

17 Social

17.1 Existing environment

This section details the social impact assessment ('the assessment') undertaken for the Project. Social impacts are the outcome of the interaction between the Project and the existing social environment. Therefore, baseline data on the existing features of the community were obtained in order to define and understand the existing social environment that may be affected by the Project. From this data a projection and assessment of potential benefits and impacts was undertaken, and potential mitigation measures or alternatives proposed to assist with the short-term and long-term management of community interests.

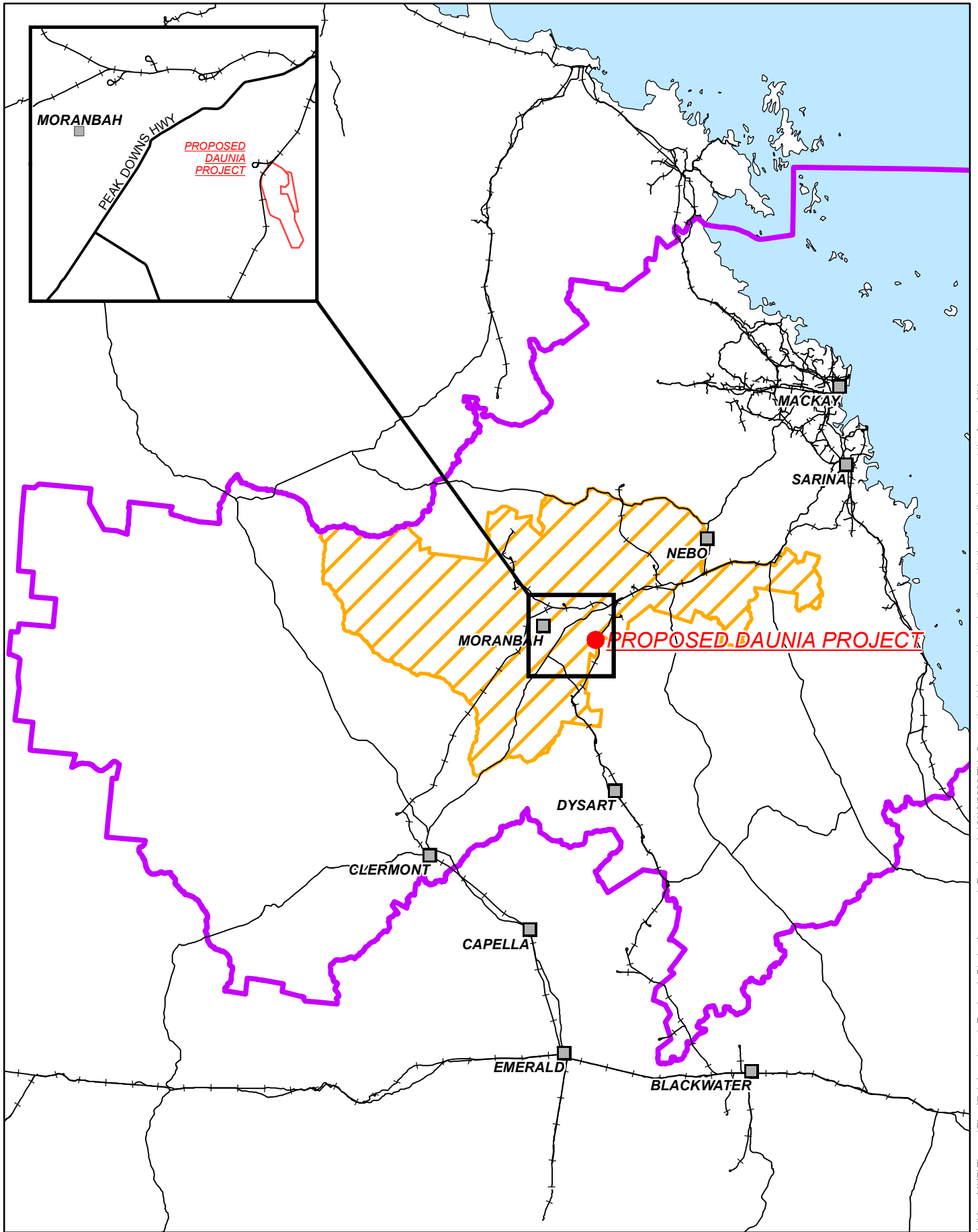
In line with the requirements of the BMA Bowen Basin Coal Growth Project (BMA BBCGP) Terms of Reference (ToR) features of the existing social environment considered include:

- population and demographics of the affected community;
- community infrastructure and services, access and mobility;
- housing and accommodation;
- local community values, vitality and lifestyles;
- recreational, cultural, leisure and sporting facilities and activities in the affected area;
- health and educational facilities;
- on-farm activities near the proposed Project activities;
- properties directly affected by the Project; and
- families directly affected by the Project.

The assessment identifies the local social and socio-economic issues in an area incorporating the townships of Moranbah, Coppabella and Nebo, the closest population centres to the Project Site, as well as identifying issues, impacts and benefits across the wider region. This approach ensures that local impacts will be identified within the context of the wider region and the State of Queensland.

For the purposes of the assessment, two study areas were defined as follows:

- A 'Regional Study Area', comprising the areas of the Mackay and Isaac Regional Councils; and
- A 'Local Study Area', comprising the following Australian Bureau of Statistics (ABS) State suburbs:
 - Moranbah (former Belyando Shire) SSC 36793
 - Oxford (former Nebo Shire) SSC 37103
 - Nebo (former Nebo Shire) SSC 36979
- The Regional Study Area and Local Study Area are shown in **Figure 17-1**.



LEGEND

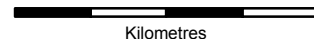
- Towns
- Major Road
- + Existing Railway
- ▭ Daunia Mining Lease
- ▨ Local Study Area (Moranbah, Oxford and Nebo State Suburbs)
- ▭ Regional Study Area (Isaac and Mackay Regional Councils)



**FIGURE 17-1
DAUNIA COAL MINE EIS**

LOCAL AND REGIONAL STUDY AREAS

0 20 40 60 80



Kilometres

Scale 1:2,000,000 on A4

Projection: Australian Map Grid - Zone 55 (AGD84)



BHP Billiton Mitsubishi Alliance

17.1.1 Methodology

The assessment has been undertaken in accordance with the principles outlined in:

- Social Issues in Development Assessment, A Resource Guide (Department of Families, 2002); and
- BHP Billiton-Wide HSEC Guideline – Environmental and Social Impact Assessment, Revision No. 2.0, 30 October 2007.

A desktop assessment of the demographic characteristics of the region was undertaken. Statistical data from the ABS 2001 and 2006 Census of Population and Housing, Basic Community Profiles formed the basis of the demographic profile. This was supplemented with information from other government statistics and regional reports. Other information sources used to provide additional local information about the demographic profile of the region included, but are not limited to:

- Isaac Regional Council Population Growth Discussion Paper for Moranbah, May 2008;
- Nebo Shire Economic Development Strategy (Nebo Shire Council, 2006);
- Bowen Basin Population Report, 2007. Full-time Equivalent Population Estimates at 31 July 2007;
- Economic and Social Impacts of the Coppabella Mine on the Nebo Shire and the Mackay Region (Rolfe *et al*, 2003); and
- Housing in the Bowen Basin (Department of Housing, 2007).

A number of reference documents prepared by BMA have been used to develop mitigation strategies in line with current BMA protocols and management practices. These include, but are not limited to:

- Community Investment Report: A review of activities and partnerships between BMA, our employees and the local communities of Central Queensland;
- Sustainable Development Report: Covering health and safety, the environment and community performance; and
- Skills for Growth: BMA's new education, training and skills development initiatives in the Queensland coal industry.

Discussions with the general community and key stakeholders also assisted the development of the regional social profile. Engagement focussed on preparing the community for the Project as well as overall growth. BMA representatives have held monthly meetings with the Isaac Regional Council to discuss BMA operations, community investment and general activities in the region. These meetings provided the opportunity for BMA to outline general plans for growth, the Project and to gather Council's input on mine planning, the EIS process, workforce accommodation and social services. BMA have also held a meeting with the Mackay Regional Council to introduce Council to the Project and BMA's overall growth and to discuss potential issues and concerns.

In addition to consultation with the general Moranbah and wider community (see **Section 16**), service providers in the Moranbah area were engaged through a workshop, one-to-one meetings and telephone interviews, which occurred from May 2008 to July 2008. The following organisations were engaged:

- Isaac Regional Council;
- Department of Communities;

- Disability Services;
- Emergency Long-term Accommodation Moranbah (ELAM);
- Moranbah and District Support Services;
- Queensland Health;
- Mackay Health Service;
- Moranbah Ambulance Service;
- Moranbah State High School;
- Moranbah East State School;
- Moranbah Community Kindergarten;
- Moranbah Police Station;
- Nebo Police Station;
- Nebo State School;
- Queensland Fire and Rescue Service;
- Drovers Rest Motel;
- MAC Services Group;
- Simply Sunshine Child Care Centre; and
- Altitude Child Care Centre.

BMA also established a Community Reference Group (CRG) to discuss key issues associated with the Project as well as overall growth in the Isaac Regional Council. This reference group, which to date has met three times, included representatives from:

- Isaac Regional Council;
- Isaac/Connors Catchment Landcare;
- Moranbah Traders Association;
- Emergency Long-term Accommodation Moranbah;
- Moranbah District and Support Services Association;
- Dysart Community Support Group;
- Department of Infrastructure and Planning;
- Department of Mines and Energy;
- Department of Communities;
- Environmental Protection Agency;
- Moranbah Hospital;
- Queensland Ambulance Service – Moranbah Station;
- Queensland Fire and Rescue Service – Moranbah Station; and
- Queensland Police Service.

17.1.1.1 Information constraints

On 15 March 2008 an amalgamation of local government areas (LGAs) occurred in Queensland. Of relevance to the assessment was the amalgamation of the former Belyando, Broadsound and Nebo Shires



into the Isaac Regional Council and the Mirani and Sarina Shires and Mackay City into the Mackay Regional Council. For the purposes of the assessment, statistics and information from both of these Regional Councils has been used to represent the Regional Study Area.

While the amalgamation of these councils will not affect the demographic statistics available from the 2006 Census, it can affect the streamlining of council strategic planning with the Project. It could also influence overall community cohesion and how communities within LGAs (as well as local authorities themselves) identify themselves. These issues will need to be consistently followed up as the amalgamations and the related processes and procedures are embedded.

17.1.2 Population and Demographic Profile

The Project is located within the Isaac Regional Council (comprising the former Belyando, Broadsound and Nebo Shires) in the northern part of the Bowen Basin approximately 200 km west of Mackay, and 1,050 km north-west of Brisbane. Situated on the eastern side of the existing Poitrel Mine, the Project site is approximately 25 km south-east of the township of Moranbah and 25 km south-west from Coppabella.

Local communities that may be affected by the Project are the townships of Moranbah and Coppabella, and to a lesser extent Nebo. These communities lie within the assessment's Local Study Area (see **Figure 17-1**).

The township of Moranbah (within the former Belyando Shire) was established in 1971 by the Utah Development Company Ltd as a purpose built mining town to service the Goonyella Mine and later the Peak Downs Mine. The town grew rapidly throughout the 1970s and 1980s as houses were constructed for the mining workforce and their families. However, staffing changes at BMA operations saw the population of Moranbah decline during the 1990s (Belyando Shire Council webpage - <http://www.belyando.qld.gov.au/>).

It is proposed that the majority of the Project's construction and operational workforces be housed at the MAC Accommodation Village at Coppabella. Located within the former Nebo Shire, the township of Coppabella is situated on the Peak Downs Highway, approximately 53 km to the east of Moranbah and 150 km to the south-west of Mackay. The town was established when land was resumed in 1970 for the purposes of building residences for railway employees. This led to the establishment of a purpose-built railway town to service the mining industry.

The township of Nebo was first surveyed in 1865. It was strategically located at the crossroads of the main south-north and east-west tracks that are now known as the Peak Downs Highway. At that time it was named Fort Cooper after Mt Fort Cooper. Popular demand, however, saw the township renamed Nebo in 1923, the name derived from Nebo Creek. During its early establishment, Nebo's primary production was dominated by sheep and wool growing, however; sheep were eventually replaced by cattle when the area proved unsuitable for sheep (Nebo Shire Council website - <http://www.nebo.qld.gov.au/>).

17.1.2.1 Population

At the time of the 2006 Census, the resident population within the Local Study Area was 8,212 persons (see **Table 17-1**). For the same time period, the Regional Study Area had a resident population of 120,837 persons, with the majority (over 80 per cent) being within the Mackay Regional Council.

Of the resident population of the Local Study Area, 4,578 (55.7 per cent) were male and 3,634 (44.3 per cent) female. This trend towards a greater prevalence of males within the community was also reflected in

the statistics for the Isaac Regional Council, where 55.3 per cent of the resident population were male and 44.7 per cent female. Mackay Regional Council had a more balanced distribution with the resident population comprising 51 per cent males and 49 per cent females.

Table 17-1 Resident Population by sex for the Local and Regional Study Areas, 2006

| Town/LGA/Region | Males | Females | Total Population |
|-------------------------|--------|---------|------------------|
| Local Study Area | 4,578 | 3,634 | 8,212 |
| Moranbah | 4,105 | 3,327 | 7,432 |
| Oxford | 311 | 188 | 499 |
| Nebo | 162 | 119 | 281 |
| Regional Study Area | 62,443 | 58,394 | 120,837 |
| Isaac Regional Council | 10,964 | 8,858 | 19,822 |
| Belyando Shire | 5,610 | 4,846 | 10,456 |
| Broadsound Shire | 3,875 | 2,969 | 6,844 |
| Nebo Shire | 1,479 | 1,043 | 2,522 |
| Mackay Regional Council | 51,479 | 49,536 | 101,015 |
| Mackay City | 43,121 | 41,768 | 84,889 |
| Mirani Shire | 2,830 | 2,576 | 5,406 |
| Sarina Shire | 5,528 | 5,192 | 10,720 |

Source: ABS 2007a to j

A 2007 study by the Planning Information and Forecasting Unit of the Department of Infrastructure and Planning found that non-resident workers currently constitute a sizeable proportion of the full-time equivalent population of the Bowen Basin. Based on a survey of accommodation providers, the study found that the former Shires within the Isaac Regional Council had a non-resident worker population of 7,197 persons (Belyando Shire: 1,881 persons; Broadsound Shire: 2,448 persons; and Nebo Shire: 2,868 persons) (Department of Infrastructure and Planning, 2007). This non-resident population, comprising people working in the area for an extended period of time but having a usual place of residence elsewhere, represents approximately 36 per cent of the total resident population for the Isaac Regional Council.

The non-resident population for the Local Study Area at the time of the 2006 Census is shown in **Table 17-2**. Based on place of enumeration statistics, there are an additional 1,702 people (21 per cent) who spend extended periods of time in the Local Study Area but whose usual place of residence is elsewhere. The large majority (98 per cent) of this non-resident population are male.

Table 17-2 Non-Resident Population by sex for the Local Study Area, 2006

| Town/LGA/Region | Males | Females | Total Non-Resident Population |
|------------------|-------|---------|-------------------------------|
| Local Study Area | 1,664 | 38 | 1,702 |
| Moranbah | 1,130 | 9 | 1,139 |
| Oxford | 464 | 19 | 483 |
| Nebo | 70 | 10 | 80 |

Source: ABS 2007e, f and h

During the period 1986 to 2001, the wider region experienced a declining population, mainly attributable to a contraction in the coal industry. Since 2001, a reversal of this trend has occurred with most areas experiencing significant population increases (refer to **Table 17-3**). While resident population figures for the Local Study Area are unavailable for the 2001 Census, figures for the township of Moranbah itself are available. Since the 2001 Census, Moranbah has experienced a residential population increase of 998 persons (16 per cent). Over the same period, the region making up the now Isaac Regional Council experienced a population increase of 809 persons (4 per cent) and Mackay Regional Council an increase of 12.4 per cent. Between 2001 and 2006 the Queensland population as a whole has increased by 249,395 persons or 6.8 per cent.

