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Queensland Rail

## **Northern Missing Link EIS**

Social and Economic Impact Assessment

Report

January 2006



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## Acronyms

ABS	Australian Bureau of Statistics
CD	Collection District
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
IAS	Initial Advice Statement
MIM	Mount Isa Mines
PCQ	Ports Corporation Queensland
NML	Northern Missing Link
QR	Queensland Rail
SEIA	Social and Economic Impact Assessment
SLA	Statistical Local Area
ToR	Terms of Reference



## 1. Introduction

This report provides an analysis of the real and perceived social and economic impacts associated with the proposed North Goonyella to Newlands rail link, commonly referred to as the Northern Missing Link (NML). The NML is situated in the Central Queensland Bowen Basin Coal Fields, directly west of the township of Glenden.

This Social and Economic Impact Assessment (SEIA) forms part of the Environmental Impact Statement (EIS) being prepared for Queensland Rail by independent consultants GHD Pty Ltd.

The objective of this SEIA is to anticipate and predict social and economic impacts, so findings and recommendations can become part of the project's planning and decision-making process. The SEIA provides a systematic assessment of the projected changes in the quality of life of local and regional communities, as a result of the currently proposed NML project.

The SEIA considers the social and economic impacts associated with three geographic areas:

- » Local (ABS Collection Districts along the proposed corridor);
- » Regional (ABS Statistical Local Areas along the proposed corridor where local people would access products and services); and
- » State (Queensland).



## 2. Background

### 2.1 The Queensland Rail (QR) Northern Missing Link Proposal

The proposed NML is situated in the Central Queensland Bowen Basin coal fields, directly west of the township of Glenden. The proposal involves the construction of a 69 km rail link between North Goonyella and Newlands Coal mines.

The full Missing Link project will extend from the Goonyella system through to the Abbot Point Coal Terminal, however the EIS (and subsequent SEIA) refers only to the Greenfield portion of the railway connecting the Goonyella and Newlands systems.

The line would be a single 60kg rail, 26.5 TAL on concrete sleeper tracks with a desirable 80km/hr train speed. Initially, the line will utilise diesel locomotives. However, future plans for electrification are being considered. The rail corridor would be 60m wide and include three passing loops (at North Goonyella, midway and at Newlands). Works will include:

- » Construction of additional work sites (temporary accommodation, storage, machinery yards, ballast and stockpiles);
- » Construction of access and maintenance tracks;
- » Construction of culvert and drainage;
- » Installation of a fibre optic link for communications and signalling; and
- » Installation of remote control signalling.

The rail link will allow coal trains presently operating on the Goonyella system (from the Central Queensland coal fields) currently using the facilities at Dalrymple Bay, to unload at Abbot Point (near Bowen). Likewise, coal trains loading at Newlands and presently using Abbot Point, would have the option of unloading at Dalrymple Bay. Coal can also be railed from Newlands to Hay Point.

The choice of port facilities (Dalrymple and Abbot Point) is strategically important as the facilities at Hay Point are reaching maximum capacity. Choice of port facilities would further allow blending of coal as required to meet overseas customer's requirements.

The presence of the rail link is expected to foster new mines in the region as well as provide a strategic emergency link if the North Coast Line is closed.

#### 2.1.1 The Proposed Corridor

The route of the proposed rail link commences on the relatively flat lowlands, at North Goonyella. The route generally heads north for approximately 40kms through mainly brigalow country that has been extensively cleared for low intensity grazing pasture. The topography then changes to hilly rubble covered rises and low basalt ridges and basalt plus of the Leichhardt Range. The selected route circuits several of the major ridges and ascends into the range before descending to the existing rail line at Newlands mine.





The proposed route travels through seven properties under grazing leases and three Shires. Two homesteads, Wollombi and Denham Park are located within two kilometres from the proposed line. The proposed route also travels through three native title claims.

## **2.2 Methodology**

The methodology adopted for the SEIA has been tailored to the project Terms of Reference, incorporating a range of integrated research and consultation activities. The outcomes of these activities have been used to inform the social and economic impacts identified in this report. The activities have included:

- » A review of the local and regional study areas including general development (local history), population trends, economic drivers and environmental qualities;
- » A comparative analysis of the social characteristics of the local, regional and state ABS 2001 Census statistics.
- » Focused consultation with key informants from the local government councils to determine existing levels of demand on services and potential impacts associated with the proposed railway;
- » One-on-one meetings with all directly affected landowners;
- » A review of two related railway projects in the region and the impacts of these railways during construction and operation on local and regional communities; and
- » Identification and consideration of potential mitigation measures to address the likely social and economic impacts.

A field trip was conducted between 26 and 30 September 2005 to meet with affected landowners and shire council representatives.

Sections of the draft report were submitted to directly affected landowner and Council representatives to ensure accuracy of information portrayed in this report. Comments received from the landowners and from councils were incorporated into the final draft submitted to QR.



## 3. Railway Case Studies

This section provides an overview of the construction and operation of similar railway projects in the region and an analysis of the identified social and economic impacts. The two case studies are:

- » Northern Bowen Basin Rail Link;
- » Togara North Rail Spur; and

It is recognised that while these case studies will identify potential social and economic impacts, the scale and nature of such impacts may differ significantly to those that may or do arise for the NML.

### 3.1 Northern Bowen Basin Rail Link

In 2001 a review was undertaken of the Environmental Factors for the Northern Bowen Basin Rail Link (NBBRL).

The socio-economic analysis of the Northern Bowen Basin Rail Link was intended to demonstrate the overall benefit to the community and to include the costs to cattle graziers within the study area based on property fragmentation. The socio-economic analysis was not considered necessary as the overall benefits to the community would be maintained through the implementation of the proposed Environmental Management Plan (EMP) to be developed as part of the environmental management process adopted for the project.

#### 3.1.1 Economic Impacts

The economic impacts of the NBBRL were identified for the construction and operation phases of the project, however both phases predicted to generate positive flow-on economic impacts.

- » Construction Impacts (using input-output multipliers)
  - For every dollar output spent on construction in a particular year, \$1.21 to \$1.55 will be spent in the Mackay region; and
  - For every construction job created in a particular year, the total regional impact on Mackay would be 1.22 to 1.74 jobs
- » Operation Impacts
  - The major beneficial impact of the operation phase of the NBBRL will be the enabling of the proposed Hail Creek Coking Mine to effectively function.

#### 3.1.2 Social Impacts

The following social impacts were identified:

- » Cattle grazing properties directly affected;
- » Fragmentation, disruption and access issues for affected properties;
- » Changes to lifestyle opportunities and amenity of area;



- » Change to property values;
- » Construction vehicle impact on local traffic;
- » Safety issues (of people and livestock); and
- » Resumption and compensation.

### **3.2 Togara North Rail Spur**

The Togara North Rail Spur is near Emerald, Rockhampton and Gladstone with the rail corridor travelling through pastoral properties. The social impacts identified in the Social and Economic Study were:

- » Properties directly affected;
- » Labour force accommodation; and
- » Construction vehicle impact on local traffic.

The Study also predicted that there would be positive flow-on economic impacts during the construction and operation phases of the project. Flow-on positive economic impacts would be local employment and increased regional and state benefits from the operation of the mine related to the Togara North Coal Mine.

### **3.3 Summary**

Based on the two case studies, there are a number of consistent impacts from railway lines through rural areas. These impacts have been incorporated into Section 8, Impacts and Mitigation Measures.



## 4. Local and Regional Profiles

### 4.1 Introduction

The following section provides an introduction and the context of the local and regional study areas. It provides an overview of the history and settlement patterns, key economic drivers and environmental qualities.

### 4.2 Local Study Area

The local study area for this SEIA is defined by the ABS Collection Districts along the proposed NML corridor. The proposed corridor does not include any of the local towns in the region – these will be addressed in Section 4.3.

The history of the local study area has been collated based on anecdotal information provided by the directly affected landowners and representatives of the Nebo and Belyando Shire Council. This section is not intended to be a comprehensive history, but rather to show that the directly affected landowners have a significant historical link to the properties they currently own to the region in which they live, work and socialise.

Three of the landowners families have been in the region for 3 to 4 generations, with two families able to trace their history to the 1880's. *Behold Nebo: A History of the Nebo Shire* documents the writings of James Perry who was writing for Mackay's *Daily Mercury* in the 1940s when he was in his seventies<sup>1</sup>. All of the landowners can trace their family history to the region for at least 2 generations, taking them back to the 1950's. Each of the properties have been improved and worked as cattle stations.

This historical link to the properties and the region creates a strong sense of place for the landowners. They and their families before them have seen the development of the coal industry around their properties since the 1960's. They have also seen the development of the support infrastructure for the mines and other industry develop in the region, direct impact their properties, e.g. water and gas pipelines.

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<sup>1</sup> Mayes, G. A. 1991 *Behold Nebo: A History of the Nebo Shire* R and R Publications p. 1



## 4.3 Regional Study Area

### 4.3.1 Development History

The development history looks at the towns that have influenced the area and are likely to be directly impacted on by the proposed railway:

- » Glenden;
- » Moranbah;
- » Nebo; and
- » Collinsville.

**Table 1 Summary of Development History of Regional Towns Impacted by the Proposal**

Town	Shire	History
Glenden	Nebo	Mount Isa Mines (MIM) developed the town of Glenden as part of their development of the Newlands Coal Mine in 1982. Glenden is an 'open town' so although the town and its facilities were built by the company, the services and public facilities are administered by the Nebo Shire Council.
Moranbah	Belyando	<p>The area was settled in the 1850s by pastoralists Andre Scott who called his cattle station <i>Moranbah</i>. The original township was built on the banks of the slow flowing Grosvenor Creek, and was named after the nearby Moranbah Station.</p> <p>According to Murray, A (1996:vii) "Moranbah is, first and foremost, a mining town. It owes its existence and prosperity to coal. The schools, shops and services are there to serve the miners and their families." The majority of the miners living at Moranbah work at the BHP Australia Coal owned mine <i>Goonyella-Riverside</i>.</p>
Collinsville	Bowen	The Collinsville area was initially grazed, with the Strathmore Station established in 1861. During the 1880's several gold mines were operating in the area with reports of large coal deposited in 1865. The main township of Collinsville was named in 1921 when 20 homes were erected. The State-owned mines closed in 1961 and were reopened under private ownership in 1963. Today the open cut mine is operated by Xstrata Coal with THEISS contractors being the main operators. <sup>2</sup>
Nebo	Nebo	According to Mayes (1991:1) the first European to pass through the area now known as Nebo Shire was Ludwig Leichhardt in 1845 naming many of the areas to the south and west of the Shire. In 1856 William

<sup>2</sup> Source: Bowen Shire Council *Bowen and Collinsville 2005/2006* pp. 50-51



Town	Shire	History
		<p>Landsborough named most of the eastern area of the Shire.</p> <p>James Perry, an early historian wrote extensively for the Mackay <i>Daily Mercury</i> in the 1940s when he was aged into his seventies. In 1949 one of Perry's published articles refers to "In the early 1860's there was a great movement of sheep and cattle from the Rockhampton area to the Bowen district, and stations were being set up on the Issac and Suttor Rivers."</p> <p>According to Mayes (1991:53), Nebo Shire and district had a total of eight towns since 1865, with only four remaining, two having completely disappeared and one only existing on a paper plan. Only Nebo, Glenden and Coppabella can still be called centres of population, but another three towns exist if only in part (Fort Cooper, Epsom and Hazeldean).</p>

#### 4.3.2 Indigenous History

The Archaeological and Cultural Heritage Assessment conducted for the Project by Pam Hegarty, Imber Bargula Cultural Heritage Consultant (September 2005 p. 9), states:

*'Cattle grazing (in Harte 1996) appears to have the dominant industry in the region. The sudden and overwhelming influx of these new people and their cultures brought conflict in competition for the regions resources and a rapid disruption of the Aboriginal lifestyle. While the Aboriginal people fought to protect their land and culture the settlers battled to win a living from the area.'*

Mayes (1991:21) writes that in 1860 it is believed that there were four *tribes* with an estimated population of 500 people each living in the Nebo region. In the 1890s those Indigenous people who had not left the area or gained employment on the cattle stations were relocated to Townsville. Mayes (1991:22) also writes that many Aboriginal people lost their lives during the large influenza epidemic in the region in 1916.

