



Taroborah Coal Project

Environmental Impact Statement

Section 4.10 – Environmental Values and Management of Impacts – Social

Prepared for:
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Table of Contents

4.10 SOCIAL	4-456
4.10.1 Description of Existing Social and Cultural Values	4-456
4.10.1.1 Local Community	4-458
4.10.1.2 Community Engagement	4-458
4.10.1.3 Social Order	4-458
4.10.1.4 Land Use	4-459
4.10.1.5 Mineral Development Licence Landholders	4-459
4.10.1.6 Infrastructure and Community Services	4-459
4.10.1.7 Indigenous Community Services	4-463
4.10.1.8 Business and Enterprise	4-464
4.10.1.9 Local Community	4-464
4.10.1.10 Demographic Profile	4-466
4.10.1.11 Indigenous Demographic Profile	4-481
4.10.1.12 Housing and Accommodation	4-489
4.10.1.13 Workforce Profile	4-499
4.10.1.14 Project Fatigue	4-500
4.10.2 Potential Impacts And Mitigation Measures	4-500

LIST OF FIGURES

Figure 4.129 Study areas	4-457
Figure 4.130 Gender by Study Area 2011	4-468
Figure 4.131 Family Composition by Study Area 2011	4-470
Figure 4.132 Country of Birth by Study Area 2011	4-471
Figure 4.133 Proficiency in Spoken English by Overseas-Born Residents by Study Area 2011	4-471
Figure 4.134 Internet Connection in Dwellings by Study Area 2011	4-473
Figure 4.135 Median Weekly Individual Income by Study Area 2011	4-474
Figure 4.136 Median Weekly Household Income by Study Area 2011	4-474
Figure 4.137 Type of Educational Institution Attended by Study Area 2011	4-476
Figure 4.138 Highest Level of Schooling by Study Area 2011	4-477
Figure 4.139 Highest Level of Tertiary Qualification Achieved by Study Area 2011	4-478
Figure 4.140 Tertiary Field by Study Area 2011	4-478
Figure 4.141 Labour Force Status by Study Area 2011	4-479
Figure 4.142 Industry of Employment by Study Area 2011	4-480
Figure 4.143 Employment by Occupation by Study Area 2011	4-481
Figure 4.144 Indigenous Type of Educational Institution Attended by Study Area 2011	4-484



Figure 4.145	Indigenous Highest Year of School by Study Area 2011.....	4-484
Figure 4.146	Indigenous Highest Level of Tertiary Qualification by Study Area 2011	4-485
Figure 4.147	Indigenous Total Personal Weekly Income by Study Area 2011	4-486
Figure 4.148	Indigenous Total Household Weekly Income by Study Area 2011	4-486
Figure 4.149	Indigenous Labour Force Status by Study Area 2011.....	4-487
Figure 4.150	Industries of Indigenous Employment by Study Area 2006.....	4-488
Figure 4.151	Indigenous Occupations by Study Area 2006	4-489
Figure 4.152	Household Composition by Study Area 2011	4-490
Figure 4.153	Dwelling Structure by Study Area 2011	4-491
Figure 4.154	Dwelling Ownership by Study Area 2011	4-491
Figure 4.155	Monthly Mortgage Repayments by Study Area 2011	4-492
Figure 4.156	Rental Repayments (Weekly) by Study Area 2011	4-493
Figure 4.157	Vehicles per Household by Study Area 2011	4-493
Figure 4.158	Emerald Median Monthly Property Prices 2012 – 2013	4-495

LIST OF TABLES

Table 4.123	Study Areas	4-456
Table 4.124	Resident Population by Study Area 2006 – 2011.....	4-467
Table 4.125	Projected Resident Population by Study Area 2011 – 2031	4-467
Table 4.126	Age by Study Area 2011	4-469
Table 4.127	Places of Usual Residence Five Years Ago by Study Area 2011	4-472
Table 4.128	Persons in Need of Assistance by Study Area 2011	4-475
Table 4.129	Unpaid Assistance to a Person with a Disability by Study Area 2011	4-475
Table 4.130	Socio-Economic Index of Disadvantage by Study Area 2011	4-476
Table 4.131	Indigenous Population by Study Area 2011	4-481
Table 4.132	Indigenous Age and Gender by Study Area 2011	4-482
Table 4.133	Indigenous Persons in Need of Assistance by Study Area 2011	4-483
Table 4.134	Unpaid Assistance to a Person with a Disability by Study Area 2011	4-483
Table 4.135	Emerald Median House Prices 2007 – 2012	4-494
Table 4.136	Building Approvals: 12 months to September 2012 by Study Area.....	4-496
Table 4.137	Emerald Property Development as at June 2013.....	4-496
Table 4.138	Queensland Housing Affordability Index 2011	4-497
Table 4.139	Bowen Basin NRW Shift Workers by Accommodation Type 2012.....	4-498
Table 4.140	Bowen Basin Accommodation Camp Bed Availability by LGA 2012.....	4-498
Table 4.141	Bowen Basin Vacant and Available Hotel/Motel Rooms by LGA 2012	4-499
Table 4.142	Social Impact and Mitigation/Opportunity Analysis.....	4-501

4.10 SOCIAL

Social Impact Assessment (SIA) forms an integral component of the EIS process. The SIA (conducted in accordance with Department of State Development, Infrastructure and Planning (DSDIP) guidelines) aims to:

- Collect and analyse information regarding key social and cultural issues, population change, community and social relationships that are likely to occur as a direct or indirect result of the Project; and
- Develop strategies for the mitigation, management, monitoring and review of these social impacts.

Throughout the SIA process, AARC has been in contact with the Social Impact Assessment Unit of the Department of State Development Infrastructure and Planning in order to provide the department with an opportunity to comment on this process.

As part of the company's ongoing stakeholder consultation process AARC developed and implemented an SIA specific engagement strategy with the aim of keeping the local community informed about key developments and timelines associated with the proposed Project. Such engagement included face-to-face consultation with directly affected landholders in November 2012, a broader community information session held in Emerald during May 2013, and meetings with specific stakeholders throughout 2012/2013.

4.10.1 Description of Existing Social and Cultural Values

The Project is located 22 km west of Emerald, central Queensland and is situated entirely within the jurisdiction of the Central Highlands Regional Council (CHRC). The Project is encompassed by a single tenement; Mineral Development License (MDL) 467 which covers an area of 7,966 ha.

Three SIA study areas, indicated in Table 4.123, were used to ensure sufficient coverage of the region and provide current and accurate statistics.

Table 4.123 Study Areas

Study Area	2011 Census	2011 Resident Population
Emerald	Emerald Statistical Area Level 2	13,218
Central Highlands	Central Highlands Local Government Area	28,715
Queensland	Queensland	4,332,739

The Emerald Statistical Area Level 2 includes the nearest major township to the Project, while the Central Highlands Local Government Area (LGA) provides a more general perspective of regional localities. Study areas are shown in relation to the Project in Figure 4.129.



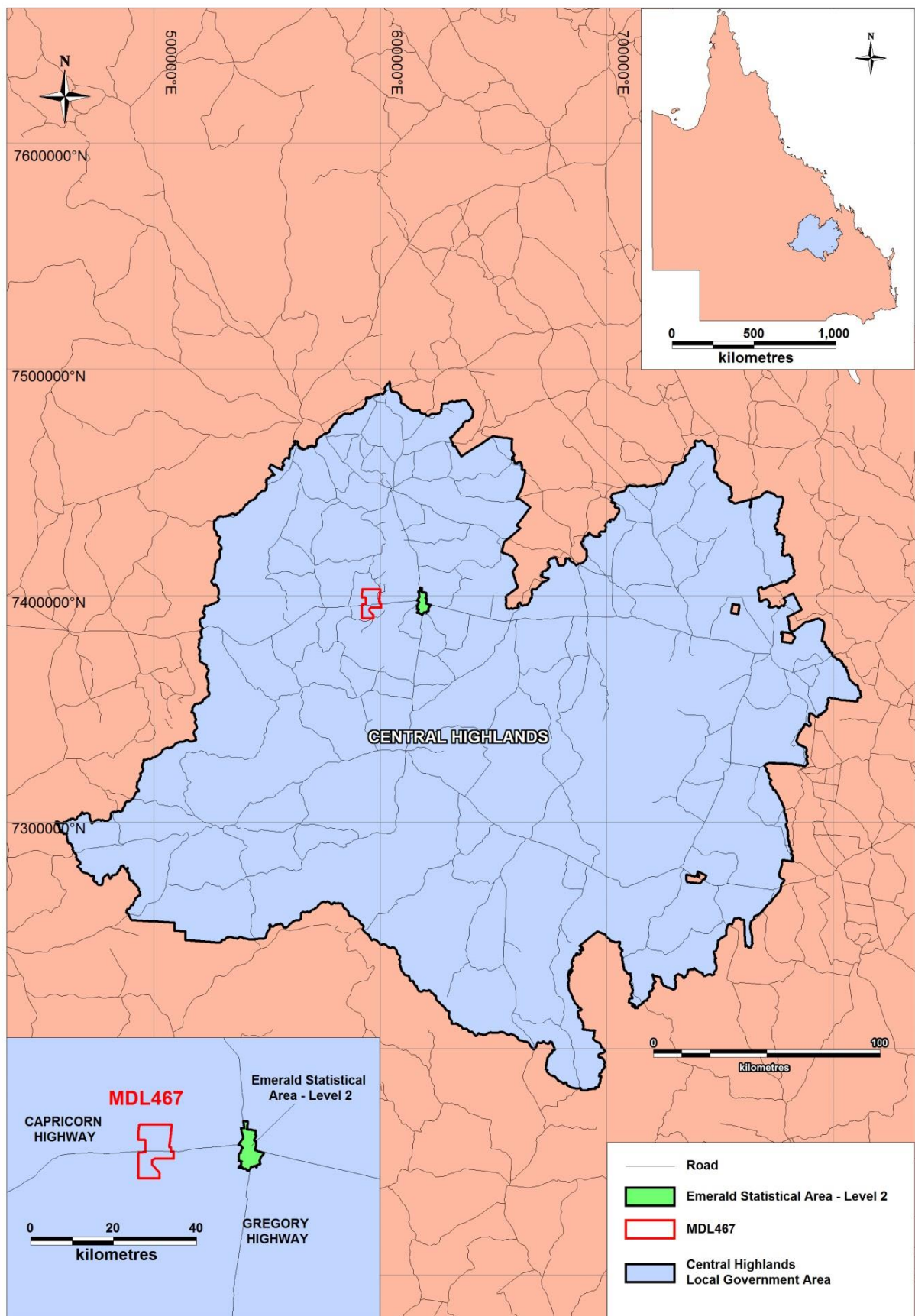


Figure 4.129 Study areas

Information for the SIA was gained through a combination of desktop reviews of relevant Queensland Government and Australian Bureau of Statistics (ABS) literature and community consultation.

Consultation with various community stakeholders revealed that local residents value their relaxed lifestyle and safe environment. The rich history and active community of Emerald is highly valued by its residents, who also have access to a range of services and community facilities.

The Indigenous community represents 3.3% and 3.6% of the Emerald and Central Highlands populations, respectively.

4.10.1.1 Local Community

While settlement patterns are reflective of the region's agricultural heritage, expansion of the resources sector has resulted in changing social patterns. Development in the region was initially a result of the large and diverse agricultural and pastoral industries, including cattle, cotton, grain and citrus. However, expansion of the coal industry has introduced more diverse employment skills for the resources-related industries.

Associated with this change in industry has been an increase in population, increasing pressure on economic and social infrastructure, impacts on amenity due to the proliferation of development, and conflicts over land use. Businesses in the region have begun to diversify into components, parts and services for the resources sector. Strong growth in electricity, gas and water supply industries is evident across the region, while professional services, transport and manufacturing have also experienced unprecedented expansion.

4.10.1.2 Community Engagement

AARC has implemented a consultation program to facilitate ongoing community engagement and keep the local community informed about the Project's key developments and timelines. Packages consisting of a fact sheet and reply-paid questionnaire were mailed to potentially affected community stakeholders and distributed to business owners, state and local government offices or representatives, and general community members.

In November 2012, consultation was conducted in person with landholders directly affected by the proposed Project (refer to Appendix B of the SIA for the Taraborah Community Consultation Report). An information session for the wider community was held in Emerald in May 2013, attracting approximately 100 attendees. This information session provided details of the Project's plans, designs and proposed operations in the form of presentation posters in order to provide proposed management strategies to attendees and stimulate discussions concerning the environmental, economic and social impact issues associated with the Project.

In addition to regular liaison with Traditional Owner groups, consultation was undertaken with a range of local Indigenous stakeholders – including the Queensland Department of Aboriginal and Torres Strait Islander and Multicultural Affairs (DATSIMA), the Central Highlands Aboriginal Corporation and local health service providers - to understand Indigenous health, education and employment issues across the region. All communication with Indigenous stakeholders was carried out in a respectful and welcoming manner, an approach that is reinforced in the Project's Indigenous Participation Plan outline (refer to Appendix B of Appendix 23 - Taraborah SIMP).

4.10.1.3 Social Order

Queensland Police statistics for Emerald indicate that, over a five year period, a general downward trend is evident for offences against the person. In contrast, general theft offences and unlawful



entries have increased by 62% and 17% respectively, over the past five years.

Drug offences have increased slightly in Emerald, from 99 to 105 offences since 2007. Drunkenness and good order offences have decreased by 13% and 19%, respectively. Despite the growth in the region, traffic and related offences have decline by 21% over the past five years.

4.10.1.4 Land Use

Land use within the Project and surrounding areas is predominantly cattle grazing and cropping. Note that a small section of land in the northeast of MDL467 has been designated by the Queensland Government as a Strategic Cropping Land Protection Area; however, this area is a sandstone ridge with moderate timber coverage and is suitable only for cattle grazing. Other pockets of land within MDL467 have been designated Strategic Cropping Land Trigger Areas.

A variety of smaller allotments within MDL467 are utilised as retirement blocks/hobby farms (starting at 65 ha) whilst the larger allotments are used for commercial pastoral businesses (up to 2,500 ha in area). Four homesteads are located on properties within the MDL467 boundary; however, many of the other lots have no residence on site.

No apparent social and cultural activities occur within the immediate vicinity of the Project site, most of these activities are located in Emerald, some 22 km to the east. Recreational activities also occur around Lake Maraboon, which is located approximately 10 km south of MDL467. The Gemfields (approximately 20 km west of Taraborah) are a popular destination for tourists and locals who are interested in the character and history of small, local communities.

4.10.1.5 Mineral Development Licence Landholders

There are 19 properties located either partly or entirely within MDL467 (excluding easements) 11 registered owners, including Queensland Rail and the Queensland Department of Transport and Main Roads (DTMR). Properties directly affected by the Project will either be purchased by the proponent, or surface rights acquired (permits the proponent to use the land for the term of the mining lease, but the land reverts back to the original owner when the lease is relinquished). Such arrangements will be subject to discussions with each affected landholder.

Twenty families are either directly or indirectly affected by the proposed Project as follows:

- Nine families - principal landholders within MDL467, three of whose principal residences are located within the MDL467 boundary; and
- Eleven families - live on or own properties adjacent to MDL467.

4.10.1.6 Infrastructure and Community Services

Community Facilities and Services

The CHRC has developed its *Central Highlands 2022 Community Plan* to plan for future growth and development in the region. A 'Get Involved' community engagement phase (which included workshops, meetings, displays and events) was implemented to inform the Community Plan. Key findings of this consultation process, among others, include:

- Improving medical, child-care and aged care services, as well as other community services, to



meet growth demands;

- Diversifying the local economy, including development of the tourism sector; and
- Developing and expanding infrastructure to meet growth demands, particularly with respect to transport systems and housing.

Education

Emerald provides important education services for the region, including three state primary schools, a state secondary school, three independent colleges and the Capricorn School of Distance Education. The Anakie State School services the Gemfields region. Student numbers in Emerald schools have remained at a reasonably high, stable level, despite downturn in the coal industry.

Housing affordability has proven to be a significant issue affecting the ability to attract teachers to the region.

Higher Education

Emerald also provides a number of tertiary education facilities, including Technical and Further Education (TAFE), Central Queensland University (CQU) Emerald Campus and the Emerald Agricultural and Pastoral College. The Australian Agricultural College Corporation Emerald is located 3 km east of the town. The Central Queensland Institute of TAFE, headquartered in Rockhampton, also has additional campuses in Emerald, Barcaldine, Blackwater and Clermont.

Early Childhood Education and Child-care Services

Five child-care services are located in Emerald, some of which offer preschool facilities. Child-care facilities are under pressure in Emerald, with demand for places exceeding supply. This shortage of places is considered to be a significant barrier to workforce participation, especially for women.

Health

General Care

Hospitals in Blackwater, Springsure and Emerald service the Central Highlands region. More acute cases or cases requiring emergency surgery are sent to larger hospitals in Rockhampton or Brisbane via rescue helicopter or the Royal Flying Doctor Service (RFDS). The relative isolation of townships in the region creates logistical issues for the delivery of adequate healthcare. Queensland Health provides a primary health service clinic in the town of Sapphire in the Gemfields area, which operates five days per week. A multipurpose health service also operates five days per week in Springsure, 65 km south of Emerald.

Sixteen general practitioners (GPs) are currently located in Emerald; in addition, a funding agreement is in place with the Central Queensland Rural Division of General Practice to establish a \$5.5 million GP 'super clinic' in Emerald.

Mining and construction workers seeking Workcover appointments or applying for medical certificates in Emerald may place increased pressure on health services. Workers are encouraged to visit their own GPs to avoid this situation.

Aged Care



The Central Highlands region has a smaller proportion of mature-aged residents in comparison to the rest of the state. Blue Care operates the Avalon Aged Care facility in Emerald, with 20 high care and 30 low care beds, while the Multipurpose Health Service Centre offers a 15 bed aged care wing in Springsure.

The Federal Government's Home and Community Care (HACC) program provides important health and aged care services for the region, including a transport service for those requiring transfer to Emerald.

Emergency Services

Police

The Emerald Police Station is supported by 20 uniformed officers and two traffic officers. Despite a significant increase in population, the number of uniformed officers has remained static over the past five years.

While many coal mines exist in the region, the proposed Project will be the only coal mine within the jurisdiction of the Emerald Police. Police have raised safety concerns associated with coal trains travelling through Emerald, particularly with regards to emergency vehicles moving between the north and south of Emerald. Note that the planned length of coal trains will not block two level crossings at any one time.

There are also concerns regarding the increased road safety hazards due to the use of private vehicles by construction workforce that will drive into Emerald each day.

Ambulance

Ambulance services are provided from Emerald and currently consist of three vehicles and eight officers on 24-hour rosters. Anakie, in the Gemfields area, has a single ambulance and officer.

Fire and Rescue

Emerald is located within Queensland Fire and Rescue Service's (QFRS) Central Region. The Emerald fire station has two fire and rescue vehicles, together with a staff of one full-time and 20 auxiliary fire fighters. A rural fire service operates in conjunction with the QFRS to contain rural grass and bush fires. The service operates out of the Iona property, near Taraborah on the Capricorn Highway, and has two units operating out of Gemfields.

Recreation, Leisure and Culture

The well-resourced and well-utilised sport, recreation and leisure facilities in the region are reflective of the younger and active community, as identified by the *Central Highlands 2022 Community Plan*. Facilities in Emerald include a gymnasium, art gallery, cinemas, a range of sport and recreation clubs and a \$10 million expansion of the aquatic centre. The Emerald Art Gallery, with support from the Regional Arts Development Fund (RADF), exhibits art from local, state and national artists.

Public and Community Transport

Transport Services

Two private coach companies (Greyhound and Paradise Coaches) operate daily bus services, including services between Longreach/Rockhampton and Emerald/Mackay. Local bus companies



provide charter services within the Emerald area.

Emerald Airport is the main airport servicing the region. Six Qantas and Virgin flights arrive and depart on a daily basis. The CHRC will receive funding of \$4.99 million from the Regional Development Australia Fund (RDAF) for the Emerald Airport Apron Extension Project in 2012/13. Once completed, the airport will have an aeromedical bay and a helipad.

Highways and Roads

The Capricorn Highway, which intersects Emerald, is a major central Queensland artery extending from Rockhampton to Longreach. Increasing traffic levels on the Capricorn Highway is problematic, with increasing light vehicle traffic generated by Drive-in Drive-out (DIDO) activities operating between mining towns and coastal centres. The State Government has committed \$100 million from 2011 to 2014 to maintain and improve the highway.

Residents have reported ongoing road maintenance on the road between Emerald and Taraborah as a result of the unstable black soil underlying the highway base. Flood damage is also apparent in a section of the road that is closest to Emerald.

Concerns also include coal trains travelling through Emerald. If the level crossings at Selma Road and Opel Street are blocked simultaneously due to the length of the coal trains, road safety issues and the blocking of emergency vehicle could arise. However, the planned length of the coal trains would not be long enough to block both level crossings at the same time.

Issues at Taraborah include the potential for limited subsidence of the Capricorn Highway as a result of underground mining beneath the road and the need for a turning lane for vehicles to safely enter and leave the Project site.

Utilities

Electricity

Emerald's current electricity supply is distributed via the Emerald substation, which is supplied by two 66 kilo volt (kV) power lines (running from Lilyvale (approximately 69 km away) and Blackwater (76 km away)).

However, the existing Blackwater-to-Emerald power line is more than 50 years old and cannot support Emerald's electricity demands on its own, if the Lilyvale power line develops a fault. Therefore Ergon Energy has identified the need to construct a new dual-circuit, high-voltage power line from the Blackwater substation to the Emerald substation. Powerline voltage (66 kV or 132 kV) will be determined, based upon electricity demand in Emerald closer to Project construction.

Since it is expected that there will be sufficient electrical capacity available from the Emerald substation following upgrade of the Blackwater feeder line to supply maximum Project power needs (approximately 25 Mega Watts (MW) for the combined opencut and underground operations), the only power infrastructure required for the Project will be an overhead feeder line from the Emerald substation to the mine industrial area. A substation will also be required to service the CHPP and underground mine.



Water

The Fairbairn Dam releases water into the Nogoa River which then flows to the Selma Weir where it is then abstracted in order to supply Emerald with water. A system of pipelines also diverts water supplies to surrounding towns, including Blackwater, Bluff, Tieri, Dysart and Middelmount. Water for resource developments is also supplied by the Fairbairn Dam via SunWater's Blackwater Pipeline and pipelines owned by mining companies. Water for the agricultural sector is diverted from the Fairbairn Dam into two irrigation channels via a network of predominantly open-earth channels.

Data from exploratory drilling for the Project indicates that the aquifer underling MDL467 provides a substantial quantity of water with acceptable quality for mining and coal processing purposes. Fresh water for Project operations is proposed to be sourced from a large water-storage dam in the northwest of the underground mining area, in agreement with the landholder. The proposal includes a pipeline between the dam to water treatment facilities and a 200 kilolitre (kL) storage tank, which will be used as buffer water storage.

