



Gateway Upgrade Project



19. Social Environment

19. Social Environment

19.1 Introduction

TOR Requirements:

This section is to describe the existing social values that may be affected by the project. The amenity and use of the project area and adjacent areas for agricultural, fishing, recreational, industrial, educational or residential purposes should be described. Consideration should be given to:

- the integrity of social conditions, including amenity and liveability; harmony and well being; sense of community; and access to social, recreation and community services and infrastructure (this should include discussions of pedestrian and cyclists access);
- population and demographics of the affected community;
- local community values, vitality and lifestyles;
- recreational, cultural, leisure and sporting facilities and activities in relation to the affected area;
- health and educational facilities;
- number of properties directly affected by the project;
- number of families directly affected by the project; and
- the health and safety of the community, workforce, suppliers and other stakeholders should be detailed in terms of health, safety, quality of life from factors such as air emissions, odour, dust and noise.

This section of the EIS describes the impact of the GUP on the social environment and identifies mitigation measures for managing potential adverse impacts.

19.1.1 Definition of Social Impact

The social impacts of a major development project are its effects on people. These can include changes to people's way of life (how they live, work, play and interact), their cultural traditions (shared beliefs, customs and values) and their community (its population structure, cohesion, stability and character).

19.1.2 Methodology of Social Impact Assessment

The methodology for undertaking Social Impact Assessment (SIA) involves:

- describing the existing social environment;
- predicting or projecting the social changes that may result from the development;
- assessing the significance of the predicted changes (both positive and negative); and
- identifying ways of mitigating potential negative impacts or maximising positive impacts.

The approach adopted for the assessment is essentially an "issues oriented" approach, which by its nature concentrates the assessment on those particular aspects of social impact likely to be considered of most significance in the particular circumstances. In the main these have been derived from the community consultation process conducted for the GUP.

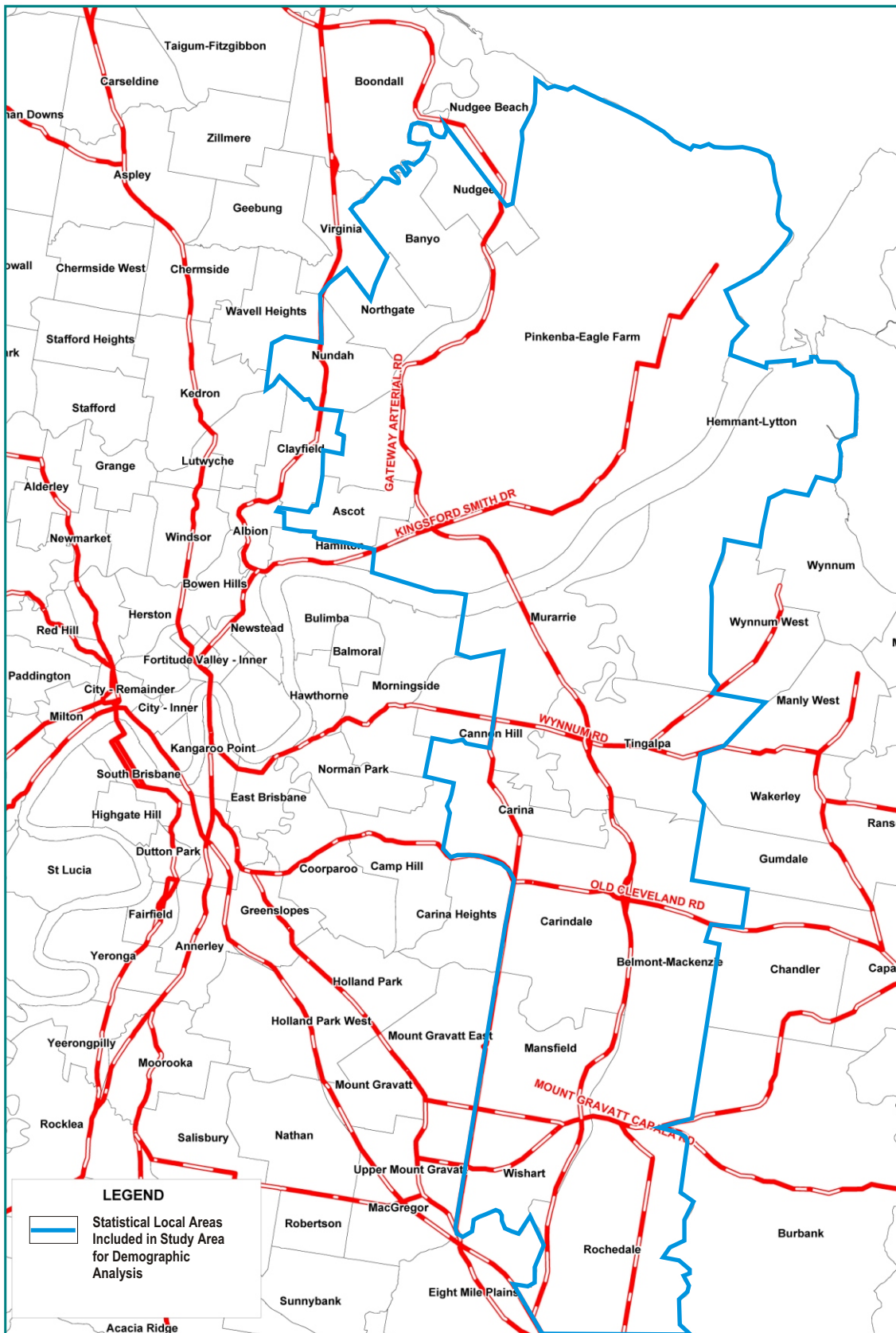
19.2 Description of the Existing Social Environment


This section summarises the investigations of the existing social environment of the GUP, namely:

- The demographic profile of the community surrounding the route; and
- The social structure, conditions and infrastructure of the study area.

A study area (Figure 19.1) was identified for the purposes of demographic analysis based on a review of the Statistical Local Areas (SLAs) defined by the Australian Bureau of Statistics (ABS) which surround the existing and proposed route of the Gateway Motorway through the upgrade area and areas immediately adjoining. These broadly equate to suburbs. The SLAs were grouped into three sections. It should be noted that some overlapping of SLAs occurred, particularly in Hemmant/Lytton, which spans two sections of the GUP study area.

Key demographic characteristics of the study area as a whole, the three sections and SLAs were identified and analysed, based on the Australian Bureau of Statistics (ABS) 2001 Census. The Census information is summarised in Tables 19.1 and 19.2.



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 Statistical Local Areas Included in Study Area for Demographic Analysis

Source: Brisbane City Plan 2000



FIGURE 19.1
Study Area for Demographic Analysis

Table 19.1 Key Demographic Indicators by Statistical Local Areas - Southern Sections

Indicator	Rosedale	Wishart	Mansfield	Carindale	Belmont/ Mackenzie	Carina	Tingalpa	Subtotal	Murarrie	Hemmant- Lytton	Pinkenba- Eagle Farm	Subtotal
Population Summary												
Total Persons	1,144	9,579	9,410	12,737	4,114	8,504	8,930	54,418	2,261	2,209	361	4,831
% of Study area Population	1.3	11.2	11.0	14.8	4.8	9.9	10.4	63.4	2.6	2.6	0.4	5.6
Age Summary												
0-4 years	38	563	586	768	315	551	790	3,611	171	182	21	374
0-4 years %	3.3	5.9	6.2	6.0	7.7	6.5	8.8	6.6	7.5	8.2	5.9	7.7
5-14 years	173	1,210	1,390	2,134	704	991	1,322	7,924	294	334	38	666
5-14 years %	15.2	12.6	14.8	16.8	17.1	11.7	14.8	14.6	13.0	15.1	10.7	13.8
15-24 years	135	1,617	1,446	1,911	513	1,156	1,221	7,999	364	300	48	712
15-24 years %	11.9	16.9	15.4	15.0	12.5	13.6	13.7	14.7	16.0	13.6	13.5	14.7
65+ years	227	1,025	1,031	1,160	257	1,213	555	5,468	235	127	48	410
65+ years %	20.0	10.7	11.0	9.1	6.2	14.3	6.2	10.0	10.4	5.8	13.5	8.5
Ethnicity Summary												
Aboriginal and TS Islanders	9	58	117	33	33	112	137	499	79	43	0	122
Aboriginal and TS Islanders (%)	0.8	0.6	1.2	0.3	0.8	1.3	1.5	0.9	3.5	1.9	0.0	2.5
Overseas Born: NESB	158	1,660	1,478	2,039	434	850	781	7,400	190	182	9	381
NESB (%)	13.9	17.3	15.7	16.0	10.5	10.0	8.7	13.6	8.4	8.2	2.5	7.9
Employment Summary												
Employed	476	4,874	4,502	6,473	2,141	4,174	4,649	27,289	1,005	1,167	158	2,330
Unemployment rate (%)	6.3	5.9	5.9	4.2	4.4	6.6	5.3	5.4	10.1	6.3	8.7	8.2
Participation rate (%)	56.7	68.6	65.7	69.7	74.0	65.9	73.4	68.8	64.2	75.7	62.9	69.3

