

Police Scotland and enforcement of 20mph speed limits in the context of the Restricted Roads (20mph Speed Limit) (Scotland) Bill.

What do the police need to do to adequately enforce 20mph speed limits?

A report for Mark Ruskell, Member of the Scottish Parliament for Mid Scotland & Fife



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## Introduction

This research is funded by Mark Ruskell MSP's office. In 2018 Mr Ruskell tabled a Restricted Roads (20mph speed limit) (Scotland) Bill before the Scottish Parliament. Police Scotland senior officers as well as academic researchers were contacted in seeking to address the question of 'what do the police need to do to adequately enforce 20mph speed limits?'. 'Adequately' means to increase the public perception of being caught if breaking the limit (realistically 24mph) to a level where it becomes a realistic deterrent.

## Method

This is an exploration of senior police officer views on enforcement of 20mph speed limits, by way of semi-structured interviews and is, therefore, purely qualitative. The aim has been to gather insights from Police with the addition of academic researchers. Through the Scottish Institute for Policing Research (SIPR) contact was made with the lead Roads Policing Officer in Scotland, Chief Superintendent Stewart Carle (hereafter referred to as the lead Roads Policing Officer). Via this communication telephone interviews lasting between 30 and 60 minutes were conducted during March 2019 with four senior Officers including the lead Roads Policing Officer. Three senior officers covering Aberdeenshire, Greater Glasgow, and Edinburgh were also interviewed. A request was made to recently retired police officers through (SIPR) contacts but there were no responses to this. Connections with road safety and policing researchers were also made through the newly formed Road Policing Academic Network (RPAN)<sup>1</sup> with input sought. The Coordinator of RPAN, Dr Helen Wells, Senior Lecturer in Criminology at the University of Keele, provided advice to the project researcher.

The output is this short report containing Conclusions and Recommendations including approaches to engaging further with Police Scotland in proactive enforcement in support of possible new 20mph speed limit legislation.

The semi-structured interview script and questions are provided in Appendix A.

## Main Findings

*Benefits of a change to 20mph in place of 30mph speed limits:* There was a general view that a lower speed limit, replacing 30mph speed limits on Restricted Roads with 20mph speed limits would likely reduce casualty numbers and the severity of those which occur. An example might be the night time economy in urban areas, especially city or town centres where pedestrians may be distracted by phones or impaired by alcohol and where a 20mph speed limit instead of a 30mph speed limit could be beneficial. A caveat was concern about compliance with the new speed limit. Wider benefits considered by interviewees were possible improvements in air quality (or possible worsening) depending on any changes in driving style, higher noise at higher traffic speed so an expected improvement with reduced

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<sup>1</sup> The Road Policing Academic Network was launched on March 12<sup>th</sup> 2019 at the University of Keele.

speed, and possibly changes in wellbeing reflected in any changes in motor traffic and its speed. There was also a note that a lower speed limit might increase walking and or cycling which would then lead to higher exposure. This could have the effect of increasing casualties not least due to riskier pedestrian behaviour over-compensating for reduced vehicle speeds. However, there was an overall view that any likely change would be positive. Pragmatically, the lead Roads Policing Officer noted that the Police Scotland view 'is not so much whether the speed limits are correct but rather what enforcement or other activities might we need'.

*Expectations:* 20mph speed limits would also lead to increased expectations from the public that the new speed limit would be enforced to a level to ensure widespread compliance (compliance is presumed to be up to 24mph), at least in the short term. There was a suggestion from the lead Roads Policing Officer in Scotland that there might be a modest package of additional resources for patrols for a 6 month period.

