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**Bowen Basin
population report,
2009**

**Full-time equivalent (FTE)
population estimates, July
2009**

February 2010

Estimates of the resident population and non-resident worker population in local government areas of Central Queensland.

Office of Economic and Statistical Research
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Executive summary

The *Bowen Basin population report, 2009* (the report) contains full-time equivalent (FTE) population estimates for all local government areas (LGAs), statistical local areas (SLAs) and select towns of Queensland's Bowen Basin, as of 31 July 2009. The FTE population measure has two components—the area's estimated resident population, and a count of non-resident workers (who fly-in/fly-out or drive-in/drive-out (FIFO/DIDO) to the area). As the latter group is not accounted for in official resident population estimates, their numbers are derived from an annual *Survey of accommodation providers*.

This edition of the report marks the fourth year since annual monitoring of the Bowen Basin's non-resident worker population was initiated by the Queensland Government. Trend analysis of all data collected since 2006 is provided in this edition, and reveals emerging patterns in the relationship between resident and non-resident workforces in the region.

The incidence of non-resident workers in the Bowen Basin is slowly increasing. FIFO/DIDO workers made up 13 per cent of the region's FTE population in 2009, compared with just 12 per cent in 2006. This proportion briefly reached 15 per cent as workforce numbers swelled in 2008, then declined as industry adjusted to prevailing economic conditions. These results indicate that the non-resident workforce bore the brunt of mining job losses that occurred in the region during 2008-09.

Despite the global economic downturn, the FTE population of the Bowen Basin in July 2009 still exceeded that for all previous years except 2008. Most of the nine statistical local areas in the region experienced significant growth in workforce numbers between 2007 and 2008, due largely to the construction of new mines and expanded production of existing operations. Nevertheless, this growth was moderated by the global downturn in 2009, with some areas experiencing net losses in non-resident workforces during that year.

Many accommodation providers surveyed in the latter half of 2009 reported a strong resurgence in demand for their services, and were optimistic that workforce numbers in the Bowen Basin will increase again in 2009-10. Given the number of new coal projects and expansions in the assessment pipeline at the time of writing, there is a strong possibility that this outcome will occur. However, the characteristics of any future growth and its impacts on communities in the region are less clear, and will depend largely on the capacity and willingness of all stakeholders to find appropriate solutions.

While this report is based on just four years of data, the trends that it reveals shed some light on how the region could continue to develop. In the first instance, it demonstrates that the combination of FIFO/DIDO workforces and non-private accommodation is now well established, and provides employers with a flexible means of meeting production expansion. Despite the rapid growth in workforce numbers that occurred in 2007-08, single persons quarters (SPQs) increased their share of the accommodation market for non-resident workers, due to expanding capacity and improvements in amenity.

Despite that trend, recent growth in the number of non-resident workers has not been at the expense of growth in local communities. One of the key findings of this report is that the resident population of the Bowen Basin increased by more than twice the growth in non-resident worker numbers since 2006. This growth in resident population has not been confined to larger centres such as Emerald and Moranbah—even smaller towns like Dysart and Glenden have grown during this period. Much of this population increase is due to improved housing availability, as new dwelling construction slowly responds to pent-up demand.

Summary findings of this report are:

The Bowen Basin's FTE population reached 93,500 people by July 2009

The FTE population of the Bowen Basin was estimated at 93,506 people at 31 July 2009, comprising 81,278 usual residents and 12,228 non-resident workers. This is an increase of 4,667 people since June 2006.

The number of non-resident workers in the Bowen Basin has increased since 2006

Some 12,228 non-resident workers were counted in the Bowen Basin at 31 July 2009. While this count was below the peak of 13,656 workers reached in June 2008, it still exceeded totals for 2006 (10,763) and 2007 (11,075).

Non-resident workers are an increasing proportion of the region's FTE population

Non-resident workers accounted for approximately 13 per cent of the Bowen Basin's FTE population in 2009, compared to 12 per cent in 2006.

Usual residents made up over two-thirds of all FTE population growth since 2006

While the number of non-resident workers in the Bowen Basin grew by 1,465 people between 2006 and 2009, the region's resident population increased by 3,202, accounting for around 69 per cent of FTE population growth.

More than two-thirds of all non-resident workers stayed in the LGA of Isaac (R)

Some 70 per cent of all non-resident workers counted in the Bowen Basin in 2009 were in the area of Isaac Regional Council (8,568 people). Of these, some 3,825 workers were accommodated in the SLA of Nebo, where they made up 57 per cent of the FTE population.

SPQs provide an increasing share of non-resident worker accommodation

SPQs housed 10,961 people or 90 per cent of all non-resident workers in the Bowen Basin in July 2009, compared with 81 per cent in 2006. Other forms of commercial worker accommodation, particularly caravan parks, have ceded market share to SPQs.

Table 1. FTE populations, LGAs and SLAs in the Bowen Basin, July 2009

Local Government Area (LGA)	Statistical Local Area (SLA)	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	Proportion of non-resident workers
	Banana	15,497	726	16,223	4.5%
Banana (S)		15,497	726	16,223	4.5%
	Bauhinia	2,355	164	2,519	6.5%
	Duarina	6,972	1,101	8,073	13.6%
	Emerald	16,799	865	17,664	4.9%
	Peak Downs	3,481	552	4,033	13.7%
Central Highlands (R)		29,607	2,682	32,289	8.3%
	Belyando	11,759	2,350	14,109	16.7%
	Broadsound	7,552	2,393	9,945	24.1%
	Nebo	2,874	3,825	6,699	57.1%
Isaac (R)		22,186	8,568	30,754	27.9%
	Bowen	13,988	252	14,240	1.8%
Whitsunday (R) (Bowen only)		13,988	252	14,240	1.8%
BOWEN BASIN TOTAL		81,278	12,228	93,506	13.1%

(R) - Regional Council (S) - Shire

Note that differences between totals and the sum of their components are due to rounding of population estimates.

Sources: *PIFU unpublished, 2009 **PIFU, Survey of accommodation providers, 2009

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Technical notes

This report has been prepared by the Office of Economic and Statistical Research (OESR), Queensland Treasury, which now incorporates the former Planning Information and Forecasting Unit (PIFU) of the Department of Infrastructure and Planning. The primary source of data for this report is the *2009 Survey of accommodation providers* for the Bowen Basin, which was conducted by PIFU in the second half of 2009. This survey collected details of accommodation provided for non-resident workers staying in SPQs, caravan parks, hotels, motels and other accommodation such as leased dwellings.

SPQ respondents were asked to report the number of people who stayed in their accommodation on 31 July 2009, or on another day in the last week of July if that was more representative of average demand during the week. Live-in employees of SPQs were included in the count of non-resident workers because few live locally. Caravan park and motel operators were asked to include guests who were medium to long-term occupants of their accommodation on 31 July or during the last week of July. Short-term and overnight guests were excluded from the count of non-resident workers.

Annual estimates of the resident population (ERP) as at 30 June are published by the Australian Bureau of Statistics (ABS) usually in March of the year following the year of estimate. As the ERP for June 2009 is not yet available, it was necessary to estimate ERPs for Bowen Basin LGAs and urban centres before FTE population estimates could be calculated. The 2009 ERP estimate in this report was calculated by taking quarterly approvals for houses and other dwellings for the calendar year 2008 and applying population multipliers based on the average household size of separate houses and other occupied private dwellings in Bowen Basin LGAs at the 2006 Census.

The 2009 estimate of ERP was based on dwelling approvals in calendar year 2008 rather than financial year 2008-09 to allow a six-month lag for dwelling completion. This method of estimating resident population does not take account of the components of actual population change, namely natural increase (births minus deaths) and net migration (arrivals minus departures).

The FTE population data in this report supercede those given in former editions published by PIFU. While the non-resident worker components of previously published FTE populations remain unchanged, the resident population components have been altered to account for boundary changes and revised estimated resident population data released by the ABS since initial publication.

The statistical geography current at the time of the Census in August 2006 was the Australian Standard Geographical Classification, 2006 (ASGC 2006). In March 2008, a major reform of LGA boundaries occurred, and the reformed LGA boundaries have been included in the Australian Standard Geographical Classification, 2008 (ASGC 2008). In this publication all FTE estimates and accommodation statistics for LGAs and statistical local areas (SLAs) are reported on ASGC 2008 boundaries, including those for years preceding the local government reforms (2006 and 2007). This allows for direct comparison of results for all years covered by the report (2006 to 2009).

For simplicity, the names of SLAs used throughout the report refer to the geographical descriptor of an area, such as “Bauhinia”, rather than the correct ASGC 2008 SLA name, for example “Central Highlands (R) – Bauhinia”.

1. Introduction

1.1 About this report

The *Bowen Basin population report, 2009* contains provisional full-time equivalent (FTE) population estimates for key localities and local government areas (LGAs) in the Bowen Basin, as of July 2009. It is based on surveys of accommodation providers conducted across the region by the former Planning Information and Forecasting Unit (PIFU) in late 2009.

The FTE population measure has two components—the usual resident population (people who live in the area permanently) and a count of non-resident workers (those who stay in the area for extended periods when working, but who are not counted as usual residents). Given the high incidence of fly-in/fly-out and drive-in/drive-out (FIFO/DIDO) workers in mining areas like the Bowen Basin, the FTE population estimate provides a better measure of total demand for goods, services and infrastructure than the resident population estimates released annually by the Australian Bureau of Statistics (ABS) .

This edition of the *Bowen Basin population report* contains FTE population estimates for 30 June 2009, as well as revised FTE population estimates for 2006, 2007 and 2008. Although survey data for the Bowen Basin were collected in 2008, FTE population estimates were not published in that year due to uncertainty about the impact of the global downturn on resident population numbers in mining towns.

The FTE population estimates for 2006 and 2007 given in this report have been revised from those released in previous editions of the *Bowen Basin population report*. While the non-resident worker counts shown in previous editions remain unchanged, the resident population components have been amended in line with:

- changes to administrative boundaries following amalgamations of local governments in 2008, most notably in the LGA of Banana Shire;
- the amended Statistical Local Area (SLA) boundary for Banana (S), as adopted under the 2008 Australian Standard Geographical Classification; and
- revisions to the estimated resident populations for 2007 and the preliminary results for 2008, as released by the ABS in 2009.

1.2 Purpose

The purpose of this report is to provide answers to five key questions:

- What is the size of the Bowen Basin's current service population, including non-resident workers engaged in construction and resource industry activities?
- How are non-resident workers accommodated while living in the region?
- What levels of demand do non-resident workers place on commercial accommodation?
- Which population centres in the region play host to non-resident workers?
- Are there noticeable differences in the pattern of FTE populations in the Bowen Basin in 2009 from those in former years?

1.3 Non-resident workers

A large number of mining workers and contractors occupy temporary accommodation in localities adjacent to the mines for extended shift rosters, and commute long distances by air or road between their workplace and usual place of residence. Changing work conditions in the mining industry, along with the provision of suitable non-permanent accommodation, have made such FIFO/DIDO arrangements more common than in the past.

The term 'non-resident worker' is used in this report to distinguish people who are not usual residents of the local area where they regularly work¹. A non-resident worker differs from other short-term or casual visitors to the area in that:

- The duration of their stay in the area is extended and regular. This usually takes the form of a period of work followed by a rest interval at their place of usual residence.
- While living in the area, the worker stays in commercial accommodation (hotels, motels or caravan parks) or in worker accommodation. SPQs² are a commonly used accommodation solution, and may be located in town centres or on a mining lease.
- Non-resident workers are often categorised according to their means of travel between home and place of work, either as fly-in/fly-out (FIFO) or drive-in/drive-out (DIDO).

Non-resident workers do not meet the ABS criteria for a 'usual resident' of the area where they work, and so are not included in the area's official resident population estimate. Nevertheless, the non-resident worker population creates additional demand for goods, services and infrastructure while living in the area, which must be planned for and provided by both government and the private sector (Cook, 1996). More information on non-resident workers is available at Appendix A of this report.

1.4 Methodology and data sources

The methodology adopted for this study follows that used previously for the Bowen Basin (DIP, 2008) and the Surat Basin (DIP, 2009):

- The non-resident worker population of the study area at 31 July 2009 was established through a collection of primary data, in the form of a survey of commercial accommodation providers. Other information was obtained through interviews and surveys of key employers and stakeholders, and analysis of data from the 2006 Census of Population and Housing.
- The second component of the FTE population measure represents the resident population of each area at 30 June 2009, based on a projection of the ABS estimated resident population (ERP) for 30 June 2008.

A more detailed discussion of the FTE population methodology is available at Appendix B of this report.

1.5 Survey of accommodation providers

To inform the preparation of the 2009 FTE population estimate, PIFU conducted a survey of accommodation providers (the survey) in the third quarter of 2009. The survey covered all of the Bowen Basin, and counted the number of people living in SPQs, hotels, motels, caravan parks and other accommodation³ on a medium-term or long-term basis.

The main target group for the survey was non-resident workers. This group consists largely of FIFO/DIDO mining company employees and associated contractors, but also includes exploration crews, tradespersons associated with the construction of new mines, major infrastructure and residential development, as well as live-in staff members of the accommodation centre. The survey did not include:

- seasonal agricultural workers and itinerants;
- tourists, including visiting caravans and campers in caravan parks;
- overnight and short-term visitors who occupy accommodation on a casual basis;

¹ This definition hinges on what is meant by the term 'local area'. For the purpose of this study, a local resident is one who normally resides within the defined LGA where the workplace is located, and a non-resident worker usually lives outside of that area.

² Refer to Glossary

³ Other accommodation includes private dwellings head-leased by companies and managed by real estate agencies and some farm-stay accommodation if occupied by non-resident workers other than seasonal agricultural workers.

- guests of accommodation not catering for workers, such as bed and breakfast dwellings, boarding houses and farm stay locations; and
- occupants of informal accommodation (e.g. tents located on private land).

Accommodation providers were asked to supply information on the number of their guests who were deemed to be medium-term or long-term occupants, including live-in employees of the establishment (such as managers, catering staff, service workers and maintenance staff). As a guide, any persons staying in the accommodation for two weeks or less were regarded as short-term occupants and not included in the FTE population estimates.

1.6 Related studies

This report forms the first of three related reports on the Bowen Basin that will be prepared by OESR in 2010:

- The *Bowen Basin population report, 2009* provides a baseline FTE population measure for the region.
- The *Population study for the Bowen Basin region, 2010* will provide a detailed demographic profile of select local government areas and localities in the region, along with analysis of the region's housing and labour markets. The study will be published in two parts during the first half of 2010.

This edition of the *Bowen Basin population report* supercedes previous editions published by PIFU for the years 2006 and 2007.

1.7 Planning and policy context

This report provides a resource to inform planning processes, including:

- local government planning schemes and priority infrastructure plans for the regional councils of Banana, Central Highlands, Isaac and Whitsunday;
- state regional planning frameworks, including the *Whitsunday, Hinterland and Mackay Regional Plan (WHAM)*, and the *Central Queensland Regional Plan*;
- the Queensland Coal Infrastructure Strategic Plan; and
- preparation and assessment of Environmental Impact Statements (EISs) for mines and major projects in the Bowen Basin.

In a policy context, the FTE population measures developed in this report will support implementation of the Queensland Government's Sustainable Resource Communities Policy, which promotes the equitable and sustainable development of mining communities. Utilising the FTE population measure will enable a better understanding of the cumulative social impacts of mining development, and will provide better information to guide the allocation of resources, services and infrastructure.

1.8 Organisation of report

This report is presented in three parts:

- The first section provides results from the 2009 Survey of Accommodation providers, which was conducted in July 2009. This section provides a count of non-resident workers according to the accommodation which they occupied at the time of survey. It also presents an analysis of occupancy rates for SPQ accommodation, and time series data from previous collections since 2006.
- The second section contains FTE population estimates for LGAs, SLAs and select localities as of 31 July 2009. This section also provides a more detailed analysis of the FTE population for each of the nine SLAs in the Bowen Basin, including time series estimates from 2006 onward. These revised FTE estimates are concorded to ASGC 2008 boundaries.

- The third section of the report contains guidelines for the application of FTE population estimates.

1.9 Geographical coverage

The geographical area covered by this report includes all nine SLAs and key towns within the four local government administrative areas that make up the Bowen Basin – Banana Shire, Central Highlands Regional Council, Isaac Regional Council and Whitsunday Regional Council (Figure 1).

Previous editions of the *Bowen Basin population report* presented data according to the boundaries of local government areas that preceded administrative reforms in 2008. These LGAs followed the same boundaries and naming conventions as SLAs in the 2006 ASGC. Following the administrative reforms, part of the former LGA of Taroom was incorporated into Banana Shire, and the SLA boundary for Banana was subsequently amended to reflect this change in the 2008 ASGC (Table 2).

Elsewhere in the Bowen Basin, the SLA boundaries current in 2006 were unchanged in the 2008 ASGC. However, the ABS adopted a different naming convention for these areas to reflect their incorporation into amalgamated LGAs, while retaining the same name for the SLA of Banana.

For ease of comparing data from previous years, this edition provides population information according to the 2008 post-amalgamation LGA boundaries and the 2008 boundaries for SLAs. To avoid confusion, the SLA naming convention adopted throughout this report refers to the area generically (e.g. the name *Bauhinia* is used rather than the full 2008 ASGC name of *Central Highlands – Bauhinia*), as shown in Table 2.

