

Presentation to Canterbury Active Transport Forum
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Cycle traffic counting

Andrew G. Macbeth, BE, MEng, CPEng, FIPENZ (civil)

ViaStrada Ltd, Christchurch

andrew@viastrada.co.nz

www.viastrada.co.nz



Outline

- Why count cycles?
- Types of cycle counts
- 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 monitoring of car traffic

Manual cycle counts

- Intersections or mid-blocks
- Cyclist interviews
- School or Uni cycle parking
- Census data
- Manual surveys may give numbers, gender, age group, helmets, types of cyclists and cycles, cyclists' views

Automatic counters

- Pneumatic tube
- Infrared or radar
- Video image processing
- Magnetic proximity
- Induction loop
- Piezoelectric



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Automatic counters

- Automatic counters can count in wet and dry weather, day or night, and for long periods (weeks or months)



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Little River Rail Trail



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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 are being field tested
 - Bicycle Recorder and ZELT
- Study includes both off-road and on-road sites
- Counters are being 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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Railway Cycleway near Fendalton Road



Railway Cycleway near Fendalton Road



Main Road Sumner (causeway)



Riccarton Road



Sparks Road



Dyers Pass Road



Conclusions

- Automatic cycle counting technologies are here!
- Both manual and automatic counts have advantages
- **Questions / discussion**

- Follow-up:
 - Andrew Macbeth
 - (03) 343-8224; 027 2929 888
 - andrew@viastrada.co.nz