

CHAPTER 16 SOCIO ECONOMIC ASSESSMENT

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16 SOCIO ECONOMIC ASSESSMENT

This chapter provides an overview of the demographic and economic indicators for Broken Hill and assesses the social and economic impacts of the Project.

The study and chapter were completed by ERM.

16.1 INTRODUCTION

The Project will have a number of socio economic impacts at a local and regional level. These impacts may be positive or negative, direct or indirect, or cumulative in nature. This chapter includes a review of relevant socio economic baseline information. This information, along with stakeholder input and other technical data has been used to predict and assess the socio economic impacts resulting from the Project.

This chapter has been prepared using publicly available information sourced from the Australian Bureau of Statistics (ABS) and other information found in the public domain. The majority of the information provided has been sourced from the 2001 Public Census data.

16.2 OVERVIEW

16.2.1 Defining the study area

The geographical boundary for the socio economic baseline (study area) reflects the anticipated zone of influence for the Project. Rasp Mine is located in the Broken Hill LGA, approximately 1,150 km west of Sydney and 300 km north of Mildura and 500 km north of Adelaide.

Broken Hill LGA is within the Far West NSW Statistical District, which includes the Central Darling LGA and a large area of unincorporated land. The Far West Region is bounded by the Queensland border to the north and the South Australian border to the west.

Sourcing labour and the procurement of goods and services for the Project is anticipated to be across local (Broken Hill LGA), regional (Far West Statistical District) and state (NSW, SA) geographies. Broken Hill is far closer to Adelaide than to Sydney and the historical, cultural, transport and communication links have been via South Australia. Miners from Burra and Moonta brought their traditions and families to Broken Hill from South Australia. The town shares the same time zone, despite being within NSW. State level socio economic impacts will occur through financial contributions in the form of taxes, royalties, licence fees and other payments. Based on these anticipated socio economic impacts baseline data is presented for:

- Broken Hill LGA;
- Far West Statistical District; and
- New South Wales.

16.2.2 Broken Hill

The City of Broken Hill is the largest regional centre in Western New South Wales covering an area of 179 km². The City has a strong mining tradition over more than six generations. The level of mining activity has directly influenced the population and affluence of the local and surrounding community. ABS Census 2006 estimate the population at 19,359 a decline of 30% since 1971. Its population has been in decline since the 1970s losing large proportions of its younger working age

population. In recent years the population has stabilised. BHCC predicts that over the next five years the City's population will remain fairly stable.

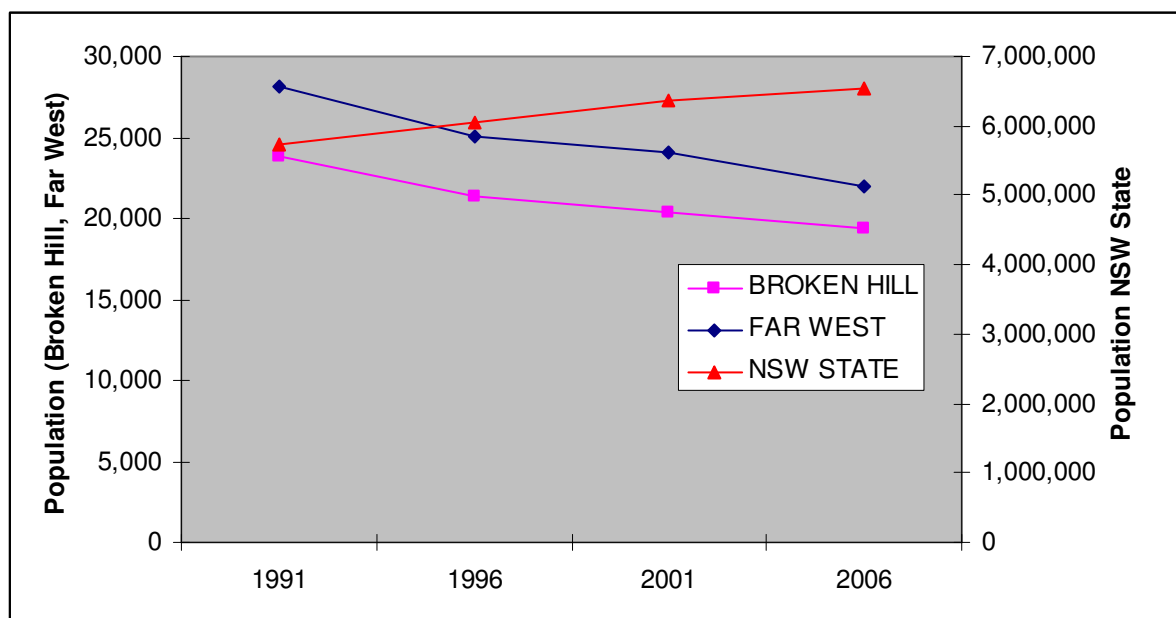
The Project Area lies within the Line of Lode which is recorded in the National Estate. It is a major landmark for the local community as well as being of national significance because of its role in bringing industrialisation to Australia via BHP.

