



**Transport**  
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# Additional crossing of the Clarence River at Grafton

Route Options Development Report  
Technical Paper – Social and Economic Issues

SEPTEMBER 2012





**Transport**  
Roads & Maritime  
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## Roads and Traffic Authority

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### Main Road 83 Summerland Way

### Additional Crossing of the Clarence River at Grafton

Route Options Development Report

Technical Paper – Social and Economic Issues

August 2012



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## Glossary of Terms and Abbreviations

ABS	Australian Bureau of Statistics
ATSI	Aboriginal and Torres Strait Islander
CBD	Central Business District
CD	Census collection district
CVC	Clarence Valley Council
DoH	NSW Department of Housing
DoP	NSW Department of Planning
FTE	Full-time equivalent
Grafton	The suburb of Grafton
Grafton City	The Urban Centre/Locality as defined by the ABS. It includes the suburbs of Grafton and South Grafton (including Junction Hill to the north).
GRP	Gross Regional Product
LEP	Local Environmental Plan
LGA	Local Government Area
RMS	Roads and Maritime Services
RNP	RMS Road Noise Policy
SEIFA	Socio Economic Index for Areas
SLA	Statistical local area
South Grafton	The suburb of South Grafton
UL	Urban Centre/Locality

# EXECUTIVE SUMMARY

Roads and Maritime Services (RMS) is currently undertaking investigations to identify a preferred location for an additional crossing of the Clarence River at Grafton.

This technical paper considers social and economic impacts broadly arising from the six short-listed route options, and in particular assesses them against a set of social and economic indicators developed to provide a comparative measure of the extent of impacts. The report draws upon previous investigations and reports including the *Preliminary Route Options Development Report – Final* main report and social and economic technical paper (RMS, January 2012), and additional subsequent investigations, to help identify potential social and economic impacts related to the project.

## Summary of Impacts

The development of an additional crossing of the Clarence River at Grafton will provide a range of benefits. The majority of these benefits accrue to the broader community of Grafton, the LGA and the wider region. The potential benefits of an additional crossing include:

- More efficient, direct and reliable transport options.
- Reduced traffic congestion and associated amenity benefits.
- Reduced travel times, which are consistent and reliable.
- Improved road safety, including removal of heavy vehicles from existing bridge.
- Improved access for service delivery and emergency services.
- Greater integration of Grafton and South Grafton, economically and socially.
- Improved access to employment, health and community services, retail and community centres and recreation sites.
- Increased public transport patronage by increasing the convenience of the river crossing.
- Improved, safer pedestrian and cyclist access across the river.

## Land use impacts

Land use impacts, including property acquisitions, are likely to be one of the major impacts arising from the project. A summary of the potential land use impacts, corresponding to the project indicators, is presented below in Table 1. Land use impacts are shown in Figures 8 to 13. A summary of the remaining project indicators is presented subsequently.

**Table 1: Land use impacts**

Type of property affected		Option E	Option A	Option C	Option 11	Option 14	Option 15
Number of residential properties potentially directly affected (number)	Likely to impact on residence or other major building	11	20	21	16	1	1
	Unlikely to impact on residence or other major building	5	1	3	6	5	0
Number of community facilities potentially directly affected (number)	Clubs / recreation	1	1	2	2	1	1
	Education	0	1	2	0	0	0
	River uses	1	1	1	1	0	0
	Places of worship	2	1	1	1	1	1
	Services	2	1	2	0	0	0
	Infrastructure	0	4	2	0	1	2
	Parks and reserves	2	6	2	1	2	2
	Government	0	0	0	0	0	0
Health and emergency services	0	0	0	0	0	0	
Number of businesses with potential impacts on business viability (number / FTE employees) <sup>1</sup>		5 / 34.5	14 / 74	2 / 4	1 / 2	1 / 2	1 / 2
Number of businesses with potential minor impacts (number)		2	7	2	0	1	0
Number and area of rural properties with potential direct impacts (number / area)		-	-	2 / 4.5 ha	2 / 8.0 ha	7 / 14.2 ha	14 / 26.7 ha
Area of regionally significant farmland likely to be affected (area)		-	-	3.4 ha	8 ha	13.9 ha	26.5 ha

**Indicator: distributional equity and impacts upon housing affordability**

The project is generally considered to have a low risk of adverse impacts upon medium-term housing affordability. Options E and A have the highest potential risk of impacting upon affordability in the short term as they affect a relatively higher number of residential properties in South Grafton; however the extent of impact under these options is considered likely to be minimal. It is also noted that any potential short-term impacts upon housing

<sup>1</sup> FTE refers to full-time equivalent positions. An FTE of 1 is equivalent to a full-time position, while an FTE of 0.5 refers to hours worked equal to half a full time position.

affordability may be offset by increased connectivity to residential growth areas provided under most options.

The distributional equity of impacts is generally fairly balanced, with Option A an exception. In addition to a relatively high absolute number of residential property impacts, the majority of impacts on businesses under Option A are located in South Grafton. South Grafton has been identified as having higher levels of disadvantage than Grafton (ABS 2006 census data), and its residents may be expected to have a lower financial and personal capacity to respond to negative impacts.

#### Indicator: changes to access and disruption to community activities or plans

Road upgrading and higher traffic volumes are likely to disrupt access patterns and community activities under several options.

Option E is likely to disrupt patterns of movement to community facilities in Villiers and Victoria Streets, including Clarence Valley Conservatorium and St Mary's Church. Option 11 will disrupt ease of north-south movement across Fry Street, currently a quiet residential area. Options 14 and 15 will introduce increased traffic flows, and therefore a barrier to movement, along Prince Street.

#### Indicator: level of connectivity to existing and future land uses and development

Improving connectivity between strategic land uses such as employment and residential areas, and growth areas, can contribute to the economic development of the Clarence Valley.

Options E, A and C provide improved connectivity between existing residential areas, Grafton CBD, and South Grafton CBD and growth areas. Option C also provides improved connectivity with Clarenza.

Option 11 improves connectivity between existing residential areas and Clarenza.

Options 14 and 15 provide improved connectivity to residential growth areas and employment lands in Junction Hill and Clarenza, and existing residential areas.

#### Indicator: potential to contribute to tourism

Tourism is an important part of Grafton's economy, and the construction of an additional crossing of the Clarence River at Grafton may have positive or negative impacts upon this industry. All options offer some possibility of integration with the *Clarence River Way Masterplan* (Clarence Valley Council, 2010), through the potential creation of a 'gateway experience' entry to the town and other complementarities with the masterplan. Opportunities for integration are greatest under Option E, and least under Options 11, 14 and 15.

A summary of social and economic impacts under each route option is presented in Table 2.



**Table 2: Summary of socio-economic impacts of each route option**

Route Option	Summary of social and economic impacts
Option E	<ul style="list-style-type: none"> <li>• Stronger connection between disadvantaged area of South Grafton and Grafton CBD</li> <li>• Helps to define South Grafton CBD and potentially creates strong link between Grafton and South Grafton town centres</li> <li>• Lowest residential property impact from three options that pass through central Grafton (Options E, A and C)</li> <li>• Greatest potential for integration with Clarence River Way tourism masterplan</li> </ul>
Option A	<ul style="list-style-type: none"> <li>• Minimal change from existing road network situation</li> <li>• Highest impact upon community facilities</li> <li>• Highest number of businesses with potential major impacts</li> <li>• Existing traffic flows maintained</li> <li>• Minimal new noise impacts</li> <li>• Affects a number of residences in South Grafton</li> </ul>
Option C	<ul style="list-style-type: none"> <li>• Least disruption to community facilities from route options that pass through central Grafton (Options E, A and C)</li> <li>• Localised but relatively high impact upon residential properties</li> <li>• Lowest business impact from route options that pass through central Grafton (Options E, A and C)</li> </ul>
Option 11	<ul style="list-style-type: none"> <li>• High potential impact on amenity, severance and safety</li> <li>• Increases access from Grafton to Clarenza growth area</li> <li>• Minimal impact on community facilities</li> </ul>
Option 14	<ul style="list-style-type: none"> <li>• Increased access to northeast Grafton residential growth area</li> <li>• Summerland Way through-traffic likely to bypass the centre of Grafton</li> <li>• Minimal residence and business property impacts</li> </ul>
Option 15	<ul style="list-style-type: none"> <li>• Increased access to northeast Grafton residential growth area</li> <li>• Summerland Way through-traffic likely to bypass the centre of Grafton</li> <li>• Minimal residence and business property impacts</li> <li>• Relatively high number of rural property impacts</li> </ul>

This technical paper builds on the work undertaken for the *Preliminary Route Options Report – Final* (RMS, January 2012) and is an attachment to the Route Options Development Report. This paper will be used to define the potential social and economic impacts of the six route options. The findings of these investigations will be used as part of the selection of a recommended preferred option.

# 1. Introduction

Roads and Maritime Services (RMS) is currently undertaking investigations to identify a preferred location for an additional crossing of the Clarence River at Grafton.

This technical paper has been prepared as part of the Route Options Development Report, in order to assist RMS and the community in their assessment of six short-listed route options identified in the January 2012 Community Update (RMS, January 2012). The report draws upon previous investigations and reports including the *Preliminary Route Options Development Report – Final* main report and social and economic technical paper (RMS, January 2012), and additional subsequent investigations, to help identify potential social and economic impacts related to the project.

This technical paper comparatively assesses the six route options based on a set of socio-economic indicators and the socio-economic issues and constraints identified in the *Preliminary Route Options Report - Final*. It is not the purpose of this technical paper to recommend or eliminate options, or suggest mitigative steps for any possible impacts. Rather this report provides an overview of potential socio-economic impacts to the degree of detail necessary to inform decision-making regarding the identification of a recommended preferred route option. The report considers potential social and economic impacts arising from each of the short-listed options.

Section 2 of this paper details the six route options. Section 3 presents the methodology used to assess each option, including the social and economic indicators supporting the overall project objectives. Section 4 outlines socio-economic constraints and opportunities identified in the *Preliminary Route Options Report – Final – Volume 2 – Social and Economic Technical Paper* (RMS, January 2012) that have been used to frame the analysis of this report, including the demographics of Grafton and its community facilities. Section 5 details the community consultation conducted as part of the route option assessment process. Section 6 presents the assessment of each route option, ordered by type of impact; this analysis includes input from detailed traffic modelling prepared by GTA and Arup fieldwork and a survey of local businesses and other stakeholders conducted by BBC Consulting Planners, and reviews of design plans of the route options prepared by Arup. Section 7 concludes the report by presenting a socio-economic issue summary of each of the six route options.

## 1.1 Suitability and assumptions

**1.1.1** The purpose of the present paper does not include a complete socio-economic impact analysis. Instead it identifies potential positive and negative impacts arising from each of the six route options for comparative purposes. These possibilities may not eventuate, depending on the ultimate design of the final option. The assessment-oriented nature of this paper also means that it does not generally offer recommendations or suggestions for management and mitigation. These aspects of the socio-economic impact assessment process will be undertaken after the preferred location for an additional crossing has been identified.

**1.1.2** Statistical data is not available at a sufficiently detailed resolution to distinguish between the resident profiles of areas along each route option – relevant census collection districts (CDs) are too large to be representative at this level of detail. In addition most routes run through the same collection districts (CDs), and as has been identified in the *Preliminary Route Options Report – Social and Economic Technical Paper* (RMS, January 2012), Grafton is not polarised and has people of different incomes living in the same area and

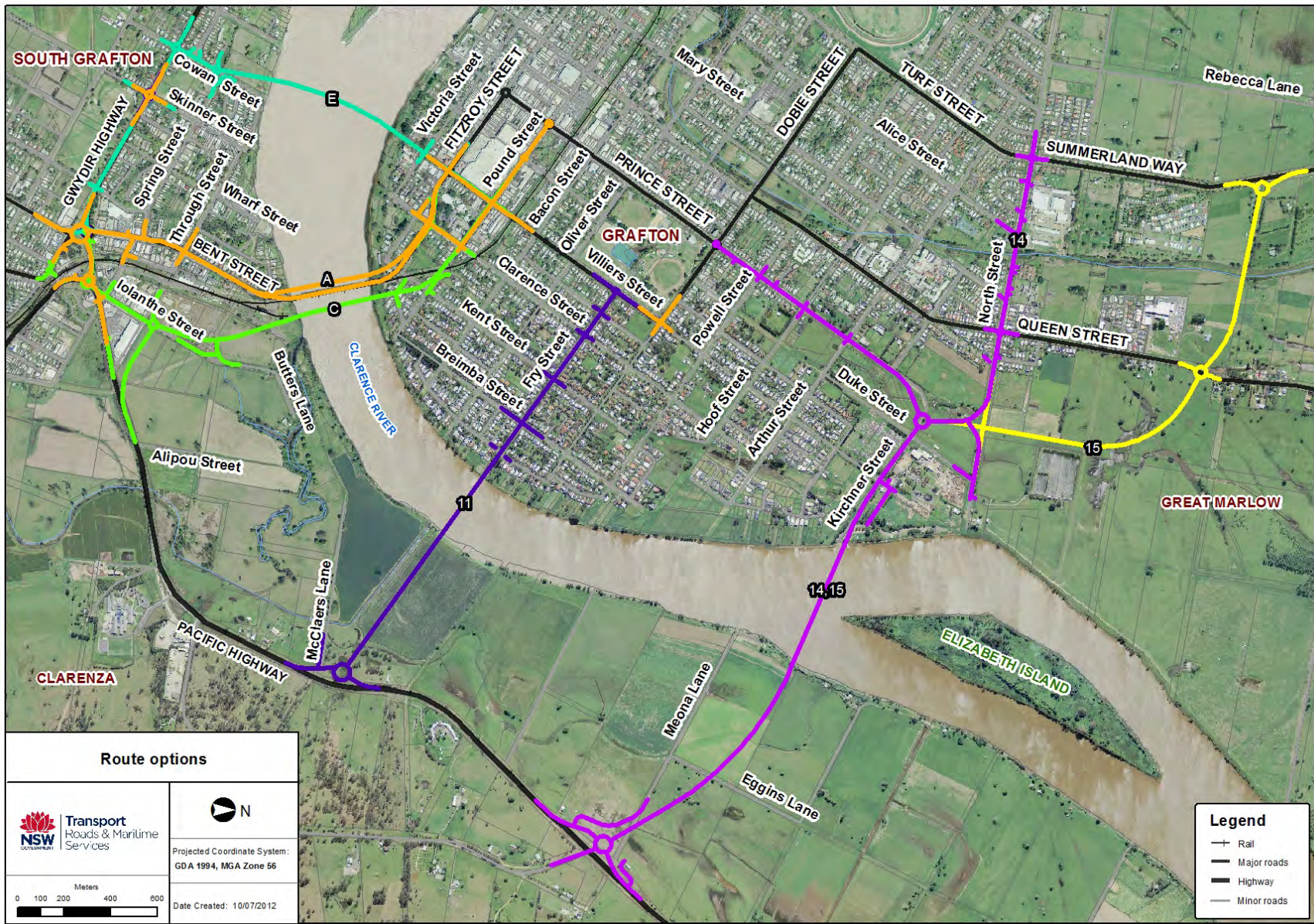
same street. As a result, data obtained from the 2006 Census is of limited value in identifying the social and demographic characteristics of populations in small areas, including affected groups. Although data is not available at this scale, consultation with key stakeholders has helped to develop an understanding of local communities and complement statistical data available. The information available is considered suitable for a comparative assessment of the route options.

**1.1.3** The profile of the existing social environment is based primarily on 2006 data presented in the *Preliminary Route Options Report – Final* main report and Social and Economic Technical Paper, (RMS, January 2012), and sourced from the *Australian Bureau of Statistics Census of Population and Housing 2006*. This data is now six years old. The most recent census was conducted on 9 August 2011. The release of census data began 21 June 2012, but has only been partially released. 2011 Census data has not been included in this comparative assessment. It will however be taken into consideration following selection of the preferred route option.

The Clarence Valley local government area's spatial and social structure will have altered over the six years since the 2006 census was conducted, and will further alter before any additional crossing is constructed. Census data employed in this report has been used on the assumption that this data approximately reflects current social conditions. Consultation with Clarence Valley Council and the Grafton Chamber of Commerce and Industry has helped to develop an understanding of local communities. The information available is suitable for a comparative assessment of the route options.

**1.1.4** The quality of responses to the survey of potentially affected businesses, outlined in detail in Section 5, was mixed. Some questions, particularly the location of customers and the proportion of business from passing trade, were often difficult for businesses to answer with certainty. Consequently the data presented in this report regarding reliance of businesses upon passing traffic is an informed estimate. Business survey data has been complemented by consultation with the Grafton Chamber of Commerce and Industry. Questions that businesses had difficulty answering do not inform the social and economic project indicators; indicators consider the number of full time equivalent employees at each business. Businesses were able to provide this information with a high degree of certainty. This information is considered suitable for the purposes of this report.

Figure 1: Six short-listed route options



## 2. Description of the short-list of route options

This chapter describes the six short-listed route options for the additional crossing of the Clarence River at Grafton. The six route options form the basis of this social and economic issues technical paper, and are described below in Table 3.

**Table 3: Route options for an additional crossing of the Clarence River at Grafton**

Option	Description
Option E	<p>This option consists of a new bridge west (upstream) of the existing bridge and south-east (downstream) of Susan Island. This option would connect to the Gwydir Highway at Cowan Street in South Grafton and to Villiers Street in Grafton. The option would extend along Villiers Street beneath the existing railway viaduct (between Pound and Bacon Streets) where the vertical clearance would be increased to 5.3 m.</p> <p>Option E would have one northbound lane and one southbound lane for vehicles and a cycle/pedestrian lane.</p> <p>The existing bridge would remain as one northbound lane and one southbound lane.</p>
Option A	<p>This option consists of a new bridge parallel and immediately west (upstream) of the existing bridge and connects to the existing road network at Bent Street in South Grafton and to Fitzroy Street in Grafton.</p> <p>This option would have two northbound lanes and one southbound lane for vehicles and a cycle/pedestrian lane. Villiers Street would need to be upgraded to provide 5.3m vertical clearance for heavy vehicles beneath the railway viaduct (between Pound and Bacon Streets).</p> <p>The existing bridge would become a one-lane southbound bridge.</p>
Option C	<p>This option consists of a new bridge parallel and immediately east (downstream) of the existing bridge. This option would connect to the Pacific Highway at Iolanthe Street in South Grafton and to Pound Street in Grafton. This option would include a new intersection with the Pacific Highway south-west of Bunnings Warehouse. The new northern approach would connect to the existing road network in Grafton at Pound Street. Pound Street would be lowered beneath the existing railway viaduct (between Kent Street and Clarence Street) to achieve a vertical clearance of 5.3m.</p> <p>Option C would have one northbound lane and one southbound lane for vehicles and a cycle/pedestrian lane. Villiers Street would need to be upgraded to provide 5.3m vertical clearance for heavy vehicles beneath the railway viaduct (between Pound and Bacon Streets).</p> <p>The existing bridge would remain as one northbound lane and one southbound lane.</p>
Option 11	<p>This option consists of a new bridge northeast (downstream) of the existing bridge and would provide a connection between the Pacific Highway, northeast of McClaers Lane, and Fry Street in Grafton.</p> <p>This option would have one northbound lane and one southbound lane for vehicles and a cycle/pedestrian lane. Option 11 would include one viaduct structure across the floodplain between the Pacific Highway and the Clarence River.</p> <p>This option would include an upgrade of Fry Street and the Villiers Street intersection to enable it to meet future traffic volumes. Villiers Street would need to be upgraded to provide 5.3m vertical clearance for heavy vehicles beneath the railway viaduct (between Pound and Bacon Streets).</p> <p>The existing bridge would remain as one northbound lane and one southbound lane.</p>

Option	Description
Option 14	<p>This option consists of a new bridge northeast (downstream) of the existing bridge. It would create a new intersection with Centenary Drive and the Pacific Highway northeast of South Grafton and connects to Kirchner Street and North Street in Grafton.</p> <p>This option would have one northbound lane and one southbound lane for vehicles and a cycle/pedestrian lane. Kirchner Street and North Street would require an upgrade through to Turf Street to accommodate future traffic volumes and the creek crossing at Alamy Creek will be upgraded to provide 1 in 20 year flood immunity. Option 14 would include a viaduct structure from the Pacific Highway across the floodplain to the Clarence River. Villiers Street would need to be upgraded to provide 5.3m vertical clearance for heavy vehicles beneath the railway viaduct (between Pound and Bacon Streets). Prince Street would also need to be upgraded from Kirchner Street to Dobie Street for heavy vehicle access into central Grafton.</p> <p>The existing bridge would remain as one northbound lane and one southbound lane.</p>
Option 15	<p>This option consists of a new bridge northeast (downstream) of the existing bridge. It would create a new intersection with Centenary Drive and the Pacific Highway northeast of South Grafton and connect to Kirchner Street, and then to the Summerland Way south of Butterfactory Lane north of Grafton.</p> <p>This option would have one northbound lane and one southbound lane for vehicles and a cycle/pedestrian lane. Option 15 would include a viaduct structure from the Pacific Highway across the floodplain to the Clarence River. Villiers Street would need to be upgraded to provide 5.3m vertical clearance for heavy vehicles beneath the railway viaduct (between Pound and Bacon Streets). Prince Street would also need to be upgraded from Kirchner Street to Dobie Street for heavy vehicle access into central Grafton.</p> <p>The existing bridge would remain as one northbound lane and one southbound lane.</p>

### 3. Methodology

This report assesses the relative social and economic opportunities and constraints of each of the six route options for an additional crossing of the Clarence River at Grafton. These constraints have been broadly identified in earlier reports and investigations, particularly investigations conducted by the former RTA in 2003/04 and the recent investigations conducted by BBC Consulting Planners documented in the *Preliminary Route Options Report – Final* (RMS, January 2012). The purpose of this report is to identify potential positive and negative impacts arising from each of the six route options for comparative purposes.

In assessing the route options, this report has adhered to the general principles of socio-economic impact assessment (Taylor, 1994). Socio-economic impact assessment involves the methodology as detailed below, split into the following six phases:

- Phase 1 - Scoping.** Identify potentially affected groups and individuals and their issues of concern and the nature of the likely impact - what might happen where and to whom?
- Phase 2 - Profiling.** Describe the nature of the groups and individuals likely to be affected.
- Phase 3 - Prediction.** What are the social impacts/changes associated with the development, who is affected and to what extent?
- Phase 4 - Assessment.** Are these impacts (both positive and negative) significant given the priorities, policies and programs of Government, including the proposal objectives?
- Phase 5 - Management, mitigation, monitoring and review.** How can the potential impacts of this development be best managed?
- Phase 6 - Recommendations.** What recommended strategies and actions will produce the best outcomes for the groups or individuals potentially impacted by the development?

This paper details the results of Phases 3 and 4, prediction and assessment. The findings of Phases 1 and 2 have been presented previously in the *Preliminary Route Options Report – Final* (RMS, January 2012), and are summarised here in Section 4. The assessments presented in this paper are for the purposes of identifying likely and potential future socio-economic impacts, and their extent. This paper does not assess the comparative benefits and costs of each option or provide recommendations as to a preferred option. Additional assessment of socio-economic impacts will be conducted once the recommended preferred location for an additional crossing has been identified. It is recommended that Phases 5 and 6 be undertaken after the preferred location for an additional crossing has been identified.