Table 17-3 Average Annual Population Change for the Regional Study Area, 2002-2007

| Town/LGA/Region | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Regional Study Area | | | | | | |
| Isaac Regional Council | 492 (2.7%) | 517 (2.7%) | 231 (1.2%) | 647 (3.3%) | 702 (3.4%) | 421 (2%) |
| Mackay Regional Council | 2,565 (2.8%) | 2,369 (2.5%) | 2,939 (3.1%) | 4,103 (4.1%) | 4,272 (4.1%) | 2,281 (2.1%) |

Source: PFIU 2008 a and b

Population projections are not readily available for individual small townships in Queensland. However, statistics for Isaac Regional Council show the general trend for the area and provide an indication of likely trends for the Local Study Area. Predictions from the Department of Local Government and Planning (DLGP) indicated that the population of the Isaac Regional Council is projected to increase at an annual average rate of 1.5 per cent between 2001 and 2026 to reach 27,059 persons. This compares to an annual average growth rate of 1.7 per cent for Queensland over the same period (OESR 2008a).

Population mobility

In comparison to the Regional Study Area and Queensland as a whole, the resident population of the Local Study Area is highly mobile with 54.9 per cent of the population residing at a different address 5 years ago. The majority (54.3 per cent) of this portion of the population came from a different statistical local area within Queensland (refer **Table 17-4**).

Table 17-4 Usual Place of Residence 5 Years Ago in the Local Study Area, Isaac and Mackay Regional Councils, and Queensland, 2006

| Place of Usual Residence 5 Years Ago | Local Study Area | | Isaac Regional Council | | Mackay Regional Council | | Queensland |
|--------------------------------------|------------------|------|------------------------|------|-------------------------|------|------------|
| | Number | % | Number | % | Number | % | % |
| Same address 5 years ago | 2,597 | 34.9 | 6,826 | 38.1 | 43,098 | 45.8 | 45.1 |
| Different address 5 years ago | 4,079 | 54.9 | 9,066 | 50.6 | 42,871 | 45.6 | 47.6 |
| Not stated | 756 | 10.2 | 2,042 | 11.3 | 8,132 | 8.6 | 7.3 |
| Total | 7,432 | 100 | 17,934 | 100 | 94,101 | 100 | 100 |

Source: ABS 2007a to j

17.1.2.2 Ethnicity

Of the resident population for the Local Study Area only 170 persons (2.1 per cent) identified themselves as Indigenous. This percentage was similar to the proportion of the resident population of Isaac Regional Council who identified themselves as Indigenous, however was lower than those recorded for Mackay Regional Council (3.9 per cent) and Queensland as a whole (3.3 per cent) (refer to **Table 17-5**).

Table 17-5 Indigenous status for the Local Study Area, Isaac and Mackay Regional Councils, and Queensland, 2006

| Ethnicity | Local Study Area | | Isaac Regional Council | | Mackay Regional Council | | Queensland |
|----------------|------------------|------|------------------------|------|-------------------------|------|------------|
| | Number | % | Number | % | Number | % | % |
| Indigenous | 170 | 2.1 | 422 | 2.1 | 3,935 | 3.9 | 3.3 |
| Non-indigenous | 7,299 | 88.9 | 17,329 | 87.4 | 89,467 | 88.6 | 91 |
| Not stated | 743 | 9.0 | 2,071 | 10.5 | 7,615 | 7.5 | 5.7 |
| Total | 8,212 | 100 | 19,822 | 100 | 78,669 | 100 | 100 |

Source: ABS 2007a to j

Within the Local Study Area there were 1,450 persons (17.7 per cent) who were born overseas. This is slightly lower than the Queensland average of 24.8 per cent. Of those born overseas the majority were from New Zealand (15.6 per cent) followed by the United Kingdom (7.7 per cent).

17.1.2.3 Age Structure

Figure 17-2 illustrates the proportion of the population in each age group by sex in the Local Study Area at the time of the 2006 Census. At this time, the largest age group in the Local Study Area was the 25 to 29 age bracket comprising 10.4 per cent of the population followed by the 30 to 34 age bracket comprising 10.1 per cent of the of the population. The smallest group was people aged over 80 years comprising 0.1 per cent of the population.

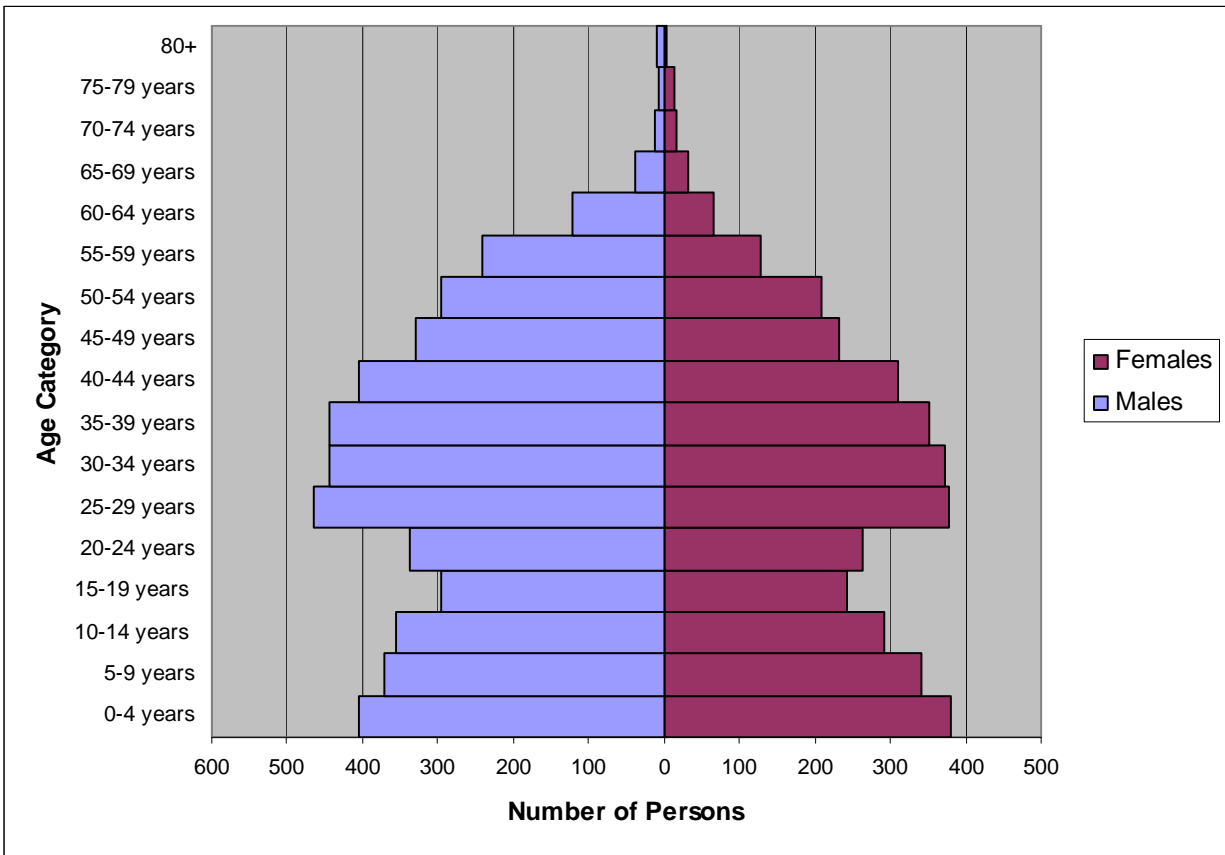


Figure 17-2 Population by Age and Sex in the Local Study Area, 2006

Since the 2001 Census, the largest level of population increase in the township of Moranbah itself was experienced by the 24-29 year old age group with a 49.3 per cent increase in this category between 2001 and 2006. Significant increases were also recorded in the 20-24 and 15-19 age groups. The increases in the 15-24 age groups would have arisen from younger people moving into the area to access mining opportunities. In addition, substantial population declines were recorded for those members of the population aged 70+ years reflecting the lack of retirement accommodation in the area (refer **Table 17-6**).

In 2006, the median age of Moranbah was 29 years which is eight years less than the national median of 37 years. This reflects the working nature of the mining town. Furthermore 3300 persons (46.2 per cent) of the town's population were aged 20 to 44 years. This is representative of a working population who are employed in such a labour intensive industry as mining and its supporting services.

Table 17-6 Population by age in Moranbah, 2001-2006

| Age Group | 2001 | | 2006 | | Change in age group 2001-2006 (%) |
|---------------|--------|-----------------|--------|-----------------|-----------------------------------|
| | Number | % of population | Number | % of population | |
| 0 – 4 years | 544 | 8.9 | 699 | 9.8 | 28.5% |
| 5 – 9 years | 592 | 9.7 | 629 | 8.8 | 6.25% |
| 10 – 14 years | 511 | 8.3 | 592 | 8.3 | 15.9% |
| 15 – 19 years | 375 | 6.1 | 491 | 6.9 | 30.9% |
| 20 – 24 years | 390 | 6.4 | 527 | 7.4 | 35.1% |
| 25 – 29 years | 495 | 8.1 | 739 | 10.4 | 49.3% |
| 30 – 34 years | 621 | 10.1 | 722 | 10.1 | 16.3% |
| 35 – 39 years | 580 | 9.5 | 703 | 9.9 | 21.2% |
| 40 – 44 years | 544 | 8.9 | 609 | 8.6 | 11.9% |
| 45 – 49 years | 541 | 8.8 | 486 | 6.8 | -10.1% |
| 50 – 54 years | 462 | 7.5 | 417 | 5.8 | -9.7% |
| 55 – 59 years | 236 | 3.8 | 295 | 4.1 | 24.7% |
| 60 – 64 years | 96 | 1.6 | 137 | 1.9 | 42.7% |
| 65 – 69 years | 52 | 0.8 | 45 | 0.6 | -13.5% |
| 70 – 74 years | 36 | 0.6 | 20 | 0.3 | -44.4% |
| 75 – 79 years | 24 | 0.4 | 12 | 0.2 | -50.0% |
| 80+ | 28 | 0.5 | 9 | 0.1 | -67.8% |
| Total | 6,127 | 100 | 7,132 | 100 | 5.06 |

Source: ABS 2007e and 2002

17.1.2.4 Marital Status

The number and proportion of people in each marital status group in the Local Study Area, Regional Study Area and Queensland is outlined in **Table 17-7**. Over half the population aged over 15 years in the Local Study Area is married (53.3 per cent), a slightly higher percentage than the Queensland average of 49.05 per cent.

Table 17-7 Marital status for Local Study Area, Isaac and Mackay Regional Councils, and Queensland, 2006

| Marital Status | Local Study Area | | Isaac Regional Council | | Mackay Regional Council | | Queensland |
|-----------------------|------------------|------|------------------------|------|-------------------------|------|------------|
| | Number | % | Number | % | Number | % | % |
| Married | 3,231 | 53.3 | 8,048 | 54.7 | 41,255 | 52.4 | 49.1 |
| Separated or divorced | 617 | 10.2 | 1,539 | 10.6 | 8,856 | 11.3 | 12.3 |
| Widowed | 68 | 1.1 | 304 | 2.0 | 3,997 | 5.0 | 5.4 |
| Never Married | 2,144 | 35.4 | 4,825 | 32.8 | 24,561 | 31.2 | 33.2 |
| Total | 6,060 | 100 | 14,716 | 100 | 78,669 | 100 | 100 |

Source: ABS 2007a to j

Between 2001 and 2006 in the township of Moranbah, the proportion of people who had never been married increased from 29.2 per cent to 35.4 per cent. This trend was also replicated within the Isaac Regional Council where the proportion of people who had never been married increased from 28.7 per cent to 32.8 per cent.

Between 2001 and 2006, the proportion of persons separated or divorced increased from 9.3 per cent to 10.2 per cent in the township of Moranbah and from 10.5 per cent to 10.6 per cent in the Isaac Regional Council.

17.1.2.5 Family and Household Structure

A breakdown of family structure for the Local Study, Regional Study Area and Queensland in 2006 is shown in **Table 17-8**. The most prevalent family type in both the Local Study Area and the Isaac Regional Council is couple families with children comprising 58.9 per cent and 55.8 per cent of all family types, respectively. These proportions are significantly greater than the Queensland average of 43.3 per cent for this family type.

In comparison the proportion of one parent families within the Local Study Area (7.9 per cent of all family types) and the Isaac Regional Council (8.0 per cent of all family types) are significantly lower than the Queensland average of 15.9 per cent.

Table 17-8 Family Structure for Local Study Area, Isaac and Mackay Regional Councils, and Queensland, 2006

| Household Structure | Local Study Area | | Isaac Regional Council | | Mackay Regional Council | | Queensland |
|--------------------------------|------------------|------|------------------------|------|-------------------------|------|------------|
| | Number | % | Number | % | Number | % | % |
| Couple family without children | 634 | 32.4 | 1,660 | 35.2 | 10,223 | 38.3 | 39.1 |
| Couple family with children | 1,152 | 58.9 | 2,627 | 55.8 | 12,631 | 47.3 | 43.3 |
| One parent family | 154 | 7.9 | 375 | 8.0 | 3,545 | 13.3 | 15.9 |
| Other family | 17 | 0.8 | 46 | 1.0 | 298 | 1.1 | 1.7 |
| Total | 1,957 | 100 | 4,708 | 100 | 26,697 | 100 | 100 |

Source: ABS 2007a to j

17.1.2.6 Dwelling Structure

In 2006, the majority of dwellings in the Local Study Area were separate houses (as opposed to semi-detached houses or units) accounting for 88.6 per cent of all dwellings. This number was slightly higher for the Isaac Regional Council where separate houses accounted for 90.4 per cent of all dwelling types. These figures were higher than for Mackay Regional Council and Queensland where separate houses accounted for 84.2 per cent and 79.5 per cent of all dwelling types, respectively (refer **Table 17-9**).

The next most prevalent dwelling type in the Local Study Area was other dwellings (including caravans) which accounted for five per cent of all dwelling types.

Table 17-9 Dwelling type in the Local Study Area, Isaac and Mackay Regional Councils, and Queensland, 2006

| Dwelling Structure | Local Study Area | | Isaac Regional Council | | Mackay Regional Council | | Queensland |
|--|------------------|------------|------------------------|------------|-------------------------|------------|------------|
| | Number | % | Number | % | Number | % | % |
| Separate house | 2,136 | 88.6 | 5,402 | 90.4 | 28,623 | 84.2 | 79.5 |
| Semi-detached, row or terrace house, townhouse | 60 | 2.5 | 70 | 1.2 | 1,415 | 4.2 | 7.7 |
| Flat, unit or apartment | 94 | 3.9 | 208 | 3.5 | 3,109 | 9.15 | 11.2 |
| Other dwelling | 122 | 5.0 | 292 | 4.8 | 805 | 2.4 | 1.5 |
| Dwelling structure not stated | 0 | 0 | 5 | 0.1 | 18 | 0.05 | 0.1 |
| Total | 2,412 | 100 | 5,977 | 100 | 33,970 | 100 | 100 |

Source: ABS 2007a to j

Of all the dwellings in the Local Study Area, a significant portion were being rented (1,120 or 46.3 per cent). This is higher than the average for Queensland with 31.1 per cent of all dwelling types being rented. In addition, 66.4 per cent of these rentals were through “other landlord type” comprising dwellings being rented through a residential park (including caravan parks), employer-government or employers (private). By comparison only 6.6 per cent of all rentals in Queensland were through this type. A further 587 (24.3 per cent) of dwellings were fully owned and 525 (21.7 per cent) were being purchased (refer **Table 17-10**) compared to 34.5 per cent and 38.7 per cent respectively for Queensland.