Indicator	Rochedale	Wishart	Mansfield	Carindale	Belmont/ Mackenzie	Carina	Tingalpa	Subtotal	Murarrie	Hemmant- Lytton	Pinkenba- Eagle Farm	Subtotal
Working Population												
Employed Full-time	824	484	2,073	1,574	291	1,170	2,112	8,528	3,636	4,332	13,825	21,793
Employed Part-time	567	497	794	2,183	247	779	781	5,848	759	832	3,453	5,044
Income Summary												
Household Income < \$500/wk (%)	35.7	21.0	24.7	17.8	14.4	28.2	21.4	22.2	31.8	26.2	34.6	29.5
Household Income >= \$1000/wk (%)	37.3	50.8	47.1	61.9	61.9	39.9	45.6	50.1	31.0	38.0	28.7	34.0
Household Summary												
Couples with children (%)	35.8	40.1	41.4	50.3	53.0	28.2	38.2	40.9	31.8	35.2	25.2	32.9
Couples without children (%)	28.6	27.8	27.0	25.9	27.4	27.0	26.0	26.8	21.1	24.8	24.5	23.0
One Parent Families (%)	8.4	10.7	11.9	8.2	6.8	12.6	12.9	10.8	19.3	12.9	11.5	15.7
Lone Person Households (%)	24.0	15.7	15.0	12.5	10.1	25.3	17.0	16.6	21.1	21.4	28.8	21.8
Households Owned (%)	63.6	45.1	44.4	52.6	38.7	41.8	30.4	43.5	33.7	29.8	45.3	32.8
Households Being Purchased (%)	10.0	28.0	29.2	30.6	44.2	26.9	35.6	30.5	32.5	42.1	22.3	36.1
Households Renting (%)	16.5	20.9	22.3	12.5	11.4	28.1	30.1	21.4	29.3	21.6	23.0	25.2
Dwelling Summary												
Separate House (%)	71.6	84.1	93.3	92.1	99.1	77.9	80.4	86.4	99.2	81.2	100.0	91.0
Semi-detached Dwelling (%)	0.6	14.8	4.5	6.7	0.0	18.2	12.0	10.1	0.5	9.0	0.0	4.4
Flats, units & apartments (%)	0.0	1.0	1.6	0.9	0.0	3.4	2.2	1.6	0.4	0.0	0.0	0.2
Other Dwellings (%)	27.7	0.0	0.0	0.0	0.2	0.0	4.6	1.5	0.0	9.4	0.0	4.3
Occupancy Ratio												
Occ Private Occupancy Ratio	2.6	2.8	2.9	3.0	3.1	2.4	2.8	2.8	2.7	2.6	2.4	2.6

Indicator	Rochedale	Wishart	Mansfield	Carindale	Belmont/ Mackenzie	Carina	Tingalpa	Subtotal	Murarie	Hemmant- Lytton	Pinkenba- Eagle Farm	Subtotal
Vehicle Availability												
No motor vehicles (%)	8.4	4.7	5.4	4.5	1.7	9.5	4.8	5.6	11.6	6.4	13.8	9.4
2 or more motor vehicles (%)	46.8	55.4	52.5	62.7	68.2	43.0	52.4	54.4	38.9	46.1	40.8	42.3

Table 19.2 Key Demographic Indicators by Statistical Local Areas - Northern Section

Indicator	Ascot	Hendra	Nundah	Northgate	Banyo	Nudgee	Subtotal	Total Study Area	Brisbane (C)
Population Summary									
Total Persons	4,566	3,455	8,096	3,769	4,796	1,907	26,589	85,838	870,671
% of Study area Population	5.3	4.0	9.4	4.4	5.6	2.2	31.0	100.0	N.A.
Age Summary									
0-4 years	224	174	458	238	310	125	1,529	5,514	53,261
0-4 years %	4.9	5.0	5.7	6.3	6.5	6.6	5.8	6.4	6.1
5-14 years	555	415	673	422	582	284	2,931	11,521	106,092
5-14 years %	12.2	12.0	8.3	11.2	12.1	14.9	11.0	13.4	12.2
15-24 years	639	409	1,238	580	614	221	3,701	12,412	138,649
15-24 years %	14.0	11.8	15.3	15.4	12.8	11.6	13.9	14.5	15.9
65+ years	581	498	1,214	460	721	258	3,732	9,610	105,437
65+ years %	12.7	14.4	15.0	12.2	15.0	13.5	14.0	11.2	12.1
Ethnicity Summary									
Aboriginal and TS Islanders	25	37	108	71	97	62	400	1021	11,795

Indicator	Ascot	Hendra	Nundah	Northgate	Banyo	Nudgee	Subtotal	Total Study Area	Brisbane (C)
Aboriginal and TS Islanders (%)	0.5	1.1	1.3	1.9	2.0	3.2	1.5	1.2	1.4
Overseas Born: NESB	309	167	841	247	368	101	2,033	9,814	110,320
NESB (%)	6.8	4.8	10.4	6.6	7.7	5.3	7.6	11.4	12.7
Employment Summary									
Employed	2,409	1,840	4,109	1,914	2,224	872	13,368	42,987	423,278
Unemployment rate (%)	5.0	4.6	8.0	6.7	7.0	6.1	6.5	5.9	7.0
Participation rate (%)	70.0	69.3	66.6	68.5	63.0	63.0	66.9	68.2	66.2
Working Population									
Employed Full-time	751	1,510	1,539	3,299	1,818	414	9,331	39,652	339,972
Employed Part-time	618	485	1,336	882	471	158	3,950	14,842	148,736
Income Summary									
Household Income < \$500/wk (%)	25.5	26.3	37.4	35.7	32.7	26.6	32.4	26.2	28.5
Household Income >= \$1000/wk (%)	46.0	47.0	30.6	34.1	34.9	41.5	37.0	44.6	43.3
Household Summary									
Couples with children (%)	22.7	29.6	16.2	22.7	30.6	36.2	23.5	34.3	30.0
Couples without children (%)	23.8	27.1	20.3	22.7	26.9	27.5	23.6	25.5	25.1
One Parent Families (%)	8.1	10.8	9.8	11.8	13.3	12.0	10.6	11.0	10.6
Lone Person Households (%)	36.7	26.5	44.3	33.3	23.4	19.4	34.3	23.1	25.8
Households Owned (%)	34.7	45.6	27.8	30.4	47.2	44.9	35.7	40.1	36.5
Households Being Purchased (%)	16.8	27.2	18.6	23.6	30.9	35.7	23.0	28.2	25.5
Households Renting (%)	41.7	21.9	47.8	40.0	18.4	15.2	35.8	26.7	32.4

Indicator	Ascot	Hendra	Nundah	Northgate	Banyo	Nudgee	Subtotal	Total Study Area	Brisbane (C)
Dwelling Summary									
Separate House (%)	50.3	90.0	41.3	66.0	97.8	99.6	64.8	78.9	74.7
Semi-detached Dwelling (%)	3.5	4.0	12.1	11.8	0.8	0.0	7.0	8.7	6.7
Flats, units & apartments (%)	44.7	5.4	45.8	21.6	1.0	0.0	27.4	10.7	17.2
Other Dwellings (%)	0.2	0.3	0.4	0.7	0.2	0.4	0.4	1.2	0.9
Occupancy Ratio									
Occ Private Occupancy Ratio	2.2	2.4	2.0	2.2	2.5	2.7	2.2	2.6	2.5
Vehicle Availability									
No motor vehicles (%)	12.7	8.4	18.7	16.4	11.9	7.4	14.3	8.9	11.5
2 or more motor vehicles (%)	37.8	45.1	25.2	32.5	40.3	47.8	34.6	46.7	42.3

Source: Australian Bureau of Statistics (ABS) 2001 Census

Table Notes:

1. Statistics in the above tables exclude overseas and Australian visitors.
2. Not stated responses have been excluded in the age, labour force and income summary.
3. Statistics on household tenure are for occupied private dwellings only.
4. Statistics on dwelling summary are for occupied private dwellings only.
5. For the statistics on the working population: Full-time is defined as having worked 35 hours or more in all jobs during the week prior to Census night. Does not include not stated responses.

19.2.1 Overview of the Study Area

The characteristics of the study area as a whole are compared in the section below with the Brisbane City Local Government Area (LGA).

In 2001, the total *resident population* of the study area was 85,838. Approximately one third (31.0%) lived north of the Pinkenba Rail Line, while nearly two thirds (63.4%) were living south of the Cleveland Rail Line. Only 5.6% of the study area population was located in the central third between the two rail lines.

By contrast, there was a *working population* (full-time or part-time) of 54,494 people in the study area. Nearly half of these (49.2%) worked in the central section between the rail lines, while a quarter (26.4%) worked south of the Pinkenba Rail Line and another quarter (24.4%) worked north of the Cleveland Branch Rail Line.

