



# Fundamentals of Planning and Design for Cycling



## Development and Delivery of a Technical Training Course



# Presentation Outline

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🚲 Project History

🚲 Objectives

🚲 The Team

🚲 Methodology

🚲 Course Content

🚲 Course Delivery

🚲 Expected Course Outcomes

🚲 Conclusions





# Background

- 🚲 Lack of formal training concerning the provision for cycling
  - University training
  - ‘Fundamentals of Traffic Engineering’
  - Engineers trained on the job
- 🚲 No agreed industry standards or guidelines

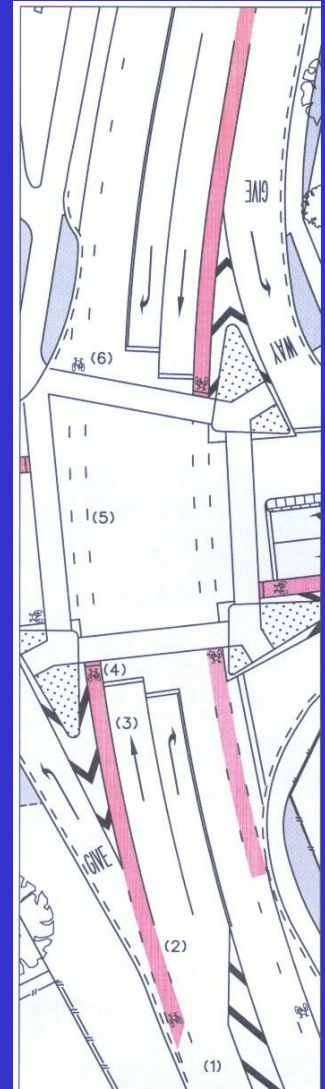


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# Project History

- 🚲 Consortium formed in December 2001
- 🚲 Methodology developed
- 🚲 Funding sought from Transfund NZ in 2002 and again in 2003

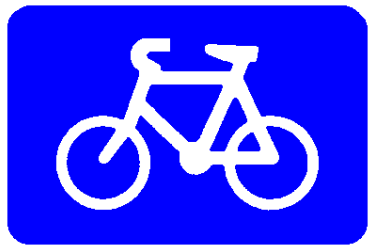




# Objectives

- 🚲 Introduce professionals to designing for cyclists
- 🚲 Increase cyclists' safety
- 🚲 Remove imbalance in transportation sector
- 🚲 Stimulate development of industry standards and guidelines (previous objective)
- 🚲 Implement Government policy of promoting cycling (new objective)





# The Team

Axel Wilke (Christchurch City Council) – team leader

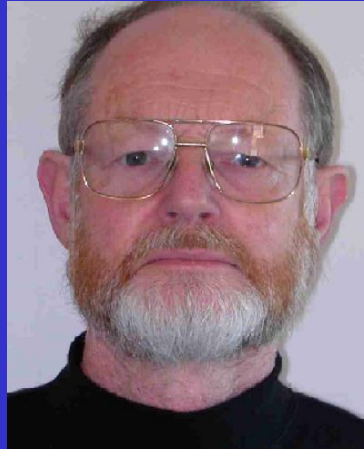
Alix Newman (ChCh City Council)



Glen Koorey (OPUS Central Laborities)

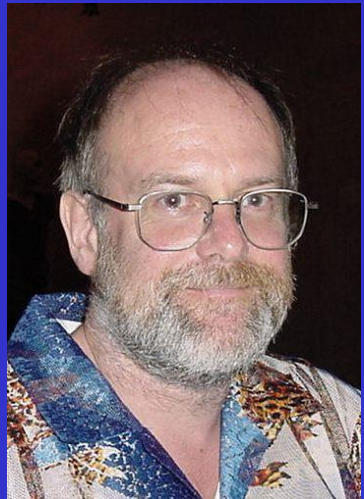


# The Team cont'd



Kerry Wood (Sustainable Transport Consultant)