The higher level of rentals and lower level of home ownership within the Local Study Area compared with the state of Queensland is reflective of the more transient nature of the population in the local community.

Table 17-10 Dwelling and tenure types in the Local Study Area, 2006

| Dwelling type | Tenure Type | | | | | Total |
|--|-------------|---|--------------|-------------------|------------|--------------|
| | Fully owned | Being purchased (including under a rent/buy scheme) | Being rented | Other tenure type | Not Stated | |
| Separate house | 529 | 505 | 960 | 21 | 49 | 2131 |
| Semi-detached, row or terrace house, townhouse | 0 | 3 | 46 | 0 | 0 | 61 |
| Flat unit or apartment | 0 | 9 | 71 | 11 | 0 | 103 |
| Other dwelling | 58 | 8 | 43 | 0 | 8 | 125 |
| Not stated | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 587 | 525 | 1,120 | 32 | 57 | 2,420 |

Source: ABS 2007e

17.1.2.7 Employment

The Local Study Area has a greater number of employed people in the labour force (98.0 per cent) compared to Queensland as a whole (95.3 per cent) (refer to **Table 17-11**). In 2006 both the Local Study Area and the Isaac Regional Council had a lower proportion of unemployed people (2.0 per cent and 2.1 per cent respectively) than Queensland as a whole (4.7 per cent). This could be attributed to the significant employment opportunities in the region offered by the mining industry.

Between 2001 and 2006, the number of people in the township of Moranbah labour force increased by 807 persons (25.4 per cent), from 3,182 to 3,989 people. By comparison, the number of people in the labour force in Queensland increased by 12.1 per cent over the same period. The significant increase in the labour force in Moranbah over this period is directly related to global demand for the mineral resources of the area and the available infrastructure that was previously dormant, allowing a rapid uptake of industry employees to the area (Isaac Regional Council 2008).

Table 17-11 Labour Force Status for the Local Study Area, Isaac and Mackay Regional Councils, and Queensland, 2006

| Labour Force Status | Local Study Area | | Isaac Regional Council | | Mackay Regional Council | | Queensland |
|--------------------------|------------------|---------------------------|------------------------|---------------------------|-------------------------|---------------------------|---------------------------|
| | Number | % (of total labour force) | Number | % (of total labour force) | Number | % (of total labour force) | % (of total labour force) |
| Employed: | 4,462 | 98.0 | 10,186 | 97.9 | 48,102 | 96.2 | 95.3 |
| Full-time | 3,229 | 70.1 | 7,314 | 70.3 | 32,948 | 68.4 | 61.6 |
| Part-time | 931 | 20.5 | 2,120 | 20.4 | 11,961 | 24.9 | 2.7.7 |
| Employed, away from work | 174 | 3.8 | 424 | 4.0 | 1,667 | 3.5 | 3.3 |
| Hours worked not stated | 128 | 2.8 | 328 | 3.2 | 1,526 | 3.2 | 2.6 |
| Unemployed: | 89 | 2.0 | 219 | 2.1 | 1,876 | 3.8 | 4.7 |
| Seeking full-time | 59 | 1.3 | 154 | 1.49 | 1,187 | 63.3 | 1.8 |
| Seeking part-time | 30 | 0.7 | 65 | 0.6 | 689 | 36.7 | 1.2 |
| Total Labour Force | 4,551 | 100 | 10,405 | 100 | 49,978 | 100 | 100 |
| Not in Labour Force | 911 | | 2,598 | | 21,950 | | 50.7 |
| Not stated | 600 | | 1,707 | | 6,743 | | 11 |
| Total | 6,062 | | 14,710 | | 78,671 | | 100 |

Source: ABS 2007 a to j

17.1.2.8 Employment by Industry

Employment by industry categories for the Local Study Area in 2006 are shown in **Table 17-12**. Almost 43 per cent of the working population of the Local Study Area are employed in the mining sector of which 86.7 per cent are male. This percentage was slightly higher for the township of Moranbah where 1,832 persons (46.7 per cent) of the working resident population were employed in the mining sector, a slight increase from 2001 when approximately 44 per cent of the working population were employed in this sector.

The other significant industries in the Local Study Area were retail trade, accommodation and food services, and construction employing 7.4 per cent, 6.9 per cent and 6.5 per cent of the working population

respectively. Of the remaining categories, education and training had the highest proportion of employees comprising 5.2 per cent of the workforce.

By comparison only 8.3 per cent of the working population of the Mackay Regional Council and 1.7 per cent of the working population of Queensland were employed in the mining sector. Significant industries in these more urban areas included construction, manufacturing, retail trade, health care and social assistance.

Table 17-12 Employment by industry category in the Local Study Area, Isaac and Mackay Regional Councils, and Queensland, 2006

| Industry | Local Study Area | | | | Isaac Regional Council | Mackay Regional Council | Queensland |
|---|------------------|--------------|--------------|------------|------------------------|-------------------------|------------|
| | Males | Females | Persons | % | % | % | % |
| Agriculture, Forestry and Fishing | 97 | 63 | 160 | 3.6 | 10.5 | 4.6 | 3.4 |
| Mining | 1,676 | 256 | 1,932 | 43.0 | 38.9 | 8.3 | 1.7 |
| Manufacturing | 64 | 26 | 90 | 2.0 | 2.0 | 9.9 | 9.9 |
| Electricity, Gas, Water and Waste Services | 14 | 3 | 17 | 0.4 | 0.5 | 0.9 | 1.0 |
| Construction | 240 | 53 | 293 | 6.5 | 6.4 | 10.1 | 9.0 |
| Wholesale Trade | 97 | 25 | 122 | 2.6 | 2.0 | 4.6 | 3.9 |
| Retail Trade | 90 | 242 | 332 | 7.4 | 7.1 | 11.4 | 11.6 |
| Accommodation and Food Services | 87 | 222 | 309 | 6.9 | 6.1 | 6.5 | 7.0 |
| Transport, Postal and Warehousing | 148 | 58 | 206 | 4.5 | 3.6 | 6.1 | 5.1 |
| Information Media and Telecommunications | 0 | 11 | 11 | 0.2 | 0.2 | 0.8 | 1.4 |
| Financial and Insurance Services | 0 | 27 | 27 | 0.6 | 0.5 | 1.8 | 2.9 |
| Rental, Hiring and Real Estate Services | 37 | 26 | 63 | 1.4 | 1.0 | 1.9 | 2.1 |
| Professional, Scientific and Technical Services | 31 | 48 | 79 | 1.7 | 1.3 | 4.4 | 5.6 |
| Administrative and Support Services | 21 | 85 | 106 | 2.4 | 2.2 | 2.2 | 3.1 |
| Public Administration and Safety | 56 | 62 | 118 | 2.6 | 2.9 | 4.0 | 6.7 |
| Education and Training | 30 | 189 | 219 | 5.2 | 5.6 | 6.3 | 7.6 |
| Health Care and Social Assistance | 13 | 141 | 154 | 3.4 | 3.6 | 8.0 | 10.2 |
| Art and Recreation Services | 0 | 15 | 15 | 0.3 | 0.2 | 0.6 | 1.3 |
| Other Services | 60 | 69 | 129 | 2.9 | 2.8 | 4.7 | 3.7 |
| Inadequately Described/Not Stated | 65 | 43 | 108 | 2.4 | 2.5 | 2.8 | 2.7 |
| Total | 2,826 | 1,664 | 4,490 | 100 | 100 | 100 | 100 |

Source: ABS 2007a to j

17.1.2.9 Employment by Occupation

In 2006, the largest occupational category within the Local Study Area was machinery operators and drivers (25.9 per cent) followed by technicians and tradespersons represented by 22.7 per cent of the workforce (refer **Table 17-13**). Both of these occupational categories were dominated by males. These two employment categories were also the largest in the Regional Study Area. By comparison, the largest employment category in Queensland as a whole was professionals.

Table 17-13 Occupation by sex in the Local Study Area, Isaac and Mackay Regional Councils, and Queensland, 2006

| Occupation | Local Study Area | | | | Isaac Regional Council | Mackay Regional Council | Queensland |
|--|------------------|---------|---------|------|------------------------|-------------------------|------------|
| | Males | Females | Persons | % | % | % | % |
| Managers and Administrators | 242 | 138 | 380 | 8.5 | 12.8 | 12.8 | 12.4 |
| Professionals | 236 | 249 | 485 | 10.9 | 9.9 | 9.8 | 17.1 |
| Technicians and Tradespersons | 912 | 104 | 1,016 | 22.7 | 20.1 | 20.2 | 15.4 |
| Community and Personal Service Workers | 33 | 179 | 212 | 4.7 | 4.6 | 4.7 | 9.1 |
| Clerical and Administrative Workers | 28 | 347 | 375 | 8.4 | 8.3 | 8.3 | 14.8 |
| Sales Workers | 39 | 214 | 253 | 5.7 | 5.2 | 5.2 | 10.4 |
| Machinery Operators and Drivers | 1,062 | 97 | 1,159 | 25.9 | 24.9 | 24.9 | 7.2 |
| Labourers | 212 | 302 | 514 | 11.5 | 12.3 | 12.3 | 11.9 |
| Inadequately described/Not stated | 46 | 31 | 77 | 1.7 | 1.8 | 1.8 | 1.8 |
| Total | 2,810 | 1,661 | 4,471 | 100 | 100 | 100 | 100 |

Source: ABS 2007a to j

17.1.2.10 Income Levels

In 2006, the most common weekly income group in the Local Study Area were persons who received over \$2,000 each week (17.1 per cent of persons receiving an income) which was well above the Queensland average in this category (2.9 per cent) (refer to **Table 17-14**). Around 13.7 per cent of persons receiving an income in the Isaac Regional Council also reported receiving a weekly income of \$2,000 or more. This percentage was recorded at around 4 per cent in the Mackay Regional Council.

The next most common category in the Local Study Area and the Isaac Regional Council were people who received a weekly income of between \$1,600 and \$1,999, reported to be received by 9.7 per cent and 9 per cent of persons receiving an income, respectively. The relatively high proportion of people receiving a weekly income in excess of \$1,300 is largely due to the relatively high proportion of persons employed in the mining industry.

Table 17-14 Weekly individual income in the Local Study Area, Isaac and Mackay Regional Councils, and Queensland for persons aged 15 years and over, 2006

| Weekly Individual Income | Local Study Area | | Isaac Regional Council | | Mackay Regional Council | | Queensland |
|--------------------------|------------------|------|------------------------|------|-------------------------|------|------------|
| | Number | % | Number | % | Number | % | % |
| Negative/ Nil income | 455 | 7.5 | 1,121 | 7.6 | 4,960 | 6.3 | 6.4 |
| \$1 - \$149 | 513 | 8.5 | 1,175 | 8.0 | 5,226 | 6.6 | 6.6 |
| \$150 - \$249 | 268 | 4.4 | 943 | 6.4 | 9,302 | 11.8 | 13.4 |
| \$250 - \$399 | 367 | 6.1 | 1,085 | 7.4 | 9,443 | 12.0 | 13.3 |
| \$400 - \$599 | 562 | 9.3 | 1,417 | 9.6 | 10,738 | 13.6 | 14.9 |
| \$600 - \$799 | 338 | 5.6 | 949 | 6.4 | 8,128 | 10.3 | 11.4 |
| \$800 - \$999 | 312 | 5.1 | 739 | 5.0 | 5,807 | 7.4 | 8.0 |
| \$1000 - \$1,299 | 437 | 7.2 | 998 | 6.8 | 6,209 | 7.9 | 7.8 |
| \$1,300 - \$1,599 | 419 | 6.9 | 886 | 6.0 | 3,806 | 4.8 | 3.9 |
| \$1,600 - \$1,999 | 588 | 9.7 | 1,317 | 9.0 | 3,071 | 3.9 | 2.2 |
| \$2000 or more | 1,038 | 17.1 | 2,013 | 13.7 | 3,178 | 4.0 | 2.9 |
| Not stated | 766 | 12.6 | 2,073 | 14.1 | 8,800 | 11.2 | 9.2 |
| Total | 6,063 | 100 | 14,716 | 100 | 78,668 | 100 | 100 |

Source: ABS 2007a to j

17.1.2.11 Education Levels

The post-secondary education qualifications of people aged 15 years and over, in the Local Study Area, Regional Study Area and Queensland, from the 2006 Census are shown in **Table 17-15**. Of the proportion of people in the Local Study Area with a post-secondary qualification, slightly less hold a postgraduate degree, graduate diploma or graduate certificate in comparison to the Queensland average. On the other hand, there are slightly more people than the Queensland average who hold an advanced diploma, diploma or certificate. This local trend is also reflected in the statistics for the Regional Study Area.

Table 17-15 Highest post-secondary educational qualification held – Local Study Area, Isaac and Mackay Region Councils, and Queensland, 2006

| Degree | Local Study Area | | Isaac Regional Council | | Mackay Regional Council | | Queensland |
|--|------------------|------|------------------------|------|-------------------------|------|------------|
| | Number | % | Number | % | Number | % | % |
| Postgraduate Degree, Graduate diploma and Graduate certificate | 96 | 3.1 | 206 | 2.8 | 1,126 | 3.0 | 6.2 |
| Bachelor Degree | 505 | 16.1 | 1,054 | 14.4 | 5,040 | 13.5 | 19.8 |
| Advanced diploma, diploma and certificate | 1,681 | 53.8 | 3,752 | 51.3 | 20,318 | 54.2 | 48.6 |
| Not stated/Inadequately described | 844 | 27.0 | 2,304 | 31.5 | 10,962 | 29.3 | 25.4 |
| Total | 3,126 | 100 | 7,316 | 100 | 37,446 | 100 | 100 |

Source: ABS 2007a to j

In 2006 the highest level of schooling received by persons aged over 15 years in the Local Study Area, Regional Study Area and Queensland, is outlined in **Table 17-16**. In all areas the highest level of education attained was Year 12 or equivalent followed by Year 10 or equivalent. This was reflective of the status that was noted for Queensland as a whole.

Table 17-16 Highest level of schooling completed in the Local Study Area, Isaac and Mackay Regional Councils and Queensland, 2006

| Age Left School | Local Study Area | | Isaac Regional Council | | Mackay Regional Council | | Queensland |
|-----------------------|------------------|------|------------------------|------|-------------------------|------|------------|
| | Number | % | Number | % | Number | % | % |
| Year 8 and below | 243 | 4.0 | 919 | 6.2 | 7,220 | 9.2 | 7.4 |
| Year 9 or equivalent | 307 | 5.1 | 820 | 5.6 | 5,257 | 6.7 | 5.8 |
| Year 10 or equivalent | 1,774 | 29.3 | 4,445 | 30.2 | 25,041 | 31.8 | 26.9 |
| Year 11 or equivalent | 609 | 10.0 | 1,348 | 9.2 | 6,847 | 8.7 | 8.2 |
| Year 12 or equivalent | 2,389 | 39.4 | 5,103 | 34.7 | 25,043 | 31.8 | 41.3 |
| Did not go to school | 7 | 0.1 | 36 | 0.2 | 250 | 0.3 | 0.5 |
| Not stated | 733 | 12.1 | 2,044 | 13.9 | 9,012 | 11.5 | 9.9 |
| Total | 6,062 | 100 | 14,715 | 100 | 78,670 | 100 | 100 |

Source: ABS 2007a to j

17.1.2.12 Summary of Demographic Profile

Since the 2001 Census, the local area in the vicinity of the Project Site has undergone significant population growth, with the township of Moranbah experiencing a 16 per cent increase in population. This is a trend that has been replicated in the region as a whole, although to a lesser extent. The Isaac Regional Council has had a 4 per cent population increase and the Mackay Regional Council a 12.4 per cent increase since the 2001 Census. Over the same period the population of Queensland increased by 6.8 per cent. The resident population of Local Study Area is also highly mobile in comparison to the Mackay Regional Council and Queensland.