Waste Management

Waste management facilities in Emerald cater for general waste, construction and demolition waste, commercial and industrial waste, timber, scrap steel, green waste and recyclable waste. General waste management principles for the Project will include recycling, and planned disposal of non-recyclables either onsite or to registered waste-disposal contractors.

Communications

Although Emerald enjoys good quality mobile phone and internet reception, these services are marginal on the Project site. A study of the Project's communications needs will be conducted as part of a detailed engineering study.

Internet speeds have increased significantly since Australia's 3,800 km fibre-optic link was developed in December 2011 (part of the Federal Government's \$250 million Regional Backbone Blackspots Program). Emerald was one of 30 regional towns that receive faster and more competitive broadband for households and small businesses. Note that the internet network cable runs adjacent to the Capricorn Highway through MDL467.

4.10.1.7 Indigenous Community Services

While the availability of competitively-priced housing is a key issue for the broader community, it is of particular concern to the Indigenous community, among which overcrowding is common and leads to other social and behavioural issues. Many families are on a waiting list for low-cost housing, however, few suitable houses become available.

The Central Highlands Aboriginal Corporation, based in Emerald, provides some Indigenous accommodation in Emerald, including seven government-funded houses and a number of units.

Two Queensland Government funded Indigenous healthcare workers, based at the Central Highlands Community Health Centre in Emerald, facilitate primary healthcare for the Indigenous community. An education program has been established and includes school visits to assess Indigenous health. Budget constraints have resulted in the discontinuation of a government-funded Indigenous immunisation program; however, local GPs have continued this free service for children under 16 years. A cardiac program is also provided for adult Aboriginal people. The program includes an educational component, raising awareness of the risk of heart attack, as well as an annual visit by a



Brisbane health team, which includes a cardiologist.

While a range of health issues endemic to the broader Indigenous community are evident, there are difficulties in organising people to visit health services.

4.10.1.8 Business and Enterprise

In the Central Highlands area, key sectors that drive broader economic activity and growth include agriculture, resources, tourism and construction. These sectors account for the largest number of businesses in the region and contribute significantly to the Gross Regional Product (GRP).

The Central Highlands Development Corporation reported that, in 2010/11, the Central Highlands regional economy contributed \$4.56 billion to the state. The mining industry accounted for 70% (\$3.2 billion) of this total, highlighting the importance of mining as an economic driver for the Central Highlands regional economy.

Refer to EIS Section 4.12 for further benefits that the Project will have upon the local, state and regional economies.

Tourism

As the 'gateway to the west', Emerald is a key destination and stopover point for tourists, especially those exploring western Queensland during winter months. Fairbairn Dam is also a holiday destination, offering a range of cabin, caravan and camping accommodation on Lake Maraboon.

Gemfields is a significant sapphire-bearing region, attracting thousands of fossickers each year. A highlight is the August Gemfest.

4.10.1.9 Local Community

The Central Highlands area was home to many Indigenous peoples, including the Western Kangoolu People; whilst the region's European history is associated with a rural lifestyle.

Both the *Central Highlands 2022 Community Plan* and direct consultation with local stakeholders revealed that local residents value their relaxed lifestyle, safe environment, friendly people, involvement in sports, high level of volunteerism and the fact that their environment is a good place to raise children.

More recently, the community has diversified with expanding mining and construction industries developing in the area, which can create social, cultural and employment challenges. A number of landholders that will be impacted by Project activities have experienced years of rural hardship and periods of prolonged drought, so the prospect of sharing their land and groundwater supply with a mining operation is an issue.

Stakeholders have expressed concerns that the region could experience a loss of identity if people move from traditional industries to mining, as a result of higher mining salaries.

In terms of offences against the person (homicide, assault, sexual offences, etc.), a general downward trend in these offences over a five year period is evident in the Queensland Police statistics for Emerald. For example, assaults dropped by 18 % since 2007, while sexual offences decreased by 45% over the same period. Conversely, unlawful entries and general theft offences increased by 17% and 62% respectively over this period.



A number of key infrastructure and community service goals have been identified by CHRC as follows:

- Regional road network - planning and delivering a safe and effective, well-maintained and interconnected network for the movement of people and products;
- Regional transport services - developing and maintaining reliable, affordable and integrated, networks and systems including public transport options;
- High-speed telecommunication systems and services - planning and providing access to systems that are reliable and affordable;
- Energy and power - planning and delivering suitable energy and power systems which meet economic development, community and environmental requirements; and
- Housing and accommodation - planning for and providing housing development land, so that people living in or relocating to the region have a choice of housing and accommodation options.

Although local health services across the study areas appear adequate (apart from the local ambulance service which is undermanned mostly as a result of the two-tier economy), for non-emergency incidents FIFO mine workers have increased the pressure for medical attention on local hospital facilities.

The Emerald region is serviced by three state primary schools, a state secondary school, three independent colleges, the Capricorn School of Distance Education, TAFE, university and the Emerald Agricultural and Pastoral College and is therefore an important local education centre.

Since demand exceeds supply for Emerald child-care facilities (with an estimated child-care waiting list of more than 400), these facilities are under pressure, with day-care for babies and toddlers (0 years to 2 years) a particular problem.

A good standard of sport and recreational facilities is currently available in the region. These facilities play an important role in the way of life and connection to the outdoors evident across the region.

In terms of transport, Emerald offers plane, train and bus services across the region, however, an increasing level of highway traffic is causing issues, which is not helped by the rise in DIDO light vehicle traffic between coastal centres and mining towns. In response to this situation, the State Government has committed a budget of \$100 million for Capricorn Highway maintenance and improvements from 2011 to 2014.

Over the years, elevated mining wages have resulted in locally-inflated house prices and rental payments, which have had a negative impact upon those employed outside the mining industry, where competitively-priced housing is an ongoing issue. However, the current downturn in the mining industry has potentially reversed this trend and CHRC is currently implementing an affordable housing program which could future-proof the region.

Indigenous training and employment, child safety, community support, family support, alcohol and other drug services, community and economic development projects are co-ordinated and delivered by Central Queensland Indigenous Development (CQID - a not-for-profit organisation that was established in November 2004). This organisation has offices in Rockhampton, Gladstone, Emerald, Woorabinda, Longreach and Bundaberg communities and is also responsible for regional coordination and management of the region's Community Development Employment Projects (CDEP) program.

In terms of future employment trends, it is anticipated that more people will be employed in the resource industries (which will require the development of additional skills sets), although the traditional industries of agriculture, fisheries and forestry will continue to be an important source of employment. It is anticipated that employment opportunities will increase in the areas of construction, manufacturing, tourism, education, training and the retail trade, activities that are already important to the region. In addition, the mining and associated industries equal opportunity policies should provide more job opportunities for women.

Significant contributions to the GRP are supplied by agriculture, resources, tourism and construction, which account for the largest number of businesses in the region. In 2010/11, the Central Highlands regional economy contributed \$4.56 billion to Queensland, of which the mining industry contributed \$3.2 billion (70%), despite the relatively low percentage of mining businesses registered in the region.

4.10.1.10 Demographic Profile

Population

In 2011, Emerald's residential population was 13,576, constituting approximately 46% of the Central Highlands LGA population (29,533) (refer to Table 4.124 for resident population details). Population projections from the Queensland Office of Economic and Statistical Research indicate that Emerald's population will increase by an average annual growth rate of 3% between 2011 and 2031 (refer to Table 4.125 for projected population details). This is substantially higher than growth in the Central Highlands region and Queensland, which are projected to increase annually by 2.4% and 1.8%, respectively.

For the 2011 Census night, counted populations were higher than resident populations in all study areas. Central Highlands exhibited a 17.5% visitor influx, whilst Emerald and Queensland experienced more modest influxes of 5.8% and 2.9% respectively. Communities such as Blackwater and the Gemfields were significant contributors to the higher than resident enumerated population (particularly males aged 25 to 64 which could be FIFO/DIDO employees). The presence of grey nomads on Census night in the local area could account for the increase in numbers of 65 to 74-year-old males and females.

Table 4.124 Resident Population by Study Area 2006 – 2011

Year	Emerald	Central Highlands	Qld
2006	12,120	28,256	4,090,908
2010pr	13,348	29,296	4,424,158
2011pr	13,576	29,533	4,474,098
Average annual growth rate 2006 – 2011 (%)	2.3%	0.9%	1.8%

Based on usual place of residence as at July 2011. pr = preliminary rebased.

Source: Queensland Office of Economic and Statistical Research.

Table 4.125 Projected Resident Population by Study Area 2011 – 2031

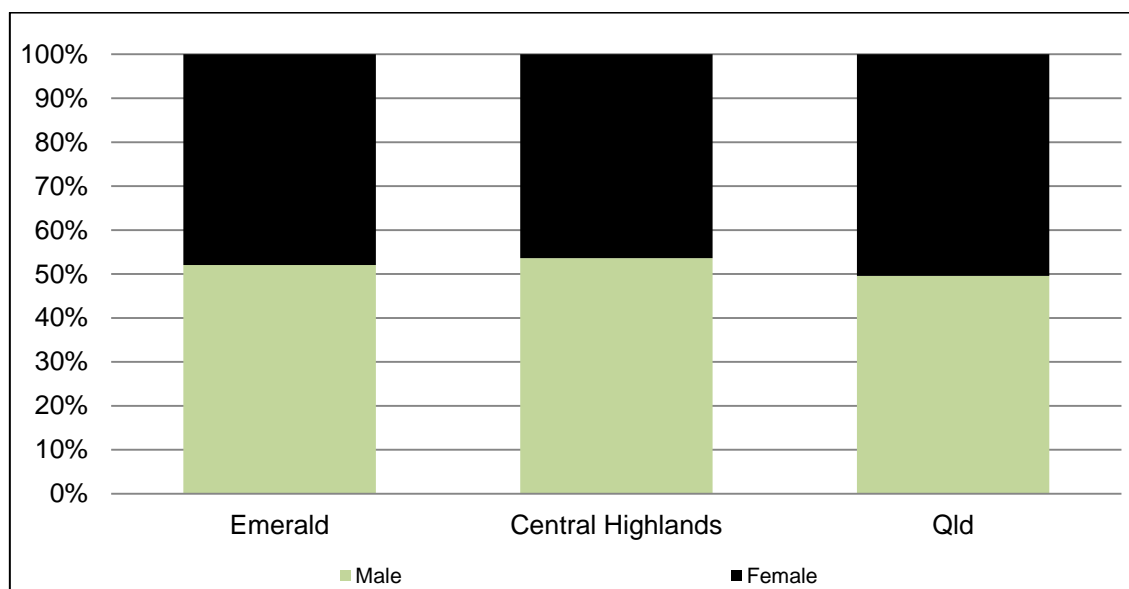
Year	Emerald	Central Highlands	Qld
2011	14,352	31,861	4,611,491
2016	17,319	36,256	5,092,858
2021	20,466	40,880	5,588,617
2026	23,268	45,685	6,090,548
2031	26,117	50,742	6,592,857
Average annual growth rate 2011 – 2031 (%)	3.0%	2.4%	1.8%

Based on usual place of residence as at July 2011.

Source: Queensland Office of Economic and Statistical Research.

Gender

The Central Highlands region had more male than female residents at the 2011 Census. Males constituted 53.6% of the LGA residential population, while 52% of Emerald residents were male. In contrast 49.6% of the Queensland population was male in 2011. The gender balance in each study area is presented in Figure 4.130.



Based on usual place of residence.

Source: Australian Bureau of Statistics.

Figure 4.130 Gender by Study Area 2011

Age Structure

The age structure of the study areas follows the same general trend as Queensland. In 2011, however, Emerald and Central Highlands were up to 3% higher than the Queensland average in the 0-9 and 25-34 years age groups. In the 65-75 years age group, the study areas were approximately 3% below the state average. Age structure for each study area is detailed in Table 4.126.

Table 4.126 Age by Study Area 2011

	Emerald		Central Highlands		Qld	
Age	Male	Female	Male	Female	Male	Female
0-4 years	9.3%	9.8%	9.1%	9.7%	7.1%	6.6%
5-9 years	8.6%	8.6%	8.0%	8.2%	6.9%	6.4%
10-14 years	7.3%	7.8%	6.9%	7.4%	6.9%	6.5%
15-19 years	7.8%	7.2%	6.6%	6.6%	7.0%	6.6%
20-24 years	7.3%	8.0%	6.7%	6.9%	6.9%	6.7%
25-29 years	9.6%	9.9%	8.4%	9.2%	7.0%	6.9%
30-34 years	8.6%	8.9%	8.0%	8.1%	6.6%	6.7%
35-39 years	8.4%	8.0%	7.9%	8.1%	7.0%	7.2%
40-44 years	7.9%	7.7%	7.8%	7.6%	7.1%	7.3%
45-49 years	7.3%	7.3%	7.4%	7.3%	6.9%	7.1%
50-54 years	6.5%	6.0%	6.9%	6.5%	6.6%	6.7%
55-59 years	4.7%	4.0%	5.8%	5.0%	5.9%	6.0%
60-64 years	3.0%	2.5%	4.2%	3.5%	5.7%	5.6%
65-69 years	1.7%	1.4%	2.7%	2.3%	4.3%	4.2%
70-74 years	0.9%	1.2%	1.9%	1.6%	3.2%	3.2%
75-79 years	0.6%	0.8%	0.9%	1.0%	2.2%	2.4%
80-84 years	0.6%	0.5%	0.6%	0.5%	1.6%	2.0%
85-89 years	0.0%	0.3%	0.2%	0.4%	0.8%	1.3%
90-94 years	0.0%	0.1%	0.1%	0.1%	0.3%	0.6%
95-99 years	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%
100 years and over	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL	100%	100%	100%	100%	100%	100%

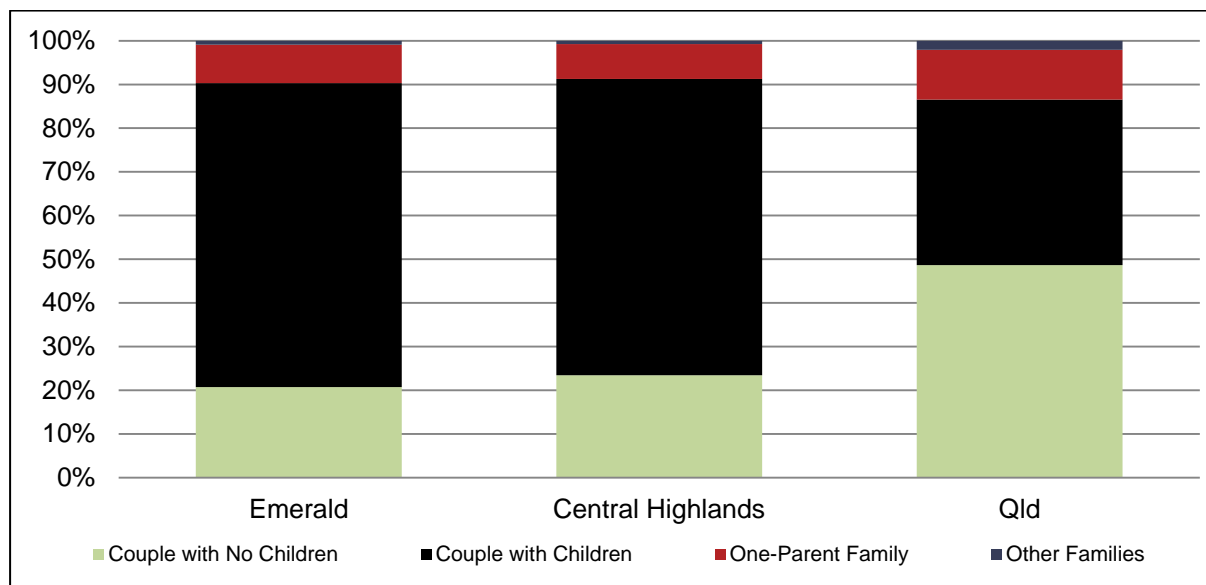
Based on usual place of residence.

Source: Australian Bureau of Statistics.



Family Composition

The predominant family structure across the regional study areas in 2011 was a couple with children. Approximately 69.6% and 67.8% of Emerald and Central Highlands LGA families are in this category, respectively. As shown in Figure 4.131, 20.7% of families in Emerald were couples with no children, which compares with 23.4% in Central Highlands and 48.6% in Queensland.



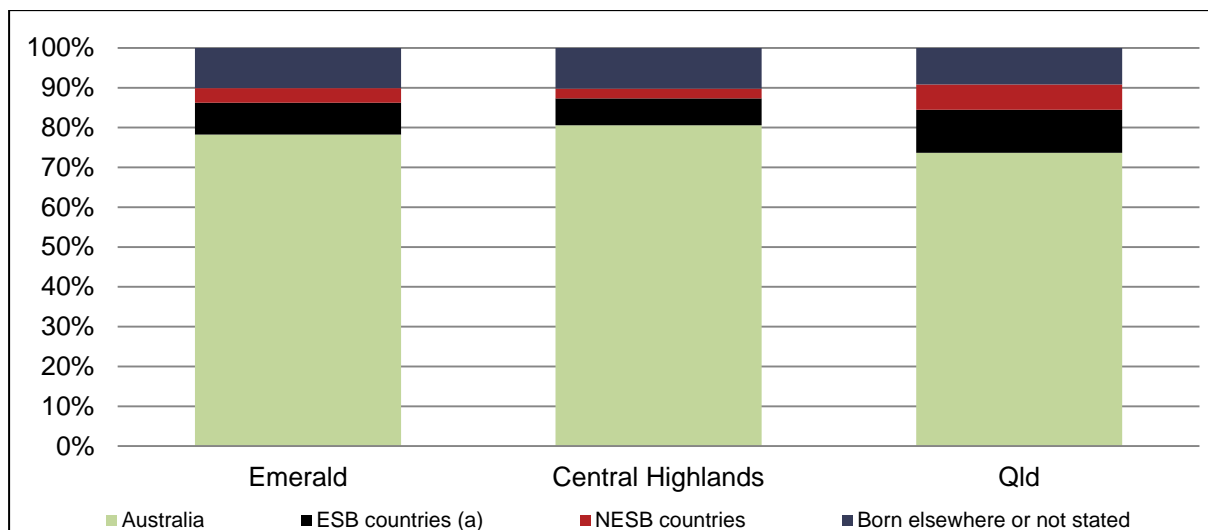
Based on usual place of residence.

Source: Australian Bureau of Statistics.

Figure 4.131 Family Composition by Study Area 2011

Ethnicity

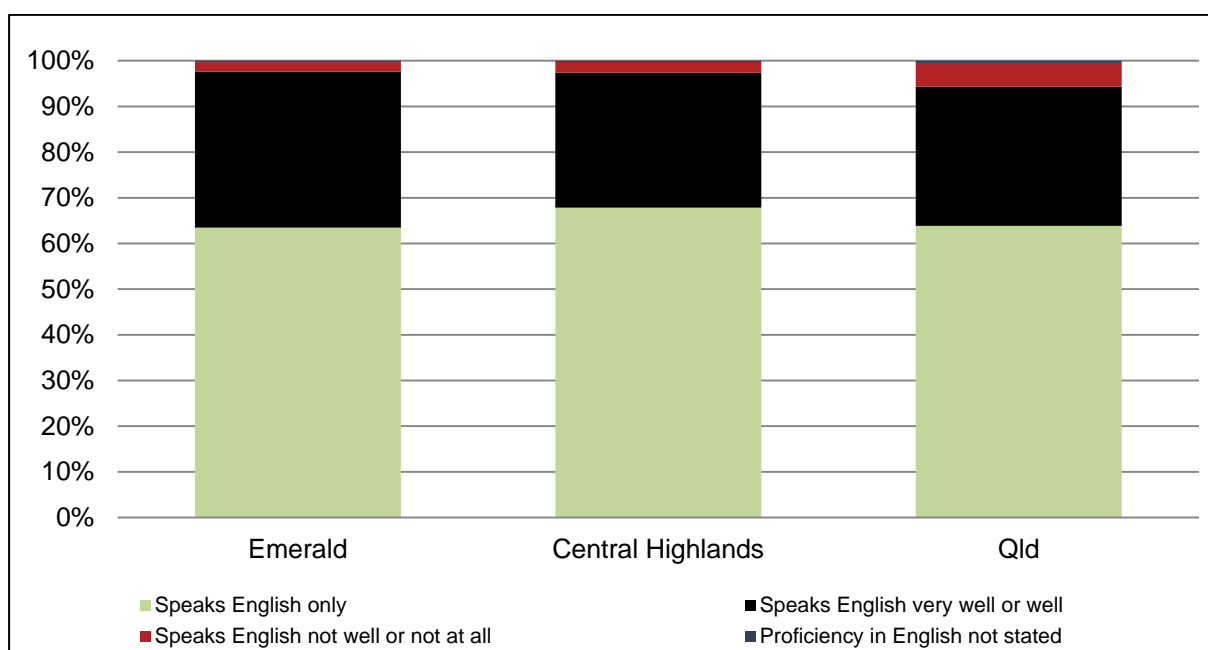
Regional study areas exhibited significantly lower ethnic diversity characteristics compared to Queensland as a whole. This may be attributable to the fact that major cities are the primary target for immigration. The 2011 Census found that 78.3% of Emerald residents and 80.6% of Central Highlands LGA residents were Australian-born, as shown in Figure 4.132. Those not born in Australia were predominantly from English-speaking countries. Compared to a figure of 5.2% for Queensland, 2.1% and 2.3% of Emerald and Central Highlands residents, respectively, could not speak English proficiently or at all (Figure 4.133).



Based on usual place of residence. ESB: English-speaking background, includes the UK, Ireland, Canada, USA, South Africa and New Zealand; NESB: non-English-speaking background.

Source: Australian Bureau of Statistics.

Figure 4.132 Country of Birth by Study Area 2011



Based on usual place of residence

Source: Australian Bureau of Statistics.

Figure 4.133 Proficiency in Spoken English by Overseas-Born Residents by Study Area 2011

Mobility

Migration was more prominent for both the Emerald and Central Highlands study areas than for Queensland. Migration (within Queensland, within Australia and overseas) was 56.9% for Emerald, and 49.5% for the broader Central Highlands region, as indicated in Table 4.127. For all study areas, the majority of people migrating moved to a new address outside of Queensland, but remained within Australia.

Table 4.127 Places of Usual Residence Five Years Ago by Study Area 2011

Location	Emerald	Central Highlands	Qld
Same usual address 5 yrs ago as in 2011	4,018	10,517	1,958,914
Different address 5 yrs ago:			
Within Queensland	2,190	3,626	265,001
Within Australia	3,875	8,184	1,285,343
Overseas	743	1,078	238,588
TOTAL (a)	11,957	26,018	4,034,846
Proportion with a different address	56.9%	49.5%	44.3%

Based on place of usual residence and persons aged five years and over. (a) Includes persons who stated that they were usually resident at a different address five years ago but did not state that address; as well as persons who did not state whether they were usually resident at a different address five years ago.

