

# Realising the Benefits of Cycling

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## Some recent academic papers

- Rachel Aldred and Sian Crossweller (2015) Investigating the rates and impacts of near misses and related incidents among UK cyclists. Journal of Transport and Health, available free [here](#).
- Rachel Aldred and James Woodcock (2015) Reframing Safety: An analysis of perceptions of cycle safety clothing. Journal of Transport Policy. Journal version [here](#), Accepted Author Version [here](#).
- Rachel Aldred, James Woodcock, and Anna Goodman (2015) Does More Cycling Mean More Diversity in Cycling? Transport Reviews, available [here](#).
- Rachel Aldred (2015) Adults' attitudes towards child cycling: a study of the impact of infrastructure. European Journal of Transport and Infrastructure Research, available [here](#).

## Evidence on infrastructure

- ‘Stated’ and ‘revealed’ preference



## Evidence on infrastructure

- ‘Stated’ preference
- Pretty consistent results
  - ‘a broad academic consensus that most people prefer to cycle away from motor traffic, or in environments with low levels of motor traffic’ (Aldred 2015: EJTIR).
  - Includes 2 detailed and particularly relevant TfL studies, my own recent UK study





## Three Key Types of Preferred Infrastructure

- Completely away from motor traffic (greenways)
- Physically protected infrastructure on busier roads
- Very lightly trafficked residential streets
  - Appropriate for different route contexts



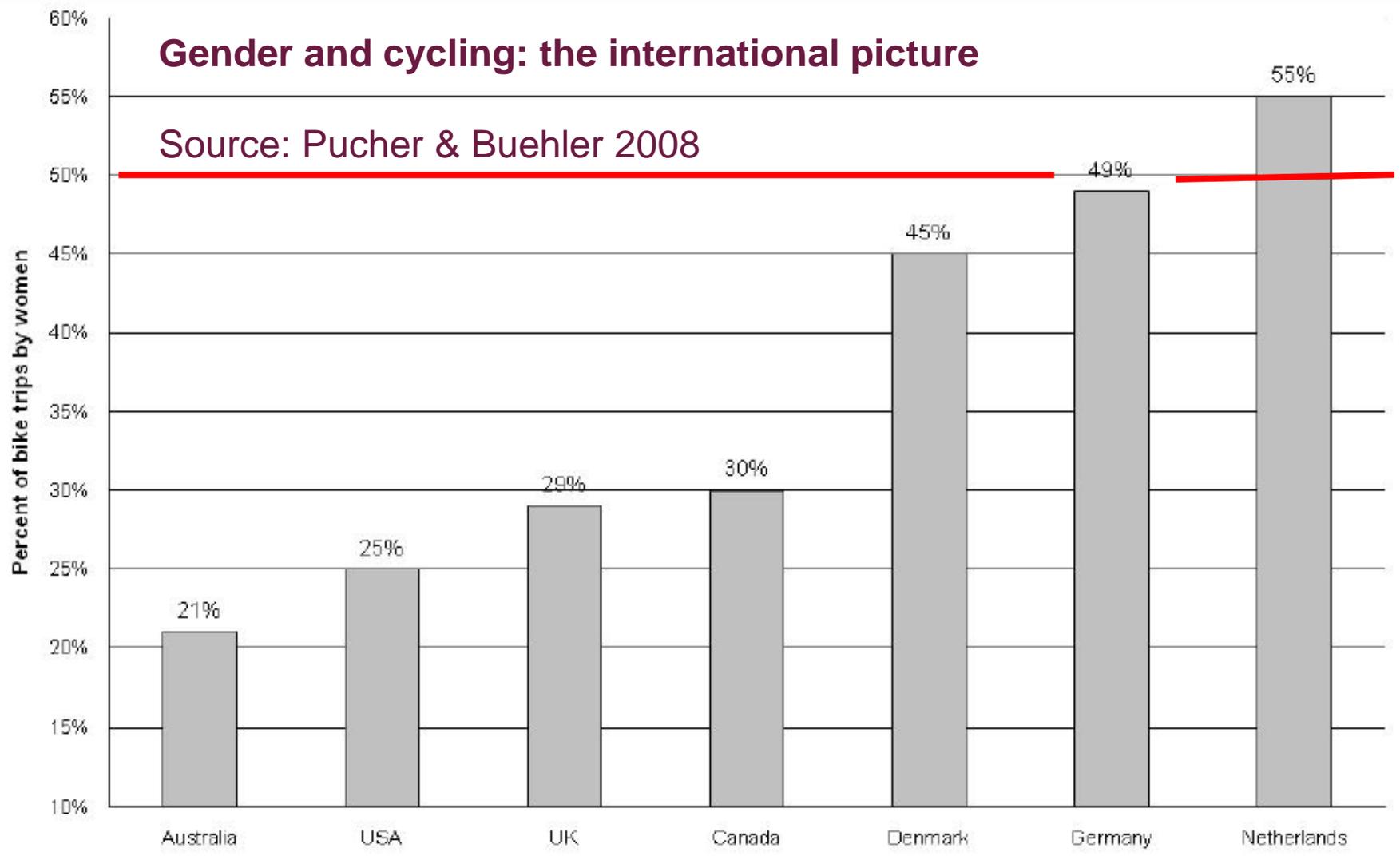
## Cycle Infrastructure Design



- Women have stronger preferences than men for separation from motor traffic (current DfT review)
- In Horsham 30% of cycle commuters are female

## Gender and cycling: the international picture

Source: Pucher & Buehler 2008



**Figure 8. Women's share of total bike trips in the Netherlands, Denmark, Germany, UK, Australia, and North America (2000 - 2005)**

