

Presentation to Auckland Regional Walking and Cycling Forum
Hobson Room, Mercure Hotel, Thursday 13 March 2008

Continuous cycle counting trials

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Outline

- Why count cycles?
- Types of cycle counts – context
- Presentation to Forum last year on automatic cycle counting technologies
- Recent research for Land Transport NZ
- Current research project on continuous counting



Why count cycles?

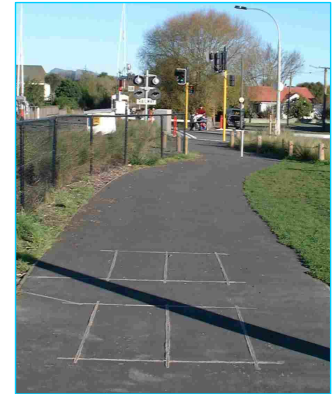
- Policy directions require more cycling
- Do new cycle facilities generate more cycle traffic? If so, how much?
- Infrastructure funding applications likely to require robust counting programmes
- Levels playing field with car traffic

Types of cycle counts – context

- Manual – intersections or mid-blocks (e.g. Gravitas); cyclist interviews; school or Uni cycle parking; Census data; may give numbers, gender, age group, cyclists' views
- Automatic – various kinds; give 24/7 data for a week or more
 - Continuous – months or years; trends
- Programme should include all 3 types

Last year's Forum presentation

- Automatic counter technologies:
 - Pneumatic tube
 - **Induction loop**
 - Video image processing
 - Magnetic proximity
 - Infrared or radar
 - Piezoelectric



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Recent research for LTNZ (1)

- Surveyed all councils and Transit offices about cycle counting
 - 71% response rate
 - 2/3 are planning new cycle infrastructure
 - Half have counted cycle traffic in recent years
 - 2/3 of these use manual only
 - Of those that do automatic, most use MetroCount
 - Only 3 use or had used continuous counting
- Literature review of continuous counting technology
- <http://www.landtransport.govt.nz/sustainable-transport/docs/cycle-counting-in-nz.pdf>

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Recent research for LTNZ (2)

- Estimating demand for new cycle facilities
 - Published as LTNZ research report No. 340, Feb 08
- Recommends:
 - On-road: 20% jump in cyclists with 8% per annum growth (but modified by local Census trend)
 - Off-road: New cyclists = $1.6 \times \sqrt{(MS \times MV)} + 0.5 \times PCV_{BF}$
 - (MS = Census cycle mode share, MV = AADT; PCV_{BF} = cycle traffic volume on road parallel to proposed path)
 - Growth = 14% (but modified by local Census trend)
- <http://www.landtransport.govt.nz/research/reports/340.pdf>

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Current research for LTNZ

- Two loop detector counters will be field tested – Bicycle Recorder and ZELT
- Study to include both off-road and on-road sites
- Counters will be calibrated against manual counts, tube counters and existing SCATS loop detectors, where feasible
- Palmerston North doing research too – piezos
- Plan to recommend a counter or counters for use in New Zealand for continuous cycle counting

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Induction loop continuous counters

- Bicycle Recorder



- From UK
- Used in South Aust.
- Excludes prams, etc.

- ZELT



- From France
- Works in mixed traffic
- Excludes cars

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Sites for testing

Site	Speed Limit	Cycle lane	Gradient	Surface	Comments
1. Railway Cycleway	NA	No	Flat	Asphalt	Wide off road path, SCATS loops for comparison
2. Main Road, Sumner	50	Yes	Flat	Chipseal	Cycle lane, good separation
3. Riccarton Rd	50	No	Flat	Asphalt	High cycle volumes, limited separation
4. Sparks Rd	80	No	Flat	Chipseal	Narrow shoulder, high speed
5. Dyers Pass Rd	50	No	Downhill	Chipseal	Steep gradient and high cycle speeds, narrow shoulder

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Conclusion

- Counting technologies are here!
- Questions / discussion
- Follow-up:
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