*Increasing the level of traffic policing reduces the number of road accidents and traffic violations:* There was a general agreement that greater levels of road traffic policing results in lower numbers of collisions and injuries and traffic violations. This agreement included this issue of a halo effect lasting for some time and distance after having seen a police officer or police vehicle. A TRL report was discussed which had concluded that greater enforcement levels are effect and that there is a lasting halo effect – up to 8 weeks from sustained police presence and a distance effect ranging between 1.5 to 5 miles.<sup>2</sup>

*Intelligence-led or evidence-led policing:* Police Scotland are engaged with National Roads Policing forums but do rely heavily on own their own analytical data. They have a central Policing Management Support Section with a small number of officers who will look at new pieces of legislation e.g. new drunk driving legislation being brought forward, and including speeds as a result of the 20mph speed limit Bill. There was knowledge of participation occasionally in academic studies internationally by the lead Roads Policing Officer but this academic engagement was not the norm. The discussion of intelligence led or evidence-led related to deployment of resources. The account given is that the last 3 to 5 years of data for collisions are collected and analytical work is undertaken as to where those collisions have taken place – fatal and serious collisions - and then these are plotted onto maps and some roads will have a higher number and so resources are allocated according to that. The statement that the majority of resources are focused on detecting speeding on the open road because that's where the vast majority of the KSIs occur was made by both the lead Road Policing Officer and the Officer covering the significantly rural road network of Aberdeenshire.

The issue of difference between evidence-led and intelligence-led was not discussed as part of the Police officer interviews. However, Dr Helen Wells noted that intelligence-led is a way of directing police resources based on quite a traditional policing idea of 'intelligence'. This is about who is doing what to who, where and when. Evidence-based and led is a

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<sup>2</sup> Elliot, M., Broughton, J. 2005. How methods and levels of policing affect road casualty rates. Report TRL637. Crowthorne: Transport Research Laboratory.

movement.<sup>3</sup> So, an intelligence-led approach to roads policing might suggest sending cars to a particular hot-spot to deter offending, whilst an evidence-based approach would suggest drawing on the deterrence literature to understand specific versus general deterrence, to consider public engagement, or procedural justice in relation to that method. Or, it might suggest looking at previous evaluations of using that approach and learning from them.

This difference highlights perhaps an embedded ethos in Police Scotland regarding roads policing and the need to respond (policing-led) rather than seeking new evidence and insights from external sources (evidence-led), with a possible risk of seeking evidence or data which may support a pre-existing world view.<sup>4</sup> Given the exploratory nature of this research further examination of Police Scotland's approach is warranted.<sup>5 6</sup>

With particular regard to the focus on enforcement on higher speed roads the casualty statistics confirm that for fatalities the majority are clearly occurring on non-built-up roads with a speed limit higher than 40mph. This is shown in Table 1 below along with the serious casualties. For serious casualties it is not true, from this data, that the majority occur on non-built-up roads. In fact, taking the 3 year average for 2015-17, the clear majority of reported serious injuries occur on built up roads with a speed limit of less than 40mph. This raises several questions. Is there an over-riding focus on addressing fatalities due to the reported cost of a road traffic fatality (currently over £1.897M) compared to the cost of a serious injury (currently just over £213K)<sup>7</sup> i.e. a death has a cost per casualty 8.9 times greater than a serious injury.<sup>8</sup> Secondly, do the Police have other intelligence or data which informs the decision to focus mostly on higher speed non-urban roads? The issue of population density is a moot point. In Scotland the majority of the population live in settlements of 10,000+ population according to the Census<sup>9</sup> where lower speeds will dominate their road networks and exposure as pedestrians and cycle users on these networks may well leave them vulnerable with speed limits of 30mph coupled with low levels of traffic policing and low speed limit compliance. With this comes the risk of a

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<sup>3</sup> Which started in medicine. See Pope, C. 2003 Resisting evidence: the study of evidence-based medicine as a contemporary social movement, *Health: An Intersectoral Journal for the social study of health, illness and medicine*, 7(3): 267-282.

<sup>4</sup> Cope, N. 2004. Intelligence-led policing or policing-led evidence, *British Journal of Criminology*, 44: pp 188-203.

<sup>5</sup> Evidence-based policy and practice has been defined as 'the integration of experience, judgement and expertise with the best available external evidence from systematic research'. Davies, H. T. O. H., Nutley, S. M. S., & Smith, P. C. P. ,1999. What Works? The Role of Evidence in Public Sector Policy and Practice (Editorial). *Public Money and Management*, 19(1), 3-5. <http://doi.org/10.1111/1467-9302.00144>

<sup>6</sup> Intelligence-led Policing has been defined: "is a business model and managerial philosophy where data analysis and crime intelligence are pivotal to an objective, decision-making framework that facilitates crime and problem reduction, disruption and prevention through both strategic management and effective enforcement strategies that target prolific and serious offenders." Ratcliffe, J. H. (2008) *Intelligence-Led Policing*. Willan Publishing Cullompton Devon.

