Chapter 9: Social and economic environment

9.1 Summary and Indicators

9.1.1 Summary

The Gold Coast has been described as a classic sunbelt city that, in addition to tourism, has an economy based on settlement by retirees. Both of these groups come to the Gold Coast to enjoy the climate, the environment and the lifestyle. It has been long established that the environmental issues are given lower standing in times, or locations, of economic or social hardship. Consequently the social and economic basis of the City of Gold Coast, and the attitude of the community toward the environment, is fundamental to the sustainability of the City. Currently some 70% of Australians believe the environment to be at least as important as the economy.

State

The per capita gross regional product of the City, while significant, appears to be only around half of that of the State, or Australia. This situation is also reflected in the household income for the City which was $29,500 in 1991 and is lower than that for Queensland ($31,815) and Australia ($34,987). Conversely the cost of living on the Gold Coast is similar to that for the rest of Southeast Queensland (SEQ) and the cost of accommodation is higher than for the rest of SEQ.

Most of the energy used on the Gold Coast is derived from external sources; there are few alternative renewable sources of energy used. This is despite the potential to use solar, wind and tidal/wave generators. Based on the gross regional product estimates, the Gold Coast consumes twice as much energy for every dollar produced than Australia as a whole.

Fewer people travel by public transport on the Gold Coast than for Queensland as a whole. If this tendency is not changed and the use of private cars continues at the same rate of today, travel times for short journeys within the City (14km) will increase from the current time of 20 minutes to over 70 minutes and average speeds will fall to around 11km/hr. Current transport systems are safer than they have been previously, based on the volume of traffic and the number of accidents.

The natural environment of the Gold Coast is not having noticeable negative effects on human health. For example, health statistics show that the Gold Coast is similar to the rest of SEQ with most people being hospitalised or dying of diseases of the circulatory system. However, the social and economic environments may be having an effect on health. Injury related illness and death is significant particularly for the age groups below 34 years of age. Whereas crime rates on the Gold Coast do not show any particular trend and gross counts of crimes are in keeping with population growth. There appears to be some correlation between crime and population density and with an index of disadvantage.

Pressure

The Gold Coast has a number of culturally significant sites and buildings. Some of these are protected via the National Trust while others have simply been given Heritage listing under the Cultural and Heritage Act.

In considering the social and economic aspects of the City the Council has to manage for growth rates of around 4.8% per annum. This equates to an extra 15,000 people each year adding to the City's current population of around 360,000. In addition the City accommodates a daily average of around 45,000 tourists and perhaps as many day-trippers. This relatively high ratio of visitors to residents may lead to tension between residents and visitors. Further, the increasing proportion of aged people on the Gold Coast compared with the rest of Queensland may lead to significant areas of social disadvantage.

Response

In Response to these States and pressures the Council provides a number of services to accommodate elderly and isolated groups in the City, particularly in terms of Library services and Council offices. The Council is also developing a Community Health Plan for the City. The State and Federal Government also provides support infrastructure for care provision in the Community

The Council is also working toward attracting environmentally sound industries to the Gold Coast that will broaden the economic base of the City. The Council is developing a Transportation Plan that strives to address issues related to the provision of an improved mix of transport modes that will reduce the reliance of people on the private car.

Conclusion

There appears to be no clear negative effects of the environment on the residents of the City. However, the current available data indicate reason for concern regarding the amount of energy consumed by the City and the nature and size of the City's economy. The demographic data indicate reason for concern as to the ability of residents to adequately value the environment due to their own needs to survive in the City. Overall, there is need for research to provide a better understanding of the relationship between society, economy and environment to help build sustainable communities.

9.1.2 Indicators

Sub-theme	Indicators
State- ⇒ Energy	Energy consumption per capita and as a ration with the gross domestic product of the LGA
State- ⇒ Economy/employment	GDP and industry split over time, employment history and prospects by industry, wage levels, cost of living/housing, housing standards, travel to work times, traffic flow and safety , visual pollution
State- ⇒ Human Health	Mortality rates, Epidemiology, and morbidity, service needs for age groups by location, living space (persons per room) yard size (m2) and persons/m2 by area.
State- ⇒ Crime	Crime stats. for different locations
State- ⇒ Access to/participation in facilities/education, recreation, parks, scenic beauty,	Weighted average distance between C.D.s and facilities etc. for different locations. No of people using facilities.
State- ⇒ Heritage listing for Aboriginal and non-Aboriginal heritage	Number, nature, condition and percentage of total and non-Aboriginal sites and structures, those listed under local/state/national Estate legislation or codes.
Pressures- ⇒ Demographics/area	age, sex, ethnic background, employment, expectations
Pressures- ⇒ Population growth/density	population growth and density trends including age groups
Current Responses- ⇒ Energy use initiatives	rate of uptake of energy conservation measures by domestic and industrial users and designers, State and local Govt. initiatives/education programs
Current Responses- ⇒ Developing a wider industrial base	Council and state initiatives to attract new industry to Gold Coast
Current Responses- ⇒ improve access and participation in facilities	Council initiatives that will encourage people to access and use public facilities. Planning for improved access to key facilities and transports nodes
Current Response- ⇒ Programs for heritage conservation	Types of program, annual expenditure, by source of funds, and total LGA expenditure.

9.2 Introduction

The human environment includes social and economic factors as well as natural influences which all contribute to the quality of life. However, the attitudes of a community toward the natural environment can also have a significant bearing on the sustainability of the natural elements of the environment. These attitudes partly depend on the society's level of affluence, education and its ability to use and adopt technology. For example, impoverished societies are more likely to degrade their immediate environment than wealthier societies. Currently some 70% of Australians believe the environment to be at least as important as the economy (ABS 1994).

Overpopulation is often listed as a contributory factor to environmental degradation. However, population on its own is not a cause of environmental degradation. Population, resource consumption and level of technology used, combine to determine the impact of a population on its environment. The level of technological development also influences resource consumption, but the ability of a society to use new technology, or to relinquish old, can be restricted for a number of reasons including cultural, education or economic.

In summary socio-economic factors of a city determine its ability to achieve a balance between the environment, the society and the economy. In many cases a healthy stable environment can only be maintained by a healthy stable economy and a healthy stable society.
There are many socio-economic indicators that could be used and many relate to the level of technological development.

This chapter considers the key socio economic factors which contribute to the quality of life and are believed to have a bearing on our attitude to the environment. The factors which describe the size, health, safety, wealth, level of education, and technology used by the people of the City of Gold Coast.

9.3 State

9.3.1 Economy

Raybold (1996) provides one of the first reliable estimates of the gross regional product (GRP) for the City of Gold Coast at $M4,446 in 1996. In addition to the work of Raybold (1996) on the GRP he also estimated the size of the tourism sector for the Gold Coast at $M1,614. Others have also made estimates of sections of the Gold Coast economy; Mula (1995) estimated education to contribute around $M320 while community services contributes around $M308 (excluding parks and gardens, personal and religious services, sport facilities, waste management and environmental protection).