Paul Ryan (OPUS) – Peer Review & Delivery



Roger Boulter (Consultant) – Peer Review

Andrew Macbeth (MWH) – Delivery







# Methodology

- 🚲 Demand analysis – 60 written responses
  - One-day course clearly favoured
  - Preferences regarding course content established
- 🚲 Transfund funding application approved for 2002/03
- 🚲 Cycling Design Guide (CDG) developed in early 2003
- 🚲 Course material based on CDG content



# Methodology cont'd







## Various forms of peer review

- Course team member reviewed each other's material
- Team peer reviewers
- External review by LTSA
- Pilot course in June 2003 (LTSA, Transit NZ, Transfund NZ) and feedback session

## Achieving industry acceptance



# Course Content

-  Meeting cyclists' needs
-  Planning for cycling
-  Cycling between intersections
-  Cycling through intersections
-  Putting it all together
-  Bouquets and brickbats



# Meeting Cyclists' Needs

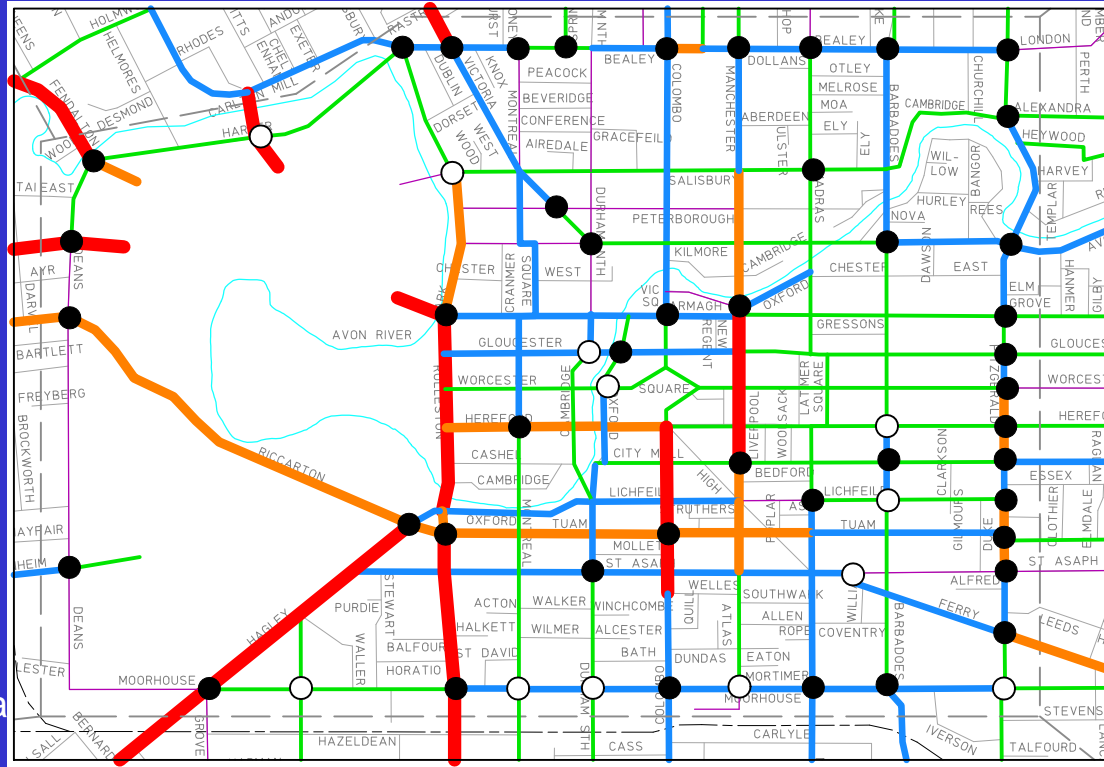
- 🚲 Government policy
- 🚲 Advantages and disadvantages of cycling
- 🚲 The Five Main Requirements
- 🚲 Design standards
- 🚲 Bringing cycling into the mainstream
- 🚲 Cyclists come in all sorts
- 🚲 Crash data and cyclists behaviour
- 🚲 Road Danger Reduction





