

Corporate Infrastructure and Regulatory
Services Scrutiny Committee

Traffic Speed Task Group

June 2019

Contents

Section		Page
1	Recommendations	2
2	Introduction	4
3	National Speed Policy Context	5
	Environmentally friendly vehicle Policy	6
4	Why do Drivers Speed?	7
5	Local Policy and Safety Context	8
	The SCARF Process	9
6	20mph Speed Limits	11
	Findings from the Atkins report	12
	20's plenty for us	13
7	Re-envisaging Traffic Speeds and Living Streets	16
	Safe Systems and Healthy Streets Approach	21
	Nudging Speed Down	22
8	Enforcement	26
	Community Speed Watch	28
	Speed Limiting Technology	29
9	Conclusion	30
10	Sources of Evidence	31
	Witnesses	31
	Bibliography	33
11	Membership	35
12	Contact	35
	Appendix I: Glossary of Terms	36
	Appendix II: Torbay Matrix for consideration of 20 mph	37
	Appendix III: Collision and KSI Data for Devon	39

1. Recommendations

The Task Group ask the Corporate Infrastructure and Regulatory Services Scrutiny Committee, Devon County Council Cabinet and the Police to endorse and take action on the report and recommendations below; with a report on progress against the recommendations in nine months' time.

Ambition	Recommendation	Agency	Timeframe
1. Taking a different approach to our policy of setting traffic speeds and embedding the safe systems approach	1.1 Review and refocus the Road Safety Strategy and current Speed Limits Policy to reflect; <ul style="list-style-type: none"> a) The wider consideration of health, sustainable travel and whole environmental impacts of speed management; b) Adoption of the safe systems approach; c) Inspirations from the TfL Healthy Streets Strategy; d) DfT 2013 Speed Limit Policy recommendations e) Public consultation on substantial changes. 	DCC	Within 6 months
	1.2 All new residential developments (over 50 houses) to be designed as 20mph from 2019 onwards.	DCC	From now
	1.3 Trial a default residential 20 mph limit in Newton Abbot and Kingkerswell.	DCC	
2. Supporting local areas to determine their own environment	2.1 Review the SCARF process to reflect changes made to the Road Safety Strategy and Speed Limits Policy, ensuring local communities have a meaningful and transparent say on proposed local schemes, using a matrix similar to that used in Torbay. (Appendix 2)	DCC	Within 6 months
	2.2 Develop a local toolkit that Communities and Town and Parishes can use to create Healthy Streets supporting a hyper local approach to communication on lower speeds as well as practical steps that can be taken in local areas. This should be supported where possible with practical support and training.	DCC Highways and Comms	9 months
3. Enforcement of existing limits	3.1 DCC to be more open to innovative trials, including associated monitoring, where safe to do so and funding can be secured.	DCC	From now
	3.2 A named County Councillor to sit on the Speed Watch Community development group to lead on the planning and development of Speed Watch across Devon.	Police/ PCC	From now

Ambition	Recommendation	Agency	Timeframe
	<p>3.3 Improving the approach and processes around Community Speed Watch to include;</p> <ul style="list-style-type: none"> a) Clear lines of communication with County and Parish Councillors as well as local police b) Resolution of the blockages in accessing equipment c) Better access to training for volunteers d) Publicity of other opportunities for people in Devon to volunteer to support local police work including Speed Watch. e) Consideration of a shared database to share and publicise speed offences – e.g. as used in Kent and Sussex. <p>To ultimately increase the number of communities involved in the Speed Watch programme.</p>	Police/PCC/lead Council or once appointed	From now
4. Leading by example	4.1 Sign up to the 'Driving for Better Business' initiative and promote across Devon.	DCC	From now
	4.2 The 'doing what matters' team to take forward the recommendations and report with leaders to ensure maximum impact.	DCC	Nine months
	4.3 Write to all Devon MPs to encourage Government to push for greater use of Intelligent Speed Adaptation for works vehicles eg. Buses, taxis etc.	DCC	On conclusion of review

2. Introduction

- 2.1 Speed, speeding and road safety have been consistent themes throughout the evolution of the scrutiny process at Devon County Council. The first task group concerned with speed was established by the Place Scrutiny Committee in 2008. Recommendations included taking a consistent and clear approach to the implementation of all speed limits and speed management across Devon be maintained and publicised, that representation be made to the government to change the guidance governing 20mph limits, and that 20 mph speed restrictions be pursued in the vicinity of Devon Schools. However, Cabinet resolved that 20 mph speed limits should only be introduced with reference to school's individual circumstances.¹
- 2.2 During the Place Scrutiny Committee meeting on 11 September 2015, Members requested that the Committee consider reviewing DCC's speed limit policy. There were concerns that the recent South Devon Link Road speed limit proposals risked compromising current DCC policy on speed limits. There were also concerns surrounding the implementation of the policy where some roads with 30mph limits had given way to unrestricted national speed limits.²
- 2.3 The Corporate Infrastructure and Regulatory Services Scrutiny Committee (CIRS) agreed on 12 June 2018 that a Task Group be set up to review DCC's existing speed limit policy. The terms of reference for the review were:
- to review DCC's existing speed limit policy;
 - to explore the ways in which vehicle speeds can be managed in conjunction with enforcement and education, for the benefit of people's health;
 - to consider how DCC could further involve local communities in decisions surrounding speed limits and to examine the approach of other local authorities to this; and
 - to understand how DCC's policy relates to anticipated government guidance.
- 2.4 Since its inception, the task group has met ten times and taken evidence from twenty-six witnesses, named at the end of this report. The task group also carried out a survey and then a focus group/round table discussion with Town and Parish Councils across Devon.
- 2.5 The Task Group has approached the issue of speed with a broader approach; viewing the community, road safety and appearance of vehicle speeds as having a significant impact upon community environment and human health. The recommendations and the conclusion in the report are designed to prompt policy makers to think differently about speed and move beyond a reductive intervention based only upon injury or death.
- 2.6 The Task Group has understood the difference between setting the speed limit on a road at the right level and then also ensuring that drivers comply with the speed limit. In some Communities even when traffic is travelling at the legal limit it can still feel too fast and deter healthy lifestyle choices. Technology is being developed that will limit speeds on vehicles, however this will only be useful in conjunction with the right speed limit. The task group would like to see communities playing a bigger part in setting and supporting healthy movements of traffic.

¹ Environment, Economy and Culture Overview and Scrutiny Committee 9/9/08, Minutes, <https://democracy.devon.gov.uk/CeListDocuments.aspx?Committeed=135&MeetingId=1464&DF=09%2f09%2f2008&Ver=2> (accessed, 05/06/2019)

² Devon County Council, minutes of the Place Scrutiny Committee, 11 September 2015, Item 90 – 'Speed Limit Policy'.

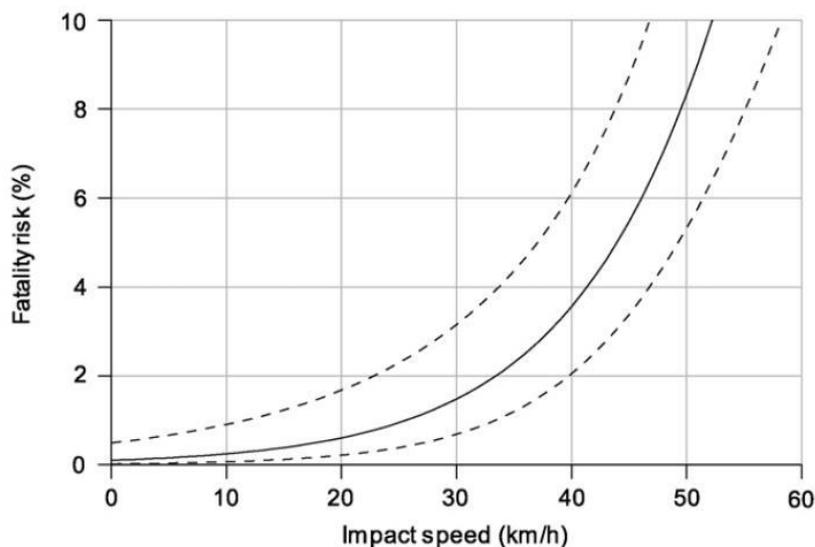
3. National Speed Policy Context

- 3.1 The Highways Agency is responsible for determining speed limits on the trunk road network. Local highways authorities can set their own speed limits on the local road network and in situations where local needs and conditions suggest a speed limit which is lower than the national speed limit, but these speed limits must be clearly signed. Local Highways authorities must also consider guidance issued by the Department for Transport when setting speed limits.³
- 3.2 Nationally there were 24,831 serious injuries in road traffic accidents reported to the police in 2017. There was a total of 170,993 casualties of all severities in reported road traffic accidents in 2017. This is 6% lower than in 2016 and is the lowest level on record. The number of fatalities aged 60 and over in reported road traffic accidents has increased from 533 in 2016 to 559 in 2017. This increase was driven by more older fatalities as pedestrians in 2017.

*'Local speed limits should not be set in isolation, but as part of a package with other measures to manage vehicle speeds and improve road safety'*⁴

- 3.3 Effective speed management involves many components designed to work together. Speed limits in areas where vehicle speeds are not self-limited by features such as on-street parking or by natural features such as road bends, are effective when supported by speed calming measures such as speed cushions or road narrowings. Increased road width and space are linked to increased vehicle speeds.⁵

Chart showing the correlation of speed and fatality



- 3.4 Impact speed is the underlying determinant of injury severity during traffic collisions. For every 1 mph reduction in average speed, collision frequency reduces by around 5%. Drivers travelling at higher speeds have less time to react to their environment. Longer stopping distances mean that resulting

³ Department for Transport, 'Speed Limits', Department for Transport Circular 01/2013, 'Setting Local Speed Limits', January 2013. <https://www.gov.uk/speed-limits> (accessed 07/05/2019)

⁴ Department for Transport, 'Setting Local Speed Limits', 01/2013, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/63975/circular-01-2013.pdf, (accessed 07/05/2019)

⁵ Department for Transport, 'Setting Local Speed Limits', 01/2013, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/63975/circular-01-2013.pdf, (accessed 07/05/2019)

crashes are more severe, causing greater injury.⁶ As speed increased, so does the severity of injury, this is demonstrated on the chart below where there is a fatality risk of 1.5% at 20mph compared to an 8% chance at 30mph. The dotted lines represent the 95% confidence interval.⁷

- 3.5 In built up areas the general speed limit is 30mph; on single carriageway roads it is 60 mph and on dual carriageways, 70 mph. However, in urban areas, particularly around schools, there has been a growing trend for local authorities to reduce the limit to 20 mph. It is important to remember that the speed limit is the absolute maximum - it does not mean that it is safe to drive at this speed in all conditions.⁸

Environmentally friendly vehicle policy

- 3.6 The effectiveness of speed management measures in reducing vehicle speeds must be matched with their appropriateness for local people and balanced with issues such as noise and air pollution and congestion. Managing vehicle speed is essential for sustainable transportation policies, which are friendly to the environment, promote safety, and protect public health. Community coherence and an improved environment are increasingly recognised as key outcomes of speed reduction measures.
- 3.7 Making engineering measures appropriate for local people is difficult to achieve. Dangerous vehicle speeds discourage forms of active travel such as cycling and walking. Excessive vehicle speeds also bring problems to communities such as noise pollution, which can undermine the quality of life of local people. When new speed calming measures are introduced, meaningful monitoring must be in place to ensure that these speed calming measures are having the desired effects on vehicle speeds.
- 3.8 There is a complex relationship between speed management and vehicle emissions. The effects of speed limits on air pollution should not be generalised; different studies have produced varying results and an uneven picture. The task group has heard that lower speeds are better for the environment to a point, as vehicle engines reach maximum efficiency at specific speeds. However not all vehicles are made equally, with different emissions and optimal running speeds between petrol and diesel cars, not to mention different engineering on different models. With at least one study demonstrating that lowering speeds to 20mph reduces NO₂ and CO₂ emissions for diesel cars but increases them for petrol cars⁹ and this does not apply to engines over 2.0 litres.
- 3.9 In urban environments, and where drivers do not maintain a constant speed, accelerating and frequently braking can disproportionately increase vehicle emissions. Traffic calming engineering works can unfortunately exacerbate this problem with heavy braking up to the measure (e.g. a chicane or speed hump) and then rapid accelerating away. As a result, the National Institute for Health and Care Excellence (NICE), has recommended “20 mph limits without physical measures to reduce speeds in urban areas where average speeds are already low (below around 24 mph) to avoid unnecessary vehicle accelerations and decelerations.”¹⁰

⁶ Taylor, M. C., Lynam, D. A. and Baruya, A. (2000), TRL Report 421 – ‘The Effects of Drivers' Speed on the Frequency of Road Accidents’. Crowthorne: TRL, cited in DfT, ‘Setting Local Speed Limits’;

⁷ The Royal Society for the Prevention of Accidents. ‘20mph factsheet’ <https://www.rospa.com/rospaweb/docs/advice-services/road-safety/drivers/20-mph-zone-factsheet.pdf> Nov 2017

⁸ House of Commons Briefing Paper, ‘Speed Limits in England’, 21 September 2017, p.3; <https://www.gov.uk/speed-limits>; The Department for Transport, ‘Speed Compliance Statistics, Great Britain: 2016’, 29 June 2017, p. 1.