The assessment has been conducted to measure potential and probable social and economic impacts against the project objectives for comparative purposes. Socio-economic impacts are social changes and impacts on the community and the economy likely to occur as a result of a particular development, planning scheme, or government policy decision. There are many definitions of social impacts. Two definitions suitable to the present assessment are:

*Significant events experienced by people as changes in one or all of the following:*

- *Peoples way of life – how they live, work, play and interact with one another on a day to day basis.*
- *Their culture – shared beliefs, customs and values.*

- *Their community – its cohesion, stability, character, services and facilities.* (New South Wales Office of Social Policy, 1995)

And

*By social impacts we mean the consequences to human populations of any public or private actions that alter the ways in which people live, work, play, relate to one another, organise to meet their needs and generally cope as members of society. The term also includes cultural impacts involving changes to the norms, values, and beliefs that guide and rationalise their cognition of themselves and their society.* (Interorganisational Committee on Principles for Social Assessment, 2003)

In order to measure the extent to which socio-economic impacts align with the project objectives, a set of specific indicators have been developed by the project team and BBC Consulting Planners. These indicators have been designed to enable a comparison between different route options. The objectives for the additional crossing of the Clarence River at Grafton project are:

- Enhance road safety for all road users over the length of the project.
- Improve traffic efficiency between and within Grafton and South Grafton.
- Support regional and local economic development.
- Involve all stakeholders and consider their interests.
- Provide value for money.
- Minimise impact on the environment.

Indicators developed to assist in the assessment of the social and economic impacts of route options are presented in Table 4.

The indicators have been considered for each of the six route options. The assessment has been prepared on the basis of a desktop review of various reports and demographic data (such as that available from the ABS), site inspections, targeted consultations with Council and social service providers, broad community consultation and an understanding of relevant research and academic literature.

**Table 4: Social and economic indicators**

Project objective	Supporting objective	Indicator	Unit
Support regional and local economic development	Provide transport solutions that complement existing and future land uses and support development opportunities	Level of connectivity to existing and future land uses and development	Qualitative
	Provide improved opportunities for economic and tourist development for Grafton	Potential to contribute to tourism	Qualitative
Minimise impact on the environment	Minimise the impact on the social environment, including property impacts	Number of residential properties potentially directly affected	Number of properties
		Number of community facilities potentially directly affected	Number of facilities
		Number of businesses where there would be potential impacts on business viability, and employees at these businesses	Number of businesses and number of FTE positions
		Number of businesses with potential minor impacts	Number of businesses



Project objective	Supporting objective	Indicator	Unit
		Number and area of rural properties with potential direct impacts	Number of properties & hectares
		Area of regionally significant farmland potentially directly affected	Hectares
		Distributional equity of social impacts and impact on housing affordability	Qualitative assessment
		Changes to access and disruption to community activities or plans	Qualitative assessment

The development and assessment of these indicators has been guided by previous technical papers and investigations identifying the main impacts likely to occur as a result of any route option. These include:

- Property and land uses (including businesses and community facilities as well as housing affordability).
- The character, amenity and liveability of affected areas as well as their cohesion, lifestyles and activities (community liveability and wellbeing).
- The amenity and utility of community and recreational facilities.
- Community linkages, access patterns and community mobility.
- Economic impacts.

Each of these has been reflected in the supporting objectives identified in Table 4.

However, potential socio-economic impacts are also dependent on a number of local factors, including:

- The demographic profile of the community surrounding the proposed option.
- The social structure, conditions and infrastructure of the locality of the proposed option.
- The physical proposals in the immediate locality of the proposed option (including mitigative works).
- Proximate land uses.

This information is summarised in Section 4 and documented in full in the *Preliminary Route Options Report – Final* (RMS, January 2012), which described the existing socio-economic environment of Grafton, South Grafton and the Clarence Valley. The options assessment presented in Section 6 uses these identified constraints and opportunities to assess the socio-economic impact of the six route options.

### 3.1 Fieldwork conducted for this report

Additional site investigations were conducted to assist in the assessment of the six route options for an additional crossing of the Clarence River at Grafton. This fieldwork was conducted in February 2012. The purpose of this field-based research was to inform the assessment of potential issues previously identified in desk-based research, and identify any additional potential social and economic impacts.

This fieldwork involved the observation of the potential for and likely degree of impact upon properties and individual accessibility impacts, including upon community facilities and businesses. It also considered route options' potential to impact upon wider accessibility issues, including severance and community cohesion impacts.

A survey of businesses in the vicinity of the route options was conducted as part of this fieldwork. The survey results of potentially directly affected businesses only are detailed in Section 3.2. As part of the survey, patterns of usage and movement along with property accessibility were considered to assess the potential impact of route options upon businesses. Community facilities were also considered for potential impacts against existing patterns of movement and accessibility.

## **3.2 Consultation conducted for this report**

The assessment contained in this technical paper incorporates data from previous investigations reported in the *Preliminary Route Options Development Report – Final*, and *Volume 2 – Social and Economic Technical Paper* (RMS, January 2012). It also incorporates data gathered from fieldwork conducted in February 2012, examining the land use and relative location of community facilities along the route options.

The assessment and identification of potential impacts for this technical paper is also informed by consultation with stakeholders, including potentially affected businesses. This consultation occurred in three stages: a survey of potentially directly affected businesses, consultation with Clarence Valley Council, and consultation with the Grafton Chamber of Commerce and Industry.

### Survey of Affected Businesses

Face-to-face surveys were conducted in February 2012 with businesses identified as potentially directly affected. Twenty-six businesses were contacted during this stage of consultation. One business declined to participate in the survey.

The survey was designed to obtain quantifiable information in order to allow comparison between the potential economic impacts to local businesses of each route option. Subjects covered in the survey included:

- Type of business
- Car parking details
- Property utilisation
- Approximate Gross Floor Area (GFA) of business
- Hours of operation
- Number of staff employed
- Property rental / ownership
- Journey to work modal split
- How and from where deliveries are received
- Business utilisation of existing Grafton Bridge, including estimated crossings per day
- Location of clients / customers, including estimated per cent of business that is 'passing trade'
- Future business plans
- Short-listed route option awareness, opinions and estimated impacts upon business.

Site use and points of property access were also noted to inform an assessment of how options may impact the business. Any other issues important to individual businesses that were raised unprompted were noted. Refer to Appendix 1 for a list of businesses contacted for the survey. Refer to Appendix 2 for a copy of the survey. The results of the survey are discussed in Section 5, and incorporated into the analysis contained in Section 6.

#### Consultation with Grafton Chamber of Commerce and Industry

Consultation was conducted with the Grafton Chamber of Commerce and Industry in May 2012. The intent of this consultation was to identify any potential additional positive or negative impacts related to the route options, and develop a more detailed understanding of conditions for local businesses and patterns of business in Grafton City in order to inform the assessment of route options presented in Section 6.

#### Consultation with Clarence Valley Council

Consultation with the Clarence Valley Council's Manager of Social Planning was conducted in May 2012. The intent of this consultation was to identify any potential additional impacts, changes in social conditions in the Grafton area since the preparation of CVC's social plan in 2009, and to develop a better understanding of the communities and demographics along each of the route options.

## 4. Existing environment/conditions and constraints

This section identifies the existing conditions and constraints relevant to the six route options. This information has been summarised from the *Preliminary Route Options Report – Final, Volume 2 Technical Paper – Social and Economic* (RMS, January 2012). It first details the demographics of the Grafton area, before considering opportunities and constraints specific to each route option.

### 4.1 Socio-economic profile of the study area

#### 4.1.1 Clarence Valley and the City of Grafton

The Clarence Valley local government area is predominantly rural, with a dispersed settlement pattern over a sizeable area (10,440 km<sup>2</sup>). In addition to numerous small villages and rural localities, settlement is based around the city of Grafton and the townships of Yamba, Maclean and Iluka.

One of four major regional centres within the Mid North Coast Region, Grafton City is a focal point for regional road and other transport networks and focus of higher order services to the Clarence Valley (Department of Planning, *Mid North Coast Regional Strategy*, 2009).

#### 4.1.2 Population growth and development

Population forecasts based on land capacity for Grafton and its surrounding area have been developed by Clarence Valley Council and the Department for Infrastructure. These growth forecasts are identified from the *Mid North Coast Regional Strategy* (2009) and are presented in Table 5.

**Table 5: Forecast population growth in Grafton and surrounds <sup>2</sup>**

	2010	2021	2031	2041
Grafton	10,761	11,255	11,255	11,255
Junction Hill	1,015	2,520	3,455	3,455
South Grafton	6,065	6,806	7,601	7,601
Clarenza	684	1,610	2,514	5,418
<b>Total</b>	<b>18,525</b>	<b>21,921</b>	<b>24,825</b>	<b>27,729</b>
Townsend, Maclean, James Creek, Gulmarrad	4,800	6,800	8,800	8,800
Coutts Crossing	613	786	955	955
Waterview Heights	769	1,974	3,150	3,150
<b>Total other areas</b>	<b>6,182</b>	<b>9,560</b>	<b>12,905</b>	<b>12,905</b>

<sup>2</sup> Additional growth is predicted in the Clarence Valley LGA beyond that in the Grafton and surrounds area shown in this table

### 4.1.3 Demographic Summary

- The local government area had a total population of 48,147 in 2006. It currently has a low rate of growth of approximately 0.6 per cent per year. In 2006 Grafton City, including South Grafton and Junction Hill, had a population of 17,501 people. North of the river, the population of the suburb of Grafton was 9,956 and to the south of the river, South Grafton's population was 5,931 people.
- The *Mid North Coast Regional Strategy* identifies that the local government area has significant capacity to increase both its population (through infill development and land releases such as those around Clarenza and Junction Hill) as well as its industrial capacity. Note that not all land identified within these "growth areas" will be developed for urban uses. The NSW Department of Planning<sup>3</sup> has estimated that the population of the local government area will reach 53,200 by 2016 and 56,600 by 2031.
- The population of the Grafton area is expected to increase by almost half, from 18,525 in 2010 to 27,729 in 2041, while the population in other areas outside Grafton is expected to double. Much of this growth will occur in Clarenza and Junction Hill.
- Grafton City is generally characterised by low density, detached housing, particularly near the riverfront. Higher densities are located in South Grafton in the public housing area and in the northern outskirts of Grafton near the hospital.
- Grafton City and the local government area has an ageing population structure. Associated with this trend are a high proportion of lone person households. Grafton City also has a smaller proportion of young adults than the NSW average (although proportionally more than the local government area). Young people and adults who do not leave the local government area generally move into Grafton City. Interestingly Grafton City has had a small baby boom, suggesting the presence of young families.
- It has been projected that by 2026 the proportion of residents aged over 65 years will have increased to 31.3 per cent of the local government area's population (up from 19.3 per cent in 2006).
- Average individual and household incomes in the local government area are significantly lower than the average for NSW, and somewhat lower than the regional average.
- The local government area has a higher unemployment rate than NSW and other parts of the Northern Rivers Region, a low labour force participation rate and high rates of part-time employment.
- Public transport usage rates are very low (less than one per cent catch a bus to work for example). Higher rates of public transport use correlate with more disadvantaged areas of Grafton City. Approximately 12 per cent of Grafton City's households do not have a motor vehicle. Many of the unemployed do not have a car.
- Approximately 10 per cent of the residents in the local government area walk or cycle to work which, whilst substantially less than the NSW average, is slightly higher than the regional average.
- Grafton City has the highest proportion in the local government area of households renting their dwellings.

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<sup>3</sup> Planning NSW, *NSW SLA Population Projections, 2006-2036*, 2010 release

- The population of the local government area is markedly under-qualified compared to NSW and the Northern Rivers Region, with low completion of Year 12 schooling and low attainment of non-school qualifications. This can in part be attributed to the age of the population and the historical requirements of the local government areas industrial base.
- Within the Northern Rivers Region the Clarence Valley population has a high level of disability.

## 4.2 Community and recreation facilities in the area

A number of Grafton City's community and recreation facilities are located near and along the length of the Clarence River or the Summerland Way. Based on the information and issues outlined in previous investigations, the following are the potential social and economic constraints relevant to an additional crossing:

- River uses
- Clubs / recreation
- Education
- Religious
- Government
- Services (Key), including Grafton and South Grafton CBDs
- Health and emergency services
- Parks and reserves
- Infrastructure

The locations of these facilities are shown fully in the *Preliminary Route Options Report – Final – Volume 2 – Social and Economic Technical Paper* (RMS, January 2012). The location of community facilities in proximity to the six route options is shown below in Figures 2 to 6.