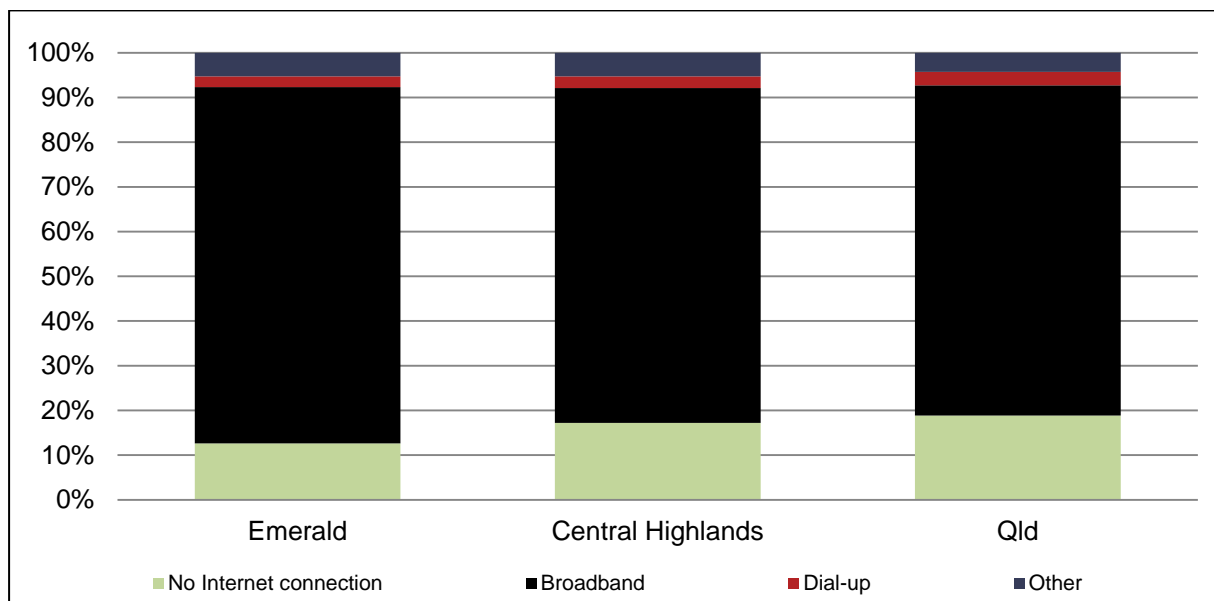
Source: Australian Bureau of Statistics and Queensland Office of Economic and Statistical Research.

Communications

Good quality mobile phone and internet reception is available in Emerald. Internet speeds have increased significantly since the establishment of Australia's fibre-optic network in December 2011. However, mobile phone reception and internet connection in the Project and Gemfields areas is marginal. Since a high speed broadband cable runs along the Capricorn Highway through MDL467, there may be an option to connect to this cable in order to improve internet service on the Project site.

Internet Connection

In 2011, a greater proportion of households in the Central Highlands regional study area had internet connection, compared to Queensland as a whole. In Emerald and Central Highlands, respectively, 77.2% and 72.4% of households had a broadband connection, while 71.3% of households across Queensland had a broadband connection (Figure 4.134).



Based on usual place of residence.

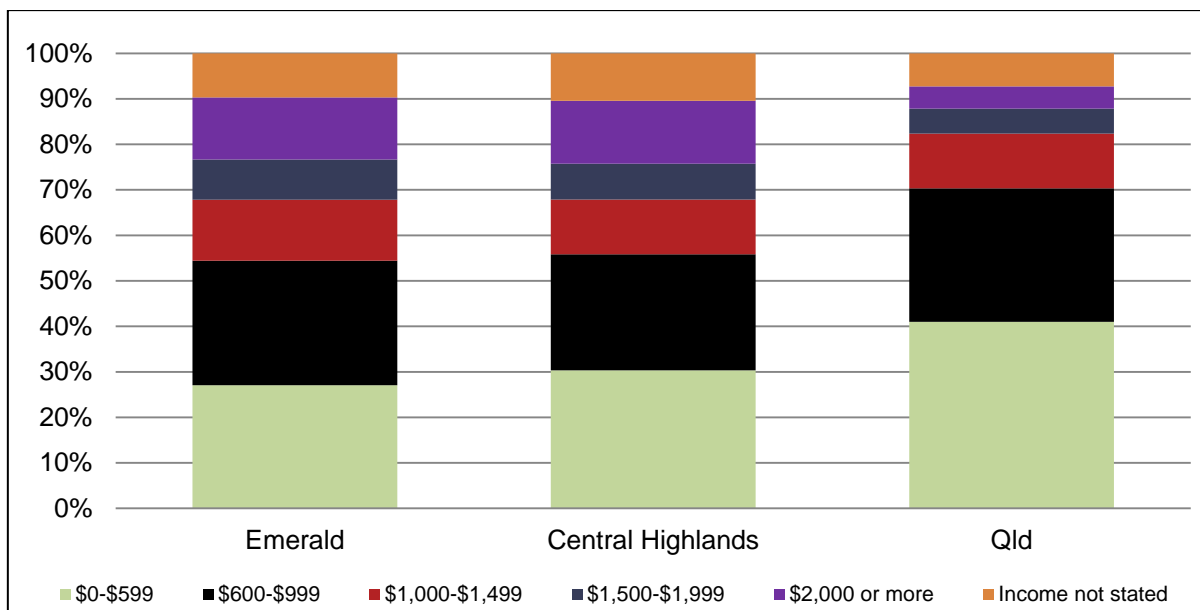
Source: Australian Bureau of Statistics and Queensland Office of Economic and Statistical Research.

Figure 4.134 Internet Connection in Dwellings by Study Area 2011

Income and Earnings

Approximately one third of residents in the Emerald (35.8%) and Central Highlands (33.7%) study areas earned a gross income of \$1,500 or more per week in 2011 (see Figure 4.135). This earning capacity compares to Queensland, where 22.4% of the population was in this income bracket.

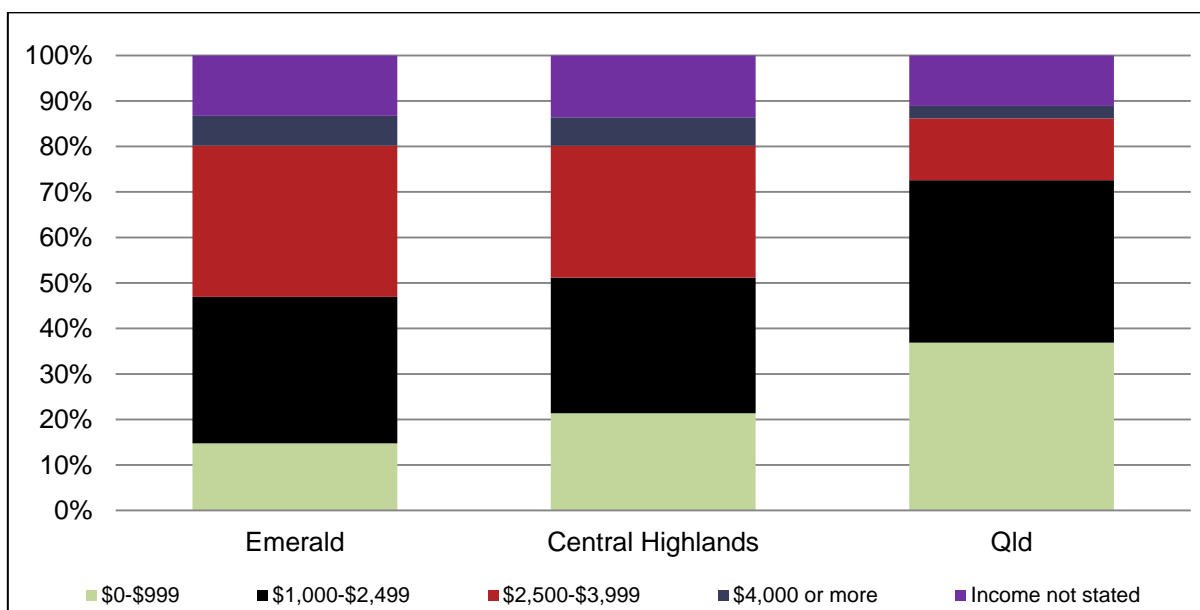
A lower proportion of households in Emerald earned less than \$1,000 per week (14.7%) compared to Central Highlands (21.4%) and Queensland (36.9%). In contrast, 6.6% of Emerald households earned \$4,000 or more per week, compared to 6.3% in the Central Highlands study area and 2.8% in Queensland. Median weekly household income for each study area is shown in Figure 4.136.



Based on usual place of residence and persons aged 15 years and over.

Source: Australian Bureau of Statistics.

Figure 4.135 Median Weekly Individual Income by Study Area 2011



Based on usual place of residence and persons aged 15 years and over.

Source: Australian Bureau of Statistics.

Figure 4.136 Median Weekly Household Income by Study Area 2011

Health and Wellbeing

Positive indicators of health and wellbeing in the Emerald and Central Highlands regions include the existence of hospitals (including a major emergency hospital in Emerald) and Queensland Ambulance Service (QAS) stations throughout the region, as well as the low proportion of Central Highlands

residents (2.2%) in need of assistance with a profound or severe disability.

Need for Assistance

The Central Highlands study area exhibited a lower rate of people with a disability than Queensland, as indicated in Table 4.128. At the 2011 Census, 636 residents in the Central Highlands study area (2.2% of the local population) were in need of assistance for a profound or severe disability, which accounted for 0.33% of Queensland individuals with a disability. In 2011, 6.5% of Emerald residents provided unpaid assistance to a person with a disability, compared to 10.2% for Queensland, as detailed in Table 4.129.

Table 4.128 Persons in Need of Assistance by Study Area 2011

Year	Emerald	Central Highlands	Qld
People with profound or severe disability	229	636	192,019
% Total population	1.7%	2.2%	4.4%

Based on usual place of residence. People with a profound or severe disability are defined as needing help or assistance in one or more of the three core activity areas of self-care, mobility and communication because of a disability, long-term health condition (6 months or more) or old age.

Source: Australian Bureau of Statistics.

Table 4.129 Unpaid Assistance to a Person with a Disability by Study Area 2011

Year	Emerald	Central Highlands	Qld
Provided unpaid assistance	640	1,527	353,372
% Total population	6.5%	7.1%	10.2%

Based on usual place of residence and persons aged 15 years and over. People with a profound or severe disability are defined as needing help or assistance in one or more of the three core activity areas of self-care, mobility and communication because of a disability, long-term health condition (6 months or more) or old age.

Source: Australian Bureau of Statistics.

Socio-Economic Index of Disadvantage

Socio-Economic Indexes of Disadvantage (SEID) are summary measures of social and economic conditions for particular geographic areas of Australia. In 2011, no Emerald residents were in Quintile 1 (most disadvantaged), compared to Central Highlands (8.4%) and Queensland (20%). Emerald and Central Highlands, however, were substantially higher than Queensland in Quintiles 4 and 5 (least disadvantaged) as indicated in Table 4.130.

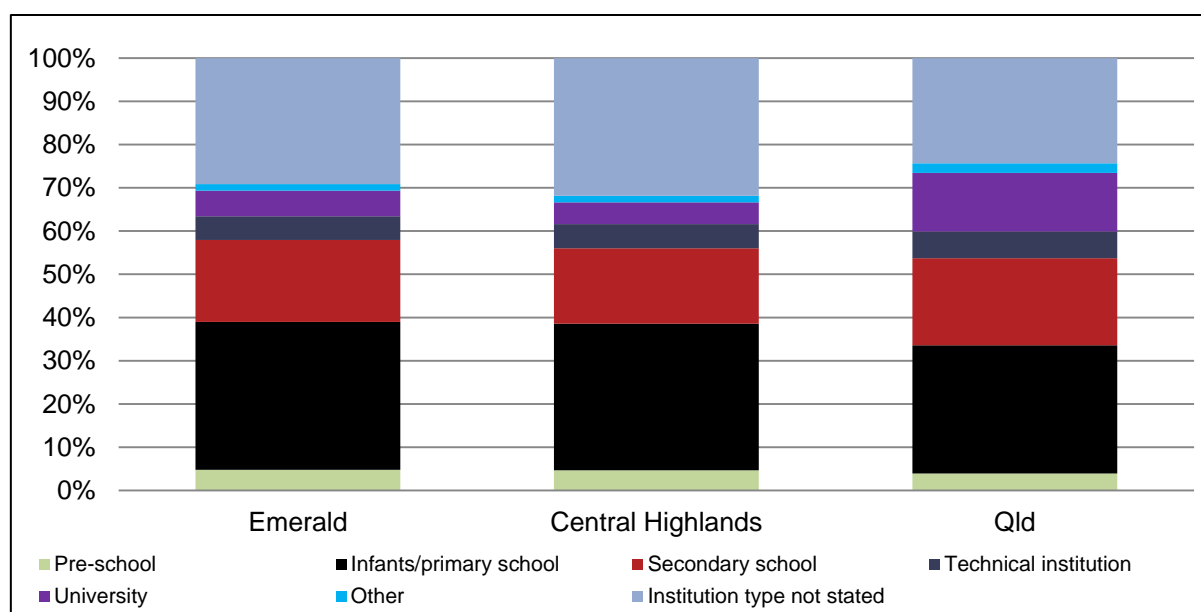
Table 4.130 Socio-Economic Index of Disadvantage by Study Area 2011

SEID Quintile	Emerald	Central Highlands	Qld
Quintile 1 (most disadvantaged)	0.0%	8.4%	20.0%
Quintile 2	15.9%	14.5%	20.0%
Quintile 3	15.6%	19.2%	20.0%
Quintile 4	26.5%	26.6%	20.0%
Quintile 5 (least disadvantaged)	42.0%	31.3%	20.0%

Source: Queensland Office of Economic and Statistical Research.

Education Levels

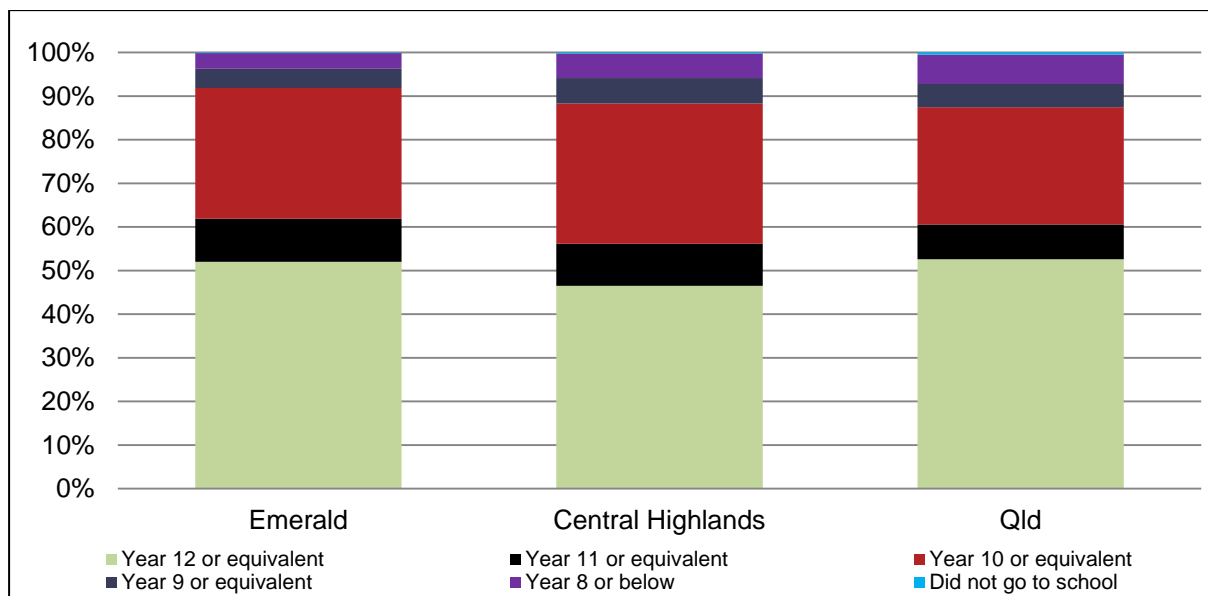
Primary school attendance in Emerald and Central Highlands (34.2% and 33.9%, respectively) was similar to Queensland as a whole (29.6%) (refer to Figure 4.137). However, significantly less participation in university is evident in both the Emerald and Central Highlands study areas (5.9% and 5.0%, respectively), compared to Queensland (13.5%). In 2011, 46.3% of Emerald residents aged 15 years and over had achieved Year 12 or equivalent. The Central Highlands study area reported a figure of 41.2%, while Queensland was 48.0%, as indicated in Figure 4.138.



Based on school location and full-time students.

Source: Australian Bureau of Statistics.

Figure 4.137 Type of Educational Institution Attended by Study Area 2011



Based on usual place of residence and persons aged 15 years and over.

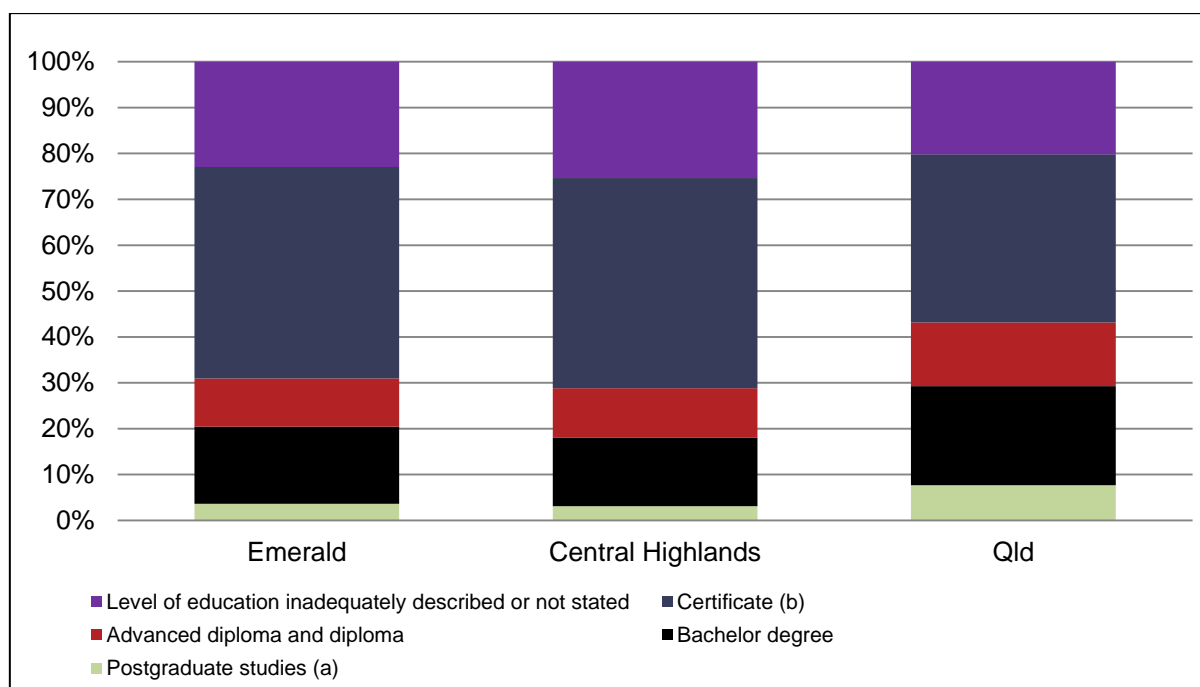
Source: Australian Bureau of Statistics.

Figure 4.138 Highest Level of Schooling by Study Area 2011

Tertiary Qualifications

In the 2011 Census, 35.5% of Emerald residents aged 15 years and over had achieved a tertiary qualification. For Central Highlands, this figure was 32.1%, and for Queensland, 36.5%. Queensland had the highest proportion of Bachelor degrees (27.0%), followed by Emerald at 21.8%. Across all study areas, certificates were consistently the highest level of qualification achieved. Figure 4.139 shows the highest level of tertiary qualification achieved in each study area.

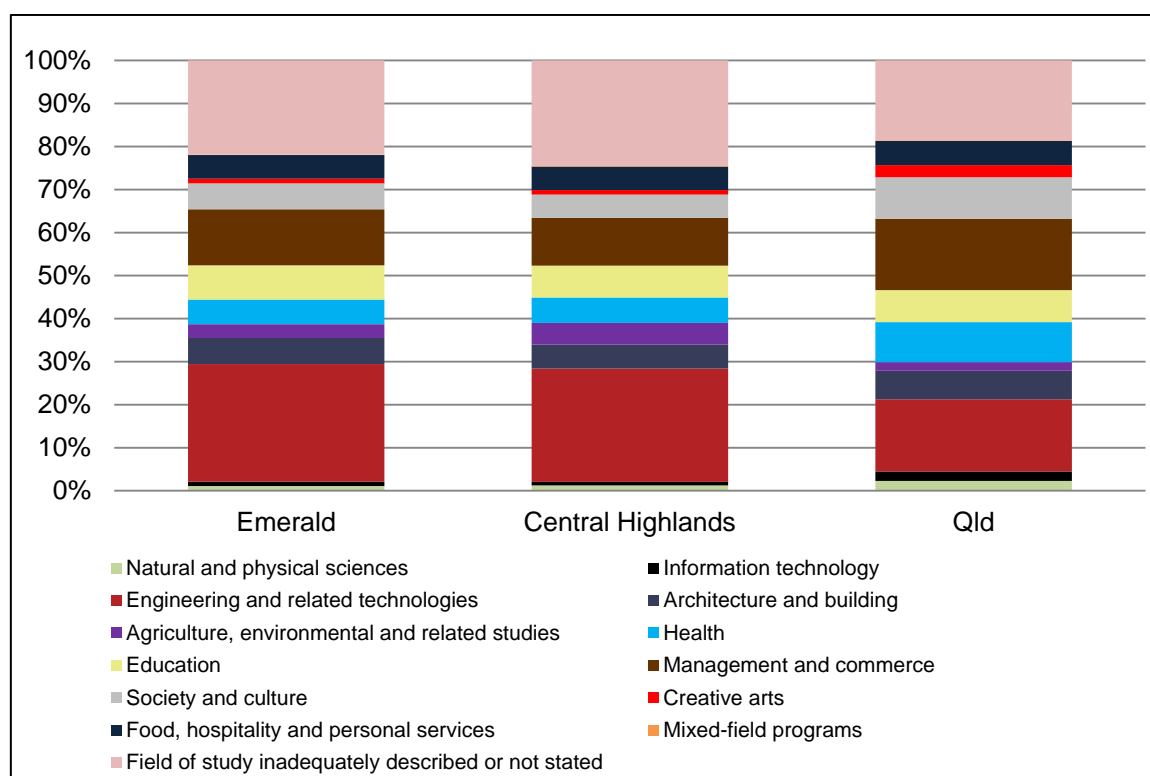
In all study areas, the most popular tertiary field of study was engineering and related technologies; the level of participation was 22.4% in Emerald, 21.1% in Central Highlands, and 14.2% across Queensland. Management and commerce was the second most popular tertiary field of study across all study areas. Figure 4.140 illustrates the various tertiary fields of education across all study areas.