Table 2. Geographical concordances and naming conventions used in this report

2008 LGA name	2006 LGA and SLA name	2008 SLA name	SLA name used throughout this report
Banana (S)	Banana (S) Taroom (S)	Banana (S)*	Banana
Central Highlands (R)	Bauhinia (S) Duaringa (S) Emerald (S) Peak Downs (S)	Central Highlands (R) - Bauhinia Central Highlands (R) - Duaringa Central Highlands (R) - Emerald Central Highlands (R) - Peak Downs	Bauhinia Duaringa Emerald Peak Downs
Isaac (R)	Belyando (S) Broadsound (S) Nebo (S)	Isaac (R) - Belyando Isaac (R) - Broadsound Isaac (R) - Nebo	Belyando Broadsound Nebo
Whitsunday (R)**	Bowen (S)	Whitsunday (R) – Bowen	Bowen

(R) - Regional Council (S) - Shire

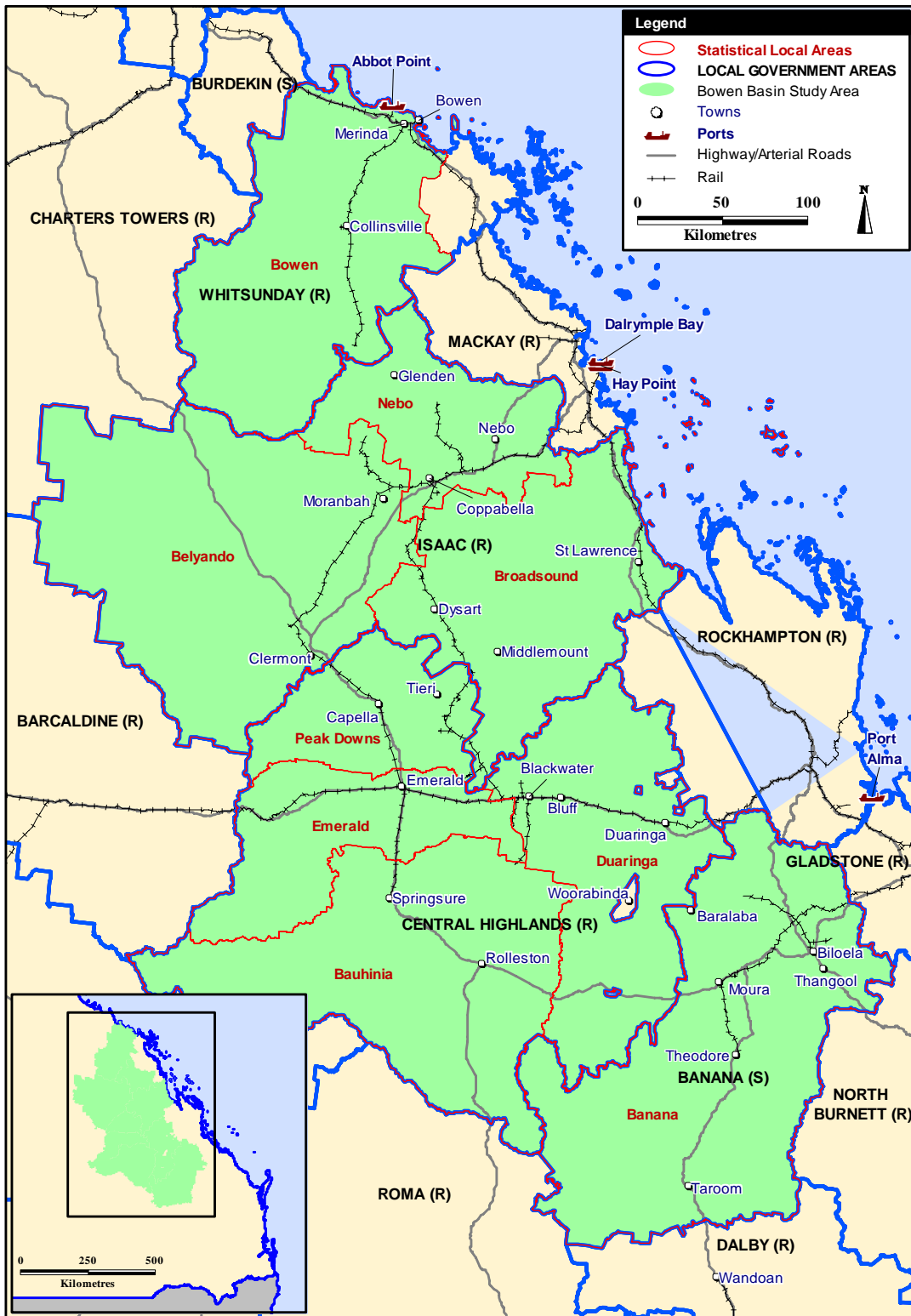
Notes:

* The 2008 boundaries of the SLA of Banana (S) include part of former Taroom (S).

**This report only includes the former Bowen (S) and not other parts of the Whitsunday Regional Council area.

Source: OESR, 2010

Figure 1. Bowen Basin showing 2008 LGA boundaries and 2008 SLA boundaries



(R)- Regional Council (S) - Shire
 Source: OESR, 2010

2. Survey of accommodation providers, 2009

2.1 Survey responses, 2009

To inform the preparation of the 2009 FTE population estimate, a survey of all commercial accommodation providers in the Bowen Basin was conducted early in the third quarter of that year. The survey counted the number of people living in SPQs, hotels, motels, caravan parks and other accommodation⁴ on a medium-term or long-term basis as of the end of July 2009.

Accommodation providers were asked to identify non-resident workers based on best knowledge of their tenants, in that they:

- lived there for extended periods;
- were not usual residents (i.e. had not lived there continuously for six months or more); and
- were not short-term visitors (lived there for less than two weeks), tourists or itinerants.

Some 140 of 142 accommodation providers⁵ volunteered written or telephone responses to the survey (Table 3), a response rate of 98.6 per cent. The category of *Hotels/ motels* was the most common form of commercial accommodation surveyed (65 responses received), followed by *SPQs* (49). A further 26 responses were received from operators of *Caravan parks/other* accommodation.

Table 3. Survey responses received by accommodation type, Bowen Basin, July 2009

Local Government Area (LGA)	Statistical Local Area (SLA)	Respondents to survey				No response received to survey	Total providers
		SPQs	Hotels/ motels	Caravan parks/ other	Total responses received		
	Banana	5	15	6	26	0	26
Banana (S)		5	15	6	26	0	26
	Bauhinia	1	2	2	5	1	6
	Duarina	7	6	3	16	1	17
	Emerald	3	15	6	24	0	24
	Peak Downs	4	5	1	10	0	10
Central Highlands (R)		15	28	12	55	2	57
	Belyando	11	10	2	23	0	23
	Broadsound	7	4	0	11	0	11
	Nebo	9	3	2	14	0	14
Isaac (R)		27	17	4	48	0	48
	Bowen	2	5	4	11	0	11
Whitsunday (R) (Bowen only)		2	5	4	11	0	11
BOWEN BASIN TOTAL		49	65	26	140	2	142

(R) - Regional Council (S) - Shire

Source: PIFU, *Survey of accommodation providers, 2009*

⁴ Other accommodation includes private dwellings head-leased by companies and managed by real estate agencies and some farm-stay accommodation if occupied by non-resident workers other than seasonal agricultural workers.

⁵ All categories of commercial or non-private accommodation, including those owned or operated by mining companies, government agencies and contractors were included in the 2009 *Survey of accommodation providers*. Some motel and caravan park operators specifically indicated that they did not provide services for non-resident workers in their response to the 2008 survey. These providers were not included in the 2009 collection.

As Table 3 shows, the mix of accommodation types catering for non-resident workers varies across the Bowen Basin. SPQ accommodation is most commonly found in Isaac LGA (comprising the SLAs of Belyando, Broadsound and Nebo) where mining is the predominant form of economic activity and the concentration of mines is highest. Hotels, motels and caravan parks are more highly represented in the other LGAs, which tend to have more diversified economies based on tourism and agriculture as well as mining.

2.2 Survey findings – number of non-resident workers, 2009

Summary results of the *Survey of accommodation providers* reveal that a total of 12,228 non-resident workers were counted in all forms of accommodation across the Bowen Basin in July 2009 (Table 4).

Table 4. Non-resident workers by accommodation type, LGAs and SLAs, Bowen Basin, July 2009

Local Government Area (LGA)	Statistical Local Area (SLA)	Number of non-resident workers			
		SPQs	Hotels and motels	Caravan Parks and Other	Total
	Banana	635	31	60	726
Banana (S)		635	31	60	726
	Bauhinia	137	15	12	164
	Duaringa	1,026	14	61	1,101
	Emerald	551	217	97	865
	Peak Downs	545	7	0	552
Central Highlands (R)		2,259	253	170	2,682
	Belyando	1,890	137	323	2,350
	Broadsound	2,368	25	0	2,393
	Nebo	3,697	70	58	3,825
Isaac (R)		7,955	232	381	8,568
	Bowen	112	15	125	252
Whitsunday (R) (Bowen only)		112	15	125	252
BOWEN BASIN TOTAL		10,961	531	736	12,228

(R) - Regional Council (S) - Shire

Source: PIFU, *Survey of accommodation providers*, 2009

In all four LGAs, SPQs were the predominant accommodation type, housing 10,961 non-resident workers or 90 per cent of total. *Caravan Parks and Other* accommodation accounted for 736 workers or six per cent of the total (Table 4), while *Hotels and Motels* accounted for only 531 occupants (or four per cent of total).

The LGA of Isaac Regional Council had the largest number (8,568) of non-resident workers in 2009, representing 70 per cent of the Bowen Basin total. Central Highlands Regional Council accounted for a further 2,682 non-resident workers or 22 per cent of total. Among SLAs, Nebo had the largest population of non-resident workers (3,825 people), representing almost one third (31 per cent) of the Bowen Basin total. The other SLAs in Isaac Regional Council, namely Belyando (2,350 people) and Broadsound (2,393 people) also had significantly high numbers of non-resident workers.

Non-resident workers made up around one quarter of the Bowen Basin's total labour force in 2009, according to estimates published by the Department of Employment and Workplace Relations (2009).

2.3 Comparison of non-resident worker numbers, 2006 to 2009

When survey results for 2009 are compared with those for 2006, 2007 and 2008, the growth pattern for the non-resident worker population in the Bowen Basin is seen as one of steady increase, interrupted by a rapid but short-lived peak in 2008. Although losses in workforce numbers occurred between 2008 and 2009 in some areas, the 2009 total of 12,228 people still exceeded those for 2007 (11,075) and 2006 (10,763).

The size of the non-resident worker population in mining communities tends to fluctuate more than the size of the usual resident population. A number of short-term influences can contribute to this volatility, such as production outages caused by adverse weather events and the scheduling of major maintenance activities. However, more pronounced changes to non-resident workforce numbers are likely to result from commencement or completion of a major construction project, or from companies tailoring production workforce numbers to meet the prevailing level of demand.

The influence of these factors can differ markedly from one area to the next, and over different time periods. This is apparent from examination of time series data, such as that for the period 2006 to 2009 (Table 5). These data show that the number of non-resident workers in the Bowen Basin grew from 10,763 in 2006 to 12,228 in 2009, an increase of 1,465 people.

However, this overall growth trend is not consistent across the entire period, with worker numbers reaching a peak of 13,656 in 2008 before declining slightly in 2009. At the LGA level, the same 2008 peak can be seen in Isaac (R), and to a lesser extent in Central Highlands (R) and Bowen SLA. By contrast, the peak in non-resident worker population for Banana (S) occurred earlier in 2007 (1,278 people), and numbers of non-resident workers have declined thereafter.

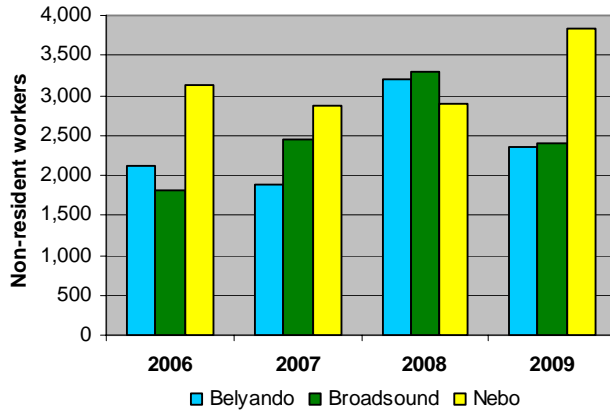
Table 5. Non-resident workers in Bowen Basin SLAs and LGAs, 2006 to 2009

Local Government Area (LGA)	Statistical Local Area (SLA)	Non-resident worker population at:				Changes to non-resident worker population for period	
		2006	2007	2008	2009	2008-09	2006-09
	Banana	1,154	1,278	1,092	726	-366	-428
Banana (S)		1,154	1,278	1,092	726	-366	-428
	Bauhinia	146	65	168	164	-4	18
	Duarina	749	1,028	1,036	1,101	65	352
	Emerald	694	636	906	865	-41	171
	Peak Downs	724	623	729	552	-177	-172
Central Highlands (R)		2,313	2,352	2,839	2,682	-157	369
	Belyando	2,119	1,881	3,194	2,350	-844	231
	Broadsound	1,821	2,448	3,300	2,393	-907	572
	Nebo	3,137	2,868	2,885	3,825	940	688
Isaac (R)		7,077	7,197	9,379	8,568	-811	1,491
	Bowen	219	248	346	252	-94	33
Whitsunday (R) (Bowen only)		219	248	346	252	-94	33
BOWEN BASIN TOTAL		10,763	11,075	13,656	12,228	-1,428	1,465

(R) - Regional Council (S) - Shire
Source: PIFU, *Survey of accommodation providers*, 2009

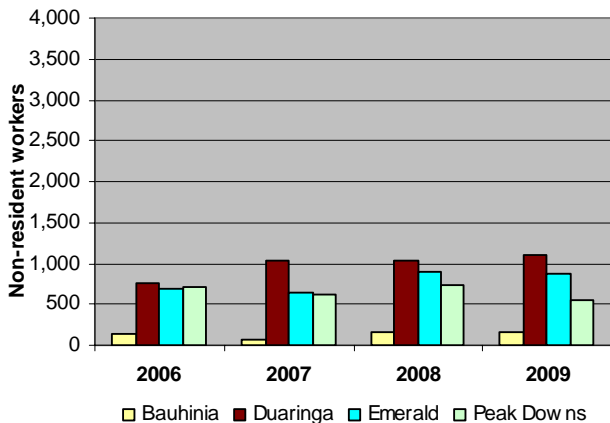
The extent and location of job growth and decline is even more evident at smaller area (SLA) level, as Figures 2 to 4 illustrate.

Figure 2. Number of non-resident workers counted in SLAs of Isaac Regional Council, 2006 to 2009 (Source: PIFU, *Survey of accommodation providers, 2006 to 2009*)



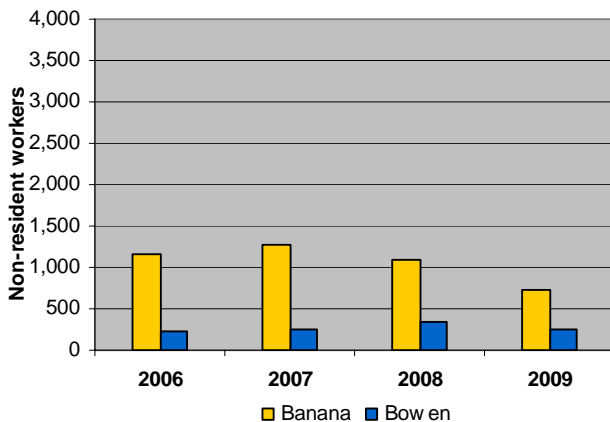
Within Isaac LGA, the number of non-resident workers in the SLA of Belyando fell by 844 between 2008 and 2009, while Broadsound SLA declined by 27 per cent (around 900 people). These areas include large mines at Saraji, German Creek and Foxleigh, where mining employment contracted. These losses were offset by growth of 940 non-resident workers in Nebo SLA during the same period, largely due to development of Moorvale mine.

Figure 3. Number of non-resident workers counted in SLAs of Central Highlands Regional Council, 2006 to 2009 (Source: PIFU, *Survey of accommodation providers, 2006 to 2009*)



Losses of non-resident workers in the SLAs of Central Highlands (R) were lower than those for Isaac (R) between 2008 and 2009. While Peak Downs SLA declined by 177 non-resident workers (or 26 per cent), Duaringa was the only SLA to experience growth (65 non-resident workers, or six per cent) during the same period.

Figure 4. Number of non-resident workers counted in SLAs of Banana and Bowen, 2006 to 2009 (Source: PIFU, *Survey of accommodation providers, 2006 to 2009*)



While the Dawson mines in Banana SLA had job losses between 2008 and 2009, the earlier decline in non-resident workforce numbers between 2007 and 2008 was due to the mine's construction phase ending. The small peak in Bowen SLA in 2008 reflects the overlap of construction and operational workforces at the Sonoma Mine near Collinsville.

2.4 Non-resident workers by accommodation type, 2006 to 2009

Results from the *Survey of accommodation providers* for 2009 and previous years indicate that the number of non-resident workers fell across all types of commercial accommodation between 2008 and 2009. At the same time, SPQs continued to accommodate the majority of non-resident workers, steadily gaining market share over the four years since 2006.

As Table 6 shows, non-resident occupants of SPQs declined from 11,611 to 10,961 (650 people, or six per cent) from 2008 to 2009, while 264 fewer workers were counted in *Hotels/motels* (a decline of 33 per cent). A more rapid decline in occupancy occurred in the *Caravan parks/other* category, with the number of non-resident workers falling by 514 (or 41 per cent) in that period.

Table 6. Non-resident workers by accommodation type, Bowen Basin, 2006 to 2009

Survey year	Non-resident workers by accommodation type				Workers living in SPQs (per cent of total)
	SPQ	Hotels/motels	Caravan park/other	Total	
2009	10,961	531	736	12,228	90%
2008	11,611	795	1,250	13,656	85%
2007	9,211	657	1,207	11,075	83%
2006	8,726	597	1,440	10,763	81%

Source: PIFU, *Survey of accommodation providers*, 2006 to 2009

The proportion of non-resident workers housed in SPQs has steadily increased over the past four years. As Table 6 shows, the share of the Bowen Basin's non-resident worker accommodation market held by SPQs grew from 81 per cent in 2006 to 90 per cent in 2009. While *Hotels/motels* have provided a relatively constant market share of between four per cent (2009) and six per cent (in previous years), the greatest decline has occurred in the *Caravan parks/other* category, which progressively fell from 13 per cent of market share in 2006 to just six per cent in 2009.

Several factors are likely to have contributed to these changes, including:

- improvements in the availability and quality of SPQ accommodation;
- conversion of existing caravan parks to SPQ-style accommodation; and
- a decline in the quantity of housing head-leased from the private rental market by mining operators and contractors, although the extent to which this applies only to non-resident workers is difficult to verify.

2.5 SPQ bed capacity and occupancy, 2009

The *Survey of accommodation providers* measures the maximum bed capacity of SPQ accommodation centres at the time of survey, as well as the number of beds actually occupied by non-resident workers and live-in staff. Results for the survey held in July 2009 show that 10,961 of the available 16,084 SPQ bed spaces across the Bowen Basin were occupied, an occupancy rate of 68 per cent (Table 7).

In terms of total bed numbers, SPQs located in Isaac Regional Council area had a significantly higher capacity (11,193 beds) than those located elsewhere. The SLA of Nebo accounted for around 45 per cent of this total (4,984 beds), closely followed by the SLAs of Broadsound (3,580 beds) and Belyando (2,629 beds). Occupancy rates of SPQ accommodation were highest in Peak Downs and Bowen SLAs, at 78 per cent and 77 per cent respectively. Emerald and Bauhinia SLAs had the lowest occupancy rates (53 per cent and 54 per cent respectively).