Figure 2: Option E route showing community facilities

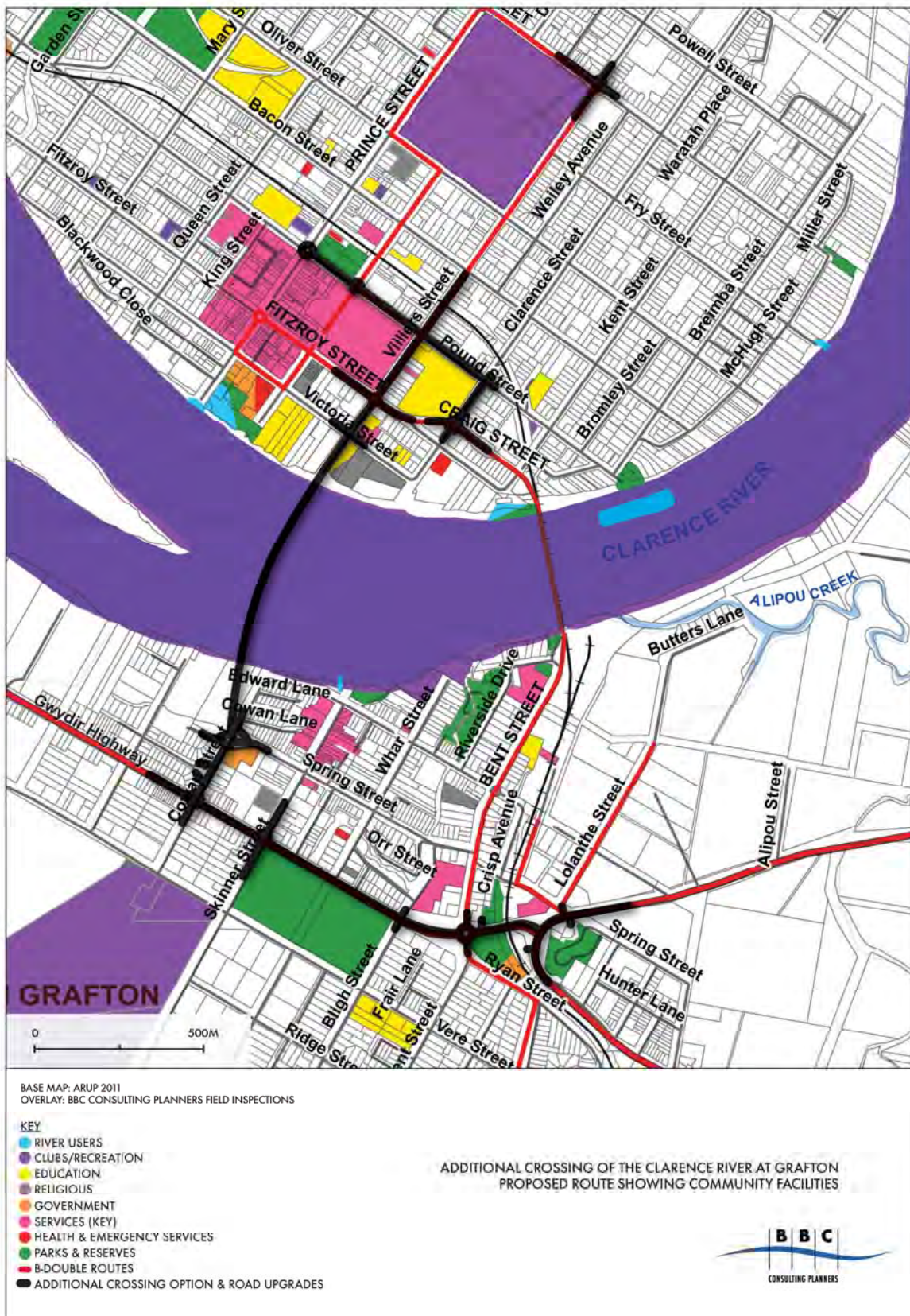


Figure 3: Option A route showing community facilities

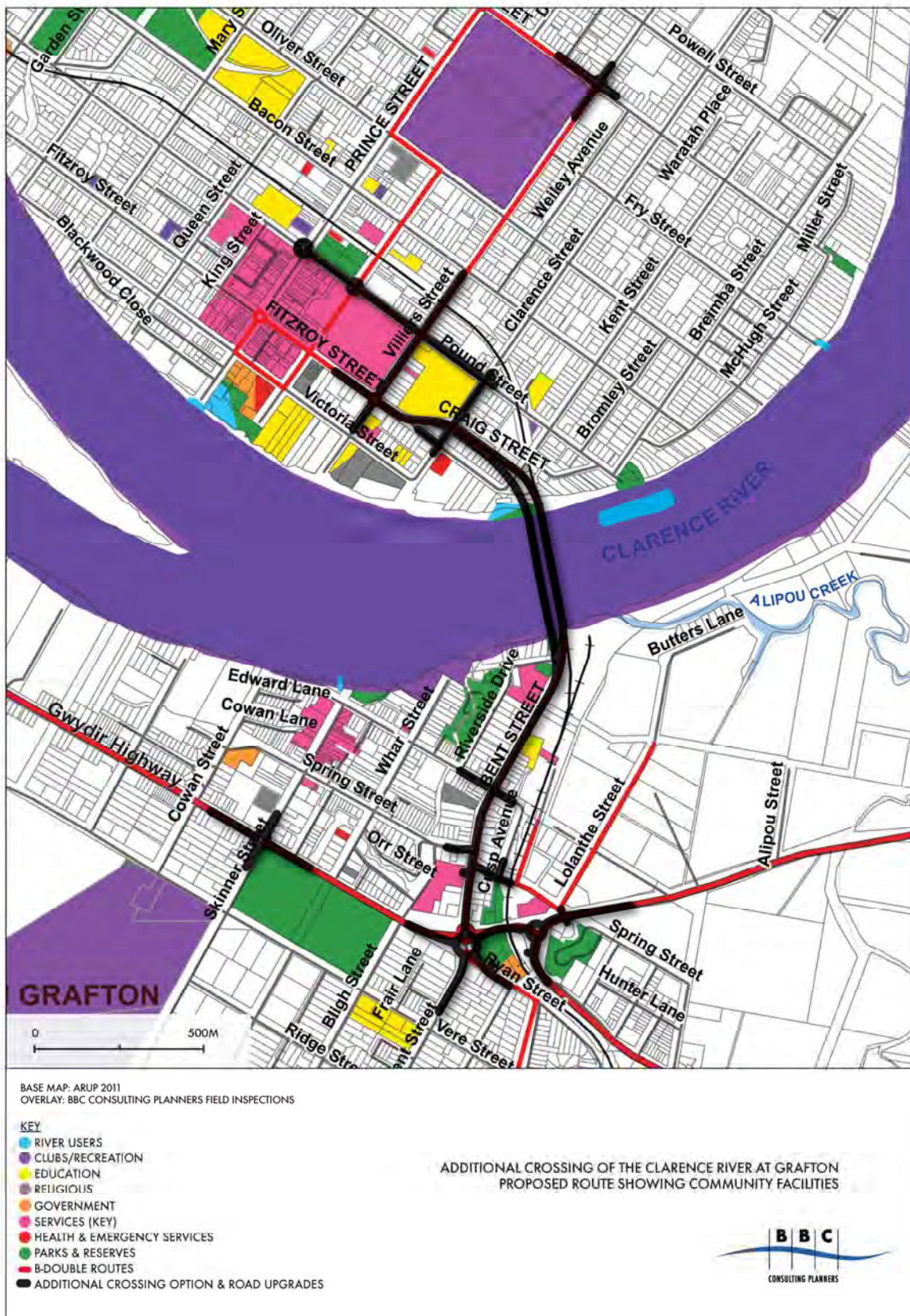




Figure 4: Option C route showing community facilities

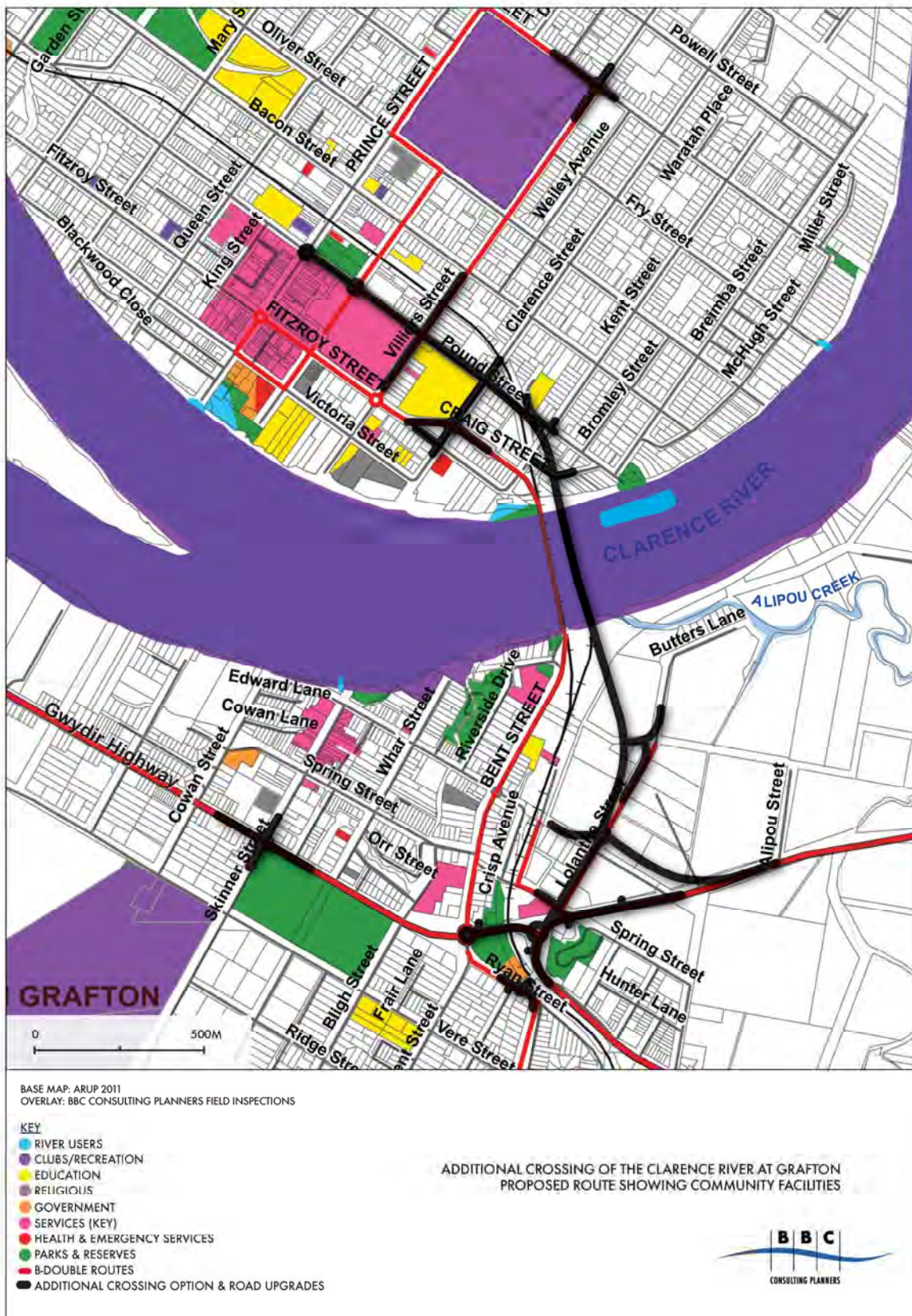


Figure 5: Option 11 route showing community facilities

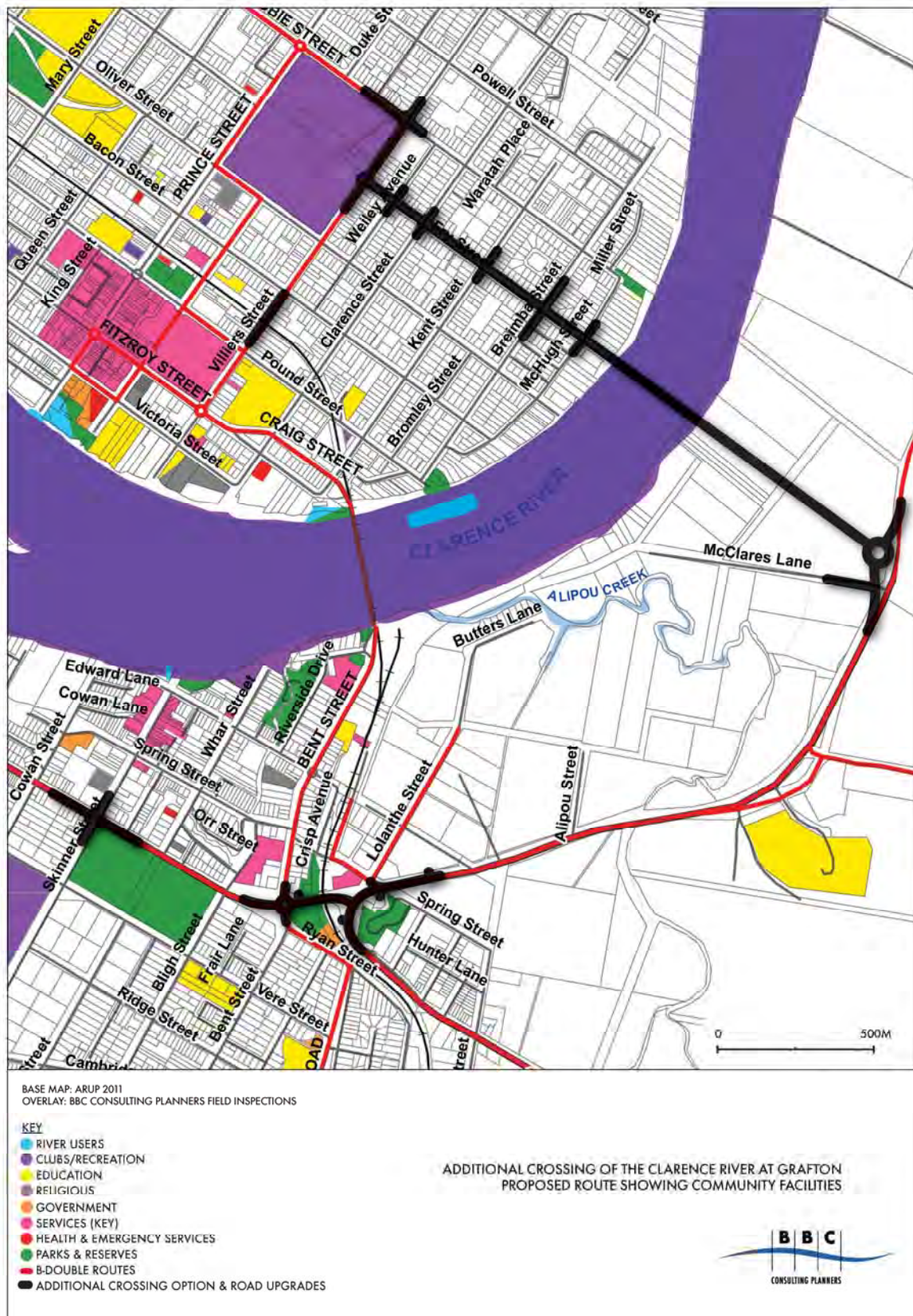


Figure 6: Option 14 route showing community facilities

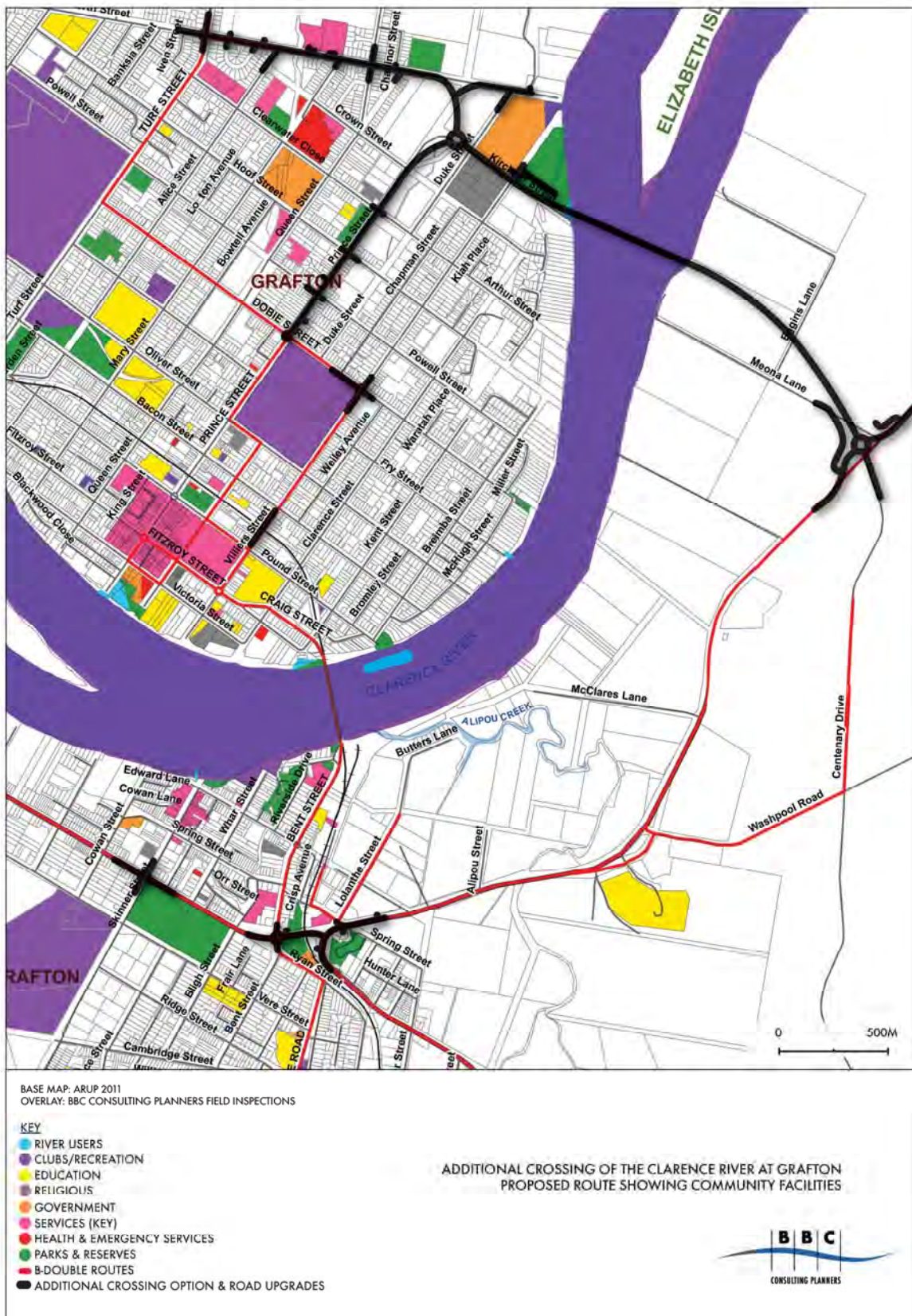
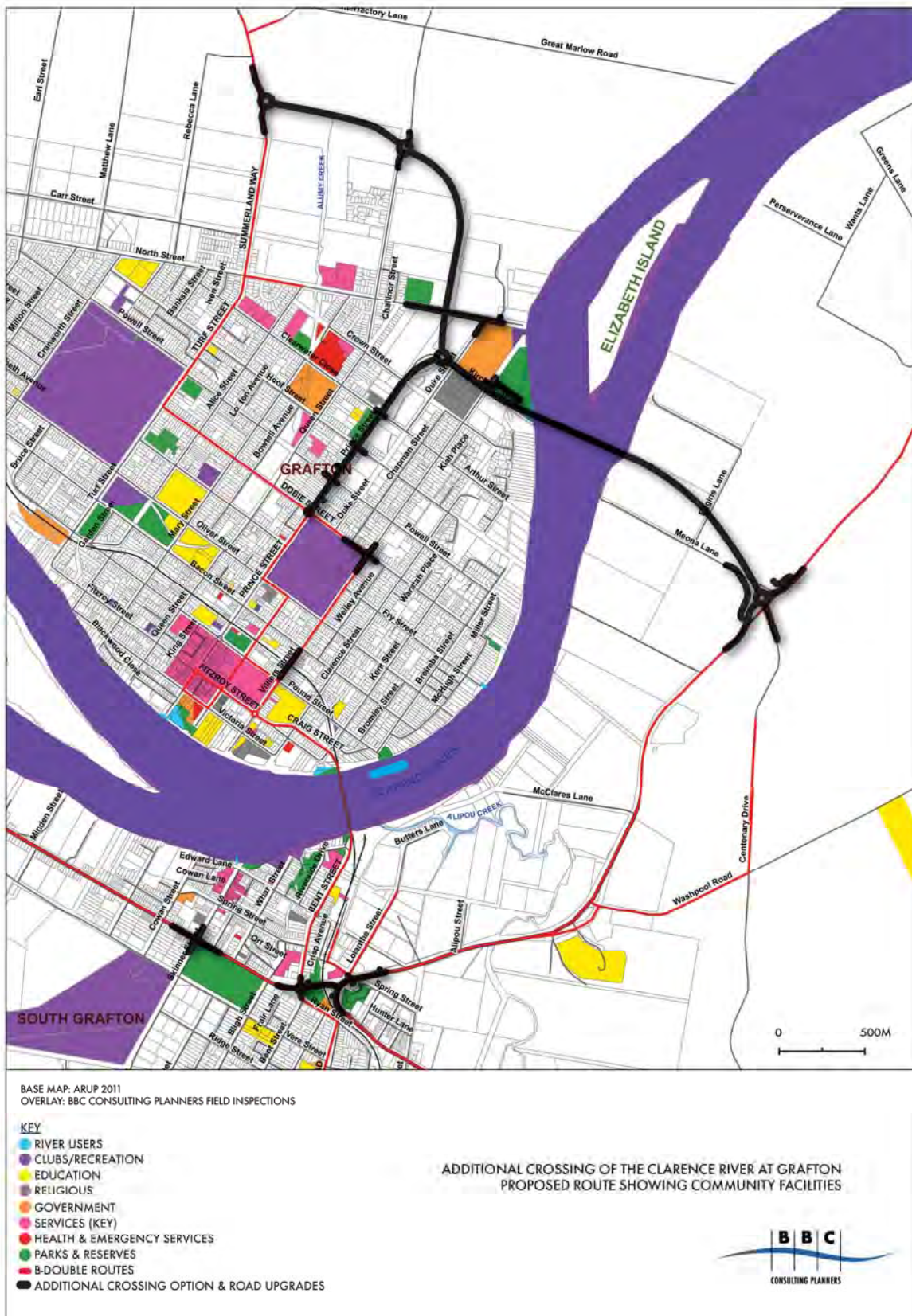


Figure 7: Option 15 route showing community facilities



### 4.3 Summary of social and economic opportunities and constraints identified in previous project stages

An additional crossing of the Clarence River at Grafton would provide a number of potential social and economic opportunities. Primarily by relieving traffic congestion, which is having a number of negative social and economic impacts, the proposal has the potential to increase accessibility to Grafton, the local government area's economic, service, social and transport hub. With its dispersed settlement pattern and coastal settlement growth, the Clarence Valley is strongly reliant on road transport, and the crossing of the Clarence River is a key component of that transport network. This potential improvement to the transport connection could have a number of potential social and economic benefits for road users:

- More efficient, direct and reliable transport options.
- Better connectivity to the transport network.
- Reduced travel times.
- Consistent and reliable trip times.
- Increased convenience, including for users of public transport.
- Support for regional and local economic development, by improving business connectivity and reducing business transport costs.

The proposed additional crossing could improve local and regional transport networks in a number of other ways, potentially providing:

- Improved road safety outcomes.
- Better integration of the communities of South Grafton and Grafton, economically and socially, in turn building stronger communities.
- Increased access to urban land release areas in the local government area at South Grafton, Clarenza and Junction Hill.
- Increased access to and between the local government area's seven industrial estates, which house a range of industries which rely on the crossing for the supply of goods and services.
- Improved connectivity, both pedestrian and vehicular, across Summerland Way.
- Improved community access to and use of the Clarence River.
- Improved pedestrian and cyclist connectivity across the Clarence River.

More broadly, the proposal affords the opportunity for potential improvements in:

- Access to employment, health and community services, retail and community centres and recreation sites.
- Associated improvement to local amenity (eg improved air quality and noise outcomes).

Potential constraints upon the project exist and have been identified in previous investigations and reports including the investigations undertaken in 2003/04 and the *Preliminary Route Options Report – Final* (RMS, January 2012). In particular, the following have been considered in this phase of the study process and should be included in the development of future mitigation mechanisms:

- Minimising property impacts.
- Minimising adverse impacts to amenity such as noise, and visual quality.
- The location of more vulnerable sections of the community.

- The potential loss of affordable housing.
- The reliance a number of businesses are likely to have on turnover generated by non-local highway traffic, such as service stations and motels.
- Maintaining the viability of the South Grafton commercial precinct.
- The potential effect on river users (recreation, cultural and tourism).
- Community views on community and recreation facilities and social issues.

#### 4.4 Existing social and economic conditions along the six route options

A summary outline of the social and economic conditions along each route option is provided in Table 6 to Table 11 below. This data has been drawn from previous reports, including the *Preliminary Route Options Development Report – Final* (RMS, January 2012), a review of relevant documents, and field-based research. Community facilities identified in these tables include all those that lie adjacent to route options and associated road upgrades.

**Table 6: Summary of social and economic conditions along Option E**

Issue	Conditions
Predominant current land uses along route	<p><u>North</u></p> <p>Route runs along Villiers Street (heritage/community facilities, some commercial, and low density residential) and may introduce higher traffic flows in Victoria Street (heritage/community facilities and some commercial and residential uses).</p> <p><u>South</u></p> <p>Route runs along Gwydir Highway (past park containing sports ground and basketball courts, low density residential, and some light commercial uses) and Cowan Street (low density residential); passes through undeveloped land adjacent to river.</p>
Character of existing roads	<p><u>North</u></p> <p>Route runs north along Villiers Street; traffic in Villiers Street south of Fitzroy is likely to be a mix of local- and through traffic; north of Fitzroy Street traffic is likely to be primarily local- and non-local through-traffic, with congestion at times. Existing heavy vehicle route runs along Villiers Street north of Fitzroy Street.</p> <p><u>South</u></p> <p>Route runs along Gwydir Highway (non-local traffic) and Cowan Street (residential street with little through-traffic). Existing heavy vehicle route runs along Gwydir Highway.</p>
Opportunities and constraints (social and economic)	<p>Route in south passes through socio-economically disadvantaged area of Grafton (ABS Census, 2006).</p> <p>Route in south runs along Cowan Street, currently a residential street.</p> <p>Route in south passes close to Skinner Street, South Grafton's commercial precinct.</p>

	<p>Route in north enters into Grafton Waterfront Precinct identified in tourism strategy.</p> <p>Route passes close to a number of community facilities.</p>
Community facilities along route	<p>“Monster Energy Pro Wakeshow” area (site of annual wakeboard event)</p> <p>St Mary's Catholic Church and Sisters of Mercy Convent</p> <p>North Coast TAFE</p> <p>Clarence Valley Conservatorium</p> <p>Grafton Shopping World</p> <p>Kennedy Street Playground</p> <p>St Patrick's Catholic Church</p> <p>Gurelgham Pty Ltd / Aboriginal Legal Services</p> <p>New Horizons Community Enterprises</p> <p>McKittrick Park</p> <p>Grafton Showground</p> <p>Clarence River Visitor Information Centre</p> <p>Silver Jubilee Park</p> <p>Derek Palmer Place</p> <p>Pacific Highway public open space</p> <p>Public open space at corner of Cowan and Spring Streets</p> <p>Clarence Regional Library Headquarters</p>

**Table 7: Summary of social and economic conditions along Option A**

Issue	Conditions
Predominant current land uses along route	<p><u>North</u></p> <p>Route runs along Craig Street and Fitzroy Street (commercial - retail and motels, Grafton Shopping World, some residential)</p> <p><u>South</u></p> <p>Route runs along Bent Street (retail and light industrial along Bent Street; some low density residential and community facilities)</p>
Character of existing roads	<p><u>North</u></p> <p>Fitzroy Street - built-up commercial street, and current main route between existing bridge and Grafton CBD; congested at times. Existing B-double route runs along Fitzroy and Craig Streets.</p> <p><u>South</u></p> <p>Bent Street – built-up commercial and residential street approaching Grafton Bridge; congested at times. Existing heavy vehicle route runs along Bent Street.</p>
Opportunities and constraints (social and economic)	<p>Route duplicates existing bridge, joining Bent and Fitzroy streets.</p>

	<p>Route runs through areas dense with community facilities and commercial premises.</p> <p>Route largely maintains existing patterns of physical connectivity.</p> <p>Route passes close to a high number of community facilities.</p>
Community facilities along route	<p>Clarence River Sailing Club &amp; sailing course</p> <p>North Coast TAFE</p> <p>Silver Jubilee Park</p> <p>Derek Palmer Place</p> <p>Earle Page Park</p> <p>Induna Reserve</p> <p>Salty Seller Reserve</p> <p>Grafton Aged Care Home</p> <p>Pacific Highway public open space</p> <p>Grafton Community College</p> <p>Bi-Lo Supermarket</p> <p>Riverside Church</p> <p>Grafton Shoppingworld</p> <p>Grafton GP Super Clinic</p> <p>Bus interchange (South Grafton)</p> <p>St Patrick's Catholic Church</p> <p>McKittrick Park</p> <p>Grafton railway infrastructure (adjacent to Derek Palmer Place)</p> <p>South Grafton station and railway infrastructure</p> <p>Grafton Showground</p> <p>New Horizons Community Enterprises</p> <p>Clarence Valley Conservatorium</p> <p>Gurelgham Pty Ltd / Aboriginal Legal Services</p> <p>Grafton railway infrastructure (adjacent to Salty Seller Reserve)</p>

**Table 8: Summary of social and economic conditions along Option C**

Issue	Conditions
Predominant current land uses along route	<p><u>North</u></p> <p>Route runs along Pound Street, east of Clarence Street, Greaves Street and Craig Street (all predominantly low density residential), and along Pound Street west of Clarence (commercial - retail).</p> <p><u>South</u></p> <p>Route runs through Iolanthe Street industrial area (light industrial, commercial and undeveloped land).</p>



Character of existing roads	<p><u>North</u></p> <p>Pound Street – likely to be non-local traffic, including traffic accessing shops and rear of Grafton Shopping World.</p> <p><u>South</u></p> <p>Iolanthe Street between Pacific Highway and Through Street – some through traffic to Bent Street, and traffic accessing retail stores.</p> <p>Iolanthe Street north of Through Street – local traffic accessing several properties towards riverfront.</p> <p>Existing heavy vehicle route runs along Bent Street.</p>
Opportunities and constraints (social and economic)	<p>Route passes through developing Iolanthe Street industrial area, potentially offering better connectivity to industrial area.</p> <p>Route to Grafton from Pacific Highway does not enter South Grafton, potentially affecting economic viability and/or social environment.</p> <p>Route may divert traffic from established commercial areas reliant on passing business.</p> <p>Route may increase traffic flows past small commercial area on Pound Street.</p> <p>Route passes close to a high number of community facilities.</p>
Community facilities along route	<p>Clarence River Visitor Information Centre</p> <p>Basmar Hall</p> <p>Pacific Highway public open space</p> <p>Derek Palmer Place</p> <p>Silver Jubilee Park</p> <p>McClymont Place open space</p> <p>North Coast TAFE</p> <p>Grafton Shoppingworld</p> <p>Gummyaney Indigenous Preschool</p> <p>McKittrick Park</p> <p>St Patrick's Catholic Church</p> <p>South Grafton Station and railway infrastructure</p> <p>Grafton Showground</p> <p>New Horizons Community Enterprises</p> <p>Clarence River sailing club course</p> <p>Bus interchange (South Grafton)</p> <p>Railway infrastructure land next to Basmar Hall</p>

**Table 9: Summary of social and economic conditions along Option 11**

Issue	Conditions
Predominant current land uses along route	<p><u>North</u></p> <p>Route runs along Fry Street (low density residential).</p>

	<p><u>South</u></p> <p>Route runs through agricultural land.</p>
Character of existing roads	<p><u>North</u></p> <p>Local road servicing existing residential community, little through traffic.</p> <p><u>South</u></p> <p>Route would turn off Pacific Highway and run along proposed new road.</p>
Opportunities and constraints (social and economic)	<p>Route to Grafton from Pacific Highway does not enter South Grafton, potentially affecting economic viability and/or social environment.</p> <p>Route in north (Fry Street) passes through relatively densely populated residential area, likely affecting social environment.</p> <p>Route runs close to low number of community facilities.</p>
Community facilities along route	<p>River use at Fry Street</p> <p>Fisher Park / Grafton Showground</p> <p>McKittrick Park</p> <p>St Patrick's Catholic Church</p> <p>McAuley Catholic College</p> <p>Clarence River Visitor Information Centre</p> <p>Silver Jubilee Park</p> <p>Pacific Highway public open space</p> <p>Derek Palmer Place</p>

**Table 10: Summary of social and economic conditions along Option 14**

Issue	Conditions
Predominant current land uses along route	<p><u>North</u></p> <p>Route runs through waterfront park, along Kirchner Street (largely undeveloped land), Prince Street (low density residential), and North Street (low density residential and commercial).</p> <p><u>South</u></p> <p>Route runs through agricultural land.</p>
Character of existing roads	<p><u>North</u></p> <p>Kirchner Street and North Street east of Summerland Way – local roads with little through traffic.</p> <p>Prince Street north of Summerland Way – local road coming off Summerland Way, providing access to residential areas.</p> <p><u>South</u></p> <p>Route would run off Pacific Highway along proposed new road.</p>
Opportunities and constraints (social and economic)	<p>Route avoids centre of Grafton (but connects to Grafton via Prince Street) and does not enter South Grafton.</p>

	<p>Route passes few businesses.</p> <p>Route connects relatively underutilised parts of South Grafton (agricultural land removed from centre) and Grafton (sparsely developed residential land on periphery of town at Kirchner Street).</p> <p>In North and Prince Streets, route runs through residential areas, and is likely to affect the social environment.</p> <p>Route runs past relatively few community facilities, but potentially directly affects well-used Corcoran Park.</p>
Community facilities along route	<p>Corcoran Park</p> <p>Sea Scout Hall</p> <p>Southern Cross St Catherine's Villas</p> <p>Jacaranda Park</p> <p>Volkers Park</p> <p>Sewage treatment plant</p> <p>Cemetery</p> <p>McKittrick Park</p> <p>St Patrick's Catholic Church</p> <p>Clarence River Visitor Information Centre</p> <p>Silver Jubilee Park</p> <p>Pacific Highway public open space</p> <p>Derek Palmer Place</p> <p>Grafton Showground</p> <p>Waste transfer station</p>

**Table 11: Summary of social and economic conditions along Option 15**

Issue	Conditions
Predominant current land uses along route	<p><u>North</u></p> <p>Route runs through waterfront park, along Kirchner Street (largely undeveloped land), Prince Street (low density residential), and new road through agricultural land.</p> <p><u>South</u></p> <p>Route runs through agricultural land.</p>
Character of existing roads	<p><u>North</u></p> <p>Kirchner Street – local road with little through traffic.</p> <p>Prince Street north of Summerland Way – local road coming off Summerland Way, providing access to residential areas.</p> <p><u>South</u></p> <p>Route would run off Pacific Highway along proposed new road.</p>
Opportunities and constraints (social and economic)	<p>Route avoids centre of Grafton (but connects to Grafton via Prince Street) and does not enter South Grafton.</p>

	<p>Route passes few businesses.</p> <p>Route connects relatively underutilised parts of South Grafton (agricultural land removed from centre) and Grafton (sparsely developed residential land on periphery of town at Kirchner Street).</p> <p>In Prince Street, route runs through residential areas, and is likely to affect the social environment.</p> <p>Route runs past relatively few community facilities, but potentially directly affects well-used Corcoran Park.</p>
Community facilities along route	<p>Corcoran Park</p> <p>Sea Scout Hall</p> <p>Sewage treatment plant</p> <p>Volkers Park</p> <p>Cemetery</p> <p>Waste Transfer Station</p> <p>Jacaranda Park</p> <p>McKittrick park</p> <p>St Patrick's Catholic Church</p> <p>Silver Jubilee Park</p> <p>Derek Palmer Place</p> <p>Clarence River Visitor Information Centre</p> <p>Pacific Highway public open space</p> <p>Grafton Showground</p>

## 5. Consultation

Consultation with the Grafton community, including businesses and the general public, has been conducted at various stages throughout the project development process. This consultation has helped to inform the development of route options.

