

Intervention 20 – Speed Management Plan

1 Description of Package

During 2020, Transport Scotland published The Road Safety Framework to 2030 for consultation, with a vision to have the best road safety performance in the world by 2030. The consultation responses are now being assessed and it is expected that the Road Safety Framework to 2030 will be published in early 2021. The framework is based on the Safe System, where safe speeds is one of five pillars. To help implement this, it is recommended that a review is undertaken, led by Transport Scotland, to establish a speed management plan across the urban and rural road network. The speed management plan will look at a range of measures such as speed management on motorways, speed limits through roadworks, speed limits through rural settlements on the trunk road network, reducing the national speed limit in urban environments and reducing speed limits in residential areas. A reduction in speed limits is not considered enough to have a significant impact on driver behaviour, therefore the package of measures could also include programmes to educate drivers on the importance of driving to the road conditions and not exceeding the speed limit. Depending on the extent to which speed limits may be changed, significant changes could be required to the engineering, enforcement and education frameworks and the resources necessary to support these.

In addition, this package should include a specific review of the national speed limit of HGVs over 7.5 tonnes on the trunk road network, potentially increasing the speed limit from 40mph to 50mph on single carriageway roads and 50mph to 60mph on dual carriageway roads. This review would include analysis of the impact of speeds on safety, operational performance and potential environmental benefits.

2 What we have heard?

Issues relating to speeds were highlighted in the online survey, undertaken to identify problems and opportunities on the transport network. Within Argyll and Bute, one of the key problem themes identified was a desire to implement a reduction in speed limits, and analysis of responses in Glasgow City region highlighted ambitions for a 20mph default speed limit on most urban roads, along with improved police enforcement of speeding in general. It should be noted that Police Scotland have previously stated that they would not prioritise the enforcement of 20mph speed limits, initially as part of their evidence to the Scottish Parliament's consideration of Mark Ruskell's private members Bill, and have since reiterated this stance. They remain of the opinion that speed limits of all types should be self-enforcing.

Evidence from the A9 suggests that increasing the HGV speed limit on single carriageway sections was followed by a reduction in

accidents associated with vehicles overtaking HGV's.

3 The evidence base to support a case for change

The Royal Society for the Prevention of Accidents' (RoSPA) Road Safety Factsheet from June 2018 states that inappropriate speed contributes to around 11% of all injury collisions reported by the police, with 15% of these crashes resulting in a serious injury and 24% of collisions that results in a death¹, indicating the importance of complying with the speed limit, and driving at an appropriate speed for road conditions.

Transport Scotland's Road Safety Framework proposes speed management as part of a Safe System, aiming to aid crash-avoidance and reduce the speed at which impacts occur, to ensure the body's limit for physical trauma is not reached or exceeded. The Safe System aims to establish appropriate speed limits according to the features of the road, the function it serves, and the physical tolerance of those who use it. It also states that the setting of speed limits should be determined by the road environment and the vehicles in use rather than the behaviour of road users. The Safe System seeks to enforce existing speed limits and ensure road users understand and comply with them.

Information published by Transport Scotland in the Development of Scotland's 2030 Road Safety Casualty Targets and Key Performance Indicators document² indicates that there is high speed limit compliance by HGVs on Motorways (99%), however compliance reduces to approximately 55% for car drivers. On Single Carriageways (National Speed Limit Roads), HGV compliance is lower. It is within 20mph speed limit areas where compliance is lowest, with only 22% of HGV drivers and 13% of car drivers complying with the speed limit.

Statistics published by RoSPA state that 53% of car drivers exceed the 30mph speed limit, with 19% of these exceeding 35mph. This indicates that there may be a benefit in educating drivers on the need to comply with speed limits in a similar way that education programs increased compliance with seat belts and reduced the drink driving rate by changing attitudes and the acceptance of these types of behaviours.

Figure 1 shows average speeds by road and vehicle type. It indicates low levels of national speed compliance - mostly from HGVs

¹ RoSPA, Road Safety Factsheet, 2018, <http://www.rospa.com/rospaweb/docs/advice-services/road-safety/drivers/inappropriate-speed.pdf>

² Transport Scotland, Development of Scotland's 2030 Road Safety Casualty Targets and Key Performance Indicators, 2020, <https://www.transport.gov.scot/media/48106/development-of-scotlands-2030-road-safety-casualty-targets-and-key-performance-indicators-september-2020.pdf>

on dual and single carriageways.

