

## **APPENDIX E**

### **Social and Economic Impacts Report**

# GRAFTON BRIDGE PROJECT

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Route Selection for Additional Crossing of  
the Clarence River at Grafton

## SOCIAL AND ECONOMIC IMPACTS REPORT

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## **EXECUTIVE SUMMARY**

The purpose of this report is to identify likely social and economic impacts associated with the proposed additional crossing of the Clarence River at Grafton. The prime objective of the project is to improve traffic flow across the Clarence River into and out of the City of Grafton. A total of seven localities and a do nothing option have been considered in this report. These localities range from providing additional crossings at locations between Susan Island (upstream) and Elizabeth Island (downstream) of the existing Grafton Bridge.

Assessment of the social and economic impacts has been based on 2001 census data, inspections of the study area and input from the community including feedback from Community Focus Meetings held in Grafton during October and December 2003, and three community liaison meetings held in Grafton during October and December 2003. Face to face discussions were also held with a sample of residents and businesses randomly selected in the overall study area during late 2003.

### **LOCALITIES**

Preliminary work has produced a number of localities for examination. The localities considered in the scope of this current social and economic impact investigation are as follows:

- Locality 1 - Prince Street Locality
- Locality 2 - Villiers Street Locality
- Locality 3 - At the existing bridge
- Locality 4 - Bacon Street Locality
- Locality 5 - Dobie Street Locality
- Locality 6 - Arthur Street Locality
- Locality 7 - North Street Locality

### **SOCIAL AND ECONOMIC STRUCTURE**

A demographic analysis using 2001 Census data was undertaken to determine the social and economic structure of the population in the study area. The data indicates a 1% growth rate.

Council's population projections based on the census data and planning proposals indicates a growth rate of 1% over the next ten years. In the last 12 months there has been a building boom in the entire Mid North Coast area, which has also been reflected in the Grafton City area. However, much of the building growth appears to be as much from investment housing and reducing family sizes and occupancy rates, as from population increases. Council is satisfied that the adopted 1% is still a reliable estimate of population projections over time.

Historical traffic growth since 1970 contained the RTA's Traffic Volumes publication (2001) shows a trend line of 1%. A 1% growth figure has been adopted for this report.

### **SOCIAL AND ECONOMIC IMPACTS**

Investigations have revealed that there are a number of concerns in the general community about the existing bridge. The community seems generally in agreement that a new crossing is necessary. Key reasons cited are the traffic delays currently experienced at peak hours on week days, the need for emergency services to be able to cross the bridge at all times without delays, and safety issues of trucks and buses using the bridge.

The Bridge is currently operating at capacity during weekday per periods. The 'do nothing' option will only further exacerbate existing traffic delays. Delays and congestion will reach a level (9 hours of peak hour per day in 30 years time) where they will have serious social and economic impacts. Restricted access across the river will progressively add to business costs and - seriously impact on the future economic development of Grafton. In reality, the duration of peak traffic periods will be limited to several hours in the morning and afternoon. The 9 hour estimate is based on how long it will take to move the required traffic volumes in 2033. However, people need to get to work and school at these times. Accordingly, business decisions will be made on accessibility for workers and movement of goods and services. Should there be no improvement to the current situation Grafton City cannot continue to grow at even 1% for any extended period.

The lack of access for emergency services to / from south side of the river is a critical issue and will remain that way until an additional crossing is provided.

Safety concerns will also increase as the periods of congestion extend. The restrictions caused by the bridge, whether real or perceived, will lead to further social isolation for those motorists that currently avoid using the bridge.

The issue of a truck bypass of Grafton City has also been consistently raised by sections of the community. Removal of unnecessary truck traffic from road approaches to the Localities under consideration would be a desirable outcome. However, the origin and destination study contained in the Traffic Study indicated that only a small number of heavy trucks use the Bridge and proceed along the Summerland Way. This means that the destination for most commercial vehicles using the Bridge is within the Study area, including Grafton CBD. Further investigation is needed to better define truck destinations and this is currently being undertaken as a supplement to this report.

## **1 INTRODUCTION**

### **1.1 Purpose**

The purpose of this study is to identify and compare the social and economic impacts expected for a number of localities for the provision of an additional crossing of the Clarence River at Grafton. The prime objective of the project is to improve traffic flow across the Clarence River into and out of the City of Grafton.

### **1.2 Overview**

Grafton is a substantial regional city located on the Clarence River. It is at the junction of three important roads – the Pacific Highway (State Highway 10), the Gwydir Highway (State Highway 12) and the Summerland Way (Main Road 83). These three roads meet at South Grafton, with the Summerland Way crossing the Clarence River via the Grafton Bridge. The bridge links Grafton and South Grafton, as well as providing access from the Pacific Highway to areas north and west of Grafton, and provides an alternative route to Brisbane.

The RTA is investigating provision of an additional crossing in Grafton. Preliminary work has shown that the most appropriate area for any new bridge is in the stretch of the Clarence River between Elizabeth Island in the north and Susan Island in the west.

### **1.3 Tasks**

The following tasks were undertaken in the preparation of this report:

- a) Preparation of a general statement of the types of impacts that can be expected. This includes impacts such as health, psychological stress, intrusion, community severance, impacts on industry, commerce, tourism and recreation.
- b) Consideration of comments made at a Community Focus Group meetings held in October and December 2003 and community information sessions held in October and December 2003.
- c) Completion of interviews with randomly selected resident and business property occupants who would be affected by the project and identification of major issues of concern.
- d) Consideration of comments received from various State and local government authorities, including Grafton City Council, Pristine Waters Shire Council, Copmanhurst Council and the Department of Infrastructure, Planning and Natural Resources.
- e) Consideration of comments received from organisations represented in the locality, via letters received or input from the Community Focus Group meeting.
- f) Consideration of local access impacts, in terms of road, cyclist and pedestrian impacts.
- g) Identification of the likely impacts on businesses / service facilities for alternative localities.
- h) Identification of the likely impacts on residents for alternative localities.
- i) Identification of likely impacts specific to this project.
- j) Examination of each of the alternative localities plus a “do nothing” option, and assessment of the likely impacts associated with each of these.

### **1.4 The Study Area**

The study area for the overview of social and economic effects for the additional crossing of the Clarence River at Grafton is shown on Figure 1. The study area extends upstream to Susan Island in the west, and downstream to Elizabeth Island in the east, Grafton and South Grafton.

## **1.5 Localities**

Preliminary work has produced a number of localities for examination. These localities are shown on Figure 1. The localities considered in the scope of this current social and economic impact investigation are as follows:

- Locality 1 - Prince Street Locality
- Locality 2 - Villiers Street Locality
- Locality 3 - At the existing bridge
- Locality 4 - Bacon Street Locality
- Locality 5 - Dobie Street Locality
- Locality 6 - Arthur Street Locality
- Locality 7 - North Street Locality

The social and economic impact analysis undertaken in this report takes a generalised approach for each option, rather than looking at a specific lot-by-lot, use-by-use basis. This aims to provide sufficient detail for the route comparison process culminating in the selection of a preferred option.



## 2 SOCIAL AND ECONOMIC STRUCTURE

### 2.1 Overview of Greater Grafton

Grafton is defined as the sub-regional centre for the Clarence Valley and as such is the major centre for the focus of services to the sub-region of Grafton, Copmanhurst, Maclean, Nymboida and Ulmarra. It has the higher order services of a hospital, TAFE facility, Community Health centre and high schools (Clarence Valley Draft Social Plan 2000).

The natural catchment / flow of population is from the valleys into Grafton. People residing in the adjoining local government areas of Copmanhurst (Junction Hill) and Pristine Waters (Waterview) travel to work in Grafton City and most of the services they use are located in Grafton. In the past the (then) NSW Department of Urban Affairs and Planning classified Grafton and the surrounding urban and rural areas as “greater Grafton” as the catchment areas crossed several local government boundaries. Residents of Grafton City also use recreational and sporting facilities located in rural areas outside of Grafton City (Clarence Valley Draft Social Plan 2000).

Grafton is the transport hub of the Clarence Valley, with road links to Sydney, Brisbane, Armidale, Casino and Glen Innes, and the North Coast Railway all converging there. The location of this convergence is right within the study area. Rail, air and river do not provide any significant intra-valley transport function and hence, the Valley is strongly reliant on road transport. The dispersed nature of the settlement patterns and the size of the Valley means that transport is very much dependant upon the private car (Clarence Valley Draft Social Plan 2000). This has implications for accessibility to services via the Grafton Bridge.