Based on usual place of residence and persons aged 15 years and over. (a) Includes graduate diploma, graduate certificate and postgraduate degree. (b) Includes certificates I, II, III and IV and certificates not further defined.

Source: Australian Bureau of Statistics.

Figure 4.139 Highest Level of Tertiary Qualification Achieved by Study Area 2011



Based on usual place of residence and persons aged 15 years and over.

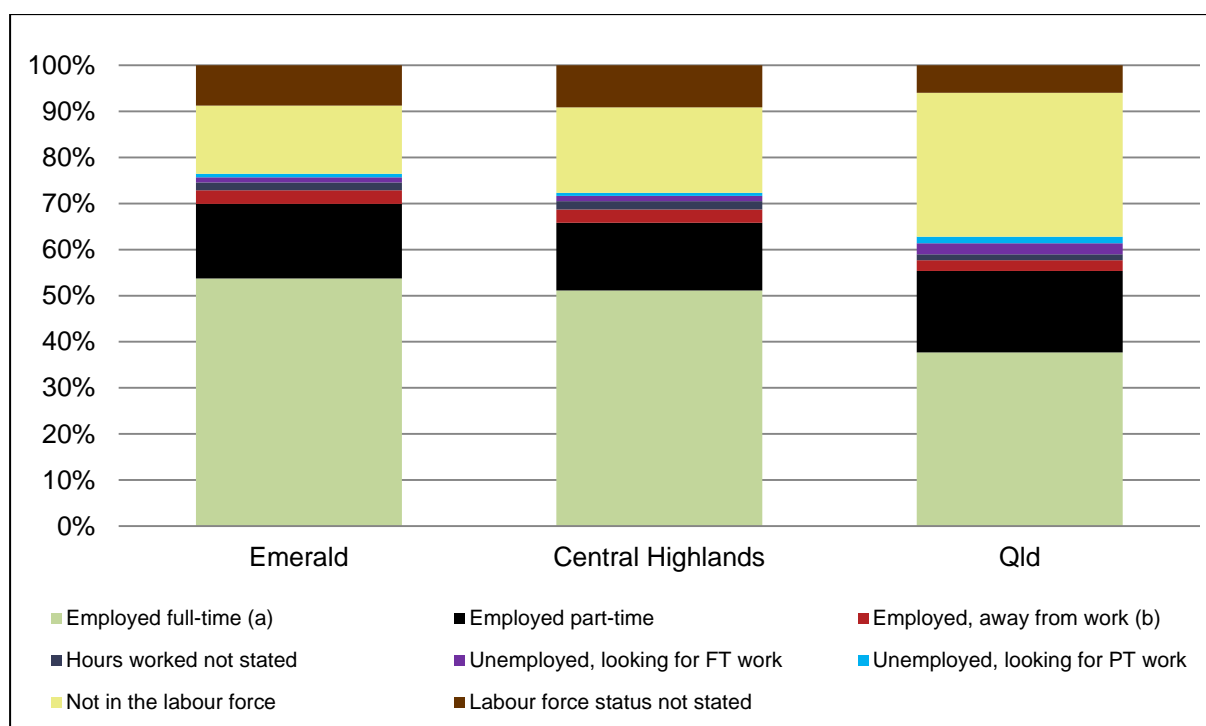
Source: Australian Bureau of Statistics.

Figure 4.140 Tertiary Field by Study Area 2011

Employment and Industry

At the 2011 Census, unemployment rates in Emerald and Central Highlands (2.2%) were more than half that of Queensland (5.5%). Statistics from the Queensland Office of Economic and Statistical Research for June 2012 revealed that these rates are unchanged. Status of the labour force in each study area is shown in Figure 4.141.

However, these unemployment figures had increased to 2.4% (Emerald) and 2.8% (Central Highlands) by the June 2013 quarter, with the unemployment figure for Queensland at 6.0%.



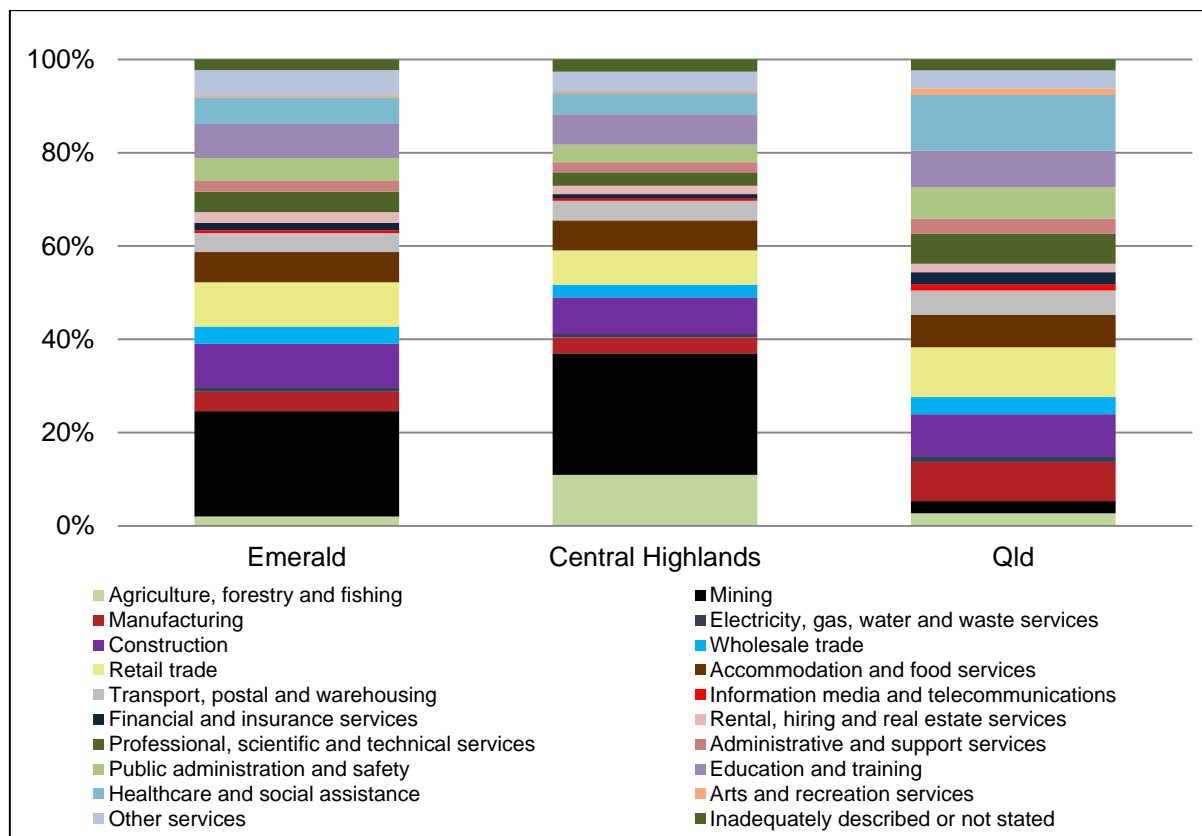
Based on usual place of residence and persons aged 15 years and over. (a) Employed full-time is defined as having worked 35 hours or more in all jobs during the week prior to Census night. (b) Comprises employed persons who did not work any hours in the week prior to Census night.

Source: Australian Bureau of Statistics.

Figure 4.141 Labour Force Status by Study Area 2011

Employment by Industry

Mining was the principal industry of employment in the Emerald and Central Highlands study areas (22.6% and 26.0%, respectively), compared to Queensland at 2.6%. This was followed by the construction industry in Emerald and the agriculture, forestry and fishing industry in Central Highlands. Across the state, however, healthcare and social assistance (11.9%) and the retail trade (10.7%) were the most prominent industries. Figure 4.142 illustrates the breakdown of employment by industry for each study area.



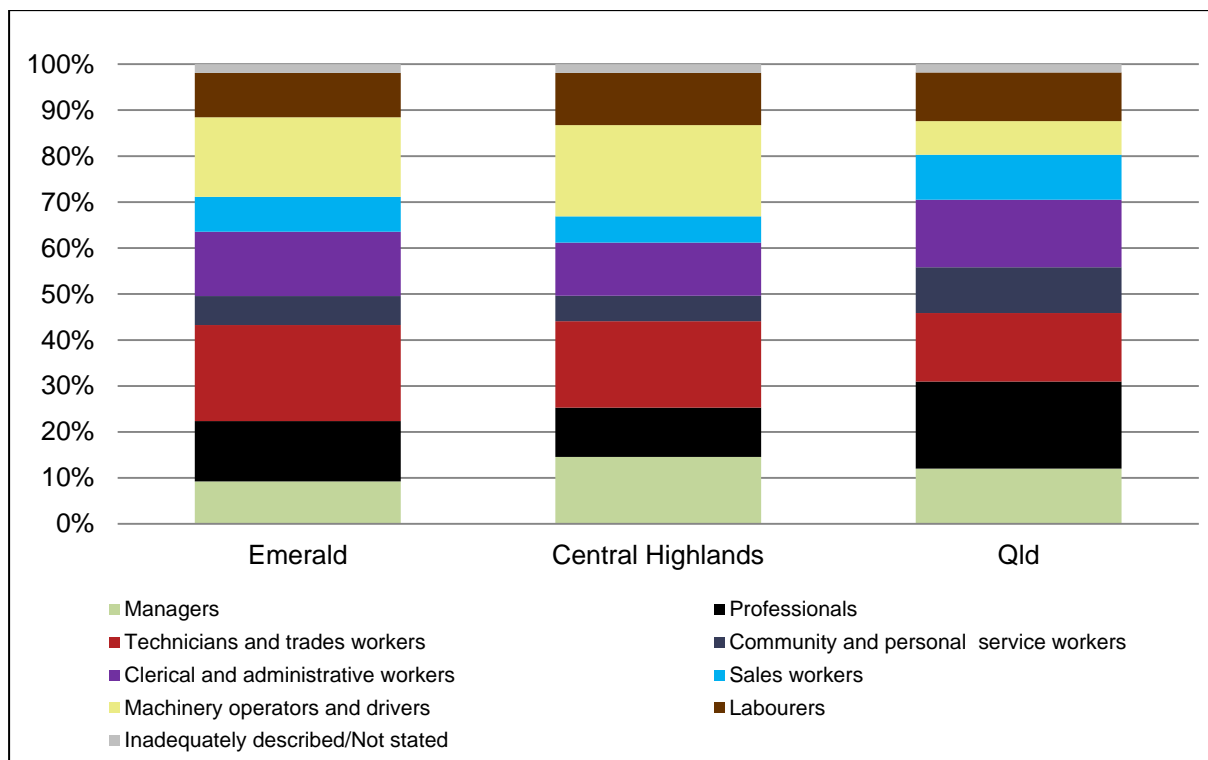
Based on usual place of residence and employed persons aged 15 years and over. Industry of employment was coded to the ABS 2006 Australian and New Zealand Standard Industrial Classification (ANZSIC). This has replaced the 1993 ANZSIC edition.

Source: Australian Bureau of Statistics.

Figure 4.142 Industry of Employment by Study Area 2011

Employment by Occupation

Higher proportions of managers, technicians, and trade workers, and machinery operators and drivers were evident in both regional study areas, indicative of the prevalent mining industry. Compared to Emerald and Central Highlands, a higher proportion of professionals are evident in Queensland, primarily due to the concentration of professionals in larger metropolitan centres (Figure 4.143).



Based on usual place of residence and employed persons aged 15 years and over. Occupation was coded to the ABS 2006 Australian and New Zealand Standard Classification of Occupations (ANZSCO). This replaced the 1996 Australian Standard Classification of Occupations (ASCO) Second Edition.

Source: Australian Bureau of Statistics and Queensland Office of Economic and Statistical Research.

Figure 4.143 Employment by Occupation by Study Area 2011

4.10.1.11 Indigenous Demographic Profile

Population

At the 2011 Census, 1,021 persons in Central Highlands stated that they were of Indigenous origin, 441 of whom resided in Emerald. This represents 3.3% and 3.5% of the Emerald and Central Highlands LGA populations, respectively, as indicated in Table 4.131. Queensland reported an Indigenous population of 155,824, constituting 3.6% of the Queensland population.

Table 4.131 Indigenous Population by Study Area 2011

Population	Emerald	Central Highlands	Qld
Indigenous (a)	441	1,021	155,827
Total population	13,218	28,715	4,332,739
Indigenous as % population	3.3%	3.6%	3.6%

Based on place of usual residence. (a) Indigenous persons comprised of Aboriginal, Torres Strait Islanders and both Aboriginal and Torres Strait Islanders.

Source: Australian Bureau of Statistics.

Gender and Age Structure

Median age across all study areas was indicative of a younger Indigenous population. In 2011, almost half of Indigenous residents in all study areas were 19 years or younger (see Table 4.132). Conversely, in Emerald, only 8.8% of the Indigenous population was aged 50 or older, compared to 11% in Central Highlands and 13.2% in Queensland.

Table 4.132 Indigenous Age and Gender by Study Area 2011

Age	Emerald		Central Highlands		Qld	
	M	F	M	F	M	F
0-4 years	23	27	67	63	10,474	9,909
5-9 years	22	17	71	63	9,758	9,459
10-14 years	31	19	63	58	9,541	9,325
15-19 years	41	28	71	48	8,720	8,169
20-24 years	24	17	49	31	6,318	6,401
25-29 years	13	16	32	28	5,159	5,538
30-34 years	19	9	42	31	4,576	4,911
35-39 years	14	4	38	18	4,626	5,121
40-44 years	20	23	47	32	4,344	4,974
45-49 years	14	21	25	32	3,820	4,169
50-54 years	6	8	12	21	3,075	3,468
55-59 years	3	10	11	20	2,378	2,642
60-64 years	3	3	15	10	1,677	1,944
65 years and over	3	3	14	9	2,278	3,053
TOTAL	236	205	557	464	76,744	79,083

Based on place of usual residence.

Source: Australian Bureau of Statistics.

Need for Assistance

In 2011, 29 Indigenous persons in the Central Highlands LGA were in need of assistance for a



profound or severe disability, representing 0.4% of the Queensland Indigenous population of people with a disability. Table 4.133 details need for assistance for the Indigenous population in each study area.

Approximately 8.6% of Emerald's Indigenous population provided assistance to a person/people with a severe disability, as indicated in Table 4.134. This compares to 11.6% for Queensland.

Table 4.133 Indigenous Persons in Need of Assistance by Study Area 2011

Population	Emerald	Central Highlands	Qld
People with a profound or severe disability	9	29	7,506
% Total Indigenous population	2.0%	2.8%	4.8%

Based on usual place of residence. People with a profound or severe disability are defined as needing help or assistance in one or more of the three core activity areas of self-care, mobility and communication because of a disability, long-term health condition (6 months or more) or old age.

Source: Australian Bureau of Statistics.

Table 4.134 Unpaid Assistance to a Person with a Disability by Study Area 2011

Population	Emerald	Central Highlands	Qld
Provided unpaid assistance	26	46	11,339
% Total Indigenous population	8.6%	7.3%	11.6%

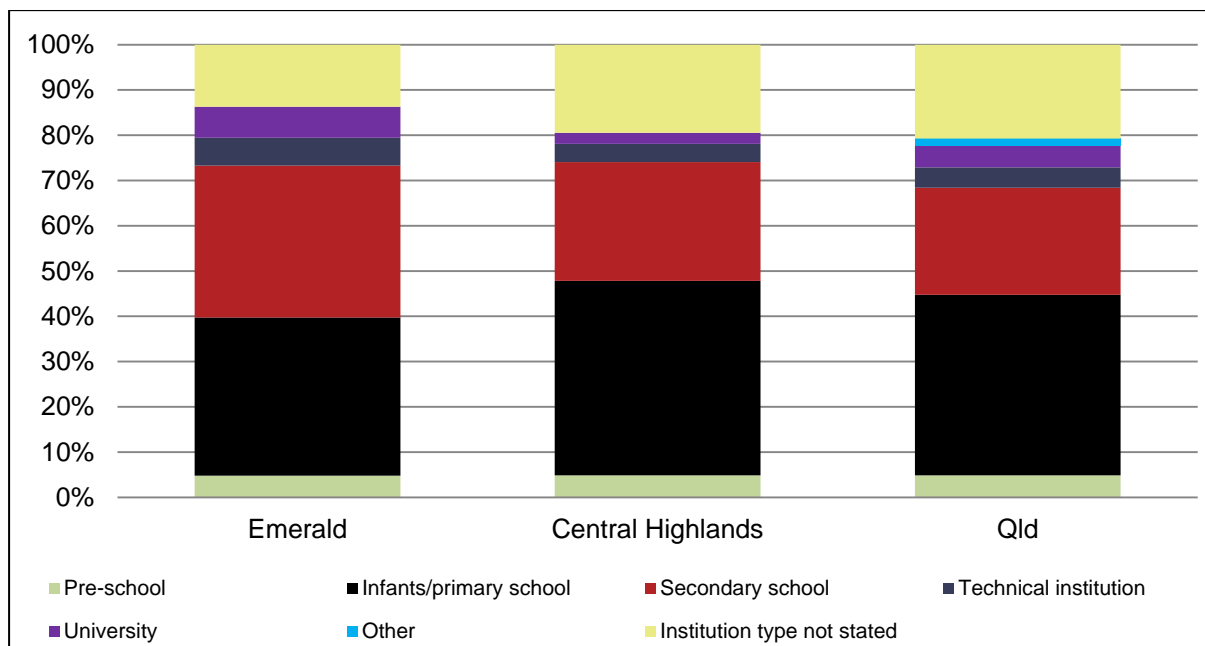
Based on usual place of residence and persons aged 15 years and over. People with a profound or severe disability are defined as needing help or assistance in one or more of the three core activity areas of self-care, mobility and communication because of a disability, long-term health condition (6 months or more) or old age.

Source: Australian Bureau of Statistics.

Education Levels

At the 2011 Census, 34.9% of Emerald Indigenous students were in primary school, which was similar to Central Highlands (43%) and Queensland (39.9%). However, the lowest participation in tertiary education was evident in Central Highlands (6.5%), followed by Queensland (10.9%) and Emerald (13%). Indigenous education by institution type is shown in Figure 4.144.

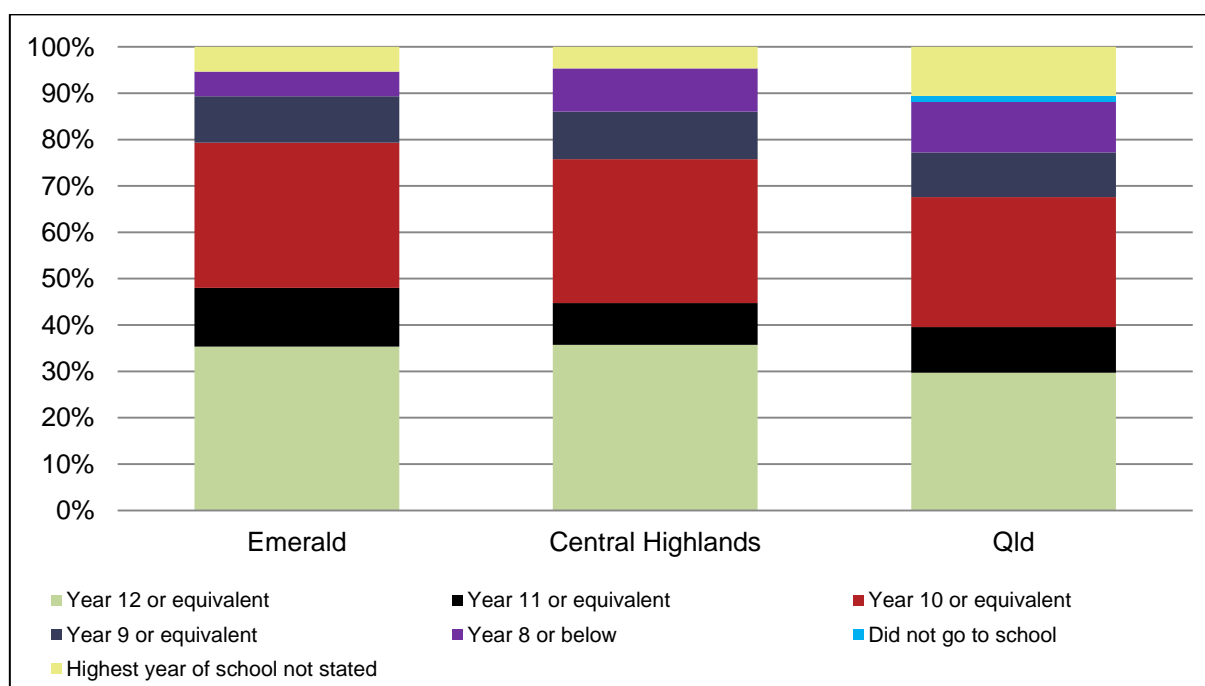
Approximately 35.3% of Indigenous residents in Emerald had completed Year 12 or equivalent at the time of the 2011 Census. This compares to 35.7% for Central Highlands and 29.7% for Queensland. Figure 4.145 illustrates the education level attained by the Indigenous population in each study area.



Based on school location and full-time students.

Source: Australian Bureau of Statistics.

Figure 4.144 Indigenous Type of Educational Institution Attended by Study Area 2011



Based on place of usual residence and persons aged 15 years and over.