The population growth experienced in both the local area and the region is predicted to continue, with the area making up the Isaac Regional Council forecast to grow on average 1.5 per cent per annum between 2001 and 2026. By comparison the population of Queensland is expected to grow on average 1.7 per cent over the same period.

The Local Study Area is also characterised by a large non-resident population - people working in the area for an extended period of time but whose usual place of residence is elsewhere. At the time of the 2006 Census, this non-resident population of the Local Study Area comprised 21 per cent of the resident population. The large majority (98 per cent) of this non-resident population are male. This trend is also reflected in the region where the non-resident population accounted for approximately 36 per cent of the total resident population of the Isaac Regional Council.

There are more males than females in the resident population of the Local Study Area, with 55.7 per cent males compared to 44.3 per cent females. The area also has lower indigenous and ethnic diversity than the Queensland average.



The age structure of the resident population is represented by a working population with 46.2 per cent of the population aged between 20-44 years. Elderly residents (aged 70+ years) comprise less than 0.6 per cent of the population and this sector of the community is on the decline.

When compared to statistics for Queensland as a whole, the Local Study Area had a higher percentage of married persons and persons who had never been married, and a lower percentage of divorced, separated or widowed individuals. The Local Study Area is also represented by significantly less one parent families, than for Queensland as a whole. This trend is also reflected by the statistics for the Isaac Regional Council; however Mackay Regional Council supports a greater proportion of one parent families.

Single dwellings are the most common dwelling type in the Local Study Area and Isaac Regional Council accounting for 88.6 per cent and 90.4 per cent of all dwelling types respectively. Of these, the majority were being rented (960 or 45 per cent). A significant proportion of all rentals in the Local Study Area (66.4 per cent) were rented through "other landlord type", which comprised dwellings being rented through a residential park (including caravan parks), employer-government (including Defence Housing Authority) or employers (private). By comparison only 6.6 per cent of all rentals in Queensland were through this type.

The unemployment rate within the Local Study Area and the Isaac Regional Council (2 per cent and 2.1 per cent, respectively) is significantly lower than the Queensland average of 4.7 per cent.

The mining sector is the largest employer in the Local Study Area employing 43 per cent of the working population. By comparison this sector employs 38.9 per cent of the Isaac Regional Council working population; 8.3 per cent of the Mackay Regional Council working population and 1.7 per cent of the Queensland working population. The largest occupational category within the Local Study Area is machinery operators and drivers followed by technicians and tradespersons.

The influence of the mining sector is also reflected in the higher than average weekly income levels realised within the local community, with 17.1 per cent of the local working population receiving a weekly income in excess of \$2,000. By comparison, 13.7 per cent of the working population of the Isaac Regional Council and 2.9 per cent of the working population of Queensland reported receiving a weekly income in excess of \$2,000.

17.1.3 Housing and Accommodation

17.1.3.1 Temporary/Short-term Accommodation

Temporary accommodation within the township of Moranbah is provided by eight hotels/motels and two caravan parks. These are:

- Hotels/motels:
 - Moranbah Motor Inn;
 - Moranbah Drivers Rest Motel;
 - Moranbah Accommodation Centre;
 - Black Nugget Hotel/Motel;
 - Curtin House;
 - Grosvenor Village Accommodation;



- Moranbah Outback Motel; and
- Western Heritage Motel.
- Caravan parks:
 - Coal Country Caravan Park; and
 - Moranbah Caravan Village.

In addition there is also the following temporary accommodation within the township of Nebo:

- Nebo Hotel;
- Nebo Motel; and
- Stay-A-While Caravan Park.

The Moranbah Village and Nebo Village accommodation centres also cater for backpackers.

The MAC Services Group Limited, which supplies accommodation to the coal mining, construction, resources and tourism industries, also has accommodation villages in Moranbah, Nebo and Coppabella. The villages cater for mining employees and employees of associated service providers to the mining industry.

The MAC Coppabella Accommodation Village was established in March 2006 and is situated at the opposite side of the Peak Downs Highway to the township of Coppabella. It is the largest of the three MAC villages and currently has a capacity of 1,315 single en-suite rooms. There are plans in place to construct single ensuite rooms to meet accommodation demand with an expectation of 1,755 single en-suite rooms by April 2009. There are also plans to construct double en-suite rooms in the future. Current facilities located on-site include a bar with TAB guest services, a small convenience store, a large dining room and a gymnasium. There are also plans for the construction of a swimming pool, tennis courts and basketball courts for use by the mining employees and staff at the accommodation village.

It is proposed that the majority of the Project's construction and operational workforces be housed at the MAC Accommodation Village at Coppabella.

The MAC Nebo Accommodation Village was established in October 1998 and is situated on the outskirts of Nebo. It currently has 463 rooms which are fully occupied at present. There are no construction activities underway at the moment although the Nebo Accommodation Village will expand in the future depending on demand for accommodation. The Nebo Accommodation Village provides single rooms with an en-suite or single rooms with a shower and toilet block located nearby.

The Nebo Accommodation Village provides facilities such as an on-site bar with TAB guest services and a dining room which is open for four hours in the morning and four hours in the evening. All meals (three per day) are included in the room rates. There is also a recreation room open 24 hours seven days per week which has a pool table, TV and tea and coffee making facilities. The Nebo Accommodation Village also houses the Coolibah Tavern which is available to both guests staying at the accommodation village and members of the public. There is also a small convenient store attached to the administration building, a book exchange library and Gazebos which will have BBQs installed in the future. There are plans to construct an



on-site gymnasium for use by mining employees and employees of associated services providers of the mining industry.

The MAC Nebo Accommodation Village is viewed by the mining industry as the overflow accommodation village for mining employees in the region as there is generally more demand for the Coppabella and Moranbah Accommodation Villages. The expansion of rooms would need to be negotiated between current contract agreements with the mining companies. It is predicted that there will be enough rooms to cater for all BMA growth projects however the MAC Nebo Accommodation Village would need to construct more rooms in order to meet a significant spike in demand.

The MAC Moranbah Accommodation Village was established in August 1996 and is situated in the township of Moranbah. There are 889 rooms at the MAC Moranbah Accommodation Village which are currently fully occupied. All rooms are single en-suites. The rooms cater predominantly for mining employees and staff working at the accommodation village and employees from mining associated companies such as plumbers, electricians and construction workers.

The MAC Moranbah Accommodation Village has a multitude of shops and facilities available for use by guests staying at the accommodation village. Available facilities include a restaurant, a small convenience store, and a gymnasium. The accommodation village is located in the centre of Moranbah in between a residential area and a golf course. Mining employees staying at the accommodation village can use local facilities located within the township of Moranbah if they are not available at the accommodation village.

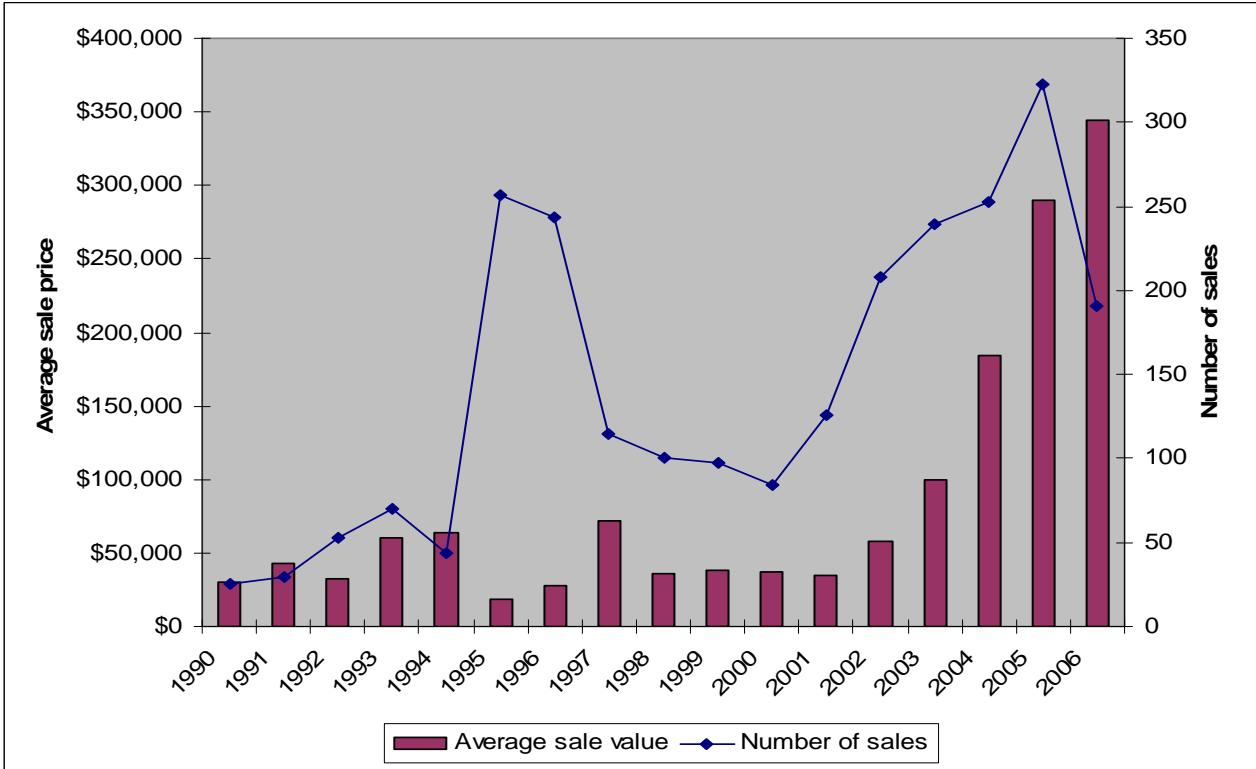
The MAC Moranbah Accommodation Village expects to cope with the potential increase in the need for accommodation resulting from all BMA growth projects and will expand their site depending on demand.

There is a high level of demand for short-term accommodation in the area. The result of this is high occupancy rates and very little available surplus. A survey undertaken by the Planning Information and Forecasting Unit of the Department of Local Government, Planning, Sport and Recreation in June 2006, found that the total room capacity available for short-term accommodation in the former Belyando and Nebo shires was 1,023. At the time of the survey both areas indicated occupancy rates in excess of 94 per cent. The majority (around 80 per cent) of rooms in both areas were occupied by non-resident workers on a longer-term basis. Short-term occupancy accounted for less than 20 per cent of total occupancy rates.

17.1.3.2 Housing Stock

Rapid population growth within the local area has meant that the Local Study Area is currently facing a housing shortage where high rental prices and housing shortages are making housing too expensive. This housing shortage has been further compounded by a shortage of land available for residential development.

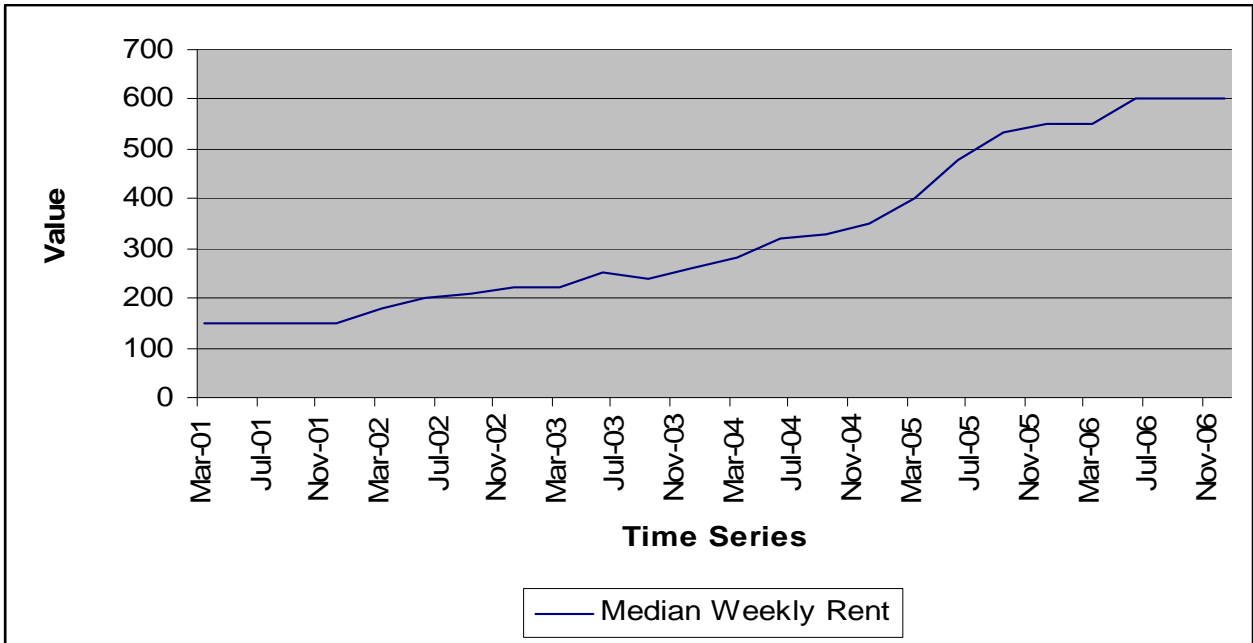
Average house prices in the township of Moranbah between 1990 and 2006 are shown in **Figure 17-3**. From this figure it can be seen that prior to 2002, the price of a house in Moranbah was on average less than \$50,000. By 2003, however the average price of housing in Moranbah had increased to \$100,000 and to between \$300,000 and \$350,000 by 2006. The average price of houses in Moranbah for the 12 months to September 2008 was \$350,000 (Domain – Property Research – Moranbah).



Source: Rolfe 2007

Figure 17-3 Housing prices and sales– Moranbah 1990 - 2006

Median rental prices in Moranbah also increased significantly over the same period averaging around \$150/week in 2001 and increasing to \$600/week by July 2006 (refer to **Figure 17-4**).