A demographic analysis using 2001 Census data was undertaken to determine the social and economic structure of the population in the study area. Council’s population projections have indicated a growth rate of 1% over the next ten years. In the last 12 months there has been somewhat of a building boom in the entire Mid North Coast area, which has also been reflected in the Grafton City area. However, much of the building growth appears to be as much from investment housing and reducing family sizes and occupancy rates, as from population increases. Council is satisfied that the adopted 1% is still a reliable estimate of population projections over time.

Historical traffic growth since 1970 contained the RTA’s Traffic Volumes publication (2001) shows a trend line of 1%. A 1% growth figure has been adopted for this report.

### 2.2 The Study Area

Social and economic statistics have been obtained from the Australian Bureau of Statistics (ABS) 2001 Census Data (ABS2001) specifically for the Collector Districts (CD) that occur within the study area, as well as for the Grafton City as a whole. This allows a social profile to be established presenting baseline information used for the assessment of social impacts and for ongoing monitoring of the effects of the additional crossing of the Clarence River at Grafton. It should be noted that some CD’s extend beyond the study area likely to be directly affected by the proposed additional crossing. However, it has been assumed that the characteristics described in the following may reasonably describe the study area.

Table 1 explains the collector districts analysed in this preliminary social and economic impact assessment, and the location of the CD’s is as shown on Figure 1. Because of the proximity of the crossings and the more general nature of the CD information, the analysis of CD’s by crossing locality has been analysed as three different alternatives – these are upstream, downstream, and then further downstream. No separate analysis is possible of the existing bridge location, as upstream and downstream CD’s meet in this location.

Census data for each relevant CD has been obtained and analysed to determine the social and economic structure of the overall city and outlying areas, as well as of communities which lie adjacent to the existing bridge and within potential locality corridors. These communities may experience some level of social and economic impact (either beneficial or adverse) as a result of the provision of an additional crossing of the river.

COLLECTOR DISTRICTS	GENERAL LOCATION	OPTION LOCALITY
1062201	Grafton, upstream of bridge	1,2,3
1062203		
1060704	South Grafton, upstream of bridge	1,2,3
1060705		
1060707		
1060708		
1062204	Grafton, downstream of bridge	4,5
1062206		
1062207		
1062208		
1060706	Grafton, further downstream	6,7
1060606		
1060607		
1060608		
1060609		
1062209		

### 2.3 Population Profile

Table 2 documents the total population numbers of the individual Collector Districts within the study area. The Collector Districts outside of the study area are listed as remaining urban areas. The total population for the relevant CD's is 9499 persons, which comprises 59% of the overall Grafton area.

LOCALITY	COLLECTOR DISTRICTS	TOTAL POPULATION (M/F)	% OF POPULATION		MEDIAN AGE (YEARS)	MEDIAN FAMILY SIZE
			TOTAL GRAFTON	STUDY AREA		
1,2,3 Grafton, upstream	1062201	516 (236 / 280)	9.6	16.1	41	2
	1062203	642 (315 / 327)			46	2
	1062205	439 (192 / 247)			34	2.3
1,2,3 South Grafton, upstream of bridge	1060704	535 (292 / 243)	11.1	18.6	36	2.4
	1060705	522 (254 / 268)			43	2.2
	1060707	462 (236 / 226)			40	2.2
	1060708	330 (149 / 181)			38	2.6
4,5 Grafton, downstream of bridge	1062204	725 (330 / 395)	16.7	28.1	38	2.2
	1062206	666 (329 / 337)			36	2.6
	1062207	467 (226 / 241)			34	2.5
	1062208	450 (213 / 237)			35	2.3
	1060706	484 (259 / 225)			35	3.1
6,7 Grafton, further downstream	1060601	435 (202 / 233)	22.1	37.2	39	2.8
	1060606	591 (277 / 314)			39	2.4
	1060607	362 (145 / 217)			64	1.7
	1060608	461 (224 / 237)			35	2.5
	1060609	413 (200 / 213)			35	2.4
	1060610	759 (449 / 310)			42	2.2
	1062202	679 (331 / 348)			34	2.7
<b>Total study area</b>		<b>9938 (4859 / 5079)</b>	<b>59.5</b>	<b>100</b>	Not available	
Remaining urban area Grafton (north)	1060602 + 1060603 + 1060604 + 1060605	2409 (1165 / 1244)			Not available	
Remaining urban area South Grafton	1060701 + 1060709 + 1060710 + 1060711	3112 (1497 / 1615)			Not available	
<b>Entire Grafton City area</b>	<b>Grafton LGA</b>	<b>16704 (8132 / 8572)</b>			<b>38</b>	<b>2.4</b>

The Grafton (north) area upstream of the bridge contains 9.6% of the Grafton population and 16% of the study area population. The South Grafton area upstream of the bridge contains 11% of the overall Grafton population and 18.6% of the study area population.

The area of Grafton downstream of the bridge in the vicinity of Localities 4 and 5 contains 16.7% of the overall Grafton population and 28% of the study area population. The area of Grafton further downstream (in the vicinity of Localities 6 and 7, contains 22% of the Grafton population, and over 37% of the population of the study area.

Table 2 also gives the median age for residents in the various collector districts of the study area, as well as Grafton overall. The median age for Grafton residents is 38, and for the study area is between 34 and 43 (with the exception of CD1060607, in the north, which contains nursing homes). This population structure is consistent with the NSW median.

Table 3 shows the age profile of people in the study area and compares it with that of Grafton. The population is spread relatively evenly across the age groups, with there being slightly higher numbers of residents aged 5-19 and 35-49 than other age groups. This indicates that the study area, as well as Grafton as a whole, has a high percentage of households in the early to mid stages of family formation. This is typical of town in the mid North Coast area.

<b>TABLE 3 – AGE PROFILE OF STUDY AREA</b>				
<b>AGE</b>	<b>TOTAL STUDY AREA</b>	<b>% OF STUDY AREA</b>	<b>% OF GRAFTON</b>	<b>(TOTAL GRAFTON)</b>
0-4	537	5.4	3.2	1083
5-9	683	6.9	4.1	1256
10-14	773	7.8	4.6	1356
15-19	696	7.1	4.2	1176
20-24	553	5.6	3.3	819
25-29	539	5.4	3.2	914
30-34	545	5.5	3.3	967
35-39	701	7.1	4.2	1163
40-44	776	7.9	4.6	1304
45-49	691	7.0	4.1	1119
50-54	568	5.8	3.4	1028
55-59	458	4.6	2.7	845
60-64	396	4.0	2.4	725
65-69	387	3.9	2.3	680
70-74	460	4.7	2.8	754
75-79	372	3.8	2.2	604
80-84	348	3.5	2.0	495
85-89	201	2.0	1.2	270
90-94	87	0.8	0.5	93
95+	23	0.2	0.1	20
VISITORS	22	0.2	0.1	38
<b>TOTALS</b>	<b>9852</b>	<b>100</b>	<b>59.0</b>	<b>16704</b>
Note the total study area population is 86 persons less than the population profiles given in Table 2. This data has been directly obtained from ABS statistics.				

## 2.4 Employment

Table 4 lists the 2001 unemployment and employment figures for the various Collector Districts in the study area, and compares these to figures for Grafton overall. Unemployment rates are provided for each CD, and can be compared to figures for Grafton and the mid North Coast.

The Australian Bureau of Statistics defines employed persons as being all persons aged 15 years and over, who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind, in a job or business or on a farm; or
- worked for one hour or more without pay in a family business or on a farm; or
- were employees who had a job but were not at work; or
- were employers or own account workers, who had a job, business or farm, but were not at work.

Unemployed persons are defined as persons aged 15 years and over who were not employed during the reference week, and who had actively looked for full time or part time work at any time in the four weeks up to the end of the reference week and who:

- were available for work in the reference week; or
- were waiting to start a new job within four weeks from the end of the reference week, and could have started in the reference week if the job had been available then.

It is noted that although employment figures fluctuate, they provide a general indication of employment and unemployment levels and are suitable for an assessment of this nature.

