The Closure of Brisbane’s Riverside Expressway – *How people changed their travel behaviour*

**The curious case of North Brisbanites**

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Queensland Department of Transport and Main Roads

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Objectives of the Paper

- **Review the impact** of the closure of the Riverside Expressway on the trip decisions of people in Greater Brisbane;
- **Consider the influence** of a voluntary travel behaviour change program called TravelSmart on those trip decisions; and
- **Draw conclusions** evident from the above analysis.
Resident Population of BSD (Greater Brisbane) in 2006 was 1.82m

Resident Population of Brisbane City Council in 2006 was 0.99m
## Key Event Timetable

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday 17 October 2006</td>
<td>• Hairline crack discovered in Ann St on-ramp</td>
</tr>
<tr>
<td></td>
<td>• Riverside Expressway and ramps closed to traffic</td>
</tr>
<tr>
<td>Friday 20 October 2006</td>
<td>• Riverside Expressway re-opened to all traffic, Alice and Ann St ramps remain closed</td>
</tr>
<tr>
<td>Friday 27 October</td>
<td>• Ann and Alice St ramps re-open to traffic with restrictions</td>
</tr>
</tbody>
</table>
Horror headlines

Crack in freeway brings city to a halt

GRIDLOCK is down

GOING nowhere... Traffic on Ann St was at a crawl after a last-minute decision to close the Riverview Expressway caught commuters by surprise.

crack in the Ann St on-ramp.
Media analysis

measured in terms of its positioning, prominence, messages communicated and other key variables per volume of article/coverage

- More than 3,000 media reports/items recorded in the 10 days from 17 to 27 October 2006
  - 65% neutral (2,082 items)
  - 25% unfavourable (812 items) and
  - 10% favourable (297 items)
- Unfavourable coverage highest on TV (‘traffic chaos’, PT overcrowding)
- Most favourable coverage on radio

93% of the Greater Brisbanites were aware of the closures

Telephone survey 16-26 Nov 2006 of 2,085 residents of the Brisbane Statistical Division
Key System Effects in Greater Brisbane

- Actual road traffic flows
- Actual public transport use
- Reported changed travel choice
Actual People Flows - 2006

All Trips in Greater Brisbane

**6.3m** private person trips a day in BSD

8% of these trips to/within the CBD Frame (City, Spring Hill, Valley, South Brisbane, Milton, Kangaroo Point)

**JTW Mode split to/in CBD Frame**

- **PT 47.7%**
- **Pvt Mtr Veh 45.3%**
- **Walk 5.1%**
- **Cycle 1.7%**
- **Other 0.2%**

All modes Avg Weekday
From HTS 2003/04 re-weighted to 2006 Census data and ABS JTW 2006 August Weekday
Public Transport Patronage

Average Change in PT Patronage during REX closures

- Rail: 23% ↑
- Bus: 1% ↓
- Ferry: 35% ↑
- Overall: 8% ↑
Public Transport Network Data
What does it all mean?

- Patronage increase on rail and ferry
- Patronage decrease for bus by ticket count.
  → We will see later this does not align with Household Travel Survey data
Conclusions
Road Traffic and Public Transport

- Major effect on the CBD and Frame road network with traffic increases of 10-20% on the major arterials within 1km of the CBD

- Some impacts on Gateway

- Impact drops quickly as you move out in the network

- PT system took up most of the changed transport task with the majority going to rail
Changed travel choice in Greater Brisbane

Was your travel affected in any way?

Not affected 71%

Affected 29%

Telephone survey 16-26 Nov 2006 of 2,085 residents of the Brisbane Statistical Division
Changed travel choice by Sub-region

Sub-region

- Total - Greater Brisbane
  - Affected: 29%
  - Not affected: 71%

- Redlands
  - Affected: 30%
  - Not affected: 70%

- Logan / Beaudesert
  - Affected: 27%
  - Not affected: 73%

- Ipswich
  - Affected: 20%
  - Not affected: 80%

- Pine Rivers / Caboolture / Redcliffe
  - Affected: 28%
  - Not affected: 72%

- City of Brisbane
  - Affected: 36%
  - Not affected: 64%

BCC residents most affected. The effect most likely increased closer to the CBD.

Telephone survey 16-26 Nov 2006 of 2,085 residents of the Brisbane Statistical Division
**Household Travel Survey**

**Behaviour Change in Greater Brisbane**

Telephone survey of 1,000 affected residents

<table>
<thead>
<tr>
<th>Trip</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>12</td>
<td>15</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Walking</td>
<td>5</td>
<td>4</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Bus</td>
<td>12</td>
<td>15</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Ferry/CityCat</td>
<td>9</td>
<td>16</td>
<td>17</td>
<td>14</td>
</tr>
<tr>
<td>Train</td>
<td>17</td>
<td>10</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Others include truck/van, cycle, car pool and scooter/motorbike</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Telephone survey 16-26 Nov 2006 of 1,000 affected residents of the Brisbane Statistical Division
Why did people cope so well?
Almost everyone went where they needed to!

