



Demographic Analysis



Appendix F2

Appendix C – Demographic and Social Environment for the Study Area

Population

Based on the 2006 ABS Census data, the study area as a whole has a population of 54,702 people, accounting for 19.8% of the total population for the Sunshine Coast region. The average annual growth rate for the study area was 2.18% for the period between 2001 and 2006 Census. This growth rate was slightly lower than that of the Sunshine Coast region (2.3%) and Southeast Queensland (2.5%).

The study area is spread across the two local government areas (LGAs) of Maroochy and Caloundra. The study area's low annual average population change compared to Caloundra and Maroochy LGAs indicate that the majority of the growth experienced by these LGAs has been focussed on coastal areas rather than in hinterland locations in which the rail corridor is situated. Broadly speaking, future growth on the Sunshine Coast is likely to be directed towards coastal localities, with minimal growth anticipated for hinterland communities, including those located along the rail line.⁸

⁸ With the exception of Nambour and Beerwah, which are designated as Major Activity Centres under the Southeast Queensland Regional Plan. Major Activity Centres are to be developed with a dwelling density of 14 dwellings per hectare.

Table 2. Population Growth, 2001-2006, All Areas

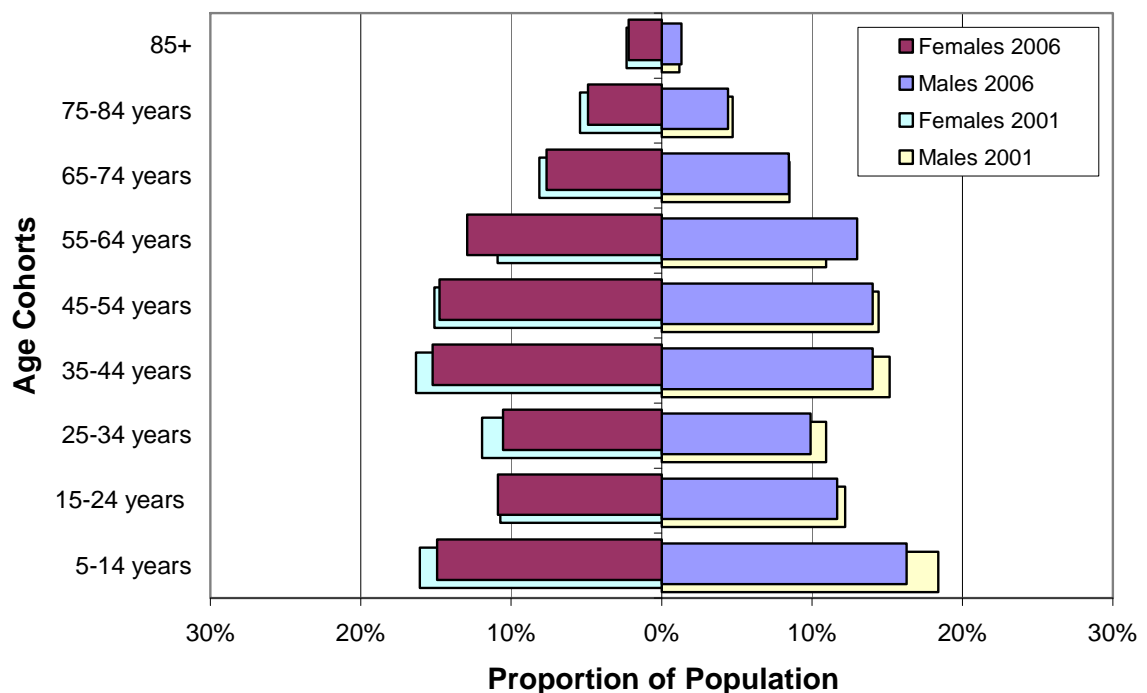
	Total Study Area	Other CDs	Sunshine Coast CDs	Nambour Urban Area CDs	Woombye Urban Area CDs	Palmwoods Urban Area CDs	Eudlo Urban Area CDs	Mooloolah Urban Area CDs	Landsborough Urban Area CDs	Peachester Urban Area CDs	Yandina Urban Area CDs	Mapleton Urban Area CDs	Beerwah Urban Area CDs	Maleny Urban Area CDs
Population 2006	54,702	27,761	4,191	14,121	812	2,622	175	1,132	1,576	452	1,074	786	1,624	1,297
- Males	26,892	14,000	2,005	6,705	405	1,230	80	572	799	225	511	360	776	584
- Females	27,810	13,761	2,186	7,416	407	1,392	95	560	777	227	563	426	848	713
- % Males	49.2%	50.4%	47.8%	47.5%	49.9%	46.9%	45.7%	50.5%	50.7%	49.8%	47.6%	45.8%	47.8%	45.0%
- % Females	50.8%	49.6%	52.2%	52.5%	50.1%	53.1%	54.3%	49.5%	49.3%	50.2%	52.4%	54.2%	52.2%	55.0%
Population 2001	49,113	24,854	3,885	12,782	721	2,302	186	979	1,393	429.00	1,012	570	1,425	1,097
- Males	24,063	12,400	1,865	6,098	354	1,090	97	486	714	225	478	256	687	593
- Females	25,050	12,454	2,020	6,684	367	1,212	89	493	679	204	534	314	738	504.00
- % Males	49.0%	49.9%	48.0%	47.7%	49.1%	47.4%	52.2%	49.6%	51.3%	52.4%	47.2%	44.9%	48.2%	54.1%
- % Females	51.0%	50.1%	52.0%	52.3%	50.9%	52.6%	47.8%	50.4%	48.7%	47.6%	52.8%	55.1%	51.8%	45.9%
Absolute Change from 2001 to 2006	5,589	2,907	306	1,339	91	320	-11	153	183	23	62	216	199	200
% Change from 2001 to 2006	11.38%	11.70%	7.88%	10.48%	12.62%	13.90%	-5.91%	15.63%	13.14%	5.36%	6.13%	37.89%	13.96%	18.23%

Source: ABS Census of Population and Housing, 2001 and 2006

Age / Sex Structure

Figure 4 below illustrates the age/sex structure of the study area. At the time of the 2006 ABS Census, the two largest age cohorts were the 35 to 44 year old age group and the 45 to 54 year old age group. Figure 4 also shows that the study area has a relatively large proportion of people in the older age group and the change in age cohorts between 2001 and 2006 Census indicate that the study area's population is ageing.