⁹ Imperial College London; Transport and Environmental Analysis Group, Centre for Transport Studies: ‘An evaluation of the estimated impacts on vehicle emissions of a 20mph speed restriction in central London’, April 2013 <https://www.cityoflondon.gov.uk/business/environmental-health/environmental-protection/air-quality/Documents/speed-restriction-air-quality-report-2013-for-web.pdf> (accessed 06/06/2019)

¹⁰ National Institute for Health and Care Excellence, ‘Air pollution: outdoor air quality and health’, June 2017, p62 <https://www.nice.org.uk/guidance/ng70/chapter/Recommendations> (accessed 06/06/2019)

4. Why do Drivers Speed?

4.1 The task group spoke to a senior academic from the University of Exeter to better understand why drivers might speed to equip the task group with greater understanding upon which to base their recommendations. As well as to gain greater insight into some of the contradictions in speed policy and approaches and public opinion.

‘26% of drivers who support 20mph admit to frequently breaking those limits’¹¹

4.2 The task group heard that there is a difference between the cognitive attitude and the affective attitude of a driver. A cognitive attitude is the logical differentiation as to whether speeding is harmful or beneficial. (Is anyone going to get hurt/can I get to my destination quicker?) The affective attitude is the feeling as to whether speeding is enjoyable or not.

4.3 These attitudes do not have to be aligned, which leads to cognitive dissonance, meaning that speeding can be seen simultaneously as good and bad. If a motorist thinks speeding is probably bad but whizzing along a country road feels good, then they are likely to speed.

4.4 Feelings are a stronger determinant than rational thought, as demonstrated on the slide below. Furthermore, positive expectance beliefs and attitudes are more influential than negative ones in changing behaviour, particularly affective attitudes. Therefore, a negative cognitive attitude (I think speeding is bad) has the weakest influence on behaviour while positive affective attitudes (I love going fast) have the strongest.

What factors influence a driver’s decision to speed?

Speeding is ...	Good	Bad
What I think		Weakest influence
How I feel	Strongest influence	

- Why? Optimistic/positivity bias – “Bad things happen to other people”
- Is it actually a ‘decision’? How conscious are drivers of their ‘behavioural inventory’ ?



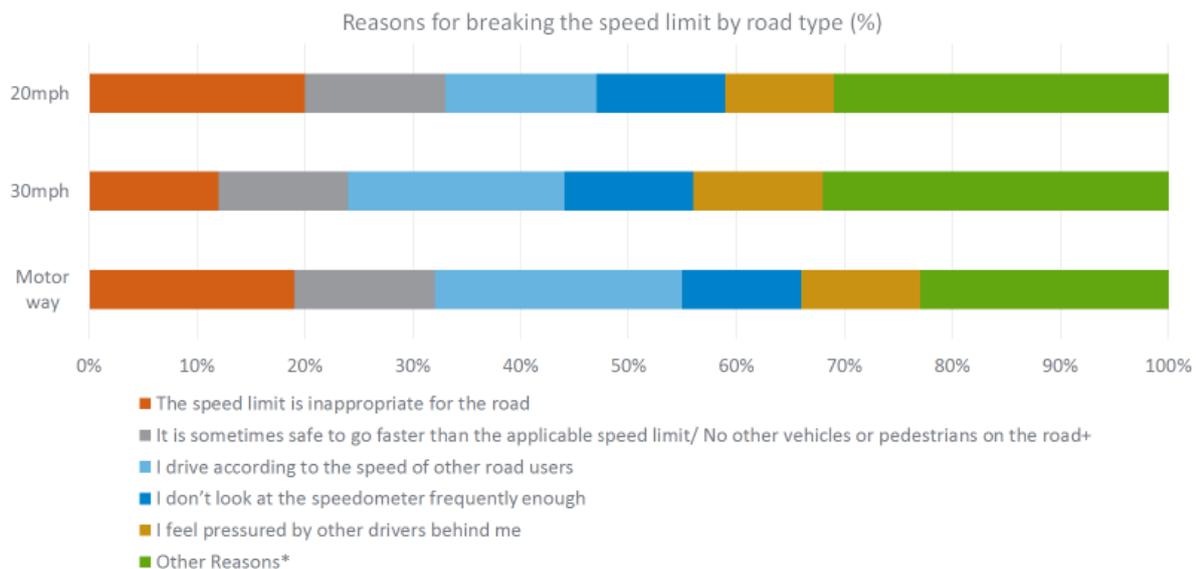
4.5 Perceived capability and perceived task difficulty also have significant impacts upon driver behaviour and risk taking. So, a road that appears hazard free, with clear visibility, smooth surface etc is more likely to encourage risk taking behaviour. If the driver in question has a high impression of their own

¹¹ Tapp et al 2015 ‘Vicious or virtuous circles? Exploring the vulnerability of drivers to break low urban speed limits <http://eprints.uwe.ac.uk/29286/3/Tapp%20et%20al%2020mph%20limits%20-%20paper%20responding%20to%202nd%20reviews%20-%20version%20sent.pdf> (accessed 06/06/2019)

skill as a driver, they are even more likely to break the speed limit. This is particularly an issue where low speed limits have been placed on inappropriate roads where faster speeds do not feel difficult to achieve. So, to decrease this, perceived capability must be reduced, and perceived task difficulty must be increased. Perceived capability can be reduced through education, persuasion and enforcement. Perceived difficulty can be reduced through engineering or other measures so that roads with slower speed limits feel objectively different to those with faster speed limits.

4.6 The RAC undertook research as part of their yearly review of motoring attitudes and behaviours. The graph below shows the self-reported reasons that people give for breaking the speed limit on roads with different speed limits.

Source: RAC Report on Motoring, 2017



12

5. Local Policy and Safety Context

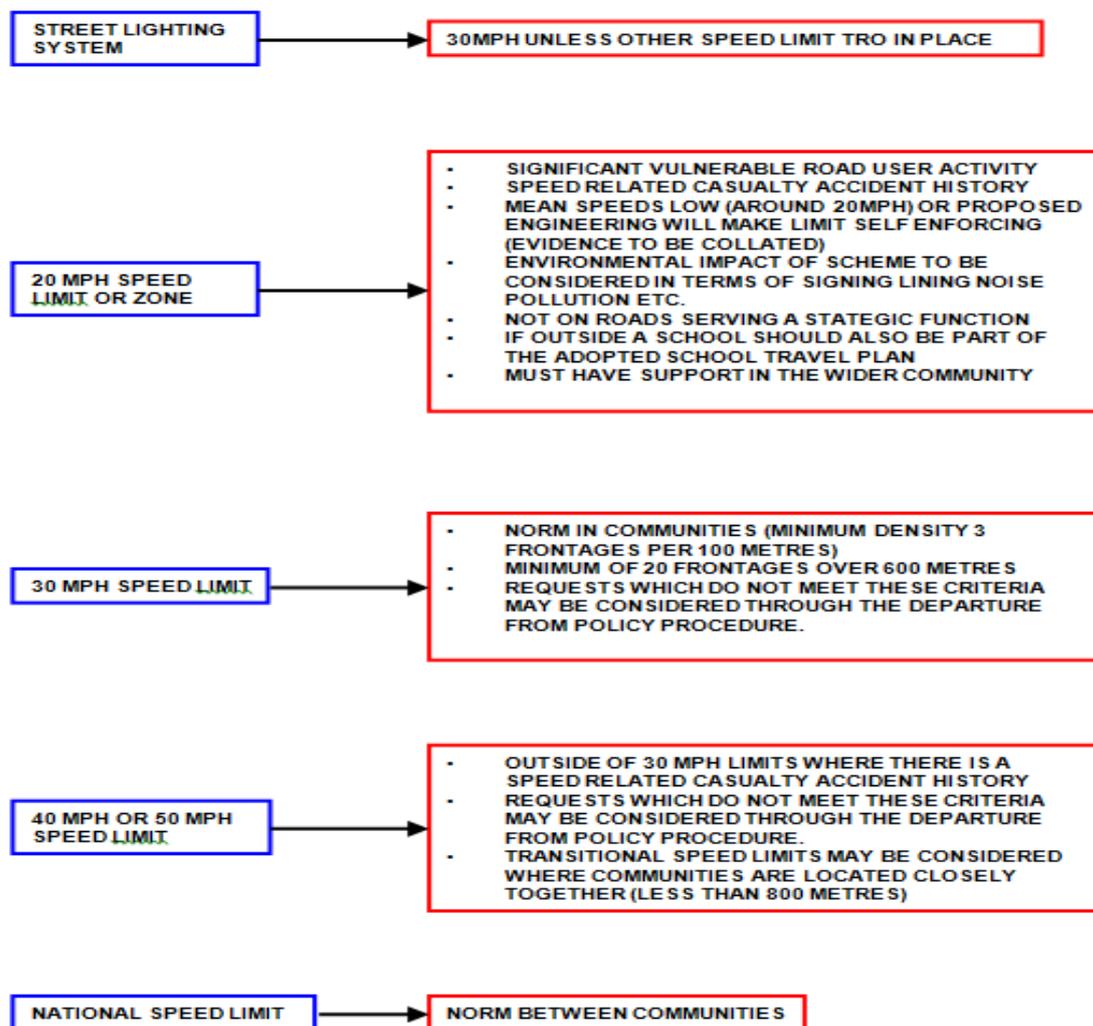
- 5.1 Councillors have reported that vehicle speeds are a highly emotive issue for the public. Groups such as older people (aged 60 and over) are more vulnerable to dangerous vehicle speeds. There is also an increasing number of older people in the population, especially in Devon.¹³
- 5.2 Appendix 3 of this report detailed the urban and rural road collisions from 2013-17. The heat map and associated graph in the Appendix demonstrates that collisions that result in casualties being killed or seriously injured (KSI) in Devon is increasing, particularly on rural roads. In Devon it is unsurprising that rural roads make up a consistent 70% of serious collisions over the past five years. The task group has heard that there are 48 collision clusters currently in Devon, if it were possible to address the top 20 then the authority could make some serious inroads in changing the trend. Treating these clusters would make a significant difference to the KSI.
- 5.3 Devon has a low number of children that are Killed or Seriously Injured (KSI) in traffic collisions but fears about the dangers of speeding from parents still exist and prevent some children from

¹² RAC, 'Report on motoring' 2017 <https://www.rac.co.uk/report-on-motoring/report-on-motoring-2017> (accessed 06/06/2019)

¹³ Department for Transport, 'Reported road casualties in Great Britain: 2017 annual report', 27 September 2018, p. 15, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/744077/reported-road-casualties-annual-report-2017.pdf (accessed 06/06/2019)

walking/cycling to school. This could have negative long-term health implications for children if their physical activity is limited.

5.4 Devon County Council Speed Limit Policy was last revised in 2009, the details of speed limit guidance can be found below. The most recent guidance from the Department for Transport on speed limits, particularly 20mph speed limits, was released in 2013. This guidance stated that Local Councils should “consider the introduction of more 20 mph limits and zones, over time, in urban areas and built-up village streets that are primarily residential, to ensure greater safety for pedestrians and cyclists”¹⁴. It was felt by Devon County Council that these changes to policy were unnecessary and due to budgetary constraints would not bring about any real change if implemented. The 20’s plenty campaign group was clear to the task group that this meant that the Council was not compliant with the latest speed policy.



15

The SCARF Process

5.5 The effectiveness of engineering measures in reducing vehicle speeds must be matched with their appropriateness for local people and balanced with issues such as noise and air pollution, congestion

¹⁴ Department for Transport, *Department for Transport Circular 01/2013, Setting Local Speed Limits*, January 2013, p5

¹⁵ Devon County Council, *Traffic Policy Note, Local Speed Limits*, DTP 34/05, November 2009, p3

and public transportation requirements. The task group has heard that traffic calming measures are often expensive to engineer and to maintain and there are challenges with funding. There was previously funding available for local changes such as traffic calming measures through the Local Transport Plan Budget. As outlined above, engineering measures are not always desirable as, in urban areas such as Exeter, introducing speed calming measures can lead to increased acceleration/deceleration and the associated problems of noise and air pollution.

- 5.6 The Speed Compliance Action Review Forum (SCARF) is the means by which speeding is analysed by DCC and Devon and Cornwall Constabulary, through this analysis it is determined what further enforcement action needs to be taken. To avoid duplication and to provide a co-ordinated, highly evidence-based response, DCC and the Police have developed a joint procedure to allow the concerns to be assessed in a consistent manner. SCARF makes use of data held by DCC, D&CC and the Peninsula Safety Camera Partnership (SCP) to ensure that assessment of complaints is evidence based. SCARF keeps records of its investigations and will not normally re-consider complaints that have already been assessed until a three-year period has elapsed.
- 5.7 The mean or average speed and the 85th percentile speed (the speed at which 85% of drivers travel at or below) are used to determine if there is a speeding issue and the appropriate intervention level. National Police Chief's Council (NPCC) guidelines are that enforcement may be appropriate where the mean speed is in excess of the Speed Limit or where the 85th%ile speed exceeds the speed limit by 10%+ 2mph. e.g. In a 30mph Speed Limit, a mean speed of 30mph would be normally be expected to have an 85th%ile speed of no greater than 35mph. The 5 potential outcomes from SCARF are demonstrated on the table below which has been produced by the task group based on information shared. It is important to note that outcomes from the SCARF process can be a blend of different measures.

