



DEBATE PACK

Number CDP 2018/0240, 1 November 2018

Road Safety

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Summary

A Commons debate on Road Safety is scheduled to take place in the Commons chamber on the afternoon of Monday 5th November.

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The House of Commons Library prepares a briefing in hard copy and/or online for most non-legislative debates in the Chamber and Westminster Hall other than half-hour debates. Debate Packs are produced quickly after the announcement of parliamentary business. They are intended to provide a summary or overview of the issue being debated and identify relevant briefings and useful documents, including press and parliamentary material. More detailed briefing can be prepared for Members on request to the Library.

1. Background

[The Road Safety Act 2006](#) brought in a number of new pieces of legislation, including provisions designed to improve road safety and help achieve casualty reduction targets. The explanatory notes for this can be found [here](#), they give an overview of the Act and the thinking behind it.

In 2011 the Coalition Government published a strategic framework for road safety, this can be found [here](#). The Government states that this sets out 'to reduce killed and seriously injured casualties on Britain's roads. Our focus is on increasing the range of educational options for the drivers who make genuine mistakes and can be helped to improve while improving enforcement against the most dangerous and deliberate offenders. Additionally, at the local level, we will be increasing the road safety information that is available to local citizens.'

In June 2018 The Parliamentary Advisory Council for Transport Safety (PACTS), a charity that supports the All-Party Parliamentary Group for Transport Safety, published a report titled '[Key Priorities For Road Safety to 2020](#)'. In October 2018 they published a paper titled '[Developing safe system road safety indicators for the UK](#)' which looked at the development of a 'Safe System', apparently the debate is likely to speak to this. More information on this can be found [here](#).

2. Safer Roads Fund

The Department for Transport (DfT) [introduced](#) the Safer Roads Fund (SRF) in January 2017 to support road safety in England by providing £25 million to help tackle some of the most dangerous A roads. The SRF totals £175 million between 2017/18 and 2020/21.

The DfT invited proposals from eligible local highway authorities to improve the safety of 50 specific sections of local A' roads, where the risk of fatal and serious collisions was highest, based on the analysis by the [Road Safety Foundation](#).

Eligible roads are listed by region, here:

- [East of England](#)
- [East Midlands](#)
- [North East](#)
- [North West](#)
- [South East](#)
- [South West](#)
- [West Midlands](#)
- [Yorkshire & Humber](#)

The first successful bids for funding were announced in June 2018 alongside an [update on progress](#) against the Government's December 2015 [Road Safety Statement](#). The Transport Minister, Jesse Norman, [said](#):

I am pleased today to announce the successful bids for the Safer Roads Fund, which we made available to enable Local Authorities to improve the 50 most dangerous stretches of 'A' roads in England. We are investing £100m to tackle these dangerous roads. This sum fully funds all bids from the Local Authorities concerned. The additional £75m initially allocated for the work has not been required, but we will continue to look closely at further scope for capital improvements to improve road safety.

There were 56 successful bids, all listed in HC Library Deposited paper [DEP 2018-0581](#).

On 16 October 2018 the RAC Foundation and the Road Safety Foundation [published an analysis](#) of the likely benefits from the SRF funding. They estimated that the funding would "prevent almost 1,450 deaths and serious injuries over the next two decades on the riskiest council-managed A roads in England". It estimated that the total value of the prevention of harm across 48 schemes, over a 20-year period, would be £550 million and would provide the following:

- **436** miles of road being targeted overall
- **300** improved bends
- **290 miles** of improved roadside shoulders

- **225** improved junctions
- **150 miles** of improved speed limits, enforcement and traffic calming
- **135** new or improved pedestrian crossings
- **90 miles** of cleared or protected roadsides – e.g. crash barriers
- **90 miles** of improved visibility and signing
- **80 miles** of improved medians (hatching/wide centrelines)
- **70 miles** of improved road surfaces
- **20 miles** of new or improved cycle facilities
- **10 miles** of new or improved footpaths

The ten stretches of road that are expected to see the greatest casualty reductions are [shown here](#). Four of the top ten, including the top two, are in Lancashire.

In February 2018 the DfT published an [independent report](#) by Kantar Republic, evaluating the process of applying for SRF. Two of its key findings were as follows:

The targeted bidding approach was broadly accepted, and LAs recognised its advantages compared to a competitive approach. Some LAs maintained that the funding was not guaranteed.