Figure 4. Age/Sex Structure, Study Area, 2001 and 2006



Source: ABS Census of Population and Housing, 2001 and 2006

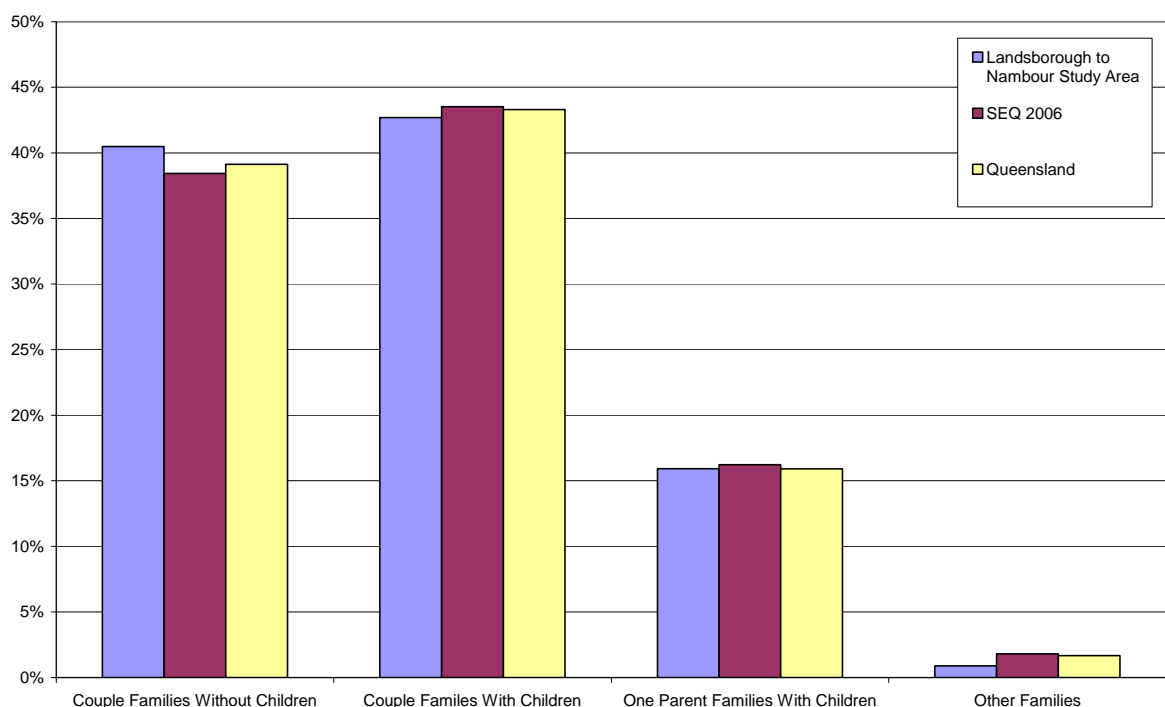
Family Type

Figure 5 compares family type distribution for the Study Area, SEQ and Queensland between 2001 and 2006. Couple families with children were the dominant family type across the study area. This was closely followed by couple families without children and one parent families. The study area's pattern of household composition was similar to that of SEQ and Queensland.

Moreover, trends were relatively consistent across the 2001-2006 period with a trend increase in couple families without children, a trend decrease in couple families with children, and minimal changes in the proportion of one parent families and other families.

The study area had a slightly higher proportion of couple families without children, and a slightly lower proportion of couple families with children, when compared against both SEQ and Queensland, in both 2001 and 2006.

Figure 5. Family Type, Study Area, SEQ and Queensland, 2006



Source: ABS Census of Population and Housing, 2006

Indigenous Profile

Indigenous persons account for 1.7% of the total population of the study area. This percentage is slightly higher than SEQ (1.8%) and significantly lower than Queensland (3.5%).

Table 3. Indigenous Population, Landsborough to Nambour Study Area, SEQ, Queensland, 2006

	Landsborough to Nambour Study Area	SEQ	Queensland
Indigenous	1.7%	1.8%	3.5%
Non Indigenous	98.2%	98.3%	96.5%

Source: ABS Census of Population and Housing, 2006

School Attendance

Within the study area, there were 15,625 people attending an educational institution at the time of the 2006 Census. The majority of people were attending primary and secondary schools. Table 4 presents the school attendance of residents in the study area.

