

**To:** Transport & Health Policy Makers, & Practitioners  
**From:** Professor Adrian Davis  
**Date:** 11<sup>nd</sup> October 2024  
**Subject:** Essential Evidence 4 Scotland No.91 Assessing the impact of 20mph speed limits in rural areas

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Top Line: Evidence from the Scottish Borders is that speeds driven in rural communities have reduced in the same way as in urban area 20mph speed limits schemes. This includes that the largest speed reductions are where speeds were highest before implementation. As with casualty data from Edinburgh, Bristol, and other 20mph schemes, reported reductions in speed are followed by reported reductions in casualties.

There is a growing international literature on the evidence of effectiveness of 20mph (30kmph) across European and other High Income Countries. This has shown that city-wide or large area schemes are effective at reducing speeds driven and also that casualties and severity of injury are reduced.<sup>1 2</sup> In the case of Edinburgh, researchers reported that the effect of 20 mph speed limits introduction on casualties citywide was a 17% reduction 3 years post implementation. The researchers concluded that the effect exceeded expectations from changes in speed alone, possibly due to a wider network effect. This population health approach has become increasingly popular in the UK over the past twenty years. In almost all cases for 20mph speed limits schemes the areas have been urban.

In response to the pandemic, a Scottish Government funded programme commenced in 2020 to help people travel more safely, especially to encourage people to travel actively. The Scottish Borders Council received Government funds to introduce 20mph speed limits in place of existing 30mph speed limits across almost all of its settlements. In the council area of Scottish Borders, where the 20mph intervention was implemented, the majority of settlements have populations significantly less than 5000. Overall, the Scottish Borders are spread over a large geographical area of 1827 square miles (4732 km<sup>2</sup>), thus comprising the 6<sup>th</sup> largest council area in Scotland in terms of area size. This intervention is considered as one of the first of its kind in the UK and overseas, due to its large scale, in predominantly rural areas.

In terms of results, researchers used “before–after” quantitative analysis of traffic and speed data collected in different waves before and after the intervention. The analysis showed that both mean and 85<sup>th</sup> percentile speeds reduced directly after the introduction of the 20mph speed limit (by 3.1 mph and 3.2 mph, respectively), and that such speed reductions were largely maintained even up to eight months after the intervention. The largest speed reductions were observed in locations with high-speed patterns before the intervention, and especially in those having mean speeds greater than 25 mph before the intervention.<sup>3</sup>

Overall, the authors suggest that the findings of this study assist in filling an evidence gap regarding the effectiveness of 20mph speed limits in rural settlements. They concluded that it also provides encouragement to UK local authorities and abroad that are actively examining the possibility of setting 20mph as the default limit in built-up areas. Since the Scottish Borders study was conducted, a much larger and similarly largely rural implementation of 20mph speed limits in place of 30mph speed limits was introduced in Wales, on 17<sup>th</sup> September 2023. In the first three months of the Welsh scheme, the number of serious casualties or fatalities dropped 23%, with 78 people killed or seriously injured on both 20mph and 30mph roads, compared to 101 before the default 20mph.<sup>4</sup>

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<sup>1</sup> Bornioli, A., Bray, I., Pilkington, P, et al. 2019 Effects of city-wide 20mph (30km/hour) speed limits on road injuries in Bristol, UK, *Injury Prevention*, doi:10.1136/injuryprev-2019-043305

<sup>2</sup> Kokka, K., Nightingale, G., Williams, A., et al, 2024 Effect of 20 mph speed limits on traffic injuries in Edinburgh, UK: a natural experiment and modelling study,

<sup>3</sup> Olowosegun, A., Fountas, G., Davis, A. 2023 Assessing the Impact of 20mph Speed Limits on Vehicle Speeds in Rural Areas: The Case of the Scottish Borders. *Safety*, 9, 66. <https://doi.org/10.3390/safety9030066>

<sup>4</sup> [Police recorded road collisions: January to March 2024 \(provisional\) \[HTML\] | GOV.WALES](#)