

From: David Brazier, Cabinet Member – Transport & Environment

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To: Environment, Highways & Waste Cabinet Committee – 3 October 2013

Decision No: 13/00063

Subject: Updated Policy for 20mph limits and zones on Kent County Council's roads

Classification: Unrestricted

Past Pathway of Paper: EHW Cabinet Committee, 4 July 2012

Future Pathway of Paper: For Cabinet Member Decision

Electoral Division: All electoral divisions

Summary: This report presents national and local evidence on the benefits of 20mph schemes and recommends a new policy that the County will seek to implement 20mph schemes when there are clear road safety or public health benefits. Any locally supported schemes that cannot be justified in these terms can still be implemented via the Member Highway Fund providing they are implemented as set out in Department for Transport Circular 01/2013.

Recommendation(s):

The Environment, Highways & Waste Cabinet Committee is asked to comment on a new policy on 20mph schemes which the Cabinet Member for Environment, Highways & Waste is minded to introduce:

(i) implement 20mph schemes where there is clear justification in terms of achieving casualty reduction as part of the on-going programme of Casualty Reduction Schemes.

(ii) identify locations for 20mph schemes which would assist with delivering targets set out in Kent's Joint Health and Well Being Strategy.

(iii) enable any schemes that cannot be justified in terms of road safety or public health benefits but are locally important to be funded via the local County Councillors Member Highway Fund. All schemes must meet implementation criteria as set out in DfT Circular 01/2013.

1. Introduction

1.1 At the 4th July 2012 meeting of this Committee an update was given on work Highways & Transportation were carrying out in developing a new policy on the implementation of 20mph schemes in Kent. This work included a trial of speed reduction measures outside schools in Maidstone which involved both formal and advisory 20mph schemes. The results of these trials were

intended to assist in the formulation of a new policy. At the meeting it was agreed that a new policy would be adopted once the trials had been evaluated. These trials have now been concluded and the results are contained within this report, along with other research and evidence.

- 1.2 As a result of this project Members are requested to agree an updated policy on the implementation of 20mph speed limits and zones. A new policy is required to respond to updated Government guidance on the setting of local speed limits which was issued in January 2013 and to campaigns both nationally and locally to introduce blanket 20mph in all residential areas.

2. Bold Steps for Kent and Policy Framework

- 2.1 This policy will feed in to the new Road Casualty Reduction Strategy which is being developed by Highways & Transportation to assist with meeting targets set out in Bold Steps for Kent and delivering the priorities set out in Growth Without Gridlock (GWG). Within GWG road safety is stated as a constant priority for central and local government. The recommendations made in this report will assist in meeting targets set out in Kent's Joint Health and Wellbeing Strategy. This decision relates to Kent's Local Transport Plan which is in the Council's Policy Framework.

3. Background

- 3.1 In recent years the demand for the implementation of 20mph schemes has been increasing in response to both local and national campaigns. A number of petitions have been submitted in recent years to Joint Transportation Boards requesting implementation of 20mph schemes. The Times newspaper has been running a national campaign encouraging local authorities to make 20mph the default speed limit in residential areas where there are no cycle lanes. This follows the tragic death of one of their reporters in a road traffic crash. A national campaign "20's Plenty Where People Live" actively promotes 20mph limits in residential and urban areas. In the 2011 British Social Attitudes Survey 73% of the public favoured 20mph limits in residential areas. A number of Highway Authorities have adopted policies introducing blanket 20mph limits in their town and cities.
- 3.2 KCC has been implementing 20mph schemes in Kent and has 50 schemes covering over 800 roads. In addition, all new residential developments are designed to keep traffic at 20mph although they are not always signed as such to avoid unnecessary sign clutter. The County's current policy allows the introduction of 20mph schemes at any location where such measures can be justified in crash savings terms or via the Member Highway Fund (MHF) providing they meet implementation criteria as set out in DfT Circular 01/2013.
- 3.3 In both 2006 and 2008 the County Council considered proposals to introduce a Kent-wide policy of 20mph limits outside all schools. On both occasions the County Council agreed not to adopt a county-wide policy and retained its existing policy of implementing them at specific locations where there was a clear and justifiable need.
- 3.4 The DfT published new advice on the implementation of 20mph schemes in its circular 01/2013 in January 2013 which contains guidance on the setting of

