

Additional Crossing of the Clarence
River



Community Focus Group Workshop

10 December 2003

Additional Crossing of the Clarence River – Project Status



1 Strategic Phase

- Investigate Study Area
- Identify Issues
- Desk Top Analysis
- Decision to Proceed



2. Development Phase

- Investigate Options
- Select Preferred Options
- Environment Impact Assessment
- Concept Design

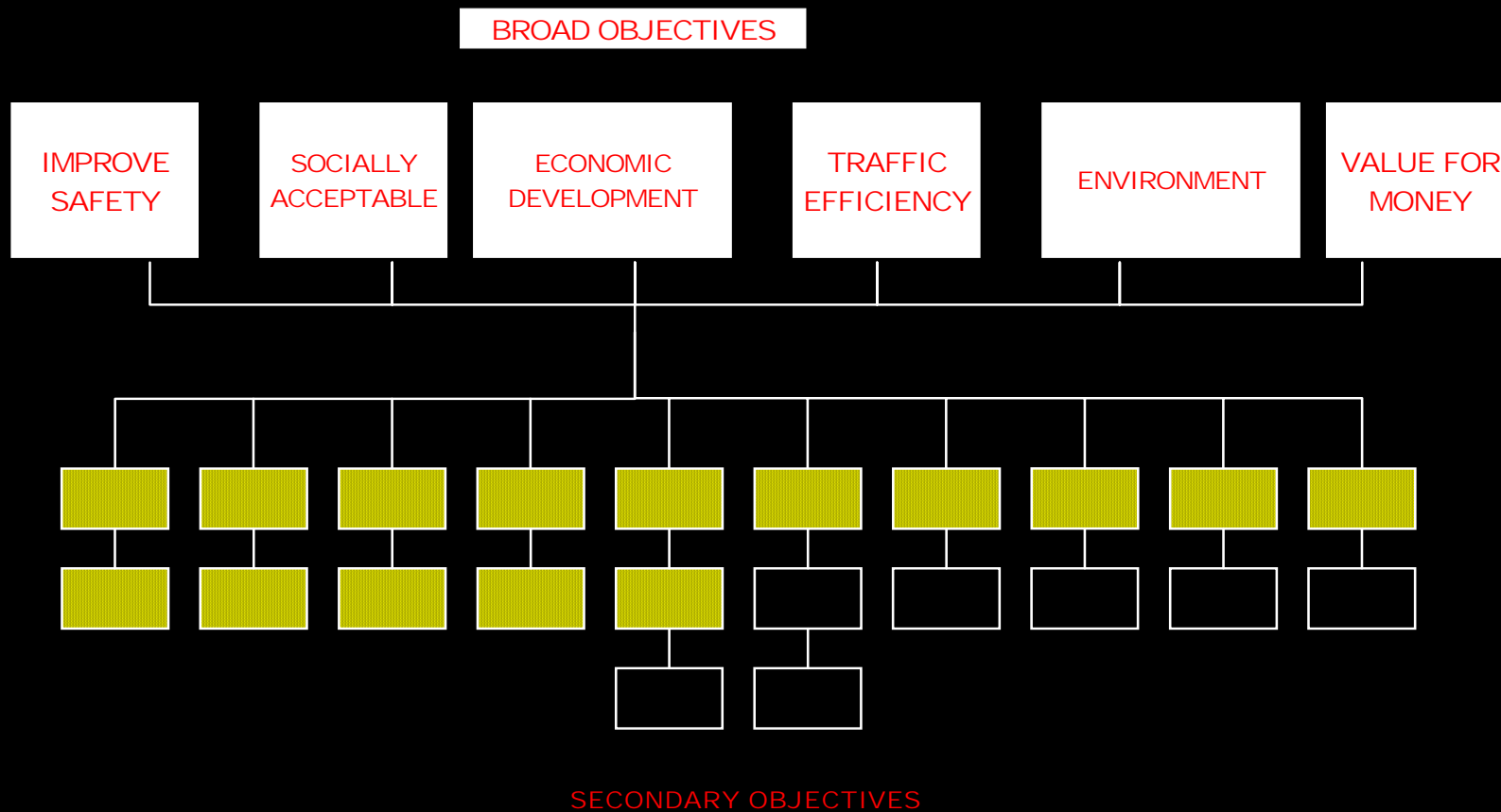
We Are
Here



3. Implementation Phase

- Detailed Design & Documentation
- Tender
- Construction

Additional crossing of the Clarence River - Project Objectives



Additional Crossing of the Clarence River - Status



Traffic Analysis

Additional Crossing of the Clarence
River – Origin & Destination
Survey- Thur 18 September 2003



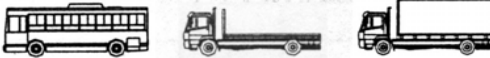
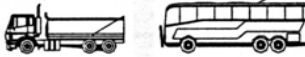

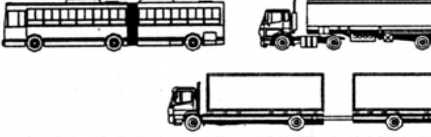








VOLUME AT GRAFTON BRIDGE	26,775
VOLUME AT JUNCTION HILL	3,223
THROUGH VEHICLES (DIRECT)	412 (1.5%)
THROUGH BUSES (DIRECT)	4 (0.01%)
THROUGH HEAVY TRUCKS (DIRECT)	70 (0.3%)

VEHICLE CLASSIFICATION SYSTEM

AUSTROADS January 1994



Class	LIGHT VEHICLES
1	SHORT Car, Van, Wagon, 4WD, Utility, Bicycle, Motorcycle 
