Safe System, Safe Speeds

Ready for 20 conference
26th February 2016
Guildhall, London

Parliamentary Advisory Council for Transport Safety (an All-Party Parliamentary Group)
about PACTS

• An All-Party Parliamentary Group
• Transport safety - road, rail and aviation
• MPs, Peers, safety professionals, businesses and user groups
• One of the oldest all-party groups (30+yrs)
• Impartial, balanced, evidence-based approach
  • Listened to by Government

Recent Developments in Road Safety seminar, 12th November 2015, Durham
PACTS’ charitable objective

“To protect human life through the promotion of transport safety for the public benefit”.

A different emphasis but entirely consistent with 20’s Plenty objectives:

• Reduce speeds and casualties
• More active travel
• More pleasant, sociable streets and communities
Reminding government .....
Recent PACTS research reports:

- **Road safety since 2010**
- **Achieving Safety, Sustainability and Health Goals in Transport, 2014**
- **Projections of road casualties in Great Britain to 2030**

Available at [http://www.pacts.org.uk/](http://www.pacts.org.uk/)
“...to reduce the number of cyclists and other road users killed or injured on our roads every year”
Figure 5.1: KSI by jurisdiction (United Kingdom, 2005-14)
Deaths by Road User Group (Great Britain, 2005-9 and 2013)

**2005-09 Average**
- Car occupants: 1407, 50%
- Motorcyclists: 544, 19%
- Pedestrians: 613, 22%
- Pedal cyclists: 130, 5%
- Other: 122, 4%

**2013**
- Car occupants: 785, 46%
- Motorcyclists: 331, 19%
- Pedestrians: 398, 23%
- Pedal cyclists: 109, 7%
- Other: 90, 5%
The controversy of speed

1700.... stagecoaches – 8mph
1830... Steam trains – black monsters
1880/90 Bicycles – “scorchers”, fastest road vehicles
1889 Motor cars faster than bicycles

And the rest is history.... Mr Toad, Clarkson, et al

All were opposed by many;
All involved high levels of death and injury
Early speed limits

1865  Red Flag Act – 2 mph urban limit
1903  Limit for cars raised to 20 mph
1935  30 mph limit in urban areas

1965 National speed limit set (70 mph)

And attempts to enforce the limits – and to raise and defeat them!
Parliamentary Advisory Council for Transport Safety (an All-Party Parliamentary Group)
Low speed roads in UK

• *Play Streets – abolished 1980s*
• *Urban safety management schemes 1990s*
• *Home Zones – 1990s trials*
• *Quiet Lanes*
• *20mph zones and limits (urban areas)*
20 MPH SPEED LIMITS AND ZONES

- **20 mph zones** require traffic calming measures ....
- **20 mph limits** are signed ... and do not require traffic calming.

More than 2,000 schemes in operation in England - majority are 20 mph zones.

20 mph limits are ...increasingly being applied to larger areas.

(DfT Speed Circular, 01/2013)
Safe speed??

• Safe System: speed based on tolerances of human body
• Which speeds count?
  – average speeds
  – 85%ile speed
  – Maximum speed
• Absolute speed or acceleration/deceleration?
• Safe for whom, and for what purposes?
Parliamentary Advisory Council for Transport Safety (an All-Party Parliamentary Group)
Speed limits and casualties

Relationship not straight forward:

- UK: 1930-35 all speed limits for cars abolished
  - annual road fatalities *dropped* from 7,305 to 6,502
- Bermuda has a blanket 20mph limit
  - but fatality rate much worse than UK
- USA 1974: some states introduced 55mph limit
  - No difference in fatality trends across states or in Canada
Sober schemes....... 

- Henke?
- The Netherlands
Only 2 x 20mph limit only studies overall identified.

• Janssen et al.’s 1991 study in The Netherlands
• Brilon & Blanke’s 1990 study in Germany
The Netherlands

“Sober” 30kph schemes ......

• *if the credible speed limit is 50 km/h, it doesn’t help much to put a sign with a lower limit of 30 km/h;*

• *drivers will not adjust their speed to the lower limit if the road does not invite them*
Denmark:

• *In Denmark it is not legal to establish places/zones where the speed limit is reduced to 30kph without engineering measures.*
Switzerland (Zurich, 2004)

- 28 low speed zones (27 Tempo 30 zones / 1 encounter zone) were checked for their effectiveness
- objective was achieved in 19 zones (68%)
- reduced speed in 17 areas
- in 11 zones, additional measures are required
- no improvement in the number of accidents and consequences are visible
- gateways necessary and special marks are generously arranged
- removal of sidewalks in meeting areas promote mixed use
30kph limits

Finland:
- In 2004 Helsinki reduced speeds from 50km/h to 40 km/h and 40 km/h to 30 km/h in large scale.
- Measured speeds reduced by 1.5 kph.
- 10 (9%) fewer casualties (2012 evaluation).
UK

• *Portsmouth (Atkins review 2010)*

• *Brake review, 2005. As a worst-case scenario, it is reasonable to expect a 1mph reduction of average speeds*
Conclusions on 20 mph limits

Research

• Zones and limits not always distinguished;
• Modest reductions in mean speed – typically 1 mph
  – What about 85%ile and top speeds?
• Casualty changes unclear – but not negative
  – All casualties or KSIs?
  – Background trends, RTM?
• Changes in traffic and mode share changes?
• Better monitoring and research needed
Conclusions on 20 mph limits

Wider benefits?