Scepticism about the data used to conduct the analysis to select roads undermined some LAs buy-in to the targeted road approach. The use of retrospective crash data to identify stretches of roads was seen as problematic; old data does not capture roadworks that may have been done since, and LAs hold more recent local intelligence that could complement and reinforce data used.

Key conclusions included:

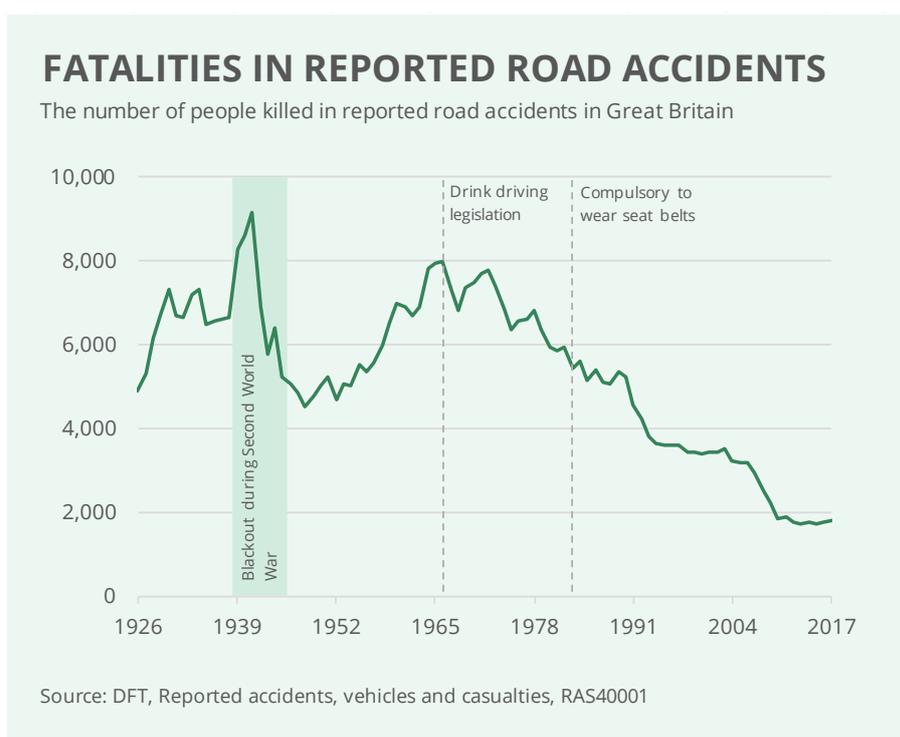
Many aspects of SRF's administration worked well to engage LAs in building a business case. The non-competitive application approach and range of support available to LAs raised awareness amongst LAs of new ways of thinking about road safety, and helped to align LA business cases with the objectives of SRF and Safe Systems principles.

Overall, LAs found developing their business case for SRF a reasonable process. LAs understood SRF was a new scheme with teething issues and their experiences reveal components of SRF to be maintained, strengthened and replaced to provide a more efficient and effective administration process.

3. Road accident statistics

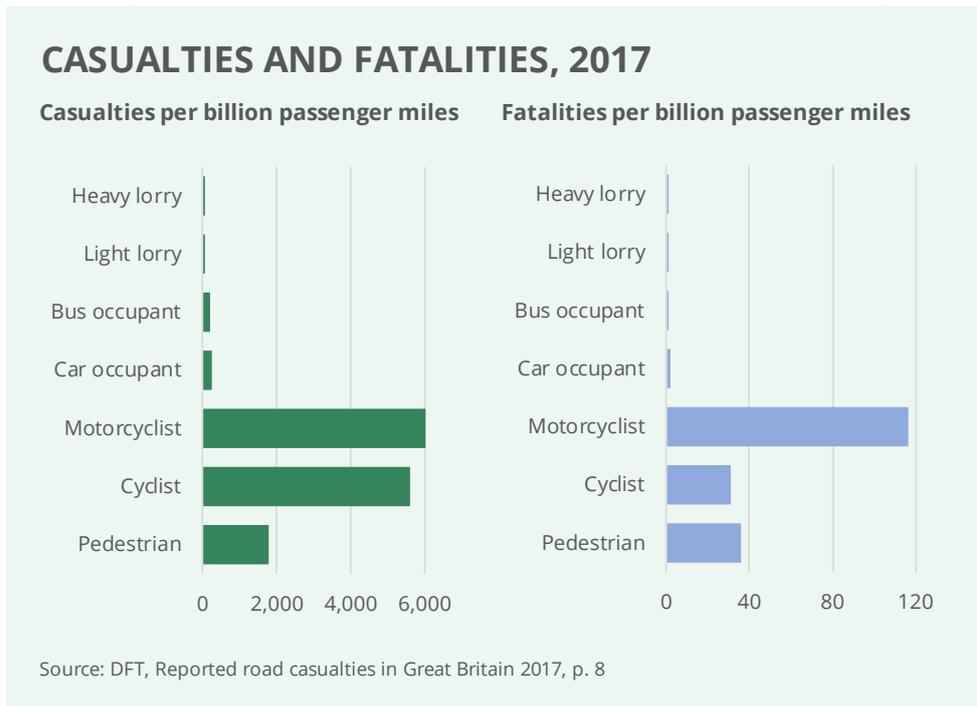
In 2017¹ there were 170,993 accident casualties recorded on Britain's roads; 1,793 of these were fatal. The long-term trend in the numbers killed and injured from road accidents has been declining, especially in the last two decades.