#### 4.3.3 Existing Economic Drivers

The main economic driver for the region is the coal industry and to a lesser extent the beef cattle industry. The Nebo Shire Council website states that the region has had significant regional growth in coal, with five new operational coal mines and the potential and capacity for another seven coal mines<sup>3</sup>. Traditionally the region has relied on the cattle industry for its main source of income. Recently agricultural crops including sugar, sorghum and grain have expanded in the region. Tourism does not provide a substantial income in the region.

<sup>3</sup> [www.nebo.qld.gov.au](http://www.nebo.qld.gov.au) October 2005



#### **4.4 Summary**

The region (where the proposed NML is to be constructed and operated) has a strong cultural link for the native title holders and a strong historical link for the directly affected landowners. The native title holders and their previous generations have seen and experienced the changing landscape and impacts on their livelihoods caused by cattle grazing, mining and supporting industries. The landowners and their previous generations have seen and experienced the changing landscape and felt the impacts on their livelihoods caused by the mining industry.

With the coal industry dominating in the region, there is a feeling of being taken over and a strong sense of survival for the cattle industry.



## 5. Community Services and Facilities

### 5.1 Introduction

A key aspect of assessing the social and economic impact of the NML is the capacity for the services and facilities in the local and regional area to respond to the needs of the people directly impacted by the project.

### 5.2 Local Study Area

The local study area for this SEIA is defined by the ABS Collection Districts along the proposed NML corridor. There are no community service providers or facilities operating out of the local study area. All services are providers out of the regional study area which is addressed in Section 5.3.

Directly affected landowners do access services in the regional study area with some landowners preferring Moranbah or Glenden for minor purchases for food, however others travel to Mackay or Bowen for larger purchases. Where there are children on the properties, they receive schooling at home. In some situations the landowners have access to medical services provided by the coalmines.

Landowners provided examples of how it is difficult to access trade services (such as auto electricians, mustering services and fencing contractors) because of the mines absorbing all the local trades with high wages.

Landowners said they did not think that the NML would impact on their ability to access services and facilities.

### 5.3 Regional Study Area

The community services and infrastructure provided in the regional study area is summarised in Table 2. Collinsville, Moranbah and Glenden provides the highest level of community and infrastructure services, part of this reason is the strategic expansion of the town for the mining industry and the designing and development of services specific to the industry and its workers.

Other towns in the region are older and their growth and expansion (or contraction) has been historically based on the cattle industry. The smaller towns do provide some services to the coal industry but are not established the same way as Moranbah or Glenden (refer to Section 4.3).

When assessing the impacts of the construction camp on local and regional services, it is important to ensure that the construction camp does not drain the existing services – creating indirect negative impacts on the local and regional communities.





**Table 2 Summary of Community Services**

<b>Service</b>	<b>Moranbah</b>	<b>Glenden</b>	<b>Nebo</b>	<b>Collinsville</b>
<i>Medical</i>				
Hospital	ü			ü
Pharmacy	ü			ü
Community/Regional Health Centre		ü		ü
Medical Centre		ü		ü
Mental Health Centre	ü			
Dentist	ü			ü
Physiotherapy	ü			ü
Optometrist	ü			ü
<i>Child Care and Health</i>				
Day Care Centre	ü			ü
<i>Emergency Services</i>				
Police	ü	ü	ü	ü
Fire Brigade <sup>4</sup>	ü	ü	ü	ü
Ambulance	ü			ü
SES	ü			ü
Crisis and Counselling Services	ü			ü
Aged Care	ü			ü
<i>Housing Services</i>				
Real Estate	ü			ü
Department of Housing	ü	ü	ü	ü
<i>Other</i>				
<i>Education</i>				
Pre-school	ü	ü		ü
Primary School	ü	ü		ü
High School	ü	ü		ü

<sup>4</sup> Including Rural Fire Brigade



Service	Moranbah	Glenden	Nebo	Collinsville
Youth Activities				ü
<i>Sporting and Recreational</i>				
Golf Club	ü	ü		ü
Organised Team Sports	ü	ü		ü
Rodeo			ü	
Other				ü
<i>Public Transport</i>				
Bus	ü			
<i>Shopping Facilities</i>				
Food	ü	ü		ü
Clothes	ü	ü		ü
Furniture/Electrical/Music	ü			ü
Hardware	ü			ü
Miscellaneous <sup>5</sup>	ü	ü		ü
<i>Cultural Centres</i>				
Churches	ü	ü		ü
Community centres/Art Facilities	ü			ü
Museum				ü
Library	ü	ü		ü
<i>Services</i>				
Banks	ü	ü		ü
Plumbing, carpentry, mechanical	ü			ü
Veterinarian	ü			ü
Australia Post	ü	ü	ü	ü
Service Station	ü	ü	ü	ü
Legal and Financial Advisors	ü			
<i>Communications</i>				
Telephone	ü	ü	ü	ü

<sup>5</sup> Newspapers, books, gift shops etc



<b>Service</b>	<b>Moranbah</b>	<b>Glenden</b>	<b>Nebo</b>	<b>Collinsville</b>
Internet	ü	ü	ü	ü
Television	ü	ü	ü	ü
Radio	ü	ü	ü	ü

#### **5.4 Summary**

It is important to review the community services and infrastructure for the NML, particularly in the assessment of directly related impacts from the construction camp. The impacts on the community services and infrastructure during the operational phase will be minimal due to the limited increase in employment numbers.



## 6. Community Profile

### 6.1 Introduction

The following section provides an overview of the demographics of the local, regional and state study areas. Data was obtained using the Australian Bureau of Statistics CDATS 2001.

The demographic data has been classified into three study areas:

- » Local – the ABS Collection Districts along the proposed corridor:
  - Belyando – 3031504
  - Nebo – 3031604, 3052002, 3052004 and
  - Bowen - 3050601
- » Regional – the ABS Statistical Local Areas along the proposed corridor:
  - Belyando – 340100600
  - Nebo – 340105700 and
  - Bowen - 340100950
- » State – ABS State.

It should be noted that the Census statistics quoted in this Report are from 2001 and there has been a significant developments in the growth of the coal industry in the region. Impacts of the growth of the coal industry since 2001 (such as increase in employment, tenure of dwellings and household weekly income) will not be reflected in the statistics of this report.

Based on anecdotal reports the statistics do not accurately reflect the transient mining workers in the region. It was reported by a number of sources as part of the consultation for the SEIA that a significant proportion of the mine employees live in Mackay with their families and travel to and from the mine sites for shifts, and that their details would be reported in the Mackay SLA. The Mackay SLA is not included in this report.

Where possible, this report has included the current statistics published by the Queensland Department of Local Government and Planning's Planning Information and Forecasting Unit.

The statistics reporting in this section of the report are the relevant tables combining local, regional and state statistics. The tables referring to local and regional information are in Appendix 2.



## 6.2 Population

**Table 3 Local, Regional and State Population (B01 2001)**

	Local	Regional	State
Total Persons	1,586	26,110	3,655,139
Total Male	1,136	14,279	1,807,730
Total Female	450	11,831	1,847,409
Total 14 and under	263	4,252	762,542
Total 65 and over	198	2,887	450,900

Of the Queensland population, 0.125% live in the area defined as local in this report and only 0.714% of the Queensland population live in the area defined as regional in this report.

Six percent of the regional population live in the area defined as local in this report. The highest percentage of the local population live in the 3052004 ABS Collection District which is located in the Nebo SLA<sup>6</sup>.

The local male to female population ratio is significantly different to the regional and state male for female population ratio. The local ratio is 72 males to 28 females, the regional ratio is 54:46 and the State ratio is 49:51.

There is significantly less 14 year old people under the local and regional areas as compared to those in Queensland. At the local and regional area only 16% of people are 14 years old or younger, compared to 20% in Queensland.

According to the Population and Housing Fact Sheet for Belyando Shire<sup>7</sup>, the preliminary estimated resident population of the Shire at 30 June 2004 was 10,524, with an increase of 24 people or 0.2% over the year. Medium series population projections prepared by the Queensland Department of Local Government, Planning, Sport and Recreation indicates that by 2011 the expected population of Belyando Shire will be 9,848 people. If mining expansion occurs, the population is projected to reach 15,095 by 2006. In the year to June 2004, natural increase (births minus deaths) accounted for an increase of 142 people while assumed net migration resulted in a loss of 118 people.

According to the Population and Housing Fact Sheet for Nebo Shire<sup>8</sup>, the preliminary estimated resident population of the Shire at 30 June 2004 was 2,144 people, a decrease of 16 people or 0.7% over the year. This compares with an increase of 63 people or 3% in the year to June 2003. Projections prepared by the Queensland Department of Local Government, Planning, Sport and Recreation indicates

<sup>6</sup> The Nebo SLA is the same area as the Nebo Shire Council.

<sup>7</sup> Queensland Government Department of Local Government, Planning, Sport and Recreation, Planning Information and Forecasting Unit, May 2005.

<sup>8</sup> Queensland Government Department of Local Government, Planning, Sport and Recreation, Planning Information and Forecasting Unit, April 2005.



that by 2011 the expected population will be between 1,910 and 2,060 people. By 2026 this is expected to change to between 1,490 and 1,910 people. In the year to June 2004, natural increase (births minus deaths) accounted for an increase of 30 people while assumed net migration resulted in a loss of 46 people.

According to the Population and Housing Fact Sheet for Bowen Shire<sup>9</sup>, the preliminary estimated resident population of Bowen Shire at 30 June 2004 was 12,566 people, an increase of 20 people or 0.2% over the year. This compares with an increase of 15 people or 0.1% in the year to June 2003. Projections prepared by the Queensland Department of Local Government, Planning, Sport and Recreation indicate that by 2011 the expected population of Bowen Shire will be between 12,200 and 12,800. By 2026 this is expected to change to between 11,300 and 13,400 people. In the year to June 2004, natural increase (births minus deaths) accounted for an increase of 37 people while assumed net migration resulted in a loss of 17 people.

