

**APPENDIX N**

**Short Listing Workshop**

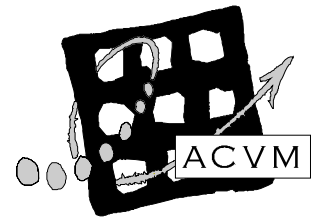


**Roads and Traffic Authority  
New South Wales**

**ADDITIONAL CROSSING OF THE  
CLARENCE RIVER AT GRAFTON**

**SHORTLISTING OF LOCALITIES**

Workshop Report  
November 2003



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# Report

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This report summarises the findings of the Localities Short Listing Workshop held on 28 November 2003. Details of the workshop are included in the Appendices.

## Background

The existing vehicular bridge over the Clarence River was completed in 1932 and since that time has served as the major link across the river between Grafton and South Grafton on the Summerland Way which leads from the Pacific Highway to Casino.

Traffic volumes including heavy vehicles using the bridge have increased over the years which has led to congestion, delays and conflicts. Also there are “kinks” on the existing bridge which is seen as a safety concern and a significant cause of delays.

In 2001 a community campaign for an additional crossing of the Clarence River at Grafton commenced. A public meeting in May 2002 led the State Government to commission the Roads and Traffic Authority (RTA) to undertake a Feasibility Study and determine strategic locations for an additional crossing to service Grafton and the surrounding communities.

As a result of the Feasibility Study, and a commitment by the State Government to proceed with the next stage of planning, the RTA formed a project team to build on the work undertaken in the Feasibility Study. Investigations of the study area were undertaken and feasible localities were developed within the study area that would improve road safety, reduce traffic delays and provide improved access for the local and statewide road network.

The localities developed were between Susan Island and Elizabeth Island (see **Figure 1**). In order to focus on developing the more feasible localities, the locality options developed to date are required to be shortlisted.

A shortlisting of localities workshop was seen as the appropriate strategic tool to bring together some of the key stakeholders involved in the project, to review and assess the localities developed in order to shortlist those worthy of more detailed investigation.

The Australian Centre for Value Management (ACVM) was commissioned to facilitate and report on the shortlisting workshop which was undertaken on **28<sup>th</sup> November 2003**. A list of participants who attended the workshop can be found in **Appendix 1**.

## Workshop Objectives

The objective for the workshop, as presented to the participants, was to:

***“Review and assess the preliminary localities investigated for the project in order to shortlist those worthy of more detailed investigation”***

This report has been compiled by ACVM and seeks to provide an objective overview of the project aspects discussed and the workshop outcomes formulated by the end of the day.

## Workshop Activities

The workshop process builds on the perspectives as well as the detailed and specialist knowledge which resides with the workshop participants. It then structures the analysis and locality review from a functional base (ie. what must the project achieve to be successful, how well does each locality achieve this?).

During the workshop, background material was presented (**Appendices 2 and 3**). The project purpose and objectives were clarified and the project givens and constraints highlighted.

The workshop group clarified, added to and finally agreed to assessment criteria (aligned to achieving the **project objectives**) as suitable to evaluate the localities.

Localities developed by the project team were presented (see **Figure 1**) and after discussion, no further options were put forward for assessment. The locality options in the assessment were:

- **Locality 1 & 2** – Upstream of the existing bridge to Susan Island
- **Locality 3** – At the existing bridge
- **Locality 4, 5, 6, & 7** – Downstream of the existing bridge to Elizabeth Island

The information shared by the group on the localities is in the **Summary Table for Comparison of Localities** shown in **Appendix 3**.

The Feasibility Study stated, *“The most feasible location appears to be in the vicinity of the existing bridge”*. Therefore, as there is an expectation that options adjacent to the existing bridge (**Locality 3**) would be further investigated, it was felt that this locality should be progressed to the next stage of investigation regardless of its merits or deficiencies.

This being the case, it was agreed that the assessment would be undertaken as a comparison of localities 1, 2, 4, 5, 6 & 7 relative to Locality 3 using the assessment criteria (see **Appendix 2**). This would determine which localities should move forward for further investigation.

The workshop discussions led the group to outcomes and conclusions as outlined below.

## Workshop Outcomes

By the end of the workshop, the participants had:

- **Clarified** the project purpose and objectives to reflect what the project must do to be successful.

The purpose of the project is to ***“Provide an additional crossing of the Clarence River in order to improve road safety, reduce traffic delays and provide improved access for the local and State road network between north and south of the Clarence River”***

The **broad objectives** of the project are to:

- Significantly improve traffic efficiency
- Significantly reduce the potential for road accidents and injuries
- Be socially acceptable to the regional and local community
- Support economic development
- Be managed in accordance with Ecologically Sustainable Development (ESD) Principles
- Achieve maximum effectiveness of expenditure (ie. value for money)
- **Reviewed** the givens and constraints within which the project is being considered (see **Appendix 2**).
- **Clarified, added and finally agreed to** an assessment criteria (aligned with the **broad project objectives**) which would be used to evaluate the localities for shortlisting.