Level	Recorded speed		Action Taken
	Average (Mean) Speed	85% of vehicles travel at:	
0	The speed limit	Not more than 15% above the Speed Limit.	No action or Speed Indicator Device (SID) Deployment.
1	The speed limit	Between 15% and 25% above the Speed Limit.	SID Deployment with Police support &/or Community Speed Watch.
2	Up to 15% above speed limit	Between 25% and 35% above the speed limit	Occasional Police or SCP Enforcement, suitable for an Educational Initiative eg. Police Speed Gun or Mobile Vehicle Activated Sign (VAS) deployment
3	Greater than 15% above Speed Limit	Greater than 35% above the Speed Limit	Level 3 Regular Police Enforcement and Review Signing consider Mobile VAS (See TMT02- Vehicle Activated Signs)
4	Greater than 25% above the Speed Limit		Suitable for SCP Mobile Camera Enforcement or Engineered Solution

- 5.8 When recorded speeds fall substantially outside of the guidelines this could indicate that the speed limit is either set at the wrong level or that Enforcement, Engineering or Education, Training and Publicity are required. In cases of consistently high levels of a speed limit being broken, this could be

taken as evidence that perhaps the speed limit is inappropriate. As such, in these cases, raising the speed limit and enforcing this should be considered. Indeed, inappropriate speed limits are considered potentially dangerous in that they can decrease the legitimacy of all other speed limits and create a disconnect between expectation (based on the posted limit) and the reality (the actual speeds travelled). If this disconnect between expectation and reality encourages inappropriate or unsafe behaviours amongst more vulnerable road users, then the risk of injury will rise. So it could be that the outcome of the SCARF process would result in raising a speed limit.

- 5.9 The SCARF process takes a clear evidence-based approach when speed limits are consistently broken to put in place interventions that are designed to improve compliance and therefore safety. However, the task group has heard several concerns about the process. Firstly, the approach relies on the local officer or enough residents and Councillors raising complaints, that may not be taken forward (see speech bubble below). Secondly the process can be cumbersome and lengthy to ascertain the evidence. Finally, the measures that are recommended are limited, often financially constrained, and may not address the actual problem.



The Parish Council has asked numerous times for traffic calming and a SCARF but have been declined.

16

- 5.10 The task group has understood that there is often a challenge between providing what residents are asking for and what the budget is able to deliver. Whilst the SCARF process does manage resources in an evidence-based way, it does not consider what residents are asking for. This is further complicated as often residents and PARISH Councils may have a solution in mind already, as in the call out above. The task group have heard examples of the successful implementation of different solutions to those that residents have asked for, particularly in Cornwall where residents wanted a bypass and instead had a shared space scheme. The onus upon the County Council is to understand what is the change that residents want, rather than what is the intervention that they think might best address the problem.
- 5.11 There is work underway to change the thinking of the organisation; the Doing What Matters team is supporting the organisation to fully understand what life really feels like for the people of Devon, and to put citizen need at the heart of everything. The Doing What Matters team is developing leadership to constantly test our assumptions about our work, about citizen need and about the interaction between the public and the services we provide. The team helps leaders to engage in continual learning in order to improve the way our work is designed and managed, based on new knowledge and understanding, so that we can truly make a difference to people's lives.

6. 20mph Speed Limits

- 6.1 20mph Speed Limits have recently undergone a great deal of scrutiny, most notably with the long-anticipated publication of the Atkins Report in November 2018. The report bases its theory of change on the assumption that lower speeds reduce the frequency and severity of accidents.

¹⁶ Task Group Survey free text box to all Town and Parish Councils

20mph zones vs limits?

A 20mph zone only requires one physical calming device (the rest may be roundels or repeater signs) there is little practical difference between zones and limits.

Most authority-wide 20mph implementations use a mixture of both to produce community-wide 20mph areas. Often a single legacy table or ramp may be used to designate a series of roads as a zone.

17

Findings from the Atkins Report

- 6.2 The Atkins report was a much-anticipated National study into the effectiveness of 20 mph. Using twelve core case studies comprising a variety of area types, road types, and scale:

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)

18

- 6.3 The schemes involved lowering the speed limit from 30mph to 20mph through signing and road markings and supporting community engagement activities to raise awareness and encourage support. None of the schemes involved the introduction of physical traffic calming measures or changes to the street design.
- 6.4 A majority of people from almost all groups surveyed were in favour of 20mph speed limits before and after implementation. However, there was a consistent net agreement post implementation that 20mph speed limits had not improved perception of area as a community environment.
- Analysis of TomTom GPS journey speed data shows that a substantial proportion of drivers were already travelling at less than 20mph prior to the introduction of the new limits and median before speeds were already close to 20mph, 44% in residential case study areas and 59% in city centre case study areas. However, these numbers increased by 6% and 3% respectively after the implementation of 20mph speed limits.
 - Journey speed analysis shows that the median speed has fallen by 0.7mph in residential areas and 0.9mph in city centre areas.
 - In residential areas, in the short term, the absolute number of collisions and casualties has reduced. However, due to similar experiences in control areas, the analysis indicates a high level of probability (generally more than 50%) that the relative reductions identified in the case study areas are due to chance, and that there is no meaningful difference between the reduction in the case study and comparator areas.

¹⁷ Information taken from witness session with Rod King from '20's Plenty' 2018

¹⁸ Atkins and Maher, *20mph Research Study Process and Impact Evaluation Headline Report*, Nov 2018, p13
<https://www.gov.uk/government/publications/20-mph-speed-limits-on-roads> (accessed 06/06/2019)

- 6.5 Although 69% of residents agreed that the 20mph limits are beneficial for cyclists and pedestrians, there was only a small (but significant) increase in the proportion of survey respondents stating that they have increased their use of active travel modes. Some 5% of residents surveyed said that they are walking more, and 2% said that they are cycling more, since the introduction of the 20mph limits.
- 6.6 Journey times are estimated to have increased by 3% in residential areas and 5% in city centre areas, however, the vast majority of residents did not see an increase in frustrated driving behaviour and there is little evidence of route changes, as only 8% of (non-resident) drivers said that they avoid driving in the area, and only 4% of residents felt that there are less vehicles using their road. This is congruous with testimony from 20's plenty below:

There is no evidence that there is any increase in congestion in 20mph roads compared to 30mph.

19

- 6.7 Longer term evidence from Portsmouth journey speed analysis shows an increase in 20mph compliance over time, from 58% one year after (2009) to 62% seven years after implementation. Implying that the positive effects from 20mph speed limits do not disappear over time.
- 6.8 **The summary finding from the research is that although the effects from 20mph speed limits are positive, they can be small at best. 20mph speed limits must be ensured to be appropriate to the road, for example if traffic speeds are already close to 20mph or are self-enforcing with measures such as traffic calming engineering.**

20's plenty for us

- 6.9 The task group spoke to Rod King, founder of The Campaign Group '20's Plenty' who was disappointed with the final Atkins report. The group highlight that the original objectives were not addressed, that the primary data used in the report has several limitations which are not taken into account, as well as the low numbers of figures used to limit the statistical validity of the data around casualty figures. The table below summarises the original objectives of the study and then gives the response from the campaign group:

Objective	Our assessment	
1. Effectiveness. To evaluate the effectiveness of 20mph speed limits, in a range of settings.	Not met	Methodology is flawed in comparisons made; uses data with inherent bias on speed measurements and data gathered is insufficient on casualties.
2. Perceptions. To examine drivers' and residents' perceptions of 20mph limits.	Met	The wide range of surveys are useful.
3. Cost/Benefits. To assess the relative costs/benefits to vulnerable groups e.g. children, cyclists, the elderly.	Not met	Cost-effectiveness was not assessed or compared with other interventions such as physically calmed zones.

¹⁹ Witness Session with Rod King, founder of 20's plenty

<p>4. Processes & Factors. To evaluate the processes and factors which contribute to the level of effectiveness of 20mph speed limit schemes.</p>	<p>Not met</p>	<p>These were discussed, but no evaluation made of the possible contribution in case studies chosen.</p>
--	-----------------------	--

20

- 6.10 The task group is very interested in the application of default 20 mph limits in Area-wide 20mph limits were first introduced in residential streets, city-wide, in Portsmouth. Portsmouth’s vision was for speeding on residential streets to become as unacceptable as drink driving. Initial results of the Portsmouth scheme were encouraging, with a reduction in average speeds (greatest on roads with the highest ‘before’ speeds), and indications that casualties have fallen.
- 6.11 Several English local authorities have since followed this approach by implementing 20mph as the default speed limit for residential streets, including Oxford, Bristol, Warrington, Islington, and Hackney. A greater number have made the political commitment to 20mph limits in principle, for example Norwich and Birmingham. The benefits of 20mph areas goes beyond a lowering of speed and many of the softer measures are harder to capture in statistical evaluation.

In Edinburgh a pilot implementation of the 20mph speed limit was found to have tripled the number of children cycling to school.

21

- 6.12 Rod King presented to the task group the five factors to consider and work into the introduction of a 20mph limit to ensure a successful change to speed:
- 1/ Conviction** – Is the traffic authority communicating conviction with an authority-wide implementation. This delivers the benefits to most drivers’ home streets and increases ownership? Or alternatively, is it communicating a lack of conviction by implementing in an isolated manner on a trial basis?
- 2/ Enforcement** – Do the police support the change in speed limit with a policy that includes some enforcement, so endorsing the mandatory nature of the limits? Alternatively do the police refuse to enforce and send a clear message that a 20mph limit should not be taken seriously?
- 3/ Previous speed** – When implemented across a wide area, many streets that already have a low speed will be included for consistency. Reductions will be less or not at all on such streets and higher where previous speeds have been greater. Hence overall averages of average speeds may well underestimate the reductions on faster streets.
- 4/ Engagement** – By recognising the social norming and engagement aspects of an implementation then the public will be far more aware of and buy into the values and benefits associated with the change. Especially if this is framed around making the community a better place for all. Public health specialists can bring useful skills and experience to such a behaviour change program. Alternatively, solely communicating via road signs is a poor substitute for engagement.

²⁰ 20’s Plenty for Us, *DfT 20mph Evaluation Conclusions*, no date; http://www.20splenty.org/20mph_evaluation_conclusions, (accessed 06/06/2019)

²¹ Edinburgh City Council Transport and Environment Committee, *South Central Edinburgh 20mph Limit Pilot Evaluation 2013*, August 2013, http://www.edinburgh.gov.uk/download/downloads/id/7820/south_central_edinburgh_20mph_limit_pilot_evaluation_2013.pdf 2.27, (accessed 06/06/2019)

5/Multi-agency approach – By approaching an authority-wide implementation with a team comprising Ambulance, Fire, Social Services, Traffic, Road Safety, Public Health, Police and Schools then each can play their part in setting this as a community enhancing initiative. Alternatively, only seeing it as a “traffic management” issue limits behaviour change and public buy-in.

6.13 In Torbay, a different model is used when assessing if an area should be lowered to 20mph. Their criteria for lowering to 20mph is to have two of either: Current mean speeds are at or below 24 mph, there is a depth of residential development and evidence of pedestrian and cyclist movements within the area and/or there is a record of injury accidents (based on police collision data) within the area, over a period of the last five years. Following this a matrix (Appendix 2) is used. This gives an example of how community support can be given more weight while still tackling speed limits through an evidence-based approach.²²

6.14 The task group followed up two authorities that had successfully reported their introduction of 20mph limits, these are detailed in the boxes below. There are key aspects of both schemes that are reflected in the 20’s plenty step by step approach above. This includes the need for early engagement and winning over hearts and minds. In Sefton much of this was done after the introduction of 20mph. In Bristol the publicity campaign started much earlier. The task group would like DCC to explore default 20mph limits and evaluate how they work locally, learning lessons from other authorities that have already done this.

Introduction of widespread 20mph zones in Sefton

In 2011, following the widely publicised conversion of all residential roads within Portsmouth, Elected Members requested a similar process be carried out within Southport. This was discussed in a report and on 3 October 2011, Sefton Cabinet Member – Transportation widened this request to include the whole of Sefton and introduced an annual rolling programme, funded from Sefton’s Local Safety Scheme allocation within the Capital Programme.

The rolling programme started in 2012/13 and completed in 2015/16. Approximately eight self-contained areas were treated each year. In each of these areas, consultation packs and questionnaires were hand delivered to every property in the area. This resulted in a spread of support for the introduction of the 20mph speed limits ranging from 53.4% to 94%, with an average of 74.7% of residents supporting the schemes over the four years of the programme. An average reduction of 1mph in 85%ile speeds has been observed since the introduction of the lower speed limits.

Sefton are complimenting the introduced speed limits with education, training and publicity programmes funded from the Capital programme for the next four or five years. The publicity/education programme that the Task Group has seen in Sefton’s local press comprises of subliminally ‘drip fed’ information every week in the local free papers. These messages highlight the advantages and reasons why people should drive at lower speeds in residential areas. They have no reference to Sefton Council. The messages change every week and hopefully prompt the reader to think about how they drive and understand how their actions impact upon others.

²² Torbay Council, *20mph Speed Limit Policy Criteria*, no date, <http://www.torbay.gov.uk/DemocraticServices/documents/s63224/Appendix%201%2020%20mph%20Residential%20Criteria.pdf>, (accessed 30/05/2019)

Introduction of 20mph limits in Bristol

In 2010 two pilot areas of 20mph were trialled in the inner-city area and the results proved very fruitful which led to a Cabinet report. This agreed to rollout 20mph citywide and from Sept 2013 to Sept 2015 the speed limit was implemented across the whole city in six phases.