### 6.3 Age

**Table 4 Local, Regional and State Age Distribution (B03 2001)**

	Local		Regional		State	
	M	F	M	F	M	F
0-14	140	123	2,953	2,705	391,611	371,531
15-24	131	55	1,654	1,340	251,126	244,109
25-44	492	172	4,464	3,549	512,009	534,013
45-64	279	105	3,611	2,696	419,819	418,916
65 and over	84	21	1,452	1,409	201,589	241,516
Total	1,126	476	14,134	11,699	1,807,730	1,847,409

There is a significantly higher percentage of males in the 25-44 year old age group at the local level (44%) compared to the regional (32%) and state (28) for the same age group.

There is also significantly less people in the 65 years old and older age group at the local level (7% male and 4 % female) compared to the regional (10% male and 12% female) and Queensland (11% male and 13% female).

According to the Population and Housing Fact Sheet for Belyando, the median age of Belyando Shire's population is to projected to increase by 8 years from a median age of 31 years in 2001 up to a median age of 39 in 2026.

<sup>9</sup> Queensland Government Department of Local Government, Planning, Sport and Recreation, Planning Information and Forecasting Unit, April 2005.



According to the Population and Housing Fact Sheet for Nebo, the median age of Nebo Shire's population is projected to increase by 10 years from a median age of 32 years in 2001 up to a median age of 42 years in 2026.

Accounting to the Population and Housing Fact Sheet for Bowen, the median age of Bowen Shire's population is projected to increase by 9 years from a median age of 38 years in 2001 up to a median age of 47 years in 2026.

## 6.4 Families

**Table 5 Local, Regional and State Family Type (B17 2001)**

	Local	Regional	State
Couple with children	127	3,003	417,806
Couple without children	89	2,327	349,697
One parent family	6	649	149,585
Other	3	61	16,567
Total Families	225	12,080	933,928

The local (57%) and state (45%) percentages for the family type "couple with children" were similar, however there was a significantly less representation of this type of family at the regional level, only 25%.

There is also significantly less one parent families in at the local (<1%) and regional levels (5%) than in Queensland (16%).

## 6.5 Birthplace

**Table 6 Local, Regional and State Birthplace by Region (B06 2001)**

	Local	Regional	State
Oceania and Antarctica	1,216	22,123	2,942,056
North-West Europe	33	1,000	244,735
Southern and Eastern Europe	0	154	57,930
North Africa and the Middle East	0	89	8,115
South-East ASIA	10	272	50,705
North-East ASIA	0	38	34,951



	Local	Regional	State
Southern and Central ASIA	0	29	13,395
Americas	3	71	25,144
Sub-Saharan Africa	0	65	23,347
Other	0	13	2,148
Not Stated	316	1,979	183,112
Overseas Visitors	6	280	69,500
Total	1,584	26,113	3,655,138

The local area did not have the representation of people who were born in countries outside the Oceania and Antarctica region, as shown in the regional and state statistics. There was significantly larger percentage of people who did not record their place of birth in the local area compared to the regional and state areas.

## 6.6 Language

**Table 7 Local, Regional and State Language Spoken at Home (B08 2001)**

	Local	Regional	State
Speaks English only	1,268	23,207	3,173,390
Speaks other language	16	893	253,691
Not Stated	296	1,743	158,558
Overseas Visitors	3	280	69,500
Total	1,583	26,123	3,655,139

The majority of people in the local, regional and state areas speak English at home.





## 6.7 Dwellings

### 6.7.1 Dwelling Structure

**Table 8 Local, Regional and State Dwelling Structure (B18 2001)**

	Local	Regional	State
Separate House	286	7,400	1,045,137
Semi-detached	10	232	91,979
Flat, unit or apartment	0	604	164,424
Other	28	1,129	41,828
Not Stated	5	147	12,245
Unoccupied Private Dwellings	77	1,605	127,299
Total	406	11,117	1,482,912

There was a similar percentage for the number of separate houses at the local, regional and state levels. There was a decrease in the percentage of semi-detached, flat, unit and apartment at the local and regional level (only 3% and 2% respectively) compared to 6% at the state level.

There were significantly more unoccupied private dwellings at the local (19%) and regional (14%) than at the state level (9%). Anecdotal reports on this issue has verified that during the slump in the coal industry in the early 2000's, "*you could not give the houses away*", now there are not enough houses for all the people working at the mines.

### 6.7.2 Dwelling Tenure Type

**Table 9 Local, Regional and State Dwelling Tenure Type (B19 2001)**

	Local	Regional	State
Fully Owned	107	3,748	496,805
Purchasing	14	1,428	349,333
Renting	96	3,146	408,117
Other	81	605	40,959
Not Stated	35	586	60,399
Total	333	9,513	1,355,613



There were a significantly less percentage of dwellings being purchased at the local level (only 4%) compared to 15% being purchased at the regional and 26% at the state level. There are similar percentages for renting dwellings, however a significant difference between those dwellings in the “Other” category, locally 24%, regionally 6% and state 3%.

According to the Population and Housing Fact Sheet for Belyando Shire Council<sup>10</sup> dwelling activity increased in the Shire in the year ending 2004 with 46 approvals, 65.2% of them for separate houses. Compared to 36 approvals in the previous year, these figures represent an increase of 27.8% in dwelling activity.

According to the Population and Housing Fact Sheet for Nebo Shire Council<sup>11</sup> dwelling activity decreased in the Nebo Shire in the year ending June 2004 with 7 approvals, 57.1% of them for separate houses. Compared to 13 approvals in the previous year, these figures represent a decrease of 46.2% in dwelling activity.

According to the Population and Housing Fact Sheet for Bowen Shire Council<sup>12</sup> dwelling activity increased in Bowen Shire in the year ending June 2004 with 47 approvals, 80.9% of them for separate houses. Compared to 34 approvals in the previous year, these figures represent an increase of 38.2% in dwelling activity.

## 6.8 Transience

**Table 10 Local, Regional and State Transience (B22 2001)**

	Local	Regional	State
Same address as 1 year ago	937	18,804	2,638,160
Difference address as 1 year ago	312	5,140	771,535
Same address as 5 years ago	560	11,767	1,584,873
Different address as 5 years ago	620	10,626	1,614,323

There is generally a high level of transience at the local, regional and state levels. Locally this could be explained by the temporary nature of mining work, anecdotal evidence suggested that people only work in the mines for 2-3 years per mine site.

<sup>10</sup> Queensland Department of Local Government, Planning, Sport and Recreation, Planning Information and Forecasting Unit (PIFU) May 2005.

<sup>11</sup> Queensland Government Department of Local Government, Planning, Sport and Recreation, Planning and information Forecasting Unit (PIFU), April 2005.

<sup>12</sup> Queensland Department of Local Government, Planning, Sport and Recreation, Planning Information and Forecasting Unit (PIFU), April 2005.



## 6.9 Education

### 6.9.1 Non-school qualification – level of education

**Table 11 Local, Regional and State Non-School Qualification: Level of Education (B23 2001)**

	Local	Regional	State
Postgraduate Degree	0	90	38,740
Graduate Diploma or Graduate Certificate	3	112	31,775
Bachelor Degree	40	920	235,113
Advanced Diploma and Diploma	41	658	156,001
Certificate	283	3,624	451,525
Not Stated	323	2,538	305,262
Not Applicable	627	12,229	1,604,681
<b>Total</b>	<b>1,317</b>	<b>20,171</b>	<b>2,823,097</b>

The highest percentage of the non-school qualification: level of education for the local, regional and state level was the “not applicable” category. The highest percentage of qualification for the local category was the certificate level (25%), this was the same for the regional and state.

### 6.9.2 Non-School Qualification – Field of Study

**Table 12 Local, Regional and State Non-School Qualification: Field of Study (B24 2001)**

	Local	Regional	State
Natural and Physical Sciences	8	122	28,448
Information Technology	0	35	20,595
Engineering and Related Technologies	220	2,415	242,020
Architecture and Building	27	450	85,601
Agriculture, Environmental and Related Studies	35	230	25,052
Health	19	453	109,168



	Local	Regional	State
Education	14	604	95,168
Management and Commerce	20	526	162,555
Society and Culture	3	292	89,888
Creative Arts	6	62	30,064
Food, Hospitality and Personal Services	20	396	65,218
Mixed Field Programs	0	0	991
Field of Study not adequately described	3	56	11,503
Not Stated	313	2,298	252,147
Not Applicable	627	12,229	1,604,681
Total	1,315	20,168	2,823,097

Both locally and regionally, there was a significantly higher percentage in the engineering and related technologies area of qualification (17% and 12%) compared to only 9% at the state level. There were only 2% for the agriculture, environmental and related studies at the local level, 1% at the regional level and less than 1% at the state level. Similar to the statistics on the level of qualification, the highest percentages of the local, regional and state was “not applicable”.

## 6.10 Labour Force Statistics

**Table 13 Local, Regional and State Labour Force (B22 2001)**

	Local	Regional	State
Employed F/T	764	8,365	1,002,596
Employed P/T	112	3,039	518,158
Not Stated	28	401	48,110
Employed	907	11,805	1,568,864
Unemployed	19	671	140,748
Total Labour Force	926	12,476	1,709,612
Not in Labour Force	139	6,388	1,000,121
Unemployment Rate	1.5%	4.5%	8.2%
	average	average	



Of the people employed, the highest percentage of full time employed people was at the local then regional level (84% and 71% respectively) with only 64% of the employed people in Queensland employed full time. It is the opposite trend for the part time employment with up to 33% of employed people working part time at the Queensland level, 25% at the regional level and only 12% at the local level.

The average unemployment rate at the local level was significantly less at only 1.5% compared to 4.5% average for the regional level and 8.2% for Queensland.

## 6.11 Industry

**Table 14 Local, Regional and State Industry (B26 2001)**

	Local	Regional	State
Agriculture, Forestry and Fishing	304	2,364	76,532
Mining	273	2,399	19,286
Manufacturing	24	457	167,380
Electricity, Gas and Water Supply	3	92	12,359
Construction	41	646	111,209
Wholesale Trade	25	590	79,718
Retail Trade	16	1,215	239,615
Accommodation, Cafes and Restaurants	38	544	88,381
Transport and Storage	94	611	77,587
Communication Services	0	78	23,016
Finance and Insurance	3	131	44,562
Property and Business Services	53	505	153,864
Government Administration and Defence	9	318	75,048
Education	12	660	118,896
Health and Community Services	9	617	151,029



	Local	Regional	State
Cultural and Recreational Services	9	81	37,341
Personal and Other Services	6	249	57,662
Non-classifiable economic units	0	40	7,452
Not Stated	18	207	27,927
Total	937	11,804	1,568,864

There is the highest percentage of employment in the Agricultural, forestry and fishing industry (32%) and in the mining industry (29%) at the local level, with an equal spread across the other industries. There was however no one employed in the communication services industry at the local level.

The regional percentages for employment across industry type is similar with the agricultural, forestry and fishing industry with 20% and the mining industry with 20%. Whereas in Queensland the highest percentage of employed people work in the retail industry (15%) and only 5% in the agriculture, forestry and fishing industry and 1% in the mining industry.