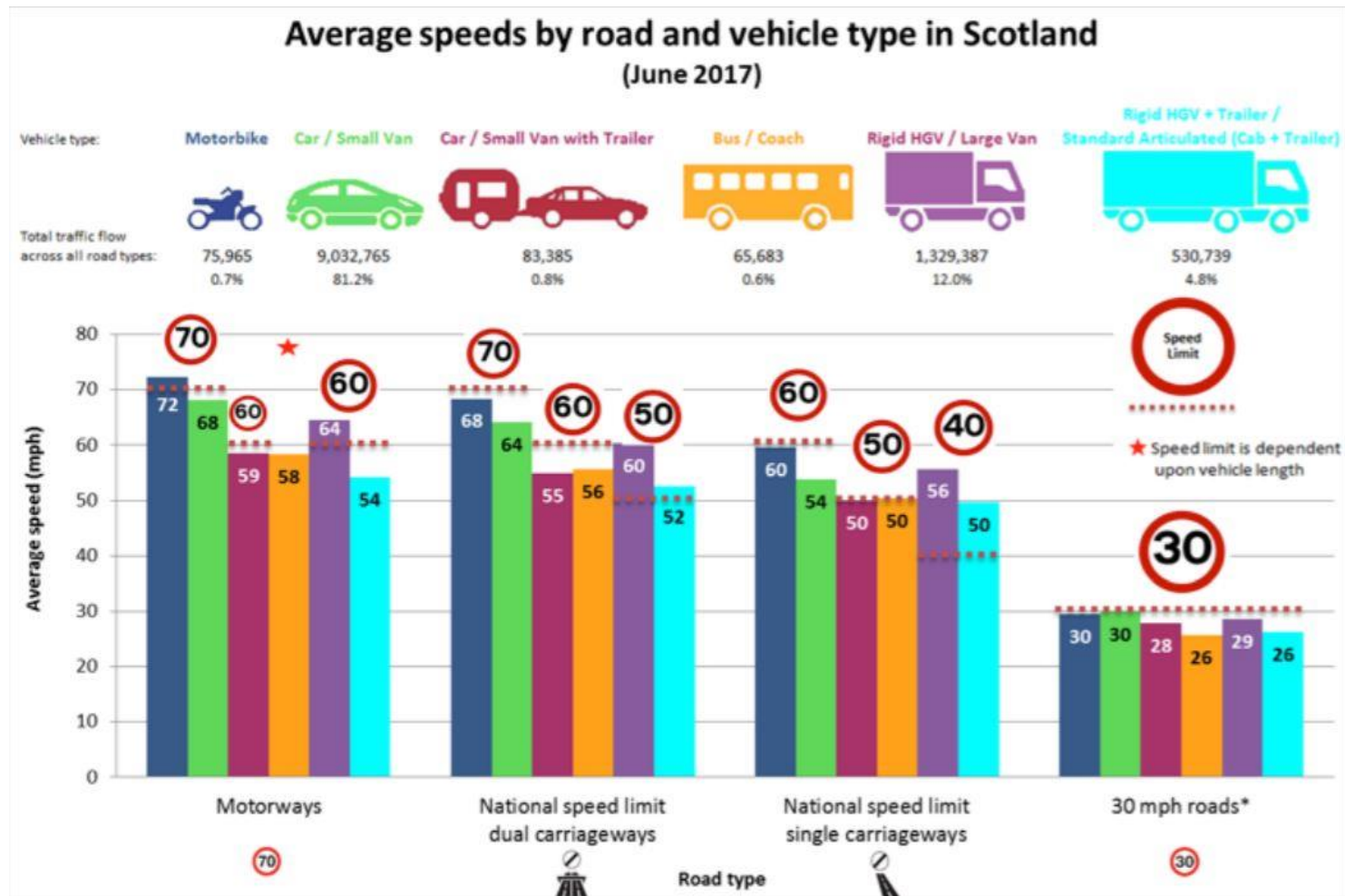


Figure 1: Average Speeds by Road and Vehicle Type in Scotland (June 2017)

The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 sets targets to reduce Scotland's emission of all greenhouse gases to net zero by 2045 at the latest, with interim targets of 75% by 2030 and 90% by 2040. Approximately 20% of greenhouse gases omitted in Scotland are attributed to road transport. A change to how we manage speeds could therefore help to meet these targets, with evidence suggesting that driving at 55mph instead of 65mph can reduce fuel consumption by 10% – 15%. Similarly, an increase in HGV speeds to a more fuel-efficient speed could result in emissions benefits.

Speed management therefore has the potential to reduce vehicle emissions by smoothing traffic flow and thus contributing on several fronts to providing a safer environment to facilitate increases in walking, wheeling and cycling. In 2017, the National Institute for Health and Care Excellence (NICE) published guidelines on air pollution stating reducing 'stop-go' driving can help lower air pollutants³.

In October 2014, the speed limit for HGVs over 7.5 tonnes was increased from 40mph to 50mph on single carriageway sections of the A9 between Perth and Inverness. This increase was applied as a pilot study within this area due to the characteristics of the route and the installation of average speed cameras on the section. Similarly, the HGV speed limit in England and Wales was increased from 40mph to 50mph on single carriageway roads and 50mph to 60mph on dual carriageway roads in 2015. Evaluations of these schemes were published by Transport Scotland (July 2018)⁴ and the Department for Transport (July 2020)⁵, respectively.