local speed limits. There are two distinctly different types of 20mph speed restrictions which are *limits*, which rely solely on signing, and *zones* which require traffic calming to reduce speeds. Highway Authorities have powers to introduce 20 mph speed limits that apply only at certain times of day. These variable limits may be particularly relevant where a school is located on a major through road that is not suitable for a full-time 20 mph zone or limit.

3.5 The following is a summary of the Government's guidance on the implementation of 20mph schemes

- Successful 20mph limits and zones are generally self-enforcing.
- Self-enforcement can be achieved either, by the existing road conditions or using measures such as signing or traffic calming to attain mean speeds compliant with the speed limit.
- To achieve compliance there should be no expectation on the Police providing additional enforcement unless explicitly agreed.
- The full range of options should be considered before introducing 20mph schemes.
- Zones should not include roads where motor vehicle movement is the primary function.
- While the Government has reduced the traffic calming requirements in zones they must be self-enforcing and include at least one physical traffic calming feature such as a road hump or build out.
- 20mph limits are generally only recommended where existing mean speeds are already below 24mph.

4. Primary School Speed Reduction Scheme Trials

4.1 In response to a petition submitted to the Maidstone Joint Transportation Board on the 28th July 2010 requesting the County Council implement blanket 20mph limits outside all schools and residential areas it was agreed to run a trial of low cost speed management schemes outside a number of Primary Schools in Maidstone. This trial, funded by local Members via their Highway Fund, included both formal and advisory 20mph schemes aiming to provide local evidence as to whether 20mph schemes near schools could provide cost effective road safety benefits. The proposed trial was limited to primary schools within 30mph speed limits. The following schemes were in operation by the end of October 2012:

- Broomfield Primary School - Experimental (up to 18 months) TRO 20mph at B2163 Leeds and (from George PH to just north of bend by the churchyard).

- Lenham Primary School - Advisory 20mph during school hours (using static signs and flashing lights) combined with a campaign to publicise this at Ham Lane, Lenham (Malt house Lane to Cherry Close).
- St. Francis Primary School - Advisory 20mph limit at school times using interactive VAS signs in Queens Road.
- Hunton Primary School - Minor signs and lines enhancements within current speed limit along West Lane.
- South Borough Primary School - Experimental (up to 18 months) 20mph TRO with four vehicle activated signs within existing 30mph limit at Postley Road, Maidstone.
- Allington Primary School - Control site included in pre and post evaluation at Hildenborough Crescent.

When the trial began it was agreed that the success criteria would be:

- change of perception of the perceived road safety danger to children on roads adjacent to schools as perceived by various groups to include Members, general road users, residents, and school users;
- change of perception of the perceived traffic speeds adjacent to schools as perceived by various groups to include Members, general road users, residents, and school users;
- influence a modal shift of journeys to schools;
- a manageable impact on traffic speed and Police enforcement requirements, and an
- increase in motorists' awareness to travel at appropriate speed outside schools.

5. Results of Primary School Speed Reduction Scheme Trials

5.1 Speeds outside the schools were surveyed prior to implementation, then after three and nine months. After three months the initial results were positive and in line with Government advice that 20mph limits without traffic calming generally reduce mean speeds by about 1mph.

5.2 After 9 months any benefits had mostly disappeared and perversely in most locations overall speeds had actually increased. The actual differences in speeds are very low and can be attributed to seasonal variation; both the 'before' and 3 month 'after' speeds were measured in the autumn and winter whereas 9 month 'after' speeds were measured in the summer when speeds tend to be slighter higher due to better weather. It should be noted that actual speeds during school peak periods (8am to 9am & 3pm to 4pm) are between 6% & 20% lower than the overall daily average. The mean speeds at the schools at peak periods varied between 21mph to 25mph, which would generally meet the DfT criteria for a signed only 20mph limit at school times.