The GRP for the Gold Coast is only some 5% of the gross state product for Queensland, but the Gold Coast is home to nearly 9% of the State's people. There may be many reasons for this apparent imbalance, such as the age structure of the Gold Coast community and the dependence on the construction and tourism industries. However, as an indicator it suggests that there is less wealth to support the population than is the case for the rest of the State. Such an imbalance can indicate a lower economic quality of life and may indicate an increased level of apathy toward the environment. These data are difficult to interpret and so while there could be room to improve the economy of the Gold Coast, it is certainly very important to understand it.

In part this understanding can come from an analysis of the workings of the economy, such as the labour market and local cost structures. Such an analysis provides a deeper insight into the specific pressures people face on the Gold Coast.

9.3.2 Employment

In 1991 the total labour force of the Gold Coast was 136,556 people. Most people on the Gold Coast are employed in property and business services (19.5%), retail (18.4%) and construction (16.7%). Just over half (56%) of the work-force on the Gold Coast is employed full-time. Only one quarter (25%) is employed part-time. The Gold Coast has a higher proportion of people employed in the construction, wholesale and retail, finance, and property and business services sectors than in both Queensland and Australia in every case.

People employed in the tourist industry are not recorded in a single category but are distributed across many. There is a higher proportion of unemployed people on the Gold Coast than for Queensland or Australia.

The nature of employment and lifestyle on the Gold Coast is reflected in average earnings of residents. In 1991 there was a larger proportion of residents earning less than $12,000 than in Queensland or Australia. In addition, there was a smaller proportion of residents earning above $30,000. Family incomes reflect these data. More families on the Gold Coast earn less than $12,000 than for Queensland or Australia, and fewer families earn more than $40,000 than for Queensland or Australia. In comparison to Queensland and Australia, fewer people on the Gold Coast are employed in the community services. Consequently, people in need of community support on the Gold Coast may not have access to adequate assistance.

9.3.3 Cost of living

The cost of living depends on a number of factors and through competitive forces the average cost of living on the Gold Coast is much the same as for Southeast Queensland. However, within the Gold Coast there is considerable variation between sub regions.

Average weekly household expenditure is an indicator of the cost of living when housing and other costs can be separately identified. Table 9.1 shows the variation in household expenditure across the suburbs of the Gold Coast. For example, households in Coolangatta spend, and therefore consume, significantly less than households in Mudgeeraba. These patterns are more a reflection of the age of the residents of these areas and their relative affluence. Coolangatta has a higher proportion of older residents who own there own homes and are often on a pension or fixed income and prefer to be close to shops and services. Conversely, residents of the Mudgeeraba area tend to be younger with families at home, a mortgage and a preference for a more rural lifestyle. While such imbalances are typical of most cities, changes in these costs may indicate significant trends which can indicate areas of potential social decline and increased pressure on the environment.

9.3.4 Housing

Housing or shelter is also fundamental to a healthy society. In comparison to Queensland and Southeast Queensland (SEQ), there are more people renting houses on the Gold Coast (Table 9.2). This statistic may change over time as affordability of houses increases. Over the last six years the median price paid for houses (including units) on the Gold Coast has fallen by comparison with other local government areas in Queensland (Table 9.3). Houses on the Gold Coast are now similarly priced to those in similar areas such as Noosa and Cairns.

While more people rent and housing has become more affordable, there are important differences in the type of housing used on the Gold Coast. Southern Regional Organisation of Councils (SouthROC) is comprised of the Cities of Gold Coast and Logan and the Shires of Redland and Beaudesert. The Gold Coast has the largest population of these local government areas and so data for SouthROC is indicative of that for the Gold Coast. SouthROC has proportionally fewer separate houses than SEQ or QLD but has many more semi-detached or townhouse style dwellings (Table 9.4).

9.3.5 Energy

World energy requirements in 1990 were estimated to have increased approximately 2.5 times than that required in 1960. Approximately three-quarters of this energy comes from non-renewable fossil fuels such as oil, coal, and natural gas (in order of predominance).

Table 9.1: Average weekly household expenditure ($ per week) for Gold Coast statistical sub regions by broad commodity groups for 1996
(Source: ABS, Auspend 1993, customised data 1996)

Sub Region	Beenleigh	Yatala	Coomera	Southport	Nerang	Coast Central	Mudgeeraba	Burleigh	Coolangatta	Total Gold Coast
Current House Costs	102.13	99.91	92.98	85.18	95.82	87.03	97.18	79.18	78.32	**615.69**
Fuel & Power	12.25	13.98	13.94	11.31	13.68	11.15	15.22	11.62	8.54	**85.46**
Food & Non-Alcoholic Beverages	110.92	124.06	116.68	98.37	115.52	101.36	124.9	99.32	80.6	**736.75**
Alcohol	16.01	20.01	21.11	19.98	21.53	21.71	21.94	19.48	17.94	**143.69**
Tobacco	13.74	12.91	12.32	11.94	12.85	11.49	12.86	11.57	11.17	**84.2**
Clothing & Footwear	29.53	34.47	28.74	23.09	28.8	24.61	31.86	23.06	16.06	**176.22**
Household Furniture & Equipment	37.6	45.18	44.21	34.63	43.24	35.5	47.81	35.13	24.54	**265.06**
Household Serv. Ops.	32.1	35.79	35.18	29.64	34.66	29.41	37.69	29.89	24.07	**220.54**
Medic care & Health Expenses	24.963	32.86	31.94	26.07	30.99	27.2	34.37	26.93	20.39	**197.89**
Transport	90.84	118.28	112.15	91.41	110.28	94.11	121.05	90.75	67.56	**687.31**
Recreation	77.13	95.42	91.69	78.44	90.69	84.98	98.04	77.36	62.57	**583.77**
Personal care	11.57	13.36	13.13	11.45	13.18	12.04	14.02	11.45	9.25	**84.52**

Table 9.1 Continued

Sub Region	Beenleigh	Yatala	Coomera	Southport	Nerang	Coast Central	Mudgeeraba	Burleigh	Coolangatta	Total Gold Coast
Miscell. Goods & Services	19.8	59.45	51.82	41.63	51.21	45.39	56.82	40.36	30.52	**317.75**
Sub total Consumption Expenditure	**589**	**696**	**674**	**571**	**671**	**596**	**723**	**563**	**458**	**4256**
Income Tax	94.73	152.9	144.71	108.83	145.36	138.06	164.25	100.11	66.8	**868.12**
Mortgage Repayments	25.74	27.76	30.09	13.27	29.21	9.76	35.49	13.69	1.52	**133.03**
Other capital House Costs	29.3	37.1	38.36	26.65	36.15	28.26	41.24	27.73	18.63	**217.02**
Superannuation & Life Insurance	16.6	27.45	25.61	17.11	25.1	19.5	29.63	16.58	8.04	**141.57**
Sub total Selected Other Payments	**170**	**248**	**243**	**168**	**238**	**195**	**274**	**163**	**97**	**1378**
Total Household Expenditure	**761**	**947**	**921**	**738**	**911**	**790**	**1002**	**725**	**549**	**5636**
Number of Households	**8399**	**2132**	**5021**	**21697**	**11848**	**21786**	**3386**	**22064**	**2000**	**87802**

This rate of consumption will exhaust known reserves in around 40 years for oil, 300 years for coal and 60 years for natural gas. Developed countries consume more than two thirds of the world's energy but have only one third of the World's population.

