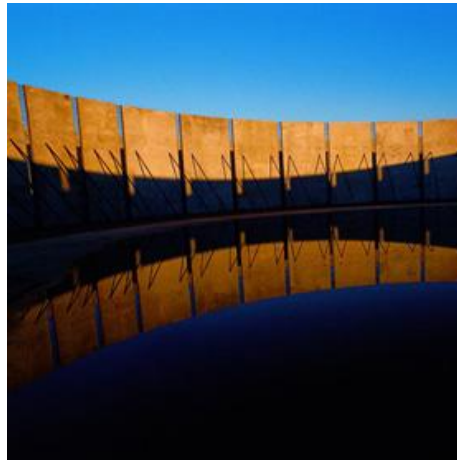


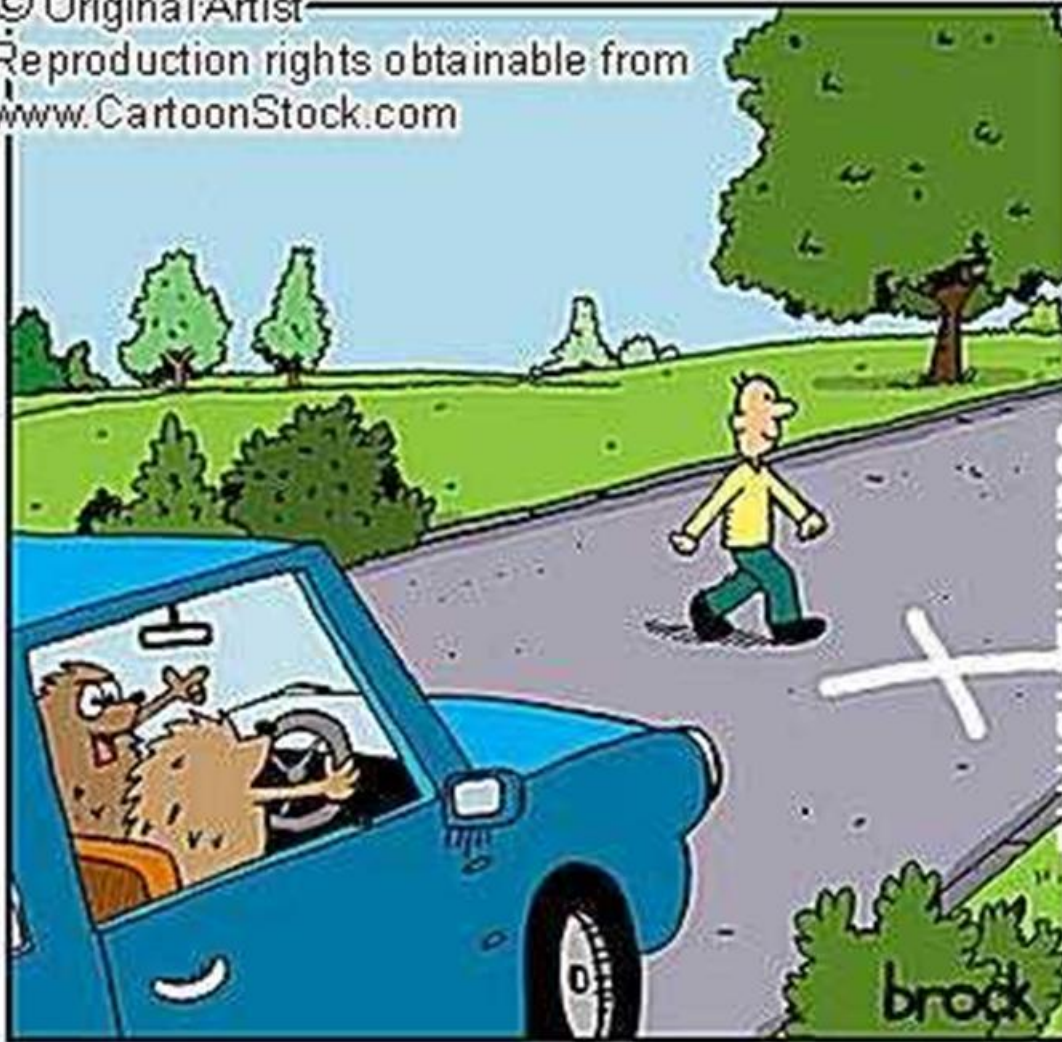
# Shared Space: Towards a people focused modelling strategy

IPENZ Transportation Conference 2010

A Kerr, K Cheung, C Vallyon



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OK Gilbert, there's one...step on it!