Based in interviews with the Nebo Shire Council representatives and directly affected landowners, there is a skill shortage in the regions. The skill shortages are reflected in the trade and operator industries.

## 6.12 Occupation

**Table 15 Local, Regional and State Occupation (B27 2001)**

	Local	Regional	State
Managers and Administrators	182	1,196	133,295
Professionals	49	1,039	251,273
Associated Professionals	41	996	187,910
Tradespersons and Related Workers	173	1,744	200,665
Advanced Clerical and Service Workers	12	185	54,677
Intermediate Clerical, Sales and Service Workers	36	1,104	265,751



	Local	Regional	State
Intermediate Production and Transport Workers	253	2,400	133,702
Elementary Clerical, Sales and Service Workers	9	780	158,222
Labourers and Related Workers	160	2,133	152,773
Inadequately Described	9	61	11,385
Not Stated	15	142	19,211
Total	939	11,780	1,568,864

At the local level the highest percentage of people are employed in intermediate production and transport workers (27%), this is similar at the regional level with the highest percentage of people employed in the same occupation (20%). Locally there is 20% of people employed in manager and administrator occupations and 18% employed in tradespersons and related workers. Again this is similar at the regional level with 10% of people employed in manager and administrator occupations and 15% in tradespersons and related workers.

At the state level, the highest percentage of people (17%) are employed in the intermediate clerical, sales and service workers occupations and 16% professionals.

### 6.13 Method of Travel to Work

**Table 16 Local, Regional and State Method of Travel to Work (B28 2001)**

	Local	Regional	State
Train	0	3	28,966
Bus	109	281	37,663
Ferry	0	6	1,965
Tram	0	0	138
Taxi	0	19	4,020
Car, as driver	308	5,931	906,073
Car, as passenger	94	1,724	112,409
Truck	16	248	30,538
Motorbike/motor scooter	11	119	15,601



	Local	Regional	State
Bicycle	12	139	20,252
Other	24	144	9,764
Walk	103	751	60,529
Two Methods	8	126	34,042
Three Methods	0	6	3,529
Work at Home	169	899	91,829
Do not go to work	38	1,183	184,462
Not Stated	7	228	27,084
Total	899	11,807	1,568,864

Locally the highest percentage of travel to work as the driver (34%), 12% catch the bus and 10% travel to work in a car as the passenger. At the regional level 50% of people travel to work by car as the driver and 57% of people in Queensland did the same.

Locally there is the highest percentage of people who worked from home at 19% compared to 10% at the regional level and 11% at the State level.

## 6.14 Weekly Household Income

**Table 17 Local, Regional and State Weekly Household Income (B31 2001)**

	Local	Regional	State
Negative/Nil income	3	60	9,803
\$1-\$199	3	301	49,119
\$200-\$299	9	632	99,530
\$300-\$399	12	687	118,458
\$400-\$499	10	539	104,114
\$500-\$599	9	382	75,586
\$600-\$699	21	467	85,859
\$700-\$799	18	339	66,412
\$800-\$999	32	370	125,246
\$1,000-\$1,199	24	708	103,765
\$1,200-\$1,499	20	592	104,433
\$1,500-\$1,999	38	1027	113,215





	Local	Regional	State
\$2,000 or more	32	706	75,549
Partial income stated	29	709	98,368
All incomes not stated	25	376	46,233
Total	285	8195	1,275,420

Locally the highest percentage of households (13%) have a weekly income of between \$1,500 and \$1,999. This is the same at the regional level with the highest percentage (12%) of households on a weekly income of between \$1,500 and \$1,999. However the state had the highest percentage of households in the \$800-\$999. There is an equal spread of the percentage of households on all levels of income at the state level.

## 6.15 Summary

Of the Queensland population, 0.125% live in the area defined as local in this report and only 0.714% of the Queensland population live in the area defined as regional in this report.

Six percent of the regional population live in the area defined as local in this report. The highest percentage of the local population live in the 3052004 ABS Collection District which is located in the Nebo SLA<sup>13</sup>.

There a significantly higher male to female ratio in the local area compared to the regional and state areas. There are significantly less people aged 14 and under and there is variation in the distribution of people aged 65 and over between the local to the regional and state areas.

There are significantly higher percentage of males in the 25-44 year old age group locally compared to the regional and state percentages.

There is a similar family make up between the local, regional and state families for couples with and without children, however there is significantly less single parent families in the local and regional areas compared to the State.

The local area did not have the representation of people born outside the Oceania and Antarctica regions that the regional and state areas did. English was the highest percentage of language spoken at home at the local, regional and state levels.

There was a similar percentage of dwellings as separate houses in the local, regional and state areas. However there were significantly less semi-detached, flat, unit or apartment at the local and regional level in comparison to the state. There were also a significant percentage of private dwellings that were unoccupied at the local and regional level, but anecdotal evidence suggests that this is no longer the case.

<sup>13</sup> The Nebo SLA is the same area as the Nebo Shire Council.



There are similar percentages of dwellings that are fully owned at the local, regional and state level. However there is a significant difference in the number of dwellings being purchased at the local level compared to the regional and state level. There is a significant amount of “other” dwelling tenures at the local level.

The local, regional and state are similar with the percentage of people holding non-school level qualifications, with the highest percentage having a certificate level of qualification.

At the local and regional level there was a significant percentage of people having qualifications in the area of engineering and related technologies.

Of those people employed, there was less percentage working full time at the state level compared to working at the regional and local level. It was the opposite for part time workers, with significantly more working part time at the state level than at the regional and local level.

The average unemployment rates were less for the local area, an increase to the regional level and then again at the state level.

Locally 32% of people were employed in the agricultural, forestry and fishing industry and 20% were employed in this industry at the regional level, and 5% at the state level. Locally 29% of people were employed in the mining industry, 20% at the regional level and only 1% at the state level.

The highest percentage of managers and administrators were employed at the local level and the highest percentage of intermediate production and transport workers were employed at the regional level. With the highest percentage of people working in as intermediate clerical, sales and service workers at the state level.

At the regional and state level, more than 50% of people travelled to work in a car as drivers. Locally a significant percentage of people catch the bus to work. The highest percentage of people worked from home at the local level (19%).

Locally and regionally the highest percentage of households had a weekly income of between \$1,500 and \$1,900, this was the same at the regional level. However the state had the highest percentage of households in the \$800-\$999.



## 7. Identification of Real and Perceived Impacts

### 7.1 Introduction

Landowners directly affected by the proposed railway corridor and the relevant Shire Councils were consulted to identify potential and real impacts of the proposed railway during the planning, construction and operational phases.

### 7.2 Affected Landowner Interviews

GHD project members meet with affected landowners from Monday 26 September through to Thursday 29 September 2005 to get an understanding of the landowners' real and perceived impacts of the rail link through their properties during each phase of the project. The impacts identified are not in any order of priority. Throughout this section some information is provided per property, however to assist in the reporting of issues landowners are not identified, rather the issues are referred to as being raised by 'landowners'. In some situations not all landowners raised all impacts or concerns. However throughout the process of meeting with landowners, all of the impacts were identified and in some cases repeated a majority of times.

Landowners requested that their identity not to be revealed so as not to affect their negotiations with QR.

#### 7.2.1 Planning and Design

The impacts reported by the landowners in the Planning and Design phase of the project are directly related to the negotiations with QR and the studies associated with the feasibility report QR are undertaking including the EIS. QR has visited each of the landowners to explain the process and begin negotiations. QR studies undertaken to date that have required consultants to access the landowners properties include:

- » Environmental Impact Assessment;
- » Geotechnical;
- » Cultural Heritage;
- » Detailed Flora and Fauna, and
- » Noise.

#### ***Consultants on Properties***

Flow on from the other studies being conducted by QR means that there are consultants on the properties. Landowners reported that the consultants appear to know more about the project than they do. An example provided by one landowner was that the consultants had the GPS points of the corridor but they have not been provided to the landowners.

Another impact is the time to administer the visits of consultants on their properties. Time is taken up with phone calls, waiting at the homestead and supervising consultants (sometimes) whilst on the



property. Landowners acknowledge that their time spent negotiating with QR representatives and with consultants will be reimbursed by QR as part of the compensation, however they still have to run their businesses and the time taken up by the NML project is a priority.

Case Study #1 is an example of one landowners experience with one of the consultants.

#### **Case Study #1 – Consultants on Properties**

A case study of the impacts of having the Northern Missing Link consultants on a cattle station was provided by one of the landowners. The landowner had requested QR to postpone any consultants coming on the property because of recent rain and the impact it could have on the roads on the property. Through a break down in communication consultants did enter the property and subsequently damaged one of the main roads on the property.

The landowner asked QR to pay for the costs of repairing the road to reasonable standard, which QR promptly agreed to.

The landowner then had to arrange for the contractor to fix the road, show the contractor the site to be repaired and check the contractors work. QR are paying for the contractor's time but not the landowners.

The landowner stated *"The road would not have to be fixed and I would not have had to do the extra work if they didn't want to build the railway. Things are not fixed out here by sending an e-mail."*

#### **Rail Alignment Issues**

A number of landowners raised concerns that the alignment of the rail link will negatively impact on property management. In these cases, QR identified alternatives to the preferred alignment and undertook assessments on these alternatives, taking into consideration environmental, social, economic, engineering and cultural heritage aspects to determine the best alignment.

At the request of the landowners a number of alternative routes were assessed, further details these assessments are provided in Section 2.3 of the EIS.

#### **Devaluing the Properties**

Landowners reported that the value of their properties would have already decreased because of the "talk" about the proposed railway.

#### **Stress of Negotiations**

There is also the associated stress that accompanies any major change. The landowners also have to contend with the other aspects of their working and personal lives and the negotiations for the railway are placing added unwanted stress on them.



## 7.2.2 Construction Impacts

### **Safety**

The largest concern for landowners during construction was the safety of their families, workers and visitors to the properties. A preliminary count of people living and working on the properties gave a total of 50 (this does not take into consideration visitors, refer to Case Study #2).

#### **Case Study #2 – Safety of Families, Workers and Visitors**

The largest concern raised by the landowners was the safety of their families, workers and visitors during the construction and operation of the railway. A representative of the Nebo Shire Council reported that only recently a local man was killed on another railway line while crossing it.

Landowners reported that they will have to warn their families and workers of the construction and operation of the railway and will have to increase their alertness of children on the property. There are also unknown legal implications if one of their workers is hurt or killed by the train or the railway.

The loss of a family member, worker or visitor is something that the landowners do not want to have to consider – yet they say they have too because of their concerns about the Northern Missing Link Railway project.

A crucial element of the management of properties is the use of working dogs to assist with mustering and other cattle work. Landowners raised their concern if they are working near the construction site and during operation that the safety of their working dogs should also be taken into consideration. Refer to Case Study #3.

#### **Case Study #3 – Working Dogs**

Working dogs are a critical element of running a cattle property. The loss of a working dog is similar to the loss of one or two employees. It takes 4 to 5 years to fully train a working dog and it is not until they are about 3 years old until the owner knows the true potential of the dog. The boss dog is usually between 7 and 8 years old.