In addition to consultation conducted at previous points throughout the project's development, further social and economic consultation has been conducted to assist with the assessment of route options in the present report. The results of this consultation are summarised here.

### 5.1 Previous consultation with the community

Community consultation about an additional crossing of the Clarence River has been conducted at several stages throughout the project's development. Consultation has included three community surveys – a postal survey (conducted December 2010 to March 2011), a telephone survey (conducted March 2011), and a business survey (conducted April to May 2011). The outcomes of these consultation processes can be found in the *Preliminary Route Options Report – Final* (RMS, January 2012), and in more detail in the *Postal survey December 2010 to March 2011 – Feedback report* (RMS, April 2011), the *Telephone survey of Clarence Valley residents* (RMS, May 2011), and the *Online business survey report* (RMS, June 2011).

The feedback gathered through the various forms of community consultation were distilled to understand values important to the Grafton community. These values indicate aspects of their lives and their towns that they hold dear and issues that they consider important, and form general principles which may at times be contradictory, rather than specific claims or preferences. These values are presented in Table 12.

**Table 12: Community values identified during community consultation 2010-2011**

Safety	<ul style="list-style-type: none"><li>• Heavy vehicles travel through and around town safely</li><li>• Pedestrians and cyclists are able to move around Grafton City in safety</li><li>• Major roads take into account the location of community facilities and residential areas</li><li>• Roads and other infrastructure reliable in times of flooding</li></ul>
Neighbourhood character	<ul style="list-style-type: none"><li>• Residential areas are peaceful and quiet</li><li>• Roads in residential areas are low-key and service the surrounding neighbourhood</li></ul>
Town character	<ul style="list-style-type: none"><li>• Historical character of Grafton</li><li>• Grafton's quiet country town character</li><li>• Aboriginal and non-Aboriginal heritage value</li><li>• Presence of high-quality infrastructure</li><li>• Dispersed traffic maintains town amenity</li><li>• Unique visual value of existing Grafton bridge</li></ul>
Lifestyle	<ul style="list-style-type: none"><li>• Timely and trouble-free car transport within and through the town</li><li>• Congestion-free roads</li><li>• High levels of amenity</li><li>• Recreational use of the river</li><li>• Ease of access to shops, businesses and workplaces</li></ul>
Infrastructure and planning	<ul style="list-style-type: none"><li>• Infrastructure planning accounts for future traffic and population growth</li><li>• Planning is strategic and provides benefits for the community</li><li>• Community involvement in the decision-making process</li><li>• Flooding a consideration in planning process</li><li>• Areas with existing traffic congestion are noted and planned for accordingly, particularly the CBD</li></ul>

	<ul style="list-style-type: none"> <li>• Planning considers a range of route options</li> <li>• Efficiency and expediency in planning and construction</li> </ul>
Equity	<ul style="list-style-type: none"> <li>• High levels of neighbourhood amenity and quality of life for all community members</li> <li>• Good standards of infrastructure for all users, not just residents</li> <li>• Everyone who uses the roads is able to do so in safety</li> </ul>
Community	<ul style="list-style-type: none"> <li>• Presence, safety and amenity of community facilities</li> <li>• Traffic avoids places where children and elderly are likely to be</li> </ul>
Traffic and efficiency	<ul style="list-style-type: none"> <li>• Heavy vehicles should travel efficiently around town</li> <li>• Dispersal of traffic to maintain town's character</li> <li>• Grafton CBD's traffic-free quality</li> <li>• Residential areas being free of heavy vehicle traffic</li> <li>• Minimal traffic-based disturbance to residents</li> </ul>

## 5.2 Consultation on the six route options for the social and economic issues technical paper

### Survey of potentially affected businesses

Face-to-face surveys were conducted in February 2012 with businesses identified as potentially directly affected. Twenty-six businesses were contacted during this stage of consultation.

As part of the survey of potentially affected businesses, business owners and managers' views on the six route options were discussed, particularly with regard to the potential impact on their business. These discussions often identified issues of concern to the businesses.

Much of the data gained from the survey was quantitative, and has been used to assess route options. Several key themes and issues however emerged from the discussions. These include:

- The importance of existing locations – many businesses felt that their premises were extremely well-sited, in a location which assured them a high level of visual prominence to passing traffic. Even though passing traffic may not immediately stop at their business, business owners and managers often felt that potential customers would remember it at a later point. This belief extended to businesses that may not generally be perceived as having a high reliance on 'passing trade', including hair dressers and print stores. Several businesses mentioned having discontinued most or all advertising expenditure, on the basis of their high visibility.

This perception was particularly common amongst businesses on Bent Street.

- Consequently, businesses were often concerned about any option that would decrease the flow of passing traffic, or even relieve congestion and thereby increase the speed of traffic flows. Businesses generally preferred options that they perceived would maintain the existing patterns of traffic movement throughout the area with minimal disruption.
- Businesses in South Grafton generally perceived themselves as being more vulnerable to negative effects resulting from a loss of visibility than those in Grafton.
- Several public-oriented businesses identified a lack of suitable commercial land in the Grafton and South Grafton areas, and were concerned that they would have difficulty finding suitable land to relocate to if required.

- Trade- and wholesale-oriented businesses generally did not feel that visibility was an important issue for their viability. These often had an established reputation and received much of the business from trade and repeat customers.
- Perceptions of the congestion on the existing Grafton Bridge differed between businesses. Some would try to avoid using the bridge at peak hours and minimise crossings, while others did not perceive it as a problem. Businesses often used the bridge frequently in day to day operations, with many making between 10 and 20 round trips per day.

### Clarence Valley Council

Clarence Valley Council's Manager of Social Planning was consulted in May 2012. The objective of this consultation was to identify any potential issues of concern to Council relating to the route options, develop a more detailed understanding of communities and demographics in the Grafton area and along routes, and identify the locations of affordable housing stock. Information gathered from consultation supports the assessment of route options presented in Section 6.

Council did not offer any comments on preferred route options, or concerns particular to specific options. However Council noted that there was growing unemployment in the Grafton area, with the closure of two large employers in the last year.

### Chamber of Commerce and Industry

The Grafton Chamber of Commerce and Industry was consulted in May 2012. The objective of the consultation was to identify any potential issues of concern to local businesses regarding the route options, and develop a more detailed understanding of patterns of business in Grafton City. Information gathered from this consultation supports the assessment of route options presented in Section 6.

The Chamber noted that mixed views were held by its members, with perceived benefits and impacts of both upstream and downstream options varying. Consultation suggested that members of the Chamber are keen to see an additional crossing of the Clarence River at Grafton built quickly. The reduction of traffic congestion within Grafton City is one of the strongest motivators of the desire for an additional crossing.

Relevant issues of concern to businesses in Grafton include:

- Occasional severe parking shortages, including on Pound Street and Prince Street; it was noted that after the construction of an additional crossing parking restrictions in Prince Street may be relaxed, due to reduced traffic volumes.
- A lack of floorspace and suitable properties available to large businesses.
- Traffic congestion in the Grafton CBD and existing Grafton Bridge, and the negative effects of traffic congestion upon levels of business.
- The importance of festival-based and destination-based tourism to the local economy.

## 6. Assessment of route options

This chapter presents the socio-economic assessment of the six short-listed route options. Potential positive and negative impacts of each option are considered in the areas of:

- Property and land uses (including businesses and community facilities as well as housing affordability).
- The character, amenity and liveability of affected areas as well as their cohesion, lifestyles and activities (community liveability and wellbeing).
- The amenity and utility of community and recreational facilities.
- Community linkages, access patterns and community mobility.
- Economic impacts.

These are considered in the following sections. Property and land use impacts for each route option are shown in Figures 8 to 12.

### 6.1 Benefits to the wider community

The development of an additional crossing of the Clarence River at Grafton will provide a range of benefits. The majority of these benefits accrue to the broader community of Grafton, the LGA and the wider region. The potential benefits of an additional crossing include:

- More efficient, direct and reliable transport options.
- Reduced traffic congestion and associated amenity benefits.
- Reduced travel times, which are consistent and reliable.
- Improved road safety, including removal of heavy vehicles from existing bridge.
- Improved access for service delivery and emergency services.
- Greater integration of Grafton and South Grafton, economically and socially.
- Improved access to employment, health and community services, retail and community centres and recreation sites.
- Increased public transport patronage by increasing the convenience of the river crossing.
- Improved, safer pedestrian and cyclist access across the river.



Figure 8: Potentially directly affected properties and facilities under Option E

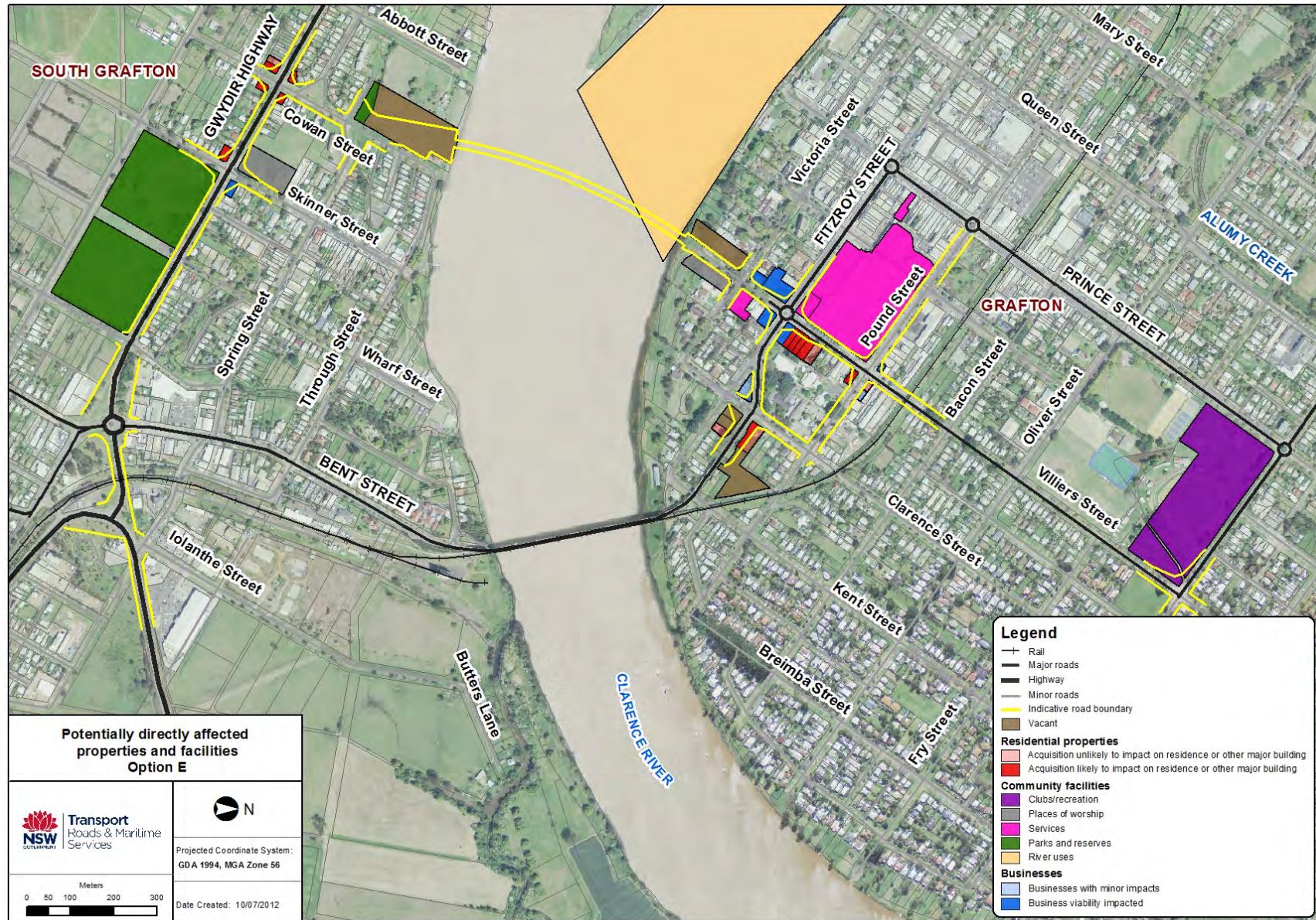


Figure 9: Potentially directly affected properties and facilities under Option A

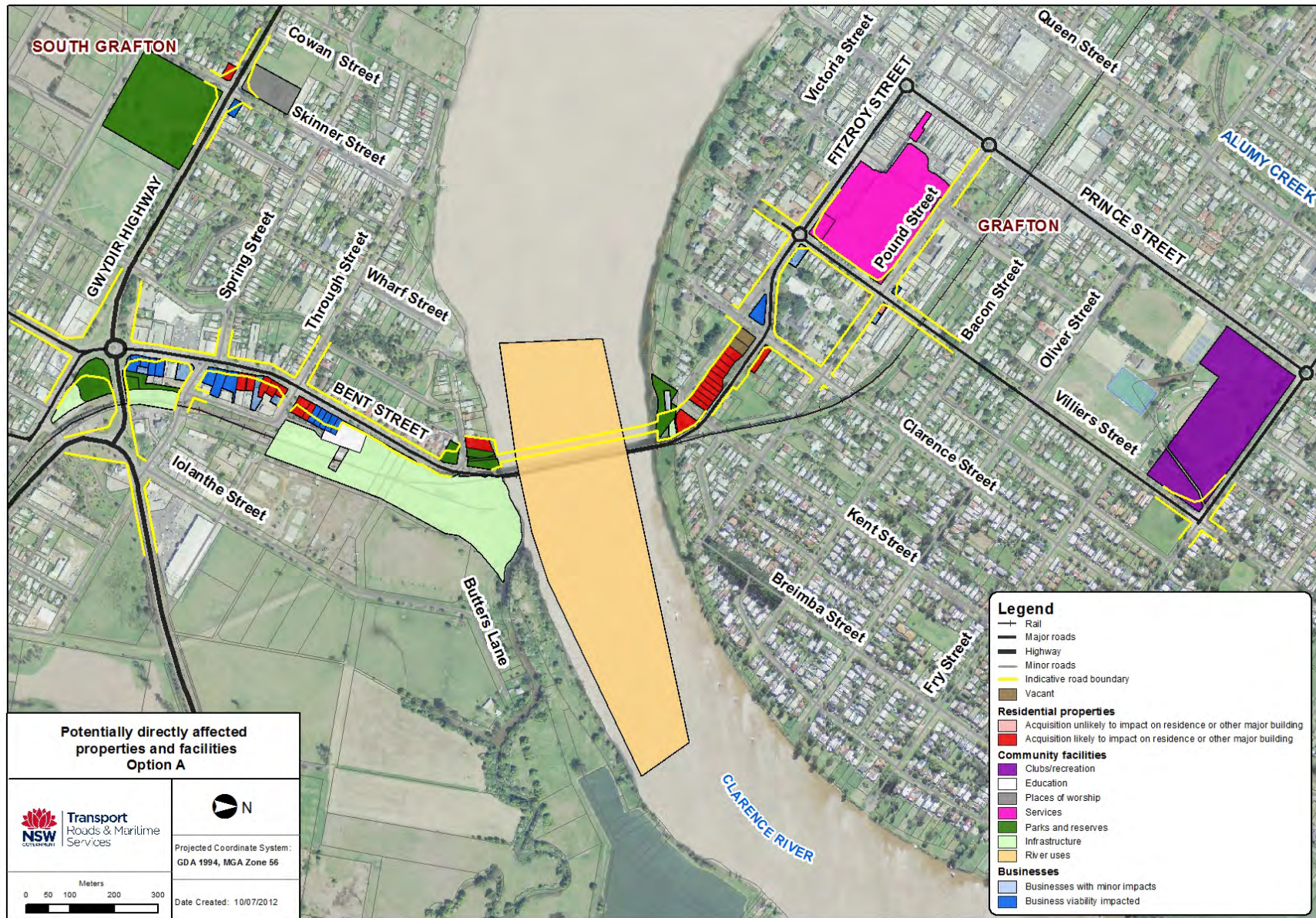


Figure 10: Potentially directly affected properties and facilities under Option C

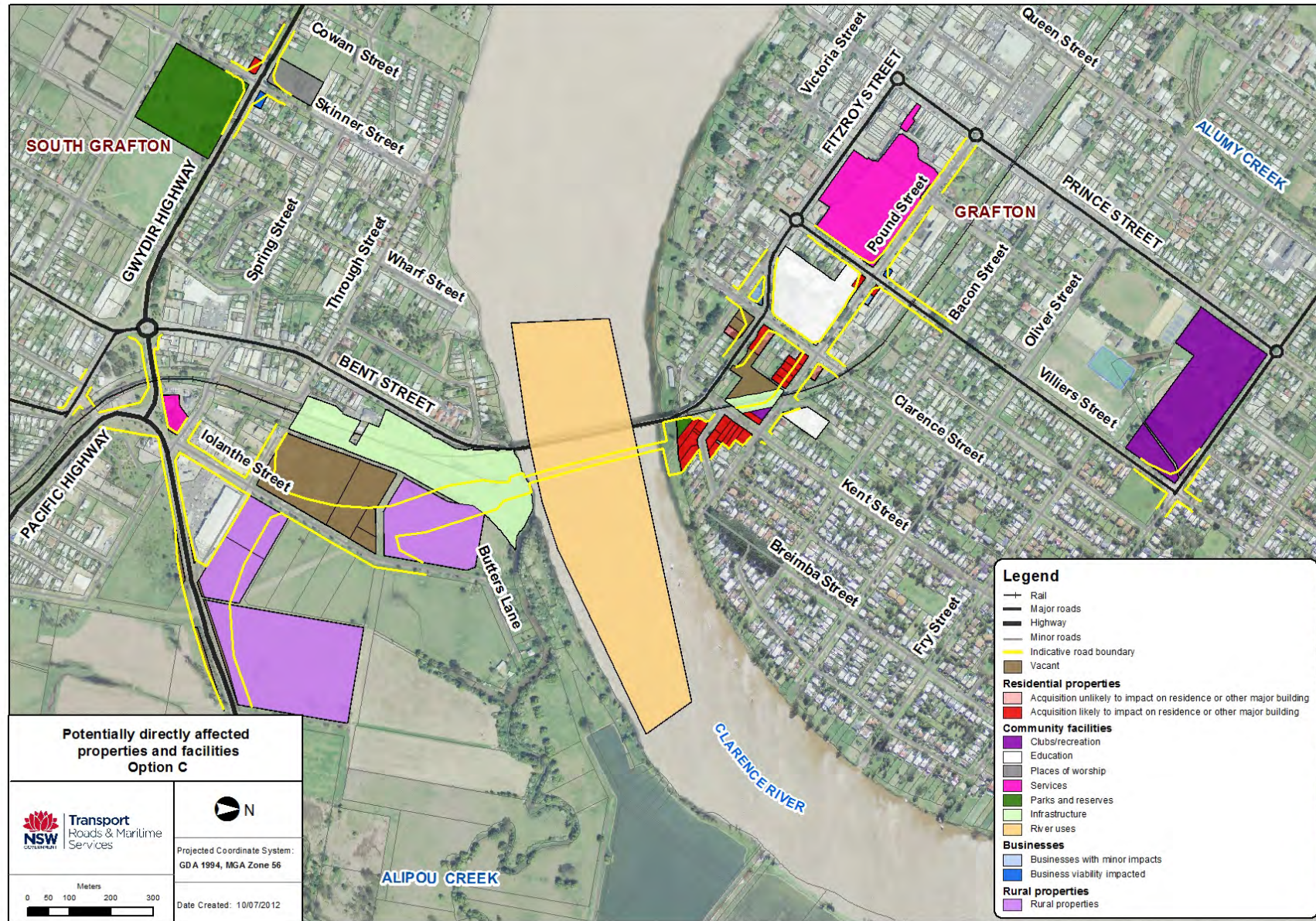


Figure 11: Potentially directly affected properties and facilities under Option 11