- 5.3 Before and after questionnaires to capture the perception and opinion of respondents on the schemes were devised together with a local research company. A quantitative approach was adopted to the questionnaire design to allow easy codifying, although qualitative responses were received on some surveys and, where practical, these have been incorporated in the analysis.
- 5.4 The following groups were surveyed:
- a) Year 5 pupils in Feb 2012; latterly Year 6 in May 2013.
 - b) Parents, School Staff and Governors.
 - c) Local Residents – those in the immediate vicinity of the focus school.
- 5.5 The results are very mixed. In the majority of cases the perception is that safety has been improved, albeit very slightly from the *before* levels. These schools were originally identified to be part of the trials as the school or local community had raised concerns over the speed of the traffic. However the results of the perception surveys *before* and *after* tend to indicate that the main safety concerns are not with the speed of the traffic, but with parents parking and the congestion this causes which actually contributes to keeping overall speeds low at school times.
- 5.6 No conclusions can be made with respect to the personal injury crash records at the schools. In all but one of the schools (at Lenham there was one crash recorded at school times) in the three years prior to the implementation of the trials no personal injury crashes had occurred during school times. The County currently holds validated crash data up to the end of June 2013 and no crashes have been recorded since the schemes were implemented.

6. Evidence of the effect of 20mph schemes

- 6.1 Evidence shows that schemes which combine 20mph limits with traffic calming measures to reduce speeds have proved very successful in reducing casualties by around 40% to 60%. When only signing has been used the overall benefits are significantly less.
- 6.2 A report published by The Royal Society for the Prevention of Accidents on the installation of 20mph schemes concluded “The evidence supports the effectiveness of 20mph zones as a way of preventing injuries on the road. There is currently less experience with 20mph limits although they have generally been positive at reducing traffic speeds. They do not reduce traffic speeds as much as zones.”
- 6.3 The DfT states there is clear evidence of the effect of reducing speeds on the reduction of collisions and casualties, as collision frequency is lower at lower speeds; and where collisions do occur, there is a lower risk of fatal injury at lower speeds. Research shows that on urban roads with low average traffic speeds a 1mph reduction in average speed can reduce the collision frequency by around 6%. 20mph limits without traffic calming generally reduce mean speeds by about 1mph. There is clear evidence confirming the greater chance of survival of pedestrians in collisions at lower speeds. Important benefits of 20mph schemes include quality of life and community

benefits, and encouragement of healthier and more sustainable transport modes such as walking and cycling.

- 6.4 A review of the first 230 20mph zones in England, Wales and Scotland indicated that average speeds reduced by 9mph, annual crash frequency fell by 60%, reduction in child accidents was 70%, and there was a reduction in crashes involving cyclists of 20%. Traffic flow in the zones was reduced on average by 27%, but the flows on the surrounding roads increased by 12%. There was generally little measured crash migration to surrounding roads outside the zone.
- 6.5 The current safety record of the existing 20mph schemes in Kent which are a mix of both limits and zones shows that casualties recorded on 20mph roads in Kent as a proportion of all roads are 2% less than the national average.

7. Environmental Impact

- 7.1 There is no direct relationship between fuel economy and posted speed limits. The impact of 20mph schemes depends entirely on changing driver's actual behaviour and speed. Research suggests that lower speeds can actually increase emissions and at best there is unlikely to be any effect. What is clear is that free flowing traffic makes for the best conditions for the lower emissions and maximum fuel efficiency. 20mph schemes that encourage modal shift to walking and cycling and encourage slower, smoother, more considerate driving should result in a reduction in carbon emissions. Schemes that introduce physical traffic calming measures are likely to reduce fuel efficiency and increase emissions as they can encourage stop / start driving.
- 7.2 The Environment Act 1995 Part IV introduced new responsibilities for local authorities relating to air quality management. The approach authorities should follow is set out in the Nation Air Quality Strategy (NAQS) published in 1997 and updated in 2000. Road transport is a major source of pollutants, therefore the reduction of emissions from traffic through implementing traffic schemes plays an important role in meeting the objectives of the NAQS.