Table 9.2: A comparison of the proportion of households renting dwellings for SEQ and some component local government areas
(source: Gold Coast City Council, City Projects analysis of Australian Bureau of Statistics and other data)

Area	Households Renting	Total	% Renting
Beaudesert	1722	10733	16
Gold Coast	29192	95415	30.6
Logan	11202	41793	26.8
Redland	4473	25425	17.6
SEQ	161613	602779	26.8
QLD	267341	944891	28.3

Table 9.3: Median house prices for selected Queensland local government areas from 1990 to 1996
(source: Gold Coast City Council, City Projects analysis of Australian Bureau of Statistics and other data)

Local Government Authorities	1990	1991	1992	1993	1994	1995	Mar-96
Brisbane	$131,142	$135,888	$145,028	$155,245	$160,242	$144,500	$143,500
Cairns	$123,924	$115,767	$130,353	$142,693	$162,127	$158,875	$152,000
Caloundra	$113,713	$123,713	$129,569	$136,569	$150,659	$142,875	$148,500
Gladstone	$72,786	$83,671	$90,980	$101,071	$110,739	$107,000	$112,000
Gold Coast	**$183,230**	**$167,829**	**$169,635**	**$173,677**	**$183,121**	**$162,125**	**$159,500**
Hervey Bay	$96,129	$98,129	$103,010	$109,484	$113,015	$108,625	$113,500
Logan	$92,470	$92,470	$104,574	$110,177	$113,037	$103,375	$105,000
Maroochy	$115,402	$115,402	$126,221	$132,376	$145,500	$142,000	$137,500
Noosa	$133,180	$133,180	$135,041	$155,033	$177,149	$171,250	$150,000
Rockhampton	$66,614	$66,614	$93,999	$103,302	$104,793	$92,250	$95,000
Townsville	$88,798	$88,798	$104,502	$112,754	$131,135	$119,875	$118,000

Table 9.4 : Number and type of dwelling in Queensland (QLD), Southeast Queensland (SEQ) and SouthROC (S'ROC)
(source: Gold Coast City Council, City Projects analysis of Australian Bureau of Statistics and other data)

Dwelling	S'ROC	S'ROC %	SEQ	S'ROC as % of SEQ	QLD	S'ROC as % of QLD
Separate House	141381	73.7	510379	27.7	810188	17.5
Semi-detached, row or terrace house, town house etc	15852	8.3	27665	57.3	40737	38.9
Flat or apartment	26795	14.0	83957	31.9	113742	23.6
Caravan etc. in caravan park	5416	2.8	13627	39.7	31768	17.0
Other	1071	0.6	3622	29.6	14604	7.3

Not Stated	1380	0.7	3987	34.6	6688	20.6
Total	191895	100.0	643237	29.8	1017727	18.9

In Australia most energy used comes from oil and then black coal. It was estimated that Australia consumes around 3962.2 petajoules (PJ=joules x 10^{15}) each year. Transport (1168 PJ), manufacturing and electricity generation are the major energy consumers.

Energy Intensity (EI) calculates the ratio energy consumption to the gross domestic product in Joules/$. Australia's EI has fallen, due to improvements in efficiency, from 17.06J/$ in 1974 to 15.57 petajoules/billion dollars in 1990-91 (DPIE 1992).

Most of the energy used on the Gold Coast comes from outside the City. For example the Southeast Queensland Electricity Board (SEQEB) converts the energy in coal into electricity at its Gladstone and Tennyson plants for distribution to Southeast Queensland, including the Gold Coast. In 1994 there were 31,012 Gwh of electricity produced for Queensland as a whole.

Unfortunately, energy data are not collected below the State, and sometimes National, level. Consequently, there are no accurate energy data specific to the City of Gold Coast. Similarly there are no data on the foods consumed by the population and visitors.

Nonetheless, it is possible to establish estimates of per capita energy consumption and energy intensity for the Gold Coast which can be used as initial benchmarks for the City. The per capita energy consumption of Australia provides an estimate of the per capita energy consumed in the City. In 1994 Australia used some 4174.s PJ (ABS Energy Accounts for Australia 1996) with a population of 17,843,300 (McLennan 1996). This translates to 2.3×10^{-4} PJ per capita, which for the 356,000 (approx.) residents of the Gold Coast is 82 PJ for the City as a whole. Hence, the energy intensity (EI) for the Gold Coast can be estimated from this data and the gross regional product of Raybold (1996). The EI for the City is then 17 PJ/$B, which is nearly twice that of the rest of the nation which is 9 PJ/$B (DPIE, pers. com.). These data indicate that the Gold Coast consumes twice as much energy as the rest of Australia for every dollar generated.

9.3.6 Transport

The transport systems of a community are fundamental to its economy, but also directly affects the quality of its residents' lives.

Each Gold Coast resident makes an average of 3.5 trips per day, which means that over 12 million trips are made each day in the City. Many of these trips are below 10km. Table 9.5 shows the different methods chosen to get to work by Gold Coast Residents and demonstrates the higher dependence on cars of Gold Coast residents than for those of the rest of Queensland. Car occupancy rates on the Gold Coast are currently 1.3 persons per vehicle per trip and declining.

Surveys have shown that traffic on the City's main roads is growing at around 4.3% a year and that travel times are increasing by 2.6% per year from 13 minutes for the average 9km trip. By the year 2011, over 1.8 millions trips will be made in the City and the average travel time is forecast to blow out to 75 mins for a 14km trip. This translates to an average speed of only 11km/hr.

Table 9.5: Mode of travel to work by employed persons in the City of Gold Coast
(Derived from ABS census 1991 data, Table E26 usual residents counted at home on census night)

Mode of travel	Gold Coast % of persons	Queensland % of persons
Train	0.5	2.2
Bus	1.4	2.6
FerryTram	0.0	0.1
Taxi	0.4	0.3
Car as driver	61.1	54.4
Car as passenger	7.1	8.2
Motor bike/scooter	1.0	1.5
Bicycle	2.0	2.0
Walked only	3.8	58.5
Other	1.4	1.5
Worked at home	5.6	6.5
Did not go to work	8.9	8.5
Not stated(c)	4.6	4.4
Total	**98.7**	**97.6**

Currently traffic flows on the Gold Coast are acceptable for most times of the day and for most times of the years. Table 9.6 describes the nature of injuries sustained between 1993 and 1995. These data indicate that number of fatal accidents has remained relatively stable and is consistent with the figures for Queensland as a whole. Similarly there appear to be no consistent trends in the number hospitalised, requiring medical treatment only or suffering minor injury, or property damage only. Consequently there is no significant change in the total number of accidents on the Gold Coast or in Queensland. This is in the face of increasing levels of population and traffic.