**TABLE 4 – EMPLOYMENT STATISTICS BY COLLECTOR DISTRICT**

LOCALITIES	COLLECTOR DISTRICTS	NUMBER EMPLOYED	NUMBER UNEMPLOYED	NOT IN LABOUR FORCE	UNEMPLOYMENT RATE (%)
1,2,3 Grafton, upstream	1062201	170	29	204	14.6
	1062203	291	21	218	7.2
	1062205	160	37	127	18.8
1,2,3 South Grafton, upstream of bridge	1060704	166	46	201	21.7
	1060705	143	39	249	21.4
	1060707	124	39	201	23.9
	1060708	90	20	140	18.2
4,5 Grafton, downstream of bridge	1062204	267	40	232	13
	1062206	271	34	194	11.1
	1062207	188	32	129	14.5
	1062208	194	23	116	10.6
	1060706	207	12	125	5.5
6,7 Grafton, further downstream	1060601	176	10	148	5.4
	1060606	176	23	234	11.6
	1060607	82	9	213	9.9
	1060608	190	14	151	6.9
	1060609	161	15	138	8.5
	1060610	127	7	536	5.2
	1062202	304	15	168	4.7
<b>Total study area</b>		<b>3466</b>	<b>465</b>	<b>3724</b>	<b>11.8</b>
Remaining urban area Grafton (north)	1060602 + 1060603 + 1060604 + 1060605	975	85	774	8
Remaining urban area South Grafton	1060701 + 1060709 + 1060710 + 1060711	921	174	1128	15.9
<b>Entire Grafton LGA</b>		<b>6818</b>	<b>802</b>	<b>5989</b>	<b>12.1</b>
<b>Mid North Coast</b>					<b>13.2</b>

It can be seen from Table 4 that the unemployment rate for the CD study area ranged between 4.7% and 23.9%, with the overall rate being 11.8% for the study area. This equates with the overall Grafton City rate of 12.1%, and the mid North Coast rate of 13.2%.

The highest area of unemployment in the study area is that of the urban area of South Grafton, with an average of 21.4% in this locality. This is nearly double the overall Grafton rate. The lowest area of unemployment in the study area is that part of the city located near Locality 6 and 7 – being in the

north.

Table 5 examines employment by industry. The study area generally follows trends experienced in the entire mid North Coast region. Retail trade employs the largest proportion of the population (18.6%), with the health and community service employing the second greatest proportion (11.8%).

<b>TABLE 5 – EMPLOYMENT BY INDUSTRY IN STUDY AREA</b>			
<b>INDUSTRY</b>	<b>TOTAL NUMBERS</b>	<b>% OF TOTAL</b>	<b>MID NORTH COAST AVERAGES (%)</b>
Agriculture, Forestry and Fishing	125	3.6	6.6
Mining	0	0	0.1
Manufacturing	279	8.2	8.2
Electricity, Gas and Water Supply	32	0.9	1.0
Construction	191	5.6	7.6
Wholesale Trade	130	3.8	4.4
Retail Trade	653	19.2	18.6
Accommodation, Cafes and Restaurants	179	5.2	7.2
Transport and Storage	155	4.5	3.5
Communication Services	71	2.1	1.4
Finance and Insurance	65	1.9	2.2
Property and Business Services	249	7.3	7.3
Government Administration and Defence	220	6.5	4.1
Education	291	8.5	7.9
Health and Community Services	435	12.8	11.8
Cultural and Recreational Services	86	2.5	2.1
Personal and Other Services	161	4.7	3.6
Non-classifiable Economic Units	9	0.2	0.4
Not Stated	78	2.3	1.9
<b>TOTAL</b>	<b>3409</b>	<b>100</b>	<b>100</b>

## 2.5 Weekly Income

The income levels for the study area are presented in Table 7 and compared to the mid North Coast averages.

<b>TABLE 7 – WEEKLY INCOME IN STUDY AREA</b>			
<b>WEEKLY INDIVIDUAL INCOME (\$)</b>	<b>TOTAL NUMBERS</b>	<b>% OF TOTAL</b>	<b>MID NORTH COAST AVERAGES (%)</b>
Negative / Nil	387	4.9	5.0
1 to 39	103	1.3	1.4
40 to 79	172	2.2	2.4
80 to 119	223	2.8	2.8
120 to 159	416	5.3	6.7
160 to 199	956	12.2	14.1
200 to 299	1560	20.4	17.9
300 to 399	751	9.6	11.0
400 to 499	636	8.1	8.5
500 to 599	551	7.0	7.0
600 to 699	308	3.9	4.3
700 to 799	250	3.2	3.1
800 to 999	352	4.5	3.7
1000 to 1499	357	4.6	3.7
>1500	132	1.7	1.3
Not stated	671	8.6	6.5
Overseas visitors	21	0.3	0.5
<b>TOTAL</b>	<b>7846</b>	<b>100</b>	<b>100</b>

Table 7 shows the largest proportion of the population (20.4%) in 2001 earned between \$200 and \$299 per week and 12.2% of the population earned between \$160 and \$199 per week. Whilst the weekly individual income for persons in the study area equates to the averages experienced in the mid North Coast area, it is substantially lower than the average individual weekly earnings for Australians (\$300 to \$399 per week). A total of 49% of the population in the study area earn less than \$300 per week. This is partially due to lower incomes paid in regional areas in Australia.

## 2.6 Travel to Work

Table 6 lists the mode of travel used by individuals in the study area to reach their place of employment. The majority of individuals in the study area travel to work by car as the driver (69%), with a further 11% as the passenger. An additional 5% travel by bicycle, and 11% by walking.

TABLE 6 – MODE OF TRAVEL TO WORK BY COLLECTOR DISTRICT										
OPTION LOCATIONS	COLLECTOR DISTRICTS	TOTAL TO WORK	CAR (AS DRIVER)		CAR (AS PASSENGER)		BICYCLE		WALK	
			No.	%	No.	%	No.	%	No.	%
1,2,3 Grafton, upstream	1062201	132	77	58	12	9	3	2	34	26
	1062203	216	130	60	18	8	7	3	54	25
	1062205	127	69	54	18	14	7	6	30	24
1,2,3 South Grafton, upstream of bridge	1060704	131	90	69	15	11	3	2	10	8
	1060705	111	57	51	19	17	3	3	27	24
	1060707	91	67	74	7	8	4	4	3	3
	1060708	74	50	68	8	11	3	4	7	9
3b,4 Grafton, downstream of bridge	1062204	218	143	66	19	9	14	6	34	16
	1062206	234	167	71	19	8	14	6	20	9
	1062207	150	110	73	16	11	11	7	3	0.2
	1062208	154	103	67	20	13	12	8	13	8
	1060706	153	123	80	10	7	0	0	8	5
5,6 Grafton, further downstream	1060601	146	110	75	15	10	12	8	3	2
	1060606	142	101	71	18	13	6	4	6	4
	1060607	66	39	59	8	12	0	0	13	20
	1060608	165	134	81	17	10	3	2	8	5
	1060609	143	93	65	20	14	8	6	10	7
	1060610	104	70	67	13	13	3	3	15	14
	1062202	252	197	78	26	10	17	7	7	3
<b>Total study area</b>		<b>2809</b>	<b>1930</b>		<b>298</b>		<b>130</b>		<b>305</b>	
Remaining urban area Grafton (north)	1060602 + 1060603 + 1060604 + 1060605	801	597		90		49		30	
Remaining urban area South Grafton	1060701 + 1060709 + 1060710 + 1060711	745	551		98		27		23	
<b>Entire Grafton LGA</b>		<b>4748</b>	<b>3395</b>		<b>522</b>		<b>209</b>		<b>371</b>	

## 2.7 Weekly Income

The income levels for the study area are presented in Table 7 and compared to the mid North Coast averages. Table 7 shows the largest proportion of the population (20.4%) in 2001 earned between \$200 and \$299 per week and 12.2% of the population earned between \$160 and \$199 per week. Whilst the weekly individual income for persons in the study area equates to the averages experienced in the mid North Coast area, it is substantially lower than the average individual weekly earnings for Australians (\$300 to \$399 per week). A total of 49% of the population in the study area earn less than \$300 per week. This is partially due to lower incomes paid in regional areas in Australia.

<b>TABLE 7 – WEEKLY INCOME IN STUDY AREA</b>			
<b>WEEKLY INDIVIDUAL INCOME (\$)</b>	<b>TOTAL NUMBERS</b>	<b>% OF TOTAL</b>	<b>MID NORTH COAST AVERAGES (%)</b>
Negative / Nil	387	4.9	5.0
1 to 39	103	1.3	1.4
40 to 79	172	2.2	2.4
80 to 119	223	2.8	2.8
120 to 159	416	5.3	6.7
160 to 199	956	12.2	14.1
200 to 299	1560	20.4	17.9
300 to 399	751	9.6	11.0
400 to 499	636	8.1	8.5
500 to 599	551	7.0	7.0
600 to 699	308	3.9	4.3
700 to 799	250	3.2	3.1
800 to 999	352	4.5	3.7
1000 to 1499	357	4.6	3.7
>1500	132	1.7	1.3
Not stated	671	8.6	6.5
Overseas visitors	21	0.3	0.5
<b>TOTAL</b>	<b>7846</b>	<b>100</b>	<b>100</b>

### 3 STAKEHOLDER GROUPS

A number of stakeholders have been identified as having an interest in the proposed additional crossing of the river. Four stakeholder groups have been identified as having an interest in the project. Of these, Groups 1 and 2 are likely to experience social and economic impacts to varying degrees (either positive or negative). Group 3 is unlikely to be affected by the project and Group 4 may experience some positive impacts as a result of using the additional crossing.