Resident Population

The following analysis relates to the resident population of the study area.

Age Structure

The proportion of the population in the study area who are children aged either 0-4 or 5-14 is slightly higher than in the Brisbane LGA as a whole. In 2001, 6.4% of the study area were aged 0-4 compared to 6.1% for Brisbane LGA. The proportion of the population aged 5-14 (13.4%) was significantly higher than that of Brisbane LGA (12.2%).

The proportion aged 0-4 was particularly high (7.7%) in the central section between the Pinkenba Rail Line and Cleveland Branch Rail Lines and lower than the Brisbane average (5.8%) north of the Pinkenba Rail Line. The proportion 5-14 years was particularly high in the section south of the Cleveland Branch Rail Line (14.6%).

The study area overall has a low proportion of the population in the 15–24 age group. In 2001, only 14.5% of the population in the study area were aged 15-24 years compared to 15.9% for Brisbane LGA. This was slightly lower in the northern section.

In 2001, 11.2% of the study area population were aged 65 and over compared to 12.1% in Brisbane LGA. There were 9,610 people aged 65 and over in the study area. This was substantially lower in the southern and central sections, and higher (14.0%) in the section north of the Pinkenba Rail Line.

Aboriginality and Ethnicity

1.2% of the study area population was from an Aboriginal or Torres Strait Islander background (1,021 persons), slightly lower than Brisbane LGA (1.4%). Half of these people (499 persons) were located in the SLA's to the south of Cleveland Branch Rail Line, although the proportion of the population was slightly lower in this section (0.9%). 122 were located in the central section between the rail lines, accounting for a higher 2.5% of the population.

In 2001, 11.4% of the study area population was born in non-English speaking backgrounds (NESB). This can be compared with 12.7% in Brisbane LGA. This proportion was higher in the section south of the Cleveland Branch Rail Line (13.6%) and considerably lower in the central (7.9%) and northern sections (7.6%).

Employment

In 2001, 68.2% of the study area population aged 15 and over were participating in the labour force. This proportion was higher than Brisbane LGA (66.2%). The labour force participation rate was highest in the central section and lowest in the northern section.

An average of 5.9% of the population was unemployed. This can be compared with 7.0% in Brisbane LGA. The unemployment rate was also highest in the central section (8.2%).

Income

In 2001, 26.2% of households in the study area had an income of less than \$500 per week compared to 28.5% in Brisbane LGA. The proportion was lower still in the southern section (22.2%).

Conversely 44.6% of households in the study area had incomes of more than \$1,000 per week compared to 43.3% in Brisbane. Over half (50.1%) of all households in the section south of the Cleveland Branch Rail Line had incomes of more than \$1,000 per week.

Household Structure

The dominant type of household in the study area is “couples with children.” In 2001, 34.3% of households in the study area were in this category compared with 30.0% in Brisbane LGA. This proportion was much higher (40.9%) in the section south of the Cleveland Branch Rail Line and considerably lower in the northern section (23.5%).

Conversely households categorised as “couples without children” account for 25.5% of households in the study area, similar to Brisbane LGA (25.1%).

One parent families were slightly higher than for Brisbane LGA (11.0% compared to 10.6%). This was a particularly significant household type in the central section between the two rail lines, comprising 15.7% of all households.

The number of lone person households in the study area is slightly less than Brisbane LGA, 23.1% compared to 25.8%. This is much lower in the section to the south of the Cleveland Branch Rail Line (16.6%) and higher in the section to the north of the Pinkenba Rail Line (34.3%).

Owned dwellings in the study area is 40.1%, which is higher than Brisbane LGA (36.5%). This was higher still in the southern section (43.5%) and very low (32.8%) in the central section. Conversely a high proportion of dwellings was being purchased (28.2% compared to 25.5% in Brisbane LGA), particularly in the central section (36.1%) and also in the southern section (30.5%).

The study area has a relatively low proportion of dwellings which are being rented (26.7%) compared to Brisbane LGA (32.4%). This was even lower in the section south of the Cleveland Branch Rail Line (21.4%) and higher in the section north of the Pinkenba Rail Line (35.8%).

Dwelling Characteristics

Of the private dwellings in the study area, 78.9% were separate houses, above the Brisbane LGA average (74.7%). The study area has a small but significant proportion of semi-detached housing in the form of semi-detached dwellings, town houses, villas and the like (8.7%), higher than the Brisbane average of 6.7%. Only 10.7% of the housing in the study area was in the form of flats, units or apartments, however, compared to 17.2% for Brisbane LGA.

There are significant differences between the sections of the study area. The section south of the Cleveland Branch Rail Line has slightly more semi-detached housing (10.1%) but only 1.6% of the housing stock in flats or apartments. The central section has an average proportion of semi-detached housing (4.4%) but very few flats or apartments (0.2%). The section north of the Pinkenba Rail Line in contrast to the rest of the study area has a lower proportion of separate houses, an average proportion of semi-detached dwellings and 27.4% flats, units or apartments.

The average occupancy rate of private occupied dwellings was 2.6 persons, compared to 2.5 persons per dwelling in Brisbane LGA. This is slightly higher (2.8) in the southern section, and lower (2.2) in the northern section.

Vehicle Availability

In 2001, 46.7% of households had access to two or more vehicles, higher than in Brisbane LGA (42.3%). Only 8.9% of households did not have access to a vehicle, compared to 11.5% for Brisbane LGA. An even higher proportion of households in the section south of the Cleveland Branch Rail Line had access to two or more vehicles (54.4%), and only a very small proportion (5.6%) had no motor vehicles.

Summary

In summary the resident population has the following characteristics:

- The total resident population of the study area is 85,838;
- There is a relatively high proportion of children both 0-4 and 5-14 in the study area, and a low proportion of 15-24 year olds;
- There is a low proportion of people aged 65 years and over, although this is higher in the northern section of the study area;
- Just over 1,000 Aboriginal or Torres Strait Islander people are located in the study area, about half of these to the south of the Cleveland Branch Rail Line;
- There is a relatively low proportion of people from non-English speaking backgrounds;
- There is a high labour force participation rate, particularly in the central section of the study area;
- The unemployment rate is relatively low compared with Brisbane LGA; although it is higher than Brisbane in the central section;
- Household incomes in the study area are slightly high for Brisbane, especially in the section south of the Cleveland Branch Rail Line;
- One parent families were slightly higher than for Brisbane LGA, particularly in the central section between the two rail lines;
- The number of lone person households is average overall, but high in the section north of the Pinkenba Rail Line;
- Home ownership is average overall, but very low in the central section between the two rail lines, where a high proportion of dwellings are being purchased;

- The study area has a low proportion of dwellings being rented although this is higher in the section north of the Pinkenba Rail Line;
- There is a slightly higher than average proportion of semi-detached dwellings and overall a low proportion of flats, units and apartments; however the section north of the Pinkenba Rail Line in contrast to the rest of the study area has a lower proportion of separate houses, an average proportion of semi-detached dwellings and a very high proportion of flats, units or apartments; and
- Access to two or more motor vehicles is higher than for Brisbane LGA and relatively few households have access to no vehicles, especially in the section south of the Cleveland Branch Rail Line.

Working Population

Key characteristics of the working population of the study area (ie people who come to work in the study area) were obtained from ABS Journey to Work data (based on the 2001 Census) ¹. This data showed the following information about people who work in the study area:

- Around 55,000 people work in the study area:
 - Nearly half of these (49.2%) worked in the central section between the rail lines;
 - A quarter (26.4%) worked in SLA's south of the Pinkenba Rail Line; and
 - Another quarter (24.4%) worked in SLA's north of the Cleveland Branch Rail Line.
- Of those who worked in the study area:
 - 19.0% also lived in the study area;
 - 42.6% lived elsewhere in Brisbane and
 - 38.5% lived outside Brisbane.
- Areas which drew the highest proportions of their workforce from the local population were mostly in the southern section and had small workforces, particularly :
 - Wishart;
 - Mansfield;
 - Carindale;
 - Belmont/Mackenzie;
 - Carina; and
 - Ascot.
- Of those working in the central section of the study area (in the SLA's of Murarrie, Hemmant/Lytton and Pinkenba/Eagle Farm) the industries they were working in were as follows:
 - 32.3% manufacturing;
 - 27.2% transport and storage;
 - 9.0% wholesaling;
 - 6.4% property and business services;
 - 5.1% construction;
 - 4.6% retailing; and
 - 2.4% government administration and defence.

¹ Note that there is a slight difference between the Journey to Work data set and the Working Population Profile data set. The former are based on a person's usual residence on Census night and where they worked the week prior to Census night. The data provided also excludes people whose usual residence was outside Queensland and Tweed (NSW), or whose work location was outside Queensland and Tweed (NSW). The Working Population Profile consists of all persons who were employed in the week prior to Census night. The data provided in Table 1 also excludes persons who were employed but did not state whether they were employed full-time or part-time.

