



To: Place Directorate

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Subject: Essential Evidence on a page: Induced Motor Traffic

Top line: Studies of transport schemes consistently report that increasing road capacity leads to increased motor traffic to a greater extent than calculated in the models underpinning the proposals for such capacity expansion. This creates a vicious spiral of increasing private motorised travel.

It has long been considered that the construction of major new roads will generate additional motorised traffic, with references to this effect traceable to the 1930s. In 1985 a paper by the Greater London Council explored traffic generation in more detail than previously.¹ This concluded that for the total of six major roads that were selected for analysis, the possible sources of extra traffic were examined and in every case where a new road had been constructed or there had been substantial alterations to an existing road, there had been a marked increase in motorised traffic. This was not confined to the road itself but also in the defined corridor or study area. In the journal where this paper is reprinted the editors noted worryingly that "It is certainly the belief of most politicians in Britain that this effect is either not present or is so small that it is not worth worrying about."

A major Government report which addressed this issue was the Standing Advisory Committee for Trunk Road Assessment (SACTRA).² The SACTRA report 'Trunk Roads and the Generation of Traffic' is probably the most robust evidence and analysis of traffic generation. SACTRA showed that the net effect of road enlargements could actually create more congestion. The report termed this 'induced traffic'. Explained simply there is a vicious circle: more road space equals more car use equals less public transport use and so fares go up, frequency goes down and more people transfer to cars etc and the new equilibrium point is a lower level of service in both cars and public transport. The SACTRA work pulled on a number of different evidence sources - not only the before-and-after traffic counts but also inferences from large numbers of studies of values of time, demand elasticities, differential growth rates, and surveys. It was because all these told a broadly consistent story that SACTRA felt able to be decisive in its conclusions.

The average traffic flow on 151 improved roads studied was 10.4% higher than forecasts which omitted induced traffic, and 16.4% higher than forecast on 85 alternative routes that improvements had been intended to relieve. In a dozen more detailed case studies the measured increase in motorised traffic ranged from 9% to 44% in the short run, and 20% to 178% in the longer run. This fitted in with other evidence on elasticities, and aggregate data. The conclusion was "an average road improvement, for which traffic growth due to all other factors is forecast correctly, will see an additional [ie induced] 10% of base traffic in the short term and 20% in the long term". As Goodwin has noted, "further studies have found that the evidence has been consistent, recurrent, unchallenged by serious countervailing evidence, but repeatedly forgotten."³ There is also evidence that the reverse case of reduced motor traffic due to reduction in road capacity from reallocation, disasters, maintenance or pedestrianisation does occur.⁴

¹ Purnell, S., Beardwood, J., Elliott, J. 1985 republished in 1999 *The Effects of Strategic Network Changes on Traffic*, World Transport Policy and Practice, 5/2: 28-48.

² Standing Advisory Committee for Trunk Road Assessment, 1994 *Trunk Roads and the Generation of Traffic*. London: Department of Transport.

³ Goodwin, P. 2006 Induced traffic again, and again, and again. Local Transport Today, August.

⁴ See Essential Evidence No 5 www.travelwest.info/evidence