Written feedback received during the community consultation exercise to date from these various stakeholder groups has been summarised in the community consultation report.

#### 3.1 Group 1

This group comprises property owners, residents and businesses within the study area that could be directly affected by the additional crossing.

#### 3.2 Group 2

This group comprises:

- local businesses;
- community facilities and services, including South Grafton Residents Progress Association, Grafton Base Hospital, Catherine McCauley College;
- community groups including the Grafton City Chamber of Commerce and Industry, South Grafton Traders Association, Heavy Transport Committee and local bus companies;
- environmental interest groups including the Clarence Environment Centre Inc., Susan and Elizabeth Island Trust, National Parks Association and Clarence Valley Conservation Coalition Inc.;
- recreational facilities, including Clarence River Yacht Club, Grafton Rowing Club;
- emergency services – eg. Fire, ambulance and police, and public transport (buses); and
- Grafton City Council, Pristine Waters Council and Copmanhurst Shire Council.

#### 3.3 Group 3

This group comprises State and Commonwealth government agencies, local government. Local Aboriginal Land Councils and Federal and State elected representatives.

#### 3.4 Group 4

This group comprises:

- the broader community;
- existing and potential users of the Grafton Bridge and additional crossing from outside of the study area;
- commuters to and from Grafton; and
- tourists accessing Grafton and the Summerland Way by road; and
- transport companies involved in freight movement to and from Grafton via the Gwydir and Pacific Highways and Summerland Way.



## 4 SOCIAL IMPACTS

Investigations have revealed that there are a number of concerns in the general community about the existing bridge. The community seems generally in agreement that a new crossing is necessary. Key reasons cited are the traffic delays currently experienced at peak hours on week days, the need for emergency services to be able to cross the bridge at all times without delays, and safety issues of trucks and buses using the bridge.

The Bridge is currently operating at capacity during weekday per periods. The 'do nothing' option will only further exacerbate existing traffic delays. Delays and congestion will reach a level (9 hours of peak hour per day in 30 years time) where they will have serious social and economic impacts. Restricted access across the river will progressively add to business costs and - seriously impact on the future economic development of Grafton. In reality, the duration of peak traffic periods will be limited to several hours in the morning and afternoon. The 9 hour estimate is based on how long it will take to move the required traffic volumes in 2033. However, people need to get to work and school at these times. Accordingly, business decisions will be made on accessibility for workers and movement of goods and services. Should there be no improvement to the current situation Grafton City cannot continue to grow at even 1% for any extended period.

The lack of access for emergency services to / from south side of the river is a critical issue and will remain that way until an additional crossing is provided.

Safety concerns will also increase as the periods of congestion extend. The restrictions caused by the bridge, whether real or perceived, will lead to further social isolation for those motorists that currently avoid using the bridge.

AUSLINK, in its Green Paper 2002, has documented the growing social costs of growth in transport services. This report states that the largest cost of congestion in Australian capital cities will be time delays for people travelling by car and public transport. Increases in road congestion also severely impact on the efficiency of freight operators and their customers.

This Green Paper provides comment on the social impacts associated with traffic. These comments include:

- Pollution from road freight transport can be reduced by improving infrastructure and by improving the efficiency of the road freight task.
- Transport related noise may affect quality of life and health. Any future infrastructure development should strike a balance between the local environment and the needs of the transport network.
- Improvements in road infrastructure and related technologies and better road user behaviour can make a major contribution to better safety.
- The growth in truck traffic and continuing heavy reliance on private motor vehicles will have major implications for the efficient movement of freight in urban areas and within the major interstate and interregional corridors. Light commercial vehicles will increasingly be needed for the movement of freight and service provision around urban and suburban areas (reflecting the increase of "just in time" logistics services and small package deliveries with growing e-commerce). This trend has significant implications in terms of congestion and emissions in urban areas.

Significant positive social impacts with the construction of an additional crossing of the Clarence River at Grafton may include:

- Ability to cross safely at any desired time of the day;
- Perceived decrease in accidents;
- Ease of movements for delivery vehicles;

- Quicker travel times to work, school, shopping and other activities, as well as quicker delivery times for products;
- Rapid response times for emergency services to South Grafton and other destinations south of the river;
- Flow on effects of reduced congestion, reduced emissions in urban areas, and reduced noise; and
- Removal of a major constraint to future urban development and economic growth.

Negative social impacts resulting from the construction of an additional crossing of the river may include:

- Uncertainty about impacts and development possibilities, which may manifest in individual community members through increased stress, anxiety or apathy about the future;
- Changes to personal economic situations through changes to property values;
- Perceptions that individual property owners and residents will suffer because of decisions made for the benefit of the wider community;
- Concerns over reduction in amenity values for residential areas likely to be affected, where attributes such as wide streets, older stately tree plantings, impacts on stately homes and a peaceful and quiet environment strongly contribute to personal and community well being in areas that may be impacted by the proposed crossing and increased traffic flows;
- Alterations to the way people undertake trips to their daily activities;
- Perceived impacts to significant environmental and heritage areas including Susan and Elizabeth Islands;
- Perception of changes in existing levels of community cohesion and integration; and
- Concerns over the heritage value of the existing bridge, and how any additional crossing may affect its amenity.

## **5 ECONOMIC IMPACTS**

Results of discussions held to date with members of the business community in the study area reflect the findings of the previous Roads and Traffic Authority Feasibility Study of February 2003, that the business and employment sector of the community seems generally in agreement that a new crossing is necessary. Businesses in Grafton cite difficulties of deliveries into the city centre and the fact that the perceived problems with the existing bridge may alter shopping preferences for customers. Many businesses appear to alter their business operations (in terms of trips and/or timing) because of the present level of congestion associated with the existing bridge.

The general consensus from this sector of the community appears that whilst a new bridge is needed, consideration needs to be given to the location of that bridge in terms of ease of access by delivery vehicles into the city centre and whether it would reduce travel times. There appears to be general agreement that regardless of the location of the additional crossing, if it will reduce travel times and delays without significantly increasing numbers of kilometres travelled, that businesses would happily utilise any new crossing. Some businesses have even suggested if the new crossing is located in a satisfactory location, that heavy vehicles could be banned from crossing at the existing bridge.

It would appear that delivery trucks to the city come equally out of Sydney and Brisbane, with only a minor amount using the Gwydir Highway and the Summerland Way. Discussions with trucking companies have revealed foodstuffs and produce seem to come mainly from Brisbane via the Pacific Highway (70%), while whitegoods and building supplies seem to come mainly from Sydney via the Pacific Highway (70%).

State Forests has advised that major forest based processing industries are located to the north and south of the Clarence River, and that a crossing of the Clarence River continues to be important to these industries as forest products are hauled in both directions to supply these industries. Usage of a crossing by heavy vehicles associated with the forest and timber industry is likely to continue in the future.

The Business Enterprise Centre has provided an estimate of employment opportunities within the city. It is estimated that 60% of businesses are located in the city CBD, 10% of businesses are located in the South Grafton CBD, 15% in the South Grafton industrial area, and 15% in the Junction Hill business and industrial locality. Of those businesses in the Grafton CBD, it is further estimated that 70-75% are located in the main street and surrounding areas (92 retailers are located in Prince Street) and 25-30% jobs in Grafton Shopping World (estimated at 30 retailers).

Of information available to date, the Department of Education and Training employs the largest number of staff (being 360 teaching and non-teaching school staff, and 200 TAFE staff). This is closely followed by Grafton Base Hospital which employs 502 staff.

Feedback from the overall community received to date indicate that significant positive economic impacts associated with the construction of an additional crossing of the river may include:

- Potential increase in number of customers and tourists into the city centre because of perceived increase in travel safety over bridge;
- Quicker travel times for trips to work and making deliveries;
- Increased access to regional areas, with flow-on economic benefits;
- Ease of access for delivery trucks;
- Buses better able to meet timetables; and
- Flow on effects of reduced congestion, reduced emissions in urban areas, and reduced noise.
- Facilitate urban growth and economic development within Grafton City.

More specifically, the identified negative economic impacts resulting from the construction of an additional crossing of the river may include:

- Disruption to businesses located at or near the proposed additional crossing;
- Changes to economic situations and business profitability through changes to traffic volumes past the business; and
- Creation of business and industry development nodes along any new route location, potentially reducing custom from existing businesses and industry.

