

20mph as a Standard Speed Limit, LCC. Feb 2000.

Why London needs it - compiled by John Hilary, LCC, Sep 1999.

(1) Reducing fatalities

According to the government report *Killing Speed and Saving Lives*, a pedestrian hit by a car at 40mph has only a 15% chance of surviving. At 30mph this chance increases to 55%. But at 20mph the chance of survival increases to 95%.¹ A total of 226 people were killed on London's roads in 1998, 277 in 1997 and 251 in 1996. The majority of those killed each year are vulnerable road users (pedestrians and cyclists).²

(2) Reducing casualties

Lowering the speed limit to 20mph reduces total road traffic casualty levels by around 60% and child casualties by around 70% according to studies in both Britain and Denmark.³ This would mean at least 25,000 fewer road traffic casualties in London each year.

(3) Reducing costs

The total number of reported Greater London road traffic casualties (fatalities included) during 1997 cost £2.17 billion at June 1998 prices (using DETR figures for calculating traffic casualty costs). (In the figures presented in section 2, lowering the speed limit to 20mph would save London over £1 billion per year (four times the mayor's estimated annual transport budget).⁴

(4) Reducing congestion

(a) Congestion on urban roads is governed mainly by the capacity of junctions, and on urban roads "the capacity of a junction tends to be higher when vehicles approach it at a low speed than at a higher one."⁵ Time savings at junctions gained through lower speeds in Vaxjo, Sweden, led to journey times being reduced overall;⁶ where 30kph (20mph) zones have been introduced in Germany, drivers spend 15% less time sitting stationary in their vehicles.⁷ NB: In London most average traffic speeds are below 20mph anyway:⁸

location	morning peak	daytime off-peak	evening peak
Central London	10.0	10.0	10.2
Inner London	13.4	15.0	12.8
Outer London	17.0	22.7	19.0

In such a situation reducing the standard speed limit to 20mph will not increase journey times, but will prevent speeding between junctions.

(b) Traffic collisions are a major cause of congestion in London; lower speeds lead to far fewer crashes (see section 2, above) and thus smoother traffic flow. An experiment in west London restricting speeds through use of speed cameras ascribed time savings to precisely this reduction in collisions.⁹

(c) A safer environment on the roads is the key to turning more people to cycling and walking, thereby reducing the number of motor vehicles and reducing congestion. The introduction of Brighton's Hanover 20mph zone in summer 1995 saw a 22% reduction in motor vehicles,¹⁰ while as a result of the cycle-friendly towns scheme in West Germany, cycle use rose by 50% between 1981 and 1991.¹¹ As Parliament noted in the Road Traffic Reduction Act 1997, "An increase in cycling's modal share could help reduce both traffic congestion and

pollution."¹²

(5) Reducing Pollution

New forecasts show that 500 of London's roads are set to break government nitrogen oxide safety levels over the next five years.¹³ Lower traffic speeds reduce air pollution by improving traffic flow: "Exhaust emissions always contain larger amounts of carbon monoxide, hydrocarbons and nitrogen oxides when a vehicle is accelerating or decelerating, or when the engine is idling, than when the vehicle is cruising."¹⁴

Where 30kph zones were introduced in Germany, car drivers on average had to change gear 12% less often, used their brakes 14% less often and required 12% less petrol.¹⁵ One study of the effects of traffic calming schemes on exhaust emissions revealed reductions of 30% in nitrogen oxide, 20% in carbon monoxide and 10% in hydrocarbons.¹⁶

The same holds true for noise pollution, "with a lower speed always resulting in a lower noise level". Again, the major benefits may come from the smoother flow gained from lower speeds, as ~ large proportion of noise is generated through acceleration.¹⁷

(6) Meeting public demand

In a telephone poll run by Carlton TV's London Tonight programme on 25 January 1999, 81% of the 10,000 respondents voted in favour of a London-wide 20mph speed limit, and only 19% against. Where 20mph zones have already been introduced in London they have been widely welcomed (as they have elsewhere throughout Britain); "overwhelming support" from the public led to the Kew zone's being made permanent in December 1992.¹⁸

(7) Agreeing with the experts

The only major study to date of optimal speeds in Britain - Speed Control and Transport Policy, by Stephen Plowden and Mayer Hillman (1996) - concluded that 20mph should indeed be the standard urban speed limit, although it argued that 15mph might be justified in university towns or where there are large numbers of tourists (both of which apply to London).

1. Killing Speed and Saving Lives, Department of Transport (1997)
2. Accidents and casualties in Greater London during 1998, London Research Centre's London Accident Analysis Unit (LAAU) Factsheet 89 (June 1999); Accidents and casualties in Greater London during 1997. LAAU Factsheet 81 (April 1998)
3. Review of Traffic Calming Schemes in 20mph Zones, Transport Research Laboratory report no 215 (1996); The Bicycle in Denmark: Present Use and Future Potential, Danish Ministry of Transport (1993)
4. LAAU Annual Report 1997(1998) p17
5. Speed Control and Transport Policy, Stephen Plowden & Mayer Hillman (1996) p120
6. *ibid*, pp120~1
7. An Illustrated Guide to Traffic Calming, Dr Carmen Hass-Klau (1990) p3
8. Transport Statistics Great Britain 1998, Department of the Environment, Transport and the Regions (1998) p100
9. The Effect of Speed Cameras in West London, LN Swali (1993), cited in Speed Control and Transport Policy, Stephen Plowden & Mayer Hillman (1996) p121
10. Review of Traffic Calming Schemes in 20mph Zones, Transport Research Laboratory report no 215 (1996), p9
11. No More Roads, Bristol Cycling Campaign response to the government's Trunk Roads Review (1997)
12. Road Traffic Reduction Act /997, Annex C, paragraph 32
13. Gasping for the Millennium, Friends of the Earth (March 1999)
14. Speed Control and Transport Policy, Stephen Plowden & Mayer Hillman (1996) p53
15. An Illustrated Guide to Traffic Calming, Dr Carmen Hass-Klau (1990) p3
16. cited in Speed Control and Transport Policy, Stephen Plowden & Mayer Hillman (1996) p53
17. Framework for Assessing the Effects of Speed, Veli-Pekka Kallberg & Sami Toivanen (December 1997) p19

18. Review of Traffic Calming Schemes in 20mph Zones, Transport Research Laboratory report no 215 (1996), p28 © John Hilary, LCC, Sep 1999