If a train hit a working dog, it cannot simply be replaced by another because of the time it takes to train one and the impact on the pack structure of the working dogs as a whole.

### **Order of Construction**

During the construction phase the landowners identified that while constructing the rail link through paddocks that these paddocks may become unusable if water and fencing is not provided prior to construction. The paddocks affected will not be able to be utilised and therefore become economically



unviable to the landowner. If the paddocks cannot be utilised then the landowners will have to find other appropriate paddocks on their property or adjust the cattle on another property.

To minimise the impact of construction activities on paddock usage and property operation, landowners identified a preferred order for construction:

- » Provision of watering points for cattle on both sides of the rail corridor;
- » Construction of fences along the railway corridor; and
- » Construction of the railway.

It is recommended that this order of construction be adopted for the project.

### ***Water***

A concern raised by landowners was where the water required for construction would be sourced. Stations within the study area rely on both surface and ground water and as a consequence of the drought water sources are becoming scarce.

There is limited usable ground water within the study area and not all stations have bores drilled, and instead rely on surface storages (dams, turkey nests). Some of the stations that have bores have reported that the surrounding mines have resulted in the water table dropping below the level of the bore and the bores are no longer sustainable or feasible to use. Those stations using bore water are concerned that the water table may be lowered further on their property should QR use ground water for construction activities.

### ***Skills Shortage***

There is a skills shortage in the region due to many of the contractors being employed by the mines. This skills shortage is likely to affect a landowners ability to construct new infrastructure (such as yards, fences etc) on their property as a result of the impacts caused by the rail corridor.

The impact of the skills shortage on the landowners is twofold:

- » Timing – the landowners have to wait for the contractors to be available (experience has shown that this is sometimes in excess of 6 weeks).
- » Costs – with the mines paying elevated wages, the contractors are asking the landowners to pay comparable rates to complete the same work.

The combination of timing and costs will effect the negotiations for compensation with QR, many landowners expressed the concern of quoting prices for infrastructure changes (such as cattle yards, fencing) at today's prices but by the time negotiations are completed and they can arrange for the contractors to do the work the prices may have escalated (for both labour and materials).

Landowners also raised their concern about the supply and demand relationship with the contractors which will also affect the cost and demand of services and materials. With seven properties directly affected by the railway all requiring similar materials and services, increasing the demand on time and cost.



### ***Weed and Seeds Transfer***

An ongoing concern for landowners is the management of weeds. The negative impacts of weeds on the properties includes (but is not limited to):

- » Pressure from Department of Natural Resources and Mines to control weeds on their land as a requirement under legislation;
- » Decrease in the viability of paddocks – cattle can not eat the weeds and the weeds dominate the native grasses which the cattle feed on; and
- » Hard to trace the source of the weeds – weeds can be spread through a number of sources. One example provided by a landowner was when a vehicle is transporting gravel – the weed seeds are in the gravel and gravel dust, gravel is deposited on the side of the road, it rains and the weed seeds travel down stream to the landowners property and begin to grow. The most common source of weeds is vehicles.

Landowners raised the potential impact of weeds during the construction of the railway – particularly as the vehicles will be travelling along the corridor and in and out areas where weeds are currently not controlled.

### ***Impact on Access and Other Private Roads***

There are a number of landowners whose main access roads (the private road from the property boundary to the homestead) and other private roads on their properties will be crossed by the railway. This poses safety issues, especially for landowners whose main access road is impacted.

Landowners are also concerned about the potential impact on their roads from large machinery during the construction phase of the project. Concerns included:

- » Landowners being able access their roads during the construction phase;
- » Construction personnel and machinery using private roads; and
- » Maintenance and restoration of roads after construction phase to original conditions.

### ***Construction Workers on the Properties***

Landowners raised concerns about the impacts of having construction workers on their properties. The properties are large and the landowners cannot keep an eye on all their property at once, so are reliant on the construction workers not to do any damage to the property, livestock or infrastructure. Part of this is ensuring that the construction workers close all gates at the time they pass through them during construction.

In addition some landowners have small children that live on or visit the properties and there is a concern for the safety of these children with respect to large camps of construction workers close to homesteads.



### 7.2.3 Operational Impacts

#### **Safety**

The main concern for landowners, once the railway is operational is the safety of their families, workers and people visiting the property. With the operation of the railway, the landowners identified the following safety issues:

- » Railway crossings – across access roads, during mustering cattle and while conducting property maintenance (refer to case study #4).
- » Fire and fire fighting – the sparks that can be released from a diesel engine and sparks from the wheels on the track, could start a fire on the property and the railway would possibly hinder the landowners access to the area to fight the fire – having to cross the railway line (where there is a level crossing) with the suitable fire fighting equipment (rubber tyre vehicle vs tracked vehicle).
- » Safety of cattle and working dogs – if cattle or working dogs do get onto the corridor– the safety of the animals.

#### **Case Study #4 - Impacts of getting over the railway**

For a single person to cross the railway at a level crossing – having to go through a gate, the following example was given:

1. Open and shut the gate;
2. Cross over the railway line – making sure there are no trains;
3. Open and shut the gate on the other side of the railway;
4. Do the work required (e.g. check a watering point);
5. Open and shut the gate;
6. Cross back over the railway line – making sure there are no trains; and
7. Open and shut the gate.

This is in comparison to where the worker on the property could have gone straight to the task at hand. It presents a safety issue for the worker – particularly if crossing with a motorbike or a horse.

#### **Fencing Maintenance**

A crucial impact of the operational phase identified by the landowners was fence maintenance. There is some concern that QR will not maintain the fence along the corridor of the railway thereby allowing cattle to enter the corridor and possibly result in collisions. If the fence is not maintained in a timely manner and the landowners have to maintain the fence themselves, issues were raised with respect to reimbursement and what liabilities will they incur if they fix a QR fence.





### ***Train Derailment***

Landowners raised concerns about the potential for train derailment on their properties and the subsequent impacts from the train derailment (broken fences).

### ***Fire and Fire Fighting***

Once the railway is operational, landowners are concerned about the impact it will have on not only causing fires but the hindrance to fighting fires (whether caused by the railway or not) and maintaining firebreaks.

### ***Access to Paddocks***

During the operation of the railway a number of paddocks will be severed (the number and type of paddocks varies between the landowners), requiring the construction of new watering points. It also means that the original access to the paddocks through gates and existing laneways will required to be redesigned and constructed, in some cases the cattle will need to be mustered for longer distances through designated access points to cross the corridor.

### ***Weed and Seeds Transfer***

Landowners have identified that there is potential for QR maintenance vehicles to spread weeds as they drive along the railway corridor – the full corridor from Bowen to Mackay via Newlands and Goonyella and the difficulty of tracing the source of the weeds and the impacts once the weeds are growing in the paddocks.

### ***Impacts to Cattle Grazing***

The landowners have raised concerns to the impact the rail line will have on cattle grazing of paddocks, these include:

- » Pastures being unpalatable to cattle due to presence of coal dust on grass; and
- » Cattle, especially immature bullocks, running away from passing trains and not uniformly grazing a paddock (i.e. wasted pasture areas close to the rail line). It is expected that the older and mature heifers will become accustomed to passing trains, but the younger bullocks will be frightened and not graze near the line, resulting in lost grazing area, as well as lessen ability for the bullocks to put on valuable weight for market profits.

During the field visit, inspection of an existing coal rail line in the region showed that within 30 m of the rail line there was little visible evidence of coal dust on the grass leaf blades.

## **7.2.4 Number of people impacted by the NML**

The proposed railway does not only impact on those people whose names are on the title for the property, it also impacts on their families, permanent and casual staff (this includes staff for mustering and fencing etc). Based on meetings with the landowners, there are approximately 50 people working or living on the properties affected by the rail line.



**Table 18** Number of People Affected on the 8 Properties Directly Impacted By the Proposed Northern Missing Link

<b>Property</b>	<b>Number of people directly affected</b>
Denham Park	10
Bilyana	8
Lancewood	9
Wollombi	9
North Suttor	5
Byerwen	9
<b>Total</b>	<b>50</b>

#### **7.2.5 Overall impressions of the NML project**

During the consultation with landowners, the project team asked a series of questions to gauge the overall feelings towards the NML project, questions and responses are summarised in the table below.



**Table 19 Summary of Landowners Impressions of the NML Project**

Questions	Affected Landowner Responses
<p>What do you know about the Northern Missing Link so far?</p>	<p><i>“Not much – everyone seems to know where it is going but us”</i></p> <p><i>“Only met with QR twice – don’t know what is going to happen”</i></p> <p><i>“Have known about the proposal since 91 or 92”</i></p> <p><i>“First heard about this latest proposal at the Ekka in Brisbane.”</i></p> <p><i>“Found out about it through the newspaper”</i></p> <p><i>“QR goes for the western alignment”</i></p> <p><i>“It’s a real pain in the arse! Especially with the negotiations with SunWater and the mines”</i></p> <p><i>“Impact on personal lives – changes priorities from things that are important to a railway line; and impact on working lives”</i></p>
<p>How do you feel about the proposal?</p>	<p><i>“Don’t want the railway”</i></p> <p><i>“Initially was shocked and horrified”</i></p> <p><i>“Realise that progress needs to happen and understand why it is to be built – we are going to have to learn to live with it. Happy with the life we had, but now that is all going to change”</i></p>
<p>What is the worst-case scenario?</p>	<p><i>“If the western alignment is chosen”</i></p> <p><i>“Will have to sell and move on”</i></p> <p><i>“Someone gets hurt either family, someone working on the property”</i></p> <p><i>“Family or workers getting hurt or losing their life”</i></p> <p><i>“QR not keeping promise with the under and overpasses – it will significantly impact on management strategies if they change their minds”</i></p>
<p>What is the best-case scenario?</p>	<p><i>“If it doesn’t go ahead at all”</i></p> <p><i>“If it doesn’t come through”</i></p> <p><i>“They [QR] go away”</i></p> <p><i>“If it didn’t happen”</i></p> <p><i>“QR keeps their promises”</i></p>



Questions	Affected Landowner Responses
Northern Missing Link's impact on the region	<p><i>"It is good for the region but not for the landowners"</i></p> <p><i>"It depends on how long the coal boom will last – what happens after?"</i></p> <p><i>"The majority of the profits from the coal go overseas – so limited local economic benefits. Local benefits will be employment and financial gain for some local businesses"</i></p> <p><i>"The increased jobs in the region – jobs for the kids"</i></p> <p><i>"Personally – negative impacts; Regionally positive impacts"</i></p> <p><i>"There will be no impact – are still producing the same amount of coal – just moving it more"</i></p> <p><i>"Economic benefits to the region – it is all part of progress"</i></p> <p><i>"Good for Bowen and Collinsville – if they use the power station there for the electricification"</i></p>
Benefits to building the railway?	<p><i>"Benefits would just be for the coal industry"</i></p> <p><i>"Could impact on localised flooding – but won't know until after it is constructed"</i></p> <p><i>"Having an alternative way to the coast railway if it gets cut off"</i></p> <p><i>"None"</i></p>
What will happen if not built?	<p><i>"Things would continue as they are"</i></p> <p><i>"It would go ahead anyway – BMA were planning on building a railway if this one does not go ahead"</i></p> <p><i>"It would be bloody great, but if it is not the railway then the mines will take over"</i></p> <p><i>"Will stay the same"</i></p>

## 7.3 Local Shire Councils

### 7.3.1 Belyando Shire Council

The GHD project members met with the Community Development Officer from the Belyando Shire Council on Thursday 29 September 2005. Issues raised by the Council representative include:

- » The Northern Missing Link project was raised at the Moranbah Interagency Meeting held on Wednesday 21 September 2005 with very little interest from those attending the meeting. Impacts to Belyando Shire were considered to be limited to employment during construction with no or few long-term benefits or impacts from the rail line itself.