2	SHORT - TOWING Trailer, Caravan, Boat 
HEAVY VEHICLES	
3	TWO AXLE TRUCK OR BUS (2 axles) 
4	THREE AXLE TRUCK OR BUS (3 axles, 2 groups) 
5	FOUR AXLE TRUCK (4 axles, 2 groups) 
6	THREE AXLE ARTICULATED (3 axles, 3 groups) 
7	FOUR AXLE ARTICULATED (4 axles, 3 or 4 groups) 
8	FIVE AXLE ARTICULATED (5 axles, 3 to 5 groups) 
9	SIX AXLE ARTICULATED (6 axles, 3 to 6 groups 7+ axles, 3 groups) 
10	B DOUBLE (7+ axles, 4 groups) 
11	DOUBLE ROAD TRAIN (7+ axles, 5 or 6 groups) 
12	TRIPLE ROAD TRAIN (7+ axles, 7+ groups) 

Additional Crossing of the Clarence River – Traffic Count Thursday 18 September 2003



VEHICLE TYPE	TIME OF DAY	VOLUMES	% OF TOTAL VOLUME
(Cars, Light Trucks & Buses)	7AM-7PM	22376	83.6%
	7PM-7AM	3994	14.9%
	<i>Sub-Total</i>	26370	98.5%
Heavy Commercial (Heavy Trucks)	7AM-7PM	302	1.1%
	7PM-7AM	103	0.4%
	<i>Sub-Total</i>	405	1.5%
	<i>TOTAL</i>	26775	

Additional Crossing of the Clarence River – Analysis of Localities



- Where are the best locations for analysis of crossings?
- 7 broad localities identified between Susan Island and Elizabeth Island
- Which localities would meet the requirements for further investigations?