The chart below shows annual road fatality data from 1926 to 2017. Between 1939 and 1945 the wartime blackout contributed to a high number of fatalities on Britain's roads – in 1942 alone, around 9,100 were killed in reported traffic accidents. The number of fatalities decline almost immediately after the war, although increased again throughout the 1950s and early 1960s to a peace-time peak of 7,985 (more than 21 road deaths per day) in 1966. The decline in fatalities coincided with the introduction of drink-driving laws in 1966 and, allowing for fluctuation in individual years, the trend has been downwards to the point where fatalities are less than a quarter of the level at the mid-1960s.



In 2017 44% of those fatal road accident victims were car occupants; 26% were pedestrians; 19% motorcyclists; and 6% were cyclists. From these headline figures you may think that car occupants are those most at risk of suffering an injury on the roads. However, as car occupants account for much of the travel on Britain's roads we need to look at accident casualties in terms of the number of miles travelled to identify relative vulnerability of different road users.

¹ All data comes from [DFT: Reported road casualties in Great Britain 2017](#) unless otherwise specified.



The chart above illustrates the number of casualties and fatalities by road user type per 1 billion miles travelled. It is clear which three groups of road users are the most vulnerable: pedestrians, cyclists and motorcyclists.

Motorcyclists, for instance, had around 6,000 casualties per billion miles travelled, and a fatality rate of just under 117 per billion miles travelled. Car occupants, in comparison, had a casualty rate of 238 per billion miles and a fatality rate of 1.9 per billion miles.

Pedestrian and Cyclist deaths and casualties

In 2017 531 pedestrians were hit by pedal cyclists resulting in 3 deaths and 122 individuals having serious injuries. This number is markedly smaller than the number of pedestrians hit by cars (18,855), with 318 being killed, and 4,353 pedestrians receiving a serious injury.

There were 141 pedal cyclist user casualties because of an accident with another pedal cyclist – there were 47 seriously injured pedal cyclist users and zero deaths. In the same year there were 14,327 pedal cycle user casualties because of accidents with cars – 2,650 pedal cyclist users were seriously injured, and there were 48 deaths.