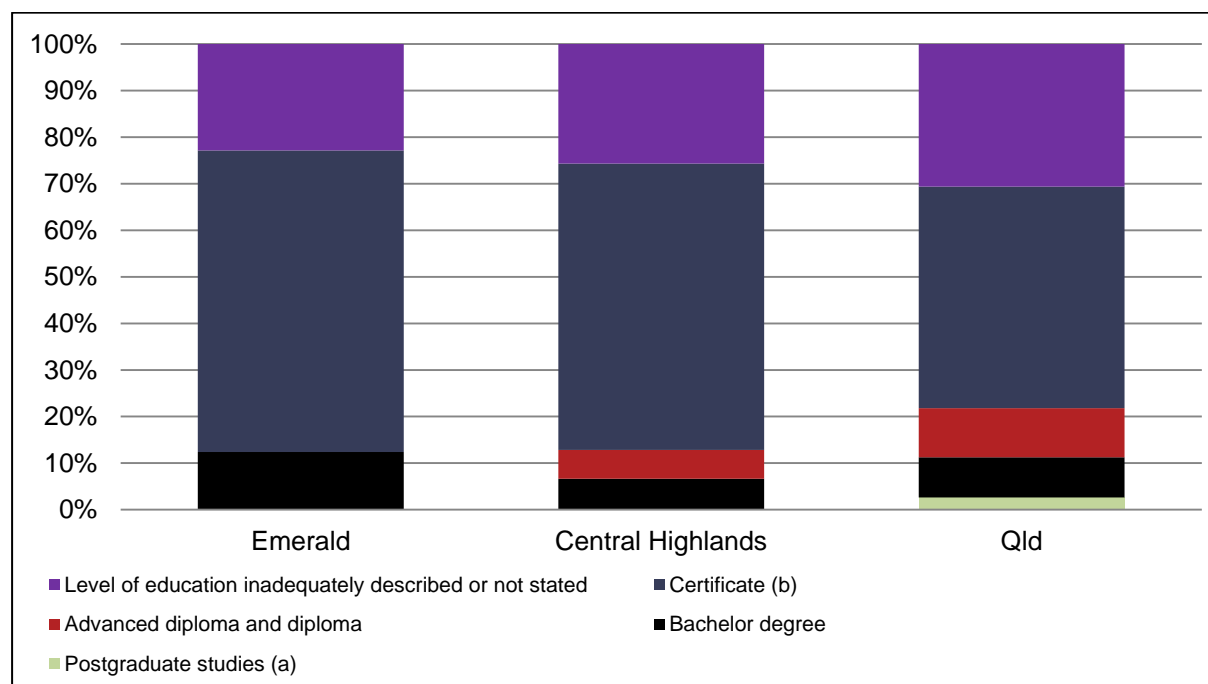
Source: Australian Bureau of Statistics.

Figure 4.145 Indigenous Highest Year of School by Study Area 2011

Tertiary Qualifications

A certificate level tertiary qualification was the most common form of tertiary qualification amongst the Indigenous population in all study areas. The highest rate of university participation (i.e. Bachelor degree or higher) within the Indigenous population was evident in Emerald (12.4%). This was followed by Queensland (11.2%) and Central Highlands (6.6 %). Figure 4.146 shows the highest level of tertiary qualification achieved amongst the Indigenous population in each study area.

The rate of participation in tertiary education is lower amongst the Indigenous population compared to the general population. In Queensland, 24% of the Indigenous population achieved tertiary qualifications, compared to 36.5% of the general population.



Based on usual place of residence and persons aged 15 years and over. (a) Includes graduate diploma, graduate certificate and postgraduate degree. (b) Includes certificates I, II, III and IV and certificates not further defined.

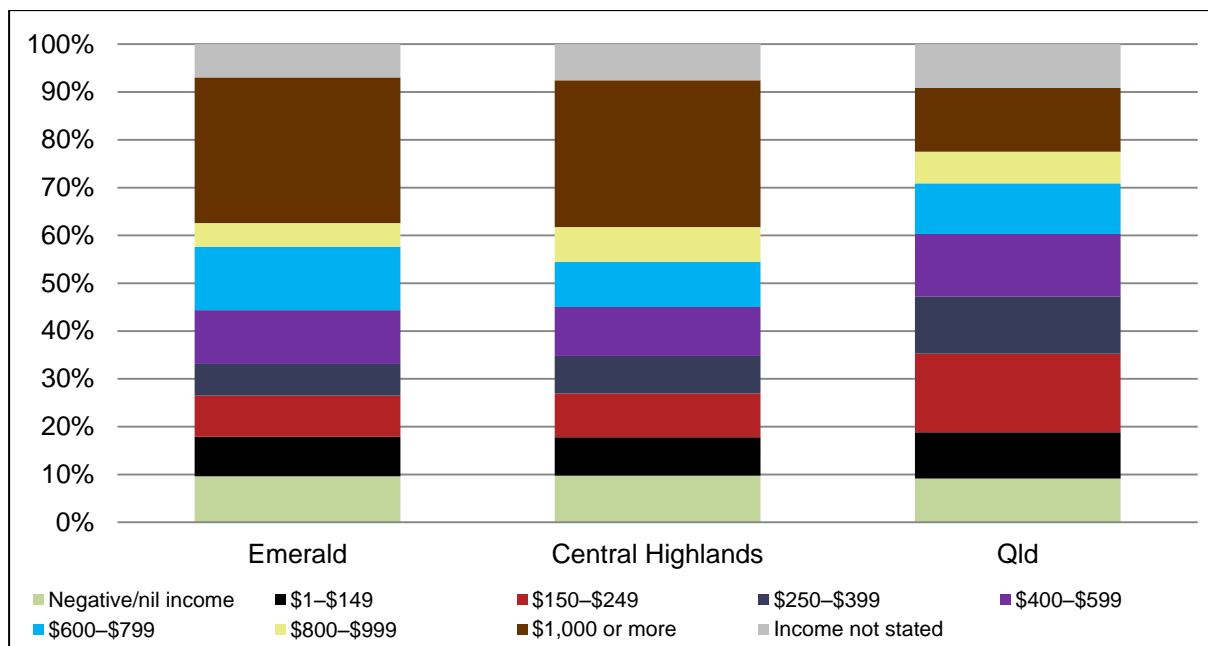
Source: Australian Bureau of Statistics.

Figure 4.146 Indigenous Highest Level of Tertiary Qualification by Study Area 2011

Income and Earnings

In 2011, Indigenous individual incomes in Emerald and Central Highlands had substantially greater proportions in the \$1,000+ weekly earnings bracket than Queensland, as shown in Figure 4.147. Of Indigenous residents in Emerald and Central Highlands, 48.7% and 47.4% (respectively) earned \$600 or more per week. This compares to 30.5% for the Queensland study area. Queensland has the highest proportion of its Indigenous population (18.8%) earning \$200 or less per week.

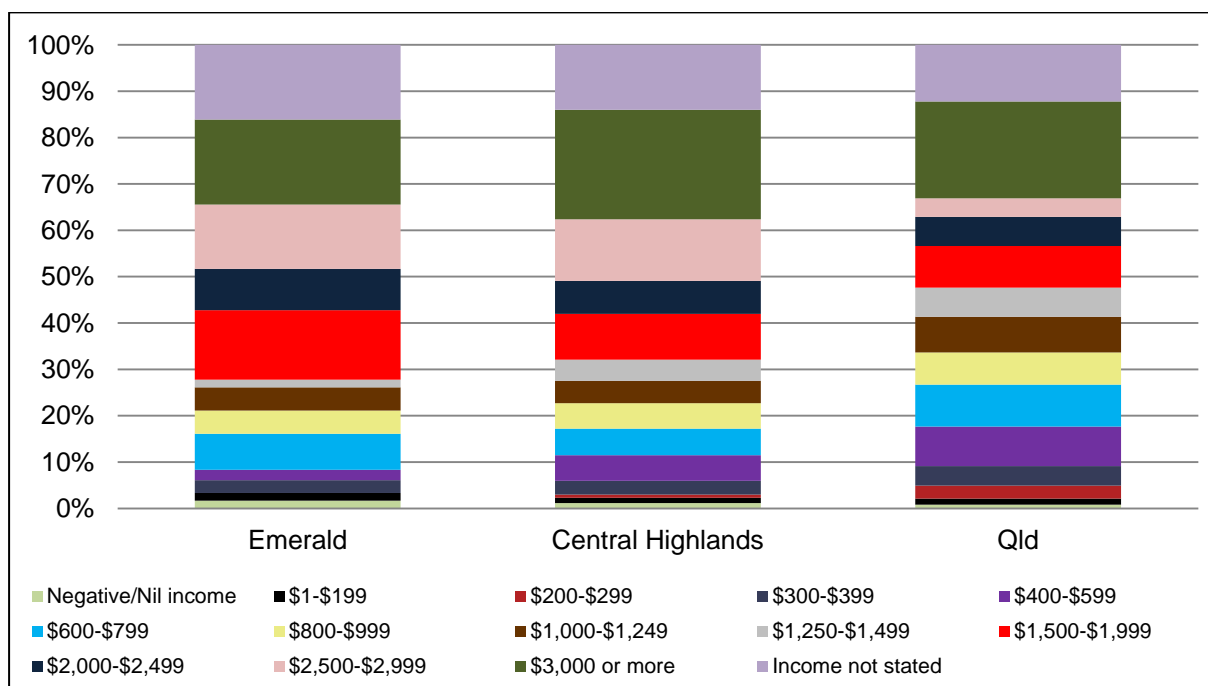
Similarly, Indigenous households in Emerald and Central Highlands tended to be more affluent compared to Queensland, as evident in Figure 4.148. In 2011, for example, Indigenous households earning \$2,500 or more per week constituted approximately 32.2% and 31.4% of all Indigenous households in Emerald and Central Highlands, respectively. These numbers are largely commensurate with household incomes of the general population. In Queensland, however, only 10.1% of Indigenous households were in this bracket.



Based on usual place of residence and persons aged 15 years and over.

Source: Australian Bureau of Statistics.

Figure 4.147 Indigenous Total Personal Weekly Income by Study Area 2011



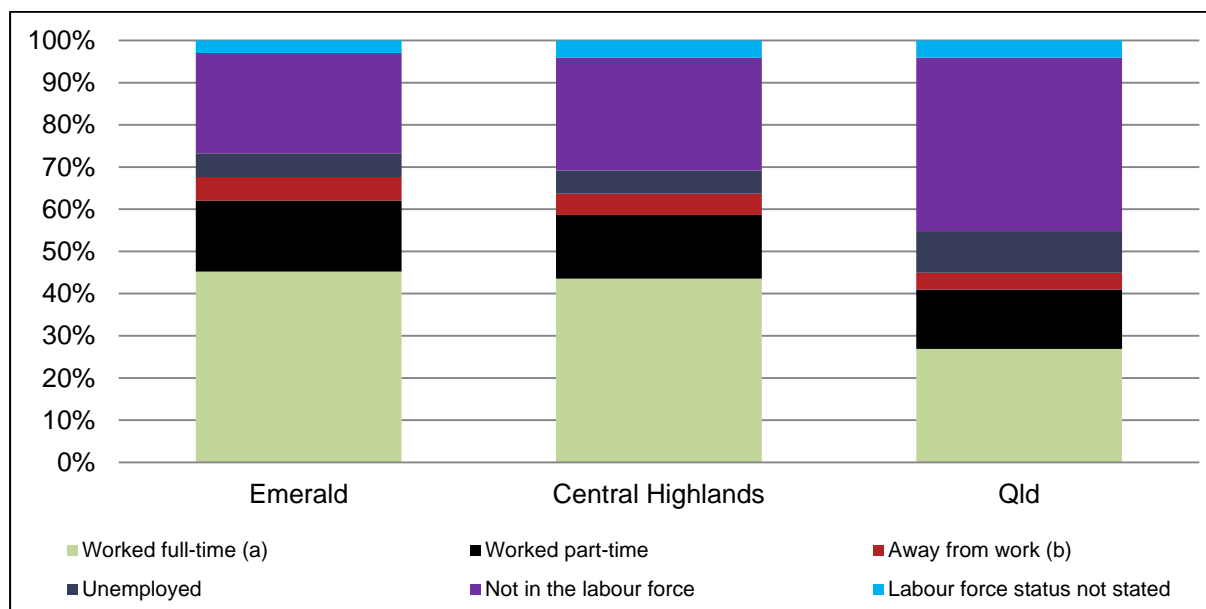
Based on occupied private dwellings. Includes houses with at least one Indigenous resident. Includes households where at least one member aged 15 years and over did not state an income and/or was temporarily absent on Census night.

Source: Australian Bureau of Statistics.

Figure 4.148 Indigenous Total Household Weekly Income by Study Area 2011

Employment and Industry

Indigenous unemployment in Queensland was 18% in 2011, compared to only 7.7% in Emerald and 8% in Central Highlands. By comparison, general unemployment trends were 2.2% in Emerald and Central Highlands and 5.5% in Queensland (more than one-third lower than Indigenous unemployment rates). Indigenous employment statistics for each study area are shown in Figure 4.149.



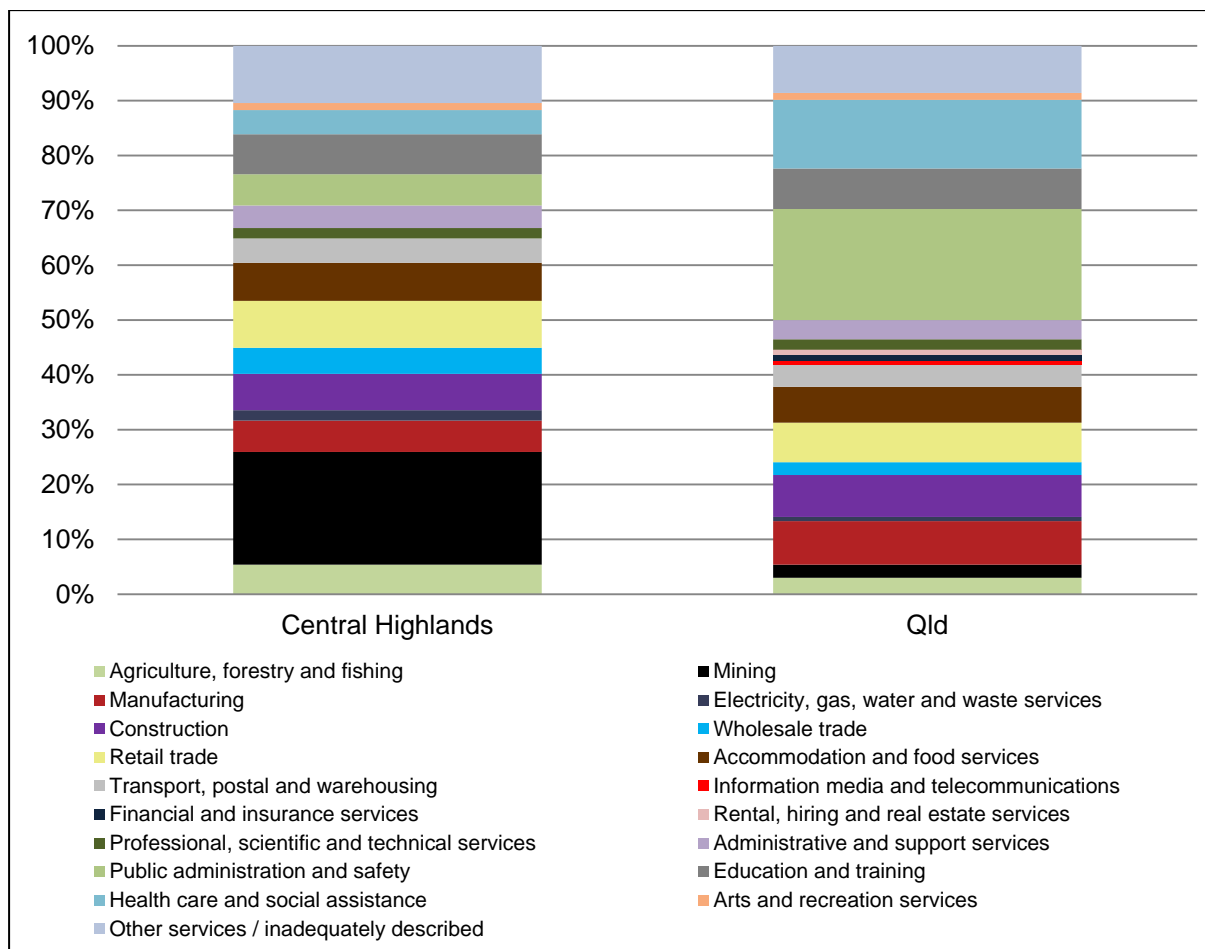
Based on usual place of residence and persons aged 15 years and over. (a) Employed full-time is defined as having worked 35 hours or more in all jobs during the week prior to Census night. (b) Comprises employed persons who did not work any hours in the week prior to Census night.

Source: Australian Bureau of Statistics.

Figure 4.149 Indigenous Labour Force Status by Study Area 2011

Employment by Industry

Mining was the largest industry of Indigenous employment in the Central Highlands LGA at the 2006 Census, constituting 20.6% of Indigenous employment. The largest industry of Indigenous employment in Queensland was public administration and safety, representing 20.2% of Indigenous employment in the state. Figure 4.150 shows Indigenous employment by industry for the two study areas for which data is available.



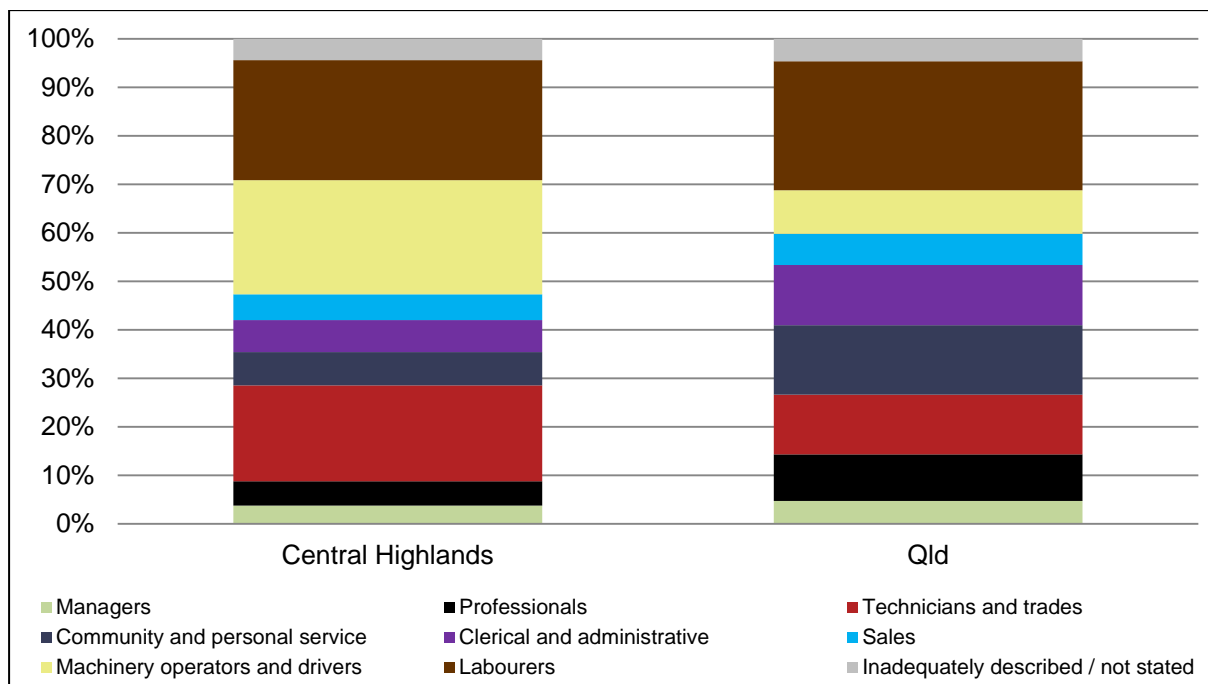
Data not available for equivalent Emerald study area. Based on usual place of residence and employed persons aged 15 years and over. Industry of employment was coded to the 2006 Australian and New Zealand Standard Industrial Classification (ANZSIC) edition. This has replaced the 1993 ANZSIC edition.

Source: Australian Bureau of Statistics.

Figure 4.150 Industries of Indigenous Employment by Study Area 2006

Employment by Occupation

In 2006, the most favoured occupation in the Queensland and Central Highlands LGA study areas was 'labourer', representing 24.8% and 26.6% of Indigenous employment, as shown in Figure 4.151. Other common occupations included 'community and personal service' (Queensland) and 'machinery operator and driver' (Central Highlands LGA).



Data not available for equivalent Emerald study area. Based on place of usual residence and employed persons aged 15 years and over. Occupation was coded to the 2006 Australia and New Zealand Standard Classification of Occupations (ANZSCO). This has replaced the 1996 Australia Standard Classification of Occupations (ASCO) Second Edition.

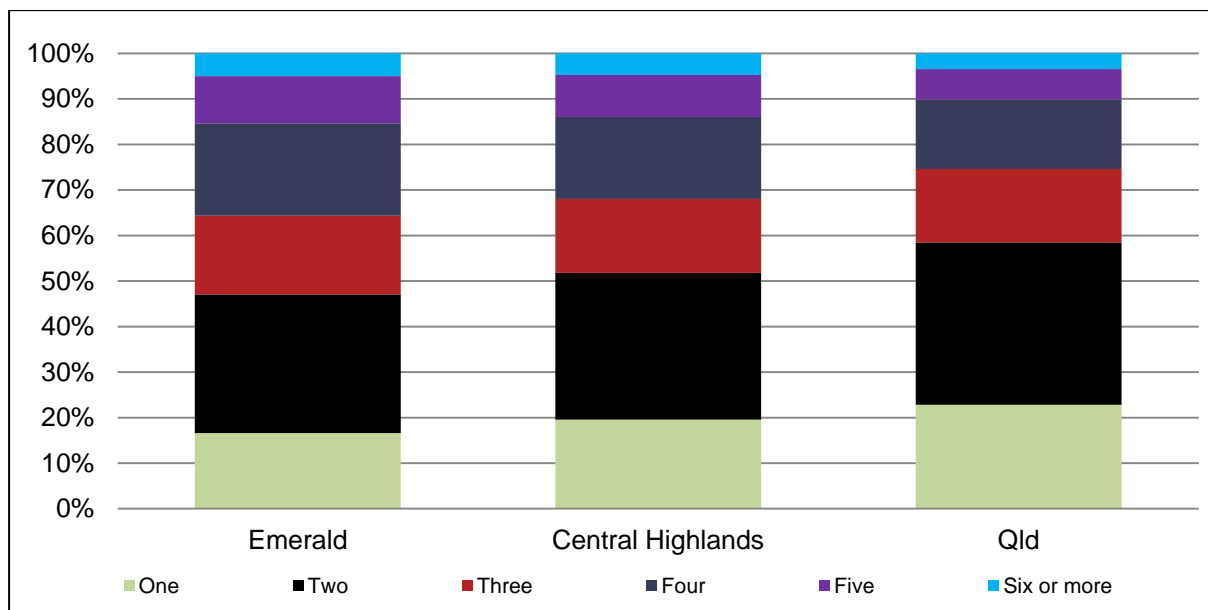
Source: Australian Bureau of Statistics.

Figure 4.151 Indigenous Occupations by Study Area 2006

4.10.1.12 Housing and Accommodation

Household Structure

Two-person households were the predominant residential composition in all study areas, constituting approximately 33% of all households. In Emerald, four-person households were the second most common household structure, while in Central Highlands and Queensland, single-person households were the second most common. Figure 4.152 illustrates the composition of households across the study areas.