### 1. Significantly improve traffic efficiency

- a. Reduce delays at the existing bridge (LOS “C” after 30 years)
- b. Provide vertical clearance for heavy transport on the Summerland Way

### 2. Significantly reduce the potential for road accidents and injuries

- a. Reduce potential road accidents and injuries at new approaches and intersections
- b. Reduce through traffic to CBD

### 3. Socially acceptable to regional and local community

- a. Minimise flooding impacts by the project
- b. Minimise (negative) impacts on the social environment (including visual impacts)
- c. Minimise (negative) impacts on access for the community

### 4. Support Economic Development

- a. Provide opportunity for economic and tourist development for Grafton (and the Clarence Valley Region)

### 5. Managed in accordance with ESD Principles

- a. Minimise (negative) impacts on the natural environment
- b. Minimise (negative) impacts on heritage (indigenous and non-indigenous)
- c. Minimise (negative) impacts of traffic noise on existing noise sensitive development

### 6. Achieve maximum effectiveness of expenditure

- a. Provides BCR > 2, (if possible)
- **Reviewed** the localities developed by the project team (see **Figure 1 & Appendix 3**)
  - **Noted** that:
    - In reference to the Feasibility study that locality 3 should be progressed to the next stage of investigation regardless of its merits or deficiencies
    - The assessment of the localities would be undertaken as a comparison of each locality relative to Locality 3 for each of the assessment criteria. This would allow determination of which localities should move forward for more detailed investigation.
    - For the purposes of shortlisting localities, no weighting of the criteria would be undertaken and hence it was assumed that all criteria were considered equal in importance at this stage of analysis
  - **Drew** the following conclusions as a result of the evaluation process undertaken:
    - Based on the qualitative assessment undertaken, **Locality 2** and **Locality 3** contributed to the project objectives better than the other localities and are **recommended** to move forward for community input and more detailed investigation

- The localities that were recommended to be eliminated had significant issues (ie. social, ecological, environmental, flooding, traffic efficiency, etc) and did not sufficiently meet the project objectives (from which the assessment criteria were taken)
- Social impacts, noise, community issues and heritage concerns will be the biggest issues to address (other than technical constraints) during the next stage of project development
- There is a need to more fully articulate the issues associated with Locality 3
- The built environment in Grafton will have a big impact on where we can locate the additional crossing
- The further that the additional crossing is away from the existing bridge lessens how well it can meet the project objectives
- An additional crossing (away from the existing bridge) could place pressure on providing a third commercial node for Grafton which may segregate the community further (strategic view)
- **Were informed** at the conclusion of the workshop, the next steps in the process to progress the project. These were recorded as:
  - The recommendations from this workshop will be presented to the community workshops which will be undertaken on the 10 & 11 December 2003 for their input to this workshop's findings
  - There will an analysis of the community input to confirm/amend the recommendations of the workshop to determine the localities to move forward for further investigation
  - The localities to move forward will be investigated further with the results proceeding to public display of Route Options in February/March 2004
  - Community input to the Route Options display will be considered and feed into a Route Evaluation Workshop. This is likely to generate additional investigation and refinement
  - The announcement of preferred route is scheduled for mid 2004