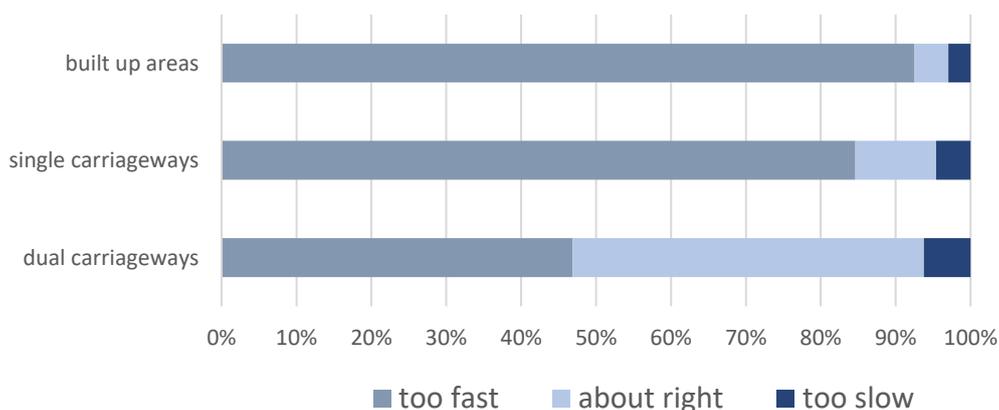
The results are that 90% of roads have a 20mph with a 30/40 and 50mph network of main arterial routes, although some main road in the centre of city are 20mph due to the volume of pedestrians and cyclists in the area. The overall outcomes of the project are to ensure reduced speed limits continue to help improve active travel and subsequently health and wellbeing for residents and make streets safer for all road users. The 20mph speed limits are wholly sign based interventions and rely on driver compliance to adhere to the speed limit (as is the case for all speed limits).

The rollout also included a comprehensive monitoring programme and in Feb 2018 the Bristol Twenty Miles Per Hour Limit Evaluation (BRITE) study was produced by the University of the West of England (UWE). This independent peer reviewed report assessed the impact of 20mph speed limits and found a reduction in road speeds and fatalities following road collisions since the lower speeds were introduced. 94% of surveyed roads have slower speeds, active travel levels have increased and there was a significant reduction in the number of fatal, serious and slight injuries and commensurate significant financial savings for the NHS. (www.bristol20mph.co.uk). A dedicated website was set up and there is now a Facebook page and twitter account to continue this work which has been invaluable as an engagement tool.

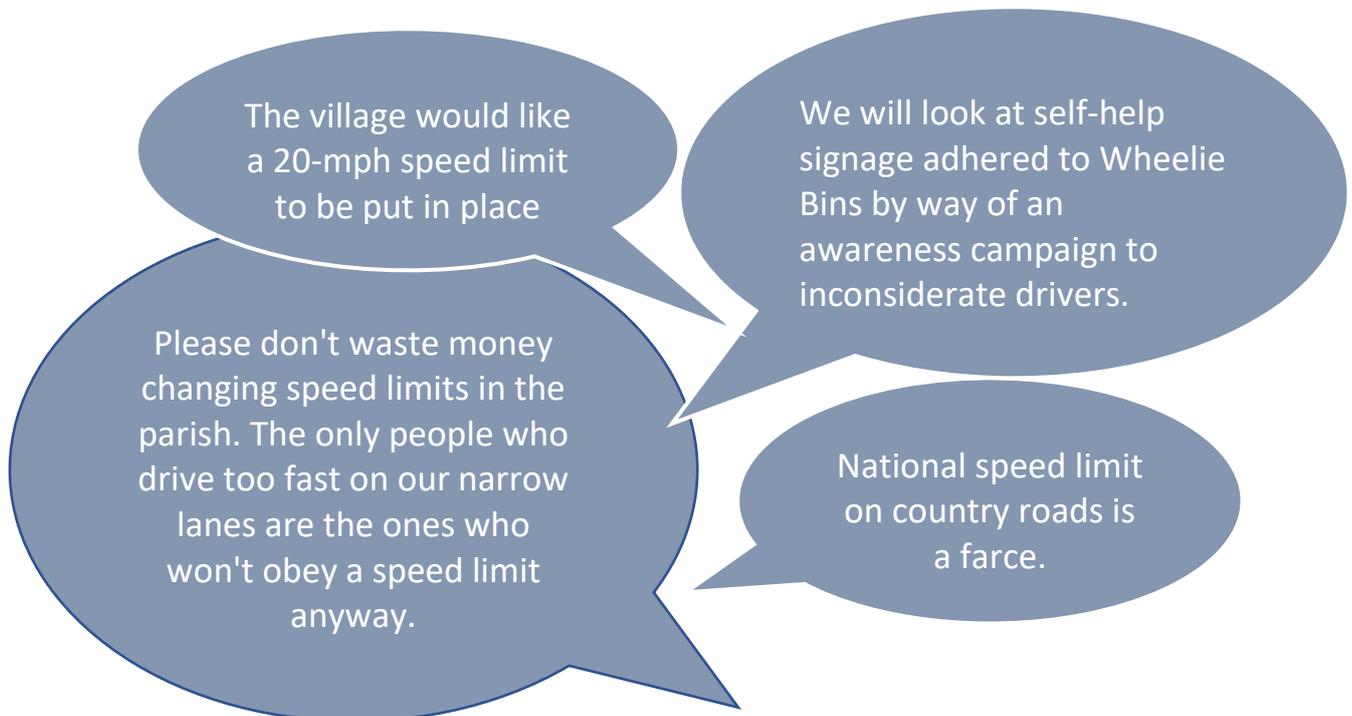
7. Re-envisioning Traffic Speeds and Living Streets

- 7.1 The task group undertook a survey to all Town and Parish Councils with the purpose of testing local opinion on speed limits. The response rate was 69, which is approximately one fifth of the Councils in Devon. Most respondents feel that vehicles travel too fast, especially in built up and residential areas:

Town and Parish Council views on speed



- 7.2 Conducting a survey in this way did highlight limitations in road descriptors as the task group had limited scope to precisely define single carriageways where passing is possible compared to single carriage ways where there can be significant differences between urban and rural roads.
- 7.3 Of the 46 comments referring to speed, 32 spoke of ways to reduce speed, but only 21 gave a reason as to why they wanted to see traffic slowed. The most common reason for wanting slower speeds was safety, the only other concern spoken of was traffic congestion/volume. The most popular measures to reduce speed were greater enforcement and greater physical traffic calming measures/signage. A selection of typical comments is graphically shown below:



- 7.4 Respondents to the survey were also invited in to a focus group/round table discussion about speed. The table below is a summary of the main points that were raised coupled with suggestions that could help the issues

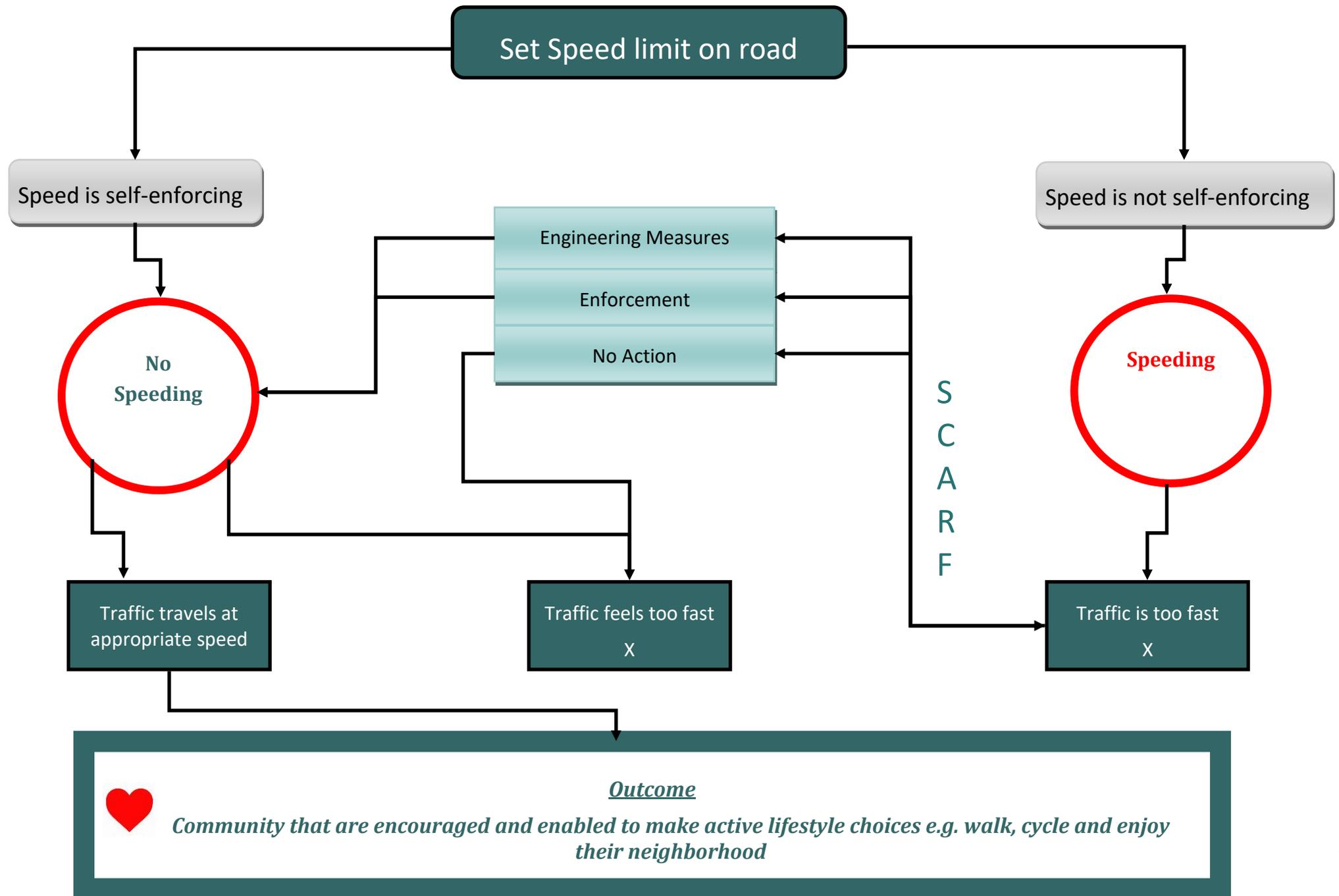
Challenges/problems	Possible solutions
<p>Changing the speed limit to a lower speed</p> <ul style="list-style-type: none"> - Will only be reduced if the average speed is fairly close to the proposed new speed. - traffic speed policy does not take into account local opinion and observations - Traffic speeds are not in keeping with growing rural communities 	<ul style="list-style-type: none"> ➤ policy to have the ability to be more proactive to speed problems, rather than reactive ➤ Changes to the SCARF process to listen to residents. ➤ More regular reviews of speed limits ➤ 'Quiet Country Lanes' adopted as a classification with a maximum speed of 50mph
<p>Reducing speeding (drivers being within the speed limit but driving at inappropriate speeds)</p>	<ul style="list-style-type: none"> ➤ Hard hitting informational posters ➤ Signage tactics from communities ➤ Flashing lights next to a school to alert drivers picking up/dropping off time at the

Challenges/problems	Possible solutions
	<p>school. This could be used more extensively in Devon.</p> <ul style="list-style-type: none"> ➤ More enforcement ➤ More innovative methods of ensuring speed remains close to a speed limit.
<p>20mph Speed Limits seen as somewhat ineffective but lots of communities would still like them.</p>	<ul style="list-style-type: none"> ➤ Have to be accompanied by traffic calming measures
<p>Engineering measures</p> <ul style="list-style-type: none"> - no budget given for traffic calming measures until there is a history of road traffic accidents in that area. - not all physical traffic calming engineering measures are helpful or achieve the right result. - Nothing can be done until there is a fatality! - Vehicle Activated Signs have proved to be unsuccessful 	<ul style="list-style-type: none"> ➤ Community could invest themselves ➤ Vehicle Activated Signs which show the speed of the vehicle may be more effective ➤ Communities expressed a wish for DCC to engage more with such methods as tree planting, road colours and other such cost-effective methods.
<p>Rat-running through small villages creating a large problem with the volume of fast-moving vehicles which are unsafe and unsociable</p>	<ul style="list-style-type: none"> ➤ Sat navs may be sending large vehicles down small and inappropriate country roads. It would be beneficial if there were a warning to alert people as to when they were in a residential area
<p>Community Speed Watch</p> <p>One community set up a community Speed Watch and managed to gain vehicle activated signage as a result. This did not change speed, however. It did garner much abuse toward the Speed Watch volunteers. The fear of harassment of Speed Watch volunteers was echoed by others.</p>	<ul style="list-style-type: none"> ➤ More support from the Police for Community Speed Watch and more visible support.

- 7.5 The task group has considered the testimonies from witnesses and put together the diagram over the page, which attempts to demonstrate the nuances that even in cases where the majority of speed is not breaking the speed limit, it may still feel too fast. This in turn can set the tone around safety for the neighbourhood. The task group asserts that an approach is required where roads are viewed as one aspect of a community and can act as an enabler for better health.
- 7.6 The speed set on any road will be informed by the local interpretation of National Policy. It may already have some features that make drivers adhere to the speed limit. The policy guidance suggests setting speed limits in line with how fast traffic is already travelling. If for example in a twenty mph zone the road is narrow and frequently has parked cars down one side, with several turns and corners, drivers are unlikely to exceed the speed limit. In an ideal world traffic meeting this speed limit will be felt by pedestrians and residents to be part of an environment where roads are safe spaces. This means that the goal – of promoting health environments has been met. However,

an alternative outcome is that although traffic is complying with the speed limit, it still feels fast. This is likely to be a deterrent to pedestrians and cyclists and may even encourage residents to get in their cars more for short journeys like taking their children to school.