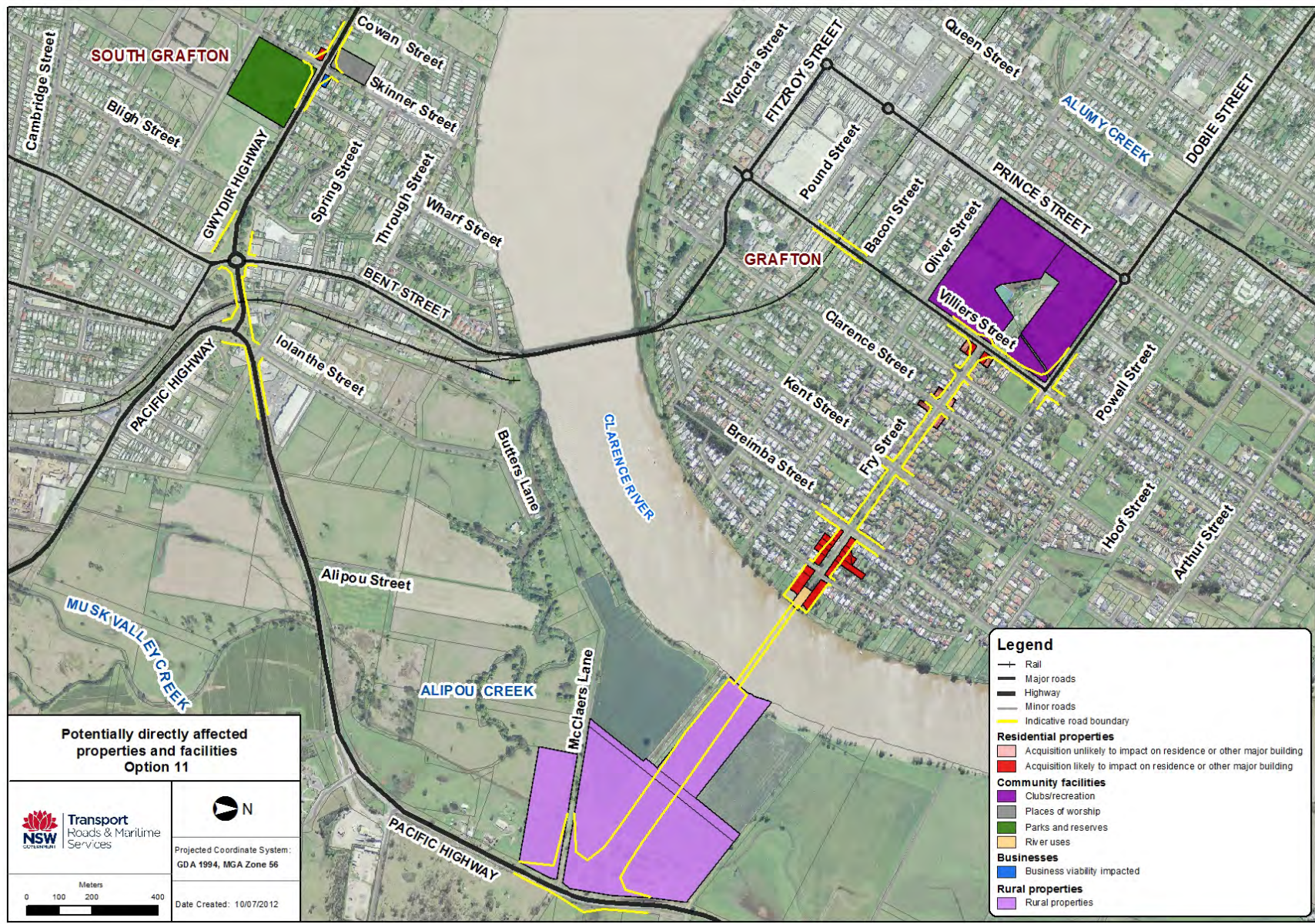


Figure 12: Potentially directly affected properties and facilities under Option 14

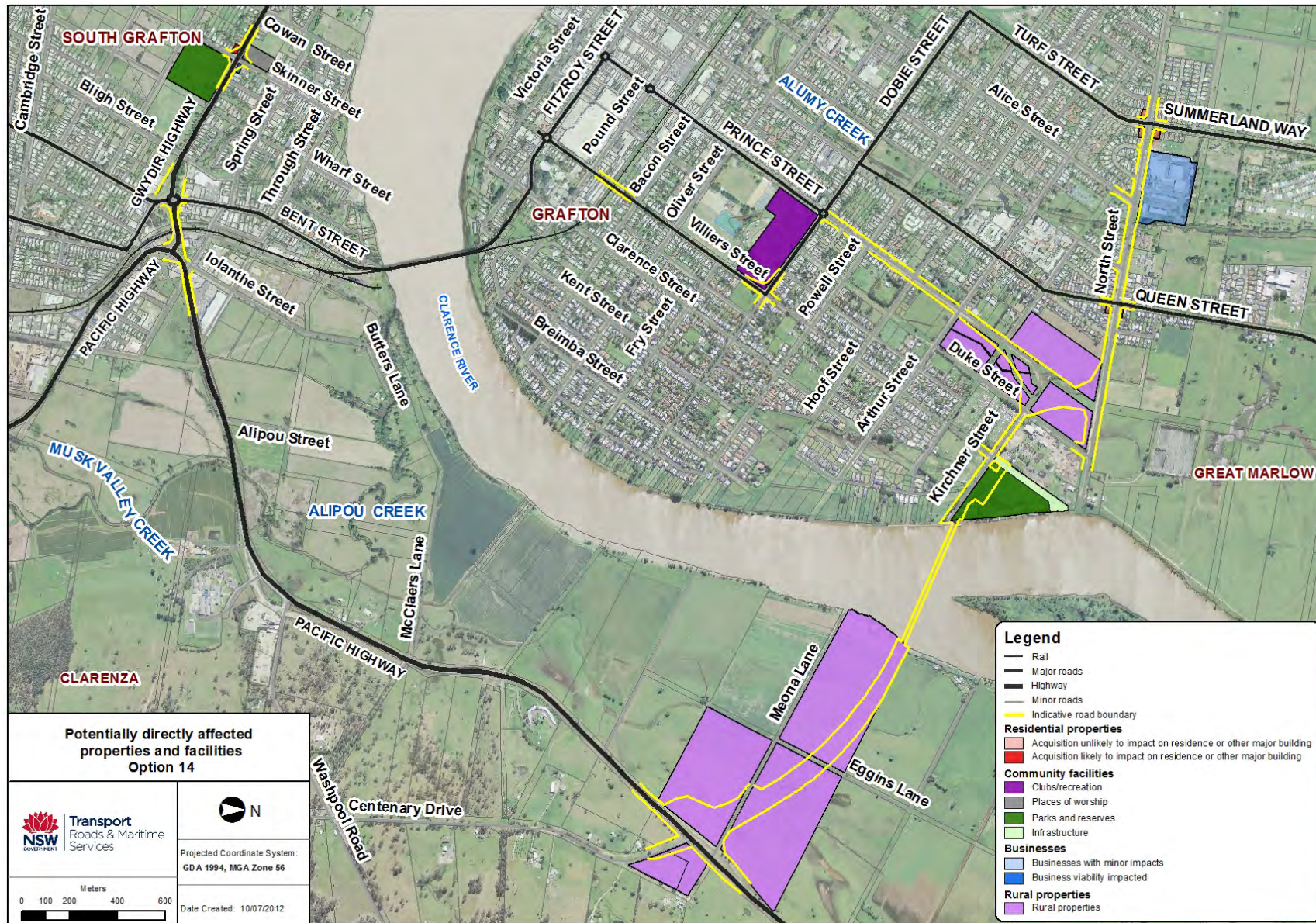
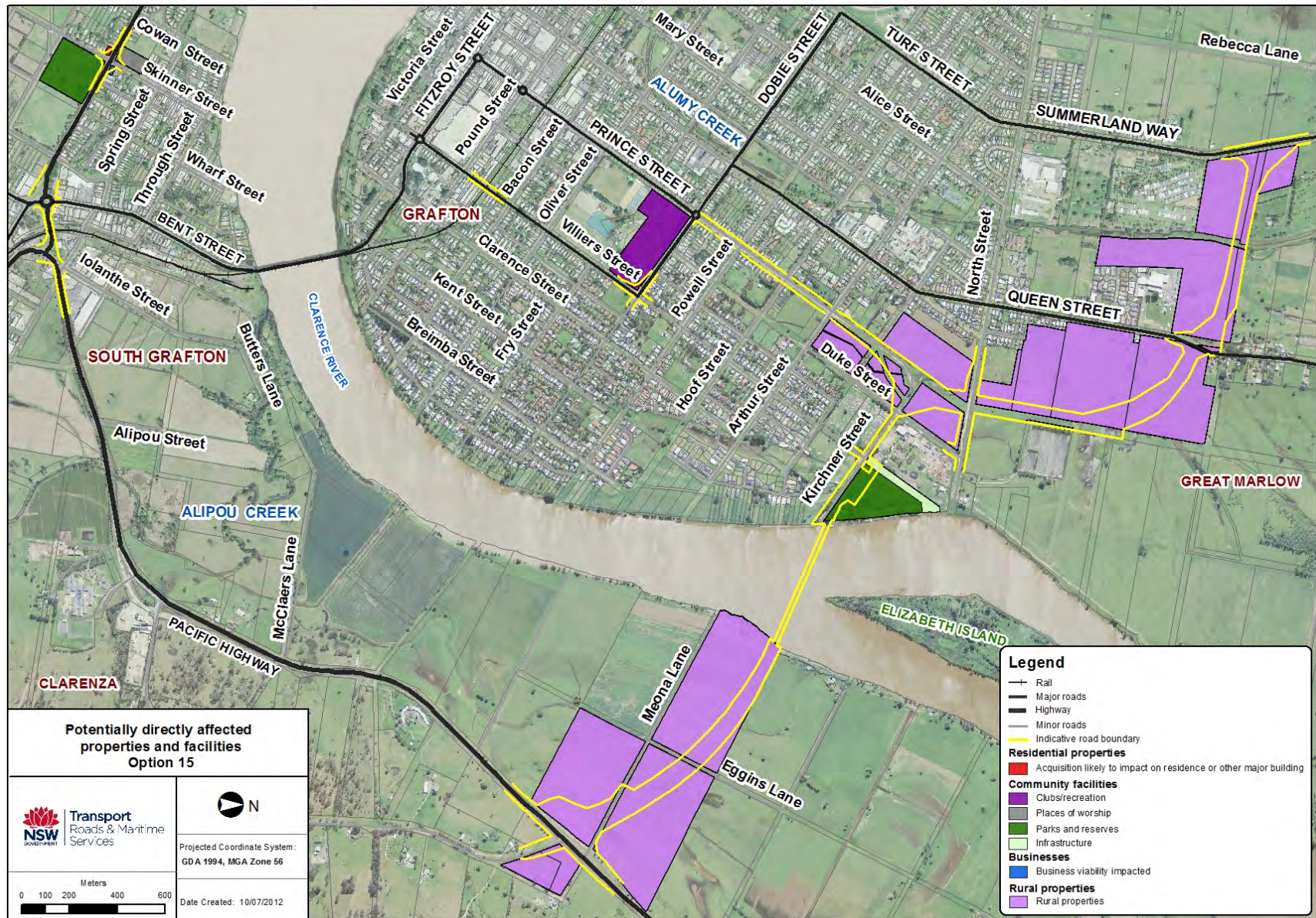


Figure 13: Potentially directly affected properties and facilities under Option 15



## 6.2 Social assessment

### 6.2.1 Property and land use impacts

#### 6.2.1.1 Residential property impacts

This section considers the indicator, “number of residential properties potentially directly affected”. This indicator informs the project objective of minimising impact upon the environment, and the supporting objective of minimising the impact on the social environment.

This is an indicator of the comparative impacts on residential properties. For the purposes of this assessment, an existing residential property is regarded as potentially directly affected if a route option is likely to require full or partial acquisition of the property. It excludes properties located in land zoned as rural as these are considered in a separate indicator. Comparatively, the greater the number, the greater the potential impact.

For each of the six route options, there are a number of directly affected residential properties. Table 13 identifies the number of directly affected properties under each route option. Properties impacts identified as major are those likely to impact residential buildings; minor impacts are those considered likely to require partial residential property acquisition, but not affecting residential buildings.

All options are likely to have major impacts upon some residential properties. One impact from the additional crossing is on the individuals and families affected by property acquisition. This will be one of the major negative social impacts from the project. Acquisition will have substantial impacts on those directly affected, impacts which are both immediate and long term in nature. Impacts of this aspect indirectly effect the community itself, and by extension the government, non-government and informal social institutions which support them.

**Table 13: Potentially directly affected residential properties**

		Option E	Option A	Option C	Option 11	Option 14	Option 15
Grafton	Acquisition likely to impact on residence or other major building	6	12	20	15	0	0
	Acquisition unlikely to impact on residence or other major building	4	1	3	6	5	0
South Grafton	Acquisition likely to impact on residence or other major building	5	8	1	1	1	1
	Acquisition unlikely to impact on residence or other major building	1	0	0	0	0	0

<b>Total</b>	Acquisition likely to impact on residence or other major building	<b>11</b>	<b>20</b>	<b>21</b>	<b>16</b>	<b>1</b>	<b>1</b>
	Acquisition unlikely to impact on residence or other major building	<b>5</b>	<b>1</b>	<b>3</b>	<b>6</b>	<b>5</b>	<b>0</b>

- Generally, residential property impacts in South Grafton are confined to Options E and Options A.
- Option E represents a medium impact scenario, with both major and minor impacts. The location of these impacts is split between residential properties in Grafton and South Grafton, with slightly more directly affected properties located in Grafton.
- Option A has a medium level of impact. Under this route a relatively high number of residential properties would be affected by major impacts, but a relatively low number by minor impacts.
- Option C has the most major impacts upon residential properties, almost all of which are located in Grafton. However this option has one of the lowest number of minor property affectations.
- Option 11 has major and minor impacts upon a number of properties in Grafton. This option has relatively little impact in South Grafton.
- Option 14 has a relatively low degree of impact, with minor effects upon several properties in Grafton.
- Option 15 has the lowest impact, affecting one property in South Grafton which is impacted under all options.

Impacts are distributed and experienced differently amongst different groups in society. As discussed in the *Preliminary Route Options Report – Final and Social and Technical Paper* (RMS, January 2012) residents of Grafton are generally less advantaged than the wider population of NSW, with fewer resources to cope with social impacts. Residents living to the south of the river are generally less advantaged than those living to the north (Source: Australian Bureau of Statistics 2008, Socio-economic Indexes for Areas). Routes in South Grafton, and in particular Option E, are likely to pass through areas with higher levels of disadvantage (ABS Census, 2006). This will need to be considered in consultation and mitigation responses.

At the individual level of assessment, the variety of personal responses to property affectation and acquisition is substantial. The social impact of property acquisition will vary according to personal circumstances (such as life stage), and the depth of connection to property, community and neighbourhood. As such, the severity of impact of acquisition at the individual level can only be properly determined by an individual.

At the individual and family level a number of impacts can potentially be experienced by residents affected by acquisition, including:

- The loss of a home. Residents have a history and attachment to their properties and ties to the community.



- Anxiety and stress.
- The loss of established social networks and impact on social capital. Residents face the loss of their friendship, support and community networks, at a time when they are needed the most.
- The loss of connection to social and community services and facilities which support residents daily life, including schools, doctors, and other human services.
- Relocation away from employment, necessitating increased travel times and costs.
- Household finances may be negatively affected, dependent on scope of compensation package. This could include, for example, rent increases at comparable properties.
- Impacts following relocation, which can include social isolation, as it can be difficult to build networks into new communities, the need to re-establish connections to a range of social, health and community services, and any unexpected financial costs increasing financial stress in households.

Strategies should be developed during the next phases of the project to minimise the potential social impacts identified, incorporate community aspirations, and assist the community through the acquisition process. These strategies should recognise that there are elements of the community which are relatively more vulnerable to the effects of property acquisition and require additional support. However it is noted that some of these impacts cannot be mitigated or compensated.

#### **6.2.1.2 Impact on community and recreation facilities (or similar)**

This section considers the indicator, “number of community facilities potentially directly affected”. This indicator informs the project objective of minimising impact upon the environment, and the supporting objective of minimising the impact on the social environment.

This is an indicator of the comparative impacts on community facilities including: clubs and recreation, education, river uses, places of worship (eg churches), government, services, health and emergency, parks and reserves and major infrastructure. This includes community facilities that are currently in operation and potentially directly affected by the route option.

For the purposes of this assessment, a community facility is regarded as potentially directly affected if an option is likely to require full or partial acquisition of the property or would otherwise cross within its boundary (in the case of river-based activities). Commercial properties are excluded except for Grafton Shopping World. Comparatively, the greater the number, the greater the potential impact.

A number of community and recreation facilities would be directly or indirectly impacted by each of the route options. This may be through land acquisition, proximity to construction works, or increased proximity to transport infrastructure. Some facilities may also experience changes in demand or access as a result of the new infrastructure. Community facilities potentially affected or in proximity to the route of each option are shown below (Table 14 to Table 25). Direct impacts are those likely to require property acquisition. Direct impacts are considered to be minor if they are unlikely to cause serious disruption to the facility's existing operations. Key effects upon community facilities are considered after Table 25.

**Table 14: Option E potential direct impacts upon community facilities**

Community Facility	Impact
“Monster Energy Pro Wakeshow” area (site of annual wakeboard event)	Potentially directly affected (bridge would cut through small north-east section of area), impact likely to be minor and event area likely able to be relocated if necessary
St Mary’s Catholic Church and Sisters of Mercy Convent	Potential minor land acquisition; increased traffic flows along Victoria Street; potential impact upon visual amenity of heritage-facilities
McKittrick Park	Potential minor land acquisition; likely to include trees providing shade, and shed  Increase in traffic flows adjacent to park along Gwydir Highway
Grafton Shopping World	Potential minor land acquisition, unlikely to affect operations
St Patrick’s Catholic Church	Potential minor land acquisition – parking area  Increased traffic flows adjacent to site along Gwydir Highway; potentially higher noise levels in facility but distance set back from highway likely to preclude major impact
Gurelgham Pty Ltd / Aboriginal Legal Services	Potential minor land acquisition  Possible increase in noise levels from higher traffic flows adjacent to facility
Grafton Showground	Potential minor land acquisition, affecting sheds in east corner
Public open space at the corner of Cowan and Spring Streets	Potential land acquisition

**Table 15: Option E potential indirect impacts upon community facilities**

Community Facility	Impact
Clarence Valley Conservatorium	Increased traffic flows past facility in Villiers Street; potentially affected by loss of on-street parking; potential noise impacts from traffic along Villiers Street - facility is likely to be more vulnerable to noise disturbance
New Horizons Community Enterprises	Increased traffic flows adjacent to facility in Villiers Street; potentially affected by loss of on-street parking
Kennedy Street Playground	Minor loss of park space, no property acquisition required

North Coast TAFE	Loss of access from Pound Street
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**Table 16: Option A potential direct impacts upon community facilities**

Community Facility	Impact
Silver Jubilee Park	Potential land acquisition
Derek Palmer Place	Potential land acquisition
Earle Page Park	Potential land acquisition
Salty Seller Reserve	Potential land acquisition
Clarence River Sailing Club Course	Potentially directly affected – option runs across course
McKittrick Park	Potential minor land acquisition; likely to include trees providing shade, and shed  Increase in traffic flows adjacent to park along Gwydir Highway
Grafton Showground	Potential minor land acquisition, affecting sheds in east corner
St Patrick's Catholic Church	Potential minor land acquisition – parking area
Grafton Community College	Potential minor land acquisition  Possible increase in noise levels from higher traffic flows adjacent to facility along Bent Street  Possible disturbance during construction
Grafton Shopping World	Potential minor land acquisition
Induna Reserve	Potential land acquisition
Grafton railway infrastructure (adjacent to Salty Seller Reserve)	Potential land acquisition
South Grafton railway infrastructure	Potential land acquisition
Bus interchange (South Grafton)	Potential minor land acquisition
Grafton railway infrastructure (adjacent to Derek Palmer Place)	Potential minor land acquisition

**Table 17: Option A potential indirect impacts upon community facilities**

Community Facility	Impact
Sailing Club	Possible increase in noise levels from higher traffic flows adjacent to facility
North Coast TAFE	Possible increase in noise levels from higher traffic flows adjacent to facility along Craig Street
Pacific Highway public open space	Potential loss of space available to public; no property acquisition required
Grafton Aged Care Home	Possible increase in noise levels from higher traffic flows adjacent to facility along Bent Street  Possible disturbance during construction
Clarence River Sailing Club	Potential noise/visual amenity impacts

**Table 18: Option C potential direct impacts upon community facilities**

Community Facility	Impact
Clarence River Visitor Information Centre	Potential minor land acquisition  Potential loss of visibility to traffic entering Grafton from the North
Basmar Hall	Potential land acquisition
North Coast TAFE	Change in access location from Pound Street to Clarence Street; loss of on-street parking; potential increase in noise levels from increased traffic flow adjacent to facility (Pound Street)
Grafton Shoppingworld	Potential minor land acquisition  Increased traffic and access along Pound Street, may benefit from easier accessibility
Gummyaney Indigenous Preschool	Potential minor land acquisition  Possible but unlikely increase in noise levels and consequent disturbance to activities from higher traffic flows adjacent to centre (Pound Street)
Clarence River Sailing Club Course	Potentially directly affected – option runs across course

McKittrick Park	Potential minor land acquisition; likely to include trees providing shade, and shed  Increase in traffic flows adjacent to park along Gwydir Highway
Grafton Showground	Potential minor land acquisition, affecting sheds in east corner
St Patrick's Catholic Church	Potential minor land acquisition – parking area
South Grafton railway infrastructure	Potential minor land acquisition
McClymont Place open space	Potential land acquisition
Railway infrastructure land adjacent to Basmar Hall	Potential land acquisition

**Table 19: Option C potential indirect impacts upon community facilities**

Community Facility	Impact
Derek Palmer Place	Minimal impact, possible reduction in immediately adjacent traffic volume
Silver Jubilee Park	Minimal impact, possible reduction in immediately adjacent traffic volume
Pacific Highway public open space	Potential loss of space available to public; no property acquisition required

**Table 20: Option 11 potential direct impacts upon community facilities**

Community Facility	Impact
River use at Fry Street	Potential land acquisition
Grafton Showground	Potentially directly affected (minor land acquisition, affecting sheds in east corner)  Increased traffic flows along Dobie Street, north of showground – possible access, noise and safety impacts
McKittrick Park	Potential minor land acquisition; likely to include trees providing shade, and shed  Increase in traffic flows adjacent to park along Gwydir Highway

St Patrick's Catholic Church	Potential minor land acquisition – parking area
Fisher Park	Potentially directly affected (minor land acquisition, at Fry and Villiers Street intersection)

**Table 21: Option 11 potential indirect impacts upon community facilities**

Community Facility	Impact
McAuley Catholic College	More direct access from East Grafton residential area (suggested by ABS 2006 census data to have high number of children)
Clarence River Visitor Information Centre	Possible decrease in visibility to southbound tourists entering Grafton

**Table 22: Option 14 potential direct impacts upon community facilities**

Community Facility	Impact
Corcoran Park	Potential land acquisition
Waste transfer station	Potential minor land acquisition
McKittrick Park	Potential minor land acquisition; likely to include trees providing shade, and shed  Increase in traffic flows adjacent to park along Gwydir Highway
St Patrick's Catholic Church	Potential minor land acquisition – parking area
Grafton Showground	Potential minor land acquisition, affecting sheds in east corner

**Table 23: Option 14 potential indirect impacts upon community facilities**

Community Facility	Impact
Southern Cross St Catherine's Villas	Possible disturbance resulting from increase in noise levels from higher traffic flows adjacent to facility along North Street
Jacaranda Park	Possible increase in noise levels from higher traffic flows adjacent to facility along Prince Street

Volkers Park	Possible increase in noise levels from higher traffic flows adjacent to facility along North Street
Cemetery	Possible increase in noise levels from higher traffic flows adjacent to facility along Kirchner Street
Sea Scout hall	Potential disturbance from higher traffic flows in proximity to facility

**Table 24: Option 15 potential direct impacts upon community facilities**

Community Facility	Impact
Corcoran Park	Potential land acquisition
Waste transfer station	Potential minor land acquisition
Sewage treatment plant	Potential minor land acquisition
McKittrick Park	Potential minor land acquisition; likely to include trees providing shade, and shed  Increase in traffic flows adjacent to park along Gwydir Highway
Grafton Showground	Potential minor land acquisition, affecting sheds in east corner
St Patrick's Catholic Church	Potential minor land acquisition – parking area

**Table 25: Option 15 potential indirect impacts upon community facilities**

Community Facility	Impact
Volkers Park	Possible increase in noise levels from higher traffic flows adjacent to facility along new road
Cemetery	Possible increase in noise levels from higher traffic flows adjacent to facility
Jacaranda Park	Possible increase in noise levels from higher traffic flows adjacent to facility along Prince Street
Sea Scout hall	Potential disturbance from higher traffic flows in proximity to facility

The total number of community facilities likely to be directly affected under each option is shown in Table 26<sup>4</sup>. Directly affected community facilities are those likely to require partial or complete property acquisition.

