



To: City Development

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Subject: Essential Evidence on a page: No. 54 Health effects of a neighbourhood traffic calming scheme

Top line: Traffic calming schemes are not only beneficial through casualty reduction and in reducing traffic danger but may also be important in improving physical health status among local residents.

Historically, continental European countries have implemented 30kph speed limit areas enforced through traffic calming measures across large sections of residential areas in their towns and cities and on some local high streets. Since the 1990s the UK has also commenced the use of traffic calming schemes to achieve statistically significant casualty and injury reductions in residential streets. This has also included some local high streets, often to 20mph. It is well established such that traffic calming measures are highly effective in reducing casualties and the severity of those which do occur. There is far less evidence, however, as to the effects of such interventions in achieving modal shift away from car use as well as the potential for an increase in informal street activity including children's play.

One of the few peer reviewed UK studies to assess the health effects of a traffic calming scheme was focused on a main road bisecting a deprived urban housing estate in Glasgow, Scotland. The scheme comprised five sets of speed cushions (raised platforms on the road to slow car drivers), two zebra crossings with adjacent railings, and creation of parking bays.¹ The researchers conducted postal questionnaire surveys and counted pedestrians before (first survey) and after (second survey) it was built. Response rates for the questionnaires of 39% and 32% respectively were achieved.

In general, residents perceived that problems with road safety, traffic, and the general environment had improved after the traffic calming scheme was introduced. Road safety for cyclists and motorists but not for pedestrians, traffic nuisance, and some aspects of the general environment such as pedestrian facilities, and traffic smells and fumes were all reported to be significantly less of a problem in the second survey. After the introduction of the traffic calming scheme 20% of respondents said that they walked in the area more as a result of it. There were smaller percentages of respondents who said that they cycled (4%) or allowed children to play (12%), or walk (12%), as a result of the traffic calming scheme. There were also increases in observed pedestrian activity in the area after the traffic calming scheme was implemented.

Self reported physical health, observed pedestrian activity, and traffic related nuisance improved in the local population after a traffic calming scheme was built in the main road. It is of note, however, that men were under-represented and it is possible that healthier people responded to the survey. Information biases might include a tendency for people to report improvements after a major engineering intervention in their neighbourhood, either because they feel they ought to, or because of recall bias. The findings require validation in further observational and experimental studies but they do suggest that traffic calming schemes can have important health impacts for the affected community.

¹ Morrison, D., Thomson, H., Petticrew, M. 2004 Evaluation of the health effects of a neighbourhood traffic calming scheme, *Journal of Epidemiology and Community Health*, 58: 837-840.