

From: Mike Whiting, Cabinet Member for Planning, Highways, Transport and Waste

To: Environment and Transport Cabinet Committee – 24 May 2019

Decision No: N/A

Subject: 20mph – policy review

Classification: Unrestricted

Past pathway of paper: N/A

Future pathway of paper: N/A

Electoral Division: County-wide

Summary:

Following the Government publication of new research relating to 20mph speed limits, the Cabinet Member for Planning, Highways, Transport and Waste requested a review of the County Council's approach to 20mph speed limits to ensure they met the requirements of the latest guidance.

Recommendations:

The Environment and Transport Cabinet Committee is asked to:

1. Note and comment on the contents of the report.
2. Note the proposed modifications to current approach to reflect current learning and best practice
3. Note that a series of research pilots should be undertaken to determine the effectiveness of alternative (innovative) traffic calming measures at locations where the prevailing road speeds are between 24mph and 28mph.

1. Background

- 1.1 Kent County Council's (KCC) approach to implementing 20mph schemes was established in 2013. A copy is provided in Appendix 1.
- 1.2 This is based on the 2013 Department for Transport (DfT) Circular 'Setting Local Speed Limits'. This follows the core principle that the existing road environment is key to the setting of appropriate speed limits.
- 1.3 In 2013, DfT revised the guidelines (DfT Circular 01/2013) and stated authorities could set 20mph speed limits in areas where local needs and conditions suggested the current speed limit was too high.
- 1.4 It went on to state (para 85) that: *"Successful 20 mph zones and 20 mph speed limits are generally self-enforcing."*

- 1.5 After deliberation by Members, this approach was agreed in 2013. Six school trials were undertaken. The Committee paper is included in Appendix 2.
- 1.6 To date, Kent has more than 1,000 roads that are subject to 20mph zones or limits.
- 1.7 In the past 24 months, 22 schemes covering 286 roads have been implemented.

2. Consistency

- 2.1 We have compared our approach to 20mph with other local authorities.
- 2.2 Hertfordshire, Durham, Essex and Wiltshire Councils have adopted a similar methodology. Specifically, they prioritise locations where the existing prevailing speeds are lower than 24mph.
- 2.3 Where speeds are greater than 24mph, additional traffic calming is required but the introduction of speed humps/platforms can be cost prohibitive and is often unpopular.
- 2.4 Some authorities, including Richmond and Watford, have set borough-wide or town-wide limits. In many instances, this approach has excluded strategic A/B roads. This is also true of the case studies contained within the Department of Transport (DfT) commissioned Atkins report into 20mph zones.

3. National Research

- 3.1 In November 2018, DfT published the Atkins Report which had been commissioned to collate national evidence on 20mph Zones.
- 3.2 The report found (see Appendix 4):
 - 20mph is the right speed where people and vehicles closely mix
 - 20mph schemes are very popular with the general public
 - 20mph speed limit schemes with little physical change bring an average reduction of 1 – 2 mph, with faster drivers potentially slowing more
 - There is a clear need for more enforcement
- 3.3 This report considers the use of more innovative and less intrusive traffic calming measures when existing speeds are between 24 and 28mph.
- 3.4 These lower cost traffic calming measures could include more innovative 'psychological' alternatives such as centre line removal, provision of bus build outs, changes to the location of parking bays (subject to TROs) or the provision of gateway features.

- 3.5 These traffic calming measures have been used elsewhere in the UK, and in some cases in Kent, to reinforce the new 20mph limits.
- 3.6 We have reviewed one of the largest and most recently installed 20mph schemes in the County (St John's in Tunbridge Wells) and the detail is included in Appendix 3.
- 3.7 In summary we have found that there has been a small reduction in speeds travelling on the majority of the roads where signed only limits were implemented and a more significant reduction in speeds on the road that required traffic calming measures to be installed (due to its existing speed being above 24mph at time of implementation).
- 3.8 Therefore, our local schemes seem to support the findings of the national research and would support an adaptation of our approach.

4. Kent Police

- 4.1 We consult with Kent Police in relation to the setting of appropriate speed limits.
- 4.2 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 traffic calming is absent have little effect on traffic speeds and have not been evidenced to significantly reduce accidents.
- 4.3 Kent Police are supportive of appropriate 20mph schemes where a high level of compliance is expected.