Table 9.6: Number and severity of transport related injuries for Gold Coast and Queensland
(Source: Queensland Department of Transport)

Severity	1993				1994				1995			
	Gold Coast		Queensland		Gold Coast		Queensland		Gold Coast		Queensland	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Fatal	40	2	357	2	45	3	368	2	36	2	408	2
Hospitalised	380	21	3,203	16	395	22	3,611	17	327	20	3,574	17
Medical Treatment	415	23	4,170	21	410	23	4,469	21	404	24	4,732	23
Minor Injury	173	9	2,169	11	185	10	2,466	12	232	14	2,750	13
Property Damage	818	45	9,666	49	751	42	9,907	48	651	39	9,529	45
Total	**1,826**	**100**	**19,565**	**100**	**1,786**	**100**	**20,821**	**100**	**1,650**	**100**	**20,993**	**100**

9.3.7 Visual pollution

Visual pollution is commonly an issue adjacent to major traffic routes and within the tourist strip. Visual pollution is also emerging as an issue in the hinterland as the evidence of urban development becomes more conspicuous on hills and ridges. However, there are no

quantitative data on visual pollution and objective indicators are difficult to identify for this area.

9.3.8 Human health

Human health can be a direct measure of the impact of a poor environment on the quality of life. However, there are a number of other influences on health statistics that are not related to the physical environment but are more related to behaviour. Consequently, extrapolation from this data to environmental changes may be quite tenuous.

Within the region as with the rest of Queensland the top five major causes of death are similar, although they differ in ranking as shown in Table 9.7. Most of these causes of death are related to lifestyles such as exposure to the sun, diet, smoking and level of exercise. It is difficult to draw too many conclusions from these data due to the large population growth experienced in the region over the last 20 years. Hence many of the residents have moved to the coast from other areas often already affected by illness.

Consequently, health statistics for the region are not as reliable an indicator of environmental degradation as they might otherwise be. Nonetheless they are still useful to note. In comparison to Queensland the rates of death from diseases of the circulatory system, cancer and diseases of the digestive system are lower in the South Coast region. Conversely, the rates of death from diseases of the respiratory system and accidents, poisonings and violence are marginally higher in the South Coast region as compared to Queensland

Table 9.7: The top five causes of death for Queensland and the South Coast of Queensland.
(Source: South Coast Regional Health Authority 1996)

Rank	Queensland	South Coast
1	Diseases of the circulatory system	Diseases of the circulatory system
2	Cancer	Cancer
3	Diseases of the respiratory System	Accidents, poisoning and violence
4	Accidents, poisoning and violence	Diseases of the respiratory System
5	Diseases of the digestive system	Diseases of the digestive system

The South Coast region has lower male mortality rates than for males in Queensland overall. This is the case for nearly all categories. The difference is greatest for diseases of the circulatory system. For men in both Queensland overall, and in the South Coast region, the two major causes of death were diseases of circulatory system and cancer.

The top five causes of death are the same for women on the South Coast region and for women in Queensland in general. In comparison to death rates for men, the death rate for women is substantially lower (between 25% and 65%) within both Queensland and the South Coast region for all the top five causes of death.

Mortality rates are kept for the South Coast Regional Health Regions by cause of death. The mortality rate per 100,000 people on the Gold Coast is given in Table 9.7. Physical injury is listed third in the table.

The Queensland Department of Health recently completed a study titled "An Epidemiological Profile of Injury Mortality and Morbidity, Brisbane South and South Coast Health Regions"

(QDH 1996). This study provides significant detail as to the age demographics of injury related deaths.

For people between the ages of 1 and 34 injury accounted for 53% of all deaths in the South Coast region, for people aged between 15 and 24 years injury accounted for 80% of all deaths. Males and females in the 15 - 24 yrs age group had the highest proportion of all deaths due to injury when compared to other age groups. Injury death rates for males were 2 to 3.5 times higher than females in the 15 to 64 year age group. There was no significant difference between males and females in the 0 to 14 year age group. Falls were the leading cause of injury related death among people over 75 years old (QDH 1996).

Suicide was the leading cause of injury related death followed by motor vehicle accidents. Accidental drowning was the leading cause of death among chidden aged 0 to 4 yrs. Data indicated that low socio-economic status is associated with elevated injury mortality. This association was particularity strong for suicide and homicide cases (QDH 1996).

Table 9.8: Mortality rates per 100,000 head of population per year for the South Coast region of Queensland.
(Source: An epidemiological profile of injury mortality and morbidity, Brisbane South and South Coast Heath Regions, Queensland Health Department)

Rank	Cause of death	Rate per 100,000 population per year
1	Diseases of the circulatory system	270.4
2	Neoplasms	163.8
3	Accidents, poisoning and violence	46.8
4	Diseases of the respiratory system	46.3
5	Diseases of the digestive system	18.3
6	Endocrine, nutritional and metabolic diseases and immunity disorders	13.5
7	Diseases of the nervous system and sensory organs	13.2
8	Diseases of the genito-urinary system	9.6
9	Mental disorders	8.1
10	Infectious and parasitic diseases	4.5
11	Congenital abnormalities	4.1
12	Diseases of the musculo-skeletal system and connective tissue	4.0
13	Symptoms, signs and ill defined conditions	3.5
14	Certain conditions originating in the perinatal period	3.2
15	Diseases of the blood and blood forming organs	1.9
16	Diseases of the skin and the subcutaneous tissue	0.8
17	Complications of pregnancy, childbirth and the puerperium	0.0

Epidemiology is the study of diseases and their spread in a population. In Queensland hepatitis and venereal diseases were the most common types of notifiable infectious diseases in 1994 (Crockett 1996, p74.).
Morbidity describes the rate of infection or injury while mortality discusses the number of actual deaths. Hospital admissions are a useful set of data that help describe the epidemiology and morbidity of a range of diseases and illnesses.

The following dot points summarise the data:

- Injury accounted for more than 11% of hospital admissions in Brisbane South and South Coast Health Regions. The statistics for injury morbidity reflect those of mortality. For example, twenty eight percent of patients between the ages of 10 and 14 years were admitted due to injury. Twice as many men than women are admitted to hospital due to injury for people between the ages of 10 and 34 years.
- Falls are the leading cause of hospital injury admissions for the elderly.
- Motor vehicle traffic accidents and poisoning were the next highest causes of injury related hospital admissions.
- Poisoning is the highest cause of hospital admission for children under 4 years of age.
- Data indicate that low socio-economic status is associated with elevated injury rates for hospital admissions. This association was particularly strong for hospital admissions due to poisoning, self inflicted injury and injury inflicted by others.

