



Cynulliad National
Cenedlaethol Assembly for
Cymru Wales

Y Pwyllgor Deisebau

Adroddiad Cwblhad

Crynodeb o ystyriaeth y Pwyllgor Deisebau ar P-03-126 Mesarau
seicolegol i leddfu traffig

Hydref 2008

Y ddeiseb yn dod i law

19 Ebrill 2008

Penderfynu bod y ddeiseb yn dderbyniadwy

22 Ebrill 2008

Ystyriaeth wreiddiol

11 Mehefin 2008

Rhoddodd y pwyllgor ystyriaeth gychwynnol i'r ddeiseb a chytuno i ofyn am friff gan Wasanaeth Ymchwil yr Aelodau.

(Gweler Atodiad 1 am y darn perthnasol o gyfarfod 11 Mehefin 2008)

2 Hydref 2008

Ystyriodd y pwyllgor bapur gan Wasanaeth Ymchwil yr Aelodau a chytuno i gau'r ddeiseb.

(Gweler Atodiad 1 am y darn perthnasol o gyfarfod 2 Hydref 2008 ac Atodiad 2 am y papur a ddarparwyd gan Wasanaeth Ymchwil yr Aelodau)

Clerc y Pwyllgor Deisebau Hydref 2008

Atodiad 1

Darn Perthansol o Drawsgriadau Cyfarfodydd y Pwyllgor Deisebau

11 Mehefin 2008

Val Lloyd: The third petition is quite interesting—'Psychological Traffic Calming'—which comes from an e-petition by Nick Tregoning and John Newbury. I suppose that I had better declare an interest, in that I know these two gentlemen.

Kirsty Williams: I also know them very well. [Laughter.]

Val Lloyd: Kirsty knows them in a slightly different way, but I know them because they live in my locality. They are calling upon the National Assembly for Wales:

'to request that the Welsh Assembly Government funds a pilot scheme in Dunvant, Swansea to examine the effectiveness of a psychological traffic calming scheme in the village'.

Hands up those who know exactly what a psychological traffic calming scheme is?

Kirsty Williams: I will have a stab at it, Chair. It is timely, given the One Wales Government's publication on speed limits yesterday, that there is a desire to look at issues of road safety and pedestrian safety. However, I admit that I am not particularly au fait with all of the elements of psychological traffic calming, so I would be more comfortable with having more information before making any further recommendations about what we could do with the petition. So, perhaps a briefing would be appropriate.

Andrew R.T. Davies: I concur. It sounds as if much more research needs to be done on this, and I think that a briefing from the Members' research service would be beneficial for all concerned.

Val Lloyd: I agree, so we will move ahead on that. For your information, we have received a message that the translation system is not working at the moment. Given that this petition is also an e-petition, we have clearly made a good move in moving to e-petitions.

2 Hydref 2008

Val Lloyd: The next petition is on psychological traffic-calming measures. This petition was submitted by the Guide Dogs for the Blind Association, if I remember correctly—no, I beg your pardon, there are two similar petitions, and this one was raised by two councillors in Swansea. I apologise to the Guide Dogs for the Blind Association and the councillors for my error.

We have received a very interesting paper from the Members' research service, which gives us information on psychological traffic calming and also on shared space, which we will be able to use when we come to the Guide Dogs for the Blind Association's petition.

Andrew R.T. Davies: I am not sure where we can take this. The report that the Members' research service has gathered together is comprehensive, and, hopefully, that will give the petitioners information. Reading through the wording of the petition, I think that this could be achieved through their constituency or regional Members

putting the request to the Welsh Assembly Government rather than the Petitions Committee, because it is not for us to tell the Welsh Assembly Government to carry out pilot projects. We have done the research part of this, and, hopefully, that will inform the petitioners' view to a greater or lesser degree. The logical way for them to progress their cause is to work through their elected representatives, and have them lobby on their behalf. We should send the report to the petitioners, but, other than that, I think that we should close the petition.

Val Lloyd: Are we all agreed?

Mr Davidson: I will have to check that the Members' research service is content for the report to be forwarded first.

Val Lloyd: Of course. It is its property, is it not?

Atodiad 2

Psychological traffic calming

This brief provides background information about non-physical traffic calming measures, also known as psychological traffic calming. It is mostly based on a study by the Transport Research Laboratory.

1. Introduction

Psychological traffic calming measures are non-physical measures and techniques that seek to encourage drivers to slow down. They are seen as an alternative to physical measures such as road humps that can be unpopular for a number of reasons.

The Welsh Assembly Government's policy regarding the use of different traffic calming techniques is set out in the *Manual for Streets*¹, published jointly by the UK Government and the Assembly Government in 2007. This recommends that the design of streets should determine vehicle speed and that a range of techniques can be used, including those based on psychology and perception.

The Transport Research Laboratory (TRL) carried out a study of alternatives to physical measures for the Department for Transport in 2005². This included a review of psychological measures, the use of focus groups and a questionnaire survey, driver simulator trials and an assessment of the impact of some measures introduced for a road passing through a village in Wiltshire.