5. Legal Implications

- 5.1 The 1988 Road Traffic Act (Section 39) puts a Statutory Duty on local authorities to undertake studies into road accidents, and to take steps to both prevent and to reduce the severity.
- 5.2 We satisfy this duty through our Casualty Reduction Programme. The current approach to 20mph schemes aligns with this duty as the schemes can be justified in terms of casualty savings.
- 5.3 The Equality Duty 2010 sets out clear principles for the way in which public services should meet the needs of their customers, including disabled people.
- 5.4 The Traffic Management Act 2004, places a duty to secure the expeditious movement of traffic on their network. This requires balancing the needs of all road users.
- 5.5 Where decisions are required on the setting of speed limits, we are obliged to consider social issues such as active travel, health and obesity and environmental implications such as noise and air pollution.

6. Local Issues

- 6.1 Requests are received from groups such as '20's Plenty for Kent' and the Kent Association of Local Councils (KALC) to reconsider the current approach to implementing 20mph limits.
- 6.2 Local requests for 20mph schemes need to be assessed against our Casualty Reduction Programme, Active Travel Strategy and other related schemes. They also need to be tested against local opinion, as objections are often revealed when schemes progress to implementation.
- 6.3 Some requests have asked to make all residential streets in Kent 20mph. Others ask us to:
- Interpret the DfT (Setting Local Speed Limits) less rigidly to make schemes more affordable.
 - Set the default speed limit of 20mph in all new residential developments.
 - Implement all schemes supported by residents where funding is available.
 - Support local communities to source funding for new schemes.
 - Facilitate external funding by explicitly linking 20mph to active travel; and
 - Allow implementation of 20mph limits, without traffic calming, on roads where existing speeds are in excess of 24mph.

7. Next Steps

- 7.1 Understanding the issues and problems in an area is key in deciding what measures should be implemented.
- 7.2 Community support is key, and it has been proven that schemes with active community support are more successful and achieve more compliance.
- 7.3 To avoid moving the 'problem' (rat running, high speeds, increased traffic volumes) simply migrating onto neighbouring roads the surrounding road network needs to be considered.
- 7.4 Surrounding land use also influences the need for a 20mph scheme. For example, roads where community centres and leisure facilities are sited will generate more foot traffic including a wide range of users such as children and young people and would support lower speeds.
- 7.5 Similarly, 20mph schemes may be appropriate on roads where there are nurseries, schools or care homes, as there is increased likelihood of people needing to use cycles, mobility scooters and push buggies. Ideally, they should not have to mix with high speed traffic.
- 7.6 Whilst the current approach remains compliant, consistent with national standards and in line with other local authorities, there is merit in exploring the benefits of modifying the criteria required to implement a 20mph speed

limit as by, providing greater flexibility in the options available it may be possible to deliver improvement in a more cost effective or more timely manner.

7.7 It is recommended that the current approach is modified to reflect current learning and best practice

7.8 A two-stage approach is proposed:

Stage 1 Verifying community support.

This will be instigated and undertaken by the Town/Parish Council/Residents' Group who will seek local views to establish strong resident support. They will also secure a scheme "sponsor" such as a County Member/Parish or Town Council/ JTB.

Stage 2 Verify local benefits and need.

Following technical and safety compliance approval, the scheme will be appraised against an expanded list of local factors (see Section 9 below). This will establish scheme acceptance and a priority when compared to other acceptable schemes.

7.9 In view of this new methodology current policy should be amended to:

1. Consider where the intervention is likely to address several issues including reducing speeds, road crashes and improving the road environment for people walking and cycling.
2. Consider where there is clear evidence of local support which outweighs opposition.
3. Consider all of the factors affecting a road environment not only the existing average speeds.

7.10 In line with the original introduction of 20mph limits, it is recommended that a series of research pilots should be undertaken to determine the effectiveness of alternative (innovative) traffic calming measures at locations where the prevailing road speeds are between 24mph and 28mph.

7.11 We will work with Kent Police to develop an evidence base to support the future use of an expanded list of traffic calming measures.

7.12 In order to select suitable pilots, we will consider schemes that successfully undertake the two-stage process but have highlighted a prevailing road speed of between 24 and 28 mph and where the location supports the use of alternative traffic calming.

