

Cycle-friendly infrastructure design

Summary of a seminar given to the City and County of Swansea by
John Grimshaw (special advisor to *Cycling England*)
on 19th October 2009

Introduction

This report highlights key points made in Mr Grimshaw's 1½ hour powerpoint presentation. A selection from the 126 slides is included. There was considerable interaction with the audience of approximately 40 Council officers. Occasional reference to this is made in the report. (Notes in [] are mine: mainly points I would like to have raised but didn't.)

As can be seen by their numbers (which correspond to the powerpoint presentation) the slides are not entirely in the order presented. For ease of reference they have been grouped under subject headings.

The comments accompanying the slides are intended to reflect Mr Grimshaw's commentary. I must however take responsibility for them.

David Naylor,
November 2009



Strategy

Slide 4 summarises what the strategy involves. And then some questions for Swansea (Slide 16).

A Cycling City Strategy and Plan includes

Infrastructure programmes to make the whole area attractive for cycling

Soft measures including Schools programmes, Travel Smart initiatives with the public, Cycling action programmes with employers and Marketing Strategies

More people cycling, more safely and more often

Slide 4

Some questions for Swansea staff?

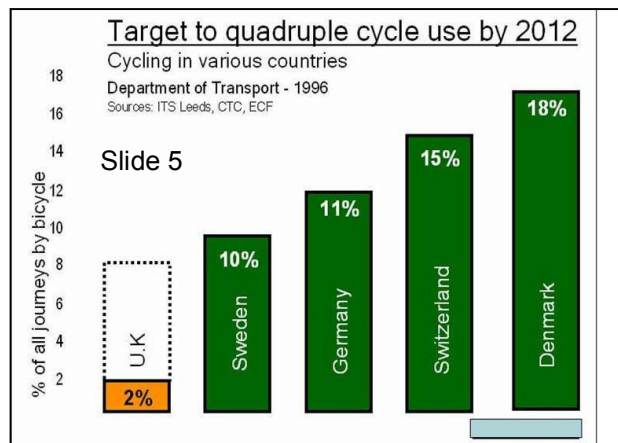
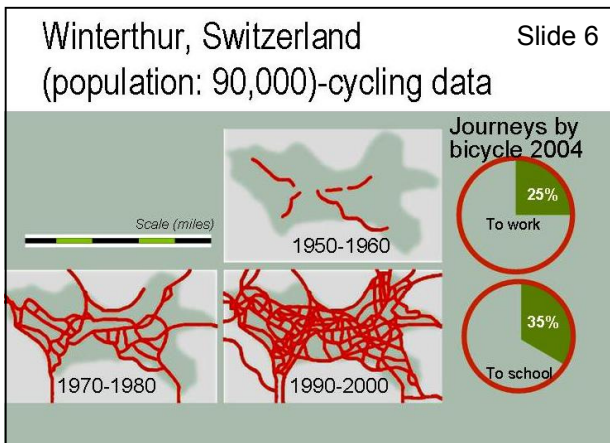
What are the routes back to cycling?
Where do we start? Is it with the journey to school, to work, shopping, leisure or tourist cycling?

What is our best strategy here in Swansea?

What are the key facilities which are the most likely to effect change?

Slide 16

Some comparisons



The UK has a long way to go, both as regards the number of journeys cycled (Slide 5) and the cycling infrastructure (Slide 6). This shows how the cycle network in one Swiss town has expanded over the last half century.

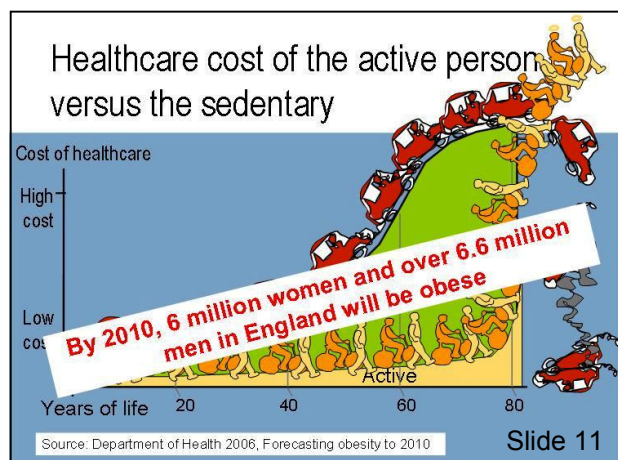
Obesity

Slide 11 shows how the cost of health care of the active and inactive varies with age.

Mr Grimshaw inquired of the cycling habits of the audience:

- 4 cycled most days;
- 8 most weeks, and
- about 16 never.