**Table 26: Summary of potentially directly affected community facility properties**

	Option E	Option A	Option C	Option 11	Option 14	Option 15
Club	1	1	2	2	1	1
Education	0	1	2	0	0	0
Church	2	1	1	1	1	1
Services	2	1	2	0	0	0
Parks	2	6	2	1	2	2
Infrastructure	0	4	2	0	1	2
River uses	1	1	1	1	0	0
Government	0	0	0	0	0	0
Health and emergency services	0	0	0	0	0	0
<b>Total</b>	<b>8</b>	<b>15</b>	<b>12</b>	<b>5</b>	<b>5</b>	<b>6</b>

Some of the potentially affected community facilities are likely to be more important for the social or economic wellbeing of Grafton City, or of particular concern to the wider community. These impacts deserve particular consideration and warrant direct consultation with affected services to gauge the extent of their impact. These community facilities include:

- The Clarence River Visitor Information Centre (corner of Spring Street & Pacific Highway), which supports the region’s tourism and economic development strategies by providing tourist information to visitors to Grafton, loses visual prominence and is unlikely to be seen by southbound tourists entering Grafton under Option C. Adequate signage may mitigate this problem.
- North Coast TAFE (1 Clarence Street), which attracts students from a wide area to study a range of vocational courses for youth and adults, is potentially affected under Options E, A and C. These options are likely to increase passing traffic and noise levels, and may result in the loss of on-street parking.
- Option 14 passes Southern Cross St Catherine’s Villas, an aged care facility with more than 50 residents, and capacity for eight dementia patients; as discussed below in Section 6.2.2 the elderly and sick are particularly susceptible to noise effects. This route may increase noise levels at the facility. Furthermore the community has expressed a desire to avoid traffic in areas where there are children and the elderly.

<sup>4</sup> These figures do not include the Pacific Highway public open space adjacent to Schwinghammer Street, and the Kennedy Street Playground; a small part of these open spaces would become roads under Options A and C, but no property acquisition would be required.



- Option E passes Kennedy Street Playground, which may increase noise levels and the risk of vehicle accidents involving pedestrians. Site visits have shown this area to be home to a strong residential community, in what the ABS 2006 Census suggests is a relatively disadvantaged part of South Grafton.
- A small section of McKittrick Park may be acquired under all options. The section of potentially impacted houses a small shed (possibly a maintenance facility), and trees that provide the majority of shade available in the park, including coverage for the grandstand.
- In addition to the TAFE, several educational facilities may experience higher noise levels under some options; these include the Clarence Valley Conservatory under Option E, Grafton Community College under Option A, and Gummyaney Indigenous Preschool under Option C. Educational institutions are generally more vulnerable to noise impacts.

River access and use, which is important to the community, may be restricted under several options:

- Option E may affect the “Monster Energy Pro Wakeshow” area. This is a space which hosts an annual high-profile wakeboarding event. Under this option the crossing is likely to pass through a small section in the north-east corner of the area. This would be unlikely to have any major adverse impacts on the event.
- Option A may directly affect Inunda Reserve in South Grafton, and Salty Seller Reserve in Grafton.
- Option C passes close to the boat mooring immediately downstream of the existing Grafton Bridge. However RMS has been advised by maritime stakeholders that Options A and C would not impact boats moored at Pound Street and would allow the same river access for visiting sailors / yachts.
- Option 11 may remove river use at Fry Street.
- Options 14 and 15 may affect Corcoran Park, which offers waterfront access. Consultation suggests that Corcoran Park is well utilised by waterskiers, horse racing groups, and recreational river users. Future works are planned for Corcoran Park, including landscaping by Clarence Valley Council, and upgrading of the Sea Scout Hall on site which is presently used by the Clarence River Yacht Club.
- The Iluka to Grafton Rowing Race course has the potential to be impacted under all route options. The course begins at the end of Victoria Street near Susan Island, and runs both north and south; the course passes all six proposed locations for an additional crossing. It is likely that the requirements for the course can be met under all options. It is noted that the minimum 35m horizontal clearance provided under all options is considered sufficient for the Bridge to Bridge ski race course.

In general, demand for social services is unlikely to be affected by any of the route options. Patterns of access to services may be improved if there is better integration of Grafton and South Grafton.

## 6.2.2 Other social impacts

### 6.2.2.1 Amenity and Lifestyle

An additional crossing of the Clarence River at Grafton is likely to have amenity impacts for both residents along a proposed route, and for the wider community including residents of Grafton and users of either the existing Grafton Bridge or a future crossing.

“Amenity” is subjective, differing according to situational and environmental factors for each person. It is broadly considered to be the ‘liveability’ or quality of a place which makes it pleasant and agreeable to be in for individuals and the community. Amenity is important in both the public and private domain and includes the enjoyment of sunlight, views, privacy and quiet. Socio-economic dimensions of amenity effects can include a lack of socialisation in the public realm and consequent weakening of social cohesion or downturn in commerce, and the social distribution of quality of life.

The social aspect is just as important as the physical aspect to the resident’s perception of amenity. Amenity has been considered to incorporate concepts such as “the standard or class of the neighbourhood, and the reasonable expectations of a neighbourhood” (Broad v Brisbane City Council 1986) or the way of life of the neighbourhood and residents’ subjective perception of their locality.

The two main types of amenity impacts that may result from an additional crossing of the Clarence River are noise impacts, and impacts on visual amenity.

#### Visual Amenity, lifestyle & neighbourhood character

Visual amenity may be potentially impacted by the construction of an additional crossing of the Clarence River at Grafton. Visual amenity is considered to be the ‘experience’ or perception of an area; under a broader approach it can be interpreted as the character of an area. Visual amenity can be an important factor in determining quality of life and people’s levels of satisfaction with the places they live and work. High levels of visual amenity can help create places where people are happy to spend time, and increase levels of sociability; conversely poor visual amenity can create areas that people are less likely to visit. Visual amenity impacts can be localised – with effects limited to small geographical areas – or more generalised, affecting the wider community.

A full consideration of the potential visual amenity impacts resulting from an additional crossing of the Clarence River is presented in the *Route Options Development Report - Technical Paper: Landscape and Urban Character*. These effects may also impact upon the social and economic conditions in the area; potential social and economic dimensions of visual amenity impacts are presented here.

Views of Grafton Bridge have been identified in previous investigations and community consultation as an important aspect of Grafton’s identity (*Preliminary Route Options Report – Final*, RMS, January 2012). In addition the positive visual impact of the existing bridge spanning the Clarence River is a considerable element in the town’s attractiveness to tourists. Key views of the bridge from various points inside and approaching Grafton City have been identified in the *Preliminary Route Options Report - Final*. As far as possible these views should be preserved to maintain the town’s strong visual identity and appeal.

Options 14 and 15 preserve current views to the existing Grafton Bridge as they would be located at a considerable distance; Options E and 11 would be located closer to the existing Grafton Bridge, but are likely to have little impact on its visual integrity.

Options A and C are located relatively close to the existing Grafton Bridge. The detail design of a proposed crossing under these options would be important to ensure that key views are not compromised; appropriate design may complement the visual amenity of the existing

Grafton Bridge. Option A locates the crossing upstream, preserving views from the Pacific Highway but potentially obscuring views from inside the city. This may impact upon the *Waterfront Precinct Masterplan*, which identifies maintaining key views and vistas as one of the masterplan principles. Under Option C the proposed crossing would be immediately downstream of the existing Grafton Bridge. This would help preserve most of the key views identified in the *Preliminary Route Options Development Report - Final* (RMS, January 2012) which are located upstream from within Grafton and South Grafton; many of the key views that are preserved are located within the Grafton Waterfront Precinct area outlined in the *Grafton Waterfront Precinct Masterplan – Volume 1* (Clarence Valley Council, March 2011). Views from the Pacific Highway and the Dovedale area of Grafton may be obstructed under Option C.

The potential wider visual amenity impacts of the six route options are as follows:

- Option E is likely to affect the visual character of the areas that it passes through on both sides of the Clarence River. On the south side Cowan Street is likely to change from a quiet residential street, with the introduction of a bridge approach with higher flows of through-traffic. This is likely to affect residents living along the approach who may value their area as it currently stands. However Option E presents an opportunity to improve the visual amenity of South Grafton through road upgrades and landscaping.

North of the Clarence River, the proposed crossing would enter Grafton along Villiers Street. There is currently a cluster of buildings and community facilities with a strong heritage character located around the intersection of Victoria Street and Clarence Street. These buildings are identified as an attractive feature of the area in the *Grafton Waterfront Precinct Masterplan*, and combined with leafy and traffic-free streets give the area a cohesive sense of place. The introduction of through-traffic and a bridge approach may impact upon the area's character and visual amenity, and tourist appeal.

- Option A is unlikely to alter the character of any neighbourhoods or areas, although it may restrict light to and impact upon the amenity of the sailing club and Salty Seller Reserve through overshadowing.
- Option C may impact upon the visual amenity of the Greaves Street area north of Grafton, with residential properties likely to be impacted by the presence of a bridge approach in the street.
- Option 11 is likely to impact upon the visual amenity and neighbourhood character of Fry Street, in Grafton. This area is currently a local road with wide, generous grassed areas on either side of the road; the introduction of heavy flows of through traffic is likely to impact negatively on residents' levels of satisfaction with their neighbourhood, and may affect patterns of socialisation in the area; as has been noted previously the street and footpaths have been observed as popular areas for children to play in.
- Options 14 and 15 are unlikely to have any major impacts which alter the character of any neighbourhoods or areas in Grafton.

### Noise Impacts

A potential impact upon amenity resulting from an additional crossing of the Clarence River will be noise amenity impacts. A discussion of the social impact assessment of noise is contained in the *Route Options Development Report - Technical Paper: Noise Assessment*.

Common to all options construction activities have the potential to impact upon the amenity and lifestyle of localised areas, such as changes to air quality (ie dust, plant and vehicle pollutants), noise (on-site from plant and vehicles, and off-site from vehicles), vibration, visual pollution, increases in traffic levels and truck movements or changes to access and movement patterns and safety concerns. Mitigative measures are particularly important in residential areas.

### **6.2.2.2 Community cohesion and mobility**

This section considers the indicator, 'changes to access and disruption to community activities or plans'. This indicator informs the project objective of minimising impact upon the environment, and the supporting objective of minimising the impact on the social environment.

This is an indicator of the comparative impacts on changes to access and disruption to community activities or plans. The indicator considers the ease with which people are able to move between and through areas at neighbourhood and wider scales, on foot as well as by vehicles; it also considers the ease of access to community facilities. Works that reduce the number of connections from an area, or impose barriers that make established patterns of travel more difficult, present a potential negative impact on access and community activities and plans.

This indicator is discussed in terms of its impacts on community cohesion – mobility effects at a smaller scale, and often involving the presence or absence of psychological barriers to movement – and access and mobility, referring to the ease of movement across larger areas.

#### Community cohesion

The cohesion of a community refers to its ability to function as and see itself as a whole, and the ease for residents to access areas outside their immediate place of residence. Disruptions to community cohesion can make travelling through an area by vehicle or on foot more difficult; a lack of community cohesion is often related to a high degree of severance in an area. As such, a lack of cohesion means that residents may be more likely to experience difficulty in accessing community facilities and services. The cohesiveness of communities can potentially be affected by:

- The presence or introduction of physical or psychological barriers (such as the Summerland Way).
- Road closures which result in changes to movement patterns (pedestrian and vehicular) and the potential severance/ increased isolation of some residential areas.
- The loss of community infrastructure.
- The loss of residents through property acquisition (discussed above).
- Major disruption to suburban centres.

There are currently two barriers which physically and psychologically divide the communities within the Grafton and South Grafton -

- The Clarence River; and
- Summerland Way (from Gwydir Highway to north of Turf Street).

The Summerland Way forms a physical barrier through the communities along its length. It physically splits locations as its width and volume of traffic can make crossing difficult; pedestrian access across the Summerland Way between Kent and Villiers Streets for example can be difficult, particularly during periods of traffic congestion.

The Clarence River has been a division in Grafton for the town's history. Today there are socio-economic divides between residents in the Grafton and South Grafton (identified from ABS statistics in Section 4, and in more detail in the *Preliminary Route Options Development Report – Final*). Traffic congestion on the existing Grafton Bridge exacerbates this division, with some residents reporting during consultation that they avoid crossing the bridge when possible due to traffic congestion.

Grafton however is an economic, service, social and transport hub. The economic and social infrastructure which serves the population is located on both sides of the river and the bridge plays a crucial role in community function and social sustainability. Tighter cohesion between Grafton and South Grafton is likely to lead to social and economic benefits.

Traffic congestion is strongly associated by the community with the existing crossing, and has a number of negative social and economic consequences. For example, there is anecdotal evidence that congestion is negatively impacting on social service delivery, with providers (based in the north) delaying visits to clients (to the south) during peak periods if it can be avoided. It is understood that peak periods are seen as before 10am and after 3pm, a significant proportion of the working day.

The project presents a generational opportunity to better integrate the communities of Grafton and South Grafton, economically and socially. Designed appropriately, the additional crossing provides the opportunity to strengthen the northern and southern commercial centres, in turn building stronger communities and improving access to community facilities.

Disruption to community cohesiveness and severances can occur at the local and Grafton-wide scale. Local effects may include reducing access to a small residential or business area, while more generalised effects can create larger divisions (such as those between Grafton and South Grafton created by the Clarence River). In terms of community cohesion and severance the following are noted:

- Option E helps to define the South Grafton commercial precinct, but potentially creates cul-de-sacs at Kennedy Street which may increase the difficulty of access with entry via circuitous routes. North of the river east-west access through the area between the existing and proposed bridge approaches (Bent and Villiers Streets) may become more difficult, depending on bridge design. This may lead to community facilities located in Victoria Street adjacent to the river, including the St Mary's Catholic Church and Sisters of Mercy Convent, becoming more difficult to access. The potential increase in traffic flow along Villiers Street may also make east-west movement more difficult in the residential area north of the railway line and increase the difficulty of access to the commercial centre community facilities for residents living east of Villiers Street.
- Option A is likely to have minimal impact upon community cohesion and severance, as it largely runs along the existing route of the Summerland Way. The widening of the northern bridge approach between Craig and Fitzroy Streets may increase the difficulty of access to Salty Seller Reserve.
- Option C has the potential to impact upon community cohesion in Grafton. This option may affect access to properties in Greaves Street, and introduce a physical barrier along Pound Street. Given the current commercial character of Pound Street this is unlikely to have severe impacts. This option may also impact upon the North Coast TAFE located in Pound Street; detailed design would consider that easy vehicle access to the facility is maintained.

Option C in South Grafton may require relocating access to residential and agricultural properties in Butters Lane, off Iolanthe Street. If the Iolanthe Street embankment is a relatively impermeable barrier it risks restricting future eastwards growth of the Iolanthe industrial area.

- Option 11 is likely to have minimal direct impact on community cohesion south of the Clarence River.

However Option 11 potentially impacts upon community cohesion in Grafton, along Fry Street. This option may introduce a hard physical boundary along Fry Street which would divide a large residential area, with the effect of increasing the difficulty of pedestrian and possibly vehicle access between each side. The area east of Villiers Street between Oliver Street in the south and Dobie Street in the north has been identified as an area with a relatively higher proportion of children, compared to other areas of Grafton and South Grafton (ABS 2006 Census), and currently has a strong 'neighbourhood' feel. Fry Street runs through the centre of this area, creating potential safety concerns. Under this option traffic entering Fry Street would end in a T-intersection at Fisher Park. Modelling conducted by Arup has suggested that this is likely to increase traffic in Villiers and Dobie Streets adjacent to the park, potentially limiting access to this facility.

- Options 14 and 15 are likely to have no direct impact on community cohesiveness and severance in South Grafton.

Increased traffic along North Street under Option 14 may impact community cohesion as a barrier to north-south movement for the small number of residents in this area. Vehicle accessibility to the residential areas immediately north and south of North Street would likely be improved, as would access to Grafton Base Hospital. Prince Street north of Dobie Street would be opened to heavy vehicle traffic. The sparsely populated nature of the land along this route may prevent this impact from being severe.

Option 15 bypasses the centre of Grafton, largely avoiding impacts on community cohesion and severance. As with Option 14, this option would introduce heavy vehicle traffic into Prince Street between Dobie and North Streets for access to and from the Grafton town centre.

The maintenance of east-west pedestrian movement paths across all options is essential, but will be challenged under some options by proposed road widths and anticipated traffic volumes. A particularly important consideration under Options A, C and 11 is to ensure that crossings are able to be maintained during detailed design, following the identification of a preferred route option.

### Accessibility and mobility

The construction of an additional crossing of the Clarence River at Grafton has the potential to have both positive and negative impacts on accessibility. Accessibility refers to the ease of movement within and to an area, and particularly between areas that people are likely to need to travel. A high level of accessibility would mean that an area is easy to access from different points of origin, often via a number of travel modes, and with a lower degree of physical exertion or time required. Accessibility has social and economic dimensions in that it can encourage social interaction and improve quality of life, and in that higher levels of accessibility can be important for the economic viability of commercial areas. Accessibility impacts are particularly important for disadvantaged members of a community who may have reduced access to private transport, such as the elderly or people on lower incomes, and for young people.

In terms of accessibility and mobility, the following are noted:

- All options require lowering a section of Villiers Street to achieve 5.3m vertical clearance beneath the railway viaduct. Option C also requires the lowering of Pound Street at the railway viaduct to achieve 5.3m vertical clearance beneath the railway viaduct.

- Under all options pedestrian and bicycle accessibility across the river would be improved, with shared pathways proposed on the new bridge. Use of the pathways would be promoted and would possibly feel safer due to the presence of passing traffic, which would be an improvement on the current situation. The shared path proposed along the new bridge in all the options would be linked into the existing and future cycle/pedestrian network contributing to the completion of the local and regional cycle/pedestrian plans detailed in *Clarence Valley Council – Bike Plan and Pedestrian Accessibility and Mobility Plan* (Clarence Valley Council 2008). This would be of considerable social benefit. Due to their distance from the Grafton and South Grafton commercial centres, Options 11, 14 and 15 may attract fewer users than other options and therefore provide less social benefit.
- Integration with public transport can be provided by Options E, A and C. Options 11, 14 and 15 may be integrated with public transport, although their distance from the Grafton and particularly South Grafton commercial centres mean these options may provide relatively little connection to the two centres.
- Option E offers the potential to provide improved accessibility to the Grafton CBD for residents of South Grafton. Previous investigations detailed in the *Preliminary Route Options Report – Final* (RMS, January 2012) have identified residents of South Grafton as being on lower incomes relative to the wider community. A stronger link between these two areas is likely to benefit this group, particularly if cycling facilities and public transport are provided. This route is likely to be able to be well integrated with the existing public transport network.
- Option A is likely to have little impact upon accessibility in the Grafton area, as it will have minimal effect on patterns of movement. Under this option a bus stop located on Bent Street, near Grafton Aged Care Home, will need to be relocated between 20 and 100m. Distance from the aged care home would be minimised as much as possible.
- Option C has the potential to negatively impact upon vehicle and pedestrian access to North Coast TAFE. Depending on the character of the traffic along Pound Street, entering the TAFE facility from the opposite side of the street may become difficult. Parking in this section of Pound Street has been identified as already problematic in consultation with stakeholders.
- Options 11, 14 and 15 all allow the possibility of bypassing the Grafton and South Grafton CBDs, to different degrees; Option 11 passes closest to the Grafton CBD while Options 14 and 15 pass through its outer suburbs. Bypasses can have positive or negative economic and social effects on a community; literature on bypasses emphasises the context-specificity of each town in judging the advantages and disadvantages of a bypass.

A 2009 study by the University of Sydney (Phibbs et al 2009) found that bypass 'success stories' often have well-defined town centres of high architectural quality which contributed to the growth of the local tourism industry following the diversion of highway traffic, and that external economic linkages can mitigate negative effects; existing community issues and a high level of dependency on passing traffic are identified as increasing a town's vulnerability to negative bypass impacts. Similarly a study commissioned by the RTA (now RMS) found three main factors in determining post-bypass economic change: population size, economic base, and distance from a larger centre (Parolin, 2011).

Options that bypass the centre of Grafton would need to demonstrate that they would address traffic congestion over the existing Grafton Bridge (in addition to other community concerns such as safety, town character, access and noise) which

appears to be the strongest desire of the community and is one of the main drivers of the project.

Indicator summary: changes to access and disruption to community activities or plans

All options will provide benefits through the provision of an additional vehicle and pedestrian crossing of the Clarence River at Grafton, and improved public transport viability. However road upgrading and higher traffic volumes are likely to disrupt access patterns and community activities under several options.

Option E is likely to disrupt patterns of movement to community facilities in Villiers and Victoria Streets, including Clarence Valley Conservatorium and St Mary's Church. This option is also likely to increase the difficulty of access between the Grafton CBD / Shopping World, and Grafton east of Villiers Street. Given the relatively high density of community facilities in this area, there is a higher possibility for disruption.

Options A and C have relatively little impact, with localised disruptions to access and community activities.

Option 11 will disrupt ease of north-south movement across Fry Street, currently a quiet residential area. Options 14 and 15 will introduce increased traffic flows, and therefore a barrier to movement, along Prince Street.

**6.2.2.3 Distributional Equity of Social Impacts and Housing Affordability**

This section considers the indicator, 'distributional equity of social impacts and impact on housing affordability'. This indicator informs the project objective of minimising impact upon the environment, and the supporting objective of minimising the impact on the social environment.