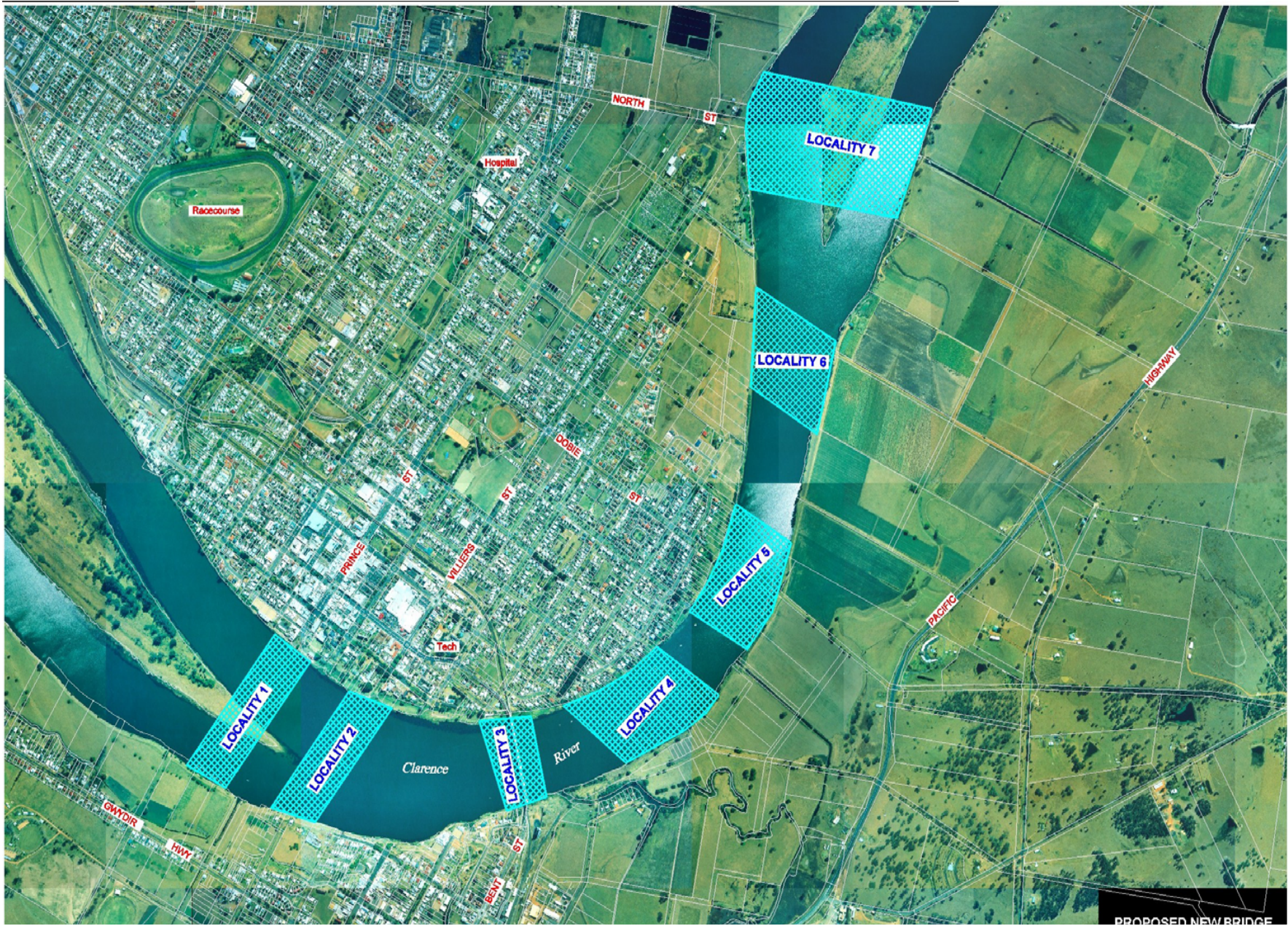


Figure 1: Sketch of Localities



## **Appendix 1. List of Participants**

# ADDITIONAL CROSSING OF THE CLARENCE RIVER AT GRAFTON SHORTLISTING OF LOCALITIES WORKSHOP

## PARTICIPANTS LIST

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Peter Collins	Regional Manager, Northern Region RTA
Peter Black	Project Manager
Joe Canceri	Bridge Design
Trevor Smith	Road Design
Sonia Williamson	Communications
Simone Garwood	Environment
Bruce Parks	RTA Client Representative
Lance Vickery	RTA Client Representative
Bill Paterson	Hydrology
Brian Kerwick	Traffic and Transport
Darren Jurevicius	Air, Noise and Water Consultant
Vicki St Lawrence	Community Participation
Geoff Smythe	Planning and Social
Sharon Smith	Planning and Social
Col Harbidge	Grafton City Council
Bob Pavitt	Grafton City Council
David Andrews	Copmanhurst Shire Council
Tim Jenkins	Pristine Waters Council
Ross Prestipino	Facilitator

## **Appendix 2. Workshop Outputs**

## Workshop Outputs

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The information presented in this Appendix is a consolidation of the general outputs and perceptions by the workshop group as they reviewed project elements such as the project objectives and investigations undertaken to date as well as the assessment of potential localities in order to shortlist the localities for more detailed investigation and public display.