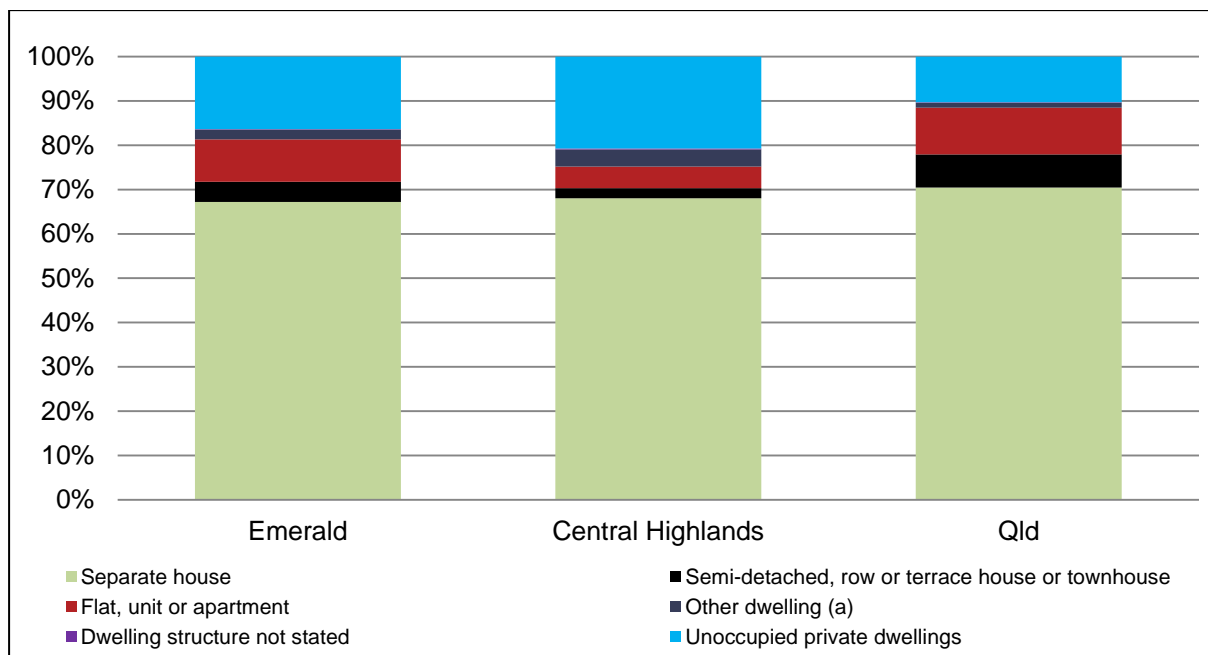


Source: Australian Bureau of Statistics.

Figure 4.152 Household Composition by Study Area 2011

Dwelling Structure

In the 2011 Census, there were 7,698 separate houses in the Central Highlands LGA, 3,176 of which were in Emerald, constituting approximately 68% of all private dwellings (refer to Figure 4.153). This compares to 70.4% for Queensland. Low numbers of semi-detached houses and apartments were found in the regional study areas. The highest rate of unoccupied dwellings (20.7%) occurred in the Central Highlands LGA, followed by Emerald (16.4%) and Queensland (10.3%).



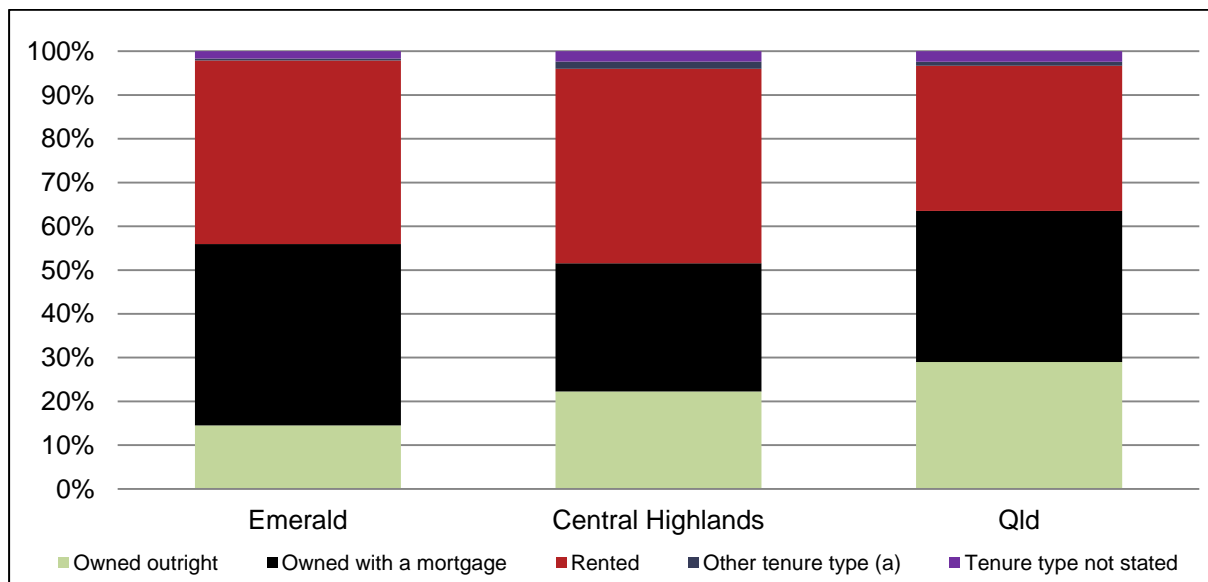
(a) Includes caravans, cabins, houseboats, tents and dwelling attached to a shop or office.

Source: Australian Bureau of Statistics.

Figure 4.153 Dwelling Structure by Study Area 2011

Dwelling Ownership

As shown in Figure 4.154, 56% of Emerald residents owned their dwelling in 2011 (either outright or via mortgage), compared to 51.6% of Central Highlands and 63.5% of Queensland residents. The highest proportion of rented properties was found in Central Highlands (44.4%), followed by Emerald (41.9%).



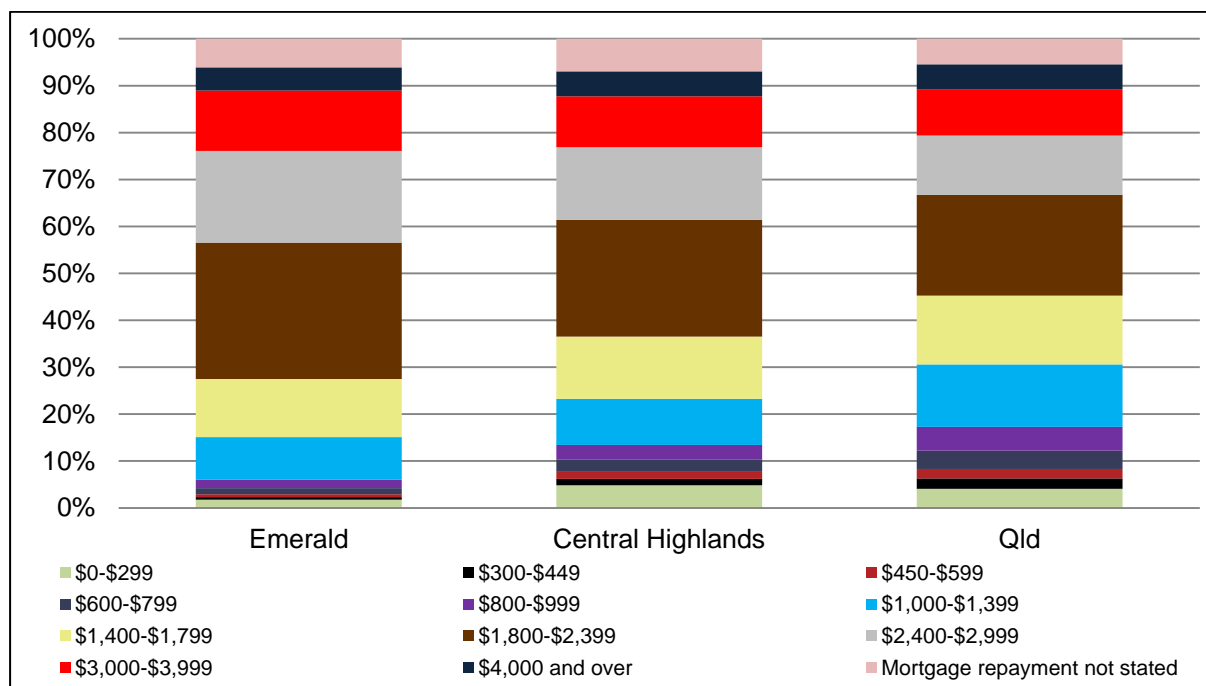
(a) Includes dwellings occupied under a life tenure scheme.

Source: Australian Bureau of Statistics.

Figure 4.154 Dwelling Ownership by Study Area 2011

Home Repayments

The most common bracket of monthly mortgage repayment in all study areas in 2011 was \$1,800 - \$2,399, as indicated in Figure 4.155. Only 6.0% of residents paid mortgages of less than \$1,000 per month, compared to 13.4% in Central Highlands and 17.3% in Queensland as a whole. Conversely, 17.8% of Emerald mortgagees paid \$3,000+/per month in repayments, compared to 16.2% for Central Highlands and 15.2% across the state.



Includes dwellings being purchased under a rent/buy scheme.

Source: Australian Bureau of Statistics.

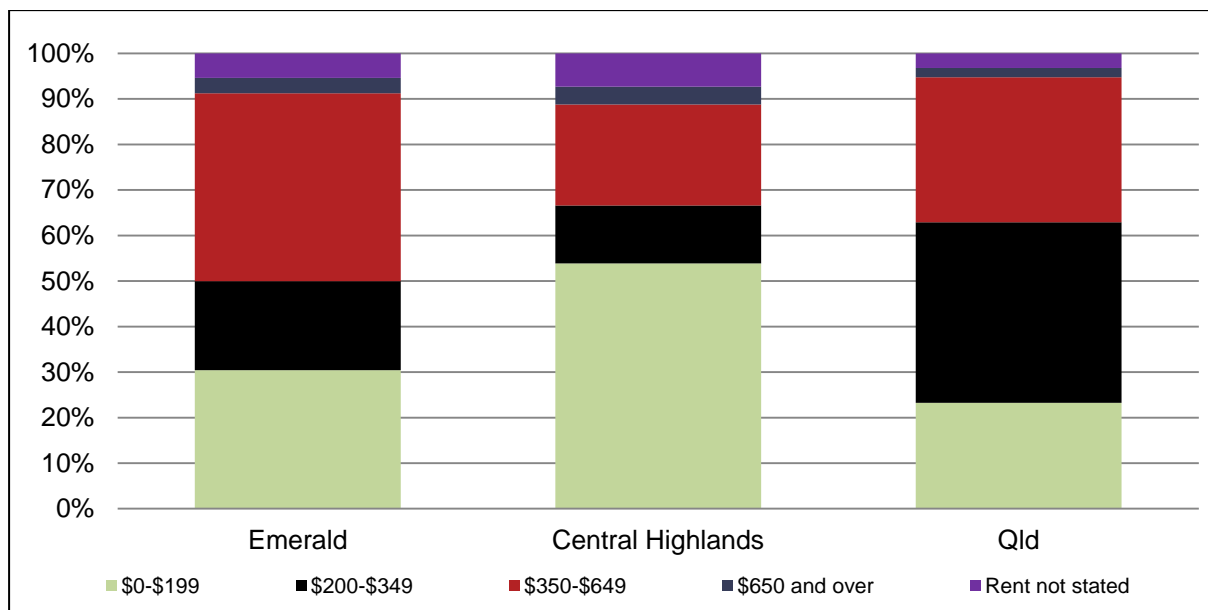
Figure 4.155 Monthly Mortgage Repayments by Study Area 2011

Rental Properties and Prices

In 2011, 3.4% of rent payers in Emerald were paying \$650+/week, compared to 3.9% of renters in the Central Highlands LGA and 2% of renters in Queensland. The greatest proportion of households paying less than \$200/week was the Central Highlands LGA, followed by 30.4% in Emerald and 23.2% in Queensland. Weekly rental repayments by bracket are shown in Figure 4.156.

During periods of high demand, high-end rental prices tend to rise sharply, while there remains a core of cheaper rental accommodation for those not on higher incomes. The percentage of this lower cost rental accommodation is higher in both Emerald and the Central Highlands than across Queensland as a whole.

The property market in Emerald has changed substantially over the past year, according to local real estate agents. In mid-2011, typically only one or two rentals were available; currently more than 24 are available. While previously a four-bedroom rental house would attract \$700/week, it would now be advertised at \$560/week. Similarly, a three-bedroom house that previously attracted \$600/week now only receives \$480/week. This decline can be directly related to the recent downturn in the coal industry and subsequent workforce cutbacks at local mines.

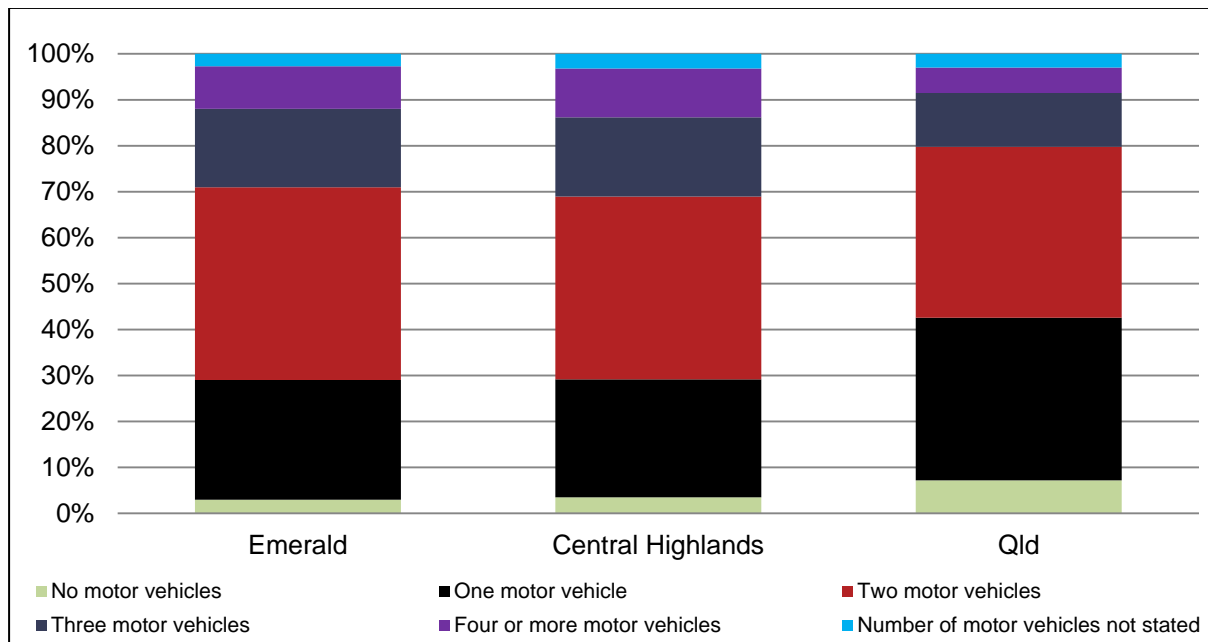


Source: Australian Bureau of Statistics.

Figure 4.156 Rental Repayments (Weekly) by Study Area 2011

Vehicles per Household

In 2011, households with two or more vehicles averaged 63.5% in all study areas. As shown in Figure 4.157, Emerald had the greatest proportion of households with three or more vehicles (26.3%). Conversely, Queensland had the greatest proportion of households with no vehicles (7.2%).



Excludes motorbikes/scooters.

Source: Australian Bureau of Statistics.

Figure 4.157 Vehicles per Household by Study Area 2011

Housing Availability and Affordability

Median House Prices

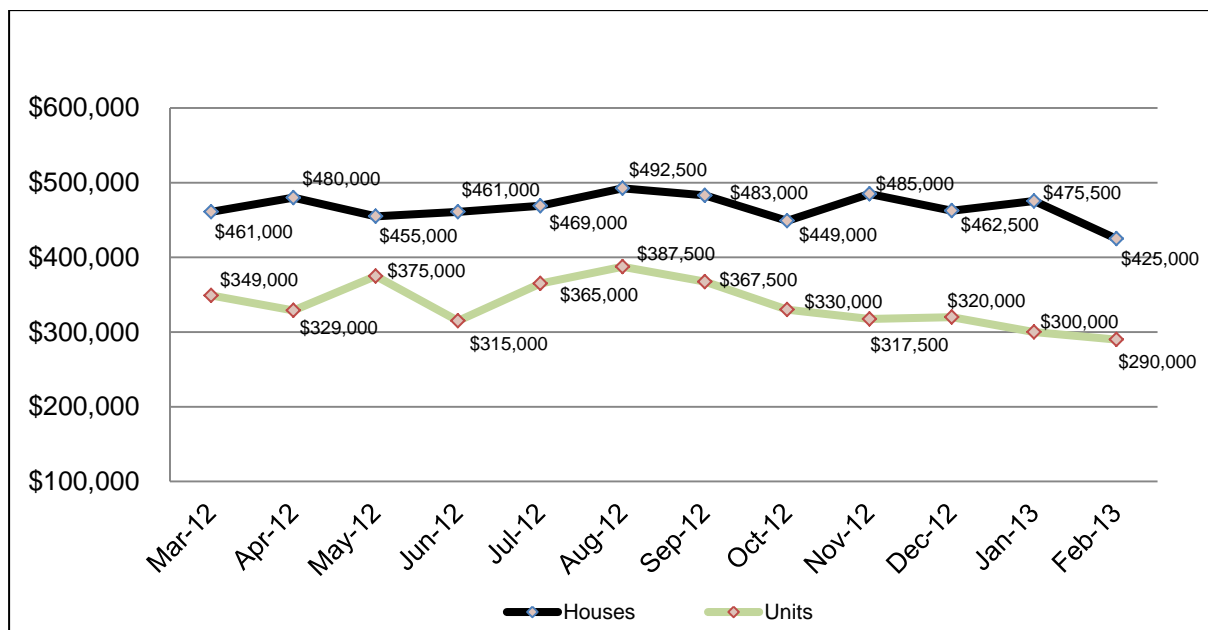
Median house prices in Emerald increased by 26.0% from 2007 to 2012, including a 2.2% decrease in 2008. Median unit prices in Emerald increased by 23.2% over the same period. However, the median house price dropped to \$425,000 in February 2013 – a fall of 7.8% in 12 months. Median unit prices fell 16.9% during the same period.

Compared to a year ago, there are currently many more houses available for sale in Emerald, and prices have reduced, the average price for a three-bedroom house and land package currently at approximately \$400,000. Median house prices and median monthly property prices for Emerald are shown in Table 4.135 and Figure 4.158 below.

Table 4.135 Emerald Median House Prices 2007 – 2012

Period	Houses		Units	
	Median Price	Change (YoY)	Median Price	Change (YoY)
2007	\$365,000	7.4%	\$280,000	1.1%
2008	\$357,000	-2.2%	\$283,500	1.3%
2009	\$380,800	6.7%	\$290,000	2.3%
2010	\$385,000	1.1%	\$290,000	0.0%
2011	\$425,000	10.4%	\$300,000	3.4%
2012	\$460,000	8.2%	\$345,000	15%

Source: Realestate.com.au



Source: Realestate.com.au

Figure 4.158 Emerald Median Monthly Property Prices 2012 – 2013

Median Vacant Land Prices

The median sale price of vacant land in Central Highlands in the year ending December 2012 was \$160,000 for lots ranging from 140 m² to 2,500 m², representing a 10% increase from the previous year. Vacant blocks in Emerald currently range in price from \$148,500 (699 m²) to \$600,000 (5 acre residential block near Emerald's new shopping centre).

Land Valuations

Land valuations for 2012 by the former Department of Environment and Resource Management (DERM, now Department of Environment and Heritage Protection (EHP)) indicate that land values in Emerald have increased by 14.8% since the previous year (increasing from \$135,000 to \$155,000). The Central Highlands LGA saw an increase of 12.6%.

Rental Properties

The 2011 Census recorded that 3.4% of Emerald renters were paying \$650 or more per week, compared to 3.9% for Central Highlands and 2.0% for Queensland. With Central Highlands exhibiting the highest proportion of households paying less than \$200 per week (Emerald was 30.4% and Queensland 23.2%).

During periods of high demand, high-end rental prices tend to rise sharply; however, a pool of lower cost rental accommodation (larger by percentage in both Emerald and Central Highlands than Queensland) is available for lower income earners.

Residential Building Approvals

In the year to 30 March 2013, 495 approvals for dwelling units in Central Highlands new residential buildings, including 384 in Emerald, were granted by the Central Highlands LGA, as shown in Table 4.136. This constituted a total value of \$131.7 million, including \$95.7 million for Emerald.

Table 4.136 Building Approvals: 12 months to September 2012 by Study Area

Building Type	Emerald	Central Highlands	Qld
Dwelling units in new residential buildings	384	495	28,479
Residential building value (a)	\$95,689	\$131,712	\$8,170,425
Non-residential building value	\$28,626	\$107,402	\$6,640,631
Proportion residential value	77.0%	55.1%	55.2%

(a) Includes alterations, additions and conversions.

Source: Queensland Office of Economic and Statistical Research.

As of June 2013, the residential development in Table 4.137 was pending approval or underway in Emerald. If these developments come to fruition, Emerald could increase its current housing and unit stock by more than 50%, from 3,843 (2011 Census) to almost 6,000. Emerald therefore appears to be prepared for any short to medium-term housing availability pressure.

Table 4.137 Emerald Property Development as at June 2013

Development	No. Units/ Beds	Developer	Status
NRW accommodation	600 beds	ATCO	Pending approval
Palm Grove Estate (Roberts St)	44 town houses	CHRC	Stages 1 and 2 sold. Stages 3 and 4 available. Groundwork commencing early 2013
Highfields Estate (Pilot Farm Rd)	1000 lots	Citricorp	Stage 1 (103 lots) approved; groundwork commencing early 2013
Villas on Rivergum (Rivergum Dve)	115 units	Securcorp	80% Stage 1 units sold. Stage 2 about to be released. Stages 3 – 5 yet to be released
Maranda Heights (Pilot Farm Rd)	238 lots	Portfolio Projects	All sold; construction underway
Echidna Valley (Pilot Farm Rd)	100 lots	TMD Trading	Stage 1 complete and available for sale; Stages 2 to 4 approved; design to be awarded mid 2013

Development	No. Units/ Beds	Developer	Status
Mayfair Ridge (Mayfair Dve, off Gregory Hwy)	500 lots	Pratt Property Group	Stages 1 to 7 sold. Stages 8, 10 and 11 selling (51 lots). Stage 9 not yet released
Nogoa Rise 5 (Rifle Range Rd)	69 lots	CHRC	Under construction; sale of lots by auction mid 2013

Source: Central Highlands Development Corporation

Housing Affordability Index

House prices in Emerald are 16.2% more affordable than Moranbah, 25.8% more affordable than Townsville and 34.2% more affordable than houses in Brisbane, as indicated in Table 4.138. Although this data is from 2011, the data is drawn from the period subsequent to the Global Financial Crisis and mining industry downturn and is therefore representative of general trends.