8. Public Health

- 8.1 From 1st April 2013 Kent County Council became responsible for a number of Public Health functions. One of these is the Health Improvement for the population of Kent – especially for the most disadvantaged. One of the areas identified in Kent's Joint Health and Wellbeing Strategy where Kent needs to do better and is performing worse than the national average is in obesity in adults. There is evidence that 20mph schemes do encourage healthier transport modes such as walking and cycling as in Bristol where preliminary results indicate increases in levels of walking and cycling of over 20%. An increase in the implementation of 20mph schemes could assist in the outcome of reducing obesity in adults and children in Kent and improving the overall health of the population.
- 8.2 The Department of Health asked the National Institute for Health and Clinical Excellence (NICE) to produce public health guidance on preventing unintentional injuries to those aged under 15 on the road. This guidance "NICE Public Health Guidance PH 31: Preventing unintentional road injuries among under-15" focuses on road design and modification. Recommendation

3 relates to measures to reduce speed and is targeted at Local highways authorities. In respect to 20mph their recommendations were:-

- Introduce engineering measures to reduce speed in streets that are primarily residential or where pedestrian and cyclist movements are high. These measures could include;

speed reduction features (for example, traffic-calming measures on single streets, or 20 mph zones across wider areas);

changes to the speed limit with signing only (20 mph limits) where current average speeds are low enough, in line with Department for Transport guidelines.

- Implement city or town-wide 20 mph limits and zones on appropriate roads. Use factors such as traffic volume, speed and function to determine which roads are appropriate.

9. Legal implications

9.1 The 1988 Road Traffic Act (Section 39) puts a Statutory Duty on the local authority to undertake studies into road accidents, and to take steps both to reduce and prevent accidents. This duty is currently enacted as part of our Casualty Reduction Programme where Highways & Transportation analyse all crashes that have occurred in the last three years and implement measures targeted at those locations where the maximum reduction can be achieved for the lowest cost. The current 20mph policy clearly aligns with this duty as 20mph schemes are implemented at any location where such measures can be justified in terms of crash savings.

9.2 The Equality Act 2010 (Disability Discrimination Act) sets out clear principles for the way in which public services should meet the needs of their customers, including disabled people. Specifically there is a duty to ensure that all reasonable measures have been taken to understand and accommodate their requirements inclusively and fairly. Highways play a vital part of providing the opportunities for people to move around safely and independently ensuring schemes are delivered which improve accessibility for the elderly, vulnerable road users and disabled people.

9.3 In general to avoid liability it is incumbent on the County Council to make balanced decisions on the setting of speed limits taking into account such social issues as health and obesity, environmental issues as noise and air pollution and especially have regard to the needs of disabled people, elderly people and people of all genders.

10. The Views of Kent Police on 20mph Schemes

10.1 Kent Police will not support 20mph speed limits unless the average speed of vehicles is 24mph or less, as research has shown that signed only 20mph limits where natural traffic calming is absent have little or no effect on traffic speeds and did not significantly reduce accidents.

- 10.2 Kent Police will not support the introduction of 20mph zones without sufficient traffic calming measures being in place and of appropriate design, that reduce the speed of most traffic to 20mph or less thereby making them self-enforcing.
- 10.3 With regard to enforcing 20mph speed limits or zones, Kent Police policy is not to routinely enforce them as they should be self-enforcing by design. The Police will respond on an intelligence led basis if there is a particular high risk issue identified, such as a motorist who regularly drives at very high speed through the area, providing that the speed limit or zone has been implemented to the current guidance/legislation.