This is an indicator of the comparative impacts on distributional equity of social impacts and housing affordability. This indicator considers the geographic and social/demographic distribution of positive and negative impacts arising from the project, and any impacts upon the supply of housing available to people on lower incomes. The intent of this indicator is not to assure impacts are equally distributed, but to identify where several negative impacts may have a compounding effect, and to be aware of impacts amongst parts of society who may have a reduced capacity to cope with them. The socio-economic information used for this indicator was based on Australian Bureau of Statistics data.

The analysis presented here considers the impact of the project upon housing affordability in the short-term, resulting from the loss of housing stock. Given the improved connectivity provided to growth areas by several options, it is possible that these short-term reductions will be offset by the construction of new dwellings.

Positive and negative impacts resulting from the construction of an additional crossing of the Clarence River at Grafton would be experienced and felt differently, by different sections of the community. Some impacts would be more pronounced in certain neighbourhoods and areas, while other impacts may be felt more strongly by different socio-economic groups. While it is not possible to ensure that the distribution of social impacts is completely equal, an awareness of the likely distributional equity can help identify groups or residents of geographic areas that may be particularly affected, or more vulnerable to harm from impacts. This can inform the identification of mitigative responses at later stages.

As mentioned previously, available demographic information is not likely to be representative of the communities potentially impacted due to the size of the area in which this data is available, and the fact that route options often run through areas likely to be atypical of their



surrounds<sup>5</sup>. However information presented in the *Preliminary Route Options Report – Social and Technical Paper* (RMS, January 2012) and gathered from consultation with key stakeholders has suggested relevant social equity issues, and the identification of vulnerable groups within the community.

These findings have suggested that there is a higher level of disadvantage in South Grafton. Specific findings include that residents of South Grafton have a lower median income and are more likely to be classified as low-income (ABS Census, 2006), that there is a lower rate of vehicle ownership and thereby mobility in South Grafton (ABS Census, 2006), and that the Skinner Street CBD is less vibrant than Prince Street (consultation with Grafton Chamber of Commerce and Industry, May 2012). The majority of social housing tenants live in South Grafton, but south of Gwydir Highway at some distance from the proposed route options.

In general less advantaged residents possess less resources to cope with social impacts (be they financial, educational, or social support networks), and special attention should be directed towards identifying and mitigating negative impacts. As noted by Clarence Valley Council in its social plan, 'socio economic disadvantage limits people's opportunities to participate in decisions affecting their lives' (Clarence Valley Council Social Plan 2010-2014, 2001, page 24).

Table 27 shows the number of non-rural property impacts in Grafton and South Grafton, as well as full time equivalent (FTE) positions potentially affected by place of residence.

**Table 27: Distribution of business, employment and residential impacts**

		Option E	Option A	Option C	Option 11	Option 14	Option 15
Businesses with potential impacts on viability	Grafton	4	2	1	0	0	0
	South Grafton	1	12	1	1	1	1
Potentially affected FTE positions by place of residence	Grafton	25	41.5	4	2	2	2
	South Grafton	9.5	32.5	0	0	0	0
Residential properties directly affected (major impact)	Grafton	6	12	20	15	0	0
	South Grafton	5	8	1	1	1	1

Under all options the majority of FTE positions likely to be affected are residents of Grafton. There is generally no large imbalance between the number of businesses with potential major impacts, with the exception of Option A. The majority of businesses affected under Option A are located in South Grafton, along Bent Street. The affectation of a number of businesses in one of South Grafton's primary commercial/industrial areas is likely to further disadvantage this part of the city, relative to Grafton.

Impacts upon residential properties are distributed approximately equally between Grafton and South Grafton under Options E, A, 14 and 15. Options C and 11 have a greater impact in Grafton, which has been identified as having on average lower levels of disadvantage.

<sup>5</sup> Exceptions to this are the residential area around Cowan Street in South Grafton affected by Option E, and Fry Street in Grafton affected by Option 11.

Consultation with Clarence Valley Council staff has suggested that the most disadvantaged area of Grafton City is in South Grafton, in social housing south of Tyson Street. It is noted that these residents, who may be most vulnerable to long-term potential negative impacts, are unlikely to be directly affected under any of the options.

Other issues related to the distributional equity of the route options include:

- Option E provides improved connectivity between an area of South Grafton that has been identified as particularly disadvantaged, with twice the rate of households without a motor vehicle (ABS), and the central Grafton area / shopping world. This may present an important benefit in improving social equity and physical mobility for this group.
- The effect Option A has on the local South Grafton economy risks contributing further towards the existing levels of deprivation in South Grafton by decreasing economic activity. However most of the potentially affected businesses are located along Bent Street, and are either light industrial or oriented towards passing traffic rather than providing services for the local South Grafton area. More locally-oriented businesses on the west side of Bent Street such as a supermarket and chemist would not be affected under Option A. This would limit the degree to which essential services for the South Grafton area would be impacted. Option A also has the highest relative impact on residential properties in South Grafton.
- Option C affects residential properties in a relatively concentrated geographical area located around Pound and Greaves streets, and is unlikely to have major negative impacts on the wider area or community.
- Option 11 primarily directly affects residents located in Fry Street. ABS statistical data from the 2006 Census is available for this area, and suggests the prevalence of a high number of families, and a median household income significantly higher than that of the Clarence Valley LGA.
- Options 11, 14, and 15 primarily provide improved connectivity between Grafton and the Pacific Highway, and may offer little benefit to residents of South Grafton.

### Housing Affordability

An important issue which will not be immediately apparent is the potential loss of affordable housing, particularly affordable rental housing, due to the project and the impact that would have on the community.

As mentioned above, the analysis presented here considers the impact of the project upon housing affordability in the short-term resulting from the immediate loss of housing stock associated with the project. Given the improved connectivity provided to growth areas by several options it is possible that these short-term reductions will be offset by the construction of new dwellings.

Housing affordability is a key issue in the region and one which is valued in Grafton. ABS data outlined in the *Preliminary Route Options Report – Social and Economic Technical Paper* (RMS, January 2012) suggests that a proportion of Grafton residents have generally lower incomes which may preclude ownership. The *Clarence Valley Social Plan* (Clarence Valley Council, 2010) identifies that there is a limited supply of affordable rental properties for which there is keen competition.

Residential property acquisitions necessary for the construction of a second crossing of the Clarence River at Grafton would represent a decrease in the total supply of housing in the Clarence Valley and Grafton area; these properties would no longer be a part of the housing market, and a smaller total housing market would impact negatively on housing affordability in the short term. This shortfall however may be made up for with future developments. The

more residential properties that would need to be acquired, the greater the potential for impacts upon housing affordability in the area.

The loss of more affordable housing is likely to have a greater impact than the loss of more expensive housing. The number of properties under each route option with potential major impacts is shown in Table 13 previously.

Options A and C have the highest number of potential major impacts, at 20 and 21 respectively, and therefore have the greatest impact upon overall housing affordability in the area. Options 14 and 15 have the least. However it is considered that the level of property acquisitions required is unlikely to be high enough to have any meaningful effect upon Grafton City's overall housing affordability. In 2006 there were a total 8,484 dwellings in the Grafton Statistical Local Area (SLA), and the construction of 113 new dwellings was approved in the Grafton SLA area in the nine months up to March 2012 (ABS).

The loss of affordable housing (or of housing in more affordable parts of town) is likely to have an adverse effect upon the overall level of housing stock available to people on a lower income. Housing within the reach of people on limited incomes can be a relatively small proportion of an area's overall housing stock. People with reduced financial capacity who are displaced from affordable housing may have difficulty securing another place to live at the same price. As a result the loss of more affordable rental housing, social housing or boarding house accommodation is likely to be more acutely felt amongst people on lower incomes. The Clarence Valley Council Social Plan (2010) has identified a lack of affordable rental housing as being a particular problem in the Grafton area.

Statistical data is not available at a sufficiently detailed resolution to distinguish between the dwelling profiles of areas along each route option at a meaningful level, being of too large a geographical area. In addition most routes run through the same collection districts (CDs), and as identified in the *Preliminary Route Options Report – Social and Economic Technical Paper* (RMS, January 2012), Grafton is not polarised and has people of different incomes living in the same area and same street. Within census collection districts, route options often pass through areas highly unrepresentative of the CD, such as Bent Street under Option A or the non-residential stretch of Villiers Street under Option E, or through undeveloped rural lands. Housing acquisitions under Options C and 11 are split between two census collection districts.

However broad trends in housing affordability and social disadvantage are discernible, and these observations are considered suitable to inform an assessment of short-term housing affordability impacts associated with the project.

Consultation with Clarence Valley Council staff has suggested that South Grafton is generally more disadvantaged than Grafton, with a higher proportion of rental dwellings. These comments are supported by data from the 2006 ABS Census. While census data is not sufficiently detailed to comment upon the conditions of each route option, median rental prices in CDs running along the south of the Clarence River are lower than in CDs to the north, and lower than the median rent for the Clarence Valley LGA (ABS 2006 Census).

South Grafton is generally less advantaged than Grafton, and as discussed in Section 4 and in the *Preliminary Route Options Report* (RMS, January 2012), housing within South Grafton is amongst the most affordable in the town. Through Street (and to a lesser extent Spring Street) has been identified in the *Preliminary Route Options Report – Volume 2 – Social and Economic Technical Paper* (RMS, January 2012) as containing low cost rental properties, with some dwellings being informally used in a manner akin to boarding houses. At the time of the 2006 Census housing to the north of the Gwydir Highway and east of Skinner Street to James Street had a lower average rent than the Grafton average. Consultation with Clarence Valley Council has also identified the presence of affordable housing in Junction Hill and Bacon Street.

Options E and A then have the greatest potential to impact negatively upon the supply of affordable housing in Grafton, as they are likely to involve more acquisitions in areas of Grafton that are more likely to have affordable housing stock. However the overall number of likely acquisitions is considered to be fairly low, with eight potential acquisitions in South Grafton under Option A the highest degree of impact in this area.

A full discussion on the strategic connectivity of land uses is contained below in Section 6.3.2.3. However it is noted that options which provide a higher level of connectivity to residential growth areas are likely to increase housing affordability by encouraging residential development in these areas. Option E provides strongly improved connectivity between the Grafton CBD and the South Grafton growth area, while Options 14 and 15 increase connectivity between the Junction Hill and Clarenza growth areas, and South Grafton.

#### Indicator summary: distributional equity of social impacts and impact on housing affordability

The project is generally considered to have a low risk of adverse impacts upon housing affordability. Options E and A have the highest potential risk to impact upon affordability as they affect a relatively higher number of residential properties in South Grafton; however the extent of impact under these options is likely to be negligible. It is also noted that any potential short-term impacts upon housing affordability may be offset by increased connectivity to residential growth areas provided under most options.

The distributional equity of impacts is generally fairly balanced, with Option A an exception. In addition to a relatively high absolute number of residential property impacts, the majority of impacts on businesses under Option A are located in South Grafton. South Grafton has been identified as having higher levels of disadvantage than Grafton (ABS 2006 census data), and may be expected to have a lower financial and personal capacity to respond to negative impacts. Option E provides connectivity benefits to a strongly disadvantaged area of South Grafton, with improved access to the Grafton CBD.

#### **6.2.2.4 Community Health and Safety**

Options have the potential to impact upon the health and safety of Grafton community generally, and of residents in close proximity to the route. Potential health and safety impacts upon users of community facilities are detailed in Section 6.2.1.2.

An additional crossing of the Clarence River at Grafton is likely to have benefits for the health and safety of the wider Grafton community under all options. These include increased possibilities for passive recreation, such as walking and cycling, through the pathways provided along the final route. The convenience of an additional crossing point may encourage passive recreation. Cycling and pedestrian facilities are provided under all options. A safety barrier would be provided to physically separate the shared pathway from traffic. The shared pathway may also make pedestrians feel safer due to the presence of passing traffic.

Several options increase the flow of through traffic into what are currently local and/or residential streets. Detail design would be particularly important under these scenarios as established patterns of use, such as footpaths or roads being used as spaces for socialisation and games, may conflict with the function of a road carrying increased traffic volumes. Such areas may present a higher potential road safety risk. The potential for such conflicts of use are outlined below in Table 28.

**Table 28: Traffic-related health and safety impacts**

Option	Potential Impacts
Option E	Traffic introduced to Cowan Street and partially residential stretch of Gwydir Highway east of Cowan Street presents some safety risk. Little change north of river.
Option A	Little difference from existing situation.
Option C	Increased traffic flows along raised embankment south of the river, and small commercial stretch of Pound Street; relatively low risk of traffic-related safety impacts.
Option 11	Some risk of potential negative health and safety impacts – through-traffic and heavy-vehicle traffic introduced into currently residential Fry Street, Dobie Street, and Kent Street. The Fry Street area is identified in census data as having a high proportion of children. Traffic would also run alongside Fisher Park.
Option 14	Some increased risk – increase in traffic flows through residential sections of Prince Street and North Street, as well adjacent to unembelished parks (Jacaranda Park and Volkers Park).
Option 15	Some increased risk – increase in traffic flows through residential sections of Prince Street, as well adjacent to unembelished parks (Jacaranda Park and Volkers Park).

Potential health and safety impacts are distributed across all options, with Option A likely having the lowest potential impact against the current scenario. Appropriate consideration needs to be given to health and safety impacts in the design process to mitigate any impacts as much as possible.

## 6.3 Economic Assessment

### 6.3.1 Property and land use impacts

#### 6.3.1.1 Businesses property impacts and FTE positions potentially affected

This section considers the indicators, “number of businesses where there would be potential impacts on business viability, and employees at these businesses”, and “number of businesses with potential minor impacts”. These indicators inform the project objective of minimising the impact on the environment, and the supporting objective of minimising the impact on the social environment, including property impacts.

These are indicators of the comparative potential impacts on businesses. This count includes businesses that are currently in operation and potentially directly affected. For the purposes of this assessment, potentially directly affected businesses are those where full or partial acquisition of the property is required. Businesses with minor impacts are those where business viability is unlikely to be affected. The number of employees at businesses with potential major impacts have been estimated on the basis of FTE positions. Comparatively, the greater the number of businesses and employees potentially directly affected, the greater the potential impact.

Under all route options, necessary property acquisitions may include land occupied by businesses, which may require the closure or relocation of the business depending on the extent of acquisition. The closure of such businesses would mean the loss of jobs for employees, should relocation not be possible. The number of businesses and their employees potentially affected under each route option, as identified in the survey of potentially affected businesses, is presented in Table 29 and Table 30.

**Table 29: Potentially directly affected businesses<sup>6</sup>**

		Option E	Option A	Option C	Option 11	Option 14	Option 15
Grafton	Potential impacts on business viability	4	2	1	0	0	0
	Potential minor impacts	2	3	1	0	1	0
South Grafton	Potential impacts on business viability	1	12	1	1	1	1
	Potential minor impacts	0	4	1	0	0	0
<b>Total</b>	Potential impacts on business viability	<b>5</b>	<b>14</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>
	Potential minor impacts	<b>2</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>

<sup>6</sup> Businesses referred to in this table are those likely to require full or partial acquisition. The figures shown under FTE positions potentially directly threatened refer to a scenario where the route option is considered to have an impact on business viability. Many businesses identified in this table will require only relatively minor acquisitions and may be able to continue operating as normal. This comparative assessment assumes that both part-time and casual employees equate to 0.5 FTE; research suggests that casual employees on average work approximately half full-time hours (*The Australian Work + Life Index 2010*, University of South Australia, 2010)

**Table 30: Potentially directly affected FTE positions by place of business<sup>7</sup>**

	Option E	Option A	Option C	Option 11	Option 14	Option 15
Grafton	32.5	25	2	0	0	0
South Grafton	2	45	2	2	2	2
<b>Total</b>	<b>34.5</b>	<b>74</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>

One business with two FTE positions is likely to be affected under all options due to road upgrading at the corner of the Gwydir Highway and Skinner Street. As shown in Table 29, this is likely to be the only major impact upon businesses or employees resulting from Options 11, 14 and 15.

The highest potential impact scenario is Option A, as work required to accommodate additional traffic volumes along existing routes would require the acquisition of land adjacent to Bent Street. A number of businesses are currently sited on this land, which is valued due to its visibility.

Option E also has a relatively high effect upon existing local businesses and employees; the majority of FTE positions affected under this option come from two large employers located on the corner of Fitzroy and Villiers Streets.

Owners of affected businesses should be compensated in accordance with relevant RMS procedures. In many cases compensation will enable businesses to relocate to other premises.

In some cases the affected businesses may choose not to, or be unable to, relocate and consequently cease trading. The closure of a business has the potential to cause major disruption in the lives of those affected, both business owners and staff members. The effects of such changes are experienced differently by each individual – some may experience relatively low levels of disruption.

In the case of employees, the loss of a job often means a period of unemployment while searching for work. Some individuals may have difficulty finding new employment, and experience a prolonged period of unemployment. This can result in a reduction of income, as well as increased mental stress and uncertainty. In some cases the change of employer can be a disruption of long-established routines and may be less satisfactory to the affected individual, in terms of working conditions or locations.

The loss of a business can also have negative impacts for the business owner (particularly for small businesses), who in many cases will have made a large financial and time investment in its operations, including premises and stock. The closure of a long-running small business is likely to be a large disruption to its owner, and result in reduced incomes. Businesses that relocate may have difficulty finding suitable new sites for relocation, and experience a reduction in trade and disruption to business operations.

The capacity of individuals to deal with such changes depends on a range of personal factors, including age and stage of life, education and training, economic resources, and professional experience. Mitigative measures directed towards the disruptive effects of

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<sup>7</sup> Data used in Table 30 only includes information supplied by those businesses that responded to the survey and whose viability is potentially affected by the route option. Some businesses were not contactable, or declined to participate in the survey of potentially directly affected businesses. Following the survey further design refinements were undertaken and additional businesses were identified as potentially directly affected. These businesses will be contacted following the release of the Route Options Development Report to provide them with the opportunity to take part in the survey. The businesses in question are affected under Option A, meaning a higher number of FTE positions are likely to be affected under this option than shown here.

business closure are available and would be considered at later stages of the project process.

At the broader economic level, the loss of businesses and jobs would have a multiplier effect through the local and regional economy, offset to some degree by additional opportunities for businesses and jobs along the preferred route of the additional crossing.

### 6.3.1.2 Agricultural property impacts

This section considers the indicator, “number and area of rural properties with potential direct impacts”. This indicator informs the project objective of minimising impacts upon the environment, and the supporting objective of minimising impacts upon the social environment including property impacts.

This is an indicator of the comparative potential direct impacts on rural properties. This count measures the number and area of rural properties that are potentially directly affected. For the purposes of this assessment, potentially directly affected rural properties are those where full or partial acquisition of the property is required.

The indicator “regionally significant farmland affected” refers to land designated as “regionally significant” by the NSW Department of Planning’s *Farmland Mapping Project* (2008). This is discussed further below. For the purposes of this assessment, regionally significant farmland is considered to be potentially directly affected if an option may require full or partial acquisition.

Several of the route options pass through agricultural and rural lands. Agricultural lands can be a source of economic income, and have an important role in food production as outlined in the North Coast Regional Strategy (NSW DoP 2009). Impacts upon agricultural properties can have similar impacts upon individuals as the loss of a business or job, as the loss of a rural property can mean the loss of a source of livelihood. The owners of impacted agricultural properties will be compensated, but the process of adjustment involved in acquiring new land or a change in lifestyle can be a stressful or difficult experience. The number of agricultural properties directly affected under each route option are shown in Table 31.

**Table 31: Number and area of rural properties and regionally significant farmland potentially directly affected**

	Option E	Option A	Option C	Option 11	Option 14	Option 15
Grafton	-	-	-	-	2 3.2 ha	10 15.7 ha
South Grafton / Clarenza	-	-	2 4.5 ha	2 8.0 ha	5 11.0 ha	4 11.0 ha
<b>Total rural properties affected</b>	-	-	<b>2 4.5 ha</b>	<b>2 8.0 ha</b>	<b>7 14.2 ha</b>	<b>14 26.7 ha</b>
<b>Regionally significant farmland</b>	-	-	<b>3.4 ha</b>	<b>8.0 ha</b>	<b>13.9 ha</b>	<b>26.5 ha</b>

Options E and A have no effect upon existing rural properties. Option C would affect two properties located just east of South Grafton, between the Pacific Highway and the rail line; these impacts are required to allow for the approach to an additional crossing of the



Clarence River. Option 11 would affect two rural properties south of the Clarence River and further downstream than Option C. Option 14 represents one of the higher-impact scenarios, with potential impacts on seven properties. Option 15, running primarily through rural land both north and south of the Clarence River, would affect the most rural properties at 14.

Depending on the preferred route option selected, some acquisition of rural properties may be required as part of works.

### Regionally Significant Farmland

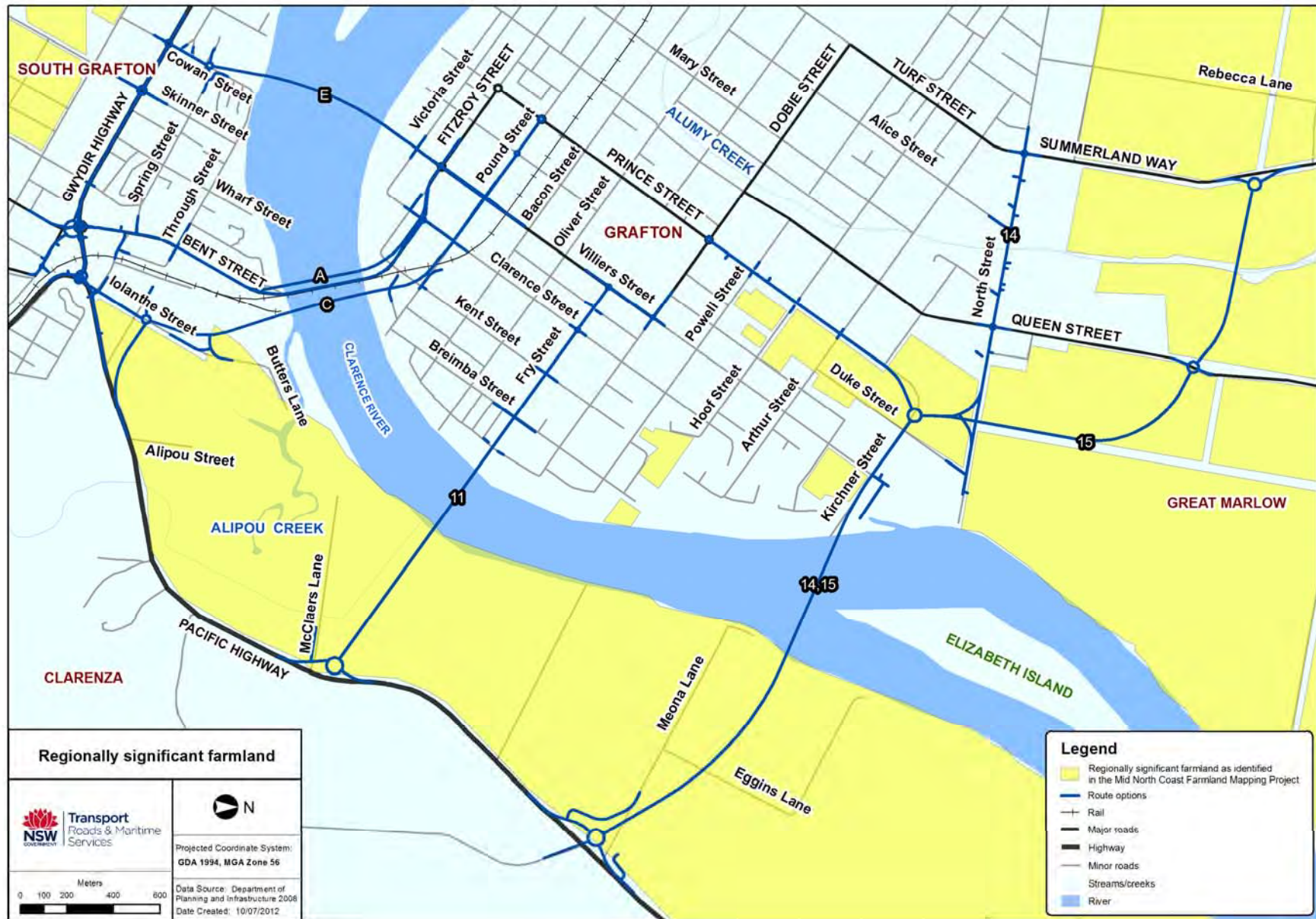
This section considers the indicator, “area of regionally significant farmland potentially directly affected”. This indicator informs the project objective of minimising impacts upon the environment, and the supporting objective of minimising impacts upon the social environment including property impacts.