9.3.9 Heritage

The land, landscapes and buildings of the Gold Coast are considered of cultural heritage value to all residents and include sites and buildings from the City's earliest history to its present state. These aspects depict the diversity of cultural heritage that are unique to the Gold Coast While lists of heritage sites are not considered an effective way to preserve the heritage and character of an area (Gold Coast City Council 1996), they do provide a first step in identifying elements of heritage and character.

9.3.9.1 Aboriginal heritage

The number and range of specific aboriginal cultural sites is poorly documented and only some are known such as the bora ring at Burleigh Heads and the middens on South Stradbroke Island. Table 9.11 lists the known sites of aboriginal cultural or archaeological significance for the City. This list is recognised to be incomplete.

Table 9.9: Sites of known Aboriginal or archaeological significance in the City of Gold Coast. (Source: Queensland Museum, Albert S.C. (1995) p5.15, Gold Coast City Council (1991) p126)

Nature of site	Site
Aboriginal Cultural and Archaeological Significance, as considered by the Queensland Museum	• Rock shelter and occupation deposit, (Numinbah border gate, freehold and National Park) • Middens on South Stradbroke island ⇒ Ocean side (Crown lease) ⇒ Western side (Crown lease) ⇒ Tipplers Passage (Reserve 640) • Middens on mainland ⇒ Logan River (Freehold) ⇒ Hope Island (Freehold) ⇒ Coomera River (Freehold) ⇒ Lake Coombabah (Freehold) ⇒ Tallebudgera Ck. ⇒ Burleigh Headland • Bora Rings and Camping Grounds ⇒ Cascade Gardens (Camping Ground now parkland) ⇒ Miami Bora Ring (Park) • Localities with Aboriginal names ⇒ Coombabah ⇒ Tallebudgera ⇒ Currumbin ⇒ Kirra

9.3.9.2 Post-European heritage

European settlement of the Gold Coast has had a much shorter association with the area and many of the original landmarks and buildings have been replaced or altered. Never the less, there are 11 buildings and 12 sites listed as having heritage value by either the National Trust or the State Heritage Register. This list is provided in Table 9.12. More detail on the urban heritage and character of the City can be found in the Urban Heritage and Character Study (Gold Coast City Council 1997).

Table 9.10: Sites of non-Aboriginal cultural heritage and significance in the City of the Gold Coast (source: Gold Coast City Council 1996)

Heritage agency	Site
The National Trust	• Burleigh Heads National park • Currumbin Sanctuary • The former Pacific Cable Station (Southport) • St George's Anglican Church (Beenleigh) • Lutheran Church (Bethania) • Nichol's Scrub (Currumbin) • Uniting Church (Nerang) • Springbrook National Park (Gwongorella National Park, Natural Bridge National Park, Mt Cougal National Park, Warrie National Park) • Cedar Creek National Park • Pimpama and Ormeau War Memorial (Pimpama) • Joalah National Park • Palm Grove National Park • Tomewin National Park
The State Heritage Register (including nominated sites)	• St Georges Anglican Church (Beenleigh) • Lutheran Church (Bethania) • Main Beach Pavilion • Southport Surf Lifesaving Club (Main Beach) • Pimpama and Ormeau War Memorial (Pimpama) • Southport Bathing Pavilion • Southport City Chambers • Southport Drill Hall • Old Tallebudgera post Office • West Burleigh Township
The Register of the National Estate	• Drainage channels/ Flood plain • Sugar mills etc. • sawmills • dairies • early farms / farm buildings • rural landscapes / views • local government building (Mudgeeraba) • 1940's / 1950's beach houses • 1960's buildings, including highrise • beach architecture • introduced planting / public • canal estates • the beach • headlands and estuaries • long views / highrise • hinterland views

9.4 Pressure

9.4.1 Population and growth rates

The growth rate of the City is relatively high at around 2.8% and represents an extra 10,000 people each year moving to the Gold Coast. However, not all areas of the Gold Coast are growing at the same rate. This is because some older areas are established in a current landuse pattern and little redevelopment to higher density living is occurring.

Other areas have a high proportion of new subdivisions and also have high growth rates as new homes are built on the vacant blocks. Other areas are undergoing some form of urban renewal where higher density living is being promoted in older, established areas that are close to work or recreation. Conversely, negative growth in established areas can also occur.

From a natural environment perspective the growth in the new suburbs often comes at the expense of remaining bushland, or farmland. From a social point of view overcrowding in poorly designed developments in urban areas can lead to increased levels of crime and loss of amenity and quality of life. For different reasons significant decline in population in areas can also lead to declining quality of life and amenity. Table 9.12 presents the growth rates of each SLA since 1991.

9.4.2 Ratio of tourists to residents

Estimates of the number of tourists average at around 45,000 visitors per day. This figure does not count day-trippers which may be equivalent to a similar number of full-time residents. These figures indicate that for much of the year at least one person in ten on the Gold Coast is not a resident. Tourist to resident ratios of this magnitude are considered high by world standards and can lead to tension between residents and tourists. If day-trippers are included, this ratio may fall to around 1 in 5. At peak holiday times the ratio may fall further to around 1 visitor to 3 residents. While these data are only estimates they are indicative of the scale and nature of the potential problem.

9.4.3 Age and sex ratios

The age structure of the Gold Coast differs from that of Queensland. There are proportionally fewer people under 40 living on the Gold Coast and proportionally more people older than 40. Table 9.11 below presents data on the age structure of the Gold Coast compared to Queensland for 1991 and 1995.

Table 9.11: Changes in age ratios for the City of Gold Coast (CoGC) and Queensland between 1991 and 1995 (Source: Taylor 1996a)

Area	% 0-14 Years		% 15-64 Years		% 65+ Years	
	1991	1995	1991	1995	1991	1995
CoGC	20.0	19.5	66.2	66.2	13.8	14.2
QLD	23.1	21.9	66.1	66.8	10.8	11.3

There is expected to be significant growth in population up till the year 2011, with the population expected to increase by as many as 243,000. While there will be increases in all age groups, there will be largest increases in the age groups over 40.

The proportion of people under 14 will fall to around 18.2%; the proportion of people between 15 and 64 will increase to 67.6%. There will be little change in the proportion over the age of 65 Years. There are approximately the same proportion of males to females on the Gold Coast.