- Of those working in the central section of the study area, occupations were as follows:
 - 26.4% professional/managerial or administrative;
 - 16.4% tradespersons;
 - 26.3% clerical, sales or service;
 - 18.0% production and transport workers;
 - 11.9% labourers; and
 - 1.1% unclassified.
- Of those working in the central section of the study area the primary method of travel to work (for those who used only one mode) was as follows:
 - 93.6% as a car driver or passenger;
 - 1.8% by motorbike or scooter;
 - 1.6% by truck;
 - 0.9% by train;
 - 0.6% by bicycle;
 - 0.5% by bus;
 - 0.5% by walking; and
 - 0.2% by ferry.
- Of those who lived in the study area and were in the workforce:
 - 25.6% also worked in the study area;
 - 61.0% worked elsewhere in Brisbane;
 - 9.8% worked outside Brisbane; and
 - 3.6% gave no fixed address.

Social Structure of the Study Area

The study area contains a range of social conditions and structures. These are described below by section.

Mt Gravatt-Capalaba Road to Cleveland Branch Rail Line

The southernmost section of the study area consists of a series of residential communities of varying age and character, from the comparatively new suburb of Wishart in the south to Tingalpa in the north. The section has a total residential population of 54,418 and a scattered working population of 14,376. With the exception of Belmont/Mackenzie and Tingalpa, these suburbs lie on the western side of the Gateway Motorway, with the majority of residents also on this side.

In general the newer suburbs tend to be closer to the Motorway than older suburbs which were in existence prior to its development. Some of these suburbs, especially estates in Carindale and Carindale Hills, have a high level of residential amenity and many adjoining parkland and creek systems which contribute to a high value being placed on the natural environment. Many homes in this area could be expected to be bought or built by second home buyers of higher income and with older children.

The majority of these suburbs “turn their back” on the Motorway, and because of lack of access across the Motorway between Old Cleveland Road and Mount Gravatt-Capalaba Road (with the exception of Carindale Hills, which accesses under the Motorway from Mount Petrie Road), these suburbs are oriented to the west for all facilities and services. The Motorway consequently forms a barrier to movement and a boundary to urban development. Some important recreation facilities are however located in the vicinity of the Motorway corridor, often taking advantage of flood prone land, especially in Wishart, Carina, Carindale and Tingalpa.

In some cases the current amenity of suburbs is reduced by the existence of traffic noise from the Motorway. This is particularly the case in newer infill estates which directly abut the alignment, and especially where new housing has been built in elevated positions with direct line of sight to the Motorway. Previous consultation has indicated noise concerns are important to these communities, particularly those in Carindale Hills and estates in northern sections of Mansfield where smaller dwellings probably with younger families have been located along the Motorway boundary.

At Tingalpa on the eastern side of the Motorway, a newer housing estate adjacent to the Motorway is exposed and has been the subject of noise concerns. Slightly older estates also lie close to the Motorway in the northern part of Belmont. In the Meadowlands Road area of Belmont, there is a large townhouse development in close proximity to the Motorway although with the provision of noise barriers. In this area on the western side of the Motorway (Carindale) lies a large relocatable home village targeted toward the "over '55's", which directly abuts the Motorway. This village, with 89 homes, is a source of low income housing for a significant number of older residents.

Cleveland Branch Rail Line to Pinkenba Rail Line

The central section between approximately Cleveland Branch Rail Line and Pinkenba Rail Line is a largely industrial precinct with a working population of 26,837, which substantially outnumbers the small residential population of 4,831 persons. The suburbs of Murarrie and Hemmant/Lytton nevertheless have strong older residential communities which were settled to provide a dormitory suburb for workers from the Port of Brisbane and surrounding industrial lands.

Both have older parts, with little new or infill development, and a relatively low level of gentrification; and new enclaves grafted onto the older settlements. The older parts are workers' suburbs with significant proportions of children and relatively few older residents.

In the case of Hemmant, the newer area is a largely first home buyers estate; while in the case of Murarrie, a new mixed housing development has occurred (post the 2001 Census) which contains a higher socio-economic population of largely second home buyers in significant contrast to the existing village, which has the highest unemployment rate in the study area, household income among the lowest in the study area, a high proportion of households renting and a high proportion of one parent families.

Accessibility would be particularly important to older Murarrie residents, who have very low vehicle availability. There is also a high proportion of Aboriginal and Torres Strait Islander residents (2.5%) living in Murarrie. Some important low cost housing lies in very close proximity to the Motorway, near the toll plaza, and the busy Lytton Road interchange.

The largest working population in the central area is by far in the Pinkenba/Eagle Farm SLA, with a work force of 17,278 employees, compared to a resident population of only 361 persons. Aside from the airport, the other area with a high concentration of employment is in the Kingsford Smith industrial precinct. The amenity of industrial and business areas varies considerably, with newer, higher quality, large scale development in areas such as the ATC area, and lesser quality premises and lower amenity in terms of streetscape, facilities and working environment in small scale older style industrial areas such as in some parts of the Kingsford Smith and Fison Avenue East precincts.

In some of these areas, exposure to main roads, including Kingsford Smith Drive and the Gateway Motorway itself, is important to business. The Gateway Bridge and its' approaches are a significant visual element in a largely industrial landscape, with green space provided by vacant land and the Royal Queensland Golf Club (RQGC). There is also a small park, Percival Park, adjacent to the existing Motorway in the Fison Avenue East industrial precinct.

Pinkenba Rail Line to Nudgee Road

In the northern section of the study area, much of the proposed alignment runs through airport and vacant Brisbane City Council (BCC) and Commonwealth lands. An appearance of green space is provided by the airport lands and yet to be developed industrial lands. The section has double the residential population (26,589) to the working population (13,281).

The social implications of this part of the route relate largely to the effect on the existing Motorway alignment. Several residential suburbs directly abut the existing Motorway alignment on the western side, extending from Ascot to Nudgee. However in general, residential development is separated from the Motorway by either industrial development, vacant paddocks or parklands/recreation area, except in the case of parts of Ascot in the vicinity of the racecourse and in Hendra, where older style fibro housing closely adjoins the existing Motorway. Noise barriers in most areas reduce noise levels although the Motorway and constant passing traffic are a background element in some residential areas and from recreation facilities such as Doomben Racecourse at Ascot, Albert Bishop Park at Nundah, the Brisbane Grammar School Playing Fields at Northgate, a motocross circuit at Banyo, Nudgee Waterhole Reserve and Nudgee Golf Course which directly abuts the eastern side of the Motorway. The amenity of these major sport and recreation facilities could be expected to be affected in varying degrees, partly depending on their type of use, by the proximity of the Motorway.

Amenity is also significantly reduced in this area by the intermixture of major industrial development and its' resultant heavy traffic through local areas. In most cases in these suburbs, road noise from Nudgee Road is probably a more significant factor than the Motorway in reducing residential amenity and the use of Nudgee Road by high volumes of semi-trailers and other commercial vehicles is likely to be a more significant issue to many communities like Ascot and Hendra which straddle either side of it, and indeed to all communities north to Nudgee which use it to travel north-south. The close proximity of schools (including Hendra State School and Pre-School on the eastern side of Nudgee Road itself) and the need for children to cycle or walk along or across Nudgee Road to access them is also an issue.

Together with low lying land, a combination of these factors may have hindered extensive gentrification of the older suburbs, although minor infill development has occurred and some redevelopment to medium density uses is occurring on the southern side of Doomben Racecourse. On the western side of Nudgee Road in the northern suburbs, considerably more recent development (between 20-30 years old) has occurred to create pleasant, neat residential suburbs, with some new housing estate development in the Nudgee area near the border of contiguous urban development.

19.2.2 Community Facilities

The location of existing community facilities in relation to the project corridor is set out in Section 4 of the EIS for each section of the project area.

19.2.3 Properties Directly Affected

Property affectation associated with the project includes a range of land uses as set out in Table 19.3. Residential and rural residential property affected accounts for a small percentage of directly affected property with open space being the primary category affected followed by industrial land use.

Table 19.3 Directly Affected Property

Land Use	Full or Partial Resumption	Number of Properties	Percentage of Total
Rural Residential	Full	1	1.3%
Rural Residential	Partial	4	1.3%
Mobile Home Park	Partial	1	0.02%
Industrial	Full	15	20.8%
Industrial	Partial	9	2.0%
Open Space – Vacant, Parks, Golf Course	Mainly Partial	332	69.3%
Road/Rail Corridor	Mainly Partial	8	5.2%
Total	N/A	71	100%

Of the six residential properties affected, four resumptions involve small proportions of the allotments which do not affect continued usage of the property, nor cause any dislocation for families.

One resumption involves a small area of the Palm Lakes Resort mobile home park which will involve the relocation of one mobile home occupied by an elderly couple. Relocation of the home within the resort is proposed prior to construction commencing.

