

22.0 Economics

22.1 Introduction

This chapter presents information on the economic assessment with regards to Ensham Life of Mine Extension Project (the proposed project, hereafter referred to as 'the Project'). The chapter includes an overview of the existing economic environment of the study area, and estimates the costs and benefits, and overall economic impact of the Project on the regional, state and national economies.

A detailed technical report is attached in **Appendix J-1** (Economics). The supporting Economics report in **Appendix J-1** has been prepared based on an earlier project definition. The project definition presented in this chapter supersedes that definition and does not require any additional changes to the Economics report.

Environmental objectives and outcomes

The Project seeks to create a net economic benefit to the region and the state, whilst protecting environmental values in the Project Site established under the Environmental Protection Regulation 2019 (EP Regulation). The Project expected to generate significant and ongoing economic benefits to the local and regional economies which otherwise would be lost should the Project not proceed.

Given the nature and scale of the Project, there are no adverse economic impacts and, therefore, are not considered a critical matter in the Environmental Impact Statement (EIS).

22.1.1 Scope of assessment

The economic impact assessment comprises the following elements:

- Economic baseline assessment: provides an overview of the existing economic environment of the local, regional, state and national economies that may be affected by the Project
- Economic impact analysis: provides an assessment of the direct and indirect economic impacts of the Project during the capital and operational phases of the Project, in terms of output, household income, employment and value added. This analysis also provides a qualitative discussion of the economic impacts of the Project on the local, regional and state economies, including mitigation measures (where relevant).
- Cost benefit analysis: provides a cost benefit analysis of the Project, including scenario and sensitivity testing to determine the economic robustness of the Project.

For the purpose of the Economics assessment, the study area analysed is based on the Project location along with the consideration of likely primary sources of labour, goods and services that will be utilised by the Project. The study area represents the regional economies most likely to be either directly or indirectly affected by the Project. The study areas are defined as follows:

- local economy: Central Highlands Local Government Area (LGA)
- regional economy: Central Queensland Statistical Area Level 4 (SA4).

22.2 Economic baseline assessment

The economic baseline assessment describes the existing local, regional, state and national economies that may be affected by the Project. The economic baseline assessment considers the following factors:

- size and structure of the existing economy
- industry analysis
- project development pipeline
- coal production outlook
- agricultural production
- local property market overview
- commercial accommodation assessment.

22.2.1 Size and structure of the existing economy

22.2.1.1 Population size and projected growth

The population projections presented for Central Highlands LGA, Central Queensland SA4 and Queensland are based on the latest Queensland Government Statistician's Office (QGSO) population projections (2018 edition).

The population of Central Highlands LGA is anticipated to increase from 28,783 in 2016 to 30,133 in 2041, or by 0.2 per cent per annum. The resident population of both Central Queensland SA4 and Queensland is anticipated to grow at a faster rate than Central Highlands LGA between 2016 and 2041. The working age population (15 years and over) in each region is anticipated to increase at a faster rate than the total population between 2016 and 2041.

Table 22-1 reports the projected total population and working age population of Central Highlands LGA, Central Queensland SA4 and Queensland between 2016 and 2041.

Table 22-1 Population projections – total population and working age population, Central Highlands LGA, Central Queensland SA4 and Queensland, 2016 to 2041

Region	2016	2021	2026	2031	2036	2041	Average annual change, 2016-41 (%)
Total population							
Central Highlands LGA	28,783	28,658	28,845	29,319	29,755	30,133	0.2
Central Queensland SA4	226,314	230,866	240,952	253,943	266,946	279,470	0.8
Queensland	4,848,877	5,261,567	5,722,780	6,206,566	6,686,604	7,161,661	1.6
Working age population (Aged 15+)							
Central Highlands LGA	21,556	21,674	22,228	22,816	23,242	23,591	0.4
Central Queensland SA4	176,547	182,086	193,246	205,393	216,645	227,341	1.0
Queensland	3,894,279	4,240,621	4,650,676	5,069,024	5,479,993	5,887,351	1.7

Source: QGSO (2018) Projected Population (medium series) by local government area and SA4

22.2.1.2 Gross regional product

According to REMPLAN (2019), the nominal gross regional product (GRP) in Central Highlands LGA in 2018 was \$6.0 billion. This is lower than the 2012 peak (\$8.4 billion) but significantly higher than all other years analysed. Average annual growth in GRP in Central Highlands LGA was 5.6 per cent per annum.

In Central Queensland SA4, nominal GRP increased from \$17.2 billion in 2013 to \$20.8 billion in 2018, equating to an Average Annual Growth Rate (AAGR) of 3.9 per cent.

At the State level, nominal gross state product (GSP) in Queensland increased from \$213.2 billion in 2008 to \$349.0 billion in 2018. Across a ten-year period, this equates to an AAGR of 5.0 per cent (slightly below growth recorded in Central Highlands LGA and but above Central Queensland SA4).

Central Queensland SA4 contribution to total Queensland GSP ranged between 5.1 per cent and 6.0 per cent of GSP, whereas, the Central Highlands LGA contribution to total Queensland GSP range between 1.1 per cent and 1.8 per cent in the five-year assessment time frame.

Table 22-2 summarises the nominal GRP and GSP in Central Highlands LGA, Central Queensland SA4 and Queensland between 2008 and 2018, including year on year percentage changes in growth.

Table 22-2 Nominal gross regional product by region and gross state product, 2008 to 2018

Year	Central Highlands LGA		Central Queensland SA4		Queensland	
	GRP (\$B)	% Change	GRP (\$B)	% Change	GSP (\$B)	% Change
2008	3.5	-	-	-	213.2	-
2009	4.5	30.0	-	-	243.1	14.0
2010	3.6	-19.9	-	-	244.2	0.4
2011	4.2	16.4	-	-	266.6	9.2
2012	8.4	101.3	-	-	283.6	6.4
2013	5.2	-38.1	17.2	-	290.2	2.3
2014	3.8	-27.7	15.5	-10.1	296.3	2.1
2015	3.6	-5.6	15.4	0.0	305.4	3.0
2016	4.2	17.4	17.7	14.4	316.2	3.6
2017	3.7	-12.1	17.1	-3.3	327.0	3.4
2018	6.0	61.8	20.8	21.7	349.0	6.7
AAGR, 2008-18		5.6		-		5.0
AAGR, 2013-18		2.6		3.9		3.8

Note: No data was reported by REMPLAN for Central Queensland SA4 between 2008 to 2012 (as it was formerly known as Fitzroy SA4)
 Source: REMPLAN (2019)

22.2.2 Industry analysis

The industry analysis provides an overview of the labour market characteristics within Central Highlands LGA, Central Queensland SA4 and Queensland, based on several data sources, including the Australian Government's Department of Employment (Small Area Labour Market (SALM) statistics), the 2016 Census (employment by industry and occupation and post-school qualifications) and ABS business count data.