## 6 SOCIAL AND ECONOMIC ANALYSIS OF LOCALITIES

### 6.1 Locality 1 – Prince Street locality

#### Grafton Side

Prince Street is the main shopping street in Grafton, with a road reserve of 40 metres. A riverside park, the Crown Hotel and civic buildings are located near the riverbank, and a landing stage for boats on the riverbank itself. The amenity of the street and shopping area is very good, with streetscape works now completed. There is sufficient traffic in the street to provide a sense of “busyness”, but not so much traffic as to reduce amenity. Total of 92 retailers located in Prince Street, with the overall CBD locality containing approximately 60% of overall business in Grafton.

#### South Grafton Side

Land in this vicinity is flood prone rural land, used for grazing and cultivation.

#### Susan Island

A bridge in this location would cross the eastern tip of Susan Island, requiring a physical support on the island.

#### Summary of Positive Impacts

- Direct increased traffic into city centre, with likely flow-on effects of increased spending by tourists and passing trade.
- South side would have no dwellings or businesses affected.
- Would alleviate (at least in part) use of existing bridge and Bent Street and Villiers Street roundabouts by heavy vehicles.
- Improved access to city centre for residents of Waterview Heights, Coutts Crossing and South Grafton (particularly those on western side).
- Alternative access to South Grafton and Waterview Heights for emergency vehicles.
- Land along Gwydir Highway and in this western section of South Grafton generally likely to become more attractive for commercial development.
- Land between Victoria Street and river would become more valuable due to increases in passing traffic – likely to become more attractive to revamp for commercial development.
- Likely increase of traffic into the South Grafton business area generally, improving business for proprietors in this location.
- Reduced traffic in Bent Street would provide increased amenity to Bent and Fitzroy Street residents.

#### Summary of Negative Impacts

- 92 businesses located in Prince Street – this is the locality with the largest number of businesses that may be potential impacted.
- Increased traffic flow would reduce amenity for shoppers – difficulty in crossing street, difficulty in parking, potential unsafe pedestrian issues in street.
- Would require traffic calming measures to be employed.
- Likely to require loss of some, if not all, central parking.
- Susan Island has significant heritage and environmental issues.
- Railway viaducts low in this location – trucks have to cross into centre of road to pass under the highest point in the viaduct.
- Increased traffic would result in increased pollution into shops in this location.
- Increase of heavy traffic through city centre and CBD.
- Increased traffic would result in streets to the west of Prince Street.
- Likely loss of amenity and ambience for Crown Hotel – possible economic impacts.
- Loss of visual amenity for residents and businesses in Grafton and South Grafton with views over the river.

## 6.2 Locality 2 - Villiers Street locality

### Grafton Side

The riverbank area here is popular for passive recreation. The end of Villiers Street, from the riverbank to Fitzroy Street, runs between St Mary's Primary School on the west side and Catherine McAuley College and a convent / parish office on the east side, as well as a motel, and the music Conservatorium. A crossing located here, and consequent increase in traffic, would have significant impact on these landuses. Villiers Street north from Fitzroy Street is already used as a bypass of the business centre. A new crossing feeding into this point would not change the present land uses along this section of Villiers Street.

### South Grafton Side

An enclave of good quality houses and run down industrial land is located here along with some average quality housing.

### Summary of Positive Impacts

- Would alleviate (at least in part) use of existing bridge and Bent Street and Villiers Street roundabouts by heavy vehicles.
- Improved access to city centre for residents of Waterview Heights, Coutts Crossing and South Grafton (particularly those on western side).
- Alternative access to South Grafton and Waterview Heights for emergency vehicles.
- Land along Gwydir Highway and in this western section of South Grafton generally likely to become more attractive for commercial development.
- Likely increase of traffic into the South Grafton business area generally, improving business for proprietors in this location.
- Is a direct route to the Summerland Way heavy vehicle detour along Villiers Street.
- Reduced traffic in Bent Street would provide increased amenity to Bent and Fitzroy Street residents.

### Summary of Negative Impacts

- Impact in terms of safety and amenity issues for children attending schools and conservatorium on northern riverbank.
- Possible noise impacts for conservatorium.
- Possible access problems at Victoria Street.
- Increased traffic could result in increased pollution into businesses in this location.
- Loss of parking in the section of Villiers Street from the river to Fitzroy Street.
- Loss of amenity to residences in Abbott Street vicinity.
- Loss of visual amenity for residents and businesses in Grafton and South Grafton with views over the river.

## 6.3 Locality 3 - Duplication of the existing bridge

### Grafton Side

On the upstream side of the bridge, riverbank reserves and the Sailing Club are located on the northern riverbank, along with dwellings fronting Fitzroy Street (all of which are within the Grafton Conservation Area). Catherine McAuley College is on the corner of Fitzroy and Clarence Streets, and KFC is located in Fitzroy Street, fronting the existing bridge approach. Private residences are located on the downstream side of the bridge, with some open riverbank reserve.

### South Grafton Side

A nursing home and public reserve adjacent to Bent Street and Riverside Drive, are located on the upstream side of the bridge. On the downstream side of the bridge, the railway occupies a large area east of Bent Street and the existing bridge approach. A considerable bridge span would be required to clear the main North Coast railway line and adjoining goods yard. The sugar terminal may also be a considerable constraint.

### **Summary of Positive Impacts**

- Better access into the city centre, with likely flow-on effects of increased spending by tourists and passing trade.
- South side minimises acquisitions.
- Alternative access to South Grafton and Waterview Heights for emergency vehicles.
- Continued high traffic flows along Bent Street, of benefit to proprietors in this location.
- Retains existing traffic on Fitzroy and Bent Streets, and will result in little adverse strategic impacts on land uses.
- Continued high traffic flows along Bent Street, of benefit to proprietors in this location.
- It retains bridge approaches in Bent and Fitzroy Streets, will result in fewer impacts to surrounding landuses, however this would be difficult on northern side of river.

### **Summary of Negative Impacts**

- Acquisition would be required on northern approach.
- Possible impacts on the sailing club.
- Possible impact on KFC building, and difficulty of access into and out of building.
- Maintained high traffic flows, and associated levels of pollution and noise, past nursing home.
- Maintained high traffic flows and associated levels of pollution and noise, past remaining residences in Fitzroy, Craig, Kent and Bent Streets.
- Heritage issues associated with construction of new structure which visually blocks views to old bridge.
- Loss of visual amenity for residents and businesses in Grafton and South Grafton with views over the river.
- Possible impacts of vibrations on structural stability of nursing homes and nearby dwellings from construction and pile driving.

## **6.4 Locality 4 - Bacon Street locality**

### **Grafton Side**

Dwellings in this location front the riverbank, and therefore public areas at the end of road reserves are of considerable value, and provide riverbank parkland and access to the river. These locations provide public (foot) areas to the riverbank and are important for recreational purposes. This locality is a predominantly residential area, with a small commercial section at the Prince Street end.

### **Clarenza Side**

Low-lying, flood prone rural land, used for grazing and cropping. Small scattering of two or three dwellings associated with this agricultural land.

### **Summary of Positive Impacts**

- Improved access into the city centre, with likely flow-on effects of increased spending by tourists and passing trade.
- On Clarenza side, no dwellings or businesses affected and does not appear to be high quality agricultural land.
- Improved access to city centre for residents of Clarenza and all future development areas in the Clarenza locality.
- More direct access to the city centre from traffic north of Grafton (ie. Yamba and Maclean).
- Alternative access to Clarenza for emergency vehicles.
- Reduced traffic in Bent Street would provide increased amenity to Bent and Fitzroy Street residents.

### **Summary of Negative Impacts**

- Homes fronting river in this location – likely loss of visual amenity.
- Increased vehicle traffic in quiet residential precincts – loss of amenity, increase in noise pollution, dust and fumes, reduction in levels of safety for cyclists and pedestrians, reduced safety in access to individual properties.
- Loss of mature trees.
- Yacht moorings in this locality may be affected.
- Loss of visual amenity for residents and businesses in Grafton and South Grafton with views over the river, particularly given that bridge would need to be elevated.

## **6.5 Locality 5 – Dobie Street locality**

### **Grafton Side**

As in Locality 4, public areas at the end of road reserves are of considerable value, and provide riverbank parkland and access to the river. A formal children's playground is provided at end of Dobie Street. These locations provide public (foot) areas to the riverbank and are important for recreational purposes. The Grafton Showground is halfway along Dobie Street.

### **Clarenza Side**

Low-lying, flood prone rural land, used for grazing and cropping.