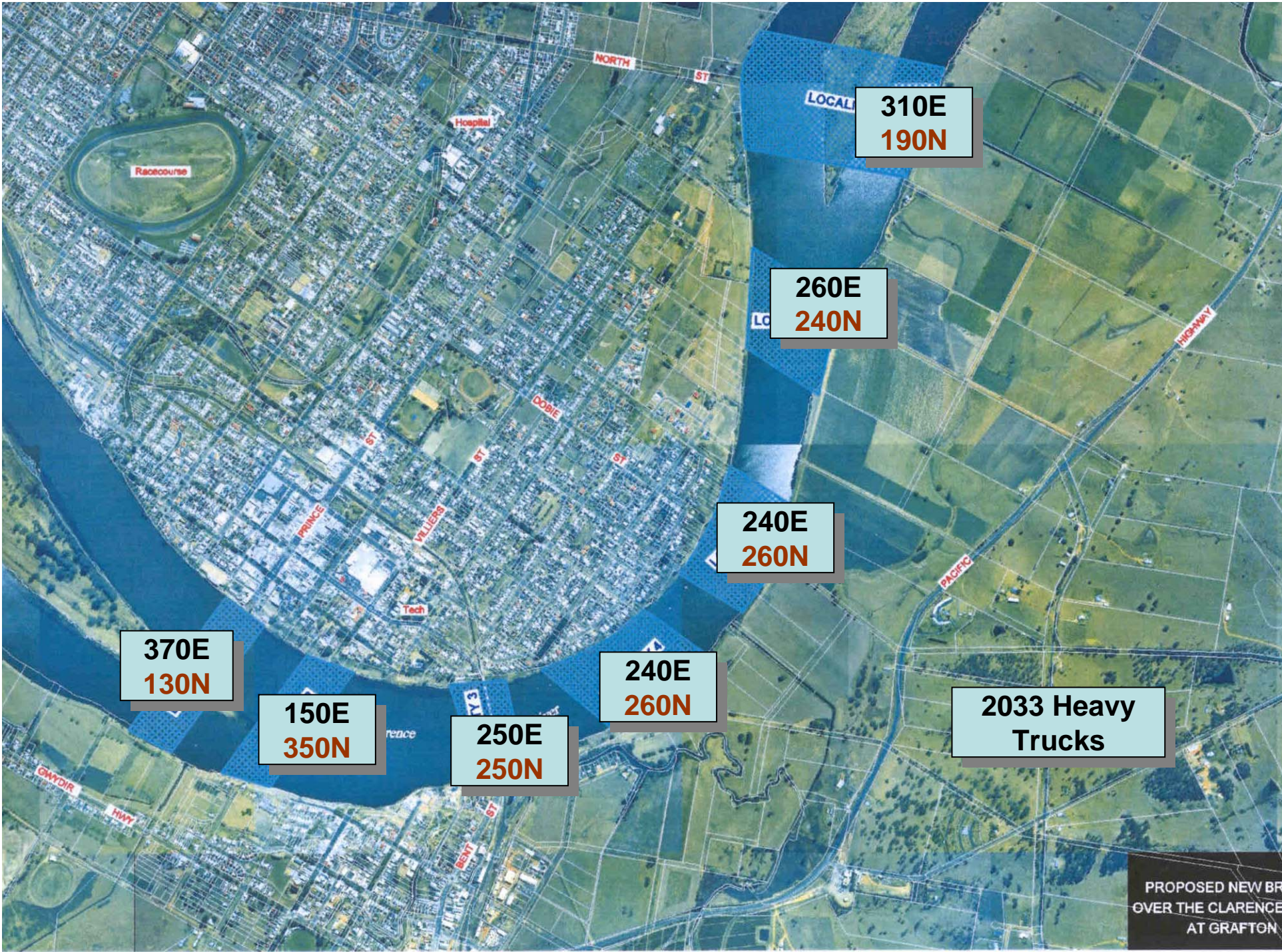


2003 Traffic

PROPOSED NEW BRIDGE OVER THE CLARENCE RIVER AT GRAFTON



PROPOSED NEW BR
OVER THE CLARENCE
AT GRAFTON



370E
130N

150E
350N

250E
250N

240E
260N

240E
260N

260E
240N

310E
190N

2033 Heavy Trucks

PROPOSED NEW BR
OVER THE CLARENCE