22.2.2.1 Labour force size

The size of the labour force in Central Highlands LGA decreased from 17,836 in 2011 to 16,561 in 2018, having peaked in 2014 at 17,617. The size of the labour force in the Central Queensland SA4 also peaked in 2014 at 124,000 and has subsequently declined to 120,606 in 2018.

In contrast, the Queensland labour force has shown growth in all years analysed, increasing from 2,401,641 in 2011 to 2,648,108 in 2018. Between 2017 and 2018 the size of the Central Highlands LGA and Central Queensland SA4 labour force increased by 5.1 per cent and 5.4 per cent respectively, whereas the Queensland labour force size increased by 2.9 per cent over the same period.

22.2.2.2 Unemployment rate

The unemployment rate in Central Highlands LGA has historically been lower than Central Queensland SA4 and Queensland. Conversely, the unemployment rate in Central Queensland SA4 was considerably lower than Queensland in 2012, 2014 and 2016. In the last two years, the unemployment rate in Central Queensland SA4 has been significantly above state levels.

The unemployment rate in Central Highlands LGA decreased from 3.8 per cent in the December Quarter 2010 to 3.0 per cent in the December Quarter 2018, with a notable increase in unemployment in 2013 and 2015 (to a maximum of 6.8 per cent in September Quarter). The unemployment rate in Central Queensland SA4 has decreased from 6.3 per cent in the December Quarter 2010 to 5.5 per cent in the December Quarter 2018, with a notable increase in unemployment in 2015 (to a maximum of 9.0 per cent in the September Quarter 2015) which was significantly above the state average.

22.2.2.3 Labour force participation rate

The labour force participation rate has historically been higher in Central Highlands LGA and Central Queensland SA4 relative to the state average. The labour force participation rate in Central Highlands LGA peaked at 79.8 per cent in 2011 before subsequently decreasing to 77.5 per cent in 2018. The labour force participation rate in Queensland has experienced a decrease from 67.0 per cent in 2011 to 65.7 per cent in 2018.

The labour force participation rate in Central Highlands LGA and the Central Queensland SA4 has followed a similar trend over the seven years analysed, with the labour force participation rate averaging 8.8 per cent points higher in Central Highlands LGA than Central Queensland SA4.

22.2.2.4 Employment by industry

As of the 2016 Census the mining and agriculture, forestry and fishing industries were the primary employers of workers residing in Central Highlands LGA, accounting for 24.3 per cent and 12.8 per cent of employment respectively. Other significant industries of employment within Central Highlands LGA included:

- retail trade – accounting for 8.1 per cent of employment
- education and training – accounting for 7.9 per cent of employment
- other services – accounting for 7.6 per cent of employment.

Although accounting for a significantly lower proportion of total employment than in Central Queensland LGA, the mining industry was also a key employer in Central Queensland SA4, accounting for 8.7 per cent of total employment as of the 2016 Census. Other significant industries of employment within Central Queensland SA4 as of the 2016 Census included:

- health care and social assistance – accounting for 10.5 per cent of employment
- retail trade – accounting for 9.6 per cent of employment
- education and training – accounting for 9.0 per cent of employment.

By comparison, the most significant industries of employment within Queensland as of the 2016 Census included the health care and social assistance (13.0 per cent of employment), retail trade (9.9 per cent of employment), construction (9.0 per cent of employment) and education and training (9.0 per cent of employment) sectors.

22.2.2.5 Employment by occupation

As of the 2016 Census, lower blue collar¹ occupations represented the dominant occupation type within Central Highlands LGA, accounting for 30.7 per cent of employment. This contrasts with Central Queensland SA4 and Queensland where the dominant occupation type was lower white-collar² occupations, accounting for 31.2 per cent and 35.3 per cent of employment respectively. Lower white-collar workers were under represented relative to Qualifications.

22.2.2.6 Post school qualifications

As of the 2016 Census, the proportion of the population aged 15 years and above holding a post-school qualification in Central Highlands LGA, Central Queensland SA4 and Queensland was 41.2 per cent, 42.5 per cent and 48.3 per cent, respectively. The lower incidence of post-school qualification holders within Central Highlands LGA relative to Queensland is primarily due to a lower proportion of persons with a bachelor's degree or higher (10.3 per cent in Central Highlands LGA, 18.3 per cent in Queensland). However, reflective of the high representation of employment within the mining industry, Central Highlands LGA and Central Queensland SA4 both had a higher incidence of the population aged 15 years and above attaining a certificate qualification relative to the state average.

22.2.2.7 Average household income

Average household incomes within Central Highlands LGA has historically been higher than the Queensland average. However, average household income in Central Highlands LGA has decreased between the 2011 and 2016 Census periods, whereas the Central Queensland SA4 and Queensland averages have increased. This decrease in average household incomes was likely due to a downturn in the mining sector. The average weekly household income in Central Highlands LGA increased from \$1,649 in 2006 to \$2,059 in 2011, though subsequently fell to \$1,994 in 2016. This represents an average annual increase of 1.9 per cent over the ten-year period. As of the 2016 Census, average household incomes in Central Highlands LGA were approximately 18 per cent higher than the state average (\$1,691 per week) and 17 per cent higher than the Central Queensland SA4 average (\$1,699 per week).

22.2.2.8 Business count

The ABS regularly publishes estimates of the counts of registered businesses within various geographic boundaries, with SA2 level the finest level of detail publicly available. This dataset provides insights into the number and mix of business activity within a geographic area but must be interpreted with some caution as it does not capture all businesses operating within a region if their main business location is registered outside the region. The Proponent has significant operations within the Central Highlands LGA but its main business address is registered within Brisbane LGA, hence has not been captured in the business count analysis for Central Highlands LGA.

As of June 2018, there were 2,901 businesses registered within Central Highlands LGA, of which 1,795 businesses were classified as sole traders, 1,068 businesses employed between 1 and 19 workers and 43 businesses employed between 20 and 199 workers. Of all registered businesses in Central Highlands LGA, 1,017 businesses or 35.1 per cent of businesses operated within the agriculture, forestry and fishing industry, with the next most significant industry of business operation being construction, accounting for 13.1 per cent of all registered businesses.