### **Summary of Positive Impacts**

- Clarenza side has no dwellings or businesses affected, and does not appear to be high quality agricultural land.
- Improved access to city centre for residents of Clarenza and all future development areas in the Clarenza locality.
- More direct access to the city centre from traffic north of Grafton (ie. Yamba and Maclean).
- Alternative access to Clarenza for emergency vehicles.
- Reduced traffic in Bent Street would provide increased amenity to Bent and Fitzroy Street residents.

### **Summary of Negative Impacts**

- Increased vehicle traffic in quiet residential precincts – loss of amenity, increase in noise pollution, dust and fumes, reduction in levels of safety for cyclists and pedestrians, reduced safety in access to individual properties.
- Loss of visual amenity for residents and businesses on both sides of the river with views over the river.

## **6.6 Locality 6 –Arthur Street locality**

### **Grafton Side**

Landuses include dwellings, rural land, and includes Grafton Base Hospital and Grafton Gaol. Along Arthur Street in this locality, substantial developments provide for aged care. There has been a number of recently approved residential developments towards the river in this locality.

### **Clarenza Side**

Low-lying, floodprone rural land, used for grazing and cropping.

### **Summary of Positive Impacts**

- Clarenza side has no dwellings or businesses affected and does not appear to be high quality agricultural land.
- Improved access to city centre for residents of Clarenza and all future development areas in the Clarenza locality.



- Trucking companies have expressed interest in such a locality for more direct access to the Pacific Highway.
- Direct access off the Pacific Highway.
- More direct access to the city centre from traffic north of Grafton (ie. Yamba and Maclean).
- Alternative access to Clarenza for emergency vehicles.

#### **Summary of Negative Impacts**

- Increased vehicle traffic in quiet residential precincts – loss of amenity, increase in noise pollution, dust and fumes, reduction in levels of safety for cyclists and pedestrians, reduced safety in access to individual properties.
- Loss of visual amenity for residents in Grafton and Clarenza with views over the river.
- Distance from city centre may result in less use by South Grafton residents, thereby having little impact on improving amenity in the Bent Street and Fitzroy Street localities.
- Reduced safety due to increased travel and new major intersection with the Pacific Highway.
- May have potential to create commercial development pressure at new Pacific Highway junction, with potential to “split” the town centre.

### **6.7 Locality 7 – North Street locality**

#### **Grafton Side**

Landuses in this locality include waste depot, aged persons homes, a number of rural uses and miscellaneous small businesses, along with residences.

#### **Elizabeth Island**

A crossing in this location would have one or more supports of Elizabeth Island and would be elevated over the island. Access has been available to this island by boat for many years, however input from the community has indicated that they seem to be generally opposed to the use of Elizabeth Island in terms of environmental and habitat issues.

#### **Clarenza Side**

Low-lying, floodprone rural land, used for grazing and cropping.

#### **Summary of Positive Impacts**

- Clarenza side has no dwellings or businesses affected and does not appear to be high quality agricultural land.
- Improved access to city centre for residents of Clarenza and all future development areas in the Clarenza locality.
- Trucking companies have expressed interest in such a locality for more direct access to the Pacific Highway.
- Direct access off the Pacific Highway.
- More direct access to the city centre from traffic north of Grafton (ie. Yamba and Maclean).
- Alternative access to Clarenza for emergency vehicles.
- A number of businesses in this locality, and it therefore may be more suitable than strictly residential streets (such as Locality 4 and 5 to the south) for additional traffic.

#### **Summary of Negative Impacts**

- Increased vehicle traffic in quiet residential precincts – loss of amenity, increase in noise pollution, dust and fumes, reduction in levels of safety for cyclists and pedestrians, reduced safety in access to individual properties.
- Loss of visual amenity for residents in Grafton and Clarenza with views over the river.
- Possible community opposition from use of Elizabeth Island.
- Distance from city centre may result in less use by South Grafton residents, thereby having little impact on improving amenity in the Bent Street and Fitzroy Street localities.
- Reduced safety due to increased travel and new major intersection with the Pacific Highway.
- May have potential to create commercial development pressure at new Pacific Highway junction, with potential to “split” the town centre.

## **6.8 Do nothing option**

Investigations have revealed that there are a number of concerns in the general community about the existing bridge. The community seems generally in agreement that a new crossing is necessary. Key reasons cited are the traffic delays currently experienced at peak hours on week days, the need for emergency services to be able to cross the bridge at all times without delays, and safety issues of trucks and buses using the bridge.

The Bridge is currently operating at capacity during weekday per periods. The 'do nothing' option will only further exacerbate existing traffic delays. Delays and congestion will reach a level (9 hours of peak hour per day in 30 years time) where they will have serious social and economic impacts. Restricted access across the river will progressively add to business costs and - seriously impact on the future economic development of Grafton. In reality, the duration of peak traffic periods will be limited to several hours in the morning and afternoon. The 9 hour estimate is based on how long it will take to move the required traffic volumes in 2033. However, people need to get to work and school at these times. Accordingly, business decisions will be made on accessibility for workers and movement of goods and services. Should there be no improvement to the current situation Grafton City cannot continue to grow at even 1% for any extended period.

The lack of access for emergency services to / from south side of the river is a critical issue and will remain that way until an additional crossing is provided.

Safety concerns will also increase as the periods of congestion extend. The restrictions caused by the bridge, whether real or perceived, will lead to further social isolation for those motorists that currently avoid using the bridge.

Grafton City cannot continue to grow if accessibility is not improved. People will not get to work and school on time without suffering long delays. Therefore the city will reach a point where additional development will not occur until access is improved.

## 7 COMMUNITY BENEFITS BY LOCALITY

An economic evaluation is designed to quantify the social and community benefits and costs of the proposal in order to assess the overall net social worth of a project. Traditional project evaluation for transport infrastructure develops a benefit assessment by quantifying user benefits such as time savings, reduction in the number of accidents and vehicle operating cost savings.

Travel Time Costs relate to the value of time of users of Heavy and Light Commercial vehicles and Business and Private cars. The analysis takes into account the differing occupancies and proportion of the various classes. It also takes into account the different value of time saving to the various classes of vehicles. Vehicle Operating Cost takes into account the traffic mix, road condition and grade and travel speed.

During this study to date, these quantitative costs have been evaluated for each of the 7 preliminary localities. Table 8 of this report (below) summarises the economic evaluation for each locality. Much of this information has been provided from traffic modelling undertaken to date.

DESCRIPTION	LOCALITY						
	1	2	3	4	5	6	7
Estimated Cost to Construct	\$45M	\$45M	\$40M	\$45M	\$40M	\$50M	\$55M
Savings in Accident Numbers	-6.3	-8.2	-11.6	2.2	3.5	0.9	-3.1
Savings in Accident Costs*	\$1.85M	\$2.39M	\$3.51M	-\$0.73M	-\$1.21M	-\$0.30M	\$1.09M
Savings in Travel Time Costs (to 2008)	\$4.1M	\$3.9M	\$5.4M	\$2.8M	\$1.7M	\$1.52	-\$1.2M
Savings in Vehicle Operating Costs (to 2008)	\$0.9M	\$0.7M	\$0.3M	\$0.2M	\$0.8M	-\$0.02M	-\$1.2M
Benefit / Cost Ratio*	1.49	1.44	2.02	1.06	1.10	0.57	0.14

Note all quoted quantitative costs are taken directly, or interpolated, from Road User Costs and Benefits Summary Tables, (\*where discounted at 7% discount rate), based on net present value.

For instance, Table 8 shows that if Locality 3 (Duplication) were adopted, the number of reportable accidents would decrease by more than 11 in the first year of operation (2007). In addition there would be a saving of travel time of \$5.4M and of vehicle operating costs of \$0.3M in that first year. If Locality 4 (downstream) were adopted, the number of reportable accidents would increase by more than two in the first year of operation. In addition, there would be a saving of travel time of \$2.8M and of vehicle operating costs of \$0.2M in that first year. The outcome of Table 8 is to identify that localities furthest from the existing crossing have reduced benefit / cost ratios to localities closest to the existing crossing.

Benefits to the community include those items quantified in the above table, as well as items which are less readily quantified. It is difficult to quantify wider impacts such as amenity, noise and other environmental costs. Noise attenuation measures can be imposed to reduce noise levels on directly affected properties, and property that is directly affected can be acquired and /or access and property adjustments made. It is difficult to quantify the impacts on property values for lands along the immediate route until detailed engineering designs are produced.