This is an indicator of the comparative impacts on areas of regionally significant farmland potentially directly affected by a route option. For the purposes of this assessment, regionally significant farmland is regarded as potentially directly affected if an option may require full or partial acquisition of such land.

Regionally significant farmland in the Grafton area is identified in the Mid North Coast Farmland Mapping Project (DP&I, 2008). It should be noted that the majority of regionally significant farmland potentially directly affected is also zoned as primary production land in the Clarence Valley Local Environmental Plan 2011 (CVLEP 2011).

Several route options would affect farmland identified as regionally significant in the *Mid North Coast Farmland Mapping Project* (DP&I 2008). Regionally significant farmland in the Grafton region is shown in Figure 14. As a response to the conversion of high quality agricultural land to urban and rural residential use and hobby farms, the identification of regionally significant farmland is intended to protect such lands from urban and rural encroachment and land use conflict. Regionally significant land is defined as ‘land capable of sustained use for agricultural production with a reasonable level of inputs and which has the potential to contribute substantially to the ongoing productivity and prosperity of a region.’ The extent to which the six route options affect regionally significant farmland is shown above in Table 31. The highest impact upon regionally significant farmland is under Option 15, with no impacts under Options E and A.

Figure 14: Regionally significant farmland in the Grafton area



## 6.3.2 Other economic impacts

### 6.3.2.1 Effects on highway oriented businesses

Non-local highway traffic, or 'passing trade', is likely to be an important part of the local economy in some areas affected by the project. A number of businesses have a high reliance on turnover generated by non-local highway traffic along the Summerland Way and the Pacific Highway. This includes Fitzroy Street, Prince Street, and Bent Street. Primarily this involves a number of hotel/motel establishments, fast food outlets and service stations.

These businesses were generally located on the Pacific Highway. Highway-oriented businesses located along the Summerland Way (fast food restaurants and service stations) generally reported around a third of their business came from non-local highway trade.

Non-highway oriented businesses generally reported that non-local highway traffic made up between 10% and 20% of their businesses, although this often came from semi-regular commuters such as residents of Yamba, Iluka or as far as Casino, rather than from long-distance travellers from Sydney or Brisbane. These businesses felt that such semi-regular commuters would recall their presence when necessary, and either travel to Grafton specifically for their services or call in on their next trip through (such businesses included car dealerships and wholesale / trade providers). As such, the visual prominence was quite important to their operations.

Route options that divert traffic away from existing flows are likely then to have some adverse effects upon existing businesses with visual prominence; the small number of businesses on the Pacific Highway (at Schwinghammer Street and Charles Street) oriented towards passing traffic are more susceptible to negative impacts resulting from a decrease in traffic flows. Traffic modelling conducted by GTA Consultants however suggests that there is unlikely to be any major decrease in traffic flows along this section of the highway.

Changing traffic flows would have some effect upon businesses (particularly along Fitzroy Street and Bent Street), but the degree of impact is likely to depend upon the individual business' circumstances. Businesses along Fitzroy Street may be more vulnerable, as they are more directly oriented to highway traffic and including several motels, a fast food shop and petrol station. Bent Street businesses are more trade- and wholesale-oriented, and include mechanics and car yards.

However the effects of each option upon motels and hotels in Grafton – particularly those located along Fitzroy Street – are difficult to accurately assess. While such businesses may be exposed to highway-oriented traffic, consultation with one hotel has suggested that a large majority of business comes from internet bookings. The business manager felt that roadside exposure was of very little significance, due to the reputation of the hotel and levels of repeat business. It is uncertain whether this observation would be true for all hotels in the area. Consultation with the Grafton Chamber of Commerce and Industry suggested that passing traffic constituted a relatively small proportion of overall business in Grafton City.

The potential effects of each route option on highway-oriented businesses are shown in Table 32. The businesses most exposed to non-local highway traffic – those located on the Pacific Highway – are unlikely to have major impacts under any of the route options. It is also noted that Grafton would be bypassed under the current concept design for the upgrading of the Pacific Highway between Woolgoolga and Ballina (RMS, *Pacific Highway upgrade –Woolgoolga to Ballina – Refined concept design – Community update October 2011*). Under this design Grafton-bound traffic would leave the Pacific Highway at Glenugie or Tyndale. As a consequence there is likely to be a decrease in passing traffic volumes along the current Pacific Highway near Grafton.

**Table 32: Potential impacts on highway-oriented oriented businesses**

Option	Potential Impacts
Option E	Some diversion of traffic from existing routes likely to have minor adverse impacts on Bent and Fitzroy Street businesses (includes hotels, fast food restaurants and petrol stations), but potential to stimulate some minor passing trade along the Gwydir Highway to Cowan Street.
Option A	Least impact upon existing business conditions and passing trade – traffic network differs little from existing situation, so traffic flows are likely to be maintained.
Option C	Some diversion of traffic from existing routes likely to have minor adverse impacts on Bent and Fitzroy Street businesses, but a cluster of businesses in Pound Street (between Clarence and Duke streets) likely to benefit. Businesses located around the intersection of Spring Street and the Pacific Highway (including McDonald's and Hungry Jacks) may be vulnerable to decreased traffic flows as Grafton-bound traffic coming south along the Pacific Highway exit at the new Through St and Iolanthe Street intersection.
Option 11	Diversion of traffic from existing routes with potential adverse impacts upon Bent and Fitzroy Street businesses from loss of passing traffic. Increased passing traffic along Villiers Street may create conditions favourable to business.
Option 14	Diversion of traffic from existing routes with potential adverse impacts upon Bent and Fitzroy Street businesses from loss of passing traffic. Increased passing traffic along Prince and North Streets may create conditions favourable to business.
Option 15	Diversion of traffic from existing routes with potential adverse impacts upon Bent and Fitzroy Street businesses from loss of passing traffic. Increased passing traffic along Prince Street may create conditions favourable to business.

### 6.3.2.2 Effects on tourism

This section considers the indicator, “potential to contribute to tourism”. This indicator informs the project objective of supporting local and regional economic development, and the supporting objective of providing improved opportunities for economic and tourist development Grafton.

This indicator compares the potential to contribute to tourism for each of the route options. It is a qualitative assessment of how the options would contribute (positively or negatively) to tourism. This includes assessment of any potential direct impacts on existing major festivals or events.

Tourism is an important part of Grafton's, and the Clarence Valley's, economy. In 2006, 8.4% of residents in the Clarence Valley LGA were employed in Accommodation and Food Services; many of these jobs are likely to be directly or indirectly related to tourism. Grafton is an attractive destination for tourists because of its heritage character, river access and watersports, and several high-profile annual events including:

- The Bridge to Bridge Ski Race
- The Monster Energy Pro Wakeshow (wakeboard tournament)

- The Jacaranda Festival

Clarence Valley Council has identified tourism as one of the region's fastest growing industries, and its *Economic Development Strategic Plan* (Clarence Valley Council, 2006) recognises this importance by establishing the development of the Clarence River Way as a strategy for economic development.

The Clarence River Way is an integrated approach to develop the tourism capacity and marketability of the Clarence Valley, with the intent of creating the region as a 'destination experience'. Strategies for its development are set out in the *Clarence River Way Masterplan: Tourism Investment and Infrastructure Plan* (Clarence Valley Council, 2009). Many of the strategies are based in Grafton, and relate to the Clarence River or visual and touristic amenity of the town.

Given the importance of the Clarence River and the visual heritage of Grafton to the Clarence River Way's masterplan, some strategies have the potential to build upon or be negatively impacted by the future construction of an additional crossing of the Clarence River. Options that may potentially have positive or negative impacts upon the implementation of the *Clarence River Way Masterplan* are shown in Table 33.

**Table 33: Potential impacts of an additional crossing of the Clarence River on the Clarence River Way Masterplan**

Option	Masterplan Strategy	Potential Impact
Option E	Reorient Grafton and South Grafton to river	May assist in reorienting Grafton to Clarence River by improving waterfront access and appeal at Villiers Street; this would be dependent on detail design of pedestrian connections
	Improve the cityscape through investment in a mainstreet program, (primarily Prince Street for waterfront linkage and Fitzroy Street)	May offer possibility of cityscaping Villiers, Pound and sections of Fitzroy Streets with upgrading of roads
	Promote development of waterfront precinct (running from Queen Street to existing bridge)	May offer possibility of developing waterfront precinct in concert with work associated with crossing Depending on design, may introduce a physical barrier or loud/visually unappealing feature inside precinct area
	Improve arrival gateway and impressions to Grafton, possibly through a rural tree-lined approach to new bridge	Potentially appealing gateway to Grafton, running adjacent to houses and sports fields in the south and entering Grafton at heritage-rich Villiers Street
Option A	Improve the cityscape through investment in a mainstreet program, (primarily Prince Street for waterfront linkage and Fitzroy Street)	May offer possibility of cityscaping Fitzroy Street, Pound and part of Villiers Street with upgrading of roads
	Promote development of waterfront precinct (running from Queen Street to existing bridge)	Minor impact – may slightly reduce length of waterfront precinct
	Investigate options to provide public waterfront access (including on residential and railways-owned land)	May reduce water front access through acquisition of Salty Seller Reserve (community facility)
	Improve arrival gateway and impressions to Grafton, possibly through a rural tree-lined approach to new bridge	Potential for minor visual amenity improvements along Bent and Fitzroy/Craig Streets with upgrading of access roads
Option C	Improve the cityscape through investment in a mainstreet program, (primarily Prince Street for waterfront linkage and Fitzroy Street)	May offer possibility of cityscaping Pound and part of Clarence Street with upgrading of roads
	Investigate options to provide public waterfront access (including on residential and railways-owned land)	May reduce public waterfront access north of the river (off Pound Street)

	Improve arrival gateway and impressions to Grafton, possibly through a rural tree-lined approach to new bridge	Offers possibility of new entry to Grafton with generous approach allowing room for streetscaping / embellishment
Option 11	Improve arrival gateway and impressions to Grafton, possibly through a rural tree-lined approach to new bridge	Offers possibility of new entry to Grafton with generous approach allowing room for embellishment, but enters Grafton at residential area with little tourist appeal (Fry Street)
Option 14	Improve arrival gateway and impressions to Grafton, possibly through a rural tree-lined approach to new bridge	Offers possibility of new entry to Grafton with generous approach allowing room for streetscaping / embellishment, but enters Grafton at residential area with little tourist appeal (Kirchner / Prince Street)
Option 15	Improve arrival gateway and impressions to Grafton, possibly through a rural tree-lined approach to new bridge	Offers possibility of new entry to Grafton with generous approach allowing room for streetscaping / embellishment, but enters Grafton at residential area with little tourist appeal (Kirchner / Prince Street)

The above table refers to the compatibility the options may have with strategies outlined in the *Clarence River Way Masterplan* (Clarence Valley Council, 2009). Some options may impact upon the tourism industry in Grafton in other ways. These include:

- Option E is likely to go through a small section of the “Monster Energy Pro Wakeshow” area to the north-east of Susan Island, where a high-profile annual wakeboard show (the Monster Energy Pro Wake Show) is currently held each year. It is understood that this area is used only for the Pro Wake Show, rather than being a designated wakeboard area. The area traversed by the crossing would be a minor section in the area’s north-east, which is unlikely to impact severely upon its function. Should there be any impacts restricting the area’s suitability for wakeboarding, it is possible that a suitable alternative site could be found.
- The Clarence River Visitor Information Centre currently fulfils an important function by informing visitors to Grafton about the recreational and leisure opportunities in the area, and encouraging passing traffic to spend time in the area, thereby promoting tourism and economic activity. Its current location on the Pacific Highway at the entrance to Grafton makes the centre highly visible to highway users. Option C would require some modification of roads adjacent to the information centre. As part of this work Pacific Highway traffic entering Grafton from the north may turn off the highway before reaching the Information Centre, and it would be possible for tourists coming from the north to enter Grafton without being aware of the centre. This would also be a possibility under Options 11, 14 and 15. Signposting is likely to mitigate this issue.

Indicator summary: potential to contribute towards tourism

All options offer the possibility of some contribution to tourism by integrating with the *Clarence River Way Masterplan* (Clarence Valley Council 2009). Options E offers the strongest possibility of integration, with possible complementarities between several of the plan’s strategies and the opportunity to provide a stronger link between Grafton and its waterfront. Options A and C have a stronger possibility of contributing towards tourism development than Options 11, 14 and 15. The three options located further downstream would enter Grafton at some distance from the CBD, and are therefore unlikely to satisfactorily provide the ‘gateway experience’ outlined in the masterplan.

### **6.3.2.3 Other economic impacts**

#### Level of connectivity to existing and future land uses and development

This section considers the indicator, “level of connectivity to existing and future land uses and development”. This indicator informs the project objective of supporting regional and local economic development, and the supporting objective of providing transport solutions that complement existing and future land uses and support development opportunities.

This indicator compares the level of connectivity to existing and future land uses and development for each of the route options. It is a qualitative assessment of how well the options connect:

- Existing and future residential areas with the Grafton and South Grafton CBDs.
- Existing and future residential areas with existing and future employment areas.
- Grafton and South Grafton CBDs.

Comparatively, the better the connections, the better the support to land uses and development opportunities.

An additional crossing of the Clarence River at Grafton has the potential to strategically connect existing land uses and future development. Such a connection would allow for efficient movement of people and goods between areas of strategic importance. This can include linking different employment or industrial areas – to facilitate the transport of cargo – or a connection between employment lands and current or future residential areas. Good connections are important for identified future growth sites, as they can help encourage residents or businesses to locate in these areas. Strategic connections can also include access from employment or industrial centres to the wider road network beyond Grafton. High levels of connectivity to existing and future land uses and development can provide economic benefits to businesses served by these connections, and social benefits (through reduced travel time) to their employees.

As identified in the *Preliminary Route Options Report – Final* (RMS, January 2012), both the manufacturing and the agriculture, forestry and fishing sectors are goods-based sectors with a strong presence in the Clarence Valley region’s economy, while retail trade is the industry which employs the most people. Within Grafton, employment areas are primarily located within the CBDs and industrial areas in South Grafton industrial estate (extending south along the railway), the Iolanthe Street industrial estate, and some scattered industrial areas in Grafton (*Clarence Valley Industrial Lands Strategy*, Clarence Valley Council, 2007). Growth areas are located in Grafton and South Grafton, while proposed future employment lands and land release areas are located in Junction Hill, Clarenza and South Grafton Heights (*Mid North Coast Regional Strategy*, NSW Department of Planning, 2009).

It is noted that traffic flows and congestion across the river are likely to be improved under all options; this would in itself provide a better level of connectivity to all land uses located on opposite sides of the Clarence River.

The extent to which each individual option would improve connectivity between existing and future land uses is as follows:

- Option E would better connect residential areas in parts of South Grafton and the proposed release area of South Grafton Heights, to the Grafton CBD and residential areas in the east of Grafton.
- Option A would not change existing patterns of connectivity, but reduced congestion along Bent and Fitzroy Streets, and at the river crossing, would improve connectivity generally in existing Grafton residential areas, the Grafton and South Grafton CBDs, and the South Grafton growth area. This may also provide benefits to businesses in the South Grafton industrial areas.

- Option C would improve levels of connectivity between the Iolanthe Street industrial area in South Grafton, and Grafton generally; in particular better connection would be provided to the residential area in the east of Grafton, connecting an established residential area with employment lands. This option would also provide better connectivity to the Clarenza growth area, the South Grafton growth area, and between the Grafton and South Grafton CBDs.
- Option 11 offers the potential to improve connectivity between the proposed future land release area at Clarenza, and the residential area in the east of Grafton. This option may provide marginally improved connectivity between Clarenza and the Grafton CBD.
- Options 14 and 15 may provide higher levels of connectivity between Junction Hill, with residential and employment land and future expansion proposed, and Clarenza.

Indicator summary: level of connectivity to existing and future land uses and development

Improving connectivity between strategic land uses such as employment and residential areas, and growth areas, can contribute to the economic development of the Clarence Valley.

Options E, A and C provide improved connectivity between existing residential areas, the Grafton and South Grafton CBDs, and the South Grafton growth area. Option C also provides improved connectivity to the Clarenza growth area.

Option 11 provides improved connectivity between established residential areas, and the residential growth area and schools located in Clarenza.

Options 14 and 15 provide improved connectivity between the two separate growth and employment areas of Junction Hill and Clarenza, as well as existing residential areas.



## 7. Conclusion

Overall, the assessment indicates that some options are likely to have more positive social or economic impacts, and some options more negative social or economic impacts. The potential socio-economic impacts of each option is summarised in Table 34 below.

**Table 34: Summary of socio-economic impacts of each route option**

Route option	Summary of impacts
Option E	<ul style="list-style-type: none"> <li>• Stronger connection between disadvantaged area of South Grafton and Grafton CBD</li> <li>• Helps to define South Grafton CBD and potentially creates strong link between Grafton and South Grafton town centres</li> <li>• Lowest residential property impact from three options that pass through central Grafton (Options E, A and C)</li> <li>• Greatest potential for integration with Clarence River Way tourism masterplan</li> </ul>
Option A	<ul style="list-style-type: none"> <li>• Minimal change from existing road network situation</li> <li>• Highest impact upon community facilities</li> <li>• Highest number of businesses with potential major impacts</li> <li>• Existing traffic flows maintained</li> <li>• Minimal new noise impacts</li> <li>• Affects a number of residences in South Grafton</li> </ul>
Option C	<ul style="list-style-type: none"> <li>• Least disruption to community facilities from route options that pass through central Grafton (Options E, A and C)</li> <li>• Localised but relatively high impact upon residential properties</li> <li>• Lowest business impact from options that pass through central Grafton (Options E, A and C)</li> </ul>
Option 11	<ul style="list-style-type: none"> <li>• High potential impact on amenity, severance and safety</li> <li>• Increases access from Grafton to Clarenza growth area</li> <li>• Minimal impact on community facilities</li> </ul>
Option 14	<ul style="list-style-type: none"> <li>• Increased access to northeast Grafton residential growth area</li> <li>• Summerland Way through-traffic likely to bypass the centre of Grafton</li> <li>• Minimal residence and business property impacts</li> </ul>
Option 15	<ul style="list-style-type: none"> <li>• Increased access to northeast Grafton residential growth area</li> <li>• Summerland Way through-traffic likely to bypass the centre of Grafton</li> <li>• Minimal residence and business property impacts</li> <li>• Relatively high number of rural property impacts</li> </ul>

This technical paper builds on the work undertaken for the *Preliminary Route Options Report – Final* (RMS, January 2012) and is an attachment to the Route Options Development Report. The potential social and economic impacts identified and assessed in this technical paper inform the Route Options Development Report. The findings of these investigations will be used as part of the selection of a recommended preferred option. Mitigation and responses to the potential impacts identified in this report will be considered at a later stage of the project's development.

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## **APPENDICES**

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## **APPENDIX 1**

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### **List of businesses attempted to contact for survey of potentially affected businesses**

## List of businesses attempted to contact for survey of potentially affected businesses

<b>Business name</b>	<b>Business address</b>
Country Road Nursery	101 Skinner Street SOUTH GRAFTON NSW 2460
Wynstan Blinds and Doors	37 Villiers Street GRAFTON NSW 2460
KFC	Craig Street GRAFTON NSW 2460
Al's Mechanical	19 Clarence Street GRAFTON NSW 2460
Sharyn's Hair Affair	19 Clarence Street GRAFTON NSW 2460
Solahart	35 Bent Street SOUTH GRAFTON NSW 2460
Southside Upholstery & Canvas	37A Bent Street SOUTH GRAFTON NSW 2460
Valley Signs and Printing	37B Bent Street SOUTH GRAFTON NSW 2460
Bent Street Car Mart	39 Bent Street SOUTH GRAFTON NSW 2460
Motortorque	95 Bent Street SOUTH GRAFTON NSW 2460
Shell Petrol	91 Bent Street SOUTH GRAFTON NSW 2460
Grafton 1-stop Camping	93 Bent Street SOUTH GRAFTON NSW 2460
Car Yard - Owned by Black Motors	1 Spring Street SOUTH GRAFTON NSW 2460
McDonalds Restaurant	Spring Street SOUTH GRAFTON NSW 2460
Daria Pty Ltd - Onga Pools	28 Through Street SOUTH GRAFTON NSW 2460
Centrel Pty Ltd- BP Petrol Station	14 Villiers Street GRAFTON NSW 2460
E J & M M Pty Ltd - Quality Inn	5-13 Villiers Street GRAFTON NSW 2460
Palroz Pty Ltd - Cetnaj lighting	41 Fitzroy Street GRAFTON NSW 2460
Big River Glass Pty LTD	73 Bent Street SOUTH GRAFTON NSW 2460
Daria Pty Ltd	24 Through Street SOUTH GRAFTON NSW 2460
Caltex	Pacific Highway SOUTH GRAFTON NSW 2460
BYO Cellars	Shop 2 / 105 Bent Street SOUTH GRAFTON NSW 2460
The Bread Bin	Shop 4 / 105 Bent Street SOUTH GRAFTON NSW 2460
United Petrol	105 Bent Street, SOUTH GRAFTON NSW 2460

## **APPENDIX 2**

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### **Interview schedule used for survey of potentially affected businesses**

## **Interview Outline – Survey of potentially affected businesses**

- Date of visit
- Business name
- Address
- Business type (ANZIC 2006 code)
- Contact name and position
- Approximate floor area (beds if tourism)
- Hours of operation
- How is property used?
- How do staff travel to work – proportions
- Where do staff live (north, south)
- Inventory deliveries & raw materials – from where, how often, how are they received?
- How does business utilise existing bridge in day-to-day operations
- Where do shoppers/patrons/clients live?
- What % of business is passing trade?
- Does the business have any future plans – expansion, relocation, retirement etc?
- Number of staff employed
- Does business own or rent property
- Is the business aware of the short-list of route options
- Does the business have any opinions on these options
- How does the business think the options may impact upon them – both positive and negative impacts