# Presentation Overview

Many Vehicles, Few  
Pedestrians

-Urban Intersection



Many Vehicles,  
Many Pedestrians

-Shopping Street



Few Vehicles, Very  
Many Pedestrians

-Sporting Event

# High Vehicle Number Application

## Case Study:

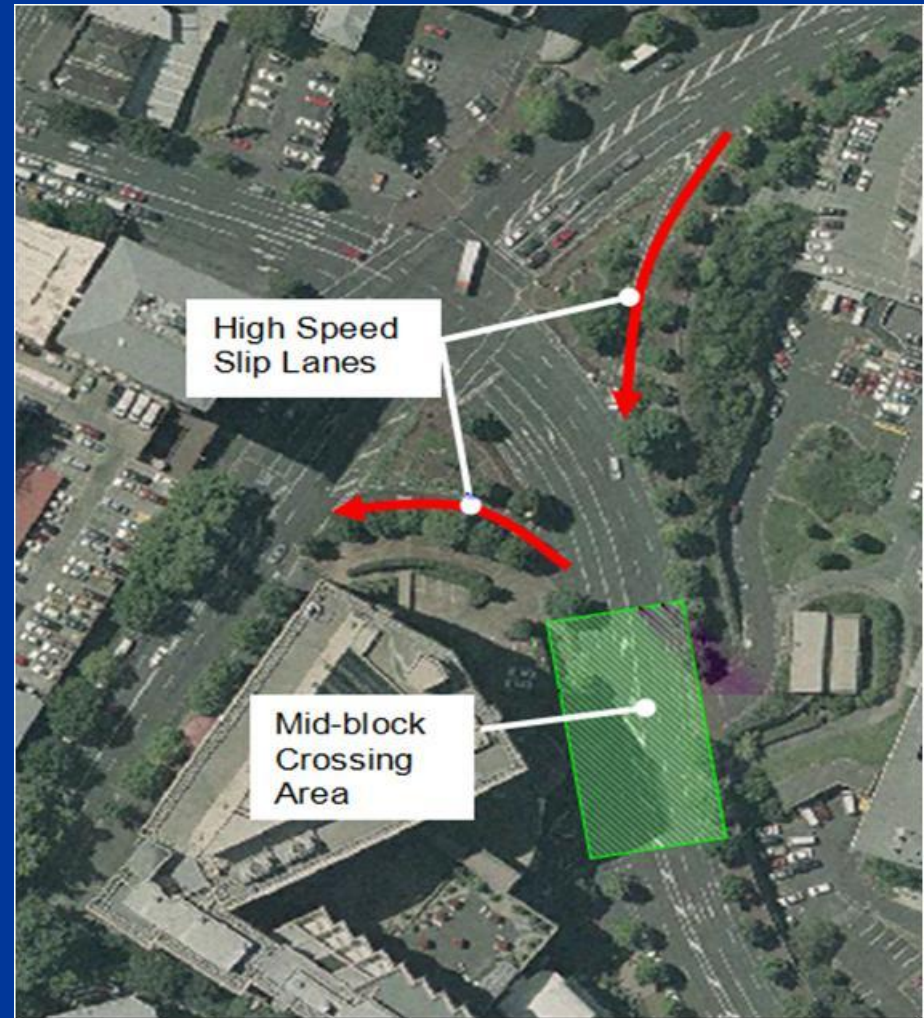
- CBD Intersection in Auckland

## Purpose:

- How changes of intersection geometry affect the performance of all modes

## Modelling tool:

- VISSIM micro-simulation



# CBD Intersection Case Study



# Optimising Intersection Performance

- Intersections optimised to include pedestrians as well as cars - perceived value of time
- Significant improvement to pedestrian delay
- Optimisation also reduced car delay at some locations

Location	Base Delay Per Person (sec)	Effective Optimisation (sec)	Optimisation plus other measures (sec)	Improved per person delay (sec)
North Shore City - Lake Rd/The Strand	52	-13	-21	31
Auckland City - Albert/Custom Street	39	-12	-15	24
Wellington City - Taranaki St/Courtenay Pl	36	-10	-14	22

# High Vehicle Number Application

- Better understanding of the interactions between vehicles and pedestrians at intersections
- Models can be used to improve the urban environment (safety and efficiency)
- Intersections can be optimised to minimise delay for all road users
- Design consideration needs to be people focused
- Formal and informal crossing
- Importance of good data