7.13 The pilot schemes would be evaluated 12 months after their implementation and outcomes reported back to this Cabinet Committee.

8. Expanded Consideration

- 8.1 To gather a wider knowledge of the needs and benefits of a 20mph scheme the following categories will now be considered. Each category will be individually weighted reflecting its specific location/circumstance:
- Casualty analysis
 - Public Health indicators
 - Existing speeds
 - Air quality
 - Road environment type
 - Cost effectiveness e.g. ability of the scheme to be self-enforcing with minimal intervention
 - Surrounding land use – what is the surrounding land use, is there land use which will generate more pedestrians and other vulnerable road users e.g. community centres, schools, shops.
 - Strong evidence of community support
- 8.2 This list is not exhaustive and may be modified subject to the specific issues of each location or in line with policy and/or available funding.
- 8.3 Appendix 5 provides sample criteria along with typical costs of ‘signed only’ schemes compared to those schemes that would require engineering measures.

9. Financial Implications

- 9.1 Schemes are funded from either our Casualty Reduction Programme, health programmes or from external funding such as Combined Member Grants or Parish Council funds.
- 9.2 Currently all schemes need to meet the 2013 DfT criteria.
- 9.3 £75,000 is available from Local Transport Plan allocation 2019-20 to undertake research schemes.

10. Recommendations

Recommendations:

The Environment and Transport Cabinet Committee is asked to:

1. Note and comment on the contents of the report.
2. Note the proposed modifications to current approach to reflect current learning and best practice
3. Note that a series of research pilots should be undertaken to determine the effectiveness of alternative (innovative) traffic calming measures at locations where the prevailing road speeds are between 24mph and 28mph

11. Contact details

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APPENDIX 1 : Existing KCC Approach to Implementing 20mphs

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.

APPENDIX 2 Copy of the October 2013 Paper

From: John Burr, Director of Highways & Transportation

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.
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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 20mphs 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-mphzones.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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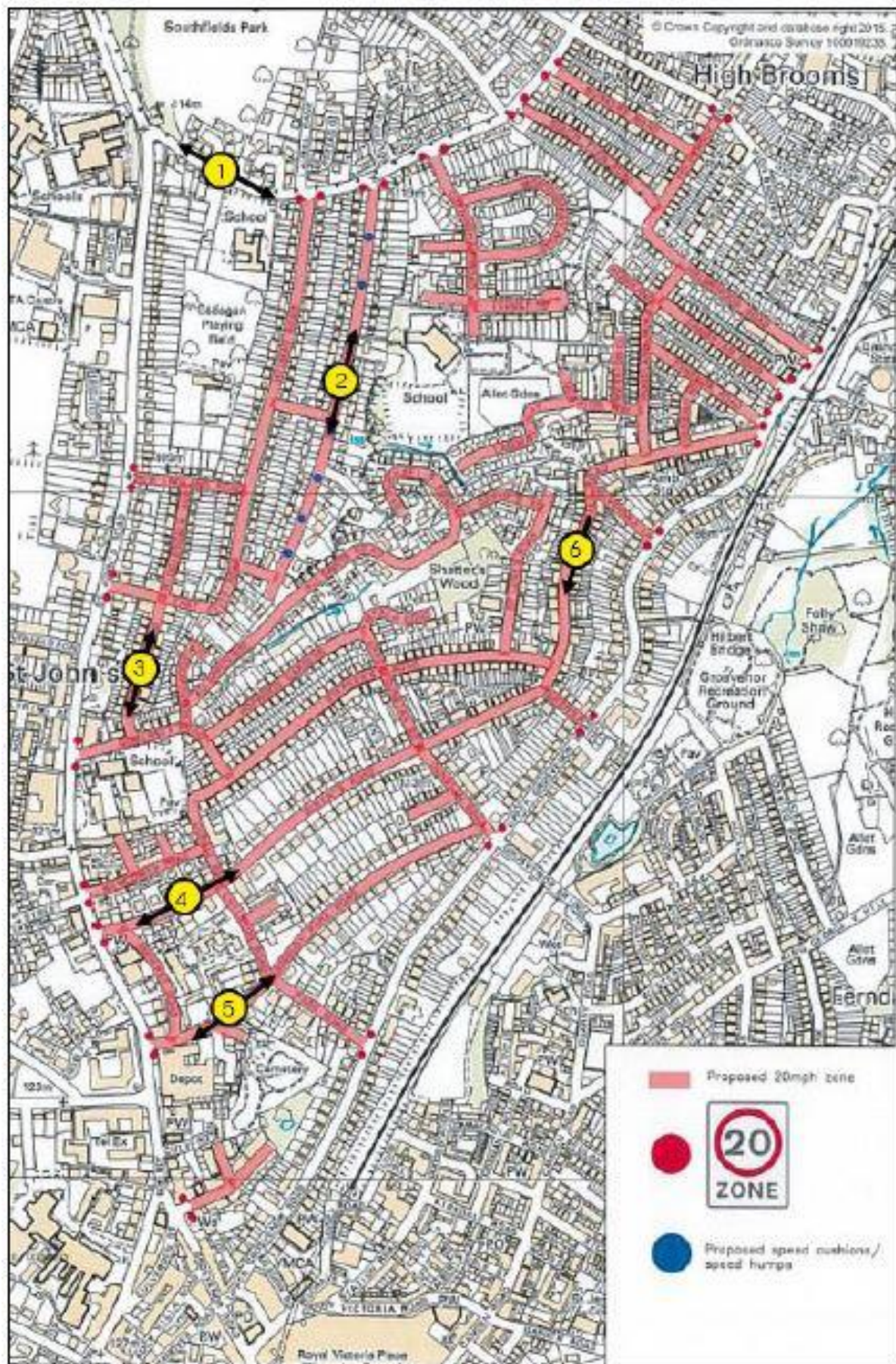
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Appendix 3 - Tunbridge Wells Case Study