### Strategic Context of the Project

In order to allow the participants to obtain an understanding of the project's strategic context, Peter Collins, Manager Northern Region, RTA set the scene in which the additional crossing of the Clarence River at Grafton was being investigated. Key points raised in his presentation included:

- Why are we looking at an additional crossing of the Clarence River?
  - Community concern about delays and emergency access as well as the future development of Grafton and the Clarence Valley
  - Another crossing of the Clarence River has been discussed since the 1960s. The crossing is not just for Grafton but for the Clarence River Valley as part of the Summerland Way and the State Road Network
  - The existing bridge has served us well but the time is right to plan and determine the best site for an additional crossing because of:
    - Increasing delays, queuing is getting longer in the peaks
    - Level of service of the existing bridge is diminishing
    - Expansion of settlement and growth either side of the Clarence River
  - NSW State Government is committed to build the crossing
- How do we go about this?
  - Set the purpose and objectives of what we are trying to achieve by undertaking a project, identify potential localities and undertake a feasibility investigation
  - Undertake a detailed process of community consultation
  - Marry the technical feasibility of options with community desires (which may require compromise)
  - During this stage of the project, the objective is to select a preferred route. Further stages will include undertaking an environmental impact assessment, a detail design stage and finally proceeding to construction stage
- It should be noted that today, we are not selecting a preferred option but recommending shortlisting localities for more detailed investigation so that technically feasible localities can be put to the community for their input

### Project Overview Presentation

An overview presentation of the project outlining the background, project objectives and potential assessment criteria was made by Peter Black, Project Manager, RTA. His presentation supplemented the background paper distributed to participants prior to the workshop. Key points made in his presentation included:

#### Project Background

- A Feasibility Study for the additional crossing of the Clarence River at Grafton was completed in March 2003. A key finding from that Study was that “.....*the most feasible location appears to be in the vicinity of the existing bridge.....*” However, although this location is feasible, an additional crossing would still have significant impacts on the community such as traffic, social, noise and aesthetics. Locations upstream and downstream also appeared feasible as they generally met all the objectives of the feasibility study (with the exception of economic benefit to cost comparisons). These localities would have a number of adverse impacts particularly social impacts, environmental impacts and traffic noise
- State Government has committed \$500,000 for the next stage of project development up to the selection of a preferred route
- Investigations have been undertaken during September to November 2003 in the study area so that a comparison to the Locality 3 against assessment criteria can take place with the intention of shortlisting localities to move forward for more detailed investigation and public display

## Purpose and Broad Objectives

- The **purpose** of the project is to *“Provide an additional crossing of the Clarence River in order to improve road safety, reduce traffic delays and provide improved access for the local and State road network between north and south of the Clarence River”*
- The **broad objectives** of the project which will determine if we have successfully achieved our purpose are:
  - Significantly improve traffic efficiency
  - Significantly reduce the potential for road accidents and injuries
  - Be socially acceptable to the regional and local community
  - Support economic development
  - Be managed in accordance with Ecologically Sustainable Development (ESD) Principles
  - Achieve maximum effectiveness of expenditure
- There are a number of **supporting objectives** that are more specific and measurable as to how we could achieve the **broad objectives**. These were distributed to the workshop group during the workshop and are listed below:
  - Reduce delays at the existing Grafton Bridge and new bridge in peak hour to a Level of Service C (LOS) in 30 years after opening
  - Provide an effective link to the State Road network including the Summerland Way
  - Reduces the volume of through traffic, including heavy vehicles, in the CBD
  - Provides adequate vertical clearance for heavy transport on the Summerland Way
  - Develop a route option and intersection design that accommodates B-Double requirements
  - Implement a comprehensive program of community consultation and participation
  - Satisfy the technical and procedural requirements of the RTA with respect to the planning and design of the Project
  - Provide transport solutions that are complementary with land use and that take into account future development opportunities
  - Consider cyclists and public transport needs
  - Provide traffic management solutions for the connecting approaches to the additional crossing, including the impact on connecting intersections, in consultation with Grafton City Council, for 30 years after opening
  - Consider delay management strategies to minimise disruption to local and through traffic and maintain access to affected properties and land during construction
  - Provide flood immunity for the bridge for a 1:100 year flood event and the approaches to 1:20 event where economically justified
  - Provide navigation clearances for the additional crossing
  - Minimise flooding impacts caused by the project
  - Minimise the impacts on the natural environment to “less than significant”
  - Minimise the impacts on the social environment to “less than significant”
  - Minimise the impacts on heritage to “less than significant”
  - Develop a route option bridge design to give a minimum design speed of 60km/h and approach design commensurate with the urban environment
  - Minimise road traffic noise on existing residences with reference to the EPA Environmental Criteria for Road Traffic Noise
  - Ensure that the project incorporates urban design principles to reinforces the aesthetics of Grafton City
  - Provides a benefits to cost ratio of greater than 2
  - Provides improved opportunity for economic and tourist development for Grafton

## Assessment Criteria

As a result, a number of draft assessment criteria were developed from the **supporting objectives** which could provide a variable response in achieving these objectives when undertaking comparisons of localities. The draft assessment criteria is listed below.