16.3 POPULATION BASELINE

16.3.1 Population over time

Figure 16-1 indicates the change in total population over time for the three geographical areas assessed.

Figure 16-1 Population of Broken Hill LGA, Far West Statistical Division and NSW State over time



Source: ABS Census Data

In 2006, population in Broken Hill was 19% lower than in 1991. The majority of the Far West region's population (88% in 2006) resides within the Broken Hill LGA. The declining population trend in Broken Hill LGA also influences the wider regional trend. Population decline in Broken Hill and the Far West is in contrast to the NSW average trend where there has been a 14% growth in population over the 1991 to 2006 period.

16.3.2 Population distribution by age

Table 16-1 breaks down the population for the study area by age.

Table 16-1 Population baseline by age, 2006

Age category	Broken Hill LGA	Far West Statistical Division	New South Wales State
0-4 years	6.2%	6.2%	6.4%
5-14 years	13.5%	13.4%	13.4%
15-24 years	11.3%	11.2%	13.3%
25-34 years	10.0%	10.3%	13.6%
35-44 years	12.7%	13.0%	14.6%
45-54 years	15.0%	15.2%	13.8%
55-64 years	12.4%	12.8%	11.0%
65-74 years	9.5%	9.2%	7.1%
Over 75 years old	9.5%	8.8%	6.7%
Total Population	19,359	22,030	6,549,177

Source: ABS Census 2006

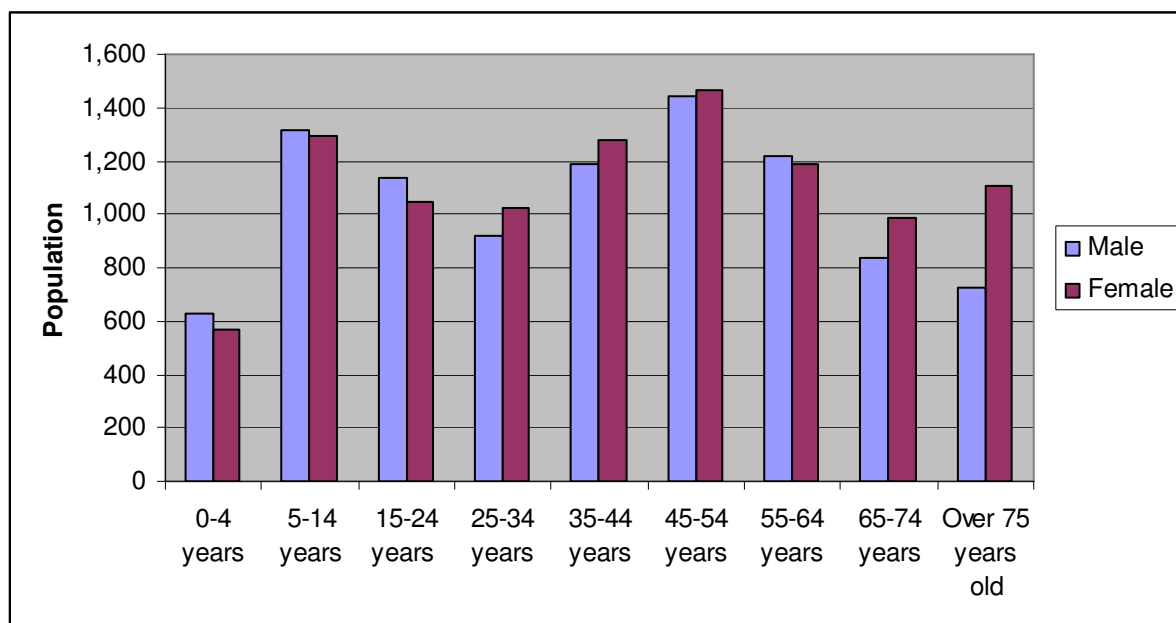
The key differences in the demographic of Broken Hill LGA compared to NSW are:

