20's Plenty for Us

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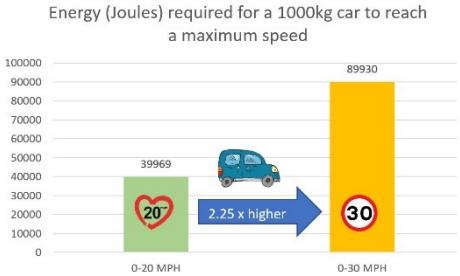
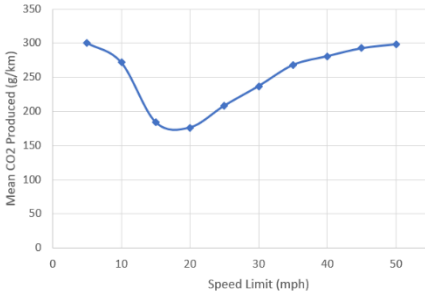
New research on emissions strengthens case for a 20mph default urban speed limit

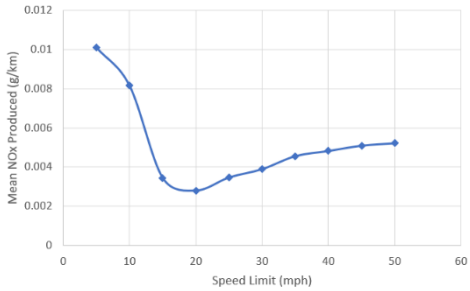
New research[1] from engineering consultants, Future Transport, models the impact of capping speeds at 20mph vs. 30mph. This "real life" modelling that takes account of the stop/start nature of urban traffic yields a very different result from traditional steady-state models. It shows significant and substantial reductions in emissions: CO_2 lower by 26% and NOx 28% lower. With UK hosting COP26, campaigners are calling on governments to set 20mph or 30km/h limits as national urban/village defaults.

Although the auto industry is fully aware of the impact of acceleration on vehicle emissions, it does not publish the results. Basic physics means that 2.25 times more energy is required to reach 30mph than 20mph. When this is repeated in the real-world environment, where we slow down at junctions, crossings, congestion points and other hazards, acceleration becomes the dominant factor in overall journey emissions.

Future Transport modelled the CO_2 and NOx emissions for accelerating from stationary to between 5 and 50 mph for a number of vehicles, with the following results for a petrol Ford Focus.







Repeated acceleration and braking, rather than steady-state, represents a far better modelling of real-world emissions in our congested cities and towns.

Wales is already planning to change the national urban default limit of 30mph to 20mph by 2023. Besides "liveability" and casualty reduction, transport carbon reduction[2] is also cited as a reason to change. The Scottish Government[3] has announced its plans to set 20mph as a norm across the country from 2025.

[1] https://futuretransport.info/urban-traffic-research/
[2] https://www.20splenty.org/iwa_calls_for_welsh_20mph
[3] https://www.20splenty.org/scotgov_says_20splenty

"It is clear that repeated acceleration dominates emissions in town driving. This research quantifies the effect and shows how reducing maximum speeds can have a significant beneficial effect on emissions. It's time for all governments to say 20's Plenty for the planet and for our health. With COP26 approaching it is an effective step towards transport carbon reduction**"**

Rod King MBE, Founder and Campaign Director for **20's Plenty for Us** commented

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Speed limit reductions are a key initiative to reduce climate-warming CO_2 emissions and harmful NOx. They also have a significant effect on public health through air quality improvements and active travel.

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