- **Reduce delays at the existing Grafton Bridge in peak hour to a Level of Service C in 30 years after opening**
  - Assessment: Will the design meet a satisfactory level of service for road users by reducing the delays at the existing bridge?
- **Provide adequate vertical clearance for heavy transport on the Summerland Way**
  - Assessment: Will the locality provide adequate vertical clearance for heavy transport on the Summerland Way?
- **Reduce the potential for road accidents and injuries for the approaches to the additional crossing, including the connecting intersections**
  - Assessment: Will the locality reduce the potential for road accidents and injuries at the approaches and at the connecting intersections?
- **Reduce the volume of through traffic, including heavy vehicles, from the CBD**
  - Assessment: Will the locality reduce the volume of through traffic, including heavy vehicles, from the Grafton and South Grafton business areas? A measure of effectiveness would be the volumes of through traffic that would be diverted away from the existing bridge.
- **Minimise flooding impacts caused by the project**
  - Assessment: Will the locality have flooding potential by affecting upstream and downstream flood levels?
- **Minimise the impacts on the social environment**
  - Assessment: What is the potential social impact of the locality? The following impacts are relevant to this assessment:
    - *Impacts on local demographics, health problems, air quality, psychological stress, intrusion, community severance, changes to access patterns, changes to residential amenity and character, displacement and provision of safe pedestrian crossings, paths and cycleways*
- **Minimise the impacts on access for the community**
  - Assessment: What is the potential impact on access of the locality? The following impacts are relevant to this assessment:
    - *Impact on local access, including effects on local road access and access limitations to the new road; use of the road by cyclists and provision of safe pedestrian crossings and paths where necessary*
- **Provide improved opportunity for economic and tourist development for Grafton**
  - Assessment: What is the potential for improved economic and tourist development? The following impacts are relevant to this assessment:
    - *Changes to industry and commerce, disruption or improvement to recreation and tourism, changes to access patterns*
    - *Impacts on settlement patterns and landuse in the area;*
    - *Impacts on businesses/service facilities dependant on Summerland Way traffic*
- **Minimise impacts on the natural environment**
  - Assessment: What are the potential impacts of the locality on flora and fauna? Assessment should consider the impact of the locality on critical habitat, threatened species, populations or ecological communities, or their habitats.

- **Minimise impacts on heritage**
  - Assessment: What is the level of direct impact on Indigenous and Non-Indigenous heritage with consideration of the following:
    - *The significance of indigenous cultural heritage sites and the direct impact of the localities on these sites;*
    - *The significance of non-indigenous cultural heritage sites and the direct impact of the localities on these sites.*
- **Minimise impacts of road traffic noise on existing noise sensitive developments**
  - Assessment: What is the potential noise and vibration impact on the localities in accordance with reference to the EPA Environmental Criteria for Road Traffic Noise.
- **Provide a benefits to cost ratio of greater than 2**
  - Assessment: Will the present value of benefits divided by the present values of costs have a value of greater than 2?

## Project Purpose and Objectives

Having listened to the presentations, the group reflected on the project purpose and objectives (ie. what must the project achieve to be successful) as stated in the background paper. These were clarified within the group and are presented below with clarifications shown in italics.

The **purpose** of the project is to:

- **Provide an additional crossing of the Clarence River in order to improve road safety, reduce traffic delays and provide improved access for the local and State road network between north and south of the Clarence River**

The **broad project objectives** for the additional crossing of the Clarence River at Grafton are to:

- Significantly improve traffic efficiency
- Significantly reduce the potential for road accidents and injuries
- Be socially acceptable to the regional and local community
- Support economic development
- Be managed in accordance with Ecologically Sustainable Development (ESD) Principles
- Achieve maximum effectiveness of expenditure (*ie. value for money*)

## Project Givens and Constraints

The group reviewed the givens and constraints within which the project is being considered. The givens/constraints are listed below as agreed to by the group. Items considered challengeable (or not given) and requiring further investigation as the project proceeds are shown in italics.

- *The “kinks” in the existing bridge will only be removed if a new bridge is built adjacent to the existing bridge (needs to be further investigated)*
- Centenary Drive will not be upgraded as part of this project
- The existing bridge is owned by Rail Infrastructure Corporation (RIC)
- The existing bridge will remain open for vehicular use regardless of the location of a new bridge over the Clarence River
- There will be a new bridge as part of the project (ie. no tunnel options due to environmental and cost constraints)
- Intersections can be upgraded and will cope with the future traffic load
- 95% of the traffic movements on the existing bridge are to/from the Grafton area
- The State Government has committed to fund the building of the additional crossing

## Assessment Criteria

The group reflected on the draft assessment criteria presented earlier which could be used to evaluate the potential locality options later in the workshop. The group discussed the criteria obtaining clarification where required, adding and amending where appropriate (see italics) and finally agreeing that the assessment criteria summarised below could be used to evaluate the options and determine a shortlist for further investigation and display to the community.