9.4.4 Service needs for age groups by location

The distribution of age groups by location in the City show some general trends. Firstly, there is a high proportion of older people (65+ years old) living along the coastal strip between Coolangatta and Labrador. The suburbs adjacent to these areas also carry a high proportion of older residents. Conversely, there is a higher proportion of children (19 years or under) in the hinterland and adjacent suburbs than along the coast. These groups require different services and levels of service. However, both can have difficulty in gaining access to services due to age or lack of transport. The level of service for public transport is higher and the proximity of services is greater for residents along the coastal strip. This is due to the greater density of people along the strip. However, while the proportion of children is greater in the hinterland the level of service and provision of services is lower due to the lower population densities of the area and the greater reliance on private transport. Figure 9.1 shows the level of disadvantage across the City as estimated from combinations of ABS data (Taylor 1997 in prep.)

9.4.5 Population density

Population density can indicate overcrowding and the potential for unsafe or unhealthy conditions. Overcrowding can also lead to social unrest and an increase in violence. While densities on the Gold Coast are relatively low and all areas are provided with adequate clean drinking water and sanitation these data are currently more useful as benchmarks. Table 9.12 presents the density of each of the 46 statistical local areas of the Gold Coast. These data are graphed in Chapter 2. The highest population densities exist near to the ocean beaches. These densities grade from around 2000 persons/ha or higher, to less than 100 persons per ha in the hinterland areas in the extreme west of the City and in the north. These lower densities coincide with the large ares of remnant vegetation. While there is some evidence of increased violence with increasing density, this is not clear and overall rates for the Gold Coast are not excessive (ABS 1994, Gold Coast Region A Social Atlas 1991 census). Figure 9.2 shows the population density in each statistical local area of the City.

9.4.6 Crime

With the exception of Surfers Paradise, Broadbeach, and Southport, the Gold Coast does not suffer any greater level of crime than the rest of Southeast Queensland (Gum et al. 1997, p122). On the Gold Coast most crimes were reported in the Surfers Paradise area (7,564 in 1995, Qld Police Service), whereas fewest crimes were reported in Neranwood (2 in 1995).

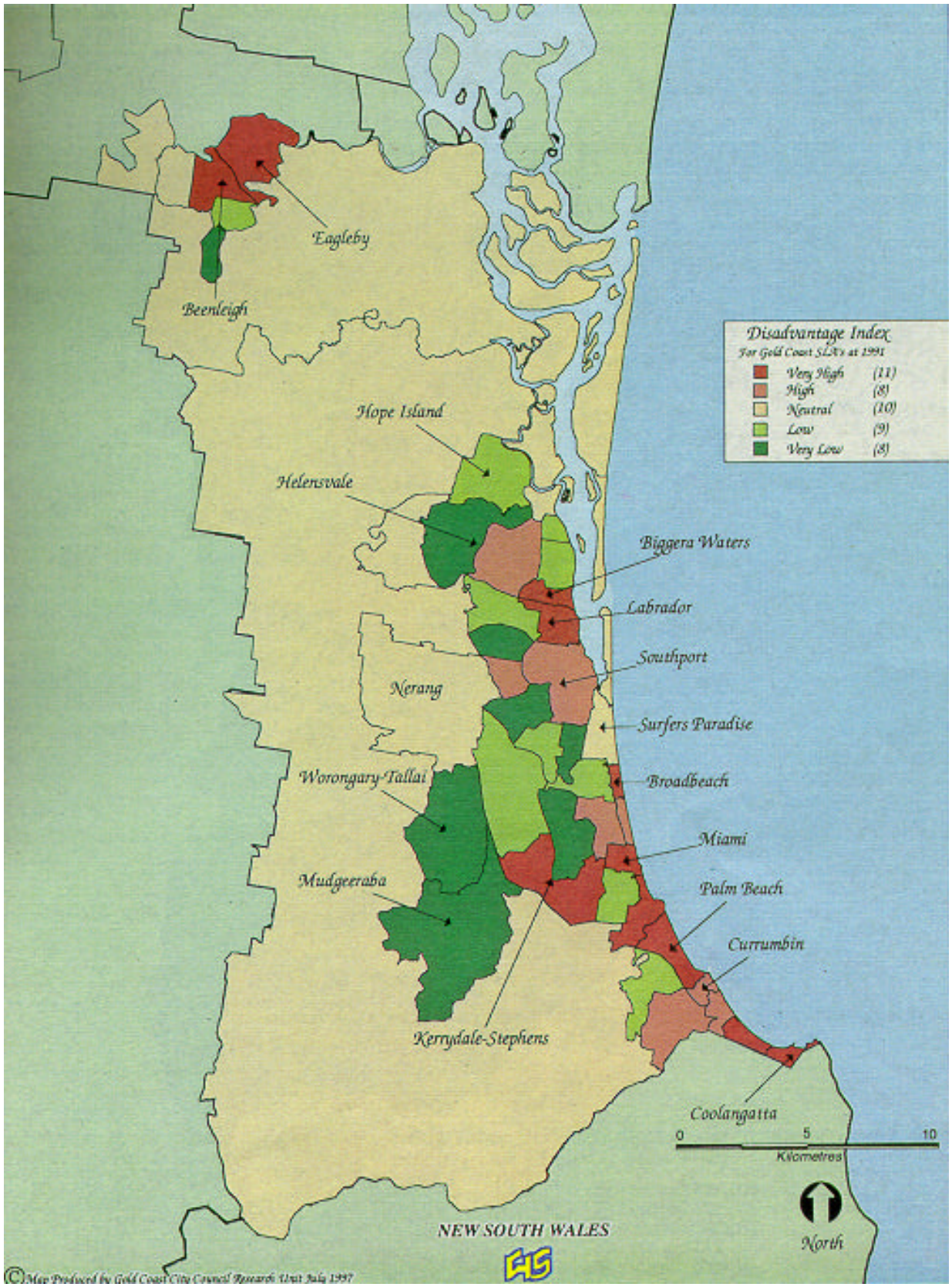

Figure 9.1 Index of disadvantage for statistical local areas of the City of Gold Coast (Source: Taylor 1997 in prep.)