Source: Rolfe 2007

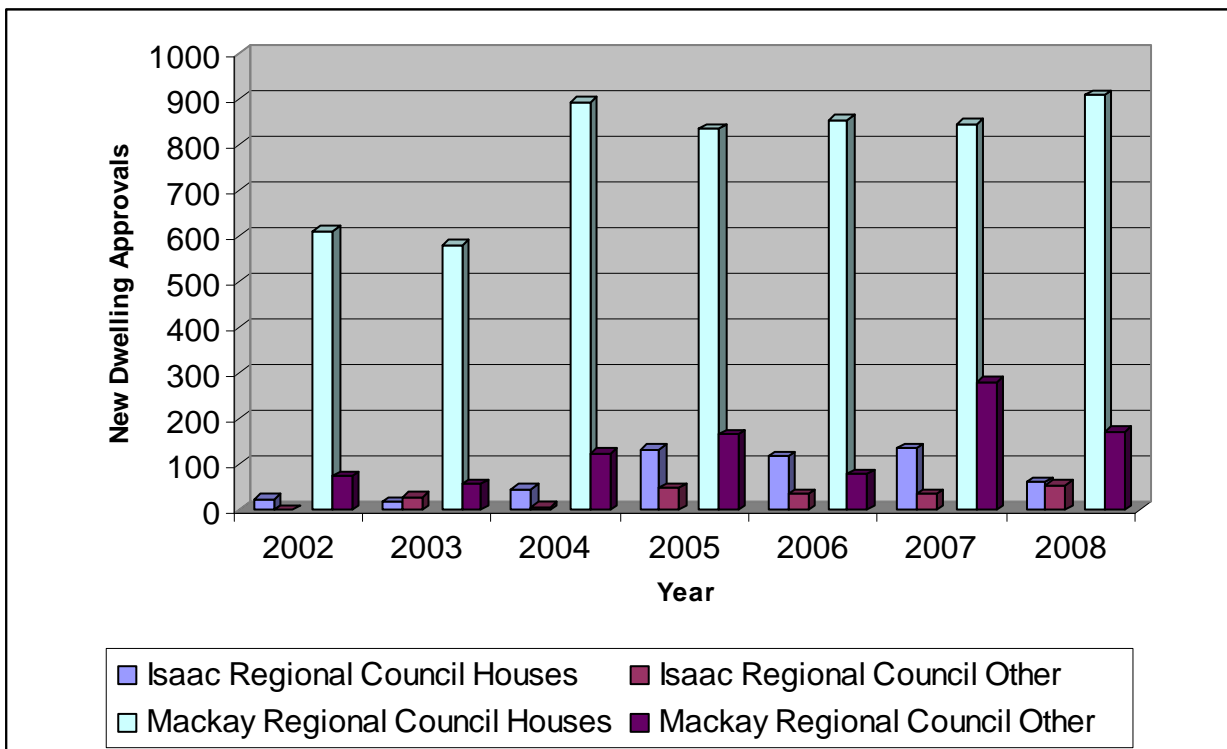
Figure 17-4 Median Rental Prices – Moranbah 2001 – 2006

High house prices and high rents normally stimulate the construction of more housing. However, there appears to be very limited evidence of this happening in the local area (refer **Section 17.1.3.3**). The amount of land subject to mining leases is restricting the amount of land available for residential development. In addition, the trend adopted by mining companies to deal with accommodation issues has been focused on providing additional accommodation villages for a shifting population base.

The un-affordability of housing, particularly for those members of the community on low to moderate incomes, has meant that many of those unable to procure accommodation in the local areas are moving to the coastal towns such as Mackay. Mackay, however, as a result of the mining boom, is also experiencing burgeoning rent prices, low vacancy rates in the private rental market and significant increases in property prices (Department of Housing 2007).

17.1.3.3 Residential Building Approvals

Figure 17-5 shows residential building activity for the Isaac Regional Council and Mackay Regional Council between 2002 and 2008.



Source: Rolfe 2007

Figure 17-5 New Dwelling Activity Isaac and Mackay Region Councils between 2002 and 2008

Figure 17-5 shows that the number of new houses in the Isaac Regional Council increased substantially between 2004 and 2005 before decreasing slightly in 2008. New houses in the Mackay Regional Council also increased over the same period.

17.1.4 Community Infrastructure and Services

17.1.4.1 Child Care and Education

Day Care Centres

There are currently two day care centres in Moranbah, namely the Simply Sunshine Child Care Centre and the recently opened Altitude Day Care Centre.

The Simply Sunshine Child Care Centre in Moranbah caters for children from infancy to 12 years of age offering long day care, before and after school care, casual care, outside kindergarten hour care, pupil-free days, rotating shifts and vocational care. The facility, which is open from 6am to 6pm, is licensed to take 74 children. The centre currently employs 28 staff (including administration staff). The centre also offers casual days for children on the waiting list if regular children are sick or on holidays.

The Altitude Day Care Centre, which opened in mid July 2008, currently caters for children from birth to 6 years. The centre may expand its services to include an afterschool program in the future. The centre is open from 7am to 6pm but has the flexibility to open between 5am and 7pm if the need arises.



At present there are approximately 90 children enrolled at the centre, which is about 40 per cent of its total capacity. Enrolments are steadily increasing. Given the centre has only been in operation for since mid July 2008 they currently do not have a waiting list, and timeframes for parents who may go on the waiting list has not yet been considered. The centre employs 20 staff. Additional Group Leaders will be required once the centre nears capacity. The Altitude Day Care Centre would like to recruit staff from the local community where possible, although a lack of appropriately trained people in Moranbah makes this extremely difficult to accomplish. Lack of affordable accommodation also makes it difficult for the centre to employ qualified people who do not currently reside in Moranbah.

The Blue River Family Day Care also provides home-based childcare in the Mackay, Pioneer Valley and Moranbah areas. Child care services are also offered through the Moranbah Neighbourhood Centre and a Playgroup.

Kindergarten and Preschool

Kindergarten and preschool facilities in the Moranbah, Coppabella and Nebo townships are provided by:

- Moranbah Community Kindergarten and Preschool;
- Moranbah East State Preschool; and
- Moranbah State Preschool.

The Moranbah East State Preschool and Moranbah State Preschool are affiliated with the Moranbah East State School and Moranbah State School respectively.

The Moranbah Community Kindergarten and Preschool offers pre-school services for children aged 3.5 to 5 years. The centre, which is open two days a week, is licensed to look after 66 children daily or 132 children weekly. There is currently one vacancy in the Thursday/Friday morning group and no vacancies for 2009.

The centre currently employs eight permanent staff (six working with children, one administration assistant and one cleaner). While the centre is not currently short staffed, it was noted that recruitment can be difficult with accommodation shortages making it hard to recruit skilled workers from outside the local area.

Schools

The Moranbah, Coppabella and Nebo area has five schools:

- Moranbah State School and Moranbah Special Education Unit;
- Moranbah East State School;
- Moranbah State High School;
- Coppabella State School; and
- Nebo State School.

The Moranbah State School was established in 1974. It offers education from Preparatory to Year 7. The school also operates a Special Education Unit. In February 2008 there were 505 children enrolled in the school.



The Moranbah East State School was established in 1971. There are currently 526 children enrolled in the school which caters for education from Preparatory to Year 7. These children are split between 22 classes, which are staffed by 28 teachers and 8 teacher's aides. The school also employs 11 non-teaching staff (administration, grounds persons etc). The school has capacity to cater for an additional 75 to 100 children.

Moranbah State High School caters for 530 students from Grade 8 to 12. These students are split between 25 classes, varying in size from 18 to 25 students. The school has a teaching staff of 38 and 30 non-teaching staff. While the school can accommodate over 600 students, this would stretch existing teaching resources and recruitment of additional staff would be necessary. The schools report that finding accommodation for new teachers in Moranbah is challenging. While teachers are entitled to subsidised housing through the Queensland Housing Department, there is a limited supply of housing through this scheme in Moranbah.

The Coppabella State School opened in 1981 and offers education from Preparatory to Year 7. There are currently has 37 students enrolled at the school.

Nebo State School offers education from Prep to Year 7. There are currently 73 children enrolled in the school. The School currently employs two teachers and a teacher principle, three teacher aids, two administration officers and a cleaner. They mainly recruit locals for teaching and non teaching employees.

Other educational facilities in the local area include the TAFE in Moranbah. This is part of the Central Queensland Institute of TAFE – Mackay Region which also has a campus in Mackay. The nearest university is the Central Queensland University Mackay campus. This campus offers courses in:

- business;
- communication and media studies;
- education;
- engineering;
- health and recreation;
- humanities and social sciences;
- information technology;
- primary industries and environment sciences; and
- tourism.

The James Cook University also has a small campus in Mackay that offers courses in community welfare, social work and nursing (Mackay Whitsunday Regional Economic Development Corporation 2006).

17.1.4.2 Health Facilities and Services

Hospitals

The closest hospital to the Project Site is located at Moranbah. Moranbah Hospital provides a range of inpatient, medical, surgical and respite care services as well as specialist maternity and psychiatric services as outlined in **Table 17-17**.

Table 17-17 Moranbah Hospital Services

| | Services Provided |
|---------------------|---|
| Hospital | Inpatient: Medical, Surgical, Respite Care |
| Specialist | Maternity, Psychiatric |
| Clinics | Child Health; General Outpatients; Pharmacy; Antenatal Clinic; dressing; physiotherapy; counselling; aged care; Well Women; Diabetic Education; Wound Management; Well Baby; Immunisation; Community nursing; Health promotion; Triple P program. |
| Allied Health | Support groups; Health; Education and Screening; Home Visit and Support; Adult, child and youth mental health; Speech Pathology; Counselling; Radiographer/Sonographer; |
| HACC | Meals on Wheels, Home Medical Aids, Home Help, Day Respite, In Home Respite |
| Other Aged Services | Hinterland Community Services |
| Visiting Services | Flying Obstetrician, Gynaecologist, Flying Surgeon, Psychiatrist, Drug and Alcohol services, Mobile Breast Screening Van, Occupational therapist, mobile Oral Health Van, School Based Youth Health Nurse |

Source: Queensland Health, May 2007

(http://www.health.qld.gov.au/services/facilities/mackay_moranb_hosp.asp)

Other main referral hospitals in the wider region include:

- Mackay Base Hospital – located approximately 200 km from the Moranbah;
- Townsville Hospital – located approximately 600 km from Moranbah; and
- The Royal Brisbane and Women’s Hospitals – located approximately 1,100 km from Moranbah.

Moranbah Hospital has 16 beds and employs the following staff:

- 31 nursing positions (including community health) (equivalent to 18.5 full-time positions);
- 9 administration positions (equivalent to 5 full-time positions);
- 11 operation positions (equivalent to 7 full-time positions);
- 10 allied health positions (equivalent to 9.5 full-time positions);
- 1 medical superintendent with right to private practice (MSRPP); and
- 1 senior medical officer with right to private practice (SMORPP).

Between 2007 and 2008, 887 patients were admitted to the Moranbah Hospital. The most common injuries/emergencies dealt with by the hospital included:

- Trauma – crush injuries, fractures, back strain/pain, eye injuries, musculoskeletal (e.g. ankle injuries), car/truck accidents, multi-vehicle accidents, general construction injuries
- Medical emergencies – cardiac, acute abdominal pain (e.g. pancreatitis, appendicitis, gastroenteritis), acute esophagitis, paediatric, obstetric, environmental (e.g. snake and spider bite), drug/toxin overdoses, depression, anxiety (Rural Health Division pers. comm. 2008).

Patients with acute conditions that require further medical intervention are transported to either the Townsville or Mackay Base hospitals. The Moranbah Hospital is supported by the Royal Flying Doctors Service and the RACQ flight in transporting patients to Townsville, Mackay and Rockhampton. On occasions it may be necessary for one or two staff members along with associated equipment to accompany

patients during emergency transfers. Road transport staff are also called in to assist in the transportation of patients.

Allied Health Services and Specialists

Specialists visit Moranbah on a regular basis. An obstetrician visits the hospital once every two months for consultations and procedures. A part-time physiotherapist and full-time counsellor treat local residents when required. A radiography service is also provided in Moranbah. An occupational therapist and diabetic educator are also available. Other allied health services available in Moranbah include:

- health promotion;
- education and screening;
- home visits and support;
- adult, child and youth mental health;
- speech pathology; and
- radiographer / sonographer.

A chemist, optometrist, dentist, physiotherapist and massage therapist are also available in Moranbah. Clinics available in Moranbah include:

- child health;
- antenatal clinic;
- dressing clinics;
- physiotherapy;
- counselling;
- aged care services;
- well women's clinic;
- diabetic education group; and
- wound management.

Aged Care Facilities

There are no aged care facilities available in Moranbah, Nebo or Coppabella. The closest facilities are located in Clermont or Mackay. There are nine Council/Community Housing one-bedroom units available for elderly and low-income pensioners in Moranbah.

Hinterland Home and Community Care provides a range of community services that assist elderly people in their own homes. Homecare nurses are employed on a rotational basis with the hospital to assist elderly residents.

Anecdotal evidence suggests that the lack of aged care facilities in the local area could be preventing older members of families moving to the area to be close to relatives.

17.1.4.3 Emergency Services

Police Service

The Local Study Area is serviced by the Nebo and Moranbah Police Stations. Officers at the Nebo and Moranbah Police Stations carry out general policing including highway patrols and traffic enforcement. Travel times to Coppabella are 30 minutes from Nebo and 50 minutes from Moranbah.

The Moranbah Police Station currently has six full-time and one part-time police officers working in the Moranbah area. It also employs another two officers who are currently on maternity leave (one full-time and one part-time). The service has two marked and one unmarked police vehicles.

With increasing population in the area, the Moranbah Police Service will need to recruit more staff. The station often receives applications from spouses of mining employees or young recruits who are transferred to the Moranbah area.

The most common incidents the police are called out to in the Moranbah area are public nuisance offences such as “hooning” and drunk and disorderly conduct. In addition, there has been an increase in the need for emergency services to respond to road accidents in the area. It has been suggested that this increase in accidents is in part related to increasing numbers of mine shift workers using roads, and the increase in the number of fuel carriers transporting fuel to the mines. Other policing activities are typically related to call-outs in response to criminal activities. These crimes generally consist of petty theft, breaking and entering, wilful damage and drug possession.

Ambulance Service

Moranbah is serviced by an Ambulance Service. This ambulance service covers the area from Dysart, halfway to Clermont and to Coppabella. In addition to emergency services the ambulance service also provides assistance for the Central Queensland Rescue Helicopter and patient transport from the Moranbah Hospital to Mackay.

There are three ambulance stations for the area that are each staffed by one crew (consisting of two staff members) per day. Station hours are from 8 am to 5/6 pm with emergency availability from 5/6 pm to 8 am. The service currently has three vehicles.

Minimum staffing at the station is two people with another two on call. The service is currently experiencing staffing shortages with only two officers at the station on most occasions. While an application for another four permanent staff has been made, housing prices in the local area are affecting the recruitment of emergency services personnel.

In addition to this there is also one Ambulance Officer at both Peak Downs and Goonyella mines. Nebo has an Ambulance Service, which is the only full time medical service in the township. Coppabella has a volunteer service that is equipped to deal with minor cases only.

The Moranbah Ambulance Service uses three vehicles. All vehicles are equipped with recent technology, including defibrillators and GPS devices.

Fire Service

The Queensland Fire and Rescue Service (QFRS) services Moranbah and the surrounding areas through 18 auxiliary fire-fighters (two fire vehicles) that are called via pager to attend to any emergency response



situation. Currently the QFRS's main emergency response workload is to road crash situations. The Area Director of QFRS has indicated that any increase in the population would inevitably increase vehicles on the road and this is where the main workload or response would probably be initially. Response to mine sites is by request only as mining companies are bound by their own legislation.

At this point in time the QFRS has no intention of recruiting more staff.

17.1.4.4 Community Services

Emergency and Long-term Accommodation in Moranbah

Emergency and Long-term Accommodation in Moranbah (ELAM) provides services to assist lower socio-economic groups and miners in crisis. The group provides short-term and long-term emergency accommodation as well as a rural youth worker and information service. Services at ELAM are combined with Centrelink, the Department of Housing, Department of Communities and the State Government.

Emergency accommodation for persons in need is provided by the Department of Housing. This need is often exacerbated because of the lack of affordable rental opportunities in the region. ELAM often provides assistance in circumstances where a mining family has broken up, and the children and their mother or father wish to remain in the region so their children can have access to both parents.

There are 22 dwellings available in Moranbah for emergency accommodation. The dwellings are available for three-month placements that can extend for up to 12 months.