- Broken Hill LGA has a higher proportion of population over the age of 65 compared against State averages; and
- Broken Hill LGA has a below State average representation of 15-34 year olds.

Aging populations are a trend that can be seen across NSW and Australia as a whole.

16.3.3 Population gender distribution

Figure 16-2 presents the population distribution by gender across a range of age categories for Broken Hill LGA.

Figure 16-2 Broken Hill LGA distribution of genders by age

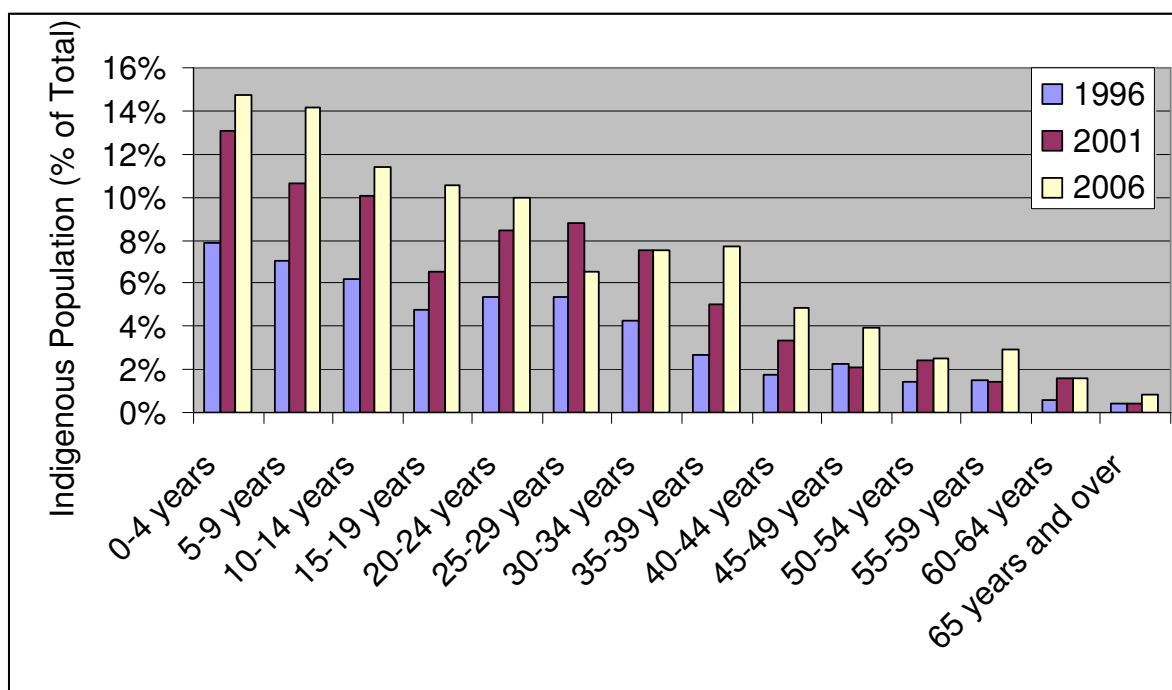
Source: ABS Census 2006

As indicated there are marginally more males than females under the age of 24, there are more females between the ages of 25 and 54 than males and females over the age of 65 significantly outnumber males. (This is consistent with the difference between male and female life expectancy).

16.3.4 Indigenous population

The proportion of indigenous population has increased over the last two census periods (*Figure 16-3*). This trend is relatively evenly reflected across all age cohorts although this is most marked in younger age groups.