Table 7. SPQ bed capacity and occupancy in Bowen Basin, July 2009

Local Government Area (LGA)	Statistical Local Area (SLA)	Total capacity of SPQs at 31 July 2009 (beds)	Non-resident workers counted in SPQs, 31 July 2009*	Occupancy rate for SPQs at 31 July 2009*
	Banana	1,067	635	60%
Banana (S)		1,067	635	60%
	Bauhinia	252	137	54%
	Duaringa	1,689	1,026	61%
	Emerald	1,042	551	53%
	Peak Downs	695	545	78%
Central Highlands (R)		3,678	2,259	61%
	Belyando	2,629	1,890	72%
	Broadsound	3,580	2,368	66%
	Nebo	4,984	3,697	74%
Isaac (R)		11,193	7,955	71%
	Bowen	146	112	77%
Whitsunday (R) (Bowen only)		146	112	77%
BOWEN BASIN TOTAL		16,084	10,961	68%

(R) - Regional Council (S) - Shire

*Note: Refers to beds occupied by non-resident workers and staff members of the accommodation centre on a medium to long-term basis—does not include overnight or short-term occupants.

Source: PIFU, *Survey of accommodation providers, 2009*

It should be noted that not all unoccupied rooms in an SPQ may actually be free for use by other guests, so the imputed vacancy rate shown in Table 7 may actually overstate the quantity of spare accommodation available. According to company policy or tenancy agreements, many SPQ operators hold rooms vacant for designated workers when off-shift, whereas other rooms are shared between shifts or reallocated to other occupants (often referred to as 'motelling').

Operators of some SPQs where motelling isn't practised reported that their premises were nearly full, even though the number of occupied beds was significantly lower than the stated bed capacity. For example, one respondent advised that his facility had no vacancies even though only 75 per cent of rooms were occupied at the time of survey.

2.6 Changes to SPQ bed capacity, 2006 to 2009

Between 2008 and 2009, the total SPQ bed capacity of the Bowen Basin grew from 10,790 beds to 16,084 beds, an increase of 5,294 beds or just under 50 per cent (Table 8). While most of this growth (3,057 beds) occurred between 2006 and 2007, capacity was further boosted by 1,190 beds between 2008 and 2009.

Most of the growth in SPQ bed numbers between 2006 and 2009 occurred within the LGA of Isaac (R), with an additional 3,938 beds becoming available. As Table 8 shows, most of this growth (1,652 beds, or 42 per cent of total) occurred in Broadsound SLA, although the SLAs of Nebo and Belyando also grew by 1,252 and 1,034 beds respectively. Elsewhere, total bed capacity for the LGA of Central Highlands grew by 1,346 during the same period, most notably in the SLA of Duaringa (1,148 beds).

Table 8. SPQ total bed capacity in Bowen Basin LGAs and SLAs, 2006 to 2009

Local Government Area (LGA)	Statistical Local Area (SLA)	Total bed capacity* for year				Change in bed capacity	
		2006	2007	2008	2009	2008 to 2009	2006 to 2009
	Banana	1,123	1,255	952	1,067	115	-56
Banana (S)		1,123	1,255	952	1,067	115	-56
	Bauhinia	181	180	232	252	20	71
	Duarina	541	1,486	1,191	1,689	498	1,148
	Emerald	906	786	824	1,042	218	136
	Peak Downs	704	701	642	695	53	-9
Central Highlands (R)		2,332	3,153	2,889	3,678	789	1,346
	Belyando	1,595	2,431	2,875	2,629	-246	1,034
	Broadsound	1,928	2,737	3,587	3,580	-7	1,652
	Nebo	3,732	4,151	4,456	4,984	528	1,252
Isaac (R)		7,255	9,319	10,918	11,193	275	3,938
	Bowen	80	120	135	146	11	66
Whitsunday (R) (Bowen only)		80	120	135	146	11	66
BOWEN BASIN TOTAL		10,790	13,847	14,894	16,084	1,190	5,294

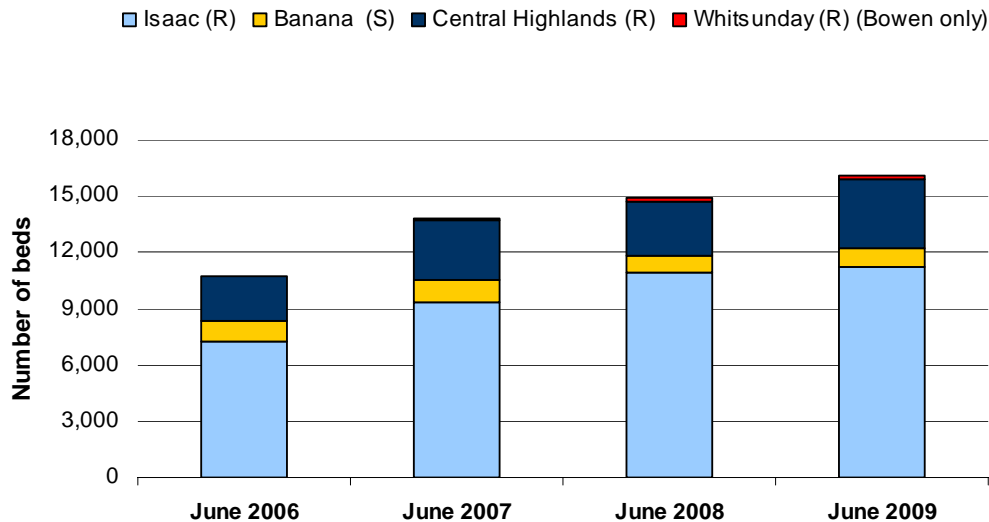
(R) - Regional Council (S) - Shire

*Note: Refers to beds available for use by non-resident workers and staff members of the accommodation centre on a medium to long-term basis—does not include overnight or short-term occupants.

Source: PIFU, Survey of accommodation providers, 2006 to 2009

Figure 5 illustrates the steady increase in SPQ bed capacity from 2006 to 2009, and the prevalence of that style of accommodation in the LGA of Isaac (R). In 2009, Isaac (R) accounted for 70 per cent of available SPQ beds in the Bowen Basin, slightly more than in 2006 (67 per cent). Central Highlands (R) held 23 per cent of the region's SPQ beds in 2009, a slight increase from the 2006 level (22 per cent). By contrast, Banana Shire's share of total bed capacity declined from ten per cent in 2006 to seven per cent in 2009.

Figure 5. Bed capacity of SPQ accommodation, Bowen Basin, 2006 to 2009



(R) - Regional Council (S) - Shire

Source: PIFU, Survey of accommodation providers, 2006 to 2009

2.7 Changes to SPQ bed occupancy rates, 2006 to 2009

Overall, SPQ bed occupancy rates for the Bowen Basin were lower in 2009 than for the previous three years, with the exception of 2007 (Table 9). In comparison with the peak of 81 per cent in 2006, only 68 per cent of SPQ beds across the region were occupied in 2009. This overall pattern of decline is reflected in the four local government areas of the region, which all experienced a drop in bed occupancy rates between 2008 and 2009.

For all SLAs in the Bowen Basin, bed occupancy rates in 2009 were lower than in 2008, with the exception of Duaringa and Nebo where non-resident worker numbers also increased. The bed occupancy rate for 2009 was highest in the SLAs of Peak Downs (78 per cent), Bowen (77 per cent) and Nebo (74 per cent), and lowest in Emerald (53 per cent). SPQ bed occupancy in Emerald SLA has been comparatively low since 2006, which largely reflects the availability of other commercial accommodation options for non-resident workers such as caravan parks, hotels and motels.

Table 9. SPQ total bed occupancy rates in Bowen Basin LGAs and SLAs, 2006 to 2009

Local Government Area (LGA)	Statistical Local Area (SLA)	Bed occupancy rates for year			
		2006	2007	2008	2009
		per cent			
	Banana	90	66	92	60
Banana (S)		90	66	92	60
	Bauhinia	73	33	49	54
	Duaringa	100	62	77	61
	Emerald	58	51	53	53
	Peak Downs	82	76	100	78
Central Highlands (R)		76	61	73	61
	Belyando	83	56	88	72
	Broadsound	83	84	90	66
	Nebo	79	65	61	74
Isaac (R)		81	68	78	71
	Bowen	94	100	100	77
Whitsunday (R) (Bowen only)		94	100	100	77
BOWEN BASIN TOTAL		81	67	78	68

(R) - Regional Council (S) - Shire

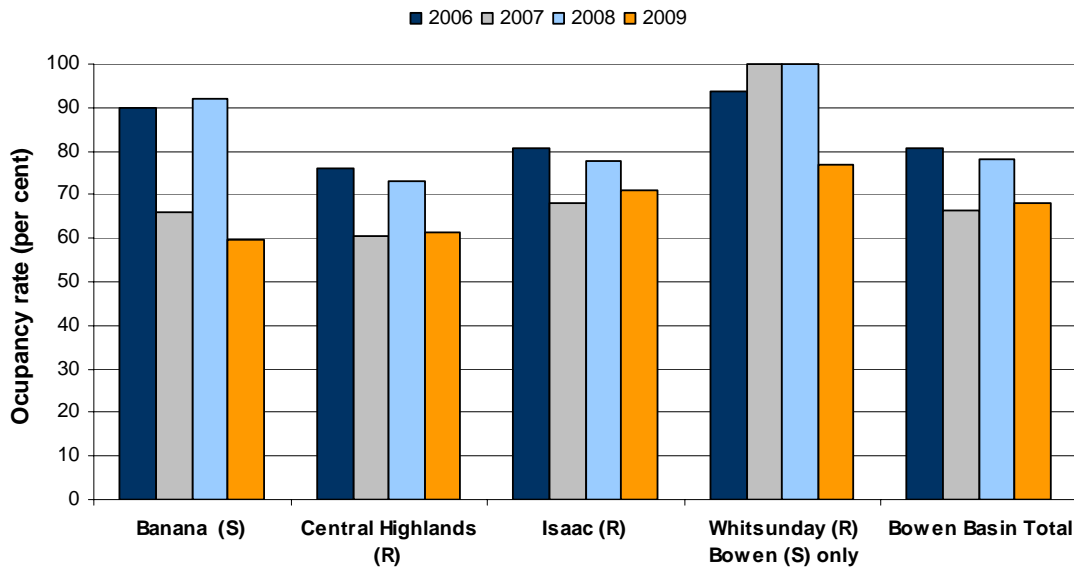
*Note: Refers to beds occupied by non-resident workers and staff members of the accommodation centre on a medium to long-term basis—does not include overnight or short-term occupants.

Source: PIFU, Survey of accommodation providers, 2006 to 2009

Figure 6 shows that SPQ bed occupancy rates for all LGAs in the Bowen Basin were lower in 2009 compared with rates for 2008. In all cases except Whitsunday (R), the years with highest occupancy rates (2006 and 2008) were followed by years where rates declined (2007 and 2009). Taking into account the patterns of growth in non-resident worker numbers between 2006 and 2009 (Table 6) as well as bed availability (Table 8), the variability in occupancy rates illustrated by Figure 6 largely reflects the extent to which the increasing supply of this type of accommodation lags behind peaks in demand.

It should be noted, however, that these occupancy patterns are more sensitive to variation in areas with small non-resident worker populations and few SPQs. Such is the case in Whitsunday (R), where demand for a limited supply of SPQ accommodation peaked during construction of the Sonoma mine in 2007-08.

Figure 6. SPQ bed occupancy rates in Bowen Basin LGAs, 2006 to 2009



(R) - Regional Council (S) - Shire

*Note: Refers to beds occupied by non-resident workers and staff members of the accommodation centre on a medium to long-term basis—does not include overnight or short-term occupants.

Source: PIFU, Survey of accommodation providers, 2006 to 2009

3. Full time equivalent population estimates

3.1 Introduction

This chapter presents the 2009 FTE population estimates for LGAs, SLAs and select localities across the Bowen Basin at 31 July 2009. Data are provided in summary form for the region as a whole, and as part of a snapshot for each of the nine SLAs of the region.

Also included in this chapter are revised FTE population estimates for preceding years (2006 to 2008), which update data published in previous editions of the *Bowen Basin report*. The revised FTE estimates for 2006 and 2007 are based on finalised estimated resident population (ERP) data from the ABS, while those for 2008 contain provisional ERP data from the same source⁶.

3.2 FTE population concept

The FTE population measure represents the 'service population' for estimating the total demand for goods and services required in an area (Appendix B). Accordingly, the FTE population measure contains two different components:

- people who live in the area on a permanent basis (the 'resident population'); and
- people who live and work in the area for an extended period but have a usual place of residence elsewhere (the 'non-resident worker' population).

3.3 FTE population estimates for the Bowen Basin, 2006 to 2009

The FTE population for the Bowen Basin at 31 July 2009 stood at 93,506, comprising 81,278 usual residents and 12,228 non-resident workers (Table 10). In 2009, non-resident workers made up 13 per cent of the region's FTE population, up from 2006 (12 per cent).

Table 10. FTE population for the Bowen Basin region, 2006 to 2009

Year	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	Non-resident workers as % of FTE
2009	81,278	12,228	93,506	13%
2008	80,318	13,656	93,974	15%
2007	79,107	11,075	90,182	12%
2006	78,076	10,763	88,839	12%

Notes: FTE population results for 2006 and 2007 are based on the post-amalgamated SLA and LGA boundaries for Banana (S), and include that part of the former Taroom (S) which is now incorporated into Banana (S). Differences between totals and the sum of their components are due to rounding.

Sources: *PIFU unpublished, 2009; ABS 3218.0 – Estimated Resident Population (revised) for 2006 and 2007, Estimated Resident Population (provisional) for 2008 **PIFU, *Survey of accommodation providers*, 2006 to 2009

As Table 10 shows, the FTE population for the Bowen Basin fell from 93,974 in 2008 to 93,506 in 2009. This decline was due to the loss of 1,428 non-resident workers between years, but was offset by growth in the resident population of around 960 people. These results should be interpreted carefully, given that the proportion of non-resident workers in the FTE population increased markedly from 12 per cent in 2007 to 15 per cent in 2008, before returning to 13 per cent in 2009. As such, the decline between 2008 and 2009 represents an adjustment to the workforce rather than a sustained loss of population.

⁶ Annual FTE population estimates for the Bowen Basin are prepared a year in advance of ABS estimated resident population (ERP) data, hence the need for forward estimates of the resident population for the current year. After the release of provisional ERPs by the ABS, the FTE population for that year is updated in the following edition of the *Bowen Basin population report*. Finally, the FTE population is adjusted again when the ABS releases its revised ERP data in the following year.

Table 11 provides a summary of the FTE population in the Bowen Basin, at July 2009. FTE populations at June 2006 are shown in Appendix F.

Table 11. FTE population for Bowen Basin LGAs, SLAs and key localities, July 2009

Local Government Area	Statistical Local Area	Locality	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	Non-resident workers as % of FTE
		Biloela	5,771	61	5,832	1%
		Moura	1,883	469	2,352	20%
		Remainder	7,844	196	8,040	2%
	<i>Banana</i>		15,497	726	16,223	4%
Banana (S)			15,497	726	16,223	4%
		Springsure	907	25	932	3%
		Remainder	1,447	139	1,586	9%
	<i>Bauhinia</i>		2,355	164	2,519	7%
		Blackwater	5,226	1,048	6,274	17%
		Bluff	370	51	421	12%
		Remainder	1,376	2	1,378	0%
	<i>Duarina</i>		6,972	1,101	8,073	14%
		Emerald	12,783	862	13,645	6%
		Remainder	4,017	3	4,020	0%
	<i>Emerald</i>		16,799	865	17,664	5%
		Capella	877	129	1,006	13%
		Tieri	1,749	423	2,172	19%
		Remainder	855	0	855	0%
	<i>Peak Downs</i>		3,481	552	4,033	14%
Central Highlands (R)			29,607	2,682	32,289	8%
		Clermont	1,953	417	2,370	18%
		Moranbah	8,225	1,933	10,158	19%
		Remainder	1,580	0	1,580	0%
	<i>Belyando</i>		11,759	2,350	14,109	17%
		Dysart	3,482	1,115	4,597	24%
		Middlemount	2,238	1,278	3,516	36%
		Remainder	1,833	0	1,833	0%
	<i>Broadsound</i>		7,552	2,393	9,945	24%
		Coppabella#	579	1,978	2,557	77%
		Glenden	1,248	1,392	2,640	53%
		Nebo	343	455	798	57%
		Remainder	705	0	705	0%
	<i>Nebo</i>		2,874	3,825	6,699	57%
Isaac (R)			22,186	8,568	30,754	28%
		Collinsville	2,185	252	2,437	10%
		Remainder	11,804	0	11,804	0%
	<i>Bowen</i>		13,988	252	14,240	2%
Whitsunday (R) (Bowen only)			13,988	252	14,240	2%
BOWEN BASIN TOTAL			81,278	12,228	93,506	13%

(R) - Regional Council (S) - Shire

Note that differences between totals and the sum of their components are due to rounding of population estimates.

ERP for Coppabella is based on Collection District of CD 3052004, which includes population outside of Coppabella village.

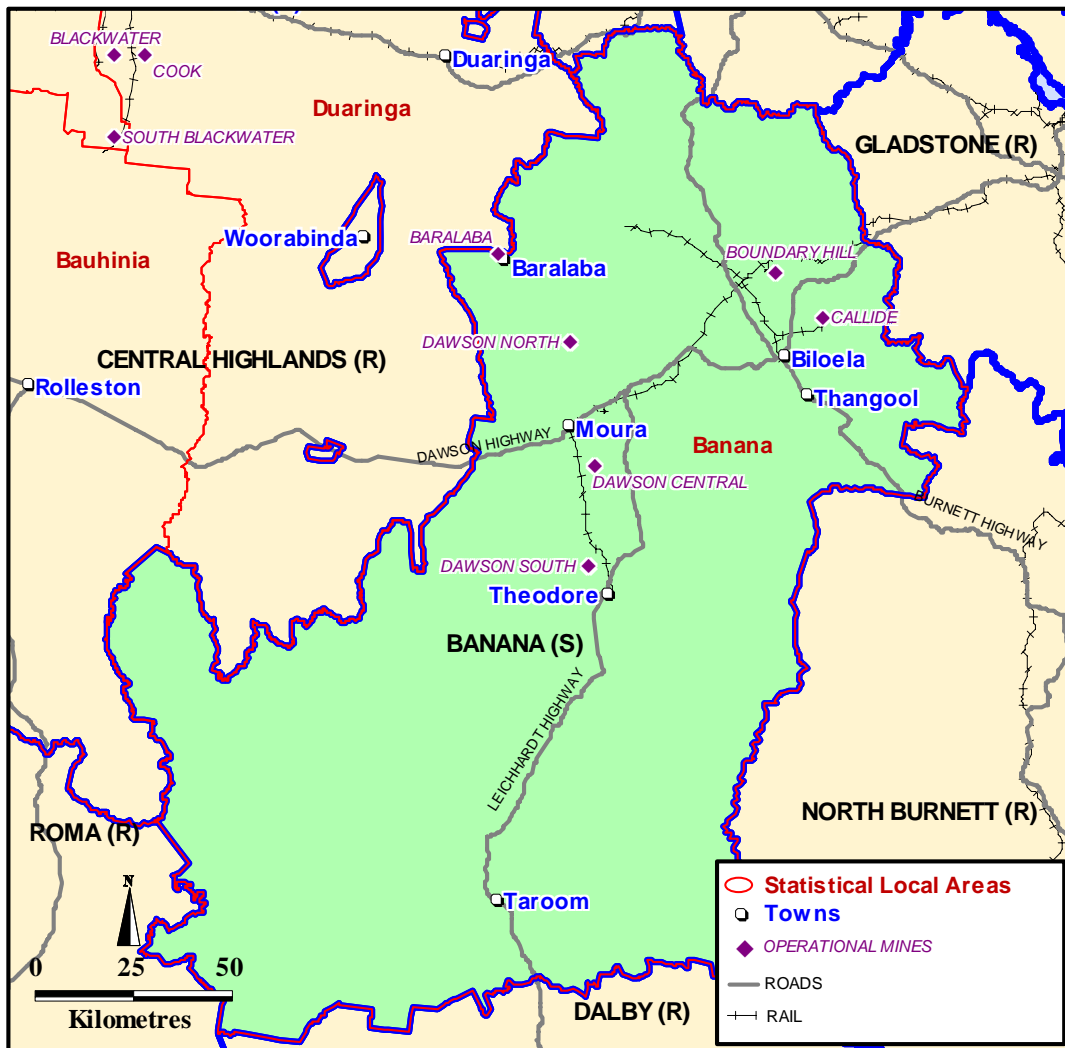
Sources: *PIFU 2009 unpublished. **PIFU, *Survey of accommodation providers*, 2009.