The following analysis (Table 9) identifies the qualitative costs and community benefits in each of the seven localities of this study area:

**TABLE 9 – COMMUNITY BENEFITS BY LOCALITY**

DESCRIPTION	LOCALITY						
	1	2	3	4	5	6	7
Approx. number of residences likely to be affected	0	Up to 10	Up to 12	Over 80	Over 80	Over 50	Over 30
Other community facilities likely to be impacted	River foreshore Crown Hotel Memorial Park Main Street	River foreshore Schools Conservatorium Motel	Aged Persons Home Sailing Club KFC	River Foreshore	River Foreshore	River Foreshore Hospital Aged Persons Home	Aged Persons Homes Sewage Treatment Works
Approx. number of properties with values directly negatively affected	Up to 6	Up to 15	Up to 14	Over 80	Over 80	Over 50	Over 30
Likely positive impacts on existing businesses in locality	No	Yes	Unchanged	None	None	Yes	Yes

As outlined above, some localities will have more properties directly adversely affected than others. There will always be a preference by affected landowners to have the route in another location, whichever location is finally chosen.

Qualitative benefits are associated with the improved accessibility to Grafton. Even though there may be some losses incurred by property owners in the final chosen location, the overall benefits to the city would outweigh the individual losses, regardless of whichever locality is chosen.

The additional crossing of the Clarence River will make Grafton a much more attractive place for commercial and residential development. It can be expected that one of the outcomes of this improved access will be an overall increase in property values across the City.

# FIGURES

# ANNEXURE A

## Results of Community Questionnaires

## ANNEXURE A Results of Community Questionnaires

During October and November 2003 interviews were undertaken with randomly selected businesses and residents in Grafton and South Grafton. The following is a summary of feedback received during the course of these discussions.

<b>INTERVIEWS WITH RESIDENTS</b>		
<b>INTERVIEWEE</b>	<b>PREFERRED CROSSING LOCATION</b>	<b>COMMENTS</b>
Resident 1 Fitzroy Street	None preferred – believes current bridge quite adequate. Spend money on hospital system.	Believes the current project to be a political agenda, but if it proceeds most likely is adjoining upstream side of existing bridge. Believes further upstream or downstream unlikely to reduce traffic congestion. Uses bridge at present only twice weekly to go to golf. If bridge proceeds in this location, will cause increases in noise and air pollution (fumes) near house, plus loss in property values. Will request sound barriers and double glazing on windows. Also, access into dwellings will be an issue, as will the proximity of the road to the nearby school.
Resident 2 Kent Street	Yes – new crossing required due to traffic congestion. No real preferred location, probably adjacent to upstream side of existing is best.	Elderly lady – doesn't get out much, and doesn't drive across bridge. No real issues, so long as not over top of her house. Logical place adjacent to current bridge on upstream side, but will have big impacts on people in Fitzroy Street. Doesn't feel bridge on upstream side will have any impact on her.
Resident 3 Breimba Street	Yes – new crossing necessary. Best location maybe downstream of existing bridge, to provide shorter route from Pacific Highway to Summerland Way.	Traffic congestion on bridge is greatest issue. Traffic doesn't personally bother him – but doesn't drive across in peak hours. Bypass of town would be preferred option, with bridge located as far downstream as possible. This will bypass the town centre and reduce congestion. But linkages still required to orient people back into town centre. Additional crossing will only affect him if Oliver Street chosen. Already hears railway and traffic noises, along with Pacific Highway traffic noise over river, so additional crossing downstream will not impact him. Breimba Street already has quite a bit of traffic.
Resident 4 Cnr. Dobie and McHugh Streets	Yes – new crossing necessary. Probably downstream is preferred location.	Retired - don't cross current bridge in peak times. Likely to use any new bridge regardless of where its located (even as far upstream as Susan Island) because it will be a safer, less congested option. Believes best option is to put additional crossing further downstream than Dobie Street, but realises can't be too far or people won't use it. Do it at existing bridge, and this will not resolve existing traffic congestion problems. Not good to build an upstream option and take traffic into city centre. If located down Dobie Street will have direct impact on these residents – wouldn't like the traffic noise, but don't want sound barriers erected adjacent to dwelling.
Resident 5 Morrison Street	Yes – new crossing necessary to reduce congestion for South Grafton residents. Best to use existing location.	Doesn't use existing bridge often – only to get to McDonalds, so doesn't really affect him. But recognises congestion is apparent, and school buses and logging trucks affect traffic. Believes lack of roundabout at Bilo is an issue. Why not build onto existing bridge, rather than create new crossing (possible two tier arrangement using one direction on top and opposite direction on bottom). Upstream option OK if could avoid Susan Island (conservation issues) – would be good to put traffic straight into Prince Street. Downstream option not likely to be used by South Grafton people (who are real reason new bridge needs to be built). Heritage issues of current bridge need to be assessed, but best solution is to use existing – saves on environmental issues. No real personal issues with any possible location.

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Resident 6 Dobie Street	No need for new bridge – spend money on hospital system.	<p>Bridge issue doesn't affect her or her husband. They only cross bridge (say) once a month to go up or down the Pacific Highway. Believes it would have too many huge impacts regardless of where built. Why not provide better services in South Grafton to resolve issues. If bridge has to be built anywhere, build it near existing bridge – people living there already have traffic noise and impacts.</p> <p>Particularly doesn't want it built in vicinity of Dobie Street. This is a residential area with no traffic noise and slow traffic at present. Additional crossing here will generate extra traffic, noise and pollution, and will be unsafe for children to ride bikes, as well as creating losses in property values. Will result in loss of amenity, loss of park at end of street, loss of street trees, and will impact ability to get into and out of driveway. If goes down Dobie Street, would require speed limits, pathways and kerb and gutter, plus additional provision of shade if trees have been cut down. Totally unsatisfactory option.</p>
Resident 7 Bent Street	Yes – new crossing necessary to reduce congestion, and to provide for emergency services and truck manoeuvring. Put downstream of existing.	<p>Please don't put at existing location – already have too much traffic noise and impacts right here – why not share the impacts around. Noise is currently huge – trucks should be required to bypass this bridge in favour of any new crossing. Don't believe current quoted truck figures – surely must be greater than 5% of traffic. Emergency issue at present is paramount – alternative access is essential immediately.</p> <p>Current bridge has heritage issues – think laterally and preserve the bridge. If new crossing is to be built upstream, make it as close to Susan Island as possible, and if downstream as close to Elizabeth as possible. Provide a truck bypass in either of these locations. Trucks negotiating current roundabouts both north and south of river are an issue.</p> <p>If upgrading at existing, this will create serious impacts in terms of access to and from house, noise, pollution. No rear access from this house possible. At present can take ½ hour to get home if have forgotten something – upgrading in this location will make it worse. Can't see any possible amelioration of these impacts – noise fences are not aesthetic.</p>
Resident 8 Ryan Street	No – no additional crossing necessary – spend money on hospitals, and provide better services in South Grafton.	<p>Doesn't really use current bridge. But if new bridge to be built, upstream of existing or near existing preferred locations. Any bridge near Susan Island would be used by people in South Grafton, Waterview Heights, Coutts Crossing, etc, for trips into Grafton. Would be great for South Grafton residents. Wouldn't use a bridge built downstream – would continue to use existing bridge. Doesn't really have any personal issues with any proposed location.</p>
Resident 9 Merton Mews, Clarenza	Yes – definitely new crossing needed. Preferred location downstream – closer to this home and to new development areas in Clarenza.	<p>Issues with bridge more traffic usage (trucks and buses on bridge) more than delays. Buses are more of an issue in peak times than trucks – trucks seem to avoid peak times. Problem of both buses and trucks with roundabouts. Mindset of public is to add extra time to get to work – she allows ½ hour to get into Grafton each morning.</p> <p>If bridge built upstream, unlikely to use – would still use existing bridge. Would always use bridge closest to her. Benefits from bridge downstream – come directly off highway – would bring more people into Grafton (but can't be too far down river). Problem with upgrading near existing – already too congested with houses, nursing home and businesses. There would still be traffic problems with approaches and roundabouts, and still delays and congestion.</p>