Currently ELAM is working below capacity and could provide a service for an increase in population of 200 workers. However, if the workers were to bring their families to the region, ELAM may not be able to provide a full service to the community.

Domestic Violence Resource Service (Mackay and Region)

The Domestic Violence Resource Service (Mackay and Region) is a non-profit organisation funded solely by the Queensland Department of Families, Youth and Community Care. It operates a domestic violence service based in Mackay, serving the region from Whitsundays in the north, St. Lawrence in the south and Moranbah in the west.

The Service provides domestic violence awareness, education and training, resourcing, and counselling across the region. The target groups of the Service are women and children affected by domestic violence.

Churches

There are six churches in Moranbah. These include:

- the Moranbah Assembly of God Church;
- QUOTA International of Moranbah;
- Moranbah Christian Fellowship Church;
- St Francis Anglican Church;
- St Joseph the Worker Catholic Church; and
- the Uniting Church North Coalfields Region.



Both Catholic and Anglican churches provide religious services and additional pastoral care for the community.

The Catholic Church conducts regular masses. The church provides assistance to elderly people in Nebo and Moranbah and surrounding areas and also provides some counselling, but generally refers people to professional counselling services. The Anglican Church provides spiritual and pastoral service to the Moranbah area and surrounds.

Services and Facilities

The township of Moranbah offers a number of services and facilities including:

The township of Moranbah offers a number of services and facilities including but not limited to:

- Moranbah Shopping Centre;
- newsagents;
- post office;
- car hire;
- airport;
- beauticians;
- bakery;
- hairdressers;
- furniture and electrical store;
- restaurants;
- cafes;
- shoe and clothing shops;
- entertainment – cinema;
- industrial services;
- pharmacy;
- RACQ;
- veterinarian;
- accountants;
- banks/building societies;
- bus service;
- butcher;
- computers;
- court house/government agents;
- gift stores;
- music store;
- plumbers;
- produce stores;

- florist;
- hardware;
- mechanical repairs; and
- service stations.

17.1.5 Local Community Values and Lifestyles

Throughout the community engagement process, Moranbah residents were encouraged to discuss important community values and their lifestyle. This feedback was gathered through feedback forms and mobile displays.

The results of the community consultation indicated that on the whole, members of the community were generally proud of the mining industry and wanted to encourage other families to live in the area and continue to promote community values. When asked to describe the attributes of their community that they liked, respondents listed the lifestyle offered, the sense of community, family atmosphere, employment opportunities, social amenities and the climate. Aspects of the local area and region that were considered to be a disadvantage included the lack of shopping facilities, the high cost of living, environmental issues associated with mining and the lack of housing and accommodation.

17.1.6 Recreational, Leisure, Cultural and Sporting Facilities

The township of Moranbah is well serviced in terms of recreational and sporting clubs. Facilities in the township are listed in **Table 17-18**.

Table 17-18 Recreational and Sporting Facilities, Moranbah

| | | |
|----------------------------|---------------------------|------------------------|
| Australian Rules | Boxing Club | Race Club |
| Rugby League Club "Miners" | Gymnastics | Rodeo Association |
| Rugby Union Club "Rams" | Highlanders Swimming Club | Campdrafting |
| Soccer Club "Hawkes" | Karate | Horse and Pony Club |
| Touch Football | Fishing Association | |
| Indoor Volleyball | | |
| Tennis Club | Bowhunters Club | BMX Club |
| Squash Club | Darts Club | Motorcycle Riders Club |
| Cricket Club | Pistol/Gun Club | Speedway Association |
| Golf Club | | |
| Bowls Club | Bridge Club | |
| Hockey Association | | |
| Netball Association | | |

In addition to a cinema and community radio, the town also has a cultural centre with art gallery, library, internet café, tourism information centre, community meeting rooms, council chambers and council offices.

17.1.7 Land Use and On Farm Activities On and Near the Project Site

Agriculture and coal mining are the major industries in the region surrounding Moranbah. There are a number of homesteads surrounding the Project Site. The majority of these properties are involved in cattle grazing activities.

17.1.8 Properties Directly Affected by the Project

Directly affected properties refers to properties not owned by the Proponent, upon which mine construction, operational or infrastructure areas will be situated. Using this definition, directly affected properties are:

- a portion of Mavis Downs at the northern end of the proposed mine
- a portion of Olive Downs at the southern end of the proposed mine
- a small portion of land to the west of the railway line
- the road reserve through Olive Downs

Olive Downs and Mavis Downs are both operating cattle properties. Mavis Downs is in family ownership with the son and his family (including three school aged children) residing on the property. Residing on Olive Downs are a couple who manage the property for the owner.

17.2 Potential Social Impacts and Mitigation Measures

The identification and analysis of the potential social impacts of the Project has been undertaken by analysing the existing socio-economic environment in the local and regional areas and utilising the results of the community consultation. The assessment considers the direct impacts on the local and regional communities as a result of the proposed development. Both beneficial and adverse impacts have been considered along with an evaluation of short-term, long-term and cumulative impacts.

The assessment relates to both the indigenous and non-indigenous populations and considers:

- impacts on demographic, social, cultural and economic profiles;
- impacts on local residents and existing lifestyles and enterprises;
- access to housing and accommodation;
- access to human and commercial services;
- impacts on human service delivery, including counselling and support services;
- the ability of people to live in accordance with their own values and priorities;
- the use of, and access to, culturally important areas and landscapes;
- the ability to participate in regional and local employment and training opportunities; and
- the new Project workforce and their families.

To assist in reducing potential impacts and to ensure that BMA maintains its standing in the local and regional community, mitigation strategies have been developed, and these are also outlined in this section.

17.2.1 Impacts on the Demographic Profile

At the local level, the Project's impacts on the demographic profile is dependent on the extent to which the construction and operational workforce take up residence in the local area. The demographic profile at the regional level is unlikely to change.

17.2.1.1 Construction

The Project would require a peak construction workforce of 450 people. The construction period is expected to be in the order of 16 months, with the majority of construction work occurring between March 2009 to and June 2010. A breakdown of this workforce over the construction period is shown in **Figure 17-6**.

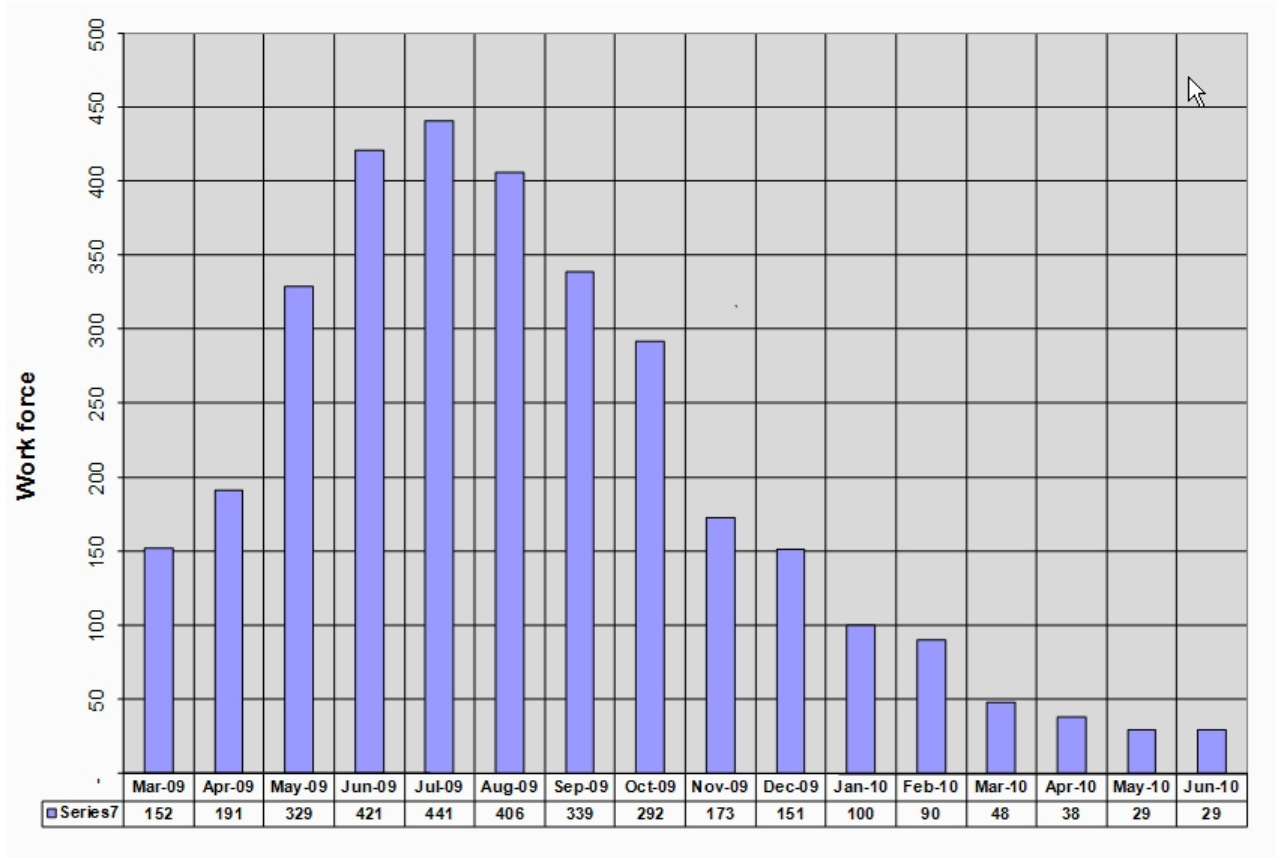


Figure 17-6 Dania Project Construction Workforce

It is anticipated that 90 per cent of this construction workforce would be a contract workforce, accommodated in the MAC Accommodation Village at Coppabella. The remaining 10 per cent would be based in nearby townships, the most likely being Moranbah. This follows the significant trend in the mining industry for employees to base themselves and their families in larger regional centres, particularly on the coast, for reasons of lifestyle, access to services (education, health and recreation), and employment opportunities for family members.

The impact of this construction workforce on the demographic profile of the local area is dependent on the number of workers who choose to take up residence in the local area and more importantly relocate with their families. Given the housing shortage in Moranbah, the high rental prices and the relatively short duration of the construction period, it is considered unlikely that a significant proportion of the construction workforce would relocate, along with their families, to the area on a more permanent basis.



As such, it is not envisaged that the construction workforce associated with the Project would have a significant impact on the overall demographic profile of the area. The trends that have already been established would continue with a further increase in the non-resident (male) population coming into the area. Any workers who do choose to move to the area on a more permanent basis are likely to be in the 20-44 year age category. There may be a slight increase in the younger age categories if these workers are accompanied by their families, however based on the factors outlined above this increase is unlikely to be significant.

Based on these assumption there is likely only to be a marginal change to the demographic profile of the area during the construction phase of the Project.

17.2.1.2 Operation

The operational workforce for the Project is estimated to be approximately 300 people. Of these, it is estimated approximately 70 per cent would be housed in the accommodation village at Coppabella. It is assumed the remaining 30 per cent would be based in nearby communities, with the most likely location being the township of Moranbah.

Again, as with the construction phase, the impact of the operational workforce on the demographic profile of the local area would depend on the number of workers who choose to take up residence in the local area and more importantly relocate with their families. Given that the life of the mine is expected to be in the order of 20 years it is more likely that some of the operational workforce would consider moving to the area on a more permanent basis. It is likely that members of the workforce inclined to move are those workers who are married and have young families. However, the housing shortage in the local area may restrict the relocation of families into the area.

While the impact of this on the demographic profile is likely to be more significant with a greater percentage of the operation workforce likely to reside in the local area and be accompanied by their families, it is not expected to deviate from the existing trends currently being followed by the demographic profile (i.e. working age population moving to the area, some bringing children). It is unlikely to bring any significant change to the overall age structure of the local resident population. Increases are most likely in the working age category of 20-44 years and in the younger age categories of 0-9 years. A very limited increase (if any) to the elderly population is envisaged.

The operation period would also see an increase in the non-resident population of the area with the assumption that 70 per cent of the workforce would be accommodated in the MAC Accommodation Village at Coppabella during their shifts, and return to their usual place of residence (most likely around Mackay) on their rostered days off.

17.2.2 Impacts on Housing Demand and Supply

During the construction phase the majority of the workforce would be contractors. While the construction contractor(s) would ultimately be responsible for accommodation of their workforce(s), BMA has secured rooms in the MAC Accommodation Village at Coppabella that will be available to accommodate this workforce.

As with the adjacent Poitrel Mine, it is proposed that the Project would be a contract mining operation. Of the operational workforce, it is estimated that 70 per cent would be accommodated in the MAC Accommodation



Village at Coppabella and the remaining 30 per cent would seek permanent accommodation in the local area.

17.2.2.1 Temporary Accommodation

While it is likely that most of the construction and operational workforces would be accommodated in the MAC Accommodation Village at Coppabella there may be some employees who prefer other accommodation. These employees may seek short-term accommodation in hotels, motels and caravan parks. There is already a high level of demand for short-term accommodation in the local area. The result of this is high occupancy rates and very little available surplus. At present the majority of the rooms available are occupied by non-resident workers on a longer-term basis. The result of the Project would be an increase in the demand for this short-term accommodation thereby even further reducing the availability of supply for other non-mining related people (e.g. tourists).

17.2.2.2 Permanent Housing

It is anticipated the preferred permanent housing location for the majority of Project employees would not be Moranbah, Coppabella or Nebo. As discussed previously, it is anticipated that 90 per cent of the construction workforce and 70 per cent of the operational workforce would be accommodated in the MAC Accommodation Village at Coppabella. This follows the significant trend in the mining industry for employees to base themselves and their families in larger regional centres, particularly on the coast, for reasons of access to services (educational, health and recreation) and employment opportunities for family members. This trend is highly related to:

- the types of shifts offered by employers
- the recruitment schedules and policies for recruitment of workers and therefore the type of employee attracted to the position (i.e. single, family, skilled, non-skilled etc)
- In the case of this Project it is anticipated that shift arrangements will be used and these will vary depending on the construction and operational activity. The working hours while on roster (e.g. 12 hour shifts during operation) and the opportunity to go home for a significant period of time, are likely to make having a permanent home base in coastal communities and large regional centres such as Mackay an attractive arrangement to a large number of potential employees.

It is proposed that housing for this transient workforce will be at the MAC Accommodation Village at Coppabella. Management of this accommodation village are confident that demands can be met for accommodation for all BMA growth projects. The MAC Accommodation Village at Coppabella currently has plans for expansion with the next stage of construction for 434 rooms, with the construction associated with this expansion underway.

It is anticipated that 10 per cent of the construction workforce and 30 per cent of the operational workforce would choose to reside more permanently in the local community. It is thought that most of this workforce would use housing within the Moranbah district. This may include housing that:

- they choose to own or purchase;
- they choose to rent privately; and
- has been constructed by BMA for the Daunia Project as part of the Company's housing scheme.



Based on these numbers there is the potential that the operational workforce of the proposed Project could exacerbate the already critical housing issues experienced in the local area. The acute housing shortage coupled with high rental prices is resulting in many workers finding it difficult to secure housing suitable for families.

Without an increase in the housing stock in the local area, it is likely that the cumulative impact of the Project and other mines being developed or expanding in the region would be additional upward pressure on the:

- level of rents;
- supply of rental properties; and
- supply of houses for ownership in the townships of Moranbah and Nebo.

As a result, there is likely to be an increase in the number of families of employees who cannot be housed locally and must choose regional locations several hours away from the area.

