An evidence-based assessment of the impact of cycling infrastructure in South East Queensland

Engineering and Technology Branch | Department of Transport and Main Roads

Michael Langdon, Senior Advisor (Cycling and Walking) | Department of Transport and Main Roads
About us

We shape the system

In 2016–17 we will invest:

$4.7b
Queensland Transport and Roads Investment Program (QTRIP)

Capital investment

QTRIP 2016–17 includes capital investment:

$3.1b
roads

$43m
cycleways

$1.4b
rail

$48.3m
maritime
(does not include ports)

$84m
public transport
Overview

• Bicycle traffic and travel behaviour changes

• Data from:
  - Traffic counts
  - Intercept surveys
  - Global Positioning Systems (GPS) tracking data
  - Census journey to work data.

• Bridges
• Missing links.

Data licensed from Strava
Overview (cont.)

Definitions:

• **Route change**: Existing cyclists will **change their route** to use the new facility.

• **Mode change**: users of other transport (car, public transport, and so on) will **change mode of transport** to cycle along the new facility.

  - **Walk**: refers to walking for the entire length of the previous journey.
  - **Public Transport (PT)**: refers to any public motorised passenger transport such as bus, train, or ferry.
  - **Car**: refers to any private motorised transport such as cars, trucks, motorcycles or taxis whether as a driver or passenger.
Missing links

- Normanby Pedestrian Cycle Link
- Western Freeway Bikeway ‘Missing Link’
- Toowong Overpass
- Veloway 1 Stage C
- North Brisbane Bikeway Stage 1A
Normanby Pedestrian Cycle Link

- Daily traffic: Commuter
  - 600 bicycles
  - 1,100 pedestrians

- Route change: 8%
- Mode change: 92%
  - Walk: 7%
  - PT: 46%
  - Car: 48%

Normanby Pedestrian Cycle Link

Origin-Destination Map

Origin suburbs
- 12% Alderley
- 10% Wilston
- 7% Grange
- 7% Kelvin Grove
- 7% Newmarket

Destination suburbs
- 60% Brisbane CBD
- 10% Herston
- 10% Spring Hill
Western Freeway Bikeway

- 55% increase in the average daily numbers of cyclists.
Toowong Overpass

- 32% increase in the average daily numbers of cyclists.
**Origin Suburbs**
- 17% Chapel Hill
- 15% Kenmore
- 11% Fig Tree Pocket
- 11% Indooroopilly
- 6% Mt Ommaney

**Destination Suburbs**
- 58% Brisbane CBD
- 4% South Brisbane
- 4% Toowong
- 4% St Lucia
Greenslopes/Tarragindi

Open Street Map

Greenslopes

South East Freeway Bikeway (SEFB)

Tarragindi

Veloway 1 Stage C
South East Freeway Bikeway
Veloway 1 – Stage C

- Daily traffic: Commuter
  - 800 bicycles
  - 0 pedestrians

- Route change: 90%
- Mode change: 10%
  - Walk: 0%
  - PT: 60%
  - Car: 40%

Origin 2009

Intercept Survey Results

Survey Site
Survey Site

Origin 2013

Intercept Survey Results

- 33 to 47
- 12 to 33
- 4 to 12
- 2 to 4
- 1 to 2
Veloway 1 – Stage C

Strava results:

- 12% increase in bike counts (in a season of typical decline)
- Over half of the activities on the old bikeway were diverted to the new bikeway
- Cyclists also diverted off Logan Road to use new bikeway.
North Brisbane Bikeway

http://www.tmr.qld.gov.au/Projects/Name/N/North-Brisbane-Bikeway.aspx

Airport Link/Clem7 Interchange Section

Opened February 2014
North Brisbane Bikeway Stage 1A

• Daily traffic: Commuter
  - 400 bicycles
  - 50 pedestrians

• Route change: 78%
• Mode change: 22%
  - Walk: 0%
  - PT: 17%
  - Car: 5%

• Car available: 68%
• PT available: 63%
North Brisbane Bikeway Stage 1A (cont.)

Figure 5.69: Cycling trip origin and destinations (transport purpose, n=55)
95% increase in Victoria Park

22% decrease on Bowen Bridge Rd

28% increase

30% reduction

Data licensed from Strava
Census Day: Bicycle journey to work

Brisbane Bike Week
Ride to Work Day 2011
Mode shift: Bicycle riders

[Graph showing mode shift percentages for recreation and transport based on different locations and travel modes.]
Mode shift: Pedestrians

Recreation

Transport

Car  Bus  Train  Taken a different route  Would not have travelled

5%  6%  2%  19%  75%

Car  Bus  Train  Taken a different route  Would not have travelled

9%  18%  28%  37%  4%
Take home messages

• Duplicating existing links will result in high route change

• Overcoming a major barrier, with a direct connection to an activity centre will result in high mode change

• Mode change will always be relative to the alternative transport options available

• Behaviour change is usually only one of many reasons why projects go ahead

• Benefits to pedestrians and urban amenity often also flow from these projects.
Thank you