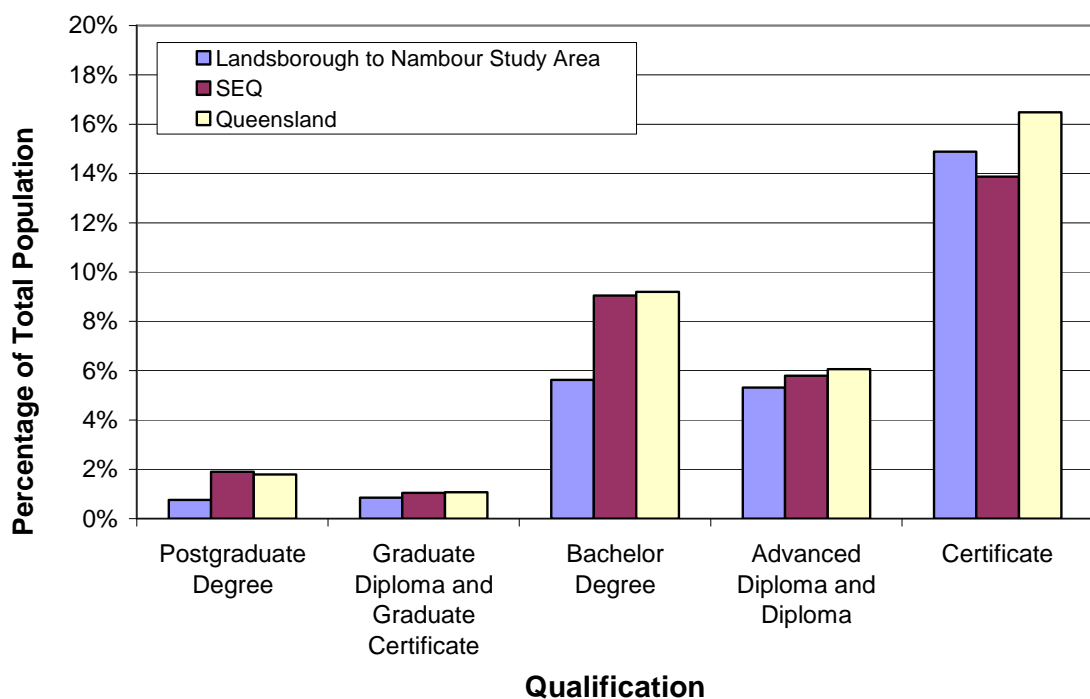
Table 4. School Attendance, Landsborough to Nambour Study Area, 2006

Type of Educational Institution	Landsborough to Nambour Study Area
Pre-school	5.5%
Infants/Primary	33.9%
Secondary	23.5%
Technical or Further Educational institution	5.9%
University or other Tertiary Institutions	6.3%
Other type of educational institution	2.2%
Type of educational institution not	22.7%
Total Persons Attending	100.0%

Educational Attainment

In terms of the highest level of education attained, the study area has a lower proportion of residents with a tertiary qualification compared to SEQ and Queensland. According to the 2006 Census, 5.6% of the population in the study area held a bachelors degree, almost half the proportion of SEQ residents with the same qualification (9.1%) and similarly, Queensland (9.2%). The proportion of the study area population with a certificate qualification was (14.9%), slightly higher than SEQ (13.9%) but lower than Queensland (16.5%). Other educational qualifications are presented in Figure 6.

Figure 6. Tertiary Qualifications, Study Area, SEQ and Queensland, 2006

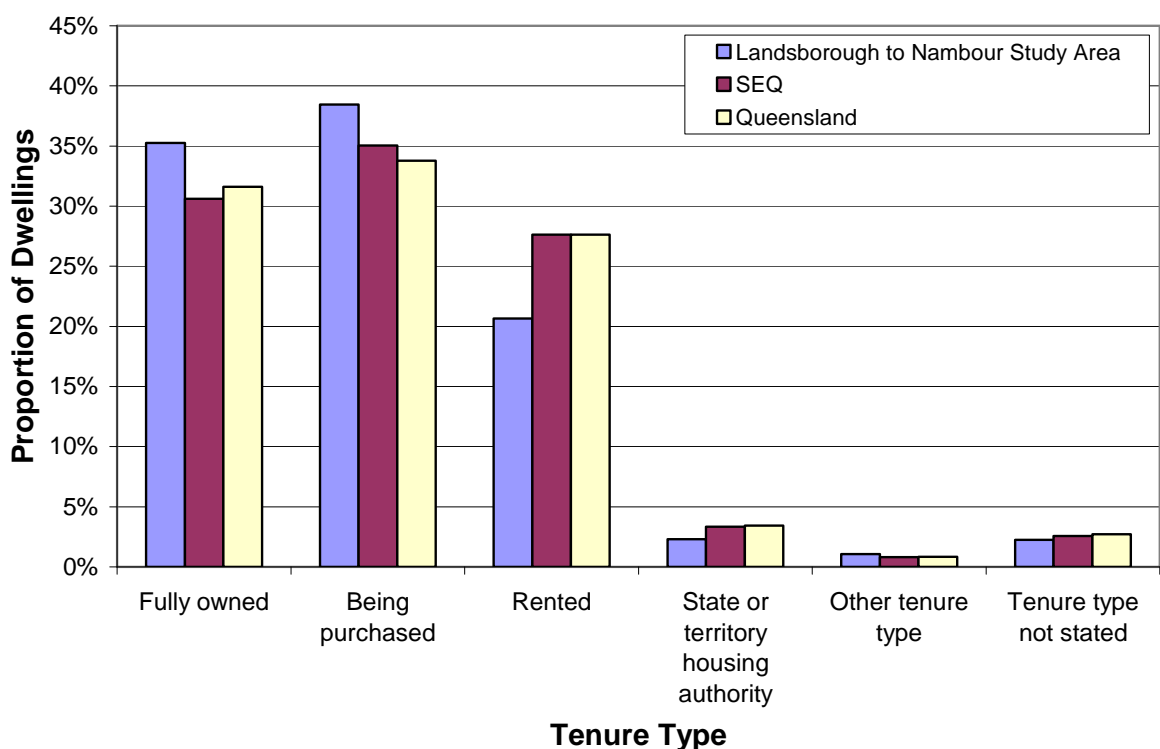


Source: ABS Census of Population and Housing, 2006

Dwelling Tenure

Based on the 2006 Census data, the study area showed higher levels of home ownership (including houses in the process of being purchased) than SEQ and Queensland. Of the total dwellings in the study area, 35.3% of dwellings were fully owned compared to the SEQ figure of 30.6% and the Queensland figure of 31.6%. Moreover, 38.4% of dwellings in the study area were being purchased which was higher than SEQ (35.9%) and Queensland (33.8%). High levels of home ownership may be associated with affordability of housing in hinterland communities. Figure 7 presents the dwelling tenure types for the study area, SEQ and Queensland.