- 7.7 Going to the other side of the diagram, a speed limit is set with a road that is not self-enforcing – this may be at a higher speed, or simply one where the topography does not lend itself to maintain the speed limit – for example with a long, straight road in a 30 mph. This scenario sees motorists breaking the speed limit. The next stage in the process is that through traffic monitoring, residents or Councillors complaining the SCARF process is initiated. Assuming that the SCARF process goes ahead, an evidence-based solution will be suggested. This could be engineering measures, to calm traffic on roads where the limit is being most severely broken. It could be enforcement on roads where the limit is still being broken, or it could be community speed watch, or no action if most of the traffic is travelling within the speed limit. This determination and subsequent action may resolve the concerns, reducing the actual speeding as well as the perception of speeding. However, it may be that traffic still feels too fast for residents, even if most of the traffic is staying within the speed limit. This is likely to inhibit walking and cycling and road us for vulnerable users.
- 7.8 One concept that the task group discussed was the idea that speeding and travelling too fast could and should become socially unacceptable, in the way of drink driving or smoking. A societal shift in attitude to speed would potentially negate the need to respond with engineering measures or enforcement.



Outcome
 Community that are encouraged and enabled to make active lifestyle choices e.g. walk, cycle and enjoy their neighborhood

Safe Systems and Healthy Streets Approach

7.9 The need for a different approach has been heard throughout the task group’s investigation. The Safe System approach is one that aligns road safety management with broader ethical, social, economic and environmental goals. By creating partnerships where government or transport agencies work closely with other groups. Given the complex multi-agency and multi-sectoral context of safe system methodology, it requires careful leadership by top management of organisations to bring together the unique contribution of each agency. Safe System has five pillars of action:

- Safe Roads
- Safe Speeds
- Safe Vehicles
- Safe Road Users
- Post Collision Response



23

7.10 In 2017 TfL published their Strategy on the Healthy Streets Approach. This is a street planning strategy which tries to re-prioritise the pedestrian, vulnerable road users and public transport while reducing pollution and congestion, to make for an environment which promotes health and wellbeing.²⁴ The strategy uses 10 Healthy Street indicators as cornerstones of its guidance around streets. These are:

²³ PACTS; ‘Developing Safe system road safety indicators for the UK http://www.pacts.org.uk/wp-content/uploads/sites/2/PactsReport_-_Developing-Safe-System-Road-Safety-Indicators-for-the-UK_Oct18-FINAL.pdf

²⁴ Transport for London, *Healthy Streets for London*, London, February 2017, p6-11

- | | |
|--|----------------------------|
| 1) Pedestrians from all walks of life | 6) Easy to cross |
| 2) People choose to walk, cycle and use public transport | 7) Places to stop and rest |
| 3) Clean air | 8) Shade and shelter |
| 4) People feel safe | 9) People feel relaxed |
| 5) Not too noisy | 10) Things to see and do |

Of these, Pedestrians from all walks of life and people choose to walk, cycle and use public transport are shown as being the most important while the remaining eight help to support these two.²⁵

7.11 The Healthy Streets approach gives a great deal of guidance on how these indicators may be implemented. One of the main recommended methods of achieving a Healthy Streets approach is a reduction in traffic speed;

“If we could reduce the speed of vehicles, then the street would feel safer, more relaxed, less noisy and easier to cross. A street with slower moving traffic is likely to attract more people to walk, cycle and spend time in it. Reducing speeds may involve physical traffic calming but also requires changing the way the street feels and how it is used, to encourage people to drive with more care. This can all help encourage people to feel more comfortable playing, socialising, exercising and resting in the street environment.”²⁶

Speed reduction is one the many example methods of achieving the Healthy Streets Indicators suggested. It is of course most effective when paired with other goals such as traffic volume reduction, promoting community ownership and reducing street clutter.

7.12 In the absence of government targets for road safety the task group advocates a Performance Indicator approach which measures progress against key indicators of collision outcome severity. These are taken from the recommendations in ‘Developing safe system road safety indicators for the UK Parliamentary Advisory Council for Transport Safety, in association with Ageas’. These are in line with the Safe system approach:

1. Traffic complying with speed limits on national roads
2. Traffic complying with speed limits on local roads
3. Drivers who do not drive after consuming alcohol or drugs
4. Car occupants using a seat belt or child seat
5. Drivers not using an in-car phone
6. Passenger cars with highest safety rating
7. Major roads with appropriate safety ratings
8. Emergency medical services arriving at priority accident scenes within 18 minutes.

Nudging Speed down

7.13 The task group head from the University of Exeter about the potential to apply Nudge Theory to reduce speeds travelled. Nudge theory alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives.²⁷ To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. For example, putting fruit at eye-level counts as a nudge, whereas banning junk food does not.

²⁵ Transport for London, *Guide to Healthy Streets Indicators*, London, November 2017, p4

²⁶ Transport for London, *Guide to Healthy Streets Indicators*, London, November 2017, p26

²⁷ Thaler, R. and Sunstein, C. ‘Nudge: Improving Decisions About Health, Wealth and Happiness’ 2009

- 7.14 Nudge theory can be used to encourage a more positive affective attitude towards following speed limits and a negative affective attitude to speeding. A ‘nudge’ is a cheap and easy cue in the environment that alters people’s behaviour in a predictable way without forbidding any options or significantly changing their economic incentives.
- 7.15 Strategies to decrease speeding could therefore include:
- In depth training, although this must be done carefully, to ensure it does not simply increase confidence
 - Social and public campaigns to stigmatise speeding
 - Improved road design, where roads feel that they should be a maximum of the speed limit
 - Reminder campaigns which use behavioural science approaches
 - Specific local campaigning and Community Speed Watch to reinforce the visible presence
- 7.16 A crucial aspect of access relates to the extent to which neighbourhoods can be described as walkable. That is, the ease with which pedestrians can get out and about around outdoor spaces, services and facilities, which has significant implications for sociability, health and well-being. Walkable environments consider not only the physical design of routes, but also features and facilities that are inclusive of the widest possible range of needs; for example, places for people to rest along their journeys, including well designed seats and benches, accessible toilet facilities, signage and street design that is sensitive to a range of needs and that can help with orientation and wayfinding.
- 7.17 Examples of this being attempted in a rural setting can be seen through such legislation as Section 268 of the Transport Act 2000, “Quiet lanes and home zones” which was later clarified further by the Quiet Lanes and Home Zones (England) Regulations 2006.
- 7.18 The law gives local authorities the power to create Home Zones and Quiet Lanes. Quiet Lanes are a designation that can be given to small rural roads that are extensively used by walkers, cyclist and riders with the aim to increasing the awareness of drivers. Evidence surrounding the scheme shows mixed results. DCC considered implementing the legislation in 2006. In a 2006 DCC Transport Plan Environmental Assessment it was given a brief paragraph of rejection.²⁸ where it stated that “the concept of Quiet Lanes is supported by the Areas of Outstanding Natural Beauty and The Countryside Agency, and so they should be reconsidered by Devon County Council in the future”.
- 7.19 The DCC document makes reference to a Department for Transport Traffic Advisory Leaflet 03/04 which in turn is summarising a study done on the effect of Quiet Lanes.²⁹ The leaflet in question shows that the results of how effective Quiet Lanes are is mixed. A reduction in speed compared to control roads was seen in only one of the three tested Quiet Lanes. However, they were a popular idea both before and after implementation, traffic flows were seen to decrease on Quiet Lanes and, perhaps most importantly, driver awareness increased.
- 7.20 A very similar policy to the Quiet Lanes was considered by Devon County Council as a part of the Rural Road Safety Demonstration project back in the late 2000s with a Green National Speed Limit Sign. This scheme was ultimately abandoned though due to surveys showing that the Green National Speed Limit Sign was not understood enough by the public in relation to the traditional national speed limit sign.³⁰
- 7.21 However, a reduced speed approach has been taken across Dartmoor National Park in response to high numbers of animal deaths, see box below:

²⁸ Devon County Council, *Strategic Environmental Assessment Statement: Devon Local Transport Plan 2006-2011*, http://www.devon.gov.uk/sea_statement.pdf (accessed 18/01/2019)

²⁹ Department for Transport, *Traffic Advisory Leaflet 3/04*, June 2004, <http://www.ukroads.org/webfiles/TAL%203-04%20Quiet%20Lanes.pdf> (accessed 18/01/2019)

³⁰ Department for Transport, *Taking on the Rural Road Safety Challenge*, Report Annex 1, March 2011, p124 <https://webarchive.nationalarchives.gov.uk/20121103223512/http://www.dft.gov.uk/publications/taking-on-the-rural-road-safety-challenge/> (accessed 18/01/2019)

Case Study: 40mph Dartmoor National Park Authority

- High numbers of livestock killed or injured on Dartmoor's roads – **448 between 2015 and 2017**; many of these have been killed by speeding motorists
- Animal carcasses are not only unsightly; injured livestock cause local farmers financial damage through veterinary bills. Dead livestock have even greater financial repercussions for farmers. Dartmoor is not only a tourist area but an agricultural environment. The National Park is also protected for its wildlife
- To reduce the number of livestock killed on Dartmoor's roads through speeding, the DNPA has undertaken a package of measures which include a combination of **legislation, education, and enforcement**. These measures are:
 - 1) **Legislation** - The introduction of blanket 40 mph speed limits to large parts of Dartmoor
 - 2) **Education** - The use of Vehicle Activated Signs (VAS) to remind drivers about the 40 mph speed limits. There are three VAS units, rotated around 6 sites throughout Dartmoor
 - 3) **Education** - The use of signage to raise awareness about animals crossing roads and the numbers of animals killed and injured by speeding motorists.
 - 4) **Enforcement** - Joint work with the Police and DVLA through the Dartmoor Rangers surrounding the enforcement of speed limits



Do you know what's around the next corner?

Follow the **RANGER CODE**

We have miles of unfenced roads and bridleways, with livestock roaming freely to find the best place to graze, farmers in large vehicles, walkers and cyclists. Please be aware of other users and keep to speed limits.

www.dartmoor.gov.uk

LOVE MOOR LIFE



Share the Roads and Bridleways

- 7.22 Home zones are a form of shared space scheme. They consist of residential streets in which the road space is shared between motor vehicles and other road users, but with the emphasis on those who walk and cycle and on children³¹ (see Countrywide initiative) with funding from the Local Transport Plan (LTP) to introduce traffic calming measures and to make speed limits more self-enforcing. They allow local residents to become involved in shaping speed limits. An example is Burnthouse Lane, Exeter.
- 7.23 Another innovative potential solution to traffic speed is the use of optical illusions. In most instances, these take the form of two-dimensional road markings designed in such a way as to seem to be three-dimensional objects. Transport for London undertook a pilot of optical illusion speed cushions in 2014 in Newham and then followed this up in 2016 on Southwark Street with the same optical illusion speed cushions. These were, therefore, merely painted onto the road, but done in such a way as to appear to be normal speed cushions to approaching drivers. Although the Task Group cannot locate the raw results from this pilot scheme it was reported at the time that “nine months after the early tests were implemented, results suggested that speeds had come down by 3mph on average”.³² Such pilot schemes of optical illusion street painting are ongoing, with the UK’s first 3D zebra crossing being created in early 2019 in St John’s Wood, London³³
- 7.24 The task group has been unable to identify sufficient research and no peer reviewed data on an empirical study of interventions that gives a clear steer on which interventions work most effectively. It is likely that this is because the nuances of different roads are very difficult to effectively compare. It would be extremely helpful if Central Government were to share expert views and analysis on the efficacy of interventions. In the absence of such clear direction, the task group has sought to collate some measures that may be of use to local communities and in the production of such guidance at a local level. However, the inclusion in the report does not mean that these initiatives are recommended:

³¹ House of Commons Library, *Roads: Home Zones*, <http://researchbriefings.files.parliament.uk/documents/SN01137/SN01137.pdf>
<https://www.cyclinguk.org/campaigning/views-and-briefings/home-zones> (accessed 05/03/2019)

³² RAC, *Virtual speed bumps used to reduce traffic speeds*, 9th August 2017, <https://www.rac.co.uk/drive/news/motoring-news/painted-road-designs-look-to-reduce-traffic-speeds/> (accessed 05/03/2019)

³³ BBC, *'UK's first' 3D zebra crossing created in St John's Wood*, 28th February 2019, <https://www.bbc.co.uk/news/uk-england-london-47402269> (accessed 06/03/2019)

An edited version of an article that appeared in the Guardian

Don't do white lines

White lines have been around since 1921, when they were painted on a hazardous corner in Birmingham. But in recent years, they have been removed from roads in Norfolk, Wiltshire and London, where Transport for London tested whether removal makes drivers more cautious and slows traffic. TfL found that average speeds slowed by 3.3mph to below the 30mph limit on Seven Sisters Road outside Finsbury Park in north London, with speeds also falling on two roads in Croydon. "Road engineers and experts agree, however, that white-line removal is best in urban areas; it won't make highways designed solely for vehicles (such as motorways) safer – as the AA points out, new car-safety technology "reads" white lines to alert drivers if they are going off track.

Get in drivers' heads

The Transport Research Laboratory tested psychological traffic-calming, which aims to reduce speeds not through speed bumps but by using perceptual techniques to increase the perceived risk of a road. Looking at a range of psychological measures undertaken in the Wiltshire village of Latton, they found that "tree buildouts" and "red brick narrowing" were the most effective measures. Red brick paving on road edges made routes appear narrower; similarly, chicanes planted with trees made drivers go much more slowly. Researchers said such measures had a lasting impact – drivers didn't speed up again when they became wise to these perceptual tricks.

Share!

