Estimating Demand for Selwyn’s Cycleways

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Selwyn District

• South and west of Christchurch
• Fastest-growing district in NZ

Outline

• Background and proposed facilities
• “Simplified Procedure 11” for demand estimation
• New demand estimation method
• Costs and benefits
• Current status of project
• Conclusions
Background

- Seven projects from SDC 2009 walking and cycling strategy action plan
- 26 km of proposed off-road cycle paths alongside roads
- Significant community and local political support

Proposed facilities

1. Lowes Rd (Rolleston towards Burnham; 3 km)
2. Edward St (Lincoln to Rail Trail; 1.1 km)
3. Coalgate to Glentunnel (2.6 km)
4. Lincoln to Springston (3 km)
5. Lincoln to Rolleston (8.5 km)
6. Rolleston to Templeton (8 km)
7. Leeston Road bridge
Simplified Procedure 11 (SP 11)

- From Economic Evaluation Manual (EEM)
- Likelihood of cycling on a facility declines with distance from facility (multipliers):
  - 400 m (0.33)
  - 800 m (0.17)
  - 1600 m (0.07)
- Population inside buffers
- Journey to work cycling mode share
New demand estimation method (1)

- Used data from existing Birchs Rd cycleway (Prebbleton to Lincoln)
- Existing traffic = 120 cyclists per day
- SP 11 predicted only 73 cyclists per day
- We modified SP 11 to better match data
- Method not yet approved by NZTA

New demand estimation method (2)

- Simplified buffer structure – just two
  - 800 m with a multiplier of 0.26
  - 1600 m with a multiplier of 0.13
- Included population and school & uni rolls
Results of predictions

<table>
<thead>
<tr>
<th></th>
<th>Original SP 11 AADT prediction</th>
<th>Modified SP 11 AADT prediction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowes Rd</td>
<td>107</td>
<td>126</td>
</tr>
<tr>
<td>Edward St</td>
<td>49</td>
<td>78</td>
</tr>
<tr>
<td>Coalgate to Glentunnel</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Lincoln to Springston</td>
<td>46</td>
<td>90</td>
</tr>
<tr>
<td>Lincoln to Rolleston</td>
<td>83</td>
<td>148</td>
</tr>
<tr>
<td>Rolleston to Templeton</td>
<td>116</td>
<td>156</td>
</tr>
<tr>
<td>Leeston Rd Bridge</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

- AADT = Annual Average Daily Traffic – cyclists per day
- Calculations also done for pedestrians

Costs vary; average $350,000/km

- Off-road paths seems cheap, but design will be relatively expensive
- Bridges can be “pinch points” and expensive to fix
**Benefit / cost ratio**

- Benefits from modified SP 11 = $97 M
- Cost of all projects = $9 M ($350,000/km)
- Benefit / cost (B/C) ratio = ~11

**Current status of project**

- Funding declined in RLTP (Aug 09)
- Three paths on “Reserve A” list for possible funding:
  - Lowes Road (Rolleston towards Burnham)
  - Edward Street (Lincoln to rail trail)
  - Lincoln to Springston
- SDC to resubmit for “LTP Online” review
Conclusions

- Methodology considered to improve on SP 11 as it:
  - is simpler (2 buffers instead of 3)
  - uses school / uni rolls, not just population
  - is calibrated against a local facility

- Healthy B/C ratios possible even for rural projects; no guarantee of funding

If you build it, they will come…