As of June 2018, there was a significantly higher representation of registered businesses within Central Highlands LGA and Central Queensland SA4 operating in the agriculture, forestry and fishing industry relative to Queensland. Queensland had a higher incidence of registered businesses operating within the professional, scientific and technical services industry, the health care and social assistance industry and the financial and insurance services industry relative to Central Highlands LGA and Central Queensland SA4. The proportion of registered business in Queensland that were classified as sole traders were comparable to that of Central Highlands LGA and Central Queensland SA4.

¹ CDM Smith defines lower blue collar workers as those employed within the single digit ANZSCO occupations of Machinery Operators and Drivers and Labourers.

² CDM Smith defines lower white collar workers as those employed within the single digit ANZSCO occupations of Clerical and Administrative Workers, Community and Personal Service Workers and Sales Workers.

Table 22-3 provides a comparison of the composition of registered businesses by industry that were registered within Central Highlands LGA, Central Queensland SA4 and Queensland as of June 2018.

Table 22-3 Regional comparison of businesses by industry, June 2018

Industry	Central Highlands LGA (%)	Central Queensland SA4 (%)	Queensland (%)
Agriculture, Forestry and Fishing	35.1	27.0	9.2
Mining	2.3	0.9	0.4
Manufacturing	2.5	2.9	3.6
Electricity, Gas, Water and Waste Services	0.3	0.4	0.3
Construction	13.1	15.7	17.0
Wholesale Trade	2.1	1.8	3.0
Retail Trade	4.1	5.1	5.6
Accommodation and Food Services	2.9	3.8	4.0
Transport, Postal and Warehousing	4.2	5.6	7.1
Information Media and Telecommunications	0.1	0.2	0.7
Financial and Insurance Services	4.5	5.7	8.4
Rental, Hiring and Real Estate Services	9.9	9.3	11.4
Professional, Scientific and Technical Services	4.6	5.9	11.1
Administrative and Support Services	3.3	3.0	4.0
Public Administration and Safety	0.2	0.2	0.3
Education and Training	0.9	1.1	1.4
Health Care and Social Assistance	2.1	3.9	5.8
Arts and Recreation Services	0.5	0.9	1.1
Other Services	6.8	6.1	4.7
Currently Unknown	0.7	0.6	0.9
Total	2,901	17,096	448,713

Source: ABS (2019) Counts of Australian Businesses, Including Entries and Exits

22.2.3 Agricultural production

This section of the regional economic impact assessment uses the latest agricultural data released by the ABS (2015-16) to identify the volume and value of key agricultural commodities produced within Central Highlands LGA and Central Queensland SA4. Key agricultural commodities are defined as those commodities which account for a significant proportion of production value in Queensland.

The Economics assessment (**Appendix N-1**) provides a comprehensive breakdown of the volume and value of agricultural commodities produced in both Central Highlands LGA and Central Queensland SA4.

In 2015-16, the most significant agricultural commodities in Central Highlands LGA, based on the value of production, were:

- Cattle and calves slaughtered (\$537.6 million or 9.2 per cent of Queensland value)
- Cotton (\$57.9 million or 12.4 per cent of Queensland value)
- Sorghum (\$38.4 million or 12.3 per cent of Queensland value)
- Chickpeas (\$28.1 million or 9.7 per cent of Queensland value)
- Grapes (\$21.9 million or 65.4 per cent of Queensland value)
- Mung beans (\$21.5 million or 18.0 per cent of Queensland value).

These key commodities accounted for a significant proportion of production within Central Queensland SA4, with all grape production in the Central Queensland SA4 attributable to the Central Highlands LGA.

Table 22-4 Value of Production, Key Agricultural Commodities (million dollars (\$M)), Central Highlands LGA and Central Queensland SA4 relative to Queensland, 2015-16

Commodity	Central Highlands LGA		Central Queensland SA4	
	Value (\$M)	% of QLD	Value (\$M)	% of QLD
Cattle and calves slaughtered	537.6	9.2	1,041.0	17.8
Cotton	57.9	12.4	77.3	16.6
Sorghum	38.4	12.3	42.9	13.7
Chickpeas	28.1	9.7	36.7	12.6
Grapes	21.9	65.4	21.9	65.4
Mung beans	21.5	18.0	37.1	31.1

Source: ABS (2018b) Value of Agricultural Commodities

22.2.4 Project development pipeline

This analysis identified 15 major projects recently approved in Queensland that are yet to commence operation and have an EIS under preparation. Identified projects included coal projects, mineral and gas projects, water projects and accommodation resort projects.

Table 22-5 summarises each project within the development pipeline at the time of the EIS preparation, including details on the proponent/s, general description and project status.

Table 22-5 Development pipeline within Central Queensland SA4

Project	Proponent	Location	Project details	Status
Central Highlands LGA				
Walton Coal Project	Walton Coal Pty Ltd	Approx. 100 km east of Emerald	Open-cut coal mine, extraction of between 1.9–2.2 million tonnes per annum (Mtpa), water supply pipeline, site access roads	Submission or Draft TOR (2019)
Curragh North (Pisces) coal	Wesfarmers Curragh Pty Ltd	Approx. 170 km west of Rockhampton	Open-cut coal mine producing 7 Mtpa	EIS Assessment Report (2019)
Minyango project	Blackwater Coal Pty Ltd (a wholly owned subsidiary of GRAM Caledon Resources Limited)	South of Blackwater, approximately 170 km west of Rockhampton	Coal from two target seams at a rate of up to 9Mtpa, produce up to 7 Mtpa of product coal for export	EIS Assessment Report (2014)
Taroborah coal project	Shenhua International Group Pty Ltd	22 km west of Emerald	Open-cut and underground coal mine, approximately 11.5 Mtpa and 64.3 million tonnes (Mt) of thermal coal	EIS Assessment Report (2015)
Santos GLNG Gas Field Development Project	Santos GLNG, is undertaking the project on behalf of the same joint venture arrangement that was established for the GLNG Project, namely Santos Limited, Petroliam Nasional Berhad (PETRONAS), Total, and Korean Gas Corporation (KOGAS)	Bowen and Surat basins	6,100 production and monitoring wells, underground gas storage and water management infrastructure	Approved with conditions (2016)