• Changes active travel, noise etc from the 20mph limit? Little evidence. Perhaps as part of wider package.

• Would public perceive small changes?

• Will small in speeds and casualties influence behaviour change?
Lower speed limits and more cameras in Vision Zero charter

ROAD SAFETY
by Andrew Forster

LOWER SPEED limits and more speed cameras lie at the heart of a new environmental road safety campaign that aims to build on the momentum of the 20's Plenty for Us campaign for 20mph speed limits.

Vision Zero UK's headline goal is the elimination of deaths from road accidents. The campaign aims to fuse road safety and environmental policy and rejects measures such as the building of bypasses, or removing objects such as trees from the roadside, which can add to the severity of accidents if struck by a vehicle.

The campaign's founders are two prominent green transport campaigners: John Whitelegg, a former Green party councillor on Lancashire County Council, geography academic, and sustainable transport consultant; and Anna Semlyen, campaign manager of 20's Plenty for Us, author of the book Cutting your car use, and a former Labour councillor in York.

“We have ‘Vision Zero’ already in aviation, the railways and health and safety at work, so why not on roads?” Whitelegg told LTT.

He said the campaign shared the same core commitment to eliminating road death as Sweden, which pioneered the Vision Zero concept in 1997. But local authorities will be encouraged to sign (see panel).

It states: “Vision Zero is a total commitment to achieving zero with direct links to reducing health damaging air pollution, reducing carbon emissions in line with national climate change targets and stripping out fear and danger in the road traffic environment to produce a significant increase in walking and cycling.”

In a launch statement, V2UK said that, to sign up to the charter, authorities “must at least agree to speed reductions of a default 20mph for built-up areas, to review and lower speed limits on other roads, speed enforcement with automatic number plate recognition (ANPR) cameras, crash investigation learning and to intermediate targets, monitoring and more.”

The campaign will adopt the same operating model as 20's Plenty for Us. “Local authority councillors are our key targets to influence,” says the Vision Zero UK website. “Because they listen to local residents, we aim to recruit volunteers across the UK to form local Vision Zero UK branches.”

Paul Watters, the AA's head of roads policy, this week questioned the campaign's focus. “We all want Vision Zero,” he said, but added: “Interruption roads are still the backbone of the economy. If you screw everything down you can probably reduce the death toll.”

Vision Zero charter measures

- 30kph (20mph) default speed limit – in areas where the default is currently 30mph
- Major upgrade of urban design to create best possible conditions (a total safe systems approach) for walking and cycling
- Blood alcohol limit set at the Swedish level (0.02%). England and Wales is currently 0.08%
- A zero tolerance for speeding and the introduction of the Swiss system for linking speeding fines to wealth and degree of speeding
- A zero tolerance policy for drug taking and driving
- Collision investigation agency modelled on the Swedish experience and independent of the police
- A direct link between the results of an investigation and the actions that are taken to prevent a recurrence of the circumstances that contributed to the fatality or serious injury
- Law reform to deal with citizen concern about severe outcomes being dealt with "leniently" and a judicial system that respects those affected by death and injury
- A presumption in all legal procedures and road safety policies that there is a duty of care on the part of drivers to pedestrians and cyclists and this duty recognises the important differences between those responsible for causing death and in jury whilst in control of a vehicle and the victims of crashes and collisions
- Road traffic reduction based on proven interventions (travel plans, personal journey planning, spatial planning, urban logistics)
- Urban design to deliver clear road traffic danger reduction danger reduction for vulnerable users
- Changes to the system of driver education, training and testing towards the Swedish model of deep learning which includes a full understanding of Vision Zero, rigorous testing and clarity that all drivers have duties and responsibilities but no rights beyond the “right to life” that all users of the system have
- Adopt the Swedish model that those drivers caught speeding within two years of passing the test have their test results voided

A9 average speed cameras praised

SPEED CAMERAS

DEATHS AND serious injuries on the A9 between Dunblane and Inverness have fallen sharply in the first year since average speed cameras were introduced, according to figures released by the A9 Safety Group.

The cameras on the 136-mile section of road went live on 28 October 2014. There are seven average speed camera zones on single carriageway sections between Perth and Inverness, and cameras 5-7km apart on the Dunblane to Perth section.

From the beginning of November 2014 to October 2015, there were two fewer deaths and 16 fewer people seriously injured compared with the previous year. In all, there have been six fatalities.

Transport minister Derek Mackay said: “For the first time since parts of the A9 were upgraded in the 1970s, there were no fatalities anywhere on the route from July to December.”

Police Scotland says that by 24 January this year, 6,107 vehicles had been detected by the cameras exceeding the speed limit by a level warranting follow-up action.

“To put some perspective around the figure this equates to an overall average of 13 vehicles exceeding the speed limit on the entire length of the A9 in the last 12 months.”
The Future?

• Limits are not enough
  – Physical measures, education, community support ...
  – Different approach on busier roads
  – Cameras??

• Change the vehicles?
  – Autonomous (and ULEV) vehicles?
  – Intelligent Speed Adaptation (Isafer)?
Thank you

David Davies
Executive Director
PACTS

Phone: 0207 222 7732
E-mail: david.davies@pacts.org.uk
Web: www.pacts.org.uk
Twitter: @pacts