Figure 7. Dwelling Tenure, Study Area, SEQ and Queensland, 2006

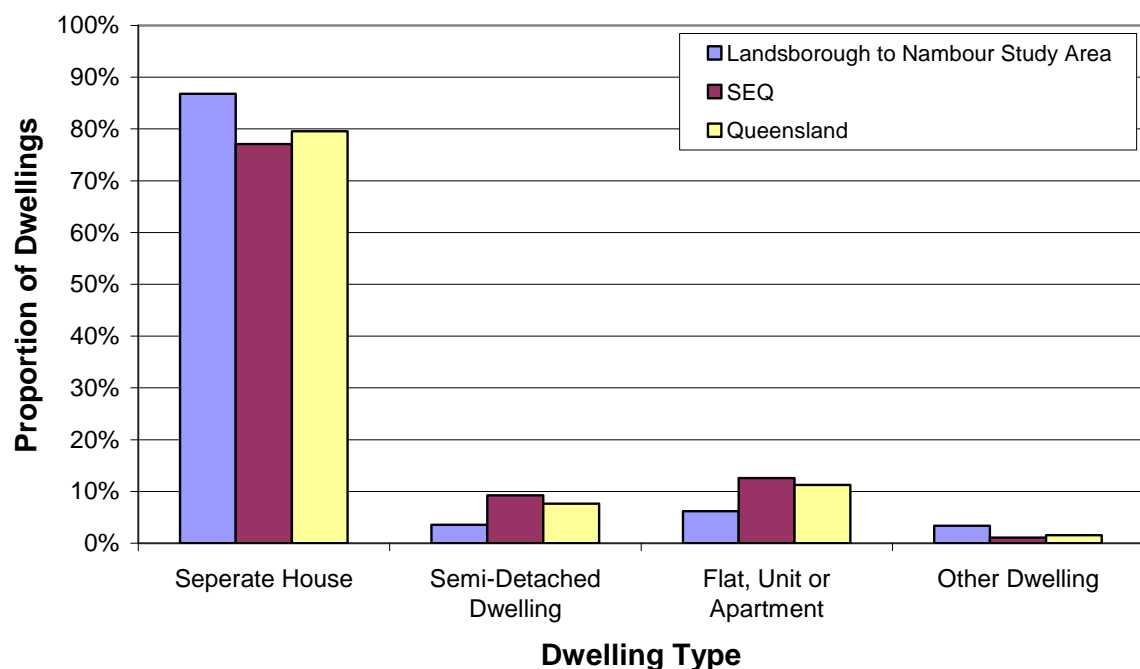


Source: ABS Census of Population and Housing, 2006

Dwelling Type

Consistent with the level of dwelling density in the area, separate dwellings comprised the majority of dwelling types in the study area. Separate dwellings accounted for 86.8% of dwellings in the study area which was higher than SEQ at 77.1% and Queensland at 79.5%. Semi detached dwellings accounted for 3.6% and attached dwellings accounted for 6.2% which were both proportionately less than SEQ (9.2% and 12.5% respectively) and Queensland (7.6% and 11.2% respectively).⁹

Figure 8. Dwelling Type, Study Area, SEQ and Queensland, 2006



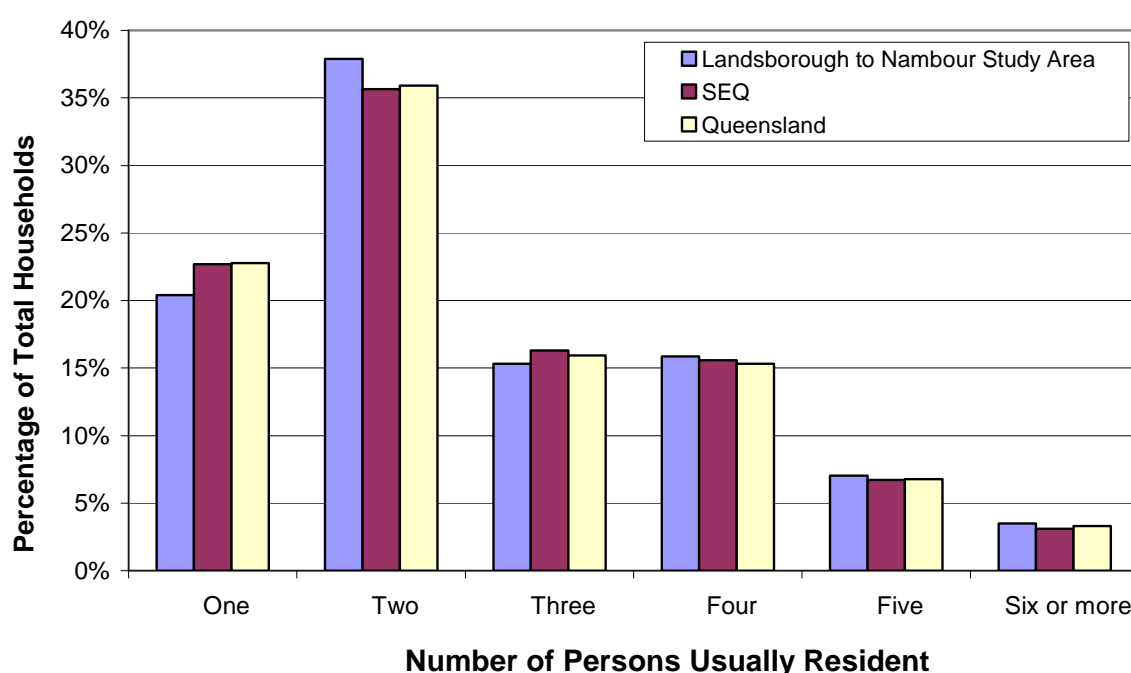
Source: ABS Census of Population and Housing, 2006