<sup>7</sup> Costs rounded to the nearest thousand.

<sup>8</sup> The costings are based on the average value of prevention. <https://www.gov.uk/government/statistical-data-sets/ras60-average-value-of-preventing-road-accidents> accessed 15/03/2019.

<sup>9</sup> <https://www.nrscotland.gov.uk/files//statistics/settlements-localities/set-loc-16/set-loc-2016-publication-updated.pdf> accessed 15/03/2019.

greater degree of harm inflicted in the event of a collision with a motorised vehicle. This correlates with the higher serious casualty numbers on built-up roads.

**Table 1: Reported Road Casualties Scotland, 2017. Scottish Government**

**Table A:** Summary of reported road injury accident and reported casualty statistics: 2007 to 2017

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Accidents</b>											
Fatal	255	245	196	189	175	162	159	181	157	175	141
Fatal & serious	2,304	2,487	2,194	1,902	1,850	1,898	1,586	1,670	1,579	1,609	1,514
All severities	12,507	12,159	11,556	10,295	9,984	9,777	8,977	8,837	8,480	8,362	7,114
<b>Accidents on built-up<sup>(1)</sup> roads</b>											
Fatal	71	82	56	56	61	64	44	67	47	44	44
Fatal & serious	1,207	1,359	1,089	981	1,014	1,049	852	922	881	861	831
All severities	7,782	7,464	6,991	6,341	6,358	6,165	5,750	5,706	5,403	5,473	4,588
<b>Accidents on non built-up<sup>(1)</sup> roads</b>											
Fatal	184	163	140	133	114	98	115	114	110	131	97
Fatal & serious	1,097	1,128	1,105	921	836	849	734	748	698	748	683
All severities	4,725	4,695	4,565	3,954	3,626	3,612	3,227	3,131	3,077	2,889	2,526

Costs can be represented thus in Table 2, using 2017 collision data by way of illustration from Table 1, and using Department for Transport Average Value of Prevention costs. This shows that while the overall costs of KSI are greater on non built-up roads with speed limits higher than 40mph, serious injuries dominate the built-up roads casualties where speed limits are mostly 30mph and have a higher serious injuries cost than for non built-up roads.

**Table 2: Average Value of Prevention of Killed and Seriously injured on Scottish roads, 2017**

	<b>Built-up roads</b>	<b>Costs £</b>	<b>Non built-up roads</b>	<b>Costs £</b>
<b>Killed</b>	44	£83,468,000	97	£184,009,000
<b>Seriously Injured</b>	787	£167,631,000	586	£124,818,000
	<b>831</b>	<b>£251,099,000</b>	<b>683</b>	<b>£308,827,000</b>

*Resourcing and targeting:* There was a general agreement that levels of enforcement would be no different to what exists at present, not least because of current resourcing levels and competing priorities. Currently 30mph speed limits are seen to be enforced adequately enough although there is a caveat here. This is that breaking the 30mph speed limit is the everyday experience and this was noted by two of the four Officers. There was also a view that 30mph and 20mph are largely 'self-enforcing' and this was coupled with a repeated statement that Killed and Seriously Injured (KSIs) dominate on higher speed limit roads above 40mph and so this is where traffic policing is largely focused, as noted above. Some of the 30mph speed limit local Police resourcing is a response to contact from communities, such as Community Councils. This may result in the local Police doing their own local survey to assess the extent of the issue of speeding. Sometimes this is public perception rather

than reality once speeds are objectively measured. There was also a limit mention of fixed speed camera use.

*20mph speed limit introduction and public awareness:* Police Scotland see value in some type of public awareness or engagement work ahead of any change to a 20mph speed limit from a 30mph – if that were to happen. In addition, there was a suggestion that following through for a while after could be valuable and there was some acknowledgement that this might need to be 5 years or more to bed in the change and acceptance of a lower speed limit. This view emerged as part of a prompt from the interviewer regarding the long-term THINK! Campaign on roads safety and the possible duration of any campaign in raising public awareness.