Figure 16-3 Indigenous population in Broken Hill by age over time (shown as a percentage of total population)



Source: ABS Census 1996, 2001, 2006

The rate of growth is particularly high across the 20-24 years old and 35 to 49 age cohorts. The absolute numbers of indigenous people in the Broken Hill LGA has increased since 1996.

16.4 INDUSTRY BASELINE

Employment breakdown by industry (*Table 16-2*) shows that the economy of Broken Hill varied from the State average, in the following areas:

- the mining sector employs a significantly greater proportion of the workforce than the State average. In Broken Hill 7.5% of the workforce is directly employed in the mining sector compared to 0.5% of the NSW workforce;
- the retail trade and health and community sectors employ an above state average proportion of the workforce; and
- the manufacturing and property and business services sectors are comparatively low employment sectors compared against the State average.

While mining remained a major employment area over the past two decades the Broken Hill economy has broadened and diversified. The 2001 data shows that the biggest employers in Broken Hill are retail, education and mining. The vast majority of workers in the mining industry are male.

Table 16-2 Industry baseline, 2001

	Broken Hill			NSW		
	Male	Female	Total	Male	Female	Total
Agriculture, Forestry and Fishing	2.2%	1.0%	1.6%	4.3%	2.2%	3.4%
Mining	13.6%	0.5%	7.5%	0.9%	0.1%	0.5%
Manufacturing	6.3%	1.5%	4.1%	15.0%	7.2%	11.5%
Electricity, Gas and Water Supply	3.3%	0.8%	2.1%	1.1%	0.3%	0.7%
Construction	8.5%	1.1%	5.1%	10.9%	2.0%	6.9%
Wholesale Trade	5.6%	1.7%	3.8%	6.7%	4.1%	5.6%
Retail Trade	18.0%	21.1%	19.4%	12.4%	16.4%	14.2%
Accommodation, Cafes and Restaurants	4.5%	9.0%	6.6%	4.3%	6.2%	5.2%
Transport and Storage	4.9%	1.5%	3.4%	6.1%	2.7%	4.6%
Communication Services	1.8%	0.6%	1.3%	2.5%	1.4%	2.0%
Finance and Insurance	1.1%	2.9%	1.9%	3.9%	5.9%	4.8%
Property and Business Services	5.7%	8.5%	7.0%	11.8%	12.5%	12.2%
Government Administration and Defence	3.8%	4.5%	4.1%	4.0%	3.7%	3.8%
Education	4.6%	11.7%	7.9%	3.9%	10.4%	6.8%
Health and Community Services	6.2%	25.1%	14.9%	3.8%	16.2%	9.4%
Cultural and Recreational Services	1.5%	1.7%	1.6%	2.4%	2.5%	2.5%
Personal and Other Services	6.0%	5.1%	5.6%	3.4%	3.8%	3.6%
Non-classifiable economic units	0.3%	0.3%	0.3%	0.5%	0.5%	0.5%
Not stated	2.0%	1.5%	1.7%	1.8%	1.9%	1.8%

Source: ABS Census 2001

16.5 EMPLOYMENT BASELINE

Employment generated through the Project is anticipated to be a key positive impact, particularly given the persistent population decline in Broken Hill. More recent data provided through the Australian Government's "employment and workplace relations services for Australians" has been used to establish an employment baseline. The Department of Education, Employment and Workplace Relations (DEEWR) releases *Small Area Labour Markets* publications that present estimates of the number of unemployed persons and unemployment rates for Statistical Local Areas, and estimates of the main labour market aggregates for DEWR labour market regions (Table 16-3).