The implications of demand for affordable, suitable accommodation far exceeding supply and Moranbah now consisting of a sizeable non-resident population, have been increased traffic on Peak Downs Highway, departure of many families from the area, an increase in the proportion of males in the population and drop in participation rates in sporting clubs and community organisations. These trends will be set to continue if demand for housing continues to increase without an increase in housing supply.

In addition, local services and businesses in the area outside the mining industry would have increased difficulty in accommodating any new employees. The issue would be compounded for these sections of the community as they generally receive lower incomes than mining workers and are less able to compete with mining workers in securing affordable accommodation.

Mitigation Measures

Given current housing shortages in the local area BMA has indicated that a high priority has been placed on actively working to address current accommodation shortages in the Bowen Basin, as well as proactively working to ensure that there is enough accommodation to meet future needs. BMA has outlined the following strategy to ensure that the Daunia Mine Project does not put additional pressure on the Moranbah housing market. The impact of the Project's construction personnel would be limited by:

- accommodation sourced at the MAC Accommodation Village at Coppabella for 350 construction personnel, alleviating immediate pressure on the Moranbah housing market; and
- during peak construction this number would increase by 70 personnel who would be accommodated in village rooms controlled by BMA in Moranbah,

The impact of the Project's operational personnel would be addressed through the:

- construction of 10 new residences to alleviate pressure on the housing market in addition to the existing BMA owned accommodation;
- allocation of accommodation from BMA owned housing in Moranbah depending on the individual circumstances of personnel;
- recruitment of operational employees from existing members of the Moranbah community;



- provision of additional accommodation for operation personnel at the accommodation facilities in Coppabella; and
- use of accommodation facilities at Coppabella to house contractors involved in short term maintenance activities.

While the use of village-style purpose built accommodation by the contractor(s) for their employees would partially address the local accommodation crisis, a more collaborative approach between all key stakeholders (local, state and federal government, community housing providers and industry) is required to provide a more long-term regional solution to the issue. The cumulative impact on housing demand and supply from continuing mine development in the region is an issue that cannot be specifically addressed by the Proponent but instead should be the focus of collaborative examination by key government agencies, community and industry stakeholders. This could include input into regional ACARP studies, assessing encroaching mining development to manage issues and ensure houses remain liveable and development of schemes to include affordable housing as part of any housing development undertaken for mine workers.

In this respect BMA is well advanced in planning for the region's future needs by:

- working with the Isaac Regional Council on concept plans for all BMA landholdings in the townships;
- competitively purchasing Council land and working with developers to support future development in the region;
- consulting with other companies, the Isaac Regional Council and the State Government about the Belyando Estate (southwest of Moranbah); and
- investing \$60 million in new accommodation in Dysart and Moranbah during the financial year ending June 2009.

The ongoing demand for accommodation as a result of the Project will be monitored by BMA and consideration will be given to options to meet the demand for workforce accommodation and minimise impacts on the Moranbah and Nebo local housing markets.

17.2.3 Ability to Participate in Regional and Local Employment and Training Opportunities

Construction

The construction contractor(s) will be responsible for the recruitment of the construction workforce. Labour will be sourced from both within and outside the local area. It is expected that employees for the construction phase will be sourced from:

- existing employees of contractors working on major construction projects;
- itinerant construction workers;
- skilled and semi-skilled workers who reside in the Local Study Area and Regional Study Area; and
- local Traditional Owners and their descendants (e.g. for cultural heritage clearances)

A survey of mining and contracting firms across the Central Highlands of Queensland undertaken in 2005 found that the industry was experiencing a shortage of skilled labour across a range of occupations. The greatest shortages were for mining engineers, diesel fitters, open-cut examiners and various plant operators. Anecdotal evidence from local contractors suggests that labour remains hard to source. This issue was also raised as a concern by the community during the community engagement process. Given this and the low



unemployment rates within the Local Study Area and Isaac Regional Council, it is considered likely that a larger percentage of the workforce would be sourced from outside the region.

Operational Workforce

Each operating contractor would be required to manage the recruitment of their operating workforce. At this stage it is envisaged that the mining contractor would employ around 250 contractors (mainly operators and fitters), the CHPP operations contractor would employ around 25 personnel for the CHPP and around 10 BMA personnel would be required for management, health and safety and environmental roles.

Employees for the operational phase would be sourced from:

- existing BMA and BHP Billiton employees;
- workers who reside in key Central Queensland regional centres;
- existing employees of contractors working on similar projects elsewhere;
- residents from the Local Study Area; and
- local Traditional Owners and their descendants (e.g. ongoing cultural heritage clearances).

BMA and the operating contractor(s) would recruit a mix of people with varying skill profiles, including:

- technically qualified people;
- people with some experience with operation of equipment; and
- people with no previous experience.
- The contractor(s) would be required to abide by overarching BMA policies including the Guide to Business Conduct and Charter(s) and will need to provide a documented Human Resource Plan detailing lawful workforce engagement and management processes.

Recruitment of BMA personnel would follow existing recruitment processes and would be managed by the Recruitment Section of the Human Resources Department in BMA Corporate Office in Brisbane. Recruitment tools likely to be used include advertising internally to BMA and BHP Billiton, advertising externally, interviews, pre-employment psychometric assessment, medicals and reference checking.

As part of the recruitment strategy, BMA and the operating contractor(s) would seek to recruit local people for roles at the Project. This would maximise the opportunities for local people to gain some personal and professional development from the Project. The low unemployment rate and skills shortage within the local area and region as a whole means that flexibility to engage the workforce from both local and/or non local sources would be required.

If employees are obtained locally, this is likely to be at the expense of other industries, mines and even internally from BMA. Local service industries generally cannot afford to pay the same salaries as mining companies; therefore they may experience a loss in skilled labour during both the construction and operation phases of the Project. Businesses in the local area are already experiencing difficulty in attracting employees to the area due to a shortage of affordable accommodation and high wages paid by the mining industry.

The occupational groups most likely to be sourced from the local area include minor maintenance contractors, tyre contractors, minor electrical contractors, hydraulic contractors, mechanical contractors,



minor earthworks contractors, cultural heritage survey personnel and environmental service providers such as those related to environmental monitoring.

Mitigation Measures

BMA would continue to work with government, education facilities and industry to collaboratively address the skills shortage throughout the region. BMA would also continue discussions with regional employment providers to encourage employment and training within the local region.

The Proponent would ensure pre-requisite training is provided to all employees. BMA has committed to a number of industry-wide and company specific programs to:

- raise awareness of mining-related careers;
- ensure the accessibility of training and education; and
- improve skills retention with the company.

Such programs include:

- sponsorship of The University of Queensland's Chairs of Mining Engineering and Minerals Processing to support the establishment of two new teaching and research positions and education material development;
- establishment of an engineering alliance with Central Queensland University by financially supporting two new research and teaching positions in engineering and a new postgraduate scholarship;
- continuation of BMA's scholarship scheme to help increase the number of mining graduates by enabling more students to undertake mining related tertiary studies;
- development of a Cadetship Program and Engineering Extension Program to provide professionals from a range of backgrounds and qualifications with technical skills and personal development to become Mining Engineers or Mineral Processing Engineers;
- in conjunction with the Queensland and Federal governments, the Queensland Resources Council and other mining companies and key educational institutions – establishment of the Queensland Minerals and Energy Academy to raise student interest in mining as a career; and
- provision of funding and technical support for the Engineering Skills Centre at Moranbah State High School (BMA, Community Investment).

17.2.4 Impacts on the Economic Profile of the Region

Potential impact

At the local level, economic impacts of industry activity are closely linked to levels of employment in the local area and spending in the local economy. The direct economic impacts of construction and operation of the Project would come from three main sources:

- spending in local businesses by employees and their families
- spending by the Project on goods and services with local businesses
- taxes (rates) and charges paid to local government

While the economic impact of the Project on the local and regional economies is provided in **Section 18**, a brief summary is provided below.



Local and regional businesses likely to benefit financially from the construction and operation of the Project include:

- hotels, motels and other accommodation providers in the area who may see an increase in patronage for short-term accommodation during both the construction and operational phases – this impact is not expected to be significant, however, as most short-term accommodation providers are already operating close to capacity;
- businesses contracted to provide goods and services to the Project, as well as people employed by those businesses. Where possible, the Proponent would encourage contractors to use local suppliers and sub-contractors; and
- businesses supplying perishable goods (such as dairy products, fruit and vegetables).

It is likely the local and regional communities would experience some economic benefits from the net increase in the population of the local and regional areas due to the Project. The long-term economic viability of the local communities would, however, be dependent on establishing and maintaining economic diversity with the local economy. This issue is explored in **Section 18**.

Mitigation Measures

In consultation with the Isaac Regional Council and local businesses, BMA will establish a process to advise them of the contract packages available during the construction and operation phases of the Project and of the issue of tenders for work. Contractors would be encouraged to use local goods and services as much as possible and those tendering for work and contracts would be required to identify the component of their proposal to be sourced locally. The proportion of local content would be considered by the Proponent when selecting contractors. This would ensure that any potential benefits and flow-on effects to the Local Study Area would be identified and maximised. There is the potential for small parcels of work to be awarded to local contractors, such as equipment hire and fencing contractors.

Communication with local and regional services providers and the general community would be ongoing during the approval phase of the Project. This will include keeping the community informed of the Project approvals process and timeline, and key Project milestones as well as contract opportunities. This ongoing communication strategy would assist in managing the communities' expectations of the economic impacts of the Project.

17.2.5 Impacts on Local Enterprises

A skills shortage has already been identified as a potential issue in this region. If employees for the Project are secured from within this limited pool, the ability of other industries and enterprises to secure employment for growth could be further limited. Other industries and service providers are already finding it difficult to attract employees to the area due to the high wages paid by mining companies and the lack of availability and affordability of housing for any new recruits.

As a strategy to assist with reducing the potential for local enterprises to experience skill shortages, the Proponent proposes to recruit people with a range of skill profiles, including people with minimal or no previous experience in mining operations. By undertaking to employ and provide training to unskilled labour the Proponent will reduce the amount of skilled labour that needs to be employed by the Project.



A relationship with Queensland TAFE and other training organisations would be developed to ensure these agencies are aware of Project requirements and build them into long-term training and upskilling plans. Partnerships with the community and agencies, that help to develop skills within the community, would also be considered by BMA.

It is recommended that BMA continue their existing strategies that promote indigenous business opportunities to promote action in areas where the company identifies opportunities for employment of local indigenous groups. Examples of opportunities existing at other BMA sites includes training local indigenous groups to manage local conservation areas including weed control, fire management and monitoring plant regrowth. Other opportunities include the property management of company owned cattle adjustment properties.

17.2.6 Property Values and Marketability

Potential Impacts

Some surrounding landholders may consider that potential impacts from noise, vibration, dust and lighting could potentially affect their property values and marketability. Mitigation strategies have been developed to reduce potential impacts from noise, vibration, dust and visual amenity (including lighting). These measures are summarised in **Section 17.2.9** with details provided in **Sections 12, 10 and 4**, respectively.

The increase in demand for residential housing within the local townships of Moranbah and Nebo, is likely to result in a further increase in the value of residential properties. Without an increase in housing supply to meet demands, house prices could surpass their already high levels. Advice from council through the Community Reference Group is that 330 allotments are currently under construction in Moranbah with 170 of these owned by BMA. A further 1,000 allotments would be generated by council in the future.

Mitigation Measures

BMA plans to construct 10 new residences to alleviate pressure on the housing market. In addition, the majority of the construction and operational workforces would be housed in the MAC Accommodation Village at Coppabella.

While the pressure on the local housing market from the Project is not expected to be substantial, the cumulative impact on this market from other mines developing or expanding in the region is likely to be significant. As discussed in **Section 17.2.2.2** a collaborative approach from state and federal government, regional councils and mining companies is required to address the housing crisis within the local area.

17.2.7 Recreation Facilities and Access

The Project is unlikely to impact on recreational facilities or affect community members' access to such facilities. Slight increases in residential population as a result of the Project could see the membership and hence viability of some recreational pursuits increase. However the extent of this impact would be dependent upon the proportion of the workforce who choose to relocate to the local area.

While workers housed in village-style accommodation could participate in local recreational and sporting activities, their working roster generally does not allow for continuity of participation, particularly for team events where employees may drop out to travel back to their usual place of residence.

On a longer-term basis, increased pressure on the lower and middle income earners within the community as a result of reduced housing affordability, could see some of these community members forced to leave the local area or unable to afford social activities as they pay more for accommodation and goods and services. This could be to the detriment of local recreational and sporting facilities.

17.2.8 Impacts on Human Service Delivery

Emergency service capacity and staffing is generally impacted by the number of emergencies generated within a catchment. Health and education service capacity relate to the demographic profile of the area, funding and the availability of staff in rural areas.

Discussions with human services providers indicate there are some current issues relating to human service delivery within the region.

While it is not anticipated that the Project itself would have a significant impact on human service delivery, longer-term impacts may arise as a result of the cumulative impact of mine development and growth within the region.

Health Services and Community Care

In many cases human service delivery associated with health and community care is at or above capacity. Other services, such as specialist care, are limited to visits from specialists outside the area or services offered in Mackay. Changes in population could change the capacity of local service providers to assist the community within the region.

Childcare services may also be impacted if young families move to the region and there is pressure on families to maintain both parents working. The new childcare facility that was recently opened in Moranbah would, however, help to alleviate some of this pressure over the short-term.

Emergency Services

The Project would see the majority of the construction and operation workforces housed in temporary village-style accommodation, with their main place of residence elsewhere. The result of this is likely to be increased traffic movements on the Peak Downs Highway between Coppabella and Mackay.

Demand for emergency services could increase if this traffic results in road accidents. The extent of the effect of this on the emergency service providers will, however, be dependent on where the traffic accident occurs.

Education Facilities

Information provided by schools in the local area suggests that most of the educational facilities in the area have capacity to take on additional students and that the provision of primary, secondary and tertiary education would remain unchanged as a result of Project construction or operation.

There is the opportunity for BMA to continue its existing workforce and community education activities such as the “Energy Excellence Program” which seeks to identify energy saving opportunities within its operations as well as encouraging its workforce and the wider community to consider energy consumption and sustainability.



The provision and support of further workforce and community education are also available through BMA's new skills development initiatives which provide multiple pathways for school students as well as existing and potential employees through their association with universities and the provision of scholarships, apprenticeships and cadetships and graduate and postgraduate education support. There are also opportunities for sponsorship of a scholarship for Indigenous students.

Ongoing consideration of indigenous business opportunities could be recognised through the provision of education and training of local indigenous groups to manage local conservation areas including weed control, fire management and monitoring plant regrowth as has occurred on other BMA sites.

BMA through its Growing BMA – Community Engagement program has also provided environmental education via environmental monitoring fact sheets which focus on noise, air quality and vibration. The community are aware of monitoring techniques, management strategies and general guidelines associated with their health and mine development in the area. BMA consider this to be an important step in providing environmental education for the general public. Discussions have also been held with environment groups to further develop the improved appreciation of conservation areas and their importance. Activities may include the development of reference books, university partnerships and resource sharing.

Some schools noted difficulty recruiting teaching staff due to the lack of accommodation in the area. This issue is discussed further in **Section 17.2.2.2**.

17.2.9 Impacts on Properties Directly and Indirectly Affected by the Project and the Local Area

There are a number of sensitive receptors situated close to the Project Site. These include:

- Olive Downs – located approximately 1.5 km to the south of the Project Site
- Daunia – located approximately 5 km east of the Project Site
- Mavis Downs – located approximately 6 km east of the Project Site
- Moorvale – located approximately 11 km north of the Project Site
- Takara – located approximately 11 km north of the Project Site
- Wotonga – located approximately 13 km north-west of the Project Site

Residents in close proximity of the proposed mine site raised concerns about a number of environmental issues. These included:

- impacts of noise, dust and visual amenity – these were most pronounced for those living in close proximity to the existing Poitrel mining operations (**Sections 12, 10 and 4**, respectively);
- increased traffic on Peak Downs Highway and local road network (**Section 13**); and
- land use and management including concerns about good cattle country being ruined and the landscape being made into a rabbit warren (**Section 4**).