- » Currently Moranbah is trying to cope with the high level of development occurring in the town as a result of the mining industry, however because of the perceived limited impacts of the railway, it is anticipated that Moranbah would be able to absorb any follow-on impacts of the rail line.
- » Concern was raised with respect to providing accommodation for construction personnel. There currently a housing shortage in the town and it would be an issue if the construction camp was located there, including capacity for services and infrastructure to support the camp.
- » Concerns about the safety of people travelling on the roads if the construction workers needed to commute to the rail line. There is currently a high number of people using the roads to work at the mines and commute to Mackay on RDO.
- » Housing costs are high in Moranbah as a result of high demand due to mining.
- » There will be issues with cattle getting over the railway line that will impact on the day to day management for landowners engaged in the grazing industry.
- » The perceived flow on effects to Moranbah from the project will be the increased rail capacity and increased production which would lead to increased employment and more people living at Moranbah.

The greatest direct impacts of the projects is seen to be on the affected landowners with indirect impacts experienced by the local towns.

### **7.3.2 Nebo Shire Council**

The GHD project members met with several of the Councillors from Nebo Shire Council on Wednesday 28 September 2005. Issues raised by the Council include:

- » Safety of public and private road crossings, in particular the Suttor Developmental Road where there should be provision of a grade separated crossing or overpass.
- » Impact to Council maintained roads during construction phase from heavy vehicles and increase in numbers, in particular the Suttor Developmental Road.
- » Direct communication line between the landowners and QR should be provided during operation to allow landowners to find out time of passing trains and the need to cross stock over the corridor.
- » Safety of landowners and employees in crossing the rail line during daily management of their property.
- » Issues with coal dust and potential impacts to cattle grazing, visibility and health.
- » Measures put in place to ensure that construction personnel do not roam over property and close property gates.
- » Prior to the construction of the corridor, the exclusion fence and watering points should be constructed to allow landowners more effective use of their properties.
- » The potential opportunity to have separately titled lots where a paddock has been severed. Under the Nebo town planning scheme, it is not possible to subdivide under 5,000 hectares, thereby not allowing landowners the ability to sell unviable portions of paddocks. If an unviable severed paddock is listed as a separate lot it can be sold to the neighbouring property.



- » Potential locations of the construction camp preferred by Council include along the Suttor Developmental Road and near Newlands Nine on the Wollombi Road.
- » Issues with respect to sourcing water and potential impacts to landowners should bores be used or water harvesting occurs.
- » Measures are to be put in place to control dust, especially in the vicinity of homesteads.
- » Council expressed interest in gaining access to any dams/storage facilities after construction. Council would use the dams to assist in road maintenance which is a local issue.
- » The following issues were raised with respect to the construction camp:
  - Should be self contained – including entertainment, catering, fuel, alcohol etc – so personnel do not have to continually drive to local centres for small supplies;
  - Increase in number of vehicles on the road networks (such as Peaks Down Highway);
  - Is likely to require town planning approval (unless included in designation of rail infrastructure), therefore sufficient timing needed to get the approval.
- » Need to inform and involvement the local emergency services in the planning of the railway.
- » Management procedures need to be in place for weed control. Weed wash down areas are to be provided.
- » Council expressed an interest in gaining access to any gravel pits established for the project. The pits would assist them in the maintenance of the Council roads in the area.
- » Issue of fires being created by the rail line and the ability to fight the fire by local landowner and fire brigade.
- » Management of waste from the construction camp, where will it be disposed and how managed?

Overall Council sees the project as being beneficial to both Nebo and Bowen Shires as a consequence of increased employment both direct and indirect.

### **7.3.3 Bowen Shire Council**

The GHD project members met with a representative from the Bowen Shire Council on Friday 30 September 2005. Issues raised by the Council representative include:

- » Bowen Shire Council sees the development as “iconic” and key to their future economic development by acting as a catalyst to further developments in the Bowen Shire including:
  - Abbot Point Loader Duplication;
  - Abbot Point Cargo Wharf;
  - Abbot Point Tug Wharf<sup>14</sup>.
- » It is expected that the economic benefits of the project would be filtered down to the local communities.

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<sup>14</sup> Source: Bowen Collinsville Enterprise 2005 *Infrastructure Development Brief: Abbot Point Industry Development Program*



- » Bowen Shire Council has raised the NML Project at annual meetings with the community about developments in the Shire over last six years and in this time there has been no comments raised on the project.
- » Bowen Shire Council perceives that the local population at Collinsville would be supportive of the project.
- » Bowen Shire Council is concerned with safety standards of road crossings and issues of increased traffic and road safety.
- » Train derailments could be an issue.

## **7.4 Summary**

Based on the information provided by the directly affected landowners and the representatives of the three Shire Councils, a clear distinction can be made between the positive and negative impacts.

Like many projects, the positive impacts are held at the National and State level with the negative impacts held at the local level – the NML project is not an exception to this.

The landowners could not identify any local benefits from the proposed railway – that is benefits to themselves and the businesses they are operating. The landowners did however develop some mitigation strategies to assist in the easing of the negative impacts and these are provided in Section 8. The landowners could however identify benefits from the railway at the regional and state level.

The Shire Councils also could identify the negative impacts that would occur at the local level for the directly affected landowners, however they were also concerned with the immediate benefits of the railway, the construction camp was seen to be one of the benefits because of the economic input into the regional economy.

The Shire Councils also identified negative impacts at the regional level the main one being impact of increased traffic on the already busy roads.



## 8. Conclusions

This SEIA provides an assessment of the demographic profile of the project area and comparison with regional and state profiles. It also presents an analysis of the perceived and real impacts of the NML on the landowners and local council areas. These identified impacts have been address as part of the EIS process and mitigation measures developed to minimise these impacts. A summary of the potential impacts /issues identified in this SEIA and that have been addressed as part of the EIS process is provided below.

**Table 20 Summary Issues/Impacts identified by Landowners affected by the Northern Missing Link Project**

<b>Planning and Design</b>	<b>Construction</b>	<b>Operation</b>
Consultants/contractors on property:	Safety of families, employees and visitors.	Safety of families, employees and visitors.
<ul style="list-style-type: none"> <li>» Administration of consultants visiting the property (time taken up with phone calls/meetings etc);</li> <li>» Some consultants not following QR Land Access Protocol; and</li> <li>» Weed movement from consultant's vehicles.</li> </ul>	Impact to property management on affected paddocks and loss of the corridor land.	Impacts of coal dust on: <ul style="list-style-type: none"> <li>» Homesteads;</li> <li>» Health of the people living and working on the properties; and</li> <li>» Grazing pastures.</li> </ul>
Devaluing of properties.	Source of water for construction.	Quality and timely maintenance of the fencing.
Stress of negotiations process for compensation and land resumption.	Weed and seed transfer.	Train derailment consequences.
Stress of uncertainties that the rail corridor might have on the future sustainability of property.	Skills shortage for construction of replacement property infrastructure (cattle yards, fencing etc).	Impacts to cattle movement across property: <ul style="list-style-type: none"> <li>» Movement of young stock;</li> <li>» Alternative water points; and</li> </ul> Mustering of cattle.
Negotiating process with QR (including uncertainty of where the railway alignment is going).	Use to private roads by construction machinery and personnel:	Access to paddocks (water runs, safety, fire, cattle).
Rail alignment impacting on property management.	<ul style="list-style-type: none"> <li>» Loss of access; and</li> <li>» Deterioration of roads and</li> </ul>	





<b>Planning and Design</b>	<b>Construction</b>	<b>Operation</b>
	responsibility for maintenance.	
	Increase in dust from construction activities.	Transfer of weeds and seeds.
	Construction workers on properties not closing gates etc.	Devaluing of properties. Loss of cattle and working dog from train collisions.
		Access for corridor maintenance.
		Ability to cross rail line to fight fires (use of bull dozers etc).



## 9. References

### 9.1 Books and Publications

- Australian Bureau of Statistics 2001 *Collection District 3031504*
- Australian Bureau of Statistics 2001 *Collection District 3031604*
- Australian Bureau of Statistics 2001 *Collection District 3052002*
- Australian Bureau of Statistics 2001 *Collection District 3052004*
- Australian Bureau of Statistics 2001 *Collection District 3050601*
- Australian Bureau of Statistics 2001 *Statistical Local Area 340100600 (Belyando)*
- Australian Bureau of Statistics 2001 *Statistical Local Area 340105700 (Nebo)*
- Australian Bureau of Statistics 2001 *Statistical Local Area 340100950 (Bowen)*
- Australian Bureau of Statistics 2001 *State 3 (Queensland)*
- Bowen Collinsville Enterprise 2005 *Infrastructure Development Brief: Abbot Point Industry Development Program*
- Bowen Shire Council 2005 *Bowen and Collinsville 2005/2006 Bowen Tourism*
- Imber Bargula Consultancy 2005 *Final Report Archaeological and Cultural Heritage Assessment Queensland Rail Northern Missing Link Rail Corridor Project*
- Murray, A. 1996 *Nothing But Scrub* Moranbah Silver Jubilee Committee Belyando Shire Council
- O'Donnell, D. 1989 *A History of Clermont and District* Belyando Shire Council
- Queensland Government Department of Local Government, Planning, Sport and Recreation, Planning Information and Forecasting Unit May 2005 *Population and Housing Fact Sheet Belyando Shire.*
- Queensland Government Department of Local Government, Planning, Sport and Recreation, Planning Information and Forecasting Unit April 2005 *Population and Housing Fact Sheet Bowen Shire.*
- Queensland Government Department of Local Government, Planning, Sport and Recreation, Planning Information and Forecasting Unit April 2005 *Population and Housing Fact Sheet Nebo Shire.*



## **9.2 Websites**

[www.belyando.qld.gov.au](http://www.belyando.qld.gov.au)

[www.bowen.qld.gov.au](http://www.bowen.qld.gov.au)

[www.bowentourism.com.au](http://www.bowentourism.com.au)

[www.nebo.qld.gov.au](http://www.nebo.qld.gov.au)

## **9.3 Examples of Good Neighbour Policy Websites**

[www.calm.wa.gov.au/good\\_neighbour\\_policy.pdf](http://www.calm.wa.gov.au/good_neighbour_policy.pdf)

[www.epa.qld.gov.au/publications](http://www.epa.qld.gov.au/publications)