Table 4.138 Queensland Housing Affordability Index 2011

Location (by postcode)	Mean Taxable Income	Median House Price	House Price: Mean Income	Median Unit Price	Unit Price: Mean Income
Emerald (4720)	\$69,392	\$425,000	6.12	\$300,000	4.32
Moranbah (4744)	\$86,186	\$629,500	7.30	\$474,000	5.50
Townsville (4810)	\$64,886	\$535,000	8.25	\$392,500	6.05
Brisbane (4000)	\$73,425	\$682,500	9.30	\$446,000	6.07

Source: Australian Taxation Office and realestate.com.au

Constraints to Development

No property development constraints are obvious in Emerald, as there is sufficient availability of vacant blocks zoned appropriately for development, as well as a number of existing houses available for rent or purchase. The only apparent barrier to development in the region is the uncertainty as to whether the Taraborah Project and other projects in the area will proceed.

Short-Term Accommodation

Camp/village accommodation was the predominant non-resident worker (NRW) form of accommodation across the Bowen Basin region, according to the *Bowen Basin Population Report 2012*, housing approximately 22,150 shift workers (88%). Other accommodation types included hotels/motels (8%), caravan parks and other accommodation (3%). Of all NRWs in the Central Highlands LGA, 79.7% resided in camps. The demand for short-term/temporary accommodation is expected to increase with ongoing coal mining development in the region.

There are a number of additional NRW accommodation developments in progress within the Emerald



area, including ATCO's 600-bed development currently under consideration by the Central Highlands Regional Council. NRW accommodation profiles are shown in Table 4.139.

Table 4.139 Bowen Basin NRW Shift Workers by Accommodation Type 2012

Accommodation	Banana	Central Highlands	Isaac	Whitsunday (Bowen)	Bowen Basin
Camp/village	1,140	4,450	16,105	460	22,150
Hotel/motel	255	1,020	490	275	2,035
Caravan park	195	115	535	0	845
TOTAL	1,590	5,585	17,125	735	25,035

Source: Bowen Basin Population Report 2012.

Accommodation Villages

There were 69 villages in the Bowen Basin in 2012, including 20 small camps (less than 100 beds), 30 medium camps (100 - 499 beds), 14 large camps (500 – 999 beds) and five very large camps (1,000+ beds). The 69 villages had a total sleeping capacity of 27,565 beds. The 510 available beds in the Central Highlands equated to 8.7% capacity, compared to 6.9% overall availability for Bowen Basin camp accommodation as a whole (Table 4.140).

Table 4.140 Bowen Basin Accommodation Camp Bed Availability by LGA 2012

Beds	Banana	Central Highlands	Isaac	Whitsunday (Bowen)	Bowen Basin
Occupied by NRWs	1,140	4,450	16,105	460	22,150
Vacant and available	35	510	1,145	200	1,890
Balance (a)	145	905	2,260	215	3,525
TOTAL BEDS	1,315	5,860	19,515	875	27,565
Vacant and available as percentage	2.7%	8.7%	5.9%	22.9%	6.9%

(a) Includes beds occupied by visitors other than NRWs or otherwise unavailable to prospective guests. Unavailable beds could include those held for mining and gas workers under permanent booking arrangements but not actually occupied by NRWs at the time of the survey. Source: Surat Basin Population Report, 2011.

A number of additional NRW accommodation developments are in progress within the Emerald area, including ATCO's 600-bed development currently under consideration by the CHRC.

Hotels and Motels

Due to NRWs, contractors and associated workers making use of hotel and motel accommodation on a long term basis, in 2012 there was only a 6.7% availability of hotels and motels in the Central Highlands. This was a 4% increase from the previous year. Table 4.141 displays the vacant and available hotel/motel rooms by LGA in 2012.

Table 4.141 Bowen Basin Vacant and Available Hotel/Motel Rooms by LGA 2012

Beds	Banana	Central Highlands	Isaac	Whitsunday (Bowen)	Bowen Basin
Occupied by NRWs	255	1,020	490	275	2,035
Vacant and available	15	100	110	65	290
Balance (a)	155	380	170	780	1,480
<i>TOTAL BEDS</i>	<i>425</i>	<i>1,495</i>	<i>770</i>	<i>1,120</i>	<i>3,810</i>
Vacant and available as percentage	3.5%	6.7%	14.3%	5.8%	7.6%

(a) Includes beds occupied by visitors other than NRWs or otherwise unavailable to prospective guests. Unavailable beds could include those held for mining and gas workers under permanent booking arrangements but not actually occupied by NRWs at the time of the survey.

Source: Surat Basin Population Report, 2011.

Community Housing

A number of long-term social houses are made available by the State Government for rent to low-income families in Emerald and the Gemfields. Houses are allocated on the basis of need. However, there is a long waiting list for these houses. Seniors accommodation is provided by the CHRC in Emerald and the Gemfields. Anglicare manages five Queensland Government-owned houses for crisis/emergency accommodation in Emerald.

The CHRC committed in October 2012 to implement an affordable housing model, with the aim of alleviating the insufficient availability of low-cost housing in Blackwater and Emerald.

4.10.1.13 Workforce Profile

Workforce Demand

During the construction phase, the workforce is expected to peak at 150 employees for opencut works over a 12 month period and 100 employees for underground works over a 6 month period. Priority will be given to people from local communities, where possible. It is anticipated that many workers will need to be sourced from beyond the local area and work on a DIDO basis. Short-term accommodation may be required by these workers in Emerald, who will bus to and from the Project site before and after their shifts.

During simultaneous opencut and underground operations, a peak workforce of 350 is anticipated. Two rotating shifts of 12 hours each will be used for the opencut operation, while the underground operation will support two 10 hour shifts, in addition to a third shift for maintenance work. Opencut production has been programed to last for 6 years and underground production 16 years.

Supply Issues and Strategies

Shenhua will source employees from local communities wherever possible, thereby reducing disruption to the community lifestyle and infrastructure fabric. Recruitment will also extend across the Central Highlands, central Queensland, and further afield if required, as the local area is not expected to provide sufficient employee numbers.

Training programs will also be implemented in conjunction with entities such as Skills Queensland and other Registered Training Organisations, in order to attract, develop and retain skilled and unskilled workers. Traineeships, apprenticeships, graduate programs, in addition to school-to-work initiatives, will be offered.

Employees sourced from beyond the local area will either relocate to Emerald or work on a DIDO basis (regional based employees) or FIFO basis (Brisbane/ out of state based employees), residing in short-term accommodation in Emerald while on shift work. A Bus-in Bus-out (BIBO) arrangement will be used to transport workers between Emerald and the Project.

4.10.1.14 Project Fatigue

Recent mine closures in the region have had a negative impact on the Central Highlands regional economy. The general Emerald community opinion of the Project has been receptive, with the opinion that the Project may have a positive economic impact on jobs and businesses prevalent throughout the community. 'Project fatigue', a phenomenon whereby communities in areas with a high degree of resource development become fatigued with the number of consultation programs, is not prevalent in Emerald and the surrounding area.

4.10.2 Potential Impacts And Mitigation Measures

Table 4.142 provides a detailed breakdown of all impacts identified during the Taraborah SIA process. The impacts take into account the existing social and cultural environments in the region, together with a study of outcomes experienced with comparable projects elsewhere in Queensland. Each impact is rated by:

- **Nature** – type of impact (perceived by the community as positive or negative (P/N))
- **Probability** – likelihood of the impact occurring (high (H), medium (M) or low (L))
- **Consequence** – degree of benefit or harm to affected stakeholders (high, medium or low)
- **Long-term risk** – negative consequence of the impact after mitigation measures have been put in place (high, medium or low).

After initial consultation with key stakeholders, Project impact mitigations and opportunities were developed, which have also been included in brief below. Full details of these and supporting management and monitoring programs feature in the *Taraborah Social Impact Management Plan*. Mitigation measures will ultimately be further developed in consultation with key Project and community stakeholders as Project planning progresses.

Table 4.142 Social Impact and Mitigation/Opportunity Analysis

Impact	Pre-mitigation			Stakeholder	Mitigation/ Opportunity	Post mitigation
	Nature (P/N)	Probability (H/M/L)	Consequence (H/M/L)			Long-term risk (H/M/L)
CUMULATIVE IMPACTS <p>The regional study areas have been impacted by intensive coal mining, construction and exploration since the mid-1970s. Operating mines that utilise Emerald as a hub for supplies, maintenance, transport and employment include Minerva, Kestrel, Crinum, Ensham and Rolleston. Other potential mining projects in the region include Springsure Creek, Togara North, Minyango, Teresa, Washpool, Baralaba North and South, Arcturus, Dingo West and Orion Downs.</p> <p>In addition, Emerald may become central to the development of the large potential thermal coal mines being developed to the west and near the town of Alpha. These developments could put pressure on local highways as a result of greatly increased vehicle movements. For example, during construction of the South Galilee thermal coal project 180 km west of Emerald, an estimated 7,300 heavy vehicle deliveries will be made to the project, contributing to a 12.8% traffic increase on the Capricorn Highway during 2013.</p> <p>These projects will potentially use Central Highlands housing, infrastructure and community services, and assuming they proceed, will create a range of positive (i.e. employment and business opportunities) and negative (i.e. strain on transport infrastructure and housing affordability/availability) impacts on the region. All such impacts will require overarching (cumulative) strategies to ensure long-term community health and wellbeing.</p> <p>However, in the current economic climate there is uncertainty around viability of all proposed mining developments. The Emerald region has suffered a subsequent slow-down in employment, mining industry support business growth and the housing market. This increased economic capacity and the remote, non-Emerald-based location of a number of the major proposed coal mines (i.e. Galilee Basin) will result in minimal impact on Taraborah operations should all new projects be realised.</p> <p>The downturn has also meant that the phenomenon known as ‘project fatigue’ – where communities surrounded by high levels of resources development are subjected to numerous project and EIS consultation programs – has not been a recent feature in Emerald or its surrounds. This was further supported by sizeable attendance (100+) at Taraborah’s community information session held in Emerald in May 2013.</p>	P/N	M	H	<ul style="list-style-type: none"> Qld Govt Central Highlands Regional Council (CHRC) Local business Chamber of Commerce (COC) Local communities Other proponents 	<ul style="list-style-type: none"> Establish a Taraborah Community Consultative Committee (CCC) – supported by key community influencers, Qld Government and CHRC – to monitor and address cumulative impacts jointly and relatively With assistance from the CCC, participate in development of a regional planning framework to proactively contribute to and achieve sustainable local communities. Align policy framework with existing government and community planning (i.e. CHRC <i>Central Highlands 2022 Community Plan</i>) Communicate CCC initiatives and outcome to Emerald communities 	M

Impact	Pre-mitigation			Stakeholder	Mitigation/ Opportunity	Post mitigation
	Nature (P/N)	Probability (H/M/L)	Consequence (H/M/L)			Long-term risk (H/M/L)
DEMOGRAPHIC IMPACTS <p>Emerald's and Central Highlands' demographic profiles are not expected to experience significant change as a result of the Project.</p> <p>Shenhua's policy is to employ local people wherever possible, which should have a positive impact on average regional household incomes and on individual earning capacities. The company will not be constructing a camp for the Project, as employees from outside the local area will be expected to relocate to Emerald permanently or utilise short-term accommodation during their shifts. This may put additional pressure on local housing and accommodation availability; however, with the project's modest construction and operations workforce numbers (up to 150 and 350 respectively), the impact should not be significant.</p> <p>The cumulative gender composition is likely to move marginally higher toward males during construction phases of the various projects, when mostly single male NRWs move into the area. The gender imbalance is likely to be tempered during operations. As an equal-opportunity employer, Shenhua is committed to employment and promotion practices that encourage female participation and retention.</p> <p>Demand for skilled tradespeople in the resources sector will remain high. This, coupled with higher mining industry wages, will continue to draw people away from other sectors, directly impacting non-resources oriented local businesses.</p>	P/N	M	M	<ul style="list-style-type: none"> CHRC Community organisations Local communities 	<ul style="list-style-type: none"> Utilise the CCC to monitor and develop mitigations for key demographic changes, such as skills shortages for non-resources businesses Work with the CHRC to facilitate the implementation of an affordable housing model in Emerald Communicate Shenhua's local employment commitment to surrounding communities to encourage local participation in the project, including the engagement of minority groups (see Appendix B of Appendix 23 for the outline of an Indigenous Participation Plan as an example). Address industry male-gender bias, with career opportunities for women (who currently only represent 14% of Queensland Resources Council member company employees) Encourage Taraborah employees to relocate to the local area 	L
LANDHOLDER IMPACTS/RURAL LIFESTYLE <p>Shenhua has indicated that it will purchase outright or acquire surface rights of properties directly affected by the Project's mining operations. Of the 11 registered owners of 19 properties within MDL467 boundaries (either entirely or in part and excluding easements), most have indicated that they would sell at the right price.</p> <p>Many landholders expressed concerns about Project-related increases in dust, noise and light levels, with a concomitant devaluation of their land. Some noted past negative protocol experience, such as gates being left open.</p> <p>Several landholders were concerned over the loss of amenity, believing that changes to the region's social fabric will further threaten their rural lifestyle as more construction crews and mining personnel move into the area.</p>	P/N	H	H	<ul style="list-style-type: none"> Landholders Native Title claimants 	<ul style="list-style-type: none"> Facilitate regular meetings with affected landholders to monitor impacts and mitigation success Implement a comprehensive Land-Access Management Plan Encourage landholders to utilise the project's enquiries and complaints management process to ensure concerns and feedback are captured and addressed Implement a strict employee and contractor behavioural code in line with community values. The code would apply to employees and contractors both on and offsite Implement a comprehensive employee and contractor induction process that comprises social impact management objectives and how to meet them, as well as training for specific issues that arise throughout the life of the Project 	M

Impact	Pre-mitigation			Stakeholder	Mitigation/ Opportunity	Post mitigation Long-term risk (H/M/L)
	Nature (P/N)	Probability (H/M/L)	Consequence (H/M/L)			
LAND USE IMPACTS The predominant land-use concern was potential Project impact on the local water supply. Landholders feared that Shenhua's drilling into and accessing the aquifer beneath MDL467, and the subsequent use of groundwater for mining purposes, would result in bore-water levels decreasing, thereby placing the local area at risk during drought conditions. One landholder expressed concerns about the potential for mining to change land drainage characteristics in such a way as to impact local creek flows and induce flooding on affected properties in periods of high rainfall.	N	M	H	<ul style="list-style-type: none"> Landholders Local communities 	<ul style="list-style-type: none"> Implement Environmental Management Plan Regularly and transparently monitor water source and water runoff impacts throughout the life of the Project Encourage landholders to utilise the Project's enquiries and complaints management process to ensure concerns and feedback are captured and addressed 	M
PSYCHOLOGICAL IMPACTS It is difficult to make a general assessment of the psychological impact of the Project and other resource projects across the community, as the prospect of change affects different people in different ways. However, landholders directly impacted by the projects are those who may potentially experience the most mental stress. Many landholders will feel a palpable sense of dislocation and loss when they perceive changes to their local environment as harmful, particularly those who have strong traditional family ties to their properties and the region. Community consultation revealed that a number of landholders were anxious about their future and frustrated about delays, uncertainty and their lives being 'in limbo,' as Shenhua assesses project viability. Specifically stated concerns that have the potential to create personal mental stress and anxiety included the following: <ul style="list-style-type: none"> Retirement plans disrupted; loss of income, decreased property value Water source degradation Road safety risks for residents and their families Noise, vibration, dust, lighting and visual amenity impacts Destruction of good agricultural land. 	N	M	H	<ul style="list-style-type: none"> Qld Govt CHRC Landholders Community organisations Local communities 	<ul style="list-style-type: none"> Facilitate regular meetings with affected landholders throughout the life of the project to monitor impacts and mitigation success Encourage affected persons to utilise the project's enquiries and complaints management process, to ensure that concerns and feedback are captured and addressed Implement a strict employee and contractor behavioural code in line with community values. The code would apply both on and offsite Implement a comprehensive employee and contractor induction process comprising social impact management objectives and how to meet them, as well as training for specific issues that arise throughout the life of the project Investigate counselling services to support directly affected landholders 	L

Impact	Pre-mitigation			Stakeholder	Mitigation/ Opportunity	Post mitigation Long-term risk (H/M/L)
	Nature (P/N)	Probability (H/M/L)	Consequence (H/M/L)			
COMMUNITY VALUES AND LIFESTYLE Taroborah is not expected to adversely impact Central Highlands' community values and lifestyle. The local community has been significantly shaped by development of the mining industry over the past 40 years. Subsequently, Project development is consistent with the region's more recent history. As Shenhuo plans for the majority of its operations workforce to reside or relocate to the Emerald area, there is expected to be no disconnect between Project employees and the broader community. Conversely, local employment should ensure integration and adoption of community values.	P/N	M	M	<ul style="list-style-type: none"> Qld Govt CHRC Community organisations Local communities 	<ul style="list-style-type: none"> Utilise the CCC to monitor and address impacts relating to community values and lifestyle Facilitate Project integration with the community through Taroborah employee participation in community and sporting organisations Implement a comprehensive employee and contractor induction process that comprises social impact management objectives and how to meet them, as well as training for specific issues that arise throughout the life of the project Develop a Taroborah Community Investment Program to contribute to Emerald's and the Central Highlands' health, wellbeing and future 	L
RECREATION, LEISURE AND CULTURE While rosters and shift work may preclude Project workers becoming involved in sporting teams and recreational groups to any large degree, their locally residing families should have no such difficulties. Additionally, mine employees may elect to use town sport and recreation facilities, such as swimming pools, cinemas and gymnasiums.	P	M	M/L	<ul style="list-style-type: none"> CHRC Community organisations Local communities 	<ul style="list-style-type: none"> Encourage employees to participate in community and sporting organisations 	L
SOCIAL ORDER Queensland Police reports that Emerald crime statistics have only increased with corresponding population increases. Experience has shown that traditional fears of unruly NRW employees lifting crime rates are largely unfounded. Even towns such as Moranbah and Nebo, where large accommodation camps comprise part of the community, report few incidents of disorder. This can be attributed, in the main, to strict employment conditions and behavioural codes that are imposed on employees as part of their work contracts. As a matter of policy, individuals who display a pattern of anti-social behaviour are identified, counselled, and if necessary, terminated from the project. It is believed that following an initial period of integration by the mine and its employees, and considering the positive contributions that they will make to local communities, negative perceptions associated with the arrival of another construction and mining workforce in the region will be largely dispelled.	N	L	H	<ul style="list-style-type: none"> Qld Govt CHRC Qld Police Community organisations Local communities Taroborah employees 	<ul style="list-style-type: none"> Liaise with Emerald Police to monitor (and where appropriate) address any Project-related impacts on social order Implement a strict employee and contractor behavioural code, in line with community values. The code would apply both on and offsite Implement a comprehensive employee and contractor induction process that comprises social impact management objectives and how to meet them, as well as training for specific issues that arise throughout the life of the project 	L

Impact	Pre-mitigation			Stakeholder	Mitigation/ Opportunity	Post mitigation Long-term risk (H/M/L)
	Nature (P/N)	Probability (H/M/L)	Consequence (H/M/L)			
COMMUNITY FACILITIES AND SERVICES Emerald's considerable community facilities and services are coping with current demand and it is not expected that the Project's small workforce will have any significant impact on capacity. It is anticipated that some community groups will benefit from the Project's proposed Community Investment Program as part of the company's policy to give back to the region. As the mine and its workforce become more entrenched, some managers and employees living in the area may choose to join local service clubs for personal development and to volunteer within the community. Indigenous Community Services As with many Australian Indigenous communities, health, housing and education are three major issues facing Central Highlands Indigenous people. A shortage of competitively-priced accommodation across the regional community has created a situation where overcrowding is commonplace for Indigenous families, leading to other social and behavioural problems. While some rental properties are available through the Central Highlands Aboriginal Corporation, there are long waiting lists for houses and little prospect of improved availability in the short term. Health workers report the presence of health issues common to many Indigenous people and of difficulties in convincing individuals to consult available health services. Trust and credibility are important to Indigenous people, who would prefer to visit a doctor dedicated to Indigenous health.	P/N	M	M	<ul style="list-style-type: none"> CHRC Community organisations Local communities Indigenous communities Taraborah employees 	<ul style="list-style-type: none"> Through the CCC, monitor and address impacts on local facilities and services As part of a Taraborah Community Investment Program (CIP), partner with key community organisations to ensure longevity of critical services Also via the CIP, partner with state and local governments to support programs that contribute to sustainable Indigenous communities – including health, training, employment and business development initiatives 	L
EDUCATION Discussions with the Queensland Department of Education, Training and Employment indicated that enrolment numbers had remained comparatively static (and high) in recent years. It is not anticipated that schools in the study areas will be greatly impacted by the Project in terms of student numbers, particularly during the construction phases. The construction workforce will comprise mostly single males, many of whom will likely be sourced from the Central Highlands region. It is expected that only a small percentage of workforce employees with children, including some mine management, will move to the region on a permanent basis during the construction phases. For the operational phase of the project, it is estimated that many of the Project's employees will be from the local area and others will be encouraged to establish a permanent home in the study areas with their families. A number of employees who move to the area will have school-aged children, but it is not expected that this will create any sudden surge in demand for places at local primary or high schools. Discussions with education personnel indicated that Emerald schools have sufficient facilities and staff capacity to accommodate further enrolments without undue stress. The community's main concern was lack of affordable housing for purchase or rent by teachers. As professionals outside of the mining industry, teaching staff are unable to afford the high accommodation prices (purchase or rent).	P/N	L	L	<ul style="list-style-type: none"> Qld Govt CHRC Local schools Local communities Indigenous communities 	<ul style="list-style-type: none"> Utilise the CCC to keep abreast of changes in population numbers that may affect local schools, especially in relation to affordable housing for teachers 	L