11. Financial Implications

- 11.1 Currently 20mph schemes are funded either from the County's Casualty Reduction Programme or via the Members Highway Fund. The total Casualty Reduction Programme budget for 2013/14 for new schemes was £800k which goes to fund many different types of safety engineering measures across the county. The CRM programme is assessed every year, based on the annual crash cluster site reviews and route studies, and funding is allocated to those schemes which are predicted to achieve the maximum casualty reduction for the lowest cost.
- 11.2 Members can already fund 20mph schemes via their Members Highway Fund providing they meet with current DfT criteria. The 2013/14 budget for the MHF is £2.2m of which each member gets £25k minus fees to spend on any highway improvement scheme they deem necessary. In the last few years members have funded eight 20mph schemes at a cost of £120k.
- 11.3 The cost of any 20mph scheme will vary due to the location and objectives of the scheme. It is estimated that the typical capital cost of a 1km length of 20mph speed limit (signing only) is £1,400 and a 1km length of 20mph zone (including traffic calming) is £60,000. The capital cost is made up of the installation of the signs, posts and associated traffic calming measures. There are revenue costs associated with any scheme that will need to be considered which include the Traffic Regulation Orders, design, consultation, engagement, marketing, monitoring, on-going maintenance of infrastructure and enforcement.
- 11.4 As every scheme is unique in terms of locality issues it is very difficult to give a robust cost estimate as to how much it would be to implement a blanket 20mph limit or zone across Kent. However, a crude estimate based on the costs quoted above and the assumption that they would only apply to unclassified urban roads, the capital costs of a blanket limit across Kent could be around £3.4m. For a blanket zone across Kent (with calming measures) the capital cost could be over £146m. Assuming a typical scheme design fee of 15%, the initial revenue costs could be £510k for a limit and £22m for a zone. No estimate has been made for the on-going maintenance or monitoring of any blanket scheme and the additional enforcement costs to Kent Police.
- 11.5 These figures are likely to be an overestimate and would probably be spread over a number of years, but they do give an indication of the approximate overall quantum of funding required if Members were minded to adopt a

blanket 20mph policy. If the new policy was adopted costs would continue to be borne by existing CRM, MHF and general highways maintenance funding streams and from KCC's Public Health budget.

12. Conclusions

- 12.1 As with many highway issues there is no national prevailing view as to the policy a local Highway Authority should adopt regarding 20mph schemes. The issues are complex and there are many pros and cons to the various options as discussed in this report.
- 12.2 The evidence presented does give some clear indicators that the benefits of 20mph zones are much more effective than signed only limits, providing greater speed and casualty reductions. This comes at a price in that they will generally require some physical traffic calming measures which will be more expensive than signed only limits, and they can create environmental problems such as increased emissions, vibrations and noise. Experience in Kent over the last few years has shown that once traffic calming has been installed it can become very unpopular. Whilst calls for the introduction of blanket 20mph schemes are heard, the costs involved in installing blanket 20mph across Kent are prohibitive and, given current financial restraints, the existing philosophy of introducing bespoke targeted road safety schemes is a more efficient way of achieving casualty reduction.
- 12.3 The results of the trials conducted outside several primary schools in Maidstone show that speeds outside these schools at picking up and dropping off times are already low and would meet with DfT criteria for a signed only 20mph limit. However it was shown the installation of a limit has very minimal impact on actual speeds which is compatible with DfT advice on limits. Perceptions of the people affected by the schemes have been generally positive, however, the benefits were very minimal and the surveys indicated that parking and congestion were actually their greatest road safety concern. The proposal of installing 20mph limits outside all schools in Kent has been debated by the County Council in 2006 & 2008 where it was concluded on both occasions to continue implementing 20 mph schemes at locations where there was a clear and justifiable need for the scheme. Since these debates there is no clear national or local evidence which suggests a change in policy would be beneficial to Kent.
- 12.4 The County Council does receive criticism concerning its road safety intervention criteria which is based on targeting areas where there are already existing raised levels of personal injury crashes. As part of the new Road Casualty Reduction Strategy currently under development a new model is being investigated that would take into account risk factors, as opposed to simple crash statistics. This potentially will lead to road safety schemes being promoted where minimal or even no crashes have occurred and could include 20mph schemes. This Strategy will be reported to the December meeting of this Committee.
- 12.5 The benefits of 20mph schemes can also help with tackling public health issues such as obesity and asthma by encouraging more walking and cycling. They can also help people move around more safely and independently improving accessibility for the elderly, vulnerable road users and disabled people. With Kent County Council now responsible for the Health