The results of this study were that psychological traffic calming measures can be successful in reducing speeds and can be introduced in a way that is acceptable to local people. However there is no single measure that is widely applicable. Rather the principles and techniques need to be applied differently depending on the situation. There was some evidence that the most effective measures appear to be those where psychological and physical measures are combined and that over time psychological measures may become less effective as drivers get used to them.

2. Types of psychological measure

Measures that are in use include:

¹ Welsh Assembly Government, Department for Communities & Local Government, Department for Transport, [Manual for Streets](#), 2007

² Transport Research Laboratory, *Psychological Traffic Calming*, J Kennedy, R Gorell, L Crinson, A Wheeler, M. Elliott, TRL Report TRL641, 2005

- village gateway treatments, such as the use of coloured surfacing and painted speed limit ‘roundels’.
- perceptual measures such visually narrowing the carriageway through road markings and the use of coloured and textured surfaces.
- techniques which make the environment seem more complex or less safe (by increasing the perceived risk, not the actual risk)

According to the TRL, psychological traffic calming works within a number of design elements which affect the speed that drivers adopt as follows:

- Context – relating to the type of road and its historical character
- Scale – relating to the width of the road
- Proportion - to enclosing features such as trees or buildings
- Roadside activity – such as parked cars, pedestrians, bus and cycle lanes
- Road surface – coloured or textured surfaces to highlight a road feature or to visually narrow the road.

The concept of ‘shared space’, where the whole road space is available to all road users, including pedestrians and cyclists, is a separate but related concept. This has mostly been applied to ‘Home Zones’ and ‘Quiet Lanes’, where there are also likely to be physical constraints to reduce speeds. However concerns remain regarding the legibility and safety of such designs for vulnerable users, particularly those with sensory or mobility impairments, and the effects of the ‘shared space’ concept where there are higher levels of traffic or higher proportions of heavy vehicles.

3. Welsh Assembly Government policy

The Welsh Assembly Government’s policy regarding the use of different traffic calming techniques is set out in the *Manual for Streets*³, published jointly by the UK Government and the Assembly Government in 2007. This sets out guidance for local highway authorities and developers for the design of residential streets. Paragraph 7.4.4 states that amongst the traffic-calming methods that can be used are:

“Psychology and perception – street features and human activity can have an influence on the speed at which people choose to drive. Research suggests that features likely to be effective include the following:

- edge markings that visually narrow the road – speed reduction is likely to be greatest where the edging is textured to appear unsuitable for driving on;
- the close proximity of buildings to the road;
- reduced carriageway width;
- obstructions in the carriageway

³ Welsh Assembly Government, Department for Communities & Local Government, Department for Transport, [*Manual for Streets*](#), 2007

features associated with potential activity in, or close to, the carriageway, such as pedestrian refuges;

on-street parking, particularly when the vehicles are parked in echelon formation or perpendicular to the carriageway;

the types of land use associated with greater numbers of people, for example shops; and

pedestrian activity.”

The manual recommends that the design of residential streets should determine vehicle speed and that a range of techniques can be used, including psychology and perception.

4. TRL Research

Focus groups were used to consider photomontage showing different types of non-physical traffic calming measures in different road scenarios (eg: village, town centre, distributor road). A **questionnaire survey** was also used to consider these scenarios. The findings were that road narrowing techniques using a continuous coloured surface would reduce speeds, especially if pedestrians were present at the roadside. However such measures are likely to become less effective over time.

The main findings from the **driving simulator trials** were:

- using edge markings to visually narrow the road reduced speed.
- continuous or repeated measures were required to sustain speed reductions.
- coloured surfacing alone did little to slow traffic.
- a combination of physical and psychological measures (such as red brick narrowing of the road surface combined with build-outs to reduce forward visibility) were the most effective.

On-road schemes implemented in the village of Latton in Wiltshire were evaluated as part of the research project. The scheme implemented in 2004 at a cost of about £40,000 comprised:

- Stone gateways where the speed limit was reduced from 40 mph to 30 mph. The gateways were placed where they linked visually to the start of housing in the village.
- Build-outs with planting to create new parking bays on alternative sides of the carriageway.
- Removal of the centre white lining
- Enhancement at and around the main junction, with paved build-outs, a paved section of footway and paving around a stone monument
- Buff surfacing near the bus stops and the main junction
- New bus bays and shelters
- Lowering of the lighting columns to a height more appropriate for a minor road

The measures were therefore a combination of physical and non-physical ones.

Traffic flow and speed data were collected before and after the installation. Following installation in-bound mean speeds fell by 8 mph in one direction and by 4 mph in the opposite direction. Within the village itself, mean speeds fell by 7-8 mph. A public opinion survey was also conducted in the village. There was strong support for the scheme (77% in favour), with 75% approving of the visual appearance of the scheme. There were however concerns about removal of the white lining.

The overall conclusions of the TRL research was that

- the most effective measures were those with a physical as well as psychological effect.
- road narrowing techniques to visually narrow the appearance of the road and continuous or repeated psychological measures were the most effective.
- uncertainty appeared to reduce speed.
- psychological measures are likely to be more popular with residents than physical measures.
- there was an expectation that schemes would become less effective over time as drivers get used to them.