Appendix A  
Local and Regional Statistical Workings



## Population

**Table 21 Local Population (B01 2001)**

	<b>3031504</b>	<b>3031604</b>	<b>3052002</b>	<b>3052004</b>	<b>3050601</b>	<b>Total</b>
Total Persons	122	366	358	645	95	1,586
Total Male	71	273	281	461	50	1,136
Total Female	51	93	77	184	45	450
Total 14 and under	27	71	43	107	15	263
Total 65 and over	101	30	31	33	3	198

**Table 22 Regional Population (B01 2001)**

	<b>Belyando</b>	<b>Nebo</b>	<b>Bowen</b>	<b>Total</b>
Total Persons	9,883	2,529	13,698	26,110
Total Male	5,464	1,652	7,163	14,279
Total Female	4,419	877	6,535	11,831
Total 14 and under	2,509	524	1,219	4,252
Total 65 and over	553	127	2,207	2,887

## Age

**Table 23 Local Age Distribution (B03 2001)**

	<b>3031504</b>		<b>3031604</b>		<b>3052002</b>		<b>3052004</b>		<b>3050601</b>		<b>Total</b>	
	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>	<b>F</b>
0-14	18	9	39	32	30	13	50	57	3	12	140	123
15-24	11	3	35	7	16	9	57	33	12	3	131	55
25-44	24	30	107	21	119	34	220	66	22	21	492	172
45-64	3	9	65	22	85	24	111	41	15	9	279	105
65 and over	3	6	25	0	27	3	26	12	3	0	84	21




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Total	59	57	271	82	277	83	464	209	55	45	1,126	476
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**Table 24 Regional Age Distribution (B03 2001)**

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	Belyando		Nebo		Bowen		Total	
	M	F	M	F	M	F	M	F
0-14	1,277	1,232	270	254	1,406	1,219	2,953	2,705
15-24	685	552	166	101	803	687	1,654	1,340
25-44	1,880	1,509	731	333	1,853	1,707	4,464	3,549
45-64	1,324	863	399	144	1,888	1,689	3,611	2,696
65 and over	290	257	83	49	1,079	1,103	1,452	1,409
Total	5,456 <sup>15</sup>	4,413 <sup>16</sup>	1,649 <sup>17</sup>	881	7,029 <sup>18</sup>	6,405 <sup>19</sup>	14,134	11,699

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### Family Type

**Table 25 Local Family Type (B17 2001)**

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	3031504	3031604	3052002	3052004	3050601	Total
Couple with children	19	28	22	46	12	127
Couple without children	11	10	22	38	8	89
One parent family	0	3	0	3	0	6
Other	0	0	3	0	0	3
Total Families	30	41	47	87	20	225

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<sup>15</sup> Plus 8 male overseas visitors.

<sup>16</sup> Plus 6 female overseas visitors.

<sup>17</sup> Plus 4 male overseas visitors.

<sup>18</sup> Plus 132 male overseas visitors.

<sup>19</sup> Plus 130 female overseas visitors.



**Table 26 Regional Family Type (B17 2001)**

	<b>Belyando</b>	<b>Nebo</b>	<b>Bowen</b>	<b>Total</b>
Couple with children	1,377	260	1,366	3,003
Couple without children	809	176	1,342	2,327
One parent family	200	29	420	649
Other	16	4	41	61
<b>Total Families</b>	<b>2,402</b>	<b>469</b>	<b>3,169</b>	<b>12,080</b>

**Birthplace by Region**

**Table 27 Local Birthplace by Region (BO7,2001)**

	<b>3031504</b>	<b>3031604</b>	<b>3052002</b>	<b>3052004</b>	<b>3050601</b>	<b>Total</b>
Oceania and Antarctica <sup>20</sup>	98	252	266	509	91	1,216
North-West Europe	6	6	9	12	0	33
Southern and Eastern Europe	0	0	0	0	0	0
North Africa and the Middle East	0	0	0	0	0	0
South-East ASEIA	0	3	0	7	0	10
North-East ASEIA	0	0	0	0	0	0
Southern and Central ASEIA	0	0	0	0	0	0
Americas	0	0	3	0	0	3
Sub-Saharan Africa	0	0	0	0	0	0
Other	0	0	0	0	0	0
Not Stated	21	104	77	114	0	316

<sup>20</sup> Including Australia



	3031504	3031604	3052002	3052004	3050601	Total
Overseas Visitors	0	0	3	0	3	6
Total	125	365	361	642	94	1,584

**Table 28 Regional Birthplace by Region (B07 2001)**

	Belyando	Nebo	Bowen	Total
Oceania and Antarctica	8,631	2,118	11,374	22,123
North-West Europe	245	68	687	1,000
Southern and Eastern Europe	24	10	120	154
North Africa and the Middle East	0	0	89	89
South-East ASEIA	71	13	188	272
North-East ASEIA	12	0	26	38
Southern and Central ASEIA	13	6	10	29
Americas	23	6	42	71
Sub-Saharan Africa	32	7	26	65
Other	0	0	13	13
Not Stated	818	299	862	1,979
Overseas Visitors	14	4	262	280
Total	9,883	2,531	13,699	26,113

### Language Spoken at Home





**Table 29 Local - Language Spoken At Home (B08 2001)**

	3031504	3031604	3052002	3052004	3050601	Total
Speaks English only	103	260	280	531	94	1,268
Speaks other language	0	3	0	13	0	16
Not Stated	19	104	71	102	0	296
Overseas Visitors	0	0	0	0	3	3
<b>Total</b>	<b>122</b>	<b>367</b>	<b>351</b>	<b>646</b>	<b>97</b>	<b>1,583</b>

**Table 30 Regional – Language Spoken At Home (B08 2001)**

	Belyando	Nebo	Bowen	Total
Speaks English only	8,963	2,202	12,042	23,207
Speaks other language	173	38	682	893
Not Stated	742	279	722	1,743
Overseas Visitors	14	4	262	280
<b>Total</b>	<b>9,892</b>	<b>2,523</b>	<b>13,708</b>	<b>26,123</b>

### Dwelling Structure

**Table 31 Local Dwelling Structure (B18 2001)**

	3031504	3031604	3052002	3052004	3050601	Total
Separate House	47	41	46	126	26	286
Semi-detached	0	3	7	0	0	10
Flat, unit or apartment	0	0	0	0	0	0
Other	0	9	8	11	0	28
Not Stated	0	0	0	5	0	5
Unoccupied Private	10	17	29	16	5	77



	3031504	3031604	3052002	3052004	3050601	Total
Dwellings						
Total	57	70	90	158	31	406

**Table 32 Regional – Dwelling Structure (B18 2001)**

	Belyando	Nebo	Bowen	Total
Separate House	2,906	613	3,881	7,400
Semi-detached	61	13	158	232
Flat, unit or apartment	127	19	458	604
Other	283	43	803	1,129
Not Stated	52	6	89	147
Unoccupied Private Dwellings	586	222	797	1,605
Total	4,015	916	6,186	11,117

### Dwelling Tenure Type

**Table 33 Local Dwelling Tenure Type (B19 2001)**

	3031504	3031604	3052002	3052004	3050601	Total
Fully Owned	12	25	27	33	10	107
Purchasing	3	3	4	4	0	14
Renting	5	4	4	80	3	96
Other	16	17	23	12	13	81
Not Stated	9	8	3	12	3	35
Total	45	57	61	141	29	333



**Table 34 Regional – Dwelling Tenure Type (B19 2001)**

	<b>Belyando</b>	<b>Nebo</b>	<b>Bowen</b>	<b>Total</b>
Fully Owned	1,228	142	2,378	3,748
Purchasing	570	48	810	1,428
Renting	1,159	384	1,603	3,146
Other	257	70	278	605
Not Stated	216	51	319	586
<b>Total</b>	<b>3,430</b>	<b>695</b>	<b>5,388</b>	<b>9,513</b>

**Transience**

**Table 35 Local Transience (B22 2001)**

	<b>3031504</b>	<b>3031604</b>	<b>3052002</b>	<b>3052004</b>	<b>3050601</b>	<b>Total</b>
Same address as 1 year ago	83	169	211	405	69	937
Difference address as 1 year ago	14	79	70	128	21	312
Same address as 5 years ago	58	107	144	204	47	560
Different address as 5 years ago	33	126	123	299	39	620

**Table 36 Regional Transience (B22 2001)**

	<b>Belyando</b>	<b>Nebo</b>	<b>Bowen</b>	<b>Total</b>
Same address as 1 year ago	7,259	1,572	9,973	18,804
Difference address as 1 year ago	1,809	649	2,682	5,140
Same address as 5 years ago	4,299	780	6,688	11,767



	<b>Belyando</b>	<b>Nebo</b>	<b>Bowen</b>	<b>Total</b>
Different address as 5 years ago	4,077	1,264	5,285	10,626

### Non-School Qualifications – Level of Education

**Table 37 Local Non-School Qualification, Level of Education (B23 2001)**

	<b>3031504</b>	<b>3031604</b>	<b>3052002</b>	<b>3052004</b>	<b>3050601</b>	<b>Total</b>
Postgraduate Degree	0	0	0	0	0	0
Graduate Diploma or Graduate Certificate	0	0	0	3	0	3
Bachelor Degree	0	10	8	22	0	40
Advanced Diploma and Diploma	4	15	9	10	3	41
Certificate	12	74	73	112	12	283
Not Stated	26	93	78	120	6	323
Not Applicable	57	100	140	277	53	627
<b>Total</b>	<b>99</b>	<b>292</b>	<b>308</b>	<b>544</b>	<b>74</b>	<b>1,317</b>

**Table 38 Regional Non-School Qualification: Level of Education (B23 2001))**

	<b>Belyando</b>	<b>Nebo</b>	<b>Bowen</b>	<b>Total</b>
Postgraduate Degree	42	10	38	90
Graduate Diploma or Graduate Certificate	58	7	47	112
Bachelor Degree	420	96	404	920



	<b>Belyando</b>	<b>Nebo</b>	<b>Bowen</b>	<b>Total</b>
Advanced Diploma and Diploma	236	49	373	658
Certificate	1,507	437	1,680	3,624
Not Stated	895	356	1,287	2,538
Not Applicable	4,202	1,045	6,982	12,229
<b>Total</b>	<b>7,360</b>	<b>2,000</b>	<b>10,811</b>	<b>20,171</b>

### Non-School Qualification – Field of Study

**Table 39 Local Non-School Qualification, Field of Study (B24 2001)**

	<b>3031504</b>	<b>3031604</b>	<b>3052002</b>	<b>3052004</b>	<b>3050601</b>	<b>Total</b>
Natural and Physical Sciences	0	0	0	8	0	8
Information Technology	0	0	0	0	0	0
Engineering and Related Technologies	4	53	60	100	3	220
Architecture and Building	0	8	9	10	0	27
Agriculture, Environmental and Related Studies	7	9	7	0	12	35
Health	3	7	6	3	0	19
Education	3	5	0	6	0	14
Management and Commerce	0	9	6	5	0	20
Society and Culture	3	0	0	0	0	3
Creative Arts	0	3	0	3	0	6
Food, Hospitality and Personal	3	6	4	7	0	20