Project	Proponent	Location	Project details	Status
Projects in surrounding LGAs				
Capricorn Integrated Resort	Iwasaki Sangyo Co (Aust) Pty Ltd	45 km north of Rockhampton and 9 km north-east of Yeppoon.	Development of a 1,500 hectare integrated resort community.	Draft EIS being prepared by proponent (2019)
Lower Fitzroy River Infrastructure Project	SunWater Ltd.	Eden Bann Weir: approx. 62 km north-west of Rockhampton. Rookwood Weir: approx. 66 km south-west of Rockhampton.	The raising of Eden Bann Weir and construction of a new weir at Rookwood on the Fitzroy River, Central Queensland	Approved with conditions (2017)
Central Queensland Coal Project (Styx Coal Project)	Central Queensland Coal Pty Ltd and Fairway Coal Pty Ltd (owned by Mineralogy Pty Ltd)	Approx. 130 km northwest of Rockhampton and approximately 25 km northwest of Marlborough within the Livingstone Shire Council area	Two Open-cut coal mine pits, extraction of up to 10 Mtpa, one train load-out facility.	Proponent to respond to submissions (2018)
Port of Gladstone Gatcombe and Golding Cutting Channel Duplication Project	Gladstone Ports Corporation Limited	Port of Gladstone	Duplication of the existing Gatcombe and Golding Cutting shipping channels to allow for improved two-way passage by deepening and widening the existing channels.	Preparing the EIS evaluation report (2019)
East End No.5 mine project	Cement Australia (Exploration) Pty Ltd and Cement Australia (Queensland) Pty Ltd	24 kilometres west of Gladstone	Lease renewal- existing mine currently produces approximately 2.5 Mtpa of limestone and clay, and it is anticipated that this rate of mining would continue on the new lease.	EIS Assessment Report (2014)
Gladstone Energy and Ammonia project	Australian Future Energy Pty Ltd	15 km north west of Gladstone, in the Gladstone State Development Area	Convert 1.5 Mtpa of coal to produce ammonia, synthetic natural gas and electrical power.	Draft EIS being prepared by proponent (2019)
Baralaba South Project	Wonbindi Coal Pty Limited	Approx. 115 km south west of Rockhampton and 8km south of Baralaba in Central Queensland	Open-cut coal mine, extraction of up to 6 mtpa, internal roads and mining infrastructure.	Final TOR issues - EIS in preparation (2017)

Source: DSDMIP (2019a) Current EIS Projects, DSDMIP (2019b) Completed EIS Projects, DEHP (2019a) Current EIS Processes, DEHP (2019b) Completed, Withdrawn and Lapsed EIS Processes

22.2.5 Commercial accommodation assessment

The QGSO regularly prepares an assessment of the non-resident workforce within the Bowen Basin at the LGA level, including details on the capacity of workers accommodation villages (WAVs) and hotel/motel rooms. The total WAV bed capacity in Central Highlands LGA increased substantially from 5,075 beds in 2011 to 7,210 beds in 2013. In the past five years, the number of WAV beds has declined from the 2013 peak, ranging between 5,365 and 5,926 beds.

As at 2018, there were an estimated 1,525 hotel/motel rooms in Central Highlands LGA, the highest level of provision identified since 2011.

Table 22-6 reports the bed capacity for workers accommodation villages and hotels and motels within Central Highlands LGA between 2011 and 2018.

Table 22-6 WAV, hotel and motel accommodation capacity, Central Highlands LGA, 2011-2018

Accommodation type	2011	2012	2013	2014	2015	2016	2017	2018
WAV bed capacity	5,075	5,860	7,210	5,590	5,365	5,835	5,910	5,925
Hotel/motel rooms	1,220	1,495	1,145	1,440	1,415	1,365	1,485	1,525

Source: QGSO (various years) Bowen Basin Population Report

22.2.6 Residential, commercial and industrial property markets

Over the past ten years, there were 4,375 residential property sales, 171 commercial property sales and 62 industrial property sales in Central Highlands LGA.

The residential property market in Central Highlands LGA peaked in 2011-12 in terms of both volume and value of sales. The median sales price in Central Highlands LGA peaked in 2011-12 at \$430,000 and has since fallen significantly to \$230,000 in 2018-19. The volume of commercial property sales peaked in 2011-12, whereas industrial property sales volumes were highest in 2016-17 and 2017-18. Interestingly, the total value of commercial and industrial property sales peaked in 2012-13. On a per square metre basis, commercial property market prices in Central Highlands LGA were highest in 2016-17 (\$494 per square metre) and industrial property market prices were highest in 2013-14 (\$435 per square metre³). As of 2018-19, there are some signs of a recovery in the median sale price of residential and commercial property within Central Highlands LGA.

³ This result must be interpreted with caution as there was only one industrial property sale in this year.

22.2.6.1 Median weekly residential rents

In line with the significant downturn in the residential property market in Central Highlands LGA, median weekly rents have also decreased, but have subsequently stabilised for all property types analysed. The median weekly rent for three bedroom houses in Central Highlands LGA decreased from \$700 per week in the June Quarter 2012 to \$200 per week in the December Quarter 2015 and has since increased to \$265 per week in the September Quarter 2019. The median weekly rent for four bedroom houses in Central Highlands LGA decreased from \$850 per week in the June Quarter 2012 to \$290 per week in the September Quarter 2016, before increasing to \$360 per week in the September Quarter 2019. The median weekly rent for three bedroom townhouses in Central Highlands LGA decreased from \$950 per week in the March Quarter 2012 to \$210 per week in the March Quarter 2016 and has subsequently increased to \$320 per week in the September Quarter 2019. The median weekly rent for two bedroom units in Central Highlands LGA decreased from \$450 per week in the September Quarter 2012 to \$156 per week in the March Quarter 2016 and has subsequently increased to \$240 per week in the September Quarter 2019.

22.3 Economic impact analysis

This section estimates the direct and indirect economic impacts of capital expenditures and during the operation phase of the Project on the regional, state and national economies. The assessment utilises an input-output approach and estimates impact in terms of output, household incomes, employment and value added.

The Economics assessment (**Appendix N-1**) provides an overview of the regional impact approach utilised.

22.3.1 Project expenditures

22.3.1.1 Capital costs

Capital expenditures relevant to the Project include one-off sustaining costs (i.e. infrastructure costs associated with the expansion of the Ensham mine footprint directly attributable to the Project) and ongoing sustaining costs (such as the rebuild and replacement of major mining equipment and other capital expenditures). All capital cost data is presented in 2020 dollars.