Olive Downs and Mavis Downs are both operating cattle properties. The Project will take parts of both Olive Downs and Mavis Downs. Compensation agreements for both of these parcels have been put in place between BMA and the respective landowners. The remainder of these properties would be subject to amenity issues including dust, noise (from mine construction, operation and transportation), access issues,



and visual amenity issues. These issues are discussed further in the following sections. As well as the specific mitigation measures developed to address each of these issues. BMA proposes the implementation of a broader community education program to promote awareness within the community of mitigation approaches and of the guidelines to protect health and property.

17.2.9.1 Visual Amenity

The Project is likely to be visible to some of the surrounding properties. While the potential exists for the surrounding properties to have views to the waste dumps and mining operations, the existing topography and remnant vegetation would help to screen a lot of these potential views. Retention of this vegetation and establishment of additional vegetation buffers around the Project Site would help to mitigate most visual impacts. The most significant visual impacts are likely to be seen from the Olive Downs homestead. The mitigation measures identified above will help to reduce the visual impacts experienced from this sensitive receptor.

In addition night lighting from the Project Site may create a glow in the night sky which would be visible to surrounding residents. It is recommended that BMA ensures lights are focussed on the areas required, and that shields are placed around the globes to limit light spill where necessary. A detailed assessment of the visual impacts from the proposed mine is provided in **Section 4**.

17.2.9.2 Air Quality

Air quality modelling has been undertaken for predicted PM₁₀, TSP concentrations and dust deposition rates at sensitive receptors from the Project. This modelling found that while predicted PM₁₀ and TSP concentration were well below ambient air quality guidelines, dust deposition has the potential to generate some nuisance impacts at Olive Downs in the later years of operations. A detailed assessment of the air quality impacts from the proposed mine is provided in **Section 10**.

During the community consultation process undertaken for this Project, surrounding property owners, including those of Olive Downs and Mavis Downs, raised concerns about dust from the proposed mine. Both property owners commented that dust from the existing Poitrel operations and the railway were already a concern for them. Health impacts associated with nuisance dust were also raised as a concern by surrounding property owners.

To assist with minimising potential nuisance dust issues, ongoing dust deposition should be undertaken at Olive Downs. Consultation with surrounding property owners and the implementation of the dust mitigation measures outlined in **Section 10** should assist in reducing the potential for dust nuisance. BMA are working with Isaac Regional Council to gather information on the health risks associated with dust generated from coal mining and relevant guidelines.

17.2.9.3 Noise Amenity

Operations at the Daunia Mine will be 24 hours a day for seven days a week. Operational noise sources will come from mobile equipment (i.e. haul trucks and excavators) and stationary sources such as the CHPP. Actual noise emissions will be dependent upon the type of operation being performed, the operating style of the operator and the level of maintenance undertaken on equipment.



During the first five years of operations, mine site noise sources will be situated at the northern end of the Project site and closest to Daunia Station and Mavis Downs. Between years 15 and 20 of operations, mining will progress to the southern end of the Project lease area and closer to Olive Downs.

A detailed assessment of the noise amenity impacts from the proposed mine is provided in **Section 12**. This assessment found that noise levels would be less than the night-time criteria for most modelled scenarios except when operational activities are proposed to be within 1.5 km of Olive Downs during years 15 to 20 of operations. Overburden excavators, spoil dump bulldozer and haul trucks were found to be the major contributors to this noise. In addition the noise from the Daunia Project, the noise contribution from the Poitrel Mine may cause increased noise levels at Olive Downs during years 1 to 5 of operations.

17.2.10 Land Use and On farm activities On and Near the Project Site

The areas surrounding the Daunia Project are used primarily for mining and agricultural purposes. There are not expected to be impacts that diminish or discontinue the future use or development of surrounding areas for cropping, grazing, forestry, recreation, industry, education, aesthetics, or scientific or residential purposes. The amenity of areas closest to the project are expected to experience some impacts particularly in relation to noise and visual impacts, though these would not be expected to impose constraints on surrounding land uses. A detailed assessment of noise amenity impacts is provided in **Section 12**. Visual amenity and air quality impacts are discussed in detail in **Section 4** and **Section 10** respectively.

17.2.10.1 Traffic/Access/Severance

Access to the Project site would primarily be from an access road to the Millennium and Poitrel mines. Periodically during the construction period, there may be the need to use Daunia road to access the site.

A detailed assessment of traffic movements as a result of the Project is provided in **Section 13**. Construction of the Project is not expected to have a significant impact on traffic operations on any of the studied road links. While management of the transport of the construction workforce to the Project site will be a decision for the successful contractor in line with BMA Contract Management Policies, it is likely the majority of the construction workforce will travel to and from the Project site via bus with the remainder using private vehicles. It is expected that this would generate eight bus movements and 230 car movements per day.

Two bus routes use the Peak Downs Highway that service schools in Moranbah. These bus routes would not be affected by construction of the Project apart from a potential increase in travel times when construction equipment is being delivered to the mine site. Delivery of such equipment will be scheduled to occur outside of school drop-off and pick-up times to minimise potential impacts.

While some disruptions to road users would occur as a result of the transportation of construction materials to the site, particularly with the movement of over-width loads, any such movement will be coordinated with Isaac Regional Council and Mackay Regional Council to minimise disruptions.

BMA significantly contributes to the road safety alliance which operates in the Central Queensland region to improve road safety on regional highways. BMA would continue this involvement and would work with the alliance to address potential traffic issues during construction and operation of the Project.

17.2.11 Impacts on the Social Profile

The social profile of a community documents the character, identity and activities of a group or community that makes it unique or identifiable. Sport and recreation are significant aspects of the social profile.

The identity of the township of Moranbah is consistent with it being a mining area. The township of Nebo on the other hand is primarily agriculturally based. Coppabella is a small community based around the rail line and agriculture.

Potential Impact

During the construction phase of the Project it is unlikely that the Project workforce would affect the social profile of the local area as the majority of the construction workforce would be accommodated in village-style accommodation at Coppabella. This accommodation would be fully self-contained and include the following facilities:

- sleeping quarters
- dining room, kitchen and crib room
- recreational room, internet café, BBQ gazebo, videos and DVDs and sporting facilities
- ablution facilities and laundry

The provision of these facilities restricts the need for the construction workforce to access the surrounding townships of Moranbah and Nebo. Given that the accommodation village is located in Coppabella, interactions with this community are likely to be significantly greater. In addition, there are already a number of purpose-built accommodation villages in the local area and the area has a significant non-resident population. Therefore it is unlikely that the construction workforce would have a significant impact on the social profile of the local area. However, the construction workforce may include individuals who would like to be part of the community on a social level.

During the operational phase the net increase in the resident population of Moranbah due to Project employees could lead to a positive impact on social opportunities. An increase in the resident population could mean greater support for recreational, sporting and cultural activities which offer social opportunities. Sporting and recreational clubs may notice an increase in membership, which would bring about increased participation rates and additional assistance in social activities management. Ideas and social activities that new residents could bring to the area could provide a positive benefit to the local and regional area. The extent of any benefits is, however, dependent on the number of employees who, along with their families, choose to take up residence in the local area.

Residents in the community were concerned however that the lack of affordable housing and the trend towards more and more single persons quarters and village-style accommodation would result in Moranbah becoming a single men's' camp and the subsequent effect this would have on the overall social values of the area. Participants indicated there was a preference for employees and contractors to relocate to the area along with their families, to sustain or enhance the community atmosphere.

Village style accommodation would be the main form of housing during the construction phase. However, in order to attract and retain a workforce, a range of accommodation options would need to be provided during the operational phase. These would include fly-in fly-out; villages, housing and would be offered in



accordance with individual lifestyle choices. This would help with alleviating the prevalence of single person quarters within the community.

Research undertaken by Professor John Rolfe from the Centre for Regional Economic Development at the University of Central Queensland has shown that people would prefer to see Moranbah developed as a residential base rather than a work camp. This supports the ongoing need to ensure that mining employees are provided with the opportunity, through provision of affordable and suitable housing, provision of service, reduced amenity issues etc to reside permanently within local communities if they so wish.

At the same time participants also noted that population increases associated with mine development would contribute to impacts on local and regional social services and road networks.

Mitigation Measures

To ensure that the social values of the local area are maintained on a long-term basis, mining companies need to provide workers and their families with the option to reside in the local community, making the community their home and become long-term contributors to the community. For the Project, BMA will be providing housing in Moranbah for BMA employees, enabling them to become part of the local community.

The construction and operational workforces would be governed by the policies and codes of conduct devised and implemented by BMA and its contractors. These codes of conduct are evident in BMA's charters which outline values associated with:

- safety and the environment
- integrity
- high performance
- win-win relationships
- the courage to lead change
- respect for each other

BMA's policies generally include drug and alcohol use and company expectations with respect to employee behaviour. During induction and training in both the construction and operational phases, the workforce would be informed of company expectations and the need to maintain good relations with the local community.

17.2.12 Ability to Live in Accordance with Values and Priorities

During the EIS consultation period, the community outlined what they valued about their surroundings and lifestyle. These attributes are identified in **Section 16**.

Participants in the community feedback form survey indicated that they were generally in favour of the Project development, and that they considered it would have a positive impact on their area in terms of increased employment opportunities. While recognising the positive impact the Project would have on the local economy, they did however raise a number of concerns regarding the Project including:

- environmental impacts and their effect on lifestyles
- increased traffic on the road network
- impact on housing

- concerns about single person quarters
- impact on water
- impact on families

Mitigation

BMA and its sites currently have a Community Partnerships Program that focuses on working with communities to develop partnerships that create sustainable value for all. This is a regional program which ensures BMA's community efforts go beyond economic benefits and address social needs through the development of partnerships. The basis of this program is to support initiatives and activities which promote involvement with government, training and welfare organisations and the communities. The program is divided into six key areas:

- youth development (Smith Family Learning for Life; Central Queensland Education Mobile Van)
- BMA's economic development/business and skills training
- community development and welfare
- community safety, sport, well-being and recreation
- arts, entertainment and cultural development
- environment and sustainable development

Opportunities and issues associated with the Project would be incorporated into this Community Partnerships Program. In managing expectations and reducing misconceptions during the Project, two-way communication between the regional council and the proponent will be a priority.

17.2.13 Project Workforce and their Families

In addition to recognising the impact of the Project on the existing social environment within the local area and the surrounding region, the Proponent also recognises the potential impacts of the Project on workforce members and their families.

During the construction and operational phases of the Project, the majority of non-local employees would reside in the purpose built camp-style accommodation while on roster but would return to their place of residence during their breaks. This arrangement may have some impacts on both employees and their families, as employees would be away from home for several days at a time. For married workers this working arrangement can place pressure on the family unit with the employee being away from the family for extended periods and the spouse left to manage the family unit on her own.

There are also potential impacts on the safety of employees, as they would be travelling to and from Coppabella/Moranbah at the start and end of each roster. This concern has been raised by a number of consultation participants and in particular by emergency services personnel.

Employees from areas outside Moranbah who choose to move to Moranbah are likely to experience a transitional phase after they move, and adjusting to a new home and town environment may take some time. An example of this would be children settling-in to a new school environment, and new residents who may initially feel some isolation, both in terms of social standing and location. However, the existence of operating mines in the area would ensure that existing residents are aware of the lifestyle of new employees and their families.

Mitigation

Existing employment, training and community initiatives already used by the Proponent would be put in place to ensure that the Project workforce is encouraged to become part of the community. During the operational phase counselling services would also be extended to families of all employees, including those who do not reside in Moranbah.

One of the key considerations in housing the majority of the workforce at Coppabella, is minimising the distance employees travel on a daily basis to and from the mine, reducing exposure to fatigue. Workers however still have to travel considerable distances to their usual place of residence prior to and at the completion of their roster periods. Restrictions are likely to be put on employees regarding allowable distances travelled before commencing shifts. This restriction would be imposed in an effort to protect the safety of those employees and other road users. Employees who, but for the restriction, would exceed the daily travel limit would be required to reside locally whilst on roster. This restriction would form part of each employee's contract of employment.

The proponent will also provide local transportation, which will coincide with shift commencements and completions to manage fatigue risk and to encourage employees to minimise their personal use of transportation.

17.2.14 Cultural Profile

The cultural profile of a community documents its way of life, set of practices and tangible features that are separate from pursuits such as work.

During construction the Project is unlikely to have a significant impact on the communities' ability to access facilities that cater for their cultural needs and activities, at both a local and regional level. During operation of the mine the increase in population may lead to an increased use of cultural services and activities.

17.2.15 Access to Culturally Important Areas and Landscapes

The assessment of cultural heritage is detailed in **Section 15**, which indicates that there is an overall low Indigenous cultural heritage significance within the Project Site. However, as outlined in **Section 15**, BMA has committed to prepare a Cultural Heritage Management Plan (CHMP) and implement the agreed strategy described in the CHMP in full. The CHMP will describe strategies for use and access to Aboriginal cultural heritage places and management of Aboriginal cultural heritage places and values. Mitigation measures associated with Aboriginal cultural heritage are outlined in **Section 15**.

Non-indigenous cultural heritage features identified within the Daunia Mining Lease are described in **Section 15**. Once construction activities commence within the Project Site, persons wishing to visit features would be able to do so only by arrangement with BMA (to protect the public from hazards associated with site activities and to prevent impacts to the features).

Access to culturally important areas and landscapes outside of the Project area would not be affected by the Project.

17.2.16 Cumulative Impacts

The potential social impacts from the Project also need to be considered in the context of other developments in the area. The assessment of cumulative impacts is of particular importance to this



assessment due to both the number of mining operations currently operating in the area, and also due to the proposed growth in mining operations predicted for the area.

While the Daunia Project itself is unlikely to have a significant impact on the local community the magnitude of social impacts could become quite substantial if other mining developments proposed for the region are taken into consideration. The local community is currently facing a number of issues including:

- housing shortages and affordability
- skill shortages
- increased traffic on the Peak Downs Highway

While these issues will be further compounded by the Project, none are likely to be brought to crisis point.

With further mining development in the region and without a consolidated effort by all key players including government and industry, there is a high potential that these issues will compound significantly and the social fabric of Moranbah and the surrounding communities could be eroded.

17.2.17 Summary

On the whole, the Project in isolation is unlikely to have a significant impact on the local or regional communities. It is not envisaged that the Project will create new issues within the local or regional communities but instead will add to the issues already faced by these communities.

The concern for community members is the changes that could occur to the local area as a result of continued mining development and expansion in the region. The existing housing situation in the area is acting as a catalyst for other issues. The lack of affordable housing is restricting the movement of new families into the area. It is also putting additional financial pressure on lower and middle income earners, forcing many to move out of the area in the search for more affordable accommodation. This in turn is reducing the pool of available labour within the community for other positions such as cleaners, retail assistance and council operators.

Community members have expressed concerns about the longer-term impacts of this on the township of Moranbah. They are concerned that if the housing crisis is not addressed and more affordable housing made available, the continuing trend of mining companies to house their workforce in village-style accommodation will result in changes to the current residential approach of Moranbah. While BMA is not in a position to address this housing crisis in isolation, they have a role to play in developing a collaborative solution with federal, state and local government, community housing providers and industry.