

BATH AND NORTH EAST SOMERSET COUNCIL

PLANNING, TRANSPORT AND ENVIRONMENT POLICY SCRUTINY PANEL

TUESDAY 17TH JANUARY, 2012

IMPLEMENTATION OF 20 MPH SPEED LIMITS

1 BACKGROUND

1.1 The council has allocated £500k to implement 20mph speed limits in Bath and North East Somerset over the next 3 years. The purpose of this report is to consult panel members on the criteria used to implement 20mph speed limits within the district based on national guidance and case studies.

1.2 Since 1999, the Road Traffic Regulation Act has given traffic authorities the powers to introduce both 20 mph zones and 20mph speed limits without obtaining the consent of the Secretary of State.

1.3 These make possible two different means of implementing 20 mph speed limits. Broadly, these are:

- Use of speed limits, indicated by terminal and repeater signs alone;
- A zonal approach using terminal signs together with suitable traffic calming measures to provide a self-enforcing element, including 20mph roundels.

1.4 20 mph speed limits without self-enforcing features have the attraction of being relatively inexpensive to implement.

2 WHERE 20MPH SPEED LIMITS CAN BE IMPLEMENTED

2.1 Research into 20 mph speed limits carried out by TRL (Mackie, 1998) showed that, where speed limits alone were introduced, reductions of only about 2 mph in 'before' speeds were achieved. 20 mph speed limits are, therefore, only suitable in areas where vehicle speeds are already low, typically **where mean vehicle speeds are 24 mph or below**, or where additional traffic calming measures are planned as part of the strategy.

2.2 20 mph speed limits are unlikely to be complied with on roads where vehicle speeds are substantially higher than this and, unless such limits are accompanied by the introduction of traffic calming measures, police forces may find it difficult to routinely enforce the 20 mph limit. The council will therefore need to consult the local police force when considering possible 20 mph limits and thereafter as part of the formal consultation process

2.3 Consequently successful 20 mph speed limits should be generally self-enforcing and **generally should not be implemented on roads with a strategic function or on main traffic routes.**

2.4 Traffic Advisory Leaflet 09/99 (*20 mph Speed Limits and Zones*) (DETR 1999a) gives advice on how and where to implement 20 mph speed limits.

http://assets.dft.gov.uk/publications/adobepdf-165240-244921-244924/TAL_9-991.pdf

3. MONITORING

3.1 The success of any 20 mph limit will depend on the local authority being able to demonstrate that the measures introduced have shown a significant benefit. In the longer term this will generally be related to the reduction or the prevention of accidents. In the shorter term a good indication of whether a limit has been successful is the reduction in vehicle speeds to 20 mph or below. An appropriate method of measurement for speeds in 20 mph speed limits is to monitor the mean and 85th percentile speeds at the mid-point of a road.

3.2 The measurements should be taken in dry weather conditions at the position on a road where speeds are expected to be highest. Not every road would need to be monitored and specific locations chosen could represent up to five other roads of similar characteristics and measures. Speed measurements need to be taken at times when traffic is flowing freely. A sample size of 100 vehicles would normally be appropriate, but where traffic flows are low then measurement of light vehicles over a two hour period would be acceptable. If the results showed that the overall mean speeds at and between measures exceed 20 mph, then further speed controlling measures such as 20pm speed roundels would need to be installed.

3.3 Monitoring can increase the overall cost of schemes. However, if it is not done demonstrating worthwhile benefits might prove difficult.

4. CONSULTATION

4.1 The value of adequate consultation being undertaken cannot be over-emphasised. Without such consultation, schemes are likely to be subject to considerable opposition, both during and after implementation.

4.2 **The police need to be consulted** about a scheme. If sufficient measures to reduce and control speeds are not installed, then the limits will not be self-enforcing and the police could be faced with calls upon their time to enforce the 20 mph speed limit.

4.3 Residents within the limit would need to be consulted together with consultation with the fire and ambulance services and any bus operators will be necessary.

5. CASE STUDY: Portsmouth

Portsmouth City Council (PCC) is the first local authority in England to implement an extensive area-wide 20 mph Speed Limit scheme.

The implementation of the 20 mph Speed Limit scheme was carried out using a combination of post-mounted terminal and repeater signs. 20 mph speed

limit roundel road markings were also provided at street entry points on the carriageway adjacent to the terminal post-mounted signs. In some cases of limited visibility, they were also provided adjacent to the repeater signs.

For ease of installation the city was divided into six sectors: Central East, Central West, South East, South West, North East and North West. This amounted to 94% of road length (410 km of the 438 km of road length) in PCC.

On most of the roads where the speed limit signs and road markings were installed, the average speeds before installation were less than or equal to 24 mph. The relatively low speeds before the scheme implementation were because of narrow carriageways and on-street parking, which further reduces effective width of the carriageways. 20 mph signs were also provided on roads with average speeds greater than 24 mph in order to avoid inconsistencies in the signed speed limits in Portsmouth. One of the aims of the scheme was to be self-enforcing (avoid the need of extra Police enforcement) and partly to support the low driving speeds, and encourage less aggressive driving behaviour.

Overall there was an increase in the number of sites that demonstrated speeds of 20 mph or less after the implementation of the scheme. Many sites already had low average speeds of 20 mph or less before the scheme was implemented. At the sites monitored with higher average speeds before the scheme was introduced, there were significant reductions in average speeds. For example for the group of sites monitored with average speeds of 24 mph or more before the scheme was introduced, the average speed reduction was 6.3 mph. The average reduction in mean speeds on all roads was 1.3 mph.

There is insufficient data to comment about the effects of the scheme on traffic routes and volumes. The expectation is that because most roads had fairly slow average speeds before the scheme was implemented, that the changes are likely to have been modest.

Comparing the 3 years before the scheme was implemented and the 2 years afterwards, the number of recorded road casualties has fallen by 22% from 183 per year to 142 per year. During that period casualty numbers fell nationally – by about 14% in comparable areas.

There are no large apparent disparities between the casualty changes for different groups of road users (for example pedestrians compared to motorists) or between crashes with different causes. The number of deaths and serious injuries rose from 19 to 20 per year. Because the total numbers of deaths and serious injuries and of casualties by road user type and cause are relatively low, few inferences about the scheme's impacts should be drawn from these figures.

Qualitative surveys indicate that the scheme was generally supported by residents, although most of the respondents would like to see more enforcement of the 20 mph speed limits. The survey suggests that the introduction of the scheme has made little difference to the majority of respondents in the amount they travelled by their chosen mode. Levels of car travel stayed similar, whilst the level of pedestrian travel, pedal cyclist travel and public transport usage had increased for a small number of respondents.

In conclusion, early figures suggest that the implementation of the 20 mph Speed Limit scheme has been associated with reductions in road casualty numbers. The scheme has reduced average speeds and been well-supported during its first two years of operation.

6 PROPOSED NEXT STEPS

6.1 Implement the first 20mph speed limit pilot in Southdown, which is expected to be implemented in March 2012.

6.2 Identify the strategic and main traffic routes which will be excluded from 20mph speed limits.

6.3 Identify priority areas for implementation, focusing on the number of road accident casualties in each area.

6.4 Develop a 3 year delivery programme for cabinet approval in March 2012.