3 key reasons

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Route</td>
<td>51%</td>
</tr>
<tr>
<td>Change in time of travel</td>
<td>38%</td>
</tr>
<tr>
<td>Mode Change</td>
<td>14%</td>
</tr>
<tr>
<td>Trip postponed or cancelled</td>
<td>7%</td>
</tr>
</tbody>
</table>

Transport system is fairly robust
People have simple trip patterns
Huge untapped potential for change

Telephone survey 16-26
Nov 2006 of 1,000 affected residents of the Brisbane Statistical Division
Better understanding the potential for change through In-depth Interviews

• The Potentials Analysis 2004 to 2007

• Over 1500 people were surveyed and asked a series of detailed questions about their trip needs and mode choices.

• Alternatives to car are considered viable if:
  – the car trip distance is less than twice the average walk or cycle distance
  – the door-to-door public transport trip time is less than twice the motor vehicle trip time or 20 minutes longer (whichever is the least).

Respondents: 1,596

Queensland Government
Car users have alternate mode options

Respondents: 1,596

CAR TRIPS (YEAR)
- “Brisbane 07” -

<table>
<thead>
<tr>
<th>Total</th>
<th>Possibilities for reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>897</td>
<td>Car use solely for subjective reasons; alternative available</td>
</tr>
<tr>
<td>431 (48%)</td>
<td></td>
</tr>
<tr>
<td>466 (52%)</td>
<td>Constraints and / or no alternative available</td>
</tr>
</tbody>
</table>
Car users have alternate mode options

**CAR TRIPS (YEAR)**

- “Brisbane 07” -

<table>
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<tr>
<td>897</td>
<td>431</td>
</tr>
<tr>
<td>(100%)</td>
<td>(48%)</td>
</tr>
</tbody>
</table>

In principle replaceable by:

- Public transport: 161 (18%)
- Bicycle: 314 (35%)
- Walking: 117 (13%)

(average 1.4 alternatives)

**Respondents: 1,596**

TravelSmart Brisbane North Application to 70,000 Households
Testing the real need for change

Changed travel choice in Greater Brisbane

Was your travel affected in any way?

Not affected 71%

Affected 29%

Telephone survey 16-26 Nov 2006 of 2,085 residents of the Brisbane Statistical Division
Testing the real need for change

Changed travel choice in Brisbane North

Was your travel affected in any way?

- Not affected: 86%
- Affected: 14%

Telephone survey in Oct/Nov 2006 of 4,153 residents of the TravelSmart Brisbane North Project area

BSD survey size too small to disaggregate and match to the suburbs of the TravelSmart Brisbane North Project area
Testing the real potential for change

Would TravelSmart Brisbane North results vary from Greater Brisbane Results?

| Mode Change – Greater Brisbane | 14% |
Tapping into the Potential Change
TravelSmart Bne North had double the mode shift

- 71% of those whom shifted mode in Greater Brisbane were car drivers
- 27% of those whom shifted mode in Brisbane North were car drivers
- 21% of the Brisbane North Average
- 8% of those whom shifted mode in Brisbane North - No TravelSmart

Telephone survey in Oct 2006 of 4,153 residents of the TravelSmart Brisbane North Project area
Telephone survey 16-26 Nov 2006 of 1,000 affected residents of the Brisbane Statistical Division
More change and higher satisfaction
During the closure those whom were affected and participated in TravelSmart were more satisfied with their choices

Experience of affected Brisbane North population during Expressway closure.

<table>
<thead>
<tr>
<th>Total (Average) %</th>
<th>Experience with Public Transport</th>
<th>With TravelSmart %</th>
<th>Without TravelSmart %</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Changed to Public Transport</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>- positive</td>
<td>- 10</td>
<td>- 3</td>
</tr>
<tr>
<td></td>
<td>- negative</td>
<td>- 4</td>
<td>- 3</td>
</tr>
<tr>
<td>22</td>
<td>Other changes</td>
<td>29</td>
<td>13</td>
</tr>
<tr>
<td>66</td>
<td>No change</td>
<td>57</td>
<td>81</td>
</tr>
<tr>
<td>100</td>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

North Brisbanites whom participated in TravelSmart had a positive to negative experience ratio of 2.5 to 1.

North Brisbanites whom did not participate in TravelSmart but still chose Public Transport had a positive to negative experience ratio of only 1 to 1.

Telephone survey in Oct 2006 of 4,153 residents of the TravelSmart Brisbane North Project area.
So North Brisbanites

- Were exposed to the same general media information and commentary as the rest of Greater Brisbane
- Were less affected by the road system disruptions
  - According to both road traffic counts and their own self reporting of the closures effect on them (29% v 14%)
- However, despite being less affected by the closure they were more likely to switch modes, mainly from car to PT; and
- Those that did choose PT during the closure and had participated in TravelSmart were significantly more satisfied than those that did not participate.
Conclusions

- People can and will change their trip decisions but need options as they don’t want to postpone or cancel an activity.
- During the Expressway Closure TravelSmart’s application in Brisbane North tapped the potential for change better than the mass media campaign.
- This suggests that:
  - the better informed people are the more likely they are to choose alternates to the car, even during a severe transport system event
  - tailored information is a critically important factor in tapping into and mobilising an untapped segment.
For further information and to give us your views please contact:

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