One resumption involves the demolition of an existing residence and relocation of the extended family which resides in the residence. Acquisition of the property would proceed by agreement or in accordance with MR guidelines.

19.2.4 Existing Environmental Quality

The existing environmental quality of residential areas in the vicinity of the project in terms of air quality and noise is described in the existing relevant subsections of Section 14 and Section 15.

19.3 Potential Impacts and Mitigation Measures

19.3.1 Introduction

TOR Requirements:

This section is to define and describe the objectives and practical measures for protecting or enhancing social values, to describe how nominated quantitative standards and indicators may be achieved for social impacts management, and how the achievement of the objectives will be monitored, audited and managed.

The social impact assessment of the project should consider the information gathered in the community consultation program and the analysis of the existing socio-economic environment, and describe the project's impact, both beneficial and adverse, on the local community. The impacts of the project on local and regional residents, community services and recreational activities are to be analysed and discussed for all stages of the project (discussion of the effects on pedestrians and cyclists and the proposed tolling regime).

The social impact assessment of the project is to be carried out by a qualified social planning practitioner in consultation with the Social Planner Brisbane City Region, Department of Communities. The assessment of impacts should address the following requirements:

- Describe the likely response of affected communities and identify possible beneficial and adverse impacts (both immediate and cumulative). These impacts should be considered both at the regional and local level. Attention should be paid to:
 - impacts on demographic, social, cultural and economic profiles
 - impacts on local residents, current land uses and existing lifestyles and enterprises
 - impacts on local and state labour markets, with regard to the source of the workforce.
- The effects of the Project on local and regional residents, including land acquisition and relocation issues and property valuation and marketability, community services and recreational activities should be described for the construction and operation phases of the development
- The social impacts of the proposed project on Aboriginal people within the study area, based on a program of consultation with the local Aboriginal communities
- The potential environmental harm on the amenity of adjacent areas used for recreation, industry, education, aesthetics, scientific or residential purposes should be discussed. The implications of the Project for future developments in the local area including constraints on surrounding land uses, such as future airport development, should be described; and
- The effects on project workforce of occupational health and safety risks and impacts on the community in terms of health, safety, and quality of life from the construction and operation phases of the Project.

For identified impacts to social values, suggest mitigation and enhancement strategies and facilitate initial negotiations towards acceptance of these strategies. Practical monitoring regimes should also be recommended.

The social impact assessment of the project considers the information gathered in the community consultation program and the analysis of the existing socio-economic environment, and predicts and projects the project's likely impact, both beneficial and adverse, on the community. The impacts of the project on local and regional residents, community services and recreational activities are analysed and discussed for both construction and operational stages of the project.

19.3.2 Projection of Likely Impacts

The projection of likely social impacts is dependent on a number of factors, including:

- The demographic profile of the community surrounding the route;
- The social structure, conditions and infrastructure of the part of the study area;
- The physical upgrading proposals in the immediate part of the study area; and
- Proximate land uses.

Section 4 of the EIS identifies effects of the proposed upgrade on land uses along the route including community facilities and other sensitive land uses. The proposal is described in Section 3.

Mt Gravatt-Capalaba Road to Cleveland Branch Rail Line

The southernmost section of the study area was noted to consist of a series of residential communities of varying age and character, with most suburbs lying on the western side of the existing Motorway. In general newer suburbs, which tend to be closer to the Motorway than older suburbs which were in existence prior to its development, will be those more significantly affected by any upgrading of the existing route.

The majority of these suburbs "turn their back" on the Motorway, and are oriented to the west for all facilities and services. The Motorway has consequently formed a barrier to movement since its' development and upgrading will make little change to patterns of community function and interaction. Some important recreation facilities are however located in the vicinity of the Motorway corridor in this section, and some of these will be partly affected.

There will also be six direct residential property effects in the southern section. While the number of these is relatively few and only one residence and one mobile home is affected, there will be impacts arising from relocation and disruption.

Cleveland Branch Rail Line to Pinkenba Rail Line

The main impacts in the central section between approximately Cleveland Branch Rail Line and Pinkenba Rail Line will be indirect impacts on the working population and on lower income residents in the suburb of Murarrie.

The suburb of Murarrie has been noted to have the highest unemployment rate in the study area, household income among the lowest in the study area, a high proportion of households renting and a high proportion of one parent families. Some important low cost housing lies in close proximity to the Motorway, near the toll plaza, and the busy Lytton Road interchange. However, removal of the toll plaza is likely to improve local amenity through a reduction in noise associated with acceleration/deceleration and a reduction in air emissions from queuing vehicles.

The central area also has a large working population which will be impacted by any change to the amenity of industrial and business areas, and potentially by change to access patterns, movements and normal activity. There will be an effect on businesses in this area, which may be subject to loss and hardship.

Issues raised from consultation with existing owners and businesses in this area include:

- uncertainty in relation to the timing of the project and the acquisition process;
- loss of tenants prior to the acquisition process or due to uncertainty created by the project;
- health of workers during construction and operation;
- cost of relocation and re-establishment of businesses;
- timing of relocation to avoid disruption to manufacturing;
- noise and vibration impacts;
- overshadowing of new structures;
- disruption and changes for workers including disabled workers (eg Help Enterprises);
- maintaining access to properties and businesses during construction;
- lack of suitable sites for relocation; and
- impacts on onsite services.

Particular issues raised by Help Enterprises (293 Fison Avenue, Eagle Farm) who employ some 80 people on site with disabilities include:

- the impact of change on workers;
- dust impacts on powder coating operations;
- shadow impacts on nursery area;
- construction noise and vibration; and
- maintaining access to the site for workers.

Impacts on recreational facilities in this section will include the Royal Queensland Golf Club and also a small park, Percival Park, adjacent to the existing Motorway in the Fison Avenue East industrial precinct.

Pinkenba Rail Line to Nudgee Road

There is expected to be relatively few social impacts in the northern section, given that much of the proposed alignment runs through airport and vacant BCC and Commonwealth lands, with the exception of disruption to established and potential recreational walking and bike tracks during construction.

The social implications of this part of the route relate largely to any possible positive impacts which may be perceived by residents and communities adjoining the existing Motorway alignment, by virtue of the temporary relocation of some traffic volumes. In consultations, residents of these areas saw this as “freeing the existing route for local residents”. It is also likely that reduction in traffic volumes will improve the amenity of some residential areas, a number of significant recreational facilities and potentially have an effect on through traffic volumes in existing suburbs (eg Nudgee Road).

19.3.3 Assessment of Social Impacts

From the above, the main social impacts likely to occur as a result of the upgrade are discussed below.

Loss of Urban Residential Amenity

The main effect on urban residential amenity will be to suburbs in the southernmost section of the route between Mt Gravatt-Capalaba Road and the Cleveland Branch Rail Line, particularly Mansfield (chainages 6300 to 7400) and Carindale (chainages 7500 to 8700). Demographic data shows Carindale in particular to be an area of mature couple families of higher income with older children, and a high proportion of homes owned. These people could be expected to be concerned about changes to their residential environment.

It was noted above that in some cases the current amenity of these suburbs is already reduced by the existence of traffic noise from the Motorway and previous consultation in relation to the provision of noise barriers (MR, 8 May 2003) has indicated noise concerns are important to these communities.

This is particularly the case where new housing has been built in elevated positions with direct line of sight to the Motorway, and in some older areas where noise barriers are either currently absent or inadequate. In such cases, virtually all residents consulted were in favour of noise barriers. A number of comments received indicated that people had noticed an appreciable increase in road traffic noise over recent years. Any further deterioration of conditions would represent a cumulative impact which has worsened over time.

Noise modelling undertaken for the EIS (refer Section 15) has identified where Main Roads criteria may be exceeded and noise barriers have been recommended both west of the Motorway to supplement the existing noise barriers at Silky Oak Crescent, Coventry Court and Ridgeview Street and east of the Motorway near Mt Petrie Road at Belmont.

Whilst concentrations for pollutants from the Motorway are predicted to marginally increase with the increase in traffic volumes, modelling undertaken for the EIS (refer Section 14) has estimated that all predicted concentrations would be well within guidelines. As such, it could be expected that the proposal will only marginally decrease amenity and livability, except where retrofitting of noise barriers will actually improve conditions.

While these effects should also be moderated by the fact that many residents moved to these areas in full knowledge of the existence of the Motorway and not without some clearly stated expectation (at least since the Integrated Regional Transport Plan (IRTP) in 1997) that upgrading may occur in the future, residents of some of these suburbs, especially those with a high level of residential amenity, may perceive impacts to be of significance as a result of the physical changes to the Motorway, and at least for a short period of time, this may affect the harmony in which they live and their sense of well-being. Accordingly, all efforts should be made towards timely implementation of the recommended noise barriers as part of the construction phase and to validate their effectiveness in achieving the noise criteria.