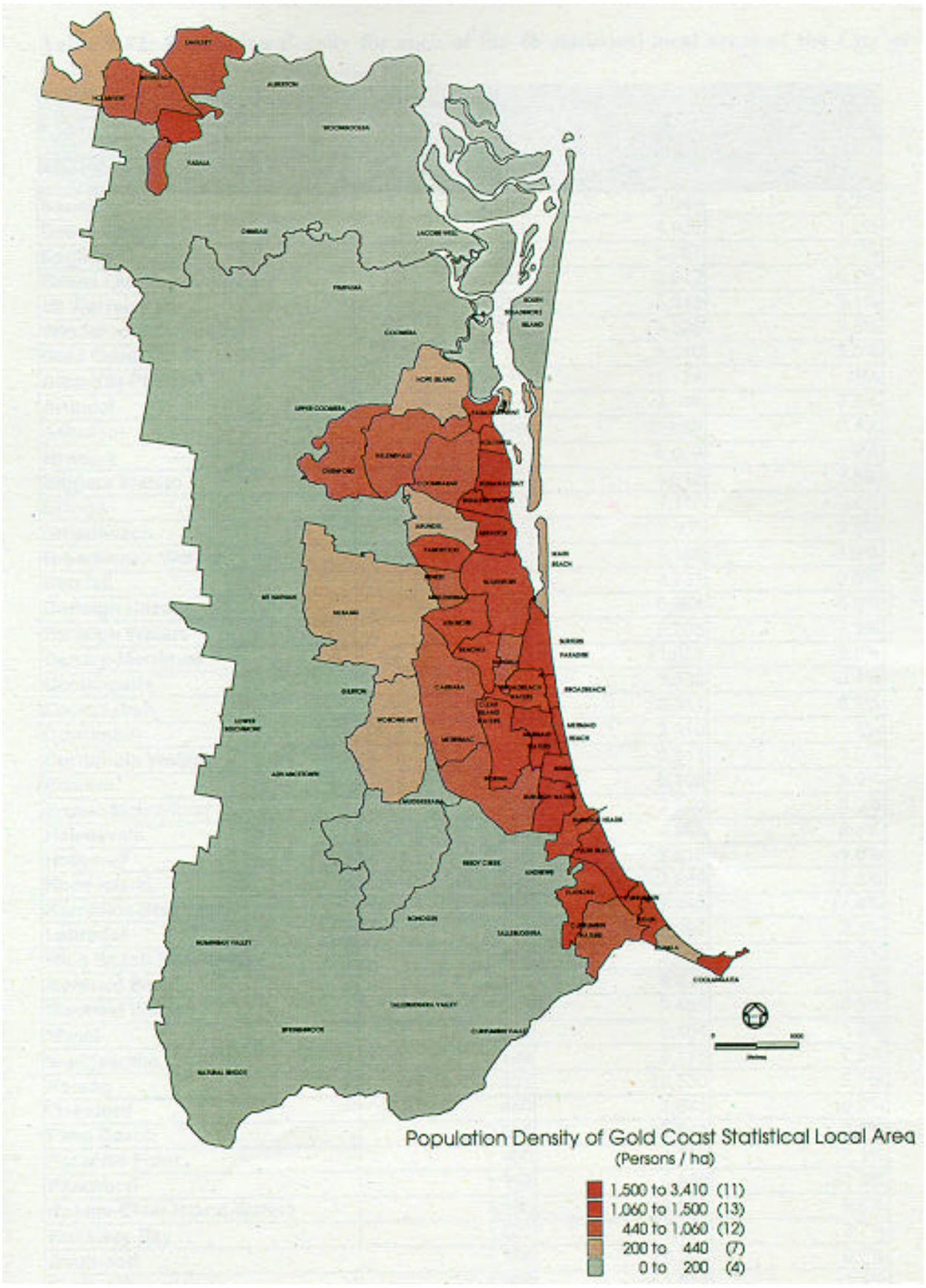

Figure 9.2: Population density of statistical local areas of the City of Gold Coast
(Source: ABS Census 1991)

Table 9.12: Population density for each of the 46 statistical local areas of the City of Gold Coast (Source : ABS publication 3201.3)

Statistical local areas	Population density (persons /km^2)	Estimated residential population 1996	Growth rate (%)
Beenleigh	1,006	8,044	0.2%
Bethania/Waterford	381	4,952	1.2%
Eagleby	626	8,767	2.2%
Edens Landing-Holmview	559	3,912	14.7%
Mt Warren Park	1,253	5,013	3.1%
Windaroo-Bannockburn	775	2,326	9.8%
Gold Coast (C) Bal. in BSD	37	8,010	8.0%
Albert(S)-Pt.B Bal.	19	19,724	N/A
Arundel	411	3,696	7.3%
Ashmore	1,498	10,488	0.4%
Benowa	1,212	6,059	2.9%
Biggera Waters	1,637	4,912	2.8%
Bilinga	370	1,110	-0.4%
Broadbeach	3,405	3,405	0.8%
Broadbeach Waters	1,198	7,186	-1.0%
Bundall	933	3,731	-0.6%
Burleigh Heads	1,061	6,364	0.0%
Burleigh Waters	1,539	9,236	2.9%
Carrara-Merrimac	507	11,653	8.0%
Coolangatta	1,769	3,538	-0.4%
Coombabah	485	6,311	8.5%
Currumbin	1,255	2,510	1.3%
Currumbin Waters	756	8,311	3.0%
Elanora	1,139	9,108	5.9%
Ernest-Molendinar	745	2,980	3.0%
Helensvale	588	9,998	8.6%
Hollywell	1,258	2,515	-1.0%
Hope Island	206	2,889	12.8%
Kerrydale-Stephens	465	7,440	17.4%
Labrador	2,225	13,351	2.4%
Main Beach-Broadwater	429	3,000	3.0%
Mermaid Beach	2,310	4,620	1.1%
Mermaid Waters	1,578	9,465	-0.6%
Miami	1,818	5,454	1.5%
Mudgeeraba	199	8,175	7.5%
Nerang	407	19,530	5.7%
Oxenford	440	7,043	19.9%
Palm Beach	2,096	12,574	-0.1%
Paradise Point	1,400	4,199	0.1%
Parkwood	1,164	6,986	31.3%
Robina-Clear Island Waters	1,185	13,031	9.6%
Runaway Bay	1,573	7,864	3.7%
Southport	1,356	20,344	0.7%
Surfers Paradise	1,969	11,814	-1.3%
Tugun	1,189	3,566	0.0%
Worongary-Tallai	310	7,745	5.0%
Total GCCC Area	**250**	**342,949**	**4.0%**

The balance of the 12 most crime effected areas are Southport, Broadbeach, Beenleigh, Palm Beach, Labrador, Burleigh Heads, Nerang, Eagleby, Coolangatta, Main Beach and Mermaid Beach. These areas represent one third of the Gold Coast's population and suffer nearly 70 of all reported crime on the Gold Coast.

Table 9.13 describes the trends in crime between 1991 and 1995. Over this period there has been an increase in crimes against the person, mainly arising from an increase in the number of assaults. There has also been a smaller increase in the number of crimes against property, and in offences overall. However, these increases are consistent with population growth over the period and do not suggest an increase in the level of per-capita crime.