- 3.1 The scheme at St Johns in Tunbridge Wells was part funded by the Combined Member Grant and part funded by LTP 2018-19.
- 3.2 The St John's area is situated within the district of Royal Tunbridge Wells and is a predominantly residential area with local shops and services on the outskirts. The key objectives of the St John's 20mph zone was to address residents and Council representatives concerns around driver's behaviour and vehicle speeds in the area. Heavy congestion on St John's Road (a main A road) resulted in vehicles looking for alternative routes and 'rat-running' through the residential areas, often at speed.
- 3.3 Traffic surveys were undertaken to assess the extents of the speeding issues and to be able to appropriately apply Kent County Council's 20mph policy to the area. The original surveys were undertaken over January/February 2016 with the follow-up surveys being undertaken in November 2017.
- 3.4 The plan, included at the end of this appendix, shows the extents of the St John's 20mph area, with the numbers indicating each street where comparison data was collected and with almost 2 years between counts, traffic speeds and volumes have had sufficient time to normalise.
- 3.5 The scheme was a signed only scheme on all roads where existing speeds were already below 24mph with one exception, Newlands Road which had mean speeds of over 24mph but under 30mph and speed bumps were installed on this road at regular intervals. The results are highlighted below.
- 3.6 Of the six surveyed streets, four have seen reductions in observed speeds, with one increasing and one unchanged. Not surprisingly the greatest reduction has been seen on Newlands Road where traditional traffic calming in the form of speed bumps has been installed. It is unclear whether or not this has caused any displaced speeding on other routes. Anecdotal feedback has been broadly positive; however, we receive complaints the speed limits are not always being complied with.



- 3.7 Newlands Road and Mereworth Road also had the greatest reduction in 85th percentile speed, indicating that driver perception of the route has been significantly modified. This is attributed to the physical measures installed on Newlands Road highlighting the entire route as 20mph, resulting in improved reductions on Mereworth Road over other roads in the area.
- 3.8 There was an increase in 85th percentile speed on Queens Road and Silverdale Road, indicating that the new speed restriction does not correlate with the existing environment. The 20mph zone has reduced traffic speeds in the area, meeting a key objective of the scheme.
- 3.9 Overall, the 20mph zone is considered an effective approach to reducing vehicle speeds and volumes in an area. The collected data indicates that routes with physical speed calming at some location along its length experience greater reductions in speeds and percentage reduction in traffic.