3.4 FTE population estimates for SLA of Banana

The SLA of Banana is located some 120 km west of Gladstone, and represents the southern end of the Bowen Basin as defined in this report (Figure 7). The 2008 ASGC boundaries for the SLA of Banana are identical to those for the LGA of Banana Shire, which was created in 2008 following local government reforms⁷. The SLA of Banana now incorporates the northern end of the former LGA of Taroom, which was dissolved during the reform process.

The major population centre for Banana SLA is the town of Biloela, located along the Dawson Highway around 130 km south-west of Gladstone. The other major population centre and focus for mining activity is Moura, situated around 65 km south-west of Biloela.

Figure 7. Map of Banana SLA, July 2009



(R) - Regional Council (S) - Shire (L) - Locality
Source: PIFU, 2009.

⁷ LGA and SLA boundaries shown in this map are drawn according to the 2008 Australian Standard Geographical Classification, and reflect changes to local government area boundaries brought about by the 2008 amalgamation process. Under the 2008 ASGC, the former LGA of Banana (S) was expanded to include the northern end of the former Taroom (S), which has since been removed from the ASGC. The LGA name of Banana (S) remains unchanged in the 2008 ASGC.

Banana SLA has a diverse economy, based on coal mining, beef production, cropping of lucerne and cotton, and power generation. Most coal mining activity in the area is concentrated around the Dawson mine complex near Moura. Elsewhere, smaller coal mining operations are located around Baralaba and Callide, which supplies the nearby Callide B power station. The area to the south of Taroom forms part of the adjacent Surat Basin, which has significant but largely undeveloped coal and coal seam gas resources.

FTE population, 2009

The FTE population of Banana SLA at 31 July 2009 was 16,223, comprising 15,497 usual residents and 726 non-resident workers (Table 12). Almost two-thirds of the non-resident worker population of Banana was accommodated in the town of Moura (469 people), with the balance counted in Biloela (61 people) and other parts of the SLA (196 people). Non-resident workers made up around five per cent of the FTE population of Banana SLA in 2009.

Table 12. Population estimates of Banana SLA and localities, July 2009

Area	Full-time equivalent population and components, July 2009			Non-resident workers as % of FTE population
	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	
Biloela	5,771	61	5,832	1%
Moura	1,883	469	2,352	20%
SLA remainder	7,844	196	8,040	2%
Banana SLA	15,497	726	16,223	5%

Note that differences between totals and the sum of their components are due to rounding of population estimates.

Sources: *PIFU unpublished, 2009 **PIFU, *Survey of accommodation providers*, 2009

FTE population, 2006 to 2009

Table 13 contains revised FTE population estimates for the SLA of Banana for 2006 to 2008, as well as results for 2009. These estimates are based on the 2008 ASGC boundaries for the SLA of Banana, allowing for direct comparison of results for the pre-amalgamation years.

The FTE population for Banana SLA fell progressively from 16,726 to 16,223 between 2006 and 2009. Most of the decline over this period was due to a net loss in the non-resident worker population of 503 people; by comparison the resident population was relatively stable, falling by only 75 people. The decline in non-resident workers between 2007 and 2008 was likely due to the completion of the construction phase of the Dawson mine complex, while the more recent fall between 2008 and 2009 was a result of workforce restructuring following the global economic downturn.

Table 13. FTE population estimates for SLA of Banana, 2006 to 2009

Year	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	Non-resident workers as % of FTE population	Change in FTE population from previous year
2009	15,497	726	16,223	4%	-298
2008	15,429	1,092	16,521	7%	-139
2007	15,382	1,278	16,660	8%	-66
2006	15,572	1,154	16,726	7%	—

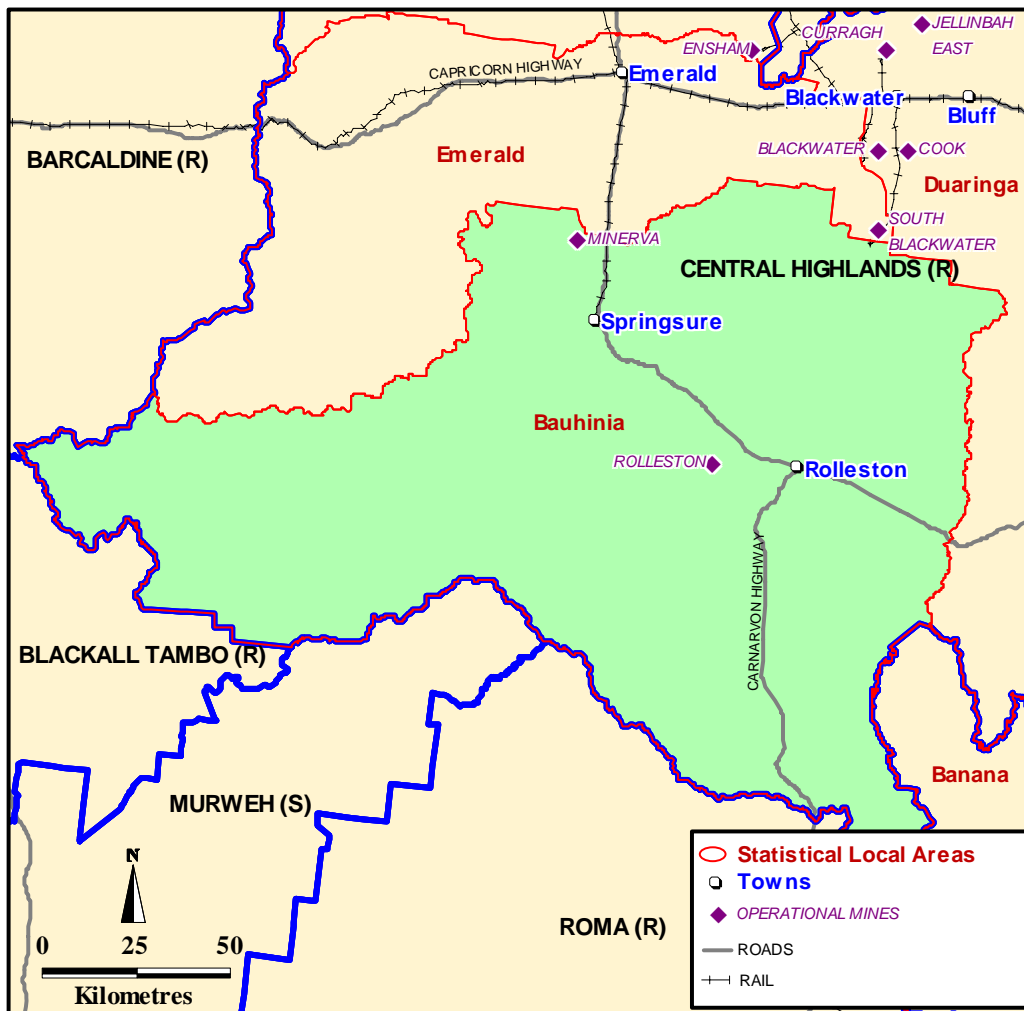
Sources: *PIFU unpublished, 2009; ABS 3218.0 – Estimated Resident Population (revised) for 2006 and 2007, Estimated Resident Population (provisional) for 2008. **PIFU, *Survey of accommodation providers*, 2006 to 2009.

3.5 FTE population estimates for SLA of Bauhinia

The SLA of Bauhinia⁸ forms part of Central Highlands Regional Council, and is located around 350 km west of Gladstone in the south-west of the Bowen Basin (Figure 8). Before local government amalgamations in 2008, the SLA of Bauhinia was also a separate LGA in its own right (Bauhinia Shire).

Bauhinia has a diverse economy based on cattle farming and grain growing, along with a small but significant tourist industry centred on Carnarvon Gorge and other scenic attractions. Coal mining plays a smaller part in Bauhinia's economy than elsewhere in the Bowen Basin, with mines currently in production at Rolleston and Minerva. The main population centre is Springsure, which is located about 70 km south of Emerald. The locality of Rolleston, to the south-east of Springsure, is the only other population centre of note.

Figure 8. Map of Bauhinia SLA, July 2009



(R) - Regional Council (S) - Shire (L) - Locality
Source: PIFU, 2009

⁸ Under the 2008 ASGC, the ABS renamed the former SLA of Bauhinia as *Central Highlands (R) – Bauhinia* to reflect the incorporation of the former Bauhinia Shire into the amalgamated Central Highlands Regional Council. This change was in name only and did not impact upon the SLA boundaries. For consistency, this document uses the name of Bauhinia to denote the SLA rather than the 2008 ASGC descriptor.

FTE population, 2009

The FTE population for the SLA of Bauhinia at 31 July 2009 was 2,519 people, comprising 2,355 residents and 164 non-resident workers (Table 14). Around 39 per cent of the SLA's resident population lived in the town of Springsure, making Bauhinia the least urbanised SLA in the Bowen Basin.

Only 25 non-resident workers were accommodated in Springsure, representing just three per cent of the town's FTE population. The remaining 139 workers were counted in SPQ accommodation located outside of town centres, but represented only nine per cent of the FTE population for the SLA remainder. Once again, this low proportion reflects the dispersed population pattern of the area's resident population and the contribution of rural activities to the area's economic activity.

Table 14. Population estimates for Bauhinia SLA and localities, July 2009

Area	Full-time equivalent population and components, July 2009			Non-resident workers as % of FTE population
	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	
Springsure	907	25	932	3%
SLA remainder	1,447	139	1,586	9%
Bauhinia SLA	2,355	164	2,519	7%

Note that differences between totals and the sum of their components are due to rounding of population estimates.

Sources: *PIFU unpublished, 2009 **PIFU, *Survey of accommodation providers*, 2009

FTE population, 2006 to 2009

Table 15 contains revised FTE population estimates for the SLA of Bauhinia for the years 2006 to 2008, as well as results for 2009. These show that the FTE population for Bauhinia has remained relatively stable over the past four years, with only minimal growth occurring in the resident and non-resident worker populations.

Table 15. FTE population estimates for SLA of Bauhinia, 2006 to 2009

Year	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	Non-resident workers as % of FTE population	Change in FTE population from previous year
2009	2,355	164	2,519	6.5%	12
2008	2,339	168	2,507	6.7%	69
2007	2,373	65	2,438	2.7%	-33
2006	2,325	146	2,471	5.9%	—

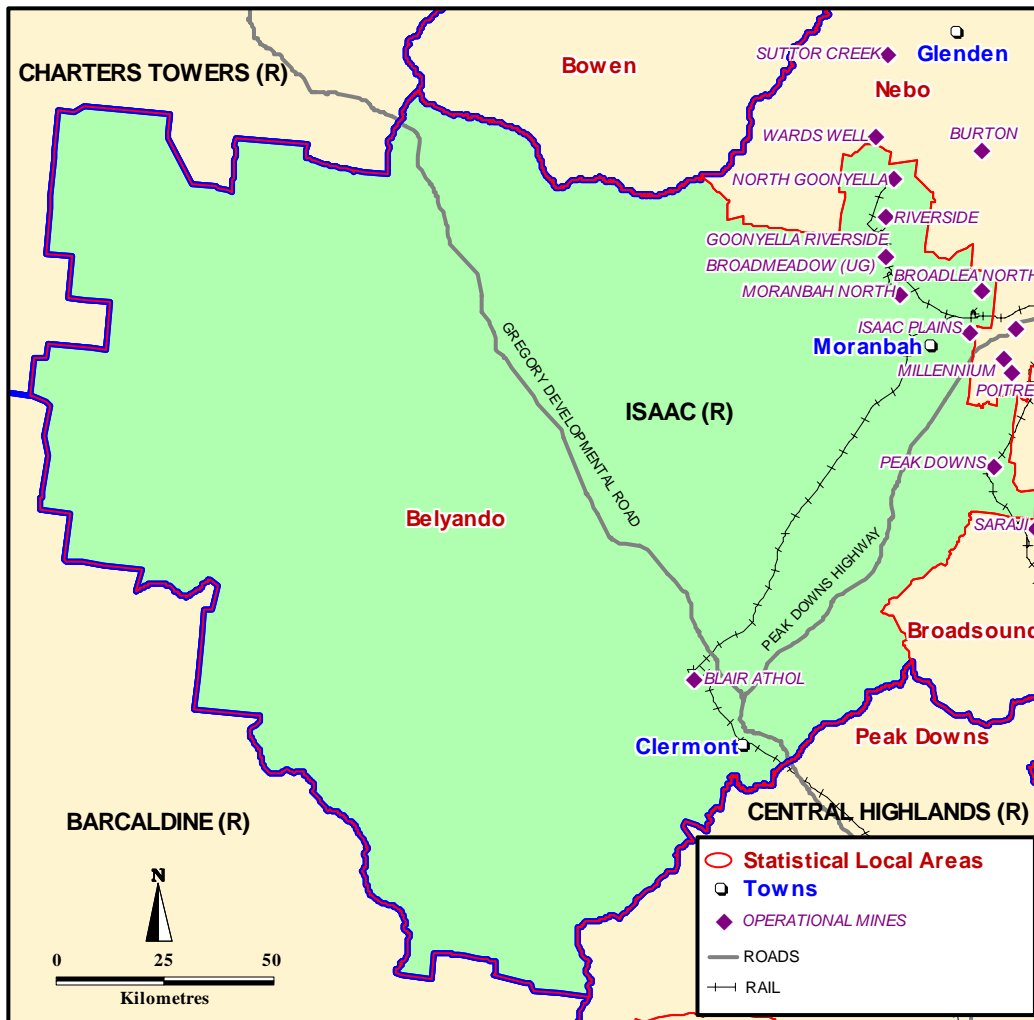
Sources: *PIFU unpublished, 2009; ABS 3218.0 – Estimated Resident Population (revised) for 2006 and 2007, Estimated Resident Population (provisional) for 2008. **PIFU, *Survey of accommodation providers*, 2006 to 2009

3.6 FTE population estimates for SLA of Belyando

The SLA of Belyando⁹ forms part of Isaac Regional Council and is located in the north-west of the Bowen Basin (Figure 9). Before local government amalgamations in 2008, the SLA of Belyando was also a separate LGA in its own right (Belyando Shire).

The main population centre of Belyando SLA is Moranbah, which is located about 180 km south-west of Mackay. Moranbah remains the administrative centre for the amalgamated Isaac Regional Council, and is the centre for coal mining activity. The other major population centre is Clermont, located approximately 270 km south-west of Mackay and 100 km north-west of Emerald.

Figure 9. Map of Belyando SLA, July 2009



(R) - Regional Council (S) - Shire (L) - Locality
Source: PIFU, 2009

⁹ Under the 2008 ASGC, the ABS renamed the former SLA of Belyando (S) as *Isaac (R) – Belyando* to reflect the incorporation of the former Belyando Shire into the amalgamated Isaac Regional Council. This change was in name only and did not impact upon the SLA boundaries. For consistency, this document uses the name of Belyando to denote the SLA rather than the 2008 ASGC descriptor.

The economy of Belyando SLA is dominated by coal mining and to a lesser extent by beef cattle-raising and grain growing. Active coal mining operations in Belyando include:

- Blair Athol
- Broadlea North
- Carborough Downs
- Goonyella Riverside
- Isaac Plains
- Moranbah North
- North Goonyella
- Peak Downs
- Clermont (still under construction in 2009)

The town of Moranbah is the major accommodation centre for residents and non-resident workers, and also provides a range of technical services, light engineering and logistical support for mining operations in the area.

FTE population, 2009

The SLA of Belyando had an FTE population of 14,109 people in 2009, made up of 11,759 usual residents and 2,350 non-resident workers. Around 80 per cent of Belyando's non-resident worker population (or 1,933 people) was located in or near Moranbah (Table 16). The balance of Belyando's non-resident workers lived in Clermont (417 people).

Table 16. Population estimates for Belyando SLA and localities, July 2009

Area	Full-time equivalent population and components, July 2009			Non-resident workers as % of FTE population
	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	
Clermont	1,953	417	2,370	18%
Moranbah	8,225	1,933	10,158	19%
SLA remainder	1,580	0	1,580	0%
Belyando SLA	11,759	2,350	14,109	17%

Note that differences between totals and the sum of their components are due to rounding of population estimates.

Sources: *PIFU unpublished, 2009 **PIFU, *Survey of accommodation providers*, 2009

FTE population, 2006 to 2009

Table 17 contains revised FTE population estimates for the SLA of Belyando for 2006 to 2008, as well as provisional results for 2009.

The FTE population for Belyando SLA rose from 13,268 to 14,109 between 2006 and 2009, peaking briefly at 14,784 in 2008. Much of this growth was attributable to a steady increase in the area's resident population, with an extra 610 people calling the area home during that period. By comparison, net growth in the non-resident worker population of Belyando SLA over the same period was only 231 people, with most change occurring between 2007 and 2008. The peak of 3,194 non-resident workers reached in 2008 coincided with the temporary construction workforces of several large projects (namely, the Clermont coal mine and the Dyno Nobel explosives plant) as well as increased production workforces of existing mines.