⁹ Attached dwellings include flats, units and apartments

Household Size

Figure 9 below shows the distribution of population usually resident in all households within the study area, compared with SEQ and Queensland average figures. The data indicates that the study area has a slightly higher proportion of four, five and six or more person households compared to SEQ and Queensland. According to the 2006 Census, the average household size for the study area was 2.9 compared to 2.7 for SEQ and 2.8 for Queensland. In terms of two person households, the study area had a higher proportion of two person households (37.9%) in comparison to SEQ and Queensland (35.6% and 35.9% respectively).

Figure 9. Household Size Distribution, Study Area, SEQ and Queensland, 2006



Source: ABS Census of Population and Housing, 2006

Housing Price

According to the Real Estate Institute of Queensland (REIQ) data, the median house price for the study area ranged between \$288,500 and \$385,000 for urban residential and \$386,000 and \$510,000 for acreage living.¹⁰ At a LGA level median prices were quite similar between Brisbane (\$390,000), Caloundra (\$395,000), and Maroochy (\$388,000).

The median house price varied within the study area, with Palmwoods recording the highest median house price (\$385,000 - \$510,000) and Nambour recording the lowest median house price (\$288,500). It appears from Table 5 that housing in towns (vs. acreage) in the study area is generally less than that of Caloundra and Maroochy LGAs.

Table 5. Median Housing Prices, Study Area Locations and LGAs, 2007

Area	12 months to end of March 2007
Yandina	\$290,000
Nambour	\$288,500
Woombye	\$335,000
Palmwoods	\$385,000
Palmwoods Acreage	\$510,000
Mooloolah Valley	\$369,000
Mooloolah Valley Acreage	\$430,000
Landsborough	\$314,500
Landsborough Acreage ¹	\$386,000
Beerwah	\$325,000
Beerwah Acreage	\$410,000
Mapleton	\$365,000
Maleny	\$365,000
Maleny Acreage ¹	\$485,000
Maroochy LGA	\$388,000
Caloundra LGA	\$395,000
Brisbane LGA	\$390,000

Source: Real Estate Institute of Queensland, 2007

Note: Acreage refers to land greater than 2,400 sq m

¹⁰ The information is sourced from REIQ for the 12 months to December 2007. Note that REIQ did not publish separate data for Eudlo or Peachester.

Rental Price

Based on the REIQ figures presented in Table 6, the median weekly rental price in the study area ranged between \$250 and \$300. While there was no difference between median rents in Maroochy LGA on the coast or in the hinterland, Caloundra hinterland was significantly lower (\$270) compared with Caloundra coast (\$310).

In general some of the smaller towns in the study area had rents up to \$50 less per week than Maroochy Coast and some were only slightly less. This is consistent with the median house price being generally lower in the study area compared with regional prices.

Table 6. Median Weekly Rents (3 Bedroom House), Study Area Locations and LGAs, 2007

Area	March Qtr 2007	March Qtr 2006	Change
Yandina	\$290	\$255	14%
Nambour	\$280	\$260	8%
Woombye	\$275	\$250	10%
Palmwoods	\$285	\$265	8%
Eudlo	\$290	n/a	n/a
Mooloolah Valley	\$300	\$280	7%
Landsborough	\$260	\$240	8%
Beerwah/Peachester	\$250	\$230	9%
Mapleton	\$280	\$260	8%
Maleny	\$260	\$260	0%
Maroochy Shire - Coast	\$300	\$280	7%
Maroochy Shire – Hinterland	\$300	\$270	11%
Caloundra City - Coast	\$310	\$280	11%
Caloundra City – Hinterland	\$270	\$250	8%
Brisbane City	\$310	\$280	11%

Source: Real Estate Institute of Queensland, 2007

Note: Locations are based on postcodes and therefore can include areas outside of townships

Income Profile

The median income for residents of each of the relevant townships assessed by this study is outlined in Table 7. The data indicate that during 2001 and 2006, the study area had a lower median individual income than the comparable regions of either SEQ or Queensland. Most notably, Nambour had the lowest median weekly individual income (\$250-\$399) whilst Mooloolah had the highest median weekly individual income (\$400-\$599).