Table 9.13: Crimes recorded in the Gold Coast police district between the time 1991 and 1995 (Source: Queensland Police Service Data)

Offence category	1991	1992	1993	1994	1995
Homicide	21	21	25	21	18
Assault	1124	1175	1324	1344	1322
Sexual Offences	236	251	306	216	307
Robbery	164	210	224	233	209
Extortion	6	12	20	24	11
Kidnapping and Abduction	25	27	73	58	28
Other Offences Against the Person	40	60	85	191	205
Total Offences Against the Person (GC)	**1616**	**1756**	**2057**	**2087**	**2100**
Breaking and Entering	8081	7360	8104	6665	7609
Arson	129	115	149	138	149
Other Property Damage	3069	3603	4173	4829	5280
Motor Vehicle Theft	2744	2496	2667	2829	3347
Stealing	12522	13199	12227	12279	13613
Fraud	1741	2175	1953	1657	2321
Other Offences Against Property	23	25	34	31	39
Total Offences Against Property (GC)	**28309**	**28973**	**29307**	**28428**	**32358**
Handling Stolen Goods	292	501	331	283	347
Drug Offences	1531	2776	2943	3346	2747
Prostitution Offences	19	53	92	99	8
Liquor Offences (excluding drunkenness)	185	24	18	88	126
Racing and Betting Offences	0	0	0	0	1
Gaming Offences	1	0	1	0	10
Vagrancy Offences	18	20	27	15	14
Good Order Offences	600	908	1867	1330	1461
Stock Offences	2	0	0	0	0
Driving Offences	3534	3488	3340	3463	2918
Miscellaneous Offences	704	795	715	770	852
Total Other Offences (GC)	**6886**	**8565**	**9334**	**9394**	**8484**
Total Offences (GC)	**36811**	**39294**	**40698**	**39909**	**42942**

Disadvantage, in social terms, describes the sum of unfavourable circumstances of a person. This concept can be extended to suburbs and localities by deriving an index of disadvantage from census data.

Taylor (1997) does this for the Gold Coast and the top twelve crime areas identified above also correlate reasonably closely with the twelve most disadvantaged areas of the Gold Coast. There are exceptions to this, for example, Surfers Paradise, Nerang and Main Beach are not ranked as strongly disadvantaged, while Bilinga, Kerrydale-Stephens, Biggera Waters are. There is also an area within Nerang that is ranked as being disadvantaged.

9.5 Responses

9.5.1 Gold Coast City Council responses

There are a number of responses that the Gold Coast City Council is involved with including:

- **Economy:** Moves to attract appropriate industries to the Gold Coast that will compliment the areas and diversify the economic base of the area.
- **Human Health:** The development of a community health plan that seeks to address the diverse needs of the residents of the City.
- **Heritage:** The Urban Heritage and Character Study, Gold Coast City Council (1997), identified and described the urban heritage and character of the Gold Coast and is seeking to develop indicators for heritage.
- **Transport:** The development of a transportation plan for the city in conjunction with the integrated transportation plan for SEQ. This plan seeks to address the issue of travel times and transportation by increasing the level of use of public transport by 6%.

In response to service needs by age and location, the Council provides a mobile library service to more remote areas of the City and to areas of the City with a high proportion of elderly residents. The Council also maintains a number of branch offices to place services close to residents to reduce the need to travel into either of the two main offices.

9.5.2: Community responses

In addition to the Council, residential welfare establishments in Queensland also provide organised substitute living arrangements to maintain a basic level of health and well being for those people who are not fully capable of looking after themselves eg, the aged, the handicapped and the mentally ill. A number of these residential welfare establishments are run by the State Government while others are run by church, charitable and community organisations - a large proportion receive funds from Government either Federal or State. The types of establishments are:

⇒ Substitute family or home care;
⇒ Hostel care;
⇒ Accommodation only;
⇒ Non residential welfare services; and,
⇒ Day care and drop-in services.

9.5.3 State and Federal Government responses

Commonwealth and State Governments, under the Home and Community Care (HACC) program, are developing a comprehensive range of integrated housing and community care services for the frail and elderly clients and their carers and younger disabled clients who wish to remain in the community.

The program aims to prevent the premature or inappropriate admission of these people into long-term care. HACC funds the following types of activities and services:

⇒ home help and personal care;
⇒ home maintenance and modifications;
⇒ food services;
⇒ community respite care;
⇒ transport;
⇒ community care paramedical services;
⇒ domestic nursing services.

9.5.4 Energy

There have been a total of 534 solar hot water systems installed in existing and new homes on the Gold Coast since March 1995 till May 1996. This was part of the State Government's Energywise program which offered a cash-back subsidy system to encourage the use of solar energy. These numbers are minimal in comparison with the number of existing and new homes on the Gold Coast.

There has been a steady increase in the consumption of energy via natural gas on the Gold Coast. Data from Allgas show an increase from 16,000 GJ in 1989/90 to 721,000 GJ in 1995/96. This is in response to the price and efficiency of gas as a form of energy.

9.6 Conclusions and future responses

It is difficult to draw accurate conclusions regarding the state of the City's social and economic environment based on these data. This is because there is no clear model as to an ideal Gold Coast and the interpretation of the available social data is very subjective. However, these data do provide a benchmark as to the basic state of the City's social and economic framework. One clear requirement for the next report is the need to include the number and range of Aboriginal heritage sites within the City, based on Department of Environment records, to enhance the heritage section of the report.

Nonetheless, some conclusions can be drawn. Firstly, if the data are correct, for every dollar generated on the Gold Coast twice as much energy is consumed (17PJ/$B) compared to the Australian average of 9 PJ/$B. Secondly, the per capita gross regional product is half that of Queensland as a whole and income levels are lower while the combined cost of living and accommodation may be higher. For most other indicators the Gold Coast appears similar to Queensland and Australia. These data suggest the need for the City to review its energy usage and to encourage energy efficiency in its practices. Further, the City needs to consider the range and types of industries in the City so that people's attitude to the greater environment can be maintained and improved.

Finally, there is a need for a better understanding of how these data and the community relate. For example, many of these data suggest significant levels of disadvantage in some areas, but this may not be the case. Hence a community attitudes survey is proposed which seeks to obtain detailed attitudinal information on the community of the Gold Coast.

9.7 References

ABS (1994) *Environmental Issues: People's Views and Practices*, Australian Bureau of Statistics, Catalogue no 4602.0

Albert S.C. (1995) *Planning Studies,* Albert Shire Council

McLennan, W. (1996) *Australian year book,* Australian Bureau of Statistics

Crockett, R.A. (1996) *Queensland Year book,* Australian Bureau of Statistics

DPIE (1992), *National Energy Management*, Department of primary Industries and Energy

Gold Coast City Council (1991) *People, Places and Planning*, Gold Coast City Council

Gold Coast City Council (1997) *Urban Heritage and Character Study*, Gold Coast City Council

South Coast Regional Health Authority (1996) *Regional Data Book*, Population and Planning Unit, Queensland Health

QDH (1996) *An Epidemiological Profile of Injury Mortality and Morbidity, Brisbane South and South Coast Health Regions*, Queensland Department of Health

Taylor, A. (1996) *Population Growth Dynamics*, Gold Coast City Council, Social Research Series no 2.

Taylor, A. (1997) *Indexing disadvantage: using aggregated demographic characteristics to identify geographic disadvantage on the Gold Coast*, Gold Coast City Council, Social Research Studies No. 7. in preparation