APPENDIX 4 - 20mph Research Study 2018

- 1.1 The Department of Transport's (DfT) November 2018 publication of the 20mph Research Study was undertaken by Atkins, AECOM and Professor Mike Maher (UCL). The study assesses the outcomes and effectiveness of introducing 20 mph speed limit schemes (i.e. reducing speed limits from 30mph to 20mph) in residential areas and town centres.
- 1.2 It is the only major UK study to date to consider multiple case study areas and provide a national overview. The study considerably strengthens the evidence base on perceptions, speed and early outcomes associated with 20mph (signed only) limits.
- 1.3 Overall the approach is based on evidence from twelve 'core' case study schemes, separated into three categories as seen in Figure 1. The schemes involved lowering the speed limit from 30mph to 20mph through signing, road markings and community engagement to raise awareness and encourage support. Notably, none of the schemes involved physical calming measures or changes to street design.
- 1.4 The majority of 20mph limits were implemented on roads where the average speed was typically less than 24 mph prior to implementation and therefore where 20mph limits were considered to be self-enforcing. The area-wide residential case studies excluded some roads, typically strategic (A and B roads), bus routes, distributor roads, streets with non-residential frontages, and wider roads where compliance was expected to be low.

Location	% Drivers 24mph or less	% Drivers within 20mph Limit	Median speed reduction
Residential Drivers	70%	47%	0.7mph
City Centre Drivers	85%	65%	0.9mph

Figure 1: Overall speed and driver behaviour change / compliance outlined in 20mph Research Study 2018

Category	Case Study schemes	
Predominantly residential schemes – small scale standalone , covering an individual neighbourhood (two schemes):	Walsall (Rushall)	Winchester (Stanmore)
Predominantly residential schemes – large scale area-wide schemes , covering a substantial portion of the town or city in question (eight schemes):	Liverpool (Area 7) Liverpool (Area 2) Middlesbrough Calderdale (Phase 1)	Nottingham (Bestwood) Brighton (Phase 2) Portsmouth Chichester
City or town centre and adjacent residential areas (two schemes):	Brighton (Phase 1)	Winchester (City Centre)

Figure 2: Twelve core case study schemes

- 1.5 The case study shows that the key motivations behind a scheme can be categorised as transport-related, health related, community-led or politically driven. Most schemes are driven by a combination of these factors.

Generally, 20mph limit schemes were seen to provide an opportunity to address a wide range of issues in a low-cost manner. Most schemes had various objectives including reducing road casualties, increasing walking and cycling levels, quality of environment, health and well-being and community benefits. Casualty reduction was not a key driver behind many of the case study schemes.

2. Support for 20mph limits

2.1 Levels of support: The study examines the level of support for 20mph (signed only) limits amongst different user groups through the questionnaire surveys. This showed high levels of post implementation support amongst cyclists (81%), residents (75%), and non-resident drivers (66%); but less support amongst residents in neighboring 30mph areas (44%) and from motorcyclists (29% supportive, 47% unsupportive). There was also little call for the limit to be changed back to 30mph (12% support amongst residents and 21% amongst nonresident drivers). The most common area of concern across all user groups considered was compliance: stronger enforcement measures were felt necessary for 20mph limits to be effective.¹

3. Speeds and drive behaviour change

3.1 The majority of 20mph limits were implemented on roads where the average speed was typically less than 24 mph prior to implementation and where 20 mph limits were self-enforcing. The area-wide residential case studies excluded some roads, typically strategic (A and B roads), bus routes, distributor roads, streets with non-residential frontages, and wider roads where compliance was expected to be low.

3.2 Evidence from the journey speed analysis showed that post implementation, 47% of drivers in residential areas and 65% of drivers in city centre areas (equating to 51% across both categories) complied with the new 20mph limit, travelling at speeds of less than 20mph. Whilst a substantial proportion were exceeding the limit, the majority travelled at less than 24mph (i.e. at speeds close to 20mph): 70% in residential areas and 85% in city centre areas.

3.3 The nature of the roads where the limits were introduced means that lower speeds were already 'self-enforced'. Reducing the speed limit to 20mph helped reinforce this lower speed.

3.4 The median speed fell by 0.7mph in residential areas and 0.9mph in city centre areas. Faster drivers reduced their speed more, with the 85th percentile speed falling by -1.1mph in residential areas and by -1.6mph in city centre areas, based on journey speed data. This is a key finding of the study as previous research has shown there is a correlation between higher speeds and increased safety risk. Results also suggest that road characteristics have more significant impact on the speeds drivers choose to

¹ Atkins, AECOM and Maher M., '20mph Research Study: Process and Impact Evaluation Technical Report', November 2018

adopt than whether the road has a 30mph or 20mph limit. Road categories and layout seems to have a greater impact on speed than lowering the speed limit.