# Planning for Cycling

- 🚲 Philosophy or Approach to Planning
- 🚲 Data Gathering about Cycling
- 🚲 Compilation of Cycling Data
- 🚲 Treatment Selection
- 🚲 Consultation










Fundamenta





# Cycling between Intersections

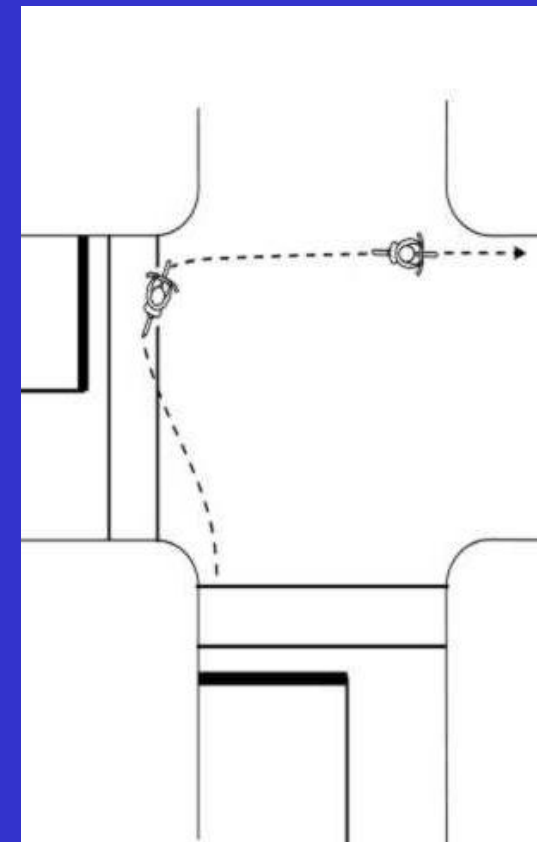
-  Choice of appropriate cycling provision
-  Providing no specific cycle facilities
-  On-road Cycle lanes
-  Other Useful On-Road Treatments
-  Making Space (incl. Case Studies)
-  Off-road Paths
-  Bridges/Tunnels, Grade Separation





# Cycling through Intersections

- 🚲 Six elements of intersection continuity
- 🚲 Hierarchy of measures
- 🚲 Cycle bypasses
- 🚲 Minor junctions
- 🚲 Cycle path crossings
- 🚲 Signal-controlled intersections
- 🚲 Roundabouts