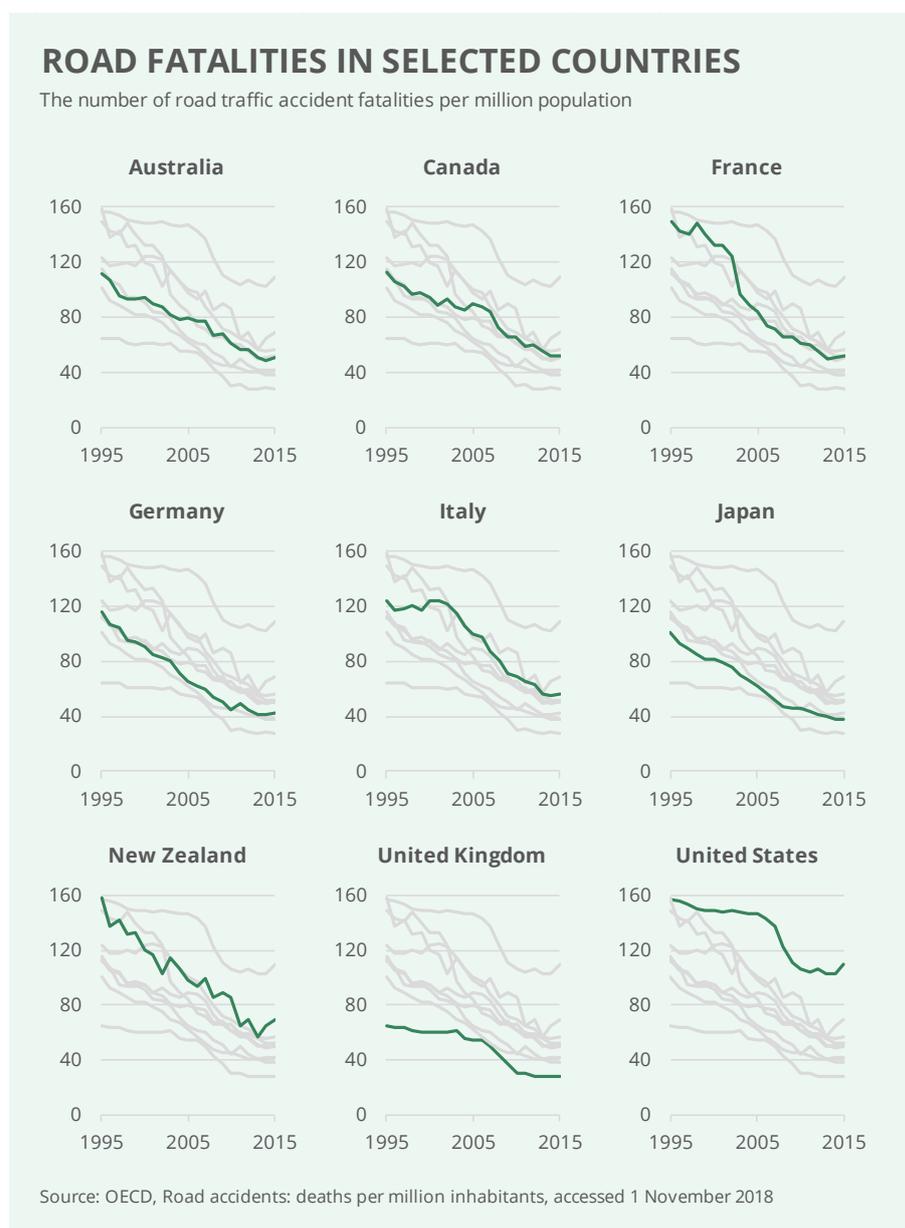
Child deaths and casualties

There were 48 child (aged 15 or younger) deaths in 2017 – around a 2% decrease on the number killed in 2016. The DFT note that between 2010 and 2017 child deaths have fluctuated with no clear trend. Many of the children killed in 2017 were as a pedestrian (46%), and as a car occupant (42%).

In 2017, there were a total of 15,721 child casualties which is the lowest number on record. Of these child casualties, 37% were as pedestrians, around one in five occurred on a weekday between 3pm and 5pm, and just under 60% were male.

International comparisons

The OECD publishes data on the number of road accidents in a range of countries each year. The graph below illustrates the number of road traffic fatalities occurring in a few selected countries between 1995 and 2015 (the last year in which full data for most countries is available).



The United Kingdom had a lower road death rate in 2015 than 45 of the other 49 countries included in the OECD's data series. Countries with a lower rate included Sweden (27 per million population), Malta (26 per million population) and Norway (23 per million population). The death rate in the United States was more than 3 times higher than that in the UK.

Constituency level data

The DfT has published data on the number of reported road accidents by severity and parliamentary constituency over the last five years – this data is available [here](#).

4. Speed Limits and Cameras

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, highway authorities have the power to vary the speed limits on the roads they control – for example in urban areas, particularly around schools, there has been a growing trend for local highway authorities to reduce the limit to 20 mph. Similarly single and dual carriageways often have a lower limit than that indicated above – particularly as they approach heavily populated areas.

In January 2013 the Department for Transport published revised guidelines to local highway authorities on the setting of speed limits. Broadly this reiterated pre-existing policy, emphasising the options available to local authorities to introduce 20 mph limits in urban areas and to assess speed limits in rural areas based on safety criteria. It also launched a new speed limit appraisal tool for local authorities. At the same time the police speed enforcement guidelines were republished. These remain in force.