It will be important in approving any emerging infill communities in this area that appropriate noise mitigation measures are required to be provided by the developer to ensure the future amenity and livability of new communities. The existence of the Motorway is likely to have already impacted on property values in these areas. The upgrade proposal should however

have little additional effect on property values and marketability in existing areas, possibly with the exception of a short period of time leading up to and during construction.

North of Old Cleveland Road, the urban residential areas of Belmont and Tingalpa (chainages 10700 to 12500) are also areas in which considerable concerns have been expressed in relation to noise and air quality arising from the existing Motorway and consultation has occurred in relation to the provision of noise barriers.

In some cases residents have experienced these effects since the Motorway was built and are also concerned about a resultant decrease in property values. This area has high proportions of children of all ages. It could be assumed that residents would be concerned about the further impacts on amenity, livability and the well-being of themselves and their families.

Noise modelling for this section (Section 15) has identified the location of noise barriers required in order to achieve Main Roads criteria at residences. Noise barriers have been recommended to supplement existing barriers both east and west of the Motorway. Once implemented, this will result in a significant benefit for residents who are currently experiencing noise conditions above Main Roads criteria. Without timely provision of these barriers, a further cumulative decrease in amenity may occur.

Air quality monitoring (Section 14) is also predicting a marginal increase in pollutants, particularly close to the Motorway as a result of the increase in traffic volumes. While such increases are predicted to be within guideline levels for all predicted concentrations, they will result in further deterioration in these conditions for some residents. This will result in a slight decline in livability.

Parts of Tingalpa between chainages 12900 and 14000 lie further from the Motorway but across a floodplain to both the east and west. While there is the potential for increased noise by virtue of the height of the structure through this area, the noise assessment (Section 15) shows that noise barriers will not be required for the noise criteria to be met within this area.

Residences in Cannon Hill on Wynnum Road currently suffer from the effects of heavy traffic volumes on Wynnum Road. The effect of the proposal in this regard will be a reduction in traffic on Wynnum Road both east and west of the Motorway based on 2011 volumes (refer Section 5), which will result in significant social benefit to these residents and an improvement in livability.

Similarly, residents of Murarrie have expressed concern in relation to increasing traffic volumes on Lytton Road, and the effect of noise from the Motorway, especially from the toll plaza on nearby parts of the suburb. Murarrie has been noted to have several indicators of disadvantage, and it is seen as important that the amenity of affordable housing in this area is retained. Both the air and noise assessments have concluded that all criteria and guidelines for noise and air quality as a result of the proposal can be met at residential areas within Murarrie. However traffic in Lytton Road West will increase as a result of the proposal as will traffic volumes generally in the area over time and as such there will be no relief from these ongoing issues for residents of this area. However, the removal of the existing toll plaza will eliminate an existing noise generator, reduce air emissions associated with queuing traffic and thus improve local amenity.

Pinkenba Community Association has indicated similar concerns about increasing traffic volumes, growing traffic congestion and delays, safety, noise and dust. No significant change in volumes of Kingsford Smith Drive east of the Motorway are predicted as a result of the GUP.

Consideration should also be given to the potential improvement in some residential conditions in communities adjoining the existing Motorway route. Several residential suburbs were noted to directly abut the existing Motorway alignment on the western side (Ascot to Nundah). Noise barriers in most areas substantially reduce noise levels although the Motorway and constant passing traffic is a background element in some residential areas. A reduction in vehicle volumes and resultant increases in amenity is expected to occur past 2011 as a result of the deviation away from these suburbs leading to an improvement in air quality and noise.

Amenity was also noted to be significantly reduced in some of these areas by the existence of major industrial development and its resultant heavy traffic through local areas, especially along Nudgee Road. A major reduction in traffic is predicted by 2011 in these local areas (refer Section 5) with reductions expected on Nudgee Road, Sandgate Road, Toombul Road and other roads in the Clayfield area (eg Kitchener/Zillmere/Widdop/Milton Roads). This will be a significant indirect social benefit to these communities and greatly improve their sense of harmony and well-being.

Overall the effect of the proposal on urban residential amenity will be relatively minor, and can largely be offset by timely implementation of recommended noise barriers. There will be some social gains in urban residential amenity associated with the proposal. There should be little or no effect on the sense of community or the "vitality" of adjoining suburbs.

Impacts on Rural and Rural Residential Lifestyles

There will be several direct and indirect property effects in the southern section on rural and rural residential properties. While the number of these is relatively few, impacts arising from both displacement for those who need to relocate and loss of amenity and livability for those staying, may be perceived as significant by those currently enjoying rural residential lifestyles.

The main effect will be in the "Koala Coast Area" north of Mount Gravatt-Capalaba Road, where there are a number of private rural properties. Assessment of any effect needs to be tempered, however, by the current noise and air quality environments enjoyed by these residents in proximity to the existing Motorway. Contact has been made with each landowner likely to be directly affected by future acquisition and the project, its impacts and possible mitigation measures have been discussed.

To the immediate north of Mount Gravatt-Capalaba Road (chainages 5160 to 6100) there are five rural properties which will be affected on the eastern side of the Motorway by land requirements for interchange ramps. These requirements are well outside the line of the existing Motorway. Four of these five properties will require partial acquisition of a strip of land along their Motorway frontage, the fifth will require full resumption as the dwelling is in close proximity to the Motorway.

Changes in air quality and noise for remaining residents are not predicted to be significant however a noise barrier has been recommended in the vicinity of Weedon Street East to achieve noise criteria for predicted traffic volumes.

Between Wecker Road and Old Cleveland Road, the corridor on the eastern side is confined to the existing Motorway reserve. Several properties in this area have been awaiting noise barriers to redress current conditions which exceed MR criteria, or improvements to existing noise barriers. Noise barriers are recommended for the area in Mt Petrie Road south of Old Cleveland Road to achieve noise criteria for predicted traffic volumes. Should these occur in timely

fashion then the overall effect on amenity and lifestyles should not be significant and may result in some improvement on existing conditions.

For the length of the proposal and the number of properties involved, overall the social effect on rural and rural residential lifestyles will be relatively minor.

Effects on Affordable Housing

Palm Lakes Relocatable Home Resort on the western side of the Motorway at Carindale has direct frontage to the Motorway and upgrading will require relocation of one existing relocatable home. The relocation of the home has been discussed with management of the resort.

This village, with 89 sites and some 110 residents is a source of affordable housing for a significant number of older residents. An aged couple currently resides in the home which will need to be relocated.

Discussions with the resort management have confirmed that the mobile home will be able to be relocated within the resort complex with no net loss of home sites.

Impacts on the amenity of affordable housing are also of social concern. Therefore it is seen as desirable that dwellings in Palm Lakes Relocatable Home Resort are not subjected to higher levels of noise from the Motorway than currently, and accordingly supplementary noise barriers are recommended to achieve noise criteria for predicted traffic volumes. Whilst air quality will change in the vicinity of the Motorway as a result of increased traffic volumes, concentrations of all pollutants are predicted to be within relevant guidelines.

The importance of retaining or improving conditions for affordable housing at Murarrie was discussed above.

Given the timely provision of recommended noise barriers, overall the effect of the proposal on affordable housing is not considered to be significant.

Effects on Community and Recreation Facilities

A number of recreation facilities are located in the vicinity of the Motorway corridor, often taking advantage of flood prone land, especially in Wishart, Carina, Carindale, Tingalpa and Murarrie in the southern section; Eagle Farm in the central section and Kedron Brook floodplain in the northern section. There is the potential for mostly minor effects on the usability of some of these facilities, and on resident access to them during construction.

A small number of community facilities are located near the proposal, however the effect on them will be minimal.

These effects and any relevant mitigation measures which would minimise these effects, are outlined in Tables 19.3 and 19.4.

Table 19.3 Potentially Affected Recreation Facilities

Sub-Section	Facility Name	Approximate Distance to Project Corridor (m)	Effect	Mitigation Measure
Mt Gravatt-Capalaba Road – Cleveland Branch Rail Line	FR Caterson Park (Sports Fields)	50	No land take, increased noise	None required
	Gumdale Pony Club Grounds	150	No land take, increased noise	None required
	Meadowlands Picnic Ground	100	No land take, increased noise	None required
	Minnippi Parklands	30	No land take, increased noise	None required
	Model Aero Club	160	No land take, increased noise	None required
	Brisbane Polo Grounds	200	No land take, remote from corridor	None required
Cleveland Branch Rail Line to Pinkenba Branch Rail Line	Brisbane River	Within Corridor	Overshadowing of river, loss of riverbank and waterway area. No impacts on navigation	Maintain water quality in river. Re establish river bank areas following construction
	Royal Queensland Golf Course	Within Corridor	Loss of area of golf course.	Reconfiguration of the course to the western side of the bridge.
	Percival Park	Within Corridor	Loss of park used by workers	Consideration to be given to re establishment of park on surplus GUP land
Pinkenba Branch Rail Line to Nudgee Road	Kedron Brook floodplain	Within Corridor	Severance of floodplain, increased noise, visual impact	Maintain opportunities for pedestrian and cycle movement under bridge structure and maintain water quality
	Parkland on Buchanan Road	Directly Adjacent	No land take, increased noise	None required
	Nudgee Golf Course	Adjacent corridor	No land take, increased noise	None required