3.5 Atkins therefore suggests looking at the following to determine which roads to include / exclude as part of 20mph schemes:

- Road Purpose
- Traffic flow
- Existing speeds
- Accident history
- Presence of schools and high level of pedestrian activity (e.g. commercial areas / facilities)
- Road environment and geometry
- Public opinion

4. 20mph zones and limits

4.1 There are two distinct types of 20mph schemes:

- 20mph limits – indicated by speed limit signs only; and
- 20mph zones – designed to be ‘self-enforcing’ through the introduction of traffic calming measures (e.g. speed humps and chicanes).

4.2 Although the Atkins study is primarily interested in new 20mph limits (signed only); some case study roads where the speed limit changed from 30mph to 20mph already had traffic calming in place, consisting of speed humps / tables or chicanes. These therefore became the new 20mph zones. Post implementation of 20mph limits, there is higher compliance on already traffic calmed roads.

4.3 Based on the findings of the study, the guidance set out in the DfT circular 01/2013 remains broadly valid as mentioned within the study.

5. Community support

5.1 It is important to note that there is a lot of public support for lower speed environments and 20mph schemes are usually well received; as residents become aware there has been some change (regardless of how beneficial it is to them), and sense the local authority has taken an interest in them and their community. The most effective 20mph schemes are those rooted in a broad integrated policy agenda, involving health, environment and community policy.²

5.2 The purpose of the research was also to inform future policy development on 20mph speeds and limits at a national and local level. This policy document is therefore written partly in response to the findings from the Atkins review.

² Atkins, AECOM and Maher M., ‘20mph Research Study: Process and Impact Evaluation Technical Report’, November 2018, p62

APPENDIX 5 Expanded Criteria : example and note on costs

Area Name	Street Name	Option limitations				Operating speeds		Collision (only speed related)			Traffic Volumes		Heavy Vehicles		Public Health		Surrounding Land use		Community Support	Preferred action	Score
		Highway Type	Suitable alternative link?	Bus route	Raised treatment ok?	Mean speed	Score	Minor	Serious / Killed	Score	AADT	Score	% of HGV's	Score	AQMA	Ranked score	Land Use	Score	Evidenced		
Residential Estate name - District or Borough name	Sylvan Rd	Local Access	N/A	Yes - Low Freq.	Maybe	28.0	0	2	0	2	6685	0	1.9%	1	Yes	3	Residential	5	Yes	Speed calming	34
	Arden Rd	Local Access	N/A	No	Yes	29.0	0	0	0	0	1215	4	1.2%	1	Yes	1	School	4	Yes	Speed calming	18
	Newmarket Rd	Local Access	N/A	No	Yes	19.0	2	1	0	1	8775	0	1.7%	1	No	0	Shops / community centre	4	Yes	Signs and markings	13.5
	Brantridge Rd	Local Access	N/A	No	Yes	19.0	2	0	0	0	8218	1	5.0%	0	Yes	2	Undeveloped	0	No	Signs and markings	11
	Furnace Dr	Connector	Yes	Yes - High Freq.	No	20.0	0	2	0	2	4376	2	0.2%	2	No	0	Undeveloped	0	No	No action	-

Costs

The cost of 20mph zones can vary significantly and will depend on the number of and the type and amount of traffic calming required.

Typical starting costs for the installation of a 20mph limit are zone are around £10,000 but this can vary dramatically. The costs include the Traffic Regulation Order, any Zone entry treatments such as signs on new posts and carriageway markings. There is also a cost associated with the required road safety audits (Stage 1,2 & 3 in some cases).

The overall cost for schemes that require traffic calming are higher as in addition to the Traffic Regulation Order there is a cost associated with the engineering measures – some typical examples are:

- blacktop speed hump approximately £1,350 each
- pre-cast concrete speed cushions from £7,250 per pair
- carriageway speed limit roundel £160 per pair
- chicane from £3,000 each
- Road safety audits £4050.

In addition to the above costs, there is also the road safety audit costs and potentially costs such as traffic management, restricted hours charges etc.