Table 17. FTE population estimates for SLA of Belyando, 2006 to 2009

Year	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	Non-resident workers as % of FTE population	Change in FTE population from previous year
2009	11,759	2,350	14,109	16.7%	-675
2008	11,590	3,194	14,784	21.6%	1,501
2007	11,402	1,881	13,283	14.2%	15
2006	11,149	2,119	13,268	16.0%	—

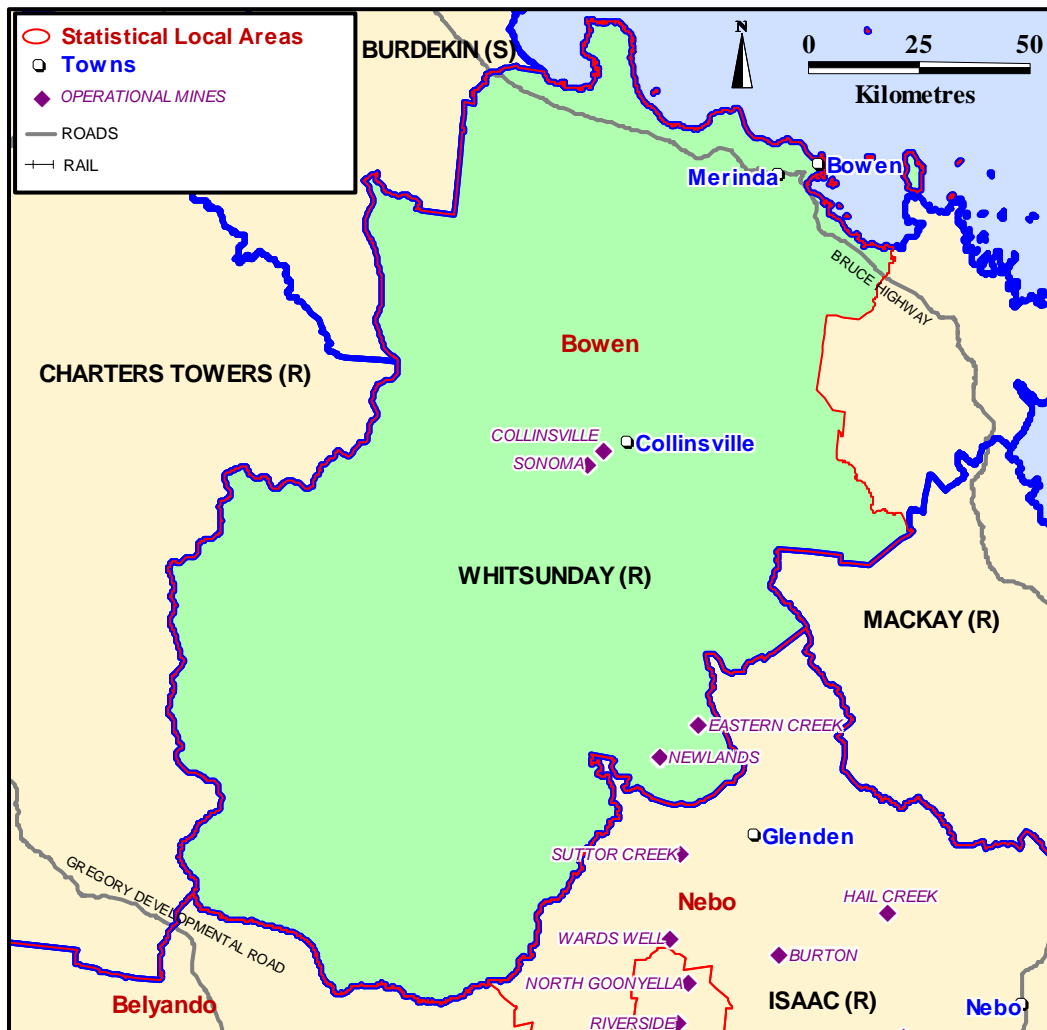
Sources: *PIFU unpublished, 2009; ABS 3218.0 – Estimated Resident Population (revised) for 2006 and 2007, Estimated Resident Population (provisional) for 2008. **PIFU, *Survey of accommodation providers*, 2006 to 2009

3.7 FTE population estimates for SLA of Bowen

The SLA of Bowen¹⁰ forms part of Whitsunday Regional Council and is located in the north-east area of the Bowen Basin (Figure 10). Before 2008, Bowen SLA was a separate LGA (Bowen Shire) in its own right, and the town of Bowen remains the administrative centre for the amalgamated council.

The main population centre in Bowen SLA is the town of Bowen, located on the coast around 180 km north-west of Mackay. Bowen is adjacent to the deepwater port of Abbot Point, which provides export coal handling and loading facilities for the region. The town of Collinsville, situated 80 km south-west of Bowen, is the area's long established centre for coal mining.

Figure 10. Map of Bowen SLA, July 2009



(R) - Regional Council (S) - Shire (L) - Locality
Source: PIFU, 2009

¹⁰ Under the 2008 ASGC, the ABS renamed the former SLA of Bowen as *Whitsunday (R) – Bowen* to reflect the incorporation of the former Bowen Shire into the amalgamated Whitsunday Regional Council. This change was in name only and did not impact upon the SLA boundaries. For consistency, this document uses the name of Bowen to denote the SLA rather than the 2008 ASGC descriptor.

Bowen SLA has a diversified economy, based largely on horticulture, coal mining, beef cattle, fishing and tourism. Active coal leases in Bowen SLA in 2009 were the Collinsville and Sonoma mines situated near the town of Collinsville¹¹. Coal taken from these two mines and from the Newlands and Eastern Creek mines is railed to the port of Abbot Point for export.

FTE population, 2009

Table 18 shows that the FTE population of Bowen SLA was 14,240 people at 31 July 2009, with only two per cent comprising non-resident workers (252 people)¹². The town of Bowen accounted for around 61 per cent of residents living in Bowen SLA, while a further 16 per cent lived in Collinsville. All 252 non-resident workers counted in Bowen SLA in 2009 were located in or near Collinsville, in close proximity to the major coal mines in the area, Sonoma and Collinsville. Compared with other SLAs, only Bauhinia had a smaller non-resident worker population than Bowen in 2009.

Table 18. Population estimates for Bowen SLA and localities, July 2009

Area	Full-time equivalent population and components, July 2009			Non-resident workers as % of FTE population
	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	
Collinsville	2,185	252	2,437	10%
SLA remainder	11,804	0	11,804	0%
Bowen SLA	13,988	252	14,240	2%

Note that differences between totals and the sum of their components are due to rounding of population estimates.

Sources: *PIFU unpublished, 2009 **PIFU, *Survey of accommodation providers*, 2009

FTE population, 2006 to 2009

Table 19 contains revised FTE population estimates for the SLA of Bowen for 2006 to 2008, as well as results for 2009. These estimates are based on the 2008 ASGC boundaries for the SLA of Bowen, allowing for direct comparison of results for the pre-amalgamation years. They show that the FTE population for Bowen SLA rose from 13,354 to 14,240 between 2006 and 2009, a small but notable increase of around 880 people. Most of this growth occurred in the resident population component, with the net increase in non-resident workers limited to just 33 between 2006 and 2009.

Table 19. FTE population estimates for SLA of Bowen, 2006 to 2009

Year	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	Non-resident workers as % of FTE population	Change in FTE population from previous year
2009	13,988	252	14,240	1.8%	182
2008	13,712	346	14,058	2.5%	400
2007	13,410	248	13,658	1.8%	304
2006	13,135	219	13,354	1.6%	—

Sources: *PIFU unpublished, 2009; ABS 3218.0 – Estimated Resident Population (revised) for 2006 and 2007, Estimated Resident Population (provisional) for 2008. **PIFU, *Survey of accommodation providers*, 2006 to 2009

¹¹ While part of the Newlands and Eastern Creek mining leases are located in the southern end of Bowen (S), the workforces of these mines are serviced by the dormitory town of Glenden, which is located in Nebo (S).

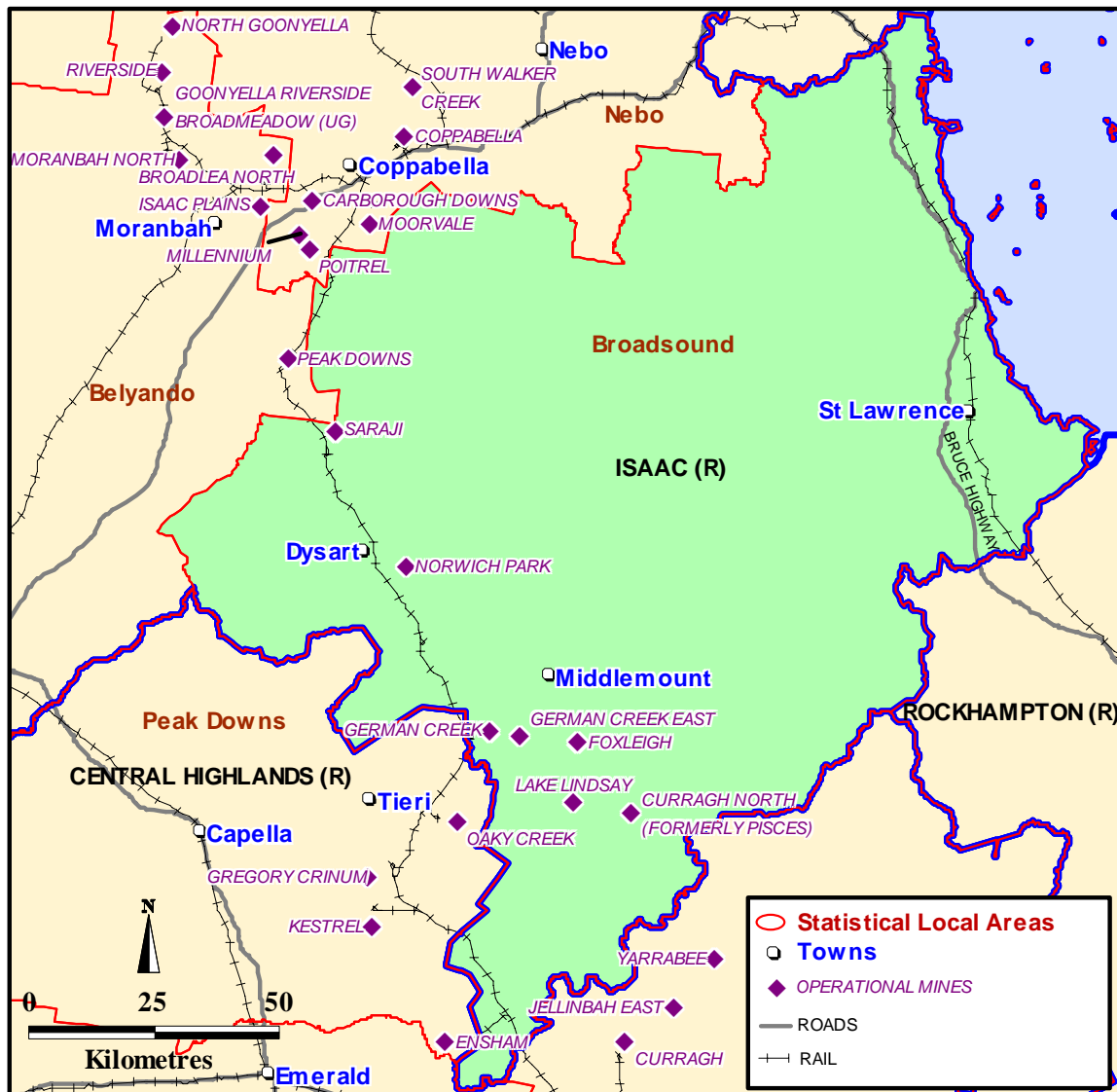
¹² Note that the *Survey of accommodation providers* for 2009 and previous years did not include consideration of part-time workers in the horticultural industry in Bowen SLA, nor did it cover construction workers building major port facilities in the town of Bowen itself. The non-resident worker population count for Bowen SLA only represents workers in the mining industry or involved in building supporting infrastructure in resource areas such as Collinsville.

3.8 FTE population estimates for SLA of Broadsound

The SLA of Broadsound¹³ is part of Isaac Regional Council and is located in the central east area of the Bowen Basin (Figure 11). Before local government amalgamations in 2008, Broadsound was also a separate LGA in its own right (Broadsound Shire). Broadsound is one of only two SLAs in the Bowen Basin with a coastal boundary.

The towns of Dysart and Middlemount, located south-east of Moranbah and north-east of Emerald respectively, were established in the 1970s to serve as dormitory towns for the nearby mines. The former administrative centre of St Lawrence, located toward the east coast, is the only other sizeable town in the SLA, but has no active mines in its vicinity.

Figure 11. Map of Broadsound SLA, July 2009



(R) - Regional Council (S) - Shire (L) - Locality
 Source: PIFU, 2009

¹³ Under the 2008 ASGC, the ABS renamed the former SLA of Broadsound as *Isaac (R) – Broadsound* to reflect the incorporation of the former Broadsound Shire into the amalgamated Isaac Regional Council. This change was in name only and did not impact upon the SLA boundaries. For consistency, this document uses the name of Broadsound to denote the SLA rather than the 2008 ASGC descriptor.

Broadsound SLA had seven major coal mines operating or nearing completion in early 2009, which accounted for around one-sixth of total coal production in the Bowen Basin. Saraji and Norwich Park mines are located near Dysart, while Curragh North, Foxleigh, German Creek open cut and the German Creek underground complex are closer to Middlemount. The new Lake Lindsay mine near Middlemount and the Lake Vermont mine near Dysart commenced production in 2009.

FTE population, 2009

The FTE population of Broadsound SLA in 2009 was 9,945 people, with non-resident workers making up almost one-quarter (24 per cent, or 2,393 people) of the total (Table 20). More than one-half of Broadsound's non-resident worker population (1,278 people) was accommodated in or near Middlemount, with the balance (1,115 people) located in or near Dysart. Between them, these two towns also housed around 5,700 usual residents, or 76 per cent of Broadsound's total resident population.

Table 20. Population estimates for Broadsound SLA and localities, July 2009

Area	Full-time equivalent population and components, July 2009			Non-resident workers as % of FTE population
	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	
Dysart	3,482	1,115	4,597	24%
Middlemount	2,238	1,278	3,516	36%
SLA remainder	1,833	0	1,833	0%
Broadsound SLA	7,552	2,393	9,945	24%

Note that differences between totals and the sum of their components are due to rounding of population estimates.

Sources: *PIFU unpublished, 2009 **PIFU, *Survey of accommodation providers*, 2009

FTE population, 2006 to 2009

Table 21 contains revised FTE population estimates for the SLA of Broadsound for 2006 to 2008, as well as provisional results for 2009. The FTE population for Broadsound increased progressively from 9,112 to 9,945 between 2006 and 2009, reaching a peak of 10,780 in 2008.

More than two-thirds of the FTE population growth between 2006 and 2009 were non-resident workers (572 people), while new residents accounted for just 261 people. The sharp increase in the number of non-resident workers between 2007 and 2008 was largely due to the construction workforces for the Lake Lindsay and Lake Vermont projects, while the decline that followed between 2008 and 2009 was largely a result of workforce restructuring following the global economic downturn. Although the number of workers at some mines in Broadsound SLA, for example German Creek, declined during this period, others actually increased (e.g. Norwich Park) (DEEDI (QME) unpublished statistics).

Table 21. FTE population estimates for SLA of Broadsound, 2006 to 2009

Year	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	Non-resident workers as % of FTE population	Change in FTE population from previous year
2009	7,552	2,393	9,945	24.1%	-835
2008	7,480	3,300	10,780	30.6%	919
2007	7,413	2,448	9,861	24.8%	749
2006	7,291	1,821	9,112	20.0%	—

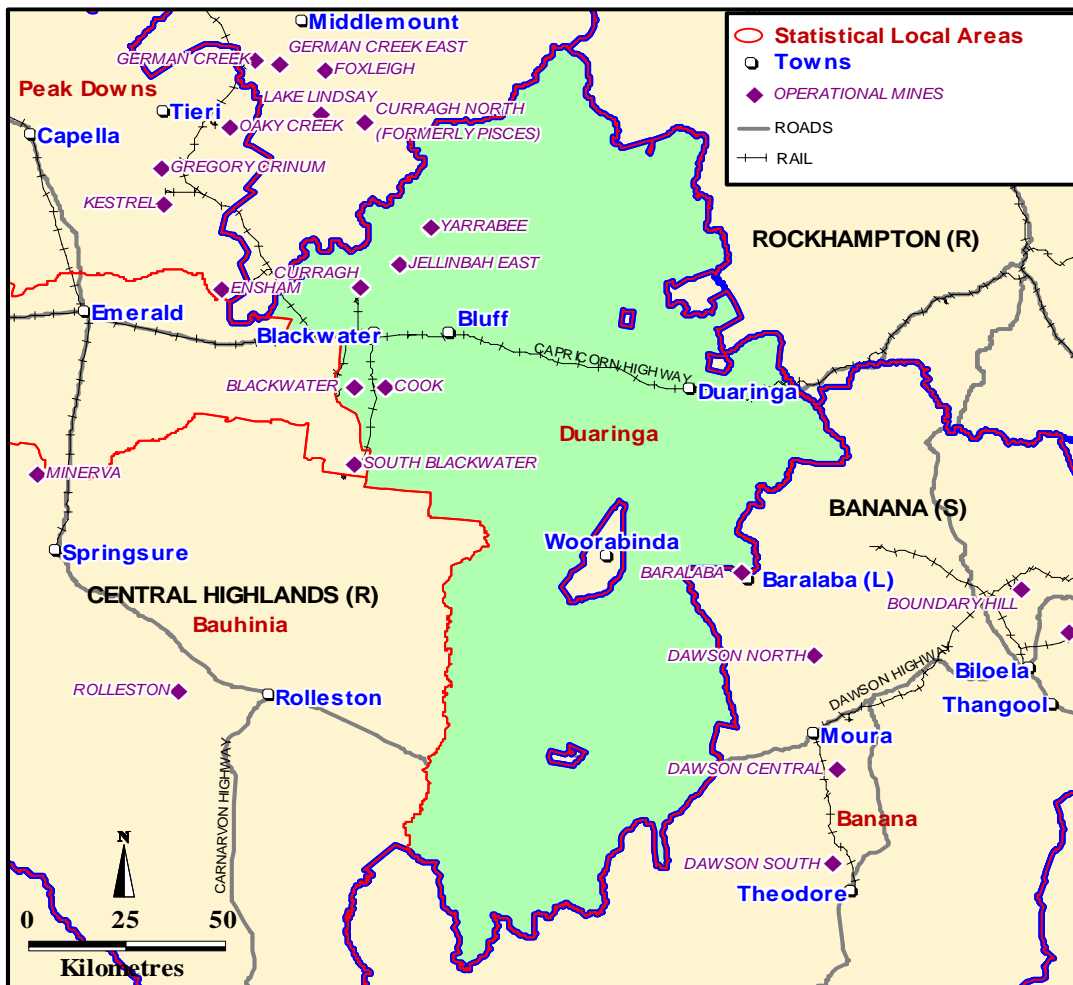
Sources: *PIFU unpublished, 2009; ABS 3218.0 – Estimated Resident Population (revised) for 2006 and 2007, Estimated Resident Population (provisional) for 2008. **PIFU, *Survey of accommodation providers*, 2006 to 2009

3.9 FTE population estimates for SLA of Duaringa

The SLA of Duaringa¹⁴ is part of Central Highlands Regional Council. It lies west of Rockhampton and extends from the central to southern parts of the Bowen Basin (Figure 12). Before local government amalgamations in 2008, Duaringa SLA was also a separate LGA in its own right (Duaringa Shire).

