	\$475.27	\$546.78	\$515.70	\$506.56	\$511.86	\$524.96	\$505.20	\$501.73	\$506.45	\$493.66
Employment (FTEs)															
Direct	35	542	1,568	2,597	2,844	3,050	3,477	3,309	3,245	3,281	3,376	3,238	3,216	3,247	3,155
Indirect	92	717	1,655	2,670	2,976	3,225	3,781	3,543	3,486	3,505	3,580	3,466	3,442	3,472	3,403
Total	127	1,259	3,223	5,267	5,820	6,274	7,258	6,852	6,731	6,786	6,956	6,704	6,658	6,719	6,557
Value Added (\$M)															
Direct	\$2.96	\$104.17	\$220.15	\$356.13	\$397.07	\$435.67	\$510.10	\$462.04	\$457.57	\$463.10	\$467.48	\$455.87	\$452.82	\$456.88	\$451.04
Indirect	\$9.75	\$90.06	\$207.39	\$335.75	\$374.07	\$405.86	\$474.56	\$442.78	\$436.06	\$439.04	\$447.85	\$433.76	\$430.70	\$434.51	\$426.15
Total	\$12.70	\$194.23	\$427.54	\$691.88	\$771.14	\$841.52	\$984.66	\$904.82	\$893.63	\$902.14	\$915.33	\$889.62	\$883.52	\$891.39	\$877.19

Table 23-8: Economic impact of ongoing and operating expenditure of the Project, 2029-2043

	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Output (\$M)															
Direct	\$828.00	\$853.73	\$870.93	\$870.22	\$850.47	\$865.30	\$852.48	\$832.13	\$843.02	\$846.45	\$825.48	\$824.29	\$765.85	\$785.49	\$545.39
Indirect	\$930.13	\$947.57	\$967.23	\$970.88	\$939.97	\$962.95	\$943.61	\$914.98	\$931.89	\$932.02	\$915.07	\$898.83	\$845.95	\$854.58	\$609.56
Total	\$1,758.13	\$1,801.30	\$1,838.16	\$1,841.10	\$1,790.43	\$1,828.25	\$1,796.09	\$1,747.11	\$1,774.91	\$1,778.46	\$1,740.55	\$1,723.11	\$1,611.80	\$1,640.08	\$1,154.95
Household Income (\$M)															
Direct	\$243.19	\$242.72	\$247.24	\$249.72	\$237.89	\$247.80	\$239.24	\$227.69	\$235.71	\$234.44	\$229.72	\$220.58	\$208.88	\$207.98	\$149.94
Indirect	\$244.46	\$248.55	\$253.66	\$254.80	\$246.23	\$252.64	\$247.24	\$239.30	\$244.11	\$244.01	\$239.55	\$234.75	\$221.18	\$223.18	\$159.30
Total	\$487.65	\$491.27	\$500.90	\$504.52	\$484.12	\$500.44	\$486.48	\$466.99	\$479.82	\$478.45	\$469.27	\$455.33	\$430.05	\$431.16	\$309.24
Employment (FTEs)															
Direct	3,122	3,122	3,182	3,214	3,066	3,186	3,084	2,943	3,039	3,023	2,969	2,854	2,708	2,692	1,955
Indirect	3,351	3,410	3,482	3,498	3,382	3,465	3,396	3,293	3,354	3,352	3,297	3,231	3,051	3,075	2,206
Total	6,473	6,532	6,664	6,711	6,448	6,651	6,480	6,236	6,393	6,375	6,266	6,086	5,759	5,767	4,160
Value Added (\$M)															
Direct	\$442.76	\$459.25	\$468.15	\$466.62	\$458.04	\$464.85	\$458.75	\$448.76	\$453.95	\$456.78	\$443.11	\$446.42	\$411.16	\$425.88	\$289.82
Indirect	\$419.80	\$427.98	\$436.85	\$438.35	\$424.71	\$434.92	\$426.31	\$413.59	\$421.05	\$421.22	\$413.42	\$406.53	\$382.25	\$386.45	\$275.29
Total	\$862.56	\$887.23	\$905.00	\$904.96	\$882.76	\$899.77	\$885.06	\$862.35	\$875.00	\$878.00	\$856.53	\$852.95	\$793.41	\$812.33	\$565.11

Source: Economic Associates estimates



23.3.3 Summary of Other Impacts

The Kevin's Corner Coal 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 fly-in-fly-out or drive-in-drive-out workers. However, a proportion of the workforce is likely to choose to reside within the region. The demand for labour will not be exclusively limited to mine construction or operation. Project-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.

Value of Coal Exports

The Kevin's Corner Coal Project will produce approximately 856 million tonnes (Mt) of coal for export from Queensland throughout the life of the mine, the value of these exports to the Queensland economy will be approximately \$67.8 billion. Once fully operational the coal mine will produce between 25 Mtpa and 30 Mtpa of coal exports, equating to a value of \$2.7 billion per annum.