Speed limits are enforced by road traffic police and automated detection devices such as speed cameras. Penalties can range from a Fixed Penalty Notice of £100 and three points on the licence to a £1,000 fine and a disqualification. Drivers may be offered the alternative of a speed awareness course. Some have called for a more pro-active approach to speed management and enforcement, with the use of Intelligent Speed Adaptation or speed limiters for vehicles.

Since 2010 Conservative-led governments have debated whether the speed limits on motorways should be increased to 80 mph, but there was no formal consultation on this and it is not now Government policy.

More information on speed limits can be found in the Commons Library Briefing paper [“Speed Limits in England”](#).

Between 1997 and 2005 the Department for Transport published a number of evaluation reports on speed cameras, providing statistical evidence supporting the effectiveness of speed cameras in reducing collisions:

- A July 1997 report by the Highways Agency about the West London Speed Camera Project found a 70 per cent reduction in fatal accidents and a 28 per cent reduction in serious accidents.²
- An August 2001 report by University College London and PA Consulting Group on the first year of the Safety Camera

² HA, [West London speed camera demonstration project](#), 1997; the work done by the Police Research Group in 1995-96 found similar results, see: Police Research Group, *Cost benefit analysis of traffic light and speed cameras* (Police Research Series Paper 20), 1996

Partnership programme pilot found that number of people killed or seriously injured dropped by 18 per cent across the eight pilot areas as a whole and by 47 per cent at the camera sites compared to the average over the previous three years. On average the number of drivers speeding at camera sites dropped from 55 per cent to 16 per cent.³

- A February 2003 report on the second year of the pilot found that, in terms of casualties, that there was a 35 per cent reduction in people killed or seriously injured (KSI) at camera sites, compared to long-term trend, equating to approximately 280 people.⁴
- The June 2004 The three-year evaluation report on the Partnership programme updated the analysis carried out in the pilot areas to include the 24 Partnership areas operating over the three years April 2000 to March 2003. Only areas operating within the programme for at least a year were included.⁵ The report found that vehicle speeds were down by around seven percent and there was a 33 per cent reduction in personal injury collisions.⁶
- The December 2005 four-year evaluation report on the Partnership programme updated the previous report to include all 38 areas that were operating within the programme over the four year period from April 2000 to March 2004. Only areas operating within the programme for at least a year were included in the analysis. The report found that vehicle speeds were down by six per cent (as opposed to seven per cent in the three year report) and that without allowing for selection effects (such as regression-to-mean) there was a 22 per cent reduction in personal injury collisions (33 per cent in the previous report).⁷

The findings of these reports have been disputed by commentators.⁸ The main contentious issue is that these evaluations do not account for regression to mean (RTM) effects.

As indicated above, the four year evaluation report updated a previous report (three year evaluation, June 2004) and was commissioned by the DfT and authored by academics and staff at PA Consulting Group, University College London, Napier University and University of London.

³ DTLR press notice, "[Life saving cameras to be made more visible](#)", 13 August 2001; and [HC Deb 29 October 2001, c477W](#)

⁴ DfT, [A cost recovery system for speed and red-light cameras - two year pilot evaluation](#), 11 February 2003, pp.iii-iv

⁵ [HC Deb 15 June 2004, c28WS](#)

⁶ DfT, [The national safety camera programme: Three-year evaluation report](#), June 2004

⁷ DfT, [The national safety camera programme: Four-year evaluation report](#), December 2005

⁸ see, e.g.: "[Shuffling accidents along the M11](#)", *Straight Statistics*, 5 February 2010; "[Caught on camera](#)", BBC News Online, 19 April 2007; "Are safety cameras only half as effective as we thought they were?", *Local Transport Today*, 12 January 2006 [LTT 434]; and: Safe Speed press notice, "[Speed camera report is false](#)", 21 June 2004;

The update included all 38 areas that were operating within the Partnership programme over the period from April 2000 to March 2004. The results regarding casualties and deaths were summarised in the report as follows:

Both casualties and deaths were down - after allowing for the long-term trend, but without allowing for selection effects (such as regression-to-mean) there was a 22% reduction in personal injury collisions (PICs) at sites after cameras were introduced. Overall 42% fewer people were killed or seriously injured. At camera sites, there was also a reduction of over 100 fatalities per annum (32% fewer). There were 1,745 fewer people killed or seriously injured and 4,230 fewer personal injury collisions per annum in 2004. There was an association between reductions in speed and reductions in PICs.⁹

These headline figures have been disputed as they do not take into account RTM effects.