In discussion it was noted that obesity was a particular problem in Wales. As slide 11 illustrates increased activity is clearly cost effective and therefore part of the answer.



The nature of a cycle route



Slide 14 shows the NCN and part of the Bristol - Bath cycle route.

In discussion about how to get people on bikes Mr Grimshaw suggested that leisure cycling leads to the more widespread use of the bike, eg for commuting & etc.

What is a cycle route?

- one which gives sufficient advantage to attract would be cyclists
- one which makes it clear that cyclists (and pedestrians) are valued travellers in the cycling town, in a modern town and in the 21st Century

Especially in a Cycling City Slide 17

A cycle route will generally include:

- lightly trafficked slow speed roads
- short cuts
- attractive traffic free sections through parks etc.
- reasonable priority at junctions
- clear provision at main roads
- permeability of town centres
- direct links to destinations
- convenient parking
- clear signing
- lightly trafficked slow speed roads

Slide 18

Path continuity

The following pictures show paths marked across roads at unsignalled junctions. Cyclists do not necessarily have the right of way but the coloured strip warns motorists to expect them.



Slide 96 illustrates the use of “elephants’ feet” to border a crossing.

Slide 104 shows a crossing raised to path level thereby acting as a speed hump. [Note the use of the “dragon’s teeth”.]

Path continuity (continued)

The two pictures below illustrate **bad** practice: the paths are not continuous across minor junctions. Slide 58 features NCN 43 in Pontardawe.



Contra-flows

The slides below illustrate contra-flows and their signing.

Slides 19 & DN-1 show Dynevor Place, Swansea:19 before and DN-1 after the contra-flow lane had been added. Mr Grimshaw noted that the legality of the sign shown in slide 82 was uncertain but suggested that Swansea ask WAG to allow us to try it out.



Slide 82

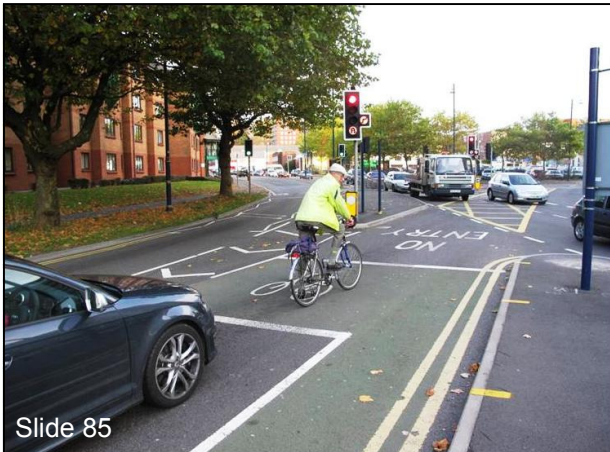
Contraflow Cycling

- The easy way

Except cycles

Advanced Stop Lines (ASLs) and signalled crossings

Slide 85 shows the ASL at the junction of Alexandra Rd and Orchard St. in Swansea.



Slide 115 shows a two stage Toucan crossing at the N. end of Orchard St, Swansea. Mr Grimshaw recommended that these crossings should be single stage where possible and that this was *Cycle England* policy. The crossing in Slide 113 is single stage. .

Shared use paths



These may be unsegregated (46) or segregated (35)

Shared paths and cycle lanes

A cycle route, especially in a Cycling City, will not include:

- Barriers
- Dismount and end of route signs
- Detours and unnecessary gradients
- Discontinuities
- Limited linkages
- Poor surfaces

Slide 50

Barriers, as in Slide 51, should be avoided. Slide 57 illustrates on the left an advisory lane and on the right a dangerous feature. Slide 43 shows a novel way of signing shared use.



Hierarchy

The following hierarchy should be adopted in planning a cycle route.