Table 7. Median Weekly Individual Income, Study Area, SEQ and Queensland, 2001 and 2006

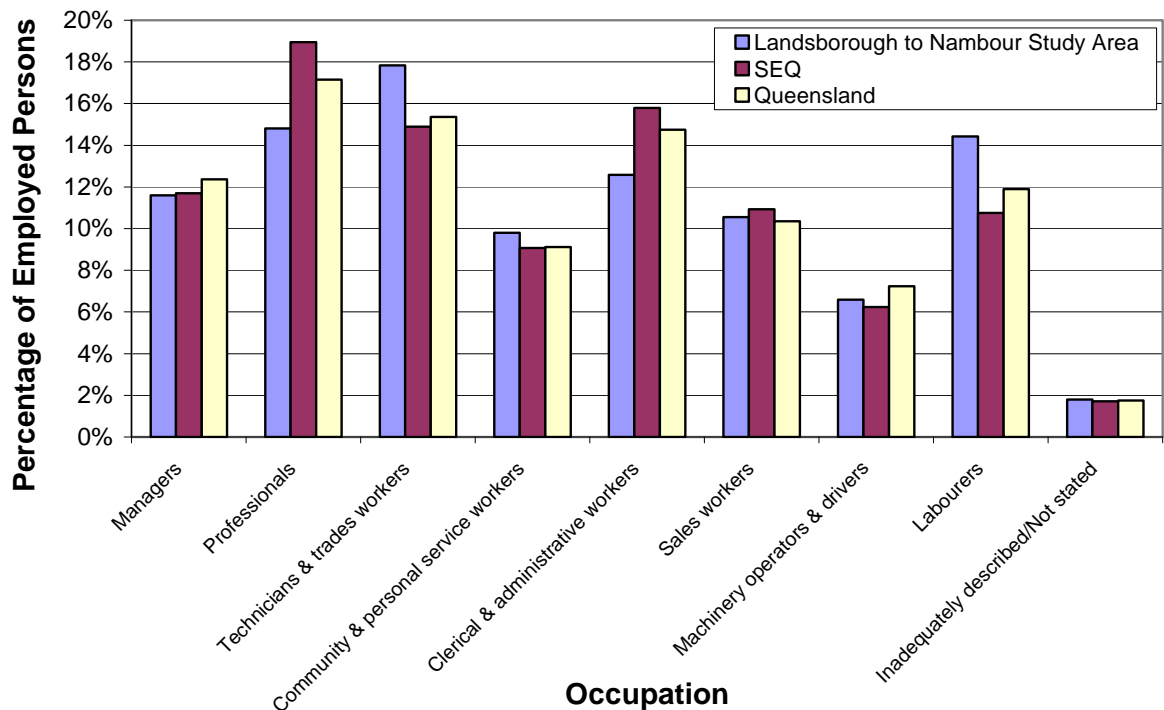
Area	2001	2006
Nambour	\$200-299	\$250-399
Woombye	\$200-299	\$400-599
Palmwoods	\$300-399	\$250-399
Eudlo	\$200-299	\$400-599
Mooloolah	\$200-299	\$400-599
Landsborough	\$200-299	\$250-399
Peachester	\$200-299	\$250-399
Yandina	\$200-299	\$250-399
Mapleton	\$200-299	\$250-399
Beerwah	\$200-299	\$250-399
SEQ	\$300-399	\$250-399
Queensland	\$300-399	\$400-599

Source: ABS Census of Population and Housing, 2001 and 2006

Occupational Profile

Proportions of lower order, labour orientated jobs were higher in the study area when compared to SEQ and Queensland whilst professional and knowledge orientated jobs accounted for a lower share of total employed persons. Proportions of persons employed as Trade Workers in the study area accounted for 17.8% of total jobs which was higher than 14.9% in SEQ and 15.4% in Queensland. Labourers also accounted for a higher proportion with 14.4% of total employed persons working in this occupation compared to 10.8% in SEQ and 11.9% in Queensland. Proportions of Professionals accounted for 14.8 % in the study are compared to 18.9% in SEQ and 17.1% Queensland. Similarly, proportions of Clerical and Administrative Workers were also lower (see Figure 10).

Figure 10. Occupation Structure, Landsborough to Nambour Study Area, SEQ, Queensland, 2006