The capital costs associated with the Project are estimated at \$314.9 million, comprising:

- \$72.4 million incurred within Central Queensland SA4
- \$107.1 million incurred within Rest of Queensland
- \$66.1 million incurred within Rest of Australia
- \$69.3 million incurred overseas.

Table 22-7 below summarises the capital expenditure by region for the Project.

Table 22-7 Capital expenditure by region for the Project, 2020-2037

Region	One off sustaining costs (\$M)	Ongoing sustaining costs (\$M)	Total (\$m)
Central QLD SA4			
Average annual expenditure	0.1	3.9	4.0
Total expenditure	2.5	69.9	72.4
Rest of Queensland			
Average annual expenditure	0.2	5.7	5.9
Total expenditure	3.7	103.3	107.1
Rest of Australia			
Average annual expenditure	0.1	3.5	3.7
Total expenditure	2.3	63.8	66.1
International			
Average annual expenditure	0.1	3.7	3.8
Total expenditure	2.4	66.9	69.3
Total			
Average annual expenditure	0.6	16.9	17.5
Total expenditure	10.9	304.0	314.9

22.3.1.2 Operational costs

The operational costs include estimates associated with mining the coal, transporting the coal to the coal handling plant (CHP) for washing and haulage of the coal to the Port of Gladstone for export. All operational costs are presented in 2020 dollars.

Total operational costs are estimated at \$2,726.2 million over the life of the Project, comprising:

- \$899.6 million incurred within Central Queensland SA4
- \$1,281.3 million incurred within Rest of Queensland
- \$545.2 million incurred within Rest of Australia.

Table 22-8 summarises the operational costs of the Project by region and broad expenditure category.

Table 22-8 Operational costs of the Project by region

Region	Mining and crushing (\$M)	Site infrastructure (\$M)	Haulage (\$M)	Total (\$M)
Central QLD SA4				
Average annual expenditure	24.9	8.4	16.7	50.0
Total expenditure	448.2	150.9	300.6	899.6
Rest of Queensland				
Average annual expenditure	35.5	11.9	23.8	71.2
Total expenditure	638.3	214.9	428.1	1,281.3
Rest of Australia				
Average annual expenditure	15.1	5.1	10.1	30.3
Total expenditure	271.6	91.5	182.2	545.2
Total				
Average annual expenditure	75.4	25.4	50.6	151.5
Total expenditure	1,358.0	457.3	910.8	2,726.2

22.3.2 Economic impact assessment

22.3.2.1 Summary of impacts – Central Queensland SA4

The economic impact analysis has estimated the impacts of the Project on the regional, state and national economies for both the capital and operational phases.

Within the Central Queensland SA4, the Project is anticipated to record the following impacts during the capital and operational phases:

- capital phase:
 - total output impact of \$168.4 million or \$9.4 million per annum
 - total household income impact of \$33.2 million or \$1.8 million per annum
 - employment impact of up to 51 full-time equivalent (FTEs) per annum, or an average of 20 FTEs per annum
 - value added impact of \$60.8 million or \$3.4 million per annum.
- operational phase:
 - total output impact of \$2,331.4 million or \$129.5 million per annum
 - total household income impact of \$431.3 million or \$24.0 million per annum
 - employment impact of up to 603 FTEs per annum, or an average of 314 FTEs per annum
 - value added impact of \$911.1 million or \$50.6 million per annum.

Table 22-9 summarises the total economic impact of the Project on the Central Queensland SA4 regional economy both annually and over the life of the Project.

Table 22-9 Economic impact analysis results, Central Queensland SA4

Indicator	Capital expenditure		Operational phase	
	Average annual impacts (\$M)	Total impacts (\$M)	Average annual impacts (\$M)	Total impacts (\$M)
Output	9.4	168.4	129.5	2,331.4
Household income	1.8	33.2	24.0	431.3
Employment (FTEs)	20	Up to 51 FTEs	314	Up to 603 FTEs
Value added	3.4	60.8	50.6	911.1

The subsequent sections of the chapter provide an overview of the economic impacts of the Project during the capital and operational phase on the Central Queensland SA4, rest of Queensland and national economies annually over the life of the Project.

22.3.2.2 Regional, state and national economic impacts relating to capital expenditures

Capital expenditures are anticipated to have significant impacts on the Central Queensland SA4, Rest of Queensland and Rest of Australia economies, as outlined below:

- Central Queensland SA4 – Total value added impacts of \$60.8 million, comprising \$26.5 million in direct impacts and \$34.3 million in indirect impacts. Capital expenditures are estimated to support up to 53 full time equivalent employees, comprising 26 direct FTEs and 27 indirect FTEs..
- Rest of Queensland – Total value added impacts of \$72.6 million, comprising \$39.2 million in direct impacts and \$33.4 million in indirect impacts. Capital expenditures are estimated to support up to 71 FTEs, comprising 39 direct FTEs and 32 indirect FTEs.
- Rest of Australia – Total value added impacts of \$26.9 million, comprising \$11.9 million in direct impacts and \$15.0 million in indirect impacts. Capital expenditures are estimated to support up to 20 FTEs, comprising four direct FTEs and 16 indirect FTEs. total contribution to output of \$69.1 million, comprising \$33.1 million in direct contribution and \$35.9 million indirectly.

Economic impacts relating to capital expenditures are anticipated to be the most significant within the manufacturing, mining and construction sectors at the regional, state and national level.

Table 22-10 summarises estimated economic impacts attributable to capital expenditures on the Project.

Table 22-10 Average annual impacts and total impacts associated with capital expenditures

Region	Average Annual Impacts				Total Impacts			
	Output (\$M)	Household Income (\$M)	Employment (FTEs)	Value Added (\$M)	Output (\$M)	Household Income (\$M)	Employment (FTEs)	Value Added (\$M)
Central QLD SA4								
Direct	4.0	0.9	9	1.5	72.4	16.3	26	26.5
Indirect	5.3	0.9	11	1.9	96.0	17.0	27	34.3
Total	9.4	1.8	20	3.4	168.4	33.2	53	60.8
Rest of Queensland								
Direct	5.9	1.3	14	2.2	107.1	24.1	39	39.2
Indirect	4.5	1.1	14	1.9	81.6	19.6	32	33.4
Total	10.5	2.4	28	4.0	188.6	43.7	71	72.6
Rest of Australia								
Direct	1.8	0.3	2	0.7	33.1	6.2	4	11.9
Indirect	2.0	0.5	6	0.8	35.9	8.7	16	15.0
Total	3.8	0.8	8	1.5	69.1	14.9	20	26.9

Note: Total impacts for employment are representative of peak impacts in a single year.