The Hierarchy of Provision along each stage of a route

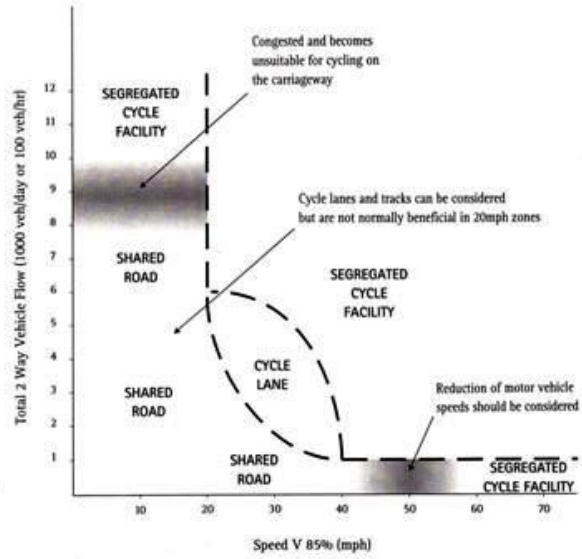
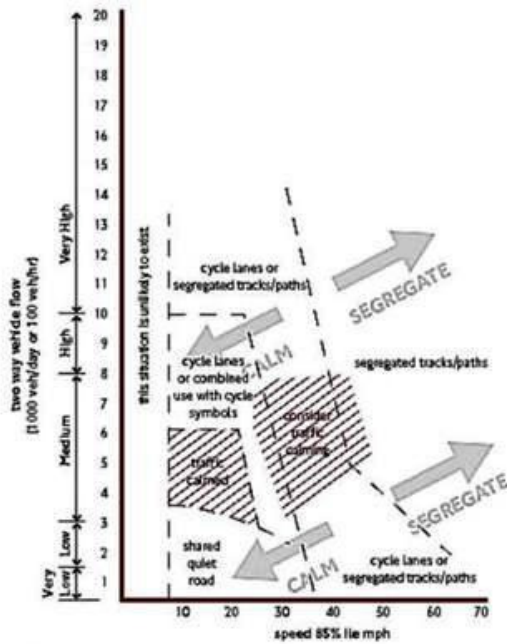
Table 1.2 Hierarchy of provision

<p>Consider first</p> <p>Consider last</p>	Traffic volume reduction	LTN 2/08
	Traffic speed reduction	
	Junction treatment, hazard site treatment, traffic management	
	Reallocation of carriageway space	
	Cycle tracks away from roads	
	Conversion of footways/footpaths to shared use for pedestrians and cyclists	

10
Slide 66

Cycle Infrastructure Design

Designing for cyclists



- Notes
1. Each route will need to be judged in the light of its specific situation
 2. Cycle lanes or tracks will not normally be required in traffic calmed areas
 3. Congested traffic conditions may benefit from cycle lanes or tracks
 4. Designs should tend to either calm traffic or segregate cyclists

London Cycling Design Standards

Slide 68

The criteria in slide 68 relate appropriate cycle provision to traffic speed and flow.

Continental practice



In Germany cyclists are given priority on certain streets. The sign reads "Fahrradstrasse" which means "Cycle street".

[It is questionable if this solution at roundabouts is appropriate in the UK as cyclists are not so well protected by law against motorists hitting them on leaving the roundabout as on the Continent.] (Note: driving is on the right here as this is in Germany.)

Exchanges from the floor

Cycle lanes.

It was suggested that they are generally too narrow [ie less than the 1.5m minimum normally recommended]. This did not bother Mr Grimshaw but he noted that lanes on roads are not widely used on the Continent. [Recent evidence suggests that narrow cycle lanes can be counter-productive.]

Cyclists and pedestrians

The problem of cyclists misbehaving on shared use paths was raised. Mr Grimshaw replied to the effect that the perception was worse than the reality and that this was a minor problem compared with the danger to cyclists on roads.

Colouring of ASLs, etc.

In reply to a question about what colour should be used for ASLs, and where cycle lanes cross junctions Mr Grimshaw noted that a range of colours were used, varying between LAs and countries. Reena Owen favoured the use of green in Swansea. (Both red and green have been used to date.) He noted however that the colouring should be applied at junctions, and not necessarily elsewhere. (The two pictures at the top of p. 4 illustrate the misuse of colour.)

Conclusion

Infrastructure for a Cycling Town

Guiding Principles seem to include

- 1 A to B routes
- 2 Continuity
- 3 Advantage eg shorter, quicker
- 4 Details
- 5 Build on what you have rather than isolated bits
- 6 Focus on the Centre

Slide 123

In England

Cycling Towns will generally include:

- Advanced stop lines
- Contraflow cycling, with or without lanes
- Permeability of central areas
- Single stage toucan crossings
- Toucan cycle aspects clearly visible
- Continuity and the increase of driver awareness at all road crossings

Phillip Darnton, Chairman of Cycling England 14 April 09

Slide 124

Slide 125 **And that's not all!**

A Cycling City will also include: Behaviour change programmes

- Senior level buy in and leadership
 - Cycle training and schools programmes
 - Engagement with work places
 - Mapping and promotion programmes
 - Integrated programmes and partnerships
 - Car free days and mass participation events
 - A determined hearts and minds programme
- for more cyclists, more safely and more often



More people cycling, more safely and more often
A Walking and Cycling Action Plan for Wales 2009 - 2013

Slide 126