Speed cameras are installed at sites where there has been a high level of collisions over a short period of time.¹⁰ The high level of collisions may be due to an increase above typical levels which has occurred as a result of chance. If the increase is down to chance then it would be reasonable to expect the number of accidents to fall from this untypically high level upon next measurement. Such a change would be expected irrespective of whether a speed camera had been installed or not. This is what is known as the regression to mean effect. The theory of RTM suggests that if a variable is first measured when it is at an abnormally extreme value which has occurred purely by chance it will be closer to its normal (mean) value on subsequent measures.

Failure to account for RTM effects when quantifying the effects of speed cameras can over-estimate their impact, attributing decreases in collisions solely to the introduction of the camera. Headline figures produced in the DfT evaluation reports have failed to take into account RTM effects and have therefore been questioned by commentators. For example, in a June 2004 press release the pressure group Safe Speed stated:

The recent official report on the benefits of UK speed cameras is totally unjustified in its headline conclusions, says Safe Speed.

The largest problem arises from the naturally random distribution of road accidents, and the rule that requires cameras to be placed where there have been a high level of accidents over a fairly short period.

When a camera is placed where there has been a temporary upward blip in accident figures, we should not be surprised

⁹ op cit., [The national safety camera programme: Four-year evaluation report](#)

¹⁰ site selection guidelines for cameras include threshold levels of both all personal injury collisions (PICs) and fatal and serious collisions (FSCs); whenever site selection is based on particularly high numbers of observed collisions in a particular period of time, the sites identified will tend to be those with more collisions than expected during the period of observation

that the blip does not recur. Such placement appear to be extremely commonplace and the effect results in an illusion of benefit. Even genuine accident black spots are most likely to receive a camera after an especially bad spell.¹¹

The DfT commissioned the Department of Engineering at Liverpool University to study the RTM effect in response to criticism received. Their findings were detailed in [Appendix H](#) of the four year evaluation.

The method used to allow for RMT effects required a larger amount of data for each site than was required in the main section of the report. The data requirements for each site meant that 216 sites could be included in the study, a somewhat smaller number than the 3,500 – 4,500 used in analysis in the main report. All of the 216 were urban sites.

Appendix H reports that the introduction of speed cameras resulted in a reduction in the number of personal injury collisions and fatal and serious collisions. However the positive effects are not as large as those reported in the headline findings. The results are summarised in Appendix H as follows:

H.4.3 Summary of results

After allowing for both RTM and long-term trends in collision frequencies, the average effect of these 216 cameras was a reduction of 19% in both personal injury collisions (PICs) and fatal and serious collisions (FSCs) relative to what would have been expected in the after period had the cameras not been installed.

In total the 216 cameras were estimated to be saving 162 PICs each year of which 24 involved fatal or serious injuries.

RTM effects were estimated to account for an average fall relative to the observed baseline collisions of 7% in all PICs and of 35% in FSCs. RTM effects represented one quarter of the observed fall in PICs and three fifths of the observed fall in FSCs.

In August 2010 concerns were also expressed following a review by the DfT as to how the severity of road casualties are recorded. It stated that there were:

...discrepancies in the categorisation of severity of injury between medically trained staff and lay persons, especially for injuries where there is little or no blood, the casualty is conscious at the roadside or there are no obvious external signs of injury such as broken bones.

It should also be recognised that not all injuries, even severe ones, come to the attention of the police. Some never do and some are reported subsequently, which means that no police officer attended the scene.¹²

¹¹ op cit., "[Speed camera report is false](#)"

¹² DfT, [Review of Police Road Casualty Injury Severity Classification – A Feasibility Study](#) (Road Safety Research Report No. 119), 5 August 2010

More information on this can be found in the Commons Library Briefing [“Roads : Speed Cameras”](#).

5. Press Articles

Express

[Speed limits to be slashed to just 15mph in major UK safety shake-up](#)

30 October 2018

The Independent

[Clocks going back sees 20 more **traffic** accidents each day, study finds](#)

27 October 2018

The Times

[Road safety inspectors given the power to seize unsafe vehicles](#)

24 October 2018

The Independent

[Cyclists could always be given priority over cars under plans to rewrite Highway Code](#)

18 October 2018

This Is Money

[“The Government's £100m scheme to improve England's most dangerous A-roads could prevent 1,450 deaths and serious injuries by 2038, says report”](#)

18 October 2018

RAC

[RAC, AA and Green Flag unite to call for enhanced **road safety** rules](#)

17 October 2018

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