Table 16-3 Employment baseline data, March 2006 – March 2007

Region	NSW	Western NSW	Broken Hill
Employment March '06	3,243,500	246,700	9,323
Employment March '07	3,299,100	236,400	8,925
Change in employment %	1.7%	-4.2%	-4.3%
Labour force participation rate March '06	61.6%	64.4%	Not available
Labour force participation rate March '07	61.5%	60.9%	Not available
Change in participation rate % points	-0.1	-3.5	Not available

Region	NSW	Western NSW	Broken Hill
Unemployment March '06 ('000s)	200,700	14,500	749
Unemployment March '07 ('000s)	190,700	13,700	726
Change (%)	-5.0%	-5.5%	-3.1%
Unemployment rate March '06	6.7%	5.6%	8.2%
Unemployment rate March '07	5.5%	5.5%	8.0%
Change in unemployment rate % points	-1.2	-0.1	-0.2

Source: DEWR (2007) Small Area Labour Markets – March Quarter 2007

Employment levels in Western NSW and Broken Hill fell in the period March '06 to March '07 in contrast to the growth in employment experienced across NSW. Between March '06 and March '07 levels of unemployment fell in Broken Hill, Western NSW, and across NSW as a whole. The level of reduced unemployment was lowest in Broken Hill (a reduction of 3.1%) and highest in Western NSW (a reduction of 5.5%).

16.6 COMMUNITY SERVICES, SOCIAL INFRASTRUCTURE AND RECREATION

Broken Hill has a well developed community services system and social infrastructure. There are a range of social services available in Broken Hill including:

- Broken Hill Community Options;
- Commonwealth Carelink Centre - Far West;
- BHCC Disability Services;
- Far West Commonwealth Carer Respite Centre;
- Far West Community Aged Care Packages;
- Charles Rasp Memorial Library;
- Shorty O'Neil Village and
- BHCC Youth Services.

Health services have received significant funding and upgrade in the last few years with the completion of a new hospital and medical facilities for the city. The key medical facilities include.

- Broken Hill Hospital;
- Broken Hill Centre for Remote Health Research. The Centre is a joint initiative of the University of Sydney's Broken Hill Department of Rural Health and the Population Health Division of the Greater Western Area Health Service - Remote Health Cluster; and
- Broken Hill Medical Centre.

However, more and more patients are airlifted to Adelaide for treatment at the Royal Adelaide and Calvary Hospitals because of the lack of skills for surgery.

Specialist medical services are provided by visiting professionals from NSW or SA.

Social infrastructure such as parks, swimming and sporting facilities, clubs and entertainment venues were developed to cater for the city at its peak in the early seventies. There were a range of clubs and entertainment venues through the town, some of which have closed as the population has declined. A key issue with regard to social infrastructure in Broken Hill is generation of sufficient demand to justify maintenance of its existing facilities and services.

The decline in population has been a critical factor for the City in retaining education facilities, health services and other government support services provision of which are all based on population levels. Creation of new employment opportunities with the potential to generate incoming population will positively impact on the ability of the city to maintain the services and facilities currently available to its population.

16.7 IMPACT ASSESSMENT

BHCC is part of the Outback Development Forum, which has developed a Far West Region Growth and Investment Strategy in order to boost the local economy, promote the region and combat unemployment and a declining population. As part of this strategy a number of initiatives will be implemented including improvements to infrastructure, housing, health and education. The Project will inject investment into the Broken Hill economy, through direct expenditure on goods and services and through the spending of its employees. The positive socio economic impacts of the Project will contribute to achievement of the objectives of the Far West Region Growth and Investment Strategy.

The following sections consider the potential for impacts on the local economy during construction and operational phases. Impacts are presented in order of their anticipated significance, and broadly follow the order of the socio economic baseline.

16.7.1 Forecast employment and population impacts

This section considers the effects of the Project on the local economy of Broken Hill. The following impacts have been considered:

- direct employment associated with the construction and operation of the Rasp mine developments (site based contractors have been included within this section);
- indirect employment created in the supply chain as a result of the increased mining activity;
- induced employment impacts resulting from increased local spending; and
- population impacts.

Direct employment impacts

The Project has been placed on care and maintenance as a result of the downturn in metal prices and the global financial crisis in 2008 / 9. Currently there are 7 people employed at the Rasp Mine. A range of opportunities, from unskilled manual labour through to highly skilled technical employees such as electricians and joiners are anticipated as the Project moves to the operational phases of mining and processing.