Project Opportunity Costs

Assuming that no grazing would occur within the Project area and a grazing density of one head of cattle per 12 hectares (ha) and 10,200 hectares of non-remnant grassland for grazing, the subject site could support approximately 850 head of cattle. Alternatively, assuming that grazing only ceased within non-remnant grassland directly impacted by the Project (i.e. 2,988 hectares) and the same stocking rate as discussed above, the loss of production would be 249 head of cattle. Hence the loss of grazing production as a result of the Project is likely to be between 249 head of cattle and 850 head of cattle.

Data contained in Section 3.5.3 of Volume 2, Appendix V indicate a slaughter value of approximately \$1,100 per head of cattle. Based on estimates provided in Section 5.3.2 of that report, the loss of potential grazing production is likely to be between 249 head of cattle and 850 head of cattle, representing a potential loss in slaughter value of between \$0.3 million and \$0.9 million per annum. Based on a social opportunity cost of capital of 6%, this represents a capitalised value of between \$4.6 million and \$15.6 million.

Approximately 5,356 hectares (ha) of woodland or heath are to be directly impact by the Project. Based on a total economic value of \$200/ha/annum, the annual economic value of direct impacts on woodland and heath vegetation communities would be approximately \$1.1 million per annum. Based

on a social opportunity cost of capital of 6%³, the capitalised value of these direct impacts on woodland and heath communities would be approximately \$17.9 million.

23.3.4 Localised Inflation

Large resource projects can push demand well ahead of supply for a range of goods and services, leading to localised inflation. Those who remain outside the mining industry or industries servicing mining can be disadvantaged, because of a wide range of affordability issues (e.g. unaffordable rents and housing, higher costs and poor availability of services, and a loss of skilled labour to sectors offering much higher remuneration).

The most significant localised inflationary impact is likely to be felt in housing and accommodation. However, analysis contained in Section 4 of Volume 2, Appendix V suggests that property market inflation has already occurred as a result of property market speculation.

Inflation in property prices can be addressed by increasing the supply of residential product. However, the risk of a slow-down in the resources sector, similar to that experienced in the 1990s, militates against significant additions to the housing stock.

Localised inflation in everyday items, such as groceries, is likely to be more limited, with higher prices experienced in western communities more likely to be attributable to transport costs, rather than demand pull inflation.

23.3.5 Distribution Effects of the Project

Due to the nature of the Kevin's Corner Project, the project creates significant demand for skilled blue collar workers. The existing labour pool within the region is shallow. As such, this will cause inflationary wage prices within sectors currently employing blue collar workers. As a result, competing sectors such as agriculture and population servicing sectors (e.g. automotive industry, general industry etc) are also likely to experience higher incomes. Persons renting within the area are likely to face cost pressures while household owners will benefit from an increase in asset wealth. To some extent these impacts would be moderated by the use of non-resident workers, however given the size of the existing labour market even modest demand for resident workers is likely to result in some inflationary pressure. People receiving government transfer payment and self funding retirees would not significantly benefit from the project. .

23.3.6 Strategies to Mitigate Impacts

There are a number of Queensland Government policies that seek to encourage local participation in major government funded projects or projects that are recipients of significant Queensland Government contributions. These policies include:

- Queensland Government Building and Construction Contracts Structured Training Policy (the 10 percent policy);
- Indigenous Employment Policy for Queensland Government Building and Civil Construction Projects, 2008 (the 20 percent policy); and

³ A 6% discount rate is the standard test discount rate for Queensland Government projects.

- Local Industry Policy (Department of Employment, Economic Development and Innovation, 2008).

These policies typically apply to the following groups:

- Queensland Government departments;
- Recipients of building construction grants; and
- Contractors who successfully tender for Queensland Government projects.

In recognition of these policies, HGPL will provide opportunities for:

- Structured training;
- Participation in construction and operation by trainees and indigenous workers; and
- Participation in construction and operation by local suppliers and contractors.

Training & Skills Development

The Queensland Government Building and Construction Contracts Structured Training Policy (Queensland Government, 2011) sets a target of 10% of labour hours to be recruited from apprentices and trainees and up-skilling of the workforce.

HGPL will set the following training targets:

- Recruit 10% or more labour hours from apprentices and trainees;
- Encourage contractors to allocate 10% or more contracted work hours to apprentices and trainees; and
- Encourage and provide opportunities for up-skilling of employees.

Local Industry Participation

HGPL will develop a Local Industry Participation Plan consistent with the Queensland Government's Local Industry Policy. The Local Industry Participation Plan will:

- Provide details of competitive local suppliers that will be invited to tender for contract work associated with the mine construction and operation;
- Provide mechanisms for the provision of Project information to local industry in an equitable and timely manner, including in-region Project briefings for the procurement of contract services;
- Outline appropriate design and procurement strategies to provide equitable access to local industry; and
- Provide mechanisms for performance measurement, reporting and feedback in relation to local procurement.