The criteria as agreed by the group to be used in the assessment of localities were summarised as:

### 1. Significantly improve traffic efficiency

- a. Reduce delays at the existing bridge (LOS "C" after 30 years)
- b. Provide vertical clearance for heavy transport on the Summerland Way

### 2. Significantly reduce the potential for road accidents and injuries

- a. Reduce potential road accidents and injuries at new approaches and intersections
- b. Reduce through traffic to CBD

### 3. Socially acceptable to regional and local community

- a. Minimise flooding impacts by the project
- b. Minimise (*negative*) impacts on the social environment (*including visual impacts*)
- c. Minimise (*negative*) impacts on access for the community

### 4. Support Economic Development

- a. Provide opportunity for economic and tourist development for Grafton (*and the Clarence Valley Region*)

### 5. Managed in accordance with ESD Principles

- a. Minimise (*negative*) impacts on the natural environment
- b. Minimise (*negative*) impacts on heritage (indigenous and non-indigenous)
- c. Minimise (*negative*) impacts of traffic noise on existing noise sensitive development

### 6. Achieve maximum effectiveness of expenditure

- a. Provides BCR > 2, (*if possible*)

## Presentation of Locality Options

The presentation of locality options as outlined in the background papers (distributed to participants prior to the workshop) was led by Peter Black, Project Manager RTA, with contributions by project team members as required in addressing various specialist areas (ie. transport, traffic, ecology, social impacts, heritage, geotechnical issues, heritage constraints flooding and economic impacts) of the various localities.

In summary, the localities (as shown in **Figure 1**) to be assessed against **Locality 3** were:

- **Localities 1 and 2** – Upstream of the existing bridge to Susan Island
- **Localities 4, 5, 6 and 7** – Downstream of the existing bridge to Elizabeth Island

The Feasibility Study stated, "*The most feasible location appears to be in the vicinity of the existing bridge*" and so it was agreed that locality 3 should move forward for more detailed investigation and community display together with the other shortlisted options as assessed by the group.

The information shared by the group on the localities are in the **Summary Table for Comparison of Localities** shown in **Appendix 3**.

After the presentation of the locality options and reflection by the workshop group, no further options were put forward for assessment.



## Assessment of Localities

The assessment of the other localities was undertaken as a comparison relative to Locality 3 against each of the assessment criteria.

The localities were judged on a qualitative basis (pictorially) by the workshop group in comparison to Locality 3 against each criterion on the following scale:

Symbol	Explanation
✓	The locality option is <b>better than</b> Locality 3 when compared against this criteria
-	The locality option is the <b>same as</b> Locality 3 when compared against this criteria
X	The locality is <b>worse than</b> Locality 3 when compared against this criteria

After the evaluation, the group considered which localities rated (on balance) so poorly or inferior to other localities that they were not worthy of moving forward for further investigation and presentation to the wider community and should be eliminated.

Also it should be noted that for the purposes of the exercise (being to shortlist localities for further investigation), no weighting of the criteria was undertaken and hence it was assumed (at this stage of project analysis) that all criteria were considered equivalent in importance.

The assessment of the locality options against the criteria (agreed to earlier in the workshop) is shown in the table below. The conclusions drawn by the workshop group then follow.

## Matrix for Assessment of Localities in Comparison to Locality 3

Criteria/Locality	1	2	4	5	6	7
<b>1. Significantly improve traffic efficiency</b>						
a. Reduce delays at existing bridge	X	X	X	X	X	X
b. Provide vertical clearance for heavy transport on Summerland Way	-	-	✓	✓	✓	✓
<b>2. Significantly reduce accidents and injuries</b>						
a. Reduce accidents and injuries at new approaches and intersections	-	-	-	-	-	-
b. Reduce through traffic to CBD	X	-	✓	✓	✓	✓
<b>3. Socially acceptable to regional and local community</b>						
a. Minimise flooding impacts by project	-	-	X	X	X	X
b. Minimise impact on the social environment	X	-	X	X	X	X
c. Minimise impacts on access for the community	X	X	-	-	-	-
<b>4. Support Economic Development</b>						
a. Provide opportunity for economic and tourist development for Grafton and Clarence Valley Region	X	-	X	X	X	X
<b>5. Managed within ESD Principles</b>						
a. Minimise impacts on the natural environment	X	X	-	-	-	X
b. Minimise impacts on heritage	X	X	✓	✓	✓	X
c. Minimise impacts of traffic noise on existing sensitive development	X	X	X	X	X	X
<b>6. Achieve maximum effectiveness of expenditure</b>						
a. Provides BCR > 2	-	-	-	X	X	X

## **Eliminating Localities and Issues to be Addressed**

As a result of undertaking the qualitative assessment of localities, the group agreed to the following localities (on balance) not being worthy of further investigation (ie. eliminate) for the following reasons.