AT GRAFTON



Up to 3 dB

Up to 4 dB

0 to 3 dB

11 dB

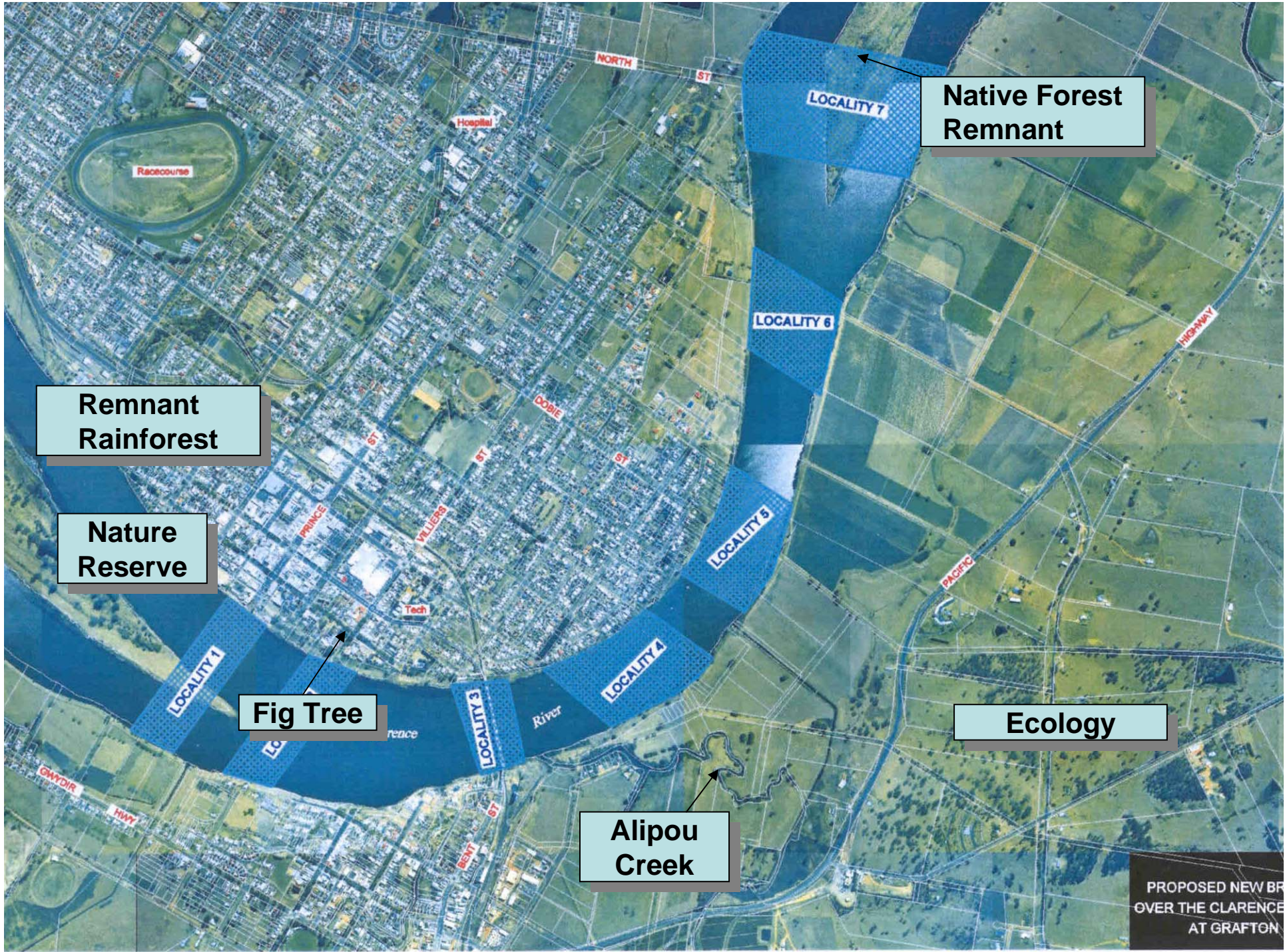
10 dB

12 dB

11 dB

Road Traffic Noise

PROPOSED NEW BRIDGE OVER THE CLARENCE RIVER AT GRAFTON



Native Forest Remnant

Remnant Rainforest

Nature Reserve

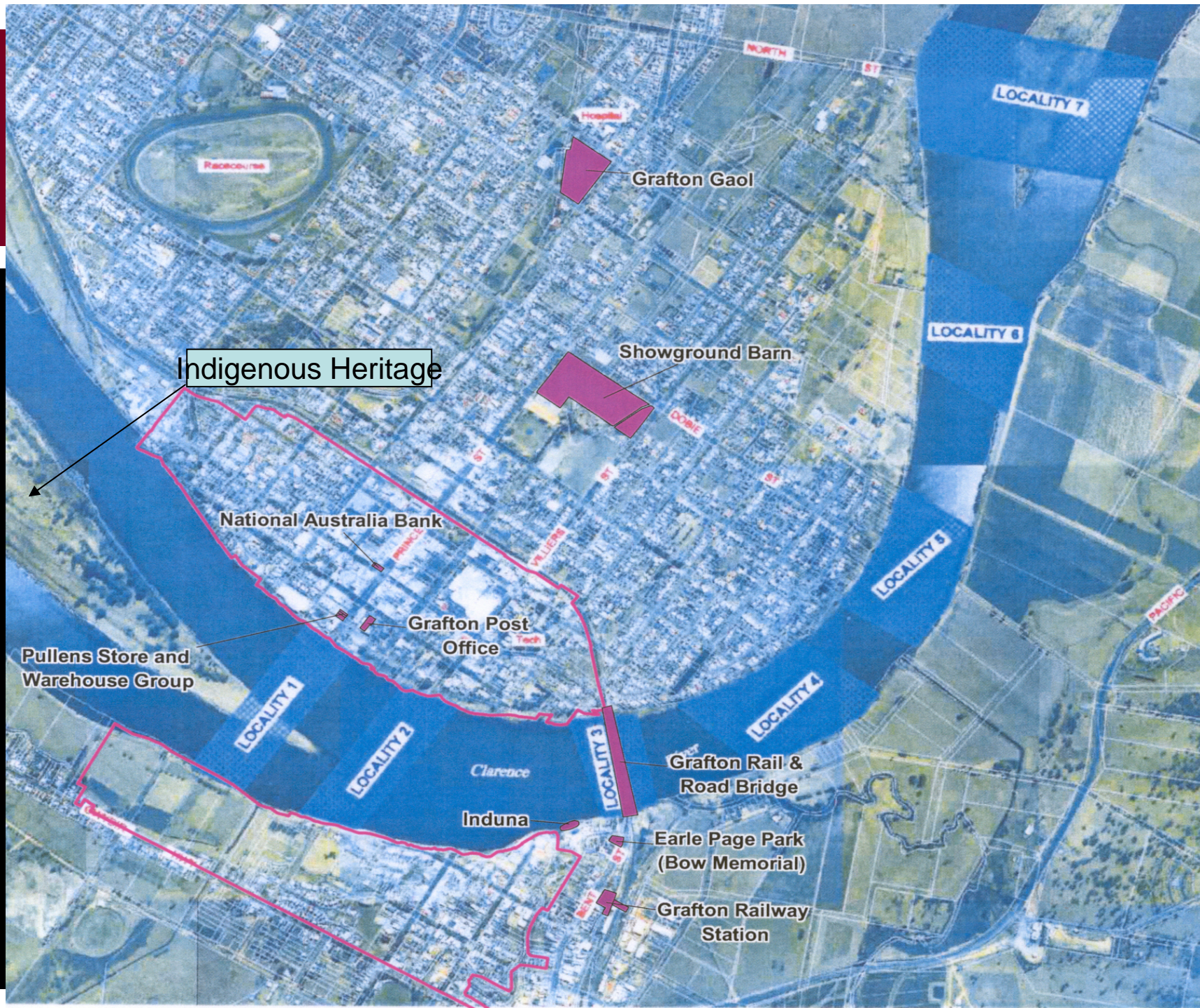
Fig Tree

Alipou Creek

Ecology

PROPOSED NEW BRIDGE OVER THE CLARENCE RIVER AT GRAFTON





Indigenous Heritage

Grafton Gaol

Showground Barn

National Australia Bank

Grafton Post Office

Pullens Store and Warehouse Group

Grafton Rail & Road Bridge

Earle Page Park (Bow Memorial)