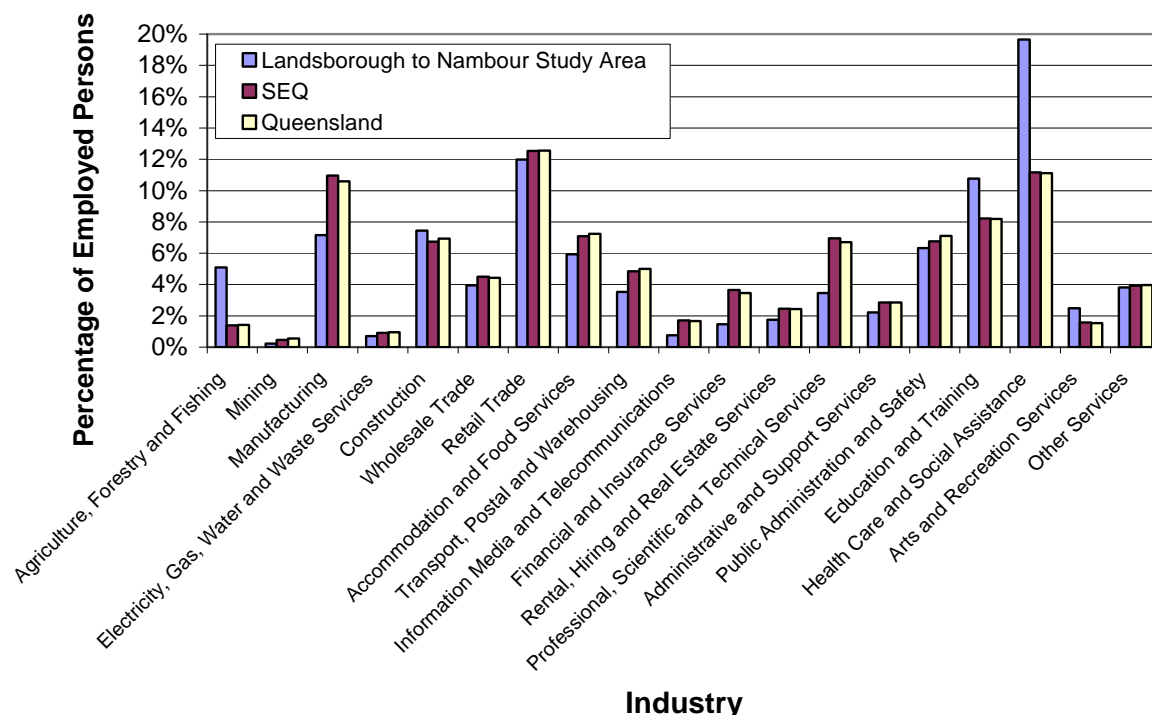


Source: ABS Census of Population and Housing, 2006

Industry

Figure 11 overleaf represents the proportions of person employed within respective industries based on place of work rather than place of usual residence. This data provides insight into the proportions of jobs available in the region rather than the employment of residents. The industry structure of the Landsborough to Nambour Study Area is noticeably different to that of SEQ and Queensland with higher proportions of Agriculture, Forestry and Fishing (5% compared to 1.5% and 1.5% respectively), Education and Training (10.8% compared to 8.2% and 8.2%) and also Health Care and Social Assistance (19.7% compared to 11.2% and 11.1%). Conversely, lower proportions of jobs in Manufacturing (7.2% compared to 11% and 10.6%), Financial and Insurance Services (1.5% compared to 3.7% and 3.5%) and Professional, Scientific and Technical Services (3.5% compared to 7% and 6.7%) are evident in the study area. The greater prevalence of primary and service industry jobs is consistent with the rural context and the exclusion of the more densely populated coastal regions in Caloundra and Maroochydore from the study area which are likely to contain greater employment in knowledge based industries.

Figure 11. Distribution of Employed Persons by Industry based on Place of Work, Study Area, SEQ, Queensland, 2006



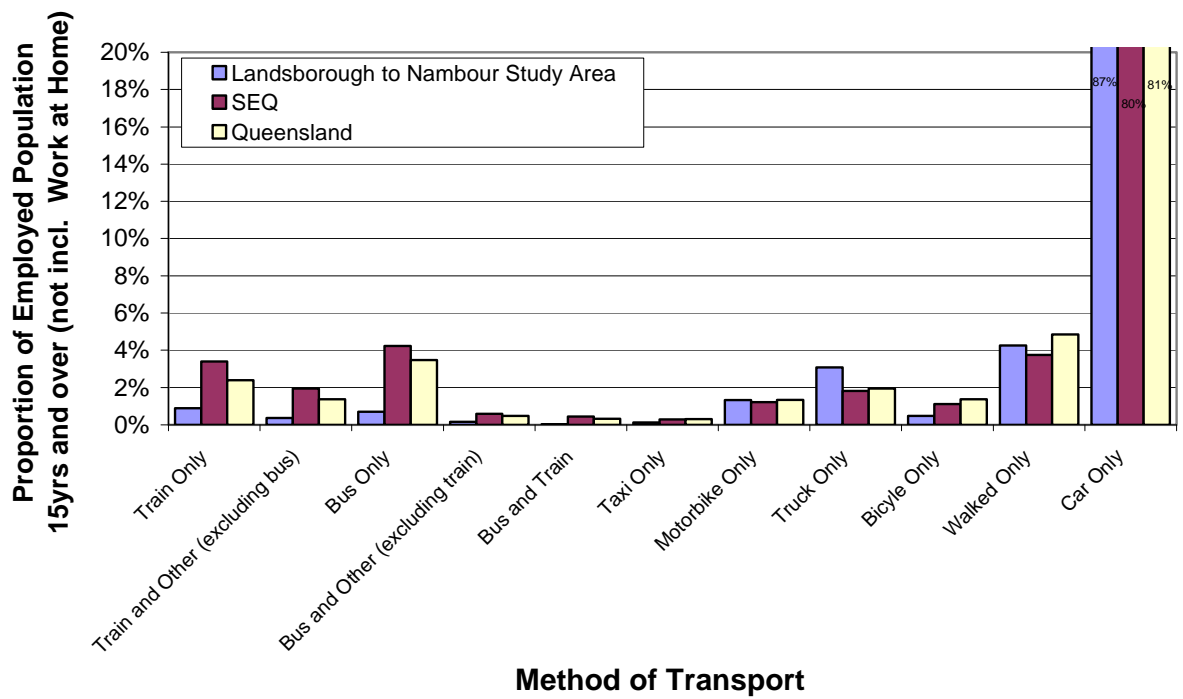
Source: ABS Census Journey to Work Data, 2006

Mode of Travel to Work

The mode of travel to work data was dominated by car usage with 86.7% of persons having reported using car transportation only either as the driver or passenger for all trips to work. In comparison, this figure was higher than both SEQ at 80.1% and Queensland at 80.7% (see Figure 12).

The proportion of persons in the study area who travelled to work by walking was higher than SEQ which is contrary to the assumption that the low density housing of hinterland communities would discourage this form of transportation. This suggests the presence of local employment within walking distance, however given the size of the townships, the majority of the jobs is likely to be in the retail sector.

Travel to work by train only was significantly lower in the study area when compared against both SEQ and Queensland. While train travel as the sole mode of transport accounted for almost 4% in SEQ and just over 2% in Queensland, less than 1% of study area residents indicated this response. This is reflective of a broad range of issues which are covered more comprehensively in the community values survey report.