22.3.2.3 Economic impacts of operation

The operational phase of the Project is anticipated to have significant impacts on the regional, state and national economies as outlined below:

- Central Queensland SA4 – Total value added impacts of \$911.1 million, comprising \$357.8 million in direct impacts and \$553.3 million in indirect impacts. During the operational phase, the Project is estimated to support up to 603 FTEs, comprising 203 direct FTEs and 401 indirect FTEs.
- Rest of Queensland – Total value added impacts of \$984.1 million, comprising \$509.6 million in direct impacts and \$474.5 million in indirect impacts. The Project is anticipated to support up to 754 FTEs, comprising 288 direct FTEs and 465 indirect FTEs.
- Rest of Australia – Total value added contribution of \$444.2 million, comprising \$216.8 million in direct value added impacts and \$227.4 million in indirect value added impacts. The Project is estimated to support up to 348 FTEs, comprising 123 direct FTEs and 225 indirect FTEs.

Within the Central Queensland SA4 economy, economic impacts are likely to be most significant within the mining and transport, postal and warehousing sectors.

Table 22-11 summarises the output impacts during the operational phase of the Project.

Table 22-11 Output impacts (\$M) during operational phase

Region	Average Annual Impacts			Total Impacts				
	Output (\$M)	Household Income (\$M)	Employment (FTEs)	Value Added (\$M)	Output (\$M)	Household Income (\$M)	Employment (FTEs)	Value Added (\$M)
Central QLD SA4								
Direct	50.0	9.6	105	19.9	899.6	173.1	203	357.8
Indirect	79.5	14.3	209	30.7	1,431.8	258.2	401	553.3
Total	129.5	24.0	314	50.6	2,331.4	431.3	603	911.1
Rest of Queensland								
Direct	71.2	13.7	149	28.3	1,281.3	246.5	288	509.6
Indirect	61.8	14.5	242	26.4	1,112.0	261.9	465	474.5
Total	133.0	28.2	391	54.7	2,393.3	508.4	754	984.1
Rest of Australia								
Direct	30.3	5.8	63	12.0	545.2	104.9	123	216.8
Indirect	28.9	7.0	117	12.6	520.9	126.1	225	227.4
Total	59.2	12.8	180	24.7	1,066.2	231.0	348	444.2

Note: Total impacts for employment are representative of peak impacts in a single year.

22.3.3 Value of coal exported

The Project is anticipated to produce approximately 38 million tonnes of thermal coal over an 18 year production schedule. The anticipated export value of product coal mined at the Project has been determined based on published estimates on the anticipated export price for thermal coal (USD per tonne) and the exchange rate outlook.

Australia's major thermal coal markets are Japan, China and South Korea and as such the demand sourced from these economies is a key driver of prices. In the short to medium term, KPMG (2019) forecast a real thermal coal price of ~US\$70 per tonne in 2020, decreasing to US\$68 per tonne in 2025. Price decreases in the short to medium term are anticipated with rising supply outpacing demand (Office of the Chief Economist, 2019). In the longer term (2026-2037), it has been assumed that the export price for thermal coal averages US\$73/tonne, consistent with KPMG (2020).

The AUD/USD exchange rate is anticipated to increase from 0.68 in 2020 to 0.75 by 2024 and remain at 0.75 in the medium to long term, consistent with KPMG (2020). This translates to a real Australia dollar coal price of \$103/tonne in 2020, falling to \$90/tonne in 2025, before increasing to \$97/tonne for the 2026-2037 period.

The total export value of the coal produced is estimated to be \$3.66 billion over the life of the Project. Assuming Queensland coal mining royalty rates remain unchanged, this will yield royalties of approximately \$256.4 million over the life of the Project.

It is pertinent to note that both exchange rates and commodity prices, including coal, are subject to fluctuations and shocks, so these estimates are intended to be indicative only, based on the current trade environment. Additionally, there is also the potential for royalty rates charged by the State Government to ultimately change from current levels.

Table 22-12 Anticipated production, export value and royalties payable over the life of the Project

	Production of saleable coal (Mt)	Export value (AUD \$M)	Total royalties payable (AUD \$M)
Average	2.1	203.4	14.2
Total	38.0	3,662.0	256.4

22.3.4 Opportunity cost of the project

The opportunity cost of any given Project is generally defined as the next best alternative use of the resources that will be foregone because of the Project. The Project Site covers 2,738 hectares and is currently utilised for irrigated/dry land farming.

The analysis has conservatively assumed that irrigated/dry land farming occurs over the entire Project Site. As the Project is an underground coal mine, it has been assumed that irrigated/dry land farming within Zone 1 of the Project Site can continue with negligible impact due to subsidence.

A subsidence assessment undertaken for the Project (**Appendix B-2 (Subsidence)**) predicts that subsidence, if it were to occur, will be typically less than 40 mm within the Project Site. For contextual purposes, the Department of Environment and Energy states seasonal variation in surface levels can be up to 50 mm as a result of changes in moisture content. Furthermore, it is not anticipated that any permanent disturbance on Zone 1 of the Project Site will occur during the life of the Project.

Therefore, it follows that the opportunity cost of the Project in terms of annual output foregone and annual gross margin foregone is likely to be negligible due to the lack of impact on the Project Site during the life of the Project.

22.3.5 Ecosystem services foregone

The Project is unlikely to disrupt and adversely impact regional ecosystems located on the Project Site. Potential impacts associated with the operational phase of underground mining projects are generally associated with indirect disturbances including subsidence, weed incursion, contamination from spills, alternatives to hydrological regime and dust. The ecological impact assessment indicates that the scope for indirect disturbances is limited, with dust impacts likely to reduce over time due to the transition from open-cut to underground mining operations. Direct disturbance is expected through minor surface disturbance for exploration (drilling, seismic) in zones 1, 2 and 3, and the construction of flares in Zone 2 and Zone 3. Zones 2 and 3 of the Project Site are located in areas within the existing Ensham Mine mining leases. Two flares will be located in Zone 2 (ML 70326, ML 70365 and ML 7459) and two flares in Zone 3 (ML 7459 and ML 70366). Flaring in Zone 2 will be located outside of mapped SCA/PAA in locations which are already disturbed from mining activities. Flaring in Zone 3, would occur on land which is already highly disturbed from mining activities. Both Zone 2 and Zone 3 are used for grazing.

