Green Lights for Bikes: Providing for bike riders at traffic signals

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Jo Eady and Malcolm Daff (SKM)

Axel Wilke (ViaStrada)

Bart Sbeghen *(Bicycle Victoria)*

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Overview

> PROBLEMS

> SOLUTIONS AND EXAMPLES

> COSTS

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What is the problem?

- For bike riders:
  - Detection
  - Long wait times
  - Safety
  - Crossing roads
- For designers:
  - Understanding options
  - Complexity of signals

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Push button detection

Harper Ave crossing, Christchurch, NZ

- Widely used (for peds)
- Locate in easy to reach place
- Benefits
  - Reassurance
  - Use existing infrastructure
- Disadvantages
  - Requires riders to stop

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Inductive loop detection

Railway Cycleway, Christchurch, New Zealand

Inductive loop in road

- Inductive loops under road/path surface
- Benefits
  - No need to stop
  - On-road: Existing loops normally detect cyclists
  - Off-road: cyclist counts, direction
- Disadvantages
  - Doesn't distinguish vehicle type
  - No feedback to rider

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Early starts

Crossing Nicholson St from Pigdon St, Carlton North

- Riders get a green signal ahead of traffic
- Benefits
  - Reduce rat-running
  - Make riders more visible
  - Support priority (inc other modes)
- Disadvantages
  - Reduced green time for traffic
  - Right turn difficulties
  - More information to process

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Early start at Napier St/Johnston St Fitzroy

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Dwell on green (for bikes)

West end of Fitzroy St, St Kilda

- Default bike signal is green
- Vehicles have to be detected
- Benefits
  - No need for cyclist detection
  - Reduced delay
  - Possible reduction in vehicle speeds
- Disadvantages
  - Delay to vehicles

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Clearance

Murrumbeena Rd crossing Princes Hwy, Murrumbeena

- Yellow (vehicles), flashing red (peds)
- Speed and clearance time
- Wide intersections
- Benefits
  - Riders won't be 'trapped'
  - Can be run with existing phase
- Disadvantages
  - May increase cycle length
  - Frustrate riders (educate)
  - More information to process

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Green wave

Nepean Hwy, Frankston

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- Synchronise successive signals
- Closely spaced signals
- Benefits
  - Reduced delay
  - Reduced speed variation
- Disadvantages
  - Interaction with cross roads
  - Slower for vehicles

Automatic green

Nepean Hwy, Bentleigh

- Green signal is displayed automatically
- Benefits
  - No need for detection
  - Reduced delays
  - Can be run with ped light
  - Easy to program
- Disadvantages
  - May increase cycle length

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Costs

- Vary $2,000 - $500,000
- Infrastructure required
- Capacity of existing signals

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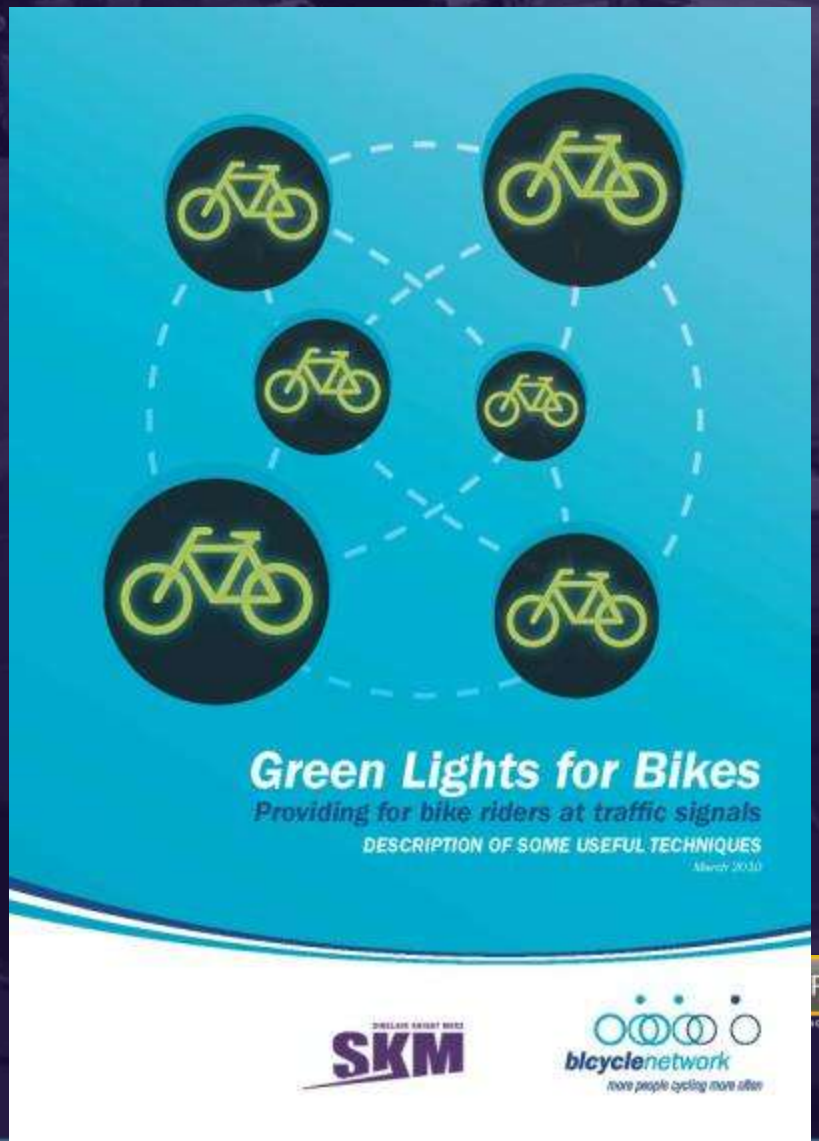
Want to know more?



- Copies of the report available
- Search ‘Traffic signals for bikes’ on Bicycle Victoria’s website
- http://www.bv.com.au/bike-futures/41329/

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October 2010

Jo Eady

jeady@skm.com.au

(03) 9248 3208

Axel Wilke

axel@viastrada.co.nz

0064 (3) 343 8221

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