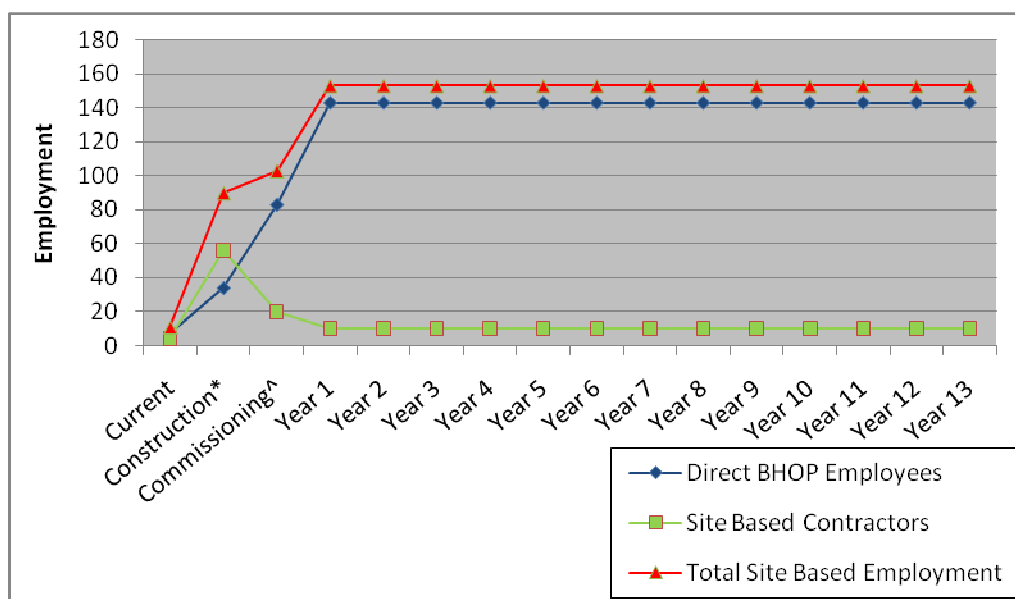
The Project is forecast to continue for 15 years and will employ people in administrative, underground mining, and processing roles as well as a range of contractors. At full production (from Year 3 of underground mining onwards) a total workforce of 153 personnel is forecast. It is understood that 143 will be employed directly by BHOP and 10 will be site-based contractors, including:

- administration roles – 18 persons;
- underground mining roles – 81 persons;
- processing mill operatives – 44 persons; and
- contractors – 10 persons.

Employment will also be generated at the port exporting concentrate from the mine. This employment is noted but has not been quantified for this socio economic assessment.

Figure 16-4 profiles employment associated with the Project over time.

Figure 16-4 Employment profile



* Construction refers to the processing plant construction, high grade pillar mining and ancillary surface activities. The stage is forecast to last for a 9 to 12 month period.

^ Commissioning refers to the processing plant commissioning and ramp up to full underground mining.

Full underground production for the Project is forecast to commence during the 1st quarter of calendar year 2012 and continue until December 2024.

Indirect and induced employment impacts

The Project will have further employment benefits to the local community through 'indirect' and 'induced' employment.

Indirect employment comprises employment generated by suppliers and contractors. The spending of direct and indirect employees will generate employment in the local economy, referred to as induced employment. This can result from spending by these employees on activities such as housing, food, clothing, leisure activities, personal and business services, transport and utilities.

Employment generated through indirect and induced effects are often referred to as the multiplier effect.

Present estimates place construction costs at over \$100 million. This includes the cost of the underground mine development, site works, processing plant and equipment, services and

ancillaries related to the operation. To estimate the indirect employment generated through the Project procurement expenditure an assumption is made regarding the relationship between person year's employment and procurement spend. It is assumed that for every \$350,000 of procurement expenditure one person year of employment will be created. This assumption is based on previous detailed ERM socio economic specific studies for the mining sector.

Forecast operational procurement spend to local firms is estimated to be \$12 million per annum. On this basis, 35 people are estimated to be employed indirectly by the Project.

A 2001 World Bank study considered the multiplier effects of mining operations. This report was used as the basis for part of the ICMM Socio-economic toolkit as part of their Resource Endowment programme of studies. In line with the World Bank study induced employment is estimated to be 165% of direct and indirect employment. This equates to 311 employees (165% of the additional 188 direct and indirect additional employees).