Sources: Australian Bureau of Statistics (2007); Department for Transport (2007); Danish Ministry of Transport (2005); Statistics Netherlands (2005); German Federal Ministry of Transport (2003); U.S. Department of Transportation (2003) and information provided directly by bike planners in Canadian provinces and cities

Transport  
policy  
Bike blog

# Why cycling in the UK is so scary

A pioneering study has found cyclists have a frightening 'near miss' on the roads every week on average. This has got to change

## Rachel Aldred

Aldred led the Near Miss study, and is a senior lecturer in transport at Westminster University

Thursday 11 June 2015  
13.00 BST



Shares 5105  
Comments 1,265



## Evidence on infrastructure (2)

- ‘Revealed’ preference evidence less strong, because...
  - Not enough high quality interventions
    - In low-cycling contexts traditionally has been less preferred infrastructure types
  - Not enough high quality evaluations

## However, growing evidence...

- ‘[E]valuation methods and interventions are both changing, and correspondingly the evidence base is beginning to improve. This is the case for example in the United States, where cities have invested in higher-quality ‘protected’ or ‘green’ cycle lanes, with associated studies of impacts. In England, higher quality interventions are being planned and implemented, with more substantial evaluation, for example in London related to Superhighways, mini-Hollands and other schemes. Evidence is starting to emerge that such high-quality routes along key desire lines can demonstrably increase cycling uptake.’

## E.g. Cambridgeshire Busway Cycleway study

- ‘Proximity to the busway predicted an increased likelihood of a large (30%) increase in the share of commute trips involving any active travel (relative risk ratio [RRR] 1.80, 95 % CI 1.27, 2.55) and a large decrease in the share of trips made entirely by car’ (RRR 2.09, 95 % CI 1.35, 3.21)
- Likely to provide substantial health benefits
  - Heinen et al 2015, just published

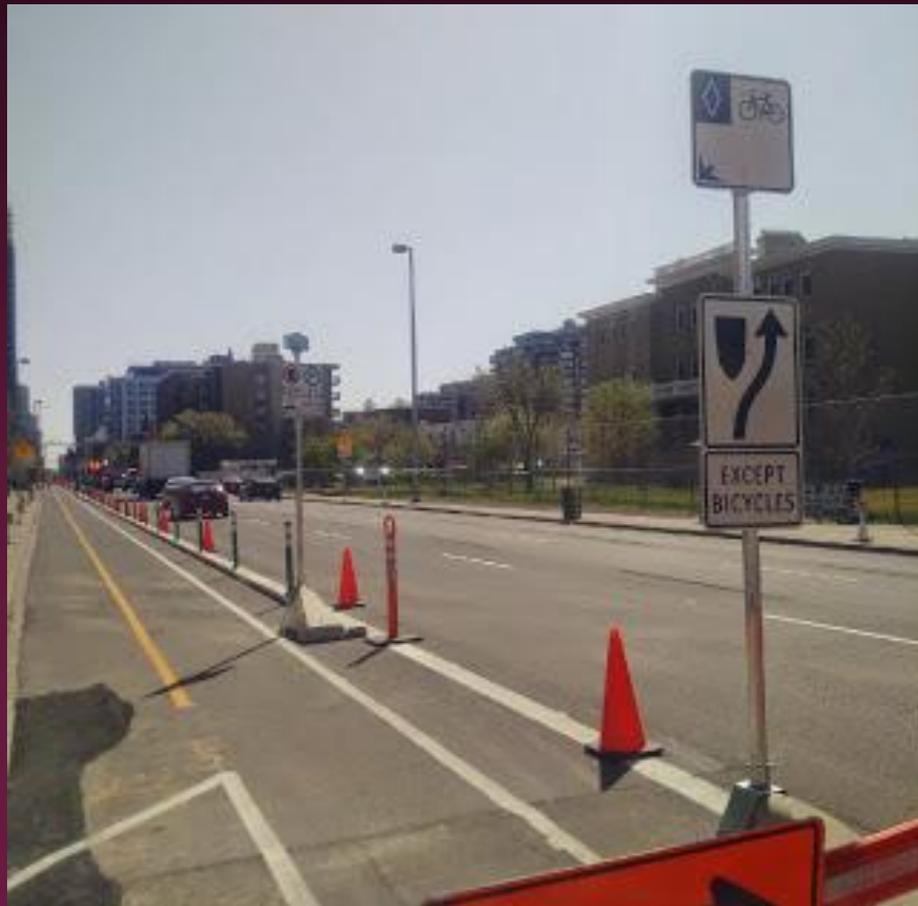


## ‘Reduction in traffic congestion’

- ‘In other words, commuters living 4 km from the busway were almost twice as likely to report a substantial increase in their active travel mode share [...] than those living 9 km away.’
  - ‘Those with children or living in less urban settlements were more likely to report a large decrease in car mode share.’
- ‘The shift in commute mode share [...] may also have contributed to a desirable reduction in traffic congestion.’
  - See <http://www.ijbnpa.org/content/pdf/s12966-015-0239-8.pdf>



# The rise of the pilot: from Calgary to Waltham Forest



## Conclusion

- Pretty solid evidence people say they don't want to cycle in mixed traffic (unless very low volumes and speeds)
  - Review work showed this preference stronger among women, who also have higher 'distance decay' for cycling
- Growing evidence that building routes corresponding to this preference works
  - Three main types of preferred route infrastructure

## Cycle Infrastructure Design



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