Figure 12. Mode of Travel to Work, Study Area, SEQ and Queensland, 2006

Source: ABS Census of Population and Housing, 2006

Appendix D - Description of Corridor Options

The study area used by Arup for the Landsborough to Nambour Rail Corridor Study was divided into five segments (A to E) and within each segment, there were alternative options for the proposed rail alignment. The assessment of the social impacts was undertaken for each of the options being considered for the five segments. The table below provides the summary and key discussion points of the corridor options, taken directly from Arup's Draft Route Identification Study Report.

Table 8. Route Options, Landsborough to Nambour Rail Corridor

Segment	Description	Discussion
A	<p>Landsborough</p> <p>Segment A of the study focus area begins immediately to the north of Landsborough station and traverses the northern part of Landsborough township, until it reaches Dularcha National Park. This segment ends approximately 300 metres to the north of Rose Road, just to the south of Mooloolah township.</p>	<p>The segment includes 5 options all of which traverse Dularcha National Park, and require a tunnel south of Mooloolah (under Rose Road).</p> <p>A2 remains close to the existing alignment and is therefore the least straight of the options. It crosses the existing line twice, as do A5 and A1. A3 and A4 only crosses the existing alignment once.</p> <p>A3 is similar in alignment to A1 whereas A4 is substantially different from the existing alignment. This could potentially create more impacts on the National Park.</p>
B	<p>Mooloolah</p> <p>Segment B begins approximately 300 metres north of Roses Road, and then splits into two options. The western alternative intersects Mooloolah township in a similar location to the existing alignment, whereas the eastern alternative crosses the main street several hundred metres to the east of the existing alignment and traverses rural residential development areas. The alternatives rejoin to the north of Neill Rd and the</p>	<p>Segment B also includes 5 options.</p> <p>B1, 3 and 4 cross the Mooloolah Connection Rd approximately 600m to the east of the town centre, which is not within accepted walking ranges for public transport. However an advantage of these options is that they remove the problems associated with road/rail crossing from the busy town centre area. Of these three options B1 has less property impacts, whereas B3 and 4 have substantial impact in the Birdsong Drive area. Another disadvantage of these options is that they impact on a scenic</p>

Segment	Description	Discussion
	segment ends just to the north of Pinch Lane. Both alternatives cross the south branch and the main branch of the Mooloolah River.	<p>area that is currently not affected by large scale infrastructure. These options also have a more substantial impact on the state significant ecosystems around the South Mooloolah River.</p> <p>Options B2 and 5 follow the existing alignment in town, maintaining pedestrian accessibility. There is no distinguishing advantage or disadvantage to these, except their connection to other preferable alignments.</p>
C	<p>Eudlo</p> <p>Segment C of the study focus area starts just to the north of Pinch Lane, Mooloolah. It also splits into two alternatives, just to the south of Logwoods Road, Eudlo. The eastern alternative passes to the east of the National Park in a broad valley and by-passes Eudlo township.</p> <p>The western alternative is generally in the same vicinity as the existing rail, encompassing Eudlo township along a similar alignment to the existing corridor and passing to the west of Eudlo Creek National Park rather than traversing it.</p> <p>Segment C ends just to the south of Palmwoods.</p>	<p>Segment C commences with five options (C1, 2, 3, 4 and 6), however C2 and 4 merge to form C5 which passes to the east of Eudlo township.</p> <p>C5 initially follows the existing line but then diverts east through the Eudlo Creek Valley was considered as a possible option due to the flat terrain. However C5 has the disadvantages of: relocating the station beyond walking distance from Eudlo; impacting on a scenic area that is currently not affected by large scale infrastructure; crossing a substantial floodplain; fragmenting horticultural land; and crossing several roads that are local collectors.</p> <p>C1,3 and 6 pass to the west of Eudlo township and Eudlo Creek National Park. These alignments have a substantial on regionally significant ecosystems and impact on ecological corridors on the edges of the National Park. They also impact on numerous roads, although many of these have alternative accesses.</p> <p>The alignments all converge to a similar route to the south of Palmwoods.</p>
D	Palmwoods-Woombye	There are 4 options in Segment D.

Segment	Description	Discussion
	<p>Segment D section of the study focus area starts just to the north of the Mooloolah-Palmwoods Road intersection with Chevallum Road. This segment includes parts of Palmwoods town and potentially impacts on Kolora Park. It widens out in the rural lands between Palmwoods and Woombye before becoming narrower and passes to the west of Woombye with minor impacts on the town area but encompassing the majority of the showgrounds.</p>	<p>D1 follows the existing line the most closely which means it is the least straight option. However it has the least impact on roads, property access and creeks and is the closest to existing stations at both Palmwoods and Woombye.</p> <p>D2 is arguably the straightest of the options and is reasonably well located at Palmwoods and Woombye in relation to the existing stations. It creates some local traffic issues at Spackman Lane, as do D3 and 4.</p> <p>Options D3 and 4 are more than 100m from the existing station and impact significantly on Kolora Park. They are also a substantial distance from Woombye Station and alienate the showgrounds/sports field in this locality.</p>
E	<p>Nambour</p> <p>Segment E begins just to the north of Paynter Creek, and Woombye. It continues to the north of Nambour station along the existing alignment., to allow for consideration of future stabling (train parking). Between Woombye and Nambour, the current line is elevated above the Petrie Creek flood plain, which is located on the western side of the rail line. Segment E is one of the most constrained from an urban land use perspective and also align with Nambour station in its current location.</p>	<p>The 5 options in Segment E are all very similar.</p> <p>E1 is closest to the existing line and crosses it several times.</p> <p>E2, 3 and 4 are virtually identical, are straighter and have less impact on the existing line</p> <p>E5 travels further to the west and has more property impacts.</p>

Source: Arup, 2008