	3031504	3031604	3052002	3052004	3050601	Total
Services						
Mixed Field Programs	0	0	0	0	0	0
Field of Study not adequately described	0	0	0	3	0	3
Not Stated	23	96	73	118	3	313
Not Applicable	57	100	140	277	53	627
Total	103	296	305	540	71	1,315

**Table 40 Regional Non-School Qualification: Field of Study (B24 2001)**

	Belyando	Nebo	Bowen	Total
Natural and Physical Sciences	53	23	46	122
Information Technology	15	0	20	35
Engineering and Related Technologies	1,123	361	931	2,415
Architecture and Building	137	35	278	450
Agriculture, Environmental and Related Studies	93	23	114	230
Health	150	35	268	453
Education	249	35	320	604
Management and Commerce	205	48	273	526
Society and Culture	98	8	186	292
Creative Arts	18	4	40	62



	<b>Belyando</b>	<b>Nebo</b>	<b>Bowen</b>	<b>Total</b>
Food, Hospitality and Personal Services	155	39	202	396
Mixed Field Programs	0	0	0	0
Field of Study not adequately described	19	7	30	56
Not Stated	842	338	1,118	2,298
Not Applicable	4,202	1,045	6,982	12,229
<b>Total</b>	<b>7,359</b>	<b>2,001</b>	<b>10,808</b>	<b>20,168</b>

## Labour Force

**Table 41 Local Labour Force (B22 2001)**

	<b>3031504</b>	<b>3031604</b>	<b>3052002</b>	<b>3052004</b>	<b>3050601</b>	<b>Total</b>
Employed F/T	46	157	187	318	56	764
Employed P/T	13	22	25	52	3	112
Not Stated	8	0	4	13	3	28
Employed	67	179	216	383	62	907
Unemployed	0	6	4	9	0	19
<b>Total Labour Force</b>	<b>67</b>	<b>185</b>	<b>220</b>	<b>392</b>	<b>62</b>	<b>926</b>
Not in Labour Force	16	20	28	63	12	139
Unemployment Rate	0%	3.2%	1.8%	2.3%	0%	1.5% average

**Table 42 Regional Labour Force (B22 2001)**

	<b>Belyando</b>	<b>Nebo</b>	<b>Bowen</b>	<b>Total</b>
Employed	3,526	1,133	3,706	8,365



	<b>Belyando</b>	<b>Nebo</b>	<b>Bowen</b>	<b>Total</b>
F/T				
Employed P/T	1,176	245	1,618	3,039
Not Stated	150	40	211	401
Employed	4,852	1,418	5,535	11,805
Unemployed	200	32	439	671
Total Labour Force	5,052	1,450	5,974	12,476
Not in Labour Force	1,779	309	4,300	6,388
Unemployment Rate	4%	2.2%	7.3%	4.5% average

**Table 43 Local Industry (B26 2001)**

	<b>3031504</b>	<b>3031604</b>	<b>3052002</b>	<b>3052004</b>	<b>3050601</b>	<b>Total</b>
Agriculture, Forestry and Fishing	43	64	71	65	61	304
Mining	6	48	93	126	0	273
Manufacturing	0	6	3	15	0	24
Electricity, Gas and Water Supply	0	0	0	3	0	3
Construction	3	11	10	17	0	41
Wholesale Trade	0	3	8	14	0	25
Retail Trade	4	3	0	9	0	16
Accommodation, Cafes and Restaurants	3	3	7	25	0	38
Transport and Storage	0	6	9	79	0	94
Communication Services	0	0	0	0	0	0
Finance and	0	3	0	0	0	3





	3031504	3031604	3052002	3052004	3050601	Total
Insurance						
Property and Business Services	0	20	13	20	0	53
Government Administration and Defence	3	3	0	3	0	9
Education	3	0	0	9	0	12
Health and Community Services	3	0	6	0	0	9
Cultural and Recreational Services	0	6	0	3	0	9
Personal and Other Services	0	3	0	3	0	6
Non-classifiable economic units	0	0	0	0	0	0
Not Stated	3	0	6	9	0	18
<b>Total</b>	<b>71</b>	<b>179</b>	<b>226</b>	<b>400</b>	<b>61</b>	<b>937</b>

## Industry

**Table 44 Regional – Industry (B26 2001)**

	Belyando	Nebo	Bowen	Total
Agriculture, Forestry and Fishing	559	196	1,609	2,364
Mining	1,591	544	264	2,399
Manufacturing	170	37	250	457
Electricity, Gas and Water Supply	18	7	67	92
Construction	286	92	268	646
Wholesale Trade	220	54	316	590



	<b>Belyando</b>	<b>Nebo</b>	<b>Bowen</b>	<b>Total</b>
Retail Trade	461	54	700	1,215
Accommodation, Cafes and Restaurants	197	89	258	544
Transport and Storage	195	116	300	611
Communication Services	36	6	36	78
Finance and Insurance	52	7	72	131
Property and Business Services	232	68	205	505
Government Administration and Defence	113	31	174	318
Education	275	51	334	660
Health and Community Services	216	21	380	617
Cultural and Recreational Services	36	6	39	81
Personal and Other Services	115	14	120	249
Non-classifiable economic units	21	6	13	40
Not Stated	78	21	108	207
<b>Total</b>	<b>4,871</b>	<b>1,420</b>	<b>5,513</b>	<b>11,804</b>

## Occupation



**Table 45 Local Occupation (B27 2001)**

	<b>3031504</b>	<b>3031604</b>	<b>3052002</b>	<b>3052004</b>	<b>3050601</b>	<b>Total</b>
Managers and Administrators	29	50	38	39	26	182
Professionals	6	6	14	23	0	49
Associated Professionals	3	4	14	20	0	41
Tradespersons and Related Workers	9	40	40	64	20	173
Advanced Clerical and Service Workers	0	6	3	3	0	12
Intermediate Clerical, Sales and Service Workers	3	6	6	21	0	36
Intermediate Production and Transport Workers	13	32	53	152	3	253
Elementary Clerical, Sales and Service Workers	0	3	0	6	0	9
Labourers and Related Workers	9	30	46	53	22	160
Inadequately Described	0	3	0	6	0	9
Not Stated	0	3	6	3	3	15
<b>Total</b>	<b>72</b>	<b>183</b>	<b>220</b>	<b>390</b>	<b>74</b>	<b>939</b>

**Table 46 Regional Occupation (B27 2001)**

	<b>Belyando</b>	<b>Nebo</b>	<b>Bowen</b>	<b>Total</b>
Managers and Administrators	480	143	573	1,196
Professionals	497	104	438	1,039



	<b>Belyando</b>	<b>Nebo</b>	<b>Bowen</b>	<b>Total</b>
Associated Professionals	421	110	465	996
Tradespersons and Related Workers	892	250	602	1,744
Advanced Clerical and Service Workers	73	7	105	185
Intermediate Clerical, Sales and Service Workers	400	80	624	1,104
Intermediate Production and Transport Workers	1,194	451	755	2,400
Elementary Clerical, Sales and Service Workers	329	47	404	780
Labourers and Related Workers	481	204	1,448	2,133
Inadequately Described	23	8	30	61
Not Stated	48	9	85	142
<b>Total</b>	<b>4,838</b>	<b>1,413</b>	<b>5,529</b>	<b>11,780</b>

### Method Travel to Work

**Table 47 Local Method of Travel to Work (B28 2001)**

	<b>3031504</b>	<b>3031604</b>	<b>3052002</b>	<b>3052004</b>	<b>3050601</b>	<b>Total</b>
Train	0	0	0	0	0	0
Bus	0	9	50	50	0	109
Ferry	0	0	0	0	0	0



	3031504	3031604	3052002	3052004	3050601	Total
Tram	0	0	0	0	0	0
Taxi	0	0	0	0	0	0
Car, as driver	27	72	54	143	12	308
Car, as passenger	6	20	26	39	3	94
Truck	3	5	4	4	0	16
Motorbike/motor scooter	3	3	0	5	0	11
Bicycle	0	0	0	12	0	12
Other	6	5	4	6	3	24
Walk	7	19	18	41	18	103
Two Methods	0	5	3	0	0	8
Three Methods	0	0	0	0	0	0
Work at Home	17	35	48	45	24	169
Do not go to work	0	6	5	27	0	38
Not Stated	0	0	0	4	3	7
<b>Total</b>	<b>69</b>	<b>179</b>	<b>212</b>	<b>376</b>	<b>63</b>	<b>899</b>

**Table 48 Regional Method of Travel to Work (B28 2001)**

	Belyando	Nebo	Bowen	Total
Train	0	3	0	3
Bus	121	126	34	281
Ferry	3	0	3	6
Tram	0	0	0	0
Taxi	8	3	8	19
Car, as driver	2,375	598	2,958	5,931
Car, as passenger	767	220	737	1,724
Truck	90	16	142	248
Motorbike/motor scooter	35	14	70	119



	Belyando	Nebo	Bowen	Total
Bicycle	58	23	58	139
Other	60	18	66	144
Walk	305	104	342	751
Two Methods	61	20	45	126
Three Methods	6	0	0	6
Work at Home	355	134	410	899
Do not go to work	520	124	539	1,183
Not Stated	89	17	122	228
Total	4,853	1,420	5,534	11,807

### Weekly Income

**Table 49 Local Weekly Household Income (B31 2001)**

	3031504	3031604	3052002	3052004	3050601	Total
Negative/Nil income	0	0	0	3	0	3
\$1-\$199	0	0	3	0	0	3
\$200-\$299	3	0	3	3	0	9
\$300-\$399	0	3	6	0	3	12
\$400-\$499	0	0	3	7	0	10
\$500-\$599	0	3	3	3	0	9
\$600-\$699	0	4	6	8	3	21
\$700-\$799	0	5	3	7	3	18
\$800-\$999	7	4	9	12	0	32
\$1,000-\$1,199	0	3	0	18	3	24
\$1,200-\$1,499	0	3	3	14	0	20
\$1,500-\$1,999	3	9	3	23	0	38
\$2,000 or more	0	8	6	13	5	32



	3031504	3031604	3052002	3052004	3050601	Total
Partial income stated	4	3	8	9	5	29
All incomes not stated	7	6	3	9	0	25
Total	24	51	59	129	22	285

**Table 50 Regional Weekly Household Income (B31 2001)**

	Belyando	Nebo	Bowen	Total
Negative/Nil income	21	4	35	60
\$1-\$199	76	13	212	301
\$200-\$299	120	18	494	632
\$300-\$399	134	31	522	687
\$400-\$499	117	22	400	539
\$500-\$599	108	20	254	382
\$600-\$699	103	31	333	467
\$700-\$799	98	23	218	339
\$800-\$999	197	50	423	370
\$1,000-\$1,199	318	65	325	708
\$1,200-\$1,499	252	57	283	592
\$1,500-\$1,999	610	115	302	1027
\$2,000 or more	473	74	159	706
Partial income stated	326	57	326	709
All incomes not stated	117	32	227	376
Total	3,070	612	4,513	8195





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