The Project will avoid loss of vegetation communities attributable to the proposed minor surface disturbance and construction both in the short term and the long term.

22.3.6 Assessment of Project impacts

The Project is anticipated to result in a range of beneficial impacts including:

- Economic stimulus to the regional, state and national economies over the life of the Project
- Significant export revenues from coal produced over the life of the Project estimated to be in the order of \$3.2 billion, which assuming royalty rates remain unchanged, would yield royalties of approximately \$224.5 million over the life of the Project
- Increased employment opportunities within Central Queensland which would serve to reduce unemployment within the region
- Opportunities for suppliers in Central Queensland to support capital investment and operation of the Project.

The assessment of impacts utilises a risk-based assessment framework based on the anticipated interaction of probability and consequence of impacts occurring, developed based on the guidance provided in Queensland Treasury (2011) A Guide to Risk Management. Due to the scale of mining projects, and their potential economic impact, it is considered that a more detailed risk matrix than the example provided in Queensland Treasury guidance is appropriate for the Project. The Economics assessment (**Appendix J-1**) provides detail relating to the descriptors of the likelihood of an event occurring, the descriptors of consequence of the impact occurring and the qualitative impact assessment matrix.

Table 22-13 provides an assessment of the anticipated positive (+ve) economic impacts resulting from the Project.

Table 22-13 Assessment of positive economic impacts

Description of impact	Likelihood	Consequence	Impact
Economic stimulus to the regional economy during capital and operation phases	Almost certain	Moderate	High (+ve)
<p>Regionally based project expenditures during the capital phase are estimated to make contributions to value added in the Central Queensland region of \$60.8 million between 2020 and 2037, including \$26.5 million in direct value added; and</p> <p>Regionally based project expenditures during the operation phase are estimated to make contributions to value added in the Central Queensland region at an average of \$50.6 million per annum in the 2020 to 2037 period, including \$19.9 million in direct value added.</p>			
Economic stimulus to the state economy during capital and operation phases	Almost certain	Moderate	High (+ve)
<p>State based project expenditures during the capital phase are estimated to make contributions to GRP of \$72.6 million between 2020 and 2037, including \$39.2 million in direct value added; and</p> <p>State based project expenditures during the operation phase are estimated to make contributions to GRP at an average of \$54.7</p>			

Description of impact	Likelihood	Consequence	Impact
<p>million per year between 2020 and 2037, including \$28.3 million in direct value added.</p> <p>Economic stimulus to the national economy during capital and operation phases</p> <ul style="list-style-type: none"> Project expenditures incurred interstate during the capital phase are estimated to make contributions to GDP of \$26.9 million in the 2027 to 2037 period, including \$11.9 million in direct value added; and <p>Project expenditures incurred interstate during the operation phase are estimated to make contributions to GDP at an average of \$46.2 million per year in the 2020 to 2037 period, including \$22.6 million in direct value added.</p>	Almost certain	Minor	Medium (+ve)
<p>Increased regional supply chain and employment opportunities throughout capital and operation phases</p> <p>The project is anticipated to generate additional regional supply chain activity. The volume of this activity is represented by the output measure. During the operational phase of the Project, total output impacts pertaining to the Central Queensland region, are estimated at an average of \$129.5 million per annum, including \$50.0 million in direct impacts.</p> <p>The employment support generated by this local supply chain activity is estimated to peak at 603 FTEs, including 201 direct FTEs.</p>	Almost certain	Medium	High (+ve)
Consideration has been given to impacts on land values and agricultural activities in the Project Site. As the Project is an extension of existing underground operations with minor surface disturbance and flaring infrastructure in Zone 2 and Zone 3 over approved mining leases, impacts to land values and agricultural activities are not anticipated.			

22.4 Cost benefit analysis

22.4.1 Assumptions

22.4.1.1 Project costs

The following cost streams have been considered for the Project:

- capital costs
- operational costs
- cost of make-good agreements.

Capital expenditures relevant to the Project include one-off sustaining costs (i.e. infrastructure costs associated with the expansion of the Ensham mine footprint directly attributable to the Project) and ongoing sustaining costs (such as the rebuild and replacement of major mining equipment and other capital expenditures).

Capital costs for the Project are anticipated to be incurred over an 18 year period, commencing in 2020. Total capital costs for the Project are estimated at \$314.9 million, with capital costs peaking in 2030 at \$43.3 million.

Operational costs associated with the Project include costs associated with mining the coal, transporting the coal to the CHP for washing and haulage of the coal to the Port of Gladstone for export.

Total operational costs of the Project are estimated at \$2.7 billion, with operational costs peaking in 2031 at \$283.5 million.

The cost of make-good agreements incorporates road compensation contributions, groundwater and surface water impacts, as well as an allowance for the costs associated with mine closure, land rehabilitation and decommissioning provisions. The make good agreement value provided excludes greenhouse gas emissions and the cost of offsets to address adverse impacts on vegetation communities/habitat.

The cost of make good agreements for the broader Ensham mine would be the same regardless of whether the Project proceeds. Hence the assessment has not allocated a value to the cost of make good agreements specifically for the Project.

22.4.1.2 Project benefits/disbenefits

The following benefit/disbenefit streams have been identified for the Project:

- value of coal production
- greenhouse gas emissions
- opportunity cost of alternative land use
- value of ecosystems foregone.

The value of coal produced as part of the Project is estimated to be \$3.66 billion over the life of the Project, peaking in 2031 at \$409.5 million.

During the operation phase of the Project, total CO₂ equivalent tonnages (CO₂-e) would be approximately 6.63 Mt CO₂-e, peaking in 2031 at 0.76 Mt CO₂-e. The economic value of CO₂-e emissions has been assumed to be \$130.87 million in the 2021 to 2057 period, with the value peaking in 2032 at 15.19 million.

The opportunity cost of the alternative land use foregone (i.e. irrigated/dry land farming) has been estimated to be negligible. Hence the assessment has not assigned a dollar value to the opportunity cost of alternative land use foregone, as it is understood that the economic activity on the Project footprint can continue both during the capital and operational phases of the Project.

The loss of vegetation communities as a result of the Project are estimated to be negligible. Hence, the assessment has not assigned a dollar value to loss of vegetation communities, as it is understood that no vegetation communities will be lost on the Project Site during the capital and operational phases of the Project.