Table 19.4 Potentially Affected Community Facilities

Sub-Section	Facility Name	Approximate Distance to Project Corridor (m)	Effect	Mitigation Measure
Mt Gravatt-Capalaba Road – Cleveland Branch Rail Line	Southgate Wesleyan Methodist Church Weedon Street East	300	No land take, internal noise levels predicted to be within noise criteria	None required
	Church, 35 Wright Street, Carindale (Jehovah's Witnesses)	130	No land take, internal noise levels predicted to be within noise criteria	Noise barrier proposed
	Gateway Life Centre, 1374 Old Cleveland Road, Carindale (Assemblies of God)	100	No land take, internal noise levels predicted to be within noise criteria	Noise barrier proposed
	Belmont Girl Guides	150	No land take, internal noise levels predicted to be within noise criteria	None required
Cleveland Branch Rail Line to Pinkenba Branch Rail Line	Brisbane Institute of TAFE (Gateway Campus)	Directly Adjacent	No land take, no change to access, reduction in internal noise predicted	None required

Recreation Facilities

In the southern section of the GUP, impacts on recreation facilities will be limited to marginal increases in noise, particularly close to the Motorway corridor.

In the central section, impacts on recreational facilities will include the Brisbane River itself, Royal Queensland Golf Club (RQGC) and also a small park, Percival Park, adjacent to the existing Motorway in the Fison Avenue East industrial precinct, which is used by the working population. Minimal change in the recreational use of the Brisbane River is anticipated as a result of the footprint of the new bridge due to the form of the new bridge including pier spacing and location that will mirror the existing Gateway Bridge. During construction the area of navigable waterway in the vicinity of the new bridge will be marginally reduced due to formwork required around each pier. Consultation with the Regional Harbour Master, Marine Operations, Queensland Transport has confirmed that these temporary impacts are acceptable with appropriate warning, signage and lighting.

Of benefit to recreational cyclists and pedestrians would be the inclusion of a shared path on the new bridge, if approved as part of the Business Case. The path would establish a cross river linkage that does not currently exist. Linkage into existing and future bikeway and pedestrian networks would compliment the bridge path and maximise its benefits to local communities.

Impacts on the RQGC have been assessed and are being managed through agreements with Main Roads.

The loss of Percival Park will have a minor impact on local workers who use the park during lunch breaks and for staff barbeques. Consideration should be given to re-establishment of a small local park on surplus GUP lands once the construction phase has been completed.

An important recreational facility has been developed in the northern section of the Kedron Brook floodplain being a recreational walking and cycle track. The GUP deviation will bridge over the track however no impediments to the use of the track both during construction and operation are anticipated. Maintaining the link in a form that minimises the impacts on the recreational experience will need to be allowed for during both the construction and operational phases.

In the northern section, the existing Motorway alignment closely adjoins several recreation facilities such as Doomben Racecourse at Ascot, Albert Bishop Park at Nundah, the Brisbane Grammar School Playing Fields at Northgate and a motocross circuit at Banyo. The amenity of these major sport and recreation facilities could be expected to be improved post 2011 by some relief from traffic volumes. No loss of land is anticipated from these facilities.

Community Facilities

The Motorway currently passes close to several churches, within 100 metres of the Gateway Life Centre and within 130 metres of the Kingdom Hall of the Jehovah's Witnesses. It also passes within 150 metres of the Belmont Girl Guides Hall. Noise levels within these facilities are predicted to be within noise criteria due to protection afforded by recommended noise barriers, distance from the Motorway and/or due to the premises being airconditioned (refer Section 15). As access will be maintained at all times to these facilities, the social effect should therefore not be significant.

Southgate Wesleyan Methodist Church and Daycare lies within 300 metres of the Motorway. Noise impacts will be acceptable at this facility and access will not be affected. There should be no effect on Mount Petrie School (450 metres) or Christian Outreach College (250 metres).

The ABC Learning Centre (a child care centre) located in Murarrie 550 metres from the Motorway, should not be affected.

No land is required from the Brisbane North Institute of TAFE and there are no changes anticipated to access to and from the campus. Internal noise levels are expected to reduce as a result of decreases in traffic volumes on the existing Motorway and this should be a social benefit.

A slight increase in air quality impacts for receptors close to the Motorway has been predicted, however all predicted concentrations are well below the relevant guidelines.

Effects on Pedestrian and Bicycle Access

A shared cycle/pedestrian path is proposed to be constructed on the new bridge to reinstate a cross river link that has been absent since the construction of the existing Gateway Bridge when the former cross runner ferry service was withdrawn. The shared path would be linked into the existing and future cycle/pedestrian network contributing to the completion of the local and regional cycle/pedestrian plans. If approved as part of the Business Case, the path would be of significant social benefit.

Details of the the proposed path are provided in Section 6.

Elsewhere along the road corridor, existing and planned future cycle links will be unaffected with the exception of the route nominated between Airport Drive and Kedron Brook Floodway. An alternative route has been nominated in Section 6.

If the path on the bridge is approved, the overall impact of the project will be to significantly enhance local and regional cycle and pedestrian movement through the provision of a cross river link on the proposed new bridge, with minimal negative impacts.

Changes to Access Patterns

The specific changes to traffic on the local road network are outlined in Section 5 of the EIS.

The modelling conducted for the EIS has demonstrated that the GUP brings relief to the surrounding road network and communities, moving through traffic back to higher order roads where these trips ideally should be. While this may be seen to create some 'losers' on more major roads, generally this reduction in traffic should protect residential streets and result in improved accessibility and movement by existing communities for local trips and trips to and from the arterial network.

These findings also confirm the expectations of participants in the Planning Study consultation who did see the relocation of the existing route as "freeing road space" for local residents and as such, this is a local social benefit as it will facilitate movement in and around the local area, including access to community, recreational, cultural and other facilities. Because of the well-established barrier to movement posed by the existing Motorway, the upgrade is not expected to significantly change existing movement patterns of residents adjacent to the proposal.

On a subregional and regional level, the benefits of improving access to the port and airport and the increased capacity on the Gateway Motorway as a major link in the regional road network are significant to the wider Brisbane and SEQ community.

Changes to the Amenity of Industrial and Business Areas

The amenity of industrial and business areas will change in the Lavarack Avenue/Kingsford Smith Drive area due to the construction of the deviation through this established area. Impacts during construction may include noise and dust emissions and following operation, the general background noise level will increase with a slight decrease in air quality. These impacts need to be balanced by the decrease in noise to be experienced in industrial areas surrounding the existing Motorway post 2011 when traffic is diverted to the deviation. Hence the level of impacts may remain similar but their incidence (i.e. the people they affect) will alter.

Privacy and security issues affecting individual premises will need to be addressed, particularly during construction when the construction site is occupied by workers. This will be of greater significance for the G James Glass site where manufacturing activities will continue through the construction phase.

The ground level amenity will change due to shadow impacts of the deviation structure and loss of buildings and landscaping. Restoration of surplus land with landscaping is recommended to mitigate some of the amenity impacts. The reinstatement of Percival Park as an informal recreation area should be considered if surplus GUP land is available.

Change to Workers' Access Patterns, Movements and Normal Activity

Some disruption to workers' access patterns and movements is anticipated during construction due to temporary street closures, loss of informal parking and the movement of construction traffic and materials through the area. The impacts of this activity can be lessened through an effective information campaign directed to local workers to ensure they are aware in advance of the nature and timing of construction activities and where necessary, the provision of temporary measures to alleviate potential problems (eg temporary parking on land held by Main Roads).

The impact of the proposal on the workers at Help Enterprises is of particular social concern, given that this industry employs some 80 people on site with disabilities. An important factor contributing to the productivity and social well-being of many of these workers is stability and routine. The significant change which will be implemented in the local area, but most importantly on the adjacent site with the construction of a retaining wall of between 4.5 and 16 metres in height, overlapping of the bridge structure with the corner of the property, changes to noise and sight lines, loss of parking and loss of several gum trees, will all be significant changes to the environment of the enterprise. The impact of overshadowing on the industry's plant nursery and other construction issues (eg noise and vibration) will also be important.

Design or construction techniques which might lessen such impacts should be considered. Special liaison will need to be established with Help Enterprises to assist in educating workers about changes and accustoming them to necessary changes in their movements or activities (eg drop-off arrangements or public transport changes). All opportunities should be taken to work with Help Enterprises to find mutually advantageous opportunities arising from the construction, including training, contracting and involvement in re-landscaping.

Overall, the number and proportion of workers affected in the study area will be very small, and generally effects should be manageable with a range of suitable consultation and communication techniques.

Social Effects on Businesses and Industries

It was identified earlier that GUP would require 9 partial and 15 full resumptions of industrial properties.