Results for both studies found that the average speed of HGVs increased by less than 2mph and there was a significant decrease in the percentage of HGVs travelling in excess of the speed limit. The evidence from the study in England and Wales did not find a statistically significant change in the number of accidents. On the A9, the key findings indicated that slow moving platoons (under 50mph) led by an HGV had reduced from 44.3% in the baseline period, to 35.5% following the speed limit increase, with data suggesting this resulted in a reduction in vehicles overtaking HGVs on the single carriageway sections and therefore reducing the potential for accidents. It should be noted that the addition of the average speed cameras also contributed to the slower average speed by other vehicles, which is also likely to have contributed to improved safety on the route.

Prior to the increased HGV speed limit being implemented in England and Wales, an economic appraisal found that the increased

³ NICE, Air Pollution: Outdoor air quality and health, section 1.5.1, 2017, <https://www.nice.org.uk/guidance/ng70/chapter/the-committees-discussion#smooth-driving-and-speed-reduction-2>

⁴ Transport Scotland, A9 HGV 50mph Speed Limit Pilot – Evaluation, 2018, <https://www.transport.gov.scot/media/42374/evaluation-report-june-2018-a9-perth-to-inverness-hgv-50mph-trial.pdf>

⁵ Department for Transport, Evaluation of National HGV Speed Limit Increase in England and Wales, 2020, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/899721/evaluation-of-the-national-hgv-speed-limit-increase-in-england-and-wales.pdf#page=69&zoom=100,129,90

speed limit was anticipated to provide substantial economic benefits, with a Net Present Value of £225.8m over the 16 years between 2015 and 2031, with 70% of these benefits occurring due to journey time savings for business journeys and 20% related to vehicles operating costs for business users.

4 The Strategic Rationale

Scotland's Road Safety Framework to 2030 was published for consultation in September 2020, with targets to significantly reduce the number of people killed or seriously injured in road traffic accidents by at least 50% by 2030. The framework is based on the Safe System, which consists of five key pillars aimed at mitigating against human error, one of which is safe speeds. To achieve this, the Safe System states that speed limits should be based on aiding crash-avoidance and reducing the speed at which impacts occur, aiming to establish the appropriate speed limits according to the features of the road, function it services and physical tolerance of those who use it. As the Safe System is likely to be introduced, a review should be undertaken to establish a speed management plan for each road type within Scotland.

The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019⁶ sets targets to reduce Scotland's emission of all greenhouse gases to net zero by 2045 at the latest, with interim targets of 75% by 2030 and 90% by 2040. Approximately 20% of greenhouse gases omitted in Scotland are attributed to road transport. The largest source of transport emissions is cars, at 40%, followed by aviation and shipping which are both 15%. In addition, 25% of emissions were generated by a combination of Light Goods Vehicles (LGVs) and Heavy Goods Vehicles (HGVs). The number of goods vehicle trips is forecast to increase by 44% between 2014 and 2037, which will negatively impact on journey times and peak period delays, thus impacting on the economy and on the environment. In 2017, HGV emissions were 3.5% higher than in 2016 and 5.2% above the 1990 baseline figure. LGV emissions were 6.5% more than in 2016 and 95.6% higher than the 1990 baseline figure, the highest increase of all road transport. Measures to reduce the impact of increased LGV and HGV trips, in particular relating to emissions, such as promoting mode shift, using alternative fuels or speed management to increase efficient movement are all required.

Why now?

- In order to achieve the vision of zero fatalities and injuries on Scotland's roads by 2050, there is a need to move forward with measures to hit the ambitious interim targets to halve the number of people killed or seriously injured on roads by 2030. Understanding the contribution that speed limits and speed management have in achieving these targets is an important

⁶ Scottish Government, Climate Change Policy, [https://www.gov.scot/policies/climate-change/reducing-emissions/#:~:text=The%20Climate%20Change%20\(Emissions%20Reduction,2030%2C%2090%25%20by%202040.](https://www.gov.scot/policies/climate-change/reducing-emissions/#:~:text=The%20Climate%20Change%20(Emissions%20Reduction,2030%2C%2090%25%20by%202040.)

element of these measures.

- Similarly ambitious targets are in place to reduce the contribution that transport makes to Climate Change, therefore measures to make transporting of goods more environmentally efficient would assist in helping achieve the targeted reductions, along with contributory measures such as encouraging mode shift.
- As part of the overall push to encourage sustainable travel, in particular walking, cycling and wheeling, creating safe environments is a major factor and speed management can contribute to the improved place making options available to encourage behavioural change towards more active travel.

The Safe System as outlined in the Scotland's Road Safety Framework to 2030 states that speed limits should be based on aiding crash-avoidance and reducing the speed at which impacts occur, aiming to establish the appropriate speed limits according to the features of the road, function it services and physical tolerance of those who use it. A review of how speed is managed to determine the most appropriate speed limit for each road type within Scotland would provide the evidence base on which to implement this approach.