### **Eliminate Locality 1 – Why:**

- Social implications:
  - Major precinct impacts and impacts on Memorial Park
  - Crown Hotel/river access impacts
  - Noise impacts
- Traffic impacts within the CBD
- Heritage issues (ie. significant listed property impacts)
- Ecology
- Major impact on CBD (traffic movements, social, environmental impacts)
- Engineering issues
- Noise impacts
- Impact on Susan Island/environmental issues

### **Eliminate Localities 4 and 5 – Why:**

- Effect on safety with increased traffic in residential streets which have low traffic.
- Major flooding effects which may not be overcome
- Ramping effect of approach
- Disruption to north – south local access movements
- Community segregation
- Major social issues
- Doubling traffic noise
- Direct access onto highway requiring additional length of travel
- Does not significantly improve traffic efficiency on the existing bridge
- Very low Benefit Cost Ratio indicating poor value for money

### **Eliminate Locality 6 – Why:**

- Low traffic volumes would use the additional crossing
- Poor connection to the road network
- Approaches may travel through an approved residential development
- Noise impacts on the hospital and other noise sensitive development
- Social issues
- Flooding impacts
- Does not significantly improve traffic efficiency on the existing bridge (too remote)
- Benefit Cost Ratio is less than 1 (indicating poor value for money)

### **Eliminate Locality 7 – Why:**

- Low traffic volumes would use the additional crossing
- Industrial heritage issues
- Noise impacts
- Social issues
- Flooding impacts
- Does not significantly improve traffic efficiency on the existing bridge (too remote)
- Benefit Cost Ratio is less than 1 (indicating poor value for money)

Of the localities considered worthy by the group of moving forward for further investigation, some of the issues that need to be addressed were identified as:

### **Locality 2 – Issues to be addressed:**

- Treatment of traffic at the intersection of Fitzroy and Villiers Streets needs to be addressed
- Noise impacts on the schools and music academy in this precinct as well as addressing other noise sensitive building/receptors on the southern side
- Connectivity and access to cross streets, relocation of traffic to other streets and associated road upgrades

- Addressing the treatment of the impacted Figtree at the western end of Villiers Street (environmental and heritage values)
- Increased clearance considered at the Villiers Street viaduct
- Heritage buildings and other heritage issues along the route
- Economic analysis
- Design heights to descend from the bridge deck down to Victoria and Villiers Streets
- Other design constraints

### **Locality 3 – Issues to be addressed:**

- Increased clearance to be considered at the Villiers Street viaduct
- Design constraints
- Connectivity and access to cross streets, relocation of traffic to other streets and associated road upgrades
- Social impacts
- Traffic noise
- Heritage
- Removal of kinks

## **Conclusions Drawn from the Evaluation of Localities**

As a result of the discussions during the evaluation process, the group began to focus their thoughts and drew some overall conclusions on the localities to be progressed for more detailed investigation and for community input and public display.

The group concluded that:

- Based on the qualitative assessment undertaken, Locality 2 and Locality 3 contributed to the project objectives better than the other localities and are recommended to move forward for community input and more detailed investigation
- The localities that were recommended to be eliminated had significant issues (ie. social, ecological, environmental, flooding, traffic efficiency, etc) and did not sufficiently meet the project objectives (from which the assessment criteria were taken)
- Social impacts, noise, community issues and heritage concerns will be the biggest issues to address (other than technical constraints) during the next stage of project development
- There is a need to more fully articulate the issues associated with Locality 3
- The built environment in Grafton will have a big impact on where we can locate the additional crossing
- The further that the additional crossing is away from the existing bridge lessens how well it can meet the project objectives
- An additional crossing (away from the existing bridge) could place pressure on providing a third commercial node for Grafton which may segregate the community further (strategic view)

## **Where to From Here?**

At the conclusion of the workshop, the project manager presented to the workshop group the next steps in the process to progress the project. These were recorded as:

- The recommendations from this workshop will be presented to the community workshops which will be undertaken on the 10 & 11 December 2003 for their input to this workshop's findings
- There will an analysis of the community input to confirm/amend the recommendations of the workshop to determine the localities to move forward for further investigation
- The localities to move forward will be investigated further with the results proceeding to public display of Route Options in February/March 2004
- Community input to the Route Options display will be considered and feed into a Route Evaluation Workshop. This is likely to generate additional investigation and refinement
- The announcement of preferred route is scheduled for mid 2004