The main towns in Duaringa SLA are Blackwater, Bluff and Duaringa, all located along the Capricorn Highway. The former administrative centre of Blackwater, located about 200 km west of Rockhampton and 70 km east of Emerald, is historically the major centre for mining operations in the area.

Figure 12. Map of Duaringa SLA, July 2009



(R) - Regional Council (S) - Shire (L) - Locality
Source: PIFU, 2009

¹⁴ Under the 2008 ASGC, the ABS renamed the former SLA of Duaringa as *Central Highlands (R) – Duaringa* to reflect the incorporation of the former Duaringa Shire into the amalgamated Central Highlands Regional Council. This change was in name only and did not impact upon the SLA boundaries. For consistency, this document uses the name of Duaringa to denote the SLA rather than the 2008 ASGC descriptor.

The economy of Duaringa SLA is dominated by coal mining, along with beef cattle grazing and cereal cropping. The towns of Blackwater and Bluff are the main accommodation centres for the mines of Blackwater (incorporating Blackwater and Blackwater South), Cook, Curragh, Jellinbah East and Yarrabee.

FTE population, 2009

The FTE population of Duaringa SLA in 2009 was 8,073 people, with 1,101 non-resident workers making up 14 per cent of this total (Table 22). Duaringa's population is highly centralised, with the town of Blackwater housing around three-quarters of the SLA's total residents and 95 per cent of non-resident workers.

Apart from the 1,048 non-resident workers counted in Blackwater in 2009, the only other centre with a sizeable non-resident contingent was the town of Bluff (51 people).

Table 22. Population estimates for Duaringa SLA and localities, July 2009

Area	Full-time equivalent population and components, July 2009			Non-resident workers as % of FTE population
	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	
Blackwater	5,226	1,048	6,274	17%
Bluff	370	51	421	12%
SLA remainder	1,376	2	1,378	0%
Duaringa SLA	6,972	1,101	8,073	14%

Note that differences between totals and the sum of their components are due to rounding of population estimates.
Sources: *PIFU unpublished, 2009 **PIFU, *Survey of accommodation providers*, 2009

FTE population, 2006 to 2009

Table 23 contains revised FTE population estimates for the SLA of Duaringa for 2006 to 2008, as well as results for 2009.

The FTE population for Duaringa SLA grew from 7,963 to 8,073 between 2006 and 2009, an increase of just 110 people. All growth during this period was due to a net increase in the non-resident worker population of 352 people, while the resident population declined by 242 people. In comparison with some other SLAs in the Bowen Basin, Duaringa's FTE population did not experience a major fluctuation in 2008, although Curragh mine's workforce expanded during that period (DEEDI (QME) unpublished statistics).

Table 23. FTE population estimates for SLA of Duaringa, 2006 to 2009

Year	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	Non-resident workers as % of FTE population	Change in FTE population from previous year
2009	6,972	1,101	8,073	13.6%	143
2008	6,894	1,036	7,930	13.1%	-168
2007	7,070	1,028	8,098	12.7%	135
2006	7,214	749	7,963	9.4%	—

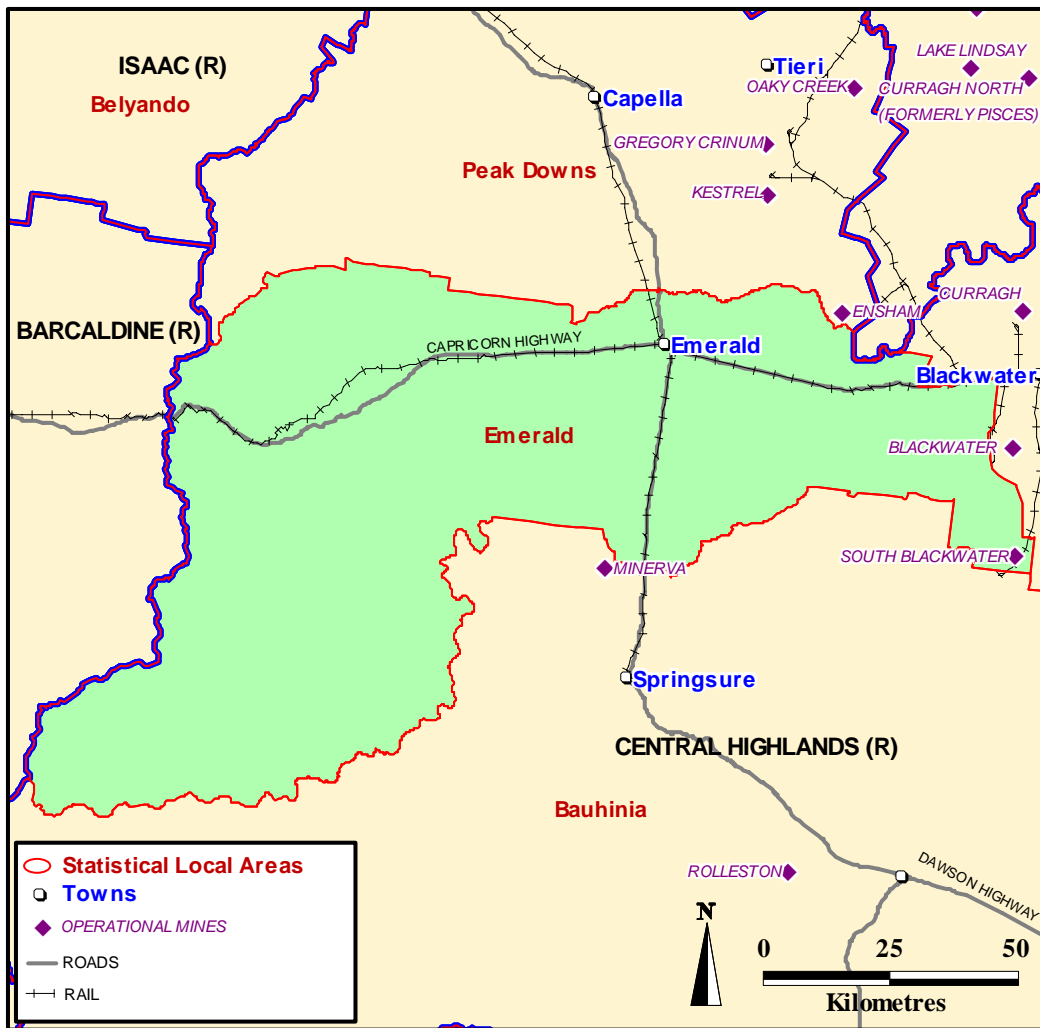
Sources: *PIFU unpublished, 2009; ABS 3218.0 – Estimated Resident Population (revised) for 2006 and 2007, Estimated Resident Population (provisional) for 2008. **PIFU, *Survey of accommodation providers*, 2006 to 2009

3.10 FTE population estimates for SLA of Emerald

The SLA of Emerald¹⁵ forms part of Central Highlands Regional Council, and is located in the south-west of the Bowen Basin (Figure 13) around 250 km west of Rockhampton. Before local government amalgamations in 2008, Emerald SLA was also a separate LGA in its own right (Emerald Shire).

The main town in the SLA is the urban centre of Emerald, which is situated at the junction of the Capricorn and Gregory Highways. In terms of population size, the town of Emerald is the largest population centre in the Bowen Basin, and is the major hub for economic activity in the southern end of the region.

Figure 13. Map of Emerald SLA, July 2009



(R) - Regional Council (S) - Shire (L) - Locality
 Source: PIFU, 2009

¹⁵ Under the 2008 ASGC, the ABS renamed the former SLA of Emerald as *Central Highlands (R) – Emerald* to reflect the incorporation of the former Emerald Shire into the amalgamated Central Highlands Regional Council. This change was in name only and did not impact upon the SLA boundaries. For consistency, this document uses the name of Emerald to denote the SLA rather than the 2008 ASGC descriptor.

The SLA of Emerald has a diverse economy, which is less dependent upon coal mining than many other SLAs in the Bowen Basin. Beef cattle production and agriculture are key drivers for the economy, boosted by the presence of an irrigation area fed from Fairbairn Dam. The town of Emerald functions as the administrative and service hub for the region, and provides a focus for wholesale, retail and tourist activities.

The only operating coal mining lease within the administrative boundary of Emerald SLA in 2009 was Ensham mine, located to the west of the town of Emerald¹⁶. Nevertheless, the centre of Emerald serves as the dormitory town for several mines in the immediate vicinity, including Ensham and Minerva, and provides a base for technical and industrial support.

FTE population, 2009

The FTE population of Emerald SLA at 31 July 2009 was 17,664 people, of which 865 people (or five per cent of the total) were non-resident workers (Table 24). Almost all of the SLA's non-resident worker population (862 people) was located in or around the urban centre of Emerald. This number includes non-resident workers living in SPQ accommodation located at Ensham mine.

Table 24. Population estimates for Emerald SLA and localities, July 2009

Area	Full-time equivalent population and components, July 2009			Non-resident workers as % of FTE population
	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	
Emerald	12,783	862	13,645	6%
SLA remainder	4,017	3	4,020	0%
Emerald SLA	16,799	865	17,664	5%

Note that differences between totals and the sum of their components are due to rounding of population estimates.
Sources: *PIFU unpublished, 2009 **PIFU, *Survey of accommodation providers*, 2009

FTE population, 2006 to 2009

Table 25 contains revised FTE population estimates for the SLA of Emerald for 2006 to 2008, as well as results for 2009.

The FTE population for Emerald grew progressively from 16,028 to 17,664 between 2006 and 2009, an increase of 1,636 people. Most of this growth (1,465 people) occurred in the resident population, with the number of non-resident workers increasing by only 171. The steady rise in the region's resident population can be attributed in part to Emerald's role as a dormitory town for the region's expanding mining operations, but also reflects the area's ability to capture direct and indirect employment associated with other industries.

Table 25. FTE population estimates for SLA of Emerald, 2006 to 2009

Year	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	Non-resident workers as % of FTE population	Change in FTE population from previous year
2009	16,799	865	17,664	4.9%	198
2008	16,560	906	17,466	5.2%	913
2007	15,917	636	16,553	3.8%	525
2006	15,334	694	16,028	4.3%	—

Sources: *PIFU unpublished, 2009; ABS 3218.0 – Estimated Resident Population (revised) for 2006 and 2007, Estimated Resident Population (provisional) for 2008. **PIFU, *Survey of accommodation providers*, 2006 to 2009

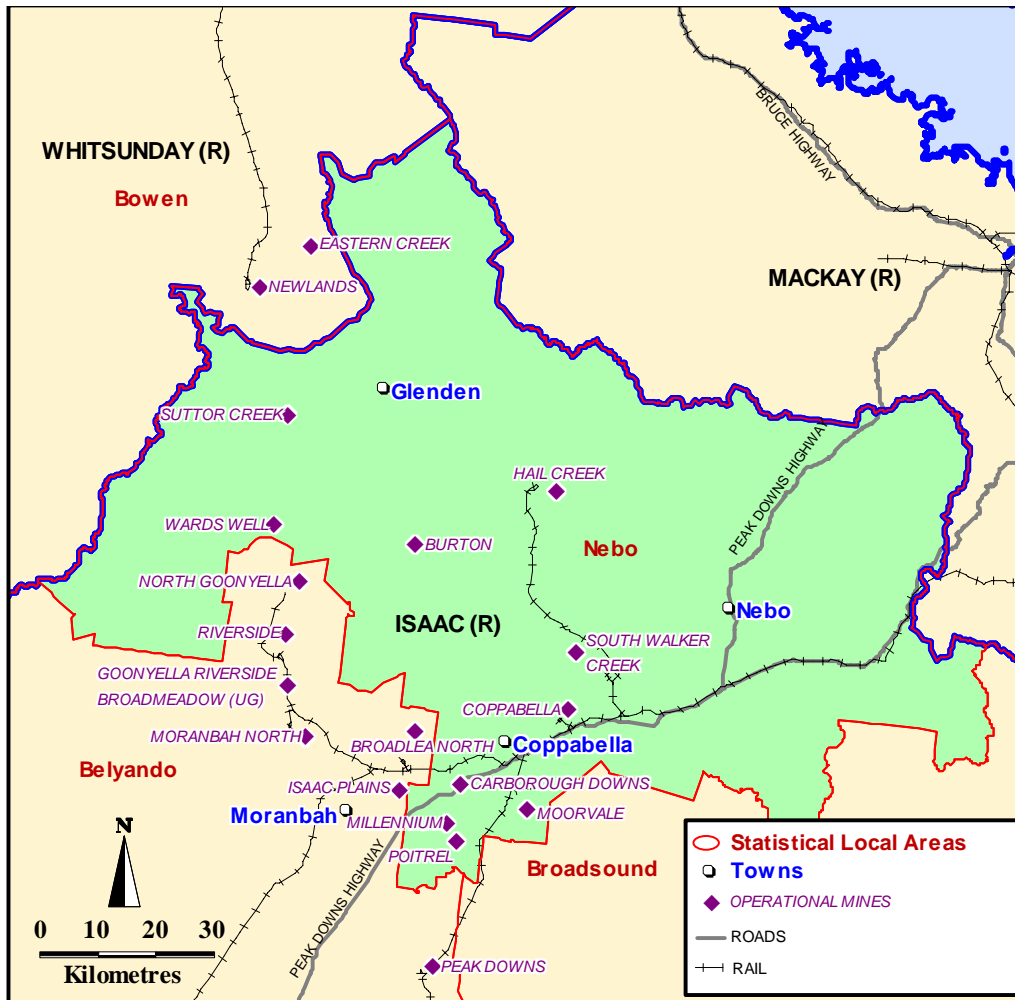
¹⁶ Parts of the Ensham mining lease also fall within the SLA of Peak Downs, rather than in Emerald SLA. Since the mine is serviced from the town of Emerald, it is included in Emerald SLA in this report.

3.11 FTE population estimates for SLA of Nebo

The SLA of Nebo¹⁷ is part of Isaac Regional Council and is located in the north-east of the Bowen Basin, some 90 km west of Mackay (Figure 14). Before local government amalgamations in 2008, Nebo SLA was also a separate LGA in its own right (Nebo Shire).

The towns of Nebo and Glenden are the largest permanent population centres¹⁸ in Nebo SLA. While the former administrative centre of Nebo has some light industrial development, both towns largely serve as dormitories for the mining industry. The village of Coppabella initially established to provide accommodation for rail employees, now has several large SPQ operations in its environs that accommodate non-resident workers.

Figure 14. Map of Nebo SLA, July 2009



(R) - Regional Council (S) - Shire (L) – Locality
Source: PIFU, 2009

¹⁷ Under the 2008 ASGC, the ABS renamed the former SLA of Nebo as *Isaac (R) – Nebo* to reflect the incorporation of the former Nebo Shire into the amalgamated Isaac Regional Council. This change was in name only and did not impact upon the SLA boundaries. For consistency, this document uses the name of Nebo to denote the SLA rather than the 2008 ASGC descriptor.

¹⁸ References to the population of Coppabella in this report refer to Collection District 3052004, which includes areas outside of Coppabella village. Coppabella was not a designated locality at the 2006 Census.

Once a predominantly rural area producing beef, sorghum and other grains, Nebo SLA now looks also to coal mining and service industries to drive its economy. The towns of Glenden, Nebo and Coppabella provide accommodation for workers employed by mines located in or adjacent to Nebo SLA, including:

- Burton
- Carborough Downs
- Coppabella
- Hail Creek
- Millennium
- Moorvale
- Newlands
- Poitrel
- South Walker Creek
- Suttor Creek

Full-time equivalent (FTE) population

At 31 July 2009, the FTE population of Nebo SLA was 6,699 people, with some 57 per cent of these being non-resident workers (3,825 people). Of all SLAs in the Bowen Basin, Nebo SLA had the highest proportion and population of non-resident workers, accounting for just under one-third of the region's total (Table 26).

Just under one-half of the total non-resident worker population of the SLA of Nebo was located in or adjacent to the village of Coppabella (1,978 people), outnumbering the resident population (579 people) by more than three to one. Non-resident workers also outnumbered residents slightly in the towns of Glenden (by 1,392 to 1,248) and Nebo (by 455 to 343).

Table 26. Population estimates for Nebo SLA and localities, July 2009

Area	Full-time equivalent population and components, July 2009			Non-resident workers as % of FTE population
	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	
Coppabella#	579	1,978	2,557	77%
Glenden	1,248	1,392	2,640	53%
Nebo	343	455	798	57%
SLA remainder	705	0	705	0%
Nebo SLA	2,874	3,825	6,699	57%

Note that differences between totals and the sum of their components are due to rounding of population estimates.

Sources: *PIFU unpublished, 2009 **PIFU, *Survey of accommodation providers*, 2009 # ERP for Coppabella is based on Collection District of CD 3052004, which includes population outside of Coppabella village.

FTE population, 2006 to 2009

Table 27 contains revised FTE population estimates for the SLA of Nebo for 2006 to 2008, as well as results for 2009. The FTE population for Nebo SLA grew steadily between 2006 and 2009 (889 people). While most of this growth was in non-resident workers (688 people), Nebo's resident population also grew by 210 people. After Emerald SLA, Nebo had the Bowen Basin's second highest resident population growth rate between 2006 and 2008 (3.5 per cent per annum) (Appendix E).