The Project is estimated to result in an additional 499 employees comprised of 153 through direct employment (employees and contractors), 35 through indirect employment and 311 through induced employment. There should be a range of opportunities available to local residents who are either seeking work, or seeking to obtain more highly skilled work.

Prior to the project being placed on care and maintenance BHOP / CBH was active in the community with various initiatives including:

- vacation employment for school children who are looking at a career in the mining industry;
- a \$10,000 grant to a Broken Hill Willyama High School student to study mining engineering at the University of Adelaide;
- funding of a visit by 35 Broken Hill High School Year 11 students to Newcastle for a science competition;
- funding for refurbishment of the Broken Hill Geo Centre;
- funding for the Line of Lode (Administrator appointed); and
- sponsorship of community activities such as Lifeline, The Geo Centre Museum and St Patrick's Day Races.

In addition, students of mining and geology came to Rasp Mine for field trips and in 2007, 2008 and 2009 BHOP supported groups from the University of New South Wales, the University of Adelaide, the University of Wollongong, the University of New England, Ballarat University and the University of Melbourne.

Table 16-4 Employment impacts under full production

Category	Employment under full production
Direct	153
Indirect	35
Induced	311
Total	499

Population impacts

The population of Broken Hill LGA has experienced a steady decline in recent years. Given the role of the mining sector in Broken Hill the rise and fall in population can largely be attributed to the degree of mining activity taking place. The Project is anticipated to:

- present a positive image of the future of mining in Broken Hill. This could encourage people of working age to remain within the LGA rather than seek employment elsewhere;
- generate a range of additional employment opportunities which the existing unemployed population may be able to fill;
- attract 'economic migrants' who would move to Broken Hill, helping to limit population decline. BHOP has estimated the source of employees as follows:
 - 60% of the workforce (91 direct positions) will be sourced locally;
 - 20% of the workforce (31 direct positions) will be ex-locals attracted back to Broken Hill; and
 - 20% of the workforce (31 positions) will be sourced external to Broken Hill.

Although the development is unlikely to fully mitigate population declines, the extent of employment opportunities offered is likely to reduce population decline in Broken Hill.

16.7.2 Forecast industrial composition impacts

Employment in Broken Hill is focused towards the mining sector (in 2001 the sector employed 13.6% of the male population) and supporting sectors including retail trade and health and community. The Project will support the existing industrial composition for Broken Hill and the wider region. The Project will also have an impact on businesses in the region who provide support services for the mining industry and their employees by increasing their confidence towards the sector and its ongoing viability for the area.

16.7.3 Forecast impact on the local and regional economy

One of the most noticeable impacts to the local and regional economy will be the employment generated, as discussed in *Section 16.7.1*. Procurement spending relating to the proposal would support the ongoing viability of a number of related areas of the economy, particularly the construction and transport sectors.

The Project will make a significant contribution to the local, State and Federal level through the payment of taxes and royalties (refer *Table 16-5*).

Table 16-5 Payments to public authorities

Payment Category	
Royalties	\$41 M
Employee Taxes	\$50 M.
Corporate Taxes	Not assessed
Licence Administration Fee	\$31, 825
Natural resource charges and consent payments	Not assessed
Total assessed contributions	\$91 M
Source: BHOP Estimates	

16.7.4 Forecast impacts to community services and development programmes

It is predicted that there will be sufficient capacity in the existing local services to accommodate the changes resulting from the Project. The increased population and economic activity estimated to accompany the Project will contribute to the ongoing viability of a range of services and facilities. Extending the life of mining activity in Broken Hill also means that BHOP will have continued opportunity to identify and support targeted community development programmes.

16.8 CONCLUSIONS

The Project will have positive socio economic impacts to the study area including:

- direct and indirect employment opportunities;
- expansion of businesses with increased local spending on goods and services;
- an increase in business and community confidence in the continuing of prosperity for the Broken Hill area;
- retention and attraction of working age population looking for new job opportunities; and
- financial contribution to the through the payment of taxes and royalties of \$91 M.