22.4.2 Results

22.4.2.1 Project life

The assessment assumes the capital and operational phases of the Project commence in 2020 and occurs over 18 years to 2037. However, the Project life for the cost benefit analysis has been extended to 2057, to allow for consideration of greenhouse gas emissions associated with the decommissioning of mining activity on the Project footprint.

22.4.2.2 Discount rates

The cost benefit analysis for the Project considers non-market goods and as such the appropriate test discount rates need to be consistent with real discount rates used for public projects derived from social time preference or social opportunity cost rates.

A range of discount rates are used by government assessment agencies for the purposes of project evaluation as summarised in **Table 22-14**. This analysis utilises the real discount rates of 4 per cent, 7 per cent and 10 per cent, which are consistent with the range of discount rates used by Infrastructure Australia.

Table 22-14 Alternative discount rates adopted by Australian and State Government Agencies

Agency	Real discount rate (%)	Notes
NSW	7	Sensitivity range of 4% to 10%
Infrastructure Australia	4 & 7	-
Victoria	7	For roads
Productivity Commission	8	-
Office of Best Practice Regulation (Cth)	7	Sensitivity range of 3% to 11%

22.4.2.3 Summary of results

Table 22-15 summarises the findings of the cost benefit analysis and provides a summary of the cost and benefit streams over the life of the Project. Under all real discount rates analysed, the Project provides a positive net benefit, with the benefit cost ratio ranging between 1.17 and 1.19, and net benefits ranging between \$217.9 million and \$344.1 million.

Table 22-15 Cost benefit analysis results

Cost/benefit stream	Net present value (\$M) under real discount rate		
	4%	7%	10%
Project costs (\$M)			
Capital costs	203.7	149.8	111.8
Operational costs	1,785.3	1,335.4	1,021.6
Make good agreements	0.0	0.0	0.0
Total	1,989.0	1,485.2	1,133.4
Project benefits / disbenefits (\$M)			
Value of production	2,419.3	1,820.8	1,401.0
Greenhouse gas emissions	-86.2	-64.7	-49.7
Opportunity cost of alternative land use	0.0	0.0	0.0
Loss of vegetation communities	0.0	0.0	0.0
Total	2,333.1	1,756.1	1,351.3

Cost/benefit stream	Net present value (\$M) under real discount rate		
	4%	7%	10%
Net benefit	344.1	270.9	217.9
Benefit cost ratio	1.17	1.18	1.19

22.4.2.4 Sensitivity testing

Sensitivity testing was also undertaken in addition to the main case analysis outlined above to test the economic robustness of the Project. The three scenario tests identified included:

- an increase in Project costs of 10 per cent
- a decrease in Project benefits of 10 per cent
- A combined increase in Project costs of 10 per cent and a decrease in Project benefits of 10 per cent.

Table 22-16 summarises the cost benefit analysis results for the sensitivity tests. The net present value was positive for two of the three scenarios analysed under all real discount rates assessed, with the benefit cost ratio for these scenarios ranging between 1.06 and 1.08. For the scenario of combined increase in Project costs of 10 per cent and a 10 per cent decrease in Project benefits, the benefit cost ratio was marginally below one under all discount rates assessed (ranging between 0.96 and 0.98).

Table 22-16 NPV results of sensitivity testing, base case scenario

Scenario test	Net present value (\$M) under real discount rate			Benefit cost ratio		
	4%	7%	10%	4%	7%	10%
Increase in costs (10%)	145.2	122.4	104.5	1.07	1.07	1.08
Decrease in benefits (10%)	110.8	95.3	82.8	1.06	1.06	1.07
Combined	-88.1	-53.2	-30.6	0.96	0.97	0.98

22.5 Conclusion

The Project is anticipated to provide significant and ongoing economic benefits to the regional, state and national economies. Capital expenditures are anticipated to generate the following economic impacts:

- Central Queensland SA4 – Total value added impacts of \$60.8 million, comprising \$26.5 million in direct impacts and \$34.3 million in indirect impacts. Capital expenditures are estimated to support up to 53 full time equivalent employees, comprising 26 direct FTEs and 27 indirect FTEs.
- Rest of Queensland – Total value added impacts of \$72.6 million, comprising \$39.2 million in direct impacts and \$33.4 million in indirect impacts. Capital expenditures are estimated to support up to 71 FTEs, comprising 39 direct FTEs and 32 indirect FTEs.
- Rest of Australia – Total value added impacts of \$26.9 million, comprising \$11.9 million in direct impacts and \$15.0 million in indirect impacts. Capital expenditures are estimated to support up to 20 FTEs,

comprising four direct FTEs and 16 indirect FTEs. total contribution to output of \$69.1 million, comprising \$33.1 million in direct contribution and \$35.9 million indirectly.

During the operation of the Project, the total estimated economic benefits are estimated to be:

- Central Queensland SA4 –Total value added impacts of \$911.1 million, comprising \$357.8 million in direct impacts and \$553.3 million in indirect impacts. During the operational phase, the Project is estimated to support up to 603 FTEs, comprising 203 direct FTEs and 401 indirect FTEs.
- Rest of Queensland – Total value added impacts of \$984.1 million, comprising \$509.6 million in direct impacts and \$474.5 million in indirect impacts. The Project is anticipated to support up to 754 FTEs, comprising 288 direct FTEs and 465 indirect FTEs.
- Rest of Australia – Total value added contribution of \$444.2 million, comprising \$216.8 million in direct value added impacts and \$227.4 million in indirect value added impacts. The Project is estimated to support up to 348 FTEs, comprising 123 direct FTEs and 225 indirect FTEs.

The Project is also likely to:

- Provide \$256.4 million in royalty payments during the operational phase of the Project
- Support employment for up to 603 FTEs within the local economy, who would otherwise lose their jobs should the Project not proceed
- Support continued economic activity within Central Highlands Regional Council, which is likely to be significantly impacted should the Ensham mine ultimately close
- Provide continued opportunities for suppliers in Central Queensland to support capital investment and operation of the Project
- Retain private sector investment in Central Highlands LGA and the region more generally due to the continued operation of the Ensham mine.

Overall, the Project is expected to maintain the level of economic activity locally, which otherwise would be lost should the Ensham mine ultimately be closed. This in turn is expected to lead to continued prosperity as incomes, employment and demand for goods and services is retained within the local economy.