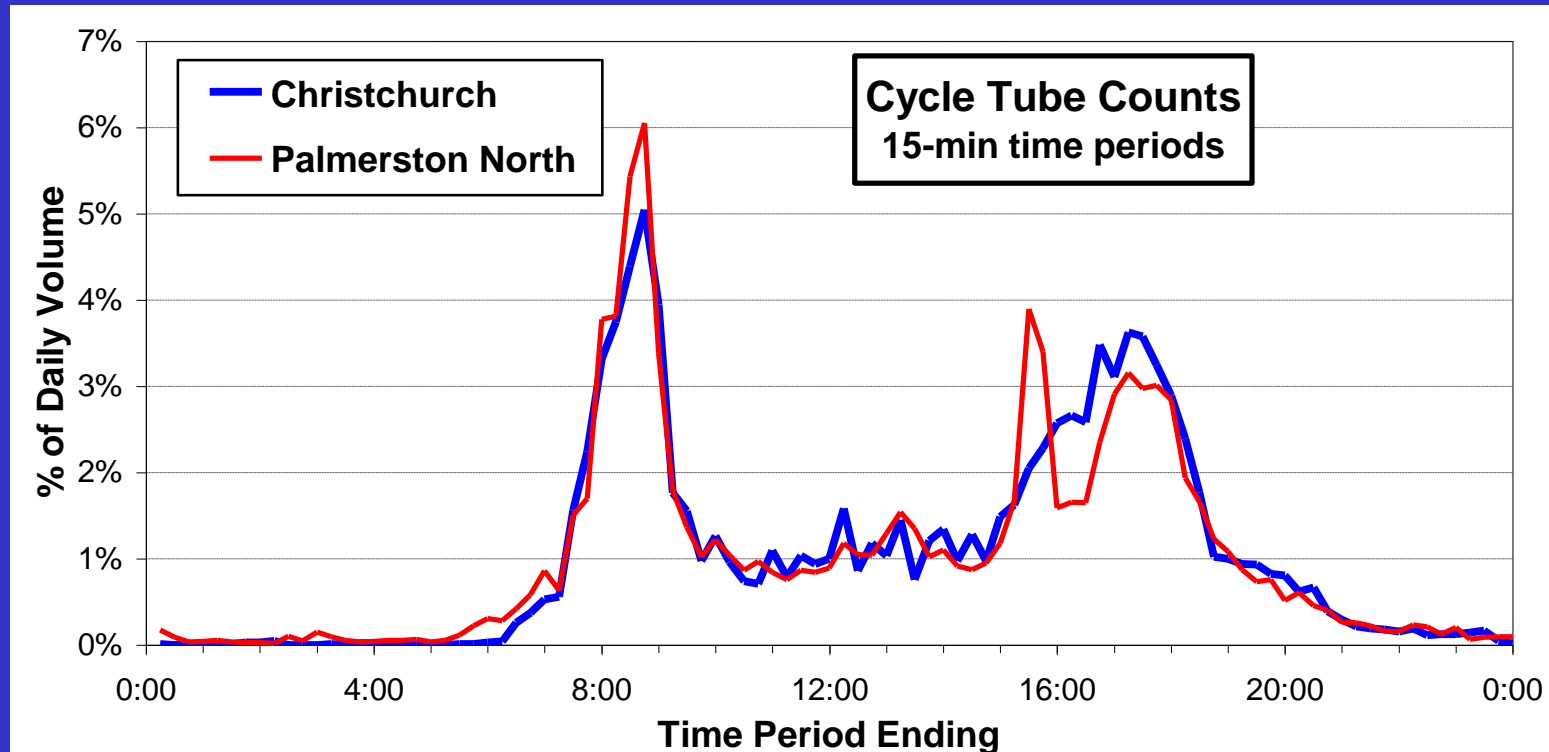


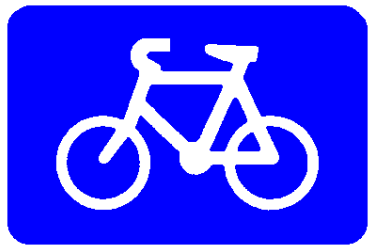
**Hook Right**



# Putting it all together

- 🚲 Creating a Practical Implementation Plan
- 🚲 Project Evaluation and Funding





# Bouquets and Brickbats







# Course Delivery

- 🚲 NZ Institute of Highway Technology (NZIHT) arranging the courses
- 🚲 Two presenters are delivering
- 🚲 6 locations in 2003
  - Auckland south, Hamilton & North Shore (already delivered)
  - Wellington, Palmerston North & Dunedin







# Course Delivery cont'd

## Other courses

- Pilot Course (Christchurch)
- University of Canterbury – Transportation Masters course
- Christchurch City Council in-house staff training

## Course Format

- Lecture
- Discussion encouraged



# Course Delivery cont'd

- 🚲 Approx. 100 attendees to date
- 🚲 Some 50 to 60 further attendees this year
- 🚲 Further courses in coming years





# Expected Course Outcomes

 Cycle planning and design experts



 Knowledge to take cyclists' needs into account

 Appreciate the scope of CDG and AUSTROADS part 14



# Conclusions

- 🚲 Course meets demand of profession and fills knowledge gap
- 🚲 Good tool for making profession aware of CDG content
- 🚲 Cyclists will be catered for more often and more appropriately
- 🚲 Cyclists' safety will improve over time



# Here Endeth The Lesson

🚲 We hope you found this course useful

- And enjoyed it!

🚲 Now go and make life better for cycling!

**THANK YOU**