Grafton Railway Station

Induna

LOCALITY 7

LOCALITY 6

LOCALITY 5

LOCALITY 4

LOCALITY 3

LOCALITY 2

LOCALITY 1

Clarence

NORTH ST

HOSPITAL

PULLENS ST

PULLENS ST

PULLENS ST

PULLENS ST

PULLENS ST

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PACIFIC

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 1

Positive Impacts

- Minimise flooding impacts by project
- Benefits to cost ratio of 1.9
- Reduce delays on the existing bridge (short term)
- Provides alternate emergency access
- Direct increased traffic into main street (economics)
- Transfers traffic away from Bent Street and the intersections on the southern approach to the existing bridge
- Likely increase of traffic into the South Grafton business area
- Improved access to CBD for areas west and south of the city

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 1

Negative Impacts

- Major impact on CBD
 - Reduced amenity (incl. vehicle emissions)
 - Increased traffic movements
 - Safety (pedestrians, intersections, parking)
- Design issues (connection at river end of Prince St)
- Increase in road traffic noise
- Impact on Susan Island (heritage/environmental issues)
- Does not reduce through traffic in CBD

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 1 (cont'd)

Negative Impacts (cont'd)

- Social impacts
 - Major precinct impacts incl. Memorial Park
 - Crown Hotel ambience/river access
 - Heritage issues (Heritage listed property impacts)
- Height restrictions remain (existing viaducts)
- Loss of visual amenity

Recommendation: Locality 1 not be considered further (social, safety, noise, environment)

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 2

Positive Impacts

- Minimise flooding impacts by project
- Benefit to costs ratio of 2
- Reduce delays at existing bridge (short term)
- A lesser impact on the natural environment than Locality 1
- No impacts on indigenous heritage
- Transfers traffic away from Bent Street and the intersections on the southern approach to the existing bridge
- Provides alternate emergency access

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 2

Positive Impacts (cont'd)

- Southern locality more attractive for commercial development
- Likely increase of traffic into the South Grafton business area (economics)
- Improved access to CBD for areas west and south of the city
- Direct northern connection to Villiers St (no turns for heavy vehicles)

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 2

Negative Impacts (cont'd)

- Does not reduce through traffic in CBD
- Impacts of traffic noise on existing sensitive development
- Impacts on non-indigenous heritage (fig tree)
- Height restrictions remain (existing viaducts)
- Increase in road traffic noise, emissions on schools/conservatorium
- Safety (school children, access at Victoria St)
- Social impacts (southern side) and loss of visual amenity

Recommendation: Locality 2 be considered further

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 2

Issues to be further investigated

- Impact of traffic at Fitzroy/Villiers St and Victoria St
- Noise impacts at schools, conservatorium, residences
- Impacts on safety
- Access at cross streets (connectivity)
- Impact on fig tree (ecology, heritage)
- Height restrictions at Villiers St viaduct
- Social impacts on southern side

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 3

Positive Impacts

- Significantly reduce delays at existing bridge (long term)
- Reduce potential for accidents on existing bridge
- Benefits to existing businesses on approaches
- Minimise flooding impacts
- Minimises impacts on the natural environment
- Second crossing improves emergency access
- Least increase in absolute road traffic noise
- Benefits to costs of 2.8

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 3

Negative Impacts

- Height restriction still remains (existing viaducts)
- Does not reduce through traffic in CBD
- Potential increase in road traffic noise
- Land acquisition required
- Property access issues
- Continued high traffic flows for existing residences
- Potential impact on heritage conservation area
- Social impacts
- Upgrade required on connecting intersections in the future

Recommendation: Locality 3 be considered further

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 3

Issues to be further investigated

- Impact of traffic at Fitzroy/Villiers St & Bent/Through St
- Noise impacts on existing residences
- Access to existing residences/businesses
- Access to the river
- Height restrictions at Villiers St viaduct
- Social impacts
- Heritage impacts
- Removal of the “kinks”