Dutch traffic engineer Hans Monderman decided urban roads would become safer if traffic lights, signs, lane markings and even kerbs were removed, so pedestrians, cyclists and motorists had to share road space. Such schemes are still controversial, but are increasingly popular in Europe, Australia, South Africa, Japan and even some car-dominated American cities. In the UK, Exhibition Road in London is an example, as is a [£4m scheme](#) in the [Cheshire town of Poynton](#).

Bay watch

Reducing the linearity of roads makes drivers' peripheral vision more acute, according to [Hamilton-Baillie](#). Removing yellow lines and creating parking bays disrupts a road's straight lines very effectively and has been undertaken in cities and towns including Glasgow, Bury St Edmunds and Halifax.

Keep it bumpy

The TfL study on the impact of removing white lines found average speeds increased on a stretch of resurfaced urban road by 4.5mph. Drivers slow down on rutted, pothole-riddled roads. But, of course, as Paul Watters of the AA points out, poorly maintained roads are more hazardous for bikes and motorbikes.

34

8 Enforcement

- 8.1 In many witness sessions, particularly with Town and Parish Councillors enforcement came up as an area for concern, with witnesses stating that there was not enough enforcement. Speeding remains a significant concern from the public. The task group has heard from the Police that there will always be a part of society that will not comply with the rules and that it is therefore essential to have a visible deterrent.

³⁴ Barkham, P. 'How to slow down traffic: ditch kerbs, keep potholes, plant trees' article in The Guardian Paper 3rd February 2016 <https://www.theguardian.com/world/shortcuts/2016/feb/03/slow-down-traffic-ditch-kerbs-keep-potholes-plant-trees>, (accessed 06/03/2019)

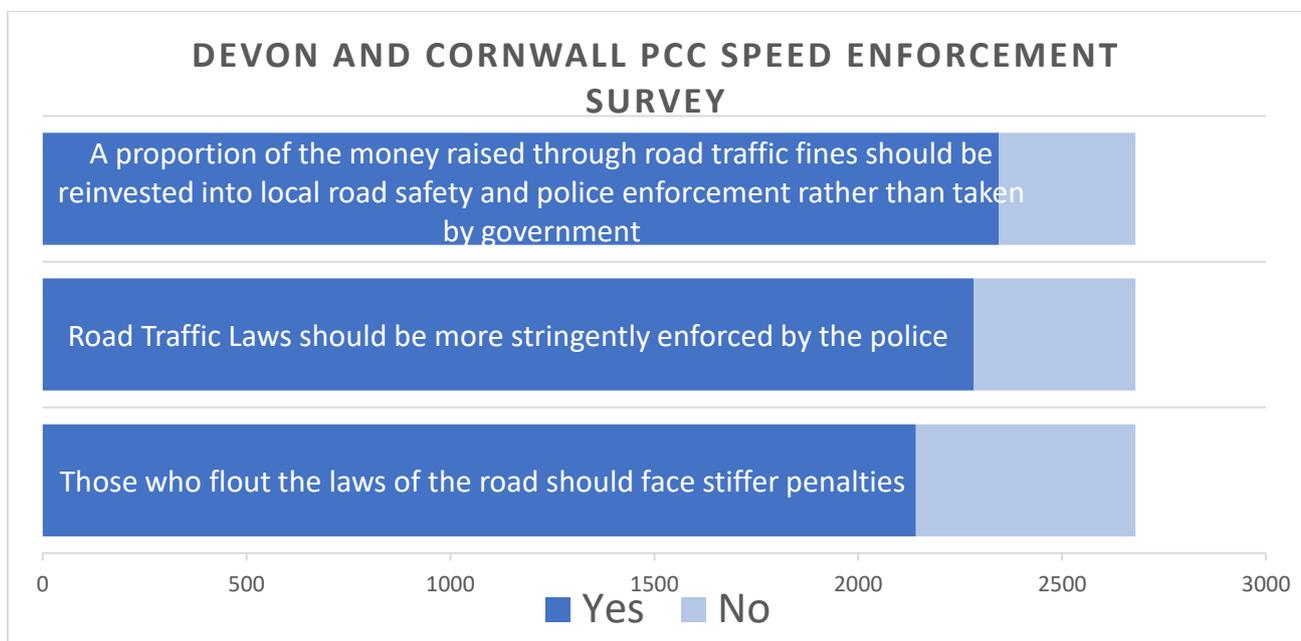
- 8.2 On motorways, 48% of cars exceeded the speed limit in 2017, with 12% exceeding the speed limit by more than 10mph. Single carriageway roads where the national speed limit applies (60 mph for cars) had the highest levels of speed limit compliance, with only 9% of cars exceeding the speed limit. On 30mph roads, 52% of cars exceeded the speed limit with 6% exceeding the speed limit by 10mph or more.³⁵
- 8.3 The task group has heard that Police in Devon have developed a ‘New roads Policing Strategy’ which has been put in place by the Chief Constable. A visible presence of speed enforcement or at least speed surveillance is an important tool for both reducing casualties and giving reassurance to local communities. Indeed, for the minority of the population who have little regard for speed limits a sense of observation is an important deterrent. This is currently being helped by innovations such as the increase in dashcam intelligence.

Speeding

There are three courses of action that can be taken dependent upon the extent of the speed infraction. These would come into effect if a motorist was breaking the limit by more than 10% of the speed limit + 2mph. This is set by the National Police Chief’s Council.

- 1 Marginal speeding - sent on a speed awareness course. This is paid for by the motorist.
- 2 Receive a fixed penalty fine.
- 3 Referred directly to court. This would happen if there was a significant speeding infringement. E.g.

- 8.4 On 2nd January 2019 Devon and Cornwall Police and Crime Commissioner’s Office released the results of a survey on Traffic Speed enforcement. A total of 2,680 people took part in the online survey run by the PCC, who is national lead for road safety for the Association of Police and Crime Commissioners. The results show overwhelming support for more stringent enforcement of road traffic laws (85% in favour), stiffer penalties for those caught speeding (80% in favour) and for a proportion of the money from fines to come locally for road safety initiatives and enforcement (88% in favour).



³⁵ Department for Transport, ‘Vehicle speeds compliance statistics Great Britain 2017’, September 2018, p1, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/743878/vehicle-speed-compliance-statistics-2017.pdf, (accessed 06/03/2019)

- 8.5 One line of questioning for the task group was around the enforcement, or not, of 20mph limits or zones. The task group were informed that 20mph limits need to be self-enforcing and would only be currently be recommended to be introduced where speeds were under 24mph for the 85th percentile. In a 20mph Zone, the engineering should decrease the speed already. Police policy is that the police can and do enforce 20mph speed limits.
- 8.6 The task group have not reviewed the 'New Roads Policing Strategy' but have been informed that it takes several approaches to try to address speeding. For example, neighbourhood teams working on visibility and education through to the No Excuse Teams. The No Excuse Teams target higher risk road users and was an initiative inspired by Dorset. This is summarised as proactive enforcement driven by community concern and data. The team focus on the higher risk motorists, which are approximately 10% who do not adhere to speed limits and may not have insurance and or an MOT.
- 8.7 The task group welcomes the seriousness in approach that the Police and the Police and Crime Commissioner are taking to speed reduction. The task group were informed about a national two-week proactive approach to motoring in January 2019. Across Devon there were 2,500 offenses recorded just during these two weeks. There are currently three officers in Exeter and three officers in Bodmin which can respond to community concerns. However, this is to cover 22,000km or road. There has recently been a needed increase in funding of £500,000 and there is now a dedicated superintendent level post for speeding.

Community Speed watch

- 8.8 Community Speed Watch (CSW) is a national initiative where active members of local communities join with the support of the Police to monitor speeds of vehicles using speed detection devices. Volunteers measure cars speed on the roadside. Volunteers receive appropriate training and are supported by neighbourhood policing team (NPT) staff. The scheme aims to cater for the problem of real or perceived speed related offending, and through partnership with the community it is to be used in circumstances that are necessary, justifiable and proportionate in order to: Reduce death and injury on the roads, improve the quality of life for local communities, reduce the speed of vehicles to the speed limit and increase public awareness of inappropriate speed.
- 8.9 Vehicles exceeding the speed limit are referred to the Police with the aim of educating drivers to reduce their speeds. Motorists who are caught simply receive a warning letter from the police telling them that neighbourhood volunteers have recorded them speeding. The letter contains an educational message and an appeal to their conscience - but no other penalty, no points or fine. However, if they receive three of these letters, they may get a home visit from a police officer and their vehicle details could be put on a police database. In cases where education is blatantly ignored and evidence of repeat or excessive offences is collated (even across county borders), enforcement and prosecution can follow.
- 8.10 CSW is not restricted to villages and rural towns. Neighbourhood Policing Panels have a role to play in developing safer urban communities and the adoption of Speed Watch schemes could assist them to more easily achieve their goals.

“(Speed Watch)...is not about interfering with neighbours' behaviour; it is a proactive solution to improve the safety and quality of life for everyone in the community.”

³⁶ Office of the Police and Crime Commissioner, Devon and Cornwall, *Road safety*, 02/01/2019, <https://www.surveymonkey.com/stories/SM-K7XGYXW8/>, (accessed 08/05/2019)

³⁷ Community Speedwatch Online, *Community Speedwatch*, <https://www.communityracatch.org/>, no date, (accessed 04/06/2019)

- 8.11 TfL shows very promising results from a study on CSW. "Of the 35,000 letters it has sent out to motorists in London in the past two years [...] only 2% of recipients have re-offended. [Furthermore] a study it conducted in Aylmer Road, in Barnet, north London, suggested that volunteers working for a year were able to bring down the average speed by 11mph, to 31mph - below the 40mph limit."³⁸
- 8.12 One of the first forces to start working with volunteers was Cheshire Police in the mid-2000s. Brian Rogers, head of Roads Policing in Cheshire at the time has stated that "he's not convinced volunteers have a significant, lasting impact on reducing road accidents, but he thinks the scheme can empower communities, in keeping with an important British principle, policing by consent."³⁹
- 8.13 One issue facing CSW groups is a lack of wider organisation. For example, if you offend in Newcastle then Doncaster, the current localised system isn't intelligent enough to escalate the stern letters. For this reason, an umbrella organisation, 'Community Speedwatch Online' has developed a computerised, super-database that it wants other groups to join. Currently it only includes Sussex and Kent.⁴⁰
- 8.14 The task group has had some concerns about Speed Watch and is pleased to hear that the Devon and Cornwall Police and Crime Commissioner's Office plans to increase its focus on Community Speed Watch. Currently there are 33 schemes in operation across Devon. The PCC's Office is setting up and implementing an action plan to deal with some of the issues being faced by CSW in Devon. Backlogs have been identified to be processed and local team support is being given. New activities are being identified to move forward with, for example, a local police team "buddy", not all of whom are PSOs, some are officers, will be assigned to Community Speed Watch Teams. There is also a need to put more information regarding the Road Traffic and Community Speed Watch information online in a clearer way. The PCC's Office Plans to learn from other authorities and is seeking more proactive enforcement on speed. There is currently a Speed Watch Development Group being organised by the PCC's Office.

Speed Limiting Technology

- 8.15 In March 2019 the EU provisionally agreed rules which will make speed limiting technology mandatory for all vehicles sold in Europe from 2022. The Department for Transport has said the system would also apply in the UK, despite Brexit.⁴¹ Intelligent Speed Assistance (ISA) systems work by cars receiving information via GPS and a digital map, telling the vehicle what the speed limit is. The car also has a video camera capable of recognising road signs. The system can be overridden temporarily. For example, if a car is overtaking a lorry on a motorway and enters a lower speed-limit area, the driver can push down hard on the accelerator to complete the manoeuvre. A full on/off switch for the system is also envisaged, but this would lapse every time the vehicle is restarted.
- 8.16 Perhaps more importantly, under the new rules, cars will also be fitted with compulsory data recorders, or "black boxes". Upon having an accident, the police and insurance company will be informed. Ford, Mercedes-Benz, Peugeot-Citroen, Renault and Volvo already have models available with some of the ISA technology fitted. However, there are questions about whether technology is advanced enough to be fully effective. Cars already have a forward-facing camera, but there is a question mark over whether the sign-recognition technology is up to scratch. Furthermore "black box" telematic technology is already in use in many cars as insurance companies use them to monitor driving behaviour in return for lower insurance costs. Research by the RAC "found that 62% of policyholders believe the device – and its Driver Score

³⁸ BBC, *Community Volunteers with Speed Guns Strike Back at Motorists*, <https://www.bbc.co.uk/news/stories-43841859>, 08/05/2018 (accessed 07/05/2019)

³⁹ BBC, *Community Volunteers with Speed Guns Strike Back at Motorists*, <https://www.bbc.co.uk/news/stories-43841859>, 08/05/2018 (accessed 07/05/2019)

⁴⁰ Community Speedwatch Online, Community Speedwatch, <https://www.communityspeedwatch.org/>, no date, (accessed 04/06/2019)

⁴¹ BBC, *Road safety: UK set to adopt vehicle speed limiters*, <https://www.bbc.co.uk/news/business-47715415>, 27/03/2019, (accessed 02/05/2019)

feature – makes them safer on the roads, compared to just 12% who think it makes no difference to their driving.”⁴²

- 8.17 The move was welcomed by the European Transport Safety Council, an independent body which advises Brussels on transport safety matters. There are critics, however, with the AA stating that, “The right speed is often below the speed limit - for example, outside a school with children about - but with ISA, there may be a temptation to go at the top speed allowed”⁴³
- 8.18 It is worth mentioning that there are other technologies currently being used to reduce speed. Speed cameras are one of the most common methods of speed enforcement in the UK. Average speed cameras have become more common over recent years. Rather than measuring a cars speed at a specific spot, as a traditional speed camera does, average speed cameras measure a cars average speed over a longer distance. This has been shown by an extensive study by the RAC to be “effective in reducing collisions, especially those of a high severity.”⁴⁴ Furthermore, according to a survey also done by RAC shows that “eight in 10 drivers think average speed cameras are better at slowing traffic than traditional fixed ones”⁴⁵.