<b>INTERVIEWS WITH BUSINESSES</b>		
<b>INTERVIEWEE</b>	<b>PREFERRED CROSSING LOCATION</b>	<b>COMMENTS</b>
Business 1 Blanchards Haulage Fry Street. Also speaking on behalf of heavy transport industry.	Yes – additional crossing necessary, to improve traffic flows and to give access for emergency services. Preferred location downstream of existing crossing.	Heavy vehicles would prefer to use a straighter route, rather than bendy bridge and lots of roundabouts, provided it's not too far away from main arterial. Possible to have the old bridge closed to heavy vehicles – not an issue to only use new bridge. Villiers / Fitzroy Street roundabout is a real issue for trucks at present – difficult to turn. Route would need to be wide street. Favoured option would be straight off Pacific Highway downstream of existing crossing, but not too far so that traffic won't enter town. Not too far from CBD (ie – not further than Elizabeth Island). If upstream would cause more congestion at the junction of all the roads (Gwydir, Pacific and Bent Street). Blanchards currently operate 17 prime movers, and 4 rigid trucks, and have no refrigerated trucks. Carry out timber power poles and sawn timber from Coolcairn mills at Junction Hill and sawmill at Jackajerry. Bring back bricks and pavers to new building areas in Yamba and Grafton, and general freight (parcels and palettes). Traffic breakdown is 20% traffic along Gwydir, North /south along Pacific is even split – say 40% south, 35% north along Pacific, and 5% north along Summerland.
Business 2 Harvey Norman Prince Street	Yes – additional crossing necessary. South Grafton residents may be nervous to cross – equates to possible loss of business. Located close to existing or upstream a little.	Business currently allows for extra time over bridge for deliveries, and makes no deliveries to South Grafton after 4pm, because of delays on the bridge. Business currently has delivery truck working 9am to 7pm, returning up to 3 times to shop during day. Receives deliveries by courier around every 15 minutes for entire day. Business deliveries estimated at 70% from Sydney, 30% from Brisbane (white goods are state based). Town relies on tourism. For tourists, bridge near main shopping centre will be good for trade. Only problem is trucks passing through main areas instead of bypassing. Would require loss of central parking to allow traffic to flow. Best solution is near existing, with a possible traffic bypass route for Summerland Way through traffic. Bottom line, their business would use a bridge located anywhere, assuming it improved delivery times. Time for deliveries influences all route choices.
Business 3 KFC	Yes – additional crossing necessary. Upstream of existing preferred choice.	Bridge backs up past intersection out front from 3.30pm, especially Thursdays and Fridays. New crossing is necessary. Upgrading near existing bridge may be good for sales, except it may mean that it is too congested in driveway. If this option chosen, KFC may require provision of another entry – maybe open up road at rear of building. Delivery trucks come out of Brisbane and Sydney – foodstuffs mainly from Brisbane (5 to 6 truck deliveries per week) versus 2 trucks from Sydney per week. If downstream option chosen, one side effect could be better access for delivery trucks from Brisbane.
Business 4 Video Ezy Prince Street	No – additional bridge not necessary for majority of Grafton residents – more needed by South Grafton. Better to spend money elsewhere. But if to be built anyway, best to locate adjacent to existing (upstream side).	People over cautious, many don't travel over in busy times, so maybe something should be done. Is it possible to get rid of bends, but keep to existing bridge alignment? Definitely shouldn't go upstream and push heavy vehicles and extra traffic down main street. Difficulty in central parking and speed is already an issue here. Would create unsafe pedestrian conditions in main street. Would need to reduce number of central parks to give better manoeuvring area into parking spaces. If go too far downstream people wouldn't use – they would rather wait in traffic 6 minutes to get across bridge. Also, is too important as a residential area. Therefore existing location seems only feasible option.

<b>INTERVIEWS WITH BUSINESSES</b>		
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<p>Business 5 Cromack and Trantor Trucking company – Duke Street</p>	<p>Yes – additional crossing necessary – best location downstream, somewhere between Dobie and North Streets.</p>	<p>Current bridge is difficult to manoeuvre around – even roundabouts are difficult – especially Bent Street roundabouts. Upgrading in this location still have to deal with congestion and roundabouts.</p> <p>Additional crossing would mean heavy vehicles could use that crossing and avoid existing bridge. Currently, avoid deliveries to depot on south side in morning and afternoon peak hours. Drivers instructed to carry out in town deliveries before 10am, and then cross to South Grafton after that.</p> <p>Company would use any new crossing – driver preference would be the quickest solution. If downstream chosen, this would alleviate congestion of South Grafton, Bent Street and city centre, and would have no viaduct restrictions. Maybe a big roundabout off end of Centenary Drive and straight across river - would give Grafton a northern entrance direct off Pacific Highway. The company's northern trips would use this crossing more than 90% of time.</p> <p>Company has 14 prime movers, 20 trailers. Travel Brisbane / Grafton every day. Predominantly use Pacific Highway 2/3 north to Brisbane, 1/3 south to Sydney. Only 1 trip west per week. Only go up Summerland Way when drivers who live at Junction Hill want to take the truck home and start off from home.</p>
<p>Business 6 Busways South Grafton depot</p>	<p>Yes – additional crossing necessary. Best location downstream of existing – as far downstream as possible. Put a limit on existing bridge - no heavy vehicles (trucks) to cross.</p>	<p>Major concern with bus timetables more than peak traffic across bridge. Delays mean timetables difficult to keep in place. Buses often late for schools. Also issue for emergency vehicles – can't get across.</p> <p>Preferred location downstream near Elizabeth Island – as far downstream as possible. Existing bridge then just becomes local bridge to service South Grafton traffic. This way, trucks could all use that crossing, and buses would use it lots once Catherine McCauley college operational. Christian school already operating out in Clarenza, and this would be preferred route to service these schools. This would solve lots of timing difficulties. Would be great for the Yamba run as well (currently 5 busloads of private school kids from Yamba per day). Existing and upstream options not as good – still too much congestion – won't help timetabling.</p>
<p>Business 7 Small business in Skinner Street, also South Grafton resident and Councillor</p>	<p>Yes – additional crossing necessary, due to heavy traffic on bridge and congestion. Preferred option upstream. Also, prefer to see existing bridge closed to heavy trucks and buses once new crossing constructed.</p>	<p>Prefer to see South Grafton connected directly to Grafton city centre (or west of the city centre) via an upstream connection across Susan Island. This would allow better access for South Grafton residents, and would be good for South Grafton businesses. It would be a better solution for trucking companies – would avoid Bent Street and Villiers Street roundabouts. Only difficulty is where to connect to on the Grafton side of the river.</p> <p>Crossing immediately downstream of bridge is a real heritage issue. Many of the town's most important heritage homes are located along riverbank here – there should be no loss of heritage houses. Grafton's residential area is beautiful and shouldn't be filled with traffic noise. Similarly, connecting near existing bridge would result in old residences on riverbank in Fitzroy Street lost.</p> <p>Further downstream – Dobie Street is an issue with traffic noise. Further down near Elizabeth would be good – but too far away for buses and trucks – too far out of town.</p>

<b>INTERVIEWS WITH BUSINESSES</b>		
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Business 8 BiLo – Bent St. New manager – (in town 1 week)	Because new to town, no real idea. Probably existing best, since keeps traffic past BiLo's front door.	Mostly trucks service this business from Brisbane (say 70%?). Mostly their deliveries and customers don't cross bridge, so they have no real issue with location of bridge. But of course, extra customers past front door would be good for business. Not keen for downstream crossing, as would deter passing trade from Bent Street.
Business 9 BP Service Station, Skinner Street	Not sure an additional crossing is necessary – spend money on health or education. But if is to be built, preferred location is upstream near his business, or alongside existing bridge.	Still think bridge is only an issue for 10 minutes morning and evening. Why not alter office hours in the city to allow for staggered traffic across bridge? But if new bridge to be built, make it upstream and connect South Grafton and Grafton City central areas together. Would be good for his business, and for South Grafton and Waterview Heights residents. Issue would be construction work and possible blocking of traffic. Crossing at existing would also be good, especially if it directed people down Riverside Drive. If went downstream, would be a potential loss of business (maybe 25%), so therefore not good. Wants crossing in his vicinity.
Business 10 South Grafton Aged Care Home Bent Street	Yes – additional crossing necessary. Preferred location is downstream.	Traffic peak hours and difficulties for emergency services mean new bridge is required. If they need an ambulance to nursing home, it has to come from Grafton side – not satisfactory in peak hour – real issue for nursing home patients. Preferred location is downstream near Elizabeth Island, forming something of a bypass for heavy vehicles and an alternative entrance to the city from north. If built near existing, issues for nursing home include access and bus stop out front. One access was recently forfeited with last lot of road works – don't want to lose Riverside Drive access – this is extremely important. Would require Riverside Drive access to remain open from Bent Street, so people who miss turn don't have to travel all way across bridge and back again! Also bus stop out front not used by residents, but is used by visitors to / relatives of residents. Nursing home wants this bus stop to remain in this location, and not relocated too far back down Bent Street. Other issue is previous minor structural cracks experienced to building with last round of road works (also cited house next door). If pile driving takes place in river nearby, and heavy machinery passing on road, this could further affect the structural strength of building.