*West Midlands Police approach and use of social media:* There was discussion about the approach used by West Midlands Police to promote a belief that traffic violators were at significant risk of being identified and apprehended. Social media work plays a large part in publicising police enforcement work and it is claimed by the West Midlands team that this creates a lasting halo effect i.e. the belief that the police are active locally apprehending traffic violators lasts some days or weeks after the teams has moved on to another area. This work was introduced by the researcher as a nationally known pro-active approach applying social media. There was, however, some hesitation about engagement with social media in the way West Midlands Police force have done although there are officers trained in the use of social media for traffic policing and an officer from Edinburgh visited to look at the 'Close Pass' programme also operated by the West Midlands Police regarding cycle user safety.

*Could average speed cameras could be applied as a way to achieve greater compliance of 20mph?:*

Average Speed Cameras (ASC) are highly regarded by Police Scotland as an effective way of enforcing speed limit compliance given that interviewees report that it has been very successfully applied on a number of A roads e.g. A77, A9 and A90. At least 90% compliance was noted. Most of the speed limits on such roads are above 40mph. However, the Edinburgh-based Inspector was enthusiastic regarding the Dalkeith Road ASC which has involved a change in speed limit from 40mph to 30mph, again with near 100% compliance. However, there may be some confusion regarding its application for compliance on 20mph roads (which may need Type Approval) but according to the Edinburgh Inspector ASC are calibrated in order to be used with 30mph speed limits if not 20mph speed limits. There were concerns that it would be cost prohibitive and that there are practical issues with the road network of many junctions across residential street networks. Conversely, the Glasgow-based officer thought that it might be the easiest way to get enforcement, if that was palatable to the majority of the public.

*In the balance of education, enforcement and engineering, does any particular one of these play a leading role should the 20mph speed limits Bill become law?:* There was agreement among the Police Officers that enforcement means everything else has failed. There were some differences, however, in whether education should be the first approach towards

20mph speed limit compliance should the Bill become law. The lead Road Policing Officer noted that public support and understanding is very important. Acceptance and a willingness to listen to messages is required by the public. Education, therefore, has a huge role and so does encouragement. Encouragement was linked with social responsibility – in the same way that people came to accept drink driving as socially unacceptable. The Aberdeenshire Inspector noted that he thought that there should initially be a long and fairly well publicised educational phase because it will take some time for this to be accepted and adhered to by the public and then followed by enforcement. Depending on how successful enforcement was there may be a need to turn to highway engineers in the Councils to help enforce the 20mph speed limit through physical measures, such as traffic calming, signing and lining.

*Public support – around 70% of the adult public consistently support residential street 20mph speed limits:*

The lead Road Policing Officer said that Police Scotland acknowledge the surveys showing clear majority support for 20mph speed limits. He noted that the new Police Plan, due out in May, has a greater focus on casualties. He would like to see greater extension of 20mph through local authority Traffic Regulation Orders (the current approach). He noted that all new housing estates should be built with, and designed for, 20mph speed limits. There was a note by one of the two urban –based officers that such evidence of public support does make the justification for 20mph a lot easier to sell in particular local areas.

*The Scottish Government's Road Safety Framework Mid-Term Review identified dealing with speed, age, and vulnerable road users as a key priority area. Transport Scotland has embraced the Safe Systems Road Safety model for zero KSIs. What impact or contribution do you think 20mph speed limits might have in relation to these ambitions?* This final question broadened the canvas of where 20mph speed limits might be situated. The lead Road Policing Officer noted that 20mph speed limits will make a contribution and that in terms of the next decade for road safety, Transport Scotland will be setting out some very challenging shifts – e.g. to get people to use public transport more. A final thought from the lead Road Policing Officer was regarding drawing on the lessons learnt from the Violence Reduction Unit's work in Strathclyde and from their public health approach. He suggested that a public health approach might be the best way to approach road safety.

## **Conclusions**

The interviews with the lead Road Policing Officer and three Inspectors cannot attempt to capture the full variations in views on aspects of enforcement of 20mph speed limits and associated issues across Police Scotland road policing staff, as discussed in the interviews. However, with the lead Roads Policing Officer and three of his Road Policing Inspectors it is reasonable to say that the responses can be said to represent a Police Scotland view in large measure.