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 4

Positive Impacts

- Provide vertical clearance for heavy transport on Summerland Way (for through traffic)
- Reduce through traffic in CBD
- Reduce traffic and delays at existing bridge (short term)
- Direct access to Pacific highway and north
- Direct access to Clarenza
- Provides alternate emergency access

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 4

Negative Impacts

- Increased traffic in residential streets
- Potential flooding effects
- Disruption to north – south local access movements
- Community segregation
- Loss of amenity/character of area
- Navigational clearances required
- Major social impacts (80-90 residences)
- Safety issues (access, pedestrians, parking)

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 4

Negative Impacts (cont'd)

- Substantial increase in road traffic noise
- Potential high severity accidents at Pacific Highway connections
- Does not significantly improve delays on the existing bridge
- Proportion of traffic will still need to enter CBD (viaducts)
- Benefits to cost of 1.4

Recommendation: Locality 4 not be considered further (social, flooding, noise, safety, value for money)

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 5

Positive Impacts

- Provide vertical clearance for heavy transport on Summerland Way (for through traffic)
- Reduce through traffic in CBD
- Reduce traffic and delays at existing bridge (short term)
- Direct access to Pacific highway and north
- Direct access to Clarenza
- Provides alternate emergency access

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 5

Negative Impacts

- Increased traffic in residential streets
- Potential flooding effects
- Disruption to north – south local access movements
- Community segregation
- Loss of amenity/character of area
- Navigational clearances required
- Major social impacts (80-90 residences)
- Safety issues (access, pedestrians, parking)

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 5

Negative Impacts (cont'd)

- Substantial increase in road traffic noise
- Potential high severity accidents at Pacific Highway connections
- Does not significantly improve delays on the existing bridge
- Proportion of traffic will still need to enter CBD (viaducts)
- Benefits to cost of 0.8

Recommendation: Locality 5 not be considered further (social, flooding, noise, safety, value for money)

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 6

Positive Impacts

- Provide vertical clearance for heavy transport on Summerland Way (for through traffic)
- Reduce through traffic in CBD
- Reduce traffic and delays at existing bridge (short term)
- Direct access to Pacific highway and north
- Direct access to Clarenza
- Provides alternate emergency access

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 6

Negative Impacts

- Increased traffic in residential streets
- Potential flooding effects
- Disruption to north – south local access movements
- Community segregation
- Loss of amenity/character of area
- Navigational clearances required
- Major social impacts (50-60 residences, aged units)
- Safety issues (access, pedestrians, parking)

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 6

Negative Impacts (cont'd)

- Substantial increase in road traffic noise
- Potential high severity accidents at Pacific Highway connections
- Does not significantly improve delays on the existing bridge
- Proportion of traffic will still need to enter CBD (viaducts)
- Benefits to cost of 0.8

Recommendation: Locality 6 not be considered further (social, flooding, noise, safety, value for money)

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 7

Benefits

- Provide vertical clearance for heavy transport on Summerland Way (for through traffic)
- Reduce through traffic in CBD
- Reduce traffic and delays at existing bridge (short term)
- Direct access to Pacific highway and north
- Direct access to Clarenza
- Provides alternate emergency access

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 7

Negative Impacts

- Increased traffic in residential streets
- Potential flooding effects
- Disruption to north – south local access movements
- Loss of amenity/character of area
- Navigational clearances required
- Major social impacts (30-35 residences, aged units)
- Safety issues (access, pedestrians, parking)

Additional Crossing of the Clarence River – Analysis of Localities



LOCALITY 7

Negative Impacts (cont'd)

- Substantial increase in road traffic noise
- Potential high severity accidents at Pacific Highway connections
- Does not significantly improve delays on the existing bridge
- Proportion of traffic will still need to enter CBD (viaducts)
- Benefits to cost of 0.9

Recommendation: Locality 7 not be considered further (social, flooding, noise, safety, value for money)