Improvement of its population a greater use of 20mph schemes for this purpose alone should be promoted.

12.6 The DfT give clear guidance as to how 20mph schemes should be implemented and requirements for signing, lining and associated traffic calming measures in circular 01/2013. Kent Police, who are responsible for the enforcement of speed limits and a statutory consultee when implementing speed limits, clearly support this guidance, as do NICE. As part of this policy it is not recommended that Kent deviates from this national guidance when agreeing how a 20mph scheme should be implemented. In a recent High Court case it was ruled that a local Highway Authority did not have a lawful justification for departing from the relevant national guidance with respect to the use of tactile paving and based on this ruling there is no justification for Kent not adopting 01/2013 when implementing 20mph speed limits.

12.7 Taking in to account all the evidence gained from current local and national experiences there is insufficient evidence to recommend KCC adopts a blanket policy for the implementation of 20mph schemes. It is proposed that the County Council continues with its policy of implementing 20mph schemes where there is clear justification in terms of achieving casualty reduction as part of the on-going programme of Casualty Reduction Schemes. However, in addition it is now proposed to identify where 20mph schemes can be implemented that would encourage more walking and cycling notwithstanding the casualty record. This will assist with delivering targets set out in Kent's Joint Health and Well Being Strategy.

12.8 Any scheme that cannot be justified in terms of its road safety or public health benefits but is locally important can still be funded via the local County Councillors Member Highway Fund, providing they meet implementation criteria as set out in DfT Circular 01/2013.

13. Recommendation(s)

The Environment, Highways & Waste Cabinet Committee is asked to comment on a new policy on 20mph schemes which the Cabinet Member for Environment, Highways & Waste is minded to introduce:

(i) implement 20mph schemes where there is clear justification in terms of achieving casualty reduction as part of the on-going programme of Casualty Reduction Schemes.

(ii) identify locations for 20mph schemes which would assist with delivering targets set out in Kent's Joint Health and Well Being Strategy.

(iii) enable any schemes that cannot be justified in terms of road safety or public health benefits but are locally important to be funded via the local County Councillors Member Highway Fund. All schemes must meet implementation criteria as set out in DfT Circular 01/2013.

14. Background Documents

DfT Circular 01/2013

<https://www.gov.uk/government/publications/setting-local-speed-limits>

RoSPA Road Safety Information 20mph Zones and Speed Limits April 2012

<http://www.rospa.com/roadsafety/adviceandinformation/highway/20-mph-zones.aspx>

Speed Survey Results of School Speed Reduction Trials

<http://kent590w3:9070/documents/s42617/B1BG1part1SpeedSurveyResults.xlsx.pdf>

<http://kent590w3:9070/documents/s42618/B1BG1part2SpeedSurveyResults.docx.pdf>

Perception Survey Results of School Speed Reduction Trials

<http://kent590w3:9070/documents/s42619/B1BG2PerceptionSurveyResults.doc.pdf>

Summary of Evidence of the Effects of 20mph Schemes

<http://kent590w3:9070/documents/s42620/B1BG3SummaryofEvidence.docx.pdf>

Kent 20mph Crash Stats 2010 to 2012

<http://kent590w3:9070/documents/s42621/B1BG420mphCrashStats.xlsx.pdf>

Equality Impact Assessment

<http://kent590w3:9070/documents/s42622/B1BG5EIAScreeningGrid.docx.pdf>

15. Contact details

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