



Cycle Safety at Roundabouts

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Introduction



- Roundabouts safe and efficient for Motorists
- Impacts on Cyclists?





Background 1



- ***LTSA Monitoring System (1995)***
 - 29% Crash Reduction for Cyclists
- ***The Ins and Outs of Roundabouts (Transfund 2000)***
 - 1% of Crashes¹ at Signals involve Cyclists
 - 6% of Crashes¹ at Roundabouts involve Cyclists



¹Injury and Non-injury Crashes





Background 2



- *Koorey & Wilke (Transfund, 2001)*
 - Higher underreporting for Cycle Non-injury Crashes
 - 6% of Crashes¹ at Signals involve Cyclists
 - 26% of Crashes¹ at Roundabouts involve Cyclists



¹Injury Crashes only





Methodology



- **Categorise Roundabout Layouts**

- Deflection

- Visibility

- Single-Lane or Multi-Lane



- **Match Crashes to Study Sites**



- **Analyse Safety Performances of different Categories**





Data Sources

1) LTSA Monitoring System (98)



2) LTSA Database 'Install Roundabout' (78)



3) BECA Crash Prediction Model Study (51)

4) 2000 LTSA Roundabout Survey (113)



➤ **Total = 300 Roundabouts**





Work Undertaken to Date



- Database of Sites
- 270 Sites Categorised (Single-Lane or Multi-Lane)
- Crash History





Work To Do



- **Match Crash List to Site Database**
- **Analysis**





Hypotheses



1) *Multi Lane Roundabouts significantly less safe for Cyclists*



2) *Not meeting Sight Triangle Criteria (Urban Roundabout) increases Safety of all Users*





Results



- *Results to be published*
 - *Transfund & Transit Publications*
 - *Transportation Group Newsletter*
 - *Future TMW*
- *Input to RCA Forum and other Groups as appropriate*