9. Conclusion

This task group was initiated to respond to at a policy level to concerns around fast traffic in Devon; the Members had a sense that the approaches taken to respond to community concerns around speed were inconsistent and most importantly that the community did not feel listened to. Over the months that this review has taken place, the Task Group has understood the different approaches that other Councils and agencies are undertaking. It has also deepened the understanding of the policy approach taken to create liveable safe environments.

Taking inspiration from Transport for London, the Task Group has the ambition to reconceptualise the County’s approach to considering roads as part of the fabric of communities. This means looking at how road use and travel in general contributes to a community’s wellbeing or could do in the future. Good design from the creation of a residential area is helpful, but there are innovations as well as behaviours that can support communities to reclaim their roads. The Task Group’s recommendations are positioned to prompt positive approaches for the whole community. In particular the Safe Systems Approach as well as Healthy Streets are initiatives that the task group would very much like to see implemented.

The Task Group recognises that a combined approach towards managing vehicle speeds; one that involves speed limit policy, enforcement, engineering and influencing behaviour change, is most appropriate in managing vehicle speeds throughout Devon. In response to residents and local Councillors the task group places on record it’s desire for a consistent approach to speed which in time should encompass all communities, giving parity across the County.

Whilst traffic speed enforcement will endure as an issue, the Task Group has been pleased to hear the positive action the Police and Crime Commissioner has planned to support Communities and looks forwards to seeing this development come to fruition. The task group is particularly interested in opportunities to involve the people of Devon and their democratically elected representatives in new policies and approaches that Devon and Cornwall Police may take.

The task group places on record it’s firm support for lower speeds, in particular in residential areas that could realistically be 20mph. Whilst recognising further work needs to be done on the best way to implement a change, the task group are committed to seeing the process to make residential roads 20mph become easier for residents. Noting the many examples of other Authorities implementing default 20mph limits, the task group has called for a

⁴² RAC, *Six in 10 drivers say ‘black boxes’ make them safer*, <https://www.rac.co.uk/drive/news/motoring-news/six-in-10-drivers-say-black-boxes-make-them-safer/>, 03/09/2018, (accessed 30/05/2019)

⁴³ BBC, *Road safety: UK set to adopt vehicle speed limiters*, <https://www.bbc.co.uk/news/business-47715415>, 27/03/2019, (accessed 02/05/2019)

⁴⁴ Owen, Ursachi and Allsop, *The Effectiveness of Average Speed Cameras in Great Britain*, London, The RAC Foundation, 2016, p24

⁴⁵ RAC, *Average speed cameras ‘better at slowing cars down’*, 29/06/2018, <https://www.rac.co.uk/drive/news/motoring-news/average-speed-cameras-better-at-slowing-cars-down/>, (accessed, 29/05/2019)

pilot in one part of Devon with a view to improving understanding about the benefits and ease of introducing default 20mph in other parts of Devon.

Finally, the Task Group looks to the future and to innovations in car design, technology as vehicles are engineered with a mindful approach to their impact in every sense from maintaining legal speeds to reducing the emissions produced.

10.Sources of Evidence

Witnesses

The Task Group heard testimony from a number of witnesses and would like to express sincere thanks to the following people for their contribution and the information shared.

NAME	ROLE	ORGANISATION
Andrew Watson	Head of Access, Recreation and Estates	Dartmoor National Park Authority
Christopher Rook,	Traffic Management Team Manager	DCC
Cllr Anthony Howell-Jones	Councillor	Poltimore Parish Council
Cllr Brian Lamb	Councillor	Bere Ferrers Parish Council
Cllr Campbell McAllister	Councillor	Bow Parish Council
Cllr David Munden	Councillor	Abbotskerswell Parish Council
Cllr Derek Boustred	Councillor	Stoke Canon Parish Council
Cllr Kevin Farrelly	Councillor	Abbotskerswell Parish Council
Cllr Ray Bloxham	Councillor	Cranbrook Town Council and Devon County Council
Cllr Ray Steer-Kemp,	Councillor	Bishops Clyst Parish Council
Cllr Ray Watts	Councillor	Colyton Parish Council
Cllr Tessa King	Councillor	Dartington Parish Council
Cllr John Clatworthy	Councillor	DCC
Dr Cris Burgess,	Senior Lecturer in Psychology,	University of Exeter
Helen Wigginton	Sustainable Transport Leader	Bristol City Council
Jeremy Phillips	Road Casualty Reduction Manager	DCC
John Amosford	Advanced Public Health Practitioner	DCC

NAME	ROLE	ORGANISATION
Jon Far	Project Manager	Peninsula Road Safety Partnership
Kevin Gillick	Doing What Matters Team	Devon County Council
Lisa Vango	Manager for Strategy and Planning	Office of the Police and Crime Commissioner, Devon and Cornwall
Mathew Scriven	Traffic Management Group Manager	DCC
Meg Booth	Chief Officer for Highways, Infrastructure Development and Waste	DCC
Mike Jones	Traffic Engineer	DCC
Mr Chris Brightman	Topsham Resident	
Rob Richards	Traffic Management Group Manager	DCC
Rod King MBE	Founder and Campaign Director	'20's Plenty for Us'
Si Jenkinson	Police Inspector	Alliance Roads Policing Team, Devon and Cornwall Police
Simon Chant	Public Health Specialist (Intelligence)	DCC
Tony Parker	Head of Communication	Devon County Council

The task group also thanks Bristol City Council for providing written representation to the task group.

Survey Participants: Town & Parish Councils who took part

*some councils submitted more than one response – number given in brackets

Anonymous (1)	Chittlehamholt, Warkleigh and Satterleigh
Abbotskerswell	Chulmleigh
Awliscombe Parish Council	Clyst Hydon
Bere Ferrers Parish Council	Colaton Raleigh Parish Council
Bishops Clyst Parish Council (2)	Colyton Parish Council
Bovey Tracey	Cranbrook Town Council
Bow Parish Council	Cruwys Morchard Parish Council
Bramford Speke	Denbury and Torbryan
Buckland Brewer	Diptford Parish (2)
Buckland in the Moor	Ermington Parish Council

Exmouth Town Council	North Tawton (3)
Farringdon (2)	Parkham
Farway	Poltimore Parish Council (3)
Feniton Parish Council (2)	Rattery
Fremington	Rockbeare
Georgeham	Salcombe
Halwill Parish	Sampford Courtenay Parish Council
Ideford	Slapton Parish Council (2)
Ipplepen (2)	St Giles on the Heath with Northcott Hamlet Parish Council
Loddiswell Parish Council	Staverton Parish Council
Malborough Parish Council	Stoke Canon
Modbury (2)	Stoodleigh Parish Council
Monkton Parish Council	Strokenham
Morchard Bishop Parish Council	Templeton
Morebath	Tiverton
Musbury	Ugborough Parish Council
Newton & Noss Parish Council	West Hill Parish Council
Newton Abbot Town Council	Wolborough Residents' Association
Newton St. Petrock	

Bibliography

- 20's Plenty for Us, *DfT 20mph Evaluation Conclusions*, no date;
http://www.20splenty.org/20mph_evaluation_conclusions, (accessed 06/06/2019)
- Atkins and Maher, *20mph Research Study Process and Impact Evaluation Headline Report*, Nov 2018, p13
<https://www.gov.uk/government/publications/20-mph-speed-limits-on-roads> (accessed 06/06/2019)
- Barkham, P. 'How to slow down traffic: ditch kerbs, keep potholes, plant trees' article in The Guardian Paper 3rd February 2016 <https://www.theguardian.com/world/shortcuts/2016/feb/03/slow-down-traffic-ditch-kerbs-keep-potholes-plant-trees> (accessed 06/03/2019)
- BBC, *Community Volunteers with Speed Guns Strike Back at Motorists*, <https://www.bbc.co.uk/news/stories-43841859>, 08/05/2018 (accessed 07/05/2019)
- BBC, *Road safety: UK set to adopt vehicle speed limiters*, <https://www.bbc.co.uk/news/business-47715415>, 27/03/2019, (accessed 02/05/2019)
- BBC, 'UK's first' 3D zebra crossing created in St John's Wood, 28th February 2019, <https://www.bbc.co.uk/news/uk-england-london-47402269> (accessed 06/03/2019)
- Community Speedwatch Online, *Community Speedwatch*, <https://www.communityspeedwatch.org/>, no date, (accessed 04/06/2019)
- Department for Transport, 'Reported road casualties in Great Britain: 2017 annual report', 27 September 2018 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/744077/report-ed-road-casualties-annual-report-2017.pdf (accessed 06/06/2019)

Department for Transport, 'Setting Local Speed Limits', 01/2013, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/63975/circular-01-2013.pdf, (accessed 07/05/2019)

Department for Transport, 'Speed Limits', Department for Transport Circular 01/2013, 'Setting Local Speed Limits', January 2013. <https://www.gov.uk/speed-limits> (accessed 07/05/2019)

Department for Transport, 'Vehicle speeds compliance statistics Great Britain 2017', September 2018, p1, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/743878/vehicle-speed-compliance-statistics-2017.pdf, (accessed 06/03/2019)

Department for Transport, *Department for Transport Circular 01/2013*, Setting Local Speed Limits, January 2013

Department for Transport, Taking on the Rural Road Safety Challenge, Report Annex 1, March 2011, p124 <https://webarchive.nationalarchives.gov.uk/20121103223512/http://www.dft.gov.uk/publications/taking-on-the-rural-road-safety-challenge/> (accessed 18/01/2019)

Department for Transport, *Traffic Advisory Leaflet 3/04*, June 2004, <http://www.ukroads.org/webfiles/TAL%203-04%20Quiet%20Lanes.pdf> (accessed 18/01/2019)

Devon County Council, minutes of the Place Scrutiny Committee, 11 September 2015, Item 90 – 'Speed Limit Policy'.

Devon County Council, *Strategic Environmental Assessment Statement: Devon Local Transport Plan 2006-2011*, http://www.devon.gov.uk/sea_statement.pdf (accessed 18/01/2019)

Devon County Council, *Traffic Policy Note*, Local Speed Limits, DTP 34/05, November 2009

Edinburgh City Council Transport and Environment Committee, *South Central Edinburgh 20mph Limit Pilot Evaluation 2013*, August 2013, http://www.edinburgh.gov.uk/download/downloads/id/7820/south_central_edinburgh_20mph_limit_pilot_evaluation_2013.pdf 2.27, (accessed 06/06/2019)

Environment, Economy and Culture Overview and Scrutiny Committee 9/9/08, Minutes, <https://democracy.devon.gov.uk/CeListDocuments.aspx?Committeed=135&MeetingId=1464&DF=09%2f09%2f2008&Ver=2> (accessed, 05/06/2019)

House of Commons Briefing Paper, 'Speed Limits in England', 21 September 2017, p.3; <https://www.gov.uk/speed-limits>; The Department for Transport, 'Speed Compliance Statistics, Great Britain: 2016', 29 June 2017

House of Commons Library, *Roads: Home Zones*, <http://researchbriefings.files.parliament.uk/documents/SN01137/SN01137.pdf> <https://www.cyclinguk.org/campaigning/views-and-briefings/home-zones> (accessed 05/03/2019)

Imperial College London; Transport and Environmental Analysis Group, Centre for Transport Studies: 'An evaluation of the estimated impacts on vehicle emissions of a 20mph speed restriction in central London' <https://www.cityoflondon.gov.uk/business/environmental-health/environmental-protection/air-quality/Documents/speed-restriction-air-quality-report-2013-for-web.pdf> April 2013 <https://www.nice.org.uk/guidance/ng70/chapter/Recommendations> (accessed 06/06/2019)

National Institute for Health and Care Excellence, 'Air pollution: outdoor air quality and health', June 2017, <https://www.nice.org.uk/guidance/ng70/chapter/Recommendations> (accessed 06/06/2019)

Office of the Police and Crime Commissioner, Devon and Cornwall, *Road safety*, 02/01/2019, <https://www.surveymonkey.com/stories/SM-K7XGYXW8/>, (accessed 08/05/2019)

Owen, Ursachi and Allsop, *The Effectiveness of Average Speed Cameras in Great Britain*, London, The RAC Foundation, 2016

PACTS; 'Developing Safe system road safety indicators for the UK' http://www.pacts.org.uk/wp-content/uploads/sites/2/PactsReport_Developing-Safe-System-Road-Safety-Indicators-for-the-UK_Oct18-FINAL.pdf

RAC, 'Report on motoring' 2017 <https://www.rac.co.uk/report-on-motoring/report-on-motoring-2017> (accessed, 29/05/2019)

RAC, *Average speed cameras 'better at slowing cars down'*, 29/06/2018, <https://www.rac.co.uk/drive/news/motoring-news/average-speed-cameras-better-at-slowing-cars-down/>, (accessed, 29/05/2019)

RAC, *Six in 10 drivers say 'black boxes' make them safer*, <https://www.rac.co.uk/drive/news/motoring-news/six-in-10-drivers-say-black-boxes-make-them-safer/>, 03/09/2018, (accessed 30/05/2019)

RAC, *Virtual speed bumps used to reduce traffic speeds*, 9th August 2017, <https://www.rac.co.uk/drive/news/motoring-news/painted-road-designs-look-to-reduce-traffic-speeds/> (accessed 05/03/2019)

Tapp et al 2015 'Vicious or virtuous circles? *Exploring the vulnerability of drivers to break low urban speed limits* <http://eprints.uwe.ac.uk/29286/3/Tapp%20et%20al%2020mph%20limits%20-%20paper%20responding%20to%202nd%20reviews%20-%20version%20sent.pdf> (accessed 06/06/2019)

Taylor, M. C., Lynam, D. A. and Baruya, A. (2000), TRL Report 421 – 'The Effects of Drivers' Speed on the Frequency of Road Accidents'. Crowthorne: TRL, cited in DfT, 'Setting Local Speed Limits';

Thaler, R. and Sunstein, C. 'Nudge: Improving Decisions About Health, Wealth and Happiness' 2009

The Royal Society for the Prevention of Accidents. '20mph factsheet' <https://www.rospa.com/rospaweb/docs/advice-services/road-safety/drivers/20-mph-zone-factsheet.pdf> Nov 2017

Torbay Council, *20mph Speed Limit Policy Criteria*, no date, <http://www.torbay.gov.uk/DemocraticServices/documents/s63224/Appendix%201%2020%20mph%20Residential%20Criteria.pdf>, (accessed 30/05/2019)

Transport for London, *Guide to Healthy Streets Indicators*, London, November 2017

Transport for London, *Healthy Streets for London*, London, February 2017

Membership

Councillors Jackie Hook (Chair), Alistair Dewhurst, Polly Colthorpe, Jackie Hodgson and Martin Shaw

Contact

For all enquiries about this report or its contents please contact:

Camilla de Bernhardt Lane, Head of Scrutiny Cam.debernhardtlane@devon.gov.uk

Appendix 1: Glossary of Terms

Community 'Speed Watch' - There are 3 types – school, community and neighbourhood. Speed Watch involves members of the local community who record vehicle speeds and pass data onto the police.