# High vehicle and pedestrian numbers application

## Case Study:

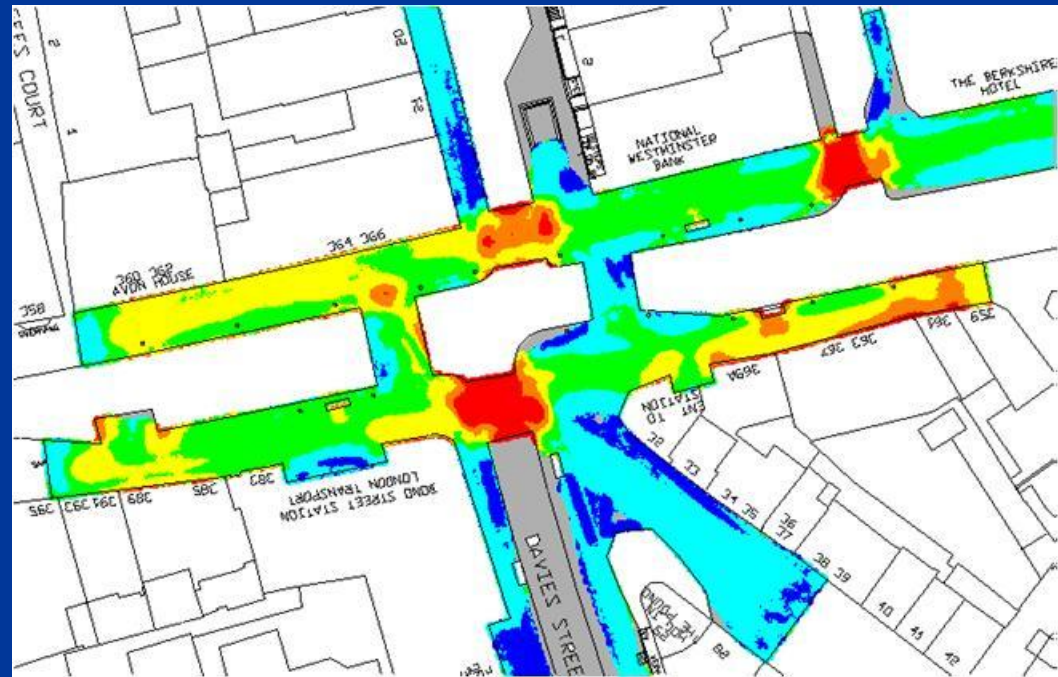
- Central London shopping street

## Purpose:

- To forecast the impact of increasing footfall of a new underground station

## Modelling tool:

- Two-tier modelling
- Saturn macro model
- Legion/Aimsun ped model





# Case Study – Oxford Street



# High pedestrian density applications

## Case Studies

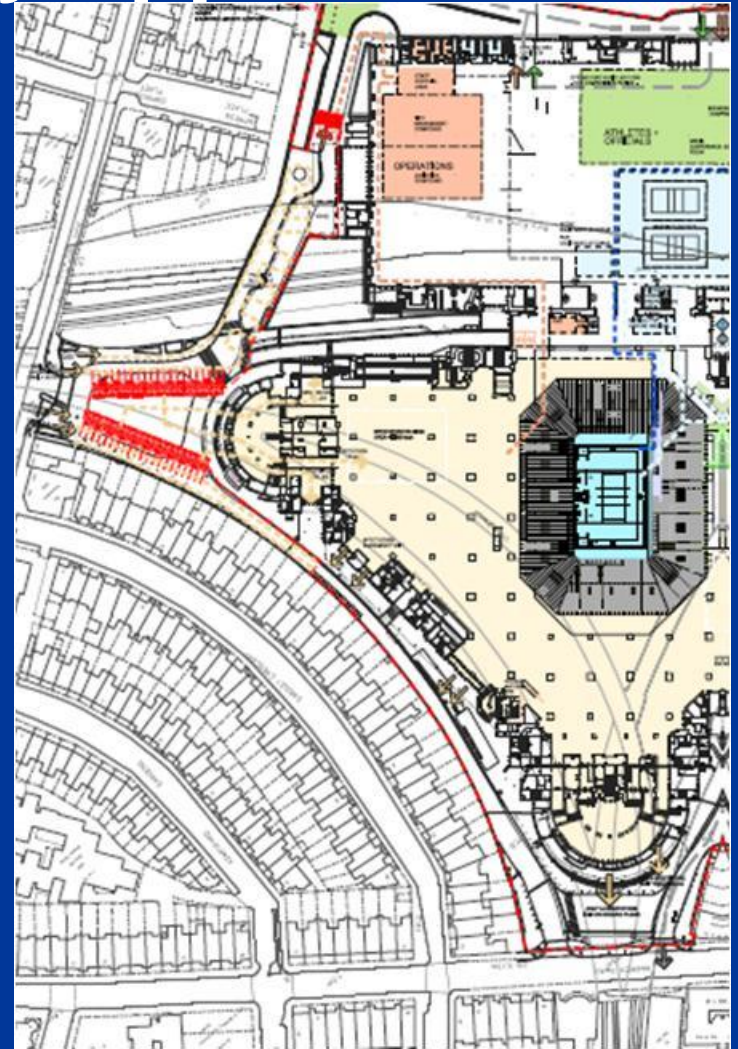
- Sporting Events in UK/NZ

## Purpose:

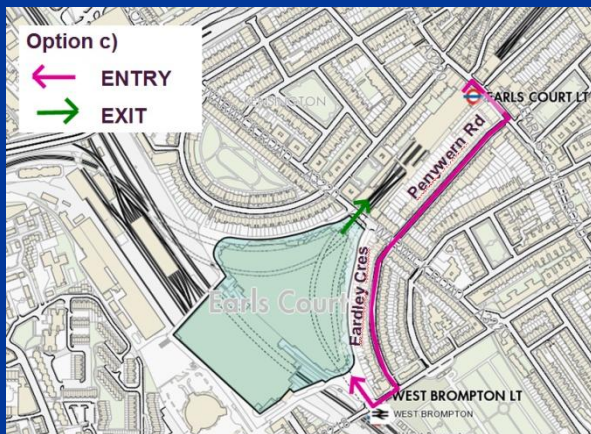
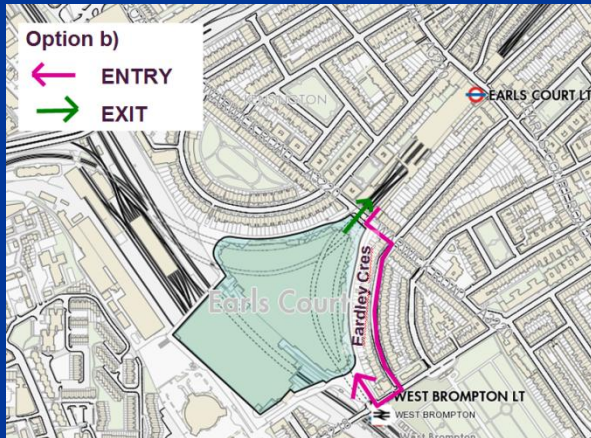
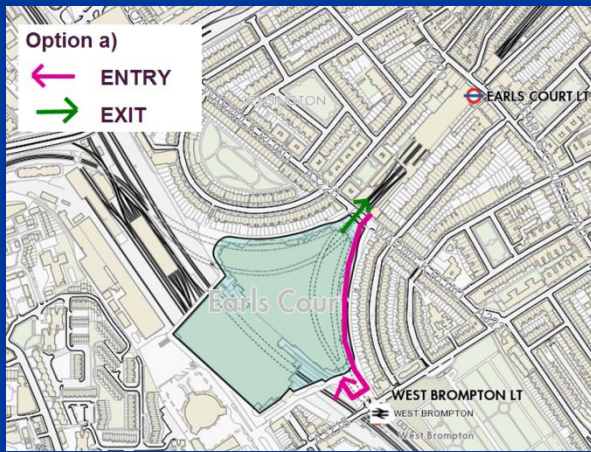
- To manage traffic movement during periods before and after major sporting events

## Modelling tool:

- Bespoke pedestrian crossing models
- Commercially available pedestrian modelling packages



# London Olympics Crowd Planning



- Earls Court Venue – hosting Olympic volleyball events
- Requirement to manage intense flows of people between venues and transport hubs
- Competing requirement to preserve vehicular journey times between venues

# Benefits of a combined approach

- Improvements in modeling techniques:
  - Formal and informal crossings can be modeled more accurately
  - Representation of gap acceptance
  - Ability to model vehicle drop off and pick up
- Benefits for transport planners:
  - Optimisation of crossings for the benefit of all road users – planning for people rather than planning for vehicles
  - Improved confidence in the efficiency and safety of intersections
  - More realistic visualisations providing more confidence for policy makers and urban planners/designers
  - Improved ability to forecast performance of special events

# New Otago Stadium