Below are key issues which provide some insights into a Police Scotland perspective on 20mph speed limits and with a view to possible speed limit changes from 30mph to 20mph, should the Bill become Scottish law.

- Police Scotland says that it will not provide any additional road policing resource to adequately enforce 20mph speed limits. However, there is a suggestion from the lead Officer for Roads Policing that some additional resource might be available for a limited period if the Bill became law. This might be for a period of 6 months.
- There is some support for an awareness raising programme to highlight to all road users any change in the limit from 30mph to 20mph. It has been suggested that this might include a period of time ahead of the enactment into law of a change in the default 30mph speed limit on Restricted Roads followed by a relatively long marketing programme to further embed and habituate road user behaviour and compliance with any new limit.
- Police Scotland will continue to enforce speed limits on what are currently 30 mph speed limit roads. If these change to 20mph by the passing of the 20mph speed limit Bill into law, the Police are committed to upholding the law inclusive of the new speed limit. However, there is recognition that violation of the 30mph speed is currently common practice among motorists.
- There is almost no recognition of the deterrent effect of 30mph speed limit violations on travel mode selection and in particular the deterrent effect to walking and cycling and that this might undermine Scottish Government active travel policy, public health, climate change and other objectives.
- There is an opportunity to explore with Police Scotland whether they have additional data which provides an additional rationale for the current resource allocation to enforcement activity addressing higher speed roads. This approach appears to be at the expense of a large proportion of the population who as pedestrians are at risk of injury in urban areas which predominately have 30mph speed limits. This is linked to the issue of exposure (as a denominator), especially of vulnerable road users.
- There appears a possible gap in police research if they are not routinely accessing the academic peer reviewed evidence and largely relying on internal intelligence-led approaches and local 'knowledge'. There are ways to support Police Scotland in accessing such evidence and this might be in collaboration with SIPR and RPAN as well as through specific academic research groups.
- Intelligence-led as opposed to evidence-led: This difference highlights perhaps an embedded ethos in Police Scotland regarding roads policing and the feeling of the need to provide a response perhaps with a possible risk of seeking evidence or data which may support a pre-existing world view rather than taking time to seek new evidence and insights from external sources.
- A re-assessment of the costs of road traffic collisions, especially comparing costs of KSI may be helpful in reviewing the monetary valuation to society, particularly concentrating on costs between Killed and Serious Injuries.
- There could be value in investigating the application of ASCs to parts of the road network with 20mph irrespective of the outcome of the 20mph Speed Limit Bill.

- All of the above needs to be considered in the context of a relatively long decline in Police Scotland resourcing including significant cuts to Road Policing budgets. This will likely have reduced the capacity within the service to do anything additional including more collaborative approaches and considering wider public policy goals.

## Recommendations

- That dialogue between Police Scotland and the Scottish Government be pursued with regards to additional funding for awareness-raising pre-implementation of the switch from 30mph on Restricted Roads of 20mph speed and that a longer term social marketing programme should be funded by the Scottish Government, should the Bill become law. This opportunity could be promoted by Mark Ruskell and is likely to receive support from Police Scotland.
- That the Police Scotland invest time to re-assess their approach to Road Policing resource allocation with a particular need to address the high levels of serious injuries on built-up roads with speed limits currently of 30mph. There also appears to be an ethical issue here which is that those who pose least risk to others (i.e. pedestrians) are not being protected sufficiently through road traffic policing in the majority of locations where most people in Scotland live – in built-up areas with 30mph and 20mph speed limits.
- That the acceptance of a relationship with overt policing levels and collisions, injuries and traffic violations would support greater deployment of resources to built-up roads with speed limits of 30mph or 20mph given the higher levels of serious injuries on these roads.
- That if there is a deficit in routinely accessing peer reviewed evidence there are existing structures which could support Police Scotland and this might be in collaboration with SIPR and RPAN as well as through specific academic research groups.
- To encourage Police Scotland to work more with other public policy areas such as Transport in order to be able to internalise understanding of wider policy goals such as decarbonisation, and public health objectives including increasing routine physical activity through active travel. The Restricted Roads Bill provides an apposite example of where wider policy objectives could bring benefits to the Police (e.g. through increased social cohesion if more people choose to walk and thus the greater potential for social connectivity and informal surveillance).