Impact	Pre-mitigation			Stakeholder	Mitigation/ Opportunity	Post mitigation
	Nature (P/N)	Probability (H/M/L)	Consequence (H/M/L)			Long-term risk (H/M/L)
CHILD-CARE <p>While it is not expected that the Project will greatly impact local child-care services (due to low workforce numbers), it is understood that this is a key issue for the region.</p> <p>Child-care facilities in Emerald are under pressure, as demand for places significantly exceeds supply. Emerald currently has an estimated waiting list of more than 400 children requiring child-care places. Availability in day-care for babies and toddlers (0 years to 2 years) is a particular problem. The shortage of places is considered to be a significant barrier to workforce participation, particularly for women in the region. A difficulty for the Central Highlands Regional Council and others planning future child-care needs is the cyclical nature of the mining industry and the corresponding fluctuations in workforce requirements.</p>	N	H	H	<ul style="list-style-type: none"> CHRC Community organisations Local communities 	<ul style="list-style-type: none"> Within the CCC consider current child-care needs and if appropriate, support community strategies to attract private childcare providers to the region and/or encourage CHRC to provide facilities in response to local requirements 	M
HEALTH SERVICES <p>The Central Highlands region and particularly Emerald, enjoys high levels of health services, including the 38-bed Emerald Hospital, which effectively caters for 3,000 patients each year.</p> <p>Consultation revealed that the Central Highlands had difficulty maintaining enough GPs to meet demand; however, this may be mitigated by the impending Federally-funded \$5 million super clinic. Another identified issue involved mining/construction workers seeking Workcover appointments or applying for medical certificates at Emerald Hospital's emergency department. An underlying issue is the lack of affordable housing for health services staff.</p> <p>Demands by Project personnel on local health services will be limited, particularly in the initial construction phase as employees will be expected to utilise the services of their home-area GP. As families move into the region during the operation phase, demand will step up, but due to Taraborah's modest workforce numbers, not to the extent that local resources will be unduly stretched.</p> <p>The Project is also assessing the feasibility of an "Adopt a Doctor" program to help fund a GP for the mine and local area.</p>	N	L	H	<ul style="list-style-type: none"> Qld Govt CHRC Emerald Hospital Local communities Taraborah employees 	<ul style="list-style-type: none"> Through the CCC, monitor and address impacts on health services Encourage NRW/DIDO employees and contractors to make use of medical services in their home bases for non-urgent treatment Work with the CHRC to facilitate the implementation of an affordable housing model in Emerald 	L

Impact	Pre-mitigation			Stakeholder	Mitigation/ Opportunity	Post mitigation
	Nature (P/N)	Probability (H/M/L)	Consequence (H/M/L)			Long-term risk (H/M/L)
EMERGENCY SERVICES <p>Despite the many coal mines in the area and Emerald being a host town for resources employees and their families, the Project would be the only coal mine within Emerald Police's jurisdiction. Local police do not envisage any abnormal levels of criminal behaviour as a result of the Project. Rather, past experience indicates that the number of offences rise and fall in accordance with population levels.</p> <p>A specific issue raised by Emerald Police related to coal trains travelling through the township. While grain, other freight and passenger trains move through Emerald currently, longer coal trains are not currently part of the process. Police envisaged road safety problems with coal trains traversing two major roads at level crossings (three in total) in Emerald. However, the planned length of the coal trains would not be long enough to cause road safety problems.</p> <p>The local ambulance service is currently undermanned, mostly as a result of the two-tier economy, where affordability of housing and cost of living in the region preclude those residents who do not work within the mining industry. This has made recruitment of new officers difficult in terms of replacing those who have left the service or transferred elsewhere.</p>	N	M	H	<ul style="list-style-type: none"> Qld Govt CHRC Emergency services Local communities Taraborah employees 	<ul style="list-style-type: none"> Develop comprehensive Emergency Response and Crisis Management Plans that include direct input from and involvement of, emergency services Implement a detailed Traffic Management Plan in conjunction with emergency services Implement a study into coal train impact on Emerald road use, including investigation of the option for building an underpass in Emerald Ensure that standard "Taraborah" trains are not so long as to traverse (or potentially block if at rest) any two road crossings at the same time Work with the CHRC to facilitate the implementation of an affordable housing model in Emerald Implement a strict employee and contractor behavioural code in line with community values. The code would apply both on and offsite Implement a comprehensive employee and contractor induction process that comprises social impact management objectives and how to meet them, as well as training for specific issues that arise throughout the life of the project 	L
PUBLIC AND COMMUNITY TRANSPORT <p>Emerald is well serviced by public transport, including rail, bus, coach and air.</p> <p>There are many private-bus traffic movements in and around Emerald, with mining companies and contractors transporting employees between work and home. Police have mapped bus movements in an effort to better coordinate private transport activities. To assist, a large floodlit car park has been constructed in Hospital Road as a bus pickup point, where mine employees can leave their private vehicles.</p> <p>Emerald airport is undergoing a \$10 million upgrade to be completed in 2013. The Central Highlands Development Corporation advised that the airport was struggling with traffic during the upgrade, with 12 flights in and out per day, and 257,000 passengers per year (most of them in the mining industry).</p> <p>Any Project construction-related impacts on public transport will be addressed in the Traffic Management Report.</p>	N	M	M	<ul style="list-style-type: none"> Qld Govt CHRC Emergency services Local communities Taraborah employees 	<ul style="list-style-type: none"> Through the CCC, monitor and address impacts on public transport services Implement a detailed Traffic Management Plan in conjunction with emergency services 	L

Impact	Pre-mitigation			Stakeholder	Mitigation/ Opportunity	Post mitigation Long-term risk (H/M/L)
	Nature (P/N)	Probability (H/M/L)	Consequence (H/M/L)			
HIGHWAYS AND ROADS The increasing level of traffic on the Capricorn Highway has been exacerbated by a rise in light vehicle traffic volumes created by DIDO activities between coastal centres and the mining towns. The section between Emerald and Taroborah is of questionable quality, with local residents reporting ongoing road maintenance due to structural problems since the highway base is situated on unstable black soil. This section of the highway is currently covered by an 80 km/hr speed limit and the sector closest to Emerald has also suffered flood damage. At the Project site, the main issues concern provision of an adequate turning lane for vehicles to safely enter and leave the mine, and possible subsidence of the Capricorn Highway as underground mining proceeds under the road. Another major concern is the potential for coal trains to travel through Emerald, across two specific level crossings. The length of train and associated wagons may mean that both level crossings (at Selma Road and Opel Street) are blocked at once, especially if the train is stationary. This may create road safety issues when emergency vehicles are prevented from moving between the north and south of Emerald township. However, note that the planned length of the coal trains would not be long enough to cause road safety issues.	N	M	H	<ul style="list-style-type: none"> Qld Govt CHRC Emergency services Local communities Taroborah employees 	<ul style="list-style-type: none"> Implement a detailed Traffic Management Plan in conjunction with emergency services Implement a study into coal train impact on Emerald road use, including investigation of the option for building an underpass in Emerald Ensure that standard "Taroborah" trains are not so long as to traverse (or potentially block if stationary) any two road crossings at the same time Encourage safe driving behaviour by employees and contractors with education and awareness programs, reiterating the expectation of responsible driving to and from the workplace 	M
UTILITIES Exploratory drilling for the Project indicated that a sufficient quantity of water (with acceptable quality for mining and coal processing operations) could be sourced from the aquifer beneath the project. There is concern that groundwater use will impact on surrounding bores and other water sources critical to affected landholders and the region as a whole. The Project's construction waste is likely to include green waste, concrete materials, timber, metals, hydrocarbons, sewage, exhaust emissions, tyres and paint materials. Operations waste is expected to include green waste, batteries, hydrocarbons, sewage, exhaust emissions, scrap metal, tyres, water treatment plant waste, tailings and other general waste. Consequently, waste management principles will be employed for the life of the Project, including recycling wherever possible (to external recyclers) and planned disposal of what cannot be recycled either temporarily onsite or to a registered waste disposal contractor. While the town of Emerald receives good quality mobile phone and internet reception, mobile phone and internet reception are marginal on the Project site and in the Gemfields, located to the west of the Project	N	M	H	<ul style="list-style-type: none"> CHRC Utility providers Landholders Local communities 	<ul style="list-style-type: none"> Facilitate regular meetings with affected landholders to monitor impacts and mitigation Liaise directly with CHRC, providers and agencies to monitor and address impacts on water, waste, energy, telecommunications and other utilities Implement suitable environmental management practices Regularly and transparently monitor water source impacts throughout the life of the project Implement a Project Communications Study Refer to Section 4.5 of the Taroborah EIS for the project's Groundwater Impact Assessment 	M
BUSINESS AND ENTERPRISE Local businesses have been under pressure since the Global Financial Crisis and subsequent mining industry downturn, so are actively seeking commercial opportunities. The Project will encourage local businesses to tender for supplies and services during both construction and operation. The Project will liaise with the Industry Capability Network (ICN), Regional Services of the Department of State Development and Infrastructure Planning and local business groups, such as the local Chamber of Commerce and Central Highlands Development Corporation (CHDC), in order to facilitate participation by local suppliers.	P	H	H	<ul style="list-style-type: none"> DSDIP, Regional Services ICN CHRC COC CHDC Local businesses Indigenous businesses 	<ul style="list-style-type: none"> Work with ICN and local business groups to maximise local business skills for project participation Communicate clear prequalification requirements to local businesses and provide mentoring/training where required 	L

Impact	Pre-mitigation			Stakeholder	Mitigation/ Opportunity	Post mitigation Long-term risk (H/M/L)
	Nature (P/N)	Probability (H/M/L)	Consequence (H/M/L)			
TOURISM It is expected that the region will continue to attract visitors, particularly during the winter months when 'grey nomads' are frequent users of the Capricorn Highway. During mine construction, tourists will potentially compete with mine workers for available short-term accommodation (e.g. motels, hotels and caravan parks), while road safety may be further compromised, as recreational vehicles increase the volume of traffic using major road corridors.	N	M	M	<ul style="list-style-type: none"> Qld Govt CHRC COC CHDC Local businesses Local communities 	<ul style="list-style-type: none"> Utilise the CCC to monitor short-term accommodation take-up rates and to develop mitigations if required Encourage safe driving behaviour by employees and contractors with education and awareness programs, reiterating the expectation of responsible driving to and from the workplace Assist with the development of an education program for the recreational vehicle community, particularly in relation to driving protocols when engaging with wide and heavy loads 	L
LOCAL EMPLOYMENT AND TRAINING The Project is openly committed to employing locally. However, lower than average unemployment levels in the region, together with an increasing demand for workers from a strong resources industry throughout the state, may lead to a skills shortage for the Project. Unskilled and semi-skilled people working in the region's traditional agricultural and forestry industries may not have the range of experience or skills that can be directly transferrable to the mining industry; however, with adequate training, many could take up positions such as plant operators and tradespersons' assistants. Regional high schools already provide school-based traineeships and apprenticeships and as local employer, Shenhua will work with education authorities, particularly through the Queensland Minerals and Energy Academy (QMEA), to ensure school curricula are aligned to the skills needs of the Project. One of the issues identified for the regional Indigenous population is a lack of formal education, leading to a lack of employment and training opportunities. Shenhua will work with mining industry groups and government authorities to improve retention of Indigenous students at high school, and look to support transition to apprenticeships and traineeships available in the resources sector for both mine construction and operations. As an equal-opportunity employer, Shenhua is also committed to employment and promotion practices that encourage female participation and retention. The company supports the leading practice principles outlined in the Queensland Resources Council's 'Women in Resources' action plan to attract and retain female employees. Overall, women represent 14% of Queensland Resource Council (QRC) member company employees.	P	H	H	<ul style="list-style-type: none"> Qld Govt QMEA CHRC Local businesses Local communities Indigenous communities 	<ul style="list-style-type: none"> Communicate Shenhua's local employment commitment to surrounding communities in order to encourage local participation in the Project, including minority groups (e.g. Indigenous groups and people with a disability) Implement schools program (including work experience), with the aim of attracting local students to the project and the mining industry Work with local Indigenous communities to identify potential candidates for apprenticeships, traineeships and general employment Collaborate with Skills Queensland and the Kinetic Group (formerly Mining Industry Skills Centre) to help develop a strategy to maximise workforce skills and promote the sustainability of the coal industry in Queensland 	L

Impact	Pre-mitigation			Stakeholder	Mitigation/ Opportunity	Post mitigation Long-term risk (H/M/L)
	Nature (P/N)	Probability (H/M/L)	Consequence (H/M/L)			
HOUSING AND ACCOMMODATION The cumulative effects of resources development in the Central Highlands, as well as property speculation, have been impacting housing availability and affordability for some time. While Emerald median house and land prices have recently stabilised, many community members are still being priced out of the market. The trend is similar for rental properties. However, with progress of various new residential developments in the local area, Emerald housing and unit stock could potentially increase by more than 50%, which should alleviate local accommodation pressures. In particular, the Project is not expected to have significant impact on housing availability and affordability during the construction phase, as the workforce will most likely operate on a DIDO basis, taking up short-term accommodation during their shifts. For the operations phase, Shenhua will be encouraging its employees who are not already part of the Emerald and surrounding community to relocate to the township. Due to property market softening and the small workforce, the Project will have some impact on short-term housing availability via the arrival of new families to the region but is not expected to cause market stress.	N	M	H	<ul style="list-style-type: none"> Qld Govt CHRC Local businesses Local communities 	<ul style="list-style-type: none"> Through the CCC, participate in development of a regional planning framework Utilise the CCC to monitor population growth and corresponding need for housing development Support CHRCs soon-to-be-implemented affordable housing strategy Develop a project-specific Workforce Accommodation Strategy, aligned with the Qld Government's Major Resource Project Housing Policy, which includes rostering, travel to site, local housing, short-term accommodation, DIDO impact, etc. 	M
SHORT-TERM ACCOMMODATION Central Highlands hotels and motels had 6.7 % availability in 2012 due to NRWs, contractors and associated workers making use of the accommodation on a long-term basis. This figure represents a four percent increase from the previous year but still reflects a tight market. The estimated construction workforce that will be assigned to the Project is relatively small (150 peak) and is expected to moderately impact short-term accommodation availability; however, for Project operations, employees not already living in Emerald will be expected to relocate permanently to the region and therefore, should not have need to make use of temporary or short-term accommodation. Representatives from various utilities and supplier companies may boost demand for short-term accommodation in the region, particularly during the construction period.	N	H	H	<ul style="list-style-type: none"> CHRC Local businesses Local communities 	<ul style="list-style-type: none"> Utilise the CCC to monitor short-term accommodation take-up rates and to develop mitigations if required Develop a project-specific Workforce Accommodation Strategy that includes rostering, travel to site, local housing, short-term accommodation, DIDO impact, etc. 	M

Impact	Pre-mitigation			Stakeholder	Mitigation/ Opportunity	Post mitigation
	Nature (P/N)	Probability (H/M/L)	Consequence (H/M/L)			Long-term risk (H/M/L)
<p>WORKFORCE ACCOMMODATION</p> <p>The Project will operate on a 24-hour, seven-day-a-week basis, with two to three rotating shifts of workers. Rosters have yet to be finalised; however it is anticipated that opencut employees will work standard 12-hour shifts, while the Project's underground employees will work 10-hour shifts. The construction workforce will utilise short-term accommodation, while operations employees and their families will be expected to relocate to the region.</p> <p>There is currently a reasonable level of property availability in Emerald, both in the home purchase and rentals markets, as well as a good quantity of appropriately zoned land for development.</p> <p>DIDO</p> <p>While Shenhua has committed to employing locally and to encouraging staff sourced from outside of the study areas to relocate to the region, it is envisaged that some will not reside in the Emerald area. These employees will be required to operate on a DIDO basis, whereby they will be based in other Central Highlands centres or further afield, and drive to and from Emerald at the start and completion of each shift (utilising short-term accommodation while on shift and BIDO arrangements to get to the mine site).</p> <p>Currently, the majority of Central Highlands operational resources workers reside in the Central Highlands region; however, Rockhampton and Gladstone have become key residential hubs for the DIDO operational workforce.</p> <p>The DIDO worker has to manage a lifestyle based on regular absences from family, travelling comparatively long distances to and from work, living in confined accommodation and living with a predominantly male population during work periods.</p> <p>Like any additional stress on family life or relationships, DIDO can magnify existing social problems at home or in some cases help to hide them, only for the problems to reappear at a later date. On the positive side, DIDO enables people to take advantage of better wages and conditions in the mining industry, without the need for family to change houses or schools, or to form new social networks. In many cases, it also allows important ties to be maintained with extended family members.</p> <p>A report on workforce turnover in Australian fly-in/fly-out mining operations, conducted by the University of Queensland's Centre for Social Responsibility in Mining, indicated that rosters such as nine-days-on/five-days-off and eight-days-on/six-days-off, were generally associated with lower employee turnover rates; and there was evidence that 14-days-on/seven-days-off rosters could also be managed with a comparatively low turnover rate.</p>	P/N	M	M	<ul style="list-style-type: none"> Qld Govt CHRC Local businesses Community organisations Local communities Taraborah employees 	<ul style="list-style-type: none"> Develop a project-specific Workforce Accommodation Strategy that includes rostering, travel to site, local housing, short-term accommodation, DIDO impact, etc. Implement a strict employee and contractor behavioural code in line with community values. The code would apply both on and offsite Implement a comprehensive employee and contractor induction process that comprises social impact management objectives and how to meet them, as well as training for specific issues that arise throughout the life of the project Encourage Project employees to reside locally 	L
<p>COMMUNITY HOUSING</p> <p>Demand for Emerald rental properties by resources personnel and contractor staff will continue to impact people on low or fixed incomes who do not own their own homes and are currently renting in the region. Relatively high rental levels may preclude this sector from continuing to live where they may have resided for many years and in some cases, this will mean displacement from family, friends and familiar surroundings.</p> <p>There are a significant number of social houses in the Emerald area; however, the majority of these have long wait lists. This creates problems for disadvantaged families, where in some instances, overcrowding has become an issue (particularly for Indigenous families).</p>	N	M	H	<ul style="list-style-type: none"> Qld Govt CHRC Community organisations Indigenous communities Local communities 	<ul style="list-style-type: none"> Utilise the CCC to monitor community housing availability and to subsequently implement regional mitigation programs Develop a Taraborah Community Investment Program, in order to contribute to Emerald's and the Central Highlands' health, wellbeing and future 	

Impact	Pre-mitigation			Stakeholder	Mitigation/ Opportunity	Post mitigation Long-term risk (H/M/L)
	Nature (P/N)	Probability (H/M/L)	Consequence (H/M/L)			
CULTURAL HERITAGE Native title claimants for the proposed Taroborah Project area are the Western Kangoulou People and Bidjara #7 People. While no Native Title determination has been agreed over the region containing the Project, Shenhua liaises directly with the registered cultural heritage body on cultural heritage issues. There are three sites of cultural heritage value located within the general vicinity of the Project site. Two have been identified as 'story places or cultural sites', and the third has been classified as 'engravings and paintings'. They are all located south of Lake Maraboon, approximately 20 km south of the Project site. Consequently, it is not anticipated that Project activities will have an adverse impact on sites of significant Indigenous cultural heritage. However, cultural heritage artefact clusters have been identified on the Project site and over half of these artefacts were salvaged and deposited at the Western Kangoulou keeping place, on the Ensham Mine east of Emerald. It is not anticipated that the Project will have a significant impact upon Indigenous cultural use of local flora and fauna since no vegetation community in its entirety will be permanently impacted by Project activities.	P	H	M	<ul style="list-style-type: none"> Qld Govt CHRC Traditional Owners (TO's) Indigenous communities 	<ul style="list-style-type: none"> In conjunction with appropriate TO's implement Taroborah's Cultural Heritage Management Plan Work with local Indigenous communities to identify potential candidates for apprenticeships, traineeships and general employment 	L
NOISE AND VIBRATION Construction and mining operations will bring increased noise levels to the region around the Project site and the explosives that will be used for blasting during opencut operations may be heard up to several kilometres away. These noise levels will impact on human amenity, as well as having the potential to distress livestock within the mine's regional footprint. Houses and other structures in the vicinity of mining operations can be impacted by low levels of ground vibration from overburden blasts and heavy machinery operation.	N	M	H	<ul style="list-style-type: none"> Qld Govt Landholders 	<ul style="list-style-type: none"> See Section 4.7 of the EIS 	L
DUST Concerns about dust hazards were expressed by a number of landholders. Several mentioned the hazards of dust from construction and mining operations as a potential health issue, while others were concerned about dust residue affecting the quality of pastures for cattle grazing.	N	M	H	<ul style="list-style-type: none"> Qld Govt Landholders 	<ul style="list-style-type: none"> See Section 4.6 of the EIS 	L
SUBSIDENCE Longwall underground mining will create land subsidence in the northern sector of MDL467. Such subsidence will have limited and manageable impacts upon the Capricorn Highway, Central West rail line, vegetation communities, local dams, landform, livestock, terrestrial and aquatic flora and fauna and underground services. Impacts upon local residents are anticipated to be minimal.	N	H	L	<ul style="list-style-type: none"> Qld Govt Landholders Queensland Rail Department of Transport and Main Roads Telstra NextGen 	<ul style="list-style-type: none"> Refer to Sections 4.2 and 4.8 of the Taroborah EIS 	L

Impact	Pre-mitigation			Stakeholder	Mitigation/ Opportunity	Post mitigation Long-term risk (H/M/L)
	Nature (P/N)	Probability (H/M/L)	Consequence (H/M/L)			
LIGHTING Because the Project will operate on a 24-hour basis, large banks of lighting will be required to illuminate the mining areas at night. The mine preparation plant and fleet of large mobile equipment will also be well lit. It is envisaged that strong external lighting will also predominate during the mine's construction phase. The extent of this lighting may impact on those properties adjacent to the mining leases.	N	M	H	<ul style="list-style-type: none"> Qld Govt Landholders 	<ul style="list-style-type: none"> See Section 4.2 of the Taraborah EIS 	L
VISUAL AMENITY The Project, particularly the opencut mine; will impact on the visual amenity of the area. By its nature, opencut mining involves the disturbance of land to extract the resource, producing substantial voids and out-of-pit spoil dumps. Over time, rehabilitation of the spoil dumps will create a new undulating landform profile that is higher than the original surrounding countryside. A buffer zone around the mining operations will partially conceal the pits, infrastructure and mobile equipment from public view but they will, nevertheless, be observed by a number of landholders whose properties are located near the mining lease.	N	M	M	<ul style="list-style-type: none"> Qld Govt Landholders 	<ul style="list-style-type: none"> See Section 4.2 of the Taraborah EIS 	L
MINE CLOSURE As development of the region's coal resources helps to provide economic diversity and stability, it should be remembered that the resource is finite and will be depleted. Current estimates indicate a Project mine life of up to 22 years (including mine construction, operations, closure and rehabilitation), so it is important that a strategy is developed over the life of the Project, to manage the social impacts leading up to and including the mine's closure. Consideration should also be given to other factors that may influence the closure or major downsizing of the mine prior to this time, including industry restructuring, government policies and/or market forces. Open consultation will be required with other stakeholders to promote long-term economic diversification, so that residents can choose to remain in the region and services can be maintained to a high standard, after the mine has closed. Agriculture will continue to remain important to the region during and beyond the Project, but it is also essential to support current businesses and attract new ones, in order to build economic resilience and thus viable communities for the longer term. An example of successful economic diversification is demonstrated in the Western Australian mining towns of Kalgoorlie/Boulder, where following the exhaustion of nickel reserves, the community rallied to use their high quality infrastructure to establish a successful mining services sector. Qualities demonstrated by the community in support of such an achievement were self-sufficiency, entrepreneurialism, mutual support and individual initiative.	P/N	H	H	<ul style="list-style-type: none"> All 	<ul style="list-style-type: none"> Implement and communicate to community stakeholders Taraborah's mine rehabilitation program Through the CCC, support local businesses to maintain their customer bases, post mine decommissioning See Section 3.7 of the Taraborah EIS 	L