**Appendix 3. Summary Table for Comparison of Localities (*supplied  
by the project team*)**

## SUMMARY TABLE FOR COMPARISON OF LOCALITIES

Criteria	Do Nothing	Locality 1	Locality 2	Locality 3	Locality 4	Locality 5	Locality 6	Locality 7
<b>1. Transport and Traffic</b>								
Volumes on various crossings <b>2003</b> . New Existing	- 26000	10000 16000	11000 15000	13000 13000	6000 20000	5000 21000	4500 22500	3000 23000
Volumes on various crossings <b>2033</b> . New Existing ** Traffic on the existing bridge may not exceed 24,000 because it may transfer to other routes to avoid peak hour delays.	- 34000	12000 22000	13000 21000	17000 17000	10000 24000 **	9000 25000 **	8000 26000 **	6000 28000 **
Level of Service year <b>2033</b> peak New Bridge Existing Bridge Los A= Very Good, Los F= Very Poor Based on Florida DOT model for Urban Conditions with 9.5% peak hour flows	- F	D E	D E	A A	D E	C E	C E	C E/F
Average weekday traffic in streets forming possible connections to localities Existing traffic volumes ( <b>2003</b> ) Volumes with Do nothing ( <b>2033</b> ) Volumes with new bridge ( <b>2033</b> )	- - -	Sth of Fitzroy 5000 6500 12000	Sth of Fitzroy 3000 3000 13000	26000 34000 34000	East of Villiers 3000 3500 13000	East of Villiers 3000 3500 12000	East of Villiers 3000 3500 11000	East of Villiers 3000 3000 9000
Height Restrictions at Viaduct * Feasible to be increased in Villiers St		4.0m	4.0m *	4.0m *	Nil	Nil	Nil	Nil
Suitable for large vehicles including B-Doubles * Kinks are an issue and tight turns at roundabouts ** Detour via Duke St would keep trucks out of CBD *** Additional truck traffic in residential streets	Yes *	Yes **	Yes	Yes *	Yes ***	Yes ***	Yes ***	Yes ***
Provision for cyclists and public transport by reducing delays for buses and improving access to growth area eg Clarenza.	Poor	Fair	Good	Good	Very Good	Good	Good	Fair
Work required on intersections in approaches to existing bridge - Villiers/Fitzroy - Bent/Through - Bent/Ryan N-No significant works needed, U-Major Upgrade by <b>2033</b>	U U U	N N N	U N N	U U U	N N N	N N N	U U N	U U U
Through traffic using Bridge and Summerland Way <b>2003</b> Large Trucks ** Through traffic without stopping comprises approx 50% of volumes shown		300 30	400 60	1000 100	250 40	250 40	250 40	250 40
Total Large Trucks <b>2033</b> New bridge Existing bridge Light trucks and buses excluded	- 500	130 370	270 150	250 250	260 240	260 240	240 260	190 310
Number of Buses <b>2033</b> New bridge Existing bridge	- 400	130 270	200 200	200 200	170 230	150 250	140 260	110 290
Accident Savings (5 Years) <b>2003</b> <b>2013</b> <b>2023</b> <b>2033</b>  Accounts for changes in travel on existing accident numbers.		-6 -7 -7 -7	-8 -9 -9 -10	-12 -12 -13 -15	2 2 3 4	3 4 5 6	1 1 1 2	-3 -4 -5 -6

Criteria	Do Nothing	Locality 1	Locality 2	Locality 3	Locality 4	Locality 5	Locality 6	Locality 7
<b>2. Economics</b>								
Return on investment Benefit cost ratio		1.9	2.0	2.8	1.4	0.8	0.8	0.9
Approx number of businesses	All	Up to 60	Up to 3	1	Up to 5	Up to 3	Up to 5	Up to 2
<b>3. Social Impacts</b>								
Approx number of residences impacted	0	0	Up to 10 + schools	Up to 12	80-90	80-90	50-60 + aged Units	30-35 + aged Units
Potential increase in road traffic noise		Up to 3dB(a)	Up to 3dB(a)	0 to 3dB(a)	10 to 12 dB(a)	10 to 12 dB(a)	10 to 12 dB(a)	10 to 12 dB(a)
Improves tourist accessibility and economic development.	Poor	Minor	Good	Very Good	Very Good	Good	Good	Minor
<b>4. Environmental Impacts</b>								
Direct and indirect impacts on habitats and wildlife corridors	Low	High	Medium	Low	Low	Low	Low	High
Non-indigenous heritage sites potentially affected	Nil	High	High	Medium	Low	Low	Low	High
Indigenous heritage sites potentially affected	Nil	High	Low	Low	Low	Low	Low	High
Potential impacts of flooding		Low	Low	Low	High	High	High	High
<b>5. Cost (\$M)</b>		<b>45</b>	<b>45</b>	<b>40</b>	<b>45</b>	<b>40</b>	<b>50</b>	<b>55</b>