## Appendix A

### Script: Introduction

This is an exploration of police officer views on enforcement of 20mph speed limits, by way of semi-structured interviews. The work is funded by Mark Ruskell MSP's office. Mr Ruskell currently has a Restricted Roads (20mph speed limit) Bill before the Scottish Parliament. A report on this research will be published by the Scottish Institute for Policing Research together and the Transport Research Institute, both at Edinburgh Napier University.

**Q: Please state your current role in Policing in Scotland and in particular any focus on traffic speed enforcement.**

So, I have a number of questions grouped under 3 broad topic areas:

- 1) Evidence-led Policing
- 2) Learning from other forces, and technology
- 3) The 3 E's of Education, Enforcement and Engineering

### Evidence-led Policing

The 30mph speed limit was set in 1935 – seemingly in an arbitrary fashion rather than based on any science e.g. human tolerance.

**Q: Can you say what your thoughts are on what benefits you think there could be should the Bill be enacted?**

Police Scotland says it is an evidence-led police force. I'd now like to discuss how do you arrive at key decision on targeting resources for traffic policing.

**Q: Can you say something about your use of academic and other research evidence to inform decision-making?**

(Prompt = you may draw on DfT funded studies. How to you avoid 'cherry picking' to suit a pre-existing stance)

In a Review by TRL (Elliot & Broughton in 2005) addressing methods and levels of policing affecting road casualty rates, the report concluded that "increasing the level of traffic policing reduces the number of road accidents and traffic violations".

**Q: Do you broadly support this view? Do you believe that 30mph speed limits are enforced adequately enough to reduce the number of accidents and traffic violations?**

**A coda would be: would this be the same for 20mph speed limits?**

**Q. Have you discussed 20mph with any other national forces within and beyond the UK? ...**

## **Learning from other forces and technology**

The West Mercia Police have deployed a team of traffic officers and use a range of social media and cascading of information (eg through schools) to spread the word that they are enforcing traffic laws including 20mph speed limits. This is in order to create a belief that breaking Traffic laws has a real risk of detection and being caught. West Mercia Police report that this has a significant lasting 'halo' effect.

**Q: Do you have a view of this approach?**

**Q. On the use of technology: Average speed cameras could be applied as a way to achieve greater compliance of 20mph. Do you see this as a helpful approach?**

## **The E's of Education, Enforcement and Engineering**

**Q: In the balance of education, enforcement and engineering, does any particular one of these play a leading role should the 20mph speed limits Bill become law?**

Mark Ruskell, MSP, commissioned some research to assess the type of social marketing engagement that would be needed with the public to create a new social norm around driving within any new 20mph speed limit. This drew partly on the lessons of the THINK! Campaign addressing drinking and driving.

**Q: Does Police Scotland have a view about the importance of social marketing type work like THINK! to bring about greater compliance with 20mph speed limits?**

The British Social Attitude Survey has consistently reported levels of support for residential street 20mph speed limits. Three repeat surveys by YouGov (2013/15/17) from across GB also reported this consistent support.

**Q: Can you say how Police Scotland responds to this 'demand'?**

The Scottish Government's Road Safety Framework Mid-Term Review identified dealing with speed, age, and vulnerable road users as a key priority area. Transport Scotland has embraced the Safe Systems Road Safety model for zero KSIs.

**Q: What impact or contribution do you think 20mph speed limits might have in relation to these ambitions?**

## **Acknowledgements**

I am grateful to Chief Superintendent Stuart Carle from Police Scotland for providing his time to participate in an interview and approval for three of his Inspectors to give their time. The contributions from the three Inspectors is also gratefully acknowledged. Thanks are also due to Dr Helen Wells for invaluable insights into policing and policing research. Tim Heilbronn at SIPR provided contacts within Police Scotland for which I am grateful as well as for the openness of SIPR to collaboration.

## **Links**

SIPR <http://www.sipr.ac.uk/contact>

TRI <https://blogs.napier.ac.uk/tri/>

RPAN on Twitter @RoadsPolicingAN

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