Table 27. FTE population estimates for SLA of Nebo, 2006 to 2009

Year	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	Non-resident workers as % of FTE population	Change in FTE population from previous year
2009	2,874	3,825	6,699	57.1%	951
2008	2,863	2,885	5,748	50.2%	152
2007	2,728	2,868	5,596	51.3%	-214
2006	2,673	3,137	5,810	54.0%	—

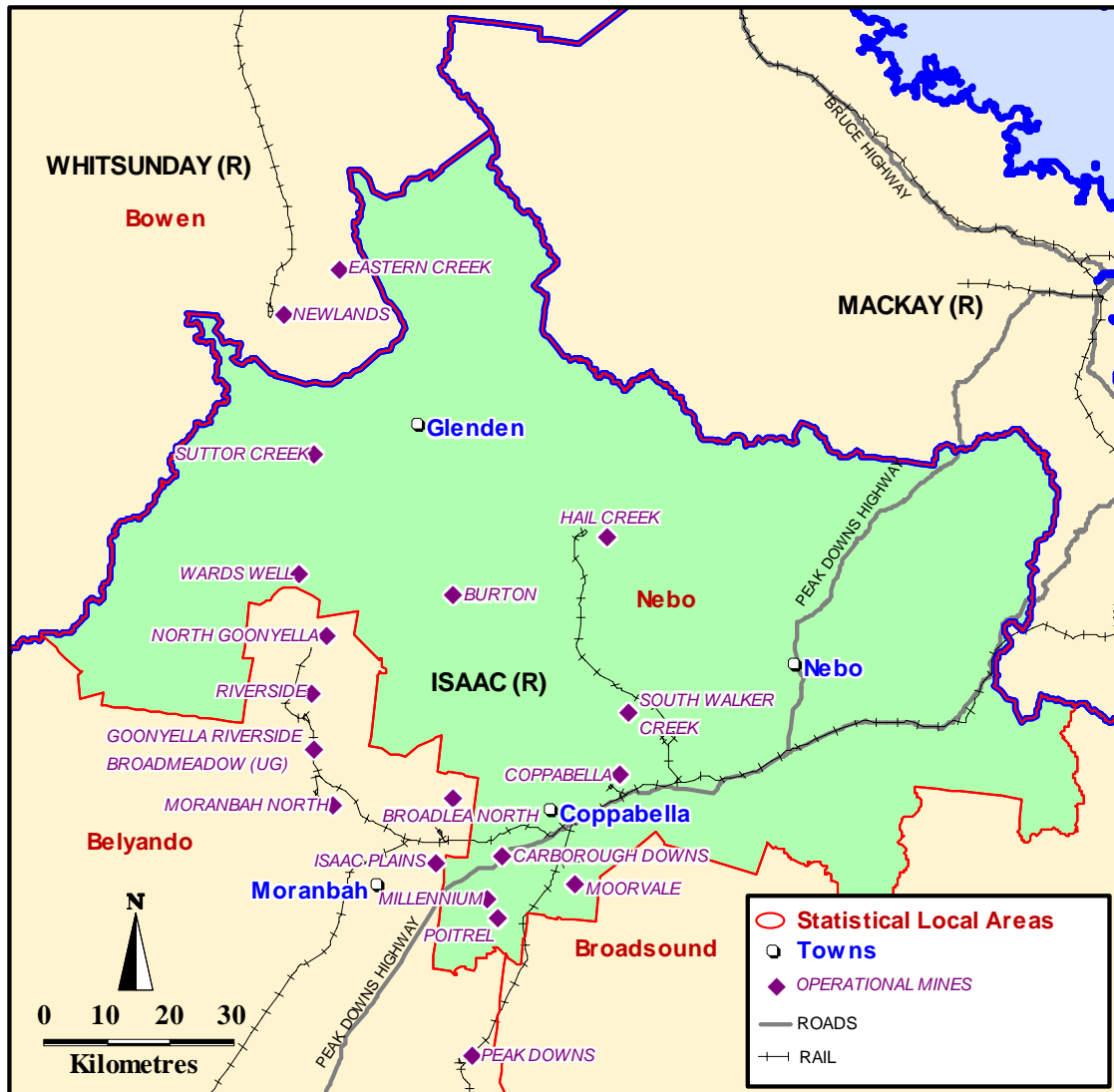
Sources: *PIFU unpublished, 2009; ABS 3218.0 – Estimated Resident Population (revised) for 2006 and 2007, Estimated Resident Population (provisional) for 2008. **PIFU, *Survey of accommodation providers*, 2006 to 2009

3.12 FTE population estimates for SLA of Peak Downs

The SLA of Peak Downs¹⁹ forms part of Central Highlands Regional Council and is located centrally in the Bowen Basin (Figure 15), north of Emerald. Before local government amalgamations in 2008, Peak Downs SLA was also a separate LGA in its own right (Peak Downs Shire).

The principal localities in the SLA of Peak Downs are Capella and Tieri. The former administrative centre of Capella is located about 50 km north of Emerald and 55 km south-east of Clermont on the Gregory Highway, while Tieri is some 30 km east of Capella.

Figure 15. Map of Peak Downs SLA, July 2009



(R) - Regional Council (S) - Shire (L) - Locality
Source: PIFU, 2009

¹⁹ Under the 2008 ASGC, the ABS renamed the former SLA of Peak Downs as *Central Highlands (R) – Peak Downs* to reflect the incorporation of the former Peak Downs Shire into the amalgamated Central Highlands Regional Council. This change was in name only and did not impact upon the SLA boundaries. For consistency, this document uses the name of Peak Downs to denote the SLA rather than the 2008 ASGC descriptor.

Like many other SLAs in the Bowen Basin, the economy of Peak Downs is based on raising beef cattle and agriculture, along with coal mining. While Capella provides other administrative, retail and light industrial services, both it and Tieri serve as dormitory towns for mines located in the area²⁰, including Gregory (Crinum), Kestrel and Oaky Creek.

Full-time equivalent (FTE) population

The FTE population of Peak Downs SLA at 31 July 2009 was 4,033, comprising 3,481 usual residents and 552 non-resident workers (Table 28). The largest population centre was Tieri, with an FTE population of 1,749 people.

More than three-quarters of the non-resident population of Peak Downs was accommodated in the town of Tieri (423 people), with the balance counted in Capella (129 people). Overall, non-resident workers made up around 14 per cent of the FTE population of Peak Downs SLA.

Table 28. Population estimates for Peak Downs SLA and localities, July 2009

Area	Full-time equivalent population and components, July 2009			Non-resident workers as % of FTE population
	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	
Capella	877	129	1,006	13%
Tieri	1,749	423	2,172	20%
SLA remainder	855	0	855	0%
Peak Downs SLA	3,481	552	4,033	14%

Note that differences between totals and the sum of their components are due to rounding of population estimates.

Sources: *PIFU unpublished, 2009 **PIFU, *Survey of accommodation providers*, 2009

FTE population, 2006 to 2009

Table 29 contains revised FTE population estimates for the SLA of Peak Downs for 2006 to 2008, as well as results for 2009.

The FTE population for Peak Downs remained relatively stable between 2006 and 2009, falling from 4,107 to 4,033 (a loss of some 74 people). Most of the decline over this period was due to a net loss in the non-resident worker population of 172 people, which was balanced by growth in the resident population of 98 people. Some job losses were reported in Crinum, Oaky Creek and Kestrel mines between 2008 and 2009, which largely impacted upon non-resident workers rather than local residents (DEEDI (QME) unpublished statistics).

Table 29. FTE population estimates for SLA of Peak Downs, 2006 to 2009

Year	Resident population (estimated)*	Number of non-resident workers**	FTE population estimate	Non-resident workers as % of FTE population	Change in FTE population from previous year
2009	3,481	552	4,033	13.7%	-147
2008	3,451	729	4,180	17.4%	145
2007	3,412	623	4,035	15.4%	-72
2006	3,383	724	4,107	17.6%	—

Sources: *PIFU unpublished, 2009; ABS 3218.0 – Estimated Resident Population (revised) for 2006 and 2007, Estimated Resident Population (provisional) for 2008. **PIFU, *Survey of accommodation providers*, 2006 to 2009

²⁰ While parts of the Ensham mining lease fall within the SLA of Peak Downs, the mine is largely serviced by the town of Emerald and so its workers are counted in the FTE population for Emerald SLA in the report.

4. Guide to using FTE population estimates

4.1 Characteristics of FTE population estimates

The FTE population measure differs from the ABS resident population estimates in that it represents a 'snapshot' of the total number of persons living in an area at a particular point in time. By contrast, the ABS resident population figures are an estimate of the number of people who reside permanently²¹ in an area, as at 30 June for the given year. It should be noted that the number of residents actually present in the area at any given point in time will vary, as some may be temporarily absent for reasons such as holidays, schooling, or work commitments.

The non-resident worker population component of the FTE population fluctuates in size and varies from one point in time to another. The number of non-resident workers living in the Bowen Basin at a given point in time can vary according to production schedules, roster arrangements, maintenance periods, and extraneous factors such as adverse weather.

In summary, the FTE population estimates for the Bowen Basin are an acknowledgement that more people live in the region than are otherwise indicated by the ABS resident population estimates, and that the number of non-resident workers also needs to be considered for service provision.

4.2 Application of FTE population estimates to planning

The FTE population figures do not represent a reworking of the ABS resident population estimates, nor are they intended to replace these measures. The resident population estimates remain the 'official' population figures for most applications, and will continue to form the basis for all LGA population projections prepared by the Queensland Government.

There are several essential points to consider when applying FTE population estimates to planning for infrastructure and services. The characteristics of the resident and non-resident worker populations are quite different, so it follows that their needs are not always the same. For example, both the resident population and the non-resident working population require some services provided by government agencies (water, sewage disposal, garbage disposal), but there are other local services such as schools, libraries, sporting facilities, and open space that are mainly used by the resident population.

The planning agency or supplier should carefully consider the characteristics of the two different groups, and the extent to which their needs for a particular service differ or overlap, before deciding which measure is most relevant. As a starting point, data from the 2006 Census should be used as a guide to the characteristics of the resident population. Census data is more limited in terms of describing the occupants of non-private accommodation, so assumptions about the age, sex and partnership status of the non-resident population should take local knowledge into consideration.

²¹ According to the definition used in the ABS 2006 Census of Population and Housing, a person is considered to be a resident of an area if they indicate on their Census return that they have lived or intend to live in that area for a total of six months or more in the Census year. Refer to the definitions contained in the glossary for further information.

The characteristics of non-resident workers vary, but it is possible to make some general observations upon their disposition according to information gathered from accommodation providers:

- SPQs are more likely to contain young single people than other forms of accommodation, but also house unaccompanied non-resident workers whose partners and dependants live elsewhere. Although the occupants of SPQs are predominantly male, most larger establishments also cater for female workers. A relatively small number of workers live in SPQs as their permanent place of residence.
- Many motels in the Bowen Basin have a semi-permanent block booking arrangement for companies, catering largely to sub-contractors and government agencies. Where permanent housing is in short supply, motels may supply medium-term interim accommodation for mining company employees and contractors. Motels are the primary providers of short-term accommodation for visiting executive, managerial and consulting staff, although these are not included in the FTE population estimates.
- The number of hotel occupants varies according to location and availability of other dwelling types. With a few exceptions, hotels are less likely to provide medium-term accommodation for non-resident workers than motels, caravan parks and SPQs.
- Of all accommodation types surveyed, caravan parks have the most diverse range of occupants, ranging from usual residents to short-term visitors. These parks usually contain a mix of working age singles, couples and families with children. Compared with Queensland overall, Bowen Basin caravan parks generally have lower proportions of usual residents who are retirees.
- Head-leased private housing is sometimes used as interim accommodation for newly arrived workers with families, particularly those awaiting permanent housing in the local area. Private housing is also rented by groups of unaccompanied workers, either in the form of private group housing arrangements or as overflow rooming to existing hostels. The survey of accommodation providers considers occupants of head-leased housing to be non-residents only when identified as such by the accommodation provider. It excludes consideration of households with individual long-term rental bonds, since these are more likely to be usual residents.

4.3 Frequently asked questions about FTE estimates

What are FTE population estimates?

The FTE population estimate is a measure of the total number of persons thought to be living in a defined area at a given point in time, excluding overnight or short-term visitors. This includes residents as well as non-resident workers (those who fly in/fly out or drive in/drive out between their permanent place of residence and place of employment).

How does the FTE population measure differ from the ABS Estimated Resident Population?

The ABS Estimated Resident Population (ERP) refers to the total number of people who permanently reside in an area. At any point in time, a number of these residents may be temporarily absent from the area due to holidays, work commitments, or boarding school arrangements. The ABS prepares annual ERPs for the year ending 30 June; however, the release of this data at LGA level does not usually occur until the first quarter of the following year. For that reason, the resident population component of the FTE population is PIFU's calculated projection based on the previous year's ERP and may differ from the ABS measure when it is released.

How is the resident population component of FTE population measures derived?

The resident population component of the FTE population is estimated from the preceding year's ERP, with the intermediate growth calculated using reported dwelling approvals data and area-specific dwelling occupancy rates. This preliminary estimate is revised by PIFU following the release of the ERP data.

How is the non-resident population component of FTE population measures derived?

The non-resident FTE population component is based on the annual survey of accommodation providers conducted by PIFU. The survey provides a point-in-time snapshot of the number of non-permanent workers living in non-private accommodation (SPQs, hotels, motels, caravan parks and other forms of accommodation, such as houses leased from the private rental market). The non-resident FTE population component excludes people who are considered to be usual residents of this accommodation as well as overnight or short-term visitors.

Do FTE population measures replace existing population measures?

No. The FTE population estimate complements but does not replace the ABS estimated resident population figures, which will continue to be published annually.

How should FTE population measures be interpreted?

The FTE population describes a service population consisting of two distinctively different components—the resident population (persons who usually live in the area), and the non-resident working population who do not live in the area on a permanent basis. The consumption characteristics and needs of the two groups may differ markedly, so it follows that they require different types and levels of services.

Do FTE population measures include dependants accompanying non-resident workers?

Generally not. The survey of accommodation providers has identified that some non-resident employees and contractors may be accompanied by dependants when working in the Bowen Basin, although this appears to be mainly limited to caravan parks. Where possible, families with children are excluded from consideration, since it is likely that they may be identified in the resident population estimates.

5. Glossary of terms and abbreviations

ABS

The Australian Bureau of Statistics.

Accommodation centre

Refer to single persons quarters (SPQ).

Australian Standard Geographical Classification (ASGC)

The Australian Standard Geographical Classification (ASGC) is a convention developed by the ABS for the collection and dissemination of geographic statistics on a national basis. It is a hierarchically structured classification of defined spatial units that satisfy different statistical purposes. See also local government area and statistical local area.

Dwelling

A dwelling is a structure which is intended to have people living in it, and which is habitable on Census night. A private dwelling is occupied on a regular basis by an owner or a rental tenant, and comprises dwellings that are other than commercial, tourist or institutional places of occupancy. Some examples of private dwellings are houses, flats, townhouses, units, caravans, tents, humpies and houseboats. Note that public housing, community housing and other forms of social housing, and housing provided by an employer, are all classified as private dwellings by Census definitions. Non-private dwellings include hotels, motels, hospitals, aged care, prisons, boarding schools and mining camps. Private dwellings are enumerated in the Census to obtain family and relationship data. Non-private dwellings (hotels, hospitals, etc.) are also counted. See also non-private dwellings (NPD), occupied private dwelling.

Estimated Resident Population (ERP)

The ABS prepares annual estimates of the resident population for Australia during intercensal years, which are based on the usual resident population measure derived from the previous Census. This ERP is derived from data on population indicators at the sub-state level, including dwelling approvals, Medicare change of address records and electoral enrolments.

Fly in/fly out or drive in/drive out (FIFO/DIDO)

An arrangement whereby workers live for an extended period in an area removed from their usual place of residence while on-shift and commute by air or road between home and place of work. Flexible work schedules and accommodation arrangements in the mining industry have made FIFO/DIDO more feasible, to the point where it has now supplanted provision of local housing as a condition of employment for many operations. See non-resident workers.

Full-time equivalent (FTE) population

A measure derived by PIFU that approximates the total population living in an area at a given point in time, as applied to the nine local government areas of the Bowen Basin included in this report. The FTE is based on two components—a survey of accommodation providers that counts the number of non-resident workers, and the resident population component estimated to be present in the area at the time of survey. See also resident and non-resident workers.

Head-lease

A form of rental tenancy arrangement whereby a company obtains the lease for one or more rental properties, which are then used to provide employee accommodation. Occupants of head-leased housing may enter into sub-tenancy arrangements directly with the employer; otherwise, tenancy agreements are managed by a third party such as a real estate agent.

Head-leasing arrangements differ from private rental arrangements, whereby the occupant enters into a direct agreement with the dwelling owner or agent.

Local government area (LGA)

According to the Australian Standard Geographical Classification (ASGC), the local government area (LGA) is a spatial unit that represents the geographical area under the responsibility of an incorporated local government council, or an Aboriginal or Island Council. An LGA may be a City (C), Regional Council (R), Shire (S) or Town (T).

In the statistical geography current at the time of the Census in August 2006 (Australian Standard Geographical Classification, 2006), LGAs were equal to or larger than statistical local areas (SLAs) and collection districts (CDs). In March 2008, LGA boundaries were changed as the result of administrative reforms in Queensland and the reformed LGA boundaries were included in the 2008 standard geographic classification (ASGC 2008).

Non-private dwellings (NPDs)

NPDs are those dwellings that provide a communal or transitory type of accommodation. NPDs include SPQs, hotels, motels, guest houses, prisons, religious and charitable institutions, defence establishments, hospitals and other communal dwellings. See dwelling, SPQ.

Non-resident worker

Employees of mining companies, contractors and construction workers, who live in an area for extended periods when working, but have a permanent place of residence in another area. This group includes workers engaged in FIFO arrangements and who live locally in non-private dwellings such as SPQs, hotels, motels, caravan parks and other forms of accommodation while on-shift. Although many non-resident workers may actually spend a total of more than six months of the year in their area of work, they are generally not regarded as being residents by the ABS and are omitted from estimates of the resident population. See FIFO, ERP.

Occupied private dwelling

All private dwellings that are occupied when the Census is taken. Unoccupied private dwellings are also counted with the exception of unoccupied dwellings in caravan parks, marinas and manufactured home estates, and units in accommodation for the retired or aged (self-care). See also private dwelling.

Office of Economic and Statistical Research

The Office of Economic and Statistical Research (OESR), a portfolio office of Queensland Treasury, is the principal economic, demographic and social research agency for the Queensland Government. OESR and PIFU were amalgamated in late 2009. See PIFU.

Other dwelling

Includes caravans, houseboats, or houses or flats attached to a shop or other commercial premises.

Other landlord type

Where the household pays rent to the owner or manager of a caravan park, an employer (including a government authority), a housing cooperative, a community or church group, or any other body not included elsewhere.

PIFU

The former Planning Information and Forecasting Unit. PIFU was part of the Department of Local Government, Planning, Sport and Recreation until 2007 then it was transferred to Department of Infrastructure and Planning. The unit was integrated with the Treasury Department's Office of Economic and Statistical Research (OESR) in late 2009. See Office of Economic and Statistical Research.

Population projection

An estimate of the future resident population of a given area. The Queensland Government produces updated population projections for all LGAs within Queensland on a regular basis. The latest edition, which contains projections to 2031, was released in December 2008. The next series of projections are due for release in early 2011.

Private dwelling

See dwelling.

Private renter

A household paying rent to a landlord who is a real estate agent, a parent or other relative not in the same household or another person not in the same household.

Resident population

According to the ABS, the resident population is an estimate of the number of persons who are resident within a given area. For Census years, the resident population is determined from responses given to questions in the Census form regarding occupancy. People are regarded as residents of the area if they identified that they lived in the area for at least six months of the Census year. The ABS collates all Census results and redistributes resident persons who were absent on Census collection night back into their area of usual residence. This usual resident population, which is also adjusted for undercount, then forms the basis for estimating population change in the intercensal period.