Each industry that may be affected by the GUP has been contacted by GUP office staff and made aware of the potential impact on the property and possible timing as well as being briefed on the Main Roads' property acquisition process. The acquisition process can include compensation for such items as reasonable legal and valuation costs and relocation costs. Early acquisition can be considered on hardship grounds.

A range of issues have been raised in the discussions to date as set out in Section 19.3.2 above. There is no doubt that there will be issues of social concern relating to many of these businesses, particularly those that will be required to relocate. In some cases investment decisions have been made predicated on long lease times and firm tenants. There is already an element of instability in the area caused by the proposal, with some tenants moving and not resigning leases. This will cause anxiety and in some cases financial hardship. Uncertainty is also impacting on the ability of some owners to make current decisions about future planning and operating. Some owners have indicated that they have put their "life work" into building up their businesses and feel that this will be lost, especially if suitable alternative premises are unavailable in the area. These are all valid social concerns.

These issues can be addressed in the following ways:

- good communication;
- providing certainty in relation to project timing to enable existing businesses to plan for relocation;
- meeting guidelines for noise and air quality during construction to avoid impacts on workers in the area;
- maintaining access to properties and businesses during construction using temporary access arrangements, if necessary;
- avoiding impacts on local and onsite services that may disrupt manufacturing; and
- achieving noise and vibration goals to avoid disruption to any sensitive manufacturing processes;
- acquisition on the grounds of hardship where necessary.

Providing information on the Main Roads' acquisition process and access to Main Roads' staff during the process will assist in minimising uncertainty regarding acquisition issues. MR guidelines should ensure that fair compensation is received taking into account the above issues. The general view expressed across many consultation discussions is that with appropriate processes and adequate notification of timing, many of the issues surrounding relocation can be resolved. While it is not possible to compensate for the social loss of a lifetime business, all assistance can be provided financially to ensure no monetary loss is sustained. Close liaison will be required to ensure that no hardship or operating difficulties occur to businesses that will be partially affected.

Effects on Aboriginal People

Consultation with members of the relevant Aboriginal communities was undertaken as part of the cultural heritage assessment (Refer Section 18) and representatives of the communities participated in Cultural Heritage surveys conducted for the GUP. Further input from these groups will be sought during the design of a Cultural Heritage Management Plan for the project.

Construction Noise and Air Quality Impacts

The social effects of noise and air quality impacts have been considered above as appropriate. Noise levels during construction have been predicted for each section of the Motorway in Section 15 with recommended construction noise mitigation measures. Construction noise will be short term and will progress through the various sections of the corridor in accordance with the construction program. Critical to the management of noise and other construction impacts will be the successful implementation of community liaison strategies including informing residents and businesses of the scheduling of construction activities, notification of any abnormal activities such as out of hours operations and providing access to a Community Liaison Officer. A complaints procedure should also be implemented.

Potential air quality construction impacts are assessed in Section 14. Airborne dust will need to be managed using dust suppression measures. Minimal impacts from construction compounds are anticipated at residential receptors due to the separation distances between the compounds and the nearest residences. Dust control techniques will be needed to avoid dust impacts on industrial premises and in particular those industries that are dust sensitive.

Traffic Delays and Disruption

Upgrading and realigning of the Motorway will cause short-term temporary disruptions to local movement, including business activities during the construction phase as a result of road closures and traffic delays. The extent of impact is dependent upon machinery being used, the type of activities being undertaken and the portion of the corridor being worked on. Potential impacts to business include:

- Temporary loss of access to business or property; and
- Loss of ability to supply products and loss of income due to road closure.

There will also be minor delays experienced by local Motorway users and the general travelling public, which is largely unavoidable in carrying out major upgrade works. Implementing traffic management procedures in accordance with the *Manual for Uniform Traffic Control Devices* (Queensland Transport 1995) will minimise impacts to commuters and local businesses due to loss of business access. Scheduling of night works would reduce the effect of construction works on traffic movement however this is not considered a viable option due to close proximity to residential dwellings.

Minimising disturbance to business access should be an objective of the EMP. The Construction Contractor will need to undertake monitoring of the effectiveness of traffic management and access actions.

Other Impacts

Further information regarding related social impacts referred to in the TOR are discussed in Section 4 (land use), Section 5 (tolling), Section 6 (pedestrians and cyclists), Section 14 (air quality), Section 15 (noise) and Section 20 (employment).

19.4 Conclusions and Recommendations

The social impacts of the proposal on residents will be relatively small due to the containment of much of the physical property impacts within or close to the existing alignment of the Motorway. Some recreation facilities will be affected, as will access to these during construction. There will be an effect on the working population and on a number of businesses in the central section, north of the new bridge. These effects will be largely felt by a relatively small number of people.

On the other hand, there will be a significant positive overall social benefit to the wider community as a result of the improved access to the airport, port and subregional centres. There would also be significant benefits for cyclists and pedestrians from the shared path, if approved, to be provided on the bridge with links into the local and regional cycle network.

It will be important to ensure that existing amenity conditions are retained as far as possible, or improved in cases where noise criteria are currently exceeded. Affordable housing and communities currently adversely affected by traffic volumes, should be targeted as a priority for mitigation measures.

19.5 Mitigation Measures

The following mitigation measures are recommended to manage potential social impacts:

- In approving any new housing estates in Emerging Community Zones, Brisbane City Council should be requested to ensure that appropriate noise mitigation measures are incorporated.
- The proposed installation of noise barriers along the Gateway Motorway which has been progressively implemented from Mount Gravatt-Capalaba Road to Lytton Road should be completed at the earliest opportunity, taking into account the new conditions following the upgrade proposal. The timing of noise barrier installation to offset new GUP impacts will be important to residents in the vicinity of the Motorway and needs to proceed prior to the effects being generated.
- The relocation of one mobile home within the Palm Lakes Relocatable Home Resort should occur in full consultation with the owners, management and the resort residents.
- Consideration should be given to the re-establishment of a local park in the vicinity of Percival Park on surplus GUP land following completion of construction. Landscaping other surplus land in this area should also be considered.
- The set of features considered important by the pedestrian and cycle working group in the design and development of the cross river cycle/pedestrian path should as far as possible be incorporated into the path design, if it is approved as part of the Business Case.
- Design or construction techniques which might lessen the impact of change on the workers of Help Enterprises should be considered. Special liaison should be established with Help Enterprises to assist in educating workers about changes and accustoming them to necessary changes. All opportunities should be taken to work with Help Enterprises to find mutually advantageous opportunities arising from the construction, including training, contracting and involvement in re-landscaping.
- Opportunities should be maintained to provide pedestrian and cycle movement under the Kedron Brook Floodway bridge so as not to limit future recreational use of the floodplain and to provide a continuous route to the north.
- Certainty should be provided to directly affected landowners to enable relocation plans to be prepared in a timely fashion. This will apply particularly to manufacturing industry which has a long lead time for relocation.
- Access should be maintained to recreation areas, community facilities and businesses during construction using temporary access arrangements, if necessary.

- Potential impacts on local and onsite services and businesses and industries that may disrupt business activities and affect workers, including privacy, security and amenity issues, should be projected prior to each stage of construction commencing, discussed with relevant businesses, addressed as required, monitored and reported (see below).
- An effective consultation and communication program should be implemented during the construction phase, including:
 - regular publication and distribution of information on construction activities, their timing and any temporary arrangements;
 - local notification of tenders which might be of interest to local businesses;
 - publication and distribution of information to take into account the needs of local communities, affected landowners, nearby businesses, nearby workers as well as the broader metropolitan community;
 - appointment of Community Liaison Officers (CLO) during the construction period;
 - maintaining a free call information line for the community to access the project delivery team including the CLOs;
 - keeping of a complaints register for recording action taken in response to complaints; and
 - monthly publicly available reporting of all consultation and communication activities including issues raised and action taken.

19.6 Monitoring

The objectives of the above mitigation measures will be to:

- Retain existing social values and the integrity of existing social conditions in the study area as far as possible;
- Minimise and offset as far as possible any impacts or changes which cannot be fully mitigated; and
- Maximise positive social benefits to the community wherever possible.

A monitoring regime should be put in place to monitor the achievement of these objectives as part of the above consultation and communication programme. Wherever appropriate or possible, quantitative indicators of success in meeting the objectives should be developed and maintained. These could include but not be limited to:

- The number of resident complaints during construction activities;
- The number of complaints from industries and businesses during construction;
- The outcomes of a post construction sample survey among affected residents and businesses to determine satisfaction with new arrangements, environmental conditions and communication/construction processes following commissioning of the GUP;
- Noise and air quality checks of predicted levels in key sensitive areas both during construction and on operation, and ameliorative measures where effects exceed acceptable criteria;
- If the path on the bridge is approved, reconvening of the pedestrian and cycle working group at appropriate stages through the construction process and once within 12 months of operation to determine satisfaction with design outcomes.
- Measure and monitor travel time savings to the wider community; and
- Make the above monitoring outcomes publicly available.