Free flow speed - Free flow speeds are observed in locations where external factors which might restrict driver behaviour (e.g. junctions, hills, sharp bends and speed enforcement cameras) are not present.

Home zones - a form of shared space scheme. They consist of residential streets in which the road space is shared between motor vehicles and other road users, but with the emphasis on those who walk and cycle and on children.

Killed or Seriously Injured (KSI) – Refers to the number of reported people killed or seriously injured in traffic collisions. Used as a measurement of road safety.

Shared space road schemes – By removing traffic signs, pedestrian crossings and even kerbs, shared space road schemes aim to make drivers drive more carefully.

Speed cushions – A speed cushion is a short, raised, rounded speed calming measure, that is normally positioned in the centre of a road lane. Speed cushions are designed to be slightly wider than cars, so that drivers must slow down and drive over the centre of the cushion to reduce discomfort.

The Speed Compliance Action Review Forum (SCARF) – made up of the Police Road Casualty Reduction and Traffic Management Officer (RCRO), a Devon County Council Road Safety Officer and members of the County's Traffic Team. The SCARF team will monitor the site where a reported speed incident occurred and will decide on what actions are necessary. These actions range from education and enforcement through to engineering.

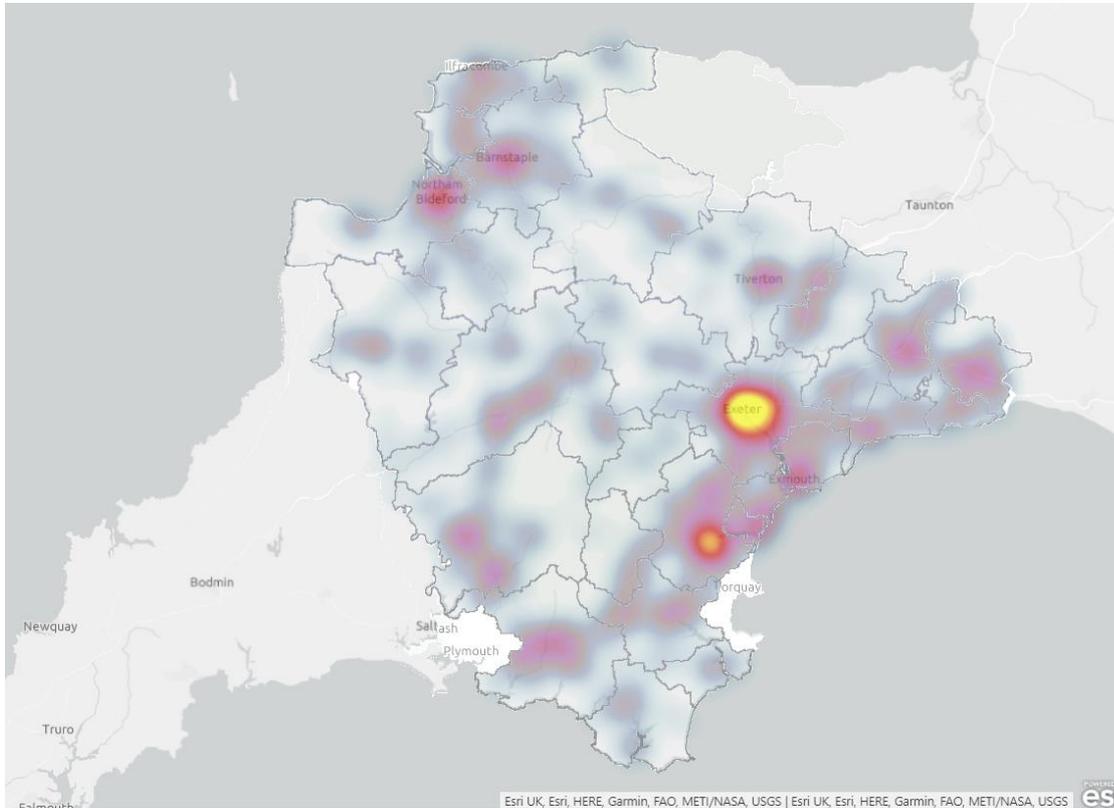
Vehicle Activated Signs (VAS) – These signs activate if an approaching vehicle is detected to be exceeding a pre-set speed threshold. The speed limit and/or a warning message will illuminate on the sign to remind the driver to slow down.

Appendix 2: Torbay Matrix for consideration of 20mph

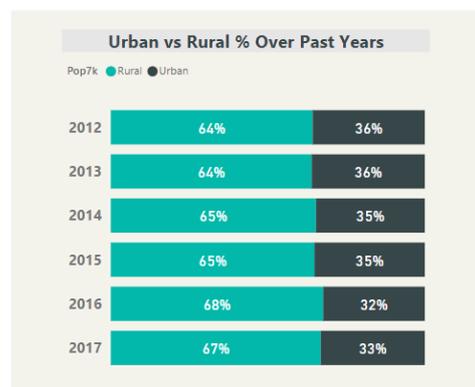
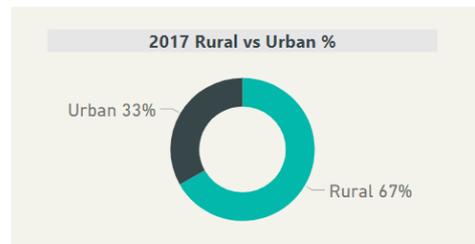
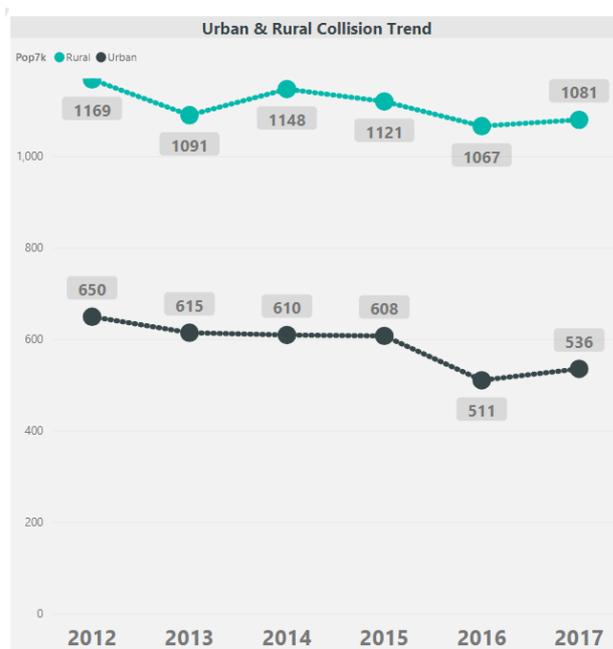
Scoring Matrix for Consideration of Residential 20mph Schemes						
Scheme: Roads and Narrative						Notes
Date:						
	-1	0	1	2		
The Proposed Scheme:-						
Is the area already traffic calmed?						
Yes (+1)						
No (0)						
Is the area predominantly residential?						
Yes (+1)						
No (0)						
Is the area on a route to schools?						
Yes (+1)						
No (0)						
Is the area on a route to a park / playground?						
Yes (+1)						
No (0)						
Vehicle speeds						
>25mph (-1)						
20 - 25mph (0)						
<20mph (+1)						
Is there an existing 20mph school scheme in the area?						
No (-1)						
Variable (0)						
20mph limit (+1)						
Injury Collision Record						
No injury collisions in 5 years (-1)						
1 - 3 injury collisions recorded over 5 years (+1)						
4 injury collisions or more over 5 years (+2)						
Road lay-out restricted highway width (e.g. historic areas)						
Yes (+1)						
No (0)						
Pedestrian facilities						
Footway width >2.5m and controlled crossing facilities (-1)						
Footway width <2.5m and good crossing facilities (0)						
Footway width <1.0m or just on one side (+1)						
Environmental						
Cycling and pedestrian levels which encourage healthy life styles						
Yes (+1)						
No (0)						
Deprived areas - based on 2015 Lower Super Output Areas (LSOA's)						
Top 30% LSOA in England (1)						
Top 30 - 60% in England (0)						
Top 60 - 100% in England (-1)						
Public Opinion						
Evidence of Support from affected stake holders?						
Yes (+1)						
No (-1)						
Supported by ward members?						
Yes (+1)						
No (-1)						
Sustainable Transport						
Sustainable transport options, walking , cycling, public transport						
Yes (+1)						
No (0)						

Supported by the Police						
Yes (+1)						
No (0)						
Value for Money						
20mph zone can be implemented with signage/markings only (+1)						
20mph limits can be implemented with signage/markings only (0)						
20 mph zone or limit requires additional engineering work (-1)						
Total Score						

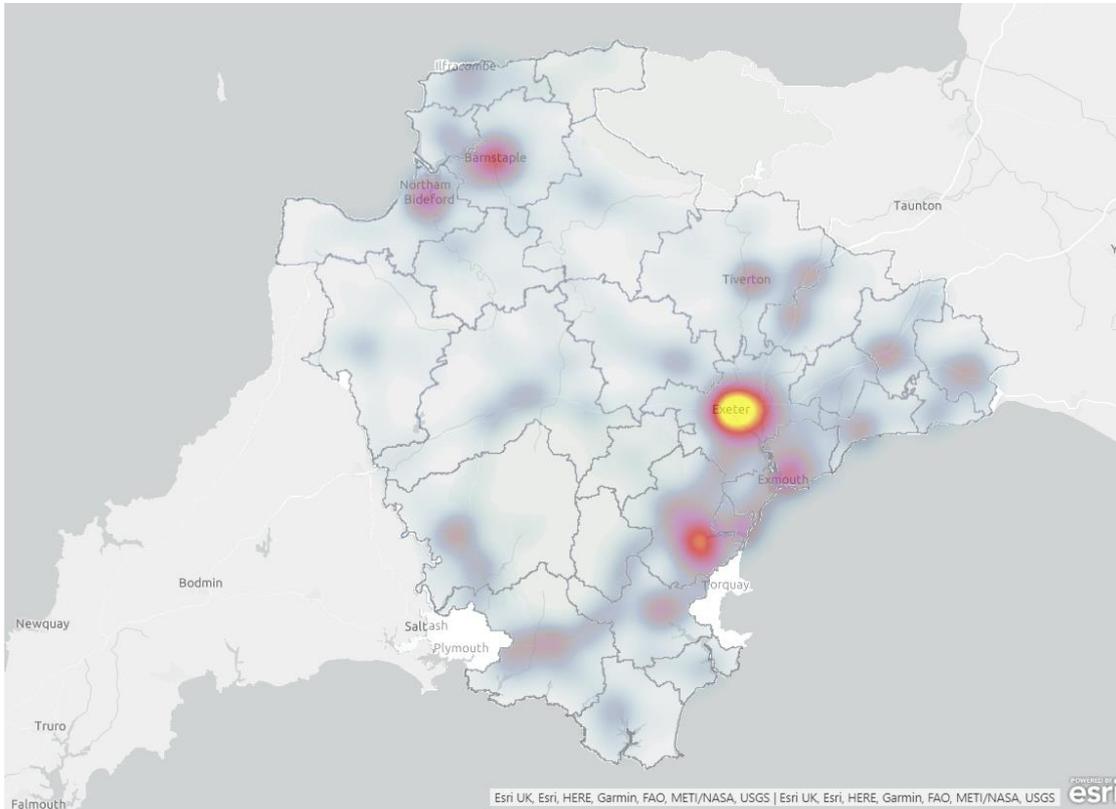
Devon CC Reported Road Collisions Heatmap 2013-17



Devon CC Reported Road Collisions Urban & Rural Comparison



Devon CC Reported Road KSI (Killed or Seriously Injured) Collisions Heatmap 2013-17



Devon CC Reported Road KSI Collisions Urban & Rural Comparison