Service population

An estimate of the total number of persons within a defined area who utilise goods or services from providers of such commodities, but who are not necessarily residents of the area from which such services are sought. The FTE population estimate is based on the service population that consumes accommodation in the Bowen Basin, comprising non-resident workers living in non-private accommodation with residents of private dwellings. The FTE measure does not include the other component of the accommodation service population, namely short-term visitors.

Single persons quarters (SPQ)

A term used to describe a particular type of non-private accommodation, usually provided to accommodate unaccompanied non-resident workers of mining companies and associated contractors. SPQ accommodation is typically a form of hostel that usually consists of demountable dwellings arranged in a large camp, although some establishments also contain permanent and semi-permanent dwellings. SPQ accommodation is arranged with common messing, laundry and entertainment facilities and rooms that are cleaned and serviced by the operator. Occupants of SPQs are usually provided with all meals. See also non-private dwellings.

Statistical local area (SLA)

The statistical local area (SLA) is a defined area under the ASGC. In Queensland, many SLAs share the same boundaries as LGAs. In the Bowen Basin many former LGAs became SLAs following local government reforms in 2008 without any further boundary changes. The exception was Banana Shire which was expanded in area following the addition of the northern part of the former Shire of Taroom. The resulting LGA retained the name of the former LGA. The SLA of Banana Shire shares the same boundaries as the LGA of that name. SLAs cover, in aggregate, the whole of Australia without gaps or overlaps. See also Australian Standard Geographical Classification, and Local Government Area.

Usual residence

The ABS uses two concepts of usual residence—*Usual residence in a dwelling* and *Usual residence in a household or family home*. These concepts are defined differently:

- Usual residence in a dwelling applies to the dwelling where the person lives for the majority of the time, and is the definition used to estimate the usual resident (UR)

population derived from the Census of Population and Housing. The Census establishes usual residence according to the place where the person has lived or intends to live for six months or more in the Census year.

- Usual residence in a household or family home applies to the dwelling that the person considers to be their family home or place of usual residence, irrespective of the length of time that they actually live in the dwelling. This definition is used by the ABS for the Monthly Population Survey and other household surveys.

For most people, the family home is the place where they live for the majority of the time, and that dwelling may be considered to be their place of usual residence according to both definitions. An exception occurs in the case of mining and construction workers, who live for extended periods in non-private accommodation near the work site but fly or drive to their family home when off-roster. It is likely that many of these workers would consider the family home to be their usual place of residence, despite spending more than half of the given year at the location of their workplace.

6. References

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Appendices

Appendix A

Characteristics of non-resident workers

The characteristics of non-resident workers in the Bowen Basin differ according to the nature of their employment, and the types of accommodation that they occupy when living in the area. While most non-resident workers are company staff or contractors who are directly engaged in mining production, there are other groups of FIFO workers who fall outside of that narrow definition. These include maintenance contractors, exploration crews, project construction workforces, and miscellaneous workers.

The most apparent differences between these groups are their accommodation arrangements. Some live in SPQ accommodation on the mine site for the entire duration of their shift, and do not consume local accommodation services. Others are more reliant on non-private accommodation such as hotels, motels, caravan parks and rental accommodation located in population centres.

Non-resident production staff and contractors

In their day to day operations, many resource industries in the Bowen Basin utilise a mix of company staff and contract workers. Depending on the resource location and the contractor's accommodation policy, production contract workers may be usual residents of the region or FIFO/DIDO from elsewhere. In more remote operations, some staff and contractors whether resident or non-resident in the area live in the on-site SPQ while rostered on. Where employed in mining operations close to service centres, non-resident contractors are also known to occupy non-private accommodation, including houses that are head-leased from the rental market by their employers.

Maintenance contractors

There is a large group of regular maintenance contractors and sub-contractors who service mining plant equipment during shutdown periods. Operations in the region conduct scheduled maintenance on an ongoing basis, so that the demand for this group's services is more or less ongoing. Accordingly many maintenance contractors live in the Bowen Basin as usual residents, while others FIFO/DIDO from outside of the region. Depending on the location of their current project, maintenance contractors may live in on-site SPQs for the duration of the shutdown, or else in non-private accommodation.

Exploration crews

This group includes surveyors, geologists and drilling crews involved in mining and gas exploration. They usually live in temporary work camps or informal dwellings at remote locations, and are likely to occupy non-private accommodation only on a short-term basis. Where it has been possible to identify and quantify them, exploration crews are included in the count of non-resident workers.

Project construction workforces

Large projects such as new mines, plant extensions or major infrastructure usually employ a temporary construction workforce, which can vary in size and duration according to the scale of the project. Construction workforces are usually housed near the project in temporary work camps, but can also utilise existing non-private accommodation such as caravan parks or houses head-leased from the private rental market. Where construction projects utilise FIFO arrangements, their workforce is included in the count of non-resident workers.

Miscellaneous workers

This group consists of those not directly employed by mining activities, and are mainly people who provide infrastructure and support services. They include employees of government agencies and government owned corporations, workers in the residential construction industry, professionals and para-professionals, and service industry staff.

While this group utilises non-private accommodation on a short to medium-term basis, it is often difficult to identify their residency status. Some are regular FIFO workers whose costs are subsidised by employers, and are included in the FTE population estimates as non-resident workers. Catering and service staff of SPQs and other non-private accommodation form a sub-group within this category.

Others include unaccompanied workers who have yet to find suitable private housing for their families in the region, regular visitors who stay for only a short time, and those who work in the region for protracted but irregular durations. These are likely to be classified either as usual residents or short-term visitors, and are not counted as non-resident workers in the FTE population estimates.

Shift arrangements for non-resident workers

A typical arrangement for FIFO operations in a 24 hour mining operation consists of three rotating shifts of workers, with two shifts rostered on at the site and the other resting at their place of usual residence²². Shift lengths are usually 12 hours in duration, with one team sleeping while the other is at work. The duration of stay in the region varies from one mine to the next, although seven days on followed by four days off appears to be a common arrangement.

Employees and contractors involved in construction projects generally work shorter daily shifts than those working in the resource sector, but are more likely to spend longer periods in the region without extended breaks.

²² This arrangement is common but not universal. Some companies adopt different work rosters, with variations in the number of days spent on-shift. Similarly, the duration of shifts worked by employees and sub-contractors during plant shutdowns and scheduled maintenance activities may vary according to the requirements of the task.

Appendix B

FTE population methodology

The FTE population measure used in this report was initially developed by the Queensland Government in 2006 to define population changes associated with mining growth in the Bowen Basin region. FTE population estimates have been adopted by local and state government agencies to inform planning across the Bowen Basin region, including the *Moranbah Water Demand Study* and the *Sustainable Futures Framework for Queensland Mining Towns* among other applications. The private sector has also found this information useful, particularly as a guide to planning residential development.

A model of how the FTE population relates to all elements of the service population for accommodation is attached as Appendix C to this report. A more detailed discussion paper covering service population methodologies and appropriate data sources (*Towards estimates of service populations to inform planning in small areas*) is available for free download from <http://www.oesr.qld.gov.au/publications/research-papers/demography/towards-est-service-pop/index.shtml>

Non-resident worker population

The non-resident worker population was established through the *Survey of accommodation providers*, conducted by PIFU in the third quarter of 2009. The survey covered all non-private accommodation providers across the Bowen Basin, including single persons quarters (SPQs), hotels, motels, and caravan parks. Accommodation providers were asked to identify non-resident workers based on best knowledge of their tenants, in that they:

- lived there on a medium-term and/or regular basis
- were not usual residents (i.e. had lived there continuously for six months or more)
- were not short-term visitors (lived there for less than two weeks)
- were not tourists or itinerants.

Resident population estimates

The ABS resident population estimates for 30 June 2008 provide a starting point for estimating annual changes to the resident population. Growth in resident population between 2008 and 2009 was estimated by applying the Census average household size per dwelling to the new dwellings approved in the interim period (lagged by six months). Note that this method did not include changes attributable to natural increase (births less deaths) and is only an approximation of actual population growth. Revised 2009 FTE population estimates will be published by OESR in the 2010 edition of this report, after ABS estimated resident population data for 2009 becomes available.

Appendix C

Model for estimating FTE population

Elements	Population component	Accommodation	Dwelling type	Typical occupants	Data source for population estimate*
Included in the FTE population	Resident population	Private housing	Houses, flats, units, caravans (owned or rented), public housing tenants	Usual residents of the area (included in the ERP). These could be mining and construction employees and their dependants	ABS Estimated Resident Population (ERP); PIFU **
		Non-private accommodation	Single persons quarters, hotels, motels, other institutions	Includes permanent live-in staff, school boarders, prisoners, nurses, aged care, retirement villages	ABS Estimated Resident Population (ERP); PIFU **
	Non-resident worker population – includes fly in/fly out or drive in/drive out workers living in the area for a short to medium-term duration	Private dwellings	Rented private houses, flats, units, caravans	Mining and construction employees, contractors, and associated trades living in the area when working but resident elsewhere when off-shift	ABS Survey of Tourist Accommodation (caravans only); PIFU **
		Non-private dwellings	Single persons quarters, hotels, motels	Mining and construction employees, contractors, and associated trades living in the area when working but resident elsewhere when off-shift	ABS Survey of Tourist Accommodation (larger premises only); PIFU **
Not included in the FTE population	Other non-resident population (medium to long-term)	Private dwellings	Rented private houses, flats, units, caravans	Persons who have been living in the area for less than six months or who don't intend to live there for more than six months	ABS Survey of Tourist Accommodation (some caravan parks); PIFU **
		Non-private dwellings	Hospitals, prisons, other institutions	Includes hospital patients, short-term to medium-term occupants of some institutions	Not estimated – Census data only
	Short-term visitors (non-resident) – includes tourists and overnight stays	Private housing	Private boarders, private guests, caravan parks	Includes tourists, day visitors normally resident elsewhere, maintenance operators, overseas visitors	ABS Survey of Tourist Accommodation (larger caravan parks only)
		Non-private accommodation	Single persons quarters, hotels, motels, bed & breakfast, backpacker hostels, holiday accommodation	Includes visiting company employees, tourists, business visitors, backpackers, maintenance operators, overseas visitors	ABS Survey of Tourist Accommodation (larger premises only)
	Itinerants (short-term population)	Private dwellings	Caravan parks, farm homestays	Includes seasonal workers	ABS Survey of Tourist Accommodation (larger caravan parks and premises)
		Non-private dwellings	Hotels, motels, backpacker hostels	Includes seasonal workers	
	Homeless	Private, non-private, informal dwellings	Staying with friends, community housing, camping, informal dwellings	Where definition of 'homelessness' includes persons without a permanent place of residence	Not estimated – Census data only

Sources: PIFU. * Denotes data sources that may be used to estimate the populations of different groups in the five-year interval between Census counts. ** **PIFU** – Data collected from PIFU's annual *Survey of accommodation providers*, targeting the area's non-resident working population (solid shading) living in non-private dwellings. The survey may also inadvertently include some persons who are accounted for in other intercensal population estimates (diagonal shading), such as the ABS Survey of Tourist Accommodation and the ABS Estimated Resident Population.

Appendix D

Estimated resident population of Bowen Basin LGAs and selected localities, 2001 to 2008(p)

Local Government Area (LGA)*	Statistical Local Area (SLA)*	Urban centres and localities	Estimated resident population (persons)			Average annual population change (persons)		Average annual population change (persons)	
			2001	2006	2008(p)	2001-2006		2006-2008(p)	
			no.	no.	no.	no.	%	no.	%
	Banana	Baralaba	260	307	293	9	3.4	-7	-2.4
		Biloela	5,531	5,728	5,758	39	0.7	15	0.3
		Moura	1,843	1,892	1,875	10	0.5	-9	-0.5
		Thangool	359	356	356	-1	-0.1	0	0.0
		Theodore	453	478	437	5	1.1	-21	-4.4
		Taroom	692	677	617	-3	-0.4	-30	-4.5
	<i>Banana (S) balance</i>		6,700	6,132	6,093	-114	-1.8	-20	-0.3
Banana (S)			15,838	15,572	15,429	-53	-0.3	-72	-0.5
	Bauhinia	Springsure	850	897	902	9	1.1	3	0.3
	Duarina	Blackwater	4,762	5,371	5,156	122	2.4	-108	-2.0
		Bluff	337	386	370	10	2.7	-8	-2.0
		Duarina	234	269	266	7	2.8	-2	-0.6
	Emerald	Emerald	9,931	11,757	12,592	365	3.4	417	3.5
		Rubyvale	501	544	550	9	1.6	3	0.6
		Sapphire	508	586	648	16	2.9	31	5.2
		Willows Gemfields	104	108	99	1	0.7	-4	-4.2
	Peak Downs	Capella	766	856	861	18	2.2	3	0.3
		Tieri	1,610	1,782	1,749	34	2.0	-16	-0.9
	<i>Central Highlands (R) balance</i>		5,458	5,701	6,051	49	0.9	175	3.0
Central Highlands (R)			25,061	28,256	29,244	639	2.4	494	1.7
	Belyando	Clermont	2,006	1,979	1,933	-5	-0.3	-23	-1.2
		Moranbah	6,338	7,611	8,087	255	3.7	238	3.1
	Broadsound	Dysart	2,500	3,338	3,435	168	6.0	48	1.4
		Middlemount	2,001	2,178	2,235	35	1.7	29	1.3
	Nebo	Glenden	909	1,178	1,245	54	5.3	33	2.8
		Nebo	206	301	343	19	7.9	21	6.8
	<i>Isaac (R) balance</i>		4,564	4,528	4,655	-7	-0.2	64	1.4
Isaac (R)			18,524	21,113	21,933	518	2.7	410	1.9
	Bowen	Bowen	7,463	7,937	8,364	95	1.2	214	2.7
		Collinsville	2,087	2,188	2,139	20	0.9	-24	-1.1
		Merinda	236	245	244	2	0.8	-1	-0.2
	<i>Whitsunday (R) balance</i>		2,623	2,766	2,965	29	1.1	100	3.5
Whitsunday (R) (Bowen only)			12,409	13,135	13,712	145	1.1	289	2.2
Bowen Basin LGAs			71,832	78,076	80,318	1,249	1.7	1,121	1.4

(R) - Regional Council (S) - Shire (p) preliminary

Note that differences between totals and the sum of their components are due to rounding of population estimates.

*SLA and LGA boundaries are based on the 2008 Australian Standard Geographical Classification.

Sources: ABS, unpublished statistics; ABS 3218.0, *Regional Population Growth, Australia*

Appendix E

Estimated resident population of Bowen Basin LGAs and SLAs, 2001 to 2008(p)

Local Government Area (LGA)*	Statistical Local Area (SLA)*	Estimated resident population (persons)			Average annual population change (persons)		Average annual population change (persons)	
		2001	2006	2008(p)	2001-2006		2006-2008(p)	
		no.	no.	no.	no.	%	no.	%
Banana	Banana	15,838	15,572	15,429	-53	-0.3	-72	-0.5
Banana (S)		15,838	15,572	15,429	-53	-0.3	-72	-0.5
Central Highlands	Bauhinia	2,252	2,325	2,339	15	0.6	7	0.3
Central Highlands	Duaringa	6,608	7,214	6,894	121	1.8	-160	-2.2
Central Highlands	Emerald	13,056	15,334	16,560	456	3.3	613	3.9
Central Highlands	Peak Downs	3,145	3,383	3,451	48	1.5	34	1.0
Central Highlands (R)		25,061	28,256	29,244	639	2.4	494	1.7
Isaac	Belyando	9,948	11,149	11,590	240	2.3	221	2.0
Isaac	Broadsound	6,482	7,291	7,480	162	2.4	95	1.3
Isaac	Nebo	2,094	2,673	2,863	116	5.0	95	3.5
Isaac (R)		18,524	21,113	21,933	518	2.7	410	1.9
Whitsunday	Bowen	12,409	13,135	13,712	145	1.1	289	2.2
Whitsunday (R) (Bowen only)		12,409	13,135	13,712	145	1.1	289	2.2
Bowen Basin LGAs		71,832	78,076	80,318	1,249	1.7	1,121	1.4

(R) - Regional Council (S) - Shire (p) preliminary

*SLA and LGA boundaries are based on the 2008 Australian Standard Geographical Classification.

Sources: ABS, unpublished statistics; ABS 3218.0, *Regional Population Growth, Australia*

Appendix F

FTE population for Bowen Basin LGAs, SLAs and key centres, 2006

Local Government Area	Statistical Local Area	Centre	Estimated resident population*	Number of non-resident workers**	FTE population estimate	Non-resident workers as % of FTE
		Biloela	5,728	93	5,821	2%
		Moura	1,892	891	2,783	32%
		Remainder	7,951	170	8,121	2%
	<i>Banana</i>		15,572	1,154	16,726	7%
Banana (S)			15,572	1,154	16,726	7%
		Springsure	897	146	1,043	14%
		Remainder	1,428	0	1,428	0%
	<i>Bauhinia</i>		2,325	146	2,471	6%
		Blackwater	5,371	749	6,120	12%
		Bluff	386	0	386	0%
		Remainder	1,457	0	1,457	0%
	<i>Duarina</i>		7,214	749	7,963	9%
		Emerald	11,757	450	12,207	4%
		Remainder	3,577	244	3,821	6%
	<i>Emerald</i>		15,334	694	16,028	4%
		Capella	856	116	972	12%
		Tieri	1,782	608	2,390	25%
		Remainder	746	0	746	0%
	<i>Peak Downs</i>		3,383	724	4,107	18%
Central Highlands (R)			28,256	2,313	30,569	8%
		Clermont	1,979	204	2,183	9%
		Moranbah	7,611	1,915	9,526	20%
		Remainder	1,559	0	1,559	0%
	<i>Belyando</i>		11,149	2,119	13,268	16%
		Dysart	3,338	830	4,168	20%
		Middlemount	2,178	991	3,169	31%
		Remainder	1,775	0	1,775	0%
	<i>Broadsound</i>		7,291	1,821	9,112	20%
		Coppabella [#]	529	559	1,088	51%
		Glenden	1,178	1,877	3,055	61%
		Nebo	301	691	992	70%
		Remainder	665	10	675	1%
	<i>Nebo</i>		2,673	3,137	5,810	54%
Isaac (R)			21,113	7,077	28,190	25%
		Collinsville	2,188	100	2,288	4%
		Remainder	10,947	119	11,066	1%
	<i>Bowen</i>		13,135	219	13,354	2%
Whitsunday (R) (Bowen only)			13,135	219	13,354	2%
BOWEN BASIN TOTAL			78,076	10,763	88,839	12%

Sources: *ABS, unpublished statistics. **PIFU, *Survey of accommodation providers*, 2006. # ERP for Coppabella is based on Collection District 3052004, which includes population living outside of Coppabella village.



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